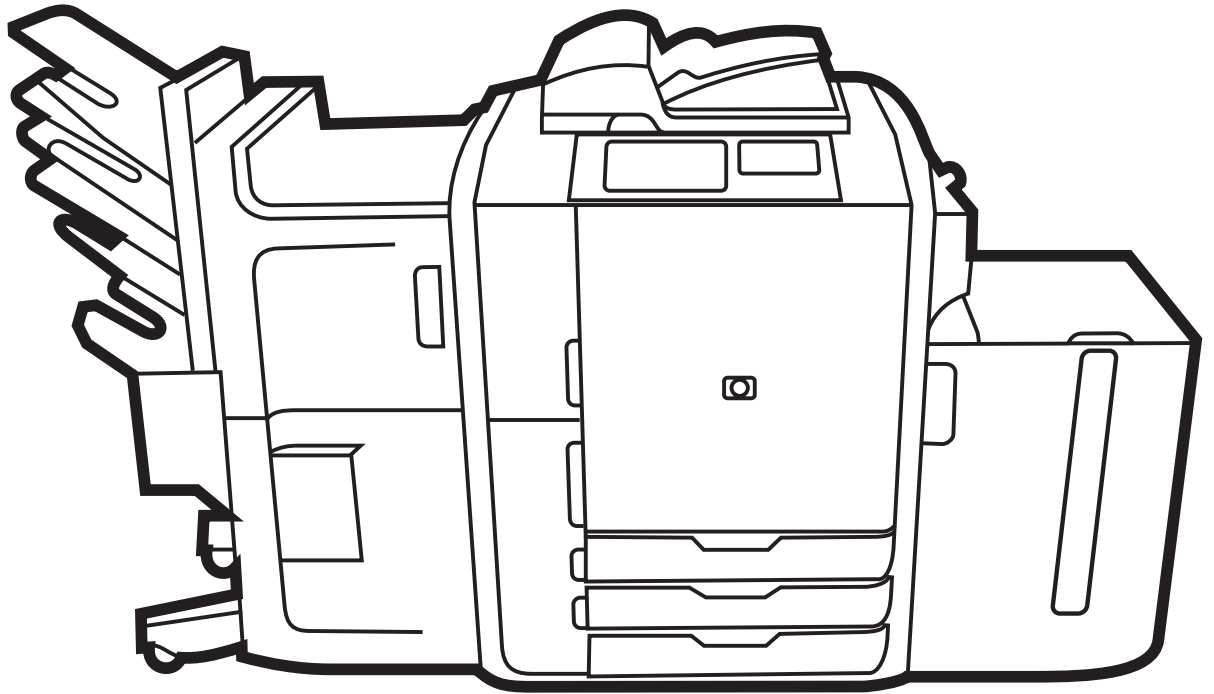


HP CM8060/CM8050 Color MFP with Edgeline Technology

Service Manual



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Technology
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Safety information

Install the device in a protected location where no one can step on or trip over the power cord, and where the power cord will not be damaged.

Use only a grounded electrical outlet when connecting the device to a power source. If you do not know whether the outlet is grounded, check with a qualified electrician.

When the device is installed in the U.S.A. or Canada, it must be connected to a dedicated 20 Amp circuit.

AC Delta and AC Wye power system statement: The device is designed to use an IT power system.

There is a risk of explosion if the battery is replaced with an incorrect type. Dispose of used batteries according to the instructions.



Warning! Risk of injury from moving parts. Do not reach into the stapler. Do not reach below moving trays.

Document history

Version	Date	Content changes
1.0	01/2007	N/A
1.1	02/2007	<ul style="list-style-type: none"> Numerous updates to removal and replacement procedures Minor corrections to image-quality fault trees Updated the following error code sections: C0.0101, C0.0102, C0.0103, C0.0104, C0.0105, C0.0106, C1.0101, C1.0102, C2.0201, C3.22A5, D1.0101, D1.0102, and D4.0701. Corrected the path to Upper Elevator diagnostic page in several sections.
1.2	03/2007	<ul style="list-style-type: none"> Parts information has moved into a separate document. Numerous updates to removal and replacement procedures Tetris sensor calibrations have been updated. Various error code sections have been updated Some information concerning a new finisher unit has been added.
1.3	04/2007	<ul style="list-style-type: none"> Error code sections: C4.0204, C6.0B02, C3.22A6, C3.22A5, Updated various color calibrations Dryer and heater fan replacement procedures Tray 5 LS encoder disk removal procedure NVM backup procedure (re: Automatic Backup) Wire routing for SIT sensor Calibrations for stapler alignment and accumulator offset alignment Tray 5 rollers
1.4	05/18/2007	HP 4-bin Job Separator removal and replacement procedures. Various other updates.
1.5	05/24/2007	Updates to carriage encoder strip adjustments and MFP media messages.

Version	Date	Content changes
2.0	07/2007	<p>The following updates have been made:</p> <ul style="list-style-type: none"> • HP multifunction finisher lower output Bin 5 belts replacement procedure • HP multifunction finisher input paper path guides replacement procedure
3.0	11/2007	<ul style="list-style-type: none"> • For firmware releases after (and not including) 20070824 72.024.0. • PPS assembly removal procedure has been updated • Accumulator removal section has been updated • Service intervals for PM items have been updated • CDFT engine calibrations 1 and engine calibrations 2 information has been updated • Pen Health Gauge information has been updated • New deductive trees: 32.08A1, 32.08A2, 32.08A3, D3.0701 • Updated deductive trees: A3.1321, A3.1323, B2.1302, C1.0101, C1.131A, C1.132A, C6.0B01, D1.0101, D1.0102, D2.0AA1, D2.0AA2, D2.0AA3, D2.0AA4, D2.0AA5, D2.0AA6, D4.0701 • IDS air purge procedure has been updated • Coprocessor replacement procedure has been updated • Event Log code addendum has been removed and contents moved to Event Log codes

Version	Date	Content changes
4.0	03/2008	<ul style="list-style-type: none"> Updated deductive trees: 32.08A2, 32.08A3, 32.1C01, 32.1C16, 49.0B01, A1.0102, A1.0103, A1.0104, A3.0141, A3.1321, A4.0141, B0.1301, B0.1302, B0.1303, B0.1304, B1.1301, B1.1302, B1.1303, B1.1304, B2.1301, B2.1302, B2.1303, B2.1304, B2.1305, B2.1306, B2.1307, B2.1308, C1.1301, C1.131A, C1.132A, D1.071B, D1.072B, D1.073B, D1.074B, D1.075B, D1.076B, D1.0A1A, D1.0A2A, D1.0A3A, D1.0A4A, D1.0A5A, D1.0A6A, D5.3803, D5.3810 New deductive trees: 32.1C01, 32.1C02, 32.1C14, 32.1C15, 32.1C16, 32.1C17, 32.1C18, 49.0B05, 49.144D, 49.2F04, 49.4C02, 68.3801, 68.8A20, 68.9449, 99.38E2, A1.0201, A2.203, A3.3839, B2.01A3, C3.22AB, C3.22AC, C3.22AD, C3.22AE, C6.0B04, D5.1045, D5.1047, D5.1051, D5.1058, D5.3810, DD.0215, DD.0237, DD.0432, DD.051D, DD.0710, DD.0802, DD.0804, DD.0926, DD.FFFF, DD.YYZZ, E3.7459, E3.7481 Updated PM part number for the drop detect spittoon Added new pen installation process flowchart Turning the device on and off information has been updated

Version	Date	Content changes
4.1	09/2008	<ul style="list-style-type: none"> ● Updated deductive trees: A2.04A2, A2.04A4, A2.05A1, A3.3839, B2.1306, C3.22A0, C4.0101, E3.7459. ● New deductive trees: 49.0B05, D2.0702, F1.0101, F1.0102, F1.0103, F1.01A1, F1.01A2, F1.01A3, F1.0501, F1.0502, F1.0503, F1.0504, F1.0505, F1.0506, F1.0507, F1.0508, F1.05A1, F1.05A2, F1.05A3, F1.05A4, F1.05A5, F1.05A6, F1.05A7, F1.05A8, F2.0101, F2.0102, F2.0103, F2.01A1, F2.01A2, F2.01A3, F2.0501, F2.0502, F2.0503, F2.0504, F2.0505, F2.0506, F2.0507, F2.0508, F2.05A1, F2.05A2, F2.05A3, F2.05A4, F2.05A5, F2.05A6, F2.05A7, F2.05A8.
5.0	2/2009	<ul style="list-style-type: none"> ● Updated Product information chapter with: <ul style="list-style-type: none"> ◦ Added Foreign Interface Harness (FIH) part to back-view table of components (Service Advisory: c01374657) ● Updated CDFT chapter with: <ul style="list-style-type: none"> ◦ CDFT preventive maintenance initialization information (Service Notice: c01230192) ◦ Export Data feature (Service Notice: c01287342) ◦ Performance settings feature for roller ink transfer prevention (Service Notice: c01287345) ● Updated Managing and maintenance chapter with: <ul style="list-style-type: none"> ◦ Disabling "SNMP Status Enabled" due to warnings

Version	Date	Content changes
		<p>information (Service Advisory: c01153952)</p> <ul style="list-style-type: none"> ◦ Drum encoder disk scratching information (Service Advisory: c01291969) ◦ Retrofit tag matrix descriptions (Service Notice: c01446489) <ul style="list-style-type: none"> ● Updated Calibrations and adjustments chapter with: <ul style="list-style-type: none"> ◦ Pen assessment and servicing information (Whitepaper c01142282, Service Notice c01287351) ◦ Tray 5 health test information (Service Advisory: c01446697) ● Updated Removal and replacement chapter with: <ul style="list-style-type: none"> ◦ New drum spittoon removal information (Service Notice: c01321183) ● Updated Troubleshooting chapter with: <ul style="list-style-type: none"> ◦ Tray 1 binding information (Service Action Advisory: c00965924) ◦ Worn actuator arm information (Service Notice: c00965926) ◦ IDO media guide jam information (Service Action Advisory: c01045073) ◦ EWS security alert information (Service Notice: c01066968) ◦ Front door switch causing motor stall information

Version	Date	Content changes
		(Service Advisory: c01536347)
		<ul style="list-style-type: none"> Updated deductive trees: 31.1301, 31.1303, 49.4C02, B2.1303, B2.1306, C0.0101, C0.0102, C0.0103, C0.0104, C0.0105, C0.0106, C1.0101, C1.0204, C1.02A2, C1.02A3, C1.02A4, C1.02A5, C1.0503, C1.1301, C1.1302, C1.1303, C1.131A, C1.132A, C2.0201, C2.0901, C2.09A1, C3.22A5, C4.0101, C4.0201, C4.0202, C4.0203, C4.0204, C4.02A1, C6.0B01, C6.0B02, C6.0B04, D1.0101, D1.0102, D1.0201, D1.0A1B, D1.0A2B, D1.0A3B, D1.0A4B, D1.0A5B, D1.0A6B, D2.01A0, D2.01A1, D2.01A3, D2.01A4, D2.01A6, D2.01A7, D2.0702, D2.0707, D2.0708, D2.0709, D2.0710, D2.0711, D2.0712, D4.0701, D4.0705, D5.1004, D5.1020, D5.1045, D5.1047, E2.5094 (Service Advisory: c01505151), E3.7459 (Service Advisory: c01505151), F1.0101, F1.0102, F1.01A1, F1.01A2, F1.0501, F1.0502, F1.0503, F1.0505, F1.0506, F1.0507, F1.0508, F1.05A1, F1.05A2, F1.05A3, F1.05A5, F1.05A6, F1.05A7, F1.05A8, F2.0101, F2.0102, F2.01A1, F2.01A2, F2.0501, F2.0502, F2.0503, F2.0505, F2.0506, F2.0507, F2.0508, F2.05A1, F2.05A2, F2.05A3, F2.05A5, F2.05A6, F2.05A7, F2.05A8 <p>New deductive tree: 31.1305, 31.1307, 31.1310, 49.144B, 49.205A, 49.4C27, 49.5001, 49.60zz, 68.yyzz, A3.3836 (Service Notice: c01384229), D2.0200, D5.1046, D5.1048, D5.1049, D5.1050, D5.1059, D5.1060, E3.0BF2 (Service Notice: c01076989), F1.01A4, F1.01A5, F2.01A4, F2.01A5</p> <ul style="list-style-type: none"> Added new appendix Finisher user options for special case options (Service Advisory: c01481836) Updated cleaning procedures (these new procedures supersede any previously published procedures)

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B1.1301: Paper jam at Transparency sensor 1 (SN1)	1306
B1.1302: Paper jam at Horizontal Transport 2 sensor (SN3)	1308
B1.1303: Paper jam at Horizontal Transport 3 sensor (SN2)	1310
B1.1304: Paper jam at Horizontal Transport 4 sensor (SN5)	1312
B2.0101: IDO Input 1 motor (M8) stall	1314
B2.0102: IDO Input 2 motor (M10) stall	1317
B2.0103: IDO Curler motor (M15) stall	1320
B2.0104: IDO Media Eject motor (M13) stall	1323
B2.0105: IDO Duplex motor (M12) stall	1326
B2.0106: IDO Output motor (M11) stall	1330
B2.02E1: Close left-side lower panel	1333
B2.02E2: Close left-side middle panel	1335
B2.02E3: Close left-side upper panel	1337
B2.0301: Able to open locked left-side upper panel	1339
B2.03C1: IDO Diverter solenoid (SOL2)	1341
B2.03C2: Cannot open left-side upper panel	1343
B2.06C1: Left-side Middle Panel LED (LED3) not lit	1345
B2.06C2: Output Bin LED (LED14) not lit	1347
B2.06C3: IDO Curler LED (LED2) not lit	1349
B2.06C4: Left-side Upper Panel LED (LED5) not lit	1351
B2.1301: Paper jam at IDO Input Staging 2 sensor (SN10)	1353
B2.1302: Paper jam at IDO Media Thickness encoder (EN14)	1355
B2.1303: Paper jam at IDO Input Staging 1 sensor (SN7)	1357
B2.1304: Paper jam at IDO Input Media sensor (SN8)	1359
B2.1305: Paper jam at IDO Output Media sensor (SN9)	1361
B2.1306: Paper jam at IDO Output 1 sensor (SN15)	1363
B2.1307: Paper jam at IDO Output 2 sensor (SN12)	1365
B2.1308: Paper jam at IDO Duplex Staging sensor (SN11)	1367

B2.1309: Paper jam at IDO Duplex Media sensor (SN16)	1369
C1.0101: Drum motor (M3) stall	1371
C1.01A1: Drum motor (M3) requires higher than normal power (PWM) to operate	1374
C1.06C1: Drum Illumination 1 LED (LED8) not lit	1376
C1.06C2: Drum Illumination 2 LED (LED9) not lit	1378
C1.06C3: Noise in the drum drive area	1380
C2.0201: Dryer Temperature sensor (SN36) problem	1382
C2.06C1: Dryer LED (LED6) not lit	1385
C2.0901: Dryer fan (FAN5) problem	1387
C2.09A1: Dryer fan (FAN5) RPM too low	1389
C2.0C01: Dryer heater (HTR1) problem	1391
C4.0101: Web Drive motor (M5) stall	1393
C4.0102: Web Wipe Material Lift motor (M4) stall	1397
C4.0201: Spit web not detected	1400
C4.0202: Change web wipe supply	1401
C4.02A1: Low Web wipe supply	1403
C4.0501: Web Advance encoder (EN11) stall	1406
C7.0B06: IDS system will not pressurize	1409
C7.0B07: IDS system will not depressurize	1412
C7.0B08: IDS leak detected	1414
C7.0B10: Black ink supply is empty	1417
C7.0B11: Black ink supply has failed	1418
C7.0B12: Black ink supply is missing	1419
C7.0B13: Black ink supply is non-HP	1420
C7.0B20: Cyan ink supply is empty	1421
C7.0B21: Cyan ink supply has failed	1422
C7.0B22: Cyan ink supply is missing	1423
C7.0B23: Cyan ink supply is non-HP	1424
C7.0B30: Magenta ink supply is empty	1425
C7.0B31: Magenta ink supply has failed	1426
C7.0B32: Magenta ink supply is missing	1427
C7.0B33: Magenta ink supply is non-HP	1428
C7.0B40: Yellow ink supply is empty	1429
C7.0B41: Yellow ink supply has failed	1430
C7.0B42: Yellow ink supply is missing	1431
C7.0B43: Yellow ink supply is non-HP	1432
C7.0B50: Bonding Agent supply is empty	1433
C7.0B51: Bonding Agent supply has failed	1434
C7.0B52: Bonding Agent supply is missing	1435
C7.0B53: Bonding Agent supply is non-HP	1436
C7.0BA0: Magenta ink supply has expired	1437
C7.0BA1: Black ink supply is low	1438
C7.0BA2: Black ink supply has expired	1439
C7.0BA3: Bonding Agent supply has expired	1440

C7.0BA4: Bonding Agent supply is low	1441
C7.0BA5: Yellow cartridge low warning	1442
C7.0BA6: Yellow ink supply has expired	1443
C7.0BA7: Cyan ink supply is low	1444
C7.0BA8: Cyan ink supply has expired	1445
C7.0BA9: Magenta ink supply is low	1446
D1.06C1: Carriage LED (LED10) not lit	1447
D4.0705: Motion PCA (A2) power not good	1449

Appendix A Event Log codes

Event Log code format	1454
Event Log error and warning codes	1457
00.02E2	1480
00.0301	1481
30.0701	1482
30.0702	1483
30.0703	1484
30.0704	1485
30.0705	1486
30.0706	1487
30.0707	1488
30.0708	1490
30.0709	1492
30.0710	1493
30.0711	1494
30.0712	1495
30.0713	1496
30.0714	1497
30.0715	1498
30.0716	1499
30.0717	1500
30.0718	1501
30.0719	1502
30.0720	1503
30.0721	1504
30.0722	1505
30.0723	1506
30.0724	1507
30.0725	1508
30.0726	1509
31.1301	1510
31.1302	1512
31.1303	1514

31.1305	1515
31.1307	1516
31.1308	1517
31.1310	1518
31.1311	1519
31.1312	1520
32.0500	1522
32.08A1	1523
32.08A2	1524
32.08A3	1525
32.0B03	1526
32.0C00	1527
32.0C01	1528
32.1C03	1529
32.1C04	1530
32.1C05	1531
32.1C06	1532
32.1C07	1533
32.1C08	1534
32.1C09	1535
32.1C0A	1536
32.1C0B	1537
32.1C0C	1538
32.1C0D	1539
32.1C0E	1540
32.1C0F	1541
32.1C10	1542
32.1C11	1543
32.1C12	1544
32.1C13	1545
32.1C14	1546
32.1C15	1547
32.1C16	1548
32.1C17	1549
32.1C18	1550
32.1800	1551
32.1801	1552
32.1802	1553
32.1803	1554
32.1804	1555
32.1805	1556
32.1900	1557
32.1901	1558
32.1902	1559

32.1903	1560
32.1904	1561
32.1905	1562
32.1906	1563
32.2100	1564
32.2301	1565
32.2302	1566
32.2600	1567
32.38E1	1568
32.4400	1569
32.4401	1570
32.4402	1571
32.4403	1572
32.5C00	1573
49.0B01	1574
49.0B05	1575
49.144B	1576
49.144D	1577
49.205A	1578
49.2F04	1579
49.4C02	1580
49.4C27	1581
49.5001	1582
49.60zz	1583
49.yyzz	1584
67.yyzz	1585
68.3801	1586
68.8001	1587
68.8002	1588
68.8003	1589
68.8A20	1590
68.9449	1591
68.yyzz	1592
79.yyzz	1593
80.0180	1594
80.0181	1595
80.0182	1596
80.018B	1597
80.018C	1598
80.0301	1599
80.0302	1600
80.0303	1601
80.0304	1602
80.0305	1603

80.0306	1604
80.0307	1605
80.0308	1606
80.0309	1607
80.0310	1608
80.0312	1609
80.0313	1610
80.0314	1611
80.0315	1612
80.0316	1613
80.0317	1614
80.0318	1615
81.yyzz	1616
85.yyzz	1617
86.yyzz	1618
99.000A	1619
99.000C	1620
99.000D	1621
99.000E	1622
99.000F	1623
99.0001	1624
99.0002	1625
99.0004	1626
99.0006	1627
99.0007	1628
99.0009	1629
99.0013	1630
99.0014	1631
99.0015	1632
99.0016	1633
99.0017	1634
99.0018	1635
99.38E2	1636
A0.03A1	1637
A0.1301	1638
A1.0102	1639
A1.0103	1640
A1.0104	1641
A1.01A2	1642
A1.01A3	1643
A1.01A4	1644
A1.01C1	1645
A1.0201	1646
A1.02C1	1647

A1.02C3	1648
A1.0701	1649
A1.07A1	1650
A1.1302	1651
A1.1304	1652
A2.0101	1653
A2.0102	1654
A2.0201	1655
A2.0202	1656
A1.0201	1657
A2.03A1	1658
A2.04A1	1659
A2.04A2	1660
A2.04A3	1661
A2.04A4	1662
A2.04A5	1663
A2.04A6	1664
A2.05A1	1666
A2.1301	1667
A2.1302	1668
A3.0101	1669
A3.0102	1670
A3.0103	1671
A3.0104	1672
A3.0122	1673
A3.0123	1674
A3.0124	1675
A3.0125	1676
A3.0126	1677
A3.0140	1678
A3.0141	1679
A3.0142	1681
A3.0143	1682
A3.0160	1683
A3.01A1	1684
A3.01A2	1685
A3.01A3	1686
A3.01A4	1687
A3.01A5	1688
A3.01A6	1689
A3.01A7	1690
A3.01A8	1691
A3.01A9	1692
A3.01C1	1693

A3.01C2	1694
A3.01E1	1695
A3.0200	1696
A3.0201	1697
A3.0202	1698
A3.0203	1699
A3.0204	1700
A3.0205	1701
A3.0206	1702
A3.0207	1703
A3.0208	1704
A3.0210	1705
A3.0211	1706
A3.0212	1707
A3.0213	1708
A3.0214	1709
A3.0215	1710
A3.0220	1711
A3.0226	1712
A3.0227	1713
A3.0232	1714
A3.0233	1715
A3.0240	1716
A3.0241	1717
A3.0242	1718
A3.0243	1719
A3.0244	1720
A3.0260	1721
A3.0261	1722
A3.0263	1723
A3.0264	1724
A3.02A0	1725
A3.02A1	1726
A3.02A2	1727
A3.02A3	1728
A3.02A4	1729
A3.02A5	1730
A3.02A6	1731
A3.02A7	1732
A3.02A8	1733
A3.02A9	1734
A3.0301	1735
A3.06A0	1736
A3.06A1	1737

A3.06A2	1738
A3.06A3	1739
A3.06A4	1740
A3.06A6	1741
A3.0702	1742
A3.0703	1743
A3.0704	1744
A3.0705	1745
A3.0706	1746
A3.0707	1747
A3.0708	1748
A3.0709	1749
A3.0710	1750
A3.07A1	1751
A3.07A2	1752
A3.07A3	1753
A3.1300	1754
A3.1301	1755
A3.1302	1756
A3.1303	1757
A3.1304	1758
A3.1305	1759
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A3.1320	1764
A3.1321	1766
A3.1322	1768
A3.1323	1769
A3.1324	1770
A3.1325	1771
A3.1360	1772
A3.3801	1773
A3.3836	1774
A3.3839	1775
A3.3880	1776
A3.38zz	1777
A4.0101	1778
A4.0103	1779
A4.0140	1780
A4.0141	1781
A4.0142	1783
A4.0143	1784
A4.01A1	1785

A4.01A2	1786
A4.01A7	1787
A4.01A9	1788
A4.0200	1789
A4.0201	1790
A4.0210	1791
A4.0211	1792
A4.0212	1793
A4.0240	1794
A4.0241	1795
A4.0242	1796
A4.0243	1797
A4.0244	1798
A4.06A0	1799
A4.06A6	1800
A4.0702	1801
A4.0703	1802
A4.0704	1803
A4.0709	1804
A4.07A1	1805
A4.07A2	1806
A4.1300	1807
A4.1301	1808
A4.3880	1809
A4.38zz	1810
B0.0101	1811
B0.1301	1812
B0.1302	1813
B0.1303	1814
B0.1304	1815
B1.0101	1816
B1.0201	1817
B1.1301	1818
B1.1302	1820
B1.1303	1821
B1.1304	1822
B2.0101	1823
B2.0102	1824
B2.0103	1825
B2.0104	1826
B2.0105	1827
B2.0106	1828
B2.01A1	1829
B2.01A2	1830

B2.01A3	1831
B2.0201	1832
B2.0301	1833
B2.03C1	1834
B2.1301	1835
B2.1302	1836
B2.1303	1837
B2.1304	1839
B2.1305	1840
B2.1306	1841
B2.1307	1843
B2.1308	1844
B2.1309	1845
C0.0101	1846
C0.0102	1847
C0.0103	1848
C0.0104	1849
C0.0105	1850
C0.0106	1851
C0.0107	1852
C0.0108	1853
C0.01A1	1854
C0.01A2	1855
C0.01A3	1856
C0.01A4	1857
C0.01A5	1858
C0.01A6	1859
C0.01A7	1860
C0.01A8	1861
C0.01AA	1862
C0.01AB	1863
C0.01AC	1864
C0.01AD	1865
C0.01AE	1866
C0.01AF	1867
C0.0DC2	1868
C1.0101	1869
C1.0102	1870
C1.01A1	1871
C1.0203	1872
C1.0204	1873
C1.02A1	1874
C1.02A2	1875
C1.02A3	1876

C1.02A4	1877
C1.02A5	1878
C1.0501	1879
C1.0503	1881
C1.05A2	1883
C1.1301	1884
C1.1302	1886
C1.1303	1887
C1.131A	1888
C1.132A	1889
C2.0201	1890
C2.0901	1891
C2.09A1	1892
C2.0C01	1893
C3.22A0	1894
C3.22A1	1895
C3.22A2	1896
C3.22A3	1897
C3.22A4	1898
C3.22A5	1899
C3.22A6	1900
C3.22A7	1901
C3.22A8	1902
C3.22A9	1903
C3.22AA	1904
C3.22AB	1905
C3.22AC	1906
C3.22AD	1907
C3.22AE	1908
C4.0101	1909
C4.0102	1910
C4.0201	1911
C4.0202	1912
C4.0203	1913
C4.0204	1914
C4.02A1	1915
C4.0501	1916
C6.0B01	1917
C6.0B02	1918
C6.0B04	1919
C7.0701	1920
C7.0B06	1921
C7.0B07	1922
C7.0B08	1923

C7.0B10	1924
C7.0B11	1925
C7.0B12	1926
C7.0B13	1927
C7.0B20	1928
C7.0B21	1929
C7.0B22	1930
C7.0B23	1931
C7.0B30	1932
C7.0B31	1933
C7.0B32	1934
C7.0B33	1935
C7.0B40	1936
C7.0B41	1937
C7.0B42	1938
C7.0B43	1939
C7.0B50	1940
C7.0B51	1941
C7.0B52	1942
C7.0B53	1943
C7.0BA0	1944
C7.0BA1	1945
C7.0BA2	1946
C7.0BA3	1947
C7.0BA4	1948
C7.0BA5	1949
C7.0BA6	1950
C7.0BA7	1951
C7.0BA8	1952
C7.0BA9	1953
D0.0801	1954
D0.0802	1955
D0.08A1	1956
D0.08A2	1957
D0.08A3	1958
D1.0101	1959
D1.0102	1961
D1.0201	1963
D1.02A1	1964
D1.02A2	1965
D1.0700	1966
D1.0701	1967
D1.0702	1968
D1.071A	1969

D1.071B	1970
D1.071C	1971
D1.071D	1972
D1.072A	1973
D1.072B	1974
D1.072C	1975
D1.072D	1976
D1.073A	1977
D1.073B	1978
D1.073C	1979
D1.073D	1980
D1.074A	1981
D1.074B	1982
D1.074C	1983
D1.074D	1984
D1.075A	1985
D1.075B	1986
D1.075C	1987
D1.075D	1988
D1.076A	1989
D1.076B	1990
D1.076C	1991
D1.076D	1992
D1.0900	1993
D1.0A07	1994
D1.0A08	1995
D1.0A1A	1996
D1.0A1B	1997
D1.0A2A	1998
D1.0A2B	1999
D1.0A3A	2000
D1.0A3B	2001
D1.0A4A	2002
D1.0A4B	2003
D1.0A5A	2004
D1.0A5B	2005
D1.0A6A	2006
D1.0A6B	2007
D2.01A0	2008
D2.01A1	2009
D2.01A2	2010
D2.01A3	2011
D2.01A4	2012
D2.01A5	2013

D2.01A6	2014
D2.01A7	2015
D2.0200	2016
D2.02A1	2017
D2.0701	2018
D2.0702	2019
D2.0703	2020
D2.0704	2021
D2.0705	2022
D2.0707	2023
D2.0708	2024
D2.0709	2025
D2.0710	2026
D2.0711	2027
D2.0712	2028
D2.0713	2029
D2.0714	2030
D2.0715	2031
D2.0716	2032
D2.0723	2033
D2.0724	2034
D2.0901	2035
D2.09A1	2036
D2.09A2	2037
D2.0AA1	2038
D2.0AA2	2039
D2.0AA3	2040
D2.0AA4	2041
D2.0AA5	2042
D2.0AA6	2043
D2.2001	2044
D2.2002	2045
D2.2003	2046
D2.2004	2047
D2.2005	2048
D3.0701	2049
D3.1101	2050
D3.1102	2051
D3.2301	2052
D3.3700	2053
D3.4400	2054
D4.0701	2055
D4.0702	2057
D4.0703	2058

D4.0704	2059
D4.0705	2060
D4.0706	2062
D4.0707	2063
D4.0708	2064
D4.0711	2065
D4.0712	2066
D4.0713	2067
D4.0714	2068
D4.0715	2069
D4.0716	2070
D4.0717	2071
D4.07C1	2072
D4.07C2	2073
D4.09A1	2074
D4.09A2	2075
D5.1000	2076
D5.1001	2077
D5.1002	2078
D5.1003	2079
D5.1004	2080
D5.1005	2081
D5.1006	2082
D5.1007	2083
D5.1008	2084
D5.1009	2085
D5.1010	2086
D5.1011	2087
D5.1012	2088
D5.1013	2089
D5.1014	2090
D5.1015	2091
D5.1016	2092
D5.1017	2093
D5.1018	2094
D5.1019	2095
D5.1020	2096
D5.1021	2097
D5.1022	2098
D5.1023	2099
D5.1024	2100
D5.1025	2101
D5.1026	2102
D5.1029	2103

D5.1030	2104
D5.1031	2105
D5.1032	2106
D5.1035	2107
D5.1036	2108
D5.1037	2109
D5.1038	2110
D5.1039	2111
D5.1040	2112
D5.1045	2113
D5.1046	2114
D5.1047	2115
D5.1048	2116
D5.1049	2117
D5.1050	2118
D5.1051	2119
D5.1058	2120
D5.1059	2121
D5.1060	2122
D5.3801	2123
D5.3802	2124
D5.3803	2125
D5.3804	2126
D5.3805	2127
D5.3806	2128
D5.3807	2129
D5.3808	2130
D5.3809	2131
D5.380A	2132
D5.380B	2133
D5.380C	2134
D5.380D	2135
D5.380E	2136
D5.380F	2137
D5.3810	2138
DD.0215	2139
DD.0237	2140
DD.0432	2141
DD.051D	2142
DD.0710	2143
DD.0802	2144
DD.0804	2145
DD.0926	2146
DD.4D07	2147

DD.4D08	2149
DD.FFFF	2151
DD.YYZZ	2152
E2.5094	2153
E3.0BF2	2154
E3.7459	2155
E3.7481	2156
Ex.yyzz	2157
F1.0101	2158
F1.0102	2160
F1.0103	2162
F1.01A1	2163
F1.01A2	2165
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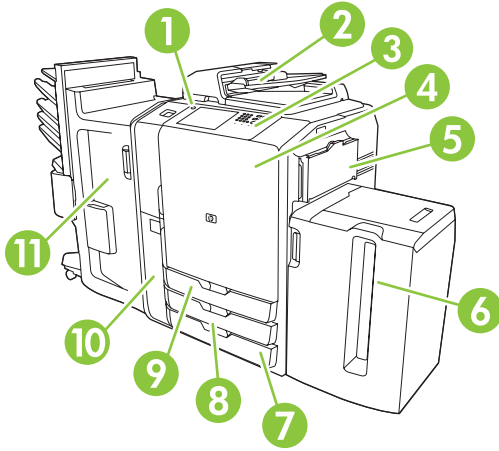
1 Product information

- [Product walkaround](#)
- [Turn the device on and off](#)
- [Use the control panel](#)
- [Supported paper](#)

Product walkaround

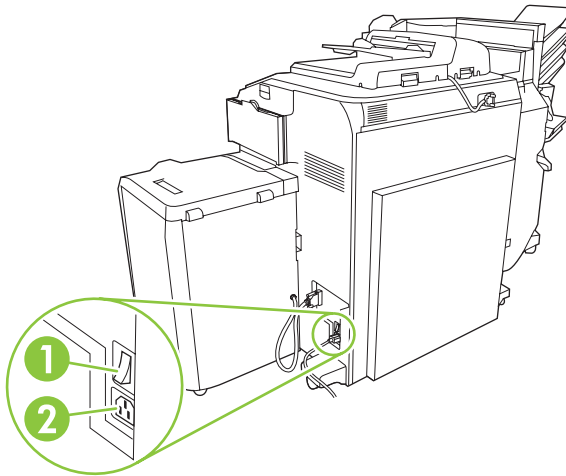
Before using the device, familiarize yourself with its major components.

Front view




1	On/off button
2	Document feeder
3	Control panel
4	Front door
5	Tray 1 (manual feed; holds 80 sheets of standard paper)
6	Tray 5 (optional high-capacity tray; holds 4,000 sheets of standard paper)
7	Tray 4 (holds 500 sheets of standard paper)
8	Tray 3 (holds 500 sheets of standard paper)
9	Tray 2 (holds 500 sheets of standard paper)
10	Ink cartridge door
11	Optional finisher

Back view (right side)



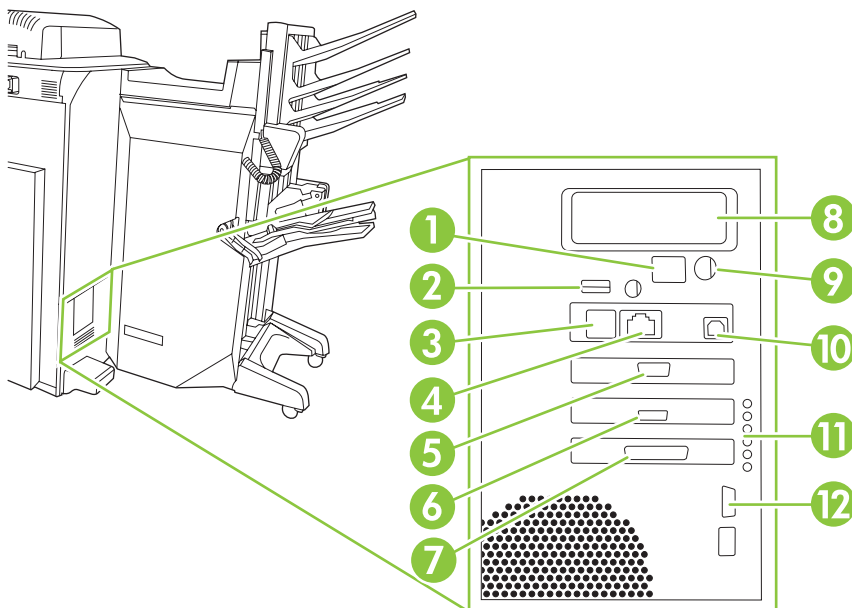
- | | |
|---|---------------------|
| 1 | Master power switch |
| 2 | Power connection |

 **NOTE:** See [Turn the device on and off on page 7](#) for guidelines on turning the device off.

 **WARNING!** Do not use the master power switch or unplug the device unless you have already turned the device off by using the on/off button on the control panel. If you use the master power switch to turn off the device, wait for the amber LED to turn dark before you turn the switch on again.

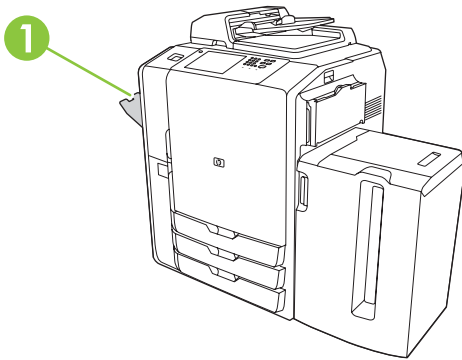
Back view (left side)

The following figure shows the interface ports for the device.



1	Boot Codes LCD monitor (for service use only)
2	Host USB (for connecting an accessory to the device)
3	Fax (RJ-11) (covered with label)
4	Embedded LAN (RJ-45) (no telecommunication connections)
5	CAN Interface (Finisher)
6	Engine Interface (PCI Express)
7	Scanner Interface
8	EIO Slot
9	FIH (Foreign Interface Harness) Requires interface cable C5957-67143.
10	Device USB (for connecting the device to a computer)
11	Status LEDs for (service use only)
12	Engine Power Control (Serial)

Single output bin

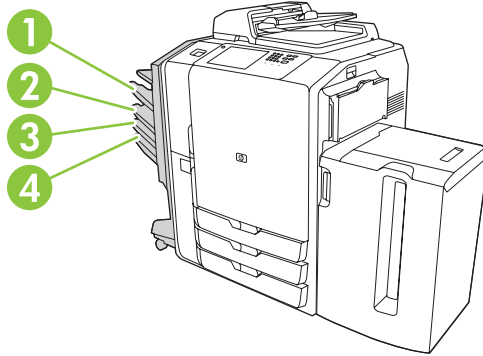


1	Single output bin
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Optional finishers

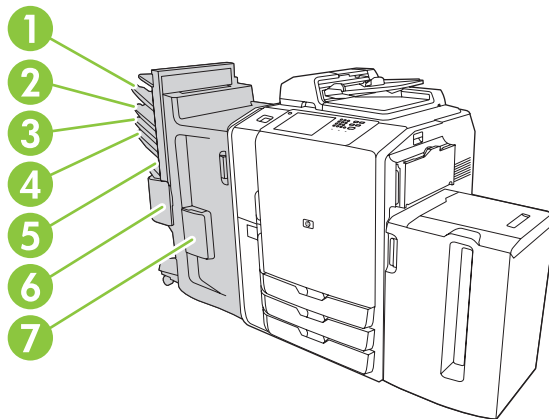
By default, when an optional finisher is installed, all copy jobs are sent to Output Bin 1, print jobs are sent to Output Bin 2, and fax jobs are sent to Output Bin 3. The system administrator can change these default settings.

Optional HP 4-Bin Job Separator



1	Output Bin 1 (Copy jobs)
2	Output Bin 2 (Print jobs)
3	Output Bin 3 (Fax jobs)
4	Output Bin 4

Optional HP Multifunction Finisher



1	Output Bin 1 (Copy jobs)
2	Output Bin 2 (Print jobs)
3	Output Bin 3 (Fax jobs)
4	Output Bin 4
5	Output Bin 5 (all stapled jobs are delivered to Output Bin 5)
6	Stapler 2
7	Stapler 1

Turn the device on and off

There are two power switches on the MFP. The control panel power button is located on the left side of the control panel. The main power switch is located on the right side of the MFP at the bottom. The control panel power button should be used as the primary means for power cycling the device.

There are three ways to shut down the MFP and they should always be attempted in the following order:

1. Press the control panel power button and choose the “Shut down” option from the menu.
2. Press the control panel power button and hold it down for four seconds.
3. Turn off the main power switch.

Method #1 (press the control panel power button and choose “Shut down”) is highly preferable because it is the only method that will result in a logical shutdown of the MFP. A logical shutdown allows the MFP to cap the pens, complete NVM operations, and properly shut down electronics and motors.

Methods #2 and #3 do not perform a logical shutdown, but instead, an immediate shutdown. Immediate shutdowns do not allow the device enough time to cap the pens or to properly shut down the hardware and electronics. This can cause degraded pen health, data loss or data corruption, and additional calibrations during the next power on of the MFP.

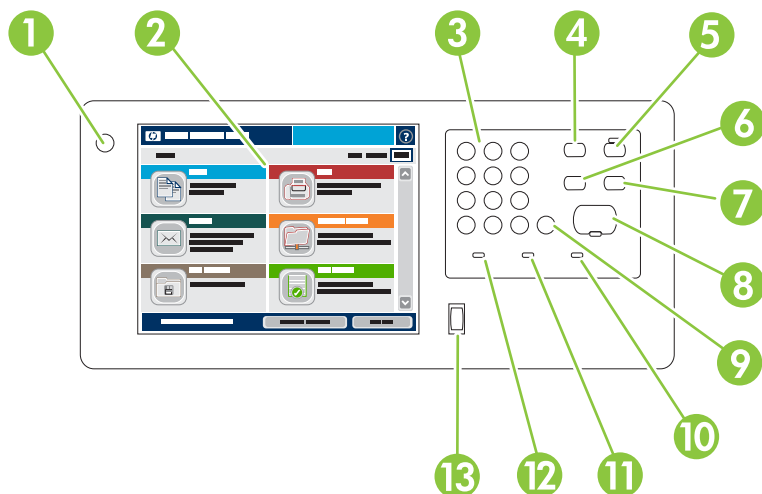
Whenever possible, use the control panel power button and choose the “Shut down” option to ensure that a logical shutdown is done to maintain MFP health.

△ **CAUTION:** If you use the main power switch to turn off the device, wait for the amber LED to turn dark before you turn the switch on again.

Use the control panel

The control panel has a full-color VGA touchscreen that provides easy access to all device functions. Use the buttons and numeric keypad to control jobs and the device status. The LED lights indicate overall device status.

Control-panel layout



1	On/off button	Turn the device on and off.
2	Touchscreen	Select and use all device features.
3	Numeric keypad	Specify the quantity for copies and other numeric information.
4	Interrupt button	Pause the device so you can insert a new job into the queue for immediate printing.
5	Sleep button	Put the device into a low-power, Sleep mode to save energy. If the device is already in Sleep mode, the light next to the button is lit amber. Press Sleep to return to the ready mode.
6	Reset button	Restore all the device settings to the default values, and return to the Home screen. Press this button to sign out if you are signed in.
7	Stop button	Halt the current job. The job status screen opens. If the device was processing a print job, it prompts you to cancel the job or to resume it. If it was processing a scan job, the job is immediately canceled. Touch OK to continue.
8	Start button	Begin copying, scanning, printing a stored job, or resume printing a job that has been interrupted.
9	Clear button	Clear the active number or text field, or return it to the default value.
10	Attention light	Indicates that the device has a condition that requires intervention. Examples include an empty paper tray or an error message on the touchscreen.
11	Data light	Indicates that the device is receiving data.
12	Ready light	Indicates that the device is ready to begin processing any job.
13	Brightness-adjustment dial	Controls the background lighting of the touchscreen.

Home screen

The Home screen provides access to the device features, and it indicates the current status of the device.

NOTE: Depending on how the system administrator has configured the device, the features that appear on the Home screen can vary. To use some features, you might need to sign in.



1	Device status line	Provides information about the overall device status. Various buttons appear in this area, depending on the current status. For a description of the buttons that can appear on the touchscreen, see Buttons on the touchscreen on page 11 .
2	Features	Depending on how the system administrator has configured the device, the features that appear in this area can include any of the following items: <ul style="list-style-type: none"> ● Copy ● Fax ● E-mail ● Network Folder ● Job Storage ● Job Status ● Supplies Status ● Administration ● Service You might need to scroll to see all the features.
3	Help button	Open the built-in Help system. You can search for information by using the Help menu, or you can search by keyword. See Control-panel Help system on page 11 .
4	Copy count	Indicates the number of copies that the device is set to make. To change the copy count, touch the box to open a virtual keypad, or use the numeric keypad on the control panel.
5	Scroll bar	Touch the up or down arrows on the scroll bar to see the complete list of available features.

6	Sign In or Sign Out	<p>You might be required to sign in to use features for which the system administrator has controlled access. These features have a lock symbol (🔒) next to them. Depending on your permissions, if you have signed in, you still might not have access to some features.</p> <p>NOTE: The lock symbol appears after you have signed in. The device administrator can access all of the device features, except the Service menu.</p> <p>Touch Sign In to open a virtual keyboard so you can type your user name and password, or type your access code. After you sign in, the name of this button changes to Sign Out.</p>
7	Network Address	<p>Find information to connect the device to the network or to install a printer driver.</p>
8	Date and time	<p>The current date and time appear here. The system administrator can select the format that the device uses to show the date and time, for example: 12-hour format or 24-hour format.</p>

Buttons on the touchscreen

Various buttons can appear on the touchscreen.



Home button. Touch this button to go to the Home screen from any other screen.



Start button. Touch this button to begin the action for the feature that you are using.

NOTE: The name of this button changes for each feature. For example, in the [Copy](#) feature, the button is named [Start Copy](#).



Information button. This button appears when two or more settings are in conflict. Touch the button to learn how to resolve the conflict.



Error button. This button appears whenever the device has an error that requires attention before it can continue. Touch this button to see a message that describes the error. The message also has instructions for solving the problem.



Warning button. This button appears when the device has a problem but can continue functioning. Touch the warning button to see a message that describes the problem. The message also has instructions for solving the problem.



Help button. Touch this button to open the built-in online Help system. For more information, see [Control-panel Help system on page 11](#).

Control-panel Help system

The device has a built-in Help system that explains how to use each screen. To open the Help system, touch the Help button (🔍) in the upper-right corner of the screen.

For some screens, the Help opens to a global menu where you can search for specific topics. You can browse through the menu structure by touching the buttons in the menu. You can also search for information by using a keyword. Touch [Index](#) and then type a keyword.

For screens that contain settings for individual jobs, the Help opens to a topic that explains the options for that screen.

If the device alerts you of an error or warning, touch the error (❗) or warning (⚠️) button to open a message that describes the problem. The message also contains instructions to help solve the problem.

Supported paper

The device produces high-quality documents in the fastest possible time when you follow these guidelines:


- The device is designed to work with a broad range of plain papers for general-office use. For optimum performance, use paper from the list of recommended papers.
- Always configure the tray for the correct paper type, and select the correct type from the printer driver.

Before using any paper, verify that it is of good quality and is free of cuts, nicks, tears, spots, loose particles, dust, wrinkles, curls, or bent corners.

Recommended paper

The paper types that are listed in this section have been tested and are known to work with the device. These paper types are divided into three categories:

- HP-brand tested and qualified papers. Use these paper types for the best results. Some of these papers have been specially formulated for use with this device.
- HP-brand papers that are not specifically optimized for this device. These papers work with the device, but the results might be of lesser quality than when using the tested and qualified papers.
- Certain non-HP brand papers. These paper types produce satisfactory print quality.

 **NOTE:** Because HP cannot control paper formulations for these non-HP papers, future results might not match past testing.

HP-brand paper is available at www.hpshopping.com or from local office-supplies retailers.

△ **CAUTION:** Using paper or other print media that does not meet HP specifications might cause problems that require repair. This repair is not covered by the HP warranty or service agreements.

The device does not support envelopes or transparencies.

Table 1-1 Supported brands of paper for this device

HP-brand tested and qualified papers	HP-brand supported papers (not optimized for this device)	Tested non-HP papers
Plain paper	HP All-In-One Paper	North America
HP Office	HP Everyday Copy & Print Paper	Boise X9
HP Multipurpose	HP LaserJet Paper	Domtar Copy Paper
HP Printing Paper	HP Color Laser Paper	GP Spectrum DP Copy
HP Copy Paper	HP Advanced Paper	GP Copy Paper
HP Office Paper LG	HP Office Recycled Paper	IP HammerMill Fore MP
Brochure paper	HP Inkjet Paper	IP Great White Copy Paper
HP Edgeline Glossy, 180 g/m ²	HP Color Inkjet Paper	Wausau Exact Multipurpose
HP Edgeline Glossy, 220 g/m ²	HP Bright White	Weyerhaeuser Husky Xerocopy
HP Premium Presentation Matte	HP Premium Choice	Xerox 4200
HP Brochure and Flyer Paper Matte		Outside North America
Speciality paper		Clairealfa White
HP Office Paper - Prepunched		IP Rey Office
HP Labels		IP Duo Colourcopy
		Mondi IQ Economy
		M-Real Data Copy
		Portucel Navigator Universal
		Stora-Enso Multicopy
		UPM Office copy/print
		Xerox Premier
		Reflex Pure White

Guidelines for using specialty papers

Table 1-2 Guidelines for specialty papers

Paper type	Guidelines
Labels	<p>Load labels only in Tray 1. Load labels with the front side facing down.</p> <p>Labels should lie flat with no more than 13 mm (0.5 inch) of curl in any direction.</p> <p>Use only full sheets of labels. If sheets have spaces between the labels, labels can peel off, which can cause jams that are difficult to remove.</p> <p>Do not use labels that have wrinkles, bubbles, or that are peeling off the backing paper.</p>

Table 1-2 Guidelines for specialty papers (continued)

Paper type	Guidelines
Cardstock	<p>Load heavier cardstock, up to 220 g/m² (80 lb cover) cardstock, only in Tray 1.</p> <p>Cardstock up to 180 g/m² (67 lb cover) can be loaded in any tray.</p> <p>Cardstock should have a smoothness rating of 100 to 180 Sheffield.</p> <p>Cardstock should lie flat with no more than 13 mm (0.5 inch) of curl in any direction.</p> <p>Do not use cardstock that is wrinkled, nicked, or otherwise damaged.</p>
HP Edgeline Glossy	<p>Load HP Edgeline Glossy paper only in Tray 1.</p> <p>Fan the stack of paper before placing the sheets in the tray. This helps prevent the sheets from sticking together.</p>
Transparencies	The device does not support transparencies. Do not try to print on them.
Envelopes	The device does not support envelopes. Do not try to print on them.

Recommended paper for specific types of documents

The device supports many types of paper. Use the information in the following table to select a type of paper for specific types of documents.

Table 1-3 Recommended papers for document types

Document type	Recommended paper	Type of finish
General office copying and printing	HP Office	Matte
	HP Office LG (long grain)	
Color document	HP Bright White	Matte
Photographs, images	HP Edgeline Glossy, 180 g/m ²	Glossy
	HP Edgeline Glossy, 220 g/m ²	
Correspondence	HP Office	Matte
	HP Office LG (long grain)	
Letterhead	HP Bright White	Matte
Report	HP Premium Presentation Matte	Coated Matte
	HP Brochure and Flyer Paper Matte	
Cover	HP Edgeline Glossy, 220 g/m ²	Glossy
Business plan	HP Edgeline Glossy, 180 g/m ²	Glossy
	HP Edgeline Glossy, 220 g/m ²	
Proposal	HP Bright White	Matte
Brochure	HP Edgeline Glossy, 180 g/m ²	Glossy
	HP Edgeline Glossy, 220 g/m ²	
Sales flyer	HP Edgeline Glossy, 180 g/m ²	Glossy
	HP Edgeline Glossy, 220 g/m ²	

Table 1-3 Recommended papers for document types (continued)

Document type	Recommended paper	Type of finish
Catalog	HP Edgeline Glossy, 180 g/m ²	Glossy
	HP Edgeline Glossy, 220 g/m ²	
Postcard	HP Edgeline Glossy, 220 g/m ²	Glossy
Chart	HP Bright White	Matte
Sign	HP Edgeline Glossy, 220 g/m ²	Glossy
Map	HP Edgeline Glossy, 220 g/m ²	Glossy
Newsletter	HP Bright White	Matte
Restaurant menu	HP Edgeline Glossy, 220 g/m ²	Glossy
Training manual	HP Office	Matte
	HP Office LG (long grain)	
	HP Office (prepunched)	
User manual	HP Office	Matte
	HP Office LG (long grain)	
	HP Office (prepunched)	

Supported paper types for each tray

When you select a paper type, you are instructing the device to use a group of predefined settings to create the best possible print quality for that type of paper.

△ **CAUTION:** Selecting a paper type that does not match the type of paper that is loaded in the tray can damage the device.

Table 1-4 Supported paper types for each tray

Paper type that is listed in the printer driver or on the control panel	Description	Tray 1	Trays 2, 3, and 4	Tray 5
Plain	Plain, uncoated paper that is less than 150 g/m ² (40 lb bond)	X	X	X
HP Office LG	A3 or 11x17 inch paper that is known to be long-grain and less than 150 g/m ² (40 lb bond)	X	X	X
HP Matte Premium 120g	Use only for HP Premium Presentation Matte Paper, 120 g/m ²	X		
HP Matte Brochure 180g	Use only for HP Brochure and Flyer Paper Matte, 180 g/m ²	X		
HP Matte Cover 200g	Use only for this HP-brand paper.	X		
HP Glossy Edgeline 180g	Use only for HP Glossy for Edgeline Paper, 180 g/m ²	X		
HP Glossy Edgeline 220g	Use only for HP Glossy for Edgeline Paper, 220 g/m ²	X		
Cardstock	Plain, uncoated paper that is from 160 to 220 g/m ² (60 to 80 lb cover)	X		
Cardstock	Plain, uncoated paper that is from 160 to 180 g/m ² (60 to 67 lb cover)	X	X	X
Matte	Plain, uncoated paper. A3 or 11x17 inch paper must be long-grain.	X	X	X
Matte Brochure	Plain, uncoated paper. A3 or 11x17 inch paper must be long-grain.	X	X	X
Matte Cover	Plain, uncoated paper that is from 160 to 220 g/m ² (60 to 80 lb cover)	X		
Labels	Uncoated, non-glossy labels	X		
Letterhead	Fine, uncoated paper that is less than 150 g/m ² (40 lb bond)	X	X	X
Preprinted	Plain, uncoated paper that is less than 150 g/m ² (40 lb bond)	X	X	X
Prepunched	Letter (3-hole) or A4 (2- or 4-hole) size paper that is less than 150 g/m ² (40 lb bond)	X	X	X

Table 1-4 Supported paper types for each tray (continued)

Paper type that is listed in the printer driver or on the control panel	Description	Tray 1	Trays 2, 3, and 4	Tray 5
Colored	Plain, uncoated paper that is less than 150 g/m ² (40 lb bond)	X	X	X
Bond	Fine, uncoated paper that is less than 150 g/m ² (40 lb bond)	X	X	X
Recycled	Plain, uncoated paper that is less than 150 g/m ² (40 lb bond)	X	X	X

Supported paper sizes for each tray

Standard paper sizes are marked in the trays. To use a custom paper size, use Tray 1.

Table 1-5 Supported paper sizes for each tray

Size	Dimensions	Tray 1	Trays 2, 3, and 4	Tray 5
Letter	216 x 280 mm	X	X	X
	8.5 x 11 inches			
Legal	216 x 356 mm	X	X	
	8.5 x 14 inches			
Executive	184 x 267 mm	X	X	
	7.25 x 10.5 inches			
Statement	140 x 216 mm	X	X	
	5.5 x 8.5 inches			
8.5 x 13	216 x 330 mm	X	X	
	8.5 x 13 inches			
11 x 17	280 x 432 mm	X	X	
	11 x 17 inches			
12 x 18	305 x 457 mm	X		
	12 x 18 inches			
4 x 6	102 x 152 mm	X		
	4 x 6 inches			
5 x 7	127 x 178 mm	X		
	5 x 7 inches			
5 x 8	127 x 203 mm	X		
	5 x 8 inches			
A3	297 x 420 mm	X	X	
	11.69 x 16.54 inches			

Table 1-5 Supported paper sizes for each tray (continued)

Size	Dimensions	Tray 1	Trays 2, 3, and 4	Tray 5
A4	210 x 297 mm 8.27 x 11.69 inches	X	X	X
A5	148 x 210 mm 5.83 x 8.27 inches	X	X	
RA3	305 x 430 mm 12.01 x 16.93 inches	X		
RA4	215 x 305 mm 8.46 x 12.01 inches	X		
SRA4	225 x 320 mm 8.86 x 12.6 inches	X		
B4 (JIS)	257 x 364 mm 10.12 x 14.33 inches	X	X	
B5 (JIS)	182 x 257 mm 7.17 x 10.12 inches	X	X	
B6 (JIS)	128 x 182 mm 5.04 x 7.17 inches	X		
8K	273 x 394 mm 10.75 x 15.5 inches	X		
16K	197 x 273 mm 7.75 x 10.75 inches	X		
Custom	Minimum: 102 x 152 mm (4 x 6 inches) Maximum: 320 x 457 mm (12.6 x 18 inches)	X		

Capacity of each tray and bin

To avoid jams and print-quality problems, load the trays with the correct amount of paper. Load complete reams at one time.

Remove paper from the output bins when they are full.

Table 1-6 Capacity of each tray and bin

Tray or bin	Capacity	Weight
Scanner glass	One sheet of paper, up to 305 x 445 mm (12 x 17.1 inches) Maximum scanning area is 297 x 433 mm (11.7 x 17.0 inches)	Any weight of paper Objects, such as books, up to 50 mm (1.97 inches) high
Document feeder	100 sheets of paper, 75 g/m ² (20 lb bond)	60 to 135 g/m ² (16 to 36 lb bond)
Tray 1	80 sheets of paper, 75 g/m ² (20 lb bond)	60 to 220 g/m ² (16 to 58 lb bond)
Trays 2, 3, and 4	500 sheets of paper, 75 g/m ² (20 lb bond)	60 to 180 g/m ² (16 to 48 lb bond)
Tray 5	4,000 sheets of paper, 75 g/m ² (20 lb bond) Letter or A4 size only	60 to 180 g/m ² (16 to 48 lb bond)
Single output bin	250 sheets of paper, 75 g/m ² (20 lb bond)	60 to 220 g/m ² (16 to 58 lb bond)
HP Multifunction Finisher	Output Bins 1 and 2: 400 sheets Output Bins 3 and 4: 200 sheets Output Bin 5: 2,500 sheets	60 to 220 g/m ² (16 to 58 lb bond)
HP 4-Bin Job Separator	Output Bins 1 and 2: 400 sheets Output Bins 3 and 4: 200 sheets	60 to 220 g/m ² (16 to 58 lb bond)

Supported paper sizes for each bin

Table 1-7 Supported paper sizes for each bin

Bin	Length	Width
Output Bins 1, 2, 3, and 4	457 to 152 mm (18 to 6 inches)	320 to 102 mm (12.6 to 4 inches)
Output Bin 5	432 to 230 mm (17 to 9.1 inches)	297 to 182 mm (11.7 to 7.2 inches)
(HP Multifunction Finisher only)		

2 Service approach

- [How to use this manual](#)
- [Service call flow](#)
- [Remote support and embedded Web server \(EWS\)](#)
- [Protected Service Mode \(PSM\)](#)
- [Safety notes](#)
- [Service toolkit](#)
- [MFP serial number explanation](#)

Servicing the device is based on focused, directive instructions for troubleshooting as well as a proactive approach for preventive maintenance.

By using the Copier Diagnostic Field Tool (CDFT), service personnel can retrieve, process, and display device information either on the MFP control panel or on a connected laptop. Calibrations and adjustments to MFP subsystems can be controlled through CDFT. Displayed fault trees guide service personnel through a series of questions and actions to resolve the root cause of a problem. With a laptop connected to the MFP, removal and replacement procedures for individual subsystems can be accessed.

A subset of the CDFT tools enable preventive maintenance by tracking of parts that can be serviced or replaced proactively by service personnel. During operation, the MFP gathers and stores maintenance data and internal counter information in logs for each of its serviceable items. Calculations based on actual customer usage and site environmental factors provide an intelligent estimate as to when specific hardware components will require attention. These maintenance tasks are monitored and performed as part of regular service visits.

How to use this manual

Use this table to find information in this manual.

Subject	Where to look in the manual
Troubleshooting	<ul style="list-style-type: none">• If an error or warning code is displayed in the Event Log, see Event Log error and warning codes on page 1457.• If a message is displayed on the control panel at an incorrect time, see Control panel messages on page 1111.• For print-quality and copy-quality troubleshooting, see the image quality troubleshooting guide.• For other troubleshooting, see Problem conditions on page 1037.
Maintenance and service intervals	See Managing and maintenance on page 77 .
NVM management	See Managing and maintenance on page 77 .
Calibrations	<ul style="list-style-type: none">• For a detailed description of each calibration, see Calibrations and adjustments on page 135.• For help running each calibration in CDFT, see Calibrate the MFP on page 58.
Service information pages	See Service information pages on page 2278 .
Test pages	<ul style="list-style-type: none">• For a detailed description of each page, see Image quality pages on page 2280.• For help printing each test page in CDFT, see Print a test page on page 68.


Service call flow

- [Initial activities](#)
- [Repair activities](#)
- [Final activities](#)
- [Extended power off situations](#)
- [Handling and disposing of service parts and consumables](#)
- [Battery disposal](#)
- [Fluorescent lamps](#)

Initial activities

The initial action of a service call is to determine the reason for the call, and then to identify and organize the actions that need to be performed.

1. Service arrives on site and gathers the information about the service call and the condition of the MFP.
2. Question the operators. Ask about the location of the most recent paper jam, the image quality, and the MFP performance in general, including any unusual sounds or other indications.
3. Check that the power cords are in good condition, correctly plugged in the power source, and free from any defects that would be a safety hazard. Repair or replace the power cords as required. Check that the circuit breakers are not tripped.
4. Record the MFP counter readings.
5. Determine what preventive maintenance items are due and perform those items.

 **NOTE:** Each preventive maintenance item has an associated internal counter. It is important that the service person resets the counter for that item every time maintenance is performed. Failure to do so will not allow for accurate tracking and performance monitoring. See [Copier Diagnostic Field Tool \(CDFT\) on page 45](#) for information on the use of these counters.

NOTE: Using the customer's printing volume, evaluate the PM items that should be performed to avoid an additional service visit in the near future.

6. Select the event log.
 - a. Record the information in the error and warning logs.
 - b. Classify this information into categories:
 - Information that is related to the problem that caused the service call.
 - Information that does not require action, such as a single occurrence of a problem.
7. Check the service maintenance log for any recent activities that are related to the problem that caused the service call.
8. Inspect any rejected copies. Determine the paper quality and weight the customer is using. The recommended paper for optimum image quality with the MFP is HP LaserJet media or white 20 lb office paper. Look for any damage, marks, image quality defects, or other indications of a problem.


If the service call was due to an image-quality issue, follow the image-quality troubleshooting procedures. See the image quality troubleshooting guide.

Repair activities

1. Try to duplicate the problem by running the same type of job that the customer was running.
2. When diagnosing or repairing an error in a particular subsystem, exercise the system by trying to determine the error or failure location. If the same error code returns, access CDFT and enter the appropriate fault tree for that error code and follow the fault tree. When the failure is found, repair as necessary and exercise the system again after the repair to validate that the subsystem has been repaired.


Final activities

1. Inspect the media transports for dust, and then vacuum as needed.

 **NOTE:** Do not use a vacuum cleaner on any electronic components.

2. Ensure that the exterior of the copier and the adjacent area are clean. Use a dry cloth or a cloth moistened with water to clean the copier. Do not use solvents.
3. Conduct any operator training that is needed.
4. Complete the service maintenance log.
5. Perform the following end-of-visit routines to validate that the MFP meets the customer's expectation for image quality and functionality:
 - a. **Automatic printing exercise.** Run the "Automatic" Exercise Device routine from CDFT. This routine takes approximately 8 minutes and exercises the following functions:
 - Printing using all input and output trays
 - Printing using color and black ink
 - Printing single- and double-sided prints
 - Stapling with both dual stitch and single-angled stitch staplers, if the MFP is equipped with an HP Multifunction Finisher
 - Job offsetting on all finisher output trays
 - Printing patterns on the paper loaded in the MFP that are selected to fit on that paper
 - b. **ADF copies.** Manually run a copy job through the ADF.
 - c. **Copy from the scanner glass.** Manually copy a page from the scanner glass.

6. If the service call was for an image-quality issue, do the following actions:
- a. Load fresh plain non-ColorLok 8.5 x 11 or A4 paper in Tray 2 and then verify that the media type setting is correct.
 - b. Load fresh plain non-ColorLok 11 x 17 or A3 paper in Tray 3 and then verify that the media type setting is correct.
 - c. Print the following test pages:
 - PQ test page from Tray 2. Verify that the overall print quality is acceptable.
 - Nozzle Health plot with error hiding **on** from Tray 2. Verify that there are no missing or misdirected nozzles. Verify that the Bonding Agent pens are working.
 - Pen Alignment test page. Verify that the carriage-to-carriage alignment, the pen-to-pen alignment, and the die-to-die alignment are correct. Any misalignment must not exceed one pixel.
 - Dimensional IQ 11 x 17 or A3 test page. Verify that the image placement, leading-edge registration, image centering, image size, skew, and magnification are correct.

 **NOTE:** For help printing the test pages, see [Print a test page on page 68](#). For help using the test pages, see [Image quality pages on page 2280](#).

7. If the service call involved a copy-quality problem, do the following actions:
- a. Specify the following copy settings:
 - Image adjustments: Normal
 - Color/Black: Auto
 - Copy Quality: Professional
 - Optimize Text/Picture: Auto
 - Color Adjustments: Normal
 - Color Balance: Normal
 - Reduce/Enlarge: Auto
 - Set all other options to off or default.
 - b. Make a copy of the PQ test page. Evaluate the quality of the copy.
 - c. Specify the following copy settings:
 - Color/Black: Black
 - Reduce/Enlarge: 100%
 - Set all other options to off or default.
 - d. Make one copy of the Dimensional IQ 11 x 17 or A3 test page from the scanner platen glass in order to verify that the scanner adjustments are correct.
 - e. Make one copy of the Dimensional IQ 11 x 17 or A3 test page from the ADF in simplex mode in order to verify that the ADF adjustments are correct.

- f. Make one copy of the Dimensional IQ 11 x 17 or A3 test page from the ADF in duplex mode with the original face up in order to verify that the centerline duplex front adjustment is correct.
 - g. Make one copy of the Dimensional IQ 11 x 17 or A3 test page from the ADF in duplex mode with the original face down in order to verify that the centerline duplex back adjustment is correct.
8. Discuss the service call with the customer to ensure that the customer understands what has been done and is satisfied with the results of the service call.

Extended power off situations

Some customers, such as schools, might not use the MFP for extended periods. During an extended period, the MFP will be powered down and unused. The MFP pens will be installed and in the capping station.

Extended periods of inactivity pose two risks to customer satisfaction:

- The pen health of a pen might degrade to the point that the pen is not recoverable and must be replaced.
- The automatic pen cleaning routine that launches when the MFP is restarted and detects an unhealthy pen might take up to 20 minutes to run.

If the customer plans to not use the MFP for an extended period, suggest that the customer power on the MFP and print a few pages at least once every six weeks.

Handling and disposing of service parts and consumables

All service repair, preventive maintenance, replacement parts, and consumables, including wipes and cleaning supplies, shall be removed from the customer's site unless specifically instructed otherwise. Service part handling and disposition will vary from country/region, and even by state or province. It is, therefore, extremely important that you acquaint yourself with the specific requirements for your locale to supplement this general overview.

Service parts shall be segregated into the following categories:

1. Wet parts and assemblies, those containing liquids, ink or bonding agent contaminated absorbent material or wipes used to clean up ink or bonding agent spills, shall be placed in a sealable bag or container immediately following removal from the device, packaged, and labeled for handling in accordance with the specific instructions for your locale for wet parts (these parts might be considered hazardous waste in some countries/regions, state or province). Spent lubricants (containers) should be included with this category.
2. Individual batteries, liquid crystal displays (LCDs), and lamps used for scanning and backlighting shall be segregated, packaged, and labeled for handling in accordance with the specific instructions for your locale for hazardous or universal wastes. Assemblies containing these materials might be included in category 3.
3. Remaining parts and assemblies shall be packaged and labeled for return to the global operations recycling centers or another designated vendor for your area per the specific instructions for recyclable parts for your locale.

Specific contact information and instructions, including a list of parts that will be included in each category for your locale, will be provided through the technical service bulletins and service operating procedures. Keeping a service part waste log will be necessary with the information required by the specific instructions for each category of materials.

For information about the disposal of batteries and the fluorescent lamp in the display LCD (which contains mercury), see [Battery disposal on page 27](#) and [Fluorescent lamps on page 27](#).

Battery disposal

This HP device contains two lithium-manganese dioxide coin-cell batteries that are located on the primary printed circuit board assemblies. These batteries might require special handling at end-of-life.

The Netherlands



Taiwan



廢電池請回收

California

Attention California users: The battery that is supplied with this device may contain perchlorate material. Special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate for information.

Fluorescent lamps

This HP product contains the following materials that might require special handling at end of life: **Mercury** (in the fluorescent lamp in the display LCD). Disposal of mercury can be regulated because of environmental considerations. For disposal or recycling information, please contact your local authorities or the Electronic Industries Alliance (EIA) (www.eiae.org).

Remote support and embedded Web server (EWS)

- [Overview](#)
- [The embedded Web server \(EWS\)](#)
- [Configurable Service Links](#)
- [Other Settings](#)

Overview

The HP CM8050/8060 MFP provides on-site and off-site access to diagnostic service information through the embedded Web server (EWS).

On-site access is supported via the EWS service information and configuration Web pages, accessible within the customer environment. Service personnel can access the device information without the physical presence of the MFP.

Off-site access to service information is enabled via e-mail notification features. These features allow service personnel to use a proactive approach to maintenance and support. For example, the MFP can be configured to e-mail the preventive maintenance information on a periodic basis. Service personnel can use this information to identify which parts they should bring to the next service visit.

The embedded Web server (EWS)

Introduction

The EWS is embedded in the device firmware and accessed using a standard Web browser.

Service personnel access is limited to device service and maintenance information. Proprietary customer data is not available to service personnel.

Access to non-service functions requires a password that is created and managed by a customer or customer network administrator. Only service personnel have access to service and maintenance information.


Use the EWS

Access the EWS using a computer with a network connection to the MFP inside of the customer's security firewall.

 **NOTE:** Connect the laptop directly to the MFP via a LAN cable or use a customer's PC.

Access the EWS


1. Open a Web browser software program.
2. Type the device IP address in the **Address** field.

 **NOTE:** The device IP address can be found on the configuration information page. If the device IP address is unknown, print a configuration page.

3. Click **Go**, or press **Enter**.

Log into the EWS

The remote access service password for the EWS is the same as the remote access service password for the MFP control panel. A service password must be configured at the control panel before service personnel can access the EWS.

 **TIP:** For more information on how to set up the service password for the MFP, see [Set the remote access password \(CDFT-E only\) on page 71](#)

1. Open the EWS and click **Log In** in the upper-right corner of the screen.

The **Enter Network Password** dialog box appears. The appearance of the login screen can vary, depending on your operating system and browser.

2. Type `service` for the user name, type the service password, and then click **OK**.

Log off the EWS

1. Click **Log Off** in the upper right corner.
2. Close the browser.


 **NOTE:** It is important to completely terminate the connection by closing the browser.

XDM (XML Device Model)

XDM (XML Device Model) is an HP proprietary specification that is used to store machine data and configuration information such as error and warning logs, preventive maintenance counters, page counts, and others. XDM can be accessed remotely through the e-mail notification and HP Instant Support features. The data can be used to remotely diagnose machine failures and predict preventive maintenance needs.

An XDM viewer application is provided to simplify viewing of the XDM data. The XDM viewer is available on the service support Web site.


The XDM content varies by user type. For the service user, service information such as the Warning log and the Preventive Maintenance information is included. No customer private data is available in the service contents of the XDM, and no service information is available in the administrator or user contents of the XDM.

 **TIP:** See the system administrator guide for more information about user types and the EWS.

E-mail notification features

E-mail notification is supported by the Alerts and AutoSend features.

These features require the configuration of the Notification Server in the EWS. The Notification Server should be configured by the customer or system administrator. Service users should always test their Alert and AutoSend configurations using the **Test** button. If the test does not result in an e-mail message sent to the configured e-mail address, the service person should request that the customer configure the Notification Server.

 **TIP:** See the system administrator guide for more information about e-mail notification features.

Alerts

The EWS can be configured to send e-mail alerts for device errors and warnings that require immediate attention. Alert messages can be sent to your e-mail account, your cell phone, or a Web server. For example, the MFP can send an e-mail notifying service when the Web wipe is nearing depletion. More than one individual can receive alert messages, with each person receiving only the alerts that are meaningful to them.


 **NOTE:** See the EWS alerts configuration page for more information.


Alerts available to service personnel include:

- **Web Wipe Warning:** Triggered when the web wipe has only a couple of days' supply remaining
- **Service Call Error:** Triggered by system errors that caused a **Call Service** message to appear on the device control panel

Alert messages can also include the following information as e-mail attachments:

- Configuration
- Supplies
- Usage
- Error log
- XDM file (printers.xml)

 **NOTE:** You should always attach the XDM file. It contains service information including the warning log and the preventive maintenance information. Use the XDM viewer to see this information.

 **TIP:** See the system administrator guide for more information about using and configuring Alerts.

AutoSend

AutoSend enables the MFP to automatically send XDM data to a configurable list of e-mail destinations on a regular basis. AutoSend can send XDM data at specific time or page-count intervals. Service personnel can review the XDM for impending preventive maintenance requirements and device failures prior to a customer visit.

 **TIP:** See the system administrator guide for more information about using and configuring AutoSend.


View and Print MFP information

Use the EWS **Information** tab to view and print MFP status and service information. Use the **Print Device Page** button on the bottom right corner of each page to print information pages.

 **NOTE:** The **Print Device Page** button is only available to service personnel.

The following information pages are available using EWS:

- Device Status
- Device Information
- Print
- Configuration
- Supplies
- Error Log
- Warning Log
- Usage
- Preventative Maintenance
- Jam History
- Service Settings
- Service Summary

 **TIP:** See the system administrator guide for more information about viewing and printing information pages.

Configurable Service Links

The **Settings** tab provides two locations for configuring internet links related to service and support.

Ordering Information page

Service personnel can use the **Ordering Information** page to direct users to the correct supplies ordering Web sites. Once configured, this information is presented to users in the **Supplies Status** page on the **Information** tab.

The **Supplies Status** page shows the description and links configured at the **Ordering Information** page. Users and administrators use this information to order supplies.


Edit Other Links page


The service user can add two custom links to the **Other Links** box on the EWS, using the **Edit Other Links** page. These internet links can be used by the customer to access a service provider's Web site and contact information, or any other Web site the service provider needs the customer to have access to.

Other Settings

The following pages under the **Settings** tab are available to both service personnel and administrators:

- Language
- Date & Time
- Sleep Schedule
- Maintenance

 **TIP:** See the system administrator guide for more information about using these pages.

 **NOTE:** Both service personnel and administrators have access to these settings and can override one another.

Protected Service Mode (PSM)

When the engine detects a hardware failure, a service fault is reported to the formatter, and shuts down to avoid damage to the unit. The formatter maps these service faults to error codes, displays the Call Service error message, and logs the specific entry into the error log. If the service fault is detected as part of the normal startup process, the power-on sequence results in the engine shutting down.

Service faults cause the engine to shut down all communication and CDFT is not able to communicate with MFP devices, such as sensors or motors. In order to allow diagnostics, the MFP must be restarted in Protected Service Mode (PSM). In PSM, the system is powered up into a minimal state to enable critical features only, such as diagnostics. It is similar to Windows® “SAFE mode”, a minimal-function state that provides the ability to diagnose the engine and isolate the faulty hardware.

PSM is initiated by service personnel through the Startup Menu. For information on starting the Startup Menu, see [Startup Menu service functionality on page 101](#).

Note that the MFP cannot process print jobs in PSM and a power cycle will be required after PSM to reset the system for printing.

△ **CAUTION:** Once out of PSM, closing the last MFP door or installing a door interlock override device will cause the carriages to move after a few seconds' delay, potentially causing pinch points.

An example service call might have the following sequence of events:

1. The system is consistently coming up from power cycling with a service fault, indicated by a Call Service error display on the control panel.
2. Service personnel power cycle the MFP into PSM to diagnose the engine service fault.
3. Service personnel use CDFT-E to isolate faulty components in the following ways:
 - Viewing the error log
 - Viewing the error details
 - Linking to diagnostic tool pages to exercise the components identified
 - Testing and probing with a volt meter
4. Service personnel exits PSM, and then cycles power on the MFP

Safety notes

To reduce risk of injury from fire or electric shock, always follow basic safety precautions when using the device.

Observe all warnings and instructions marked on the device.

Do not touch the contacts on the end of any of the sockets on the device. Replace damaged cords immediately.

Do not install or use the device near water or when you are wet.

Use only a grounded electrical outlet when connecting the device to a power source.

There is a risk of explosion if the battery is replaced with an incorrect type. Dispose of used batteries according to the instructions.

Be careful of sharp edges at various locations on the MFP.



Warning!: Risk of injury from moving parts. Do not reach into stapler. Do not reach below moving trays.

Do not install a door interlock override device on the lower-left door interlock before you remove and replace an ink cartridge.

To prevent personal injury, do not install a door interlock override device while clearing a media jam. The system will start automatically once the jam is cleared and all of the MFP interlocks are closed. Once the last MFP door is closed or an interlock override device is installed, there might be some delay before the system resumes printing.

To prevent personal injury, use caution when installing a door interlock override device. Once the last MFP door is closed or a door interlock override device is inserted, and without any jams present, there is a few seconds' delay before the carriages move, potentially causing pinch points.

To activate and deactivate the IDS relief valve with the IDS pressurized, the system must be in PSM mode. If service wants to activate and deactivate the IDS relief valve while the IDS is pressurized in a non-CDFT PSM mode, the IDS air system cannot be pressurized.

Ensure that the Network and Fax cables are physically removed from the MFP before entering CDFT. This will prevent print and fax jobs from starting unexpectedly during MFP servicing.

There are certain pen servicing routines that will be initiated occasionally at the end of a print/copy job. There is a 2-second delay from the end of the print/copy job to the start of the pen servicing routines.

Use gloves and safety glasses when handling ink parts.

Multifunction finishers and 4-bin separators have sharp metal edges near their wheels which can pose a safety risk to anyone who sticks their hand underneath the device. In order to reduce this risk, all devices should have a protective cover over these edges.

Service toolkit

Quantity	Tool description
Off the shelf (Required)	
1	Triplet Digital Multimeter - model 9005
1	Model 6244 Minigrabber® Test Clip To Right Angle Sheathed Banana Plug Test Lead, Red
1	Model 6244 Minigrabber® Test Clip To Right Angle Sheathed Banana Plug Test Lead, Black
1	Sharp Point Pogo Meter Probes
1	Screwdriver-Phillips #2 40 mm
1	Screwdriver-Phillips #2 200 mm
1	Screwdriver-Phillips #2 100 mm
1	Screwdriver-Phillips #1 75 mm
1	Screwdriver-Flat Tip 100 mm x 3.5 mm
1	Screwdriver-Flat Tip 150 mm x 6.5 mm
1	Plier-Cutter with Recoil Spring
1	Plier-Needle Nose With Recoil Spring
1	Mini Maglite AA
1	Screwdriver Set-Miniature
1	Wrench Set-Metric Hex, 1.5-5 mm
1	Screwdriver-Magnetic Ratcheting 4"
1	IP30 TORX Plus bit for Ratching Screw Driver Kit
1	IP20 TORX Plus bit for Ratching Screw Driver Kit
1	IP10 TORX Plus bit for Ratching Screw Driver Kit
1	IP8 TORX Plus 50 mm bit for Ratching Screw Driver Kit
1	IP6 TORX Plus 50 mm bit for Ratching Screw Driver Kit
1	15 cm Metric Ruler
1	Dust Blower
1	3M Vacuum cleaner
	220VAC model
	120VAC model
1	Field Service Grounding ESD kit (wrist strap, mat, clips, leads)
1	Eye loop (7x with recital. Recital design is TBD)
1 pack (300 per pack)	Lint free cloths (TexWipes TX609 9" x 9" square)
Off the shelf (Recommended)	

Quantity	Tool description
1	Tool Case
1	Sash Brush
1	Push/Pull Spring Hook
1	Swiss Army Knife
1	Captive Spring Hook
1	Magnetizer/Demagnetizer
1	Pocket Mirror
1	Magnetic Pick-Up Tool
1	Pen Level
1	450 mm metric ruler
1	Safety glasses
1 box	Disposable Vinyl Gloves (medium)
1 box	Disposable Vinyl Gloves (large)
1	Laptop PC (for CDFTI) with the following minimum supported configuration: <ul style="list-style-type: none"> Windows XP Professional operating system with Service Pack 2 Administrator privilege Microsoft .NET 1.1 framework (.NET 2.0 will not work but can also be present) 512 MB RAM Intel Pentium 4 processor or equivalent running 1.6 Ghz or higher 2 GB free disc space (needed for application, Scan and Analyze files, and RFU bundles) CD-RW drive DVD-ROM drive USB 2.0 interface Network interface compatible with the MFP interface
Off the shelf (Optional)	
1	DB9 Female/Female straight through cable (6ft minimum - used to connect Serial Log Cables to the laptop)
1	Feeler Gauge - Metric 0.005-1.00 mm
1	3M Temflex Tape
1	Plier-Vise Grip Curved Jaw 10.1 cm
1	10.5" Screwdriver (flat tip)
1	Straight Mini-Pliers

Quantity	Tool description
1	Wire Stripper/Cutter/Pliers
1	Screw Starter
1	Adjustable Wrench 6"
1	Hammer, Ball Peen Hickory Handle 4 oz
1	Clipper Multi-Purpose Cart
1	Film Remover-8 fl. oz. bottle
1	Force Gauge (1800-2200 grams)
1	Ratching Screw Driver Kit (Torx)
1	Wypall Economizer Towels, 12 Bags/Case
1	Drop cloth
MFP-specific (required)	
5	Service interlock cheater switch (HP #3101-4085)
1	SVC TOOL-TIMING PINS, ACCUMULATOR
MFP-specific (recommended)	
	SVC KIT-ELECTRICAL TEST TOOL

MFP serial number explanation

Format

The serial numbers for the MFP and accessories have the following format:

Table 2-1 MFP serial number format

Country/ Region code	Year	Month	Day	Version	Line code	Count value	Hidden code
CC	Y	M	D	V	L	XXX	HCID

Country/Region code

Table 2-2 Country/Region codes

Country/Region code	Meaning
BR	Brazil
CN	China
CZ	Czech Republic
ES	Spain
HU	Hungary
MX	Mexico
MY	Malaysia
TH	Thailand
SG	Singapore
US	United States

Year

The year code is the last digit of the year of manufacture. For example, a year code of 5 represents a manufacture date of 2005.

Month

Table 2-3 Month codes

Month code	Meaning
1	January
2	February
3	March
4	April
5	May

Table 2-3 Month codes (continued)

Month code	Meaning
6	June
7	July
8	August
9	September
A	October
B	November
C	December

Day


Day code	Meaning	Day code	Meaning
1	1	H	17
2	2	I	18
3	3	J	19
4	4	K	20
5	5	L	21
6	6	M	22
7	7	N	23
8	8	O	24
9	9	P	25
A	10	Q	26
B	11	R	27
C	12	S	28
D	13	T	29
E	14	U	30
F	15	V	31
G	16		

Version

The version code indicates the version number of the model.

Preproduction units use the digits from 1 to 9.

Production units use the characters from B, C D, F, G, H, J, K, M, N, P, Q, R, S, T, V, W, Y, and Z.

 **NOTE:** The characters A, E, I, L, O, and U are not used for the version code.


Line

The line code indicates the production line on which the printer was built.

Count value

Each unit is assigned a count value. The count value is set to 001 each day at midnight and is increased by one for each printer manufactured that day.

The count value uses the digits 1 to 9 and the characters B, C D, F, G, H, J, K, M, N, P, Q, R, S, T, V, W, Y, and Z.

 **NOTE:** The characters A, E, I, L, O, and U are not used for the version code.

Hidden code

The hidden code is an alphanumeric field that maps to a specific model. This field is only used by the factory and distribution centers to control model differences within a product type. This field is not printed in the human-readable portion of the serial number that is on the product serial label. The hidden code is only included in the bar-coded portion of the product serial label.

Serial number location

- [MFP](#)
- [ADF](#)
- [Scanner](#)
- [Tray 5](#)
- [HP Multifunction Finisher](#)
- [HP 4-Bin Job Separator](#)

MFP

The serial number for the MFP is located on the lower right cover, next to the master power switch.



ADF

The serial number for the ADF is located on the underside between the two ADF hinges.



Scanner

The serial number for the scanner is accessed from the right side of the MFP.

1. Open Tray 1.

2. Remove one screw.



3. Remove the scanner service cover.



Tray 5

The serial number for Tray 5 is located on the rear cover.



HP Multifunction Finisher

The serial number for the HP Multifunctional Finisher is located on the lower right frame, near the fixed castors.



HP 4-Bin Job Separator

The serial number for the HP 4-Bin Job Separator is located on the lower rear frame.



3 Copier Diagnostic Field Tool (CDFT)

This chapter contains information about the following topics:

- [Introduction](#)
- [Troubleshoot the MFP and accessories](#)
- [Perform Preventive Maintenance \(PM\)](#)
- [Manage and maintain firmware](#)
- [Calibrate the MFP](#)
- [Print a test page](#)
- [View, print, and edit service information](#)
- [Set the remote access password \(CDFT-E only\)](#)
- [Calibrate the HP Multifunction Finisher](#)
- [Set the HP 4000-sheet input tray paper size](#)
- [Set the scanner default media size](#)
- [Adjust the power setting \(200-240V AC systems only\)](#)
- [Performance settings](#)

Introduction

This section introduces the two versions of the Copier Diagnostic Field Tool (CDFT) and how to start the tool.

Overview

CDFT is a software tool used to service the MFP and accessories.

Use CDFT for the following tasks:

- Troubleshoot the MFP and accessories
- View the preventive maintenance item replacement schedule
- Calibrate the MFP and accessories
- Maintain and manage the MFP firmware
- View and print service information

Two CDFT versions

There are two versions of CDFT:

- CDFT-L (laptop version)
- CDFT-E (embedded version)

CDFT-L

CDFT-L is the full-featured application that can be run on a Windows XP laptop. The embedded Web server can be launched directly from CDFT-L.

Authentication for CDFT-L is completed by using a Remote Access Password. This dynamic password is set in CDFT-E.

To set the password in CDFT-E, see [Set the remote access password \(CDFT-E only\) on page 71](#).

CDFT-E

CDFT-E runs on the MFP control panel. CDFT-E offers all of the functionality of CDFT-L, with the following exceptions:


- CDFT-E does not contain fault trees.
- CDFT-E supports firmware upgrades through a USB drive.
- The electronic version of the service manual is not accessible from CDFT-E.

Authentication for CDFT-E is completed by using a static Service Access Code that is set during the manufacturing process.

CDFT-E has available a service assist mode. With service assist mode, the customer can log into a restricted version of CDFT and help with remote troubleshooting. For more information, see [Use service assist mode on page 53](#).


Start using CDFT

- [How to start CDFT-L](#)
- [How to start CDFT-E](#)

 **NOTE:** To start a service assist call, see [Use service assist mode on page 53](#).

How to start CDFT-L


Follow these steps to start CDFT-L:

 **NOTE:** Wireless must be turned off before connecting to the MFP in order to use CDFT-L.

1. Connect a LAN cable from the laptop to the MFP LAN port.

 **NOTE:** If you need to perform an RFU, use a USB cable to connect to the MFP. For more information, see [Use CDFT to perform an RFU on page 56](#).

2. Turn on the power to the MFP and wait for the system to initialize.
3. Start the CDFT-L application from the laptop.
4. When prompted, type the remote access password in the **Password** field and click **OK**.


 **NOTE:** The remote access password is set in CDFT-E. See [Set the remote access password \(CDFT-E only\) on page 71](#).

If you have trouble connecting directly to the MFP with CDFT-L, see [CDFT-L direct connection problems on page 1090](#).

How to start CDFT-E

To start CDFT-E from the MFP control panel:

1. Touch **Service** on the control panel home screen.
2. Select the language you want.

 **NOTE:** This step is only required when accessing full service mode for the first time.

3. Enter the Service PIN, and then touch **OK**.

Options available in CDFT-L, CDFT-E, Service Assist Mode, and Protected Service Mode (PSM)

This table summarizes options available in CDFT-L, CDFT-E, Service Assist Mode, and Protected Service Mode (PSM).

Function	CDFT-E (non-PSM)	CDFT-L (non-PSM)	PSM	Service Assist Mode
Run motors, solenoids	X	X		
Test voltages			X	
Change remote service password	X			
Deductive page view	X	X	X	X

Function	CDFT-E (non-PSM)	CDFT-L (non-PSM)	PSM	Service Assist Mode
Check sensors	X	X	X	X
View fault trees		X		
View removal and replacement procedures		X		
Remote connection		X		
View logs	X	X	X	X
View PM items	X	X	X	X
Communication test	X	X	X	
Calibrations	X	X		
Remote firmware upgrade	X	X		

Troubleshoot the MFP and accessories

- [Use the Event Log](#)
- [Use the subsystems menu](#)
- [Troubleshoot image quality](#)
- [Use service assist mode](#)

Use the Event Log

- [View recently reported errors and warnings](#)
- [View the full Event log](#)
- [Troubleshoot an event](#)
- [Troubleshooting Options](#)
- [View diagnostic trends](#)

View recently reported errors and warnings

The CDFT **Home** screen displays recently reported errors and warnings in the **Recent Events** box.

View the full Event log

To view the full **Event Log**, do one of the following:

- Click **View Log and Troubleshoot** on the CDFT **Home** screen to view the complete **Event Log**.
- or
- Click **Settings/Procedures**, and then click **Event Log**.

The **Event Log** displays the following information for each event:

- **Code:** Error or warning code
- **Timestamp:** Time that the event was reported
- **Description:** A description of the event
- **Pages:** The page count at the time that the event was last reported
- **Repetitions:** The number of times the event has been reported

Troubleshoot an event

To troubleshoot an event in the Event Log:

- Click the event entry that you want to troubleshoot, and then click **Troubleshoot**.

CDFT displays a troubleshooting screen for the event code.

The troubleshooting screen lists potential root causes for each event and recommended actions for diagnosing the event. Follow the recommended actions, in order, and stop when the event has been successfully diagnosed.

Access the following items from the troubleshooting screen:

- Subsystem diagnostic pages
- Diagrams
- Fault trees (CDFT-L only)

Troubleshooting Options

- [Use subsystem diagnostic pages](#)
- [View diagrams](#)
- [Use fault trees \(CDFT-L only\)](#)

Use subsystem diagnostic pages

Each subsystem has at least one diagnostic screen. To access the diagnostic screen for a subsystem:

- Click the button that displays the subsystem name from the troubleshooting screen for the event code.

View diagrams

From the troubleshooting screen for the event code, click one of the following buttons:


- Component locator
- Wiring diagram
- Parts diagram (CDFT-L)

In CDFT-E, the diagrams are displayed on the control panel. In CDFT-L, an electronic version of the service manual opens and displays diagrams.

Use fault trees (CDFT-L only)

Use the step-by-step fault tree wizard in CDFT-L to troubleshoot an event code. To use the wizard:

- Click **Fault tree** from the troubleshooting screen for the event code.

 **NOTE:** While diagnostic information is available for all event codes, not all event codes have a corresponding fault tree. If a fault tree is not available for an event code, the **Fault tree** button is not displayed.

When a fault tree is used for troubleshooting a subsystem, the diagnostic screen for the subsystem does not need to be accessed. The fault tree displays all service application components needed for troubleshooting.

View diagnostic trends

The **Event Log** is used to perform the following tasks:

- [View all diagnostic trends](#)
- [View diagnostic category trends](#)
- [View diagnostic trend graphs](#)

View all diagnostic trends

The **Diagnostic Trends** screen displays the following information:

- **Code:** Error or warning code
- **Timestamp:** Time that the event was reported
- **Subsystem:** Specific subsystem affected by the event
- **Trend:** The trend category

By default, all trends are listed when accessing the **Diagnostic Trends** screen.

View diagnostic category trends

The Diagnostic Trends screen can be filtered for specific primary event types. Available event categories are:

- **Carriage Inaccuracy**
- **Power Electronics**
- **Paper Jams**

To view primary diagnostic category trends:

1. Click **View Diagnostic Trends** from the **Event Log**.
2. Click an event category in the **Diagnostic Trends** box.

The list is updated to show only events for the category selected.

View diagnostic trend graphs

To view trend graphs:

1. Click **View Diagnostic Trends** from the **Event Log**.
2. Click an event category in the **Diagnostic Trends** box.
3. Click **View Graph/Change Interval** in the **Trend Time Interval** box.

 **NOTE:** Two different graphs are available.

Use the subsystems menu

Use the subsystems menu to view diagnostic pages for specific subsystems of the MFP.

Understand the subsystems diagnostic pages

The subsystems diagnostic pages are categorized by functional system, such as dryer, vacuum, and scanner. Use the pages to directly access status information for subsystem components.

To access the subsystems diagnostic pages:

- Click **Subsystems**, and then click the button for the subsystem that you want to diagnose.


△ **CAUTION:** If CDFT crashes during a test on a component, power cycle the MFP.

Run devices

Use the subsystems menu to engage subsystem devices in order to perform troubleshooting. For example, specific LEDs, sensors, and motors can be turned on and off in an isolated manner.

To run a device:


1. Click **Subsystems**, and then click the button for the subsystem containing the device.
2. Navigate to the subsystem component that you want, and then click the button for the specific device that you want to run.

 **NOTE:** Typically, white indicates the sensor's normal state and green indicates an activated state. For some sensors, however, there is not a "normal" state, as for example, the paper size sensors on the paper trays. In this case, the "normal" state would depend on the paper size inserted in the tray at the time the reading is taken. Some drum sensors can also not have a Q state (normal state) after the drum is moved with the CDFT.

How to test voltages with CDFT

Follow these steps to test the voltage to a motor with CDFT:

1. Use the Service Test Tool to bypass the wire harness between the motor and the Motion PCA (A2).
For more information, see [How to test voltages on page 1030](#).
2. Open the appropriate diagnostic page for the motor you want to test.
3. Click **Voltage Test**, and then click the button for the motor that you want to test.

 **NOTE:** The system must be in PSM mode for testing motor voltages.

Test communications

Use the **Communication** menu to perform communication tests with all PCAs and pens in the MFP.

To test communications:

1. Click **Subsystems**, and then click **Communication**.
2. Click **Start Test**.

Troubleshoot image quality

- [Scan and analyze \(CDFT-L only\)](#)

Scan and analyze (CDFT-L only)

The scan and analyze function is used to determine whether a print is within specification for a specific type of defect selected from a list. The scan and analyze home page will display a list of available tests to choose from, each test has an internal test target associated with, when the user selects a test, a thumbnail of the test target will be shown to the right side of the list.

To perform the scan and analyze function using CDFT-L:

1. Click **Settings/Procedures**, and then click **Scan and Analyze**. Follow the instruction on the screen.
2. Select one test from the list by clicking on it to enable the options buttons at the bottom of the screen. You have these three options:
 - **Load existing image:** Select this option if you have a previously stored tiff file that you want to analyze again.
 - **Target already printed:** Select this option if you already have a printed target for the selected test. Follow the instructions to place the printed target on the platen glass to run the test.
 - **Print Target:** Select this option to run a test from scratch, when you click on this button the target for the selected test will be printed. Follow the on screen instruction to load the printed target on the platen glass to run the test.
3. Place the printed target face down on the scanner glass, look at the picture on the screen to orient the target in the correct direction, make sure the target is properly registered on the rear left corner close the ADF and then click **Scan**.
4. The target will be scanned and the scan raw data will be stored in tiff format in the coprocessor HDD. A tiff file named "rawdata.tif" of the scanned target will be copied to the following directory in the laptop "C:\CDFTScanData". CDFT-L will perform the analysis on the copied file.

Every time a test is performed the existing "rawdata.tif" file will be replaced by the new scanned image, unless the user saves the image with a different name from the results test. Refer to Scan and analyze test results presentation.

Depending on the network connection type selected to run CDFT-L, the test can take from 4 to 6 minutes.

Once the test is done, the results will be displayed in a tabular format. The table headings and the number of columns will depend on the selected test.

Additionally, the results screen will give the user the option to save the scanned TIFF image and test results under a different name. By default, the name of the saved image is as follows: "TestName_rawdata_dd_m_yyyy_h_mm_am.tif" i.e. "VerticalBanding_rawdata_12_2_2006_2_17 PM.tif".

In case the fiducials or reference points in the target can't be found, an error message will appear describing the cause of the error, the potential root causes, and the recommended actions. Follow the recommended actions and then repeat the test.

Use service assist mode

- [Understand service assist mode](#)
- [Start service assist mode](#)
- [End service assist mode](#)


Understand service assist mode

Service assist mode allows customers to access a subset of CDFT-E features. Typically, an end user uses this restricted mode to access the application's features when receiving phone support.

Typical features that are disabled include subsystem tests such as running motors or solenoids, backup of the non-volatile memory, or firmware upgrades.

Start service assist mode

To start service assist mode from the MFP control panel:

 **NOTE:** Service assist mode is available when the user is logged in as a User or Administrator. Touching the **Service** button when logged in as a Service User will load CDFT-E in full service mode.

1. Touch **Service** at the control panel **Home** screen.
2. Enter your access code and then touch **OK**.

A prompt requests whether the user is working with an authorized service person.

3. Select **Yes**.

If the **Service** button is touched when service assist mode is available but the user is not the Service User, the **Service Assist Mode** log in screen is displayed.

4. Type your Service Assist Mode Access Code at the **Log In** screen and touch **OK**.

The CDFT-E application is loaded in service assist mode and takes control of the interface while the control panel home screen is disabled and hidden. Limited CDFT-E functionality is now available.

End service assist mode

To end service assist mode, touch the **X** in the upper right corner of the screen.

When the CDFT-E is exited, it will close down its window and control and focus is returned to the control panel home screen.

Perform Preventive Maintenance (PM)


Use CDFT to perform the following preventive maintenance tasks:

- [Access the embedded Web server \(CDFT-L only\)](#)
- [View the estimated remaining life of a Printer Maintenance \(PM\) item](#)
- [Reset the PM counter for a PM item](#)

Access the embedded Web server (CDFT-L only)


Access the embedded Web server (EWS) directly from CDFT-L:

- Click **Settings/Procedures**, and then click **EWS Access**.

 **NOTE:** The embedded Web server launches in a separate browser window. To log in to the EWS, see [The embedded Web server \(EWS\) on page 28](#).

View the estimated remaining life of a Printer Maintenance (PM) item

PM information is viewable both in **PM Log** and in the **Maintenance Items** box on the **Home** screen.

 **NOTE:** If you have trouble connecting directly to the MFP with CDFT-L, see [CDFT-L direct connection problems on page 1090](#).

View PM information on the CDFT Home screen

The CDFT **Home** screen displays the following PM information:

- Web wipe percent remaining
- Maintenance items

View the PM log

The PM log displays the PM items, the estimated life remaining, and other details for each PM item.

To view the PM log:

- Click **View PM items** on the CDFT **Home** screen.

Reset the PM counter for a PM item

When finished servicing a PM item, reset the PM counter for the item:

1. Select the replaced item from the **PM Items** log.
2. Click **View Selected Item Settings**.
3. Click **Reset** in the **Item Usage Counter**, and then click **OK** to confirm.

Manage and maintain firmware

CDFT can be used to do the following firmware maintenance tasks:

- [Manage non-volatile memory \(NVM\)](#)
- [Use CDFT to perform an RFU](#)
- [Use a USB flash drive to upgrade the firmware](#)

Manage non-volatile memory (NVM)

CDFT can be used to perform the following NVM maintenance tasks:

- Set NVM to back up automatically to the internal storage (CDFT-E)
- Manually back up NVM to an internal or external backup destination
- Manually restore NVM from an internal or external source

For more information, see [Non-volatile memory \(NVM\) backup and restore on page 107](#).

To access the NVM maintenance options:

1. Click **Settings/Procedures**, and then click **NVM**.
2. Click the button for the backup or restore function that you want.



NOTE: **Enable Automatic Backup** must be checked CDFT-E for automatic backup to occur.


Use CDFT to perform an RFU

For more information about remote firmware upgrades, see [Firmware upgrade on page 118](#)

To upgrade the firmware using CDFT-L:

1. Prepare the MFP to receive the RFU file. See [Firmware Download on page 102](#).
2. Use a USB cable to connect the MFP and laptop.
3. Start CDFT-L. See [How to start CDFT-L on page 47](#).
4. Click **Settings/Procedures**, and then click **Firmware Upgrade**.
5. Check the box indicating the upgrade mechanism (**LAN** or **USB**).
6. Click **Browse**, navigate to the file location, and then select the firmware file.
7. Click **Upgrade**.


Use a USB flash drive to upgrade the firmware

 **NOTE:** Firmware updates using a USB flash drive can only be done through CDFT-E in Ready mode and Service Assist mode. Updates with a USB flash drive through the Startup Menu are not supported.

1. Insert the USB flash drive containing the upgrade files into the host USB connector on the lower left side of the MFP.
2. Click **Settings/Procedures**, and then click **Firmware Upgrade**.

CDFT detects the drive and displays a list of the available upgrade files on the USB drive. (The .RFU upgrade file is considered valid if it contains a valid header.) Upgrade information is displayed about the MFP's current firmware version and the upgrade version.

3. Click **Upgrade** to initiate the firmware upgrade.

 **NOTE:** If CDFT determines that data loss is possible, a warning message is displayed. Click **OK** to proceed with the upgrade. For specifics about data loss within a release, refer to the release notes for that firmware version.

4. After the upgrade file from the USB drive has loaded, the MFP will automatically reboot.
5. Remove the USB drive.

Calibrate the MFP


To gain access to calibrations in CDFT, click **Settings/Procedures**, and then click **Calibrations**.

- [Engine Calibrations 1](#)
- [Pen Health Gauge](#)
- [Engine Calibrations 2](#)
- [Scanner and ADF calibrations](#)
- [Tray calibrations](#)

For a full description of a calibration, see [Calibrations and adjustments on page 135](#).

Engine Calibrations 1

The following calibrations are run from this page:

 **NOTE:** All of the following calibrations are available in the Service Assist Mode except New Pen Servicing.

Calibration	Steps	Approximate time	Complete description
Pen Cleaning	Click Pen Cleaning	4.5 to 15 minutes	Pen Cleaning routine on page 151
New Pen Servicing	Select New Pen Servicing	10 minutes	New Pen Servicing routine on page 150
Automatic Pen Alignment (APA)	<ol style="list-style-type: none">1. Load fresh Letter or A4 plain paper in paper tray 1, 2, 3, or 4.2. Select the paper tray.3. Select Automatic Pen Alignment, and then click Start.4. After the calibration completes, print the "Pen Alignment test 8.5x11/A4" page.	18 to 40 minutes	Automatic Pen Alignment (APA) calibration on page 148
Pen Density Compensation	<ol style="list-style-type: none">1. Load fresh Letter or A4 plain paper in paper tray 1, 2, 3, or 4.2. Select the paper tray.3. Select Pen Density Compensation, and then click Start.4. After the calibration completes, print a Composite Gray test page.	12 to 15 minutes	Pen Density Compensation calibration on page 149
Drop Detect	Click Drop Detect	2 to 3 minutes	Drop Detect routine on page 151
Drop Detect Beam	Click Drop Detect Beam	2 to 3 minutes	Drop Detect Beam calibration on page 149

Calibration	Steps	Approximate time	Complete description
Reset Nozzle Health Database (NHDB)	Click Reset NHDB	2 to 3 seconds	Reset NHDB on page 152
Store NHDB	Click Store NHDB	2 to 3 seconds	Store NHDB on page 152


Other features on the page

- **Print Test:** Click to open the Print Test page.
- Diagnostic Plots: Click **Nozzle Health** or **All Colors** to print a diagnostic plot from the selected tray. Use the **Enable Error Hiding** checkbox to turn error hiding on and off when printing these pages. The default for Enable Error Hiding is unchecked (Error Hiding OFF).
- **Pen Health Gauge:** [Pen Health Gauge on page 59.](#)

Pen Health Gauge


The Pen Health Gauge indicates the nozzle health of each pen:

Indicator status	Meaning	Action Required
Green (+)	The pen is healthy.	None
Yellow (!)	The pen is functioning but might need to be cleaned.	Never replace a pen because of yellow. Pen cleaning only if a streak shows in normal prints.
Red (-)	The pen needs to be cleaned.	Pen cleaning
	NOTE: If the Pen Health Gauge indicates that a newly installed pen needs to be cleaned, see Pen Health gauge indicates missing nozzles when a new pen is installed on page 1044.	
Gray (?)	The health of the pen is not known or the NHDB has been reset. Run a Drop Detect to refresh the Pen Health Gauge. See Engine Calibrations 1 on page 58.	Run the Drop Detect routine to refresh the Pen Health Gauge, followed by the New Pen Servicing routine, if needed

 **NOTE:** The gauges status is refreshed anytime the Engine Calibrations 1 page is displayed, the NHDB is reset, or a pen-related calibration completes.


Pen ID: Displays a dialog with the following information:

- Fill date code
- Pen ID

 **NOTE:** The last three digits of the fill date code are the week number (two digits) followed by the last number of the year (one digit). For example, a fill date code of **CMF347** would mean week **34** and year **2007**.

Engine Calibrations 2

The following calibrations are run from this page:

 **NOTE:** Only the Carriage Stopping Accuracy and the Carriage-to-Carriage Alignment calibrations are available in Service Assist Mode.

Calibration	Steps	Approximate time	Complete description
Carriage-to-Carriage Alignment	Click Carriage-to-Carriage Alignment	2 to 22 minutes	Carriage-to-carriage alignment on page 144
Carriage Stopping Accuracy	Click Carriage Stopping Accuracy .	8 to 30 minutes	Carriage Stopping Accuracy calibration on page 141
Carriage Encoder Strip Reset	Click Reset Carriage Encoder .	2 minutes	
Tetris sensor (SN58) Calibration	Follow the onscreen instructions. (Requires the use of the Tetris Sensor calibration kit.)	10 to 11 minutes	Tetris sensor (SN58) calibration on page 163
Reset Pen Density Compensation	Click Reset Pen Density Compensation .	1 second	Pen Density Compensation calibration on page 149
Top-of-form	<ol style="list-style-type: none"> 1. Load several sheets of fresh Letter or A4 plain paper in paper tray 1, 2, 3, or 4. 2. Select the paper tray. 3. Select Top-of-Form, and then click Start. 	2 to 3 minutes	Top-of-form Position calibration on page 163
First Nozzle Position	<ol style="list-style-type: none"> 1. Load several sheets of fresh Letter or A4 plain paper in paper tray 1, 2, 3, or 4. 2. Select the paper tray. 3. Select First nozzle position, and then click Start. 	3 to 4 minutes	First Nozzle Position calibration on page 164
Drum Position	<ol style="list-style-type: none"> 1. Load several sheets of fresh Letter or A4 plain paper in a paper tray. 2. Select the paper tray. 3. Select Drum Position, and then click Start. 	2 to 3 minutes	Drum Position calibration on page 140
Media Side Edge	<ol style="list-style-type: none"> 1. Load several sheets of fresh Letter or A4 plain paper in paper tray 1, 2, 3, or 4. 2. Select the paper tray. 3. Select Media side edge, and then click Start. 	2 to 3 minutes	Media Side Edge calibration on page 139

Other features on the page

- **Tray selection:** Click to select the paper tray from which to feed paper for a calibration.

Scanner and ADF calibrations

You can adjust the scanner and ADF manually or automatically. Automatic adjustments are recommended.

To access a scanner or ADF calibration screen, click **Settings/Procedures**, click **Calibrations**, and then click the button for the calibration screen that you want.


- [Scanner image adjustments](#)
- [Manual scanner image adjustments](#)
- [ADF image adjustments](#)
- [Manual ADF image adjustments](#)

For a full description of a calibration, see [Calibrations and adjustments on page 135](#).

Scanner image adjustments

Follow these steps to perform an automatic scanner image adjustment:

1. Click **Scanner Adjustments** on the **Calibrations** page.

 **NOTE:** Depending on the firmware version, you might need to touch **Automatic Scanner Adjustments** for this step.

2. Select a paper size of 11x17 or A3, as available in the paper trays. (If these sizes are not available, use 8.5x11 or A4.)
3. Touch **Print Target Page**.
4. Place the printed target page on the scanner glass with the top edge of the page facing left.
5. Touch **Copy Target Page**.
6. **Vertical Magnification adjustment**
 - a. Measure the copied page from point A to D. If the measured value is 127 mm \pm 1 mm (5.0 in \pm 0.04 in), skip to the Leading Edge adjustment.
 - b. Touch the **Vertical Magnification** field to select it.
 - c. Using the keypad, enter the measured value.
 - d. Touch **Enter** to update the setting.
 - e. Touch **Copy Target Page** to make another copy and confirm the **Vertical Magnification** adjustment.
7. **Leading Edge adjustment**
 - a. Measure the distance from the top edge of the paper to point F. If the measured value is 20 mm \pm 1 mm (0.79 in \pm 0.04 in), skip to the Centerline adjustment.
 - b. Touch the **Leading Edge Adjustment** field to select it.
 - c. Using the keypad, enter the measured value. Press **Enter**.
8. **Centerline adjustment**

- a. Measure the distance from the left edge of the paper to point E. If the measured value is within the following specification, skip to Confirm adjustments.

Target page size	Scanner centerline specification
Dimensional Image Quality 11x17	139.7 mm ± 1 mm (5.5 in ± 0.04 in)
Dimensional Image Quality A3	148.5 mm ± 1 mm (5.85 in ± 0.04 in)
Dimensional Image Quality 8.5x11	107.9 mm ± 1 mm (4.25 in ± 0.04 in)
Dimensional Image Quality A4	105 mm ± 1 mm (4.13 in ± 0.04 in)

- b. Touch the **Centerline Adjustment** field to select it.
- c. Using the keypad, enter the measured value.
- d. Touch **Enter** to update all the settings. (Entering a 0 (zero) value does not change a setting.)

9. Confirm adjustments

- Touch **Copy Target Page** and confirm all adjustments.

For a full description of the calibration, see [Scanner adjustments on page 138](#)

Manual scanner image adjustments

Follow these steps to perform a manual scanner image adjustment:

1. Click **Scanner Adjustments** on the **Calibrations** page.
2. Touch **Direct Adjust**.
3. Touch **Print Target Page**.
4. Place the printed target page on the scanner glass with the top edge of the page facing left.
5. Touch **Copy Target Page**.
6. **Vertical Magnification adjustment**
 - a. Measure the copied page from point A to D. If the measured value is 127 mm ± 1 mm (5.0 in ± 0.04 in), skip to the Leading Edge adjustment.
 - b. Touch the **+** or **- Vertical Magnification** buttons to adjust.
 - c. Increase the current value if the distance measured is less than 127 mm (5.0 in).
 - d. Touch **Enter** to update the setting.
 - e. Touch **Copy Target Page** to make another copy and confirm the **Vertical Magnification** adjustment.
7. **Leading Edge adjustment**
 - a. Measure the distance from the top edge of the paper to point F. If the measured value is 20 mm ± 1 mm (0.79 in ± 0.04 in), skip to the Centerline adjustment.
 - b. Touch the **+** or **- Leading Edge** buttons to adjust.

- c. Decrease the current value if the distance measured is less than 20 mm (0.79 in).
- d. Touch **Enter** to update the setting.

8. Centerline adjustment

- a. Measure the distance from the left edge of the paper to point E. If the measured value is within the following specification, skip to Confirm adjustments.

Target page size	Centerline specification
Dimensional Image Quality 11x17	139.7 mm ± 1 mm (5.5 in ± 0.04 in)
Dimensional Image Quality A3	148.5 mm ± 1 mm (5.85 in ± 0.04 in)
Dimensional Image Quality 8.5x11	107.9 mm ± 1 mm (4.32 in ± 0.04 in)
Dimensional Image Quality A4	105 mm ± 1 mm (4.13 in ± 0.04 in)

- b. Touch the **+** or **- Centerline** buttons to adjust.
- c. Decrease the current value if the distance measured is less than the specification.
- d. Touch **Enter** to update the setting.

9. Confirm adjustments


- Touch **Copy Target Page** and confirm all adjustments.

For a full description of the calibration, see [Scanner adjustments on page 138](#)

ADF image adjustments

Follow these steps to perform an automatic ADF image adjustment:

1. Click **ADF Adjustments** on the **Calibrations** page.

 **NOTE:** Depending on the firmware version, you might need to touch **Automatic ADF Adjustments** for this step.

2. Select a paper size of 11x17 or A3, as available in the paper trays. (If these sizes are not available, use 8.5x11 or A4.)
3. Touch **Print Target Page**.
4. Place the printed target page face up in the ADF input tray with the top edge of the page facing left.
5. Touch **Single-Sided**.
6. **Vertical Magnification adjustment**
 - a. Measure the copied page from point A to D. If the measured value is 127 mm ± 1 mm (5.0 in ± 0.04 in), skip to the Leading Edge adjustment.
 - b. Touch the **Vertical Magnification** field to select it.
 - c. Using the keypad, enter the measured value.
 - d. Touch **Enter** to update the setting.

- e. Load the original again.
- f. Touch **Single-Sided** to make another copy and confirm the **Vertical Magnification** adjustment.

7. Leading Edge adjustment

- a. Measure the distance from the top edge of the paper to point F. If the measured value is 20 mm \pm 2 mm (0.79 in \pm 0.08 in), skip to the Single-sided Centerline adjustment.
- b. Touch the **Leading Edge Adjustment** field to select it.
- c. Using the keypad, enter the measured value. Press **Enter**.

8. Centerline Simplex adjustment

- a. Measure the distance from the left edge of the paper to point E. If the measured value is within the following specification, skip to Confirm adjustments.

Target page size	ADF centerline specification (Simplex or Duplex)
Dimensional Image Quality 11x17	139.7 mm \pm 2 mm (5.5 in \pm 0.08 in)
Dimensional Image Quality A3	148.5 mm \pm 2 mm (5.85 in \pm 0.08 in)
Dimensional Image Quality 8.5x11	107.9 mm \pm 2 mm (4.32 in \pm 0.08 in)
Dimensional Image Quality A4	105 mm \pm 2 mm (4.13 in \pm 0.08 in)

- b. Touch the **Centerline Adjustment** field to select it.
- c. Using the keypad, enter the measured value.
- d. Touch **Enter** to update all the settings. (Entering a 0 (zero) value does not change a setting.)

9. Confirm adjustments

- a. Place the printed target page **face up** in the ADF input tray with the top edge of the page facing left.
- b. Touch **Single-Sided** and confirm all adjustments.

10. Centerline Duplex Front

- a. Place the printed target page **face up** in the ADF input tray with the top edge of the page facing left.
- b. Touch **Double-Sided**.
- c. Measure the distance from the left edge of the paper to point E in the copy. If the measured value is within the specification listed above, skip to Centerline Duplex Back adjustment.
- d. Touch the **Centerline Duplex Front adjustment** field to select it.
- e. Using the keypad, enter the measured value.
- f. Touch **Enter** to update the setting. (Entering a 0 (zero) value does not change a setting.)

11. Confirm adjustment

- a. Place the printed target page **face up** in the ADF input tray with the top edge of the page facing left.
- b. Touch **Double-Sided** to make another two-sided copy and confirm the adjustment.

12. Centerline Duplex Back

- a. Place the printed target page **face down** in the ADF input tray with the top edge of the page facing left.
- b. Touch **Double-Sided**.
- c. Measure the distance from the left edge of the paper to point E in the copy. If the measured value is within the specification listed above, stop here.
- d. Touch the **Centerline Duplex Back adjustment** field to select it.
- e. Using the keypad, enter the measured value.
- f. Touch **Enter** to update the setting. (Entering a 0 (zero) value does not change a setting.)

13. Confirm adjustment

- a. Place the printed target page **face down** in the ADF input tray with the top edge of the page facing left.
- b. Touch **Double-Sided** to make another two-sided copy and confirm the adjustment.

Manual ADF image adjustments

Follow these steps to perform a manual ADF image adjustment:

1. Click **ADF Adjustments** on the **Calibrations** page.
2. Touch **Direct Adjust**.
3. Touch **Print Target Page**.
4. Place the printed target page face up in the ADF input tray with the top edge of the page facing left.
5. Touch **Single-Sided**.
6. **Vertical Magnification adjustment**
 - a. Measure the copied page from point A to D. If the measured value is $127 \text{ mm} \pm 1 \text{ mm}$ (5.0 in ± 0.04 in), skip to the Leading Edge adjustment.
 - b. Touch the **+** or **- Vertical Magnification** buttons to adjust.
 - c. Increase the current value if the distance measured is less than 127 mm (5.0 in).
 - d. Touch **Enter** to update the setting.
 - e. Place the printed target page face up in the ADF input tray with the top edge of the page facing left.
 - f. Touch **Copy Target Page** to make another copy and confirm the **Vertical Magnification** adjustment.

7. Leading Edge adjustment

- a. Measure the distance from the top edge of the paper to point F. If the measured value is 20 mm \pm 2 mm (0.79 in \pm 0.08 in), skip to the Single-sided Centerline adjustment.
- b. Touch the **+** or **- Leading Edge** buttons to adjust.
- c. Decrease the current value if the distance measured is less than 20 mm.
- d. Touch **Enter** to update the setting.

8. Centerline Simplex adjustment

- a. Measure the distance from the left edge of the paper to point E. If the measured value is within the following specification, skip to Confirm adjustments.

Target page size	ADF centerline specification (Simplex or Duplex)
Dimensional Image Quality 11x17	139.7 mm \pm 2 mm (5.5 in \pm 0.08 in)
Dimensional Image Quality A3	148.5 mm \pm 2 mm (5.85 in \pm 0.08 in)
Dimensional Image Quality 8.5x11	107.9 mm \pm 2 mm (4.32 in \pm 0.08 in)
Dimensional Image Quality A4	105 mm \pm 2 mm (4.13 in \pm 0.08 in)

- b. Touch the **+** or **- Centerline Simplex** buttons to adjust.
- c. Increase the current value if the distance measured is less than the specification.
- d. Touch **Enter** to update the setting.

9. Confirm adjustments

- a. Place the printed target page **face up** in the ADF input tray with the top edge of the page facing left.
- b. Touch **Single-Sided** and confirm all adjustments.

10. Centerline Duplex Front adjustment

- a. Place the printed target page **face up** in the ADF input tray with the top edge of the page facing left.
- b. Touch **Double-Sided**.
- c. Measure the distance from the left edge of the paper to point E in the copy. If the measured value is within the specification listed above, skip to Centerline Duplex Back adjustment.
- d. Touch the **+** or **- Centerline Duplex Front** buttons to adjust.
- e. Increase the current value if the distance measured is less than the specification.
- f. Touch **Enter** to update the setting.

11. Confirm adjustment

- a. Place the printed target page **face up** in the ADF input tray with the top edge of the page facing left.
- b. Touch **Double-Sided** to make another two-sided copy and confirm the adjustment.

12. Centerline Duplex Back adjustment

- a. Place the printed target page **face down** in the ADF input tray with the top edge of the page facing left.
- b. Touch **Double-Sided**.
- c. Measure the distance from the left edge of the paper to point E in the copy. If the measured value is within the specification listed above, stop here.
- d. Touch the **+** or **- Centerline Duplex Back** buttons to adjust.
- e. Decrease the current value if the distance measured is less than the specification.
- f. Touch **Enter** to update the setting.

13. Confirm adjustment

- a. Place the printed target page **face down** in the ADF input tray with the top edge of the page facing left.
- b. Touch **Double-Sided** to make another two-sided copy and confirm the adjustment.

Tray calibrations

To access the Tray calibration screen, click **Settings/Procedures**, click **Calibrations**, and then click **Tray Calibrations**.

- To calibrate the Tray 1 width slider, select one of the three calibration positions displayed.
- Use a ruler to accurately position the width slider to the selected position.
- Press the **Calibrate** button.
- Repeat for all three positions.


Print a test page

Follow these steps to print a test page:

1. From the CDFT home page, click **Settings/Procedures**, and then click **Printing Test**.


The **Printing Test** page opens.

2. Select the test page that you want to print from the list of test pages.

 **NOTE:** Many test pages are included in multiple paper sizes. You do not select the size of the test page separately.

3. Select the following printing options:

- **Input tray:** Enter the number of paper tray you want to use as the paper source.

 **NOTE:** Verify that the paper tray has the appropriate paper size for the test page.


- **Output Bin:** Select the destination for the test page.
- **Number of copies:** Enter the number of copies that you want.
- **Single-sided/Double-sided:** Click to print in simplex or duplex mode.
- **Unstapled/Stapled:** Click to have the test page stapled or unstapled.

4. Follow these steps if you want to print the test page with one of the pens off:

- a. Click **All Pens On**.

A list of the pens is displayed.

- b. Click the pen that you want to shut off.
- c. Click **Done**.

 **NOTE:** To reactivate a pen, click **Pen Off**, click the pen, and then click **Done**. If you exit CDFT, the pen is automatically reactivated.

5. Click **Print**.

View, print, and edit service information

- [View service information](#)
- [Print service information](#)
- [Edit print settings information](#)
- [Export data](#)

View service information

- [View MFP information on the CDFT Home screen](#)
- [View detailed MFP information](#)

View MFP information on the CDFT Home screen

The CDFT **Home** screen displays MFP information and page counts.

View detailed MFP information


To view MFP information:

1. Click **Settings/Procedures**.
2. Click **Print Information Pages**.
3. Click **Related Information** for those pages that are viewable.

Print service information

To print service information:

1. Click **Settings/Procedures**.
2. Click **Print Information Pages**.
3. Select the page or pages that you want to print.
4. Click **Print Selected Pages**.

 **NOTE:** To view the **Event Log**, **Warning Log**, **Jam History**, or **Preventive Maintenance** log online, click the **Related information** button for the page that you want to view.

Edit print settings information

Color threshold adjustments

These controls are used for setting the color accent color thresholds, expressed in pixels, for General Office Color and Professional Color:

1. Click **Settings/Procedures**.
2. Click **Print Settings**.

3. Click **+** or **-** to change the threshold value in the corresponding print mode.
4. Click **Save Changes**.



NOTE: The default threshold for Color Accent is the approximate equivalent of the amount of ink used in printing a 0.5 x 0.5 in (12.7 x 12.7 mm) square of color coverage. The maximum value is limited to 260,000.

NOTE: The threshold for Color Accent pages should be set to the same value regardless of color quality mode (Professional or General Office).

Disabling black one pass printing

One pass printing is only used when printing black-only text documents. Disable black one pass printing when there is smudging on these types of documents due to poor drying:

1. Click **Settings/Procedures**.
2. Click **Print Settings**.
3. Click the arrow to select **Disabled**.
4. Click **Save Changes**.

Export data

The CDFT Export Data feature provides the ability to export various types of data from the device to an external file for offline evaluation of the data. This feature is most often used during escalation situations based on a request from advanced technical support.

There are two types of data that can be exported from the device using CDFT: XDM machine data (an XML file) and a zipped file of debug information.

1. Insert a USB drive into the MFP's USB slot.
2. Log into **CDFT-E**.
3. Touch **Settings/Procedures**.
4. Touch **Export Data**.
5. Select the data type.
6. Touch **Export**.
7. Touch **OK** on the Export Data window after the export has successfully completed.
8. Exit CDFT-E.

Set the remote access password (CDFT-E only)

Set the remote access password:

1. Click **Settings/Procedures**, and then click **Set Remote Access Password**.
2. Enter the password in the **New Password** field, and then enter it again in the **Confirm New Password** field.
3. Click **OK**.

Calibrate the HP Multifunction Finisher

To gain access to calibrations in CDFT, click **Settings/Procedures**, and then click **Calibrations**.

- [Accumulator offset alignment](#)
- [Stapler alignment](#)
- [Set the finisher stapler 2 paper-size setting](#)

For a full description of a calibration, see [Calibrations and adjustments on page 135](#).


Accumulator offset alignment

1. Click **Settings/Procedures**.
2. Click **Calibrations**.
3. Click **Offset stall**.


Stapler alignment

1. Perform the Accumulator offset alignment.
2. Click **Settings/Procedures**.
3. Click **Calibrations**.
4. Click **Finisher Stapler**.
5. Click **Letter** or **A4** to print a sample test page. The test page shows the desired position for the staples.
6. Click < or > to reposition the staple left or right. The offset value in millimeters is displayed.
7. Click **Set** to commit the change.

Set the finisher stapler 2 paper-size setting


 **NOTE:** Before setting the stapler position, look at stapler 2 and verify if it is installed in the A4- or letter-size position. See the installation guide for information on changing the stapler 2 position.

1. Click **Settings/Procedures**.
2. Click **Paper Size Settings**.
3. Click < or > to change the finisher paper-size setting to **A4** or **Letter** (the setting must match the physical stapler 2 installed position).
4. Click **Commit Change** to save the stapler 2 paper-size setting.

 **NOTE:** The finisher stapler 2 paper-size setting does not take effect until the MFP power is turned off, and then on.


Set the HP 4000-sheet input tray paper size

1. Touch **Settings/Procedures**.
2. Touch **Paper Size Settings**.
3. Touch < or > to change the **Tray 5** paper-size setting.
4. Touch **Commit Change** to save the HP 4000-sheet input tray paper-size setting.

 **NOTE:** The HP 4000-sheet input tray paper-size setting does not take effect until the MFP power is turned off, and then on.

Set the scanner default media size

1. Touch **Settings/Procedures**.
2. Touch **Paper Size Settings**.
3. Touch < or > to change the **Scanner Default Media Size** setting to **A** for media sizes in inches (for example, letter or 11 x 17 in), or **A4** for metric media sizes (for example, A4 or A3).
4. Touch **Commit Change** to save the scanner default media size setting.

 **NOTE:** The scanner default paper-size setting does not take effect until the MFP power is turned off, and then on.

NOTE: This setting determines the scan area for the flatbed and ADF.

For example, if the default media size is set to **A4** (metric media sizes), the message **Original size is A4** will appear on the control panel-display even if an 8.5 X 11 inch original is placed on the flatbed glass or in the ADF. The message **Original size is A3** will appear on the control panel-display even if an 11 X 17 inch original is placed on the flatbed glass or in the ADF.

Make sure that you set the scanner default media size to the setting that matches the media sizes used in your country/region.

Adjust the power setting (200-240V AC systems only)


For systems that operate using 200-240V AC, the power setting can be adjusted to better match the installation site's available circuit breaker. The MFP default power setting is for a 12A circuit breaker. There is a 10A optional power setting for sites that do not support a 12A circuit. Use the following procedure to change the power setting for installation sites with a 10A circuit breaker.

1. Touch **Settings/Procedures** on the CDFT screen.
2. Touch **Power Settings**.
3. Touch **10 amp** in the **200-240 VAC** configuration pane.
4. Exit CDFT, and then turn the MFP power off and then on to activate the changed power setting.

Performance settings

The MFP uses a series of pinch rollers to transport printed and dried sheets from the drum. In some cases, the pinch rollers can transfer ink to either the same page or on successive pages resulting in poor print quality. The MFP uses a firmware algorithm to impose additional dryer passes on problematic pages to protect against roller ink transfer, resulting in a slower system print speed. You can enable or disable this algorithm in CDFT (firmware release version 20071204 73.022.0 and newer).

The algorithm is enabled by default and should only be disabled for troubleshooting purposes. If the algorithm is disabled, no extra dryer passes will be added and the device will be susceptible to roller ink transfer.

 **NOTE:** In some unique cases, a customer might want this functionality disabled for performance reasons, but that is not generally recommended.

The Roller Ink Transfer prevention algorithm is enabled or disabled completely from the **Performance Settings** screen in CDFT. Use this screen to view the current status of the algorithm.

1. Touch **Settings/Procedures** on the CDFT screen.
2. Touch **Performance Settings**.
3. Select whether or not extra drying is activated.
4. Touch **Save Changes**.
5. Exit CDFT.

4 Managing and maintenance

- [Maintenance and replacement strategy](#)
- [Service intervals](#)
- [Gaining access to preventive maintenance data](#)
- [Hardware maintenance](#)
- [Maintenance log](#)
- [Startup Menu service functionality](#)
- [Non-volatile memory \(NVM\) backup and restore](#)
- [Non-volatile memory \(NVM\) resets and initializations](#)
- [Firmware upgrade](#)
- [Firmware downgrade](#)
- [Retrofit tags](#)
- [Event trends](#)
- [Finisher user options](#)

Maintenance and replacement strategy

Preventive maintenance for the MFP involves the tracking of parts that can be serviced or replaced proactively by service personnel. Calculations based on actual customer usage and site environmental factors provide an intelligent estimate as to when specific hardware components will require attention. These maintenance tasks are monitored and performed as part of regular visits by service personnel, providing the customer the most uptime and highest reliability possible.

In the past, the service approach was less predictive in nature, requiring unscheduled visits and longer service calls. With the MFP's preventive maintenance tools, the number of customer visits is kept to a minimum and only those parts needing servicing are cleaned or replaced.

During operation, the MFP gathers and stores maintenance data and internal counter information in logs for each of its serviceable items. When a counter reaches a predetermined level, or *threshold*, the item is flagged within the preventive maintenance tools, either the copier diagnostic field tool (CDFT) or the embedded Web server (EWS). The logs can be viewed or printed through CDFT or EWS. Thresholds can be adjusted accordingly by service personnel. See [Copier Diagnostic Field Tool \(CDFT\) on page 45](#) or the system administration guide.

Each log captures the item name, the current counter value, and the threshold or interval value. Based on this information, as well as the actual usage by the customer, the tools recommend the items to service. For example, if a particular sensor's current counter is at 110000, the threshold is 120000, and customer is averaging 20000 pages per month, cleaning the sensor is recommended. The service person reviews the recommendation and decides the best time to perform the maintenance. After the tasks have been completed, the service person then resets the counters for those items serviced.

Service intervals

The preventive maintenance items are listed in the following table.

Interval	Description	Service/PM kit number	Subsystem	Result	Action	Estimated time (minutes)	
ADF pages	25K	ADF Feed sensor (SN404) ADF Feed sensor (SN404) on page 87	None	ADF	ADF jams	Clean	10
	25K	ADF Timing sensor (SN406) ADF Timing sensor (SN406) on page 88	None	ADF	ADF jams	Clean	10
	240K	ADF pick rollers ADF pick rollers on page 89	SVC KIT PM-ROLLER FEED C5962-67004	ADF	ADF jams	Replace	10
Flatbed copies	50K	ADF hinges ADF hinges on page 90	None	Scanner	Squeaking noise. Damage to hinge.	Lubricate	5

Interval	Description	Service/PM kit number	Subsystem	Result	Action	Estimated time (minutes)	
Pages	120K	Tetris sensor (SN58) Tetris sensor (SN58) on page 90	None	Carriage	Print quality degradation	Clean	10
	250K	Cooling fan filters Cooling fan filters on page 91	SVC KIT-COOLING FILTER C5956-67583	Structure	Hotter electronics	Clean or replace	15
	250K	Drum screen Drum screen on page 91	None	Drum	Paper jams	Clean	20
	250K	Scanner chamber filter Scanner chamber filter on page 91	SVC KIT-COOLING FILTER C5956-67583	Scanner	Reduced image quality. Hotter electronics.	Replace	5
	400K	Horizontal transport drive rollers Horizontal transport drive rollers on page 91	SVC KIT PM-DRIVEROLLER HORIZ TRANSPORT C5956-67290	Horizontal	Paper jams	Replace	15
	500K	Carriage felt oiler Carriage felt oiler on page 92	SVC KIT PM-CARRIAGE FELT C5956-67441	Carriage	Squeaking noise. Print quality degradation.	Replace	15

Interval	Description	Service/PM kit number	Subsystem	Result	Action	Estimated time (minutes)	
Pages (Cont.)	500K	Curler output transmission (belts and pulleys) IDO curler output transmission (belts and pulleys) on page 92	SVC KIT PM-CURLR OUTPT TRNSMSN C5956-67787	IDO	Paper jams	Replace	15
	1M	Carriage encoder strip Carriage encoder strip on page 95	SVC KIT PM-CARRIAGE ENCODER C5956-67819	Carriage	Print quality degradation	Replace	10
	1M	Carriage drive belt Carriage drive belt on page 95	SVC KIT PM-CARRIAGE DRIVE C5956-67586	Carriage	Carriage motor stall	Replace	20
Accumulated sheets	500K	Accumulator wheel shaft assembly Accumulator wheel shaft assembly on page 95	SVC-SHAFT EXIT 1 CPL C5959-67365	Finisher	Poor output stack quality. Paper jams.	Replace	50

Interval	Description	Service/PM kit number	Subsystem	Result	Action	Estimated time (minutes)	
Individual tray picks	200K	Tray 1 pick roller and pad Tray 1 pick roller and pad on page 95	SVC-ASSY-TRAY 1 PICK ROLLER, C5956-67424 SVC BRACKET, PAD, PICKING CPL, C5956-67394	Engine	Paper jams	Replace	20
	200K	Tray 5 pick rollers (pick, feed, and separation) Tray 5 rollers on page 96	SVC-ASSY ROLLER PICK C5961-67028	Tray 5	Paper jams	Replace	10
	1M	Input tray 2 pick roller Input tray pick roller on page 96	SVC-TRAY2-4 PICK ROLLER C5956-67420	Engine	Paper jams	Replace	10
	1M	Input tray 3 pick roller Input tray pick roller on page 96	SVC-TRAY2-4 PICK ROLLER C5956-67420	Engine	Paper jams	Replace	10
	1M	Input tray 4 pick roller Input tray pick roller on page 96	SVC-TRAY2-4 PICK ROLLER C5956-67420	Engine	Paper jams	Replace	10
Ink usage (cc)	67K	Aerosol duct kit Aerosol duct kit on page 96	SVC KIT PM-AEROSOL DUCTS C5957-67085	Aerosol	Print quality degradation	Replace	25
	67K	Charcoal filter Charcoal filter on page 96	SVC ASSY-CHARCOAL FILTER C5956-67262	Vacuum	Odor	Replace	5
	135K	Aerosol filter Aerosol filter on page 97	SVC ASSY-AEROSOL FILTER C5956-67266	Aerosol	Print quality degradation. Pen failure.	Replace	5

Interval		Description	Service/PM kit number	Subsystem	Result	Action	Estimated time (minutes)
Spittoon drop count	58M	Drum spittoon and lower drum spittoon Drum spittoon and lower drum spittoon on page 97	SVC KIT VACUUM SPITTOON C5957-67108	Service station	Shutdown	Replace	15
Ink usage (0.1 cc)	27	Drop detect spittoon Drop detect spittoon on page 98	SVC-DROP DETECT SPITTOON C5957-67145	Service station	Print quality degradation	Replace	10
Lamp hours	1000	Scanner exposure lamp Scanner exposure lamp on page 99	SVC-LAMP, SCANNER C5956-67149	Scanner	Reduced image quality. Lamp outage.	Replace	10
Short Web advances (monitored by the MFP)		Web wipe Web wipe on page 99	SVC KIT PM-WEB WIPE C5956-67837	Service station	Shutdown	Replace	12.5

Gaining access to preventive maintenance data

Preventive maintenance data can be view and printed, along with other service information pages, using either CDFT or EWS (for remote access). See [Service information pages on page 2278](#) for more information on the service information pages

CDFT

CDFT's home screen provides current page counts, web wipe information, recently logged events, and a list of preventive maintenance (PM) items. Select **View PM items** for a detailed view of all maintenance items. The PM items are sorted by those items with the shortest predicted number of weeks before reaching their threshold for servicing being listed first. Items to be serviced past sixteen weeks are not predicted due to accuracy. The information displayed includes:

- **PM due within:** The time period that the item will reach its maintenance threshold, based on current usage.
- **Remaining:** The percentage of usage remaining within the item's maintenance interval.
- **Usage:** The current PM counter value for the item.
- **Threshold:** The item's threshold value at which the item will be flagged for maintenance within CDFT.

Click **View Selected Item Settings** to view the PM Item Details screen that displays the maintenance history of the selected item. It presents the data, the counter value, the threshold, and the global device page count at the previous four times the item was serviced.

To print the PM data, go to CDFT's home screen, select the **Settings/Procedures** tab, and then click **Print Information Pages**.

See [Copier Diagnostic Field Tool \(CDFT\) on page 45](#) for more information on CDFT.

EWS (embedded Web server)

EWS provides the ability to view and print service information pages (which includes preventive maintenance data) through remote access.

See the system administration guide for information on how to print the information pages.

Hardware maintenance

- [Preventive maintenance kits](#)
- [General procedures](#)
- [ADF Feed sensor \(SN404\)](#)
- [ADF Timing sensor \(SN406\)](#)
- [ADF contact glass](#)
- [ADF pick rollers](#)
- [ADF hinges](#)
- [Tetris sensor \(SN58\)](#)
- [Cooling fan filters](#)
- [Drum screen](#)
- [Scanner chamber filter](#)
- [Horizontal transport drive rollers](#)
- [Carriage felt oiler](#)
- [IDO curler output transmission \(belts and pulleys\)](#)
- [IDO media eject fingers, output sensors, and linkage bushings](#)
- [Carriage encoder strip](#)
- [Carriage drive belt](#)
- [Accumulator wheel shaft assembly](#)
- [Tray 1 pick roller and pad](#)
- [Tray 5 rollers](#)
- [Input tray pick roller](#)
- [Aerosol duct kit](#)
- [Charcoal filter](#)
- [Aerosol filter](#)
- [Drum spittoon and lower drum spittoon](#)
- [Drop detect spittoon](#)
- [Scanner exposure lamp](#)
- [Web wipe](#)

Preventive maintenance kits

For a listing of the available service preventive maintenance kits, see the parts manual.

General procedures

- [General cleaning](#)
- [Cleaning spilled ink](#)
- [How to clean an ink or Bonding Agent spill on carpet](#)
- [Cleaning the control panel](#)
- [Resetting preventive maintenance counters](#)
- [Cleaning pick rollers](#)

General cleaning

△ **WARNING!** In order to avoid shock hazard, turn the printer off and unplug all power cords before you begin these steps.

△ **CAUTION:** Do not use ammonia-based cleaners on the MFP and its accessories. While cleaning, be careful not to touch the transfer or delivery rollers. Skin oils on the rollers can cause print-quality problems.

- Vacuum the inside of the MFP regularly (approximately every 120K pages), primarily for the paper dust and other debris that is generated. The dust can build up on the IDO sensors, output door, the finisher, and on the floor around the unit.
- If the outside of the MFP and its accessories are visibly marked, clean them with a water-dampened cloth.
- Clean the inside of the MFP and its accessories with a dry, lint-free cloth.
- Ample wipes are provided with applicable field replaceable units (FRUs). Use as needed to clean internal ink-soiled areas, and then return soiled wipes with the FRU for disposition. Escalate for support in the unlikely event that spillage can not be readily absorbed in wipes provided.

📄 **NOTE:** Dispose of all wet material as appropriate. See [Handling and disposing of service parts and consumables on page 26](#).

Cleaning spilled ink

Follow these instructions to remove ink from your skin and clothing:

△ **CAUTION:** Use gloves and safety glasses when handling ink parts.

Surface	Remedy
Skin	Wash the area with an abrasive soap.
White fabric	Wash the fabric in <i>cold</i> water and use chlorine bleach.
Color fabric	Wash the fabric in <i>cold</i> water and use sudsy ammonia.


△ **CAUTION:** Always use cold water to remove ink from fabric. Warm or hot water can set the ink into the fabric.

How to clean an ink or Bonding Agent spill on carpet

Follow these steps to clean an ink or Bonding Agent spill:

△ **CAUTION:** Use gloves and safety glasses when handling ink parts.

1. Use absorbent material to wipe or blot the spilled ink or bonding agent.
2. When most of the spilled substance is removed from the carpet, use mild soap and water to remove the rest of the ink or bonding agent.

 **NOTE:** Ink and Bonding Agent are water-based.

△ **CAUTION:** Ink and Bonding Agent might stain a surface. Vigorously wiping a carpet to remove the ink or Bonding Agent might cause or worsen a stain.

Cleaning the control panel

Clean the control panel whenever it is necessary to remove fingerprints or dust. Wipe the control panel gently with a clean, water-dampened, lint-free cloth.

△ **CAUTION:** Use water only. Solvents or cleaners can damage the touchscreen. Do not pour or spray water directly onto the touchscreen.

Resetting preventive maintenance counters

Each preventive maintenance item has an associated internal counter. It is important that the service person resets the counter for that item every time maintenance is performed. Failure to do so will not allow for accurate tracking and performance monitoring. See [Copier Diagnostic Field Tool \(CDFT\) on page 45](#) for information on the use of these counters.

Cleaning pick rollers

Frequent mispicks are likely the result of a dirty or worn pick roller. If the problem occurs between scheduled maintenance intervals, try cleaning a dirty pick roller and see if that helps its performance. If not, then replace the pick roller.

To clean a pick roller, follow these steps.

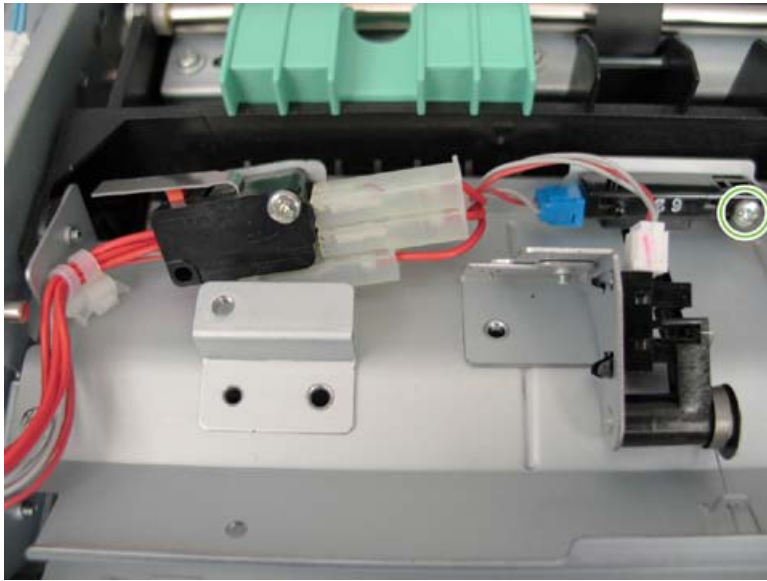
1. Remove the specific pick roller.
2. Wipe the pick roller with a water-dampened lint-free cloth.
3. Using a dry, lint-free cloth, wipe the pick roller to remove loosened dirt.
4. Allow the pick roller to dry completely before you reinstall it.

ADF Feed sensor (SN404)

Clean the ADF Feed sensor (SN404) and the surrounding area with a soft brush and puffs of air. SN404 should be cleaned regularly. Paper dust can accumulate and result in mispicks or paper jams.

[ADF Feed sensor \(SN404\) on page 251](#)

Reset the preventive maintenance counter for this item every time maintenance is performed.



ADF Timing sensor (SN406)

Clean the ADF Timing sensor (SN406) and the surrounding area with a soft brush and puffs of air. SN406 should be cleaned regularly. Paper dust can accumulate and affect the reflective sensitivity of the sensor, resulting in paper jams.

[ADF Timing sensor \(SN406\) on page 256](#)

Reset the preventive maintenance counter for this item every time maintenance is performed.



ADF contact glass

- Clean the ADF contact glass only if dirt is visible, or if you are experiencing a decrease in copy quality, such as streaking.
- Clean the ADF contact glass by wiping it gently with a clean, dry, lint-free cloth. Only if necessary, use a slightly water-dampened lint-free cloth.
- Replace the ADF contact glass if it is scratched and the scratches cause streaks on the images.

[ADF contact glass on page 280](#)

△ **CAUTION:** Do not pour or spray liquids directly onto the ADF glass. Do not press hard on the glass surface.

ADF pick rollers

Clean the rollers in the ADF if you are experiencing misfeeds or if the originals show marks as they exit the ADF. If cleaning the rollers does not solve the immediate problem or if it is a scheduled preventive maintenance interval, replace the rollers.

△ **CAUTION:** Clean the rollers only if you experience misfeeds or marks on the originals, and you notice dust on the rollers. Cleaning the rollers frequently could introduce dust into the device.


1. Access the ADF pick rollers.
 - [Separation roller on page 237](#)
 - [Pick roller on page 239](#)
 - [Lower separation roller on page 241](#)
2. Wipe the rollers with a water-dampened, lint-free cloth. For a scheduled preventive maintenance interval, replace the rollers.
3. Allow the pick rollers to dry completely before you reinstall them.

Reset the preventive maintenance counter for this item every time maintenance is performed.

ADF hinges

Lubricate the ADF hinges at the scheduled preventive maintenance interval.

1. Apply a small amount of grease directly to each hinge.

 **NOTE:** Manufacturer's specification: Molykote EM-110 grease.



2. Close the ADF several times to spread the grease evenly.

Reset the preventive maintenance counter for this item every time maintenance is performed.

Tetris sensor (SN58)

Clean the Tetris sensor (SN58) at the scheduled preventive maintenance interval to remove any aerosol buildup.

1. Access SN58.

[Tetris sensor \(SN58\) on page 581](#)

2. Wipe a water-dampened swab across the cover of the sensor to clean.

△ **CAUTION:** Do not use any cleaner or solvent, or liquid other than water, as this can damage the device.

3. Wipe completely dry with a dry swab.

Reset the preventive maintenance counter for this item every time maintenance is performed.

Cooling fan filters

There are two types of fan filters:

- **Replaceable cartridge.** The square filter cartridge for the CPSU Cooling fan (FAN3) should be replaced at the scheduled preventive maintenance interval.
[CPSU Cooling fan \(FAN3\) filter on page 574](#)
- **Foam sheet.** The porous foam material covering cooling vents can be cleaned by compressed air, vacuuming, or washing with water.

Reset the preventive maintenance counter for this item every time maintenance is performed.

Drum screen

Clean the drum screen at the scheduled preventive maintenance interval to remove any build-up.

△ **CAUTION:** Use gloves and safety glasses when handling ink parts.

1. Remove the drum screen.
[Drum screen on page 496](#)
2. Clean both sides of the screen with water and a lint-free cloth to clear all of the holes.
3. Wipe off any ink build-up on the drum.
4. Allow the screen to dry completely, and then reinstall.

Reset the preventive maintenance counter for this item every time maintenance is performed.

At the same service interval as the drum screen, the following IDO sensors should be vacuumed for dust and other debris that is generated:

- IDO Output 1 sensor (SN15)
- IDO Output 2 sensor (SN12)
- IDO Duplex Staging sensor (SN11)
- IDO Duplex Media sensor (SN16)
- IDO Output Media sensor (SN9)

Scanner chamber filter


Replace the scanner chamber filter at the scheduled preventive maintenance interval.

[Scanner chamber filter on page 298](#)

Reset the preventive maintenance counter for this item every time maintenance is performed.

Horizontal transport drive rollers

Frequent paper jams are likely the result of a dirty or worn drive roller. If the problem occurs between scheduled maintenance intervals, try cleaning a dirty roller to see if that helps its performance. If not, replace the roller.


 **NOTE:** When the horizontal roller replacement PM item is reset, a minimum of 20 sheets need to be run in order to recalibrate the new horizontal rollers.

To clean a roller, follow these steps.

1. Remove a drive roller, as described in [Drive rollers on page 174](#).
2. Wipe the roller with a water-dampened lint-free cloth.
3. Using a dry, lint-free cloth, wipe the roller to remove loosened dirt.
4. Allow the roller to dry completely before you reinstall it.

Carriage felt oiler

Replace the carriage felt oiler underneath each of the Carriage PPS PCAs and the felt oiler underneath each carriage v-bearing at the scheduled preventive maintenance interval.

 **WARNING!** Do not get oil from felt on the encoder disk.

[PPS felt oiler on page 567](#)

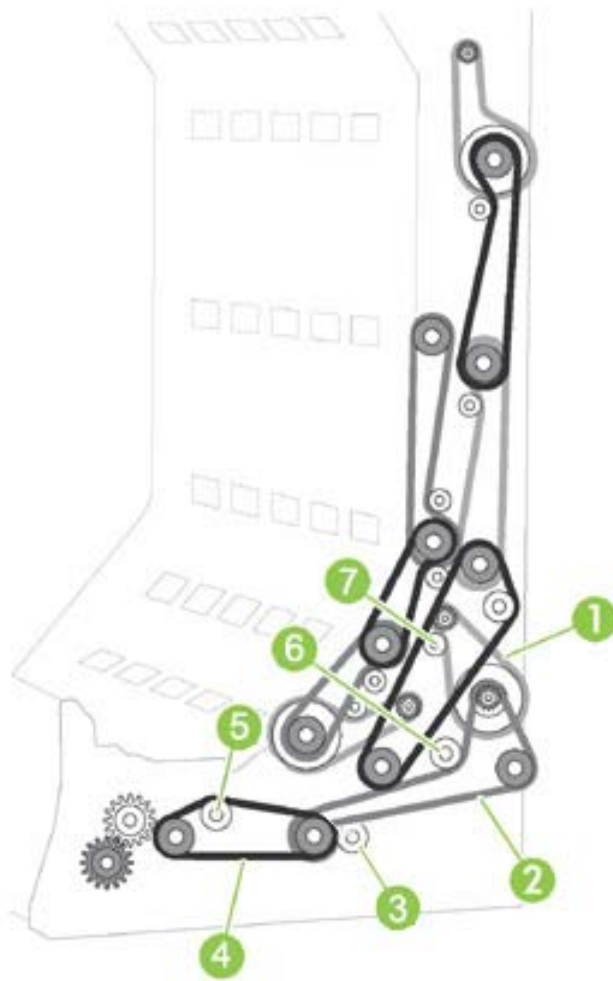
[Carriage felt oilers on page 557](#)

Reset the preventive maintenance counter for these items every time maintenance is performed.

IDO curler output transmission (belts and pulleys)

Replace the curler output transmission belts at the scheduled preventive maintenance interval.

1. Remove the IDO RM.
[IDO removable module \(IDO RM\) on page 400](#)
2. Replace the IDO curler output transmission belts and pulley assemblies included with the PM kit.



1	Belt-71T
2	Belt-162T
3	Short flanged tensioner
4	Belt-97T
5	Mid flanged tensioner
6	Idler pulley 14mm assembly
7	Idler pulley (flangeless) assembly

Before the final tightening of the tensioner screws, perform the following steps anytime a belt is installed during a service activity:

- a. Install all of the belts
- b. Activate all tensioner spring arms
- c. Turn motor pulley by hand a few turns to balance the belts

Reset the preventive maintenance counter for this item every time maintenance is performed.

IDO media eject fingers, output sensors, and linkage bushings

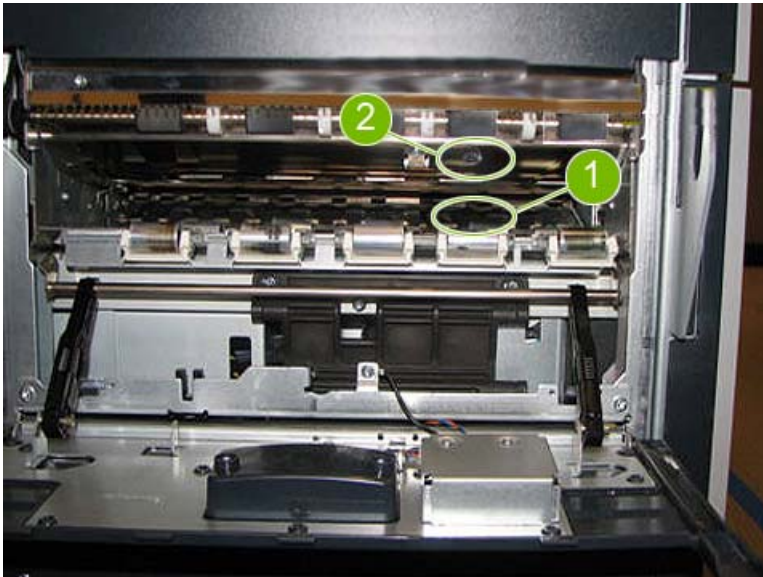
Reattach the finisher.

Clean media eject fingers (6 minutes)

1. Enter CDFT.
2. Pull the finisher away from the engine.
3. Open the left-side upper panel.
4. Insert an interlock cheater key into the left-side upper panel door sensor (door lock override).
5. In CDFT, select **Subsystems**, select **Paper Path**, and then select **IDO Motors**.
6. Press the **M13 Media Eject** button with the arrow pointing diagonally down.
7. Observe the media eject fingers moving down to expose their tips.
8. Use lint free cloth and distilled water to gently clean the tips of the fingers.
9. When the fingers are clean, press the **M13 Media Eject** button with the arrow pointing diagonally down.
10. Observe the media eject fingers moving back to their normal position.
11. Remove the interlock cheater key and close the left-side upper panel.
12. Use lint free cloth and distilled water to gently clean the tips of the fingers.
13. Exit CDFT.

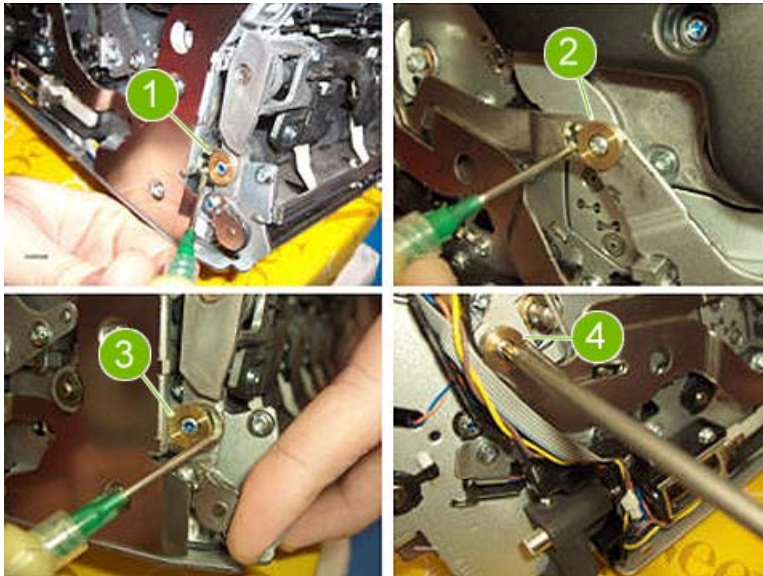
Clean IDO Output 1 sensor (SN15) and IDO Output 2 sensor (SN12) (1 minute)

- Use a vacuum cleaner or a blast of compressed air to clean paper dust from IDO Output 1 sensor (SN15) (callout 1) and IDO Output 2 sensor (SN12) (callout 2).



Clean and lubricate media eject linkage bushings (5 minutes)

- Apply lubricant to the linkage (callouts 1-4). Use the yellow lubricant provided in the standard trunk kit (Lubricant – Grease PAO Light, P/N 6060-1412). To correctly lubricate one specific bushing (callout 4), first remove the bushing by unfastening its retaining screw.



Carriage encoder strip

Replace the carriage encoder strip at the scheduled preventive maintenance interval.

[Carriage encoder strip on page 535](#)

Reset the preventive maintenance counter for this item every time maintenance is performed.

Carriage drive belt

Replace the carriage drive belt at the scheduled preventive maintenance interval.

[Carriage drive belt on page 538](#)

Reset the preventive maintenance counter for this item every time maintenance is performed.

Accumulator wheel shaft assembly

Replace the accumulator roller at the scheduled preventive maintenance interval.

[Accumulator wheel shaft assembly on page 867](#)

Reset the preventive maintenance counter for this item every time maintenance is performed.

Tray 1 pick roller and pad

Replace the Tray 1 pick roller (on the Tray 1 pick shaft) and Tray 1 pick pad at the scheduled preventive maintenance interval.

[Tray 1 pick roller and pad on page 356](#)

Reset the preventive maintenance counter for this item every time maintenance is performed.

Tray 5 rollers

Replace the three Tray 5 rollers at the scheduled preventive maintenance interval. The top two rollers (pick roller and feed roller) can be accessed directly by opening the Tray 5 top door. The lower separator roller can be accessed by removing the left bottom panel.

[Tray 5 rollers on page 752](#)

Reset the preventive maintenance counter for this item every time maintenance is performed.

Input tray pick roller

Replace the standard input tray pick roller (Trays 2, 3, and 4) at the scheduled preventive maintenance interval.

[Pick roller on page 331](#)

Reset the preventive maintenance counter for this item every time maintenance is performed.

Aerosol duct kit

The aerosol duct kit contains:

- Aerosol manifolds and ducts

[Aerosol duct assembly on page 625](#)

- Aerosol duct wipes

[Aerosol duct wipes on page 631](#)

 **NOTE:** The drop detect spittoon incorporates two bonding agent duct wipes.

Replace these components at the scheduled preventive maintenance interval.

Reset the preventive maintenance counter for this item every time maintenance is performed.

Charcoal filter

Replace the charcoal filter at the scheduled preventive maintenance interval. The filter is located inside the muffler case part.



[Muffler on page 219](#)

Reset the preventive maintenance counter for this item every time maintenance is performed.

Aerosol filter

Replace the filter at the scheduled preventive maintenance interval.

[Aerosol filter on page 618](#)

Reset the preventive maintenance counter for this item every time maintenance is performed.


Drum spittoon and lower drum spittoon

- [Drum spittoon](#)
- [Drum encoder](#)

Drum spittoon

Replace the drum spittoon at the scheduled preventive maintenance interval.


The preventive maintenance schedule will be recalculated after one of the following events: power cycle, sleep mode cycle, or date change at midnight.

 **NOTE:** Dispose of all wet material as appropriate. See [Handling and disposing of service parts and consumables on page 26](#).

 **CAUTION:** Use gloves and safety glasses when handling ink parts.

[Drum spittoon and lower drum spittoon on page 494](#)

Reset the preventive maintenance counter for this item every time maintenance is performed.

 **NOTE:** If the error code "C6.0B01 Change Drum Spittoon" has occurred and disabled the MFP, you must power cycle the system in PSM mode to reset the Drum Spittoon counter. Afterwards, power up normally to operate the MFP.

NOTE: If the error code "C6.0B02 - Device due for maintenance" has occurred with SNMP status enabled for that device, the device will show as "offline" from the driver and no print jobs can be sent to it. As a workaround, disable **SNMP Status Enabled**.

In the Printers and Faxes folder, go to **File**, then **Server Properties**, click the **Ports** tab, select the port that was set up for that device, and then click **Configure**. Uncheck "SNMP Status Enabled", and then click **OK**.


Drum encoder

Clean the drum encoder disk and the three drum encoder sensors at the same time the drum spittoon is replaced.

Clean the drum encoder as follows:


△ **CAUTION:** Do not use any liquids to clean the drum encoder disk. The disk must be wiped only with a dry, lint-free cloth.

1. Remove two screws, and then carefully lift off the encoder cover.
2. With a flashlight, carefully inspect the encoder disk, encoder cover, and the three encoders for scratches, debris, such as paper fibers, white powder, black fragments or any other loose material. Replace the encoder disk if badly scratched in the encoder or index areas.

 **NOTE:** If available, use compressed air to clean these areas.

NOTE: To correct an existing encoder mounting gap, unscrew the encoder cover (one screw) and make sure that the two encoder locating pins are fully inserted into the PCA mounting holes. Also be sure that the encoder cover locating pin is inserted into the PCA mounting hole when tightening the screw.


3. Wipe the encoder disk with a dry, lint-free cloth.
4. Use a dry lint-free cloth or soft bristle brush to clean each of the three encoder sensors.
5. Replace the encoder cover.

 **NOTE:** Ensure all three encoders and covers are mounted flush to their respective circuit boards.

NOTE: When either the Drum Encoder Averager PCA (EN1) or the Drum Encoder PCA (EN2) is replaced, run the [Drum Position calibration on page 140](#).

Drop detect spittoon

Replace the drop detect spittoon at the scheduled preventive maintenance interval.

 **NOTE:** Dispose of all wet material as appropriate. See [Handling and disposing of service parts and consumables on page 26](#).

△ **CAUTION:** Use gloves and safety glasses when handling ink parts.

[Drop detect spittoon on page 659](#)

 **NOTE:** The drop detect spittoon incorporates two bonding agent duct wipes.

Reset the preventive maintenance counter for this item every time maintenance is performed.

Scanner exposure lamp

Replace the scanner exposure lamp when it is determined to be the source of reduced image quality (for example, the lamp is burned out or is dimming).


- △ **CAUTION:** Do not touch the scanner lamp glass. Hold the lamp by the holders at the ends.

[Scanner exposure lamp on page 280](#)

Reset the preventive maintenance counter for this item every time maintenance is performed.

Web wipe

Replace the web at the scheduled preventive maintenance interval.

-  **NOTE:** Dispose of all wet material as appropriate. See [Handling and disposing of service parts and consumables on page 26](#).

- △ **CAUTION:** Use gloves and safety glasses when handling ink parts.

[Web wipe cartridge on page 664](#)

Enter Protected Service Mode (PSM), and then select **Initialize New Web** on the web wipe tool form in CDFT for this item every time the web wipe material is replaced.

-  **NOTE:** To complete the web initialization process, power cycle the system.

NOTE: If the error code "C4.0204 - Device due for maintenance" has occurred with SNMP status enabled for that device, the device will show as "offline" from the driver and no print jobs can be sent to it. As a workaround, disable **SNMP Status Enabled**.

In the Printers and Faxes folder, go to **File**, then **Server Properties**, click the **Ports** tab, select the port that was set up for that device, and then click **Configure**. Uncheck "SNMP Status Enabled", and then click **OK**.

Maintenance log

- [How to complete the maintenance log](#)
- [Maintenance log page](#)

How to complete the maintenance log

Fill out the maintenance log after you complete a service call.

Follow these steps to fill out the maintenance log:

1. Open the front door.
2. Remove three screws from the plate on the inside of the front door.
The maintenance log is stored behind the plate.
3. Fill out the maintenance log, and then place it in the storage area and refasten the plate.

Maintenance log page

Figure 4-1 Maintenance log

HP MACHINE SERVICE RECORD (STORE AND KEEP A COPY OF THE COMPLETED RECORD AT THE MACHINE)				
MACHINE/ACCESSORY SERIAL NUMBERS:			Comments	
COMPANY/SYSTEM ADMINISTRATOR:				
Network Config (IP address, subnet mask, gateway, etc.):				
DATE	SERVICE REP NAME / EMPLOYEE #	TOTAL MACHINE COUNT	PROBLEM DESCRIPTION	ACTIONS PERFORMED
			CUSTOMER COMPLAINTS OBSERVABLES FAULTS	ADJ = Adjustment Performed C = Cleaned FW = Firmware I = Inspected R&R = Removed & Replaced Part L = Lubricated R = Retrofit Cal = Calibration PM = Preventative Maintenance
/ /				
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Startup Menu service functionality

You can use the Startup Menu to troubleshoot and restore the MFP in the case of a severe MFP failure or if the control panel application is not available.

- [How to use the Startup Menu](#)
- [Administrator tools](#)
- [Service tools](#)

How to use the Startup Menu

Follow these steps to start the Startup Menu:


1. Turn off the power to the MFP.
2. Turn on the MFP.
3. Press the **Stop** button when the flashing cursor, the white HP logo, and  are displayed.

Use these keys to navigate the Startup Menu:

Table 4-1 Startup Menu navigation

Key	Function
2	Navigate up a menu.
8	Navigate down a menu. NOTE: If you see a red arrow on the screen, then scroll down to see more menu items.
5	Select an item from a menu.
Start	Select an item from a menu.
Stop	Exit a screen and go back to a previous screen.

Follow these steps to sign in to the Startup Menu:

 **NOTE:** You need to sign in to the Startup Menu only in order to gain access to the Service Tools menu or if the Administrator Tools menu is grayed out.

1. Select **Sign In**, and then press **Start**.
2. Enter the service PIN, and then press **Start**.

Administrator tools

- [Installation options](#)
- [Firmware Download](#)
- [Calibrate the touchscreen](#)
- [Change the administrator password](#)
- [Embedded JetDirect functionality](#)

- [Administrator startup options](#)

Installation options

Use the options available from the **Installation Options** menu to override the default behavior of the RFU installers.

Follow these steps to set the installation options:

1. Enter the Startup Menu. For help, see [How to use the Startup Menu on page 101](#).
2. Select **Administrator Tools**.


If the administrator tools are password protected, sign in to the Startup Menu.

3. Select **Installation Options**.
4. Select the options that you want:

Option	Function
Force All	Sets each of the subsystems listed under Subsystem Install Options to Force . When selected, this option takes effect when the power cycle continues and affects only this power up.
Disable All	Sets each of the subsystems listed under Subsystem Install Options to Disable . When selected, this option applies to all subsequent power cycles. CAUTION: Using this option can lead to firmware incompatibility errors.
Reset to Defaults	Sets each of the subsystems listed under Subsystem Install Options to Automatic .
Reformat Coprocessor Drive	Deletes the entire contents and rewrites the partitioning information for the Coprocessor drive. The subsystem firmware that resides on the drive is reinstalled at the next power cycle. CAUTION: All user data on the Coprocessor drive is lost.
Subsystem Install Options	For each subsystem listed, you can set the following options: <ul style="list-style-type: none"> • Automatic: The firmware for the subsystem is installed only if the subsystem firmware in the RFU file is of a different version than the firmware already installed. • Force: Reinstalls the firmware for the subsystem even if the currently installed subsystem firmware is the current version. When selected, this option applies only to the next power cycle. • Disable: Disables the installation of the firmware for the subsystem even if the currently installed subsystem firmware is not the correct version. CAUTION: Using this option can lead to firmware incompatibility errors.

Firmware Download

To perform an RFU over USB, use the **Firmware Download** menu to prepare the MFP to receive the RFU file. Before starting a RFU, you can use the **Installation Options** menu to override specific RFU settings. For more information, see [Installation options on page 102](#).

 **NOTE:** Use a USB 2.0-compliant cable and laptop to upgrade the firmware. The use of a non-USB 2.0-compliant cable results in degraded performance.

Follow these steps to download the firmware:

1. Enter the Startup Menu. For help, see [How to use the Startup Menu on page 101](#).
2. Select **Administrator Tools**.
If the administrator tools are password protected, sign in to the Startup Menu.
3. Select **Firmware Download**.
4. Select the options that you want:

Option	Function
Download Now	Starts the RFU download process.
Reinstall All Subsystems	Reinstalls the firmware for each subsystem after the next power cycle even if the RFU firmware for a subsystem is the same version as the firmware currently installed. This option is similar to the Force All option available from the Installation Options menu. For more information, see Installation options on page 102 .
Reformat Drives	Deletes the entire contents and rewrites the partitioning information for the selected drives. The subsystem firmware that resides on the drive is reinstalled and the drive areas are initialized to a default state. CAUTION: All user data on the selected drives is lost. For more information, see Reformat disks on page 117 .
Continue Boot After Download	Continues the power cycle process after a successful RFU download completes.

5. Transfer the RFU file to the MFP. For help see [How to update the firmware on page 118](#).

 **NOTE:** It is recommended that you use the MFP diagnostic software to transfer the firmware.

Calibrate the touchscreen

Follow these steps to calibrate the touchscreen:

1. Enter the Startup Menu. For help, see [How to use the Startup Menu on page 101](#).
2. Select **Administrator Tools**.
If the administrator tools are password protected, sign in to the Startup Menu.
3. Select **Calibrate Touch Screen**.
A window with two **X** icons in opposite corners is displayed.
4. Touch each **X**, and then follow the onscreen instructions to validate the calibration.
5. After you have validated the calibration, press **Stop** to exit the calibration screen, and then press **Start** to continue the power up.

After the calibration is completed, the Startup Menu home screen is displayed.

Change the administrator password

Follow these steps to change the administrator password:

1. Enter the Startup Menu. For help, see [How to use the Startup Menu on page 101](#).

2. Select **Administrator Tools**.

If the administrator tools are password protected, sign in to the Startup Menu.

3. Select **Change Administrator Password**, and then enter a new password.



NOTE: If you do not enter a password, then a password will not be needed to gain access to the administrator functions.

4. Press **Start** to save the password and continue the power cycle.

Embedded JetDirect functionality

You can prevent embedded JetDirect from starting when the MFP is power cycled. Doing this might be helpful when you are diagnosing network problems.

Follow these steps to enable or disable embedded JetDirect:

1. Enter the Startup Menu. For help, see [How to use the Startup Menu on page 101](#).

2. Select **Administrator Tools**.

If the administrator tools are password protected, sign in to the Startup Menu.

3. Select **Enable Embedded JetDirect**. If the **X** is cleared from the box, then JetDirect is disabled. If the **X** is displayed in the box, then JetDirect is enabled.

Administrator startup options

Follow these steps to use the startup options:

1. Enter the Startup Menu. For help, see [How to use the Startup Menu on page 101](#).

2. Select **Administrator Tools**.

If the administrator tools are password protected, sign in to the Startup Menu.

3. Select the options that you want. If the **X** is cleared from the box, then the option is disabled. If the **X** is displayed in the box, then option is enabled.

Option	Function
Select Language	Allows you to select the control panel language.
Extended Diagnostics	Executes diagnostics when the power cycle continues.
Display Firmware Revision	Displays the currently installed firmware version when the power cycle continues.
Cold Reset	See Cold Reset on page 114 .

Option	Function
Skip Disk Load	See Skip Disk Load on page 117 .
Initialize Disks	Select the disk or disks that you want to initialize. For more information, see Formatter Disk initialization on page 116 and Coprocessor Disk initialization on page 116 .

The selected options will take effect when the power cycle continues.


Service tools

- [Reset the administrator password](#)
- [Enter Protected Service Mode \(PSM\)](#)
- [Reinitialize NVRAM](#)
- [Boot Manager](#)

Reset the administrator password

Follow these steps to clear the administrator password:

1. Enter the Startup Menu, and then sign in to the Startup Menu. For help, see [How to use the Startup Menu on page 101](#).
2. Select **Service Tools** and then sign in with the service password.
3. Select **Reset Administrator Password**.

 **NOTE:** To set a new administrator password, use the **Change Administrator Password** option on the **Administrator Tools** menu. For help, see the system administrator guide.

Enter Protected Service Mode (PSM)

When you select **Protected Service Mode**, the MFP enters PSM when the power cycle continues and affects only this power up.

Follow these steps to enter Protected Service Mode (PSM):

1. Enter the Startup Menu, and then sign in to the Startup Menu. For help, see [How to use the Startup Menu on page 101](#).
2. Select **Service Tools** and then sign in with the service password.
3. Select **Protected Service Mode**.

For more information about PSM, see [Protected Service Mode \(PSM\) on page 1030](#).

Reinitialize NVRAM

The **Reinitialize NVRAM** function occurs when the power cycle continues.

Follow these steps to reinitialize NVRAM:

1. Enter the Startup Menu, and then sign in to the Startup Menu. For help, see [How to use the Startup Menu on page 101](#).
2. Select **Service Tools** and then sign in with the service password.
3. Select **Reinitialize NVRAM**.

For more information about NVRAM, see [NVRAM initialization on page 115](#).

Boot Manager

Boot Manager can be used to troubleshoot formatter problems and should rarely be used. Boot Manager is generally not recommended for use in the field.

1. Enter the Startup Menu, and then sign in to the Startup Menu. For help, see [How to use the Startup Menu on page 101](#).
2. Select **Service Tools** and then sign in with the service password.
3. Select **Boot Manager**.
4. Select the following options:

Option	Function
Boot to Device	Select the device from which to power up the formatter. The USB ports are concealed beneath a panel.
<ul style="list-style-type: none">• USB Port 0• USB Port 1• Pre Boot Installer• Formatter Firmware	CAUTION: Selecting Formatter Firmware can cause firmware incompatibility problems.
Reset Boot Configuration	Select this option to restore a missing power up entry for an eligible device from EFI NVRAM. After the entry is restored, the formatter should be able to power up correctly.

Non-volatile memory (NVM) backup and restore

This section contains information about the following topics:

- [Overview](#)
- [Machine NVM backup](#)
- [NVM restore](#)

Overview

Non-volatile Memory (NVM) is memory that is not lost through a system power cycle or power loss.

NVM for the MFP is subdivided into two classes:

- [Customer NVM](#)
- [Machine NVM](#)

Customer NVM

Customer NVM is customer private data, such as:

- Templates
- E-mail addresses
- Address lists
- Passwords

The system administrator can use the embedded Web server (EWS) to back up customer NVM to an external network drive.

This customer private data can only be accessed by system administrators. Field service personnel cannot gain access to customer NVM. However, service personnel should have an understanding of customer NVM if required to return a system to its complete state.

For details on Customer NVM, see the administrator guide.

Machine NVM

Machine NVM is data used by the system to operate as configured. Examples of machine NVM include the following items:

- Copy and print job settings
- Preventive maintenance counters
- Results of system calibrations

Machine NVM can only be backed up and stored by field service personnel.

Machine NVM backup

You can use CDFT to perform an NVM backup. The backup operation is performed on the entire system.

The following data is backed up:

- Device configuration: System configuration information, including any accessories installed and current settings (language, default print modes, copy settings, etc.).
- Device calibration values
- Device state
- Usage counters
- Part and assembly usage counters
- System logs (errors, warnings, service operations)
- Model configuration

The following NVM data is not backed up or restored:


- Customer information (stored jobs, templates, E-mail addresses, etc.)
- Firmware
- Internal test pages and calibration pages

This section contains information about internal and external NVM backups:

- [Internal backup](#)
- [External backup](#)

Internal backup


The backup destination is automatically set for the internal MFP hard drive. Internal backups can be completed automatically or manually. Use the Auto NVM Backup screen in CDFT-E to configure automatic backups.

 **NOTE:** **Enable Automatic Backup** must be checked in CDFT-E for automatic backups to occur. A weekly interval is the default setting for automatic backups.

External backup

The external NVM backup can be used to manually transfer the existing system image to a specific external backup destination.


You can use CDFT to perform an external NVM backup.

 **NOTE:** A backup using CDFT-E is usually performed to back up the image to a USB mass storage device such as a thumb drive.

To perform NVM backups using CDFT, see [Manage non-volatile memory \(NVM\) on page 56](#).

NVM restore

Use CDFT to restore NVM for the entire system or for a specific subsystem from an external or internal source.

 **NOTE:** You can only restore NVM data to the MFP that was the source of the backup.

You can restore NVM for the following subsystems:

- Scanner
- Print engine
- Formatter and hard drive

You can use the following sources for an NVM restore:

- Internal storage
- USB mass storage
- Laptop

To perform NVM restore using CDFT, see [Manage non-volatile memory \(NVM\) on page 56](#).

Non-volatile memory (NVM) resets and initializations

- [Memory architecture](#)
- [Memory-management tools](#)

Memory architecture

The MFP has two independent controllers: the formatter and the Coprocessor.

Each controller has a hard drive and NVRAM storage devices. The hard disk of each controller is partitioned. In some cases data are stored redundantly between the two controllers so that if the data in one location is missing or invalid, the data can be reloaded from the redundant location.

- [Formatter](#)
- [Coprocessor](#)
- [Shadow copies](#)
- [Data groupings](#)
- [Where data are stored](#)

Formatter

The formatter contains a custom-made board on which the LaserJet LynxOS is executed. The formatter hard disk contains the OS and associated firmware. The formatter initializes the OS from the hard disk.

The formatter has a NVRAM chip that contains the following data:

- Manufacturing data
- Warranty and maintenance data
- Configuration data

For a description of the partitions on the formatter hard disk, see [Where data are stored on page 113](#).

Coprocessor

The Coprocessor has a custom-made board that is designed to initialize and execute a Windows OS and associated firmware. Unlike the formatter, the Coprocessor does not have an NVRAM chip. All Coprocessor data are stored on the Coprocessor hard drive.

For a description of the partitions on the Coprocessor hard disk, see [Where data are stored on page 113](#).

Shadow copies

Some data are stored redundantly.


The formatter maintains a shadow copy of the formatter NVRAM. Whenever the NVRAM is updated, the shadow copy is updated. If NVRAM is corrupt when the MFP powers up, the NVRAM is rebuilt from the shadow copy. Individual subsystems that use NVRAM can access the appropriate parts of the shadow copy to rebuild any corrupted data.

The formatter hard disk and the Coprocessor hard disk maintain a set of data referred to as “Redundant Disk Data.” The Redundant Disk Data includes many, but not all, MFP configuration and job settings. For more information, see [Data groupings on page 111](#).

The Coprocessor contains the backup copy of the Redundant Disk Data. This backup copy is automatically updated on a regular basis. If the Redundant Disk Data contained on the formatter hard drive is missing, it is restored using the backup copy on the Coprocessor.

Data groupings

This section breaks down the data contained on the both the formatter and Coprocessor.

 **NOTE:** This section is not a complete listing of the data stored on the formatter and Coprocessor. It is limited to data that service personnel can manage.

Redundant Disk Data

- Digital Send E-mail configuration
- LAN and Internet fax configuration
- LDAP addressing
- Analog fax configuration
- Show/Hide applications on the Home screen
- Send to Folder (E-mail, fax)
- Fax store/print scheduling

Formatter NVRAM

- Non-HP supplies usage
- Date/Time configuration
- Sleep schedule
- Display language
- I/O and network Configuration
- EWS alerts server configuration
- EWS security and device information
- The fifty most recent Event Log entries
- A copy of the EWS configuration info
- Sleep Mode/Sleep Delay
- Supplies order threshold
- Stored job management
- Default print options
- Tray and bin configuration

- Warning/error behavior configuration
- Virtual keyboard layout

Formatter hard disk data

- JDI IP address
- Stored/scheduled/safeguarded jobs
- Fonts and entities
- PJL disk
- Stored overlays
- PDL data and directories
- Job history log
- EWS configuration information
- EWS alert and Autosend E-mail configuration
- EWS user-defined and service links
- The 200 most-recent Event Log entries
- Shadow copy of NVRAM
- Internal backup of machine data

Coprocessor hard disk data

- A copy of the Redundant Disk Data
- Security device access
- Address book
- Security permissions
- User usage data (EUTC)
- Local PIN authentication
- Copy configuration
- E-mail configuration

Where data are stored

This table describes where sets of data are stored on the formatter hard disk, the formatter NVRAM, and the Coprocessor hard disk:

Formatter hard disk	Formatter NVRAM	Coprocessor hard disk
Code partition <ul style="list-style-type: none"> JEDI formatter firmware Copy of the firmware superbundle 	<ul style="list-style-type: none"> MFP warranty and history data The 50 most-recent Event Log entries 	C partition <ul style="list-style-type: none"> Coprocessor firmware
dsk_ide0a partition <ul style="list-style-type: none"> Shadow copy of formatter NVRAM Redundant Disk Data Stored/scheduled/safeguarded jobs Third-party applications, executable, and fonts PJL disk Stored overlays PDL data and directories Job history log EWS configuration 	<ul style="list-style-type: none"> Device settings Copy of the JDI Mac address Security string Copy of the EWS configuration information 	D partition <ul style="list-style-type: none"> Database Copy of Redundant Disk Data
Serviceability partition <ul style="list-style-type: none"> The 200 most-recent Event Log entries Machine data backup 		E partition <ul style="list-style-type: none"> Windows work space Temporary files OS swap space
JDI partitions <ul style="list-style-type: none"> JDI IP address 		

Memory-management tools

- [Restore Factory Settings](#)
- [Cold Reset](#)
- [NVRAM initialization](#)
- [Disk initialization](#)
- [Erase private data](#)
- [Reformat disks](#)
- [Skip Disk Load](#)

Restore Factory Settings

Description

Use the Restore Factory Settings function to reset the following data to the factory default settings:

- Analog fax configuration
- Show/Hide applications on the Home screen
- Send to Folder (E-mail, fax)
- Fax store/print scheduling
- Copy configuration
- E-mail configuration
- Stored job management
- Error and warning behaviors
- Default print and tray options
- Supply order threshold
- Virtual keyboard layout

When to use

Use the Restore Factory Settings function when you encounter problems with user settings.

Instructions

Use the administrator menu on the control panel to gain access to the Restore Factory Settings function. For help, see the system administrator guide.

Cold Reset

Description

Use the Cold Reset function to reset the following data to the factory default settings:

- Date/Time configuration
- Sleep schedule
- Display language
- I/O and network configuration
- EWS alerts server configuration
- EWS security and device information
- All Event Log entries
- EWS configuration information
- Job history log

When to use

Use the Cold Reset function when you encounter problems with any of the above settings.

Instructions

See [Administrator startup options on page 104](#).

NVRAM initialization

Description

Use the NVRAM Initialization function to reset the MFP configuration portion of NVRAM. The following data are reset:

- Non-HP supplies usage
- Date/Time configuration
- Sleep schedule
- Display language
- I/O and network Configuration
- EWS alerts server configuration
- EWS security and device information
- The 50 most-recent Event Log entries
- A copy of the EWS configuration info
- Sleep Mode/Sleep Delay
- Supplies order threshold
- Stored job management
- Default print options
- Tray and bin configuration
- Warning/error behavior configuration
- Virtual keyboard layout

When to use

Use the NVRAM Initialization function when you suspect that one of the above settings is causing a problem.

How to gain access

See [Reinitialize NVRAM on page 105](#).

Disk initialization

You can initialize the formatter hard disk and the Coprocessor hard disk together or separately. For more information, see [Administrator startup options on page 104](#).

If you initialize both disks, data on each disk is reset to the factory defaults. If you initialize only one of the disks, then data on the reinitialize disk is rebuilt from the shadow copy contained on the other disk.

- [Formatter Disk initialization](#)
- [Coprocessor Disk initialization](#)

Formatter Disk initialization

Description

Use the Formatter Disk Initialization function to remove user data from the formatter hard disk. The following data are affected:

- Digital Send E-mail configuration
- LAN and Internet fax configuration
- LDAP addressing
- Analog fax configuration
- Show/Hide applications on the Home screen
- Send to Folder (E-mail, fax)
- Fax store/print scheduling

When to use

Use the Formatter Disk Initialization function when the formatter hard disk is corrupted or one of the above settings is causing a problem.

Instructions

See [Administrator startup options on page 104](#)

Coprocessor Disk initialization

Description

Use the Coprocessor Disk Initialization function to reset the D and E partitions on the disk. For more information, see [Where data are stored on page 113](#).

When to use

Use the Coprocessor Disk Initialization function when the Coprocessor hard disk is corrupted.

Instructions

See [Administrator startup options on page 104](#)

Erase private data

Description

The Erase Private Data function offers two types of memory erasure: Secure Fast Erase and Secure Sanitizing Erase. Secure Fast Erase is optimized for speed. Secure Sanitizing Erase take three passes at the hard disk. The Erase Private Data function performs the following actions:

- Overwrites all data on partition dsk_ide0a on the formatter hard disk and partitions D and E on the Coprocessor disk

For more information, see [Where data are stored on page 113](#).

- Prompts Windows to clear all pagefiles
- Executes a NVRAM initialization

For more information, see [NVRAM initialization on page 115](#).

When to use

Perform an Erase Private Data function before sending a returned MFP to a new customer.

Instructions

Use the administrator menu on the control panel to gain access to the Erase Private Data function. For help, see the system administrator guide.

Reformat disks

Description

The Reformat Disks function removes all user and configuration data from the selected disk.

You can reformat both disks or you can reformat only one disk. If you reformat both disks, data on each disk is reset to the factory defaults. If you reformat only one of the disks, then data on the reformatted disk is rebuilt from the shadow copy contained on the other disk.

When to use

Use the Reformat Disks function when you suspect disk corruption of causing an RFU operation to fail.

Instructions

See [Firmware Download on page 102](#).

Skip Disk Load

Description

The Skip Disk Load function prevents third-party applications from loading during a power cycle.

When to use

Use the Skip Disk Load function when you suspect third-party applications of causing a problem.

Instructions

See [Administrator startup options on page 104](#).

Firmware upgrade

- [How to update the firmware](#)
- [Other methods to transfer the RFU file](#)


△ **CAUTION:** Perform a NVM back-up and ask the customer to perform a customer backup before upgrading the MFP firmware. See [Non-volatile memory \(NVM\) backup and restore on page 107](#).

How to update the firmware

The firmware upgrade process can take up to 30 minutes, depending on how much the firmware has changed in comparison to the version that is currently on the device.

Follow these steps to update the firmware:

1. Download the firmware update file from service support Web site, and save the file on the network or on your computer.

 **NOTE:** The file has the extension .RFU. The .RFU file is large. Depending on the connection speed, downloading the file could take several minutes.


NOTE: If you have firmware upgrade CDs, insert the first upgrade CD into the laptop CD/DVD drive, and then follow onscreen instructions. After the RFU bundle is produced by the program, continue with step 2.

2. Use the Startup Menu to prepare the MFP to receive the RFU file.

For instructions, see [Firmware Download on page 102](#).


3. Use the MFP diagnostic software to transfer the RFU file to the MFP.

For more information, see [Use CDFT to perform an RFU on page 56](#).

 **NOTE:** HP recommends that you use the MFP diagnostic software to transfer the RFU file. The MFP diagnostic software offers the fastest method to transfer the RFU file. If the HP diagnostic software is not available, you can use one of the alternative methods. For more information, see [Other methods to transfer the RFU file on page 118](#).

Other methods to transfer the RFU file

- [Use HP Web Jetadmin to upgrade the firmware](#)
- [Use FTP to upgrade the firmware](#)
- [Use MS-DOS to upgrade the firmware](#)
- [Use a USB flash drive to upgrade the firmware](#)

 **NOTE:** HP recommends that you use the MFP diagnostic software to transfer the RFU file. You should use an alternative method only if the MFP diagnostic software is unavailable.

Use HP Web Jetadmin to upgrade the firmware

1. Start HP Web Jetadmin.
2. Open the **Device Management** folder in the drop-down list in the **Navigation** panel. Navigate to the **Device Lists** folder.


3. Expand the **Device Lists** folder and select **All Devices**. Locate the device in the list, and then click to select it.

If you need to upgrade the firmware for multiple devices, select all of them by pressing the **Ctrl** key as you click the name of each device.
4. Locate the drop-down box for **Device Tools** in the upper-right corner of the window. Select **Update Printer Firmware** from the action list.
5. If the name of the .RFU file is not listed in the **All Available Images** box, click **Browse** in the **Upload New Firmware Image** dialog box and navigate to the location of the .RFU file that you downloaded from the Web site. If the filename is listed, select it.
6. Click **Upload** to move the .RFU file from your hard drive to the HP Web Jetadmin server. After the upload is complete, the browser window refreshes.
7. Select the .RFU file from the **Printer Firmware Update** drop-down menu.
8. Click **Update Firmware**. HP Web Jetadmin sends the selected .RFU file to the device. The control panel shows messages that indicate the progress of the upgrade. At the end of the upgrade process, the control panel shows the **Ready** message.

Use FTP to upgrade the firmware

This procedure requires that the device be connected to a Windows network. Before beginning, obtain the device network address or hostname. To find the address, on the device control panel, touch **Network Address**.

1. Open an MS-DOS command prompt on your computer.
2. Type: `ftp <NETWORK ADDRESS>`. For example, if the network address is 192.168.0.90, type `ftp 192.168.0.90`.
3. Press **Enter** on the keyboard.
4. When prompted for the user name, press **Enter**.
5. When prompted for the password, press **Enter**.
6. Type `bin` at the command prompt.
7. Press **Enter**. The message **200 Types set to I, Using binary mode to transfer files** appears in the command window.
8. Type `put <filename>` where `<filename>` is the name of the .RFU file that was downloaded from the Web site, including the path. For example, type `put C:\CM8060\8060FW.RFU`, and then press **Enter**.

 **NOTE:** If the file name or path includes a space, you must enclose the file name or path in quotation marks. For example, type `put "C:\MY DOCUMENTS\CM8060\8060FW.RFU"`

The following series of messages appears in the command window:


```
200 PORT command successful
150 Opening BINARY mode data connection
226 Ready
```

226 Processing Job

226 Transfer complete

Then, a message that contains the transfer-speed information appears.

9. The download process begins and the firmware is updated on the device. This can take approximately five minutes. Let the process finish without further interaction with the device or computer.


 **NOTE:** The device automatically turns off and then on again after processing the upgrade.

10. At the command prompt, type: `bye` to exit the ftp command.
11. At the command prompt, type: `exit` to return to the Windows interface.

Use MS-DOS to upgrade the firmware


This procedure requires that the device be connected to a Windows network. Before beginning, obtain the device network address or hostname. To find the address, on the device control panel, touch **Network Address**.

1. From a command prompt or in an MS-DOS window, type the following: `copy /B <FILENAME> \\<COMPUTERNAME>\<SHARENAME>`, where `<FILENAME>` is the name of the .RFU file (including the path), `<COMPUTERNAME>` is the name of the computer from which the device is being shared, and `<SHARENAME>` is the device share name. For example: `C:\>copy /b C:\8060fW.RFU \\YOUR_SERVER\YOUR_COMPUTER`.

 **NOTE:** If the file name or path includes a space, you must enclose the file name or path in quotation marks. For example, type: `C:\>copy /b "C:\MY DOCUMENTS\8060FW.RFU" \\YOUR_SERVER\YOUR_COMPUTER`.

2. Press **Enter** on the keyboard. The control panel shows a message that indicates the progress of the firmware upgrade. At the end of the upgrade process, the control panel returns to the Home screen. The message **1 file(s) copied** appears on the computer screen.


Use a USB flash drive to upgrade the firmware

 **NOTE:** Firmware updates using a USB flash drive can only be done through CDFT-E in Ready mode and Service Assist mode. Updates with a USB flash drive through the Startup Menu are not supported.

1. Insert the USB flash drive containing the upgrade files into the host USB connector on the lower left side of the MFP.
2. Click **Settings/Procedures**, and then click **Firmware Upgrade**.

CDFT detects the drive and displays a list of the available upgrade files on the USB drive. (The .RFU upgrade file is considered valid if it contains a valid header.) Upgrade information is displayed about the MFP's current firmware version and the upgrade version.

3. Click **Upgrade** to initiate the firmware upgrade.

 **NOTE:** If CDFT determines that data loss is possible, a warning message is displayed. Click **OK** to proceed with the upgrade. For specifics about data loss within a release, refer to the release notes for that firmware version.

4. After the upgrade file from the USB drive has loaded, the MFP will automatically reboot.
5. Remove the USB drive.

Firmware downgrade

⚠ **WARNING!** Re-installing the previous system firmware may become necessary if the upgrade fails or if the new firmware is not working correctly for any reason.

Downgrading the firmware from the new version to the previous version will cause some data to be lost. This data can be recovered using NVM restore of machine and customer data if the data was backed up before the firmware upgrade was done, that is, while the original firmware was still on the system.

To do a firmware downgrade, follow the firmware installation instructions using the previous version of firmware instead of the new version. If you are using CDFT-L or Web JetAdmin to perform the installation, you might be prompted that some data loss will occur. Once the downgrade has completed, restore the backup of the machine data and customer data to recover lost settings. If backups are not available from which to restore, these settings will have to be manually reset.

The following data is lost during the downgrade:

- Local Address Book entries (imported items plus auto-added items based on manual entry and history)
- Job Setting Defaults (for email, copy, fax, and print)
- Security Settings (except those noted below)


During the downgrade, the following security services settings will **not** be lost:

- Device Administrator password (used to log in to the EWS and on the control panel)
- Disk access controls (such as enabling or disabling NFS disk access, and PjL disk access)
- Disk wipe and secure disk erase settings
- PjL security passcode
- Boot menu access password

Retrofit tags

- [Introduction](#)
- [Retrofit tag installation, placement, and orientation](#)
- [Retrofit tag descriptions](#)

Introduction

 **NOTE:** For information about removal of case parts to gain access to some retrofit tag locations, see [Covers on page 204](#).

Retrofit tag labels provide information about modifications that have been made to the HP 8050/8060 MFP and accessories. Labels are attached to a frame or non-removable section of the device or accessory. Retrofit tag labels can be used to identify the differences between non-interchangeable parts, diagnostic procedures, repair and replace procedures, and adjustment procedures.

Field notes or bulletins will have a unique retrofit tag label number assigned to them to identify modifications required for a specific device configuration.

When a modification to the device or accessories is completed, the unique retrofit tag label number is marked out on the retrofit tag. Check the retrofit tag label to identify modification made to a specific HP 8050/8060 MFP or accessory.

Figure 4-2 Retrofit tag label example

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Component	HP Service part number
CM8050/8060 MFP	C5958A/5957A
ADF	C5962A
Scanner	C5956-60079
HP multifunction finisher	C5959A
HP 4000-sheet input tray	C5961A
HP 4-bin job separator	C5964A
HP single output bin	C5963A
HP analog fax accessory	C5954A

Retrofit tag installation, placement, and orientation

Retrofit tag labels will be installed on the device and accessories at the factory in predetermined locations. Retrofit labels will be positioned in a readable orientation with the label box marked “1” in the upper left-hand corner.

ADF retrofit tag location

Raise the ADF. The retrofit tag label is on the ADF frame, near the left hinge.

Figure 4-3 Retrofit tag label locations (1 of 7)



Scanner retrofit tag location

Open the Tray 1. Remove one screw (callout 1) and then remove the plastic shield (callout 2). The retrofit tag is on the scanner frame.

Figure 4-4 Retrofit tag label locations (2 of 7)



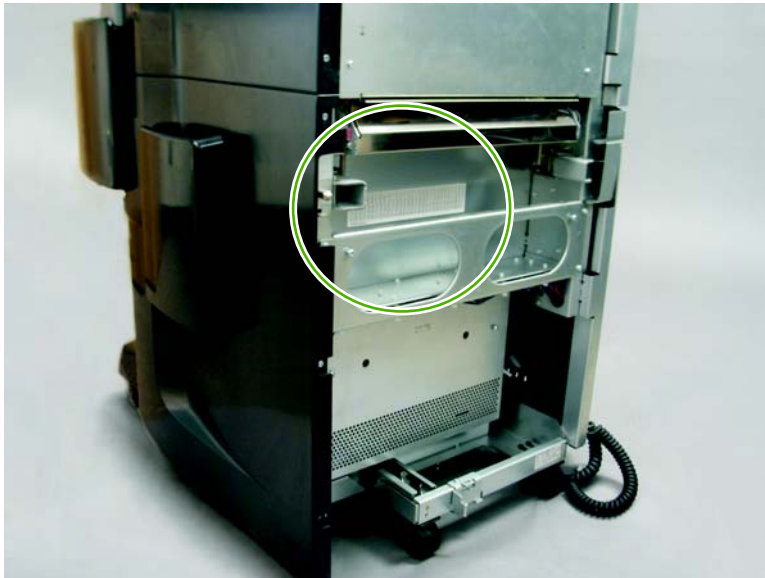
Figure 4-5 Retrofit tag label locations (3 of 7)



HP Multifunction Finisher retrofit tag location

The retrofit tag label is on the right side of the finisher chassis.

Figure 4-6 Retrofit tag label locations (4 of 7)



HP 4-Bin Job Separator retrofit tag location

Loosen six screws, and remove the PCA access cover. The retrofit tag label is located below the main PCA.

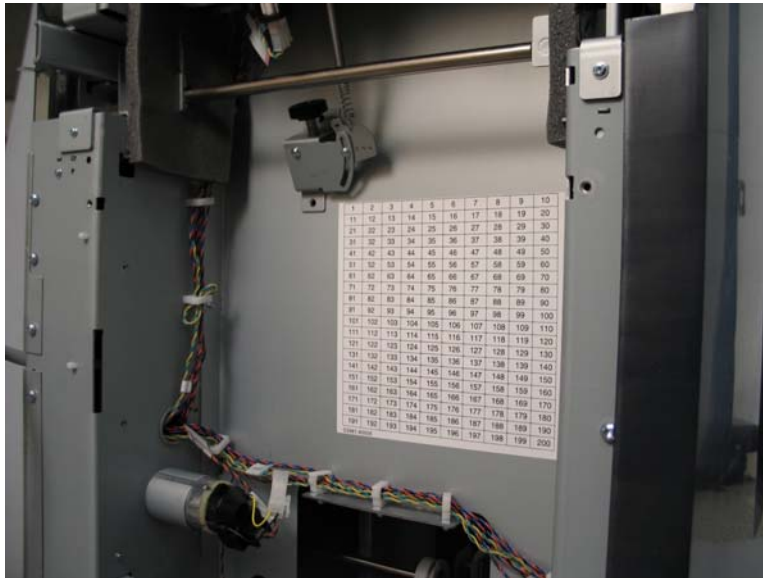
Figure 4-7 Retrofit tag label locations (5 of 7)



Tray 5 retrofit tag location

The retrofit tag label is placed on the left side of Tray 5.

Figure 4-8 Retrofit tag label locations (6 of 7)



HP 8050/8060 MFP retrofit tag location

The retrofit tag label is near the web wipe cover on the left side of the device.

Figure 4-9 Retrofit tag label locations (7 of 7)



Retrofit tag descriptions

- [Print engine](#)
- [Multifunction Finisher](#)
- [4-Bin Separator](#)

Print engine

Engine tag number	Tag description	Service note reference
1	New duplex door cover hardware (C5957-67042) provides more threads to eliminate the potential of over tightening the hardware.	c00965922 - Service Action Advisory
2	The new carriage drive belt clamp (C5956-67468) has a notch cut into it to eliminate the shorting to ground of the bonding agent pen pocket PCA.	c00965921 - Service Action Advisory
3	Not in use.	NA
4	Dryer heater element upgrade (C5957-67092)- this issue was resolved before most customer shipments occurred.	c00996754 - Service Bulletin
5	The new hole profile in the media guide eliminates media damage on edge and middle of 8" by 5.5" media.	c01045073 - Service Action Advisory
6	This tag eliminates the use of an acoustic foam piece on the web wipe access panel, while increasing to 1 inch the thickness of the acoustic foam piece applied to the CPSU board and PVR door.	NA

Engine tag number	Tag description	Service note reference
7	Original PPS modules will be replaced with new ones because of cracking. The new ones are made with a better material.	c01328841 - Service Action Advisory
8	<p>IDO media guide - There are two changes associated with this tag:</p> <ol style="list-style-type: none"> 1. Changed Sensor hole shape in 3 guides in the IDO-RM to reduce media stabbing and bent corners of 4x6 media. 2. Move location of IDO-PI frame mounting holes downward by 0.9mm. 	Pending

Multifunction Finisher

Engine tag number	Tag description	Service note reference
1	New output assembly (C5964-67039) and stack quality fingers (C5964-67036) provide better offset stack quality. Tags 1 and 5 should always be marked together after this upgrade.	c01119634 – Stack Offset Quality
2	Updated separator slide and vertical mounting brackets (C5959-67360) have been installed in manufacturing or replaced in the field.	NA
3	Not in use.	NA
4	The paper guide assembly (C5959-67392) within the accumulator has been replaced	c01069596 - Service Action Advisory
5	This tag completes the upgrade for better offset stack quality. New output assembly (C5964-67039) and stack quality fingers (C5964-67036) have been installed. Tags 1 and 5 should always be marked together after this upgrade.	c01119634 - Stack Offset Quality
6	<p>This tag indicates that the finisher input path assembly (C5959-67376) was replaced as part of the Rev B to Rev C finisher rework.</p> <p>Replacing this part improves the performance of SN211 and prevents the occurrence of A3.3801 error codes.</p>	c01388788 – Service Notice
7	<p>This tag indicates that the finisher accumulator (C5959-67104) was replaced as part of the Rev B to Rev C finisher rework</p> <p>Replacing this part improves the performance of the accumulator and prevents many common accumulator motor stalls and jams.</p>	c01388788 – Service Notice
8	This tag indicates that the finisher job separator wire harness has been replaced and re-routed through the access hole near the rear of the finisher.	c01632188 – Service Notice
9	<p>This tag indicates that the finisher job separator wire harness has been replaced, and installed with the plastic wire retainer in place at SN262. (When marking Tag 9, be sure to also mark Tag 8.)</p> <p>Installing the retainer with a new wire harness will extend the life of the new job separator wire harness substantially.</p>	c01632188 – Service Notice

4-Bin Separator

Engine tag number	Tag description	Service note reference
1	New output assembly (C5964-67039) and stack quality fingers (C5964-67036) provide better offset stack quality. Tags 1 and 5 should always be marked together after this upgrade.	Stack Offset Quality
2	Updated separator slide and vertical mounting brackets (C5959-67360) have been installed in manufacturing or replaced in the field.	NA
3	Not in use.	NA
4	Not in use.	NA
5	This tag completes the upgrade for better offset stack quality. New output assembly (C5964-67039) and stack quality fingers (C5964-67036) have been installed. Tags 1 and 5 should always be marked together after this upgrade.	c01119634 - Stack Offset Quality
6	Not in use.	N/A
7	Not in use.	N/A
8	This tag indicates that the finisher job separator wire harness has been replaced and re-routed through the access hole near the rear of the finisher.	c01632188 – Service Notice
9	This tag indicates that the finisher job separator wire harness has been replaced, and installed with the plastic wire retainer in place at SN262. (When marking Tag 9, be sure to also mark Tag 8.) Installing the retainer with a new wire harness will extend the life of the new job separator wire harness substantially.	c01632188 – Service Notice

Event trends

Purpose of event trending

Event trends are based on specific classes of warnings and errors found in the event log. The trend data is used to help predict where service issues may occur and to assist with troubleshooting and isolating problems. Information is presented in both a list and a graphical format.


Event types

The event trends are analyzed for three primary event types:

- **Power electronics:** Input power system sag and surge events detected during normal system operation which can lead to lowered throughput and print quality issues
- **Carriage inaccuracy:** Detected out of spec carriage stopping accuracy that can cause print quality issues that are difficult to diagnose.

Run a Carriage Stopping Accuracy calibration when the system firmware determines that the carriage stopping accuracy is out-of-specification. After you run the calibration, the system trends the errors and warnings generated from the original carriage stopping accuracy problem and any new errors or warnings generated by the calibration.

- **Paper jams:** Jam event analysis can be used to understand jam locations, frequency of system jams and other issues for problem isolation and possible intervention.

 **NOTE:** When one of the event types has reached a specific threshold, it is highlighted via an indicator on the CDFT Event Trends page.

Access these tools using CDFT. See [View diagnostic trends on page 50](#)

Finisher user options


- [Offsetting](#)
- [Stapling in legal landscape](#)
- [Batch printing](#)

Offsetting

Offsetting enables the finisher to separate jobs so that a customer can find their job in a stack of other print jobs. By default, offsetting is enabled (turned ON). Use the following procedure to enable or disable offsetting according to customer needs.

1. Download the following **.pjl** file to your laptop and load onto the MFP:
 - **SHEnableOffset.pjl**
 - **SHDisableOffset.pjl**
2. Type the IP address of the MFP into your Web browser to access the Embedded Web Server (EWS).
3. In the EWS, select the **Print** tab, browse to the **.pjl** file that you need to enable or disable, and then click **Apply**.

The new settings are now in place.


 **NOTE:** These settings will remain active through reboots, power cycles, firmware reflashes, and firmware upgrades.

4. Train the customer. Explain that you have disabled (or re-enabled) offsetting, and that the behavior of the MFP will now be different:
 - If you disabled offsetting, jobs will no longer be offset from one another. This will increase output speed slightly and may improve stack quality.
 - If you enable offsetting, there will be an offset of 10-15 mm between each job in Bins 1-4. There will be an offset of approximately 20 mm in Bin 5. These offsetting values are not adjustable. Offsetting makes it easier for the customer to differentiate among jobs.

Stapling in legal landscape


By default, the MFP does not allow the customer to staple a legal-sized landscape print job. Use the following procedure to enable the user to staple landscape legal jobs.

1. Download the following **.pjl** file to your laptop and load onto the MFP:
 - **SHStapleLandscapeLegalOn.pjl**
 - **SHStapleLandscapeLegalOff.pjl**
2. Type the IP address of the MFP into your Web browser to access the Embedded Web Server (EWS).
3. In the EWS, select the **Print** tab, browse to the **.pjl** file that you need to enable or disable, and then click **Apply**.
4. Reboot the MFP.


 **NOTE:** These settings will remain active through reboots, power cycles, firmware reflashes, and firmware upgrades.

NOTE: This new functionality requires special user actions which might not be obvious. Train the customer to be successful and to prevent unnecessary service calls.

The MFP will allow stapling in landscape legal mode by following these directions:

 **NOTE:** The staple appears in the top right corner of the landscape print job, even though the user selects **Top Left**. This is the only option possible.

- Load the legal landscape job into the ADF.
- Touch **Copy** on the control panel.
- Touch **Staple**.
- Touch **Orientation**, and then touch **Landscape**.
- Touch **Staple**, and then touch **Top Left**.
- Select the number of copies, and then touch **Start**.
- The job prints in landscape mode on legal paper with a staple in the top-right corner. (This is the only option possible.)
- Ensure that the page settings in your user program (for example, Microsoft Word) are set to legal size and landscape mode.
- In the **Properties** menu of the print driver, select **Legal** as the paper size and **Top Left** for the output staple option.

 **NOTE:** Be sure to leave the orientation setting at **Portrait**.

- Click **OK** to exit the **Properties** dialog box and print the job.
- The job prints in landscape mode on legal paper with a staple in the top-right corner. (This is the only option possible.)

Batch printing

By default, the accumulator drops each print job individually into bin 5 with a 20 mm offset. Use the following procedure to enable batch printing so that a continuous series of small jobs (not stapled) will be delivered as a single stack into bin 5, with no job offsetting. This improves output speed for small jobs going to bin 5, but does not provide any job offsetting. Enable batch stack only at the customer's request.

1. Install firmware version 74.017.0 or greater.
2. In CDFT, touch **Settings/Procedures**, and then touch **Finisher Settings**.

Follow these steps to enable batch printing (batch stack) in bin 5:

- In the **Bin 5 Batch Stack** box, touch **On**.
- Verify that the **Bin 5 Batch Stack** box now reads **Enabled**

Follow these steps to disable batch printing (batch stack) in bin 5:


- In the **Bin 5 Batch Stack** box, touch **Off**.
- Verify that the **Bin 5 Batch Stack** box now reads **Disabled**.

3. Exit CDFT.

 **NOTE:** These settings will remain active through reboots, power cycles, firmware reflashes, and firmware upgrades.

Train the customer. Explain that the behavior of the MFP will now be different:

- If you enabled batch printing (batch Stack), small, sequential jobs will accumulate and drop together into bin 5 without offsetting. This increases output speed.
- If you disabled batch printing (batch stack), every job that goes into bin 5 accumulates and drops individually, with offsetting between each job.

 **NOTE:** This setting only applies to non-stapled jobs. Stapled jobs accumulate and drop individually.

5 Calibrations and adjustments

- [ADF adjustments](#)
- [Scanner adjustments](#)
- [Media calibrations](#)
- [Drum calibrations](#)
- [Carriage calibrations](#)
- [Control Panel calibrations](#)
- [Pen calibrations](#)
- [Tray 1 calibrations](#)
- [Tray 2, 3, and 4 adjustments](#)
- [Tray 5 calibrations](#)
- [Top-of-form sensor \(SN22\) and Tetris sensor \(SN58\) calibrations](#)
- [HP Multifunction Finisher calibrations](#)

ADF adjustments

- [ADF Duplex Center Line Front and Back adjustments](#)
- [ADF Vertical Magnification adjustment](#)
- [ADF Leading Edge adjustment](#)
- [ADF Center Line Simplex adjustment](#)
- [ADF Scan Start Position adjustment](#)

ADF Duplex Center Line Front and Back adjustments

Purpose

This adjustment centers the image in the horizontal direction (main scanning direction) in order to define the correct side margins for a two-sided copy made from the ADF.

When to run

Run the adjustment when the center line of a copy regularly does not match the center line of an original for a two-sided copy made from the ADF.

Instructions

- See [ADF image adjustments on page 63](#).

ADF Vertical Magnification adjustment

Purpose

This adjustment defines the correct image size in the vertical direction (sub-scanning) direction for the ADF.

When to run

Run the adjustment when the magnification of the copy image is regularly incorrect.

Instructions

- See [ADF image adjustments on page 63](#).

ADF Leading Edge adjustment

Purpose

This adjustment defines the correct top margin for copies made from the ADF.

-  **NOTE:** Verify that the ADF vertical magnification is correct before you adjust the ADF lead edge.

When to run

Run the adjustment when the leading edge or trailing edge of a copy regularly does not match the leading edge or trailing edge of an original.

Instructions

- See [ADF image adjustments on page 63](#).

ADF Center Line Simplex adjustment

Purpose

This adjustment centers the image in the horizontal direction (main scanning direction) in order to define the correct side margins for a single-sided copy made from the ADF.

When to run

Run the adjustment when the center line of a copy regularly does not match the center line of an original.

Instructions

- See [ADF image adjustments on page 63](#).

ADF Scan Start Position adjustment

Purpose

This adjustment determines when the scanner should begin acquiring the image from the original when copying from the ADF.

When to run this adjustment

Run this adjustment when the content on the leading edge of a copy regularly does not match the leading edge of the original.

Instructions

- See [Manual ADF image adjustments on page 65](#).

Scanner adjustments

- [Scanner Vertical Magnification adjustment](#)
- [Scanner Leading Edge adjustment](#)
- [Scanner Center Line adjustment](#)

Scanner Vertical Magnification adjustment

Purpose

This adjustment defines the correct image size in the vertical direction (sub-scanning direction) for the scanner.

When to run

Run this adjustment when the magnification of a copy image is regularly incorrect.

Instructions

- See [Scanner image adjustments on page 61](#).

Scanner Leading Edge adjustment

Purpose

This adjustment defines the correct top margin of the copies made from the scanner flatbed.

When to run

Run the adjustment when the leading edge of a copy regularly does not match the leading edge of an original.

Instructions

- See [Scanner image adjustments on page 61](#).

Scanner Center Line adjustment

Purpose

This adjustment centers the image in the horizontal direction (main scanning direction) in order to define the correct side margins for a copy made from the scanner flatbed.

When to run

Run this adjustment when the center line of a copy regularly does not match the center line of an original.

Instructions

- See [Scanner image adjustments on page 61](#).

Media calibrations

- [Media Side Edge calibration](#)

Media Side Edge calibration

Purpose

This calibration is used to locate the side edge of media on the drum.

When to run

Run this calibration when the side margins on the printed page need to be adjusted.

Required time

2 to 3 minutes

Internal operation

The Tetris sensor (SN58) locates the front side edge of paper on the drum. This value is stored in NVM.

Instructions

△ **CAUTION:** This calibration is light-sensitive. All of the MFP covers must be installed before you run this calibration.

- See [Engine Calibrations 1 on page 58](#)

Drum calibrations

- [Drum Position calibration](#)

Drum Position calibration

Purpose

This calibration determines the relative position of the drum calibration holes to the drum encoder disk.

When to run

Run this calibration after the drum encoder disk or a drum encoder PCA is replaced or reinstalled after a repair procedure.

Required time

2 to 3 minutes

Internal operation

The Tetris sensor (SN58) locates precisely placed calibration holes on the drum edge surface. The calibration holes correspond to a precise encoder disk count for this MFP. This calibration helps determine the drum vacuum zone locations to use for loading the leading edge of the media.

Instructions

△ **CAUTION:** This calibration is light-sensitive. All of the MFP covers must be installed before you run this calibration.

- See [Engine Calibrations 1 on page 58](#)

Carriage calibrations

- [Carriage Stopping Accuracy calibration](#)
- [Carriage encoder strip adjustment](#)
- [Carriage-to-carriage alignment](#)

Carriage Stopping Accuracy calibration

Purpose

This calibration adjusts and calibrates the stopping accuracy of the print carriage motors.

When to run

Run this calibration in the following situations:

- A carriage or carriage-related part (such as a carriage motor) is replaced.
- A warning message is recorded in the event log indicating a carriage accuracy issue.
- When directed to in order to fix a print-quality problem.

Required time

8 to 30 minutes

Internal operation

The Carriage Stopping Accuracy calibration begins with a diagnostic of the Carriage 1 stopping accuracy. This diagnostic section is used to quickly determine if a more lengthy calibration is required. The carriage performs a stopping accuracy test in three zones along the carriage travel axis. After all three zones are tested, the actual calibration process automatically runs only in the zones that failed.

After Carriage 1 is completed, Carriage 2 begins the same process.

After the testing and calibration are completed, the new carriage stopping data is stored in NVM.

A warning message is recorded in the event log if a carriage deviates from the expected carriage stopping behavior profile.

Based on the carriage-stopping profile, carriage motor speeds are adjusted to slow down and stop the carriages at precise locations.

Instructions

- See [Engine Calibrations 2 on page 60](#).

Carriage encoder strip adjustment

Purpose

Carriage 1 and carriage 2 encoder strips need to be adjusted (centered) at the front and rear of the carriage travel for correct positioning to be read by the index sensors on the pocketboards.

When to run

Perform this adjustment when removing or replacing encoder driver motors, encoder strips, or encoder PCAs.

Required time

5 minutes

Internal operation

Each carriage encoder board has three sensors: one encoder sensor and two index sensors. This encoder strip adjustment uses the index sensors only. Both index sensors on A16 are referenced as EN18 and both index sensors on A19 are referenced as EN19.

Examine the following sensors using CDFT to make adjustments:

- **EN18 Carriage 1 Index 1** for the rear wall position of carriage 1
- **EN18 Carriage 1 Index 2** for the front wall position of carriage 1
- **EN19 Carriage 2 Index 1** for the rear wall position of carriage 2
- **EN19 Carriage 2 Index 2** for the front wall position of carriage 2

Each of the two encoder strips have index sensor adjustment marks at each end of the strips. The adjustment marks consist of three parts, one above the other: a thick black mark, a thin clear mark, and another thick black mark. The procedure is meant to center the index sensors on the thin clear marks. The sensors will display **L** when centered over a black encoder strip area and **H** when centered over a clear encoder strip area. The adjustment procedure uses the clear area to determine when the encoder strip is properly aligned.

Carriage 1 encoder strip adjustment instructions

1. Enter CDFT.
2. Enter the Carriage tool page.
3. Manually move carriage 1 to the front so that it is pressed against the front wall of the carriage structure.
4. Examine sensor **EN18 Carriage 1 Index 2**. A displayed **H** means the front end of the carriage 1 encoder strip is in the correct position and no adjustments to the front end of the carriage 1 strip bracket is necessary.

If **L** is displayed, the bracket holding the front end of the carriage 1 encoder strip needs to be adjusted to reposition the encoder strip. Remove the carriage cover plate to access the front encoder strip mounting brackets. Loosen the two screws holding the carriage 1 encoder strip bracket, and then raise or lower the bracket until **H** is displayed. Tighten the screws and recheck that **H** is still displayed.
5. Manually move carriage 1 to the rear so that it is pressed against the rear wall of the carriage structure.
6. Examine sensor **EN18 Carriage 1 Index 1**. A displayed **H** means the rear end of the carriage 1 encoder strip is in the correct position and no adjustment to the rear end of the carriage 1 encoder strip bracket is necessary.

If **L** is displayed, the bracket holding the rear end of the carriage 1 encoder strip needs to be adjusted to reposition the encoder strip. Remove the MFP rear covers to access the rear encoder strip mounting brackets. Loosen the two screws holding the carriage 1 encoder strip bracket, and then raise or lower the bracket until **H** is displayed. Tighten the screws and recheck that **H** is still displayed.

7. If adjustments were made to carriage 1, calibrations will need to be run after first checking and adjusting the carriage 2 encoder strip positions. Failure to perform the **Reset Carriage Encoder**, **Drop Detect Beam**, and **Automatic Pen Alignment** calibrations can result in carriage positioning errors or poor print quality.

Carriage 2 encoder strip adjustment instructions

1. Manually move carriage 2 to the front so that it is pressed against the front wall of the carriage structure.
2. Examine sensor **EN18 Carriage 2 Index 2**. A displayed **H** means the front end of the carriage 2 encoder strip is in the correct position and no adjustments to the front end of the carriage 2 strip bracket is necessary.

If **L** is displayed, the bracket holding the front end of the carriage 2 encoder strip needs to be adjusted to reposition the encoder strip. Remove the carriage cover plate to access the front encoder strip mounting brackets. Loosen the two screws holding the carriage 2 encoder strip bracket, and then raise or lower the bracket until **H** is displayed. Tighten the screws and recheck that **H** is still displayed.

3. Manually move carriage 2 to the rear so that it is pressed against the rear wall of the carriage structure.
4. Examine sensor **EN18 Carriage 2 Index 1**. A displayed **H** means the rear end of the carriage 2 encoder strip is in the correct position and no adjustment to the rear end of the carriage 2 encoder strip bracket is necessary.

If **L** is displayed, the bracket holding the rear end of the carriage 2 encoder strip needs to be adjusted to reposition the encoder strip. Remove the MFP rear covers to access the rear encoder strip mounting brackets. Loosen the two screws holding the carriage 2 encoder strip bracket, and then raise or lower the bracket until **H** is displayed. Tighten the screws and recheck that **H** is still displayed.


5. If adjustments were made to either carriage 1 or carriage 2 encoder strip brackets, perform the **Reset Carriage Encoder**, **Drop Detect Beam**, and **Automatic Pen Alignment** calibrations. Failure to perform these calibrations can result in carriage positioning errors or poor print quality.
6. Select **Reset Carriage Encoder** on the **Engine Calibration 2** page.

[Engine Calibrations 2 on page 60](#)

7. Run the **Drop Detect Beam** calibration.

[Drop Detect Beam calibration on page 149](#)

8. Run the **Automatic Pen Alignment** (APA) routine.

 **NOTE:** The APA will reestablish carriage and pen positional alignments.

[Automatic Pen Alignment \(APA\) calibration on page 148](#)

Carriage-to-carriage alignment

Purpose

Establishes carriage-to-carriage alignment in X and Y directions to improve print quality. X is the process direction or drum rotation direction and Y is the carriage movement direction.

When to run

Run the routine in the following situations:

- To eliminate a line in the process (X) direction located in the center of the prints
- To diagnose vertical banding

Required time

2-22 minutes

The time variation is based on the temperature of the carriages. The MFP begins with a warm-up period that can last from 0-20 minutes before the actual calibration begins.

Internal operations

The carriage-to-carriage alignment prints one special test pattern on Letter or A4 paper, and then scans the pattern using the Tetris sensor (SN58). At the end of the procedure, the alignment data is processed and stored in NVM.

Instructions

△ **CAUTION:** Do not use glossy paper or colored paper to perform carriage-to-carriage alignment.

See [Engine Calibrations 2 on page 60](#).

Control Panel calibrations

- [LCD touchscreen](#)

LCD touchscreen

Purpose

This calibration aligns the LCD with the sensitive areas of the touchscreen.

When to run

Run this calibration when the control panel touch screen is inaccurate.

Instructions

- See [Calibrate the touchscreen on page 103](#).

Pen calibrations

- [Pen assessment and servicing](#)
- [Automatic Pen Alignment \(APA\) calibration](#)
- [Pen Density Compensation calibration](#)
- [Drop Detect Beam calibration](#)
- [New Pen Servicing routine](#)
- [Pen Cleaning routine](#)
- [Drop Detect routine](#)
- [Reset NHDB](#)
- [Store NHDB](#)

Pen assessment and servicing

The Edgeline MFP pens need periodic assessment and servicing in order to maintain optimal image quality. An assessment is made at different intervals to determine if pen servicing is necessary. The intervals are at the beginning of a job, during a long job, at the end of a job, and at a daily scheduled time. When an assessment of pen health occurs, every nozzle of every pen is tested. If the results show a pattern of nozzle outs that may result in a print quality defect, pen servicing is invoked and the control panel will display the message “Calibrating”.

Servicing at the beginning of a job

If a unit is idle and a print job is sent, the MFP wakes up and performs pen servicing to get the pens ready for printing. If the MFP has been idle for more than 8 hours prior to this job, pen servicing and the “Calibrating” message is displayed for 3 seconds before printing begins. If the idle time has been more than 7 days, extensive pen servicing is performed and the “Calibrating” message is displayed for at least 20 seconds before printing begins.

Servicing in the middle of a long print job

If the MFP is idle and a print job is sent, the MFP wakes up and performs pen servicing to get the pens ready for printing. If the MFP has been idle for more than 8 hours prior to this job, pen servicing and the “Calibrating” message will be displayed for 3 seconds before printing begins. If the idle time has been more than 7 days, extensive pen servicing will be performed that will result in the “Calibrating” message displayed on the LCD screen for at least 20 seconds before printing begins.

Servicing at the end of a job

When the MFP is done printing, occasionally it will service the pens before it stores them for the next job. When this occurs, the MFP will display “Calibrating” on the LCD screen. This message can stay on the screen for 3 to 26 seconds depending on the types of pen servicing performed. On the average, about every 180 pages of cumulative printing will result in pen servicing. An average user (19K pages a month) will experience this pen servicing about twice a day, with the “Calibrating” message on the LCD screen usually lasting for 3 seconds but can last up to 26 seconds. Since this pen servicing happens only when a job is completed, it should not cause any printing delay unless the next job is sent right after the pen servicing has begun.

About once a day at the end of a job, the MFP checks the pens for defects and attempts to resolve any defects. If no defect is found, this process only takes about 2 minutes to complete. If defects are found, it will take an additional 3, 7, or 12 minutes (3 stages) to recover from the defects, depending on the severity. When the MFP is checking for defects, no message is displayed unless the user interrupts, for example to send a print job. In this case, the MFP displays the "Calibrating" message to notify the user while it attempts to cancel the process which takes at least 30 seconds to complete. In this situation, the user will see the "Calibrating" message for about 30 seconds before printing can begin. If the MFP successfully cancels this process, it will reinitiate the process again 4 hours later.

If the process is not interrupted, the MFP completes the checking of the pens silently. If defects are found, it will attempt to recover from the defects. During this recovery phase, the message "Calibrating" will be displayed on the LCD screen. How often the checking process resulting in the recovery process depends on the health of the pens-- worst case estimate is approximately once a week.

Servicing at scheduled time set by administrator

The servicing time can be set by the device administrator using the control panel, Embedded Web Server, or Web Jet Admin. It is recommended to select a time when the system will be powered on and is least likely to be used so that the servicing routines do not interrupt customer usage of the device. By default, the scheduled calibration time is 3:00AM. The scheduled servicing is performed daily to maintain print quality and print speed. When the calibration is initiated, the MFP displays the "Calibrating" message. This message can stay on the screen for 3 to 15 minutes depending on the types of pen servicing performed, but it can be interrupted by an incoming print job. If the daily calibration can not be completed during its scheduled time, such as interrupted by a user job or an out of ink condition, the calibration is postponed, and then reinitiated at the next opportunity within 2-4 hours.

In order for the daily calibration to execute, the device must be powered ON during the time that the calibration is scheduled. If the device is set to Sleep during this time, it will wake to perform the maintenance, and then go back to sleep as configured by the sleep interval. If the device is powered OFF when the calibration is scheduled to execute, the calibration will be initiated at the next opportunity, such as when the pens go into the capped position after a print job. If a device is frequently powered off over night, a different calibration time (not the 3:00 AM default) should be selected during a time when the device will be powered ON and least likely to be in use.

Control panel: Setting the scheduled calibration time

1. Select the **Administration** menu.
2. Select **Time/Scheduling**.
3. Select **Calibration Time**.
4. Set the time to the desired calibration time.
5. Press **Save**.

Embedded Web Server: Setting the scheduled calibration time

1. Select the **Settings** tab.
2. Select the **Maintenance** option.
3. Set the time to the desired calibration time.
4. Press **Apply**.

Web Jet Admin: Setting the scheduled calibration time

1. Select **Configuration** in the drop down menu.
2. On the **Configure Device** tab, click the check box for **Daily Maintenance**.
3. Set the desired time, and then click **Configure**.

Automatic Pen Alignment (APA) calibration


Purpose

The APA establishes carriage-to-carriage, pen-to-pen, and Die-to-Die alignment to improve print quality.

When to run

Run the APA calibration in the following situations:

- The MFP is installed.
- A new pen is installed.

 **NOTE:** After installing a new pen, run a New Pen Service routine before running an APA. For help running a New Pen Service routine, see [New Pen Servicing routine on page 150](#). In all other cases, run a Pen Cleaning routine before running an APA. For help running a Pen Cleaning routine, see [Pen Cleaning routine on page 151](#).

- Print-quality issues exist.

Required time


18 to 40 minutes

The time variation is based on the temperature of the carriages. The MFP begins with a warm-up period that can last from 0-20 minutes before the actual calibration begins.

Internal operations

- The APA calibration prints special test patterns on Letter or A4 plain paper and then scans those patterns using the Tetris sensor (SN58). At the end of the procedure the calibration data is processed and stored in NVM.

Instructions

 **CAUTION:** Do not use glossy paper, colored paper, or paper containing HP's ColorLok coating technology for an APA. Fresh plain paper is best to use because papers with a high humidity content might not pass the Bonding Agent pen alignment process.

CAUTION: This calibration is light-sensitive. All of the MFP covers must be installed before you run this calibration.

- See [Engine Calibrations 1 on page 58](#).

Pen Density Compensation calibration


Purpose

This calibration creates a uniform density across the printed page and ensures a uniform tonal gradation.

When to run

Run the Pen Density Compensation calibration in the following situations:

- The MFP is installed.
- A new pen is installed.

 **NOTE:** After installing a new pen, run a New Pen Service routine and an APA before running a Pen Density Compensation calibration. For help running a New Pen Service routine, see [New Pen Servicing routine on page 150](#). In all other cases, run a New Pen Service routine and an APA before running a . For help running a Pen Cleaning routine, see [Pen Cleaning routine on page 151](#).

- Color print-quality problems exist. Colors are not uniform across the same page.

Required time

12 to 15 minutes

Internal operation

The calibration compares ink levels on the paper between pens of the same color from each carriage.

A color block from each pen is deposited side-by-side on a sheet of paper. The Tetris sensor (SN58) determines a density value for each of the color blocks.

Computations are made that determine the density difference between similar colored blocks. The calibration information is stored in NVM. Adjustments are made to the amount of ink delivered by each pen to balance the ink output uniformly across the paper.

Instructions

△ **CAUTION:** This calibration is light-sensitive. All of the MFP covers must be installed before you run this calibration.

- See [Engine Calibrations 1 on page 58](#).

Drop Detect Beam calibration


Purpose

This calibration determines the center position of each of the six Drop Detect channel beams. This data is used to position the pens accurately over the Drop Detect assembly for determining pen health.

When to run

Run the drop detect calibration in the following situations:

- You are troubleshooting the drop detect assembly.
- You are troubleshooting a pen health problem.
- You have removed or replaced the Drop Detect assembly.

 **NOTE:** A drop detect calibration is automatically run when you run a New Pen Servicing calibration.

Required time

2 to 3 minutes

Internal operation

The drop detect assembly has six optical beams (one per pen channel) that help determine the health of the pen nozzles.

Each optical beam location and width are measured for each pen column/channel to determine the center of the optical detection beam. This information is stored in NVM.

The pens deposit drops of ink that pass through the beam, which allows precise locating of the pen nozzle.

Instructions

- See [Engine Calibrations 1 on page 58](#).

New Pen Servicing routine

Purpose

This routine resets the NHDB, calibrates the drop detector beam centering, and prepares a new pen for optimal printing.

When to run

Run this routine in the following situations:

- The MFP is installed
- A pen is replaced

 **NOTE:** The New Pen Servicing routine is not available in Service Assist mode.

Required time

10 minutes

Internal operations

This routine does the following actions:

- Erases all pen health data
- Performs some initial pen cleaning
- Performs a Drop Detect routine followed by Level-1 servicing

Instructions

- See [Engine Calibrations 1 on page 58](#).

Pen Cleaning routine

Purpose

This routine cleans the pen nozzles and updates the pen health database based on the Drop Detect results.

When to run the routine

Run this routine when the pen health gauge indicators are amber or red.

Required time

4.5 to 15 minutes

Internal operation

The routine begins at Level-2 pen servicing (pen spitting, pen wiping, and pen spitting). The Level-2 pen servicing routine is followed by a Drop Detect. If more cleaning is needed, a confirmation dialog will be displayed; the user can exit the servicing or continue a Level-3 pen servicing followed by another Drop Detect.

Instructions

- See [Engine Calibrations 1 on page 58](#).

Drop Detect routine


Purpose

This routine determines the health of the pens and triggers routines to optimize print quality all of the pen nozzles.

When to run

Run the routine in the following situations:

- You are troubleshooting the drop detect sensor assembly
- You are troubleshooting a pen health problem

 **NOTE:** A Drop Detect routine is automatically run when you perform a New Pen Servicing calibration or a Pen Cleaning routine.

Required time

2 to 3 minutes

Internal operation

The drop detect assembly has six channels (one per pen) and each channel has an optical beam that helps determine the health of the pen nozzles.

During the Drop Detect routine, each pen is positioned over a drop detect channel. A group of nozzles from each of the six pens simultaneously fires ink into the channels, one nozzle at a time. The sensor beam detects each ink drop fired. The print carriages then position the next group of nozzles for testing. This process repeats until all nozzles have been tested.

The results from the Drop Detect routine is used to update the Pen Health Gauge.



NOTE: The pens are not cleaned during a Drop Detect routine.

Instructions

- See [Engine Calibrations 1 on page 58](#).

Reset NHDB

Purpose

This routine resets the nozzle health database (NHDB) in the engine RAM. It does not replace the NHDB in the formatter hard disk drive until you select [Store NHDB](#) or run the Drop Detect routine.



NOTE: Resetting the NHDB will cause the Pen Health Gauge to display gray and a question mark "?" until the Drop Detect routine is run.

Store NHDB

Purpose

This routine is normally used after [Reset NHDB](#) to clear the old NHDB stored in the formatter hard disk.

Tray 1 calibrations

- [Tray 1 Paper-Width Guide calibration](#)

Tray 1 Paper-Width Guide calibration

Purpose

The Tray 1 paper-width guide must be calibrated to correctly detect the width of media in Tray 1.

When to run

Run this calibration in the following situations:

- Tray 1 is replaced.
- Print margin problems on pages fed through Tray 1 exist and the media size in tray 1 is not reported correctly.

Required time

2 minutes

Internal operation

The Tray 1 media guide is moved to match the width of the paper. The width measurements are made from the inside edge of Tray1 closest to the front of the MFP, to the inside edge of the width slider.

The Tray 1 paper-width guide moves a variable resistor. The resistor value is calibrated using predefined positions. The calibration results are stored in NVM for use when printing from Tray 1.

Instructions

- See [Engine Calibrations 2 on page 60](#).

Tray 2, 3, and 4 adjustments

Tray 2, 3, and 4 pick arm alignment


When installing the pick arm assembly, do not tighten the three screws at the rear of the assembly until you install the associated tray in the Trays 2, 3, and 4 assembly. When the pick arm lowers after the tray is installed, push the pick arm roller against the tray edge, and then tighten the screws.

For instructions on removing the pick arm assembly, see [Pick arm assembly on page 328](#).

Tray 5 calibrations

- [Separator force](#)
- [Stack height](#)
- [Pick force](#)

Separator force

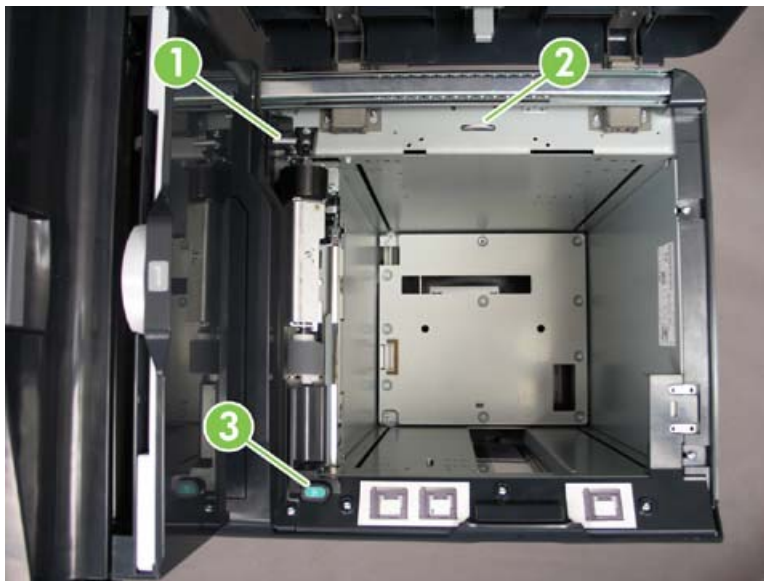
 **NOTE:** Perform a separation force adjustment only on *new* upper (feed) and lower separation rollers.

Setting the correct separator force is determined by passing the following tests:


- Media separation test
- Initialization check

Media separation test

1. Open the Tray 5 top door, and then tape down the arm lifter link (callout 1) and the Tray 5 Media Door Open sensor (SN107) (callout 2).



2. Hold down the media release button (callout 3) while slipping two sheets of fresh standard-weight paper under the pick arm. Position the trailing edge of the sheets slightly past the paper-width guide opening in the elevator tray.

 **NOTE:** Ensure the paper edges are aligned.



3. In CDFT, select **M101 Pick** to run the pick motor. If the correct amount of separator force is being applied, only the bottom sheet should kickback.

Initialization check

- Open, and then close the Tray 5 top door. This runs an initialization test. You can hear the Tray 5 motors running for a few seconds while the test runs. The elevator motor has a distinctive sound. Once it stops, you should hear the pick motor turn on. This is when the pick/separator testing occurs. The test runs only once if the separator force was found to be within the correct limits. The test runs three times consecutively if the separator force is not correct and warning codes are logged.

If Tray 5 passes the first test, the MFP is within tolerance for pick and separation forces.

If Tray 5 passes the second test, the MFP is marginal and you should follow the steps outlined in **Repair strategy**.

You can only determine whether the third test passed or failed by viewing any warning logs in CDFT related to the third test. If a third test runs, even if Tray 5 passes the test, the MFP is unhealthy. Follow the steps outlined in **Repair strategy**.

Any mechanical link between the Tray 5 Pick motor (M101) and the lower separator encoder disk can cause this test to fail.

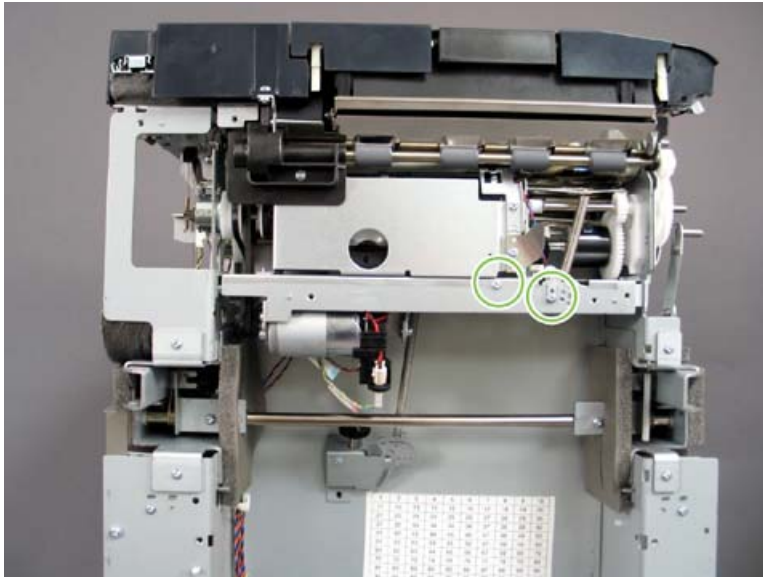
Repair strategy

- a. Check the pick and the upper and lower separator tires for correct seating. Unsnap the tires and reposition them to ensure that the tires are seated correctly.
- b. Examine the pick and the upper and lower separator tires for wear or contamination, and then replace if required.

- c. Run the cleaning routine for the clutches, outlined in Service Advisory c01386766.
- d. If the error log reports several A2.04A1 failures and the cleaning procedure outlined in Service Advisory c01386766 does not prevent these failures, replace the separator clutch.

Separator force adjustment

1. Remove the following covers:
 - Pin alignment plate
[Pin alignment plate on page 721](#)
 - Left bottom panel
[Left bottom panel on page 721](#)
2. Loosen two screws.



3. Using a T10 driver, reach underneath and turn the jack screw to adjust tension on the separator spring, retighten the two screws (right screw first, followed by the left screw), and then run the initialization test by opening and closing the Tray 5 top door. Repeat until the initialization test runs only once.

Stack height

 **NOTE:** Perform the stack height calibration before adjusting the pick force.

1. Open the Tray 5 top door, and then tape down the Tray 5 Media Door Open sensor (SN107) (callout 1).



2. Hold down the arm lifter link (callout 2), wait for the elevator tray to rise to its highest position, and then release the arm lifter link.
3. Lay a straight edge, such as a ruler, flat on the elevator tray on the right side of the cork pad. Check to see if the edge of the ruler is at exactly the same height as, or just slightly below, the ridge of the black guide. If the ruler is not at the same height as, or just slightly below, the ridge, an adjustment to the Tray 5 Stack Height sensor (SN104) is necessary.




4. Remove the two screws that secure the paper-width guide.




5. Remove the paper-width paper guide.

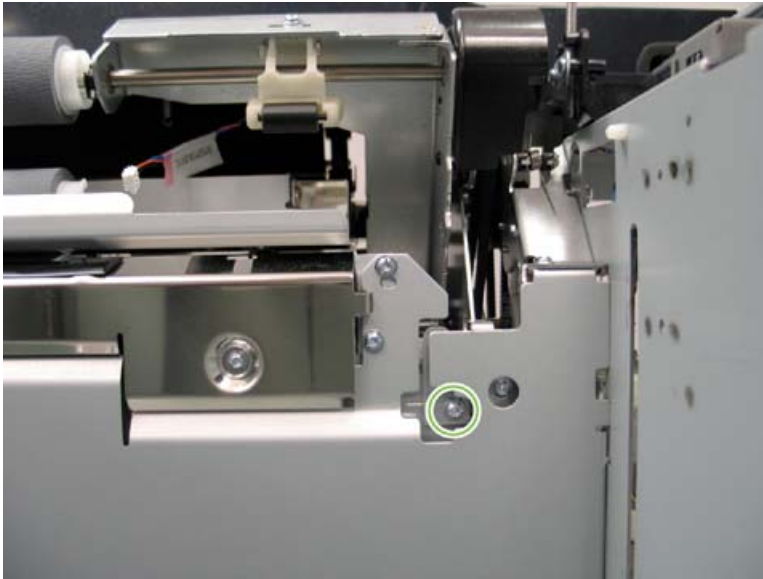



 **Reinstallation tip** Be careful not to pinch the wire harness of the Tray 5 Empty sensor (SN111) below the elevator tray when reinserting the paper-width guide.

6. Slightly loosen the adjustment screw to SN104.

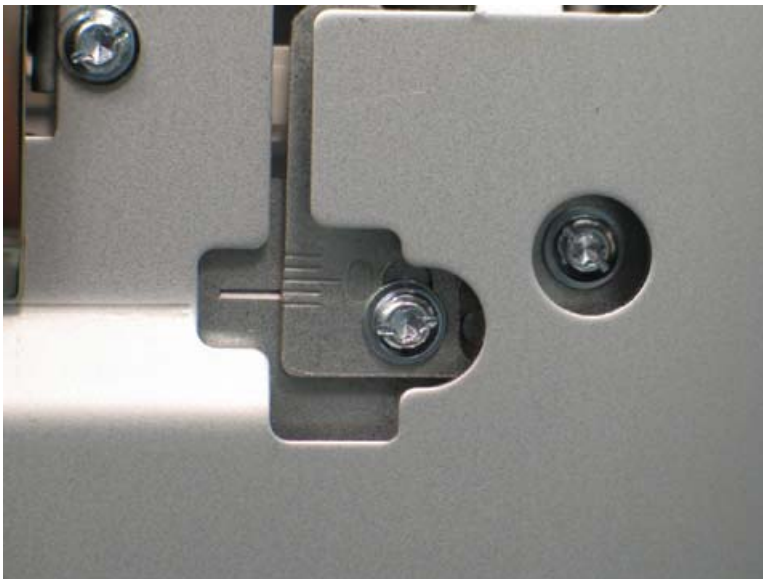
 **NOTE:** For easier access to SN104 adjustment hardware, remove the paper width guide.

 **CAUTION:** There are sharp edges on the paper width guide.




 **NOTE:** Ensure SN104 is straight up and down and not twisted after adjusting and securing the sensor. Be sure to test the alignment of the pick arm actuator to the sensor so that the pick arm actuates the sensor.

7. By prying with a small, flat-bladed screwdriver, raise or lower the gauge to raise or lower the elevator tray accordingly.



8. Retighten the adjustment screw while holding the gauge/sensor assembly to prevent the assembly from shifting.
9. Repeat the procedure until the elevator tray stops at the correct height in step 3.
10. Reinstall the paper-width guide.

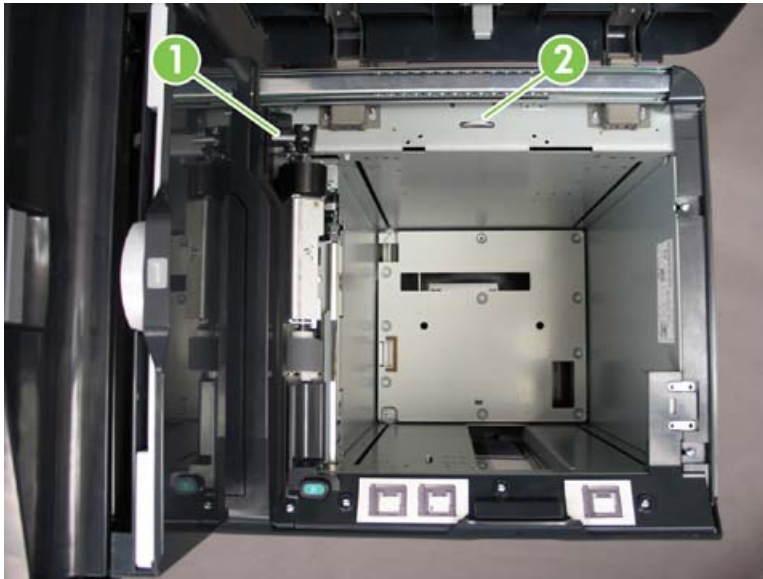
Pick force

 **NOTE:** Calibrating the stack height is a prerequisite to setting the pick force.

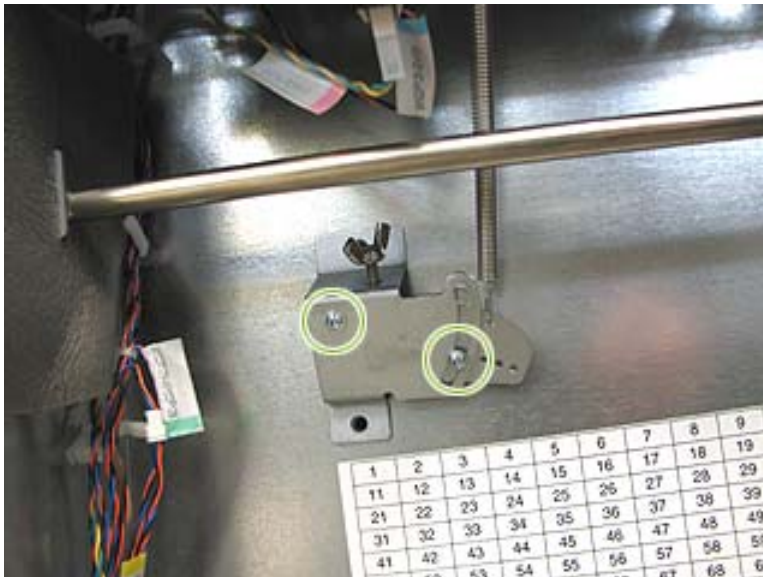
1. Remove the left bottom panel.

[Left bottom panel on page 721](#)

2. Open the Tray 5 top door, and then tape down the arm lifter link (callout 1) and the Tray 5 Media Door Open sensor (SN107) (callout 2), letting the elevator tray rise to its highest position.



3. Loosen two screws below the pick force adjustment wingnut.



4. Turn the wingnut counterclockwise until the pick arm drops, then clockwise just until the arm barely rises off the elevator tray.

5. Turn the wingnut counterclockwise $2\frac{1}{4}$ rotations.
6. Retighten the two screws (right screw first, followed by the left screw) below the adjustment wingnut. Hold the tensioning bracket while retightening to prevent the bracket from moving.

Top-of-form sensor (SN22) and Tetris sensor (SN58) calibrations

- [Top-of-form Position calibration](#)
- [Tetris sensor \(SN58\) calibration](#)
- [First Nozzle Position calibration](#)

Top-of-form Position calibration

Purpose

This calibration determines the drum encoder rotational distance between the Top-of-form sensor (SN22) and the Tetris sensor (SN58).

When to run

Run the calibration when the Tetris sensor (SN58) or the Top-of-form sensor (SN22) are replaced or when the top margin on prints is incorrect.

Required time

2 to 3 minutes

Internal operation

A sheet of Letter or A4 paper loads on the drum. The leading edge of the paper passes underneath SN22 and then under SN58. The distance of drum rotation between these two sensors is measured and stored in NVM.

Instructions


△ **CAUTION:** This calibration is light-sensitive. All of the MFP covers must be installed before you run this calibration.

- See [Engine Calibrations 1 on page 58](#).

Tetris sensor (SN58) calibration

Purpose

This calibration provides measurements that are used by the Pen Density Compensation calibration.

 **NOTE:** This calibration requires the use of a Tetris Sensor calibration kit. The kit consists of a set of preprinted calibrations sheets and a USB data drive. The USB data drive contains unique calibration values for the enclosed calibration sheets and should not be used with any other set of calibrations sheets.

When to run

Run this calibration only when the Tetris sensor (SN58) is replaced.

Required time

10 to 11 minutes

Internal operation

This procedure uses SN58 to scan and measure a set of preprinted target pages. The target pages have been previously scanned and the color data recorded in a data file. The data file is unique to the target pages and must not be used with other targets. A USB thumb drive will contain the spectral data for the calibration and is attached to the USB port near to where the networking cable attaches.

Instructions

△ **CAUTION:** This calibration is light-sensitive. All of the MFP covers must be installed before you run this calibration.

📄 **NOTE:** Disconnect any attached finisher when running the calibration. The preprinted calibration pages that are used need to be protected from damage. Using the finisher subjects them to more potential roller damage.

Use the Tetris Sensor calibration kit.

📄 **NOTE:** Calibration sheets can be used multiple times and should be stored flat in their packet until needed.

- a. Check that the identifying number on the USB data drive and the number on the calibration sheets match. If the numbers do not match then they cannot be used together for the calibration.
- b. Insert the USB data drive into the MFP.
- c. Insert the calibrations sheets in tray 2, 3, or 4.

📄 **NOTE:** Each calibration sheet is numbered. Ensure that the calibrations sheets are in the proper order and correctly oriented. The top sheet should be page 1.

- d. Select the tray.
- e. Click **Tetris Sensor Calibration**.

First Nozzle Position calibration

Purpose

This calibration determines the location of the first black ink nozzle used for printing.

When to run

Run the calibration when the Tetris sensor (SN58) is replaced.

Required time

3 to 4 minutes

Internal operation

- During this calibration, plain paper loads on the drum and a calibration pattern prints. The Tetris sensor (SN58) scans the pattern to determine the x and y locations of the first black nozzle printing position. This calibration also occurs automatically as part of the APA calibration process.

Instructions

△ **CAUTION:** This calibration is light-sensitive. All of the MFP covers must be installed before you run this calibration.

- See [Engine Calibrations 1 on page 58](#).

HP Multifunction Finisher calibrations

- [Stapler alignment](#)
- [Accumulator offset alignment](#)
- [Stapler 2 paper-size adjustment](#)

Stapler alignment

Purpose

This calibration adjusts the relative position of the staples from stapler 1 and stapler 2 on the media.

When to run

Run this alignment if staples are out of position on a print job.

Required time

2 to 3 minutes

Internal operation

The alignment adjusts the relative position of the staples by increasing or decreasing the spacing of the staple from the edge of the media

Instructions

- See [Stapler alignment on page 72](#).

Accumulator offset alignment

Purpose

This calibration aligns the accumulator offsetters.

When to run

Run this calibration after replacing the Finisher Main PCA (A200), an accumulator offset motor (M244 or M245), or the accumulator assembly.

Required time

2 to 3 minutes

Internal operation

The alignment adjusts the relative position of the accumulator offsetters.

Instructions

- See [Accumulator offset alignment on page 72](#).

Stapler 2 paper-size adjustment

Purpose

This calibration adjusts the stapler 2 paper-size setting.

When to run

Run this adjustment after changing the physical stapler 2 installed position (A4 or Letter).

Instructions

- See [Set the finisher stapler 2 paper-size setting on page 72](#).

6 Removal and replacement

- [Introduction](#)
- [General procedures](#)
- [Covers](#)
- [Automatic document feeder \(ADF\)](#)
- [Scanner](#)
- [Control panel](#)
- [Trays 2, 3, and 4](#)
- [Tray 1](#)
- [Vertical](#)
- [Horizontal](#)
- [Input, duplex, output \(IDO\)](#)
- [Drum](#)
- [Vacuum](#)
- [Carriage](#)
- [Ink delivery system \(IDS\)](#)
- [Aerosol](#)
- [Dryer](#)
- [Service station](#)
- [Web wipe](#)
- [Formatter electronics](#)
- [Power and control electronics](#)
- [Tray 5](#)
- [HP Multifunction Finisher](#)
- [HP 4-Bin Job Separator](#)

⚠ **WARNING!** To avoid injury, you must unplug the power cord from the wall receptacle before servicing the MFP.

Introduction

- [Removal and replacement strategy](#)
- [General cautions during removal and replacement](#)
- [Electrostatic discharge](#)

Removal and replacement strategy

This chapter documents the removal and replacement of field replaceable units (FRUs) for the printer models and for the print engine system of the MFP. See the parts manual for a list of FRUs.

Replace parts in the reverse order of their removal. Directions for difficult or critical replacement procedures are included.

General cautions during removal and replacement

Before removing or replacing assemblies and parts:

- Make sure that the printer is turned off.
- Disconnect all cables and cords.
- Use caution. The printer can have sharp sheet-metal edges.

Make sure your power source is adequate for the product voltage rating. The voltage rating is on the product label. The product uses either 110-127 Vac or 200-240 Vac and 50/60 Hz.

Connect the power cord between the product and a grounded AC outlet.

△ **CAUTION:** To prevent damage to the product, use only the power cord that is provided with the product.

If the printer has been running continuously prior to servicing, turn the power off but allow the printer to remain plugged in with the cooling fans running for at least 10 minutes before unplugging the power cord.

Note the lengths, diameters, and locations of screws. Be sure to return each screw to its original location during reassembly. Incorrectly routed or loose wire harnesses can interfere with other internal components and can become damaged or broken. Frayed or pinched harness wires can be difficult to locate. When replacing wire harnesses, always use the provided wire loops, lance points, or wire-harness guides.

△ **CAUTION:** A PoziDriv screwdriver will damage screw heads on the printer. If you have an electric or multi-speed screwdriver, use a torque limiter or set the clutch to apply low torque.

Table 6-1 HP recommended torque values

Material	Torque
Plastic to metal	0.621 Nm (5.5 lb-inch)
Metal to metal	1.129 Nm (10 lb-inch)
PCBA	0.621 Nm (5.5 lb-inch)
Plastic to plastic	0.621 Nm (5.5 lb-inch)

Electrostatic discharge

- △ **CAUTION:** The printer contains parts that are sensitive to electrostatic discharge (ESD). Always service the printer at an ESD-protected workstation, or use an ESD mat. Watch for the ESD symbol to identify the parts that are sensitive to ESD. Protect these parts by using an ESD wrist strap and protective ESD pouches.

There are several ESD jacks on the printer frame to plug in ESD straps while servicing. Replace an ESD jack by unscrewing the jack from the frame.

Carriage ESD jack

- Extract the carriage. The ESD jack is located on the inside of the carriage structure.

[Carriage extraction on page 178](#)



Rear ESD jack

- Remove the following items:

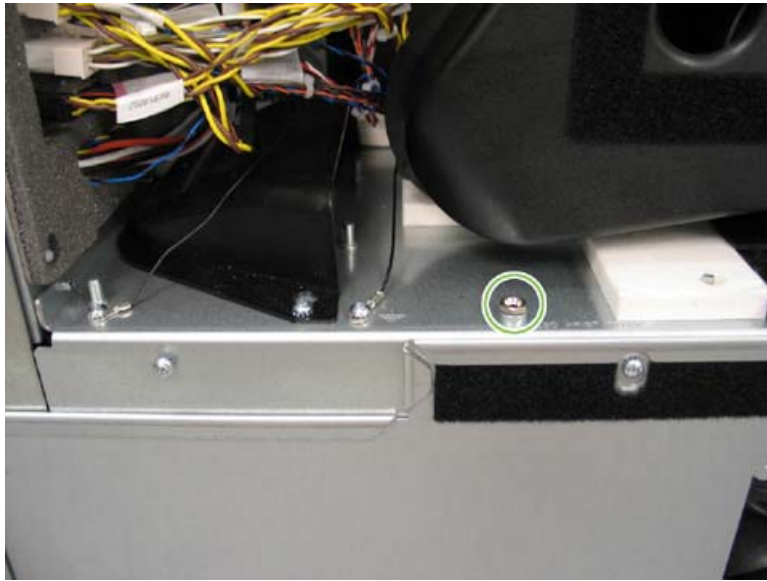
- Muffler

[Muffler on page 219](#)

- Back cover

[Back cover on page 219](#)

From the rear, the ESD jack is located to the left of the service station.



Left-side ESD jack

- Remove the lower left cover.

[Lower left cover on page 215](#)

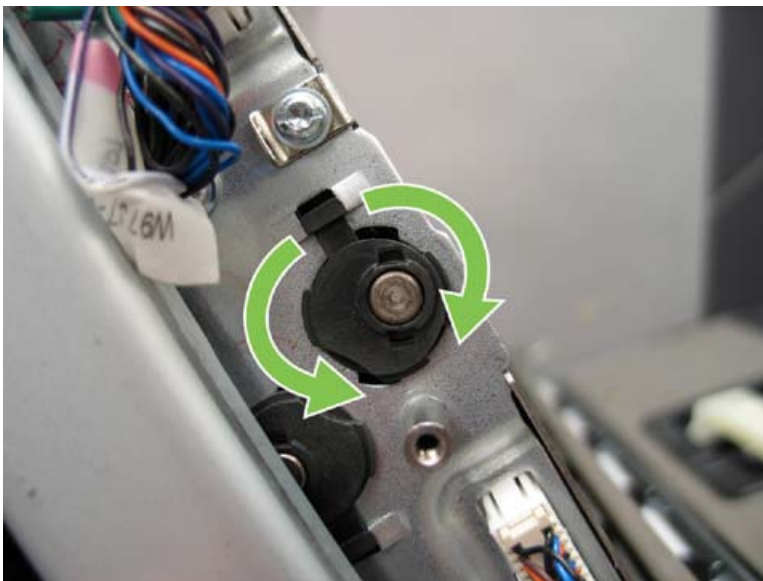


General procedures

- [Drive rollers](#)
- [Pinch roller assembly](#)
- [Wires and cables](#)
- [Carriage extraction](#)
- [Pen care](#)
- [Print zone](#)
- [MFP casters](#)

Drive rollers

1. Remove any belts from the drive roller.
2. For each drive roller yoke, use a screwdriver to lift the tab on the drive roller yoke, turn the drive roller yoke to the release position, and then remove the yoke.




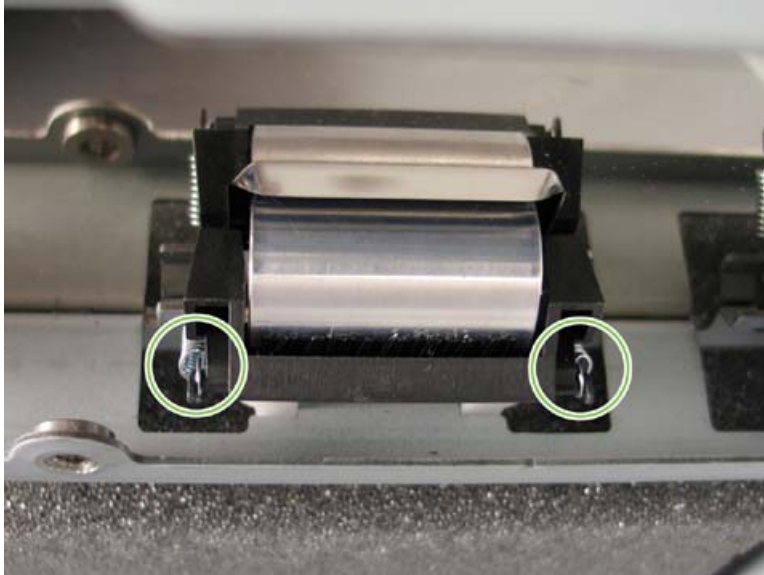
3. Remove the drive roller.

 **NOTE:** When the horizontal roller replacement PM item is reset, a minimum of 20 sheets need to be run in order to recalibrate the new horizontal rollers.

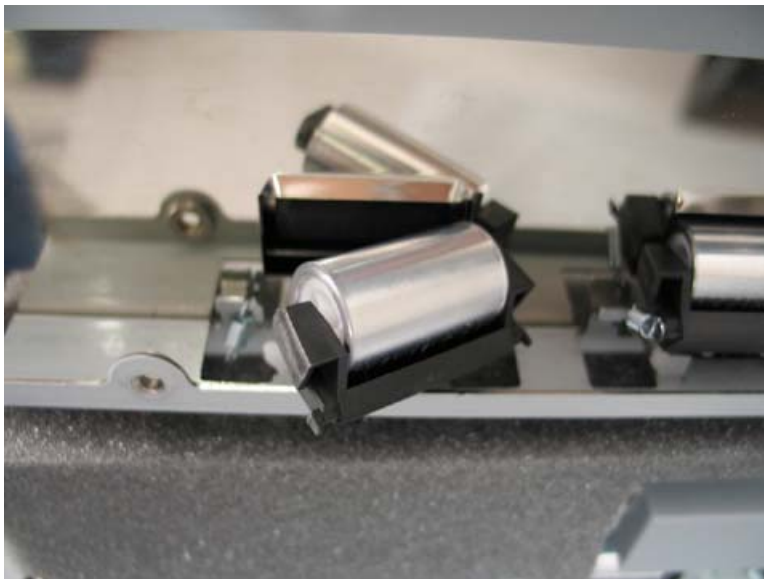
Pinch roller assembly

1. Remove the springs on each side of the pinch roller assembly.

 **NOTE:** When removing the idler roller, be careful not to damage the idler roller datum alignment hooks.



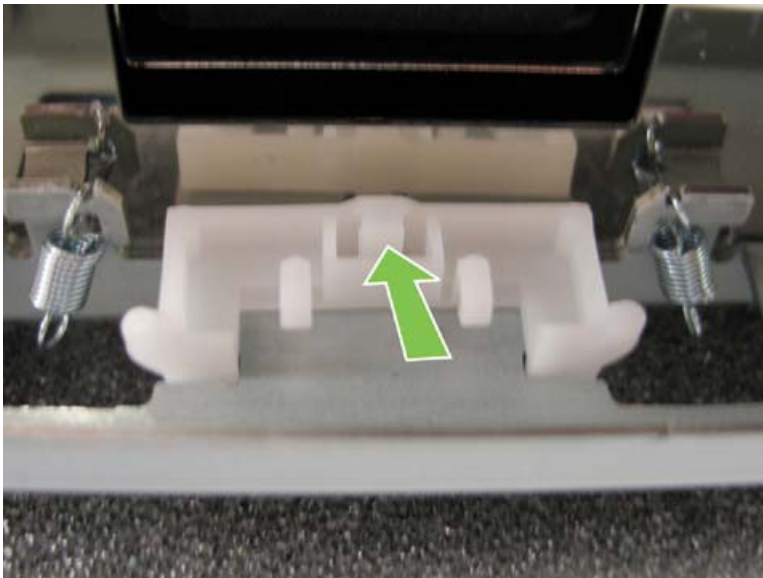
2. Detach the roller holder from the roller datum.



3. Remove the roller from the roller holder.



4. Use a screwdriver to unhook the front clasp of the roller datum, and then remove the roller datum.



Wires and cables

All wires and cables in the MFP have been color coded and labeled.

Color coding standards

Description	Color
26–28 AWG Sensors	
GND/LED cathode	Black
3.3 VDC Opto LED anode	Violet

Description	Color
5 VDC Opto or Nav LED anode	Orange
Opto sensor or switch signals/collector	Blue
Encoder channel A	Brown
Encoder channel B	Gray
16–22 AWG Power Distribution	
GND (digital and analog)	Black
3.3 VDC	Violet
5 VDC	Orange
5 VSB	Orange/White
12 VDC	Blue
24 VDC	White
32 VDC	Yellow
52 VDC	Red
Safety Ground (16 AWG)	Green/Yellow
ESD Ground (20 AWG)	Green/Yellow
20–24 AWG Motor Drive	
DC Motor A (pos) / Solenoid	Yellow
DC Motor B (neg) / Solenoid	Brown
Stepper A0	Black
Stepper A1	Brown
Stepper B0	Orange
Stepper B1	Yellow
Fan Drive U	Yellow
Fan Drive V	Brown
Fan Drive W	White
AC Power (12 AWG UL1015)	
Neutral	White
Line	Black
Switched	Orange

Cable labeling standards

Each cable has three labels: two labels for the connectors (one for each end), and one label for the cable (which is located near one of the connectors).

The cable label consists of the following elements:

- W (cable) number
- Manufacturing part number
- Revision number
- Manufacture date: year and work week (YYWW)
- Country/Region of origin

Here is an example of a cable label:

W1
c5956-60124
rev. 1
0608
Made in China

The connector label consists of the following elements:

- W (cable) number
- P or J (plug or jack) number
- – (to)
- Device or wire number
- Jack number (for PCAs)

An example of a label for a cable plugging into a PCA's jack is: **W1P3-A1J3** (cable #1 plug #3 connects to jack #3 on PCA #A1).

Carriage extraction

1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)

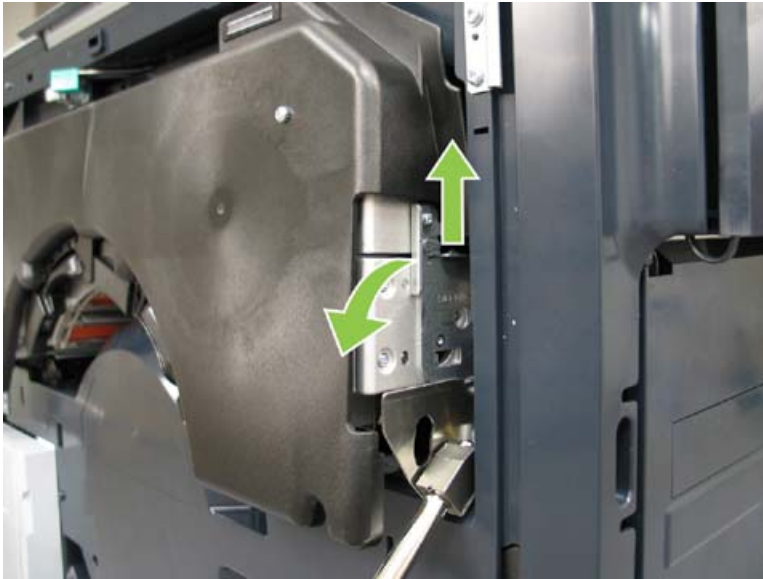
2. Lower the carriage structure locking bar.



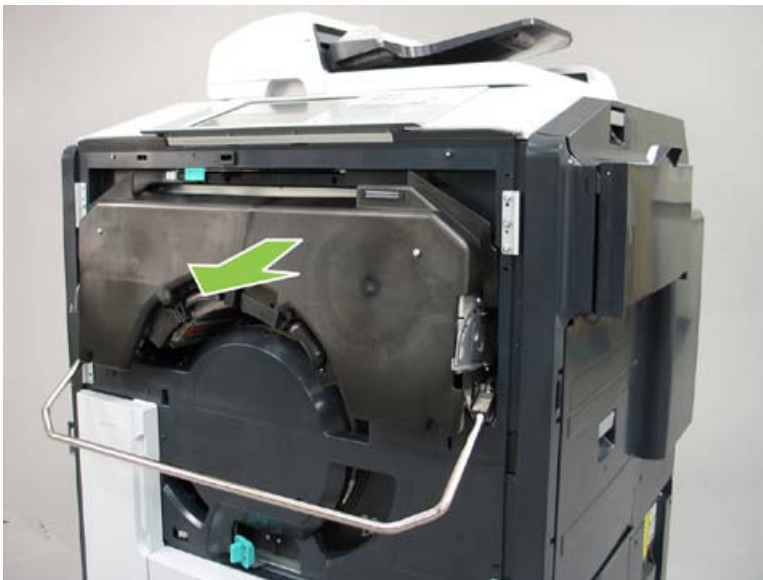
3. Loosen one screw on the right-side carriage locking plate and one screw on the left-side carriage locking plate.



4. Lift up on the locking tabs (one tab on each of the side locking plates), and then rotate the locking plates toward the front of the carriage to unlock them (the plates will snap into the unlocked position).



5. Pull the carriage structure forward out of the device.



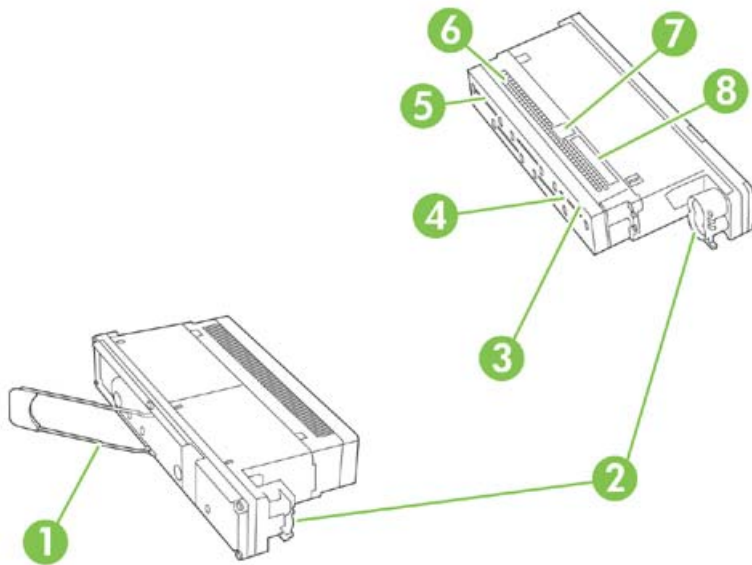
Pen care

Special care must be taken when handling, storing, or returning pens. The die material can easily crack or rip, resulting in electrical failures, image quality (IQ) issues, or pen drool. The dies are especially sensitive to external contamination. Any residue on the dies can clog nozzles and cause unrecoverable IQ issues.

△ **CAUTION:** Use gloves and safety glasses when handling ink parts.

Handling

- Do not shake the pens.
- Do not drop the pens. Damage can occur if a pen falls over.
- Do not touch the surface of the dies.
- The color inks and bonding agent must never come in contact with each other in the nozzles. This contact would result in unrecoverable print quality issues.
- When placing a pen on a work surface, hold the nozzles up and place one corner of the pen on the surface, and then gently rock the pen forward until the pen is flat. This guards against *pen-gulping*, ingesting air which results in loss of backpressure.
- Pen contacts are sensitive to electrostatic discharge (ESD). Do not touch the exposed contacts on the pen after removing the cap.
- When a pen is removed, use a dry, lint-free cloth to wipe the bottom edge of the pen closest to the interconnect pads to remove any excess ink that might have built up from aerosol during printing. (**Do not** touch the surface of the dies.) To avoid cross-contamination of inks and the bonding agent, do not reuse the cloth to wipe other pens.



1	Handle
2	Septum
3	Edge to be wiped after every pen removal.
	<p>CAUTION: Dies are very fragile and should not be wiped. Wipe only the edge of the pen body on the side of the interconnect pads.</p> <p>NOTE: When replacing, swapping, or removing and reinstalling a pen, ensure to use a clean dry wipe on the pen cap surfaces in order to remove any ink build-up. When cleaning the pen caps, prevent cross-contamination by using a new location on the clean dry wipe for each pen cap.</p>
4	Die 5
5	Die 1

6	Interconnect pads
7	Acumen
8	MID label (a unique identifier for the pen)

Storage

- To prevent evaporation, **do not leave pens uncapped for longer than 30 minutes.**
 - If reinserting the pens back into the MFP is not possible, store the pens in an airtight container.
 - Recap a pen only with a **new, unused** orange nozzle cap (callout 1) and needle plug (callout 3). Place the supplied polystyrene block (callout 2) between the finger handles to ensure the cap remains effective. If recapping a pen with a new, unused cap and plug for longer than three weeks, the pen should also be packaged in an airtight container to prevent further evaporation.

 **NOTE:** The orange nozzle cap is keyed for proper orientation.



- **Discard** all used orange pen nozzle caps and needle plugs. Reinstalling a used cap on a pen can damage the dies and cause pen drooling and print quality issues.
- When storing pens, keep the nozzles in an upright position.
- Pens are sensitive to high temperature storage. Degradation to internal components occurs at temperatures greater than 40° C (104° F) for long durations (40–50° C exceeding 10 days), shortening the life of the pen. A pen should never be stored at more than 50° C for any duration.
- Remove the needle plug *before* removing the cap to reduce the chance of air being ingested in the nozzle area.
- If the pen carriages with installed pens are not returned to the cap position before power up, an extended servicing algorithm will automatically begin at initialization as part of the nozzle health recovery.

Pen returns

- [General recommendations](#)
- [Repackaging a failed pen](#)

General recommendations

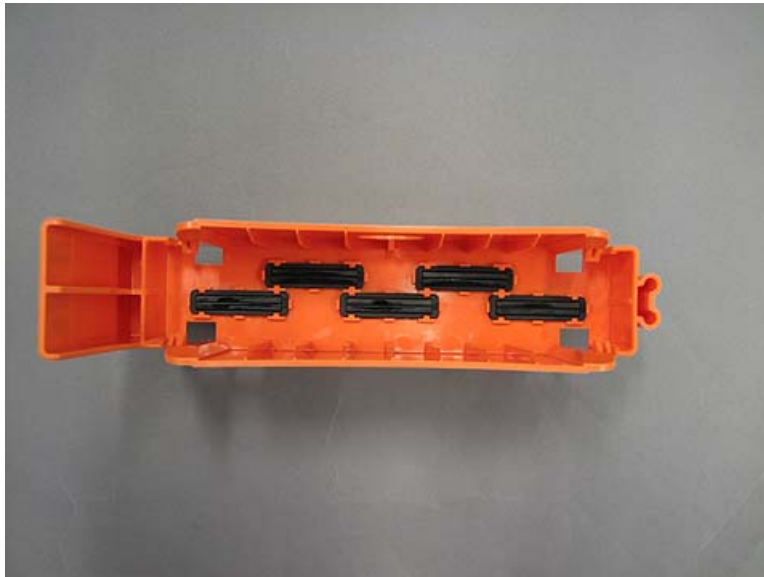
Care must be taken when pens are removed from the MFP. For pen handling guidelines, see [Handling on page 181](#).

Pens must be repackaged correctly using the packaging material for failed pens.

Repackaging a failed pen

Fully repackage the failed pen with the supplied FRU packaging.

1. Turn the pen cap over and ensure all five black rubber seals are present. If a seal is missing, obtain a new cap.



2. Align the cap with the pen by holding the cap by its tabs and gently squeezing. Ensure the snap hooks of the pen cap are secured in the notches.



3. Insert the nozzle cap.



4. Place the polystyrene block between the tabs of the pen cap.



5. Place the capped pen in the bubble bag. Remove the adhesive backing, if present, fold the bag flap, and then seal the bag.



6. Place the bubble bag into the white foil bag, and then seal the bag.



7. Place the bagged pen between two foam pieces in the shipping carton. The carton holds a single pen.



8. Include the following information and paperwork in the shipping carton:

- Description of the pen failure:
 - Printer reject error code
 - IQ description and printout of the defect
 - Other applicable information
- Date
- Printer serial number

- Any additional defect prints
- Supplies status page
- Sample prints:
 - Nozzle health with error hiding ON
 - All colors 8.5 x 11 or A4
 - Streaks test plot

9. Close the carton.



10. Return to:

Attn: Returns Department 3117, Hewlett Packard, 16399 W. Bernardo Rd., San Diego CA
92127-9635

Print zone

- [Print zone removal](#)
- [Print zone replacement](#)

Print zone removal

⚠ **WARNING!** The print zone weighs approximately 57 kg (125 lbs). Two people are required to move the print zone.

WARNING! Many screws in the print zone assembly have a red coating (Glyptal) painted on, indicating a sensitive, factory-only alignment or calibration. Do not loosen or remove any screw with a red coating.

1. Remove the following items:

- MFP front doors

[Front doors on page 204](#)

- Carriage plate cover

[Carriage plate cover on page 208](#)

- Upper inner cover

[Upper inner cover on page 209](#)

- Trays 2, 3, and 4

[Trays 2, 3, and 4 on page 323](#)

- Lower inner cover

[Lower inner cover on page 211](#)

- Web wipe cartridge

[Web wipe cartridge on page 664](#)

- Drop detect assembly

[Drop detect assembly on page 659](#)

- Horizontal assembly

[Horizontal assembly on page 388](#)

- IDO printer interface

[IDO printer interface on page 474](#)

- Pens

[Pens on page 530](#)

- Carriage pen pocket PCAs

[Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

- Carriage encoder PCAs

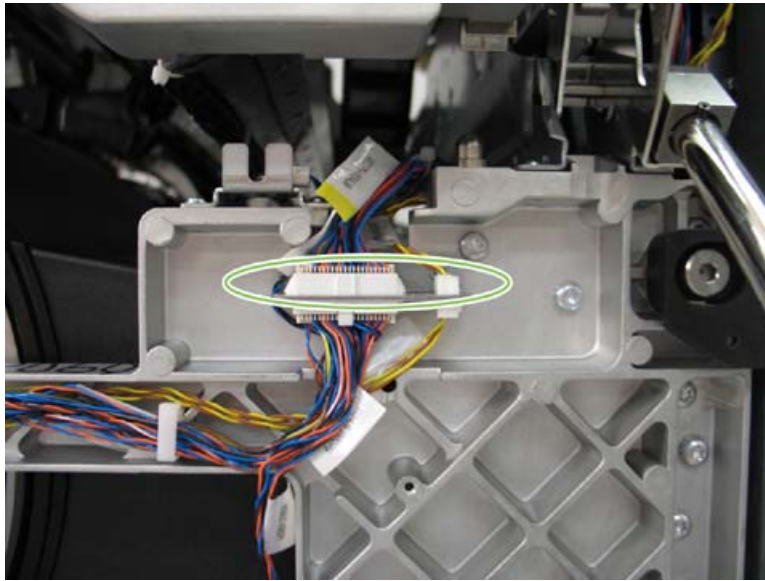
[Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)

2. Verify that both the IDO door and Tray 1 are open.

3. On the front of the print zone, disconnect the top wire connectors from the bulkhead, and then unthread the wires:

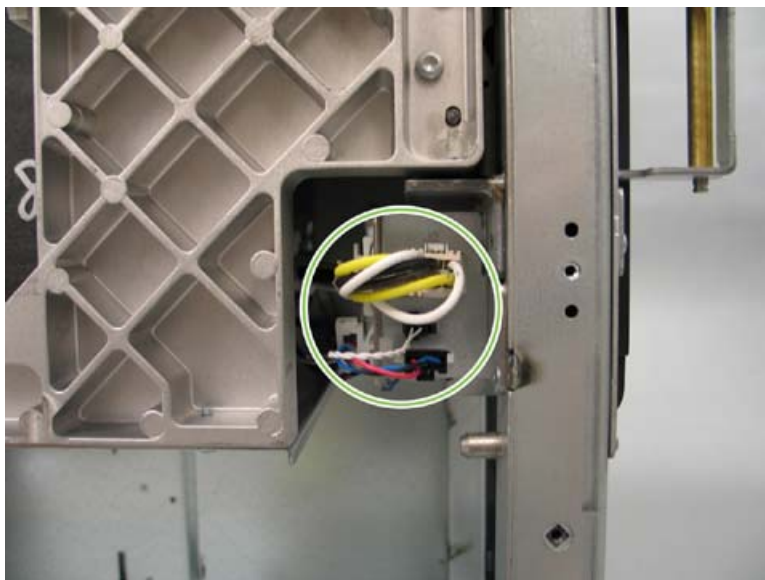
- W32P9-W34J9

- W13P5-W100J5



4. Disconnect three dryer wire connectors:


- W25P36-SN36
- W24J14-HTR2
- W22P2-HTR2



5. Disconnect the following wire connectors which are located behind the print zone to the right of the service station:

- W35P1-W10J1
- W48P13-W47J13
- W10P1-W25J1

- W33P20-LED20
- One ground screw

 **NOTE:** Wrap and secure any loose wires that could be damaged when you remove the print zone.



6. Unclip the drop detect wire harness from the wire clip at the base of the rear of the print zone.



7. Remove and cap each of the pens.

[Pens on page 594](#)

8. From the front of the MFP, squeeze the sides of the front end of the e-chain together, and then remove the e-chain from the pivot bracket.





9. Remove the aerosol manifold from each carriage.



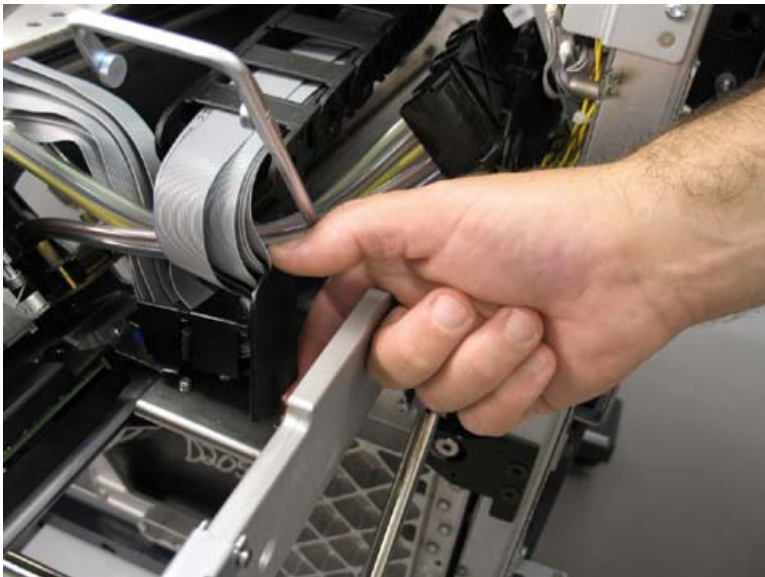
10. For each carriage, disconnect the pen pocket wire connectors of the trailing cables, and then unthread the wire harness from the pivot bracket.



 **NOTE:** The bonding agent pocket on each print carriage has two wire connectors, one with brass thumbscrews and one without.

 **CAUTION:** In order to prevent damage to the wire harnesses later in the removal process, be sure that the wire harnesses are free of the pivot brackets.

11. Remove the cable bracket that secures the e-chain to the print carriage by pressing on the front tab of the bracket, pivoting the bracket to the rear of the MFP, and then pulling the bracket towards you.



12. Disconnect the IDS hoses for each pen by squeezing the top of the two sides of the IDS hose bracket assembly together, and then lifting up to remove the bracket.

💡 **Reinstallation tip** Push on both sides of the cradle to fully seat it.

⚠ **CAUTION:** Be careful not to damage the trailing cables.



💡 **Reinstallation tip** Ensure the ink tubes are routed **in front** of the trailing cables.



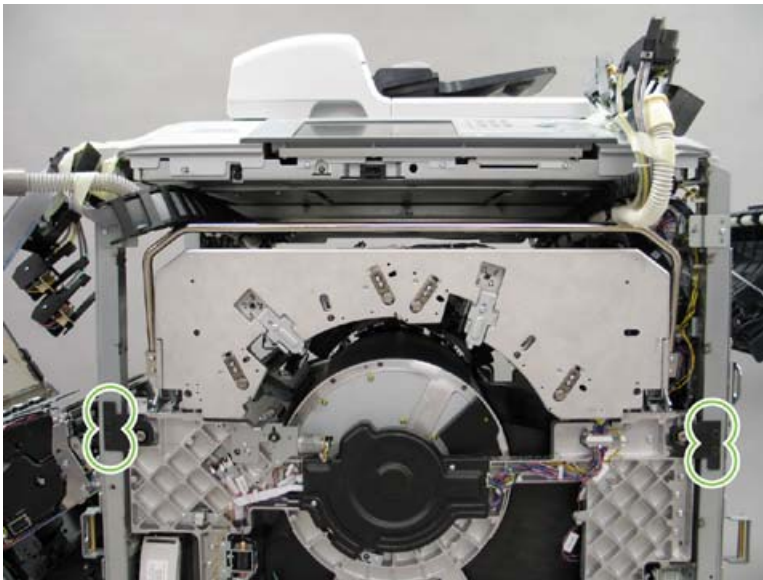
13. Use tape to secure the hoses and wire connectors to the upper MFP case parts.

14. Close the print carriage structure.

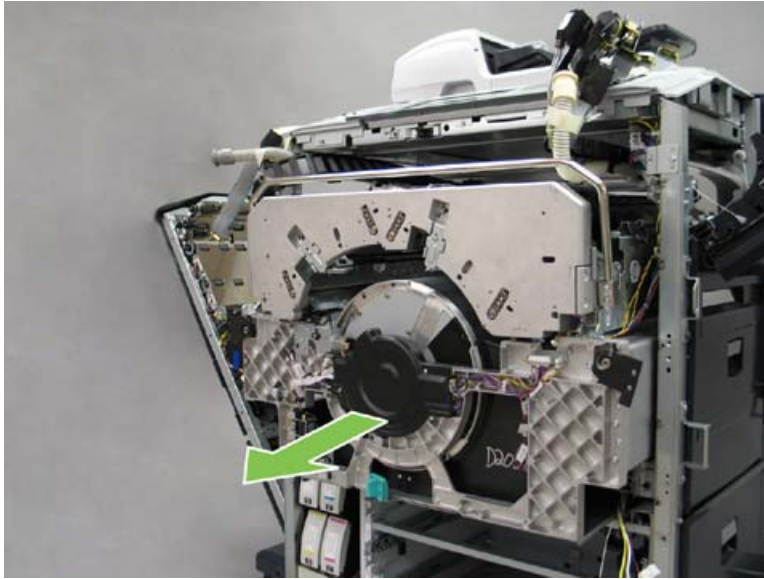


△ **CAUTION:** Be sure that the hoses are supported and not damaged when you close the print carriage structure.

15. For each bracket on the front of the print zone, use an allen wrench to remove the two outer screws.



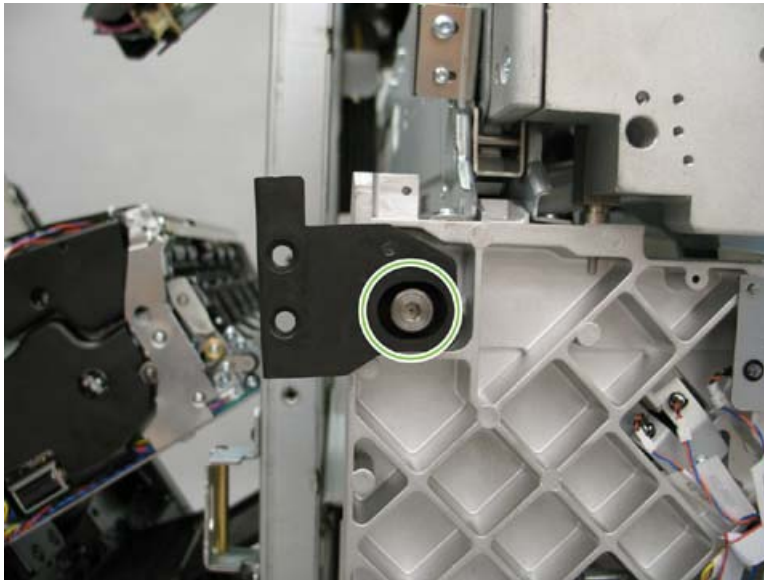
16. Grip the print zone from the middle, and then pull the print zone out of the MFP.



△ **CAUTION:** Do not set the print zone on the floor. Place the print zone on rails.

Print zone replacement

1. If the front brackets are connected to the print zone, remove one screw for each bracket, and then remove the bracket.



2. Wrap and secure any loose wires on the print zone to prevent wire damage when you install the print zone.
3. Inspect the MFP for any loose wires that could be damaged when you insert the print zone. Clear any such wires out of the way.
4. Insert the print zone three-quarters of the way into the MFP.


5. From the rear of the MFP, clip the drop detect wire connector to the wire clip at the base of the print zone.



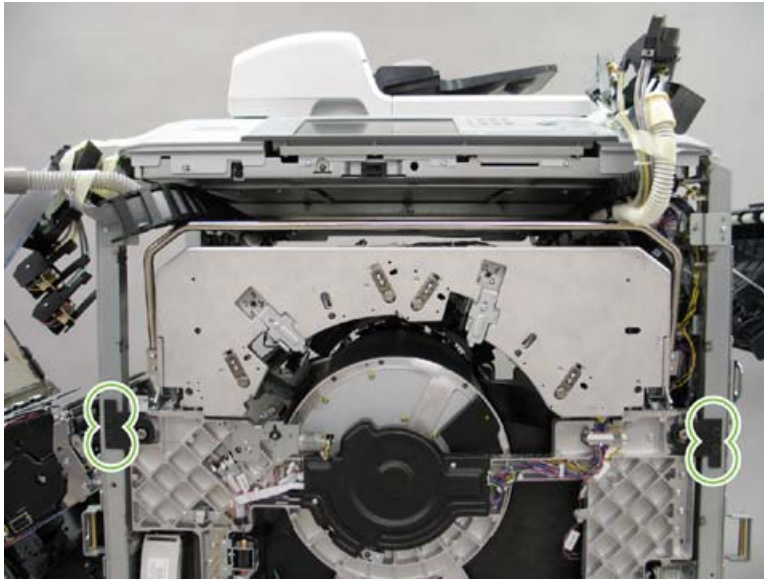
6. Verify that the alignment pin on the lower rear of the MFP is aligned with the alignment slot on the MFP.




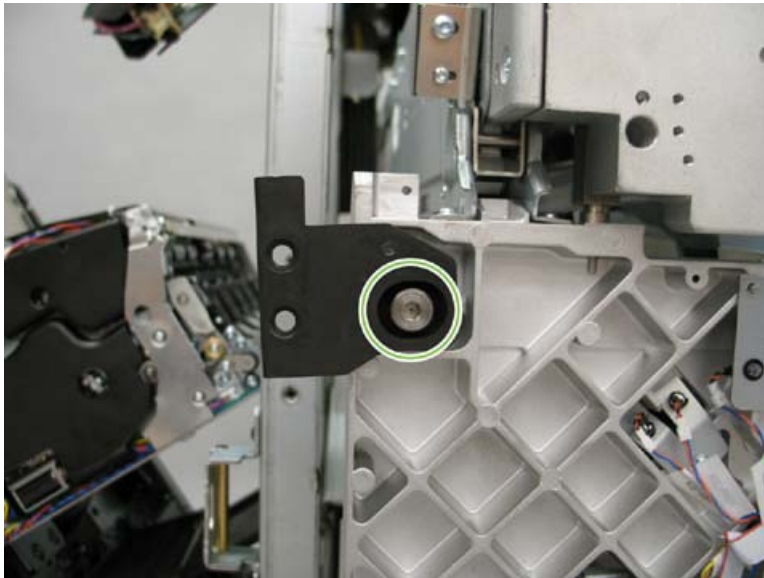
7. Push the print zone into the MFP as far as it will go.

 **NOTE:** Slightly lift the print zone to fully insert the alignment pin into the alignment slot.

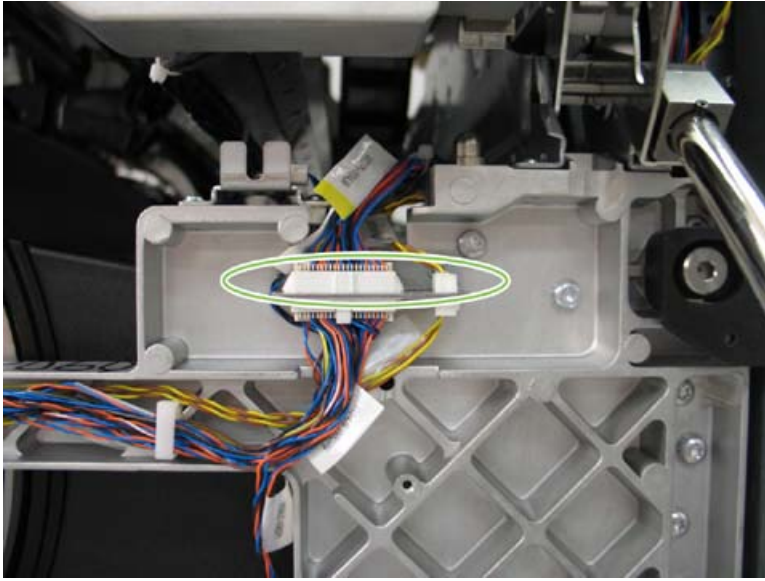
8. For each print zone front bracket, install two allen screws to secure the bracket to the MFP frame, and then install the one larger screw to secure the bracket to the print zone.



 **Reinstallation tip** Secure the left bracket to the print zone before securing the right bracket. The right side is slotted.



9. On the front of the print zone, connect the following wire connectors:
 - W32P9-W34J9
 - W13P5-W100J5



10. Connect the dryer wire connectors:

- W25P36-SN36
- W24J14-HTR2
- W22P2-HTR2



11. Connect the following wire connectors located behind the print zone to the right of the service station:


- W35P1-W10J1
- W48P13-W47J13
- W10P1-W25J1

- W33P20-LED20
- One ground screw



12. For each carriage, do the following tasks:

- Connect the e-chain front bracket to the carriage.
- Connect the e-chain front end to the pivot bracket.
- Thread the IDS hoses through the pivot bracket, and then connect the IDS hoses to the carriage.
- Thread the wire harness through the pivot bracket, and then connect wire connectors to the carriage.

 **NOTE:** The bonding agent pocket on each print carriage has two wire connectors.

- Thread the aerosol hose through the pivot bracket, and then connect the aerosol manifold to the carriage.

13. Close the print carriage structure.



14. Install the following items in this order:

- Carriage encoder PCAs
[Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Carriage pen pocket PCAs
[Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Pens
[Pens on page 530](#)
- Drop detect assembly
[Drop detect assembly on page 659](#)
- Web wipe cartridge
[Web wipe cartridge on page 664](#)
- IDO printer interface
[IDO printer interface on page 474](#)
- Horizontal assembly
[Horizontal assembly on page 388](#)
- Trays 2, 3, and 4
[Trays 2, 3, and 4 on page 323](#)
- Lower inner cover
[Lower inner cover on page 211](#)

- Upper inner cover
[Upper inner cover on page 209](#)
- Carriage plate cover
[Carriage plate cover on page 208](#)
- MFP front doors
[Front doors on page 204](#)

15. Run the following calibrations in the order listed:

Type	Calibration	Description
Carriage and drum calibrations	Carriage encoder strip adjustment	Carriage encoder strip adjustment on page 141
	Carriage encoder reset	Click Reset Carriage Encoder .
	Carriage Stopping Accuracy	Carriage Stopping Accuracy calibration on page 141
	Top-of-Form calibration	Top-of-form Position calibration on page 163
	Media side edge calibration	Media Side Edge calibration on page 139
	First nozzle location	First Nozzle Position calibration on page 164
	Drum Position calibration	Drum Position calibration on page 140
Pen calibrations	New Pen Servicing	New Pen Servicing routine on page 150
	APA	Automatic Pen Alignment (APA) calibration on page 148
	Tetris sensor calibration	Tetris sensor (SN58) calibration on page 163
	Pen Density compensation	Pen Density Compensation calibration on page 149
NVM backup	External NVM backup	Manage non-volatile memory (NVM) on page 56

MFP casters

△ **WARNING!** The MFP weighs 329 kg (725 lbs). Two people are required to move the MFP.

1. Detach all MFP accessories. See the installation guide for instructions.
2. Remove the cover or trim covering the caster to be replaced.

3. Spread a 32 mm (1¼-inch) stack of paper on the floor to create a ramp for the caster on the opposite side of the caster to be replaced. For example, to replace the left front caster, create a ramp for the right front caster.



4. Roll the MFP onto the stack of paper. Check the clearance of the caster to be replaced.



5. Remove four bolts.



6. Place a support under the elevated side of the MFP, and then remove the caster.



Covers

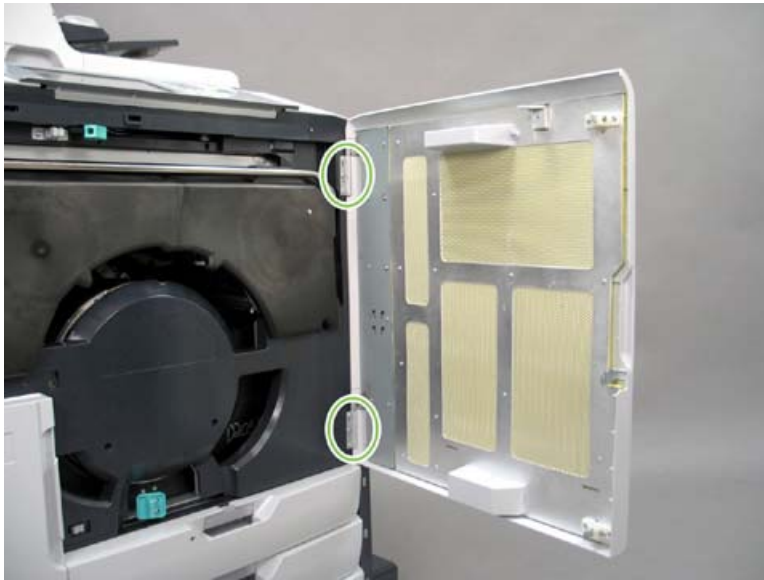
- [Front doors](#)
- [Carriage plate cover](#)
- [Upper inner cover](#)
- [Trays 2, 3, and 4 covers](#)
- [Lower inner cover](#)
- [Front Door Lock solenoid \(SOL4\)](#)
- [Web wipe access case parts](#)
- [Left case parts](#)
- [Right case parts](#)
- [Rear case parts](#)
- [Top case parts](#)

Front doors

- [Front door](#)
- [Left front door](#)
- [IDS door](#)
- [Front Door LED \(LED7\)](#)
- [Upper-left Door Open sensor \(SN37\)](#)
- [Front Door Open switch \(SW3\)](#)

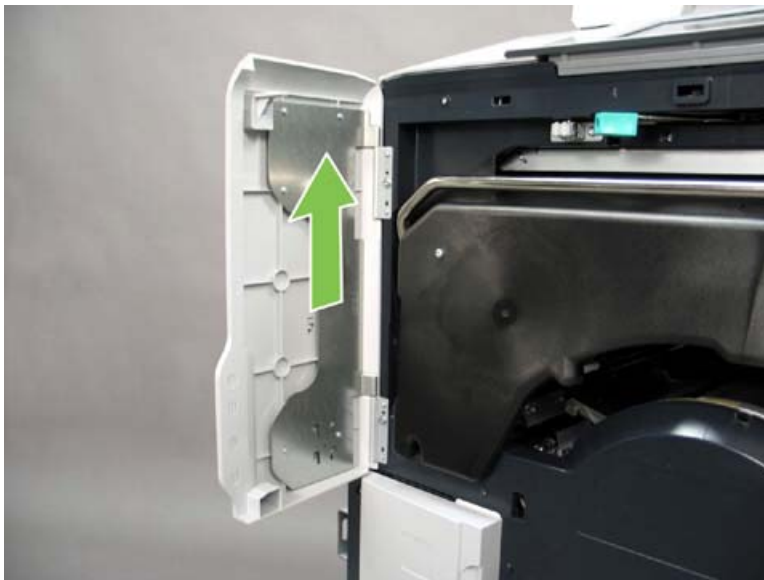
Front door

- Open the door, and then lift up to remove it.



Left front door

- Open the door, and then lift up to remove it.



IDS door

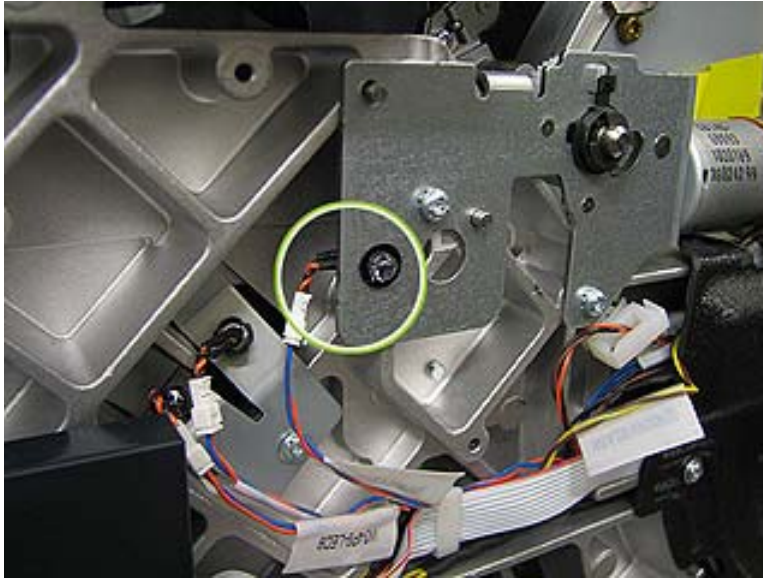
- Open the door, remove four screws, and then remove the door.



Front Door LED (LED7)

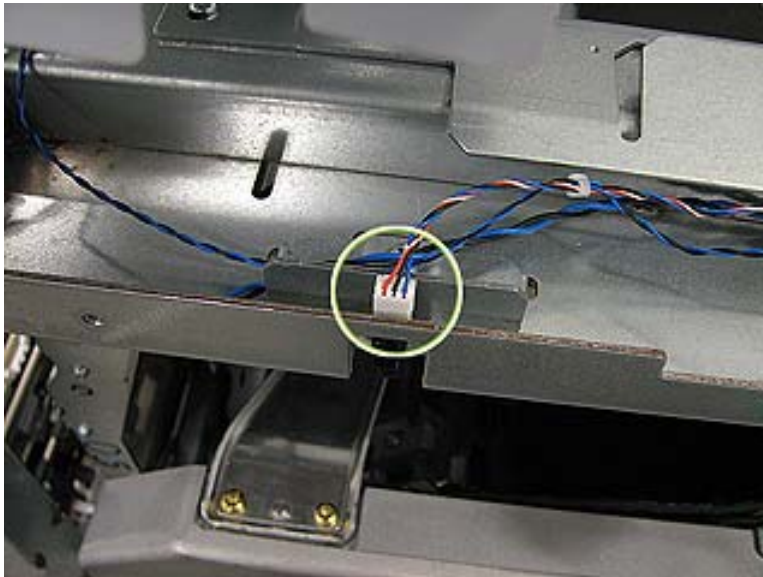
1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)

2. Disconnect the LED wire connector, and then remove LED7.



Upper-left Door Open sensor (SN37)

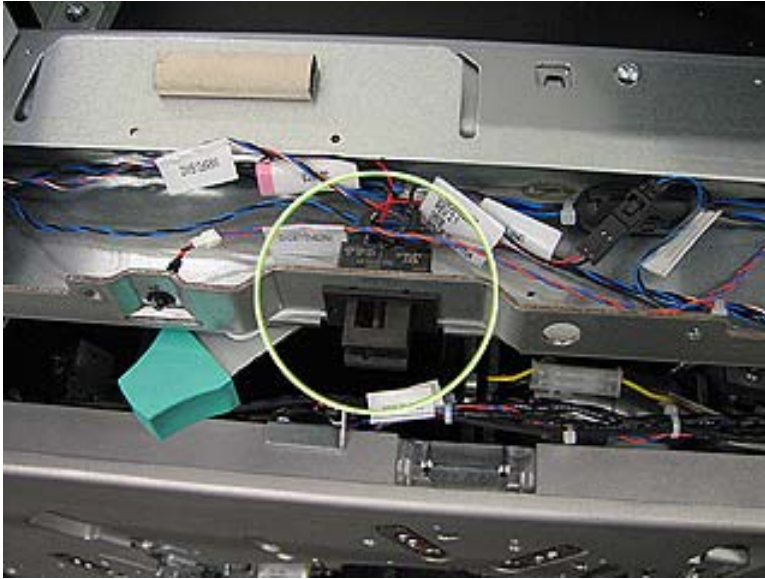
1. Remove the scanner left trim.
[Scanner left trim on page 223](#)
2. Disconnect the wire connector, and then remove SN37.



Front Door Open switch (SW3)

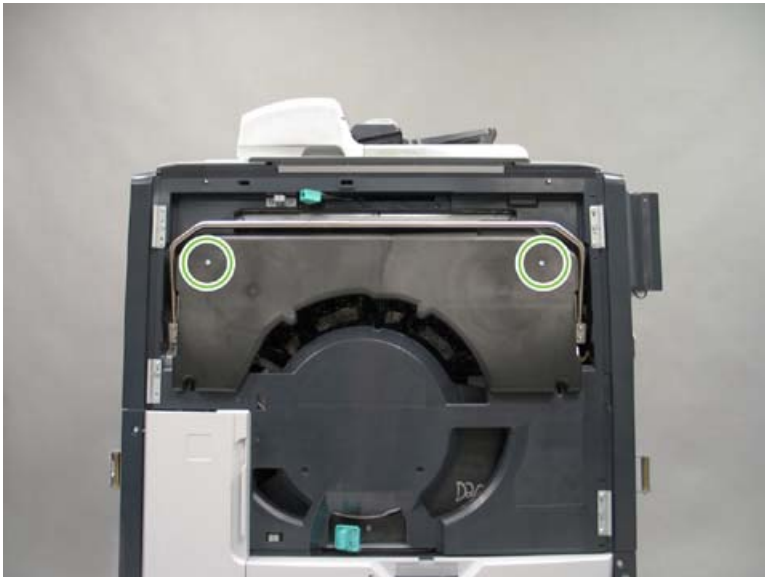
1. Remove the control panel.
[Control panel assembly on page 309](#)

2. Disconnect the wire connector, and then remove SW3.




Carriage plate cover

1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
2. Loosen two screws, lower the carriage bar, and then remove the carriage plate cover.

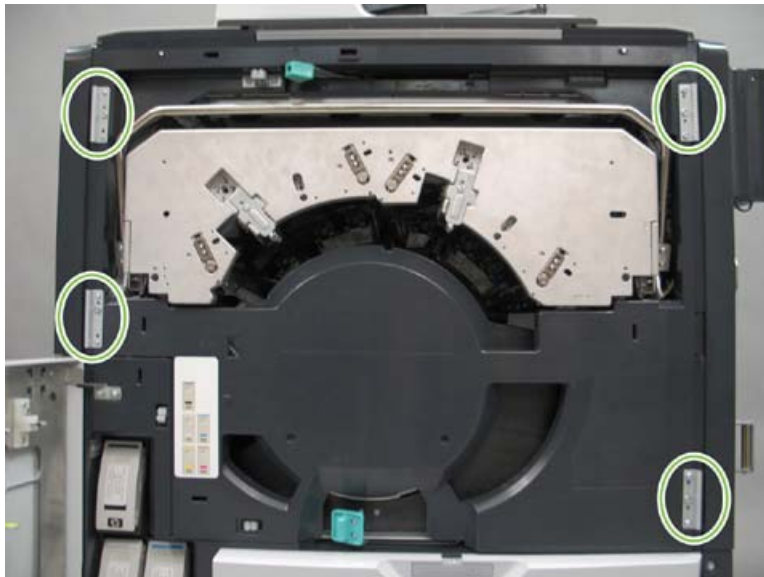


Upper inner cover

1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
2. Remove only the middle screw on each of the four hinges, open the IDS door, and then pull out the upper inner cover.

 **Reinstallation tip** Position the bottom corners of the cover, and then rotate the top into place.


 **NOTE:** There are two alignment pins at the top of the cover.



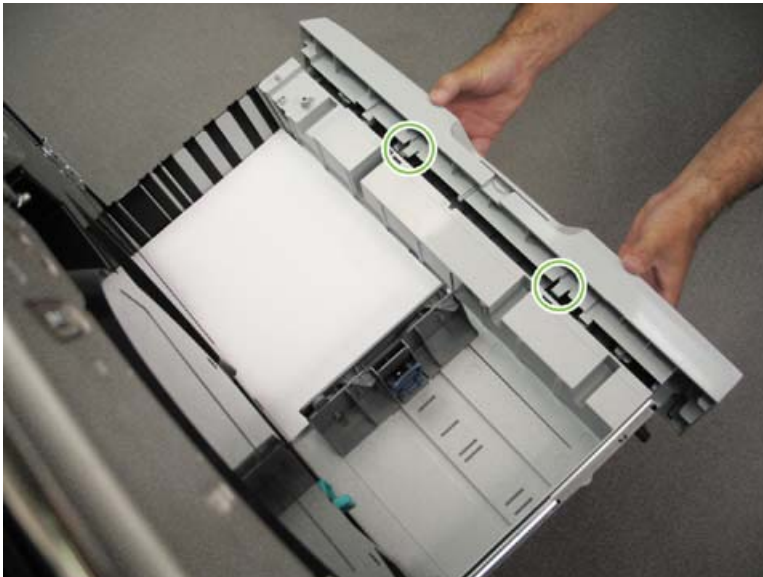
Trays 2, 3, and 4 covers

1. Open the tray and remove two screws.



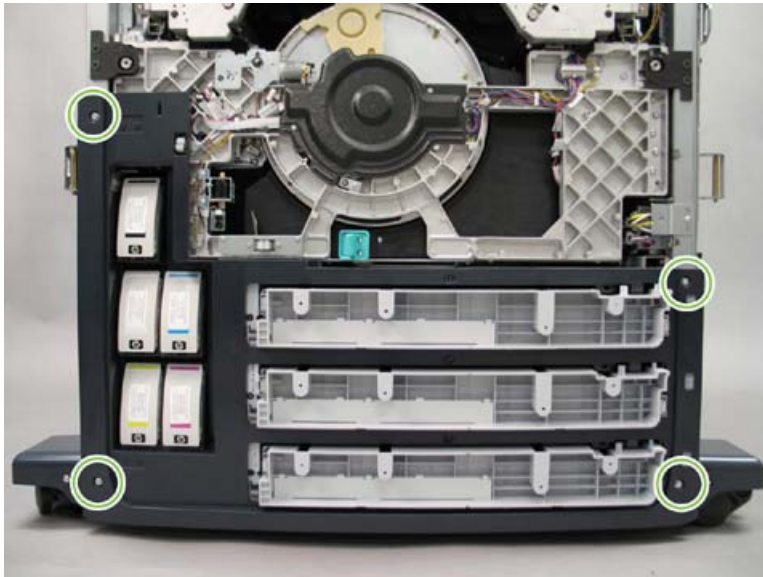
 **NOTE:** Accessing the screws might require removing some paper.

2. Press two tabs, and then tilt the cover down to remove.



Lower inner cover

1. Remove the following items:
 - MFP front doors
[Front doors on page 204](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)
 - Trays 2, 3, and 4
2. Remove four screws.



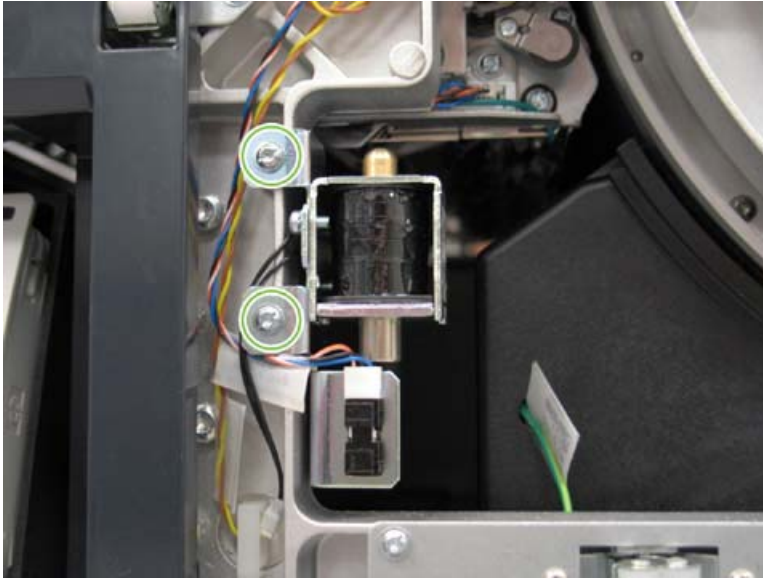
3. Remove the lower inner cover.


Front Door Lock solenoid (SOL4)

1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover

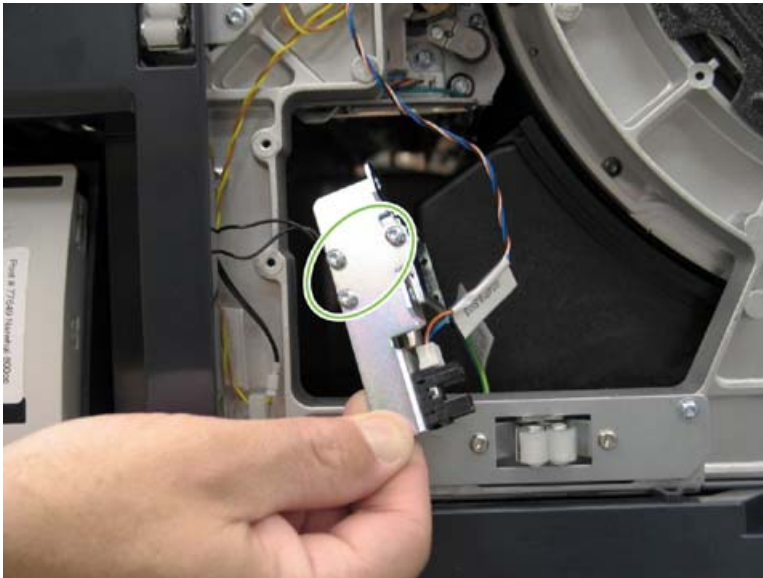
[Upper inner cover on page 209](#)


2. Disconnect the sensor wire and the solenoid connector (W100P4-SOL4), and then remove two screws.



 **NOTE:** Ensure the sensor is mounted with the connector at the top.

3. Remove three screws, and then remove SOL4 from the mounting bracket.



 **Reinstallation tip** Ensure the wire harness does not interfere with the operation of the front door solenoid.

Web wipe access case parts

- [Upper left cover](#)
- [Web wipe access panel](#)

Upper left cover

- Loosen two captive screws, and then lift up to remove the cover.



Web wipe access panel

1. Remove the web wipe cover.
[Upper left cover on page 213](#)
2. Loosen four screws, and then lift up to remove the panel.



Left case parts

- [IDO cover](#)
- [Lower left trim](#)

- [Left-side lower panel](#)
- [Lower left cover](#)


IDO cover

- Loosen two screws, open the IDO, and then pull the IDO cover to release the hook-and-loop connection and to remove the cover.



Lower left trim

- Remove one screw, loosen a second screw, and then slide the trim out over the front caster.

 **NOTE:** The screw next to the caster is removable. The other screw is captive.



Left-side lower panel

- Loosen four captive screws, and then lift off the cover.



Lower left cover

- Loosen four captive screws, and then slide the cover out over the rear caster.



Right case parts

- [Upper right cover](#)
- [Lower right cover](#)
- [Right-side lower panel](#)
- [Lower right trim](#)

Upper right cover

- Loosen three captive screws, and then lift up to remove the cover.



Lower right cover

- Loosen four captive screws, and then slide the cover out over the rear caster.



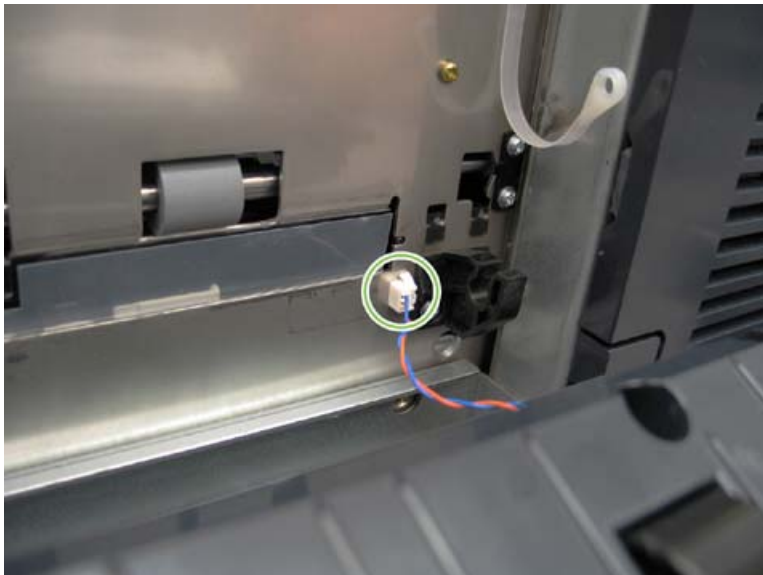
Right-side lower panel

The right-side lower panel (outside) is attached to the lower paper path door (inside). Together, they provide a side access door to Trays 2, 3, and 4. They are removed together as a single unit.

1. From the right side of the MFP, open the right-side lower panel, and then remove the two hinge strap screws on opposite sides of the panel.

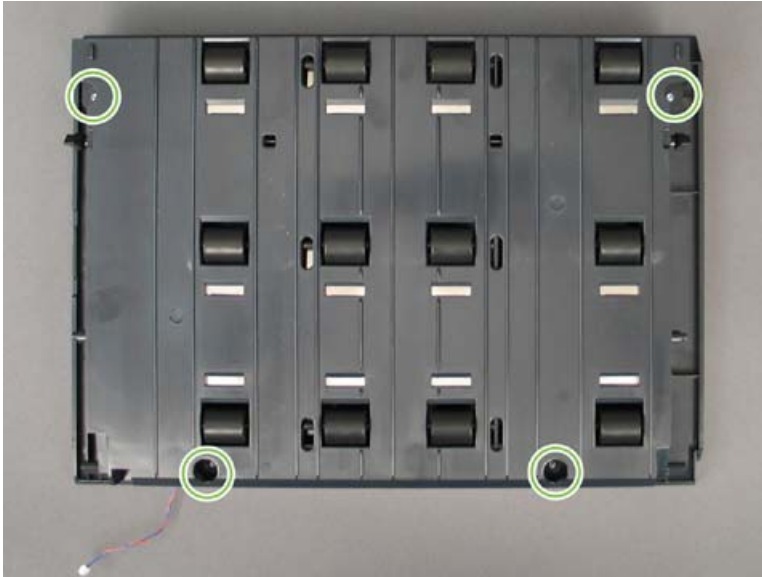


2. Disengage the panel from the Trays 2, 3, and 4 assembly, but do not remove the panel from the MFP. Be careful not to pull on the wire at the bottom of the panel.
3. Disconnect one wire connector at the lower right corner of the panel.




4. Remove the panel.

5. Remove four screws, and then separate the right-side lower panel and the lower paper path door.



Lower right trim

- Remove one screw, loosen a second screw, and then slide the trim out over the front caster.

 **NOTE:** The screw next to the caster is removable. The other screw is captive.




Rear case parts

- [Muffler](#)
- [Back cover](#)
- [Electronics bay cover](#)

Muffler

- Loosen one screw, flip down the side latch, and then lift up on the muffler to remove it.

 **NOTE:** To prevent damage to the pen cooling fan assembly or the green pen cooling exhaust duct, the service station should be in the forward (printing) position when removing or installing the muffler.



Back cover

1. Remove the muffler.
[Muffler on page 219](#)
2. Remove the pen cooling exhaust duct.



3. Remove the fabric cover.



4. Loosen seven screws, and then lift to remove the cover.

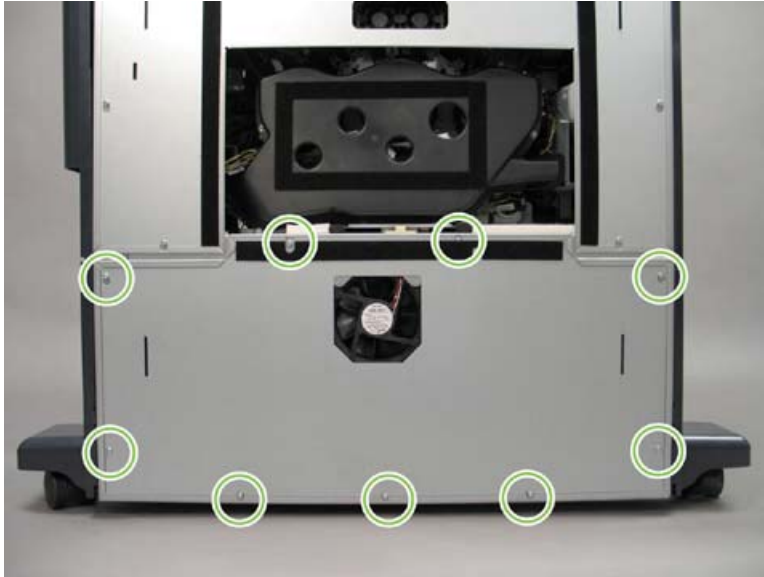


Electronics bay cover

1. Remove the muffler.

[Muffler on page 219](#)

2. Loosen the top six screws, remove the bottom three screws, and then lift up to remove the cover.



Top case parts

- [Scanner rear trim](#)
- [Scanner service cover](#)
- [Scanner lock cover](#)
- [Scanner left trim](#)
- [Scanner right trim](#)

Scanner rear trim

1. Remove the following items:
 - ADF assembly
[ADF assembly on page 226](#)
 - Upper left cover
[Upper left cover on page 213](#)
2. Loosen the top screws on the upper right cover.
[Upper right cover on page 216](#)

3. Loosen two screws, and then lift off the rear trim.



Scanner service cover

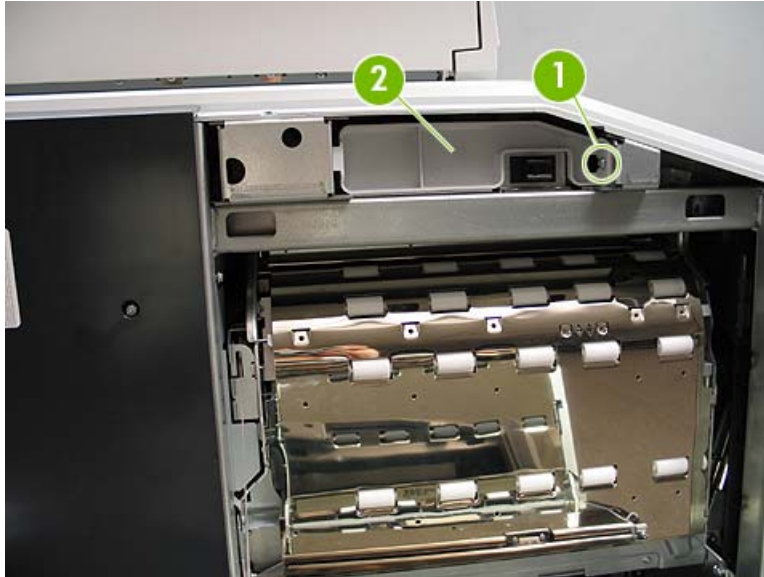
1. Open Tray 1.
2. Remove one screw, and then remove the cover.



Scanner lock cover

1. Open the IDO.

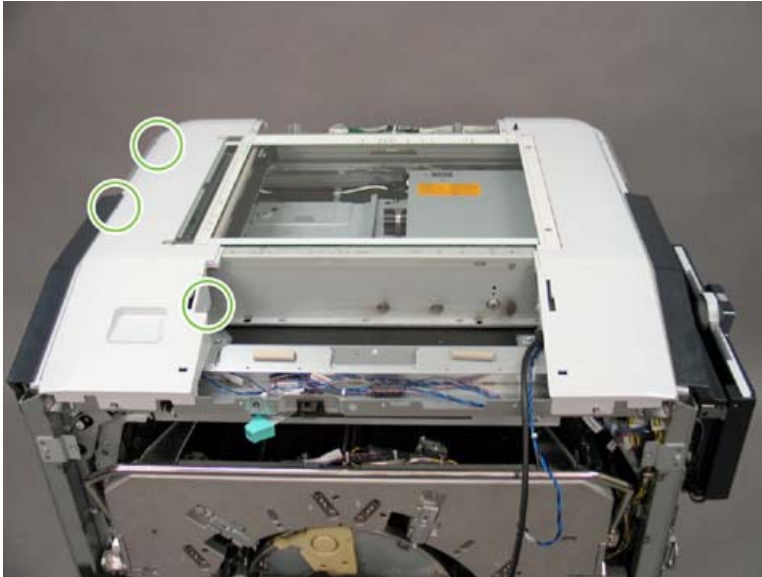
2. Loosen one screw (callout 1), and then remove the cover (callout 2).



Scanner left trim

1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)
 - Control panel
[Control panel assembly on page 309](#)
 - Upper left cover
[Upper left cover on page 213](#)
 - Scanner rear trim
[Scanner rear trim on page 221](#)
2. Open the IDO door.

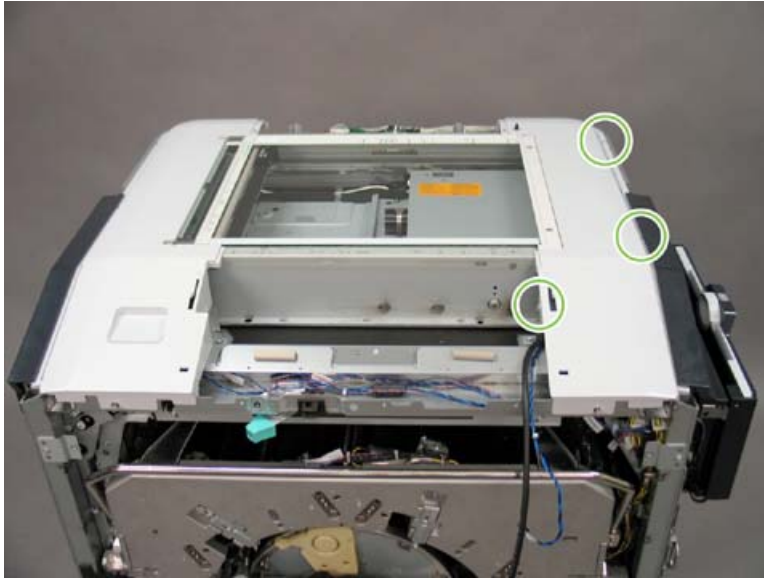
3. Remove three screws, and then lift off the trim.



Scanner right trim

1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)
 - Control panel
[Control panel assembly on page 309](#)
 - Upper right cover
[Upper right cover on page 216](#)
 - Scanner rear trim
[Scanner rear trim on page 221](#)
 - Scanner service cover
[Scanner service cover on page 222](#)
2. Open Tray 1.

3. Remove three screws, and then lift off the trim.



Automatic document feeder (ADF)


- [ADF assembly](#)
- [ADF covers and trays](#)
- [ADF originals cover](#)
- [Separation roller](#)
- [Pick roller](#)
- [Lower separation roller](#)
- [ADF Feed clutch \(CL401\)](#)
- [Reading guide](#)
- [ADF PCAs](#)
- [Switches](#)
- [Sensors](#)
- [Motors](#)
- [Solenoids](#)
- [ADF hinges](#)
- [ADF conveying rollers](#)

ADF assembly


1. Disconnect the rear cable.




2. Open the ADF, and then lift straight up at the hinge supports.

 **TIP:** Depending on the ADF assembly being serviced, it might be easier to remove the ADF and move it to a separate workspace.




 **NOTE:** The ADF hinges are a preventive maintenance item and are lubricated at scheduled intervals. See [Service intervals on page 79](#)).

Reset the preventive maintenance counter for this item every time maintenance is performed.

 **Reinstallation tip** A calibration might be required if skewed copies from the ADF are occurring or if the ADF hinges are reinstalled or replaced.

[Adjust the ADF hinges to correct copy skew problems on page 1061](#)

 **NOTE:** If the ADF assembly is replaced, perform the ADF image adjustments in CDFT for vertical magnification, leading edge, and center line (simplex, and duplex front and rear).

[ADF image adjustments on page 63](#)

ADF covers and trays

- [ADF front cover](#)
- [ADF rear cover](#)
- [ADF top cover](#)
- [ADF feed cover](#)
- [ADF input tray](#)
- [ADF paper-width guides](#)
- [ADF output bin](#)
- [ADF Control PCA \(A401\) cover](#)

ADF front cover

1. Open the ADF top cover.



2. Remove two screws, and then tilt up and remove the front cover.



ADF rear cover

1. Open the ADF top cover.



2. Remove two screws, and then tilt up and remove the rear cover.

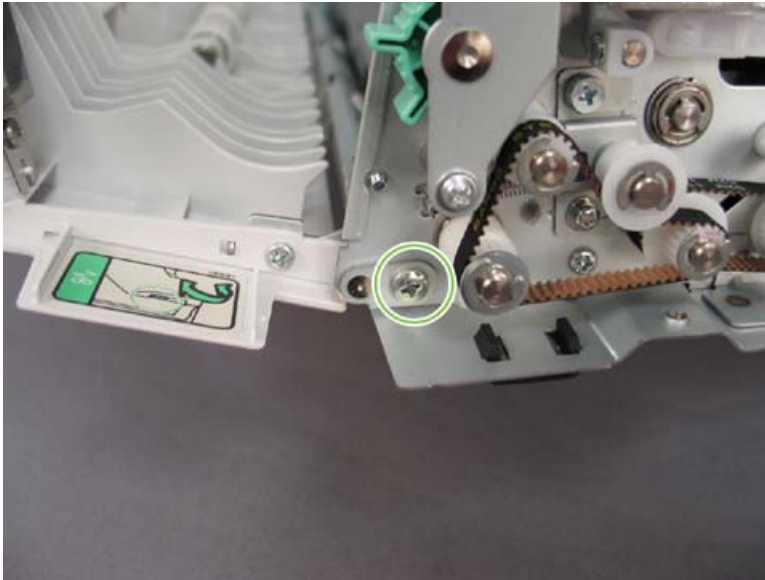


ADF top cover

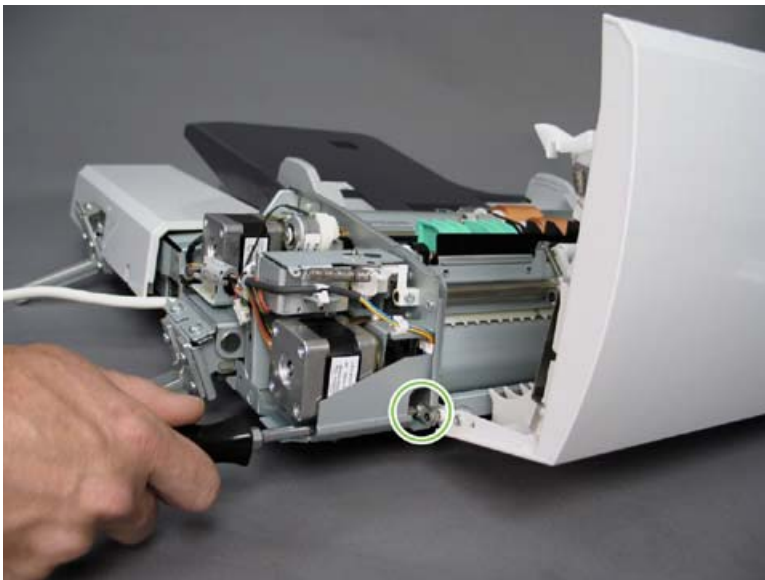
1. Remove the following items:
 - ADF front cover
[ADF front cover on page 228](#)
 - ADF rear cover
[ADF rear cover on page 229](#)

2. Remove one screw and hinge bracket from the front of the ADF.

△ **CAUTION:** The ADF metal sheets have sharp edges. Use caution when removing the hinge brackets.



3. Remove one screw and hinge bracket from the rear of the ADF.



4. Remove the ADF top cover.

ADF feed cover


1. Open the ADF top cover.

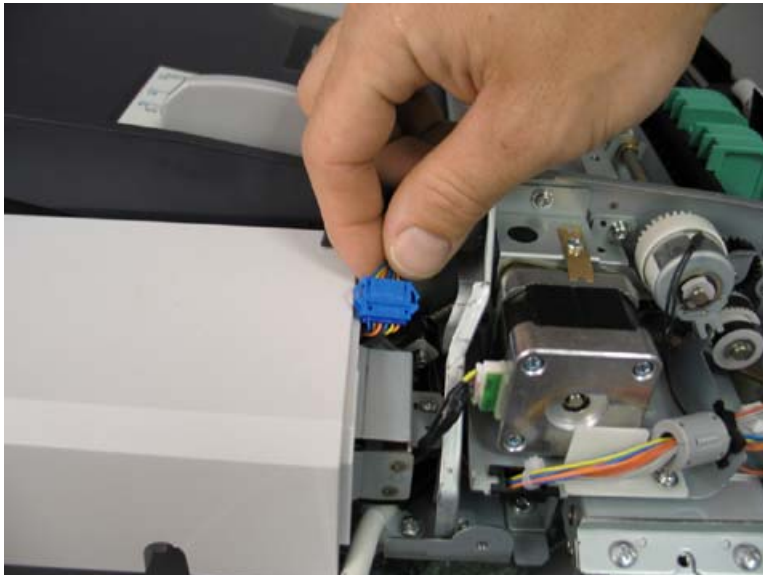
2. Remove two screws, and then remove the ADF feed cover.



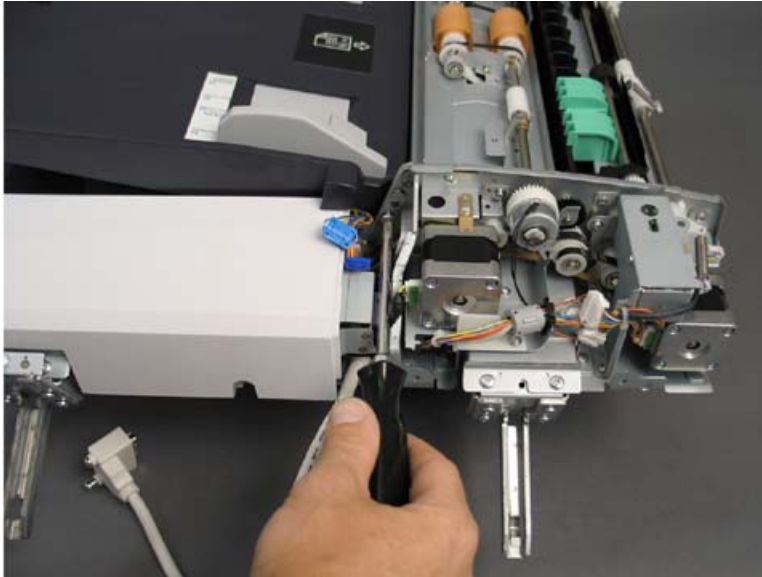
ADF input tray

1. Remove the ADF rear cover.
[ADF rear cover on page 229](#)
2. Disconnect one wire connector.


 **NOTE:** It might be necessary to remove the ADF output bin to access this wire connector.
[ADF output bin on page 233](#)



3. Remove one screw, and then remove the rear hinge bracket.

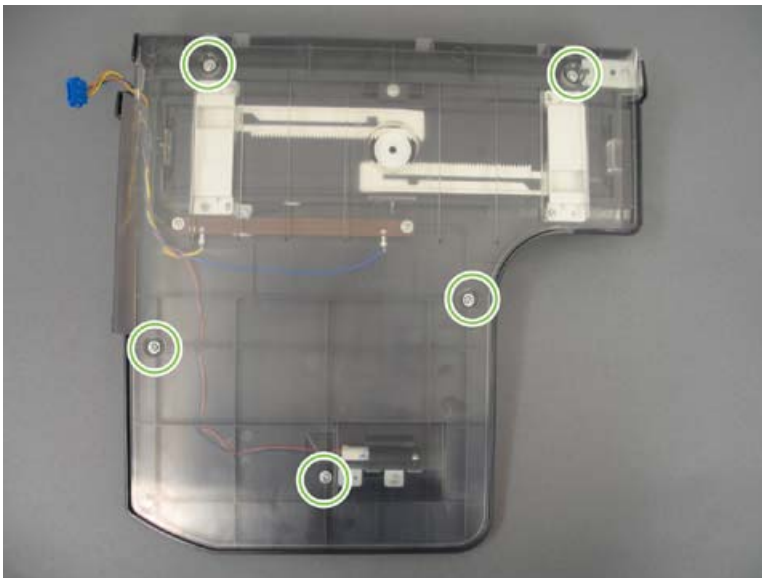


4. Push the ADF input tray far enough to the rear to clear the front hinge, and then remove the ADF input tray.

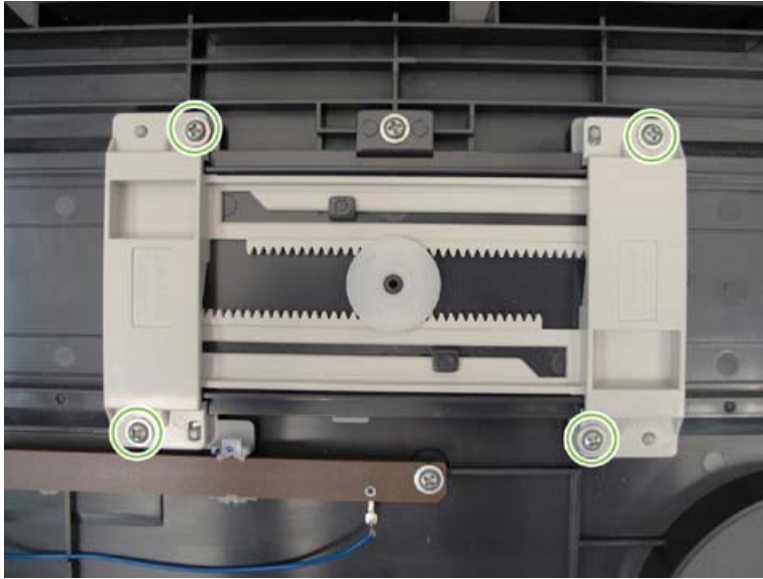
 **NOTE:** There is a loose spring on the front hinge.

ADF paper-width guides

1. Remove the ADF input tray, and then move it to a separate workspace.
[ADF input tray on page 231](#)
2. Remove five screws, and then remove the ADF input tray bottom cover.




3. Remove four screws from the paper-width guides.



4. Lift off the center gear, and then slide the guides to lift the guides off of the alignment pins.



 **Reinstallation tip** Before reinstalling the center gear, push both guides to the outside to ensure proper alignment.

Ensure the guides are aligned on the pins when reinstalling.

ADF output bin

1. Remove the ADF front cover.

[ADF front cover on page 228](#)

2. Remove two screws.




3. Remove two screws, one from the right side and the other from the rear of the ADF output bin.



4. Pull the frame out slightly to release the locating pin of the output bin, and then lift and pull out the output bin.



 **Reinstallation tip** When reinstalling the output bin, ensure the two tabs are properly engaged on the frame.



ADF Control PCA (A401) cover

1. Remove the ADF output bin.

[ADF output bin on page 233](#)


2. Remove eight screws, and then lift off the PCA cover.

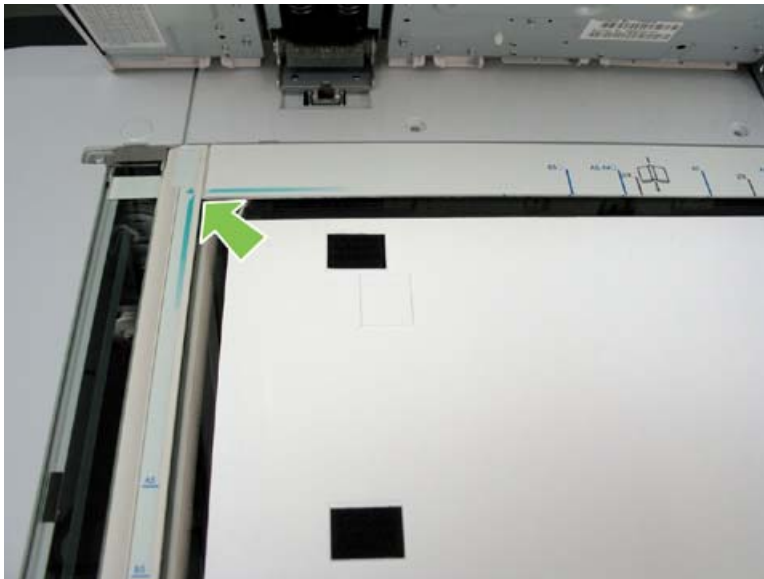


ADF originals cover

- Pry the edges up to release the six hook-and-loop attachments on the back of the originals cover.



 **Reinstallation tip** To align the originals cover, place the one square corner of the cover face down in the upper left corner of the flatbed glass, and then close the ADF.



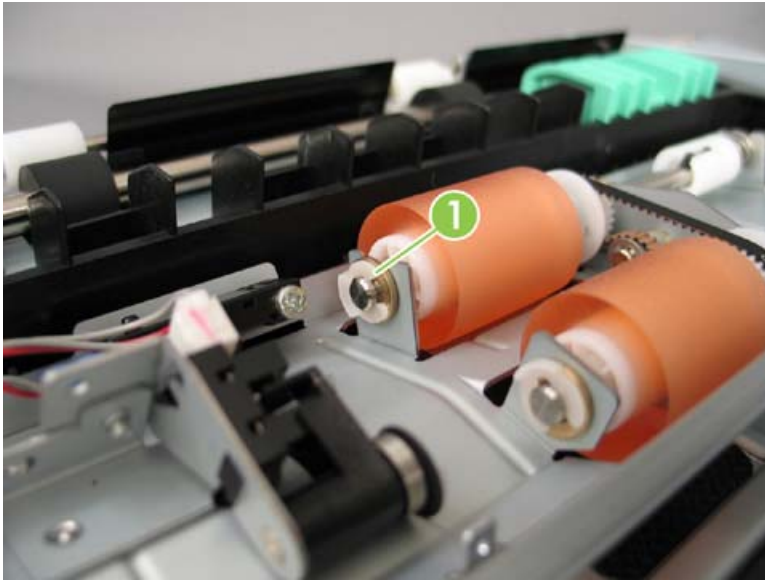
Separation roller

1. Open the ADF top cover.
2. Remove the ADF feed cover.

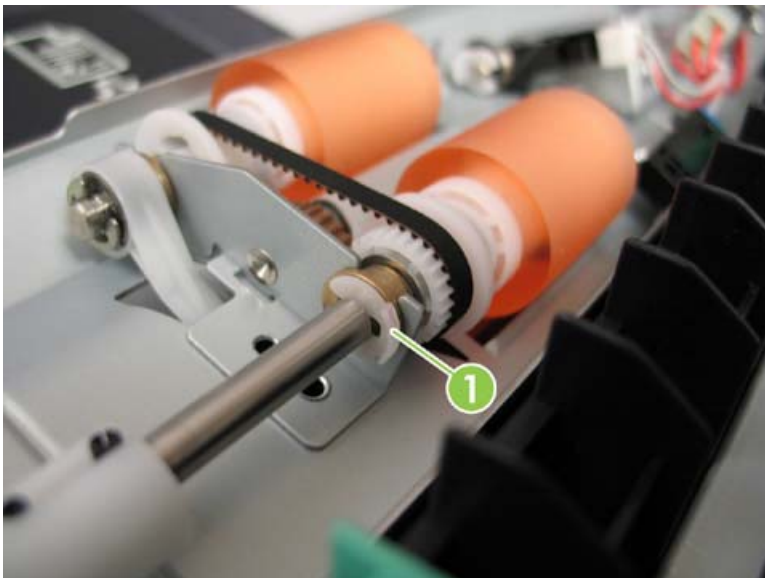
[ADF feed cover on page 230](#)

3. Remove the front retaining clip (callout 1) and the front bushing.


△ **CAUTION:** The ADF metal sheets have sharp edges. Use caution when removing the separation roller.




4. Remove the rear retaining clip (callout 1).



5. Slide the shaft and rear bushing to the rear, and then remove the separation roller from the shaft.

 **Reinstallation tip** Make sure that the bushing is fully seated in the bushing holder for proper fit of the shaft and roller.



 **Reinstallation tip** Verify that the notches in the roller are aligned with the projections on the one-way clutches.

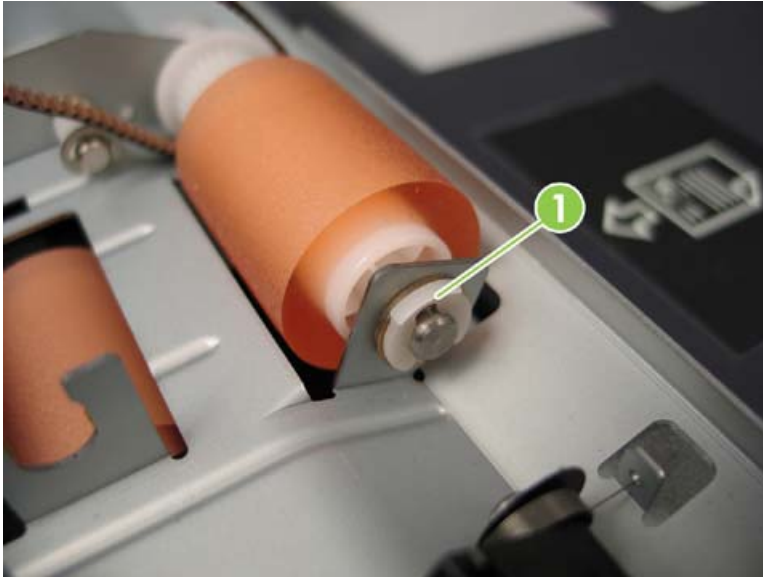
Pick roller

1. Open the ADF top cover.
2. Remove the ADF feed cover.

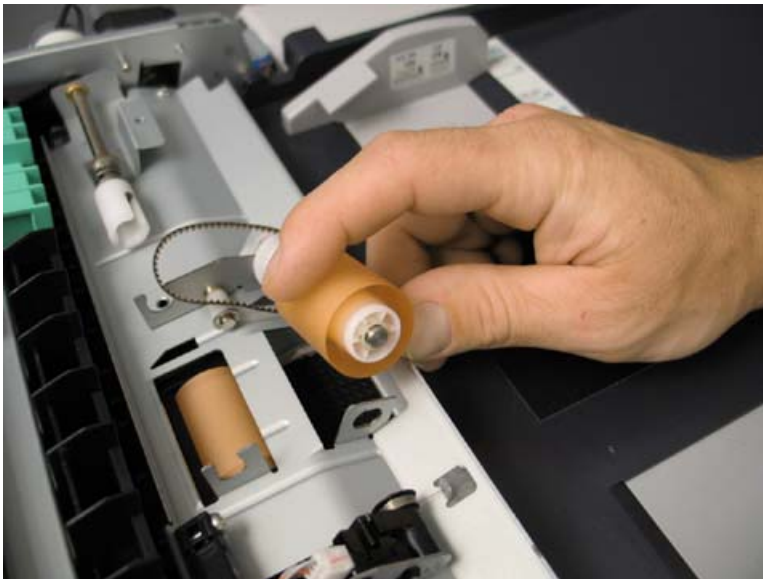
[ADF feed cover on page 230](#)

3. Remove the front retaining clip (callout 1) and the front bushing.

△ **CAUTION:** The ADF metal sheets have sharp edges. Use caution when removing the pick roller.



4. Slide the shaft and the rear bushing to the rear, and then remove the pick roller from the shaft.



📄 **NOTE:** The pick roller is a preventive maintenance item and is cleaned at scheduled intervals. See [Service intervals on page 79](#).

Reset the preventive maintenance counter for this item every time maintenance is performed.

💡 **Reinstallation tip** Verify that the notches in the roller are aligned with the projections on the one-way clutch.

Reinstallation tip Make sure that the bushing is fully seated in the bushing holder for proper fit of the shaft and roller.

Lower separation roller

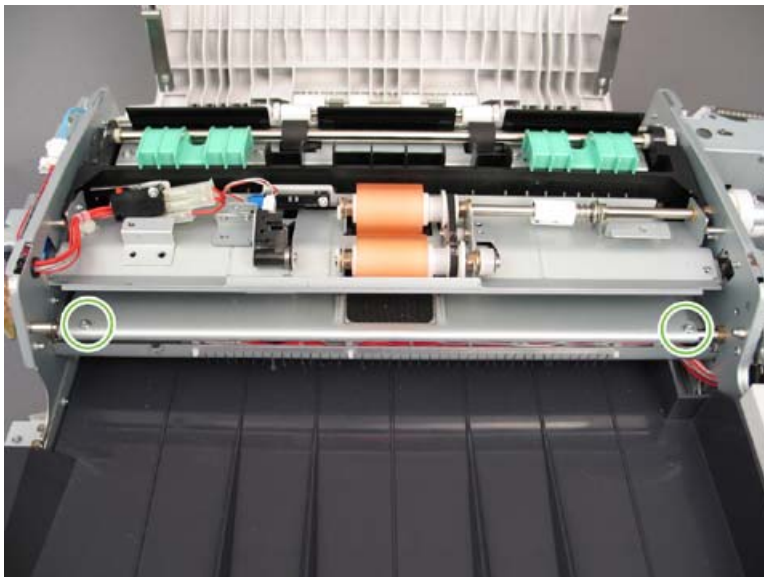
1. Open the ADF top cover.
2. Remove the ADF feed cover.

[ADF feed cover on page 230](#)

3. Remove two screws.



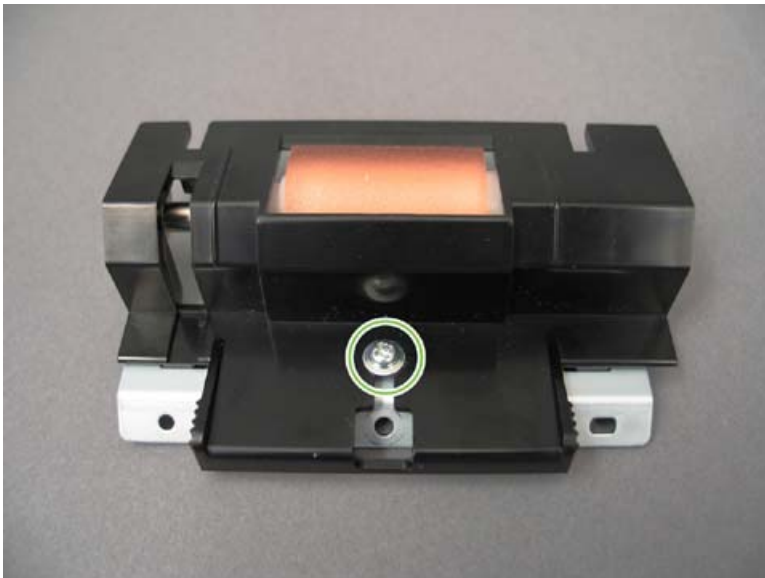
4. Remove two screws, and then remove the original feed lift plate.



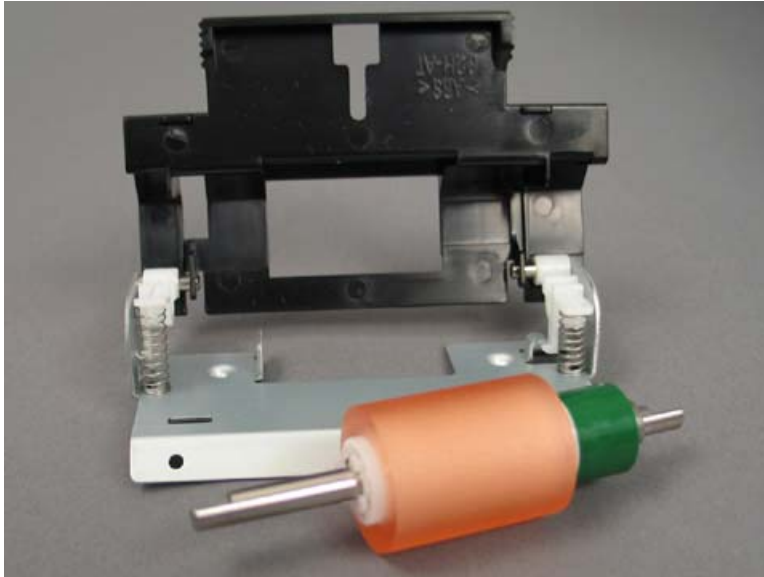
5. Remove one screw, and then lift out the lower separation guide assembly.




6. Remove one screw and remove the cover.



7. Lift the shaft off of the lower separation roller arms.



8. Remove the retaining clip from the end of the lower separation roller, and then remove the roller from the shaft.

 **Reinstallation tip** Ensure that the notches in the roller are aligned with the projections on the torque limiter. Also, verify that the separation shaft spring is seated properly.

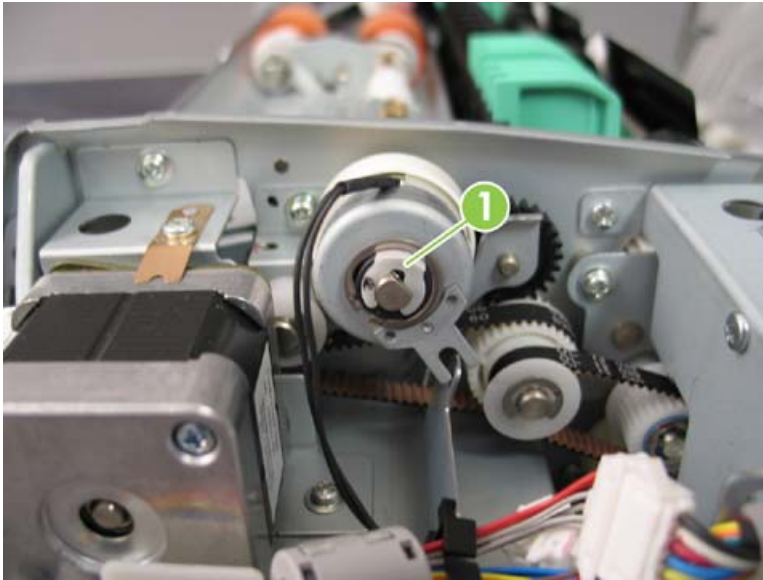
ADF Feed clutch (CL401)

1. Remove the ADF rear cover.

[ADF rear cover on page 229](#)

2. Remove the retaining clip (callout 1), disconnect the wire connector, and then remove the feed clutch from the shaft.

△ **CAUTION:** Note the original location of the clutch lever arm. Return the clutch lever arm to the original location when you reinstall the feed clutch.



Reading guide

1. Open the ADF.
2. Remove two screws, and then remove the reading guide.

💡 **Reinstallation tip** Note the orientation of the reading guide. The rounded bottom edge faces to the left.



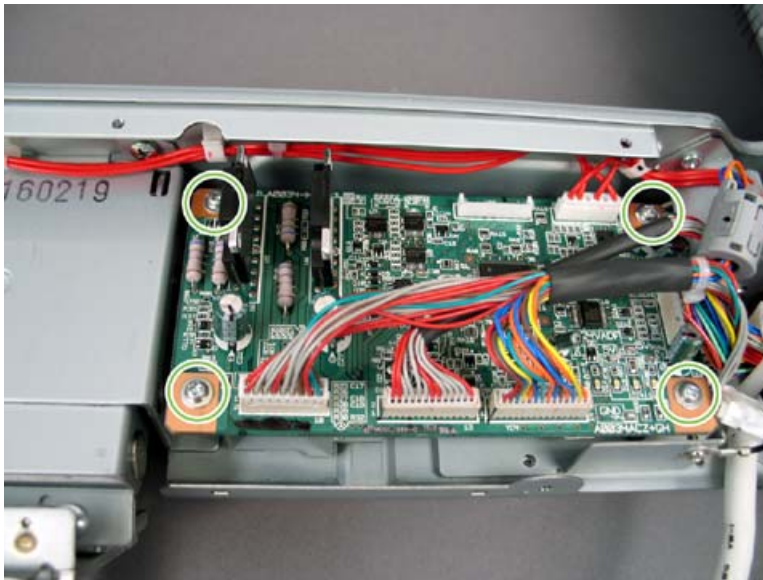
ADF PCAs


- [ADF Control PCA \(A401\)](#)
- [ADF Original Present LED PCA \(A402\)](#)

ADF Control PCA (A401)

△ **CAUTION:** Wear an ESD strap.

1. Remove the following covers:
 - ADF output bin
[ADF output bin on page 233](#)
 - ADF Control PCA (A401) cover
[ADF Control PCA \(A401\) cover on page 235](#)
2. Disconnect all wire connectors from the PCA.
3. Remove four screws, and then remove A401.



 **NOTE:** If the ADF Control PCA (A401) is replaced, perform the ADF image adjustments in CDFT for vertical magnification, leading edge, and center line (simplex, and duplex front and rear).

[ADF image adjustments on page 63](#)

ADF Original Present LED PCA (A402)

△ **CAUTION:** Wear an ESD strap.

1. Remove the ADF front cover.
[ADF front cover on page 228](#)

2. Disconnect the wire connector, remove one screw, and then lift A402.



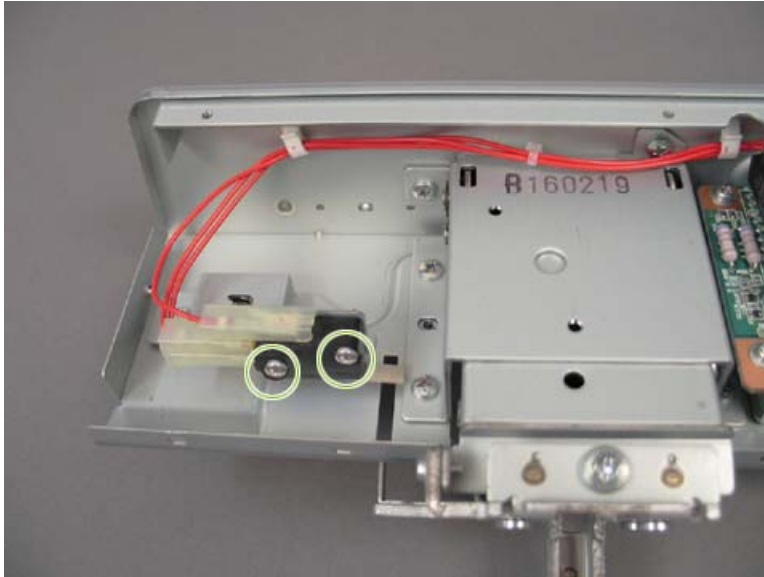
Switches

- [ADF Open Safety switch \(SW401\)](#)
- [ADF Cover Open switch \(SW402\)](#)

ADF Open Safety switch (SW401)

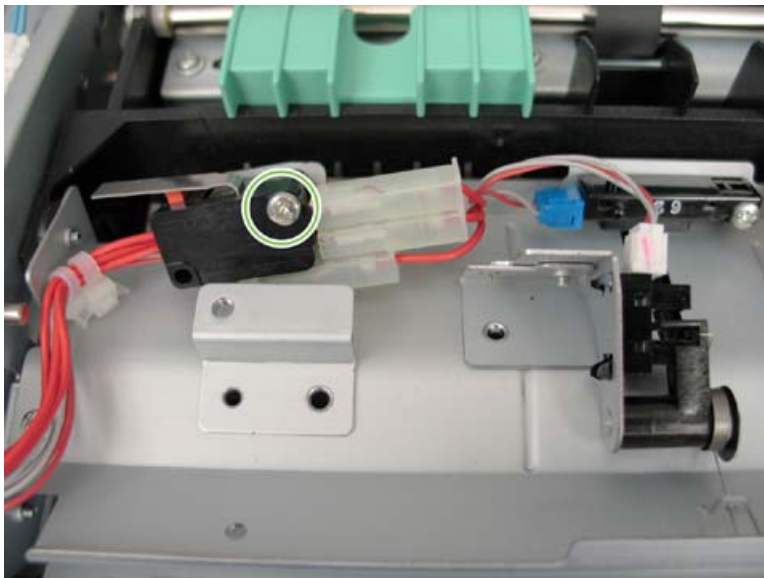
1. Remove the following covers:
 - ADF front cover
[ADF front cover on page 228](#)
 - ADF output bin
[ADF output bin on page 233](#)
 - ADF Control PCA (A401) cover
[ADF Control PCA \(A401\) cover on page 235](#)

2. Remove the two screws, disconnect the wire connector, and then remove SW401.



ADF Cover Open switch (SW402)

1. Open the ADF top cover.
2. Remove the ADF feed cover.
[ADF feed cover on page 230](#)
3. Remove one screw, disconnect the wire connector, and then remove SW402.



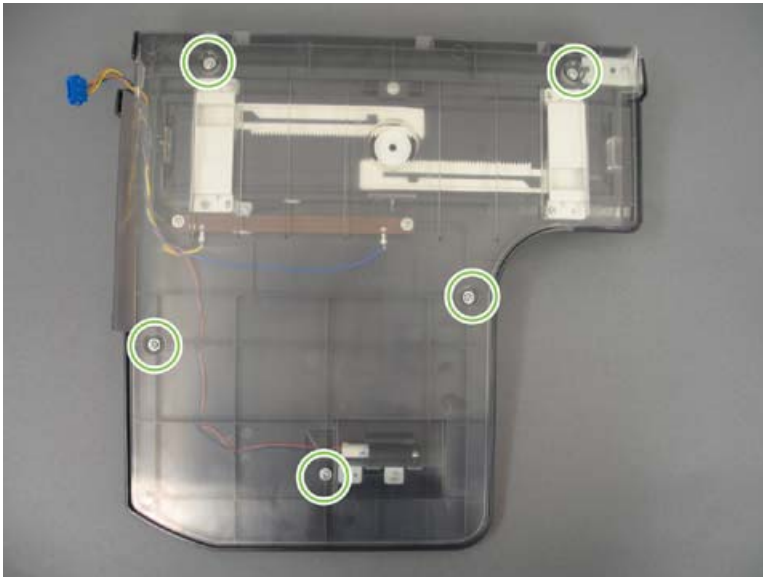
Sensors

- [ADF Length sensor \(SN401\)](#)
- [ADF Width sensor \(SN402\)](#)

- [ADF Original Present sensor \(SN403\)](#)
- [ADF Feed sensor \(SN404\)](#)
- [ADF Reverse sensor \(SN405\)](#)
- [ADF Timing sensor \(SN406\)](#)

ADF Length sensor (SN401)

1. Remove the ADF input tray, and then move it to a separate workspace.
[ADF input tray on page 231](#)
2. Remove five screws, and then remove the ADF input tray bottom cover.



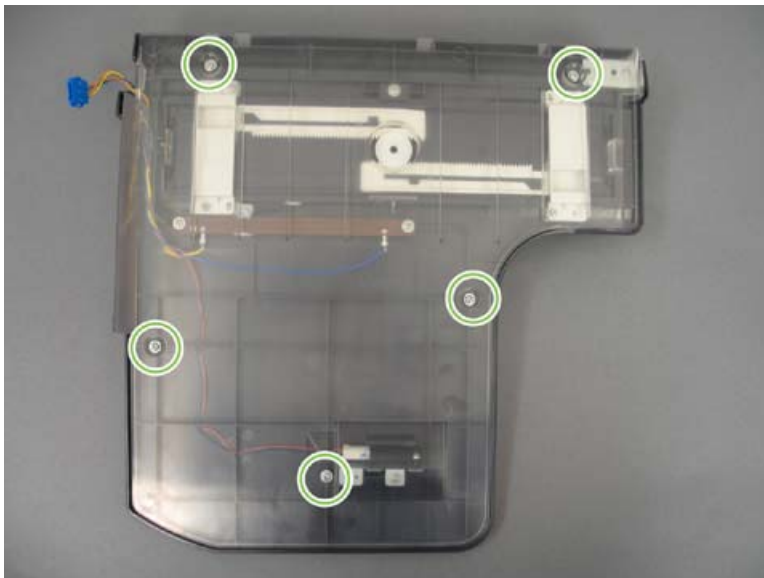
3. Remove one screw, and then disconnect the length sensor wire connector.



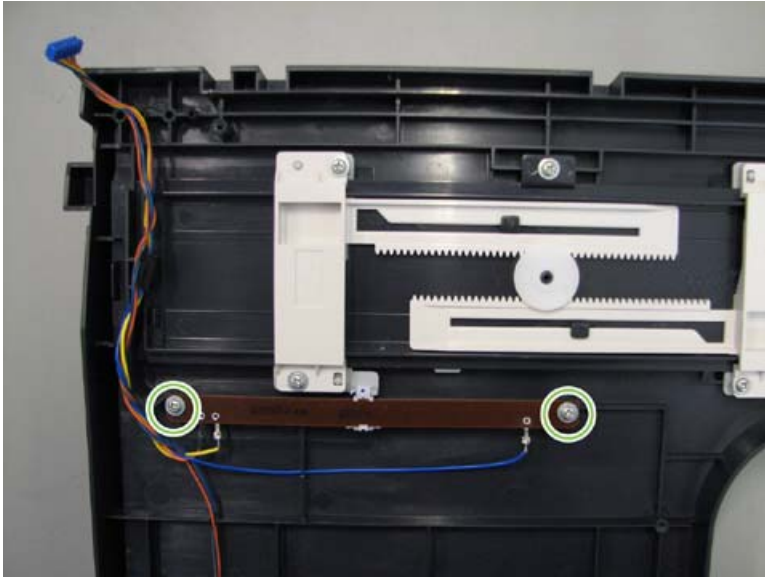
4. Remove SN401.

ADF Width sensor (SN402)

1. Remove the ADF input tray, and then move it to a separate workspace.
[ADF input tray on page 231](#)
2. Remove five screws, and then remove the ADF input tray bottom cover.



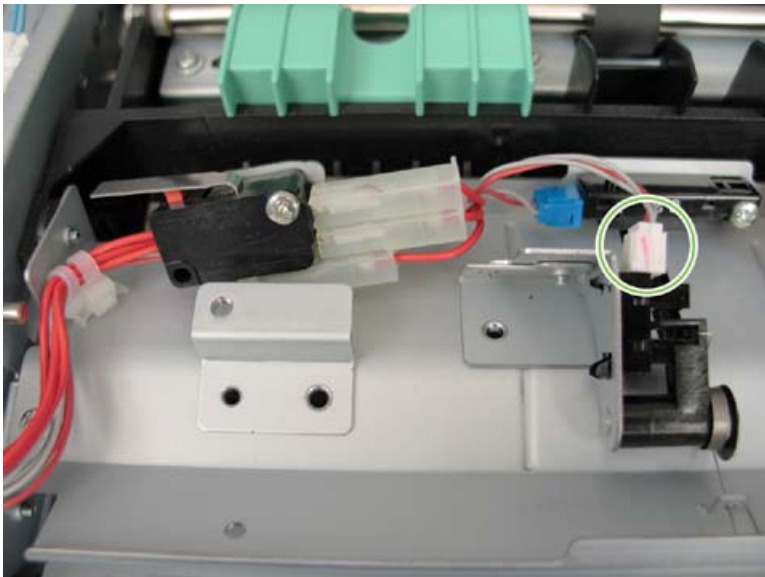
3. Disconnect the wire connector, and then remove two screws.



4. Remove SN402.

ADF Original Present sensor (SN403)

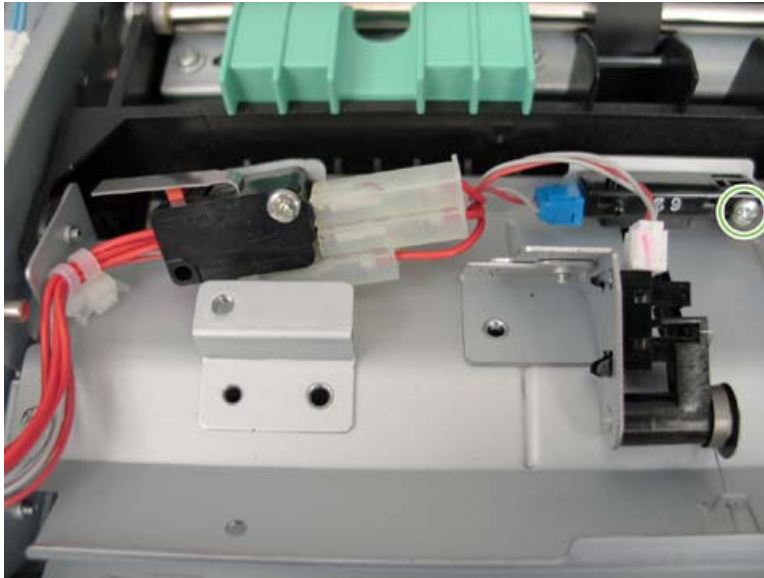
1. Open the ADF top cover.
2. Remove the ADF feed cover.
[ADF feed cover on page 230](#)
3. Disconnect the wire connector.




4. Remove SN403 from the mounting bracket.

ADF Feed sensor (SN404)

1. Open the ADF top cover.
2. Remove the ADF feed cover.
[ADF feed cover on page 230](#)
3. Remove one screw, disconnect the wire connector, and then remove SN404.



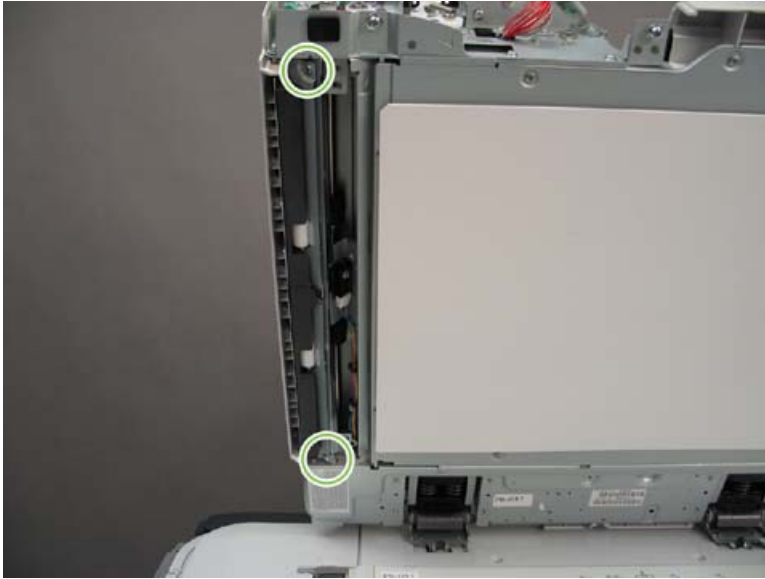
 **NOTE:** ADF Feed sensor (SN404) is a preventive maintenance item and should be cleaned regularly. See [Service intervals on page 79](#).

Reset the preventive maintenance counter for this item every time maintenance is performed.

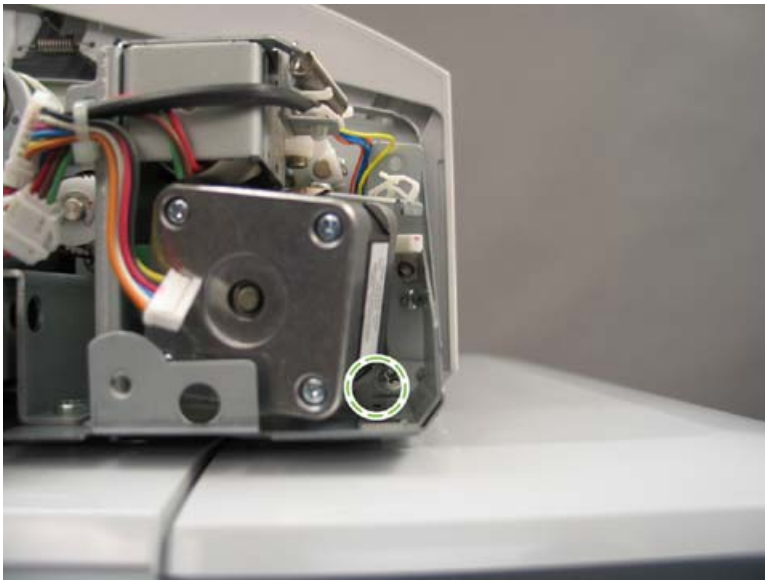
ADF Reverse sensor (SN405)

1. Remove the following items:
 - ADF front cover
[ADF front cover on page 228](#)
 - ADF rear cover
[ADF rear cover on page 229](#)
 - ADF Conveying motor (M402)
[ADF Conveying motor \(M402\) on page 260](#)
 - Reading guide
[Reading guide on page 244](#)

2. Remove two screws from the front of the roller guide.



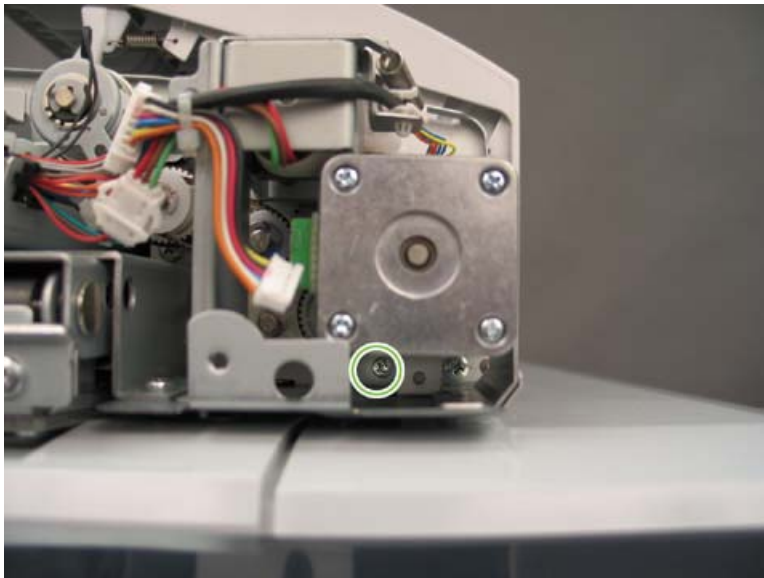
3. Move M402 aside, and then remove one screw.



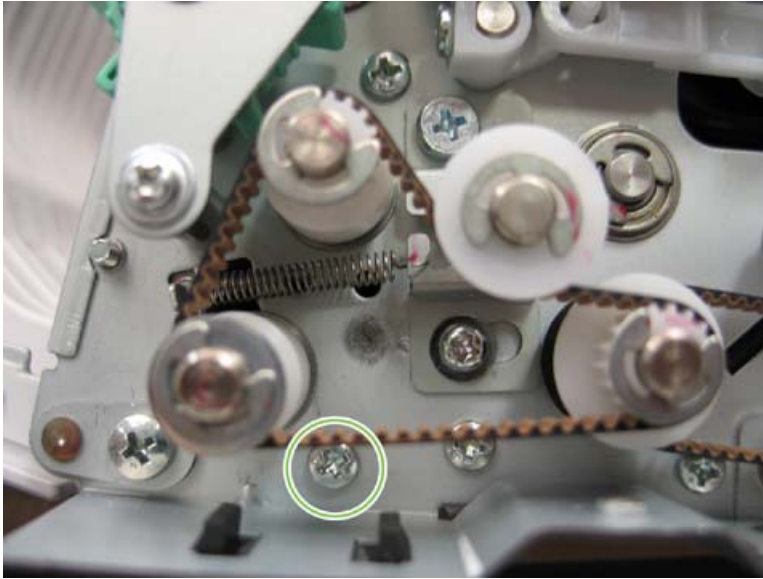
4. Remove one shoulder screw.




5. Remove one screw from the rear of the ADF.

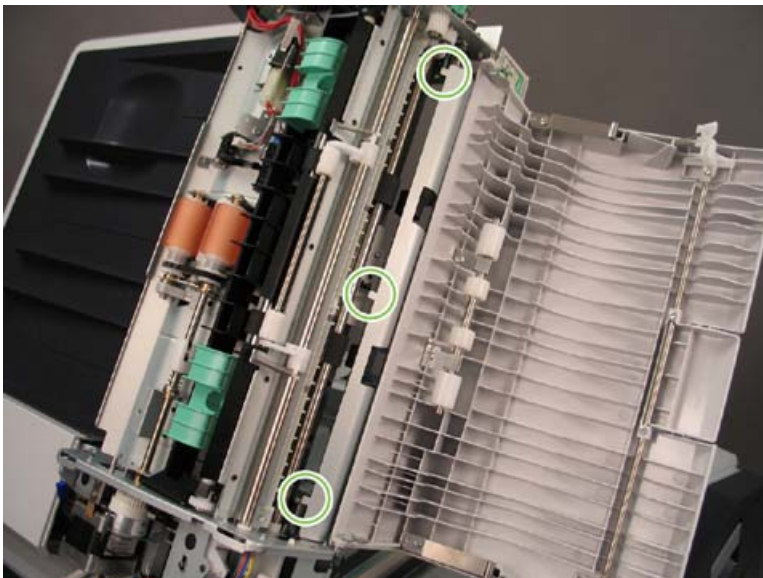


6. Remove one screw from the front of the ADF.



7. Slightly rotate the ADF conveyance guide outward, and then remove the conveyance guide.

 **NOTE:** When reinstalling the ADF conveyance guide, align the three tabs on the inside edge of the conveyance guide with corresponding slots inside the ADF.




8. Remove two screws from the sensor mounting bracket.

 **NOTE:** SN405 is mounted to the back of this bracket.



9. Remove one screw, and then remove SN406. Rotate the bracket to access SN405. Disconnect the wire connector, and then pry the mounting feet of the sensor.



 **NOTE:** When reinstalling the bracket, press and hold the actuator so that the bracket seats completely.



ADF Timing sensor (SN406)


1. Remove the reading guide.

[Reading guide on page 244](#)

2. Remove one screw, and then disconnect the wire connector.



3. Remove SN406.

 **NOTE:** ADF Timing sensor (SN406) is a preventive maintenance item and should be cleaned regularly. See [Service intervals on page 79](#).

Reset the preventive maintenance counter for this item every time maintenance is performed.

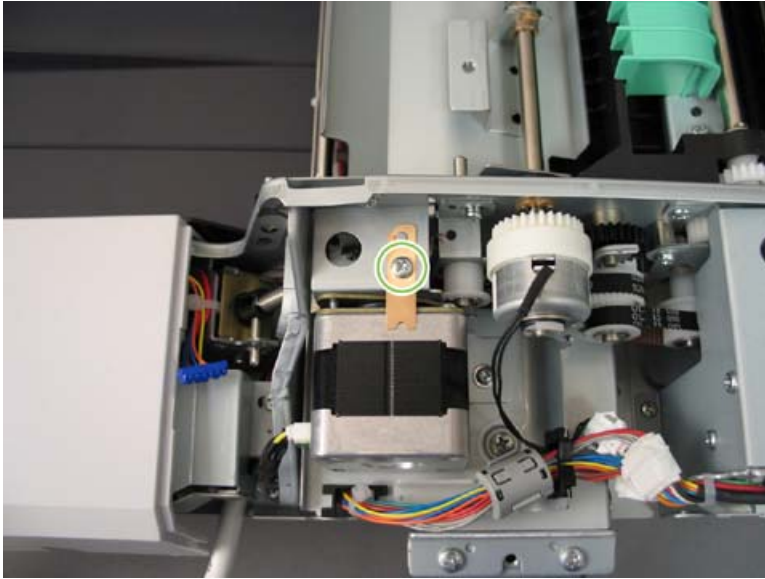
Motors

- [ADF Feed motor \(M401\)](#)
- [ADF Conveying motor \(M402\)](#)

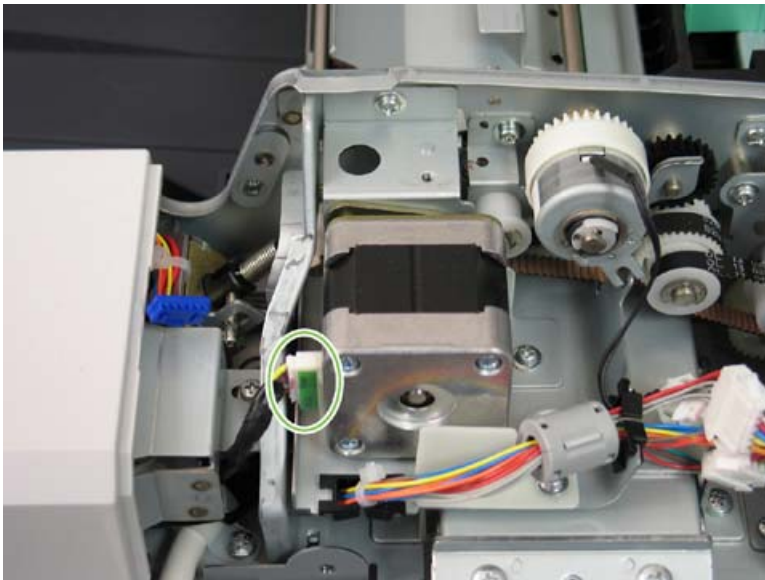
ADF Feed motor (M401)

1. Remove the ADF rear cover.
[ADF rear cover on page 229](#)


2. Remove one screw, and then remove the grounding strap.

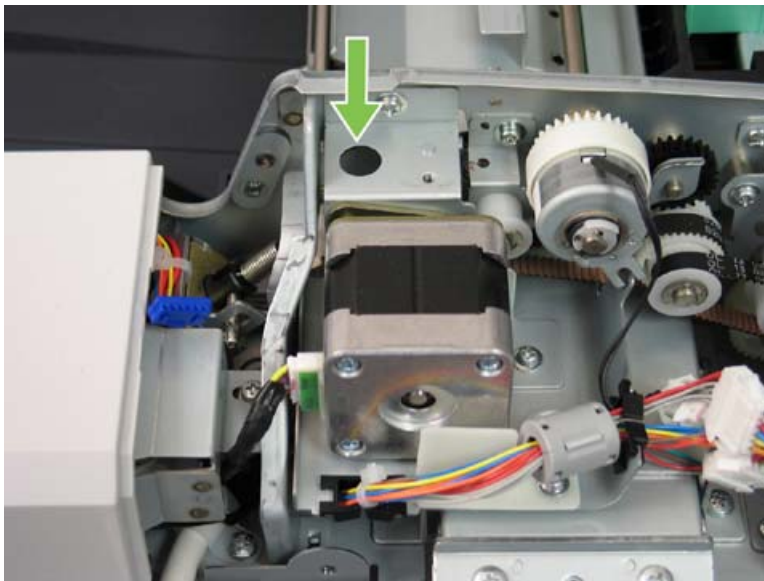


3. Disconnect the wire connector.

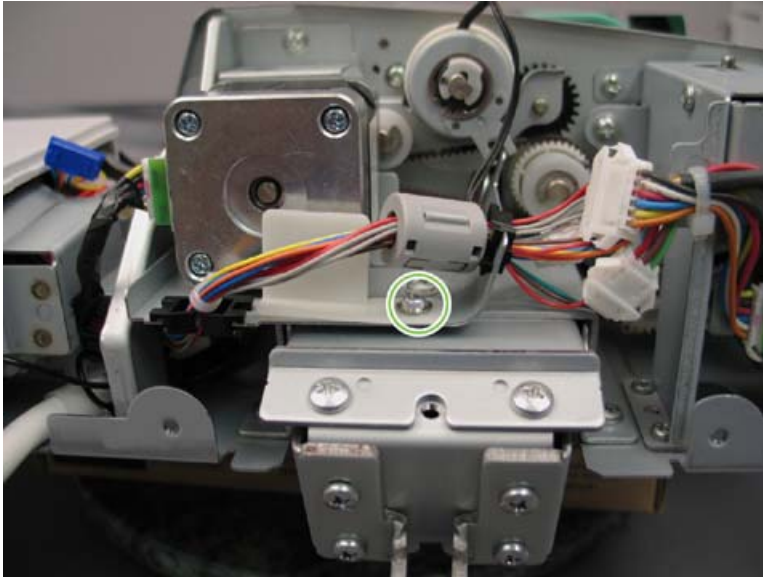


4. Remove three screws from the motor bracket.


 **NOTE:** Gain access to one of the three screws through the top of the motor bracket.



5. Remove one screw from the plastic panel in front of the motor, and then remove the panel.



6. Remove the feed motor assembly.
7. Remove two screws from the mounting bracket, and then remove M401.

 **NOTE:** If ADF Feed motor (M401) is replaced, perform the ADF image adjustments in CDFT for vertical magnification and leading edge.


[ADF image adjustments on page 63](#)

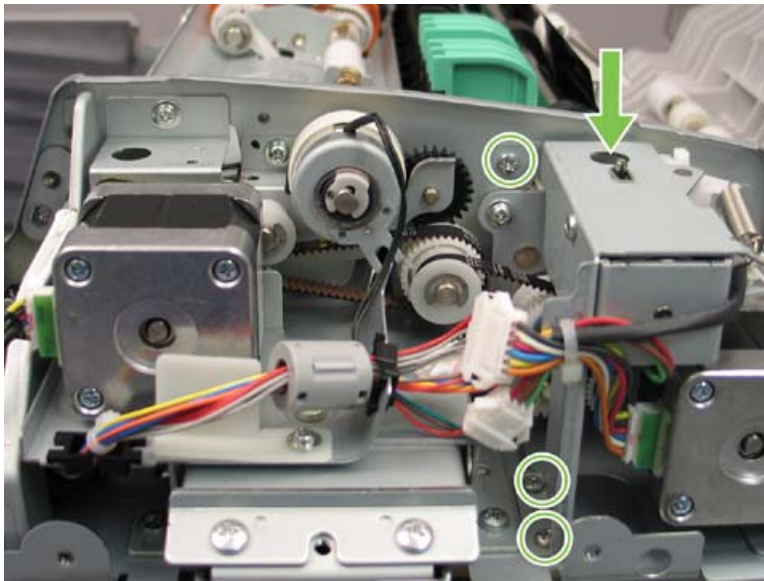
ADF Conveying motor (M402)

1. Remove the rear cover.

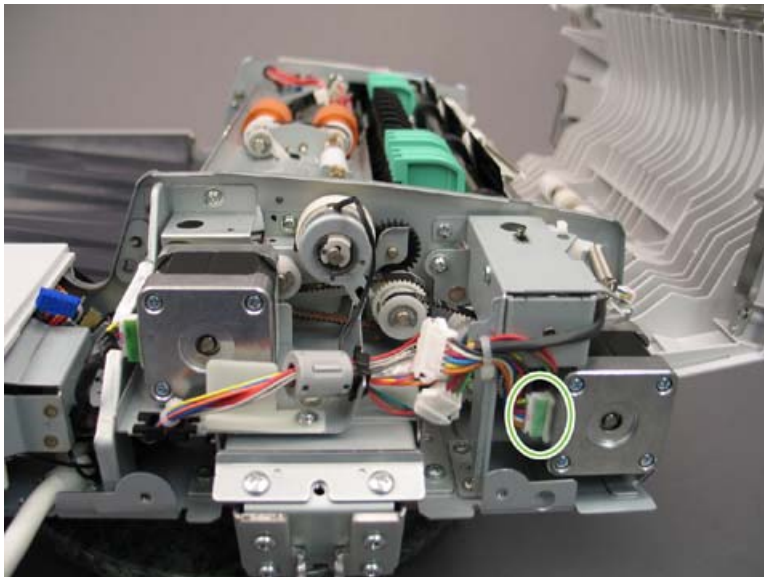
[ADF rear cover on page 229](#)

2. Remove four screws, unclip the wires mounted to the solenoid bracket, and then move the solenoid mounting bracket aside.

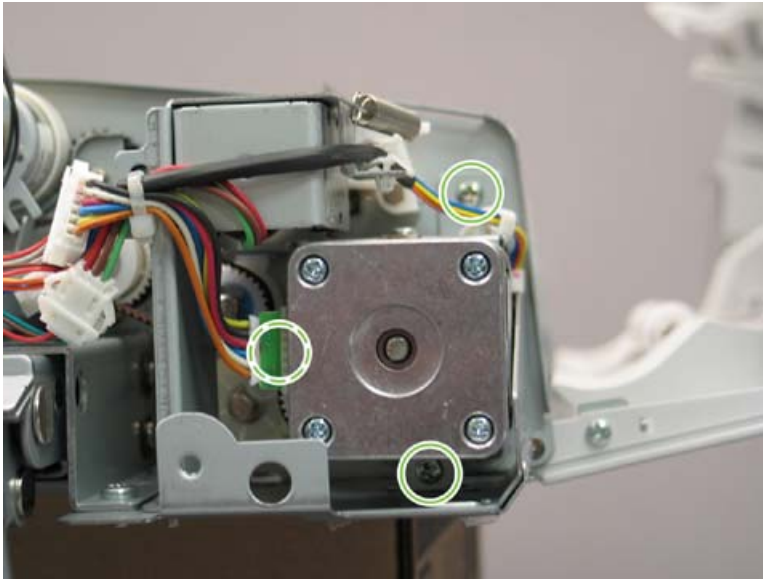
 **NOTE:** Gain access to one screw through a hole on top of the solenoid mounting bracket.




3. Disconnect the motor wire connector.



4. Remove three screws from the motor bracket, unclip the wires from the motor assembly, and then remove the conveyor motor assembly.



5. Remove two screws from the mounting bracket, and then remove M402.

 **NOTE:** If the ADF Conveying motor (M402) is replaced, perform the ADF image adjustments in CDFE for vertical magnification and leading edge.

[ADF image adjustments on page 63](#)

Solenoids

- [ADF Original Lift solenoid \(SOL401\)](#)
- [ADF Duplex Shift solenoid \(SOL402\)](#)
- [ADF Duplex Pressure solenoid \(SOL403\)](#)
- [ADF Eject Shift solenoid \(SOL404\)](#)

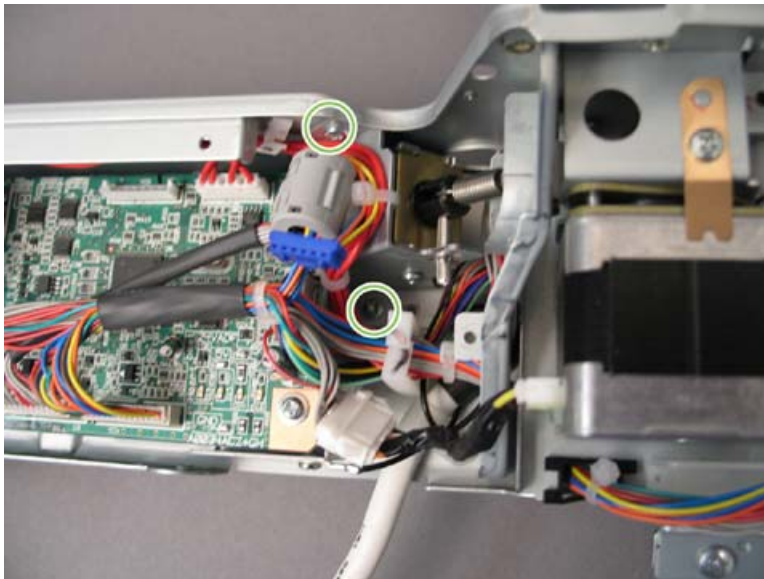
ADF Original Lift solenoid (SOL401)

1. Remove the following items:
 - ADF front cover
[ADF front cover on page 228](#)
 - ADF rear cover
[ADF rear cover on page 229](#)
 - ADF output bin
[ADF output bin on page 233](#)
 - ADF Control PCA (A401) cover
[ADF Control PCA \(A401\) cover on page 235](#)

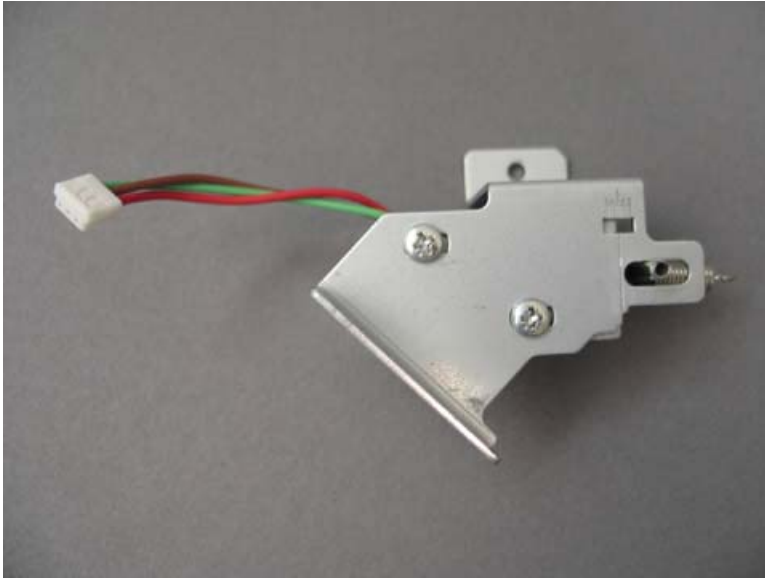
2. Unhook the spring from the plastic lever.




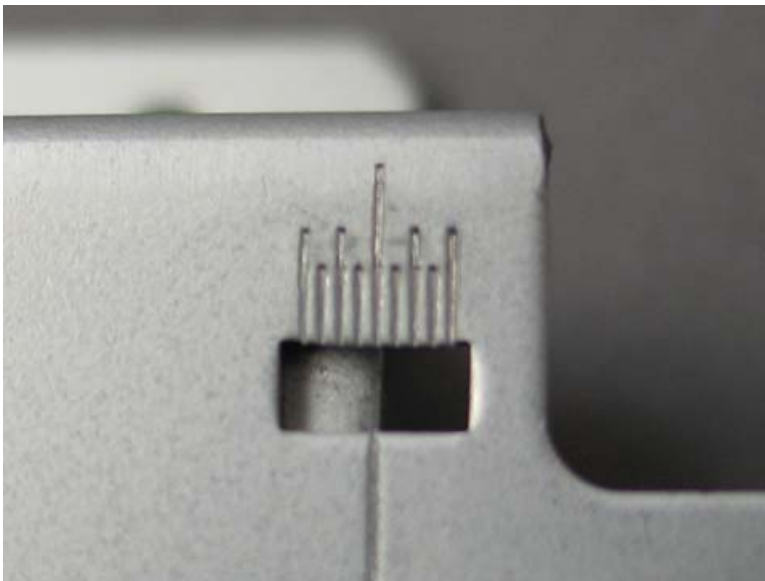
3. Remove two screws, cut the wire retainer, disconnect the wire connector, and then remove the original lift solenoid mounting bracket assembly.



4. Remove two screws to remove SOL401 from the mounting bracket.



 **NOTE:** When reinstalling, align SOL401 in the mounting bracket to the center mark.



ADF Duplex Shift solenoid (SOL402)

1. Remove the ADF front cover.

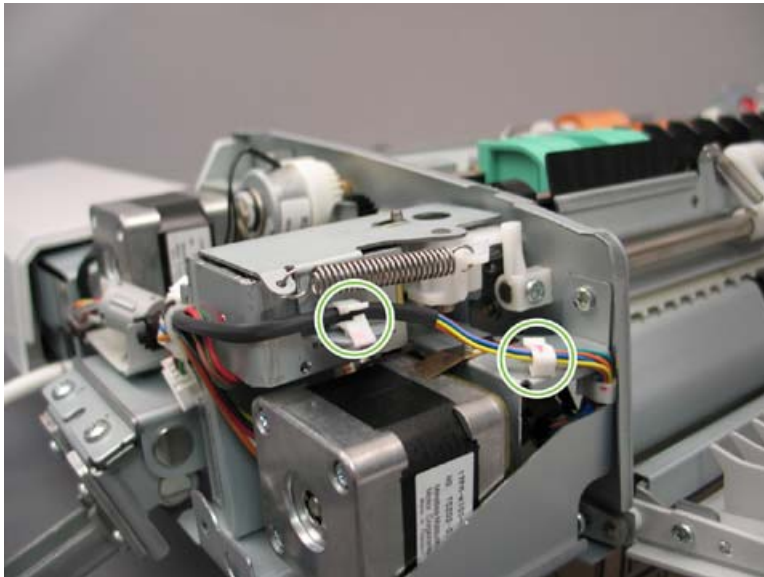
[ADF front cover on page 228](#)

2. Disconnect the wire connector, remove two screws, and then remove SOL402.

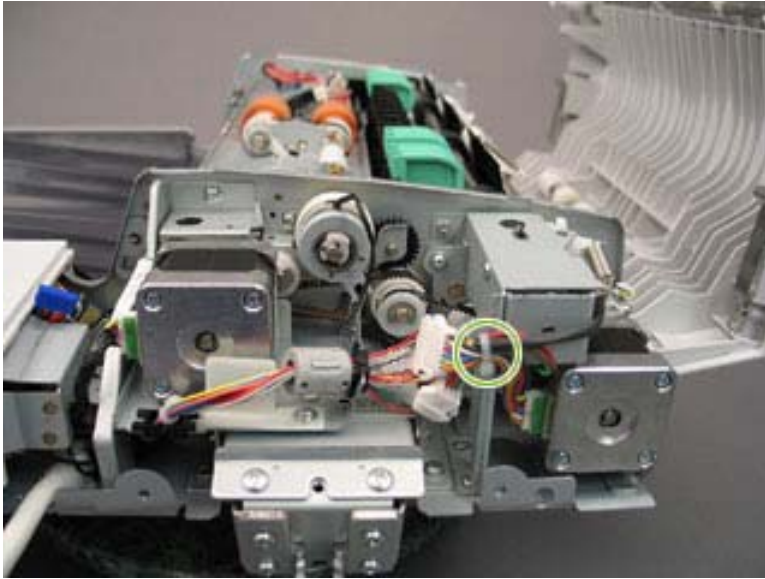


ADF Duplex Pressure solenoid (SOL403)

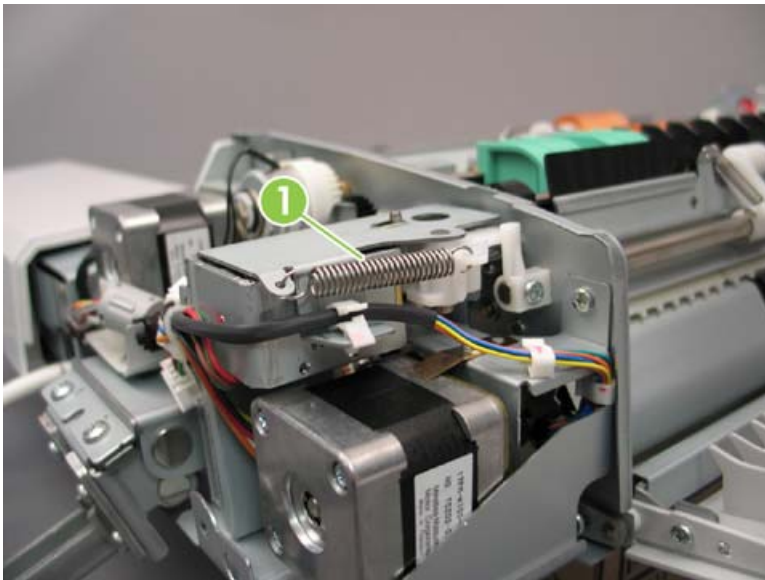
1. Remove the ADF rear cover.
[ADF rear cover on page 229](#)
2. Unhook the surrounding cables from the wire clamps.




3. Cut the wire retainer, and then disconnect the wire connector from SOL403.

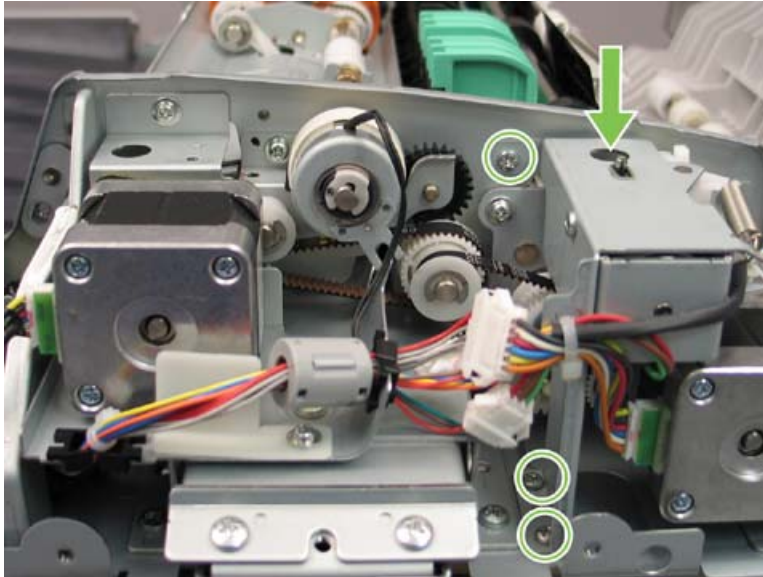


4. Unhook the spring (callout 1).

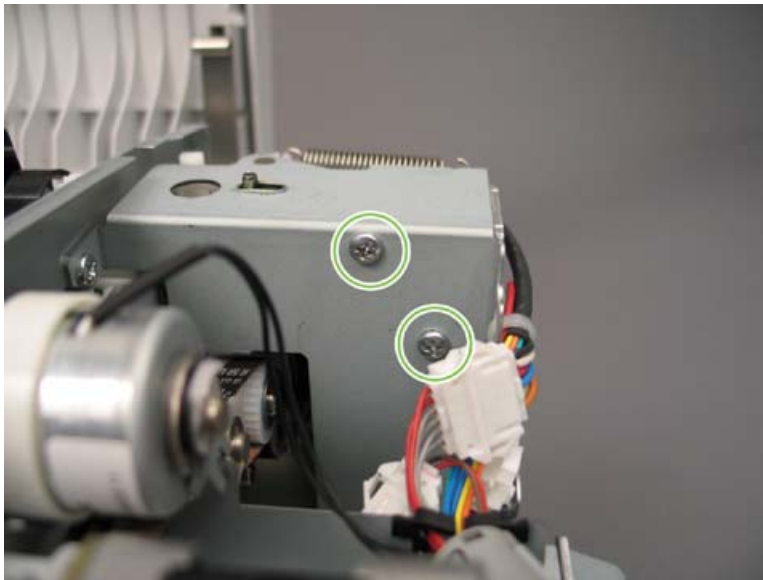



5. Remove four screws, and then remove the solenoid mounting bracket assembly.

 **NOTE:** Gain access to one screw through a hole on top of the solenoid mounting bracket.



6. Remove two screws, and then remove SOL403 from the mounting bracket.



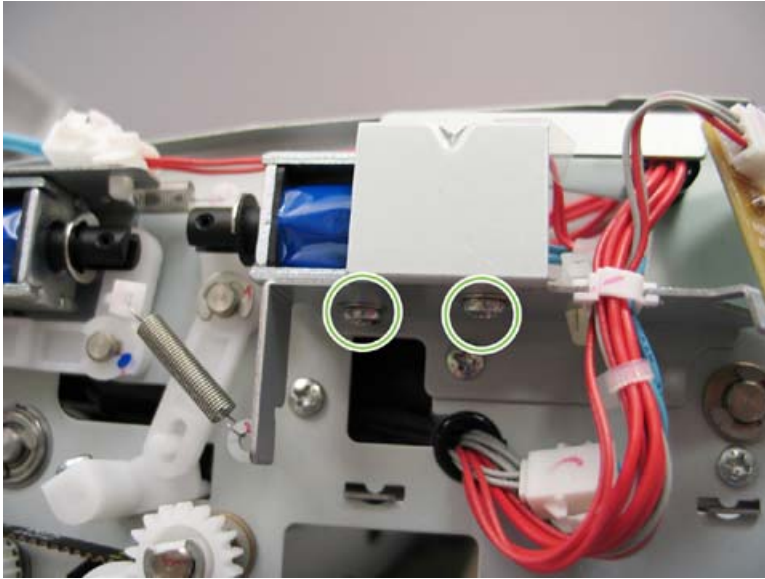
 **Reinstallation tip** A replacement duplex solenoid might be delivered unassembled. In the case of a solenoid failure due to an open coil, it might be easier to reuse the existing metal solenoid arm with the pin already inserted. If not, insert the plastic solenoid lever into the new metal solenoid arm and secure with the supplied spring-pin. The spring-pin should protrude 11–12 mm from the solenoid arm and extend through the hole in the top of the solenoid casing.

ADF Eject Shift solenoid (SOL404)

1. Remove the ADF front cover.


[ADF front cover on page 228](#)

2. Disconnect the wire connector, cut the wire retainer, remove two screws, and then remove SOL404.




ADF hinges


- [Left hinge](#)
- [Right hinge](#)

 **NOTE:** The ADF hinges are a preventive maintenance item and are lubricated at scheduled intervals. See [Service intervals on page 79](#)).

Reset the preventive maintenance counter for this item every time maintenance is performed.

 **Reinstallation tip** A calibration might be required if skewed copies from the ADF are occurring or if the ADF hinges are reinstalled or replaced.

[Adjust the ADF hinges to correct copy skew problems on page 1061](#)

 **NOTE:** If an ADF hinge is replaced, perform the ADF image adjustments in CDFT for vertical magnification, leading edge, and center line (simplex, and duplex front and rear).

[ADF image adjustments on page 63](#)

Left hinge

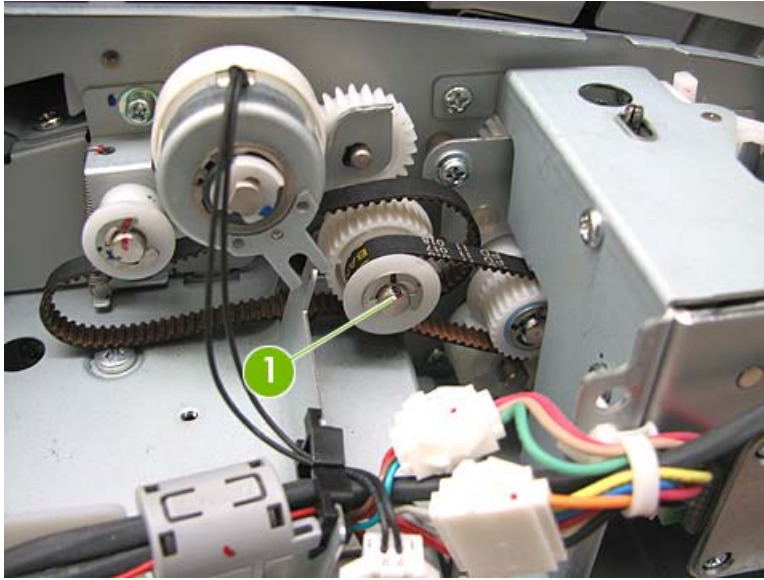
1. Remove the following items:
 - ADF originals cover
[ADF originals cover on page 237](#)
 - ADF rear cover
[ADF rear cover on page 229](#)
 - ADF assembly

[ADF assembly on page 226](#)

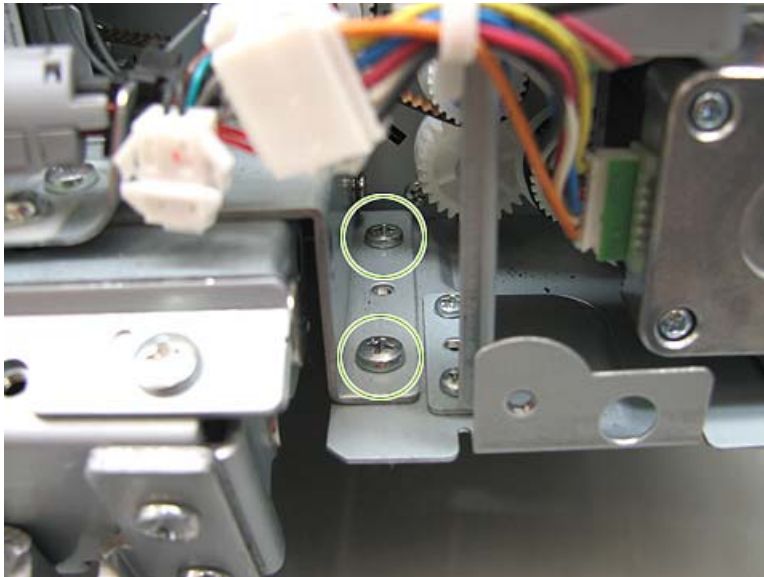
- ADF Feed motor (M401)

[ADF Feed motor \(M401\) on page 257](#)

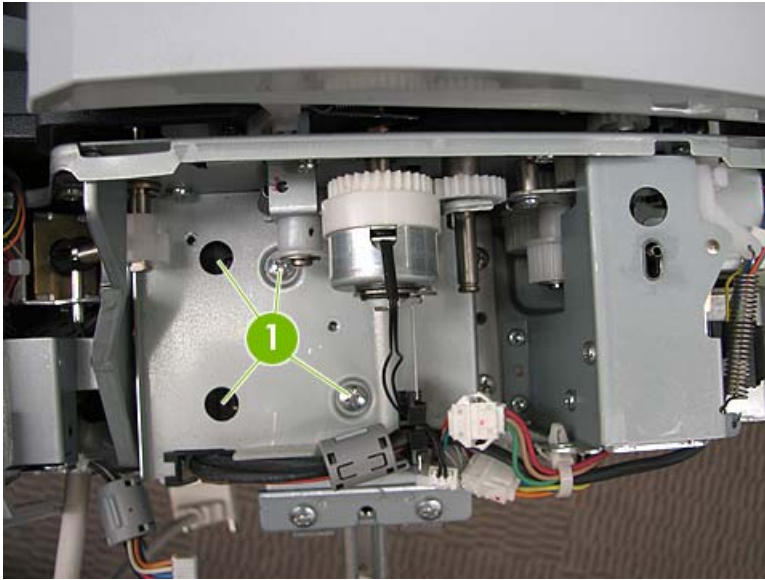
2. Remove the retaining clip (callout 1) from the gear, and then remove the gear cover, the gear, and the belt.



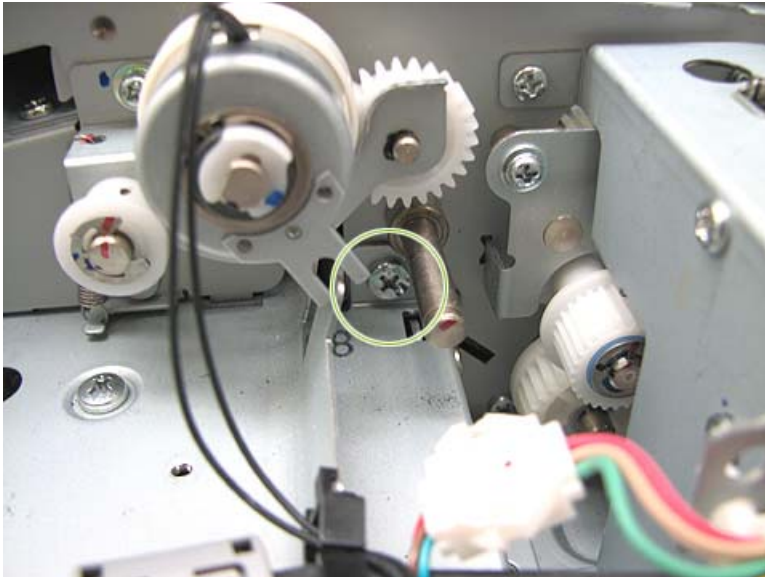
3. Remove two screws.



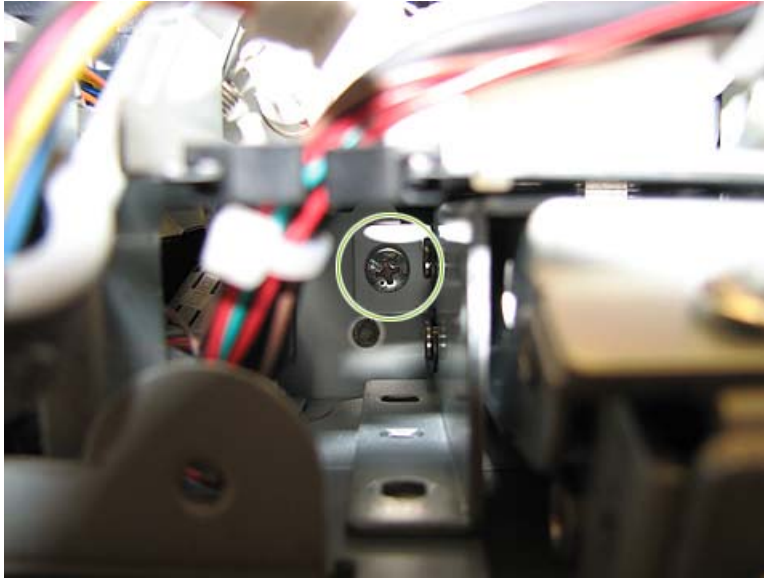
4. Remove four screws (callout 1) from the top of the hinge. Two of the screws are accessed through holes in the hinge cover.



5. Remove one screw.



6. Remove one screw.



7. Remove the hinge.



Right hinge

1. Remove the following items:
 - ADF originals cover
[ADF originals cover on page 237](#)
 - ADF front cover
[ADF front cover on page 228](#)
 - ADF rear cover

[ADF rear cover on page 229](#)

- ADF output bin

[ADF output bin on page 233](#)

- ADF Control PCA (A401) cover

[ADF Control PCA \(A401\) cover on page 235](#)

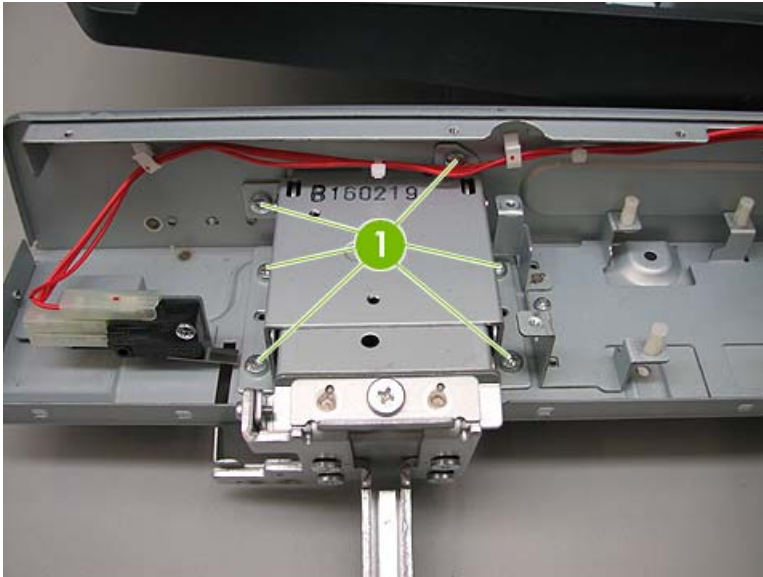
- ADF assembly

[ADF assembly on page 226](#)

- ADF Control PCA (A401)

[ADF Control PCA \(A401\) on page 245](#)

2. Remove six screws, and remove the hinge.



ADF conveying rollers

1. Remove the following items:

- ADF front cover

[ADF front cover on page 228](#)

- ADF rear cover

[ADF rear cover on page 229](#)

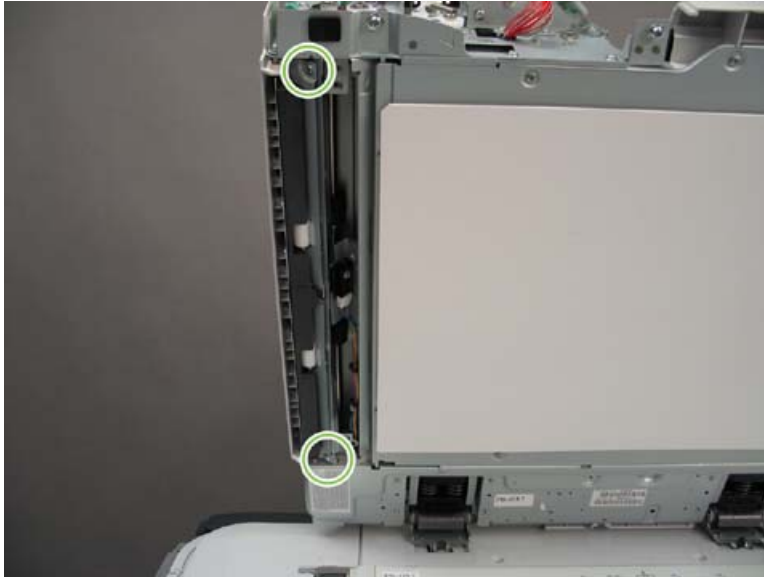
- ADF Conveying motor (M402)

[ADF Conveying motor \(M402\) on page 260](#)

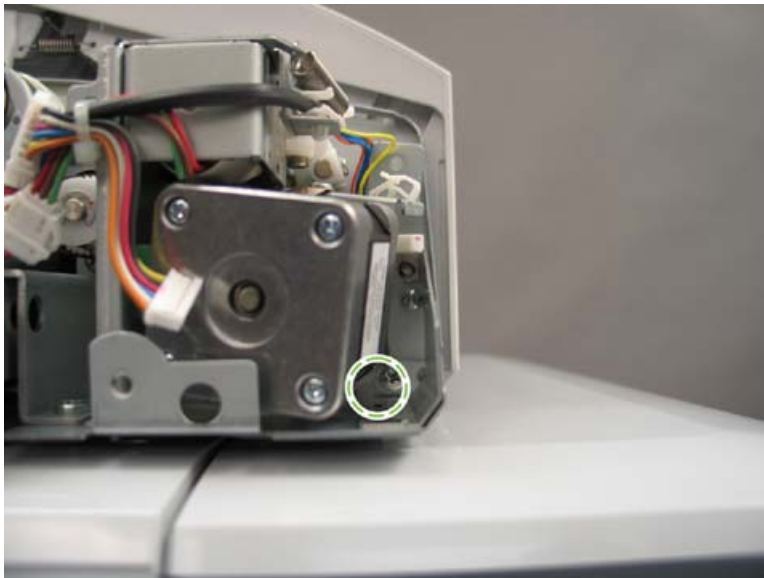
- Reading guide

[Reading guide on page 244](#)

2. Remove two screws from the front of the roller guide.



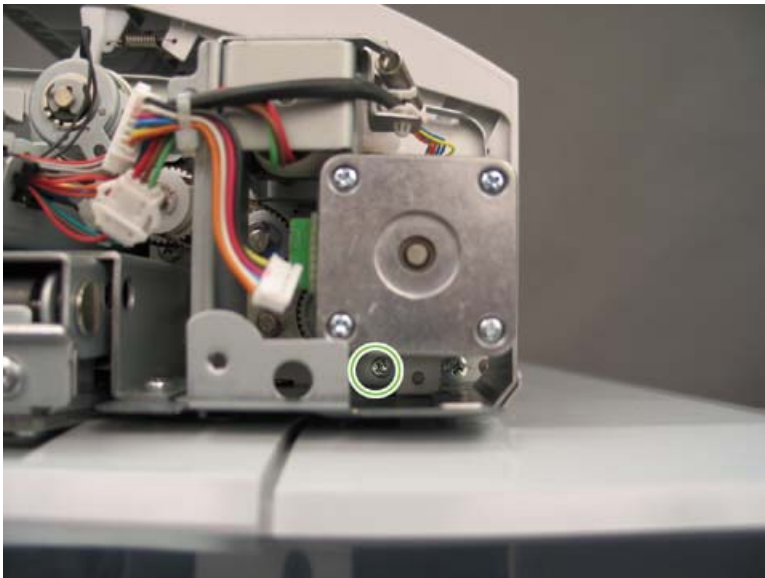
3. Move M402 aside, and then remove one screw.



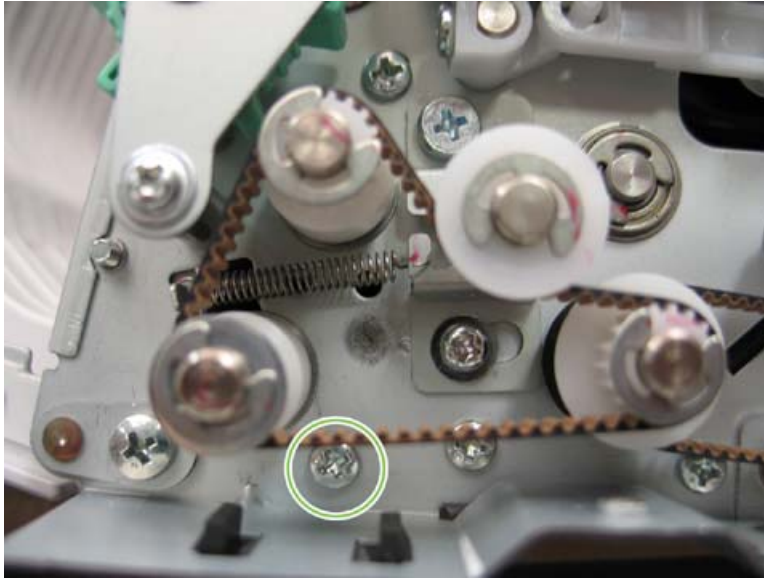
4. Remove one shoulder screw.




5. Remove one screw from the rear of the ADF.

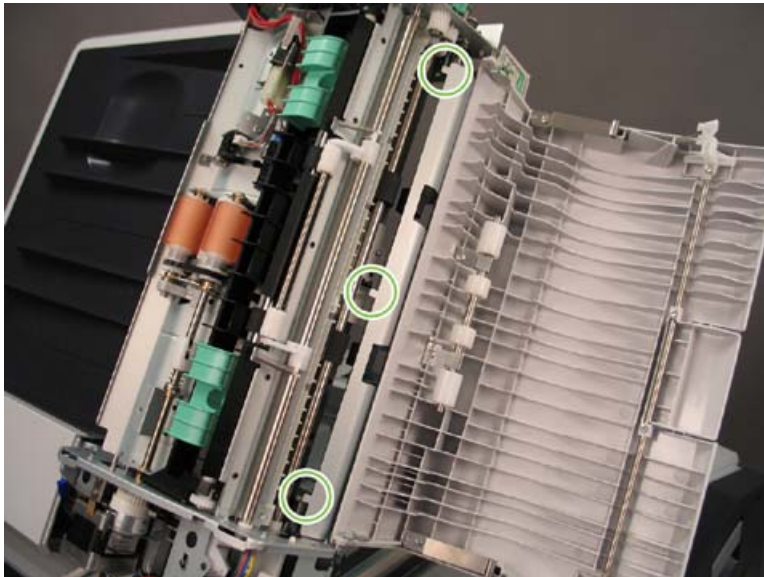


6. Remove one screw from the front of the ADF.



7. Slightly rotate the ADF conveyance guide outward, and then remove the conveyance guide. The upper and lower conveying rollers are located under this guide.

 **NOTE:** When reinstalling the ADF conveyance guide, align the three tabs on the inside edge of the conveyance guide with corresponding slots inside the ADF.



8. Remove the retaining clips from the rear of the roller shafts, and then remove the retaining clips, belt, and pulleys from the front of the roller shafts. Slide the roller shafts slightly to the front, and then lift up and remove the conveying rollers.

Scanner

- [Scanner assembly](#)
- [Platen glass](#)
- [ADF contact glass](#)
- [Scanner exposure lamp](#)
- [Scanner mirrors](#)
- [Image scan unit \(ISU\) cover](#)
- [Image scan unit assembly](#)
- [Scanner motor \(M501\)](#)
- [Scanner sensors](#)
- [Scanner PCAs](#)
- [Fans](#)
- [Scanner chamber filter](#)
- [Rear wire assembly](#)
- [Front wire assembly](#)

Scanner assembly

1. Remove the following items:
 - ADF assembly
[ADF assembly on page 226](#)
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)
 - Control panel
[Control panel assembly on page 309](#)
 - Upper right cover
[Upper right cover on page 216](#)

- Upper left cover

[Upper left cover on page 213](#)

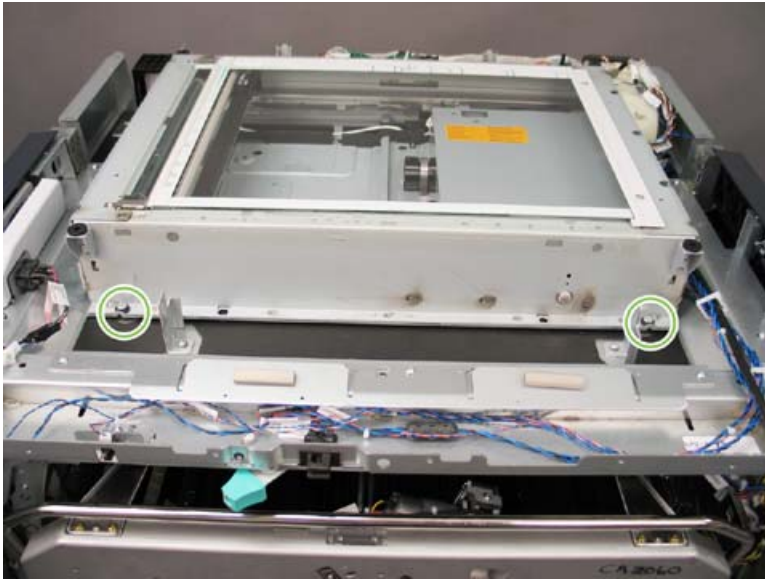
- MFP top case parts

[Top case parts on page 221](#)


2. On the right side of the MFP, disconnect one cable from the side of the scanner, and then disconnect two wire connectors (callout 1).



3. Remove two screws from the front of the MFP, and then remove two screws from the rear of the MFP.




4. Lift the scanner assembly off the MFP.

 **NOTE:** If the scanner assembly is replaced, perform the scanner image adjustments in CDFT for vertical magnification, leading edge, and center line.

[Scanner image adjustments on page 61](#)


Platen glass

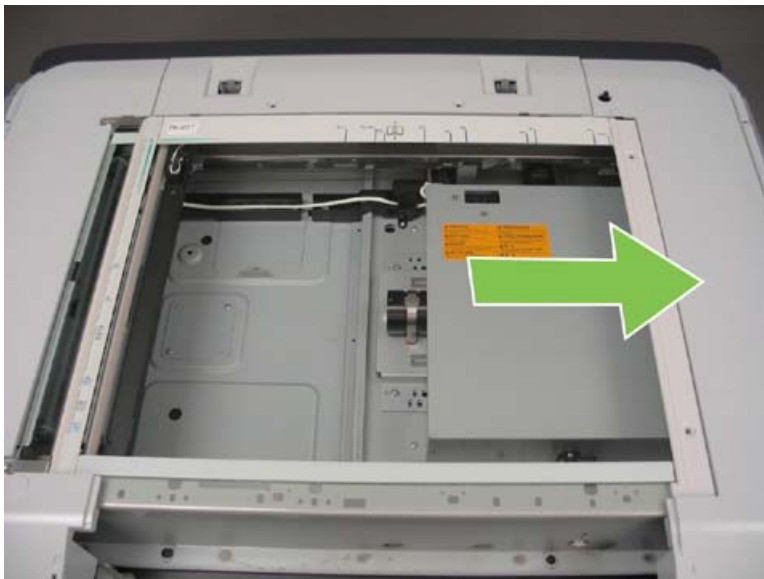
1. Remove two screws from the right trim, and then slide the trim to the front and lift to remove.


 **NOTE:** When reinstalling, slide the trim to the rear to secure the clip underneath to the scanner frame.



2. Slide the platen glass to the right, and then lift the glass off of the scanner assembly.


 **TIP:** Fold a sheet of paper over the glass to hold the glass from both sides and to avoid leaving fingerprints.



 **NOTE:** Clean the scanner glass with distilled water, and then remove any residue with a dry, lint-free cloth.


ADF contact glass

1. Remove two screws from the front and rear holders, and then remove the contact glass.

 **TIP:** Fold a sheet of paper over the glass to hold the glass from both sides and to avoid leaving fingerprints.



2. Lift the contact glass off of the scanner assembly.

 **NOTE:** The ADF contact glass is a preventive maintenance item and is replaced at scheduled intervals. See [Service intervals on page 79](#).


Reset the preventive maintenance counter for this item every time maintenance is performed.

Scanner exposure lamp

1. Remove the glass assembly.

[Platen glass on page 279](#)

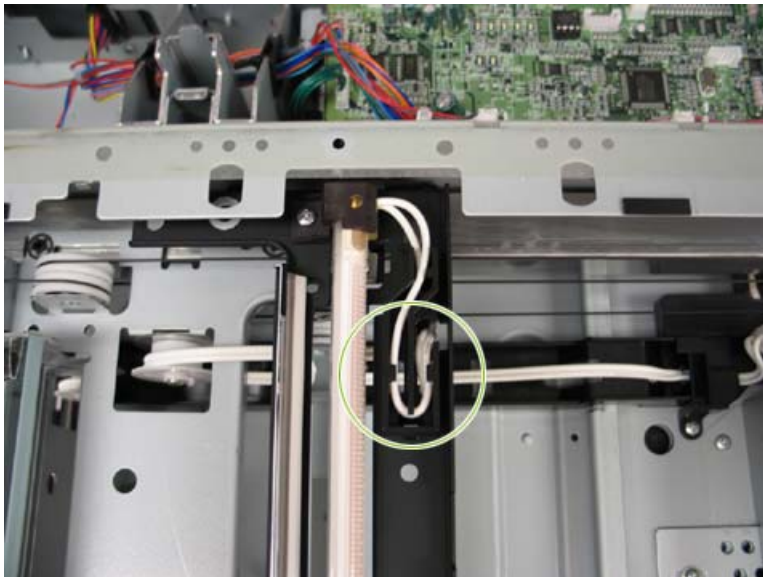
2. Remove one screw, and then remove the wire retainer and disconnect the lamp.

 **NOTE:** The cord has an alignment mark that corresponds to the cord holder underneath the clamp, for use when reinstalling.



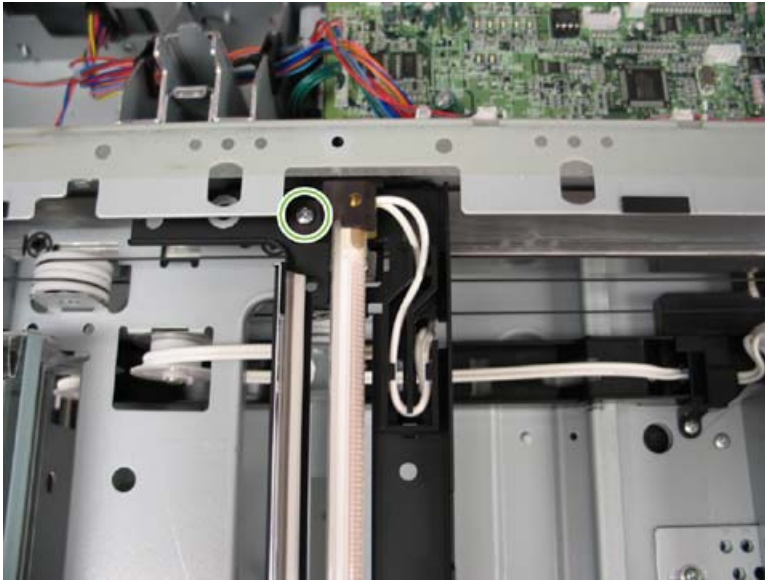
3. Move the full-rate carriage to the cutout in the scanner frame. Unwind the scanner exposure lamp power cord from the pulley, and then unclip and remove the cord restraint.

 **CAUTION:** Do not touch the scanner lamp bulb when moving the full-rate carriage.



4. Remove one screw both ends of the scanner exposure lamp assembly.

△ **CAUTION:** Do not touch the scanner exposure lamp bulb. Hold the lamp by the holders at the ends.



5. Lift out the lamp and cord.



📄 **NOTE:** The scanner exposure lamp is a preventive maintenance item and is replaced at scheduled intervals. See [Service intervals on page 79](#).

Reset the preventive maintenance counter for this item every time maintenance is performed.

Scanner mirrors

Three scanner mirrors are located on the half-rate and full-rate carriages:

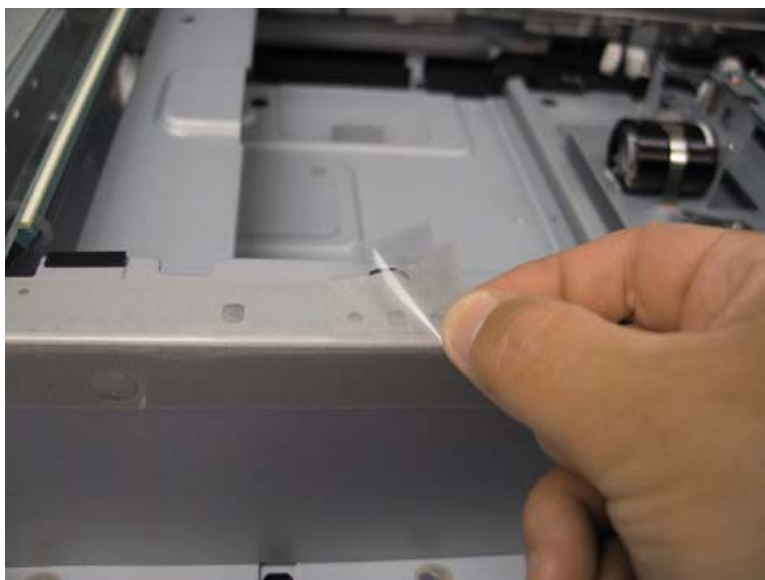
- Mirror 1 - full-rate carriage
- Mirror 2 - half-rate carriage (upper)
- Mirror 3 - half-rate carriage (lower)

Mirror 1

1. Remove the glass assembly.

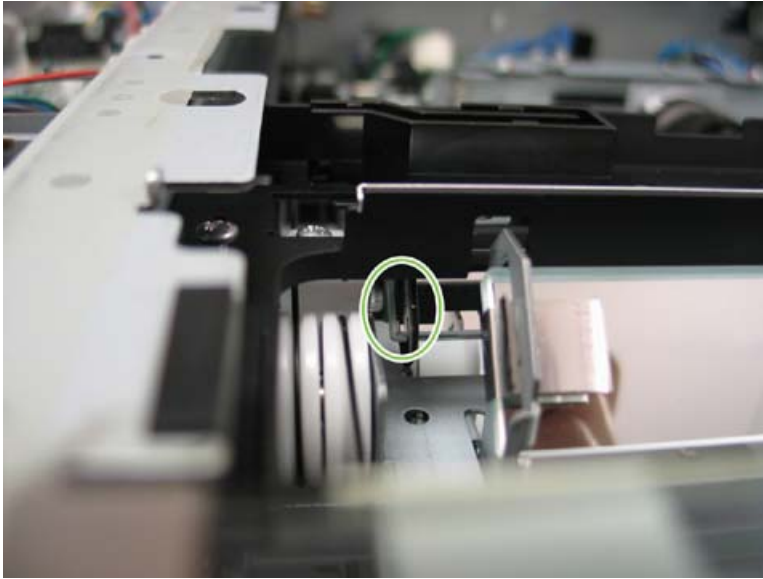
[Platen glass on page 279](#)


2. Move the full-rate carriage to the cutout area, remove two small pieces of film from the scanner frame front and rear, install the alignment tools, and then secure the tools to the frame with a screw.



△ **CAUTION:** Do not touch the scanner exposure lamp while moving the full-rate carriage. Grab the full-rate carriage from the metal frame.

3. To release each clip, press down on the clip while prying.



 **NOTE:** When reinstalling, ensure the reflective side of the mirror is facing up.

NOTE: If the mirror is replaced, perform the scanner image adjustments in CDFT for vertical magnification, leading edge, and center line.

[Scanner image adjustments on page 61](#)

Mirrors 2 and 3


1. Remove the glass assembly.

[Platen glass on page 279](#)

2. Install the alignment tools by moving the half-rate carriage to the center of the scanner and up to the second position.
3. Remove two small pieces of film from the scanner frame front and rear, install the alignment tools, and then secure the tools to the frame with a screw.

4. To release each clip, press down on the clip while prying.



 **NOTE:** If a mirror is replaced, perform the scanner image adjustments in CDFT for vertical magnification, leading edge, and center line.

[Scanner image adjustments on page 61](#)

Image scan unit (ISU) cover

1. Remove the glass assembly.
[Platen glass on page 279](#)
2. Remove four screws, and then remove the image scan unit (ISU) cover.

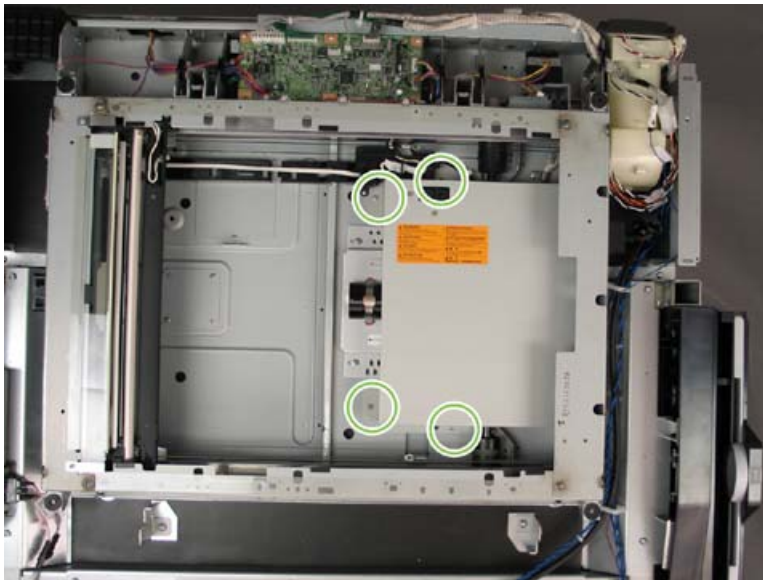


Image scan unit assembly

 **CAUTION:** Wear an ESD strap.

Removal

1. Remove the following items:
 - Platen glass
[Platen glass on page 279](#)
 - ISU cover
[Image scan unit \(ISU\) cover on page 285](#)
2. Remove four screws, disconnect two wire connectors, and then remove the image scan unit assembly.



Replacement

1. Install four screws but do not tighten.



2. Take note of the single-digit number labeled on the lens.



3. Insert two positioning pins (included in service kit C5956-67154) in the numbered holes on both sides of the lens that corresponds to the number on the lens.



4. Tighten the four screws, remove the two positioning pins, and then reconnect the two wire connectors.

△ **CAUTION:** Be careful not to bend or break the CCD board when reconnecting the two wire connectors.

📄 **NOTE:** If the ISU assembly is replaced, perform the following scanner image adjustments in CDFT for vertical magnification, leading edge, and center line.

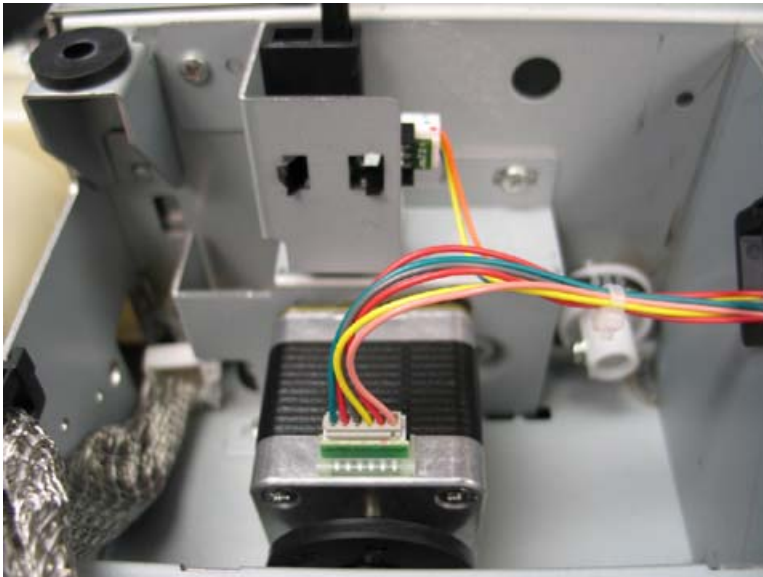
[Scanner image adjustments on page 61](#)

NOTE: If the image is distorted, perform the scanner distorted image adjustment.

[Adjust the scanner half-rate mirror to correct image distortion on page 1063](#)

Scanner motor (M501)

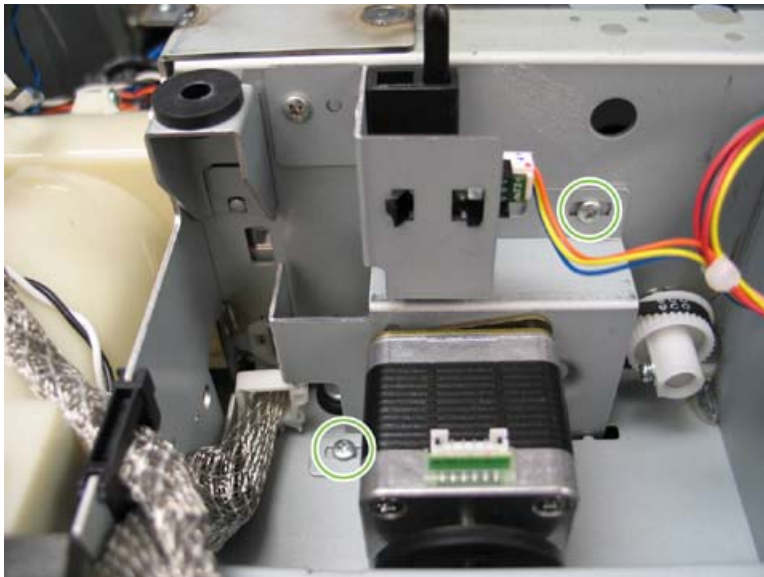
1. Remove the following items:
 - ADF assembly
[ADF assembly on page 226](#)
 - Control panel
[Control panel on page 309](#)
 - Web wipe cover
[Upper left cover on page 213](#)
 - Scanner rear trim
[Scanner rear trim on page 221](#)
 - Scanner service cover
[Scanner service cover on page 222](#)
 - Scanner right trim
[Scanner right trim on page 224](#)
2. Disconnect the scanner motor wire connector.



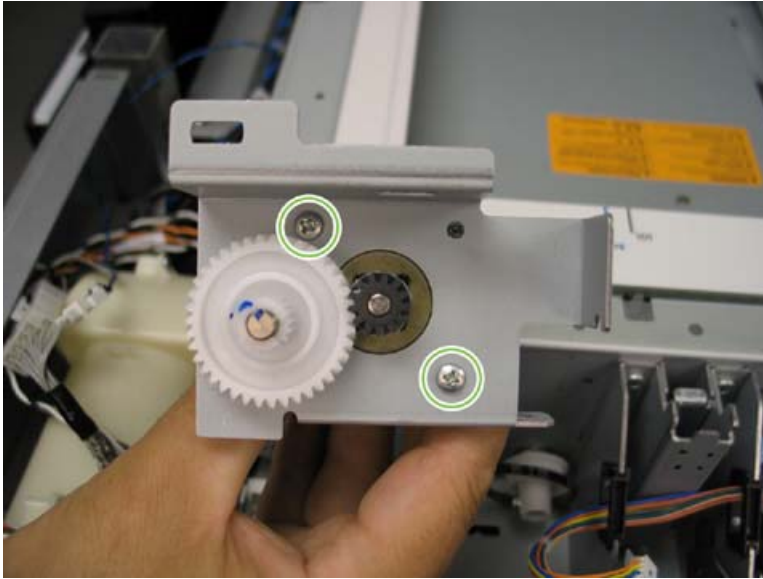
3. Remove one screw, and then move the sensor bracket aside.




4. Remove two screws, slide the scanner motor assembly to the right to loosen the belt tension, and then remove the scanner motor assembly.



5. Remove two screws, and then remove M501 from the mounting bracket.



 **NOTE:** If the Scanner motor (M501) is replaced, perform the scanner image adjustments in CDFT for vertical magnification and leading edge.

[Scanner image adjustments on page 61](#)

Scanner sensors

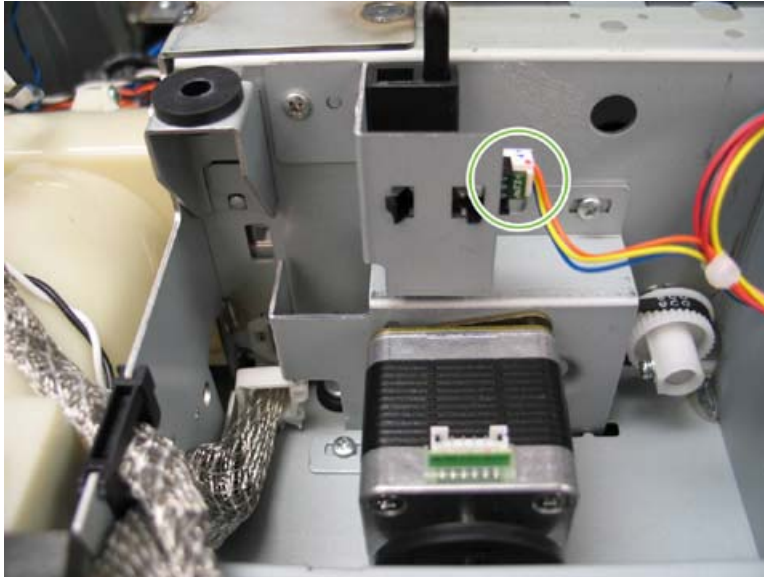
- [Scanner Original Size Detection sensor \(SN501\)](#)
- [Scanner Length sensor \(SN502\)](#)
- [Scanner Home Position sensor \(SN503\)](#)

Scanner Original Size Detection sensor (SN501)

1. Remove the following items:

- ADF assembly
[ADF assembly on page 226](#)
- Control panel
[Control panel on page 309](#)
- Scanner rear trim
[Scanner rear trim on page 221](#)
- Scanner right trim
[Scanner right trim on page 224](#)
- Scanner service cover
[Scanner service cover on page 222](#)

2. Disconnect the wire connector, and then remove SN501.



Scanner Length sensor (SN502)

1. Remove the following items:
 - Platen glass
[Platen glass on page 279](#)
 - ISU cover
[Image scan unit \(ISU\) cover on page 285](#)
2. Disconnect the wire connector, remove one screw, and then remove SN502.



Scanner Home Position sensor (SN503)

1. Remove the following items:
 - ADF assembly
[ADF assembly on page 226](#)
 - Scanner rear trim
[Scanner rear trim on page 221](#)
2. Disconnect the wire connector, remove one screw, and then remove the sensor mounting bracket.



3. Remove SN503.

Scanner PCAs

- [Scanner Control PCA \(A501\)](#)
- [Scanner Inverter PCA \(A504\)](#)
- [AFE PCA \(A502\)](#)

Scanner Control PCA (A501)

△ **CAUTION:** Wear an ESD strap.

1. Remove the following items:
 - ADF assembly
[ADF assembly on page 226](#)
 - Remove the scanner rear trim.
[Scanner rear trim on page 221](#)
2. Disconnect all of the wire connectors from A501.

3. Remove six screws, and then remove A501.



4. To retain the adjustments and counters, use a small flat-bladed screwdriver to gently pry the EPROM from the old board and install it in the new board.

△ **CAUTION:** Be careful not to bend the pins of the EPROM. During installation, ensure the notch on the end of EPROM is aligned with the notch in the EPROM socket on the board.



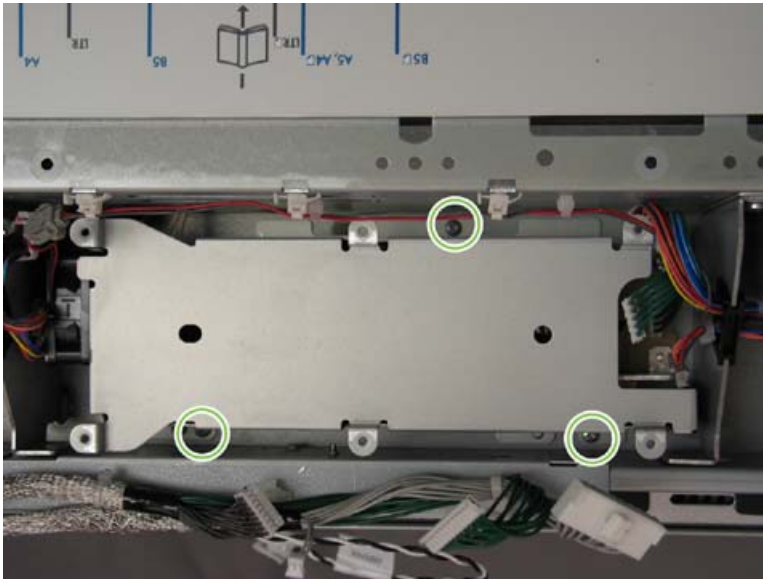
📄 **NOTE:** If the Scanner Control PCA (A501) is replaced, perform the scanner image adjustments in CDFT for vertical magnification, leading edge, and center line.

[Scanner image adjustments on page 61](#)

Scanner Inverter PCA (A504)

△ **CAUTION:** Wear an ESD strap.

1. Remove the following items:
 - ADF assembly
[ADF assembly on page 226](#)
 - Scanner rear trim
[Scanner rear trim on page 221](#)
 - Scanner Control PCA (A501)
[Scanner Control PCA \(A501\) on page 292](#)
2. Remove three screws, and then remove the A504 cover.



3. Disconnect all of the wire connectors from A504.

4. Remove three screws, and then remove A504.



AFE PCA (A502)

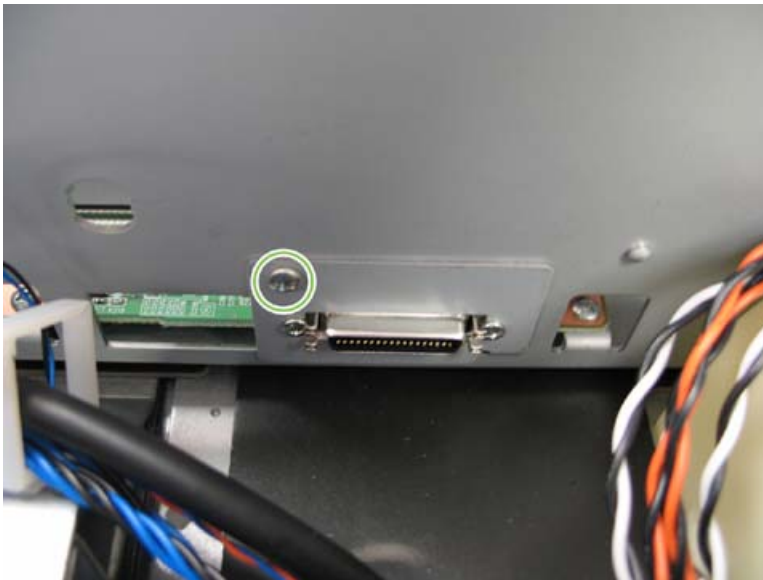
△ **CAUTION:** Wear an ESD strap.

1. Remove the following items:
 - Scanner assembly
[Scanner assembly on page 276](#)
 - Platen glass
[Platen glass on page 279](#)
 - ISU cover
[Image scan unit \(ISU\) cover on page 285](#)
2. Disconnect all of the wire connectors from A502.

3. Remove six screws.



4. Remove one screw from the connector plate, and then remove A502.



Fans

- [Scanner Cooling fan \(FAN501\)](#)
- [Scanner Inverter PCA Cooling fan \(FAN502\)](#)

Scanner Cooling fan (FAN501)

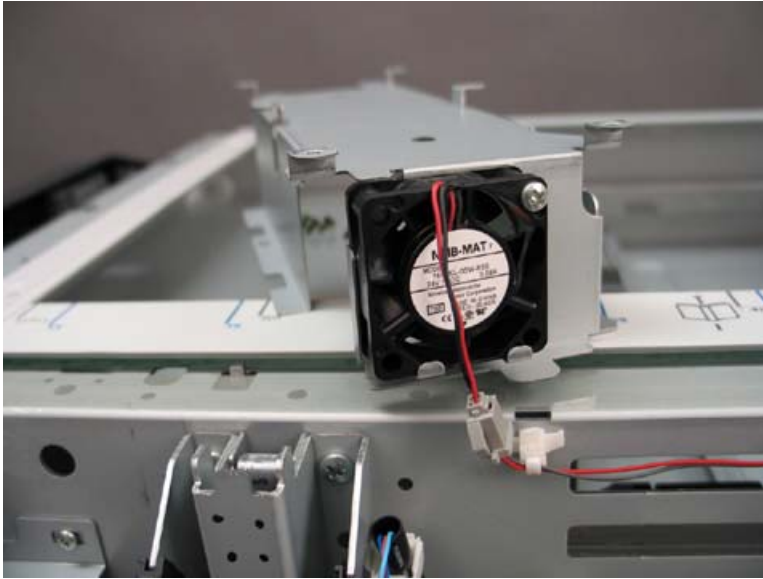
1. Remove the following items:
 - ADF assembly
[ADF assembly on page 226](#)
 - Scanner left trim
[Scanner left trim on page 223](#)
2. Remove two screws, disconnect the fan cable, and then remove FAN501.




Scanner Inverter PCA Cooling fan (FAN502)

1. Remove the following items:
 - ADF assembly
[ADF assembly on page 226](#)
 - Scanner rear trim
[Scanner rear trim on page 221](#)
 - Scanner Control PCA (A501)
[Scanner Control PCA \(A501\) on page 292](#)
2. Remove three screws, and then remove the A504 cover.

3. Disconnect one wire connector, remove one screw, and then remove FAN502.



Scanner chamber filter

-  **NOTE:** The scanner chamber filter is a preventive maintenance item and is replaced at scheduled intervals. See [Service intervals on page 79](#).

Reset the preventive maintenance counter for this item every time maintenance is performed.

1. Remove the following items:
 - ADF assembly
[ADF assembly on page 226](#)
 - Remove the rear scanner trim.
[Scanner rear trim on page 221](#)

2. Remove the scanner chamber filter.



Rear wire assembly

Removal

1. Remove the following components:
 - Scanner assembly
[Scanner assembly on page 276](#)
 - Platen glass
[Platen glass on page 279](#)
 - Scanner exposure lamp
[Scanner exposure lamp on page 280](#)
 - ISU cover
[Image scan unit \(ISU\) cover on page 285](#)

2. Slide the full-rate carriage until it aligns with the rear frame openings.



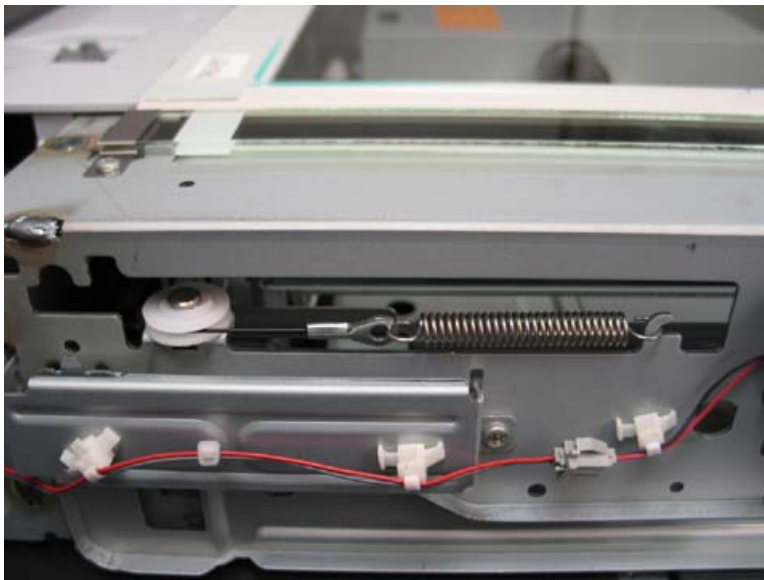
3. Remove two screws, one from each of the front and rear wire retainers, and then push the wire underneath the tab.



4. Remove the full-rate carriage by passing the rear of the carriage through the hole in the scanner rear frame, and then turn the carriage front counterclockwise and lift up.



5. Detach the round terminal of the scanner wire from the scanner wire spring on the left side of the scanner.



6. Remove the scanner wire.

When installing new wires, be sure to use the correct color for each side.

- Machine front: gray (Service kit C5956-67158)
- Machine rear: black (Service kit C5956-67159)

 **NOTE:** Alignment tools are included with these wire service kits.

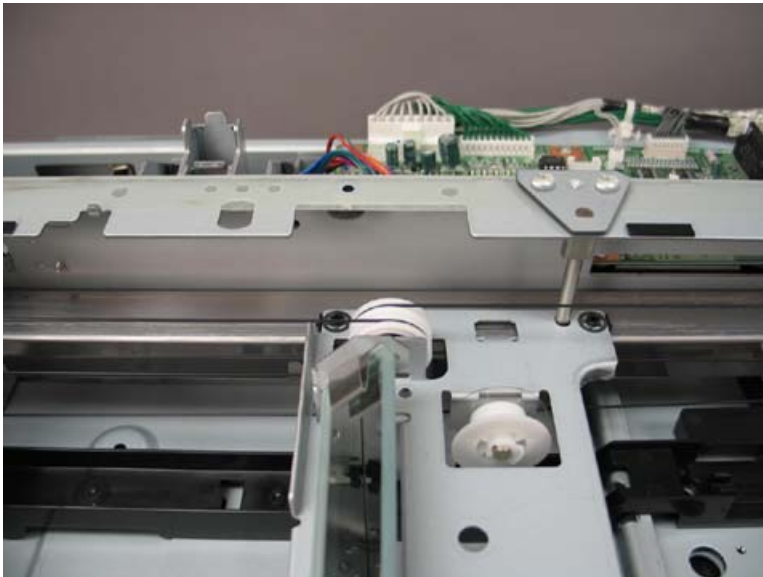
Replacement

1. Remove two small pieces of film covering the holes for the alignment tools from the front and rear of the top of the scanner frame.



2. Move the half-rate carriage to the center of the scanner at the second position for the frame-securing tools. Insert the two frame-securing tools into the front and rear positioning holes to pin the half-rate carriage in position.

Secure the two frame-securing tools using two screws for each.



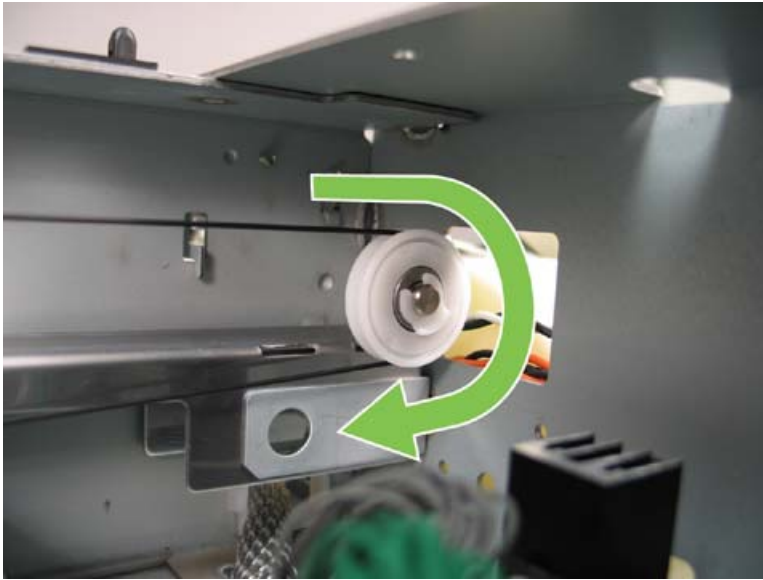
3. Hook the round terminal on one end of the scanner wire onto the catch inside the scanner.



4. Loop the scanner wire around the rear groove in the scanner wire pulley on the half-rate carriage, winding from below to above.



5. Loop the scanner wire around the groove in the wire pulley on the right side on the scanner, winding from above to below.



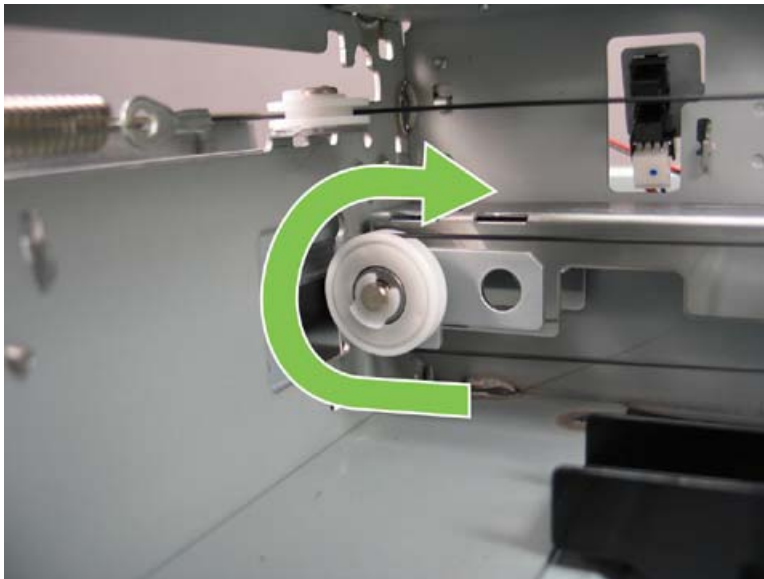
6. Wind the scanner wire around the scanner wire drum, from above to below, five turns from the rear toward the hole in the drum. Insert the locating ball on the scanner wire into the hole in the scanner wire drum.



7. Wind the scanner wire three more turns from the locating ball towards the front.



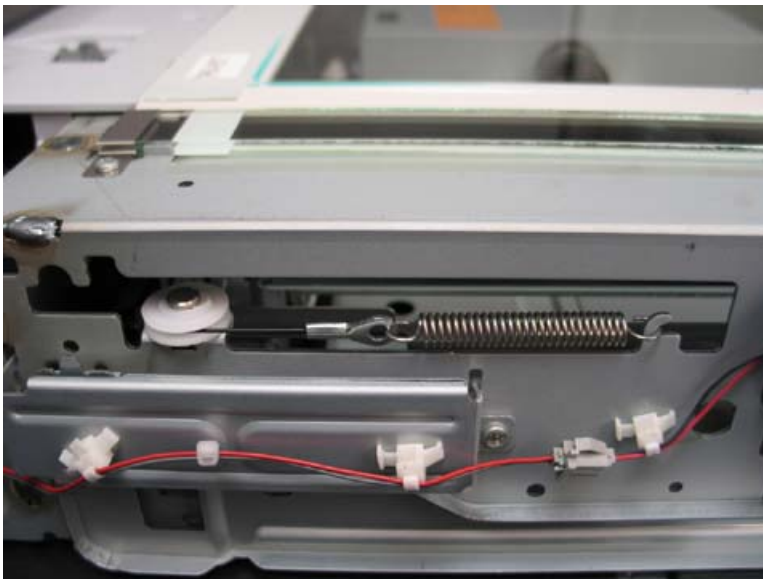
8. Loop the scanner wire around the groove in the scanner wire pulley on the left side of the scanner, winding from below to above.



9. Loop the scanner wire around the front groove in the scanner wire pulley on the half-rate carriage, winding from below to above.



10. Run the scanner wire around the horizontal pulley on the left side of the scanner, and then hook the round terminal onto the scanner wire spring. Hook the other end of the spring onto the catch on the frame.

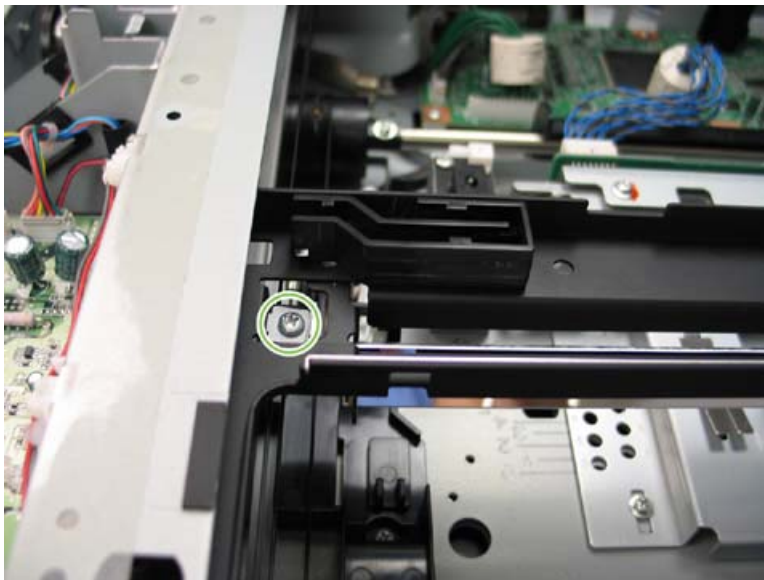


11. Remove the frame-securing tools.
12. Move the half-rate carriage from side to side to correctly position the wire, and then position the carriage at the frame cut out.
13. Insert the full-rate carriage into the scanner, using the openings at the center of the scanner. Align the holes in the two carriages at the front and rear.


14. Insert the two frame-securing tools into the front and rear positioning holes to determine the positions for the half-rate and full-rate carriages.



15. While holding the wires under the full-rate carriage, insert two screws, one each into the two wire retainers at the front and rear of the carriage.



16. Replace the scanner exposure lamp, and then remove the frame-securing tools.

 **NOTE:** After replacing the scanner wire, perform the scanner image adjustments in CDFT for vertical magnification, leading edge, and center line.

[Scanner image adjustments on page 61](#)

NOTE: If the image is distorted, perform the scanner distorted image adjustment.

[Adjust the scanner half-rate mirror to correct image distortion on page 1063](#)


Front wire assembly

The procedure for the front scanner wire is similar to the rear scanner wire procedure. See [Rear wire assembly on page 299](#).

When installing new wires, be sure to use the correct color for each side.

- Machine front: gray (Service kit C5956-67158)
- Machine rear: black (Service kit C5956-67159)

 **NOTE:** Alignment tools are included with these wire service kits.

 **TIP:** After replacing the scanner wire, perform the scanner image adjustments in CDFT for vertical magnification, leading edge, and center line.

[Scanner image adjustments on page 61](#)

Control panel

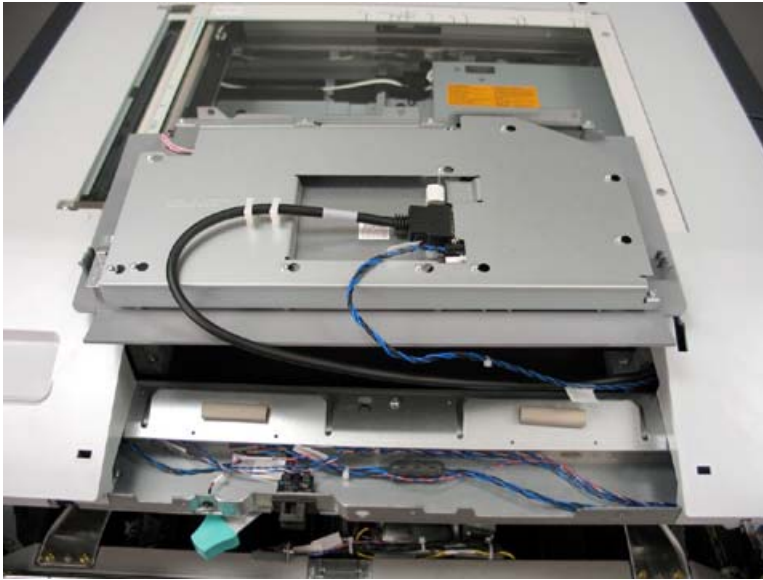
- [Control panel assembly](#)
- [Control panel PCAs](#)
- [Keypad assembly and button assembly](#)
- [Power switch assembly](#)
- [LCD and touchscreen](#)
- [Control panel lamp](#)

Control panel assembly

1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)
2. Remove three screws from the front of the MFP.



3. Disconnect the two wire connectors from the control panel assembly and two wire retainers, and then remove the control panel assembly.



△ **CAUTION:** To prevent damage to the LCD, place the control panel on a soft surface, such as a towel.

Control panel PCAs

- [Control panel PCA](#)
- [Control panel LCD PCA](#)

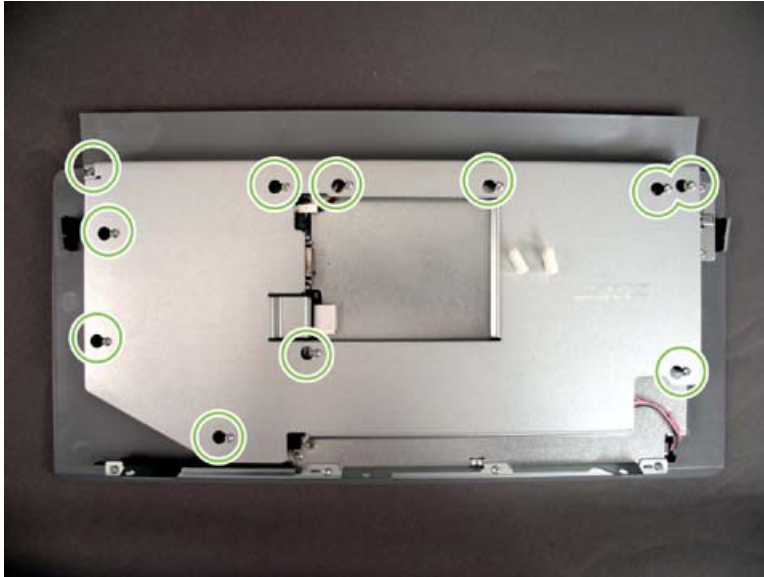
Control panel PCA

△ **CAUTION:** Wear an ESD strap.

1. Remove the control panel assembly.

[Control panel assembly on page 309](#)

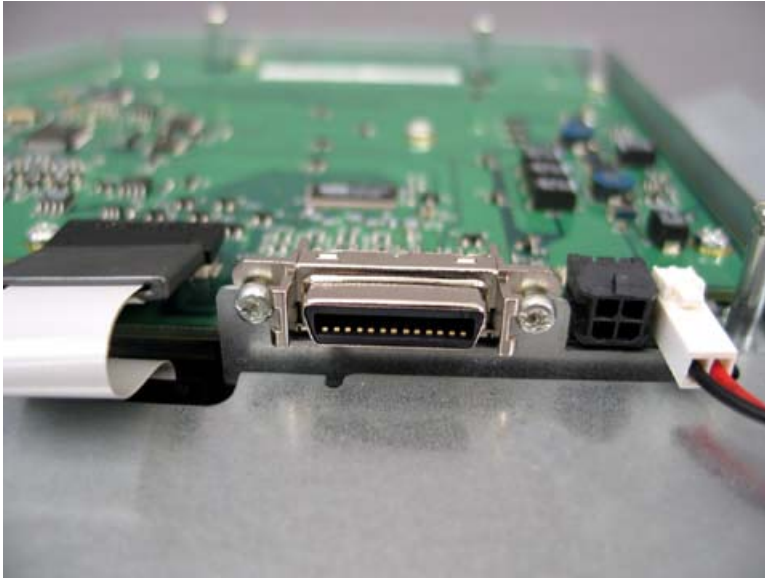
2. Loosen 11 screws from the control panel rear panel, and then remove the rear panel.



3. Disconnect four wire connectors from the control panel PCA.




4. Loosen the two screws from the control panel data connection.




5. Remove six screws from the control panel PCA, and then remove the PCA.



 **NOTE:** The brightness dial comes loose when the control panel PCA is removed.

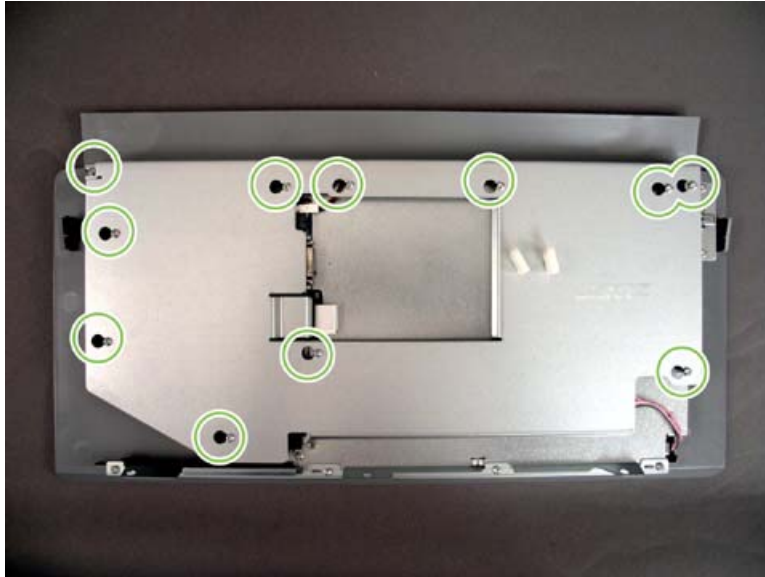
Control panel LCD PCA

 **CAUTION:** Wear an ESD strap.

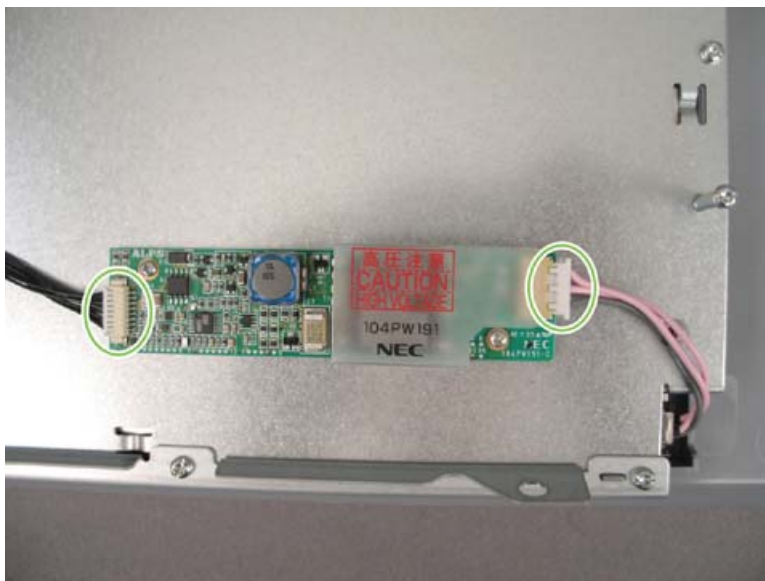
1. Remove the control panel assembly.

[Control panel assembly on page 309](#)

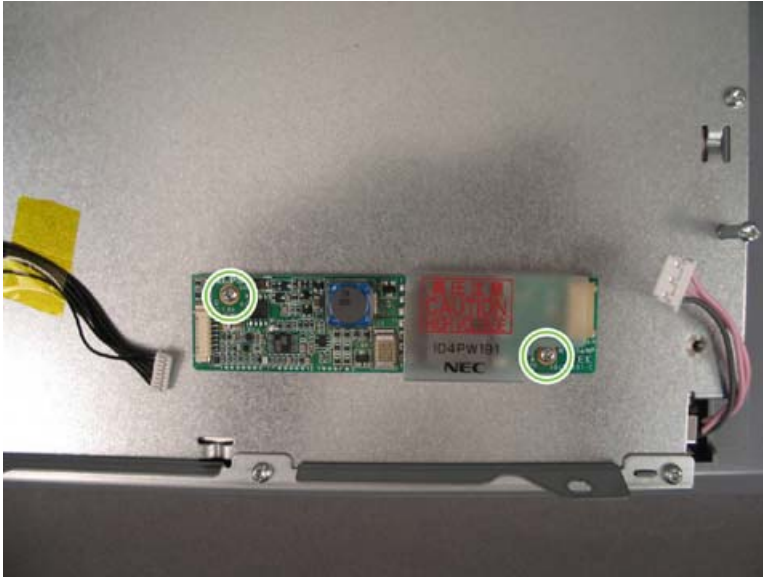
2. Loosen 11 screws from the control panel rear panel, and then remove the rear panel.



3. Disconnect the wire connectors from the LCD PCA.




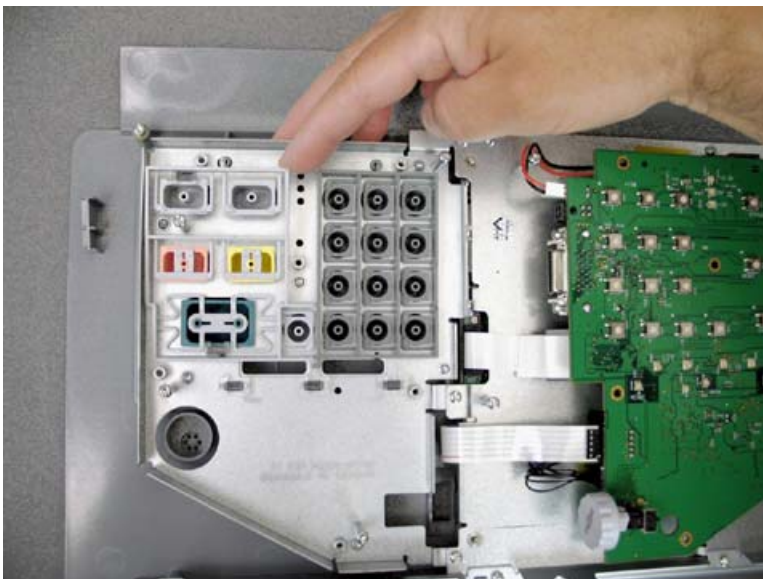
4. Remove two screws from the LCD PCA, and then remove the LCD PCA.



Keypad assembly and button assembly

1. Remove the following items:
 - Control panel assembly
[Control panel assembly on page 309](#)
 - Control panel PCA
[Control panel PCA on page 310](#)
2. Remove the keypad assembly or the button assembly.

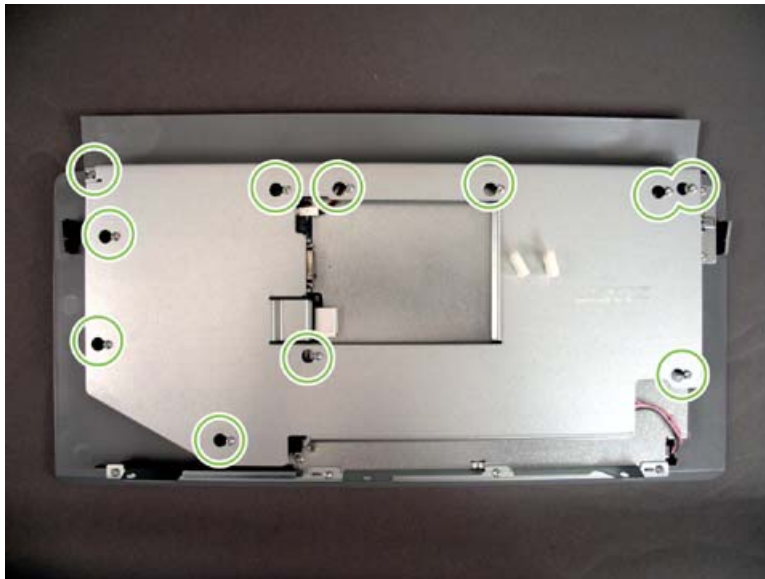
 **NOTE:** There are two loose LED light pipes in this area.



Power switch assembly

△ **CAUTION:** Wear an ESD strap.

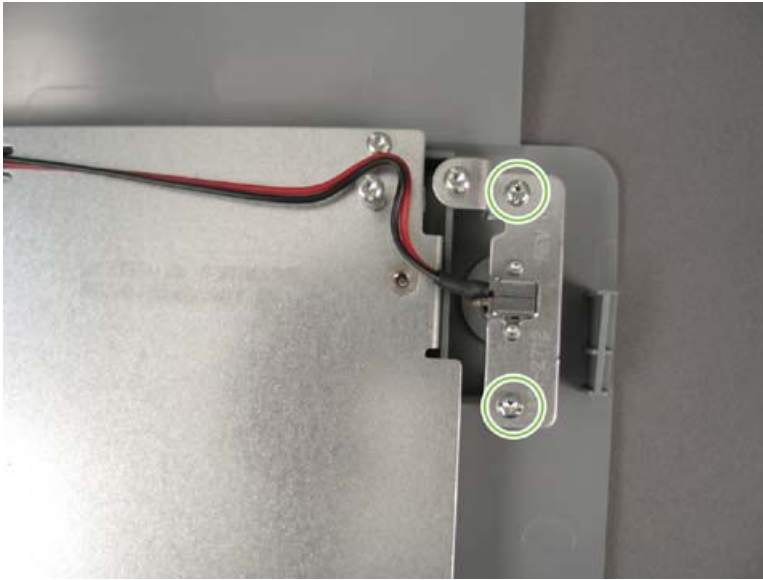
1. Remove the control panel assembly.
[Control panel assembly on page 309](#)
2. Loosen 11 screws from the control panel rear panel, and then remove the rear panel.



3. Disconnect the power switch wire connector from the control panel PCA.



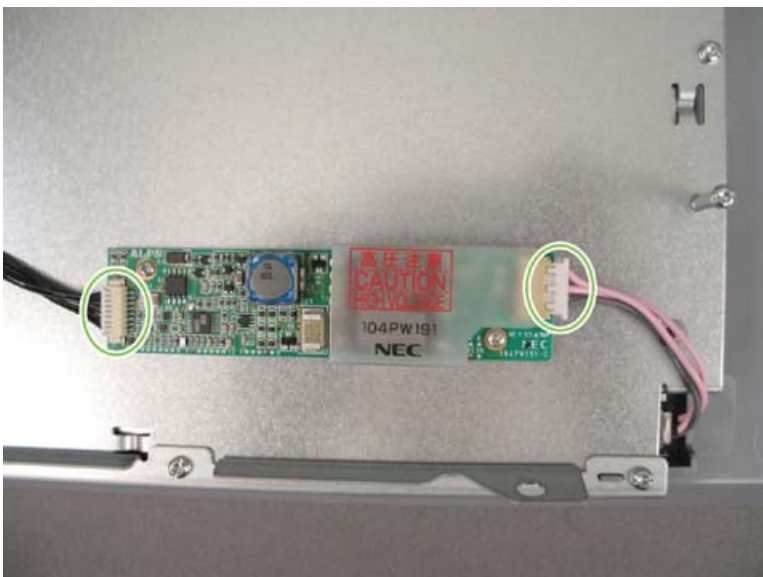
4. Remove the two screws that secure the power switch to the control panel assembly, and then remove the power switch and the power switch button.



LCD and touchscreen

△ **CAUTION:** Wear an ESD strap.

1. Remove the following items:
 - Control panel assembly
[Control panel assembly on page 309](#)
 - Power switch assembly
[Power switch assembly on page 315](#)
2. Disconnect the wire connectors from the LCD PCA.

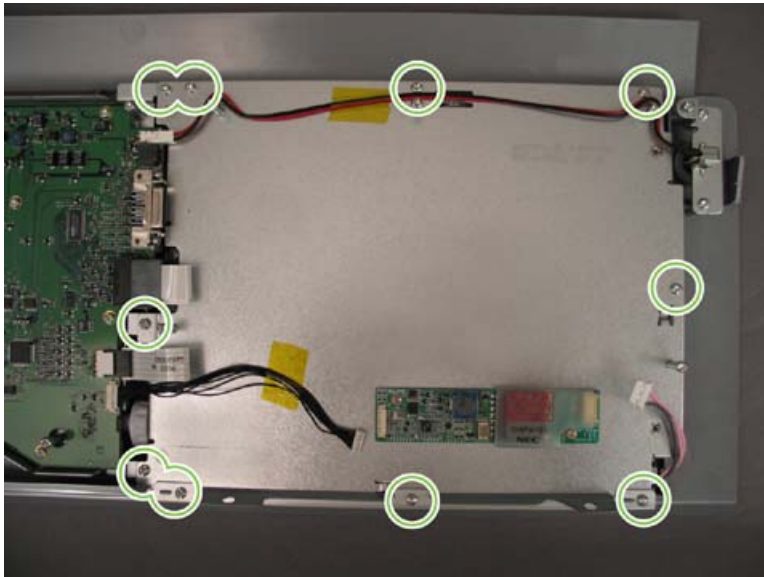



3. Disconnect the LCD and touchscreen wire connectors from the control panel PCA.




4. Remove four screws from the mounting bracket, and then remove the mounting bracket.
5. Remove ten screws from the LCD rear panel.

 **NOTE:** Avoid getting fingerprints on the LCD and touchscreen.



 **Reinstallation tip** To prevent damage, the touchscreen should be fully seated and lying flat during reassembly.

6. Turn the LCD rear panel over, remove four screws, and then remove the LCD.

 **Reinstallation tip** After removing or replacing the LCD touchscreen, perform the following calibration to align the sensitive areas of the touchscreen:

[LCD touchscreen on page 145](#)

Control panel lamp

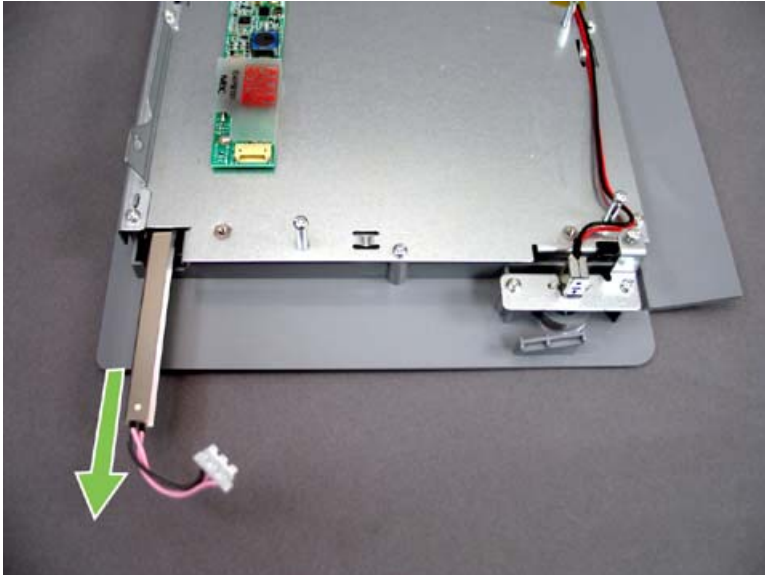
1. Remove the control panel assembly.

[Control panel assembly on page 309](#)

2. Disconnect one wire connector.



3. Press down on the lamp holder tab, and then slide the lamp out.



Trays 2, 3, and 4

- [Lower paper path door](#)
- [Trays 2, 3, and 4 assembly](#)
- [Trays 2, 3, and 4](#)
- [Paper-length guide](#)
- [Media-length guide actuator tape](#)
- [Paper-width guide](#)
- [Paper-width sensor flag](#)
- [Pick arm assembly](#)
- [Pick roller](#)
- [Trays 2, 3, and 4 Transport motor \(M18\)](#)
- [Exit roller shaft](#)
- [Right lower panel handle](#)
- [Paper-exit sensor flag](#)
- [Trays 2, 3, and 4 distribution PCA](#)
- [Trays 2, 3, and 4 Controller PCA \(A23\)](#)
- [Trays 2, 3, and 4 sensors](#)
- [Trays 2, 3, and 4 LEDs](#)

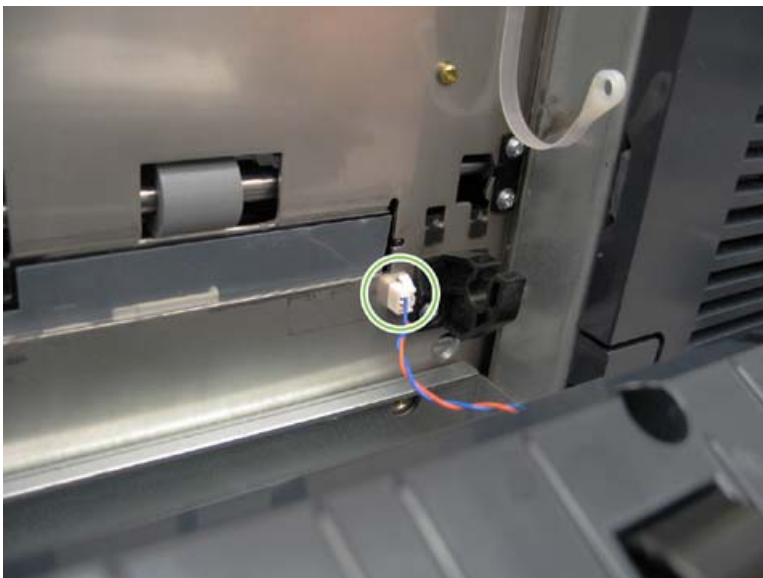
Lower paper path door

The right-side lower panel (outside) is attached to the lower paper path door (inside). Together, they provide a side access door to Trays 2, 3, and 4. They are removed together as a single unit. To separate the two pieces, see [Right-side lower panel on page 217](#).

1. From the right side of the MFP, open the right-side lower panel, and then remove the two hinge strap screws on opposite sides of the panel.



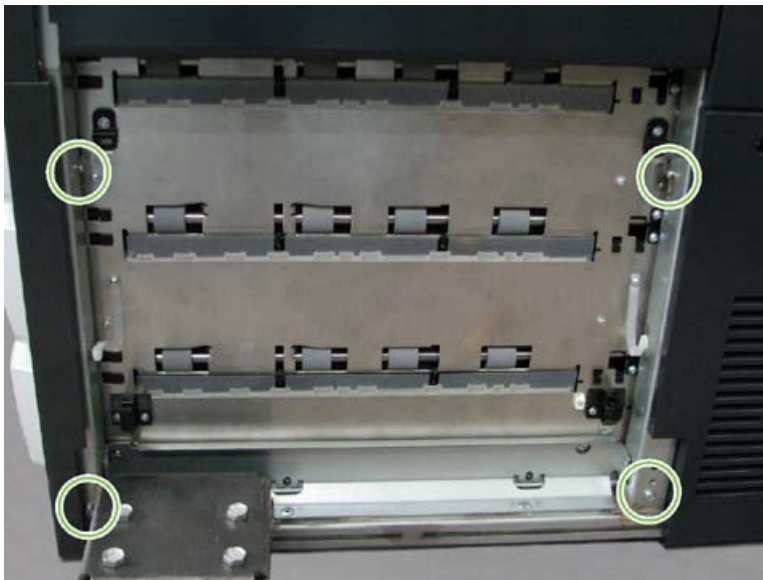
2. Disengage the panel from the Trays 2, 3, and 4 assembly, but do not remove the panel from the MFP. Be careful not to pull on the wire at the bottom of the panel.
3. Disconnect one wire connector at the lower right corner of the panel.



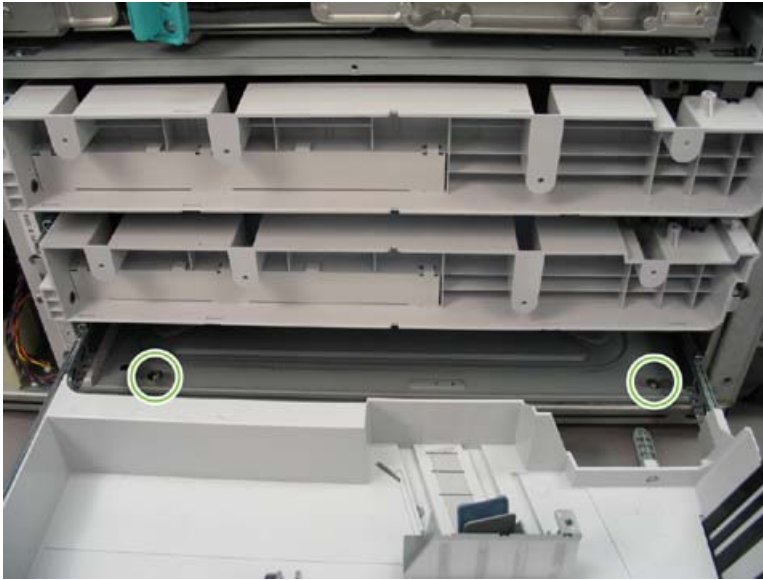
4. Remove the panel.

Trays 2, 3, and 4 assembly

1. Remove the following items:
 - Front case doors
[Front doors on page 204](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)
 - Tray 2–4 covers
[Trays 2, 3, and 4 covers on page 210](#)
 - Lower inner cover
[Lower inner cover on page 211](#)
 - Right-side lower panel
[Lower paper path door on page 320](#)
 - Lower right trim
[Lower right trim on page 218](#)
2. Remove four screws.



3. Pull out the bottom Tray 4, and then remove the two screws from the base of the Trays 2, 3, and 4 assembly.



4. From the lower right side of the MFP, push the Trays 2, 3, and 4 assembly to the left until the metal tabs on the Trays 2, 3, and 4 assembly clear the MFP frame.
5. From the front of the MFP, pull out the Trays 2, 3, and 4 assembly far enough to access two wire connectors on the left side of the Trays 2, 3, and 4 assembly.

△ **CAUTION:** When removing the Trays 2, 3, and 4 assembly, be careful not to damage the assembly wire harnesses connected to the ink supply station or the Trays 2, 3, and 4 controller PCA. Tuck the wires in to protect them from damage.

6. On the left side of the Trays 2, 3, and 4 assembly, disconnect the two wire connectors.
 - W11P13-A23J13
 - W9P9-A23CN12




7. Remove the Trays 2, 3, and 4 assembly completely and place on a flat surface.

Trays 2, 3, and 4

1. Pull out the individual trays 2, 3, and 4 as far as they will go.
2. On the left side of each tray, push the runner lever down, and on the right side of each tray, push the runner lever up.



3. Remove trays 2, 3, and 4.

 **Reinstallation tip** Trays 2, 3, and 4 are not interchangeable. Return each tray to its original position in the Trays 2, 3, and 4 assembly.

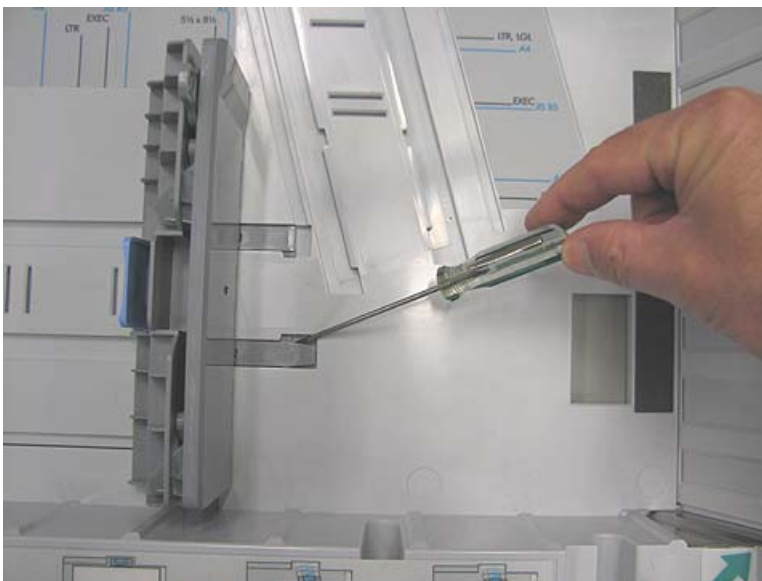
Paper-length guide

1. Open the appropriate tray of the Trays 2, 3, and 4 assembly.


2. Push the paper-length guide to the right as far as it can go.




3. Use a screwdriver to raise the end of the front runner.



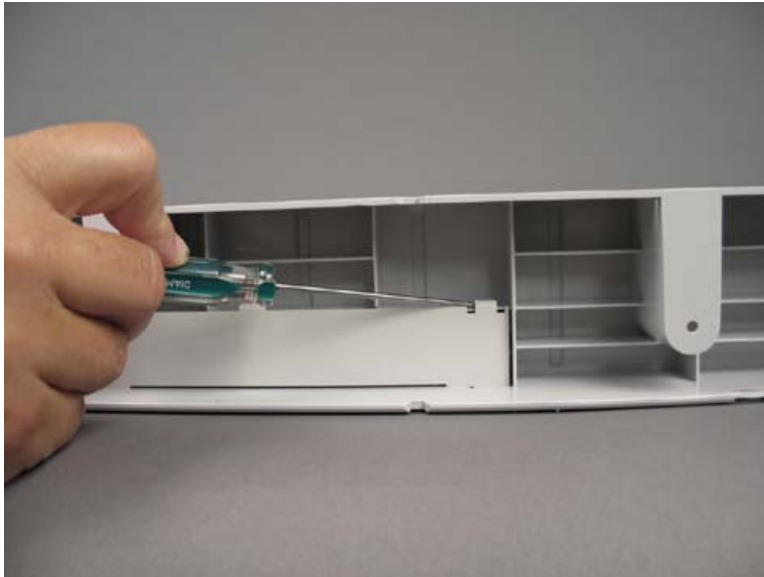
4. Push the guide to the right, and then remove the guide.

 **Reinstallation tip** Verify that the paper-length guide is seated on the media-length guide actuator tape tab. If the paper-length guide is seated correctly, the media-length guide actuator tape moves with the paper-length guide.

 **NOTE:** If the lower inner cover is removed, you must manually activate the paper-length guide to properly position the guide against the media in the tray.


Media-length guide actuator tape

1. Remove the appropriate tray from the Trays 2, 3, and 4 assembly.
[Trays 2, 3, and 4 on page 323](#)
2. Remove the tray cover.
[Trays 2, 3, and 4 covers on page 210](#)
3. Remove the paper-length guide.
[Paper-length guide on page 323](#)
4. On the front of trays 2, 3, and 4, use a screwdriver to pry loose each tab on the media-length guide actuator tape panel, and then remove the panel.



5. Pull the actuator tape through the slot on the side of trays 2, 3, and 4.



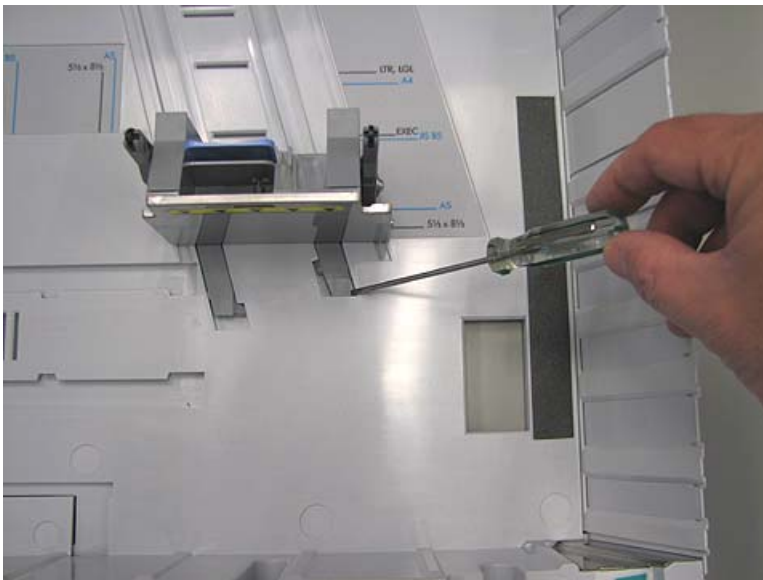
 **Reinstallation tip** Verify that the paper-length guide is seated on the media-length guide actuator tape tab. If the paper-length guide is seated correctly, the media-length guide actuator tape moves with the paper-length guide.

Paper-width guide


1. Open the appropriate tray of the Trays 2, 3, and 4 assembly.
2. Push the paper-width guide forward as far as it can go.



3. Use a screwdriver to raise the end of the front runner.

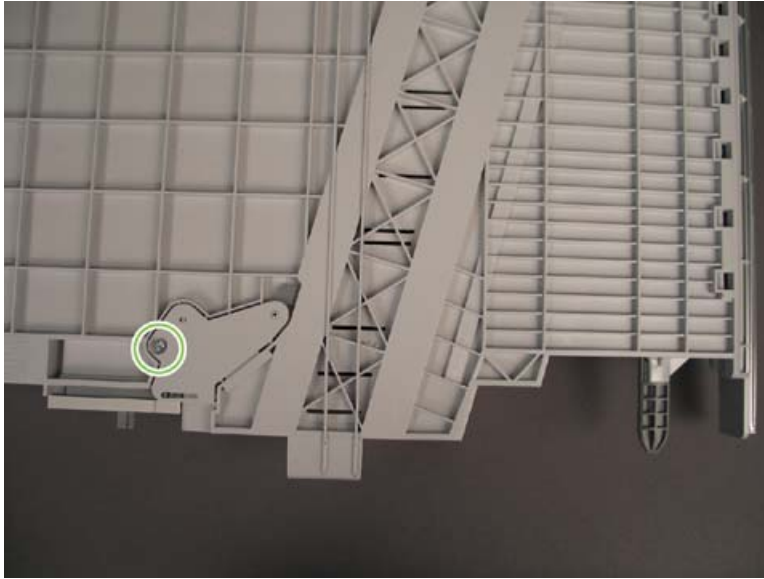


4. Push the guide forward, and then remove the guide.

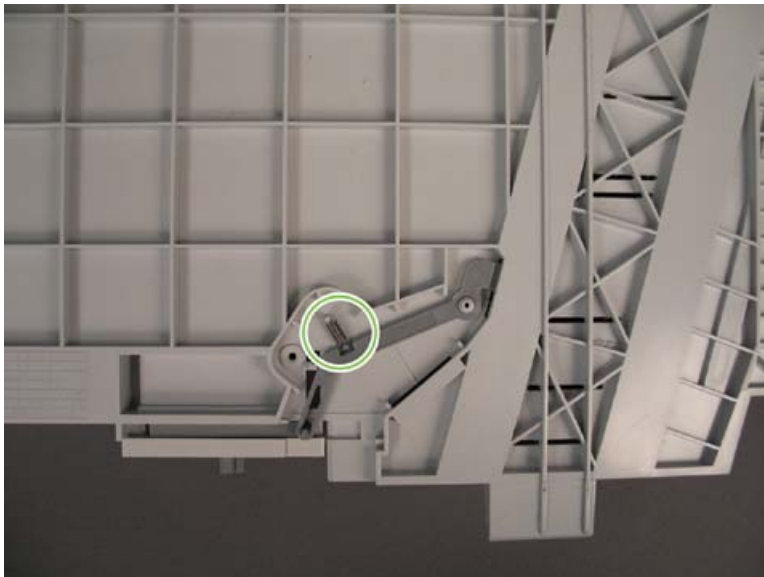
 **NOTE:** If the lower inner cover is removed, you must manually activate the paper-width guide to properly position the guide against the media in the tray.

Paper-width sensor flag

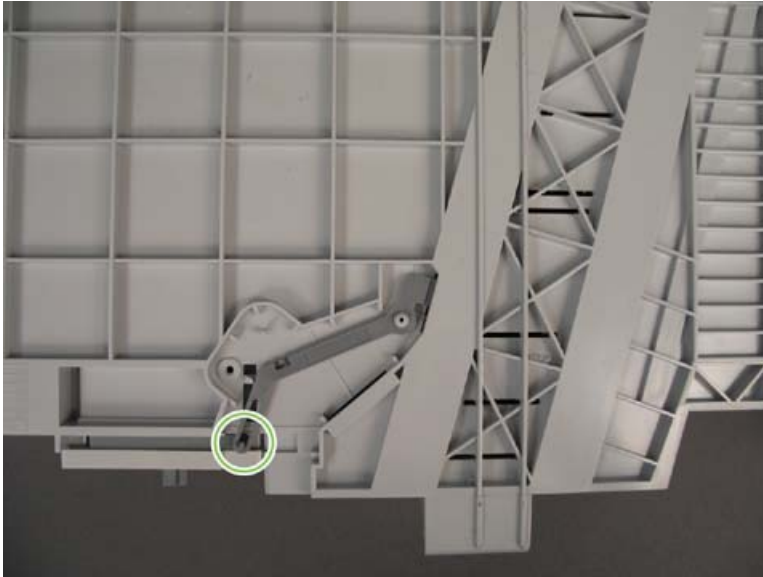
1. Remove the appropriate tray from the Trays 2, 3, and 4 assembly.
[Trays 2, 3, and 4 on page 323](#)
2. On the underside of the tray, remove one screw from the plate that covers the sensor flag, and then remove the plate.



3. Remove the flag spring.



4. Lift the pivot arm off of the sensor flag tab.




5. On the back of the tray, remove the two screws that secure the paper-width sensor flag.



6. Remove the sensor flag.

Pick arm assembly

 **NOTE:** Whenever possible, use the top access door for accessing and visually inspecting the pick arm. If the Trays 2, 3, and 4 assembly cover needs to be removed, place the Trays 2, 3, and 4 assembly on a flat surface. Be sure to locate all of the mounting tabs and screws for proper alignment when reinstalling the cover.

1. Remove the Trays 2, 3, and 4 assembly.

[Trays 2, 3, and 4 assembly on page 321](#)

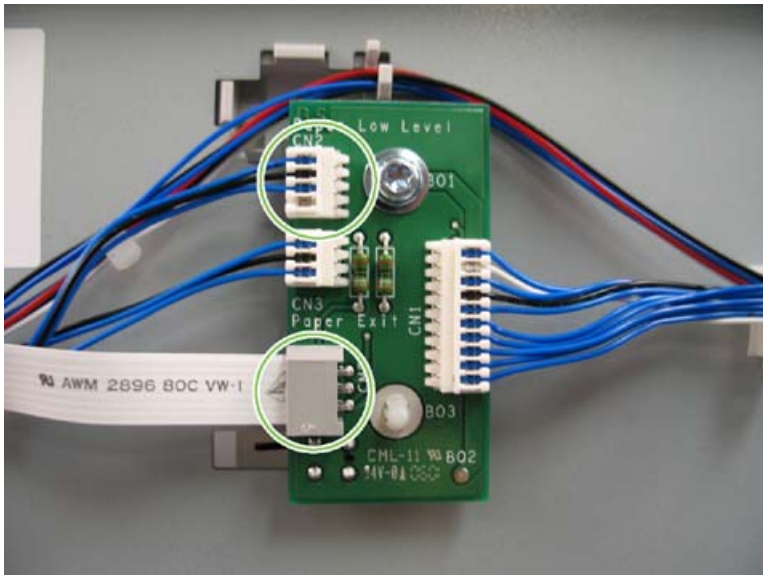
2. Remove six screws from the Trays 2, 3, and 4 assembly cover.




3. Remove the tray with the problem pick arm from the Trays 2, 3, and 4 assembly.

[Trays 2, 3, and 4 on page 323](#)

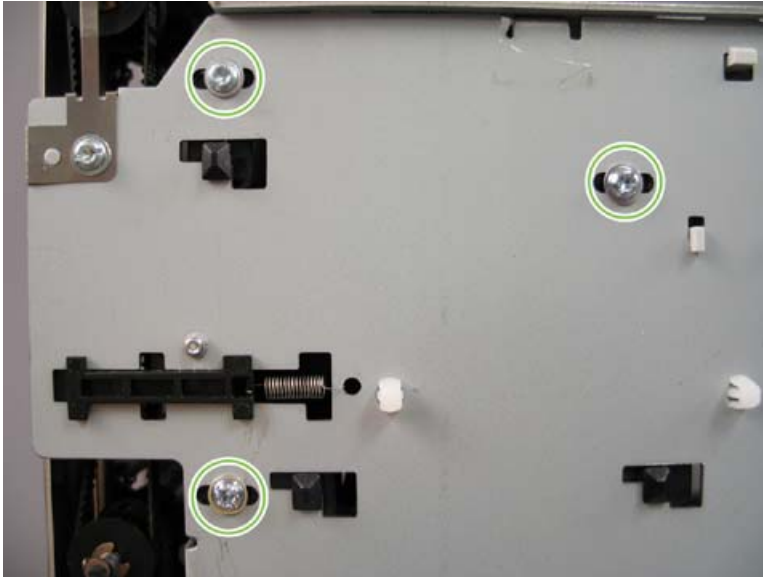
4. Remove any other tray from the Trays 2, 3, and 4 assembly necessary for gaining access to the pick arm from the top of the Trays 2, 3, and 4 assembly.
5. On the back of the Trays 2, 3, and 4 assembly, disconnect the pick-arm ribbon wire and the paper-low sensor wire connectors from the left side of the appropriate Trays 2, 3, and 4 tray distribution PCA.



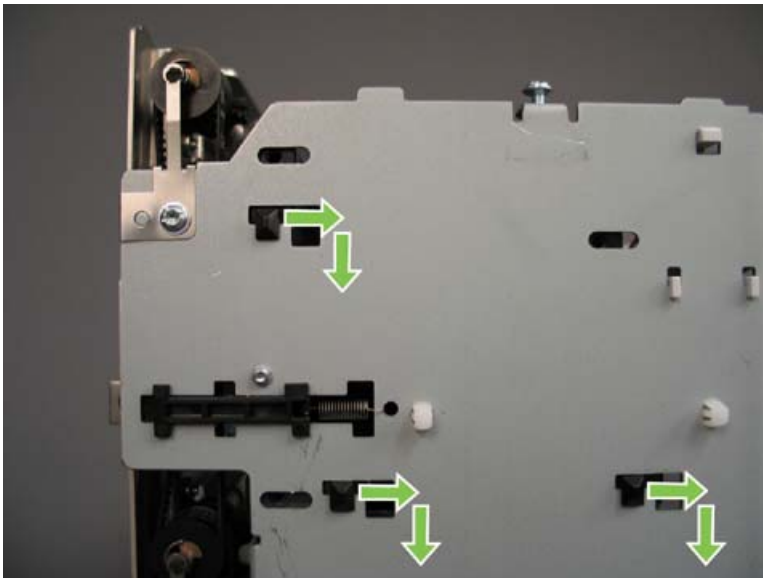
 **NOTE:** Each tray in the Trays 2, 3, and 4 assembly has a distribution PCA.


6. Unthread the pick arm wire harness.

7. Remove the three screws that secure the pick arm assembly.




8. Push the pick arm to the right and down, and then remove the pick arm.




 **Reinstallation tip** When installing the pick arm assembly, do not tighten the screws until you install the associated tray in the Trays 2, 3, and 4 assembly. When the tray is fully inserted and latched, tighten the pick arm in place.

Reinstallation tip The contacts on the pick-arm ribbon cable face out when the cable is correctly connected to the Trays 2, 3, and 4 distribution PCA.

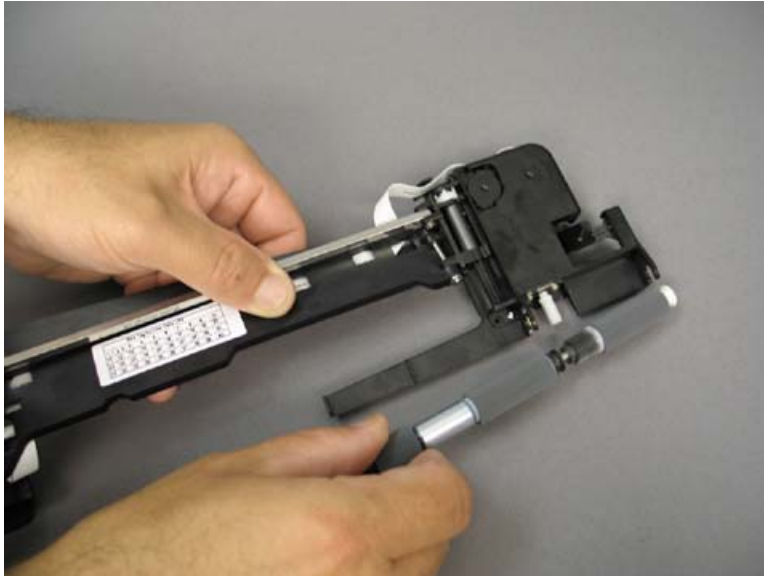
 **NOTE:** Do not touch the screw on the back of the pick arm assembly. This is a factory adjustment and not a field adjustment.

Pick roller

 **NOTE:** The pick roller is a preventive maintenance item and is replaced at scheduled intervals. See [Service intervals on page 79](#).

Reset the preventive maintenance counter for this item every time maintenance is performed.


1. Remove any trays necessary to access the pick arm assembly.
2. Using your hands and no tools, pry the pick roller free of the pick arm.



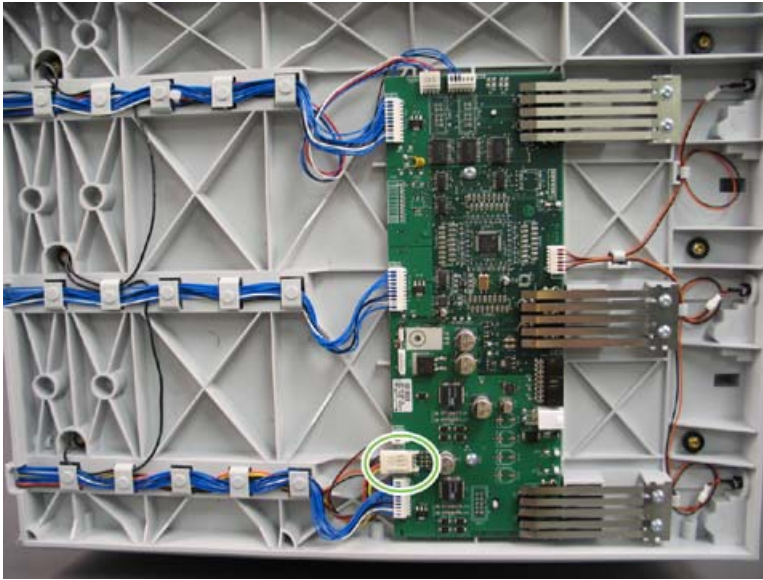
Trays 2, 3, and 4 Transport motor (M18)

1. Remove the Trays 2, 3, and 4 assembly.
[Trays 2, 3, and 4 assembly on page 321](#)
2. Remove trays 2, 3, and 4.
[Trays 2, 3, and 4 on page 323](#)
3. Remove the tray 3 pick arm assembly, and then remove the tray 4 pick arm assembly.
[Pick arm assembly on page 328](#)

 **CAUTION:** The pick arm assemblies are not interchangeable.

 **NOTE:** Whenever possible, use the top access door for accessing and visually inspecting the pick arm. If the Trays 2, 3, and 4 assembly cover needs to be removed, place the Trays 2, 3, and 4 assembly on a flat surface. Be sure to locate all of the mounting tabs and screws for proper alignment when reinstalling the cover.

4. Disconnect the M18 wire connector from CN2 on the Trays 2, 3, and 4 Controller PCA (A23), and then unthread the wire harness.



5. From inside the Trays 2, 3, and 4 assembly, remove the spring connected to the M18 tensioner.




6. Remove two screws, and then remove M18.



Exit roller shaft

1. Remove the Trays 2, 3, and 4 assembly.
[Trays 2, 3, and 4 assembly on page 321](#)
2. Remove any tray necessary to gain access to the problem exit roller shaft from the top of the Trays 2, 3, and 4 assembly, but do not remove the tray with the problem exit roller shaft itself. That specific pick arm for the tray should remain in the down position.
[Trays 2, 3, and 4 on page 323](#)
3. Remove six screws from the Trays 2, 3, and 4 assembly cover.

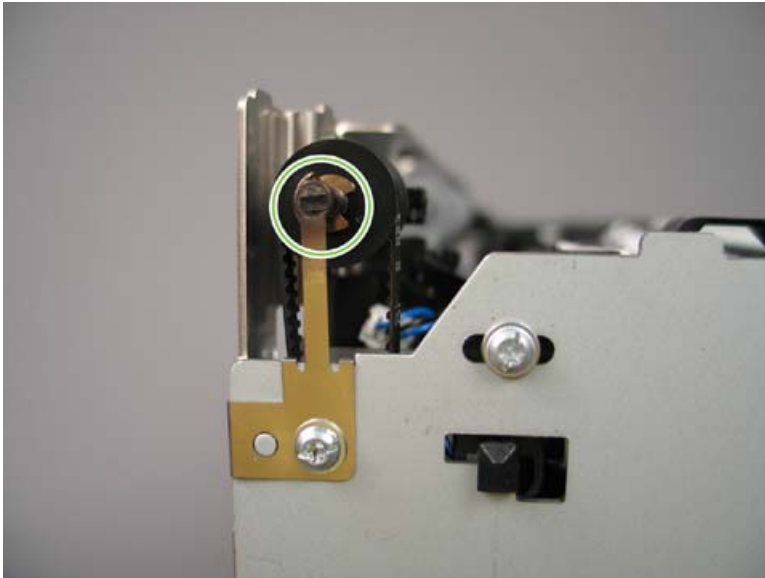


 **Reinstallation tip** Be sure to locate all of the mounting tabs and screws for proper alignment when reinstalling the cover.

4. Remove any pick arm assembly above the problem exit roller shaft.

[Pick arm assembly on page 328](#)

5. From the back of the Trays 2, 3, and 4 assembly, remove the c-clamp from the end of the roller.



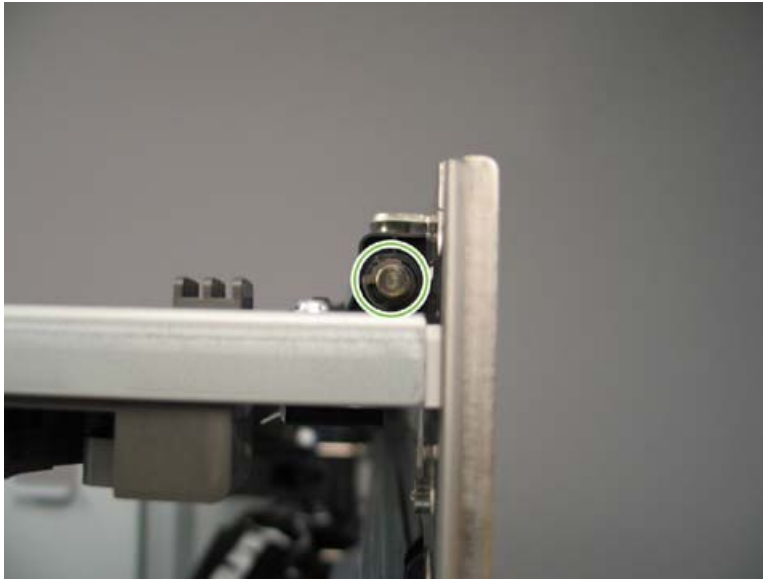
6. Remove the washer from the exit roller shaft, and then remove the belt or belts from the pulley.

△ **CAUTION:** Do not remove the spring arm. Gently bend the spring out of the way when removing the washer and belts. Be careful not to disfigure the spring arm.


7. Remove the pulley from the exit roller shaft, and then remove the tensioner.
8. On the side of the Trays 2, 3, and 4 assembly, pull off the pick arm magnet holder. Observe the position of the magnet holder and the flag shaft as you remove the item to help with reinstallation.



9. On the front of the Trays 2, 3, and 4 assembly, remove the c-clamp from the end of the exit roller shaft.



10. Push the exit roller shaft back, and then remove the shaft.

 **Reinstallation tip** When reinstalling the tensioner on the exit roller shaft, verify that the tensioner spring touches the side of the Trays 2, 3, and 4 assembly. The washer on the end of the exit roller shaft is pinned to fit into the gear pulley.

Right lower panel handle

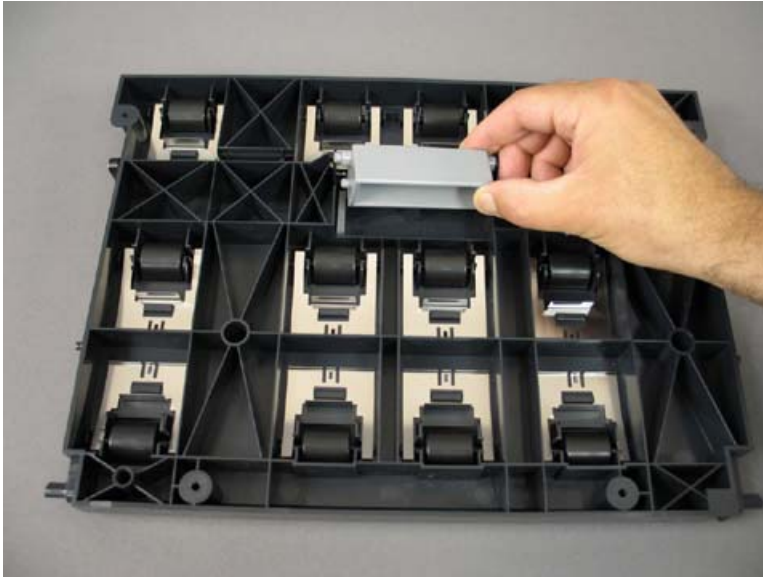
1. Remove the right lower panel.

[Lower paper path door on page 320](#)

2. Remove four screws, and then separate the right lower panel halves.




3. Gently pry the handle from the handle holder.



Paper-exit sensor flag


1. Remove the Trays 2, 3, and 4 assembly.
[Trays 2, 3, and 4 assembly on page 321](#)
2. Remove any tray necessary for gaining access to the problem paper-exit sensor flag from the top of the Trays 2, 3, and 4 assembly.

[Trays 2, 3, and 4 on page 323](#)

 **NOTE:** Do not remove the tray with the problem paper-exit sensor flag. The pick arm for the tray should remain in the down position.

3. Remove six screws from the Trays 2, 3, and 4 assembly cover.

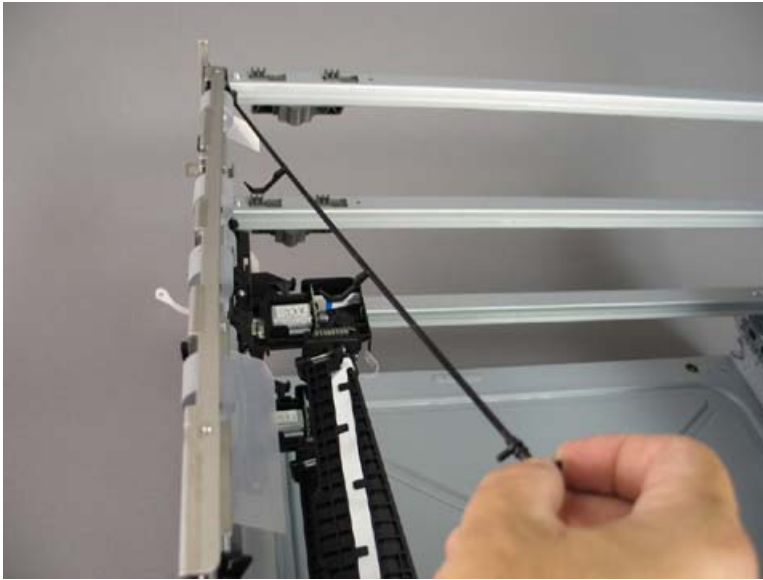


 **Reinstallation tip** Be sure to locate all of the mounting tabs and screws for proper alignment when reinstalling the cover.

4. Remove any pick arm assembly above the problem paper-exit sensor flag.
[Pick arm assembly on page 328](#)
5. On the side of the Trays 2, 3, and 4 assembly, pull off the pick arm magnet holder.



6. Pry the rear of the flag shaft from the holder, and then remove the flag shaft. Observe the position of the magnet holder and the flag shaft as you remove the item to help with reinstallation.



💡 **Reinstallation tip** When reinstalling the paper-exit flag shaft, verify that the spring on the front of the shaft has tension.

Trays 2, 3, and 4 distribution PCA

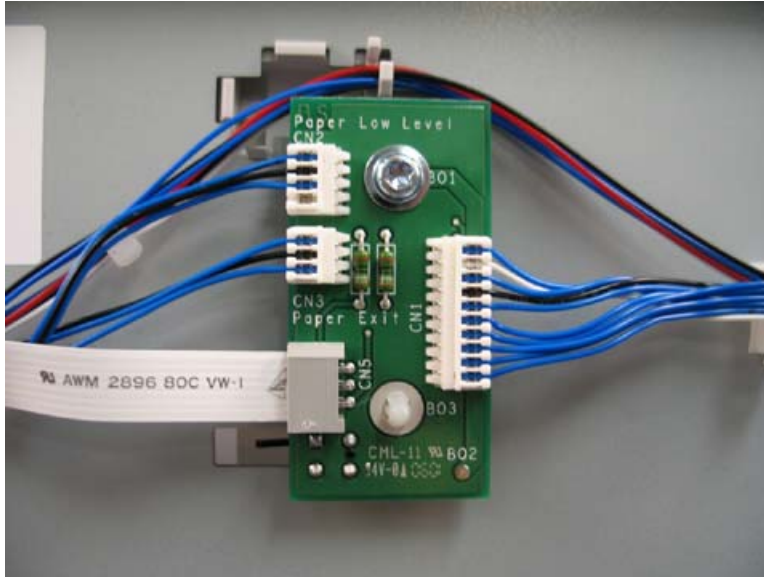
There is one distribution PCA for each tray: Tray 2 Distribution PCA (A33), Tray 3 Distribution PCA (A33), and Tray 4 Distribution PCA (A33).

⚠ **CAUTION:** Wear an ESD strap.

1. Remove the Trays 2, 3, and 4 assembly.

[Trays 2, 3, and 4 assembly on page 321](#)

2. Disconnect the wire connectors connected to the PCA.

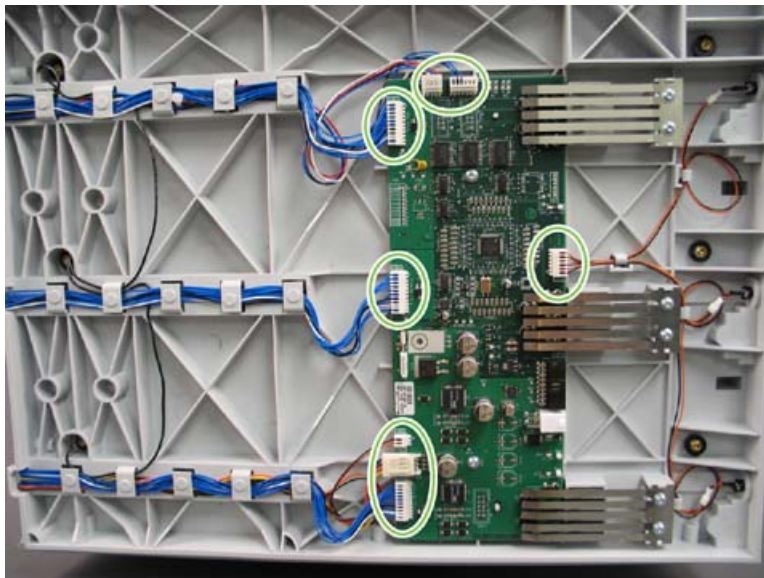


3. Remove the Trays 2, 3, and 4 distribution PCA.

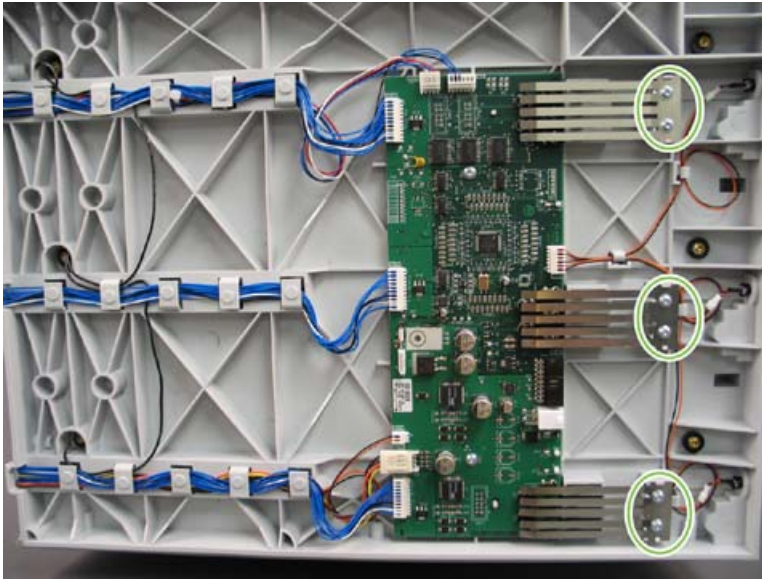
Trays 2, 3, and 4 Controller PCA (A23)

△ **CAUTION:** Wear an ESD strap.

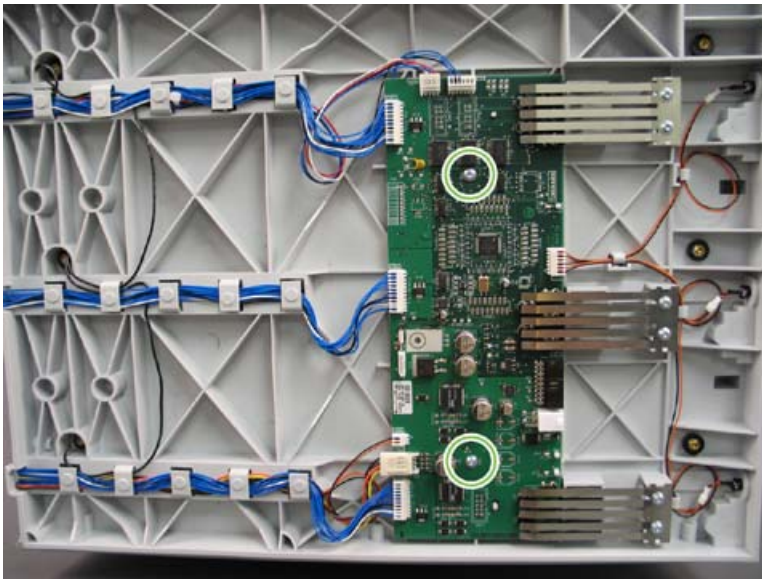
1. Remove the Trays 2, 3, and 4 assembly.
[Trays 2, 3, and 4 assembly on page 321](#)
2. Disconnect the wire connectors connected to the Trays 2, 3, and 4 Controller PCA (A23).





3. For each set of paper-length leaf spring actuator fingers, remove two screws, and then remove the leaf spring actuator fingers.



4. Remove two screws, and then remove A23.



 **Reinstallation tip** The paper-length leaf spring actuator fingers must press down on the flag actuators on A23.

 **NOTE:** For information on the position of the actuator fingers and the relation to paper size, see [Trays 2, 3, and 4 Controller PCA \(A23\) actuator fingers on page 2340](#).

Trays 2, 3, and 4 sensors

- [Tray 2, 3, and 4 Ambient Temperature sensor \(SN41\) and Tray 2, 3, and 4 Humidity sensor \(SN42\)](#)
- [Right-side Lower Panel Open sensor \(SN43\)](#)
- [Trays 2, 3, and 4 tray paper-low sensors \(SN44, SN48, and SN52\)](#)

- [Trays 2, 3, and 4 tray paper-empty sensors \(SN45, SN49, and SN53\)](#)
- [Trays 2, 3, and 4 tray paper-width sensors \(SN46, SN50, and SN54\)](#)
- [Trays 2, 3, and 4 tray paper-exit sensors \(SN47, SN51, and SN55\)](#)
- [Trays 2, 3, and 4 tray-open sensors \(SW9, SW14, and SW19\)](#)
- [Trays 2, 3, and 4 tray paper-length sensors](#)

Tray 2, 3, and 4 Ambient Temperature sensor (SN41) and Tray 2, 3, and 4 Humidity sensor (SN42)

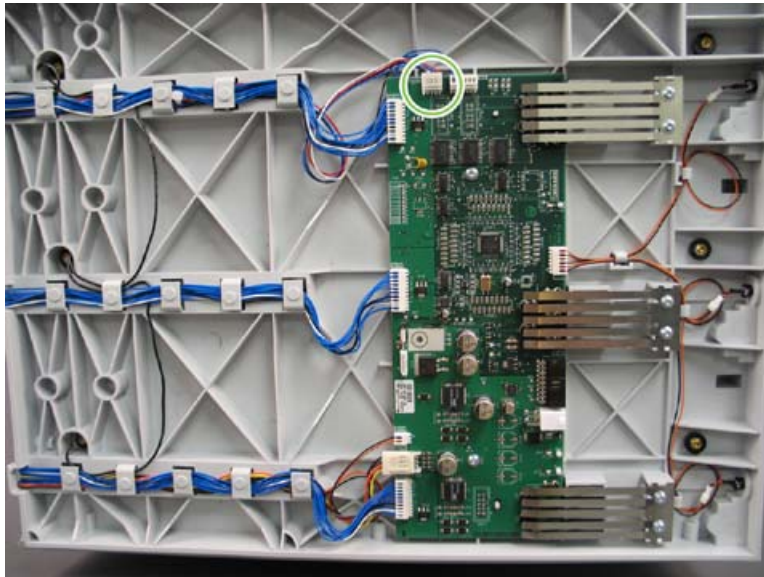
△ **CAUTION:** Use an ESD strap.

SN41 and SN42 are one assembly.

1. Remove the Trays 2, 3, and 4 assembly.

[Trays 2, 3, and 4 assembly on page 321](#)

2. Remove tray 2 and tray 3 from the Trays 2, 3, and 4 assembly.
3. Disconnect the sensor wire harness from CN8 on the Trays 2, 3, and 4 Controller PCA (A23), and then unthread the wire harness.



4. Remove the SN41 and SN42 sensor assembly.



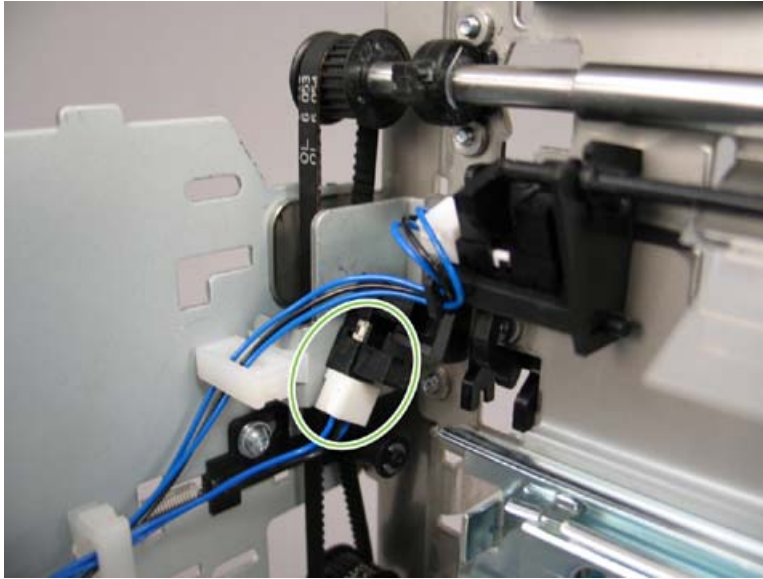
Right-side Lower Panel Open sensor (SN43)


1. Remove the Trays 2, 3, and 4 assembly.
[Trays 2, 3, and 4 assembly on page 321](#)
2. Remove two screws, and then remove the top access door.

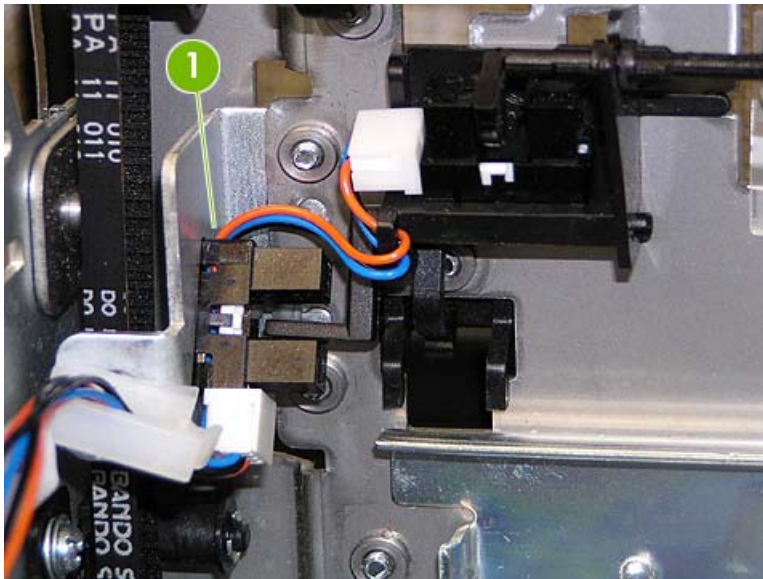


3. Remove the tray 2 pick arm assembly.
[Pick arm assembly on page 328](#)

4. Disconnect the sensor wire connector.



 **Reinstallation tip** Tuck the SN47 wire behind the Right-side Lower Panel Open sensor (SN43) (callout 1) to eliminate flag actuator binding.



5. Remove the sensor.

Trays 2, 3, and 4 tray paper-low sensors (SN44, SN48, and SN52)

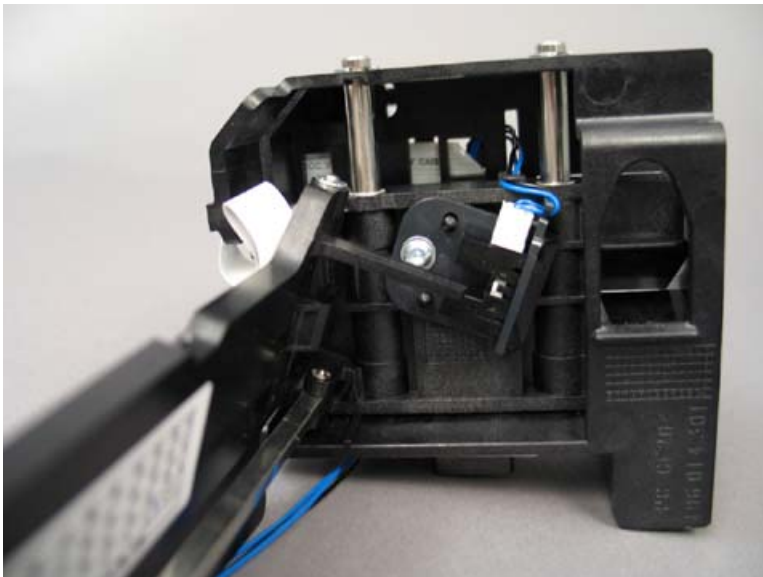
1. Remove the Trays 2, 3, and 4 assembly.

[Trays 2, 3, and 4 assembly on page 321](#)

2. Remove two screws, and then remove the top access door.



3. Remove the pick arm assembly with the problem sensor.
[Pick arm assembly on page 328](#)
4. On the pick arm assembly, disconnect the wire connector, and then remove the sensor.



Trays 2, 3, and 4 tray paper-empty sensors (SN45, SN49, and SN53)

1. Remove the Trays 2, 3, and 4 assembly.
[Trays 2, 3, and 4 assembly on page 321](#)

2. Remove two screws, and then remove the top access door.



3. Replace the pick arm assembly that has the problem sensor.

[Pick arm assembly on page 328](#)

Trays 2, 3, and 4 tray paper-width sensors (SN46, SN50, and SN54)

1. Remove the Trays 2, 3, and 4 assembly.

[Trays 2, 3, and 4 assembly on page 321](#)

2. The paper-width sensor for each tray is connected to the Trays 2, 3, and 4 distribution PCA for that tray. To replace the sensor, replace the appropriate distribution PCA.

[Trays 2, 3, and 4 distribution PCA on page 338](#)

Trays 2, 3, and 4 tray paper-exit sensors (SN47, SN51, and SN55)

1. Remove the Trays 2, 3, and 4 assembly.

[Trays 2, 3, and 4 assembly on page 321](#)

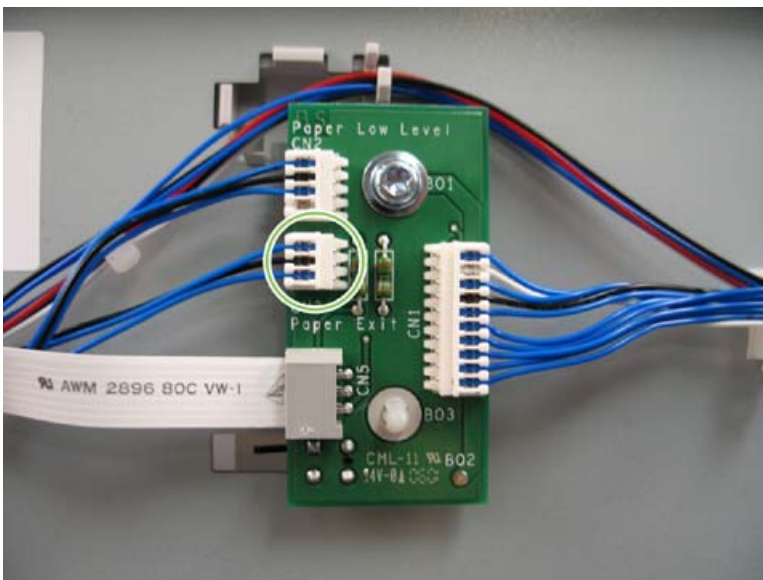
2. Remove two screws, and then remove the top access door.



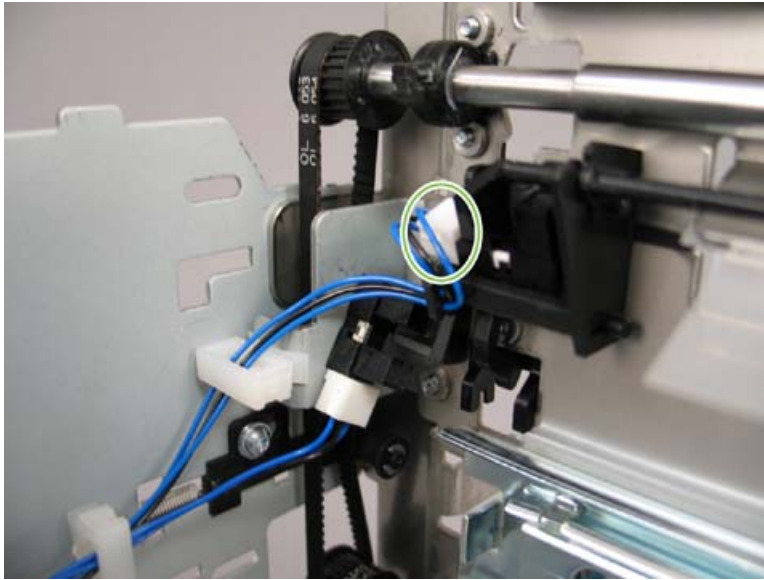
3. Remove the pick arm assembly with the problem sensor.


[Pick arm assembly on page 328](#)

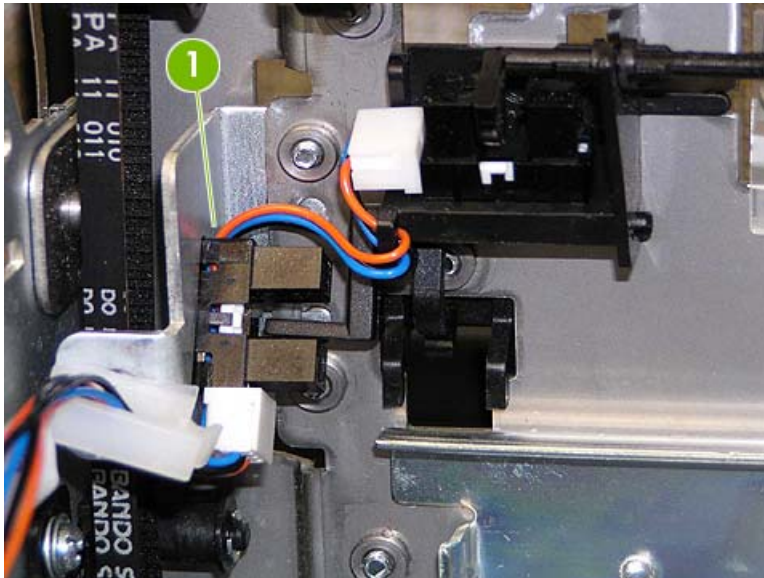
4. Disconnect the sensor wire connector from CN3 on the Trays 2, 3, and 4 Controller PCA (A23), and then unthread the wire harness.



5. One the side of the Trays 2, 3, and 4 assembly, use a screwdriver to push in the sensor tab, and then remove the sensor.



 **Reinstallation tip** Tuck the SN47 wire behind the Right-side Lower Panel Open sensor (SN43) (callout 1) to eliminate flag actuator binding.



Trays 2, 3, and 4 tray-open sensors (SW9, SW14, and SW19)

- The tray-open sensor for each tray is connected to the Trays 2, 3, and 4 Controller PCA (A23). To replace the sensor, replace A23.

[Trays 2, 3, and 4 Controller PCA \(A23\) on page 339](#)

 **NOTE:** Do not bend or damage the leaf spring actuator fingers.

Trays 2, 3, and 4 tray paper-length sensors

This task covers these sensors: SW10, SW11, SW12, SW13, SW15, SW16, SW17, SW18, SW20, SW21, SW22, and SW23.

- The paper-length sensors for each Trays 2, 3, and 4 tray are connected to the Trays 2, 3, and 4 Controller PCA (A23). To replace the sensors, replace A23.

[Trays 2, 3, and 4 Controller PCA \(A23\) on page 339](#)

 **NOTE:** Do not bend or damage the leaf spring actuator fingers.

Trays 2, 3, and 4 LEDs

- [Trays 2, 3, and 4 tray LEDs \(LED15, LED16, and LED17\)](#)
- [Right-side Lower Panel LED \(LED18\)](#)

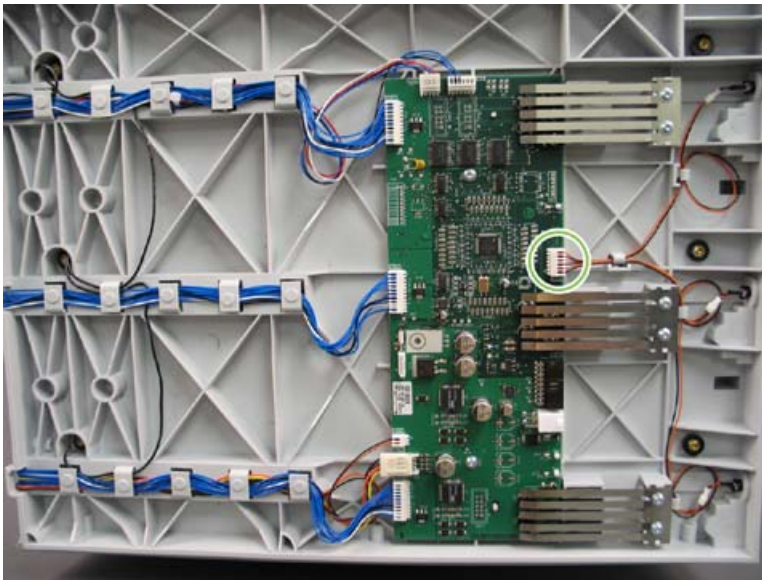
Trays 2, 3, and 4 tray LEDs (LED15, LED16, and LED17)

These LEDs are a single assembly.

1. Remove the Trays 2, 3, and 4 assembly.

[Trays 2, 3, and 4 assembly on page 321](#)

2. On the back of the Trays 2, 3, and 4 assembly, disconnect the LED wire harness from CN11 on the Trays 2, 3, and 4 Controller PCA (A23).



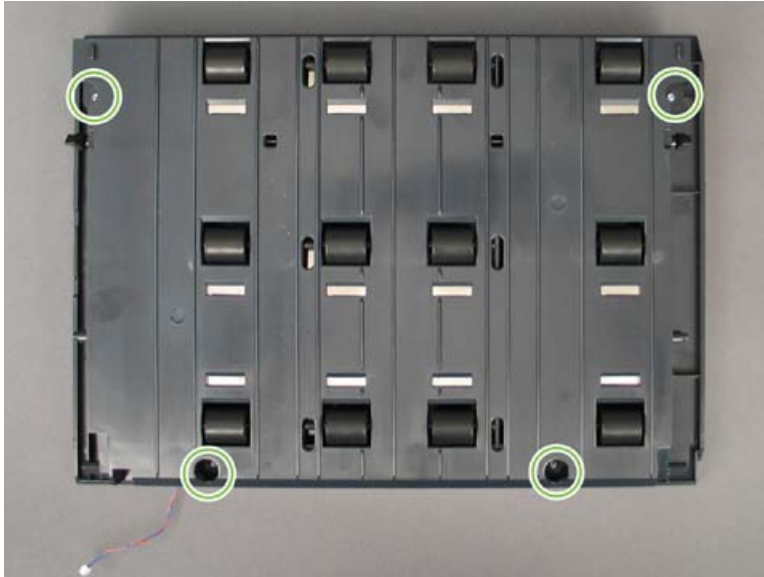
3. Remove the LED.

Right-side Lower Panel LED (LED18)

1. Remove the right lower panel.

[Lower paper path door on page 320](#)

2. Remove four screws, and then separate the right lower panel halves.



LED18 is mounted below the opening for the right lower panel handle.

3. Remove LED18.

Tray 1

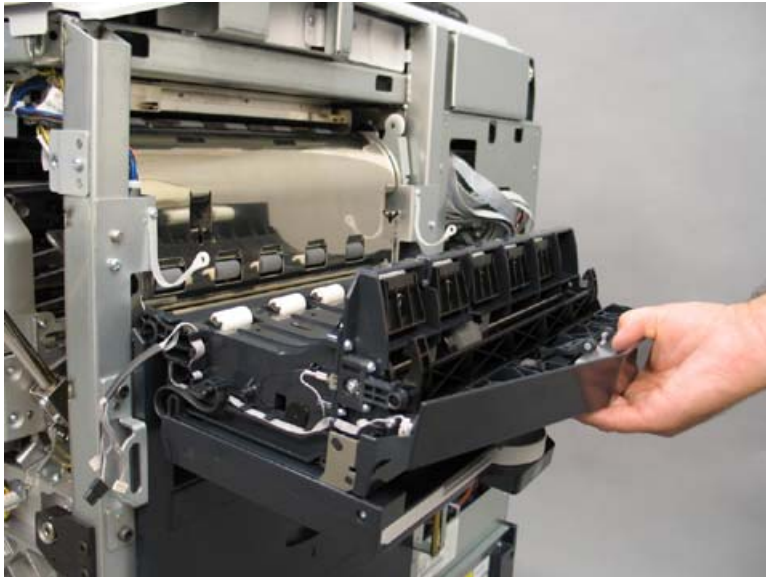
- [Tray 1 assembly](#)
- [Tray 1 Pick solenoid \(SOL1\)](#)
- [Tray 1 upper case part](#)
- [Tray 1 handle](#)
- [Tray 1 latch](#)
- [Tray 1 pick roller and pad](#)
- [Input tray](#)
- [Input tray extension](#)
- [Paper-width guide](#)
- [Tray 1 Width sensor \(SN24\) assembly](#)
- [Tray 1 sensors](#)
- [Tray 1 LED \(LED12\)](#)

Tray 1 assembly

1. Open Tray 1.
2. Remove the following items:
 - Front case doors
[Front doors on page 204](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)
3. From the front of the MFP, disconnect three wire connectors:
 - W36P12-SN27
 - W20P1-SOL1
 - W36P24-SN24



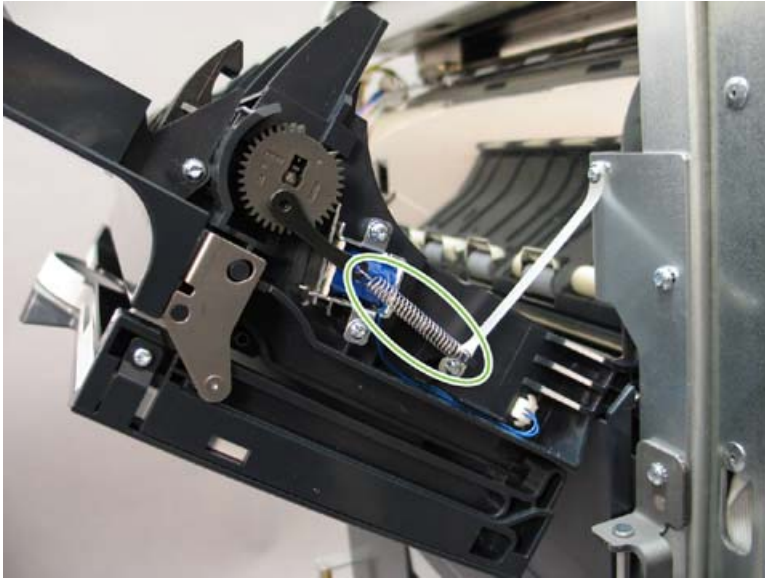
4. Remove one screw from each hinge strap, and then disconnect the hinge straps and grounding wires.
5. Tilt Tray 1 back, and then lift Tray 1 off of the hinges.



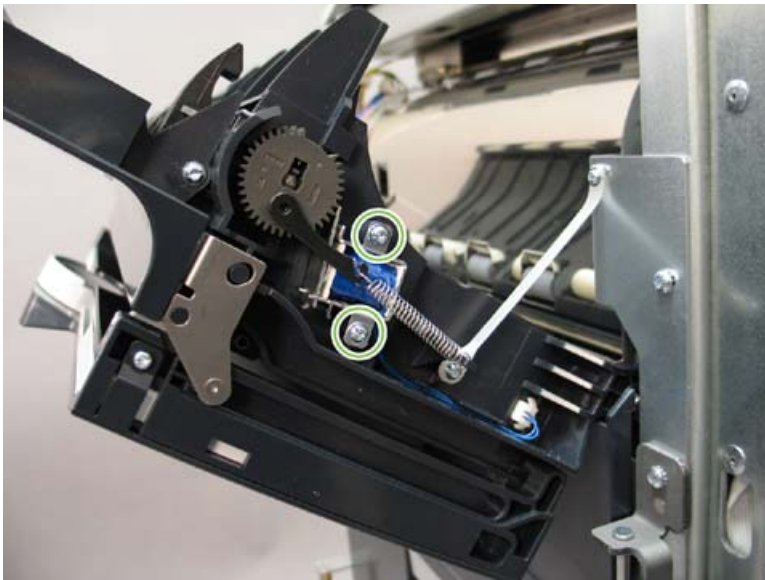
Tray 1 Pick solenoid (SOL1)

1. Open Tray 1.

2. Remove the spring that stretches across the Tray 1 Pick solenoid (SOL1).



3. Remove the two solenoid screws and faceplate.

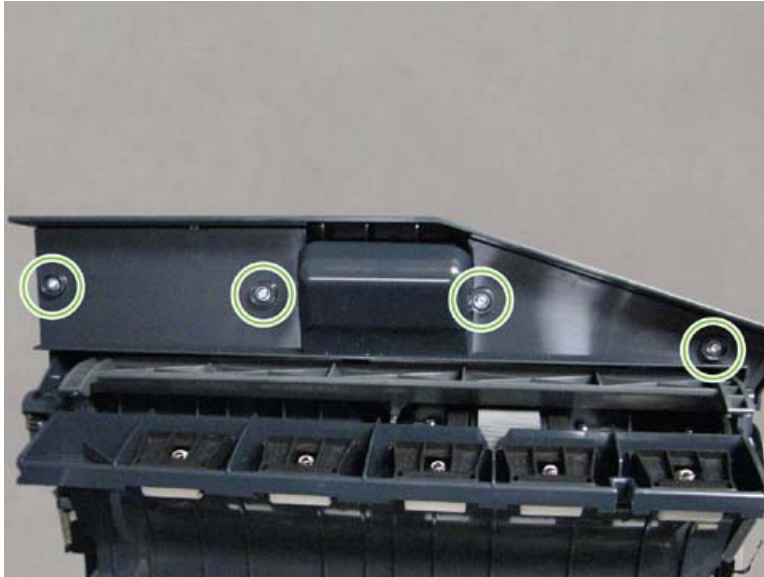


4. Disconnect the SOL1 wire connector.
5. Remove SOL1.

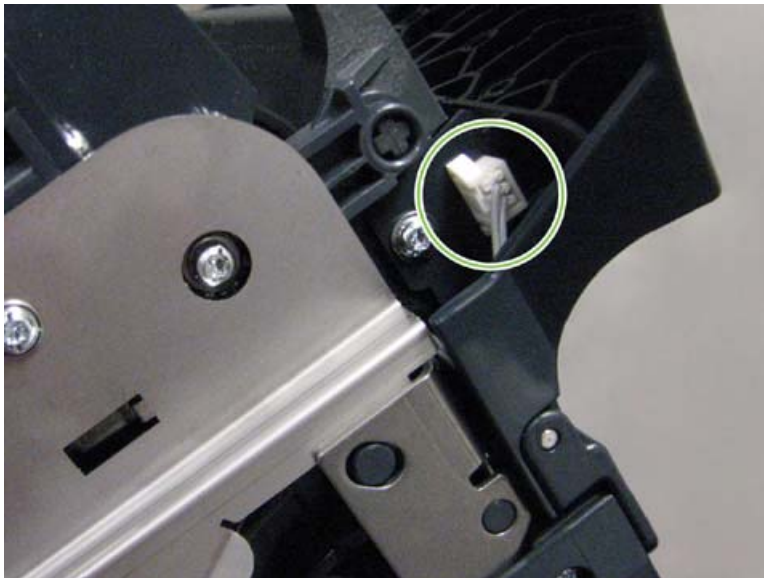
Tray 1 upper case part

1. Open Tray 1

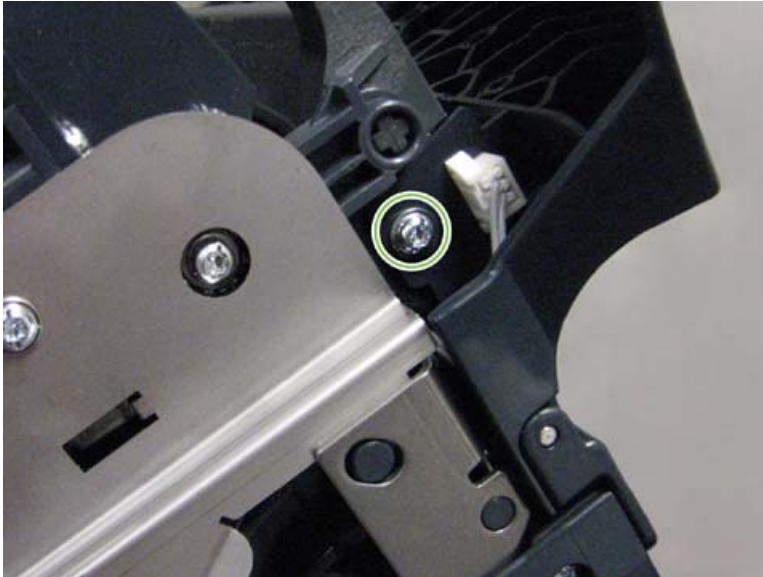
2. Remove four screws from the inside cover plate, and then remove the cover plate.



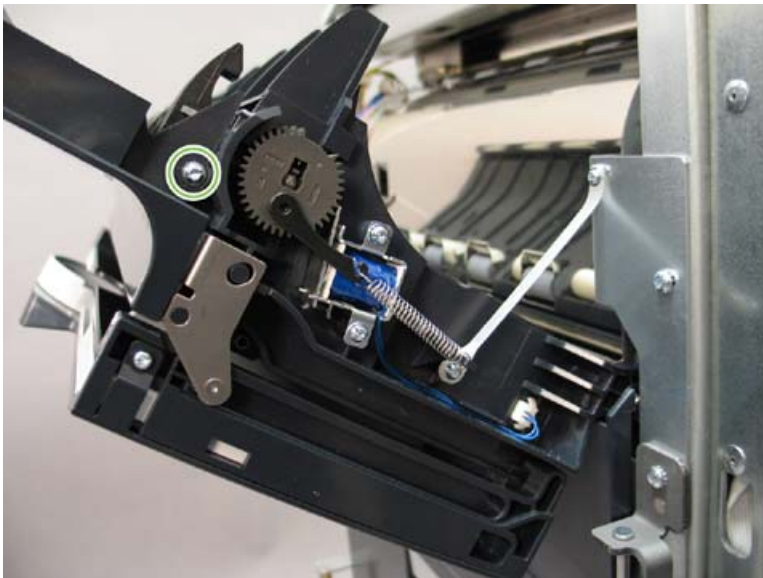
3. On the front side of Tray 1, disconnect one wire connector.



4. Remove one screw.



5. On the rear side of Tray 1, remove one screw.




6. Open the input tray, and then remove the Tray 1 upper case part.

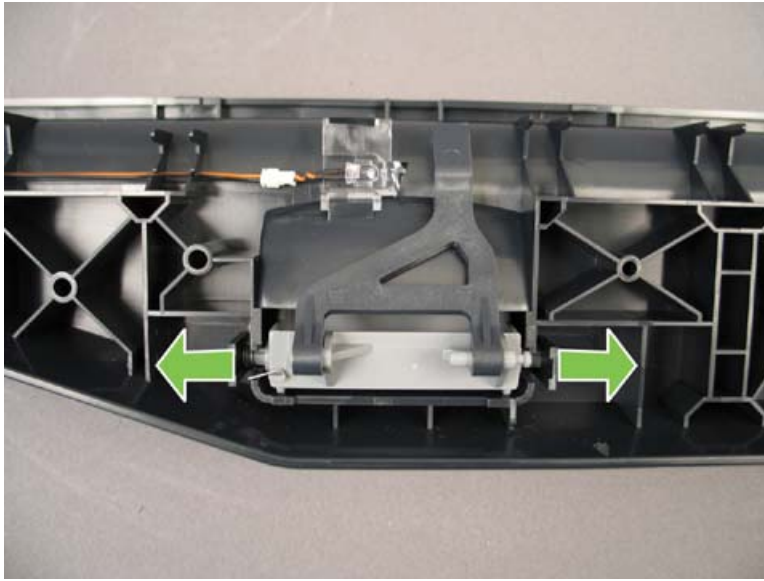
Tray 1 handle

1. Remove the Tray 1 upper case part.

[Tray 1 upper case part on page 352](#)

2. On the upper Tray 1 case part, pry the handle holders apart, and then remove the handle and the loose spring.

 **NOTE:** Be careful not to damage the plastic.

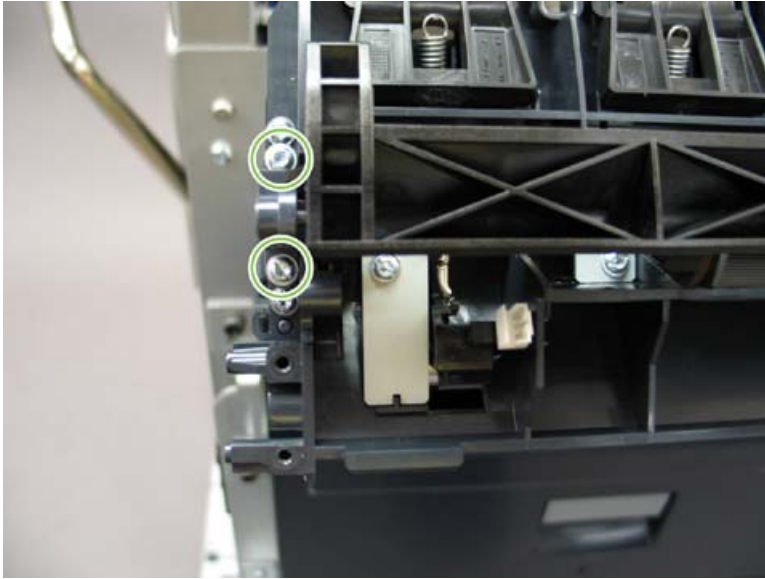



Tray 1 latch

1. Remove the Tray 1 upper case part.
[Tray 1 upper case part on page 352](#)
2. Remove the latch spring.



3. Remove two screws on the left latch holder, and then remove the latch holder.

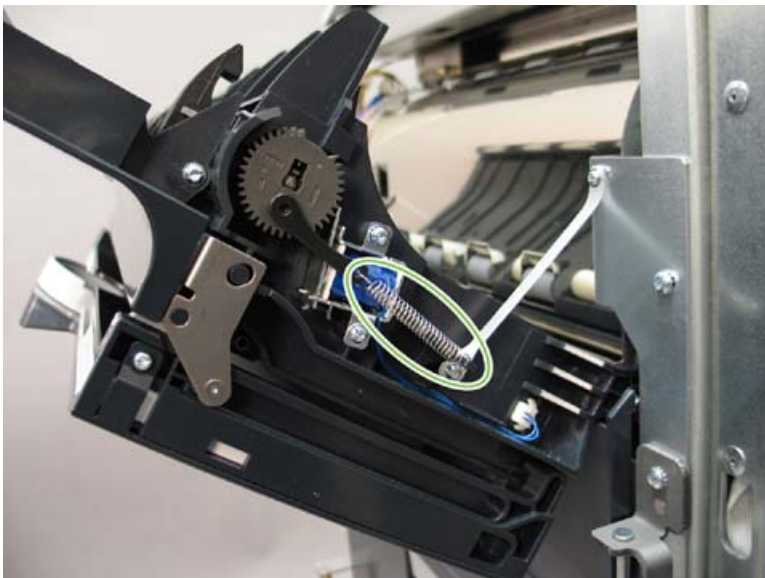


 **NOTE:** The Tray 1 pick shaft might rise when the left side latch holder is removed.


4. Remove the Tray 1 latch.

Tray 1 pick roller and pad

1. Remove the following items:
 - Tray 1 upper case part
[Tray 1 upper case part on page 352](#)
 - Tray 1 latch
[Tray 1 latch on page 355](#)
2. Remove the spring that stretches over the Tray 1 Pick solenoid (SOL1).

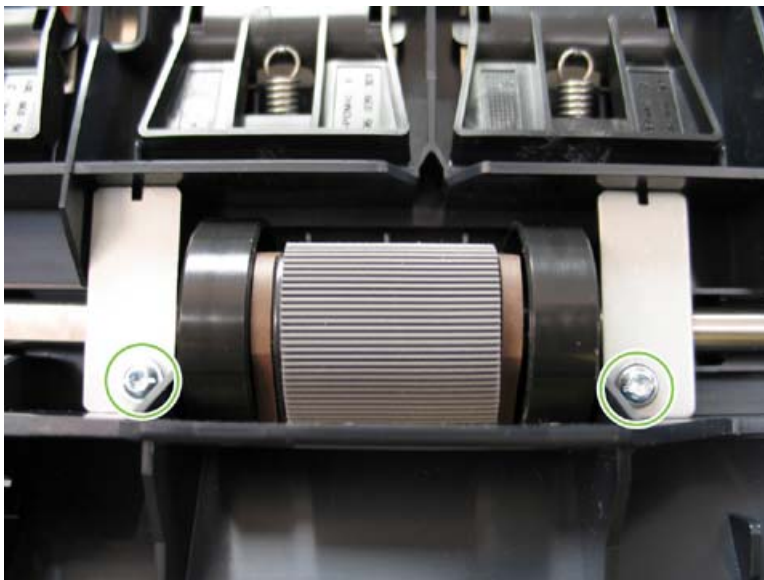


3. Remove two screws on the right latch holder, and then remove the latch holder.

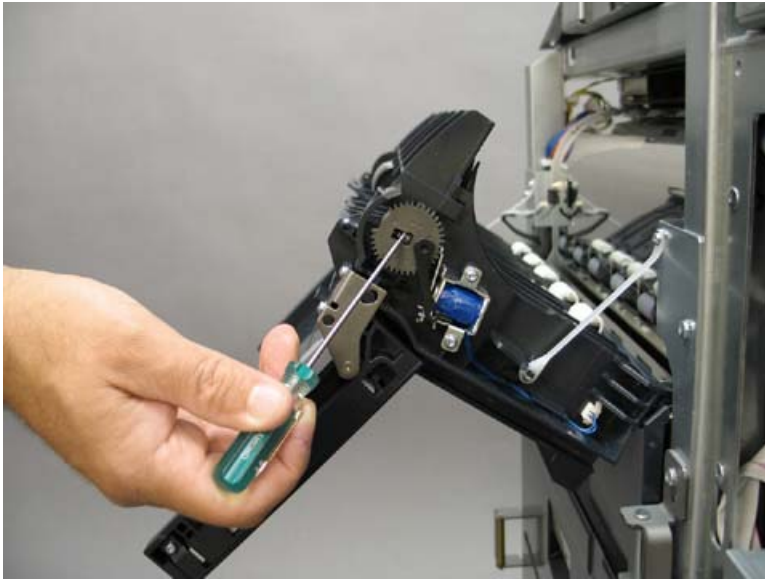
 **Reinstallation tip** The latch holders are not interchangeable.



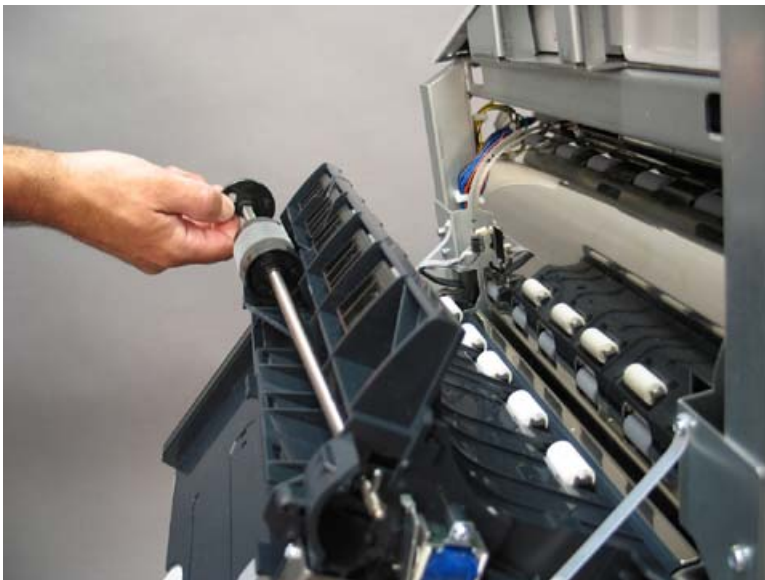
4. Remove two screws, and then remove the shaft holders.



5. Use a screwdriver to lift the latch in the center of the gear, and then pry the gear off of the pick shaft.



6. Remove the two screws and lift up the left latch holder, rotate the pick roller shaft so that the flat part of the cam is exposed, and then remove the pick roller shaft.



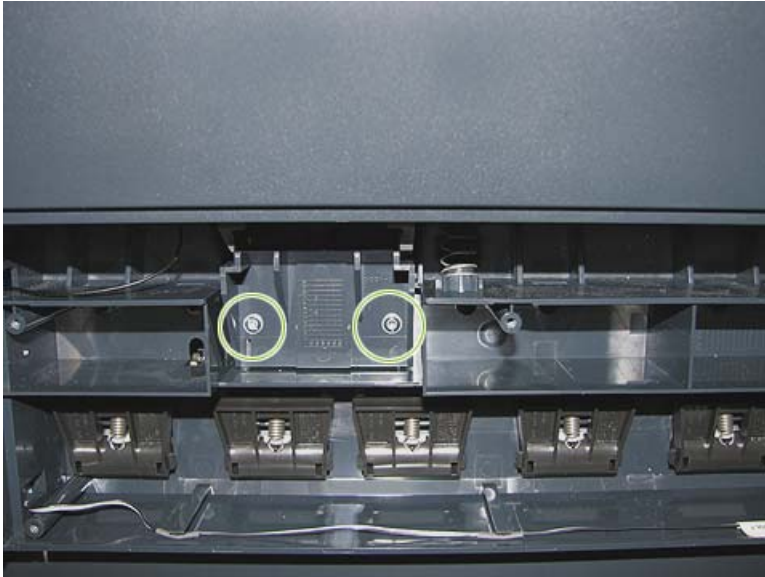
7. Remove one screw from the end of the pick roller shaft, pull off the bearing, and then slide off the roller.



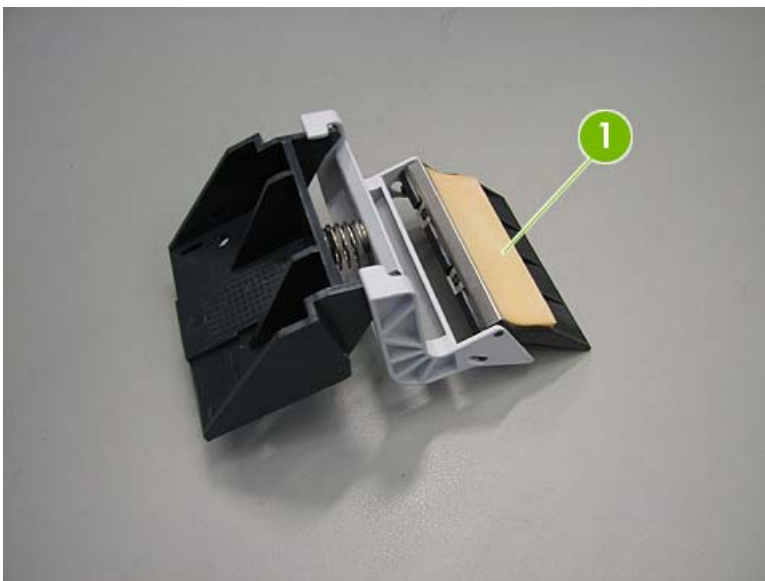
8. Remove five screws from the Tray 1 door.



9. Remove two screws, and then remove the Tray 1 pick pad bracket.



10. Replace the Tray 1 pick pad (callout 1).

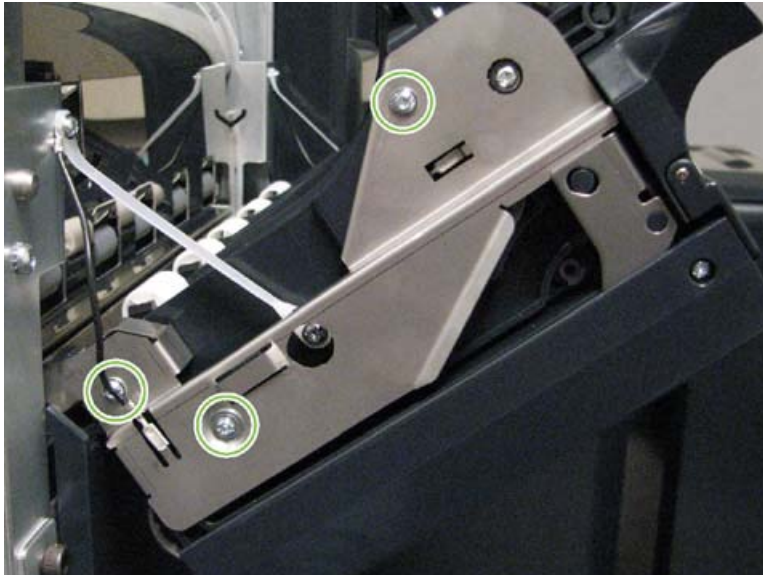


 **NOTE:** The Tray 1 pick roller and Tray 1 pick pad are preventive maintenance items and are replaced together at scheduled intervals. See [Service intervals on page 79](#).

Reset the preventive maintenance counter for this item every time maintenance is performed.

Input tray


1. Remove the following items:
 - Door engine right
[Front door on page 205](#)
 - Door engine left
[Left front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)
 - Tray 1 upper case part
[Tray 1 upper case part on page 352](#)
2. Remove three screws, disconnect two ground connections, and then remove the side cover.



3. With the input tray down, remove four screws



4. Remove the hinges.

 **NOTE:** One hinge is retained by the tray cover.



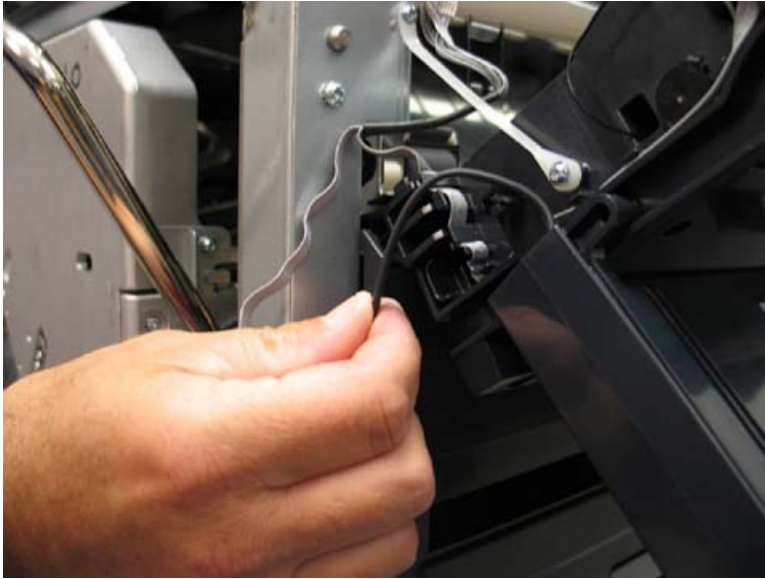
5. Disconnect three wire connectors.



6. Remove five screws from the Tray 1 door, and then disconnect two wire connectors.



7. Unthread the Tray 1 wire harness.



8. Raise the input tray, and then remove the input tray.



Input tray extension

1. Remove the following items:
 - Tray 1 upper case part
[Tray 1 upper case part on page 352](#)
 - Tray 1 input tray
[Input tray on page 361](#)

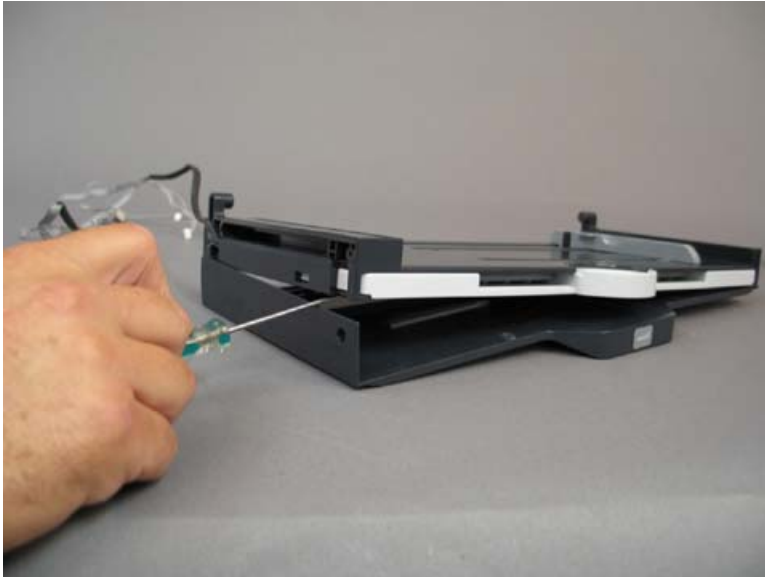
2. Remove one screw on the wire side of the tray.



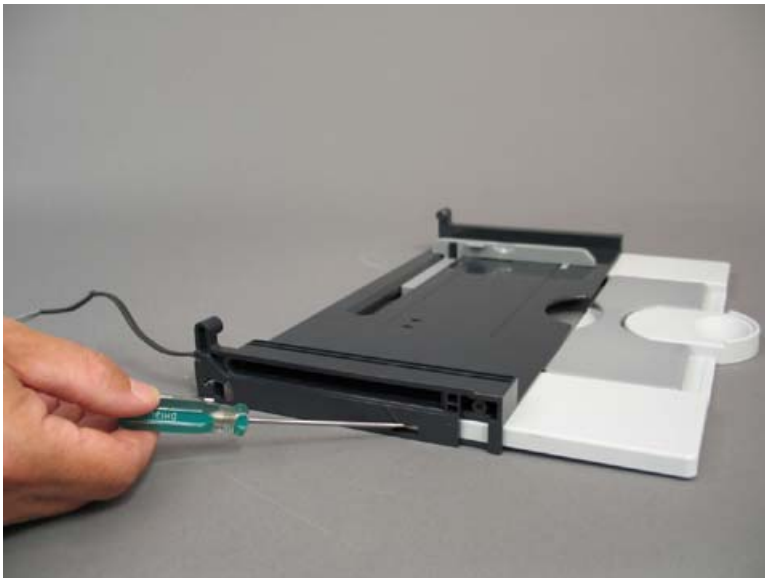
3. Remove one screw on the other side of the tray.



4. Use a screwdriver to pry the two parts of the input tray apart at each hinge post.



5. Use a screwdriver to lift the tab on each side of the tray as you pull the tray extension forward.



Paper-width guide

- [Paper-width guide removal](#)
- [Paper-width guide replacement](#)

Paper-width guide removal

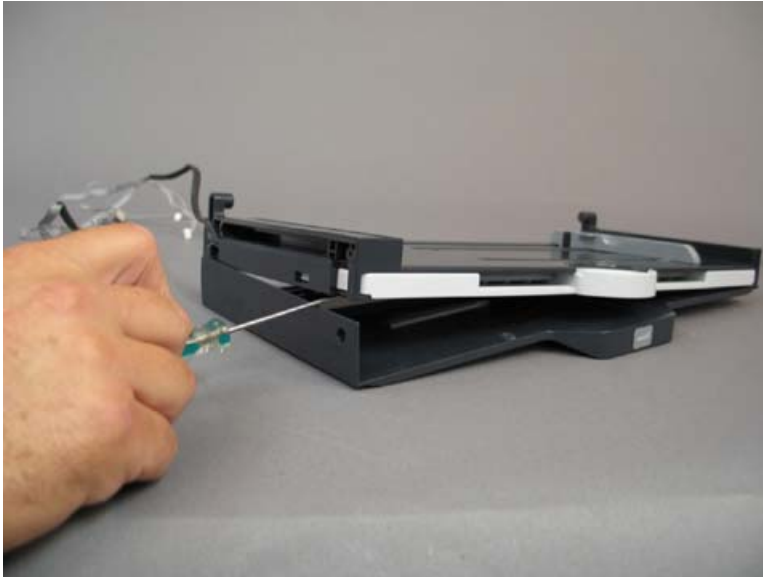
1. Remove the following items:
 - Tray 1 upper case part
[Tray 1 upper case part on page 352](#)
 - Tray 1 input tray
[Input tray on page 361](#)
2. Remove one screw on the wire side of the tray.



3. Remove one screw on the other side of the tray.




4. Use a screwdriver to pry the two parts of the input tray apart at each hinge post.



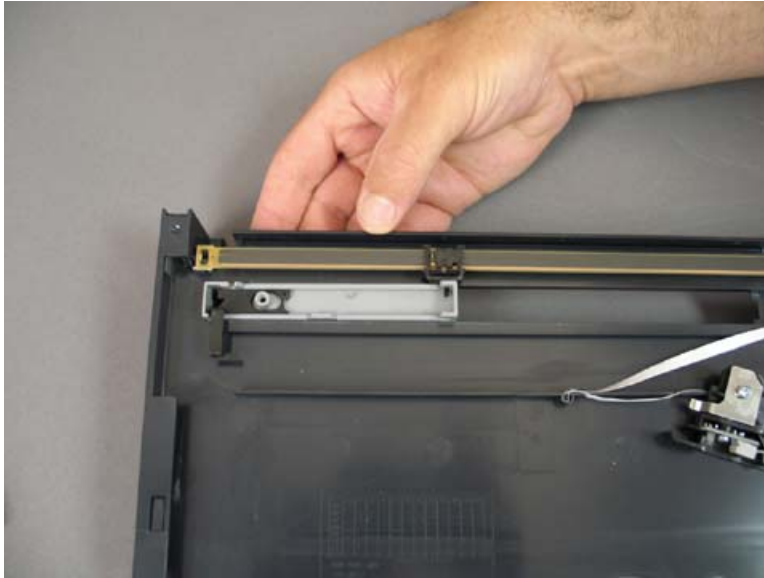
5. Remove one screw on the paper-width guide assembly.



 **NOTE:** The paper-width guide falls loose as soon as the screw is removed. A spring within the paper-width guide assembly and the Tray 1 Width sensor (SN24) flag comes loose as well.

Paper-width guide replacement

1. Hold the tray upside down, hold the paper-width guide underneath the tray, and insert the sensor flag in the paper-width guide.




2. Place the tab on the media-width sensor slider in the slot on the paper-width guide.

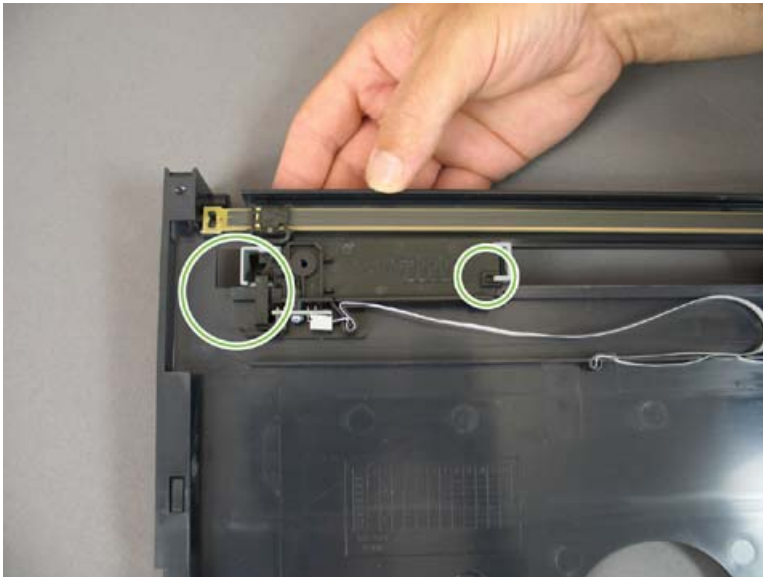


3. Replace the sensor flag spring.



4. Place the sensor assembly over the paper-width guide.

 **Reinstallation tip** Be sure that the hook on the sensor assembly fits under the runner on the tray, that the sensor flag fits in the sensor, and that the sensor assembly fits under the tabs on the end of the paper-width guide.




5. Place the metal guide over the sensor assembly, and then replace the screw.



Tray 1 Width sensor (SN24) assembly

The Tray 1 Width sensor (SN24) assembly includes the Tray 1 Media Edge sensor (SN38).

 **NOTE:** When the Tray 1 Width sensor (SN24) is replaced, it is necessary to perform a calibration procedure. See [Tray 1 Paper-Width Guide calibration on page 153](#).

1. Remove the following items:

- Tray 1 upper case part
[Tray 1 upper case part on page 352](#)
- Tray 1 input tray
[Input tray on page 361](#)

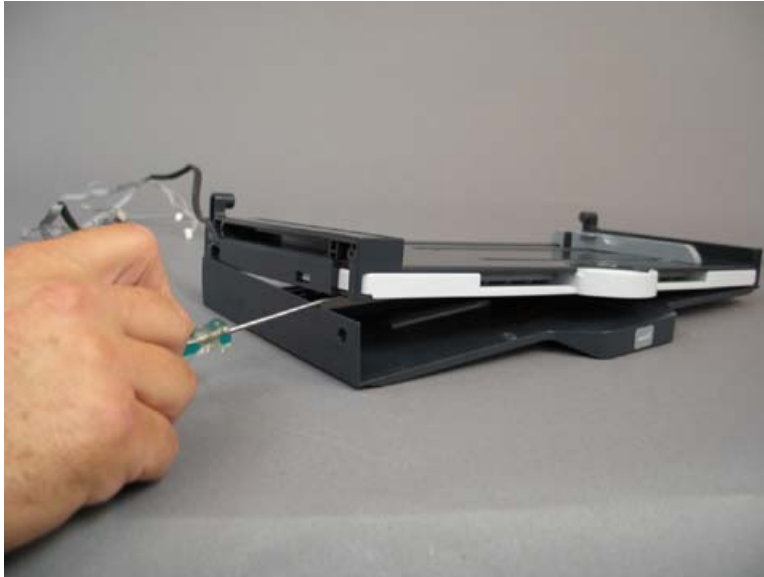
2. Remove one screw on the wire side of the tray.



3. Remove one screw on the other side of the tray.



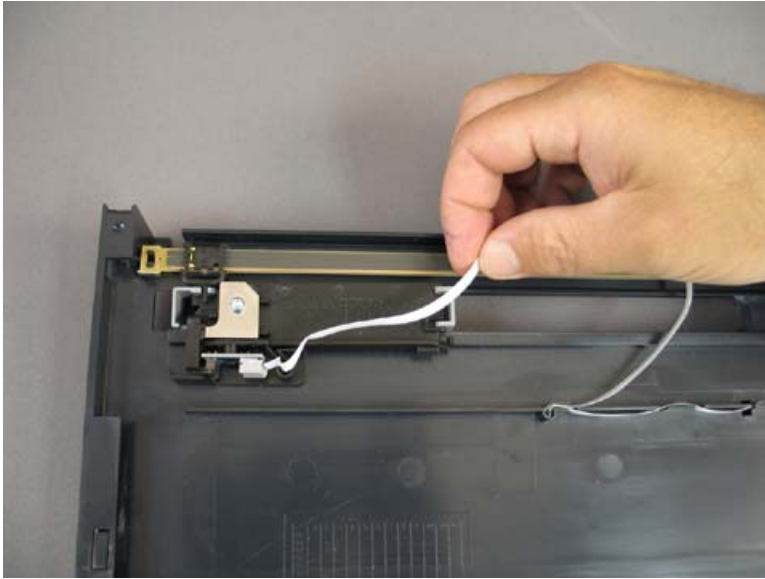
4. Use a screwdriver to pry the two parts of the input tray apart at each hinge post.



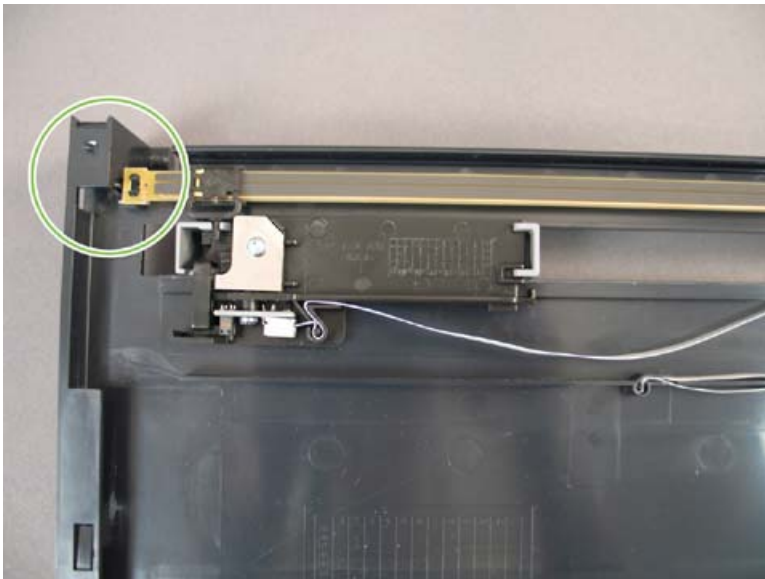
5. Remove one screw on the paper-width guide assembly.



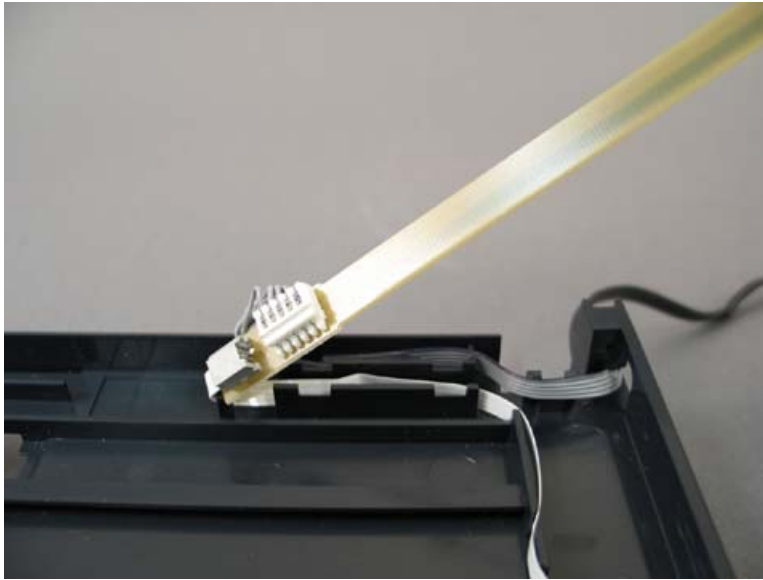
6. Unthread the Tray 1 Media Edge sensor (SN38) wire harness.




7. At the end of the media width sensor strip, pinch the plastic holders, and then lift the media width sensor strip until it is free.



8. Tilt the media width sensor strip up to expose the media width sensor wire connector, and then disconnect the wire connector.



9. Pull the media width sensor strip forward until it is free, and then remove the assembly.

 **Reinstallation tip** Be sure that the tab on the media width sensor slider fits in the slot on the paper-width guide assembly.

Tray 1 sensors

- [Tray 1 Width sensor \(SN24\) and Tray 1 Media Edge sensor \(SN38\)](#)
- [Tray 1 Media sensor \(SN27\)](#)

Tray 1 Width sensor (SN24) and Tray 1 Media Edge sensor (SN38)

- Follow the steps to remove the Tray 1 Width sensor (SN24).

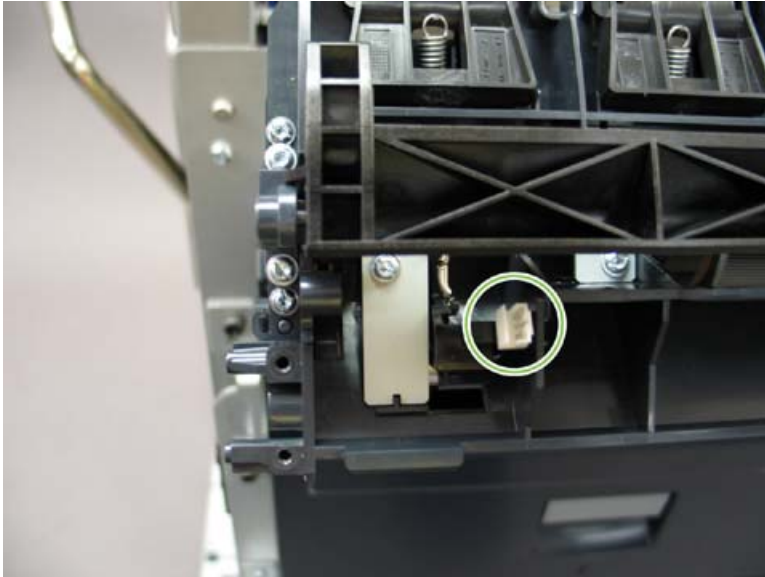
[Tray 1 Width sensor \(SN24\) assembly on page 371](#)

Tray 1 Media sensor (SN27)

1. Remove the Tray 1 upper case part.

[Tray 1 upper case part on page 352](#)

2. Disconnect the sensor wire connector.



3. Remove SN27.

Tray 1 LED (LED12)

1. Remove the Tray 1 upper case part.

[Tray 1 upper case part on page 352](#)

The LED is located on the Tray 1 upper case part.



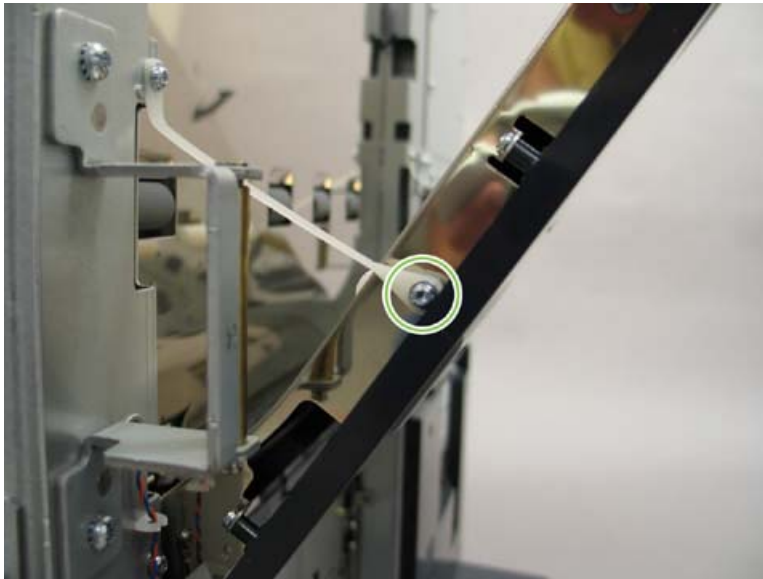
2. Remove LED12.

Vertical

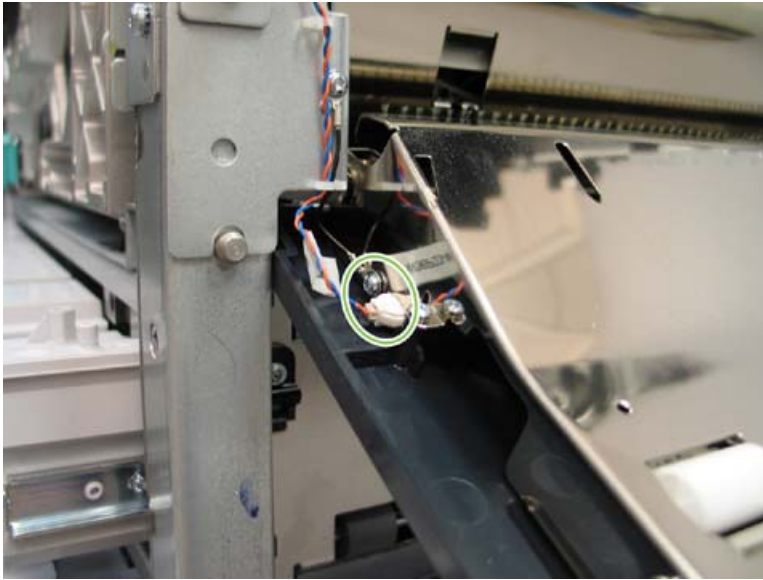
- [Right-side middle panel](#)
- [Vertical assembly](#)
- [Tray 1 drive arm](#)
- [Tray 1 guide](#)
- [Vertical motor \(M6\)](#)
- [Vertical latch assembly](#)
- [Vertical drive rollers](#)
- [Vertical sensors](#)
- [Right-side Middle Panel LED \(LED13\)](#)

Right-side middle panel

1. Open the Trays 2, 3, and 4 jam access door.
2. Open the right-side middle panel.
3. While holding the right-side middle panel in place, remove the screw that secures each strap to the door, and then disconnect each strap from the door.



4. Support the right-side middle panel, disconnect one wire connector, and then loosen one ground screw from the vertical path frame.



5. Lift the right-side middle panel slightly off of the hinges, and then pull the right-side middle panel away from the MFP.

Vertical assembly


1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)
 - Upper right cover
[Upper right cover on page 216](#)
 - Tray 1 assembly
[Tray 1 assembly on page 350](#)
 - Horizontal assembly (does not need to be fully removed)
[Horizontal assembly on page 388](#)

2. Disconnect two wire connectors:

- W14P6-W36J6
- W13P3-W20J3



3. For each Tray 5 clasp, remove two screws, and then remove the clasp.

 **NOTE:** Note the orientation of the clasp for reinstallation.



4. On the Tray 5 guide, remove two hex screws, and then remove the guide.



5. While holding the vertical assembly in place, remove two screws, and then remove the vertical assembly.

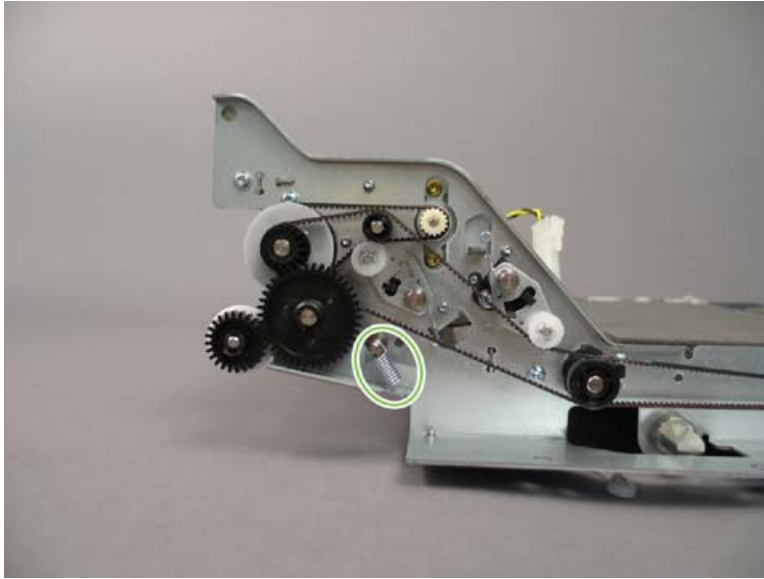


Tray 1 drive arm

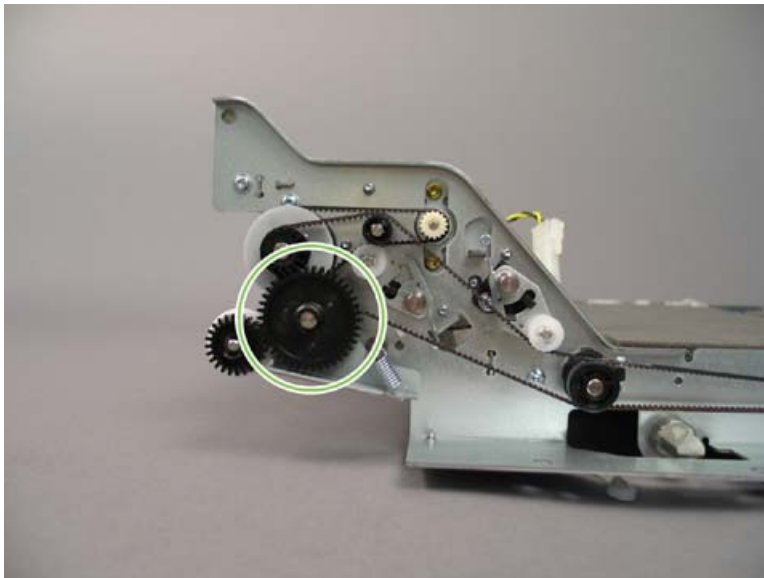
1. Remove the vertical assembly.

[Vertical assembly on page 378](#)

2. Remove the drive-arm spring.



3. Remove the retaining clip, remove the gear, and then remove the drive-arm assembly.



Tray 1 guide

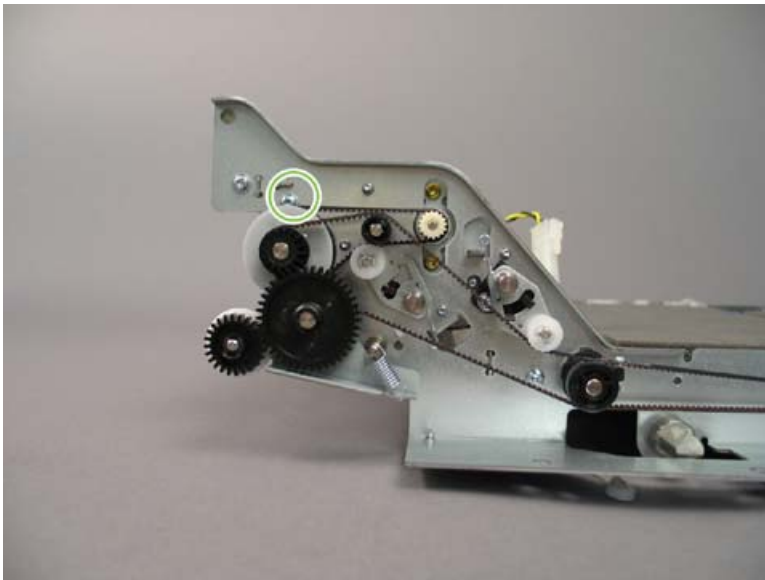
1. Remove the vertical assembly.

[Vertical assembly on page 378](#)

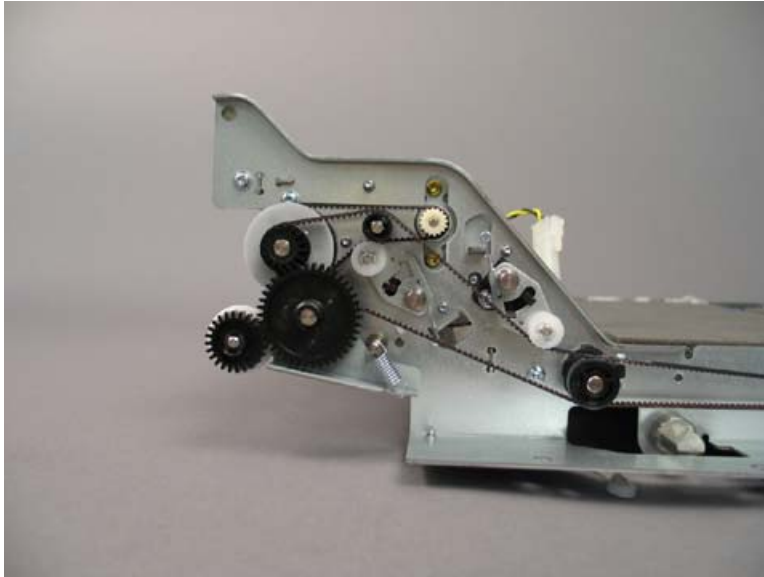
2. Remove one screw.



3. Loosen one screw.

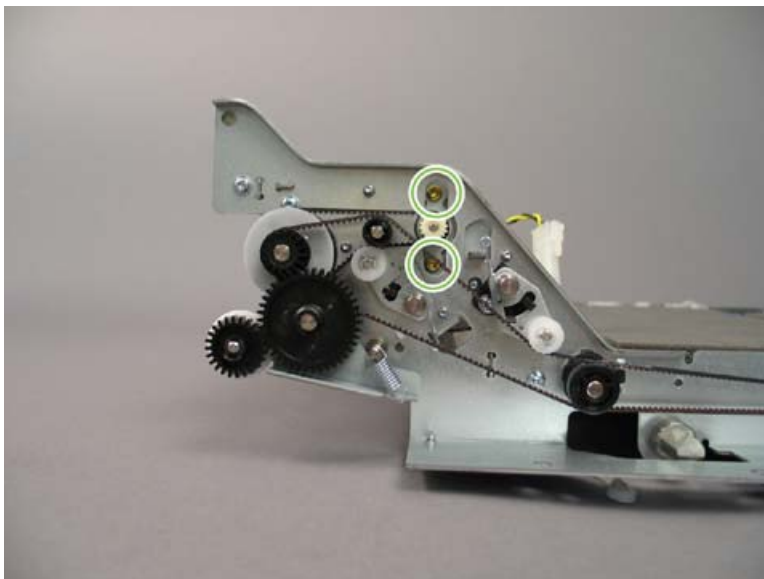


4. Pry the ends of the vertical assembly apart, and then remove the guide.



Vertical motor (M6)

1. Remove the vertical assembly.
[Vertical assembly on page 378](#)
2. Disconnect two wire connectors:
 - W36P12-EN12
 - W20P6-M6
3. Press the belt tensioner, and then remove the drive belt from M6.
4. Remove two screws, and then pull out M6.

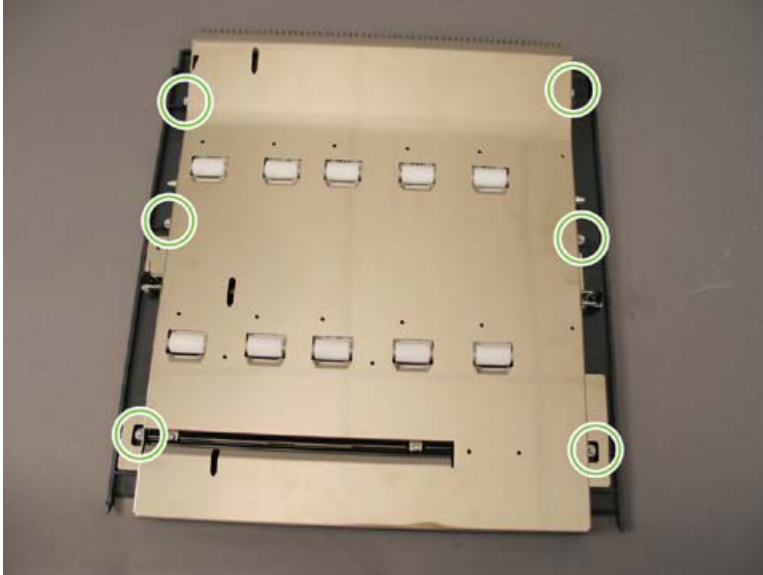


Vertical latch assembly

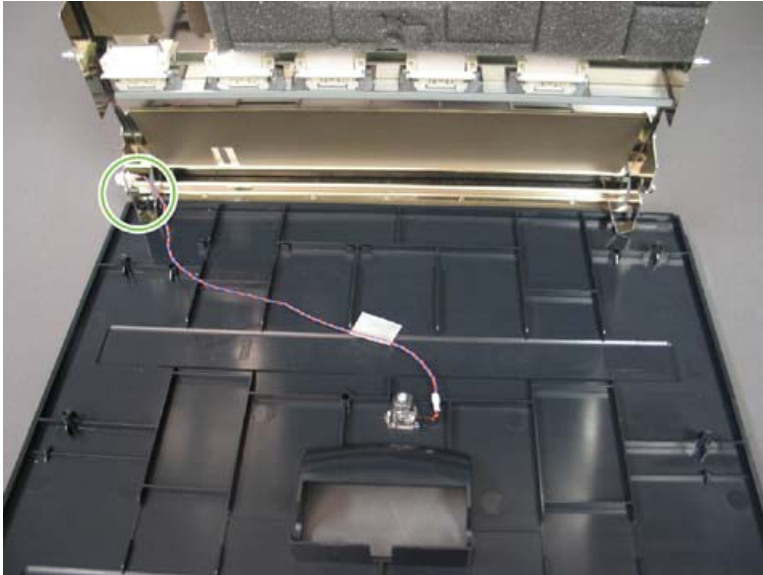
1. Remove the right-side middle panel.

[Right-side middle panel on page 377](#)

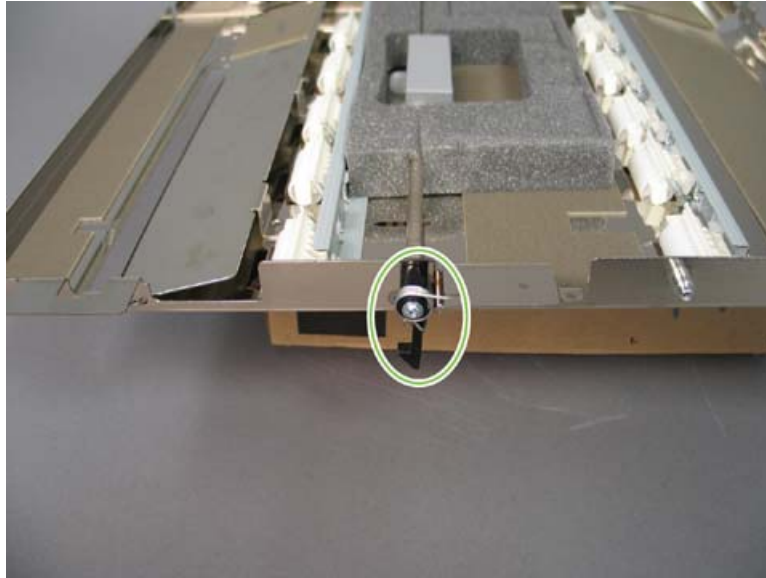
2. Remove six screws.



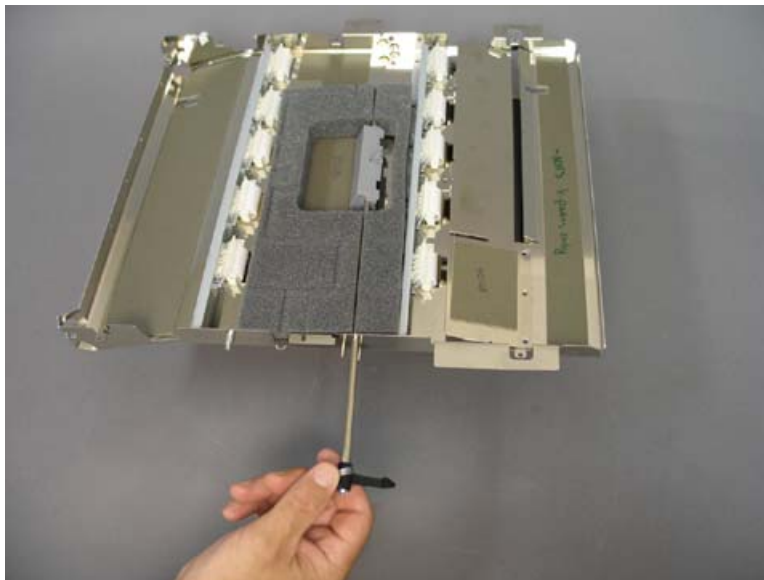
3. Lift the guide, and then disconnect one wire connector.



4. Place the right-side middle panel guide face-down with the base pointing towards you, and then remove the latch on the right of the guide:
 - a. Remove one screw.



- b. Remove the latch and the spring.
5. Pull the rod from the left, and then remove the handle from the rod.




Vertical drive rollers

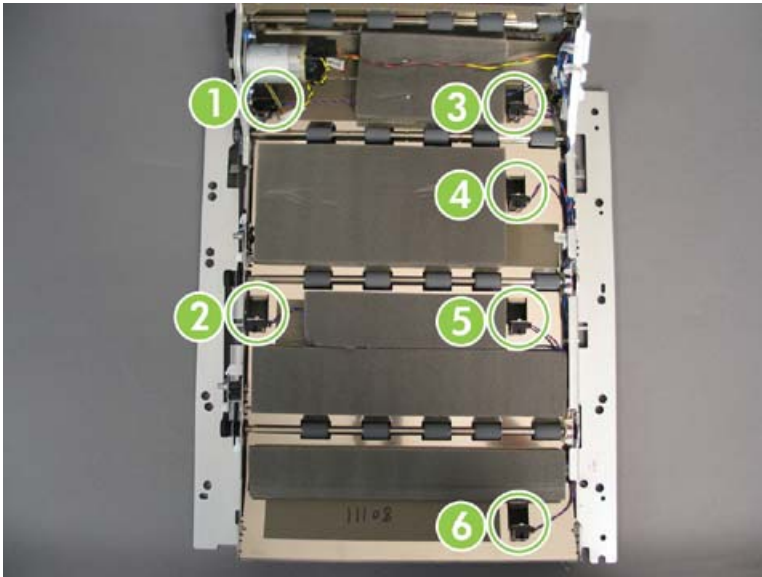
1. Remove the vertical assembly.
[Vertical assembly on page 378](#)
2. Follow the steps to remove a drive roller.
[Drive rollers on page 174](#)

Vertical sensors

- Right-side Middle Panel sensor (SN23)
 - Vertical Transport 3 sensor (SN25)
 - Vertical Transport 4 sensor (SN26)
 - Vertical Transport 2 sensor (SN28)
 - Tray 1 Door Open sensor (SN30)
 - Vertical Transport 1 sensor (SN35)
1. Remove the vertical assembly.

[Vertical assembly on page 378](#)

 **NOTE:** The sensors are located on the same side as the Vertical motor (M6).



1	Tray 1 Door Open sensor (SN30)
2	Right-side Middle Panel sensor (SN23)
3	Vertical Transport 3 sensor (SN25)
4	Vertical Transport 4 sensor (SN26)
5	Vertical Transport 2 sensor (SN28)
6	Vertical Transport 1 sensor (SN35)

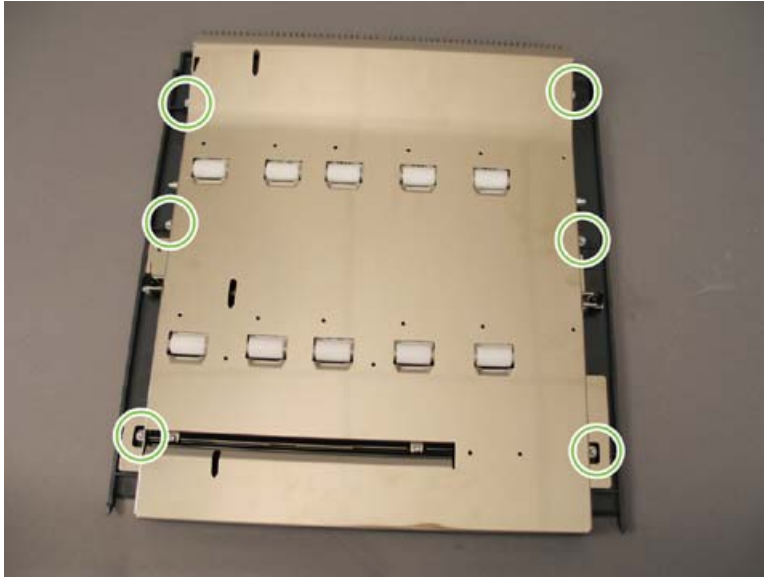
2. Remove the sensor.

Right-side Middle Panel LED (LED13)

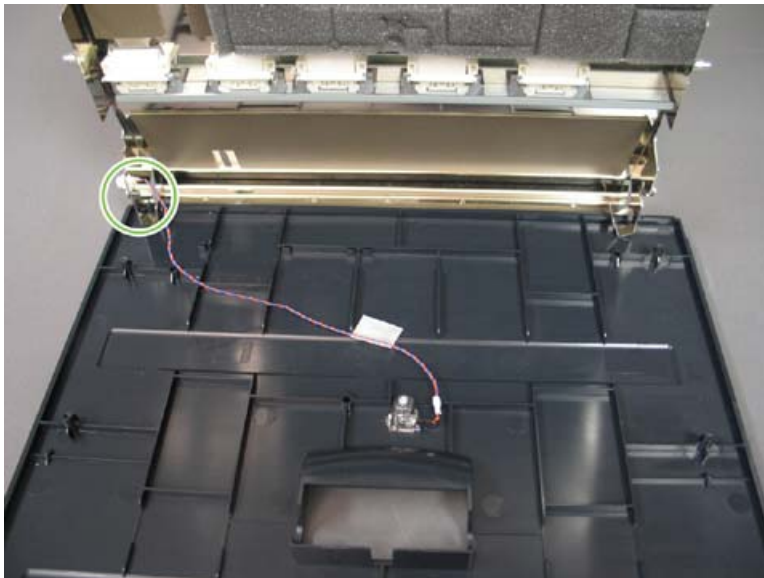
1. Remove the right-side middle panel:

[Right-side middle panel on page 377](#)

2. Remove six screws.



3. Lift the guide, and then disconnect one wire connector.



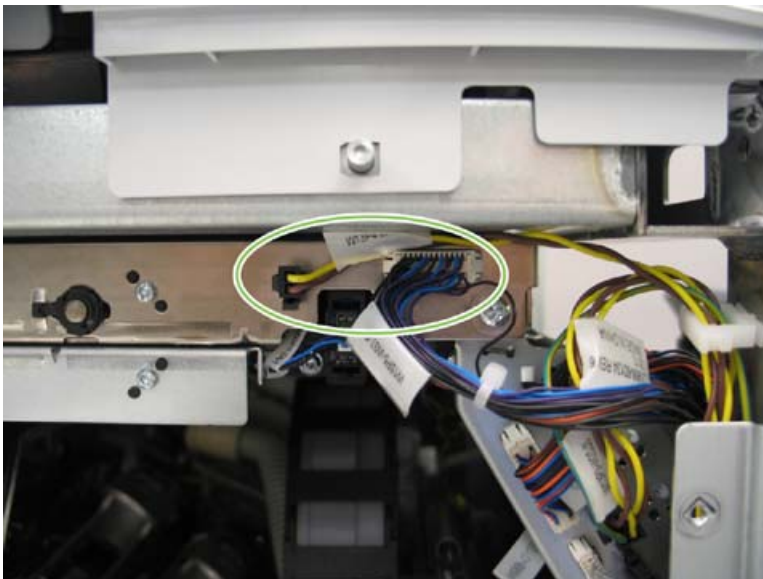
4. Remove LED13.

Horizontal

- [Horizontal assembly](#)
- [Horizontal jam access guide](#)
- [Horizontal motor \(M7\)](#)
- [Horizontal latch assembly](#)
- [Horizontal drive rollers](#)
- [Horizontal sensors](#)
- [Horizontal Latch LED \(LED1\)](#)

Horizontal assembly

1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)
2. Disconnect two wire connectors.



3. Open Tray 1.


4. Remove two screws.



5. Extract the print carriage structure.

[Carriage extraction on page 178](#)

6. Remove the horizontal assembly.

 **Reinstallation tip** Ensure that the top two guide rails are engaged, and then slide the assembly inside to connect with the two rear alignment pins.

Horizontal jam access guide

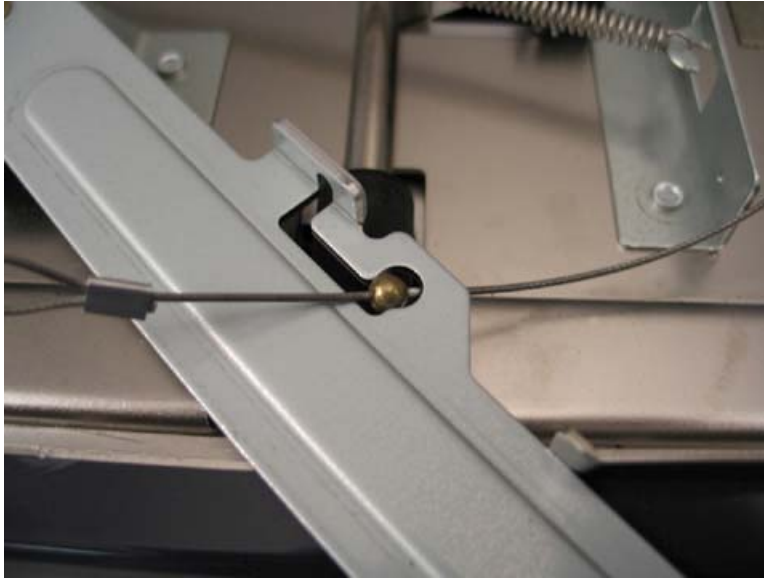
1. Remove the horizontal assembly.

[Horizontal assembly on page 388](#)

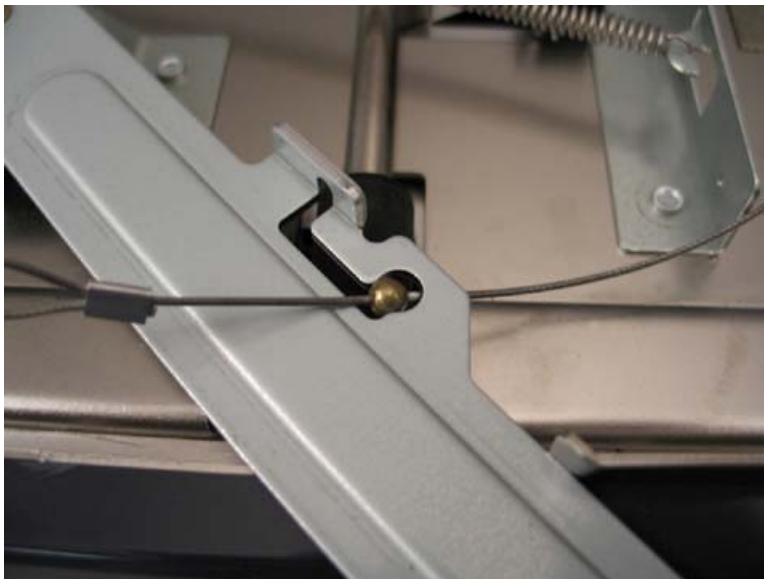
2. With the latch mechanism facing up, unthread the support cable:

- a. To release tension on the cable, push the handle to the right to lower the horizontal jam access guide.

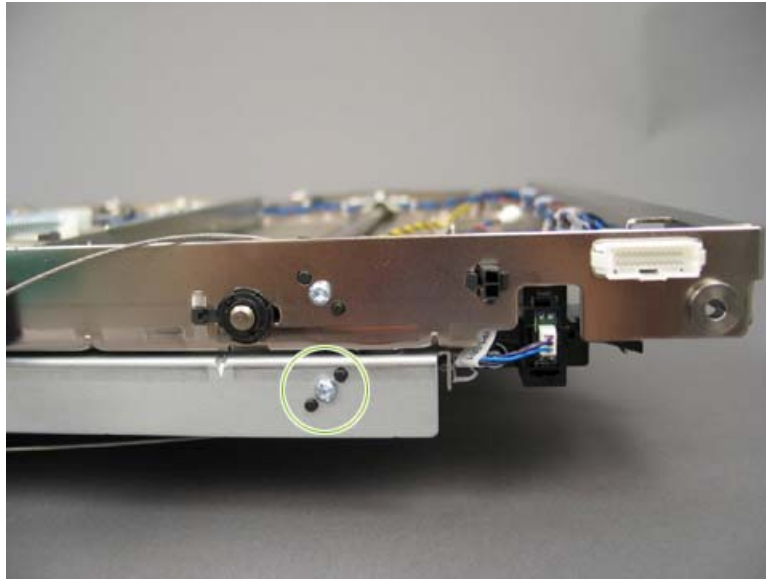
- b. Release the support cable anchor from the horizontal jam access guide.



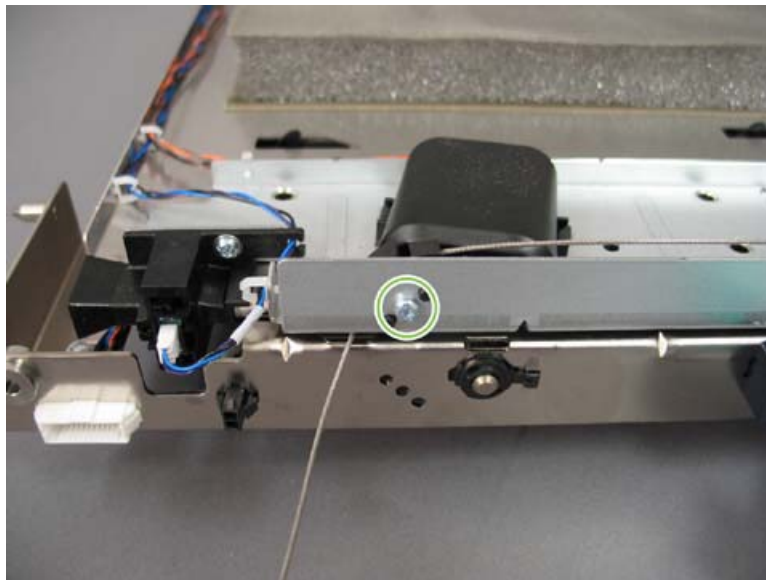
- c. Remove the spring from the support cable.
- d. Remove the cable from the latch mechanism.



- e. Remove one screw on the datum on the right of the horizontal upper assembly, and then remove the datum.



- f. Unthread the support cable through the datum.
- g. Turn the horizontal assembly over so that the Horizontal motor (M7) faces up.
- h. Loosen one screw to loosen the datum on the left of the horizontal jam access guide.



- i. Unthread the support cable through the datum.
- j. Pull the cable through the holes in the horizontal upper assembly and horizontal jam access guide.

3. Disconnect three wire connectors:
 - W18P7-M7
 - W37P3-EN3
 - W37P1-SN1
4. Remove the three wire harnesses from the horizontal jam access guide.
5. On the rear of the horizontal assembly, remove two screws and two hinges.

△ **CAUTION:** The hinge on the right includes a ground wire.



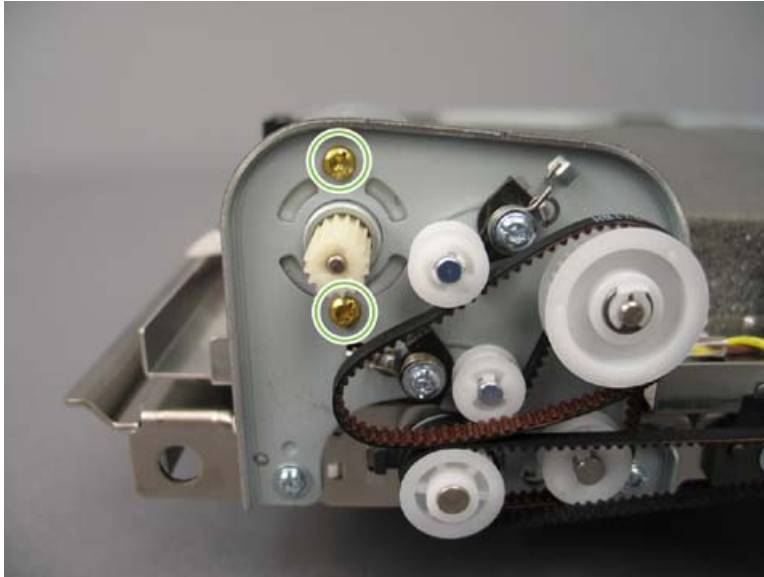
6. Lift the horizontal jam access guide up and away from the horizontal upper assembly. Leave the ball on the support cable to the left of the datum on the latch mechanism.

💡 **Reinstallation tip** Be sure to attach the ground wire to the right hinge.


Horizontal motor (M7)

1. Remove the horizontal assembly.
[Horizontal assembly on page 388](#)
2. Disconnect two wire connectors from M7:
 - W37P3-EN3
 - W18P7-M7

3. Loosen the belt idlers, remove the belt from the motor, and then remove two screws.



4. Remove the horizontal motor (M7).

 **Reinstallation tip** The two belt tensioners next to the motor are not auto-adjust tensioners and must be tightened manually.

Horizontal latch assembly

1. Remove the horizontal assembly.

[Horizontal assembly on page 388](#)

2. Remove the cable tension spring and one handle guide spring.

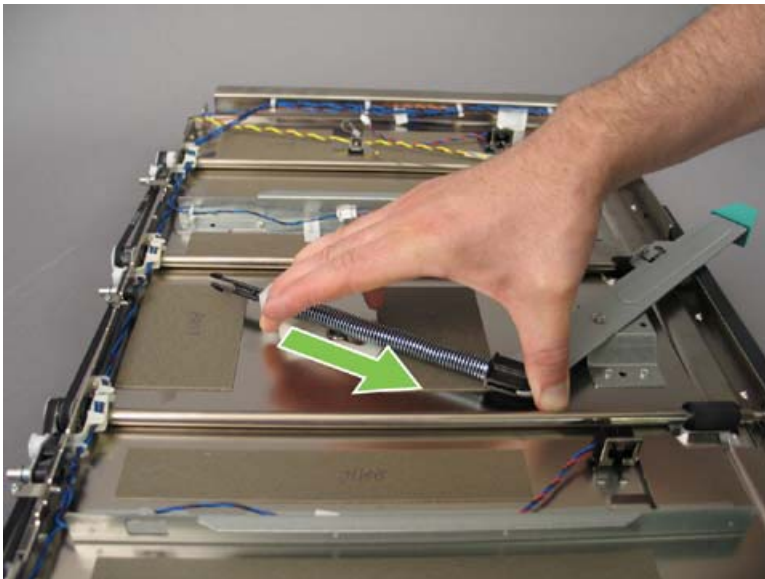


3. Push the handle to the right to lower the horizontal jam access guide.

4. Remove the cable from the latch lever.



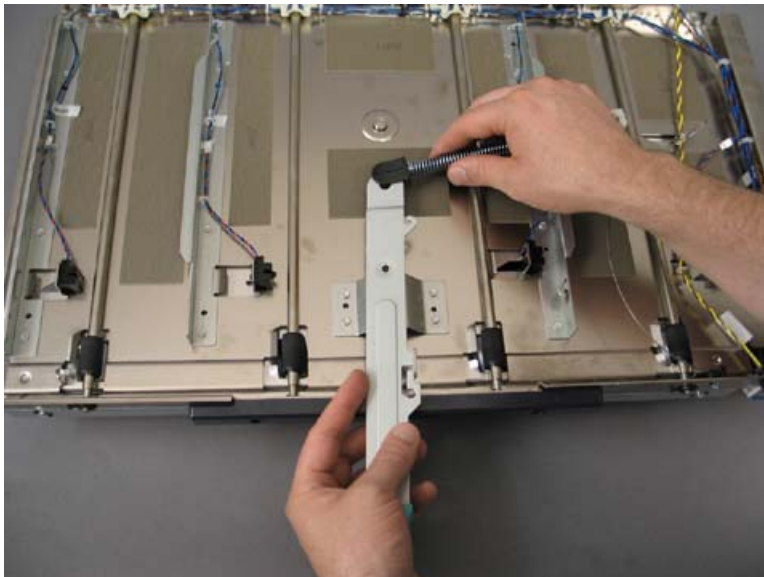
5. Push the compression spring guide forward to release the compression spring arm from the horizontal upper assembly.



6. Remove the latch pivot screw and the brass bushing.




7. Move the tensioner arm to a 90-degree angle, and then disconnect the tensioner arm from the handle.



8. Remove one screw, and then remove the grip from the latch handle.



9. Remove the handle.

 **Reinstallation tip** Secure the pivot screw before attaching the tensioner arm. The ball on the latch cable should be to the left of the datum on the latch mechanism.

Horizontal drive rollers

1. Remove the horizontal assembly.
[Horizontal assembly on page 388](#)
2. Follow the steps to remove a drive roller.
[Drive rollers on page 174](#)

Horizontal sensors

- [Transparency sensor 1 \(SN1\)](#)
- [Horizontal paper sensors \(SN2, SN3, SN4, and SN5\)](#)

Transparency sensor 1 (SN1)

1. Remove the following doors and covers:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover

[Carriage plate cover on page 208](#)

- Upper inner cover

[Upper inner cover on page 209](#)

2. Disconnect wire connector W37P1-SN1.




3. Press the upper and lower clips of the sensor together, and then pull the sensor towards you in order to remove the sensor from the holder.

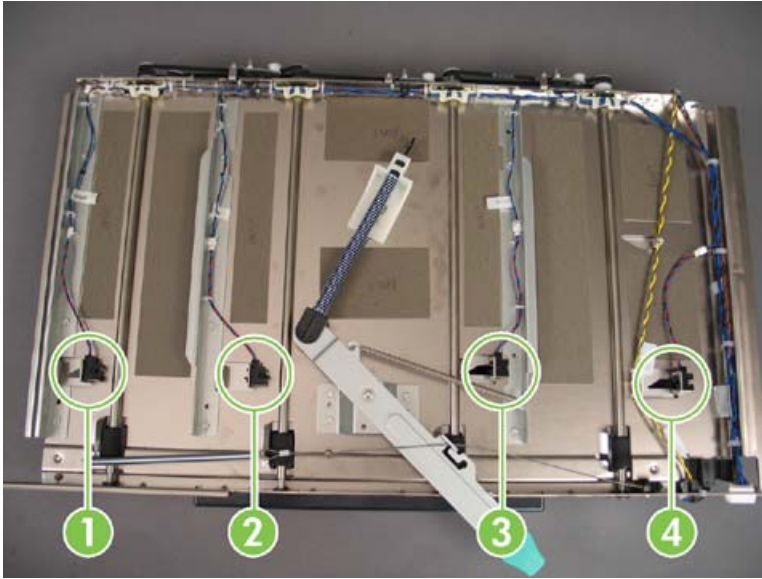
Horizontal paper sensors (SN2, SN3, SN4, and SN5)

1. Remove the horizontal assembly.

[Horizontal assembly on page 388](#)

 **NOTE:** The sensors are located on the top of the horizontal assembly with the latch mechanism.

2. Remove the sensor.



1	Horizontal Transport 4 sensor (SN5)
2	Horizontal Open sensor (SN4)
3	Horizontal Transport 3 sensor (SN2)
4	Horizontal Transport 2 sensor (SN3)

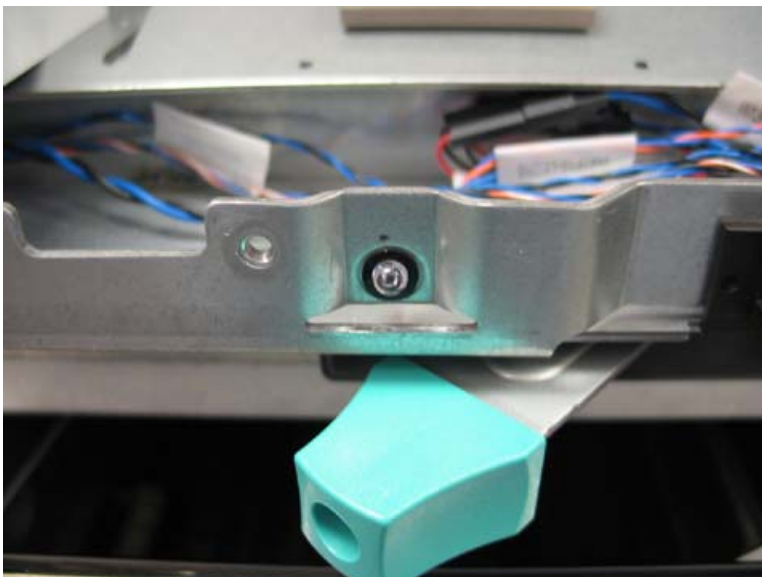
Horizontal Latch LED (LED1)

1. Remove the control panel.

[Control panel assembly on page 309](#)

 **NOTE:** You are not required to disconnect the control panel.

2. Remove LED1.




Input, duplex, output (IDO)

- [IDO removable module \(IDO RM\)](#)
- [IDO covers](#)
- [IDO duplexer door](#)
- [Pinch roller assembly](#)
- [Pinch roller guide assembly](#)
- [Input paper guide](#)
- [IDO motors](#)
- [IDO belts](#)
- [Drive roller](#)
- [IDO curler](#)
- [Input guide assembly](#)
- [IDO handle 2 assembly](#)
- [IDO media eject](#)
- [Duplex inner short damper](#)
- [IDO decurler assembly](#)
- [Decurler cam shaft assembly](#)
- [Duplex upper outer guide](#)
- [IDO door](#)
- [IDO H-bar assembly](#)
- [IDO printer interface](#)
- [IDO Media Thickness encoder \(EN14\)](#)
- [IDO sensors](#)
- [IDO LEDs](#)
- [IDO switches](#)

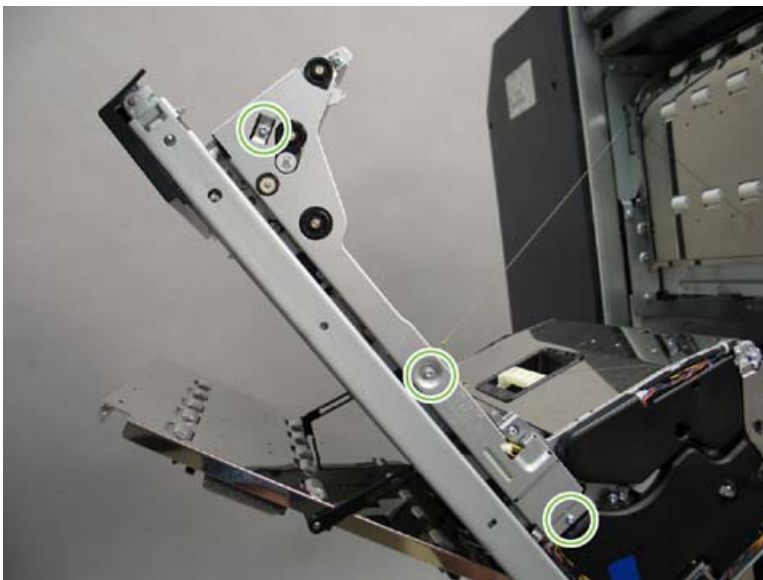
IDO removable module (IDO RM)

1. Loosen four screws on the duplexer door, and then remove the duplexer door outer cover.

 **Reinstallation tip** When reinstalling the duplexer door cover, do not overtighten the four mounting screws that secure the door to the IDO. If the hardware is overtightened, there is a high probability of damaging the IDO duplexer door assembly.




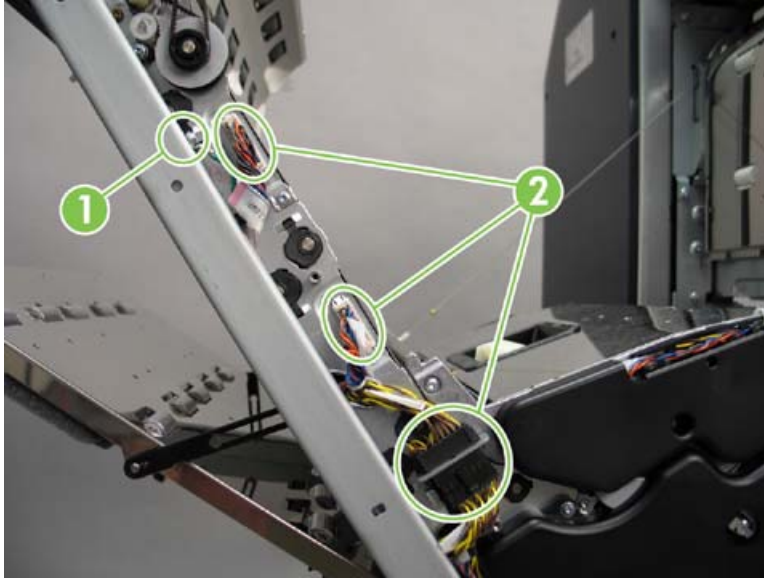
2. Open the IDO.
3. From the front of the IDO, remove three screws, and then remove the metal IDO wire cover.




4. Disconnect one ground wire (callout 1) and three wire connectors (callout 2):

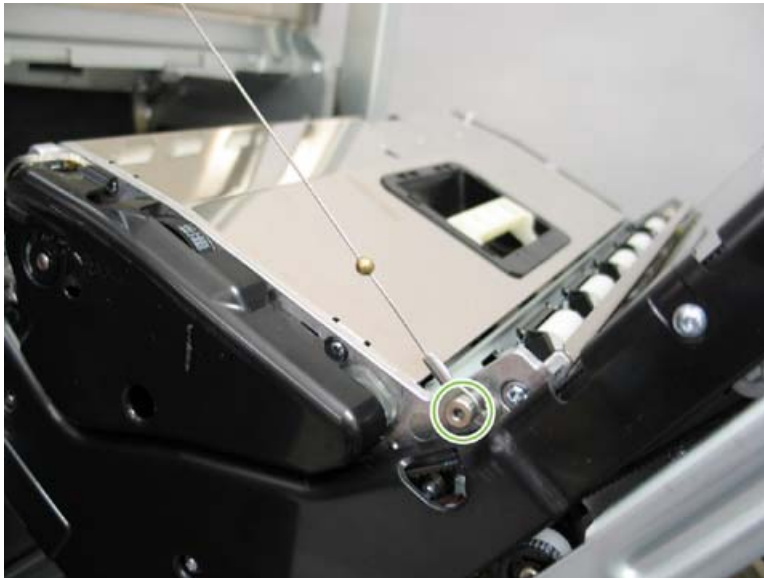
- W43J11-W19P11
- W17J7-W44P7
- W45P6-W16J6

 **NOTE:** The duplexer door should be closed before the IDO RM is removed.



 **NOTE:** To prevent excessive wear, be careful not to scrape the cables while unplugging the connectors.

5. From the rear of the IDO, while holding the safety cable, remove one screw, and then detach the safety cable from the IDO.



6. Open the output door, and then unsnap two attachment latches from the top.



7. Grip the sides of the IDO RM, and then lift the IDO RM up and out of the IDO H-bar assembly.

△ **CAUTION:** Be sure to lift the IDO RM high enough that the output door attachments clear the crossbar of the IDO H-bar assembly.

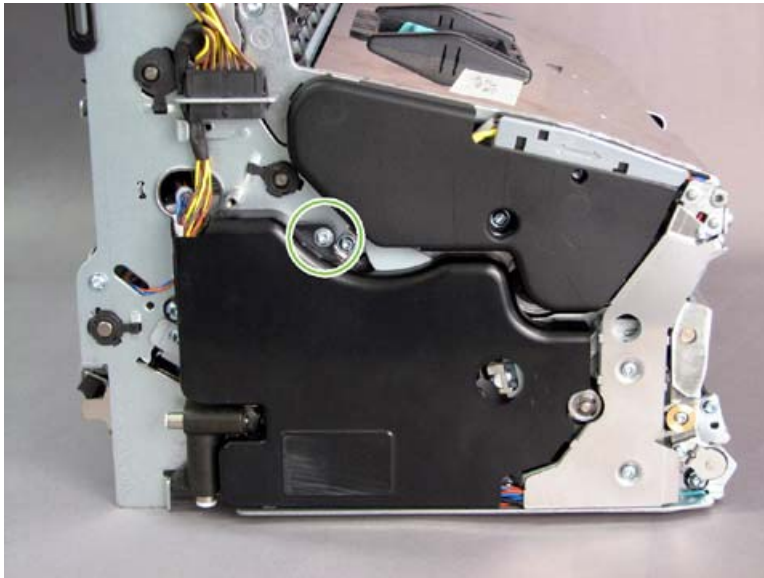
CAUTION: When performing any service activity on the IDO, be careful when opening the curler. Do not overextend the curler assembly door. Doing so could damage the IDO cables and connections.

IDO covers

- [IDO front cover](#)
- [IDO rear cover](#)
- [Curler front cover](#)
- [Curler rear cover](#)

IDO front cover

- Remove one screw, and then remove the IDO front cover.



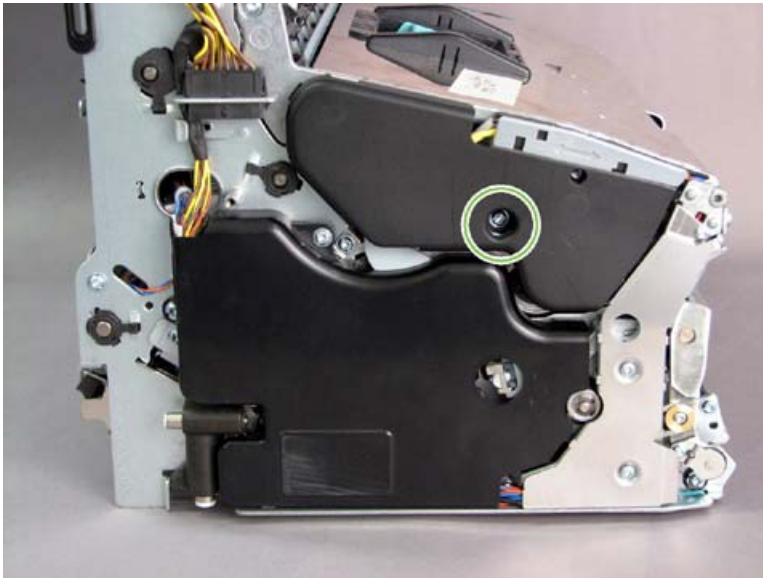
IDO rear cover

- Remove three screws, and then remove the IDO rear cover.



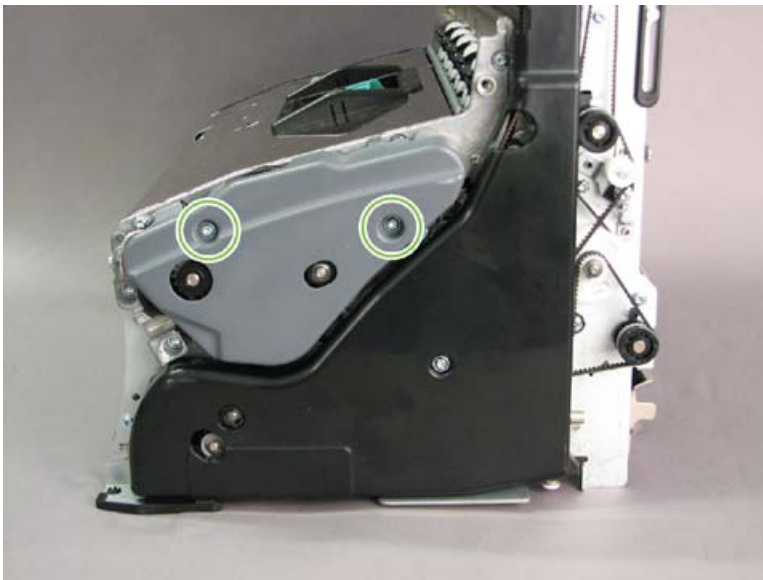
Curler front cover

- Remove one screw, and then remove the curler front cover.



Curler rear cover

- Remove two screws, and then remove the curler rear cover.



IDO duplexer door

- [Duplexer door](#)
- [Duplexer door handle](#)

Duplexer door

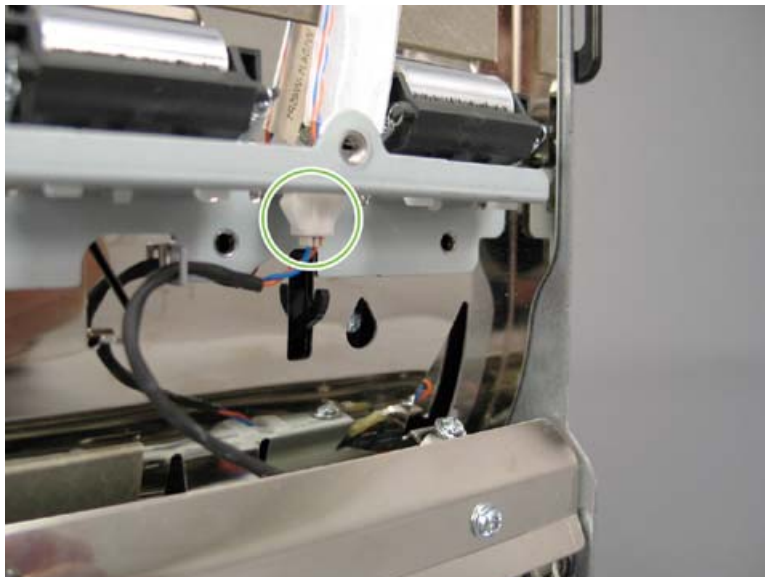
1. Remove the IDO RM.

[IDO removable module \(IDO RM\) on page 400](#)

2. Set the RM upright, and then remove two springs at the base of the duplexer door.



3. Disconnect the Left-side Middle Panel LED (LED3) wire connector, and then pull the wire through the guide.



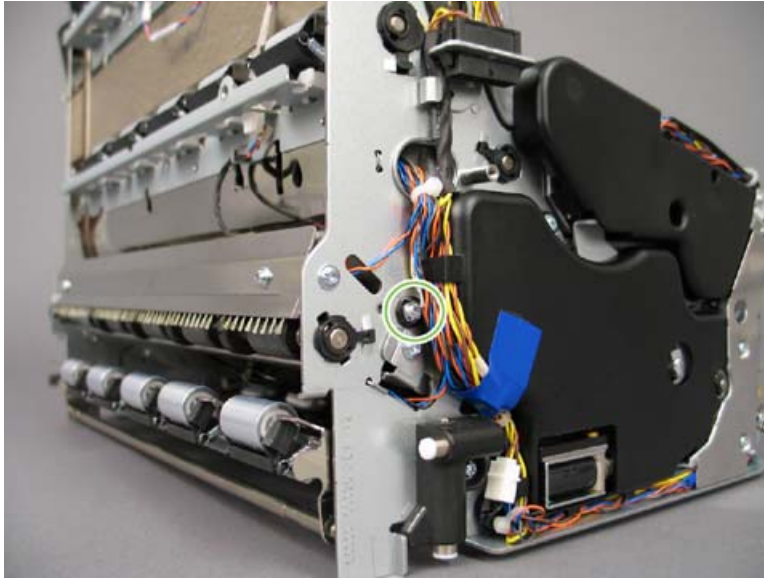
4. Remove one outer ground screw.




5. On the front side of the duplexer door, remove one screw and one spacer.



6. On the rear side of the duplexer door, remove one screw and one spacer.



7. Partially open the duplexer door, and then disconnect the door guides from the RM.

 **NOTE:** Do not disconnect the door guides from the duplexer door.

8. Remove the duplexer door.

Duplexer door handle

1. Remove the IDO RM.
[IDO removable module \(IDO RM\) on page 400](#)
2. Remove the duplexer door from the RM.
[Duplexer door on page 405](#)

3. Remove the retaining clip from the latch rod.



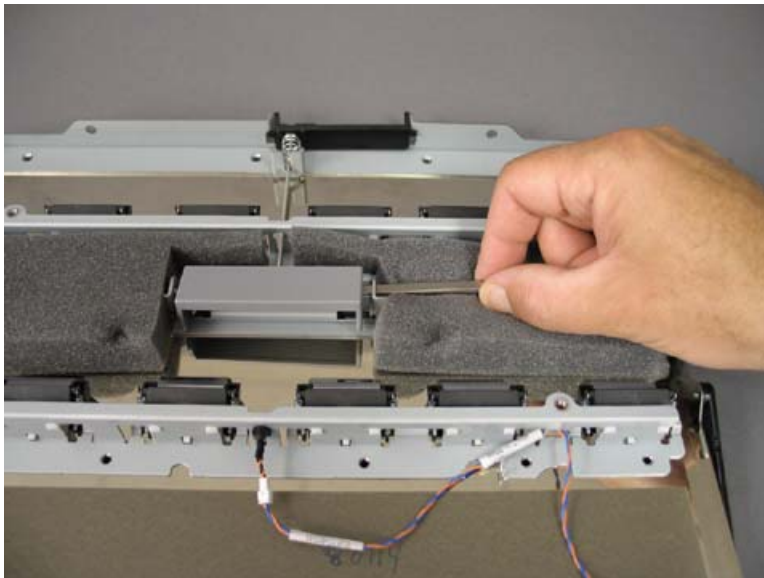
4. Remove the latch rod.



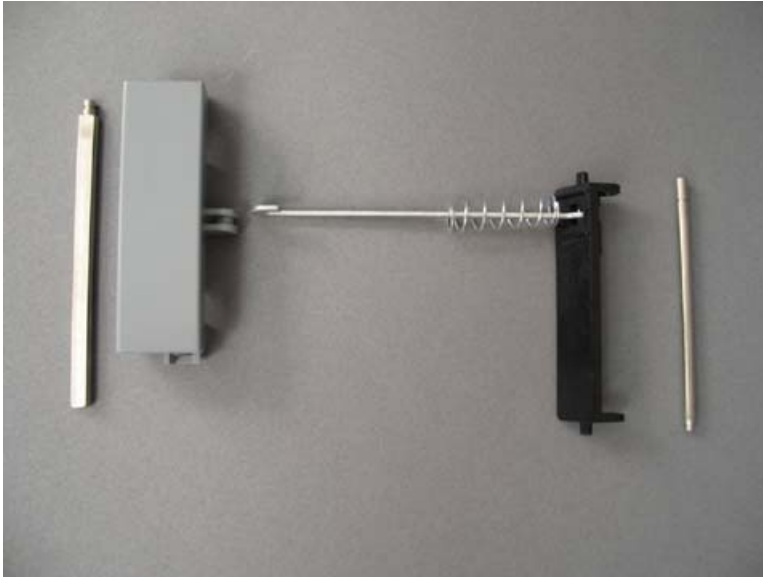
5. Remove the retaining clip from the left side of the handle rod.



6. Pull the handle rod to the right, and then remove the handle rod.



7. Remove the handle hook from the latch.



Pinch roller assembly

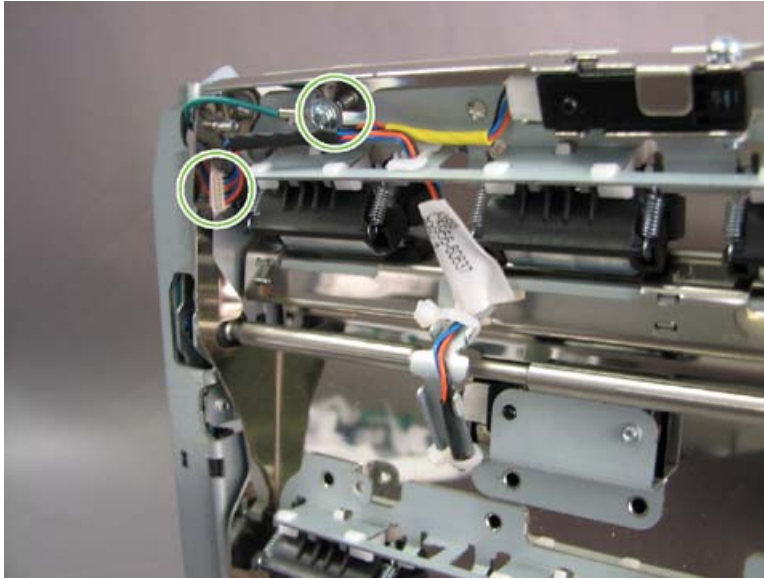
See the steps for removing a pinch roller.

[Pinch roller assembly on page 175](#)

Pinch roller guide assembly

1. Remove the following items:
 - IDO RM
[IDO removable module \(IDO RM\) on page 400](#)
 - Decurler cam shaft assembly
[Decurler cam shaft assembly on page 466](#)
2. Lay the RM on the duplexer door.

3. Disconnect one wire connector and one ground wire.



4. For the hinge on the front side, remove one hinge screw and one bushing.



5. For the hinge on the rear side, remove one hinge screw and one bushing.



6. Remove the pinch roller guide assembly.

Input paper guide

1. Remove the IDO RM.

[IDO removable module \(IDO RM\) on page 400](#)

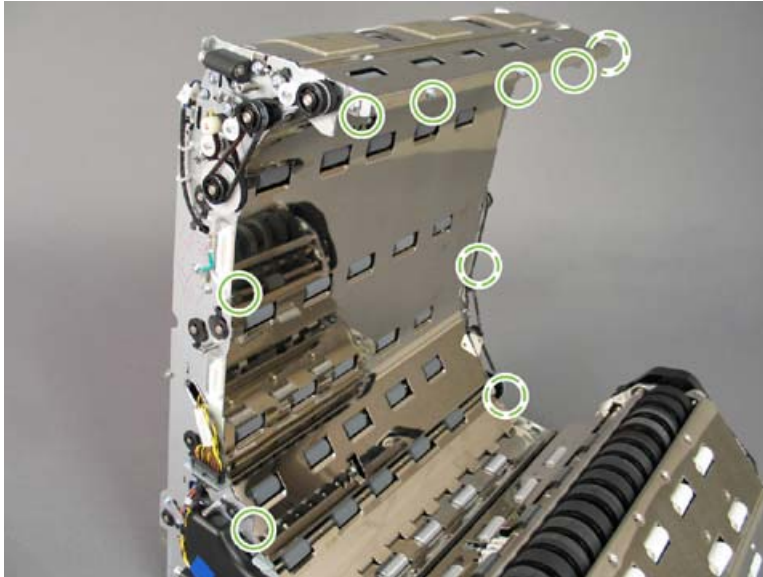
2. Remove the IDO rear cover.

[IDO rear cover on page 403](#)

3. Open the curler.

△ **CAUTION:** When performing any service activity on the IDO, be careful when opening the curler. Do not overextend the curler assembly door. Doing so could damage the IDO cables and connections.

4. Remove nine screws.



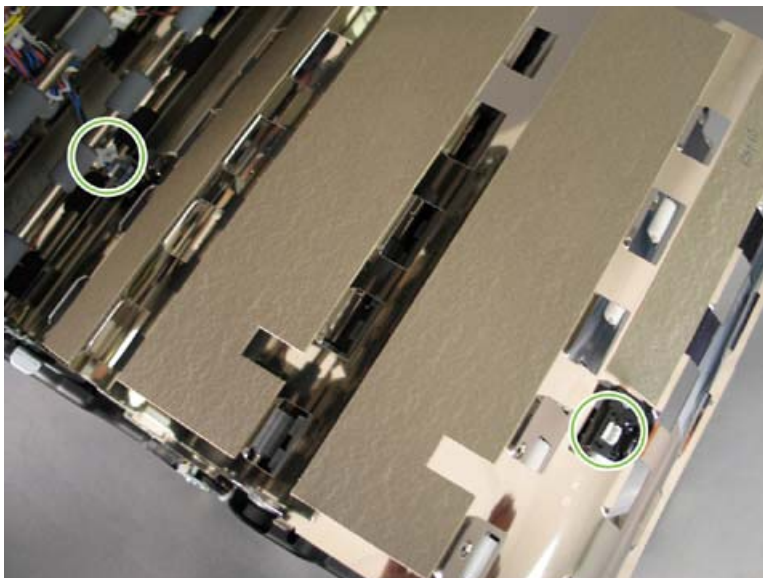
5. Pry the input paper guide loose, but do not remove it completely.

△ **CAUTION:** Two sensors are attached to the input paper guide.

6. Disconnect two wire connectors.

- W44P7-SN7
- W44P10-SN10 (This will disconnect itself as the guide is opened.)

💡 **Reinstallation tip** Open the duplexer door and reinstall the IDO Input Staging 2 sensor (SN10) through the access holes.



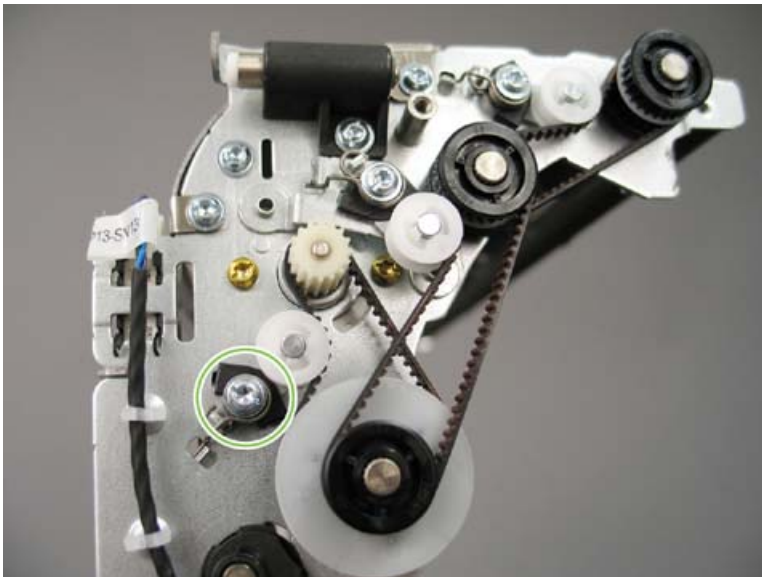
7. Remove the input paper guide.

IDO motors

- [IDO Input 1 motor \(M8\)](#)
- [IDO Input 2 motor \(M10\)](#)
- [IDO Output motor \(M11\)](#)
- [IDO Duplex motor \(M12\)](#)
- [IDO Media Eject motor \(M13\)](#)
- [IDO Curler motor \(M15\)](#)
- [IDO Decurler motor \(M17\)](#)


IDO Input 1 motor (M8)

1. Remove the IDO RM.
[IDO removable module \(IDO RM\) on page 400](#)
2. Remove the input paper guide.
[Input paper guide on page 412](#)
3. Disconnect two wire connectors:
 - W44P9-EN9
 - W19P8-M8
4. Loosen one screw to release the tensioner.



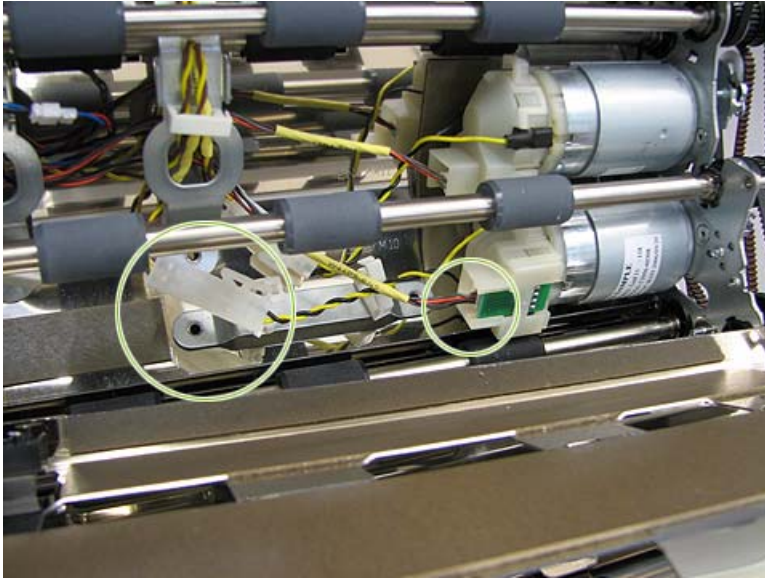
5. Remove two screws, and then remove M8.



 **Reinstallation tip** Be sure to return the tensioners to their original positions.

IDO Input 2 motor (M10)


1. Remove the IDO RM.
[IDO removable module \(IDO RM\) on page 400](#)
2. Remove the input paper guide.
[Input paper guide on page 412](#)
3. Disconnect two wire connectors:
 - W44P5-EN5
 - W19P10-M10




4. Loosen one screw and release the tensioning spring to gain access to the motor screw underneath.



5. Remove the two screws, and then remove M10.

 **Reinstallation tip** Before installing the motor, connect the encoder wire to the motor.

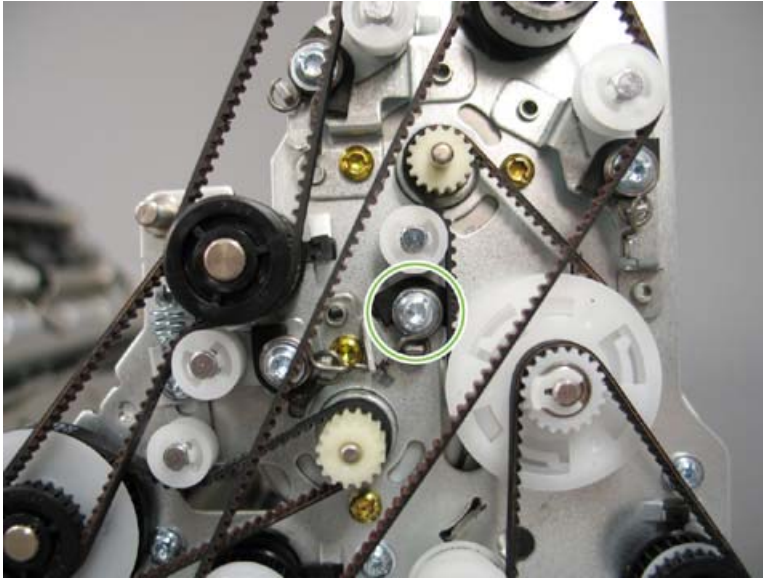


 **Reinstallation tip** Be sure to return the tensioners to their original positions.

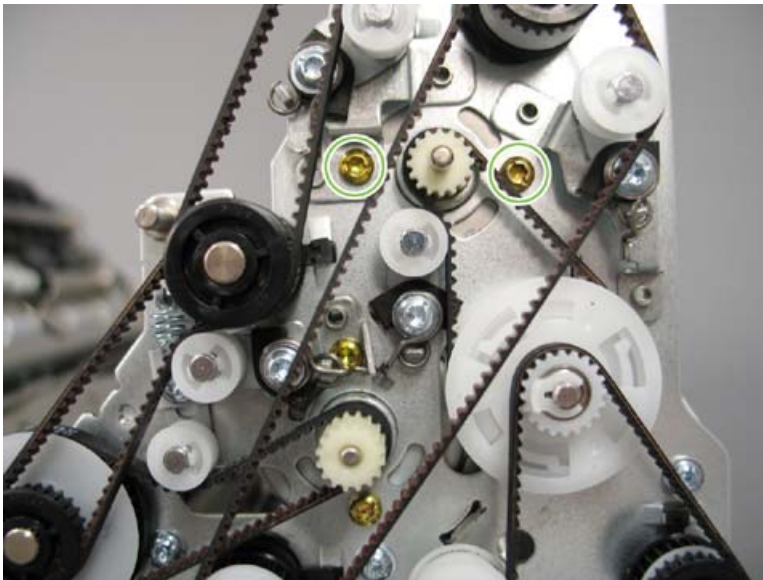
IDO Output motor (M11)

1. Remove the IDO RM.
[IDO removable module \(IDO RM\) on page 400](#)
2. Remove the input paper guide.
[Input paper guide on page 412](#)
3. Disconnect two wire connectors:
 - W44P4-EN4
 - W19P11-M11

4. Loosen one screw to release the tensioner.



5. Remove two screws, and then remove M11.



💡 **Reinstallation tip** Be sure to return the tensioners to their original positions.

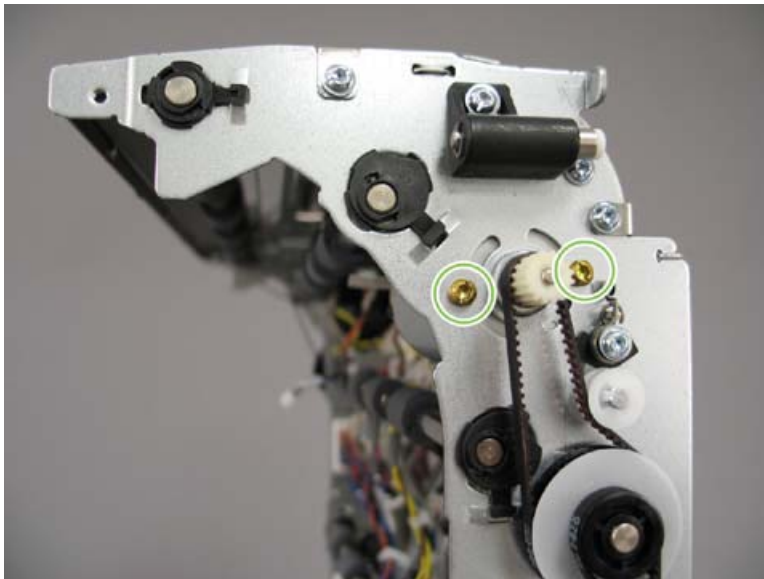
IDO Duplex motor (M12)


1. Remove the IDO RM.
[IDO removable module \(IDO RM\) on page 400](#)
2. Remove the input paper guide.
[Input paper guide on page 412](#)

3. Disconnect two wire connectors:
 - W44P7-EN7
 - W19P12-M12
4. Loosen one screw to release one tensioner.



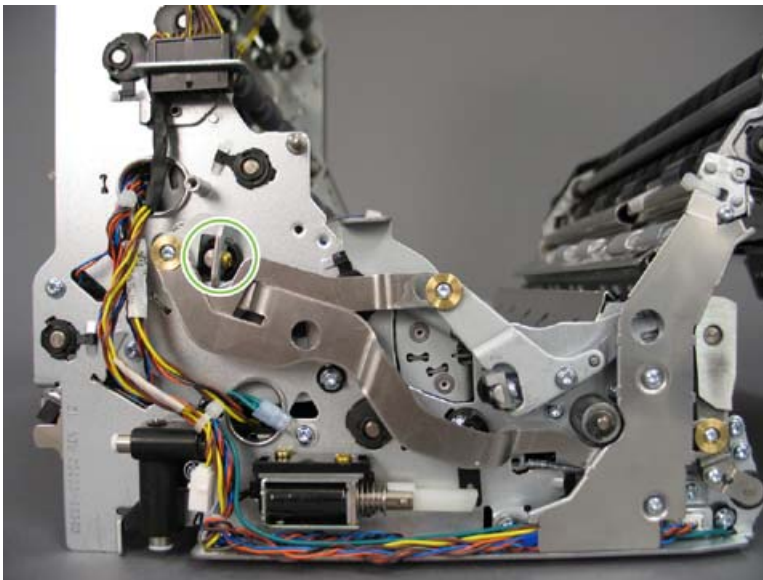
5. Remove two screws, and then remove M12.



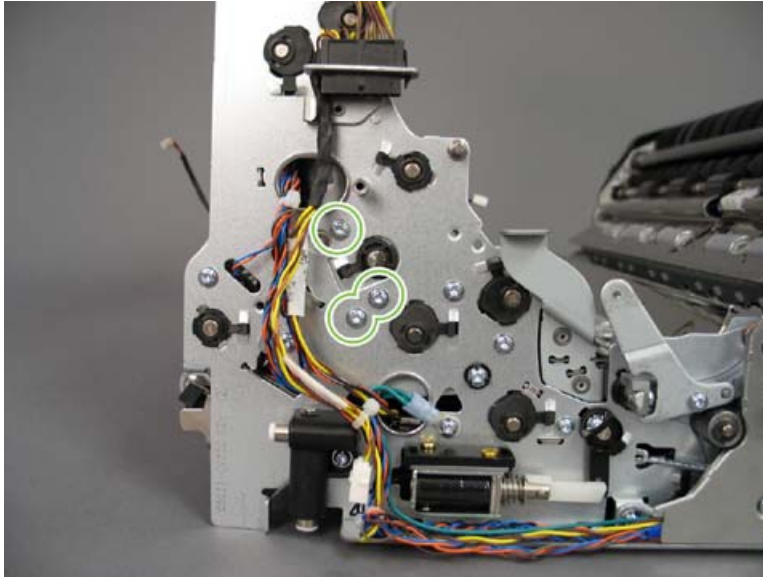
 **Reinstallation tip** Be sure to return the tensioners to their original positions.


IDO Media Eject motor (M13)

1. Remove the following items:
 - IDO RM
[IDO removable module \(IDO RM\) on page 400](#)
 - IDO front cover
[IDO front cover on page 403](#)
2. Remove the input paper guide.
[Input paper guide on page 412](#)
3. Disconnect one wire connector to the motor that includes:
 - W44P17-EN17
 - W19P13-M13
4. Remove the media-eject drive arm.
[Media-eject drive arm on page 445](#)
5. Remove one screw and one bushing, and then remove the pivot shaft link.




6. Remove three screws, and then remove the IDO Media Eject motor (M13) assembly.



 **Reinstallation tip** When reinstalling the media-eject arms, start at the pivot shaft and move towards the media-eject shaft.

IDO Curler motor (M15)

1. Open the IDO.
2. Open the curler.

 **CAUTION:** When performing any service activity on the IDO, be careful when opening the curler. Do not overextend the curler assembly door. Doing so could damage the IDO cables and connections.

3. Remove the following items:

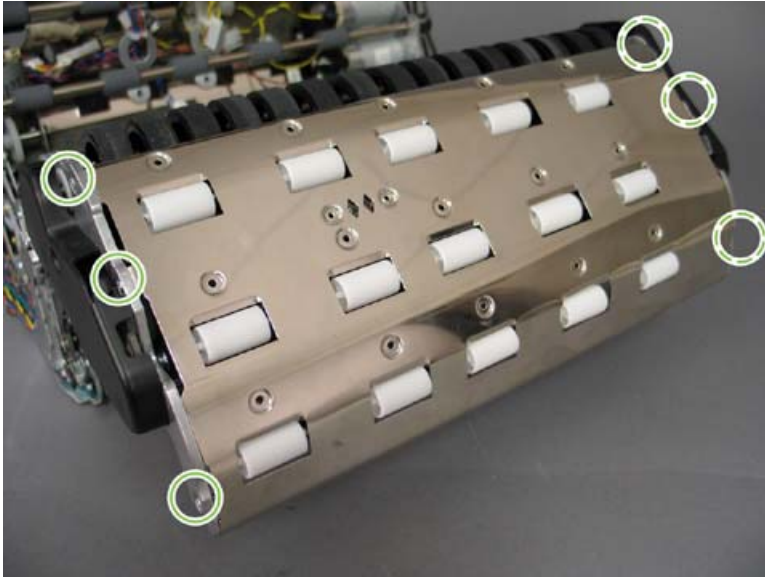
- Curler front cover

[Curler front cover on page 404](#)

- Curler rear cover

[Curler rear cover on page 404](#)

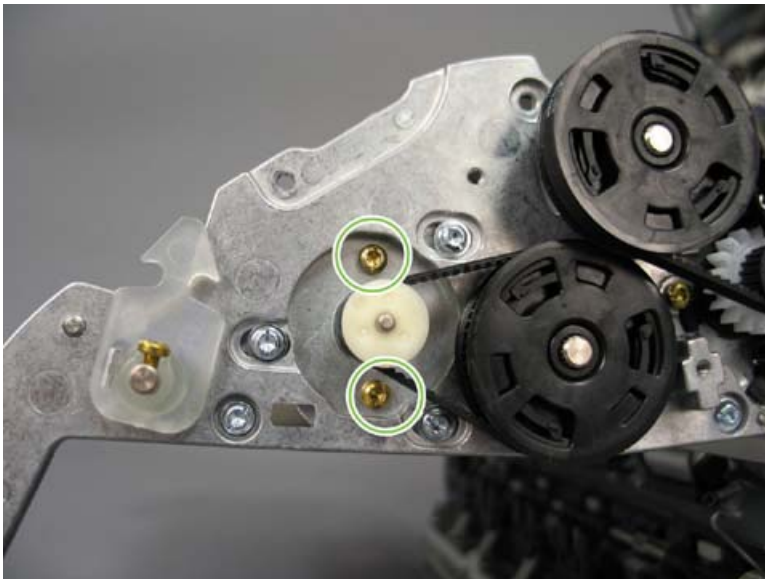
4. Remove six screws, and then remove the curler guide.



5. Disconnect two wire connectors:

- W87P15-EN15
- W86P1-M15

6. Remove two screws, and then remove M15.

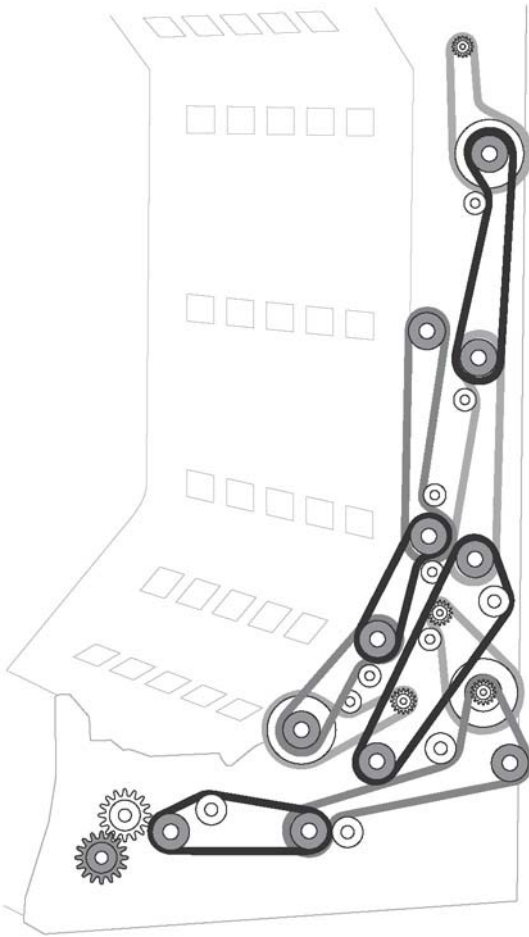


IDO Decurler motor (M17)

1. Remove the IDO RM.
[IDO removable module \(IDO RM\) on page 400](#)
2. Remove the decurler cam shaft assembly.
[Decurler cam shaft assembly on page 466](#)
3. Remove two screws, and then remove M17.

IDO belts

Use the following illustration as a guide for belt locations on the IDO.



 **NOTE:** IDO curler output transmission belts and pulleys are preventive maintenance items and are replaced at scheduled intervals. See [Service intervals on page 79](#).

Reset the preventive maintenance counter for this item every time maintenance is performed.

Drive roller

See the steps for replacing a drive roller.

[Drive rollers on page 174](#)

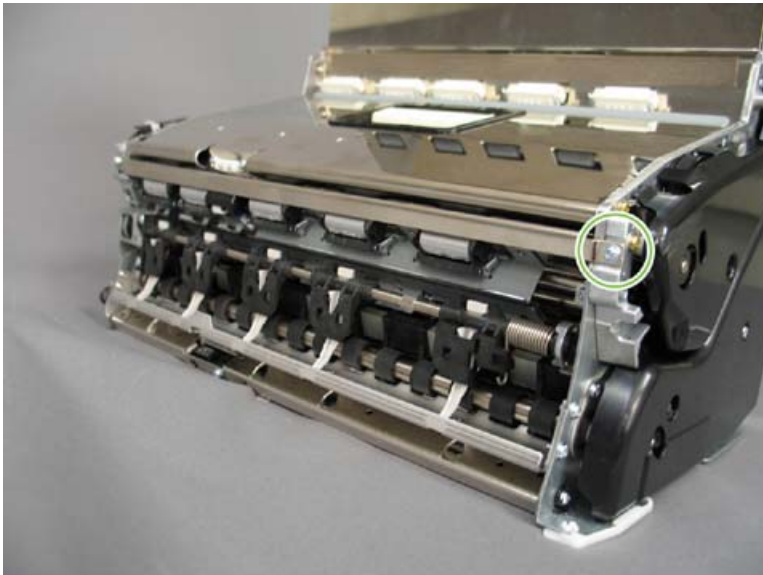
IDO curler

- [Curler assembly](#)
- [Curler-drive rollers and drive shaft](#)
- [Curler large roller assembly](#)
- [Curler input drive roller assembly](#)
- [Curler medium roller assembly](#)
- [Curler small roller assembly](#)
- [Curler comb](#)
- [Curler drive shaft assembly](#)
- [Curler handle and latches](#)

△ **CAUTION:** When performing any service activity on the IDO, be careful when opening the curler. Do not overextend the curler assembly door. Doing so could damage the IDO cables and connections.

Curler assembly

1. Remove the IDO RM.
[IDO removable module \(IDO RM\) on page 400](#)
2. Remove one screw, and then remove the front side cover
[IDO front cover on page 403](#)
3. Remove one screw from the front of the input guide assembly.



4. Open the IDO, remove two screws and one ground screw, and then remove the hinge.



5. Disconnect the wire connectors, and then slide the IDO curler off the other hinge pin to remove it.

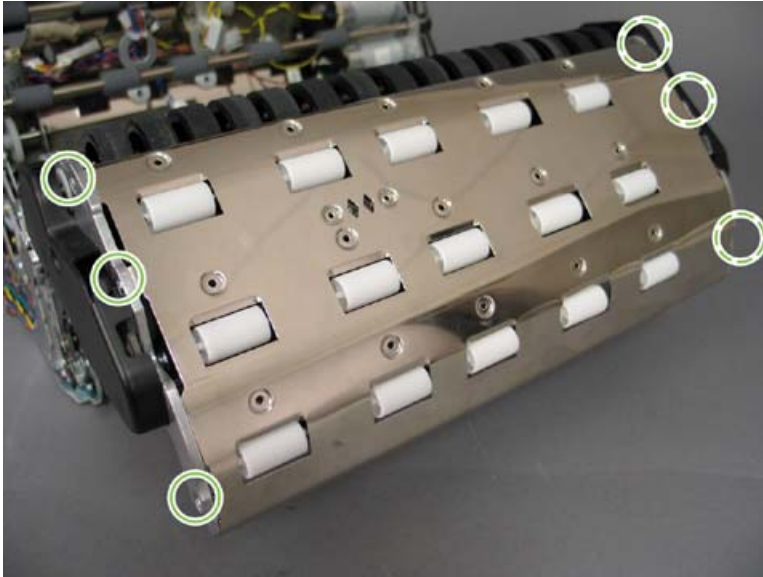
Curler-drive rollers and drive shaft

1. Open the IDO.
2. Open the curler.
 - △ **CAUTION:** When performing any service activity on the IDO, be careful when opening the curler. Do not overextend the curler assembly door. Doing so could damage the IDO cables and connections, and the curler pivot point.
3. Remove the front and rear curler covers.

[Curler front cover on page 404](#)

[Curler rear cover on page 404](#)

4. Remove six screws, and then remove the curler guide.



5. Follow the steps to remove a drive roller or shaft.

[Drive rollers on page 174](#)

Curler large roller assembly

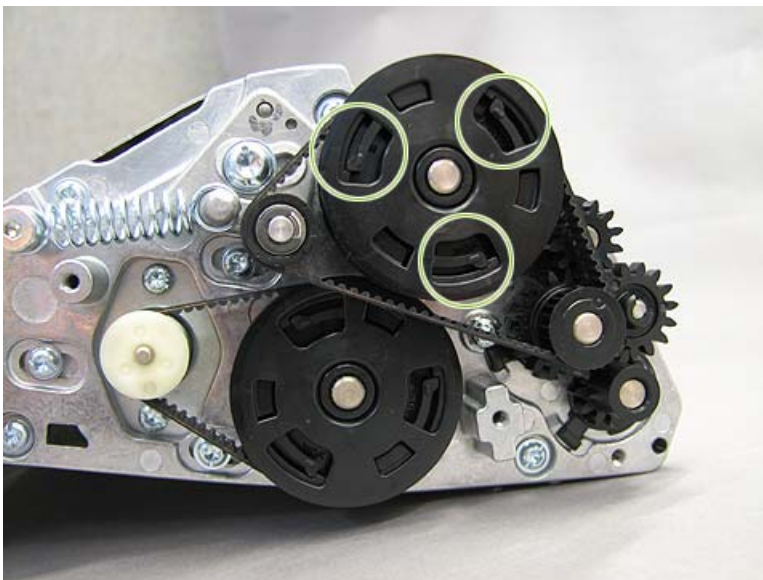
1. Remove the curler assembly.

[Curler assembly on page 424](#)

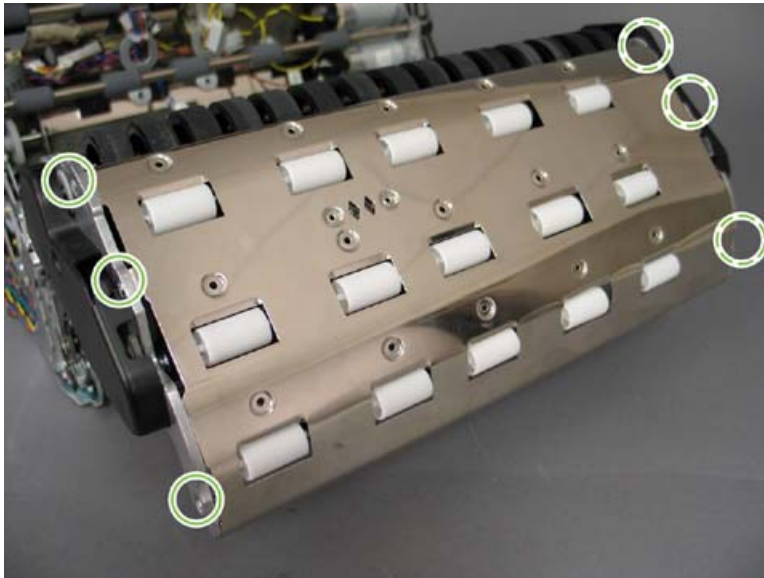
2. Remove two screws, and then remove the curler rear cover.

[Curler rear cover on page 404](#)

3. Release three tabs, twist the cover, and then lift off the cover from the large gear.



4. Release the spring from the belt tensioner, and then remove the belt from the large gear.
5. Remove six screws, and then remove the curler guide.



6. Pry the bushing out from the other end of the shaft.



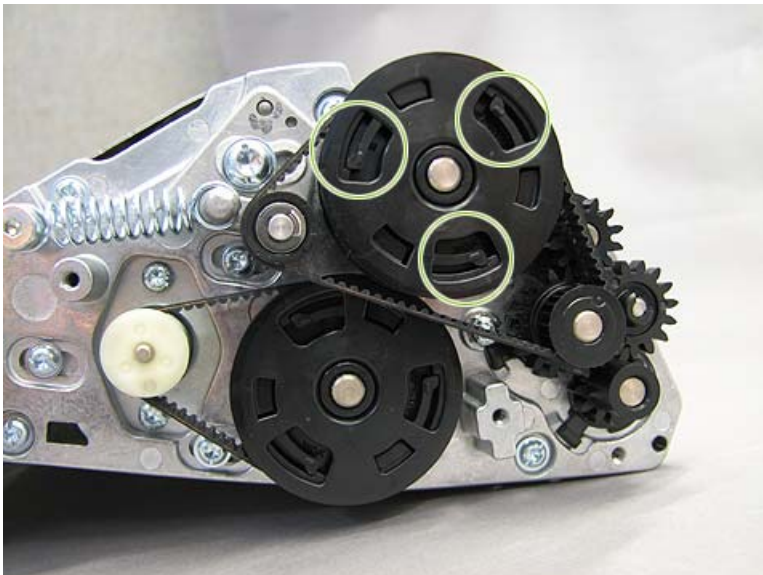
7. Rotate the yoke at the large gear end of the shaft.

8. Lift out the large roller assembly (callout 1), lifting the non-bearing end first.



Curler input drive roller assembly

1. Remove the curler assembly.
[Curler assembly on page 424](#)
2. Remove two screws, and then remove the curler rear cover.
[Curler rear cover on page 404](#)
3. Release three tabs, twist the cover, and then lift off the cover from the large gear.



4. Release the spring from the belt tensioner, and then remove the belt from the large gear.

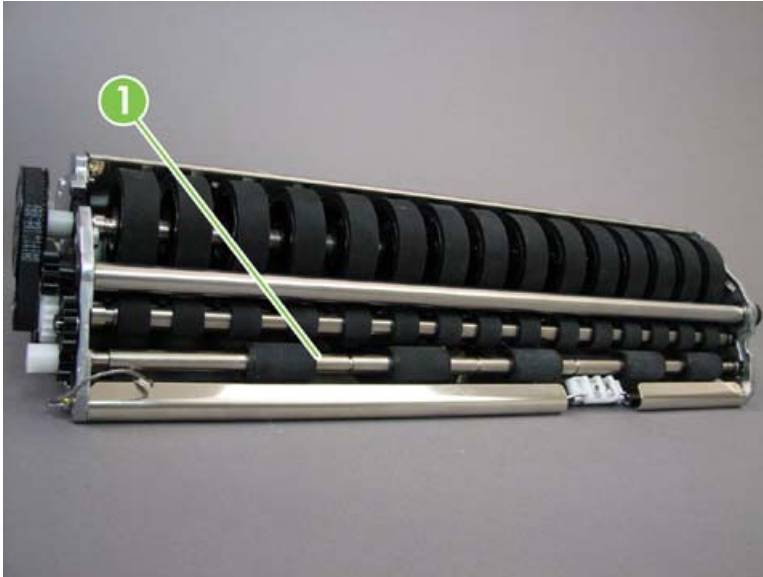
5. Remove one screw, and then remove the gear idler.



6. Rotate and remove the yoke from the curler medium roller assembly.

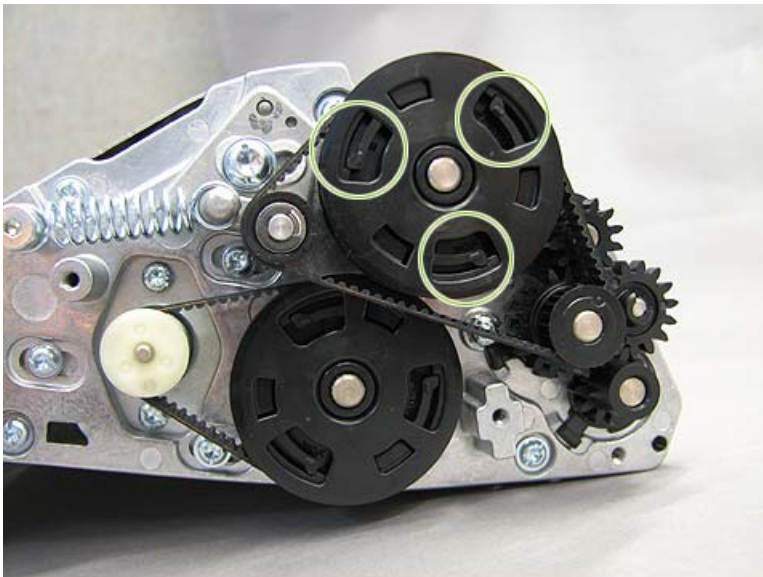


7. Rotate the yoke and remove the input drive roller assembly (callout 1).



Curler medium roller assembly

1. Remove the curler assembly.
[Curler assembly on page 424](#)
2. Remove two screws, and then remove the curler rear cover.
[Curler rear cover on page 404](#)
3. Release three tabs, twist the cover, and then lift off the cover from the large gear.



4. Remove the belt from the large gear.

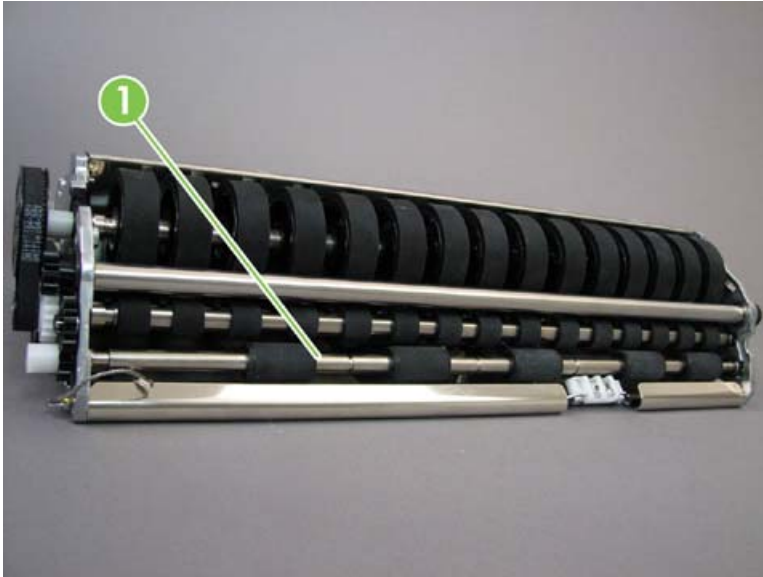
5. Remove one screw, and then remove the gear idler.



6. Rotate and remove the yoke from the curler medium roller assembly.



7. Rotate the yoke and remove the input drive roller assembly (callout 1).



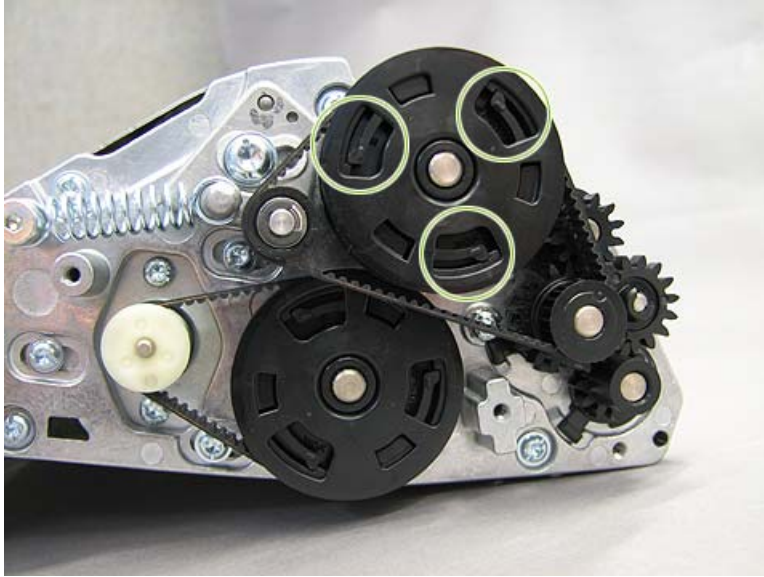
8. Rotate the yoke (on the large gear side) and remove the curler medium roller assembly (callout 1).



Curler small roller assembly

1. Remove the curler assembly.
[Curler assembly on page 424](#)
2. Remove two screws, and then remove the curler rear cover.
[Curler rear cover on page 404](#)

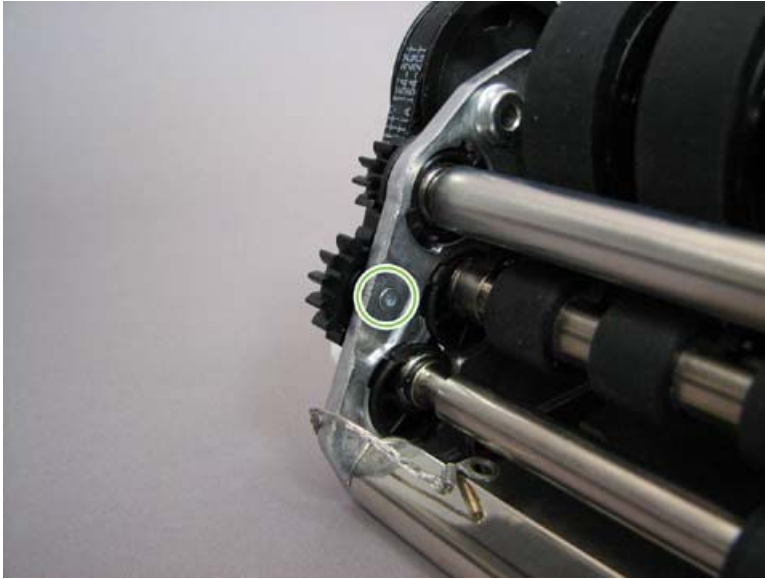
3. Release three tabs, twist the cover, and then lift off the cover from the large gear.



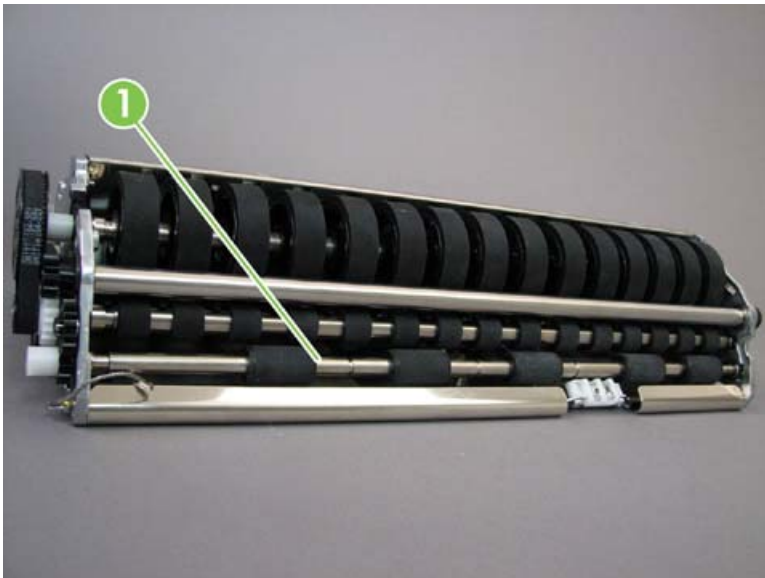
4. Remove the belt from the large gear.
5. On the other side, loosen the belt tensioner, and then remove the belt.



6. Remove one screw, and then remove the gear idler.

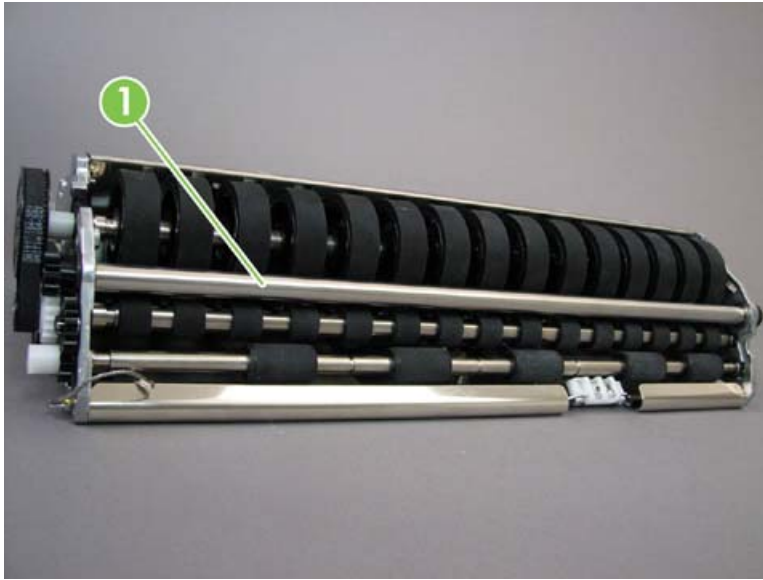


7. Rotate the yoke and remove the input drive roller assembly (callout 1).



8. Loosen the curler medium roller, sliding it to the side until it is disengaged.

9. Gently pry the trailing bushing while removing the curler small roller assembly (callout 1) past the comb.



Curler comb

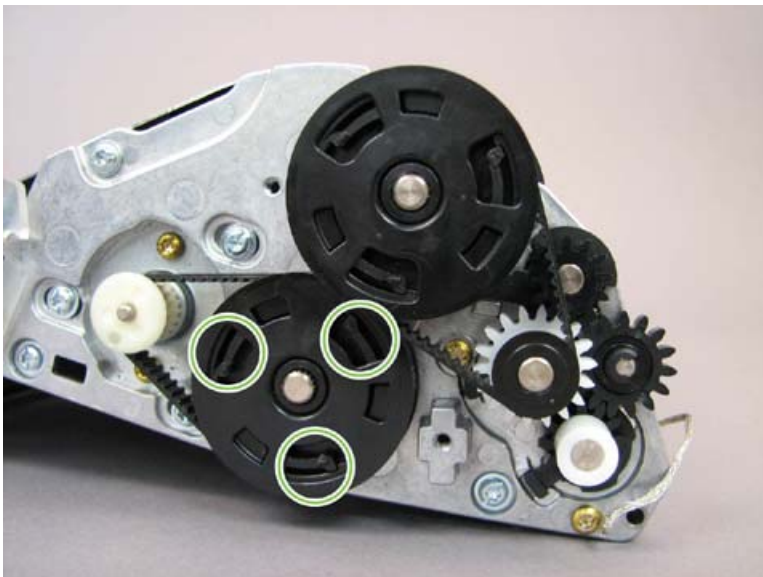
1. Remove the curler assembly.
[Curler assembly on page 424](#)
2. Remove the following curler rollers:
 - Curler large roller assembly
[Curler large roller assembly on page 426](#)
 - Curler medium roller assembly
[Curler medium roller assembly on page 430](#)
 - Curler small roller assembly
[Curler small roller assembly on page 432](#)
 - Curler input drive roller assembly
[Curler input drive roller assembly on page 428](#)

3. Remove two screws, one from each side of the curler, and then remove the curler comb.



Curler drive shaft assembly

1. Remove the curler assembly.
[Curler assembly on page 424](#)
2. Release three tabs, twist the cover, and then lift off the cover from the large gear.



3. Loosen three motor screws, and then remove the drive belt.



4. Remove four screws (two on each side), and then remove the curler cover.
5. From inside, press the tabs together to unsnap the bushing on the curler drive shaft.



6. Remove the curler drive shaft.

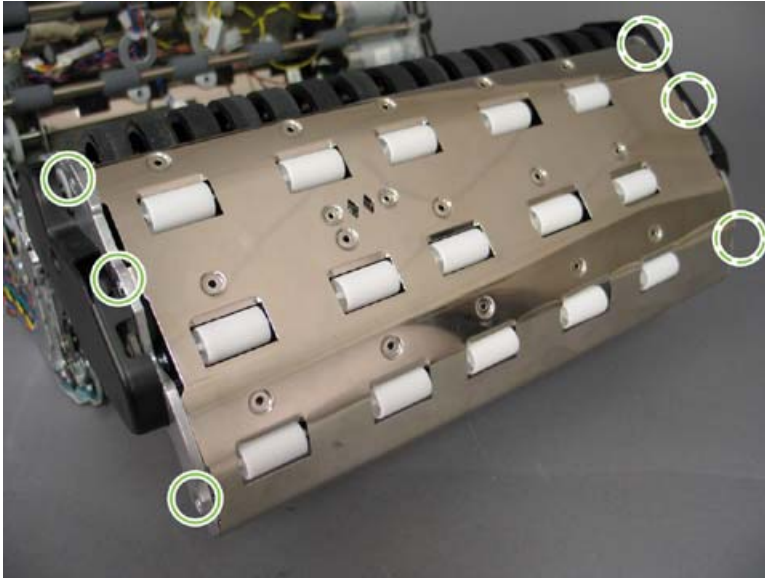
Curler handle and latches

1. Open the IDO.
2. Remove both curler side covers.
 - [Curler front cover on page 404](#)
 - [Curler rear cover on page 404](#)

3. Open the curler.

△ **CAUTION:** When performing any service activity on the IDO, be careful when opening the curler. Do not overextend the curler assembly door. Doing so could damage the IDO cables and connections.

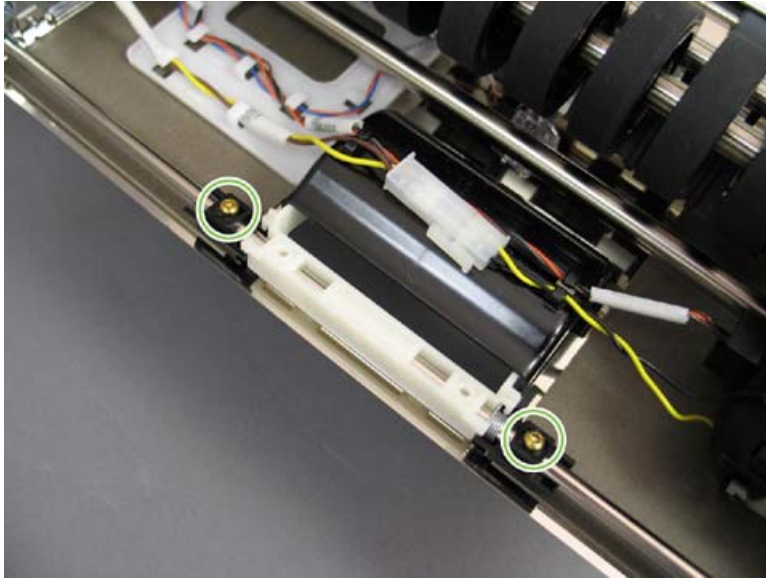
4. Remove six screws, and then remove the curler guide.



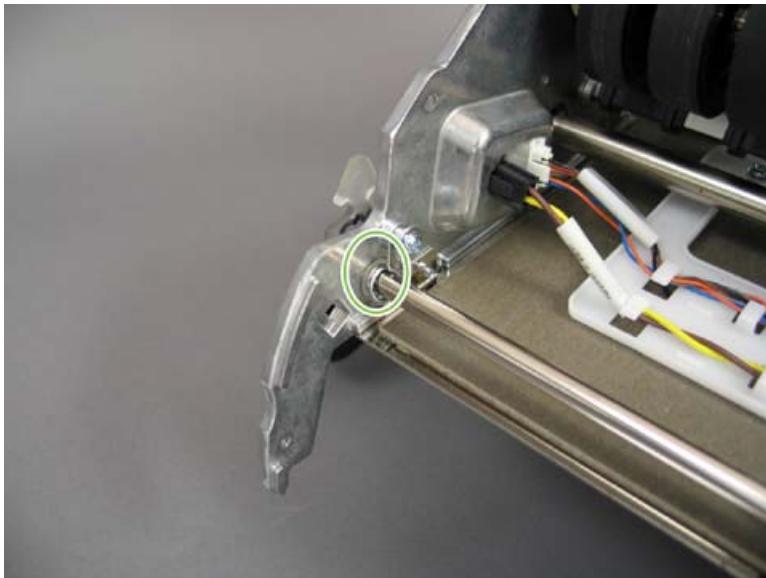
5. On the gear side of the RM, remove one screw, and then remove one of the curler latches.



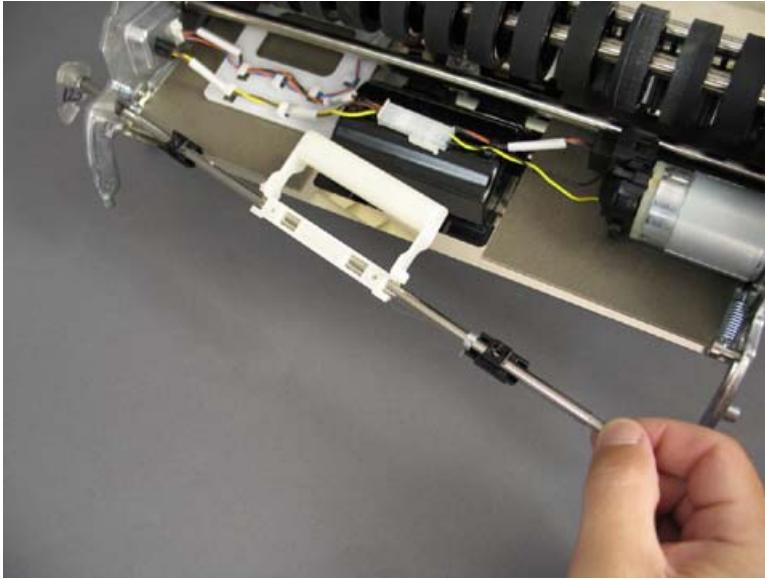
6. Remove two screws on the handle.



7. Release the spring on the back of the latch.



8. Remove the handle rod.



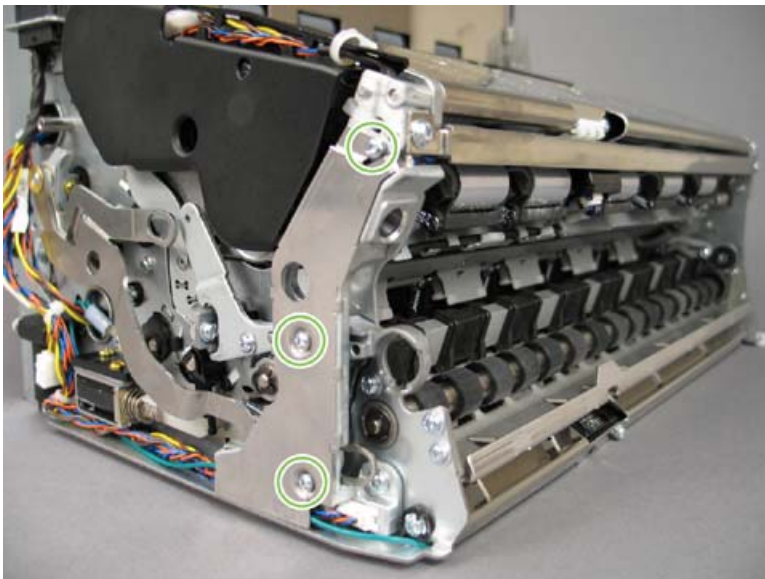
9. Remove the handle.

Input guide assembly

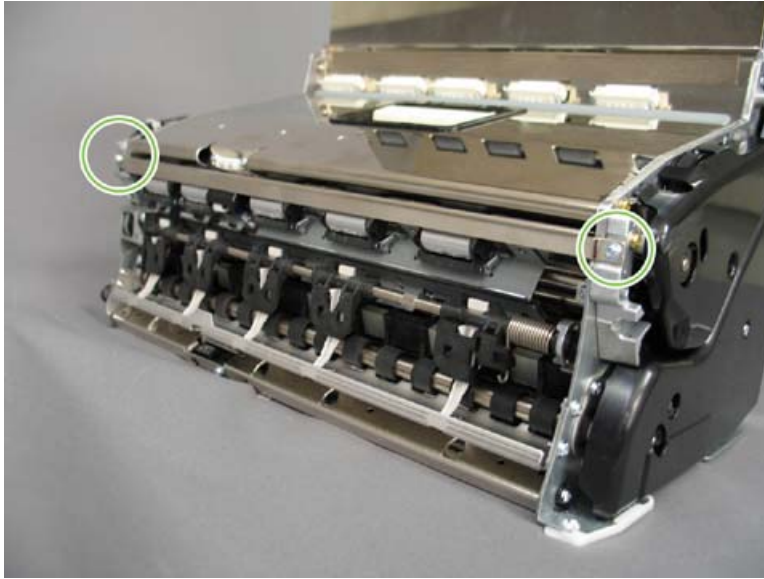
1. Remove the curler assembly.

[Curler assembly on page 424](#)

2. Remove three screws on the datum cover, and then remove the datum cover.



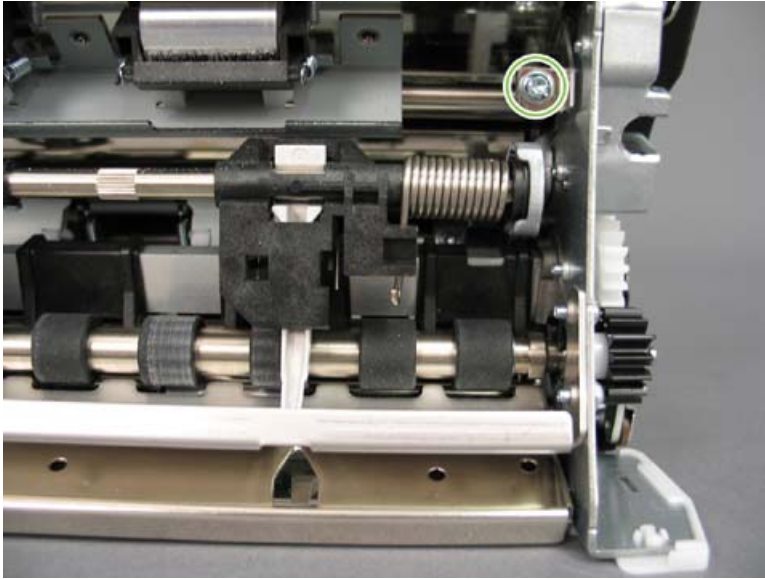
3. Remove two screws from the front of the input guide assembly.



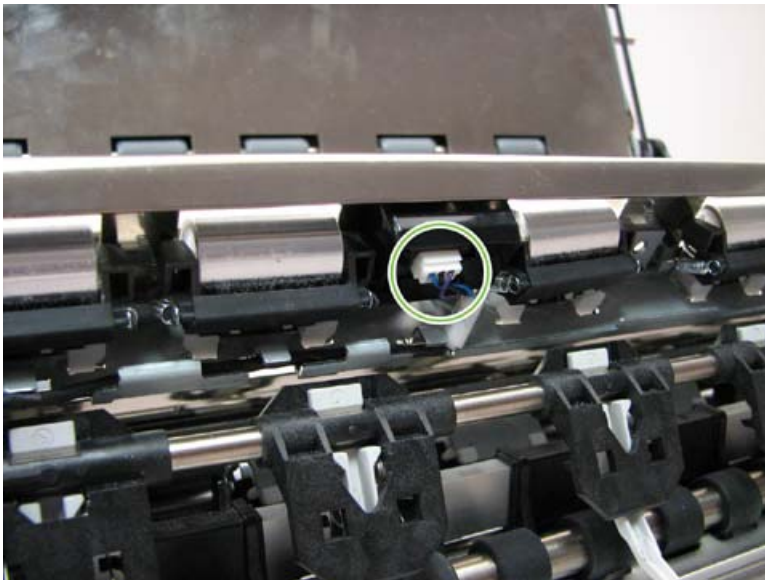
4. Remove one screw from the front side.



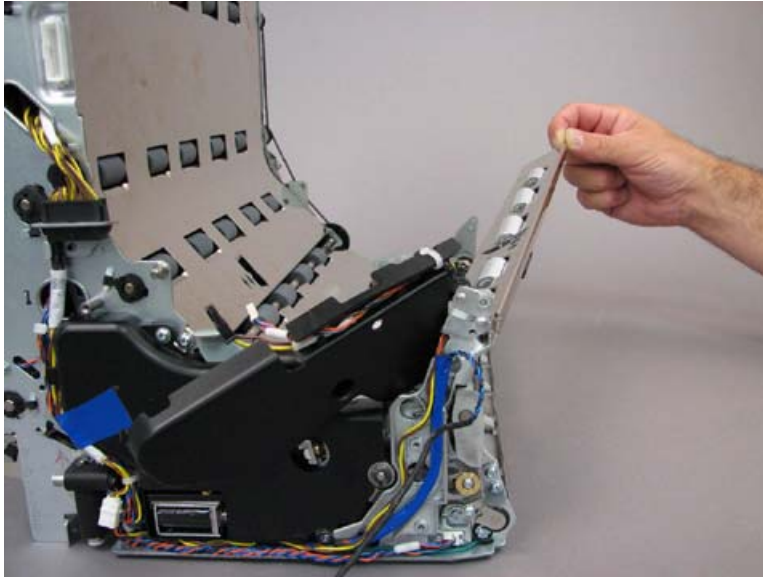
5. Remove one screw.



6. Disconnect, and then unthread and remove SN8.

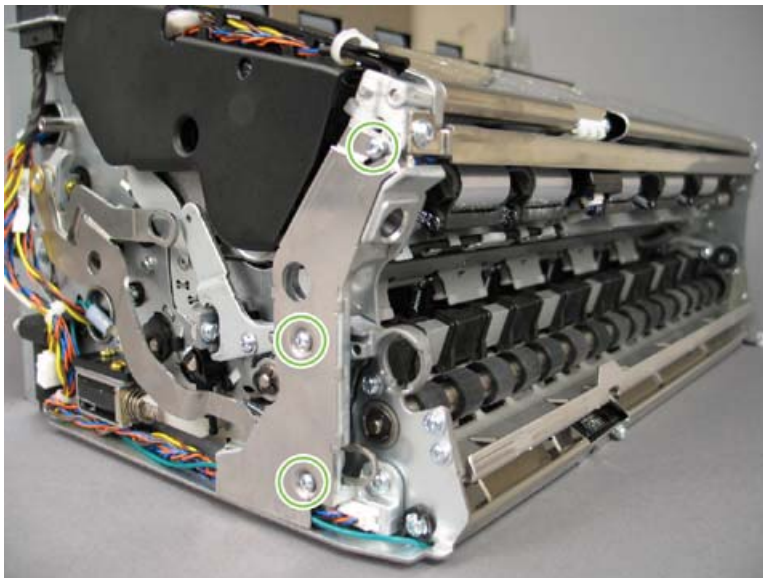


7. Remove the input guide assembly.

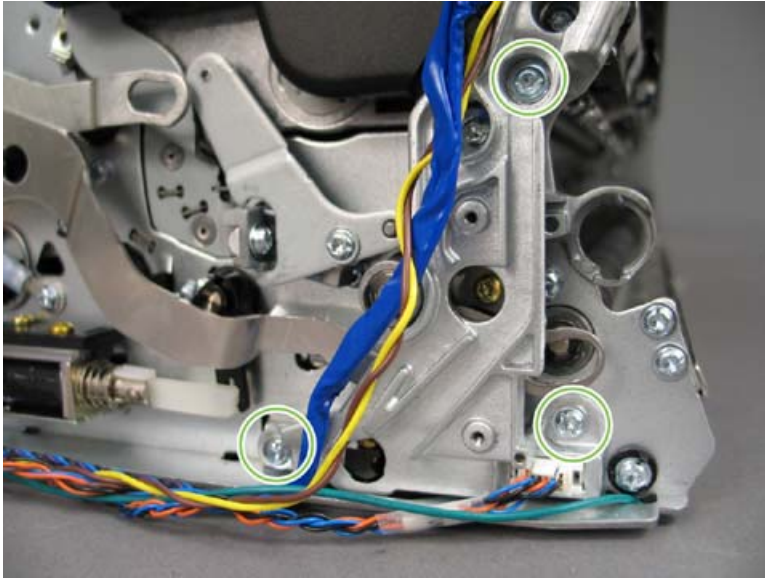


IDO handle 2 assembly

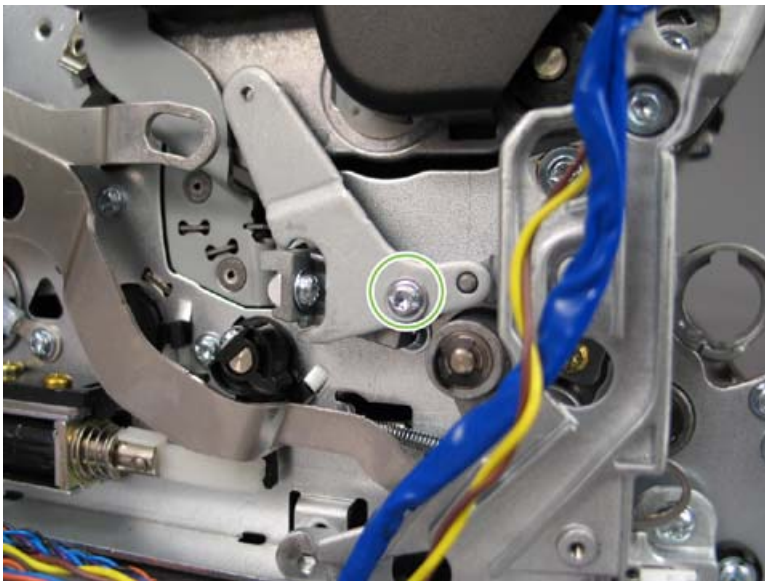
1. Remove the curler assembly.
[Curler assembly on page 424](#)
2. Remove one screw, and then remove the front side cover.
[IDO front cover on page 403](#)
3. Remove three screws on the datum cover, and then pry off the datum cover.



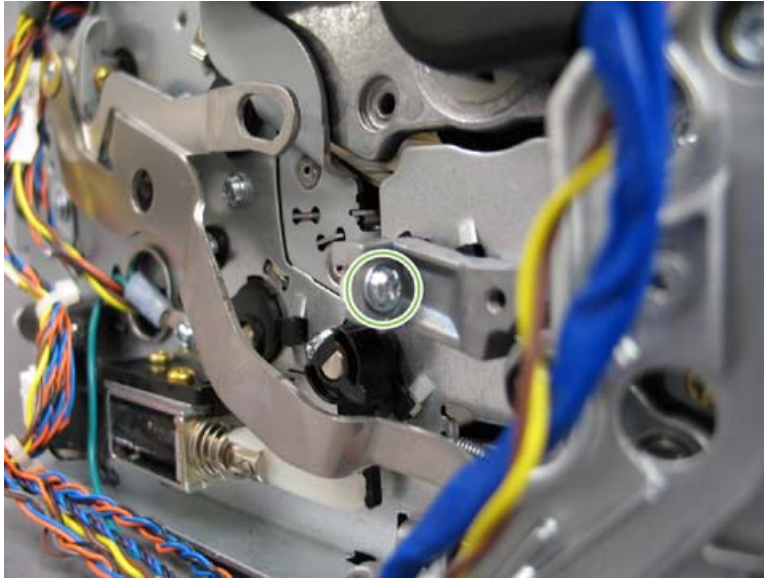
4. Remove three screws on the datum, and then loosen the datum.



5. Disconnect the wire connector on the datum.
6. Remove one screw on the left drive arm link, and then remove the link.



7. Remove one screw, and then remove the pivot arm.



8. Remove one hinge screw on the rear side, remove one hinge screw on the front side, and then lift out the handle 2 assembly.

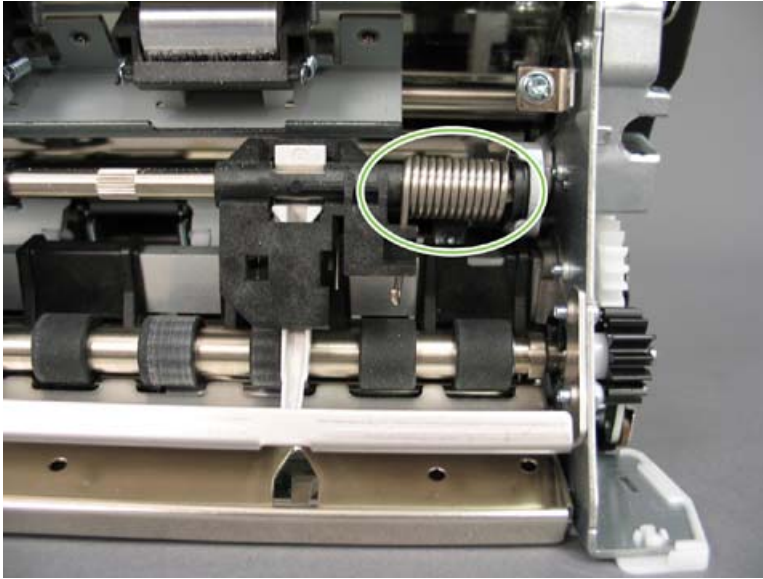
IDO media eject

- [Media-eject drive arm](#)
- [Media-eject diverter shaft](#)
- [Media-eject fingers assembly](#)
- [Media-eject guide upper](#)
- [Media-eject pivot arm shaft](#)
- [Diverter upper guide assembly](#)
- [IDO Diverter solenoid \(SOL2\)](#)

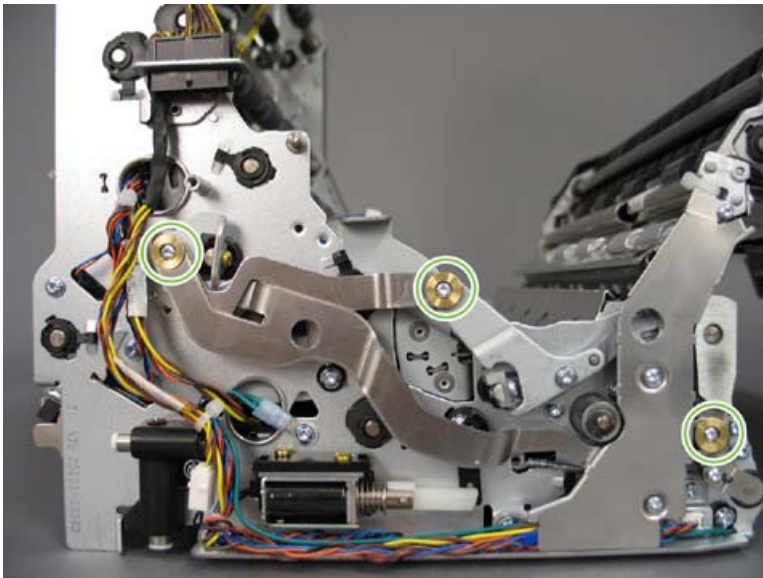
Media-eject drive arm

1. Remove the IDO RM.
[IDO removable module \(IDO RM\) on page 400](#)
2. Remove one screw, and then remove the front side cover.
[IDO front cover on page 403](#)

3. Release the spring on the right side of the media-eject fingers assembly.



4. Remove three screws and three bushings on the media-eject pivot arms.



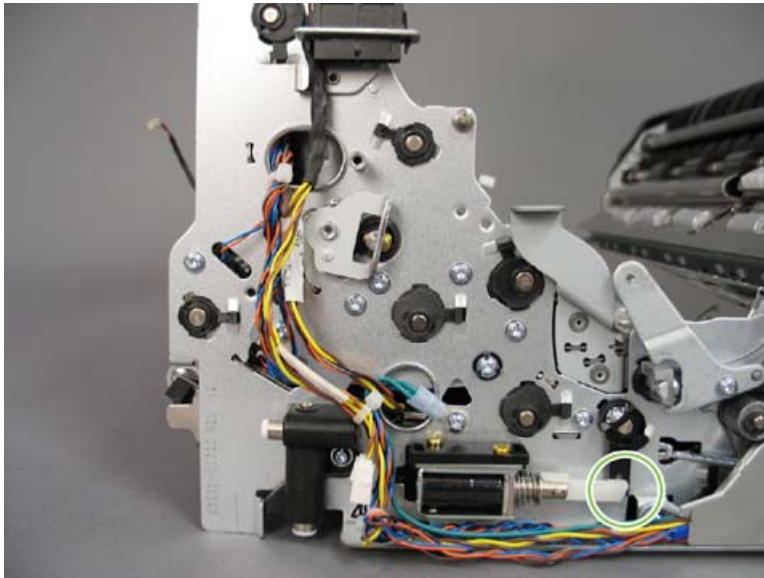
5. Remove the pivot arms, and then remove the drive arm.

Media-eject diverter shaft


1. Remove the IDO RM.
[IDO removable module \(IDO RM\) on page 400](#)
2. Remove the pinch roller guide assembly.
[Pinch roller guide assembly on page 410](#)
3. Remove one screw, and then remove the front side cover.

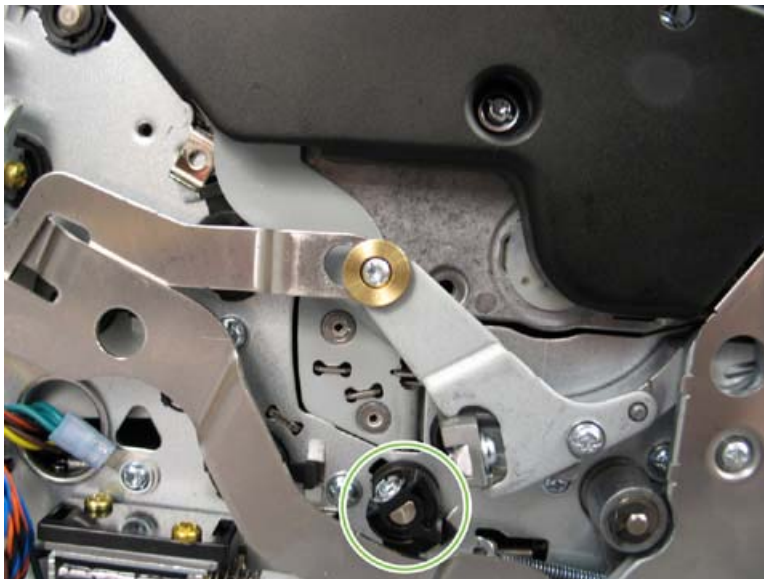
[IDO front cover on page 403](#)


4. Unsnap the IDO Diverter solenoid (SOL2) arm from the diverter shaft linkage.



5. Remove one screw on the media-eject pivot arm, and then remove the pivot arm so that the media-eject diverter rod yoke is exposed.

 **NOTE:** The pivot arm and diverter shaft can be removed more easily by releasing the rear yoke first, and then prying the pivot arm off and removing the yoke on the front end.



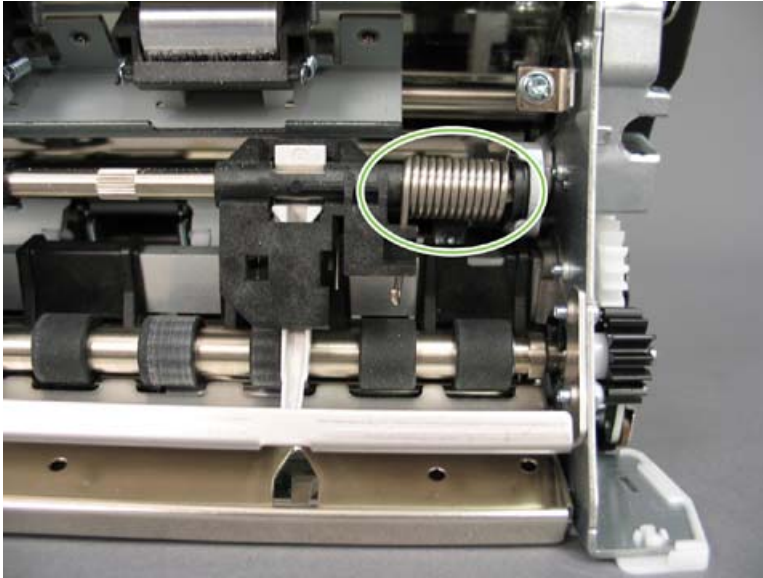
 **Reinstallation tip** Holding a small, flat-bladed screwdriver between the yoke diverter and the bearing yoke will prevent the diverter yoke from rotating while the screw is tightened. Verify proper operation by pulling the diverter solenoid plunger back into its housing and then letting it go. If the spring pushes it out, allowing the diverter to travel its full range of motion, the diverter yoke is properly positioned on the shaft.

6. Rotate the yokes on both ends to the release position.

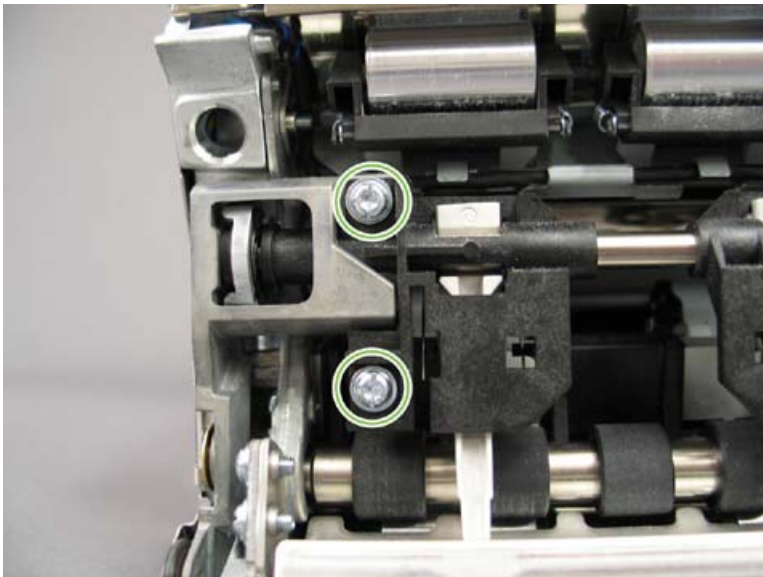
7. Lay the RM on the duplexer door.
8. Remove the diverter rod.

Media-eject fingers assembly

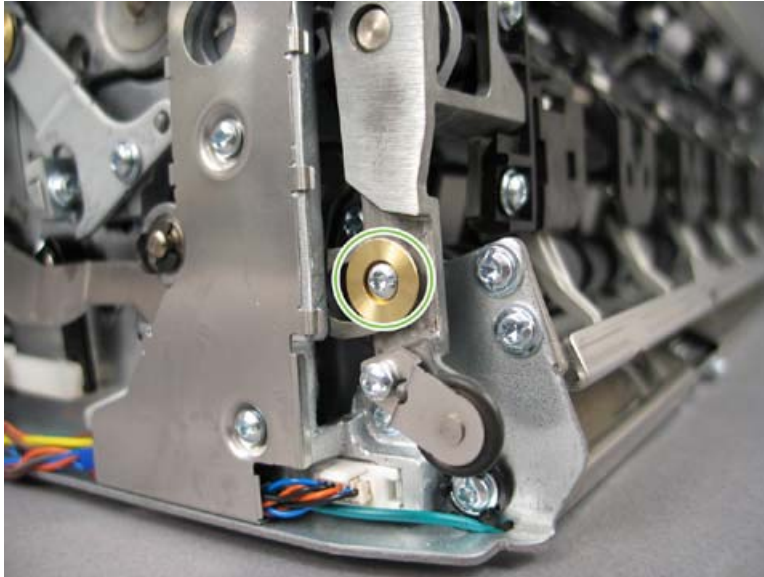
1. Remove the IDO RM.
[IDO removable module \(IDO RM\) on page 400](#)
2. Release the spring on the right of the media-eject fingers assembly.



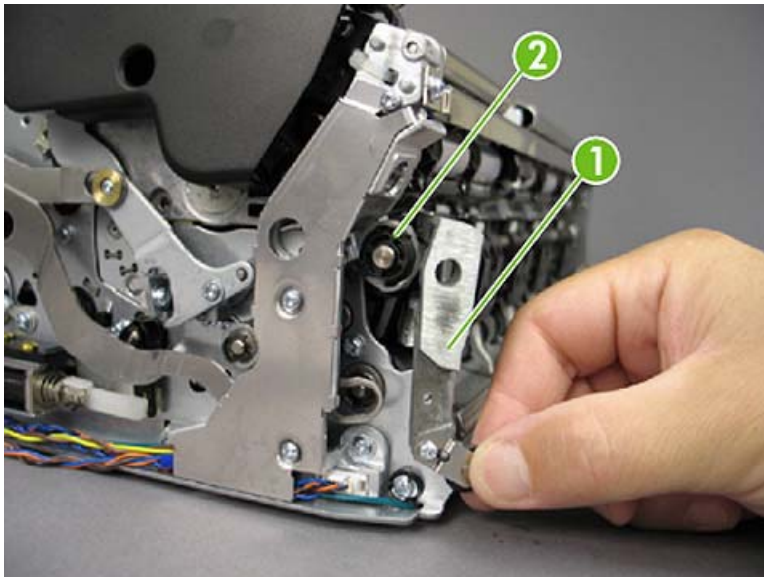
3. Remove two screws from the front of the assembly.



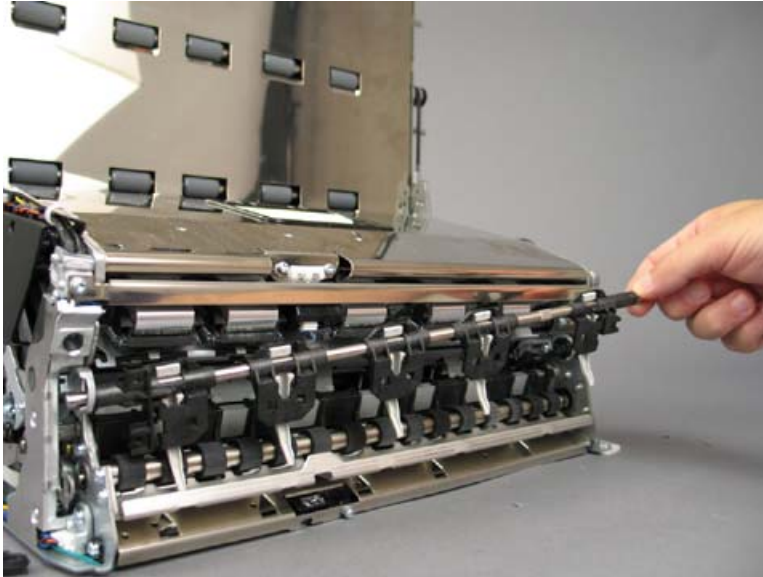
4. Remove the screw that secures the assembly to the media-eject drive arm.



5. Remove the drive arm connector (callout 1), and then turn the yoke (callout 2) to the release position and remove the yoke.

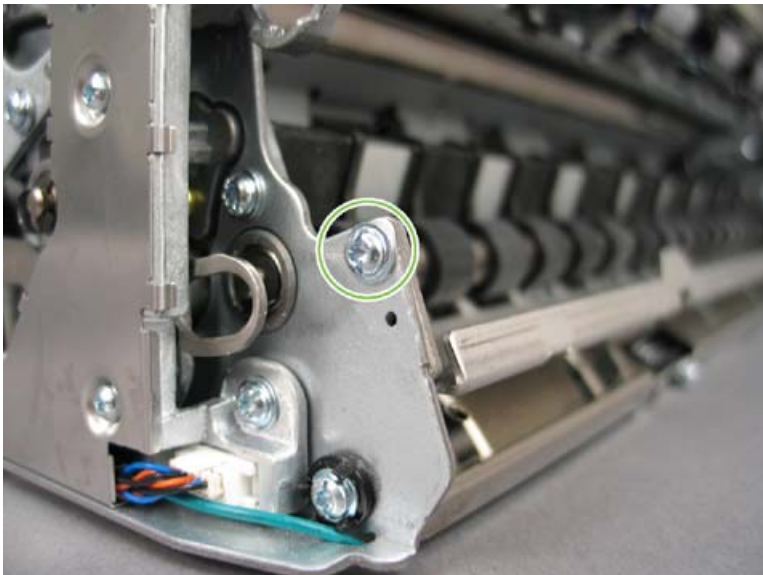


6. Push the media-eject fingers assembly to the left, and then remove the assembly.

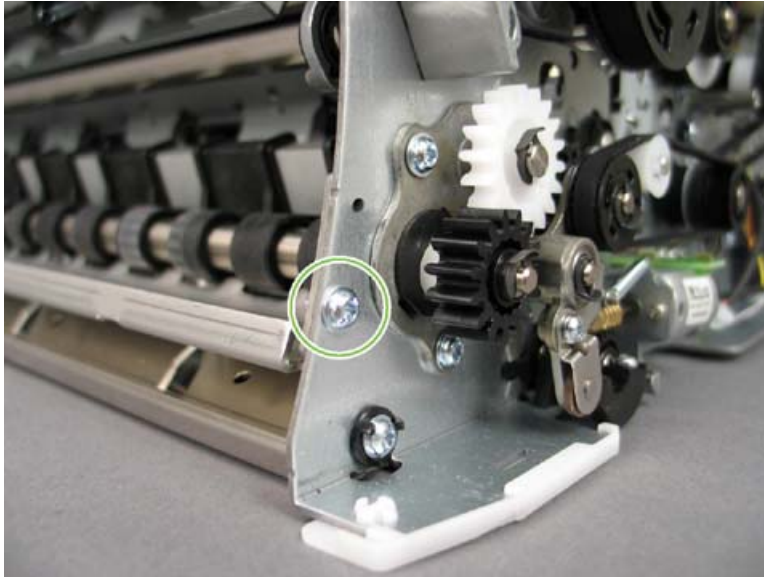


Media-eject guide upper

1. Remove the IDO RM.
[IDO removable module \(IDO RM\) on page 400](#)
2. Remove the media-eject fingers assembly.
[Media-eject fingers assembly on page 448](#)
3. Remove one screw on the left side of the guide.



4. Remove one screw on the right side of the guide.

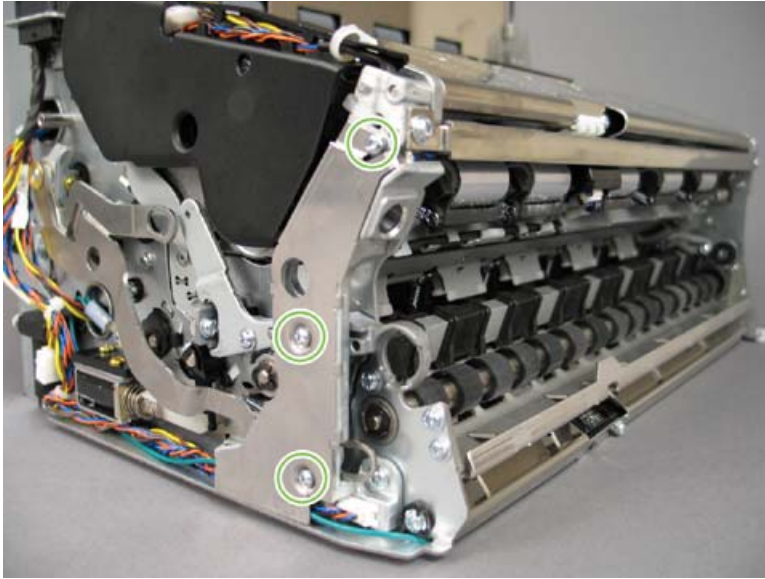


Media-eject pivot arm shaft

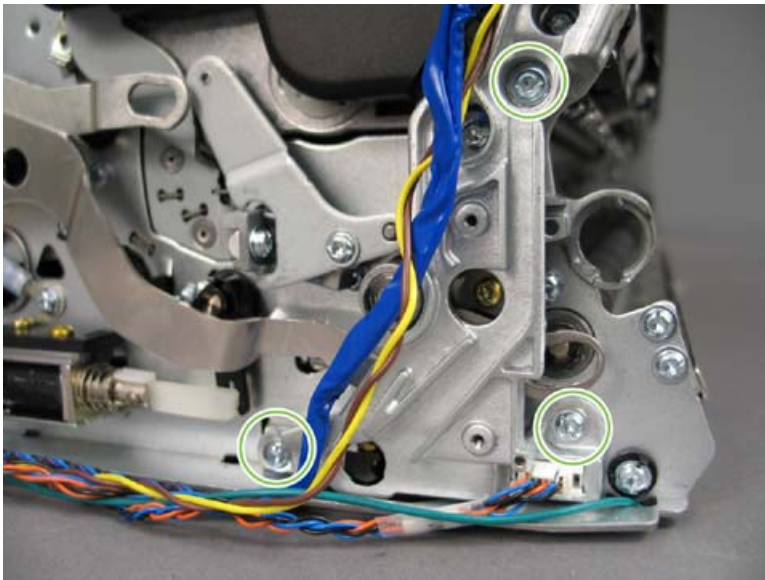
1. Remove the IDO RM.
[IDO removable module \(IDO RM\) on page 400](#)
2. Remove the media-eject fingers assembly.
[Media-eject fingers assembly on page 448](#)
3. Remove one screw on the media-eject drive arm.



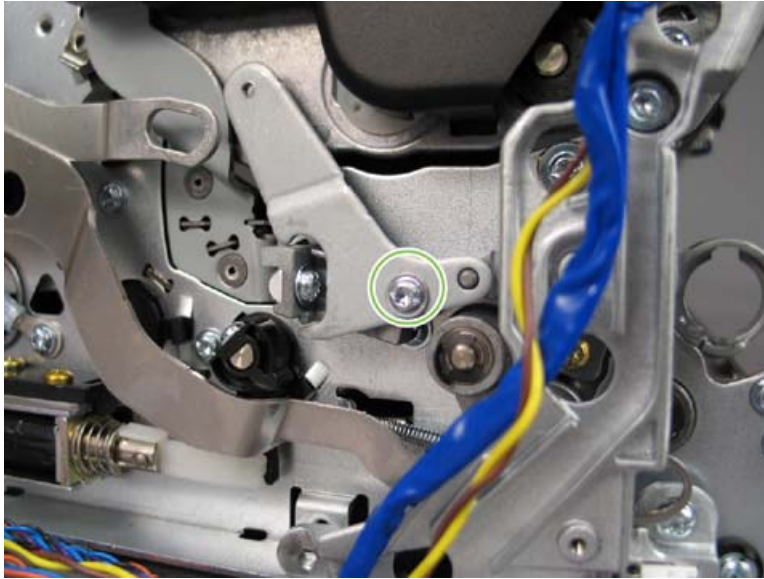
4. Remove three screws on the datum cover, and then remove the datum cover.



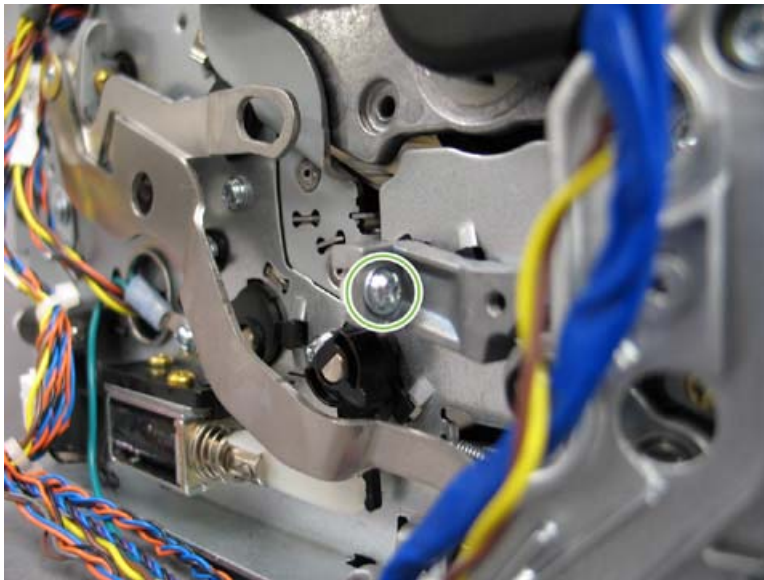
5. Remove three screws on the datum, and then loosen the datum.



6. Remove one screw on the left drive arm link, and then remove the link.

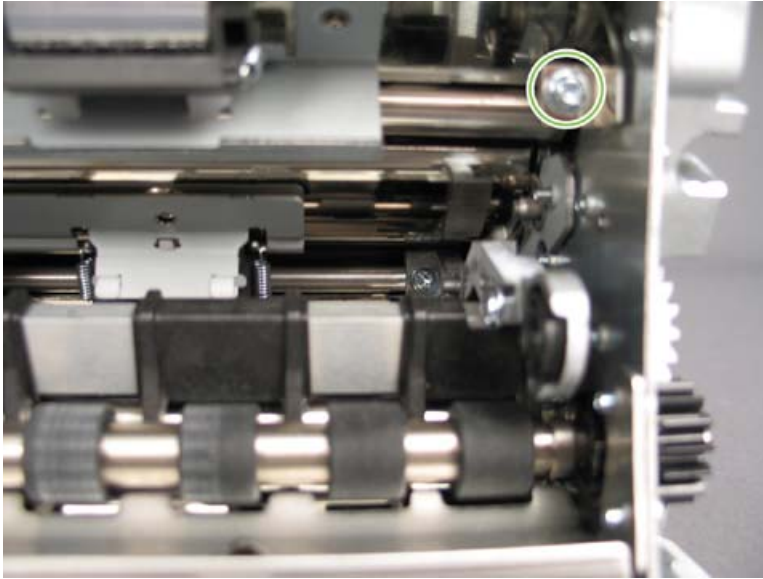


7. Remove one screw, and then remove the pivot arm.



8. Turn the yoke to the release position, and then remove the yoke.

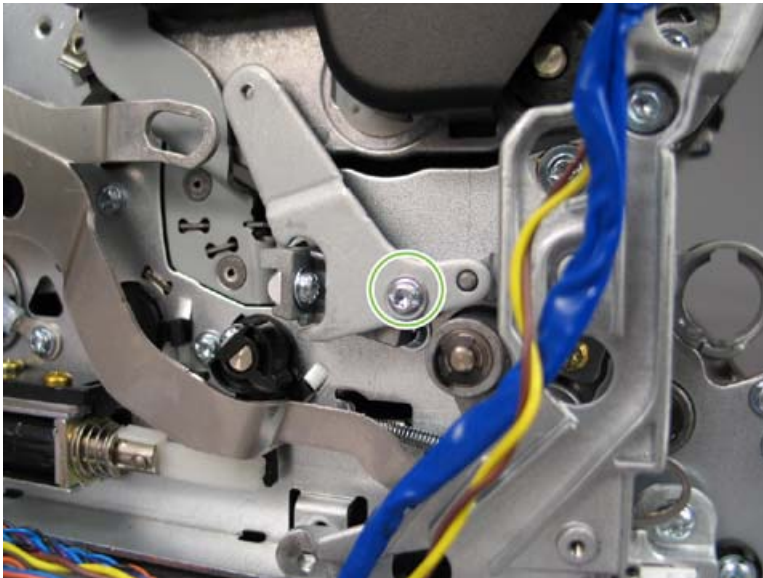
9. In the interior of the RM, remove one screw on the right drive arm, and then remove the drive arm.



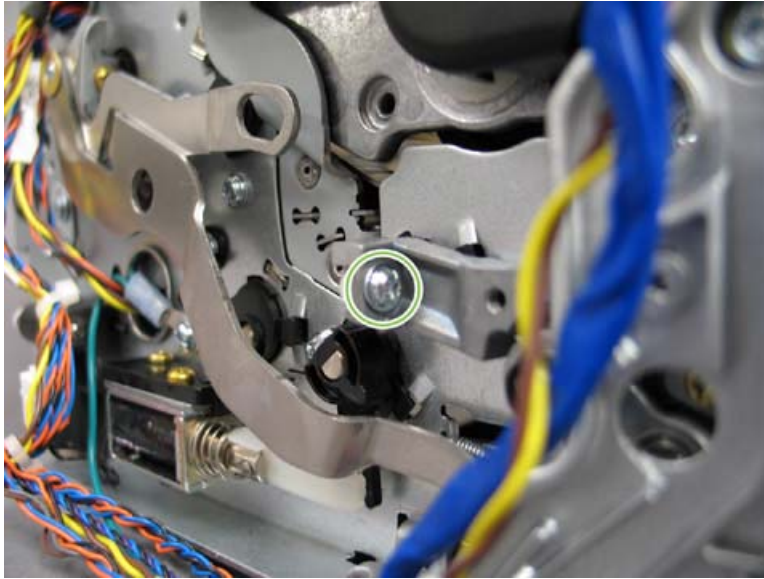
10. Pull the shaft out of the left side of the RM.

Diverter upper guide assembly

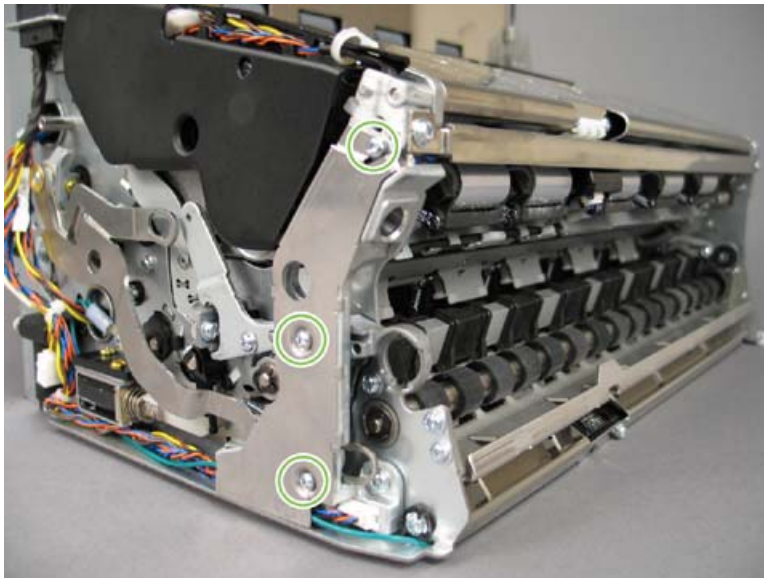
1. Remove one screw on the left drive arm link, and then remove the link.



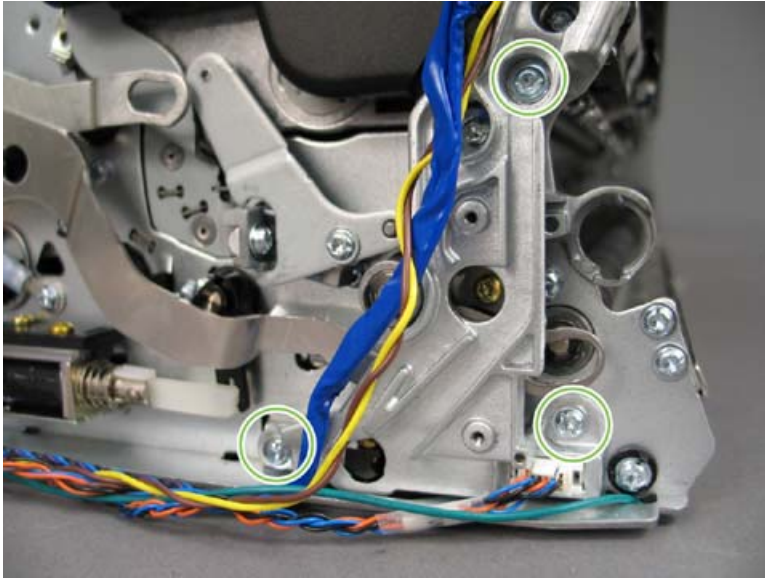
2. Remove one screw, and then remove the pivot arm.



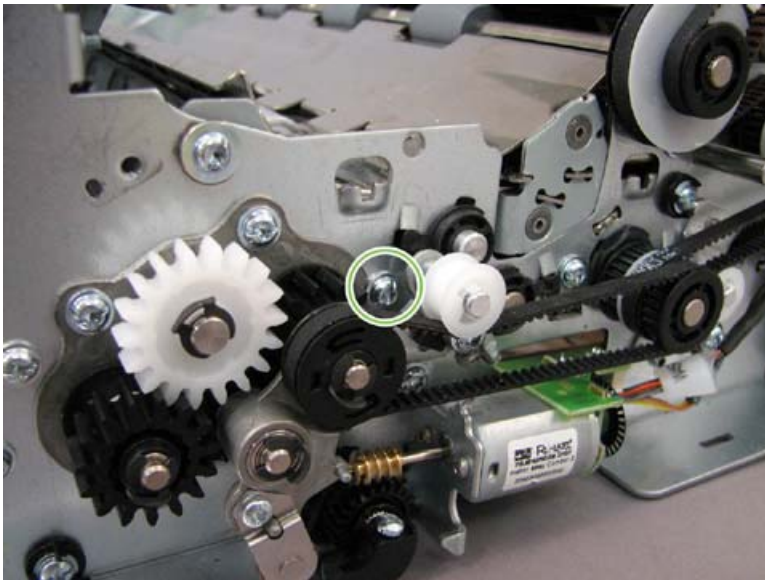
3. Remove three screws on the datum cover, and then pry off the datum cover.



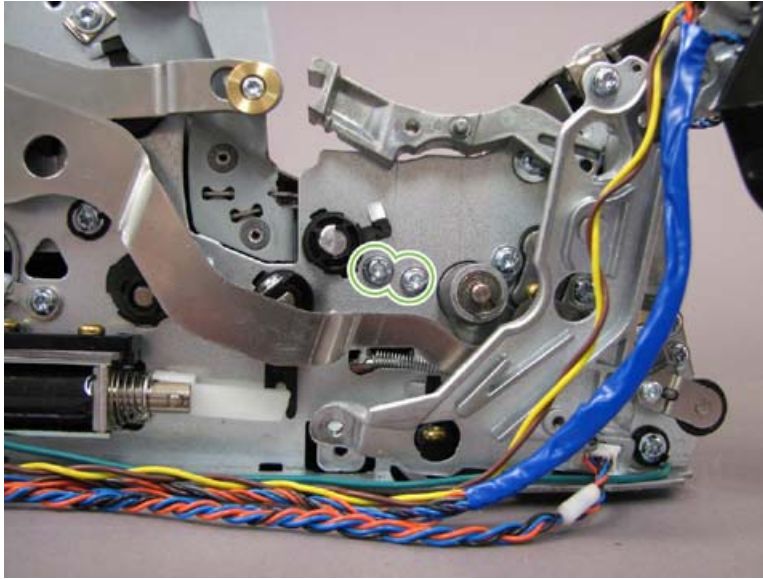
4. Remove three screws on the datum, and then remove the datum.



5. Remove one screw from the rear side.



6. Remove two screws from the front side.



7. Remove one screw from the shaft arm.



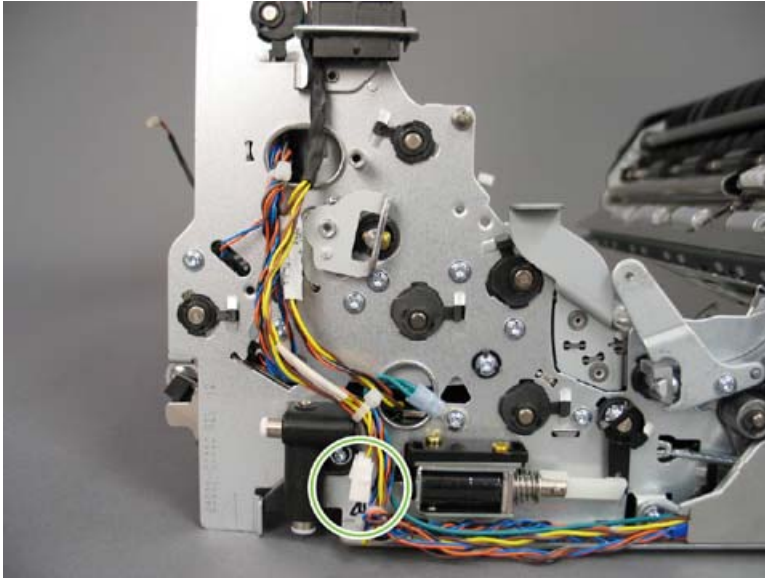
8. Remove the retaining clip from the other end of the shaft, slide the shaft out the front side, and then remove the diverter upper guide.

IDO Diverter solenoid (SOL2)

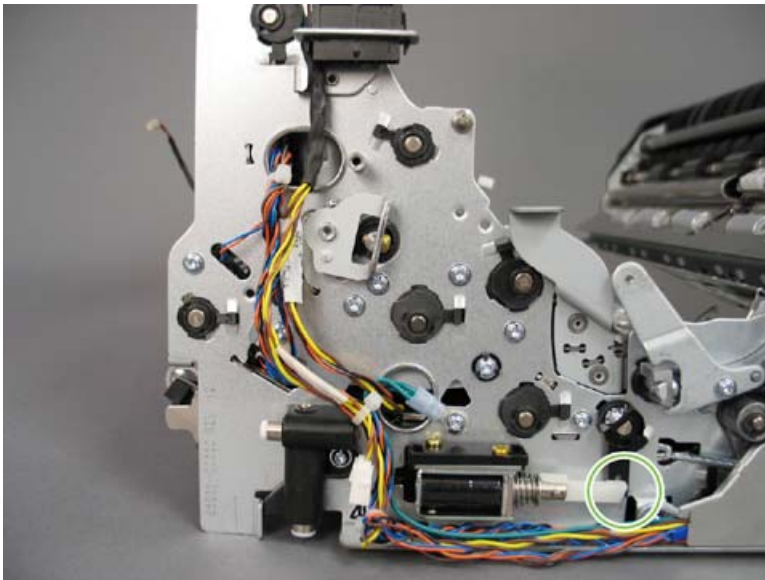
1. Remove one screw, and then remove the front side cover.

[IDO front cover on page 403](#)

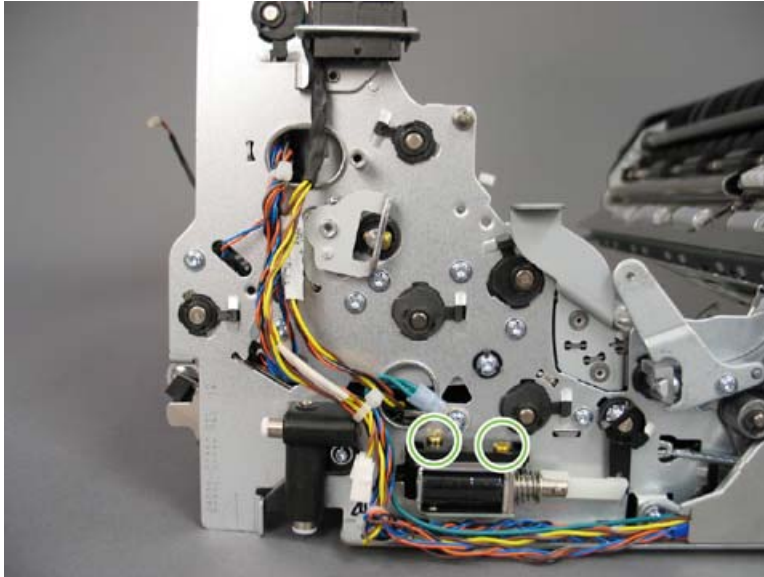
2. Disconnect one wire connector.



3. Unsnap the solenoid arm from the diverter shaft linkage.



4. Remove two screws, and then remove SOL2.



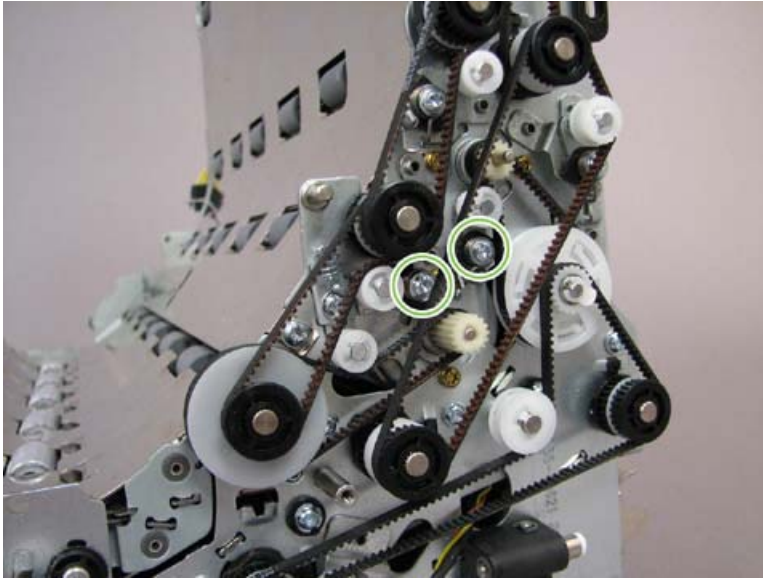
Duplex inner short damper


1. Remove the media-eject drive arm.

[Media-eject drive arm on page 445](#)

△ **CAUTION:** When the arm is removed, the media-eject fingers move to an extended position. The fingers are very sharp.


2. On the rear side, loosen two tensioners, and then remove two belts from the input drive roller.



 **Reinstallation tip** Before the final tightening of the tensioner screws, perform the following steps any time a belt is installed during a service activity:

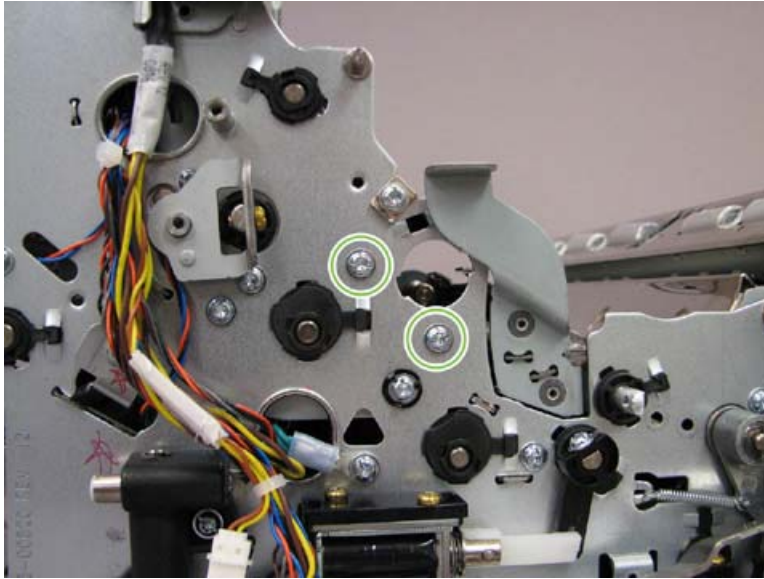
- a. Install all of the belts.
- b. Activate all tensioner spring arms.
- c. Turn the motor pulley by hand a few turns to balance the belts.

3. Rotate the two yokes on the input drive roller, and then remove the input drive roller.

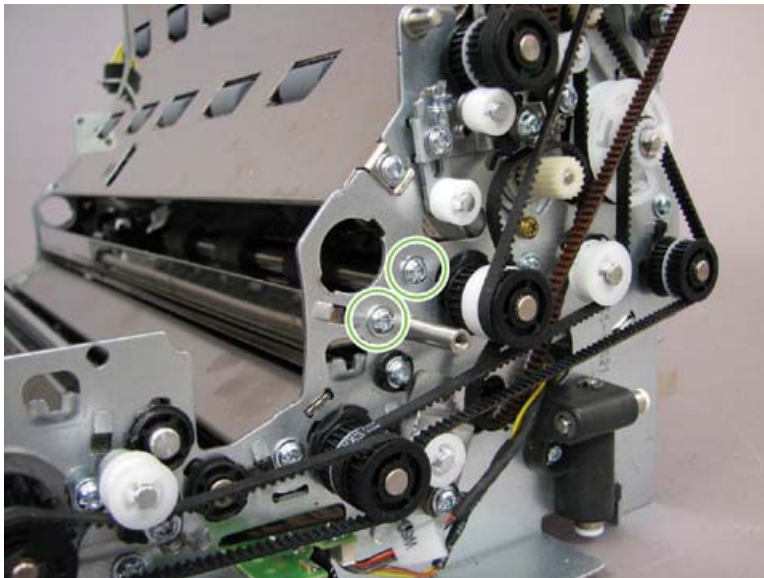
 **NOTE:** On the gear side of the input drive roller, the yoke tab is under the gear and is difficult to see. Rotate the tab clockwise to loosen.



4. Remove two screws on the front side.



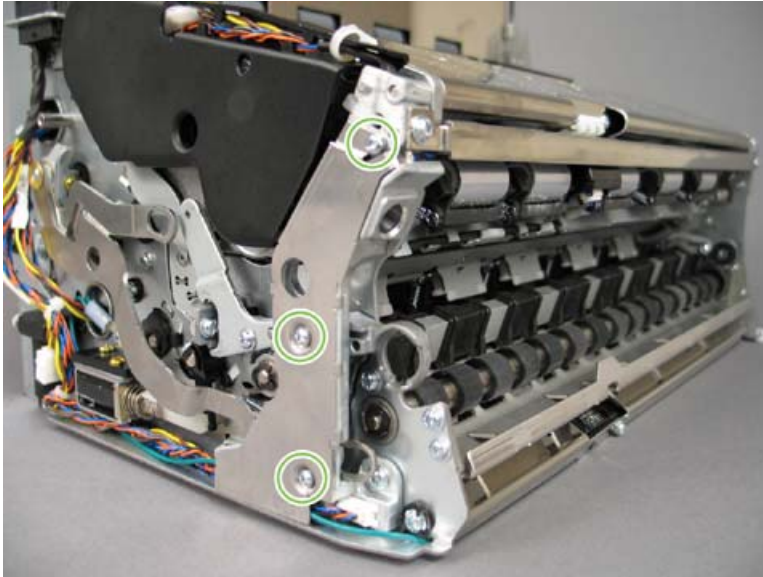
5. Remove two screws on the rear side, and then lift out the damper.



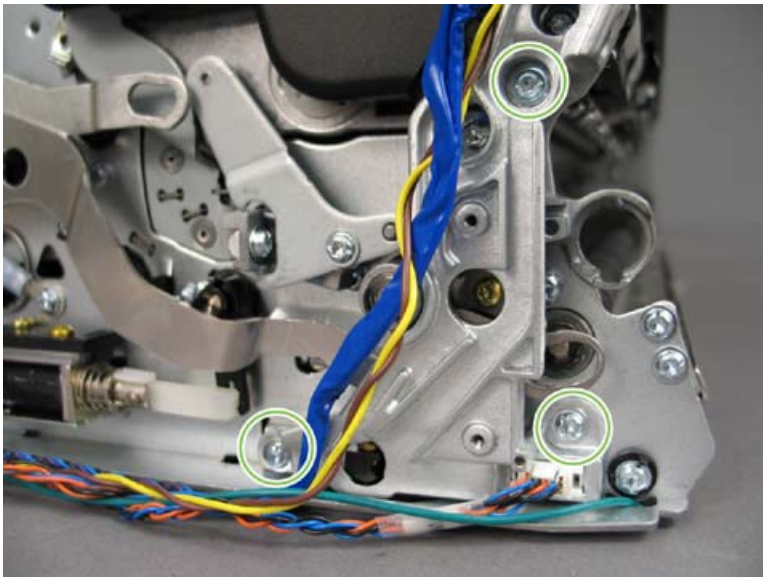
IDO decurler assembly

1. Remove the curler assembly.
[Curler assembly on page 424](#)
2. Remove one screw, and then remove the front side cover.
[IDO front cover on page 403](#)
3. Disconnect two wire connectors: W45P2-W87J2 and W19P1-W86J1.

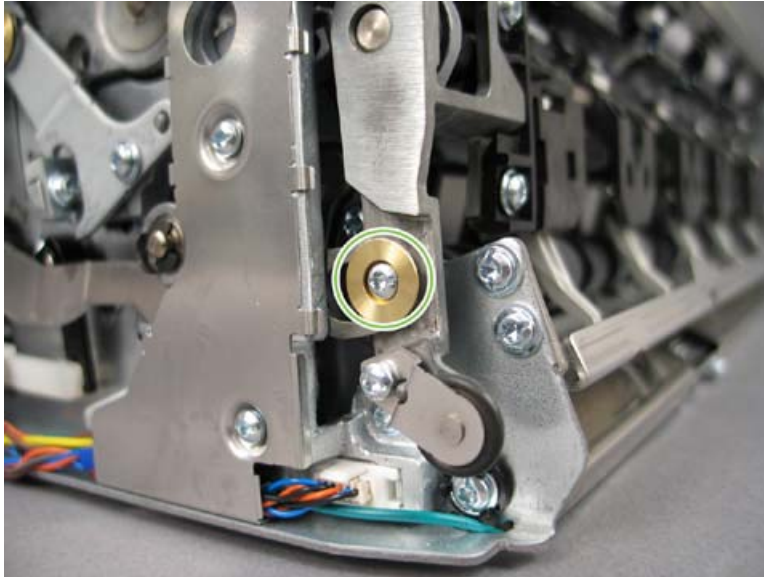
4. Remove three screws on the datum cover, and then pry off the datum cover.



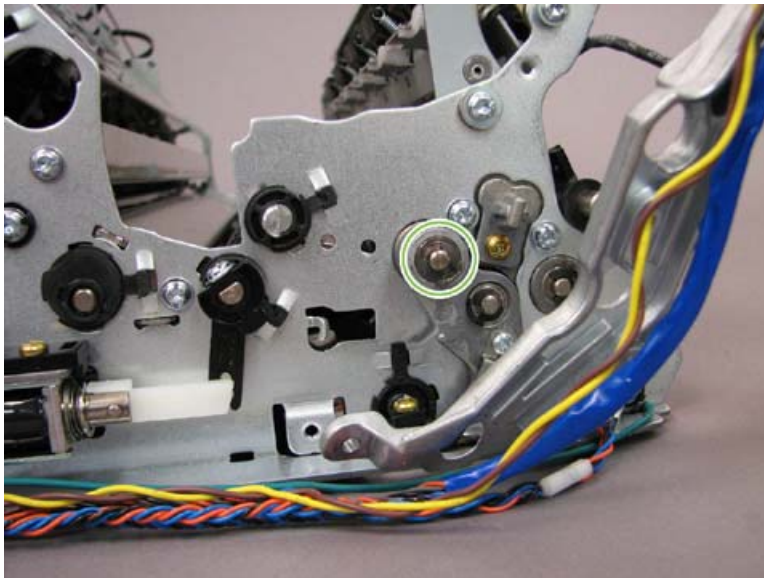
5. Remove three screws on the datum, and then loosen the datum. Remove the screw at the top of the datum that connects it to the input guide.



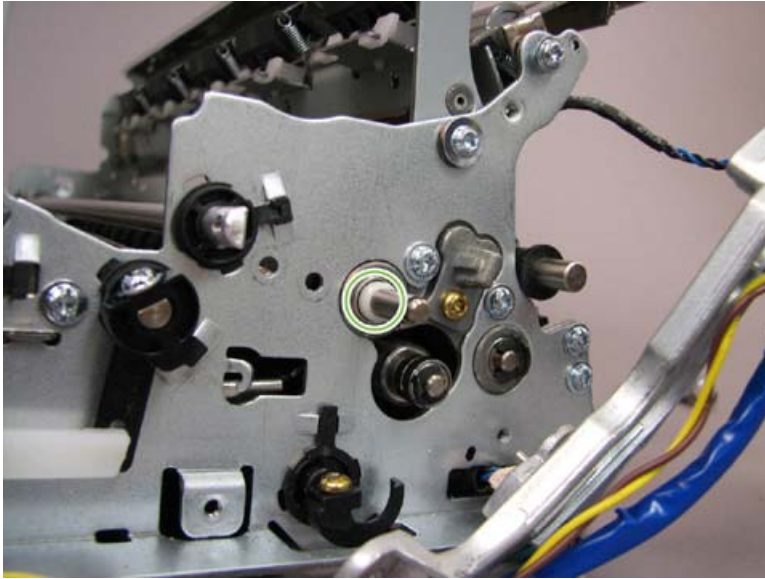
6. Remove one screw, and then remove the far-right media-eject bushing.




7. Remove one retaining clip, and then remove the front decurler cam follower.

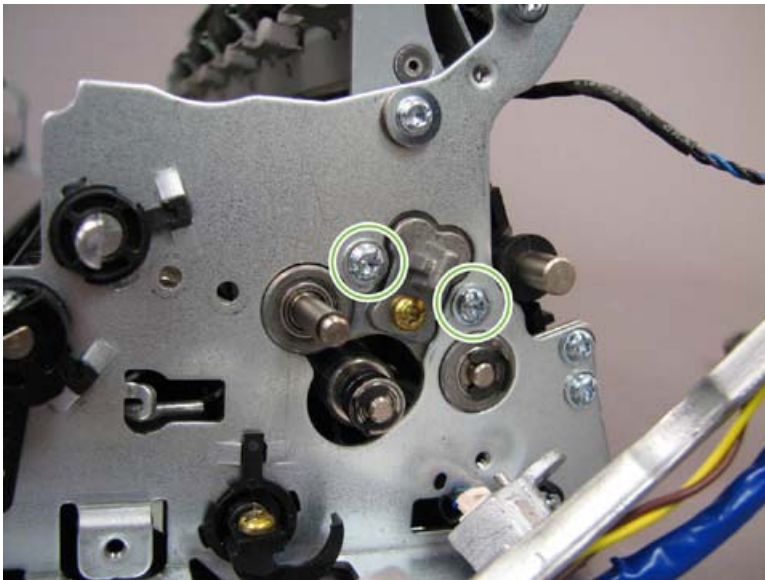


8. Remove one bearing and spacer.

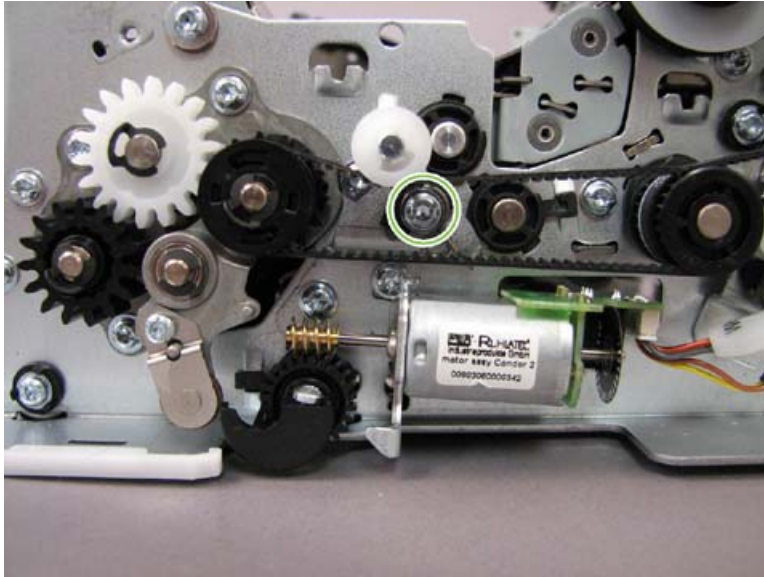


 **Reinstallation tip** The spacer has a profile with one flat side and one rounded side. The flat side should face the bearing.

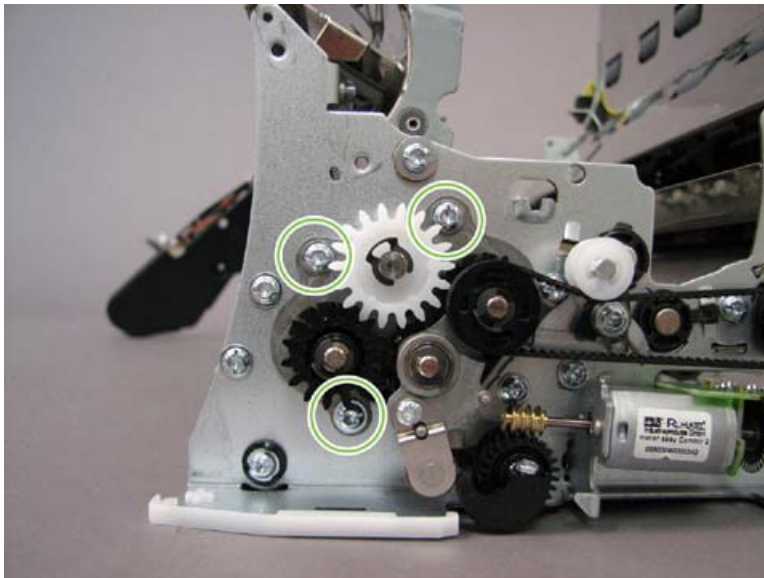
9. Remove two screws.



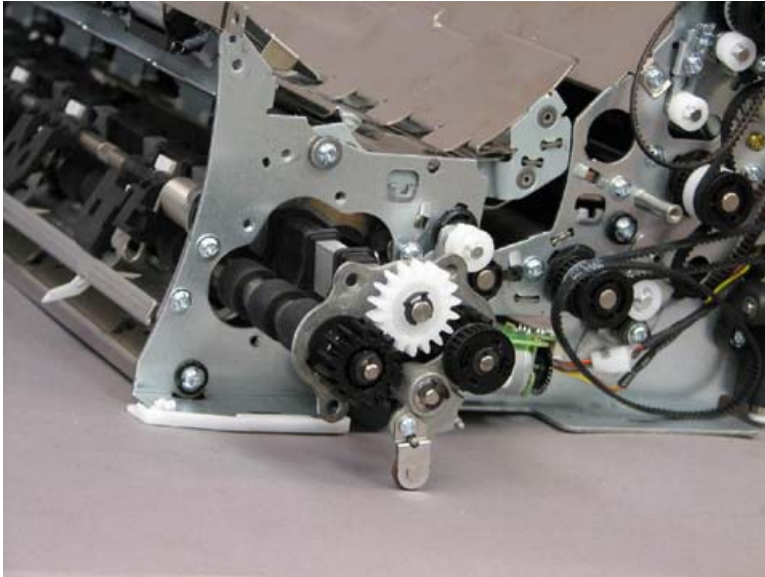
10. From the rear, loosen the tensioner and remove the drive belt.



11. Remove three screws.

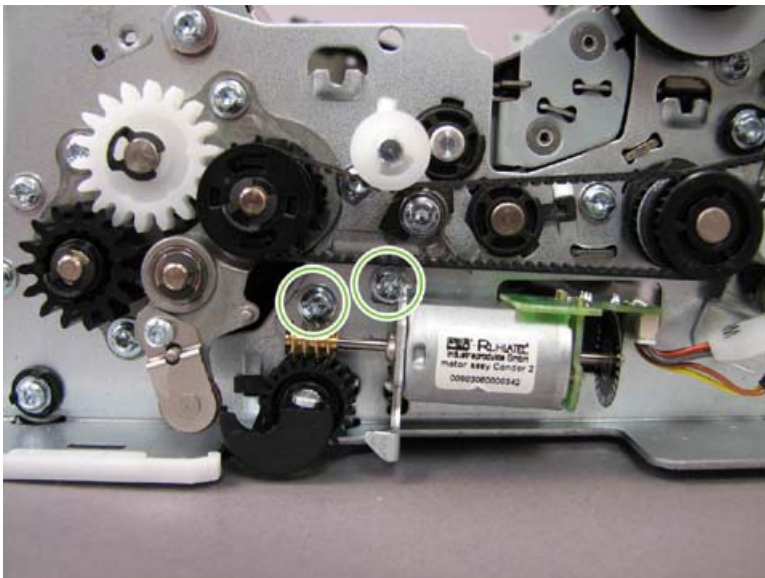


12. Slide out the decurler assembly.

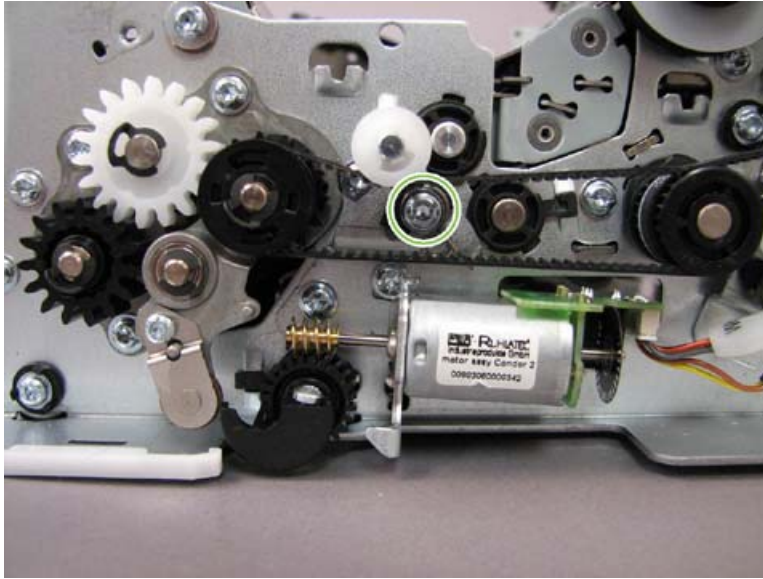


Decurler cam shaft assembly

1. Remove the IDO RM.
[IDO removable module \(IDO RM\) on page 400](#)
2. Remove IDO rear cover.
[IDO rear cover on page 403](#)
3. Remove two screws.




4. Loosen one belt tensioner screw, and then remove the belt.



5. Disconnect one wire connector (W45P16-EN16M17) from the IDO Decurler motor (M17).
6. Lay the RM on the duplexer door.

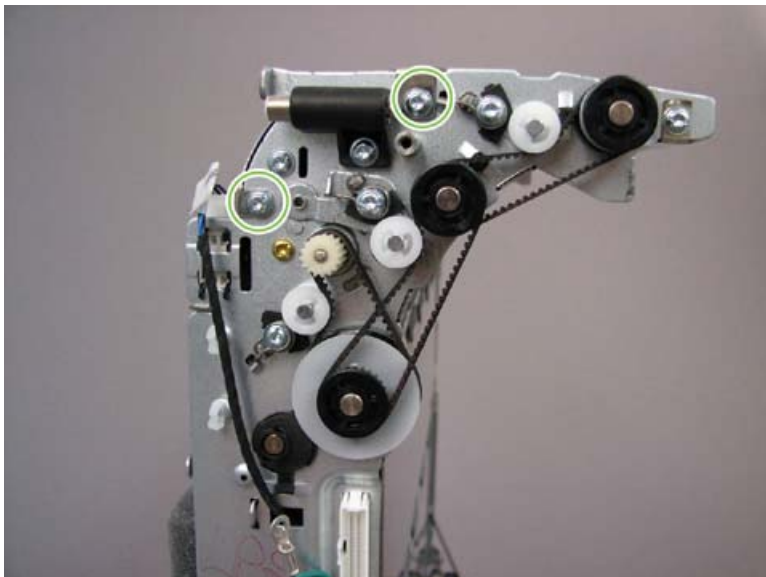
7. Remove one screw, and then slide off the side decurler cam.



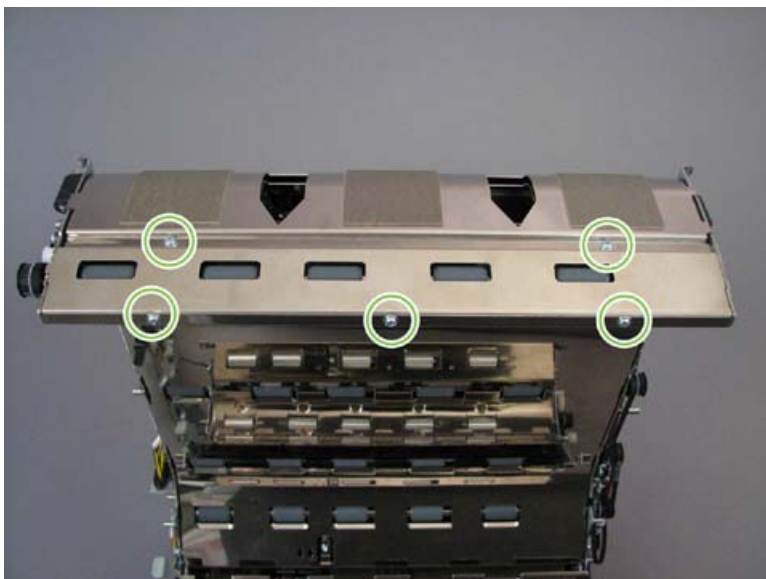
-
-  **Reinstallation tip** Use the following procedure to prevent over-tightening the decurler cam:
- a. Tighten the screw on the cam at the end of the shaft.
 - b. Visually check for binding against the eject finger mechanism.
 - c. Reinstall the IDO, and then select the eject finger button in CDFT to eject the finger completely to the operating position.
 - d. With the eject fingers fully extended, cycle the decurler assembly and check for binding with the cam.
-
8. From the rear of the IDO, slide out the decurler cam shaft assembly with M17 attached.

Duplex upper outer guide

1. Remove six screws (two on each side and two on top).



2. Disconnect the Left-side Middle Panel sensor (SN13).
3. Remove five screws from the guide in front.



4. Lift off both guides.

IDO door

- [IDO H-bar damper](#)
- [IDO Interlock solenoid \(SOL3\)](#)
- [IDO H-bar interlock](#)

IDO H-bar damper

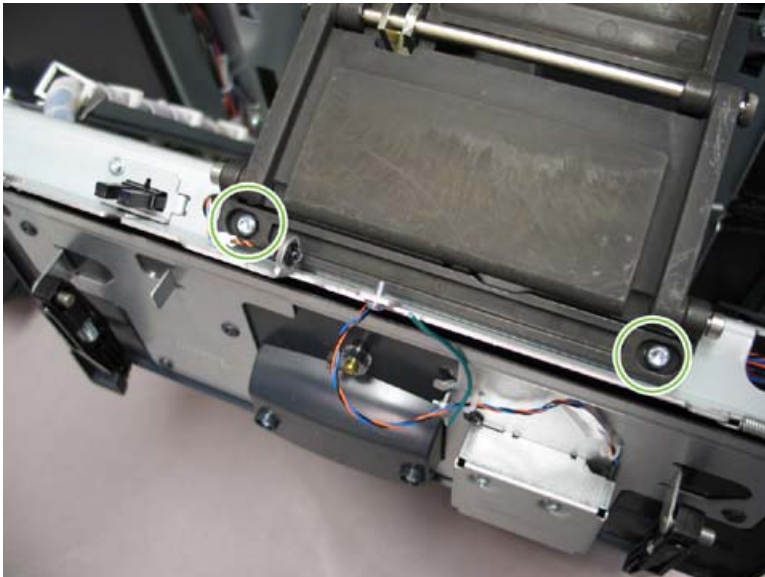
1. Remove the IDO RM.

[IDO removable module \(IDO RM\) on page 400](#)

2. Disconnect the output bin LED (LED14) wire connector.



3. Support the IDO H-bar assembly with one hand and remove the two screws that connect the hinge to the IDO H-bar.




4. Remove the two screws that connect the hinge to the MFP.



5. Remove the c-clamp that secures the damper to the MFP.



6. Remove the IDO H-bar damper.

 **Reinstallation tip** For proper jam clearance, be careful not to install the gas spring of the H-bar damper upside down.

IDO Interlock solenoid (SOL3)

1. Open the IDO.
2. Disconnect the SOL3 wire connector.

3. Remove two screws, and then remove SOL3.



4. Remove the solenoid arm.



IDO H-bar interlock

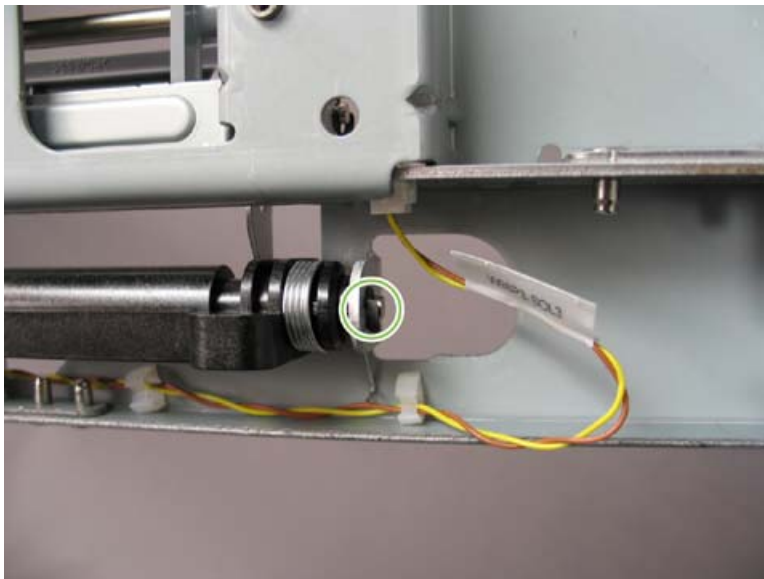
1. Open the IDO.
2. Remove the IDO Interlock solenoid (SOL3).

[IDO Interlock solenoid \(SOL3\) on page 471](#)

3. Remove one c-clamp from each of the handle rods.



4. Remove the rods, and then remove the handle.
5. Remove the c-clamp from the latch.



6. Remove the latch rod, and then remove the latch assembly.

IDO H-bar assembly

1. Remove the following items:
 - IDO cover
[IDO cover on page 214](#)
 - Left side middle panel
[Left-side lower panel on page 215](#)
 - IDO removable module (IDO RM)
[IDO removable module \(IDO RM\) on page 400](#)
 - IDO H-bar damper
[IDO H-bar damper on page 470](#)
2. Disconnect and remove all wire harnesses from the H-bar assembly.
3. Remove two hinge screws from the bottom pivot point of the assembly, and then remove the H-bar assembly.



IDO printer interface

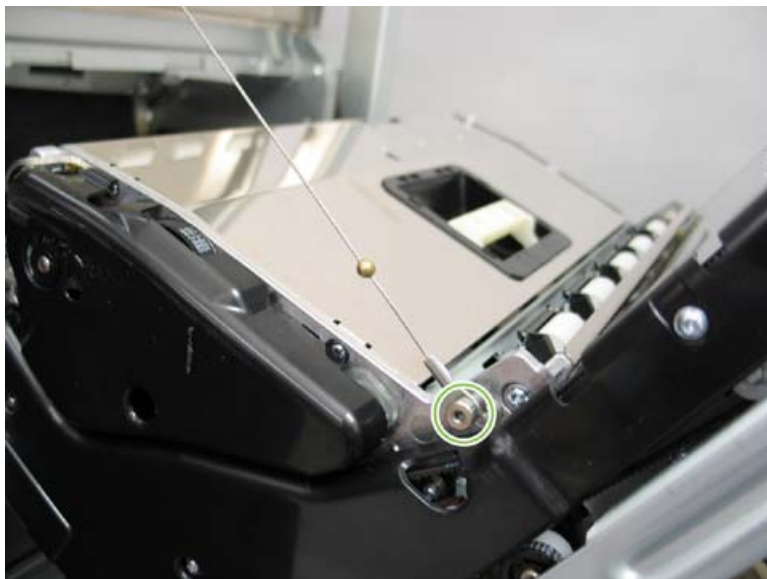
- [Printer interface assembly](#)
- [Printer interface paper guide](#)
- [Printer interface damper](#)

Printer interface assembly

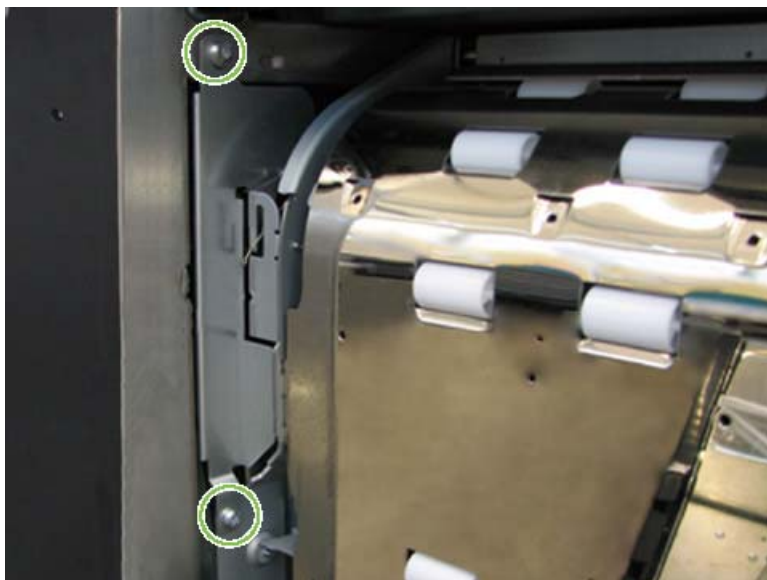
1. Remove the horizontal assembly.

[Horizontal assembly on page 388](#)

2. Open the IDO.
3. From the rear of the IDO, while holding the safety cable, remove one screw, and then detach the safety cable from the IDO.



4. Remove two screws, and then remove the cover plate on the left side of the IDO printer interface.



5. Disconnect one wire connector.



6. Remove four screws.



7. Remove the IDO printer interface.

Adjust the printer interface to align IDO Input Staging 2 sensor (SN10)

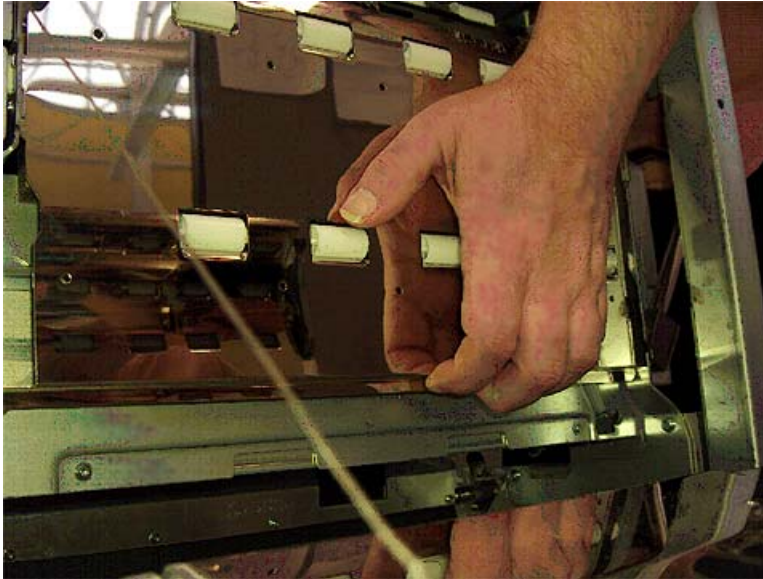
1. Loosen one screw on the rear side of the print interface bracket.



2. Loosen one screw on the front side of the print interface bracket.



3. Grasping the bottom lip, lift the print interface up approximately 1 mm.



4. While holding up the print interface, retighten the two screws.


IDO printer interface and horizontal transport alignment

When the IDO printer interface is reinstalled, follow these steps to align the IDO printer interface with the horizontal transport.

1. Install the IDO printer interface but do not tighten the screws.
2. Install the horizontal transport and secure it with the two screws in front.

[Horizontal assembly on page 388](#)

3. Tighten all five of the IDO printer interface screws.

 **NOTE:** If media jams at the IDO Input Staging 2 sensor (SN10), loosen the two outermost screws of the IDO printer interface, lift the IDO printer interface, and then retighten the two screws.

Printer interface paper guide

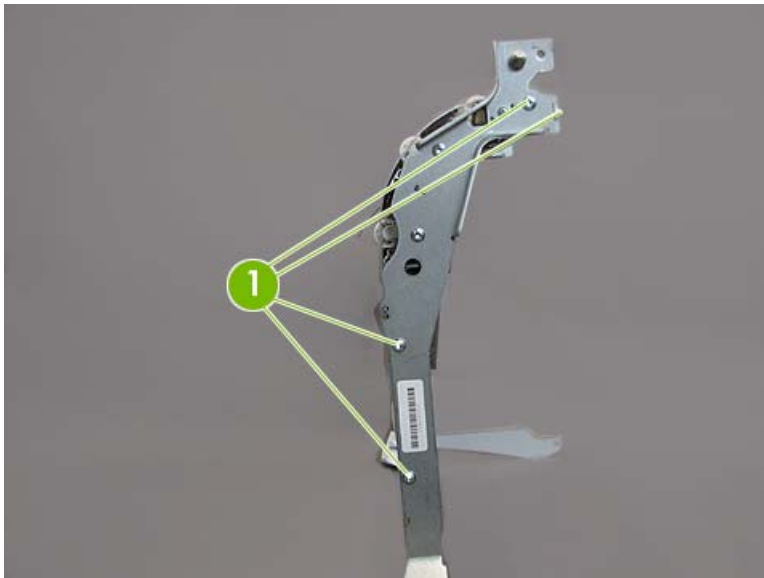
1. Remove the printer interface assembly.

[Printer interface assembly on page 475](#)

2. Remove four screws (callout 1) from the rear side of the printer interface assembly.



3. Remove four screws (callout 1) from the front side of the printer interface assembly.



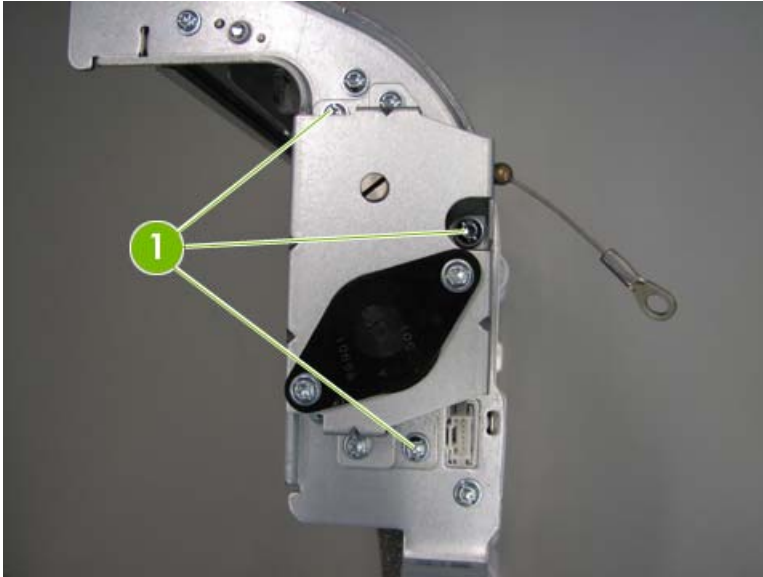
4. Remove the printer interface paper guide.

Printer interface damper

1. Remove the printer interface assembly.

[Printer interface assembly on page 475](#)

2. Remove three screws (callout 1) from the damper assembly, and then remove the damper.

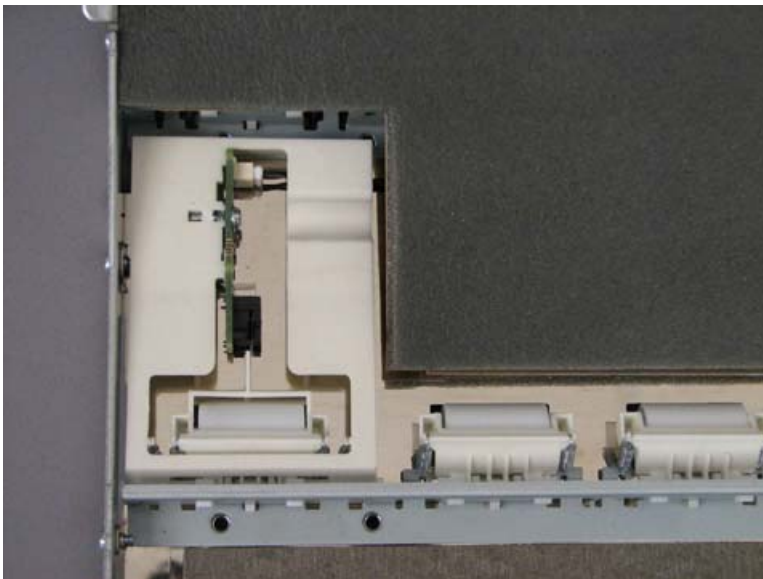


IDO Media Thickness encoder (EN14)

1. Open the IDO.
2. Remove the IDO printer interface.

[IDO printer interface on page 474](#)

The encoder is attached to the interior of the printer interface.



3. Remove the encoder.

IDO sensors

- [IDO staging sensors \(SN7, SN10, and SN11\)](#)

- [IDO Input Media sensor \(SN8\)](#)
- [IDO Output Media sensor \(SN9\)](#)
- [IDO Output 2 sensor \(SN12\)](#)
- [Left-side Middle Panel sensor \(SN13\)](#)
- [Left-side Lower Panel sensor \(SN14\)](#)
- [IDO Output 1 sensor \(SN15\)](#)
- [IDO Duplex Media sensor \(SN16\)](#)
- [Output Bin Full sensor \(SN17\)](#)

IDO staging sensors (SN7, SN10, and SN11)


- IDO Input Staging 1 sensor (SN7)
- IDO Input Staging 2 sensor (SN10)
- IDO Duplex Staging sensor (SN11)

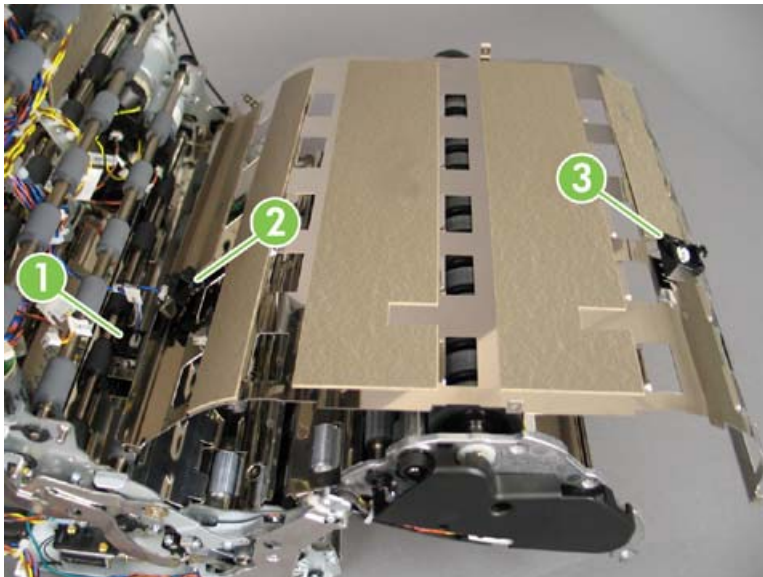
1. Remove the IDO RM.

[IDO removable module \(IDO RM\) on page 400](#)

2. Remove the input paper guide.

[Input paper guide on page 412](#)

 **NOTE:** SN7 and SN11 are attached to the input paper guide.



3. Remove the appropriate sensor.

1

IDO Duplex Staging sensor (SN11)

2	IDO Input Staging 1 sensor (SN7)
3	IDO Input Staging 2 sensor (SN10)

IDO Input Media sensor (SN8)

1. Remove the IDO RM.

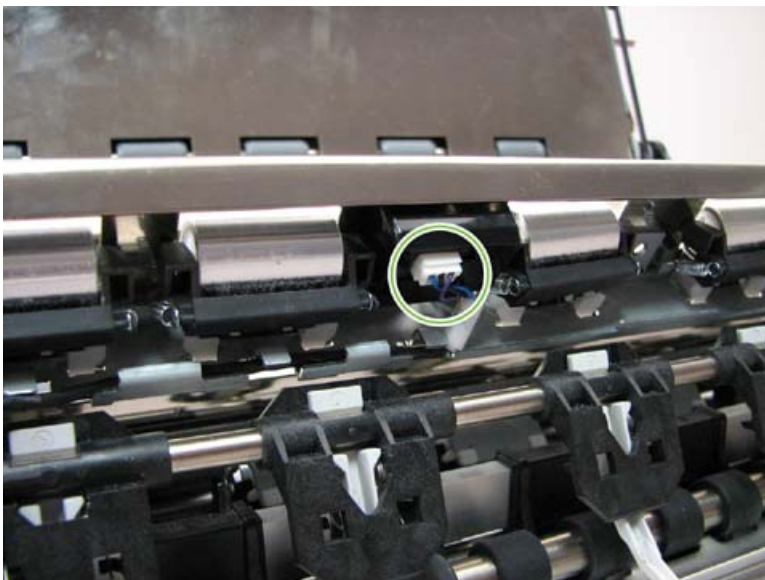
[IDO removable module \(IDO RM\) on page 400](#)

2. Open the curler, remove one screw, and then close the curler.

△ **CAUTION:** When performing any service activity on the IDO, be careful when opening the curler. Do not overextend the curler assembly door. Doing so could damage the IDO cables and connections.



3. Remove SN8. The sensor is attached to the IDO input guide assembly.

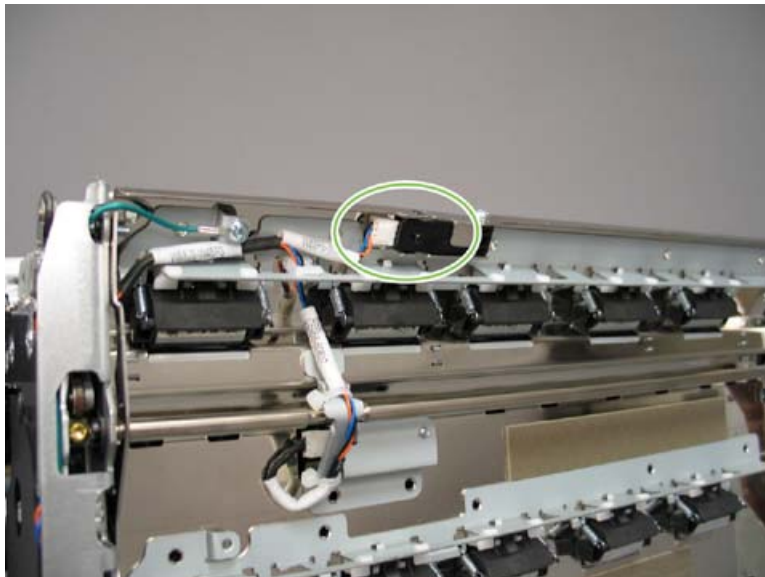


IDO Output Media sensor (SN9)


1. Remove the IDO RM.

[IDO removable module \(IDO RM\) on page 400](#)

2. Lay the RM on its side. The sensor is attached to the pinch roller guide assembly.



3. Remove one screw, and then remove the sensor.

 **NOTE:** This is an Aleph OH series (OH-118-A5) reflective sensor. Be sure to install the correct sensor.

NOTE: IDO Output Media sensor (SN9) is a preventive maintenance item and is replaced at scheduled intervals. See [Service intervals on page 79](#).

Reset the preventive maintenance counter for this item every time maintenance is performed.

IDO Output 2 sensor (SN12)

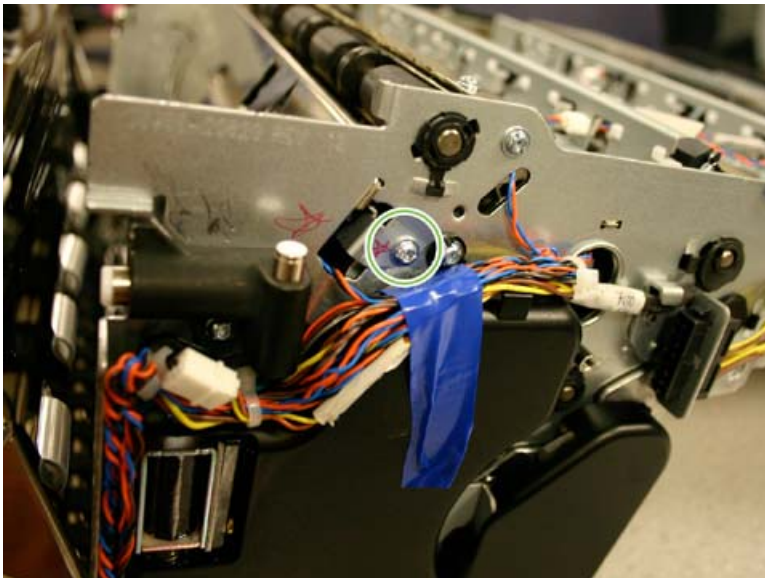
1. Remove the IDO RM.

[IDO removable module \(IDO RM\) on page 400](#)

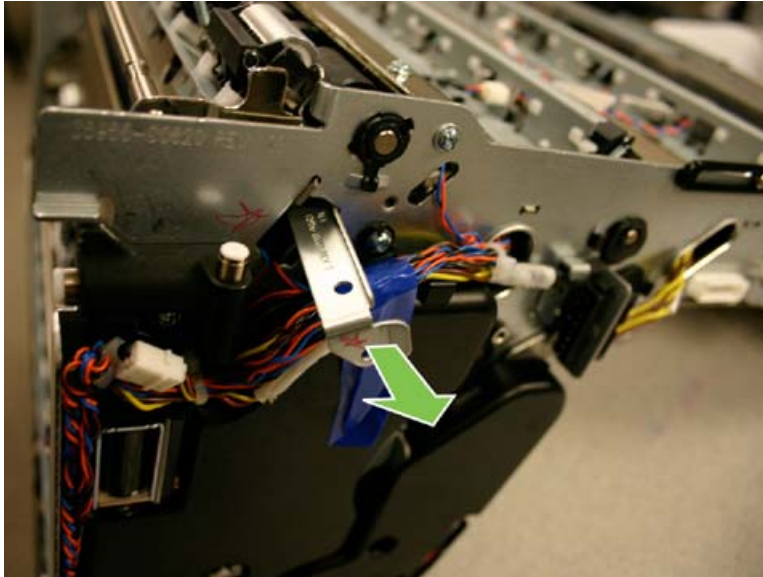
2. Remove one screw from the front.




3. Remove one screw from the side.



4. Slide out the sensor holder.



5. Remove one screw, and then remove the sensor.

 **NOTE:** This is an Aleph OH series (OH-118-A5) reflective sensor. Be sure to install the correct sensor.

Left-side Middle Panel sensor (SN13)

1. Remove the IDO RM.
[IDO removable module \(IDO RM\) on page 400](#)
2. Position the RM upright. The sensor is on the right side near the top of the duplexer door.



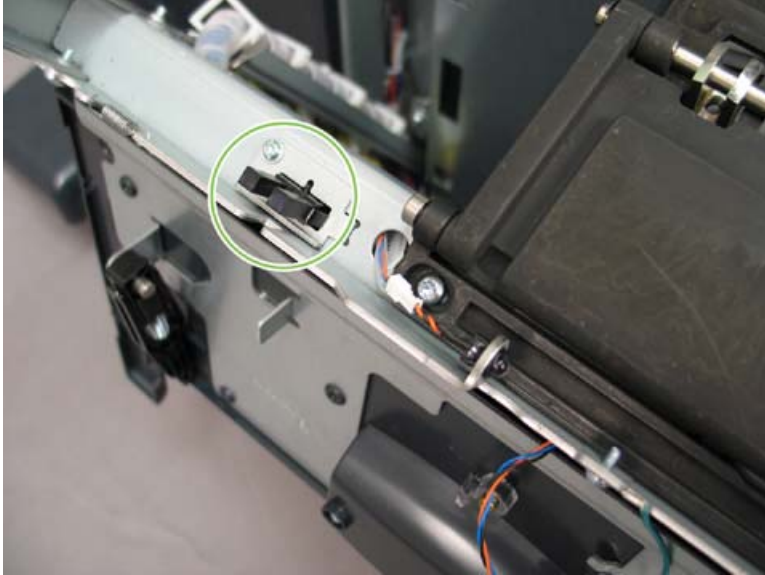
3. Remove the sensor.

Left-side Lower Panel sensor (SN14)

1. Remove the IDO RM.

[IDO removable module \(IDO RM\) on page 400](#)

SN14 is attached to the bottom of the IDO H-bar assembly.



2. Remove the sensor.

IDO Output 1 sensor (SN15)

1. Remove the IDO RM.


[IDO removable module \(IDO RM\) on page 400](#)

2. Remove the pinch roller assembly. The sensor is attached to the pinch roller guide assembly.

[Pinch roller assembly on page 410](#)



3. Remove one screw, and then remove the sensor.

 **NOTE:** This is an Aleph OH series (OH-118-A5) reflective sensor. Be sure to install the correct sensor.

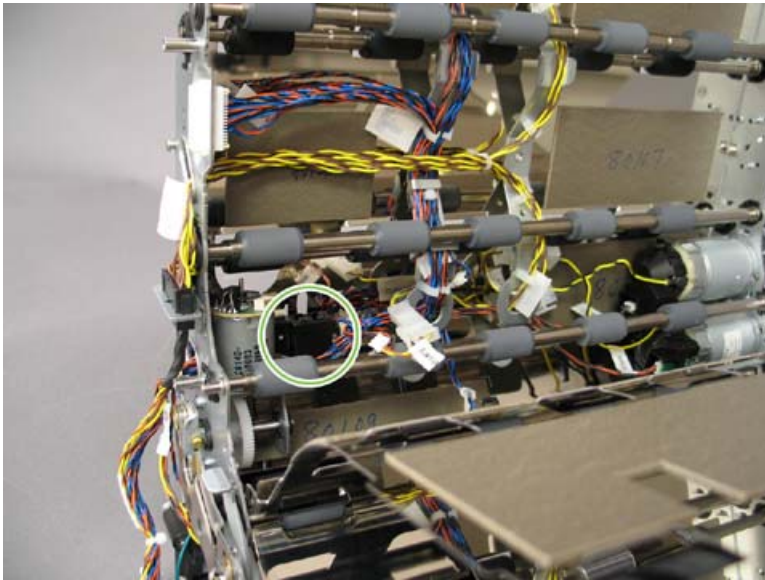
IDO Duplex Media sensor (SN16)

1. Remove the IDO RM.

[IDO removable module \(IDO RM\) on page 400](#)

2. Remove the input paper guide.

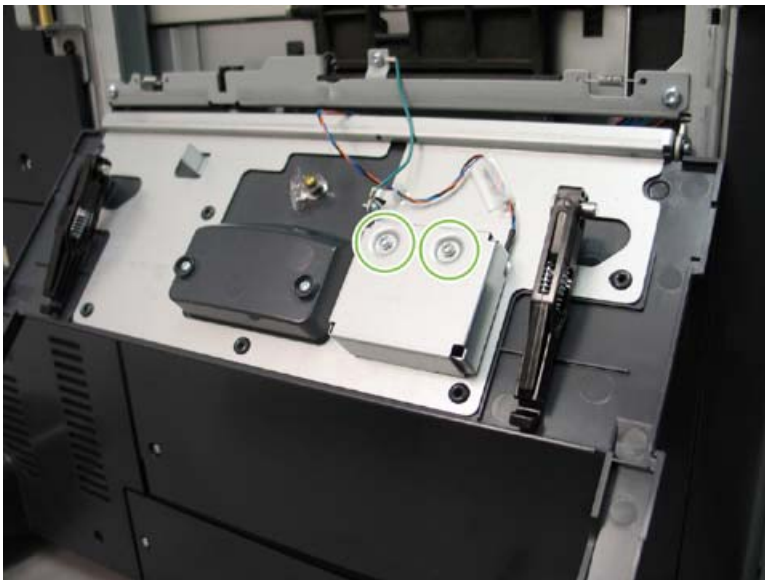
[Input paper guide on page 412](#)



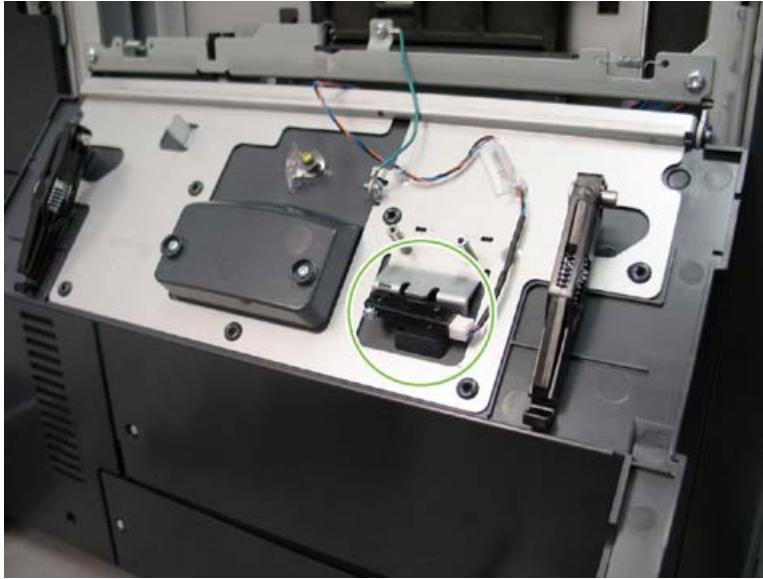
3. Remove the sensor.


Output Bin Full sensor (SN17)

1. Remove the output door.
2. Remove two screws, and then remove the cover.




3. Remove one screw, and then remove the sensor.

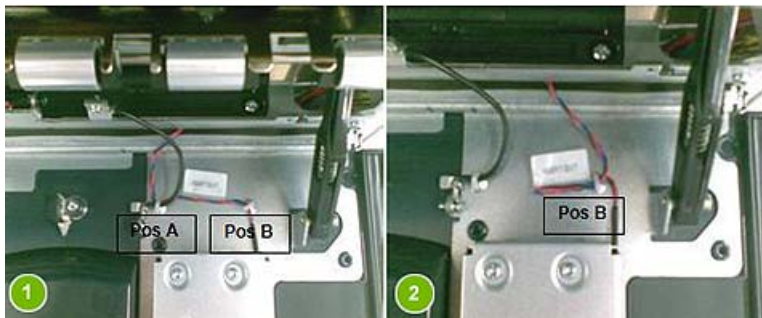


 **NOTE:** To prevent false bin full messages, the standard output bin sensor and window should be cleaned of paper dust regularly.

NOTE: To allow the system to print or copy while the finisher is electrically and mechanically disconnected from the print engine, and the system does not have the Output Bin Full sensor (SN17) installed, install an output bin bypass jumper (C5957-67078) on connector W96P17-SN17.

 **Reinstallation tip** Ensure the blue, red and black cable bundle for the SOB full sensor is routed so that the ground wire and the sensor cable are not overlapping when the output cover is closed, preventing the sensor cable from being crushed. If necessary, unhook the cable from the saddle at Position A (figure 1) and make a take-up loop through the saddle at Position B (figure 2).

Inspect the cable and repair any damage to the individual wires.

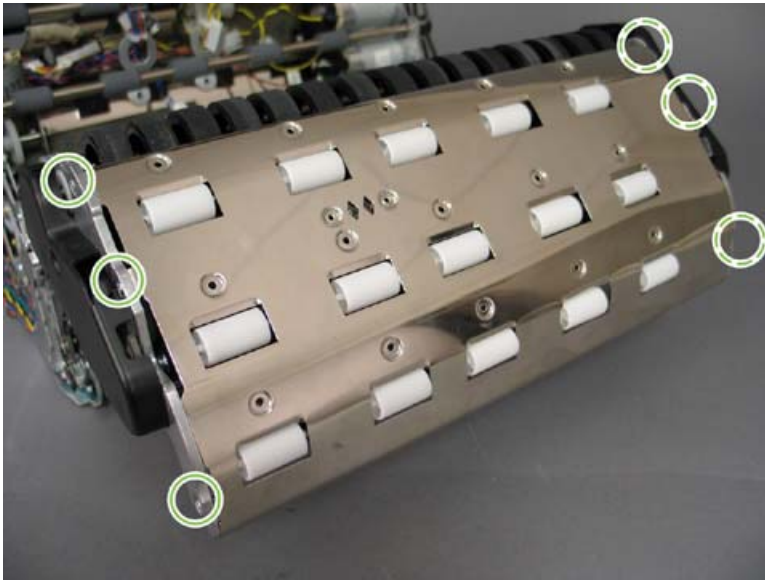


IDO LEDs

- [IDO Curler LED \(LED2\)](#)
- [Left-side Middle Panel LED \(LED3\)](#)
- [Output Bin LED \(LED14\)](#)
- [Left-side Upper Panel LED \(LED5\)](#)

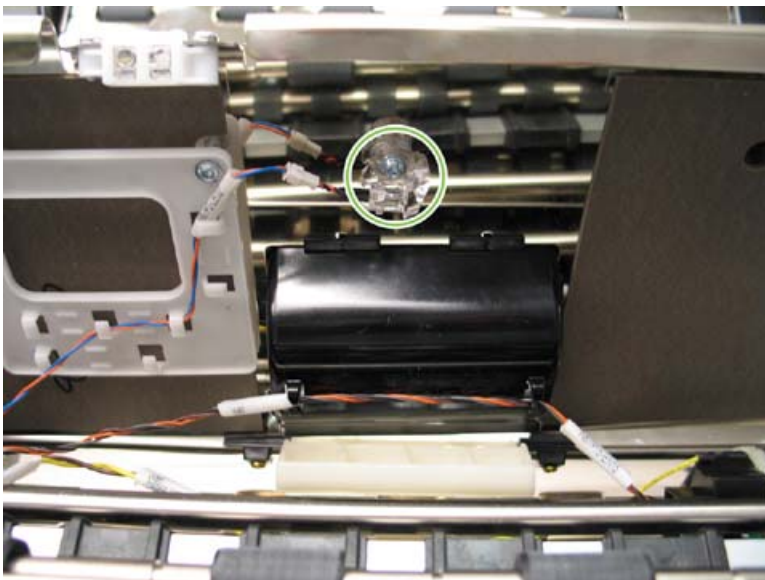
IDO Curler LED (LED2)

1. Open the IDO.
2. Remove both curler side covers.
 - [Curler front cover on page 404](#)
 - [Curler rear cover on page 404](#)
3. Remove six screws, and then open, but do not remove, the curler cover.



LED2 is connected to the curler cover.

4. Remove LED2.



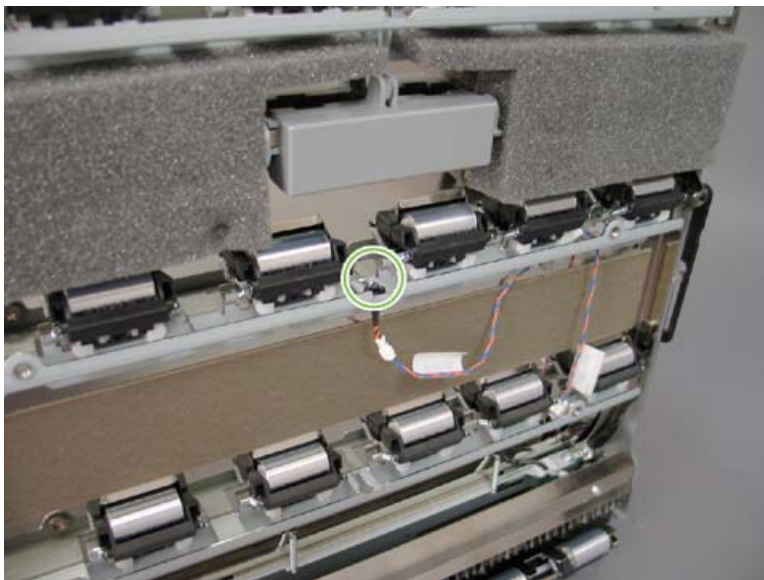
Left-side Middle Panel LED (LED3)

1. Open the IDO.

2. Remove four screws on the duplexer door, and then remove the duplexer door outer cover.



LED3 is connected to the duplexer door.



3. Remove LED3.

Output Bin LED (LED14)

1. Open the output door. The Output Bin LED (LED14) is attached to the lower part of the IDO H-bar assembly.



2. Remove LED14.

Left-side Upper Panel LED (LED5)

1. Open the IDO. The Left-side Upper Panel LED (LED5) is attached to the upper part of the IDO H-bar assembly.



2. Remove LED5.

IDO switches

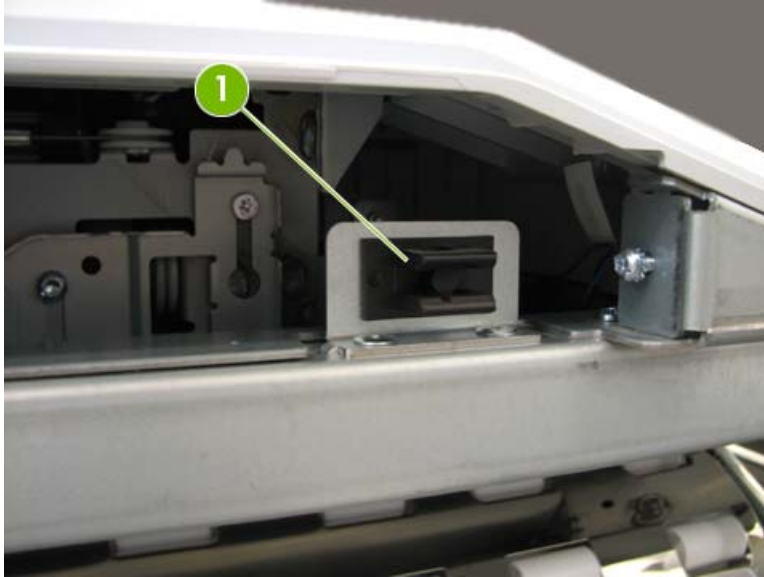
- [Left-side Upper Panel switch \(SW8\)](#)

Left-side Upper Panel switch (SW8)

1. Open the IDO.
2. Remove the scanner lock cover.


[Scanner lock cover on page 222](#)

3. Remove SW8 (callout 1) by squeezing the side tabs of the switch body, and then pushing it out through the switch bracket. Disconnect the wire connections on the back of the switch.




Drum

- [Drum spittoon and lower drum spittoon](#)
- [Drum screen](#)
- [Drum guide](#)
- [Drum motor \(M3\)](#)
- [Drum encoder PCAs](#)
- [Drum encoder disk](#)
- [Vacuum poppet valves](#)
- [Drum barbs](#)
- [Drum Illumination 1 LED \(LED8\) and Drum Illumination 2 LED \(LED9\)](#)

 **NOTE:** The drum cannot be removed. If you need to replace the drum, you must replace the entire print zone.

[Print zone removal on page 187](#)

Drum spittoon and lower drum spittoon

 **NOTE:** Dispose of all wet material as appropriate. See [Handling and disposing of service parts and consumables on page 26](#).

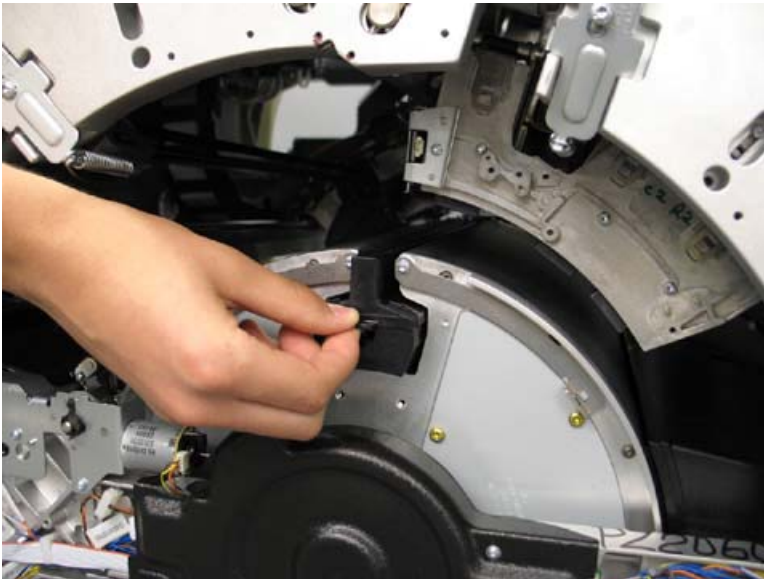
 **CAUTION:** Use gloves and safety glasses when handling ink parts.


1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)
2. Raise the print carriage structure.

3. Loosen two screws on the drum spittoon cover, and then remove the cover.



4. Press down on the spittoon tab, and then pull the drum spittoon out of the drum. Loosen, but do not remove, the two screws just below the spittoon opening, and then remove the lower spittoon.



 **NOTE:** The drum spittoon is a preventive maintenance item and is replaced at scheduled intervals. See [Service intervals on page 79](#).

Carefully install the new assemblies to avoid damaging the foam gaskets on the bottom of each piece.

Reset the preventive maintenance counter for this item every time maintenance is performed.

The preventive maintenance schedule will be recalculated after one of the following events: power cycle, sleep mode cycle, or date change at midnight.

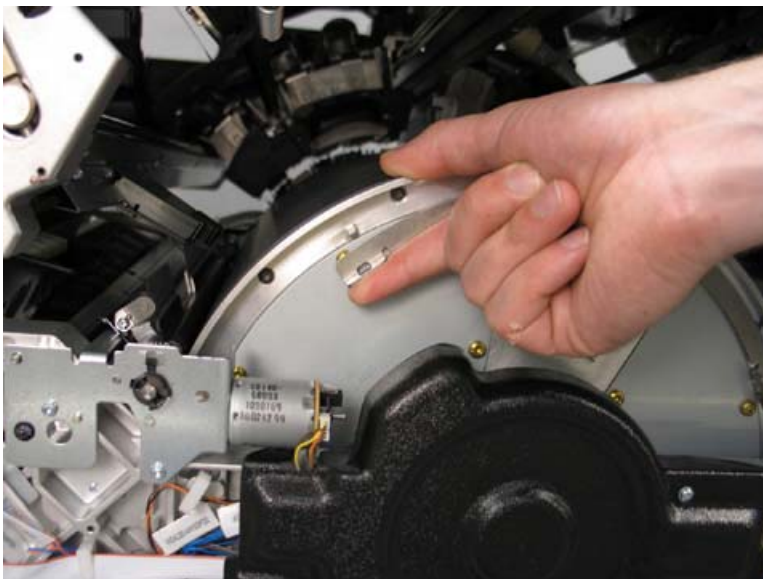
Drum screen

- [Drum screen removal](#)
- [Drum screen replacement](#)

Drum screen removal

△ **CAUTION:** Use gloves and safety glasses when handling ink parts.

1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)
 - Drum spittoon
[Drum spittoon and lower drum spittoon on page 494](#)
2. Raise the print carriage structure by lowering the carriage structure locking bar.
3. Open the dryer.
4. Open the IDO door.
5. Unclasp the left drum screen rod clasp.



6. Unhook the left drum screen rod from the drum.



7. Rotate the drum clockwise while wrapping the drum screen clockwise around the left drum screen rod.



8. Unclasp the clasp on the right drum screen rod.



9. Remove the drum screen.

Drum screen replacement

1. Verify the following conditions:

- The dryer is open.
- The IDO is open.
- The drum spittoon is removed.

[Drum spittoon and lower drum spittoon on page 97](#)

2. Roll the clean drum screen around the right drum screen rod so that the dull side of the drum screen faces out.



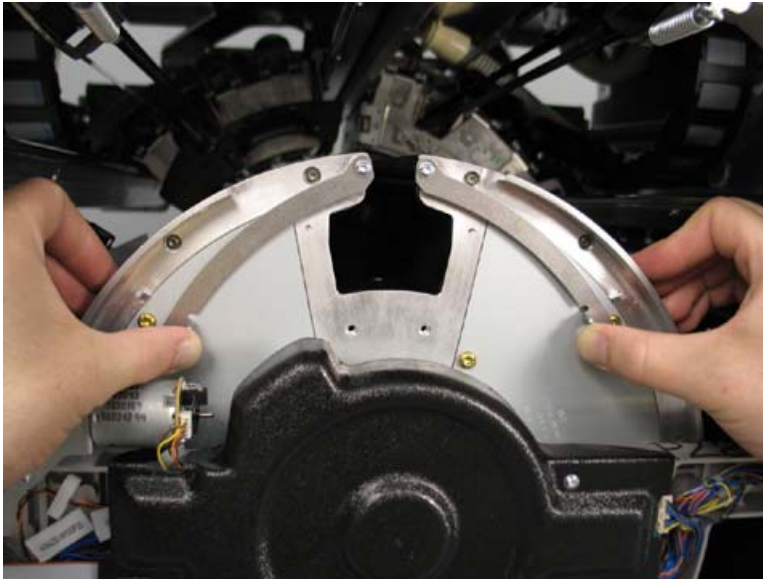
3. Insert the left drum screen rod into the left drum slot, and then set the drum screen left clasp to the locked position.
4. Rotate the drum clockwise while unwrapping the drum screen.




5. Insert the right drum screen rod into the right drum slot.




6. Unclasp the left drum screen clasp, and then simultaneously push both drum screen rods in as far as they go.



7. Simultaneously raise both drum screen clasps to the locked positions.

 **Reinstallation tip** Manually rotate the drum to verify that the drum screen is properly installed.

 **NOTE:** The drum screen is a preventive maintenance item and is cleaned at scheduled intervals. See [Service intervals on page 79](#).

Reset the preventive maintenance counter for this item every time maintenance is performed.

Drum guide

- [Drum guide assembly](#)
- [Drum Guide motor \(M22\)](#)
- [Drum guide strip](#)
- [Drum guide rear bracket](#)

Drum guide assembly

1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover

[Upper inner cover on page 209](#)

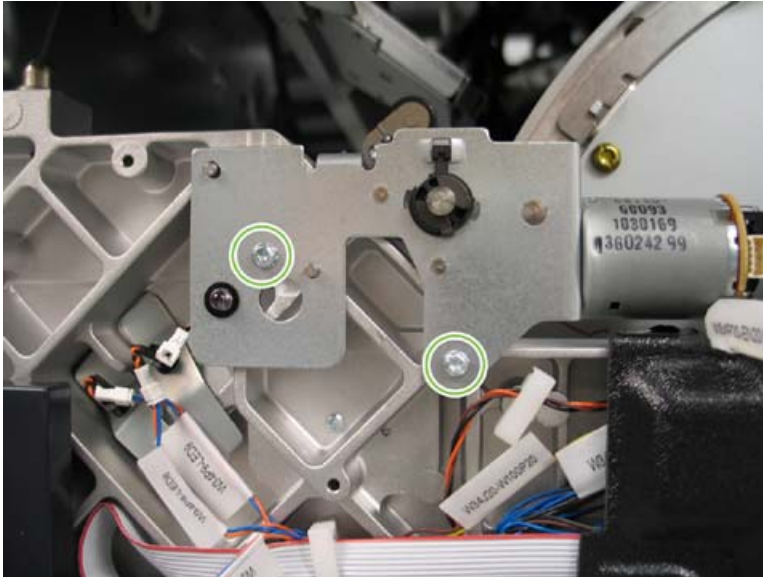
2. Lower the carriage structure locking bar to lift the carriage structure.
3. Disconnect the Drum Guide motor (M22).



4. Disconnect the Front Door LED (LED7).

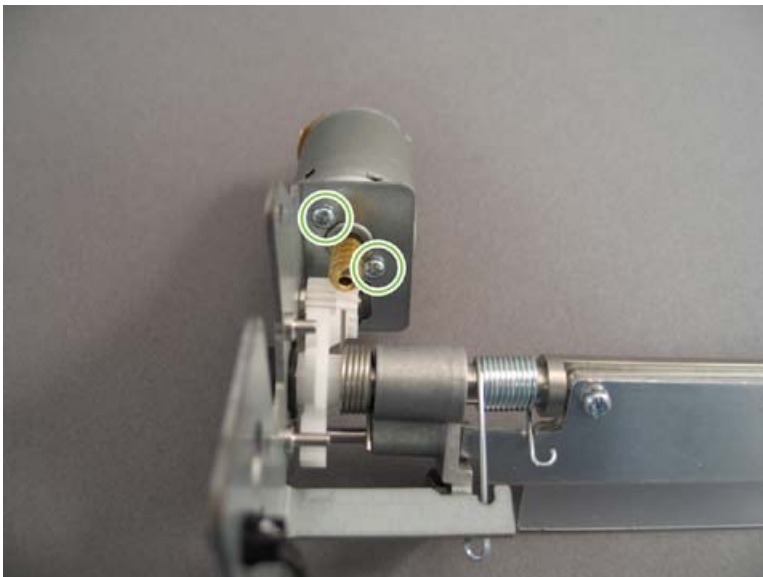


5. Remove two screws, and then pull out the drum guide.



Drum Guide motor (M22)

1. Remove the drum guide assembly.
[Drum guide assembly on page 500](#)
2. Remove two screws, and then remove the Drum Guide motor (M22).



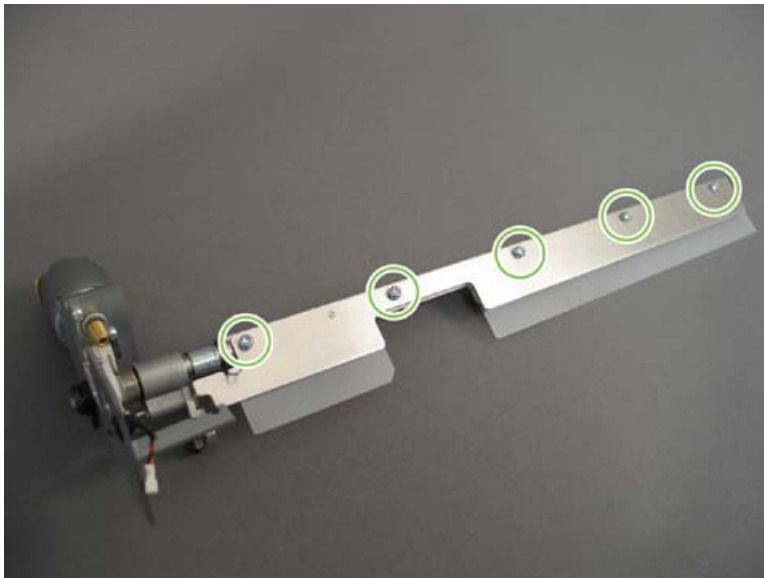
Drum guide strip

1. Remove the drum guide assembly.
[Drum guide assembly on page 500](#)

2. Unhook one spring.



3. Remove five screws, and then remove the drum guide strip.



Drum guide rear bracket

The rear of the drum guide assembly fits into this bracket.

1. Remove the drum guide assembly.

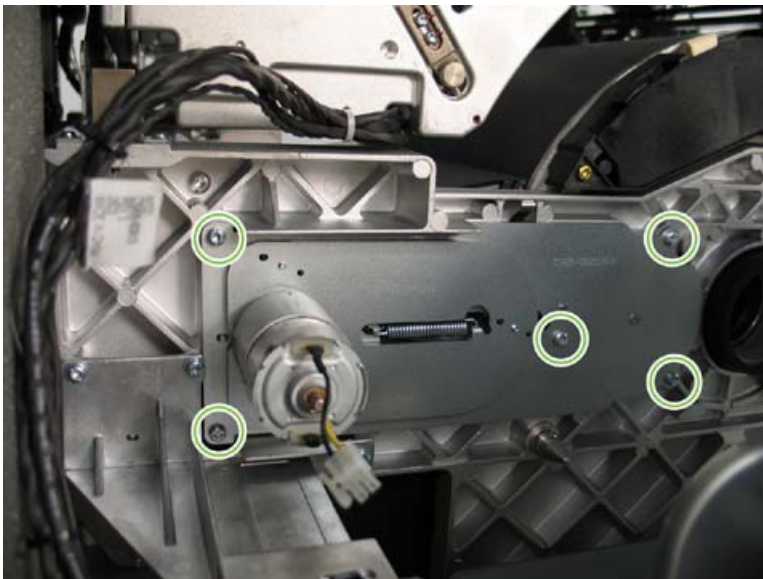
[Drum guide assembly on page 500](#)


2. Remove one screw, and then remove the bracket.



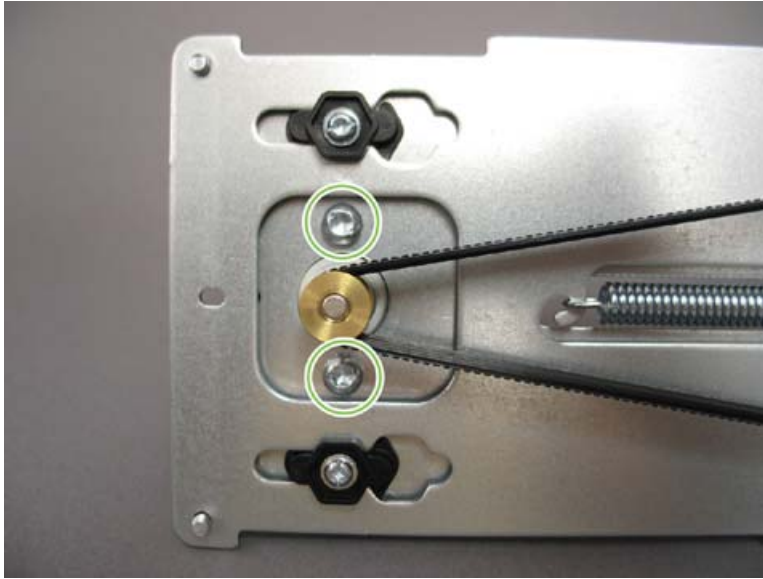
Drum motor (M3)

1. Remove the service station assembly.
[Service station assembly on page 648](#)
2. Disconnect the drum motor (M3) wire connector.
3. Loosen five screws on the drum motor (M3) plate.



 **Reinstallation tip** To seat the plate properly, tilt the left edge of the plate in first, aligning with the pin.

4. Remove two screws, and then remove the drum motor (M3).

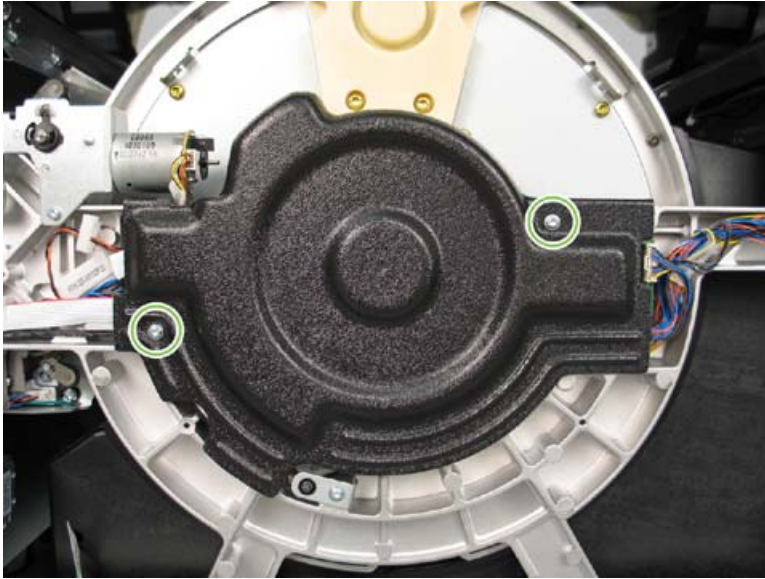


Drum encoder PCAs


△ **CAUTION:** Wear an ESD strap.

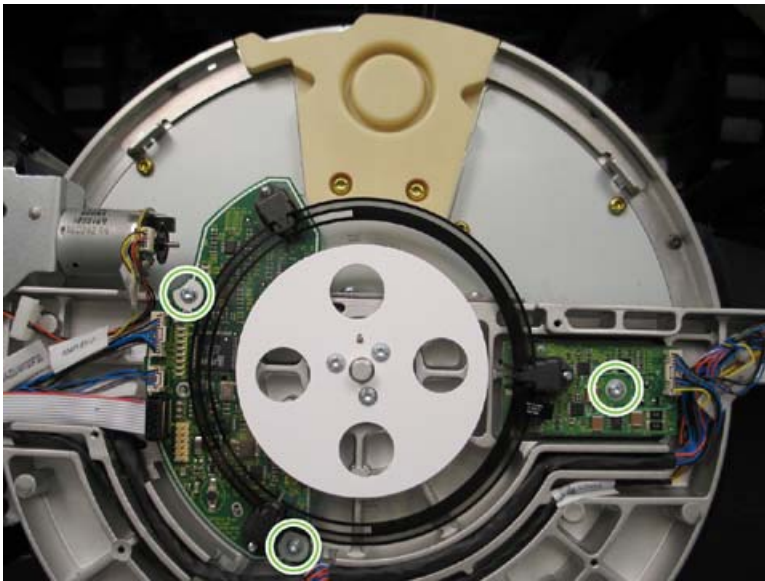
1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)


2. Remove two screws from the drum encoder cover, and then remove the drum encoder cover.



3. Disconnect the wire connectors to the drum encoder PCAs.
4. Remove two screws for the larger Drum Encoder Averager PCA (EN1) on the left, and then remove one screw for the smaller Drum Encoder PCA (EN2) on the right.

 **NOTE:** Gently flex the encoder disk to remove the drum encoder PCAs.



 **NOTE:** When either the Drum Encoder Averager PCA (EN1) or the Drum Encoder PCA (EN2) is replaced, run the following calibration routines in the order listed:

[Top-of-form Position calibration on page 163](#)

[Drum Position calibration on page 140](#)

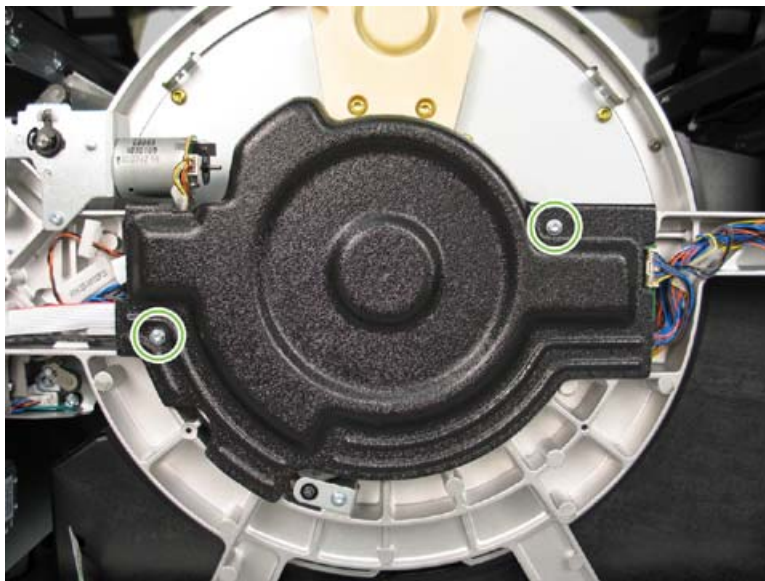
[First Nozzle Position calibration on page 164](#)

[Automatic Pen Alignment \(APA\) calibration on page 148](#)

Drum encoder disk

△ **CAUTION:** Wear an ESD strap.

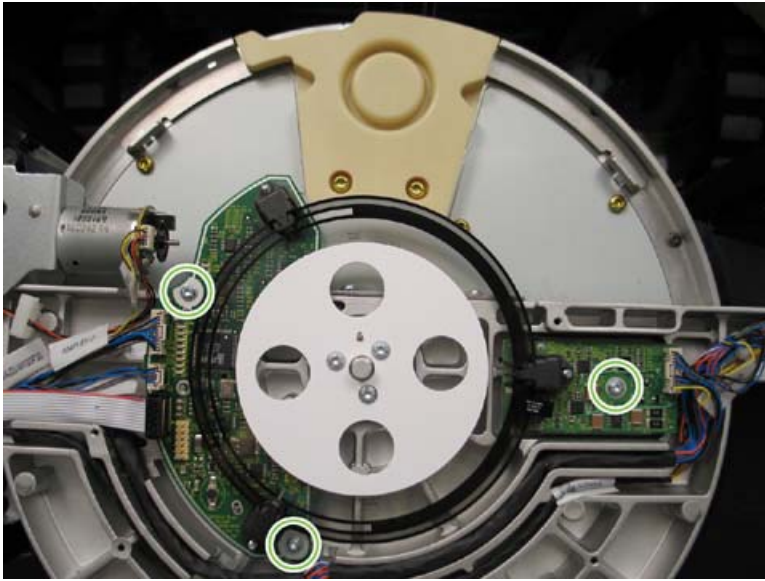
1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)
2. Remove two screws from the drum encoder cover, and then remove the drum encoder cover.



3. Disconnect the wire connectors to the drum encoder PCAs.

4. Remove two screws for the larger Drum Encoder Averager PCA (EN1) on the left, and then remove one screw for the smaller Drum Encoder PCA (EN2) on the right

 **NOTE:** Gently flex the encoder disk to remove the drum encoder PCAs.



5. Remove three screws from the drum encoder disk, and then remove the drum encoder disk.

△ **CAUTION:** Handle the encoder disk only by the edges to keep the disk surface clean.



💡 **Reinstallation tip** Install the PCAs and the encoder disk in the following order: Drum Encoder Averager PCA (EN1), drum encoder disk, and then Drum Encoder PCA (EN2).

📄 **NOTE:** When the drum encoder disk is replaced, run the following calibration routines in the order listed:

[Top-of-form Position calibration on page 163](#)

[Drum Position calibration on page 140](#)

[First Nozzle Position calibration on page 164](#)

[Automatic Pen Alignment \(APA\) calibration on page 148](#)

Vacuum poppet valves


The drum is divided into four vacuum drum zones.

Vacuum Zone	Location
1	Left of the drum spittoon (as viewed with the spittoon at the top of the drum)
2	Opposite of the drum spittoon
3	Right of the drum spittoon (as viewed with the spittoon at the top of the drum)
B1 and B2	Entire rear of the drum

The drum has two sets of vacuum poppet valves. There are six poppet A valves in the front of the drum. There are two poppet B valves in the rear of the drum.

- [Poppet A valves](#)
- [Poppet B valves](#)

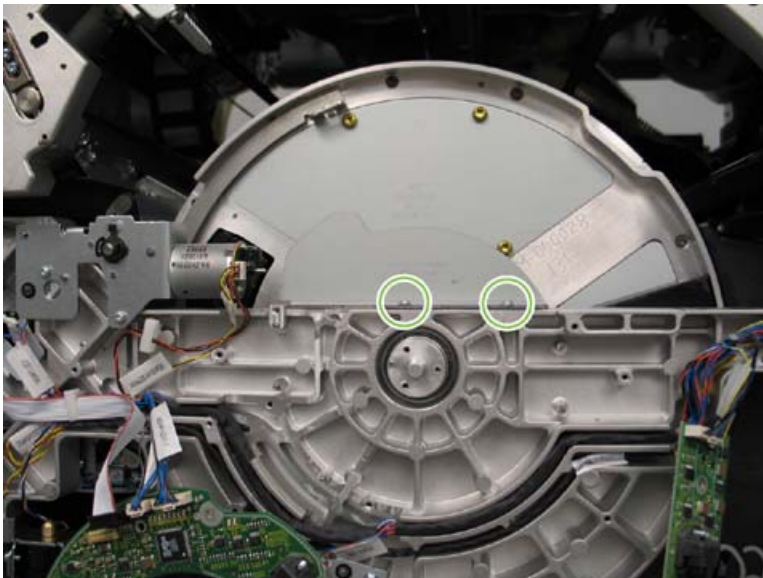
Poppet A valves

 **NOTE:** Drum vacuum zones 1, 2, and 3 have two poppet A valves each. The left poppet A valve in a drum vacuum zone is secured by a single clamp. The right poppet A valve in a drum vacuum zone is secured by two clamps. In order to remove the left poppet A valve, you must first remove the right poppet A valve. These instructions show you how to remove both poppet A valves from a drum vacuum zone.

1. Remove the following items:

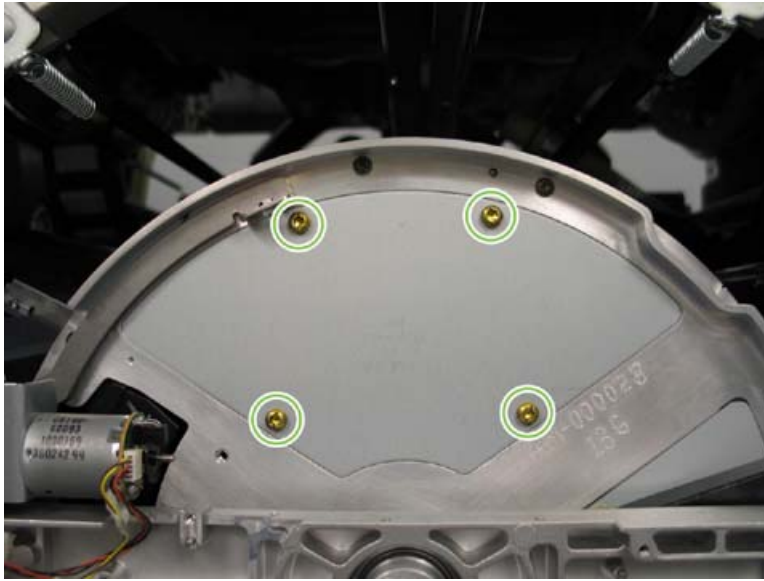
- Door engine left
[Left front door on page 205](#)
- Door engine right
[Front door on page 205](#)
- Carriage plate cover
[Carriage plate cover on page 208](#)
- Upper inner cover
[Upper inner cover on page 209](#)
- Drum spittoon cover
[Drum spittoon and lower drum spittoon on page 494](#)
- Drum encoder disk
[Drum encoder disk on page 507](#)


2. Remove two screws on the drum encoder disk back plate, and then remove the drum encoder disk back plate.



3. Loosen four screws from the front plate for the problem drum vacuum zone. Then, using the screws as handles, remove the plate.

 **NOTE:** Depending on the zone, you may need to first remove a counterweight (three screws).




 **CAUTION:** The plate has a foam seal. Be careful not to damage the seal. If you remove multiple plates, note the vacuum zone for each plate.

4. Use a screwdriver to pry off the poppet valve hose that connects the right poppet A valve to the barb on the interior of the drum.



5. Use a screwdriver to pry off the poppet valve hose that connects the left poppet A valve to the right poppet A valve.


 **NOTE:** In vacuum zone 2, the left poppet A valve is connected to a barb in the interior of the drum. Disconnect the poppet valve hose the barb.

6. For each right A poppet-valve clamp, loosen one screw and remove the clamp, and then remove the right poppet A valve.




7. Loosen one screw on the left A poppet-valve clamp, remove the clamp, and then remove the left poppet A valve.



 **Reinstallation tip** Install the left poppet A valve, and then install the right poppet A valve. If either poppet valve does not fit easily in place, and you replaced a poppet B valve, the poppet B valve might not be seated correctly.

Reinstallation tip In drum vacuum zone 2, the left poppet A valve connects to a barb on the interior of the drum rather than to the right poppet A valve.

Poppet B valves

 **NOTE:** The drum has two poppet B valves located behind the poppet A valves.

1. Remove the following items:

- Door engine left
[Left front door on page 205](#)
- Door engine right
[Front door on page 205](#)
- Carriage plate cover
[Carriage plate cover on page 208](#)
- Upper inner cover
[Upper inner cover on page 209](#)
- Drum spittoon cover
[Drum spittoon and lower drum spittoon on page 494](#)
- Drum encoder disk
[Drum encoder disk on page 507](#)

2. Remove the appropriate poppet A valves:

[Poppet A valves on page 510](#)

Problem poppet B valve	Drum vacuum zones from which to remove the poppet A valves
Right	1 and 2
Left	2 and 3


3. Use a screwdriver to pry off the poppet valve hose from the barb on the interior of the drum.



4. For each of the four clamps that secure the poppet B valve, lift the lever until the clamp releases, and then remove the clamp and the clamp housing.



5. Remove the poppet B valve.

 **Reinstallation tip** There are two alignment pins on the back of the poppet B valve. The poppet B valve fits into a groove and two alignment pins on the side of the drum to the rear.

Reinstallation tip Install the clamp housing, and then install the clamp. If one of the four clamps does not lock easily into place, then the poppet B valve might not be seated correctly. When the poppet B valve is properly seated, a clamp might feel a little loose after being installed.

Drum barbs

1. Remove the following items:

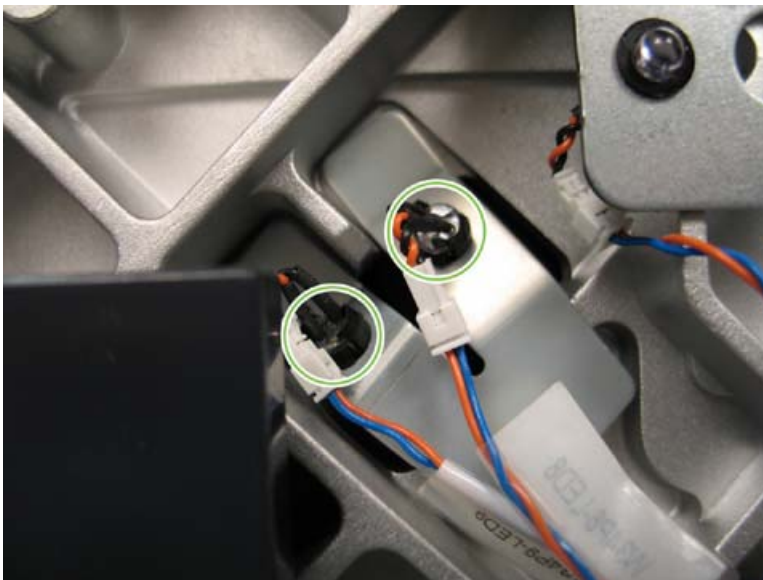
- Door engine left
[Left front door on page 205](#)
- Door engine right
[Front door on page 205](#)
- Carriage plate cover
[Carriage plate cover on page 208](#)
- Upper inner cover
[Upper inner cover on page 209](#)
- Drum spittoon cover
[Drum spittoon and lower drum spittoon on page 494](#)
- Drum encoder disk
[Drum encoder disk on page 507](#)
- Drum encoder disk back plate and drum front plate (for a specific drum vacuum zone)
[Poppet A valves on page 510](#)

2. Reach inside the drum, and then remove the barb with a hex wrench.



Drum Illumination 1 LED (LED8) and Drum Illumination 2 LED (LED9)

1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)
2. Remove one screw on the LED bracket.



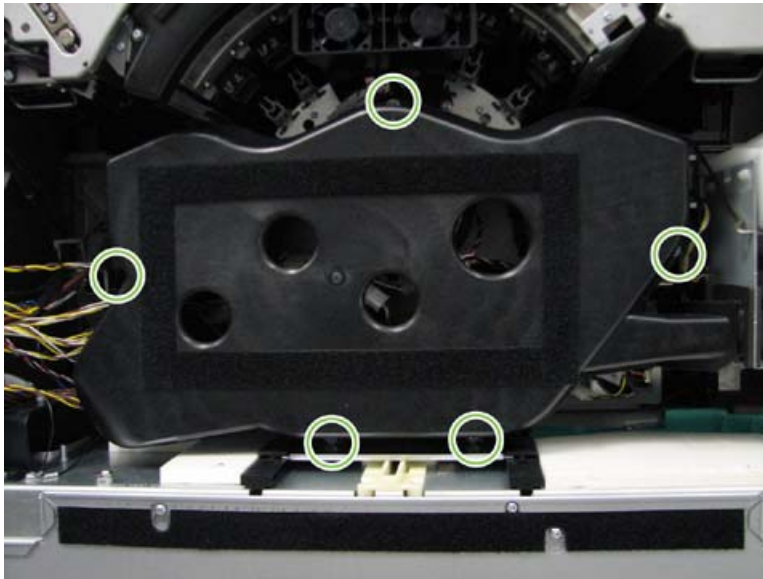
3. Disconnect the LED wire connectors.
4. Remove LED8 and LED9

Vacuum


- [Vacuum fan assembly](#)
- [Vacuum supply housing](#)
- [PSU exhaust duct assembly](#)
- [PSU recirculation duct](#)
- [Vacuum hose spigots](#)

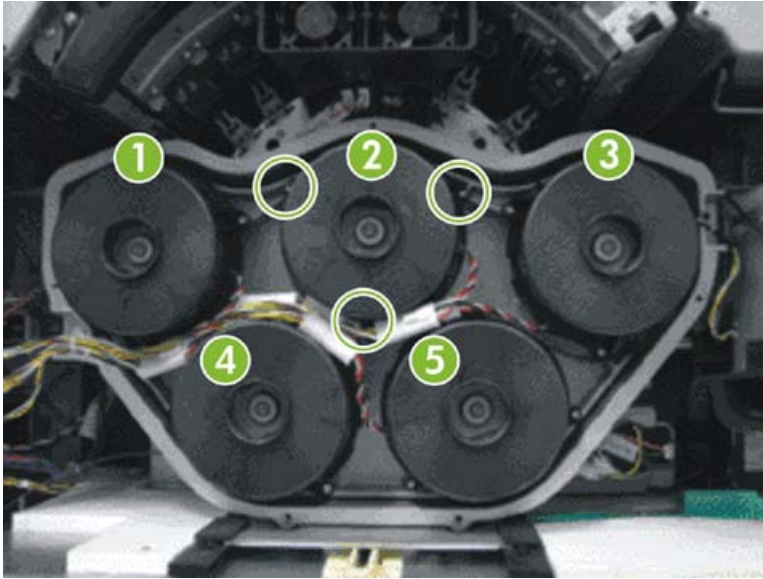
Vacuum fan assembly


1. Remove the following items:
 - Muffler
[Muffler on page 219](#)
 - Back cover
[Back cover on page 219](#)
2. Remove five screws, and then remove the vacuum blower cover. There are five fans under the vacuum blower cover.




3. Remove three screws, and then remove the selected fan cover.


 **NOTE:** The fans are designated Fans 1–5.

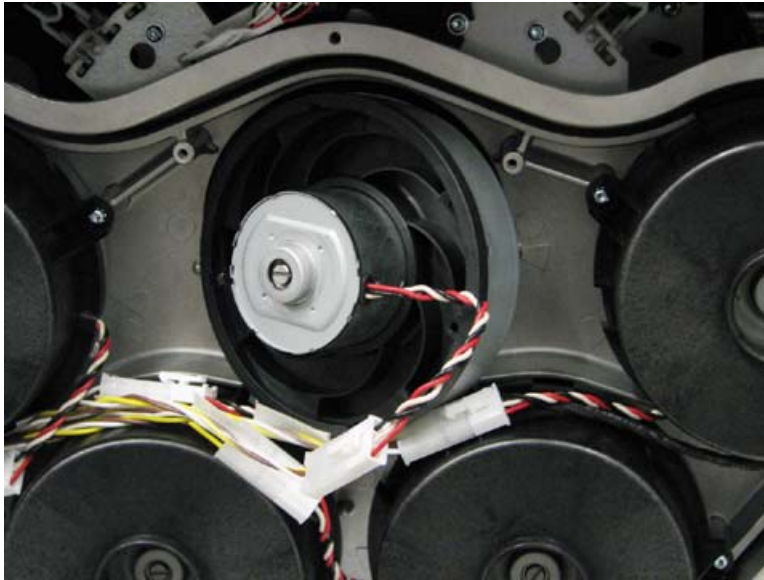



 **NOTE:** The fan cover holds the fan motor and fan gasket in place.

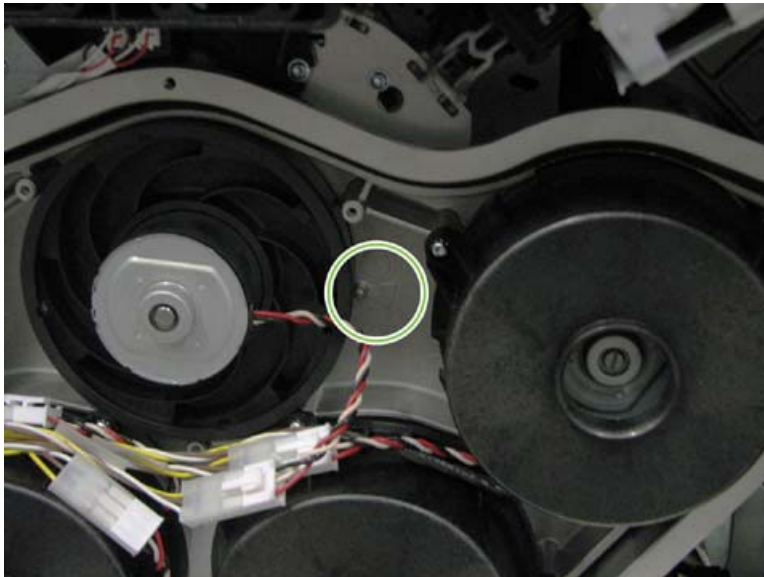
 **TIP:** For easier access, unlatch and remove the web wipe latch bar, and then slide the service station pivot handle towards the front of the MFP to move the vacuum fan assembly to the rear of the MFP.


4. Disconnect the fan cable, and then remove the fan.

 **NOTE:** To avoid damaging the motor, grab the fan by the outside housing and not by the motor itself.



 **Reinstallation tip** Align the fan cable with the marker on the inside of the housing to ensure the proper cable lengths in the cable harness.



 **Reinstallation tip** Ensure no fan cables are pinched when reinstalling fan covers.

Vacuum supply housing

1. Remove the following assemblies:

- Rear muffler

[Muffler on page 219](#)

- Back cover


[Back cover on page 219](#)

- Web wipe access case parts

[Web wipe access case parts on page 212](#)

- Vacuum fan assembly

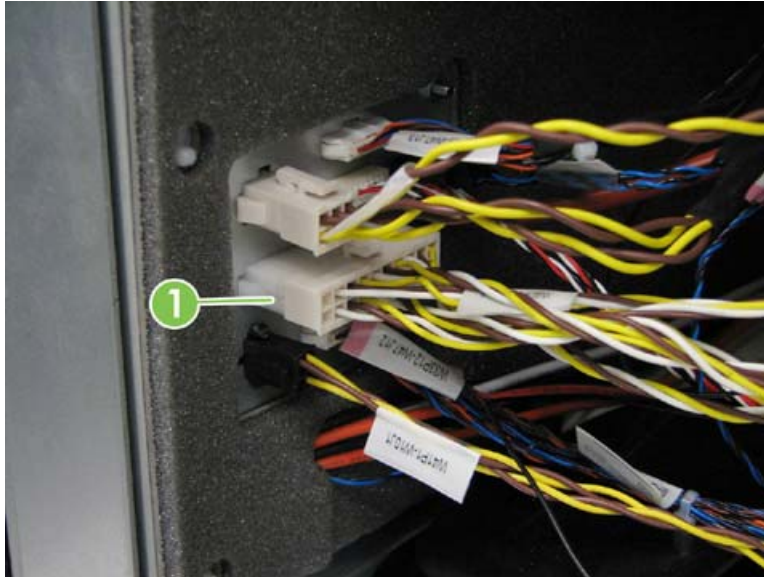
[Vacuum fan assembly on page 517](#)

 **NOTE:** Remove the top-center VAC2 fan assembly to remove the vacuum supply housing.

2. Remove the vacuum tube from the side of the vacuum supply housing.




3. Disconnect one wire harness (callout 1) on the left sidewall.



4. On the right side of the service station, disconnect the aerosol motor wire harness, and then unclip the wire harness from the aerosol filter box.

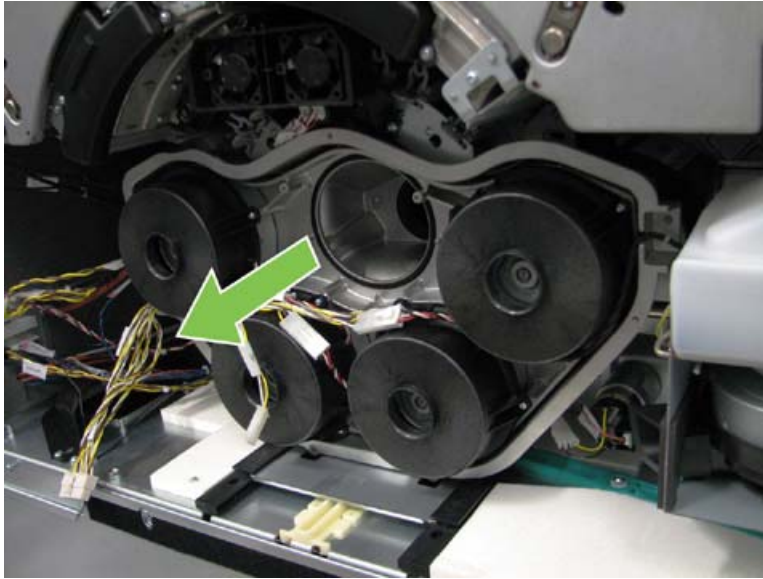



 **Reinstallation tip** Be sure to thread the wire harness back through the clip when reinstalling the vacuum motor assembly.

5. Loosen two screws inside the fan cavity.



6. Remove the vacuum supply housing.



 **NOTE:** Do not set the vacuum supply housing down on its rear gasket to avoid damaging the gasket. Remove the gasket before setting the housing onto a workspace. When reinstalling the gasket, the thinner side faces the vacuum supply housing.



PSU exhaust duct assembly

1. Remove the following assemblies:
 - Muffler
[Muffler on page 219](#)
 - Back cover
[Back cover on page 219](#)

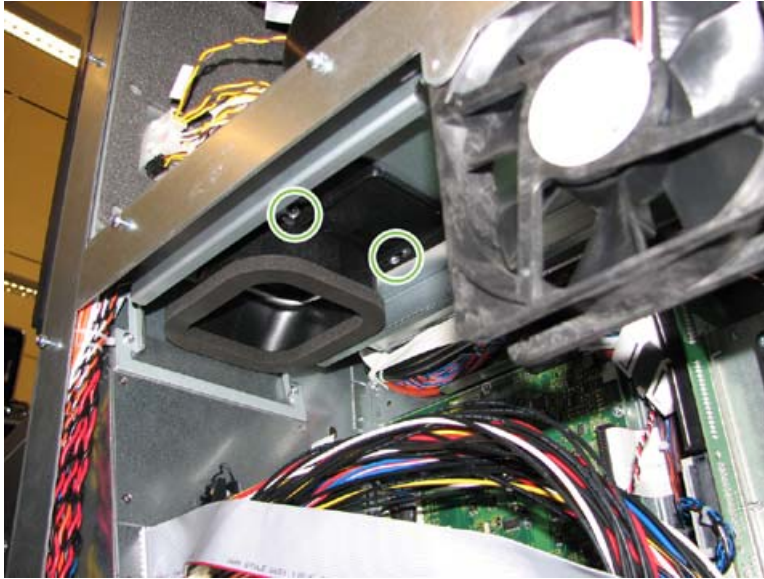
2. Loosen three screws, slide the duct towards the rear of the MFP, and then lift out the duct.



PSU recirculation duct

1. Remove the following assemblies:
 - Rear muffler
[Muffler on page 219](#)
 - Back electronics cover
[Electronics bay cover on page 220](#)
 - Power supply assembly
[Power supply assembly on page 697](#)

2. Loosen two screws, and then slide the assembly sideways to clear the screws slots.

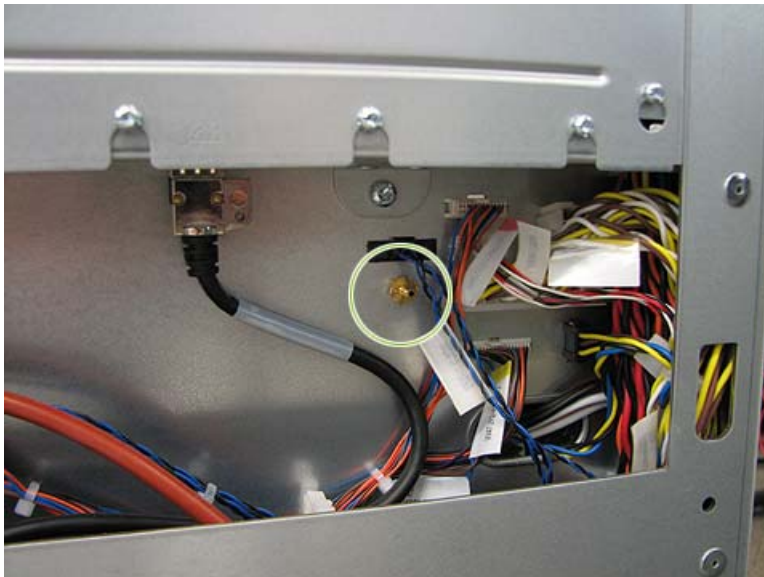


Vacuum hose spigots

There are two vacuum hose spigots. Unscrew the spigots to replace.

- Remove the upper right cover to access the vacuum hose spigot, located below the Image Processing PCA (A6).

[Upper right cover on page 216](#)



- Remove the MFP front doors and upper inner cover to access the vacuum hose spigot on the drum.

[Front doors on page 204](#)

[Upper inner cover on page 209](#)



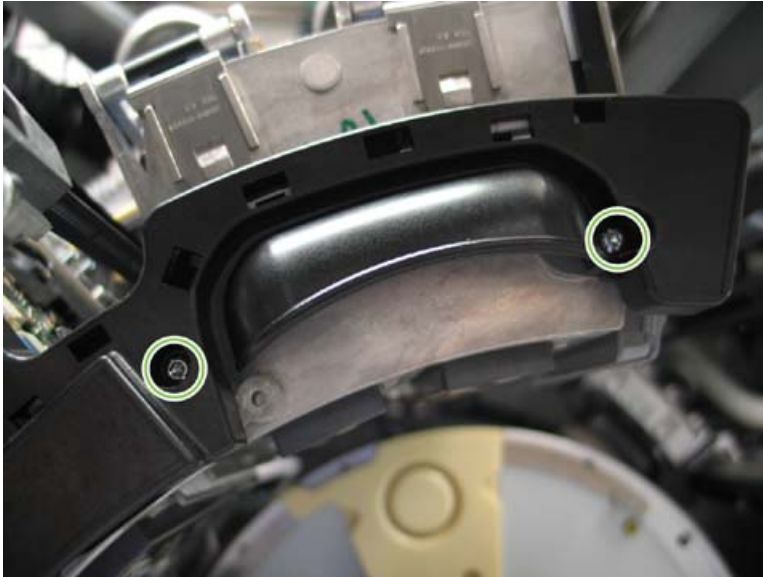
Carriage

- [Carriage handle](#)
- [Aerosol manifold and hose](#)
- [Pens](#)
- [Carriage latches](#)
- [Carriage encoder strip](#)
- [Carriage idler pulleys](#)
- [Carriage drive belt](#)
- [E-chain](#)
- [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\)](#)
- [Carriage magnets](#)
- [Carriage felt oilers](#)
- [Pen-to-paper spacing \(PPS\)](#)
- [Carriage PCAs](#)
- [Carriage sensors](#)
- [Carriage LED \(LED10\)](#)
- [Carriage pen-out-of-cap \(POOC\)](#)
- [Carriage extraction mechanism](#)
- [Carriage X-braces](#)

Carriage handle

1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
2. Extract the carriage.
[Carriage extraction on page 178](#)

3. Remove two screws, and then lift off the carriage handle.



Aerosol manifold and hose

 **NOTE:** Each print carriage has an aerosol manifold.


Follow these steps for both carriage 1 and carriage 2.

1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)
 - Muffler
[Muffler on page 219](#)
 - Back cover


[Back cover on page 219](#)

2. Extract the print carriage structure, and then move the print carriages to the front of the structure.

[Carriage extraction on page 178](#)

 **NOTE:** Observe how the aerosol hose is routed through the e-chain to allow the carriage to move. When you replace the aerosol hose, it will need to be routed through the e-chain in the same manner.

3. Disconnect the aerosol hose from the aerosol manifold, and then pull the manifold free of the carriage.

 **Reinstallation tip** After reinstalling the aerosol hose, push the pen carriage back and forth several times. Ensure that the aerosol hose remains attached to the e-chain, that there is no kinking in the hose, and that the hose does not catch on any other parts.

Reinstallation tip Ensure the aerosol manifold sits in front of the aerosol manifold retainer and not behind it.



4. Unclip the aerosol hose along the length of the e-chain.

5. Unclip the aerosol hose from the MFP frame.



6. Detach the aerosol hose from the aerosol filter box, and then remove the hose.



△ **CAUTION:** Be careful not to damage the carriage encoder strip when you remove the aerosol hose.

Pens

△ **CAUTION:** Pens require special care. See [Pen care on page 180](#) for guidelines.

CAUTION: Use gloves and safety glasses when handling ink parts.

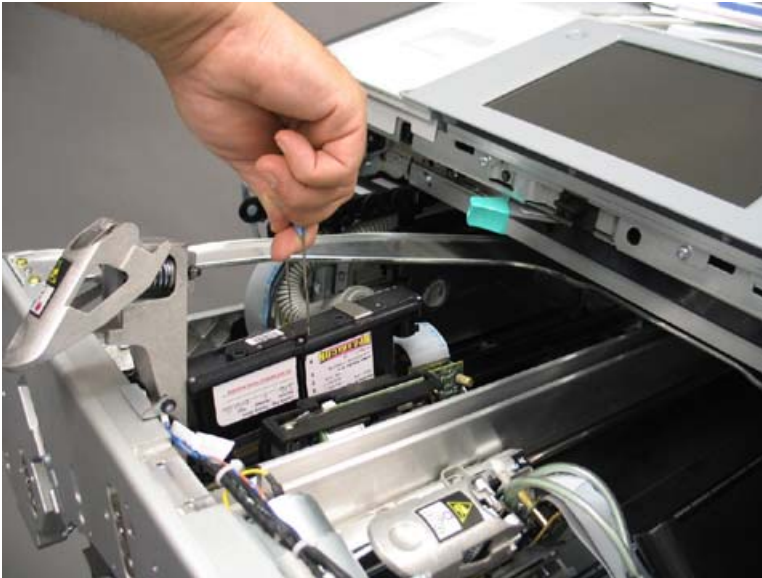
1. Open the print carriage structure (which shuts down power to the pens), and then pull the pen carriages to the front.

📄 **NOTE:** Ensure there is no interlock cheater installed.

2. Lift the pen pocket latch.



3. Lift the pen handle, and then pull the pen straight out of the carriage pocket.

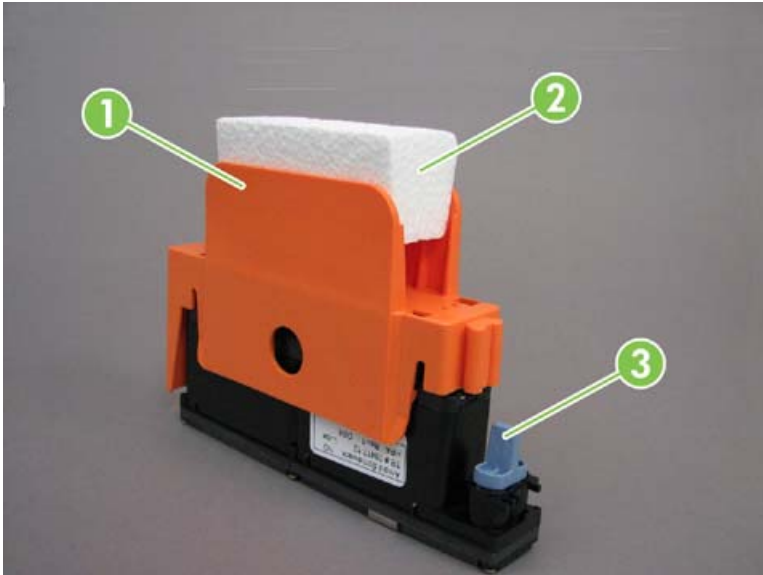


4. Cap the pen for storage. See [Pen care on page 180](#) for capping guidelines.

5. Take a new pen out of its packaging. Remove the polystyrene block (callout 2). Pull up on the needle plug (callout 3) to remove it, and then squeeze the top of the plastic nozzle cap (callout 1) and pull it off of the pen assembly.

△ **WARNING!** Discard all used orange pen nozzle caps and needle plugs. Reinstalling a used cap on a pen can damage the die and cause pen drooling and print quality issues.

△ **CAUTION:** The pen contacts are sensitive to electrostatic discharge (ESD). Do not touch the exposed side or bottom contacts on the pen after removing the cap.



6. Place a pen in the carriage pocket and gently push it *straight down* into the pocket until it is seated. Do not snap it down hard. Lift the pen straight up, and then reseat it firmly and gently a second time to ensure proper seating in the carriage.

△ **CAUTION:** Push down firmly but gently. Snapping the pen too hard against the datums can cause temporary missing nozzles.

Make sure that you push the pen straight down into the pocket until the pen is sitting on both the front and back datums. Ensure that *you* seat the pen; do not rely on the latch to seat the pen. Close and latch the pen cover. Repeat this step for the remaining pens.

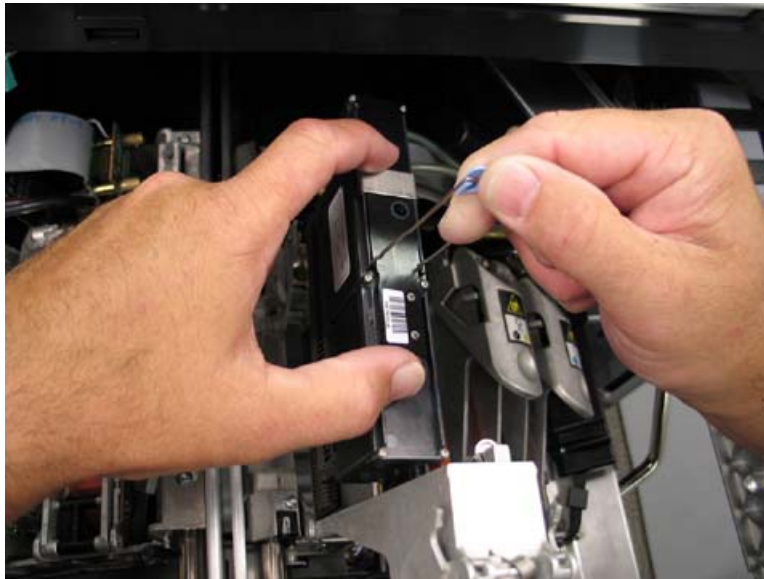
△ **WARNING!** To avoid damage to the pens, do not allow the carriage locking bar to be raised when the carriage structure is out of the MFP.

△ **CAUTION:** Make sure that you push the pen straight down into the pocket. To avoid damage to the pen contacts in the pen pocket, always use the pen handle (blue tab and wire) and your fingers to steady the pen when installing it. If the pen does not install easily, pull the pen straight up and out of the slot, and then reinstall it.

📝 **NOTE:** The pens are keyed and can only be installed in the appropriate slot. If a pen is hard to install, make sure that you are installing the correct pen in the appropriate slot.

NOTE: You may need to move ink tubes out of the way.

NOTE: Refer to the New Pen Installation Process flowchart. See [New pen installation process flowchart on page 2341](#).



📝 **NOTE:** When a pen is replaced, run the following routines:

[New Pen Servicing routine on page 150](#)

[Automatic Pen Alignment \(APA\) calibration on page 148](#)

[Pen Density Compensation calibration on page 149](#)

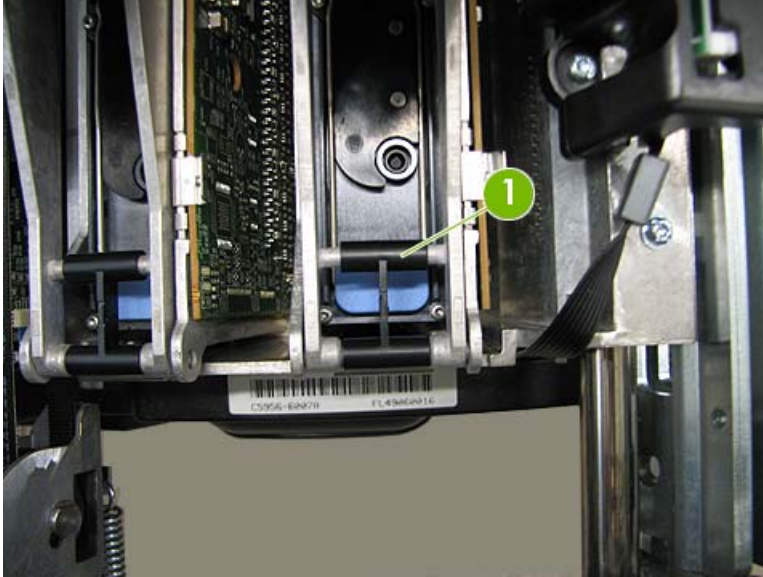
When replacing, swapping, or removing and reinstalling a pen, be sure to use a clean dry wipe on the pen cap surfaces in order to remove any ink build-up. When cleaning the pen caps, prevent cross-contamination by using a new location on the clean dry wipe for each pen cap.

Carriage latches

1. Extract the carriage structure, and then pull the pen carriages to the front.

[Carriage extraction on page 178](#)

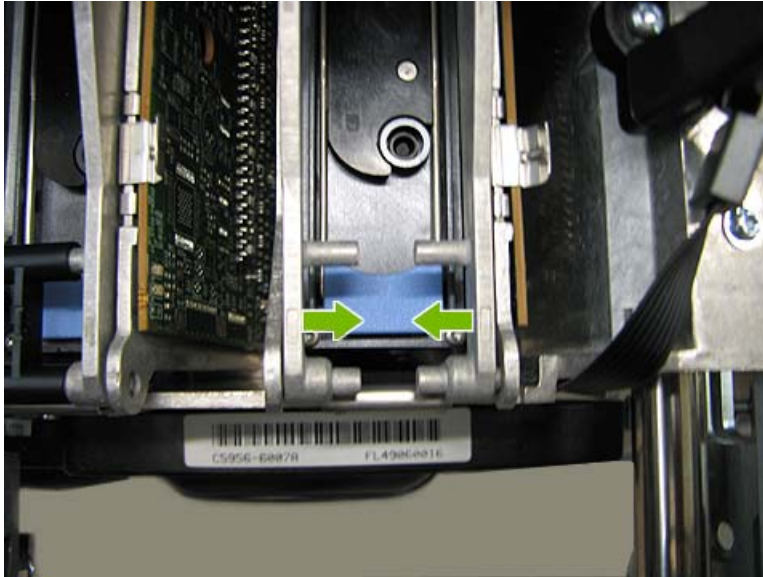
2. Pry off the plastic latch clip (callout 1).



3. Lift the carriage latch.




4. Squeeze together the sides of the carriage latch, and then lift out the latch.



Carriage encoder strip

 **NOTE:** Each print carriage has an encoder strip.


 **CAUTION:** Take care not to contaminate the encoder strip with ink, oil, fingerprints, or other compounds.

Carriage encoder strip removal

Follow these steps for both carriage 1 and carriage 2.

1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)

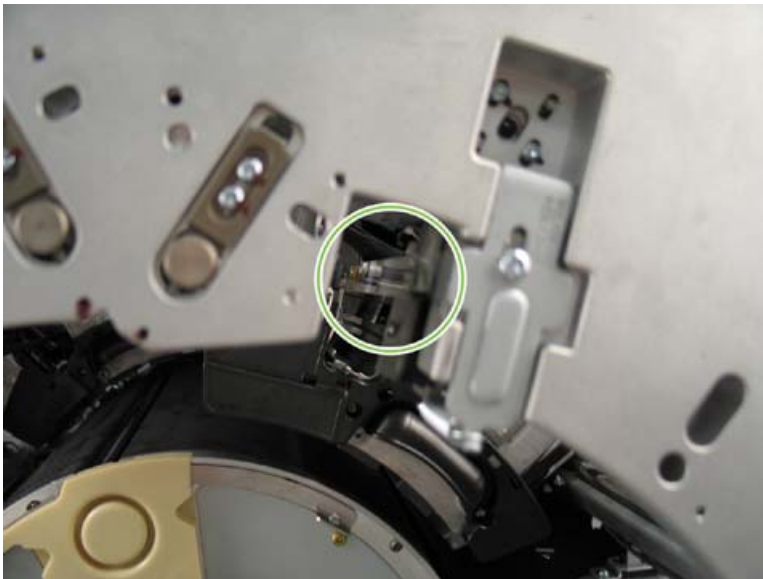
2. Open the print carriage structure, and then pull the print carriage to the front of the carriage structure.


 **NOTE:** Observe the orientation of the carriage encoder strip. The encoder strip has a front and back and a top and bottom. The top is indicated by up arrows and the front is indicated by an “A”.

NOTE: Some older-style encoder strips can have a longer front tab on the end that is tucked under the mounting plate. If this is the case, loosen one screw on the front of the print carriage structure to free the encoder strip tab



3. Lift the end of the encoder strip off of the tab.



 **CAUTION:** When reinstalling, ensure the front end of the encoder strip is properly centered over the mounting pin. It is possible to incorrectly position the encoder strip's mounting hole over one of two protruding side tabs which can result in carriage stalls.

4. On the inside of the MFP near the carriage drive belt pulley, lift the encoder strip off of the rear pin.



5. Remove the encoder strip.

⚠ **WARNING!** Be careful when reaching into the MFP. The exposed edges of the carriage PCAs are sharp.

💡 **Reinstallation tip** An adjustment is required when the carriage encoder strip is reinstalled or replaced.

[Carriage encoder strip adjustment on page 141](#)

Reinstallation tip Be sure to route the carriage encoder strip through the carriage encoder PCA.

Carriage idler pulleys

1. Remove the following items:

- Muffler

[Muffler on page 219](#)

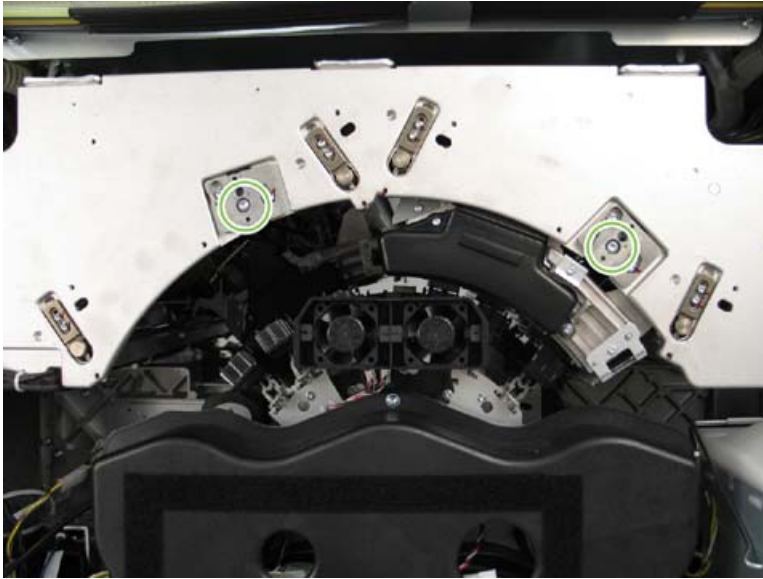
- Back cover

[Back cover on page 219](#)

- Carriage encoder strip


[Carriage encoder strip on page 535](#)

2. Remove one screw for each pulley from the rear of the carriage structure.



3. Remove the carriage idler pulley by pushing the pulley towards the front of the MFP.

Carriage drive belt

 **NOTE:** Each print carriage has a drive belt.

Follow these steps for both carriage 1 and carriage 2.

1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)
2. Open the print carriage structure, and then pull the print carriage to the front of the carriage structure.

3. Loosen one screw on the front of the print carriage structure on the side that has the problem drive belt. Pivot the bottom of the bracket to release the tension of the spring, and then remove the screw completely.



⚠ **WARNING!** The plate that the screw secures is attached to a spring.


4. Remove the plate and the spring.
5. Remove one screw near the carriage motor.




⚠ **WARNING!** The plate that the screw secures is attached to a spring.

6. Pivot the plate, and then remove the plate and the spring.

7. Pull out the drive-belt pulley pin.

 **Reinstallation tip** The pin is keyed and must be aligned to be reinstalled properly. Match the flat side of the pin to the tab.

 **NOTE:** Apply a small drop of heavy grease (blue color) to the pin.



8. Remove the drive-belt pulley.
9. Loosen the two screws on the belt clamping plate that secures the drive belt to the carriage.



10. Remove the drive belt from the rear drive-belt pulley, and then remove the drive belt.



E-chain

-
- △ **CAUTION:** Wear an ESD strap.
- 📋 **NOTE:** Each print carriage has an e-chain.
- △ **CAUTION:** Use gloves and safety glasses when handling ink parts.
-


Follow these steps for both carriage 1 and carriage 2.

1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)
 - Muffler
[Muffler on page 219](#)
 - Back cover
[Back cover on page 219](#)
 - Upper right cover

[Upper right cover on page 216](#)

2. Open the print carriage structure.
3. On the right side of the MFP, disconnect the four wire connectors for the appropriate print carriage from the image processing PCA. The left group of cables is for carriage 1. The right group of cables is for carriage 2.



 **NOTE:** As viewed from the front of the MFP, the left print carriage is print carriage 1. The right print carriage is print carriage 2.

4. Unclip the aerosol hose along the length of the e-chain.

- From the rear of the MFP, lower the ink tube attachments to access two screws. Remove the two screws, push the door slightly to the rear to unhook the door tabs, and then lower the carriage PSU PCA door.

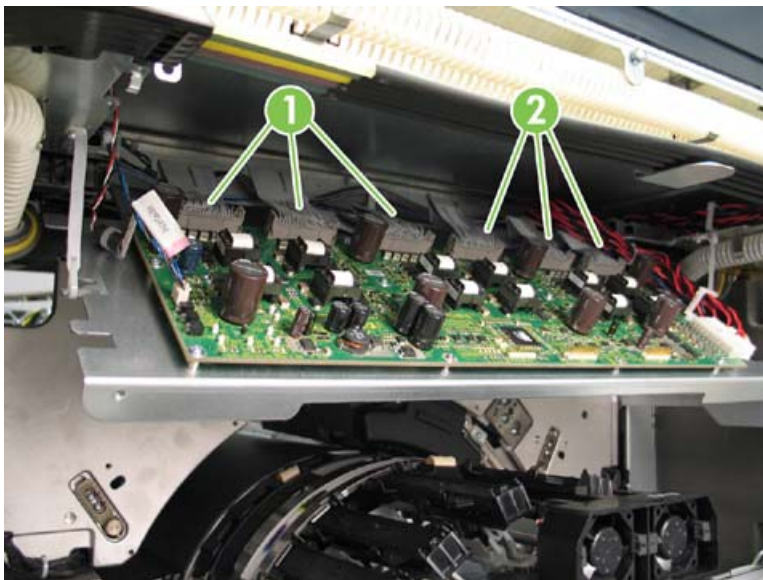
CAUTION: Lower the door slowly and ensure the PCA cables do not catch on any metal edges inside.

NOTE: The carriage PSU PCA door is hinged. Be careful of the pen caps below as you lower the door.

Reinstallation tip Raise the door, and then pull the door towards you to hook the door in place before installing the two door screws.

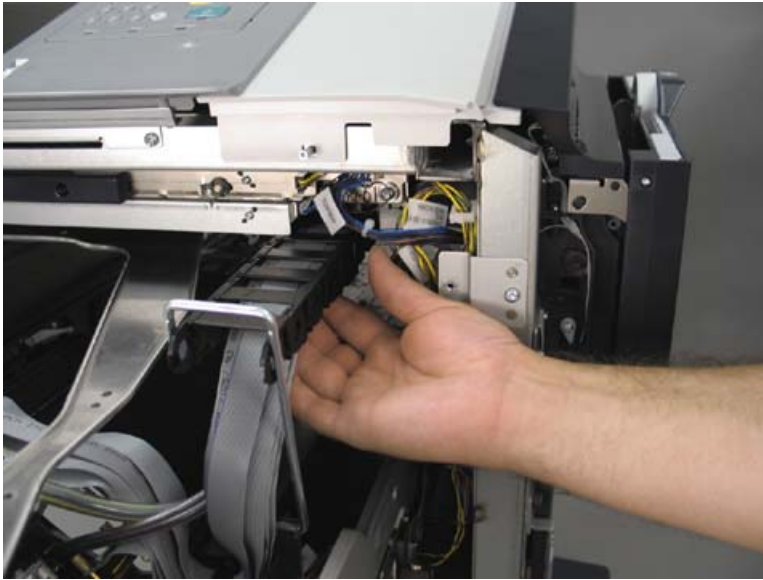


- Disconnect the appropriate e-chain pocket wire connectors from the Carriage PSU PCA (A7).



NOTE: As viewed from the rear of the MFP, remove the three connectors on the left side of the carriage PCA (callout 1) for carriage 2. Remove the three connectors on the right side of the carriage PCA (callout 2) for carriage 1.

7. Press the middle of the flat-sided IDS clip (or pry the side of the clip with a flat-bladed screwdriver) to release the IDS tubes.



8. Remove the IDS hoses from the e-chain.
9. From the front of the MFP, squeeze the sides of the front end of the e-chain together, and then remove the e-chain from the pivot bracket.





10. Remove the aerosol manifold from the carriage.

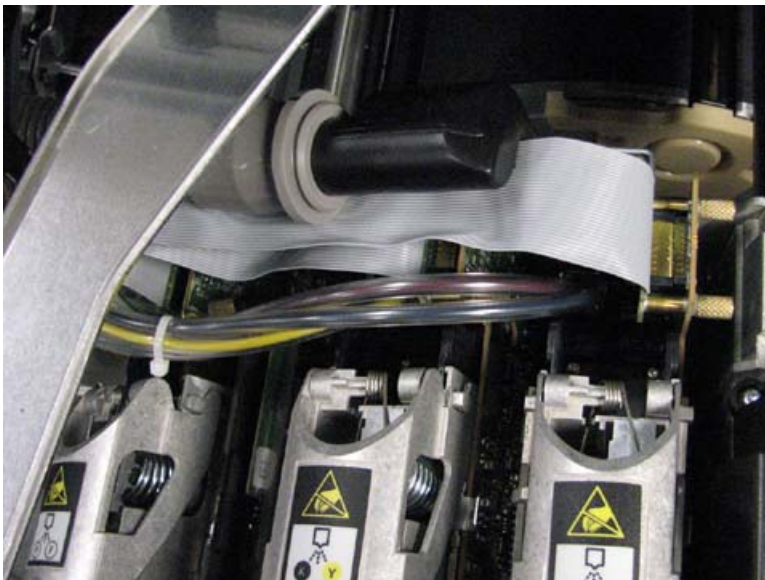


11. Disconnect the pen-pocket wire connectors.



 **NOTE:** The bonding-agent pockets on carriage 1 and carriage 2 have two wire connectors.

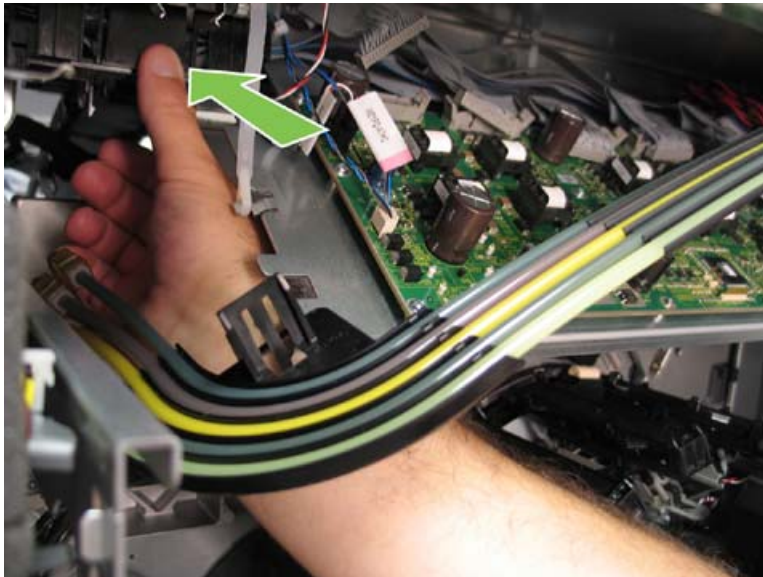
 **Reinstallation tip** Ensure the ink tubes are routed **in front** of the trailing cables.



12. Remove the cable bracket that secures the e-chain to the print carriage by pressing on the front tab of the bracket, pivoting the bracket to the rear of the MFP, and then pulling the bracket towards you.




13. From the rear of the MFP, push the center tab of cable bracket, rotate the bracket down, and then push the entire bracket forward until the e-chain comes loose.




14. Unthread the wire harness from the image processing PCA and the wire harness from the carriage PCA, and then remove the e-chain.

Reassembly of the e-chain

When replacing a cable within the e-chain, the orientation of the cables and brackets during the reassembly process is critical to proper installation. Carriage 1 and carriage 2 have slightly different cable configurations but the general assembly process is similar.

 **NOTE:** Cables are arranged in a stack within the e-chain, with the shortest cable on the bottom as you individually snap their locating clips into the clamp and bracket at either end. Fold cables individually, not as a bundle.

1. Lay the shortest cable (shortest distance from the thumbscrew connector to the locating clip) into the cable clamp. The connector should be facing down. Press the locating clip into the cable clamp.

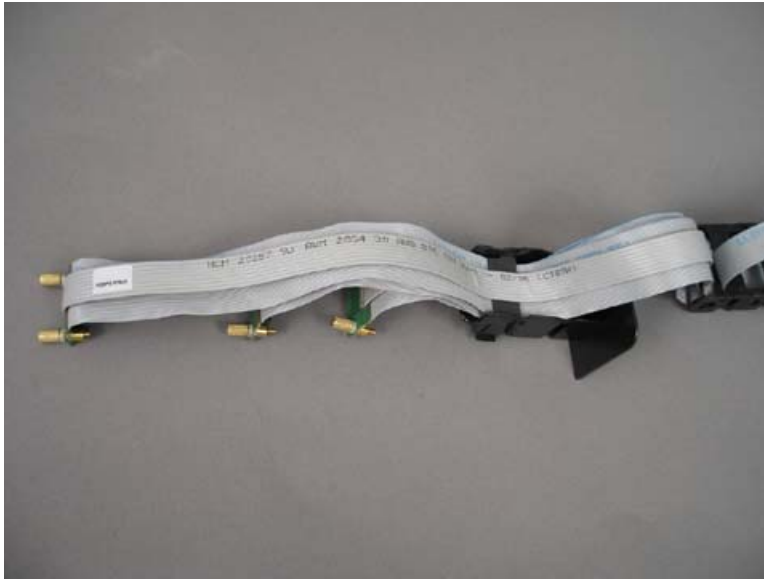
 **NOTE:** The cable clamps for carriage 1 and carriage 2 e-chains are mirrored images of each other. The carriage 2 e-chain is shown in the following photos.



2. Lay the next-longest cable on top, with the same connector face-down orientation as the previous cable, and then snap the locating clip into place.



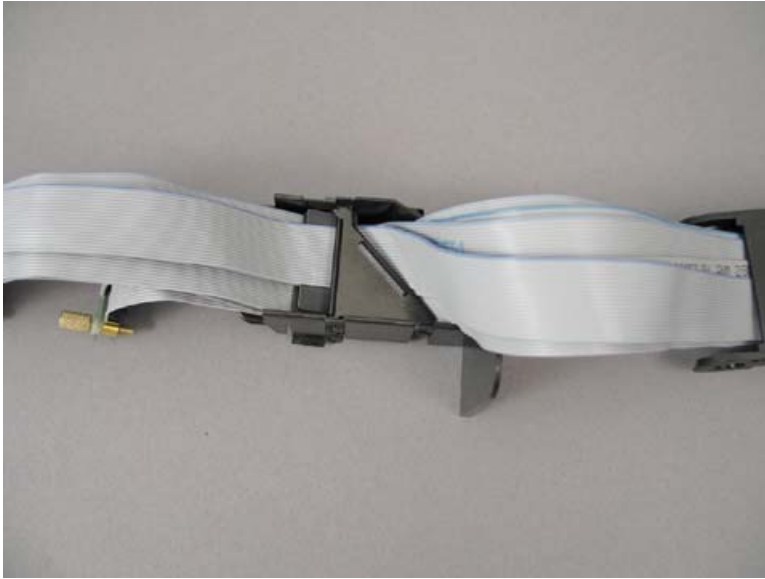
3. Lay the third cable on top, with the same connector orientation as the previous cable, and then snap the locating clip into place.



4. Lay the fourth and final cable (a narrow encoder cable) on top, and then snap the locating clip into place.




5. Snap on the top cover to the cable clamp, securing all of the cables.




6. Flip the cables and cable clamp over so that the cables are cradled within the e-chain. Snap the four hose clips and one flat-sided IDS clip at the marked locations along the outside of the e-chain. The cable bracket attaches to the opposite end of the e-chain.



 **NOTE:** Attach the flat-sided IDS clip to the fourth notch in the e-chain from the cable clamp.

7. Flip the e-chain back over, and then fold the wide cable over and snap the locating clip into place in the cable bracket.

 **NOTE:** For the carriage 2 e-chain, the wide cables fold to the left and the narrow cables fold to the right. Fold the cables individually, not as a bundle.



8. Fold the narrow cable over and snap the locating clip into place in the cable bracket.

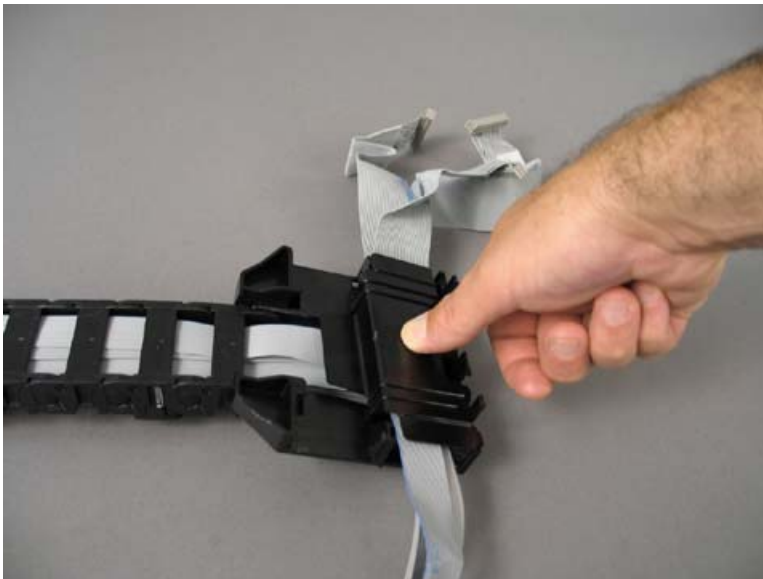
Continue this process with the remaining cables, folding the wide cables to the left and the narrow cables to the right.




9. Fold the last two (narrow encoder) cables to the right and snap the locating clips into place.




10. Snap on the top cover to the cable bracket, securing the cables. Be sure not to pinch the top cables under the cover.



 **NOTE:** The carriage 2 trailing cable bracket has cables folded in two directions. The carriage 1 trailing cable bracket cables fold only in one direction.

Carriage 1 motor (M1) and Carriage 2 motor (M2)

 **NOTE:** Each print carriage has a drive motor.

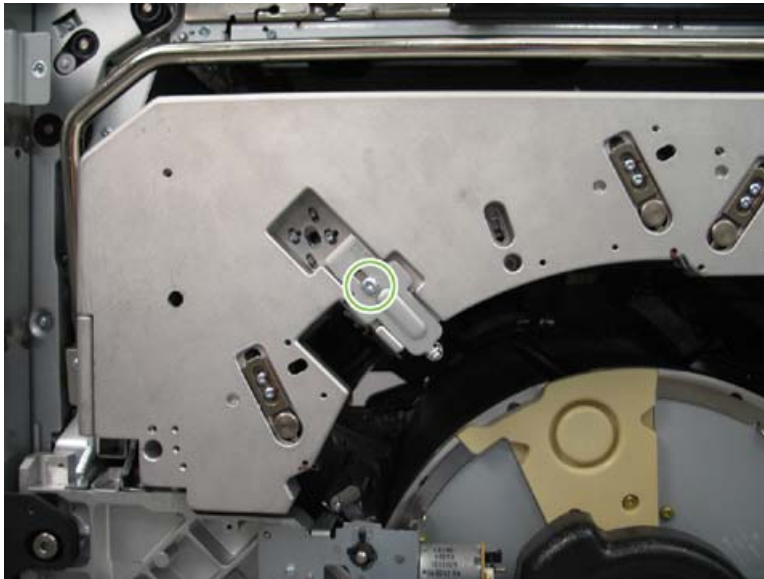
Follow these steps for both carriage 1 and carriage 2.

1. Remove the following items:

- Door engine left
[Left front door on page 205](#)
- Door engine right
[Front door on page 205](#)
- Carriage plate cover
[Carriage plate cover on page 208](#)
- Upper inner cover
[Upper inner cover on page 209](#)

2. Open the print carriage structure.

3. Loosen one screw on the front of the print carriage structure on the side that has the problem drive motor. Pivot the bottom of the bracket to release the tension of the spring, and then remove the screw completely.



⚠ WARNING! The plate that the screw secures is attached to a spring.

4. Remove the plate and the spring.

5. Remove one screw near the carriage motor.



⚠ **WARNING!** The plate that the screw secures is attached to a spring.

6. Pivot the plate, and then remove the plate and the spring.
7. Pull out the drive-belt pulley pin.

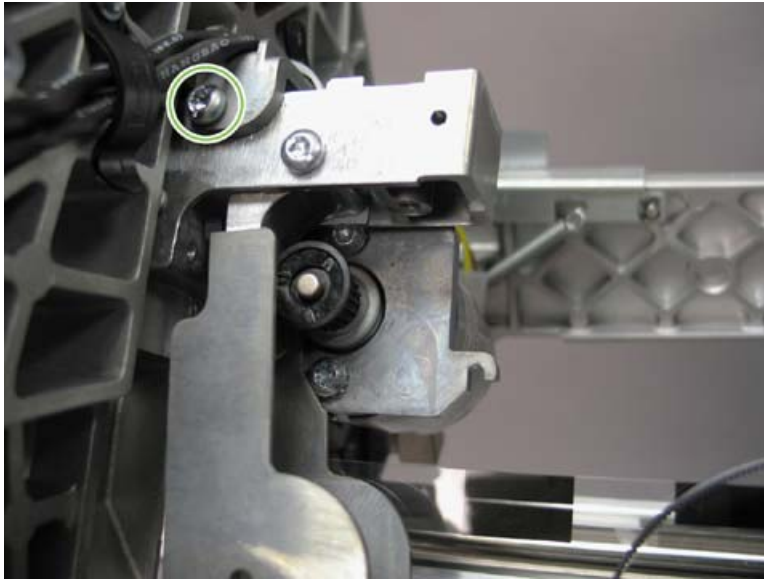
💡 **Reinstallation tip** The pin is keyed and must be aligned to be reinstalled properly. Match the flat side of the pin to the tab.


📝 **NOTE:** Apply a small drop of heavy grease (blue color) to the pin.



8. Remove the drive-belt pulley.

9. Disconnect one wire connector from the motor, remove one screw, and then slide out the carriage motor assembly. Remove two screws to remove the motor from the assembly.



 **NOTE:** After removing or replacing a carriage motor, perform the following calibration and adjustment:

[Carriage Stopping Accuracy calibration on page 141](#)

[Carriage encoder strip adjustment on page 141](#)

Carriage magnets

- [Carriage 1 magnet](#)
- [Carriage 2 magnets](#)

Carriage 1 magnet

1. Extract the carriage structure.

[Carriage extraction on page 178](#)

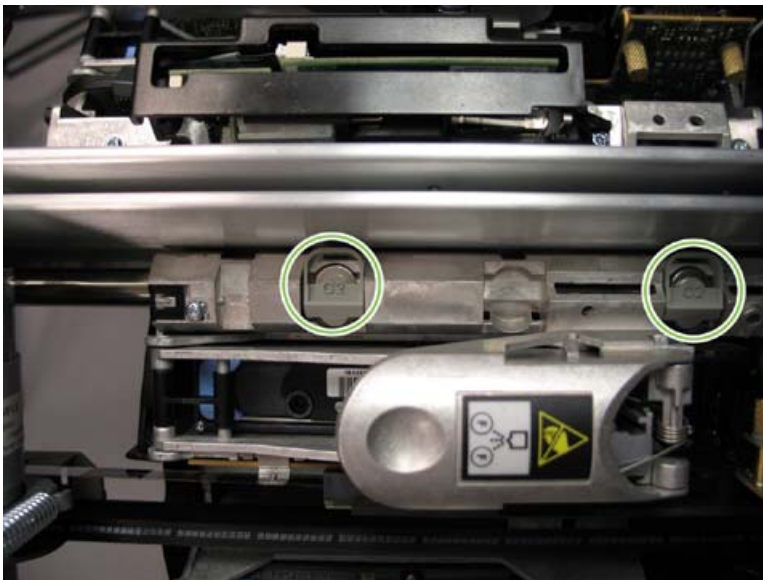
2. Pry the tab to remove the magnet clip, and then remove the magnet.



 **Reinstallation tip** Position the magnet so that it is tilted rather than flat.

Carriage 2 magnets

1. Extract the carriage structure.
[Carriage extraction on page 178](#)
2. Remove the PPS assembly.
[PPS assembly on page 559](#)
3. Pry to remove the magnet clips, and then remove the two magnets.



 **Reinstallation tip** Position the magnet so that it is flat rather than tilted.


Carriage felt oilers

- [Carriage 1 felt oiler](#)
- [Carriage 2 felt oiler](#)

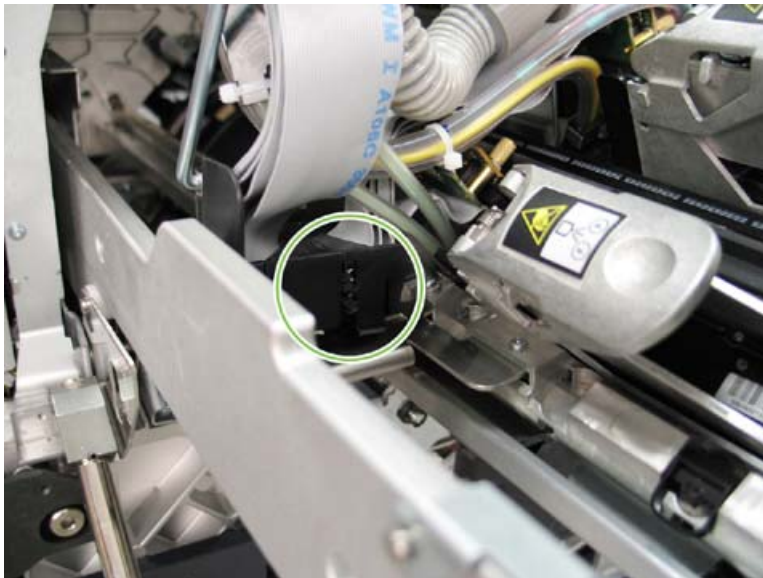
Carriage 1 felt oiler

1. Remove the front carriage felt oiler clip, and then slightly slide the carriage to the rear to access and remove the front carriage felt.



 **Reinstallation tip** The shiny side of the felt faces the clip.

2. Release the e-chain cable bracket by pressing on the front tab of the bracket, pivoting the bracket to the rear of the MFP, and then pulling the bracket towards you.



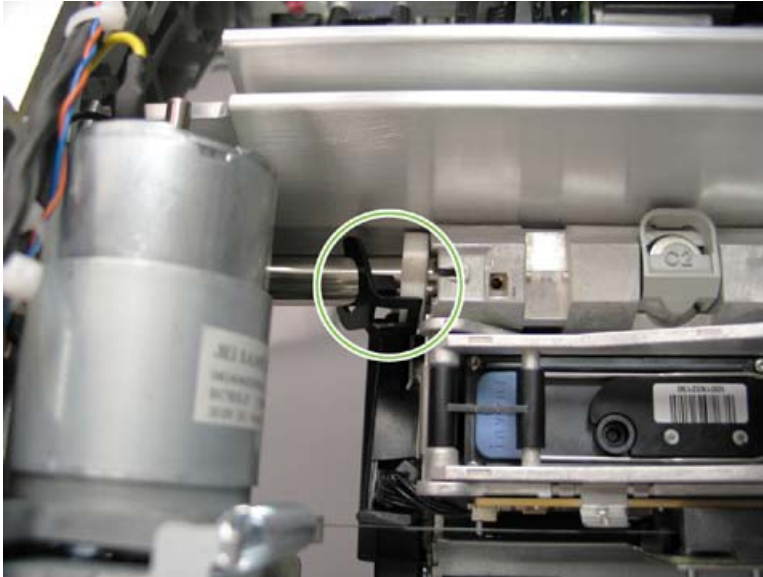
3. Remove the rear carriage felt oiler clip, and then slightly slide the carriage to the front to access and remove the rear carriage felt.

💡 **Reinstallation tip** The shiny side of the felt faces the clip.

Carriage 2 felt oiler

1. Remove the front carriage felt oiler clip, and then slightly slide the carriage to the rear to access and remove the front carriage felt.

💡 **Reinstallation tip** The shiny side of the felt faces the clip.



2. Remove the rear carriage felt oiler clip, and then slightly slide the carriage to the front to access and remove the rear carriage felt.

💡 **Reinstallation tip** The shiny side of the felt faces to the outside of the pen carriage.

Pen-to-paper spacing (PPS)

- [PPS cover](#)
- [PPS assembly](#)
- [PPS motor assembly](#)
- [PPS felt oiler](#)
- [PPS cable](#)

PPS cover

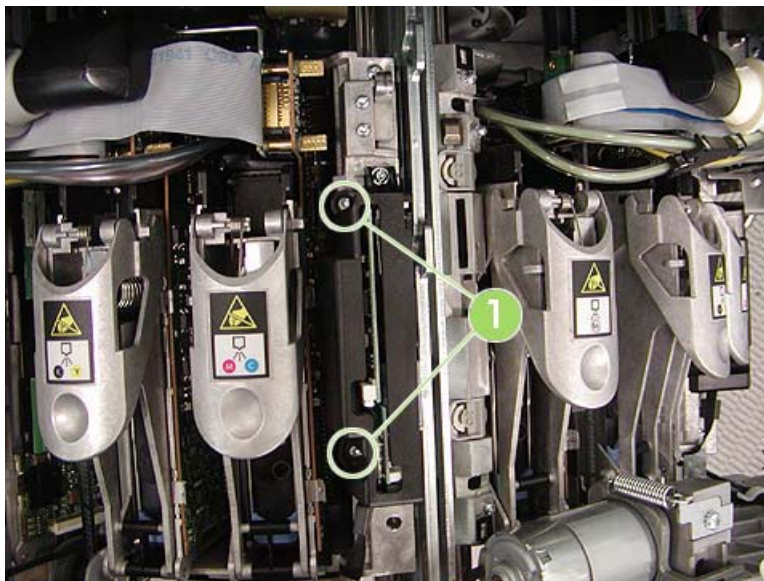
1. Extract the carriage structure.

[Carriage extraction on page 178](#)

The PPS assemblies are located on the right side of each carriage (callout 1).



2. Remove two screws (callout 1), and then remove the PPS cover.



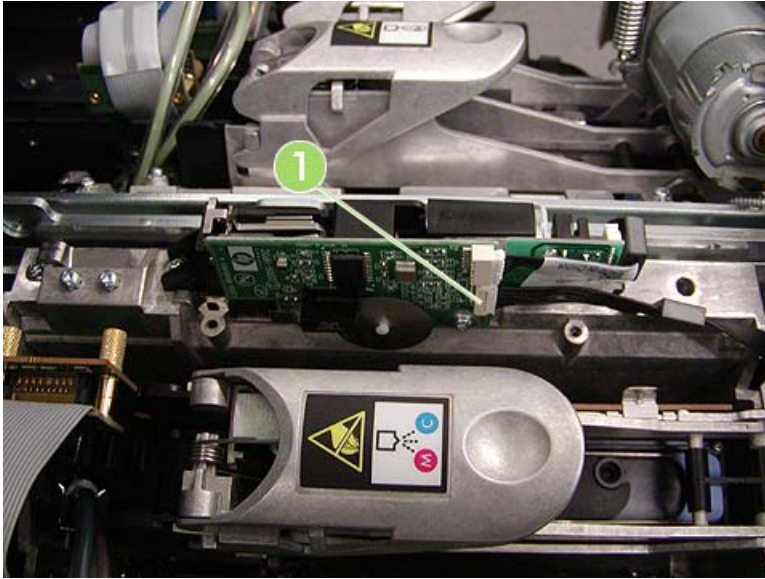
PPS assembly

Remove the old PPS assembly


1. Remove the PPS cover.

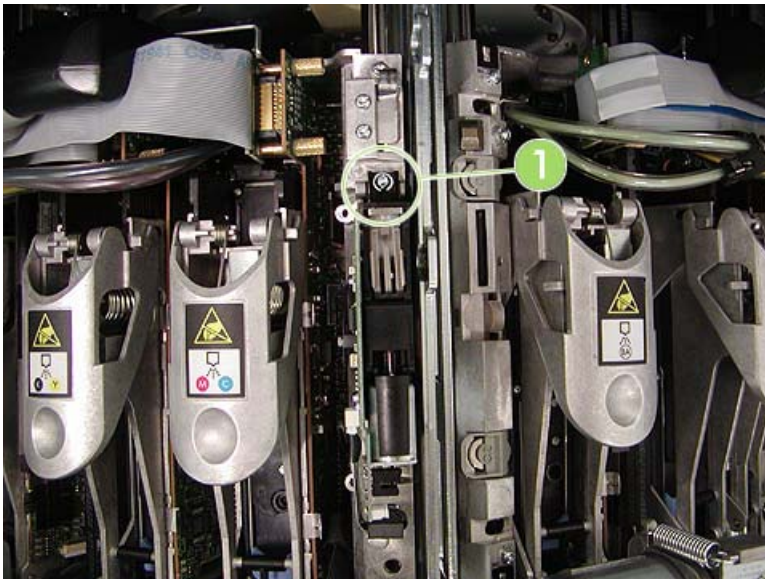
[PPS cover on page 559](#)

2. Disconnect one wire connector (callout 1).



3. Remove one screw (callout 1), and then carefully remove the PPS assembly. (This is the screw that, if stripped, determines that the Z retainer needs replacement.)

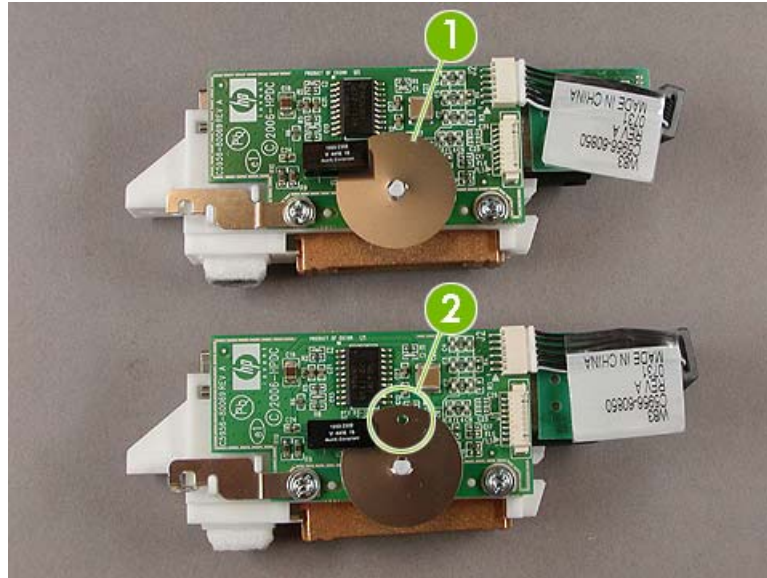
 **NOTE:** The carriage will lower onto the Z retainer as you remove this screw.



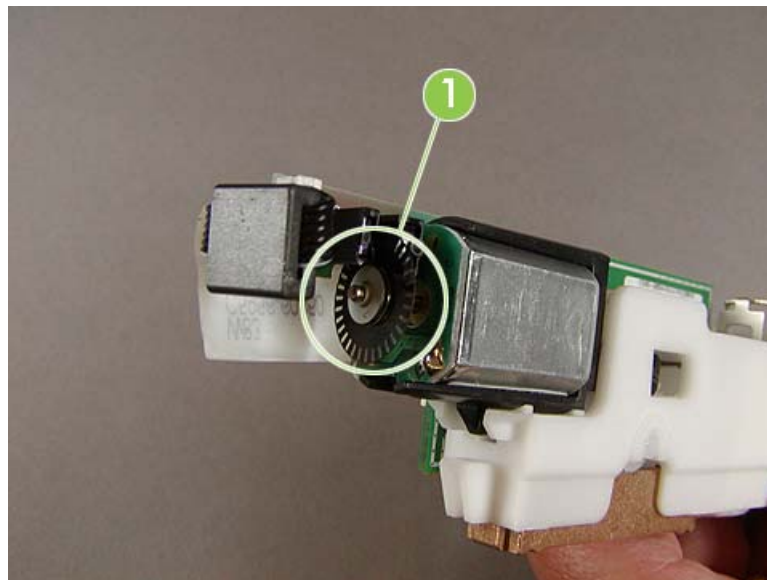
Install the new PPS assembly

1. Prepare the new PPS assembly for installation:

- Before installing the new PPS assembly, look at the large metal sensor disk on the side of the assembly. Check that the hole in the disk is underneath the optical sensor. The correct position of the disk is shown in callout 1. Callout 2 shows the disk in an incorrect position with the hole not underneath the sensor.



- If the hole is not already underneath the sensor, gently turn the encoder wheel (callout 1) until the hole in the sensor disk is underneath the sensor.



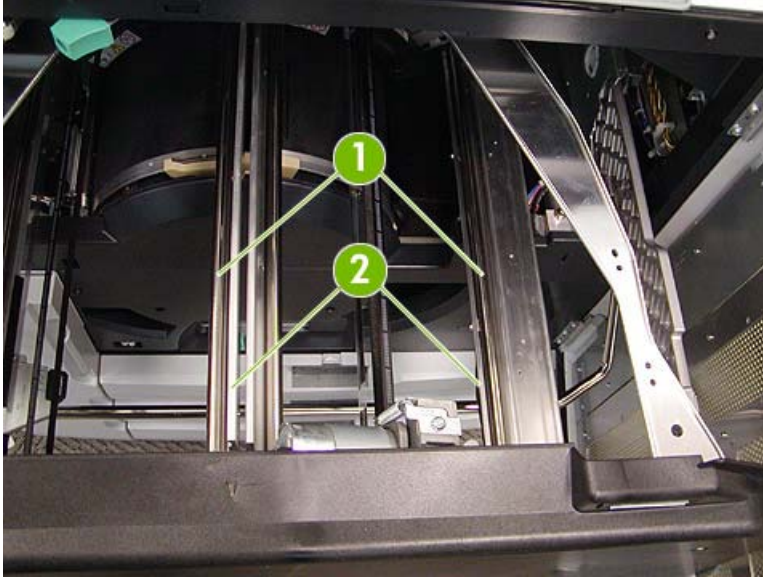
2. Using the print carriage handle, lift the print carriage, and while holding up the print carriage, insert the screw to install the new PPS assembly.

- △ **CAUTION:** Do not over-tighten the screw. Avoid cross-threading the screw into the plastic Z retainer. If the Z retainer is stripped, replace the Z retainer (procedure follows).

3. Reconnect the PPS cable, and then reinstall the PPS assembly cover.
4. Push the carriage with the new PPS assembly to the back of the print structure.
5. Carefully wipe the carriage rod (callout 1) that has the new PPS assembly using a dry, lint-free cloth to remove any existing oil. Be sure to clean the bottom of the rod where oil can accumulate. Also wipe the bottom of the stiffener (callout 2) that runs the length of the rod.

△ **CAUTION:** Avoid getting oil on the carriage encoder strips.

Failure to clean the rods after replacing a PPS assembly may cause excess oil to accumulate on the carriage rod and potentially drip oil onto the drum screen and drop detect assembly.



6. Move the carriage back and forth 2-3 times over the carriage rod to distribute fresh oil from the new PPS assembly.
7. Run the following calibrations:
 - Carriage Stopping Accuracy calibration
[Carriage Stopping Accuracy calibration on page 141](#)
 - From the Printing Test menu, print a copy of the All Colors page and look for carriage to carriage banding down the center of the page. If carriage-to-carriage banding is observed, run the Carriage-to-Carriage alignment.
[Carriage-to-carriage alignment on page 144](#)

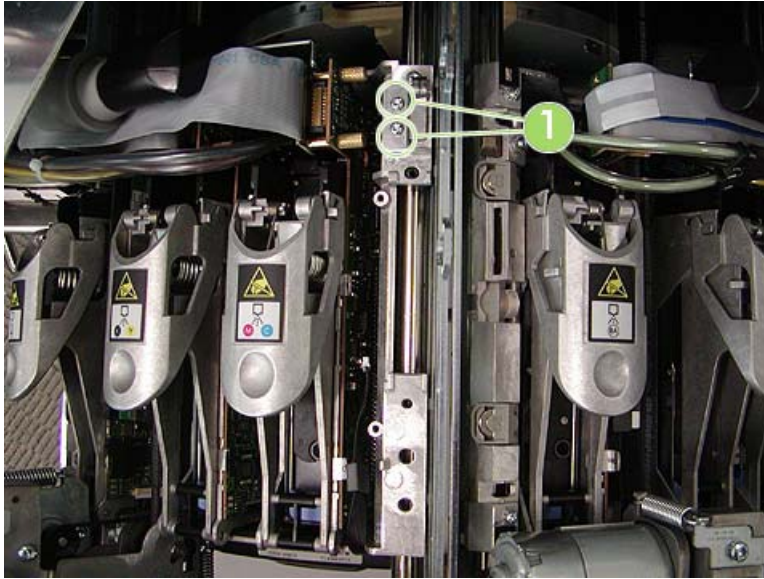
Carriage 1 Z retainer

IMPORTANT: Only replace the Z retainer if the Z retainer currently installed in the MFP is stripped and does not hold the PPS assembly screw securely.

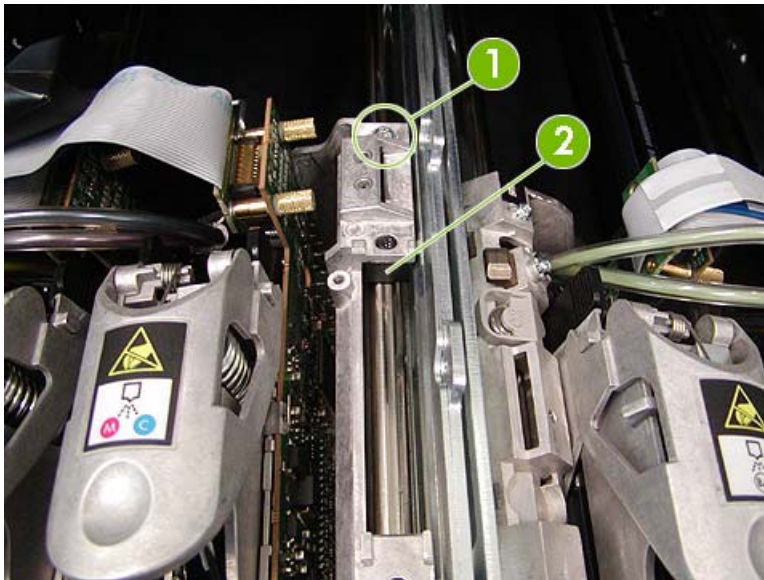
📄 **NOTE:** During disassembly, it is important to note the screw type and location. When you install the Z retainer, do not switch the type of screw for a specific location.

1. Remove the PPS assembly.

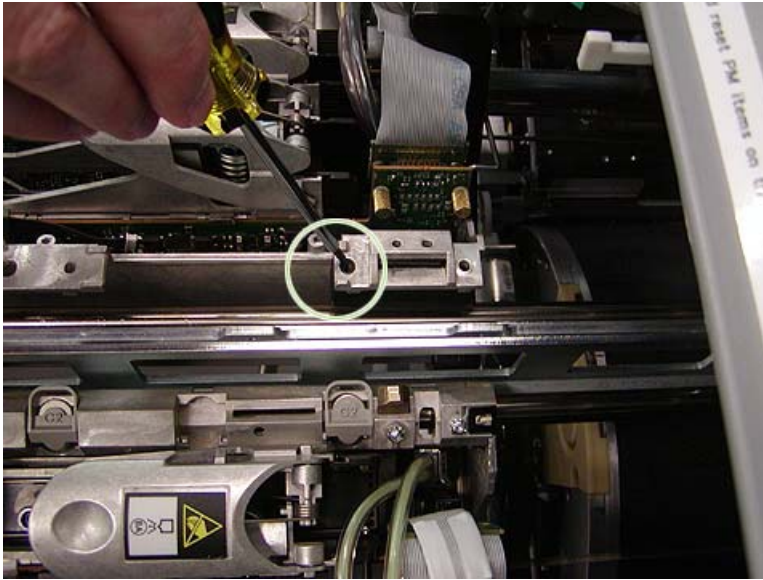
2. Remove two screws (callout 1), and then remove the metal bracket.



3. Remove one screw (callout 1) holding the Z retainer (callout 2).




4. Using the print carriage handle, lift the print carriage, and while holding the print carriage up, push out and remove the black plastic Z retainer.



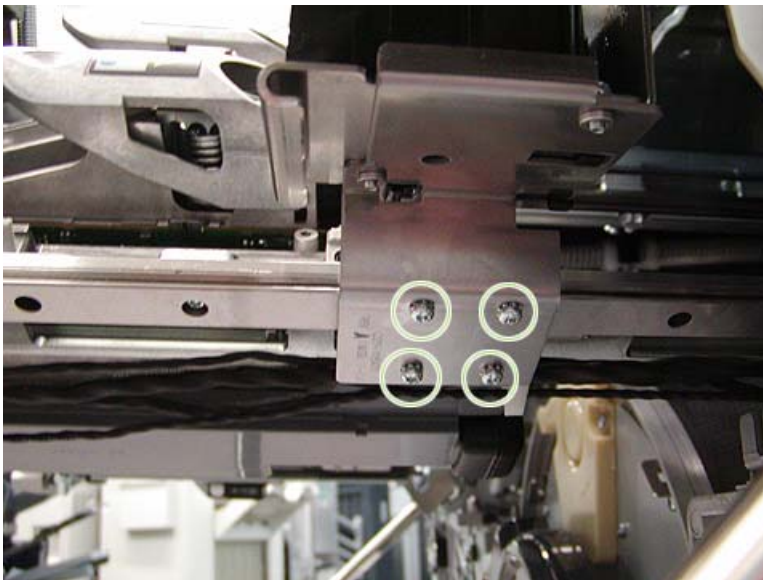
5. Install the new Z retainer.

Carriage 2 Z retainer

IMPORTANT: Only replace the Z retainer if the Z retainer currently installed in the MFP is stripped and does not hold the PPS assembly screw securely.

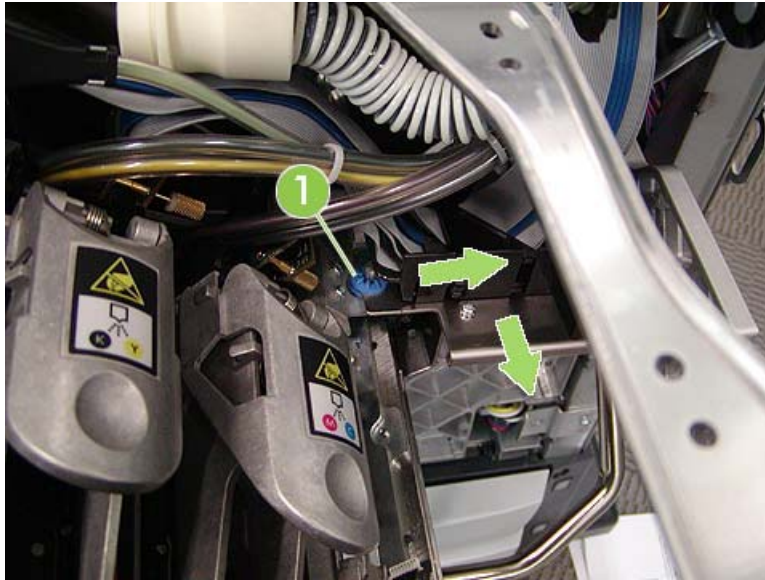
 **NOTE:** During disassembly, it is important to note the screw type and location. When you install the Z retainer, do not switch the type of screw for a specific location.

1. Remove the PPS assembly.
2. From underneath the print carriage 2 structure, remove four screws from the pivot bracket base.

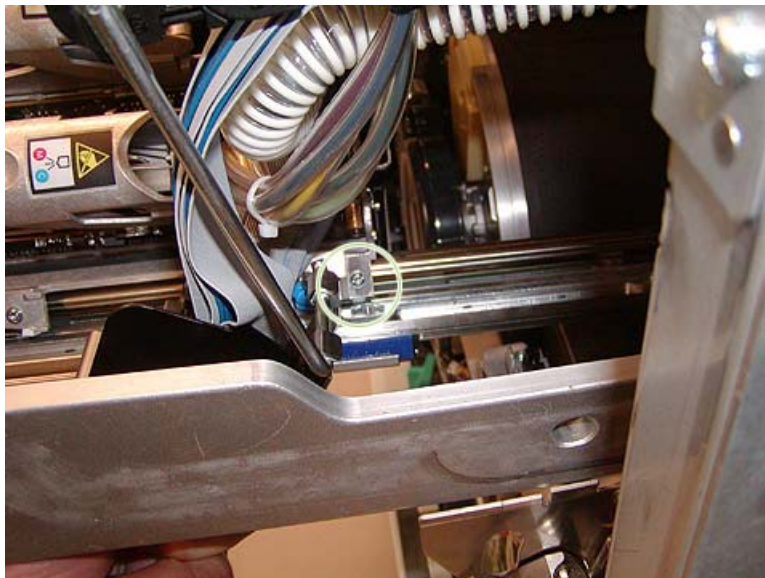


3. Detach the pivot bracket from the carriage slider.

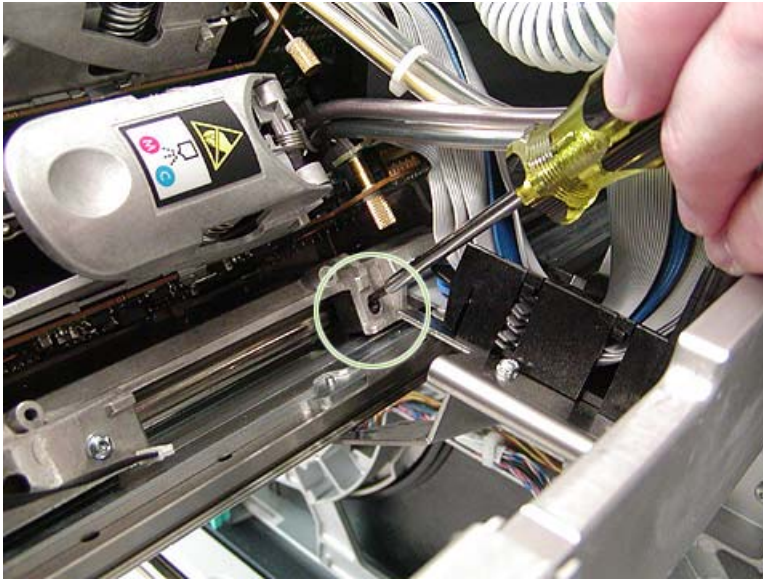
💡 **Reinstallation tip** For reinstallation, the slot in the pivot bracket base fits around the blue grommet (callout 1).



4. Remove one screw holding the Z retainer.



5. Using the print carriage handle, lift the print carriage, and while holding the print carriage up, push out and remove the black plastic Z retainer.



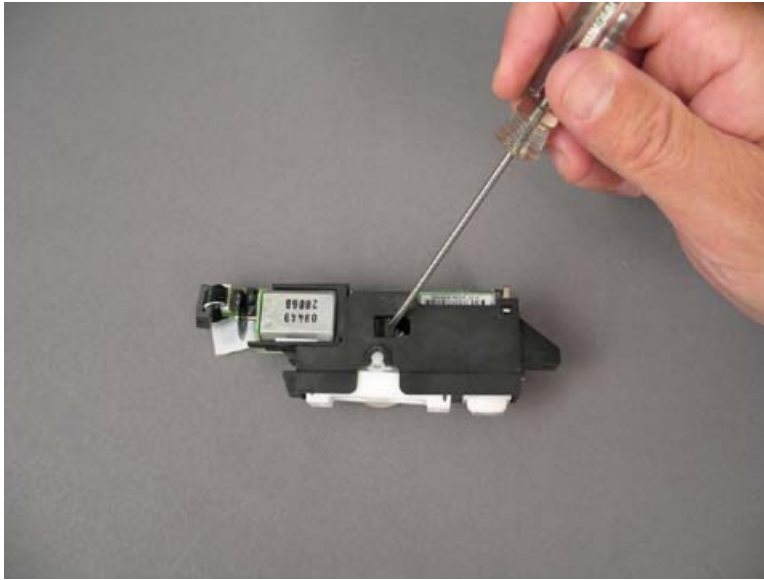
6. Install the new Z retainer.

PPS motor assembly


1. Remove the PPS assembly.
[PPS assembly on page 559](#)
2. Disconnect one wire connector.



3. Use a screwdriver to push down on the plastic tab that secures the motor assembly to the PPS assembly, and then pull the motor assembly away at a slight angle from the PPS assembly.

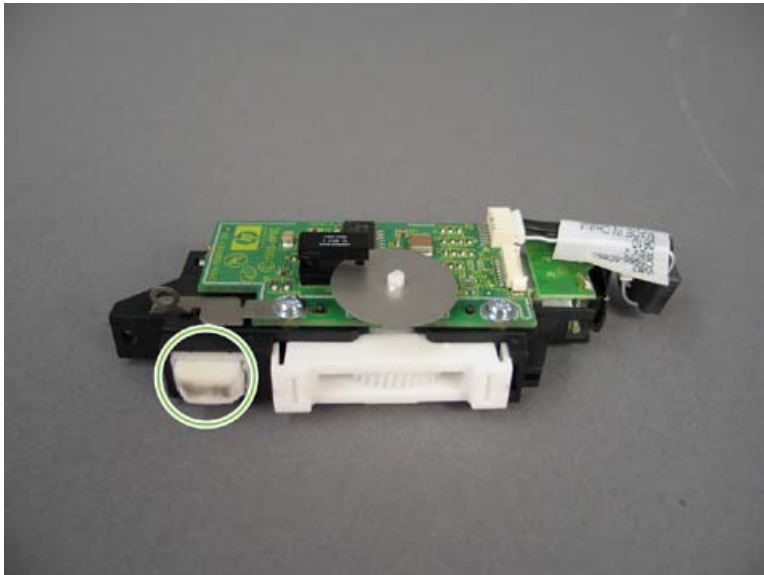


4. Gently twist the motor assembly until it comes loose from the PPS assembly.

 **Reinstallation tip** The PPS motor assembly can be installed backwards. If the PPS motor assembly is installed backwards, you will encounter image quality issues.

PPS felt oiler

1. Remove the PPS assembly.
[PPS assembly on page 559](#)
2. Pull the felt oiler out from the bottom of the PPS assembly.



PPS cable

1. Remove the following items:
 - Carriage handle
[Carriage handle on page 527](#)
 - PPS cover
[PPS cover on page 559](#)
2. Disconnect the wire connector at each of the PPS cables.

Carriage PCAs

- [Carriage pen pocket PCAs \(A17, A18, A20, and A21\)](#)
- [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\)](#)
- [Carriage PPS PCAs \(A25 and A34\)](#)
- [Carriage PSU](#)
- [Image Processing PCA \(A6\)](#)

Carriage pen pocket PCAs (A17, A18, A20, and A21)

△ **CAUTION:** Wear an ESD strap.

CAUTION: Use gloves and safety glasses when handling ink parts.

Bonding agent pocket


- Follow the steps to remove a carriage encoder PCA.

[Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)

C/M pocket or B/Y pocket


1. Open the pen latch, and then pull the pen straight out of the pen pocket. Store the upside down pen on a stable surface.
 - △ **CAUTION:** Do not drop the pen.
2. Remove the pen latch. Use a small flat-bladed screwdriver to unsnap the plastic H-bar at the front edge of the latch. Squeeze the latch sides to release, and then remove the latch.
 - △ **CAUTION:** Be careful not to damage the pen pocket when removing the latch.
3. Unscrew the large combination trailing cable connector, and then detach it from the pocket PCA.

4. While gently pushing the pocket PCA away from the pocket, lift up on the retention clips, one at a time, to free the pocket PCA from the carriage.

 **NOTE:** For the C/M pocket on both carriage 1 and carriage 2, remove the PPS cover to allow enough room to remove the pocket PCA. See [PPS cover on page 559](#).




5. Gently lift the pocket PCA out of the carriage. Take care not to strike the pocket PCA against the retention clips.
6. Replace the two retention clips with new clips before replacing or reinstalling the pocket board.

 **Reinstallation tip** Verify the three feet on the pocket PCA are located in the three holes at the bottom of the carriage, and then snap the pocket PCA under the retention clips.

Carriage 1 Encoder PCA (A9), Carriage 2 Encoder PCA (A24), Pen Pocket 1 PCA (A16), and Pen Pocket 4 PCA (A19)

Carriage 1 Encoder PCA (A9) and Pen Pocket 1 PCA (A16) are attached and located in pocket 1. Carriage 2 Encoder PCA (A24) and Pen Pocket 4 PCA (A19) are attached and located in pocket 4.

 **NOTE:** Pen Pocket 1 PCA (A16), and Pen Pocket 4 PCA (A19) cannot be swapped between carriages for troubleshooting purposes because there is a potential risk to create PQ defects. If either Pen Pocket 1 PCA (A16) or Pen Pocket 4 PCA (A19) is suspected to be the cause of a problem, it should be replaced with a new one. If the same pocket PCA is reinstalled into the original pocket, or if a new pocket PCA is installed into any pocket, no issues will result.

 **CAUTION:** Wear an ESD strap.

CAUTION: Use gloves and safety glasses when handling ink parts.

1. Remove the carriage encoder strip.

[Carriage encoder strip on page 535](#)

△ **CAUTION:** Take care not to contaminate the encoder strip with ink, oil, fingerprints, or other compounds.

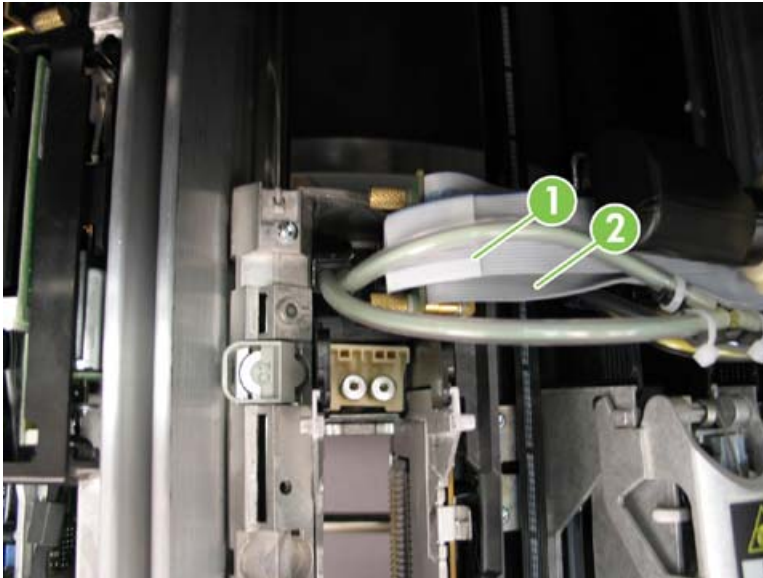
2. Open the pen latch, and then pull the pen straight out of the pen pocket. Store the pen upside down on a stable surface.

△ **CAUTION:** Do not drop the pen.

3. Remove the pen latch. Use a small flat-bladed screwdriver to unsnap the plastic H-bar at the front edge of the latch. Squeeze the latch sides to release, and then remove the latch mechanism.

△ **CAUTION:** Be careful not to damage the pen pocket when removing the latch.

4. Disconnect the small trailing cable from the pocket PCA (callout 1), and then the large combination trailing cable connector (callout 2).

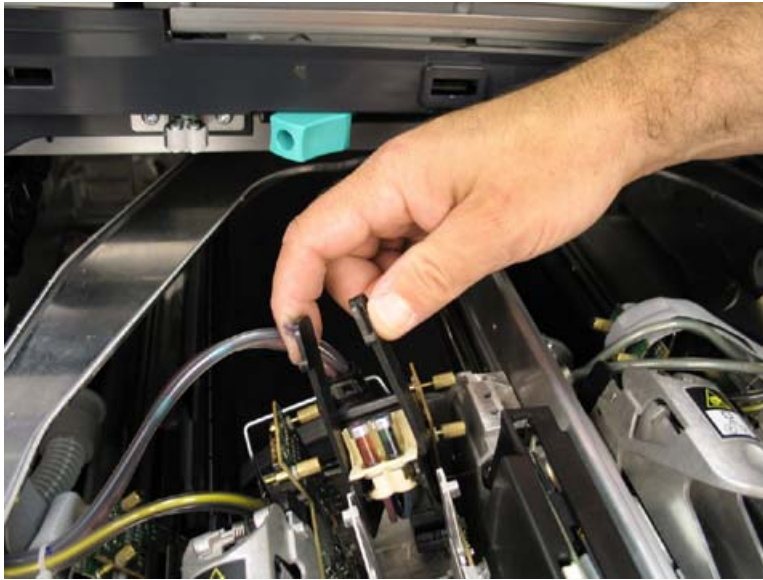


5. Remove two screws, and then lift off the carriage handle. See [Carriage handle on page 527](#).

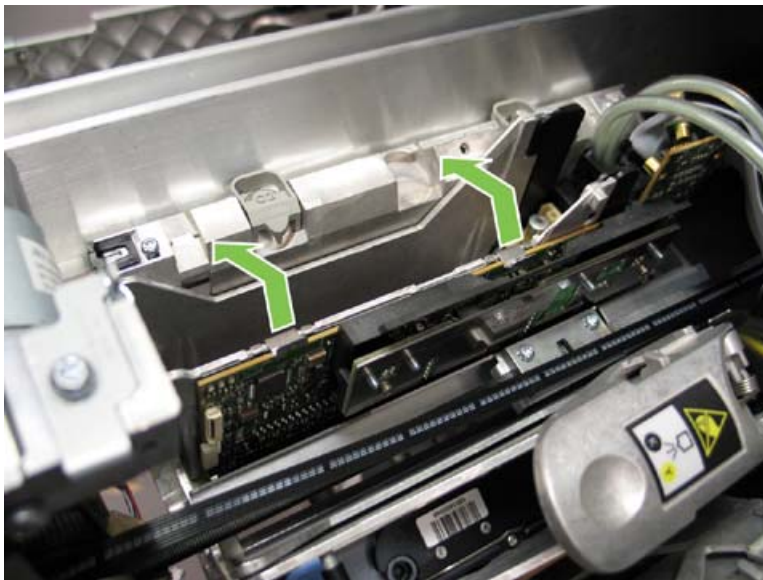
6. Disconnect the PPS cable and Tetris sensor cable from the pocket PCA.

📄 **NOTE:** Only pocket 1 has the Tetris sensor cable.


7. Disconnect the IDS hoses by squeezing the top of the two sides of the IDS hose bracket assembly together, and then lifting up to remove the bracket.




8. While gently pushing the pocket PCA away from the pocket, lift up on the retention clips, one at a time, to free the pocket PCA from the carriage.



9. Gently lift the pocket PCA out of the carriage. Take care not to strike the pocket PCA against the retention clips.
10. Replace the two retention clips with new clips before replacing or reinstalling the pocket board.

 **NOTE:** After removing or replacing a carriage pen pocket PCA, perform the following adjustment:
[Carriage encoder strip adjustment on page 141](#)

 **Reinstallation tip** Verify the three feet on the pocket PCA are located in the three holes at the bottom of the carriage, and then snap the pocket PCA under the retention clips.

Carriage PPS PCAs (A25 and A34)

△ **CAUTION:** Wear an ESD strap.

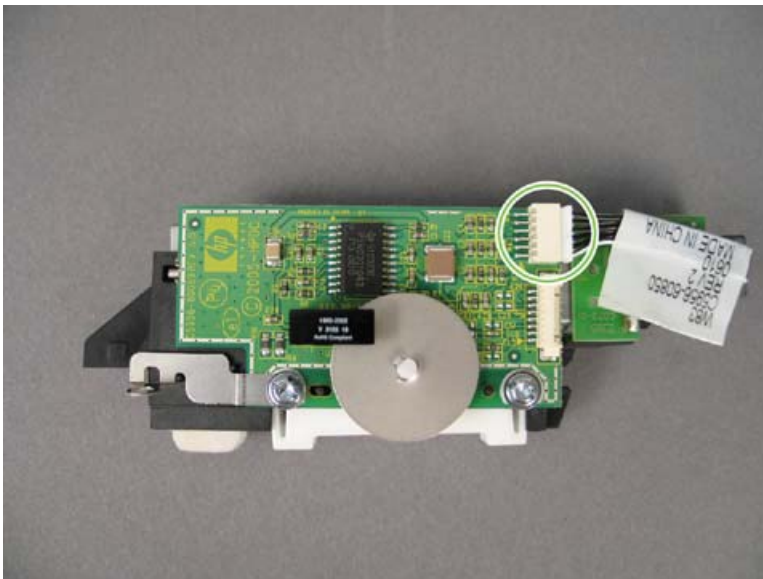
1. Remove the PPS assembly.

[PPS assembly on page 559](#)

2. Remove two screws.



3. Disconnect one wire connector.



4. Remove the PCA.

Carriage PSU

- [Carriage PSU PCA \(A7\)](#)

- [CPSU Cooling fan \(FAN3\) filter](#)
- [CPSU Cooling fan \(FAN3\)](#)

Carriage PSU PCA (A7)

1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)
 - Muffler
[Muffler on page 219](#)
 - Back cover
[Back cover on page 219](#)
2. Open the print carriage structure.

3. From the rear of the MFP, lower the ink tube attachments to access two screws. Remove the two screws, push the door slightly to the rear to unhook the door tabs, and then lower the carriage PSU PCA door.

△ **CAUTION:** Lower the door slowly and ensure the PCA cables do not catch on any metal edges inside.

💡 **Reinstallation tip** Raise the door, and then pull the door towards you to hook the door in place before installing the two door screws.




4. Disconnect all of the wire connectors from A7.
5. Unhook the restraining straps, and then unhook the rear of the door assembly to remove it.

CPSU Cooling fan (FAN3) filter

1. Remove the following items:
 - ADF assembly
[ADF assembly on page 226](#)
 - Scanner rear trim
[Scanner rear trim on page 221](#)

2. Remove the FAN3 filter from the carriage PSU duct.



 **NOTE:** The CPSU Cooling fan (FAN3) filter is a preventive maintenance item and is cleaned or replaced at scheduled intervals. See [Service intervals on page 79](#).

Reset the preventive maintenance counter for this item every time maintenance is performed.

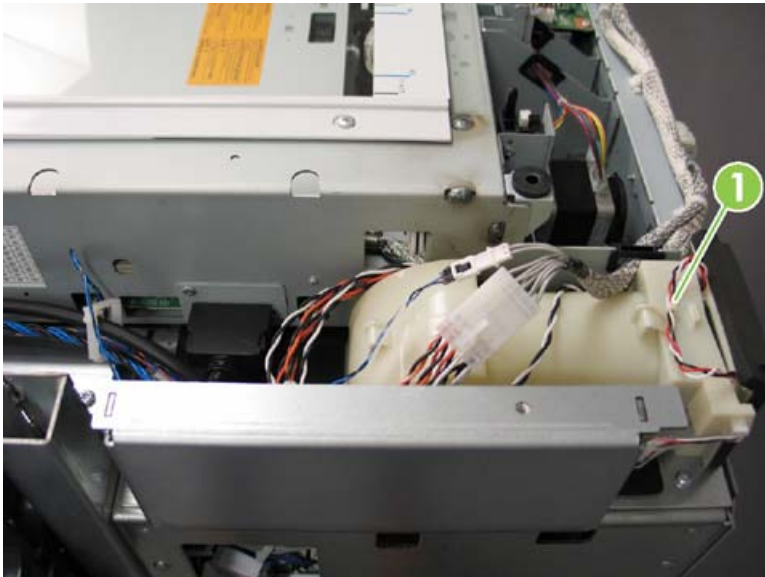
CPSU Cooling fan (FAN3)

1. Remove the following items:
 - ADF assembly
[ADF assembly on page 226](#)
 - Scanner rear trim
[Scanner rear trim on page 221](#)

2. Remove the FAN3 filter from the carriage PSU duct.



3. Unclip the FAN3 wire (callout 1) from the top of the carriage PSU duct, and then disconnect the wire connector inside the duct.



4. Pull out FAN3.

Image Processing PCA (A6)

- [Image Processing PCA assembly](#)
- [Image Processing PCA Cooling fan \(FAN9\)](#)
- [Image Processing PCA DIMMs](#)

Image Processing PCA assembly


1. Remove the upper right cover.


[Upper right cover on page 216](#)

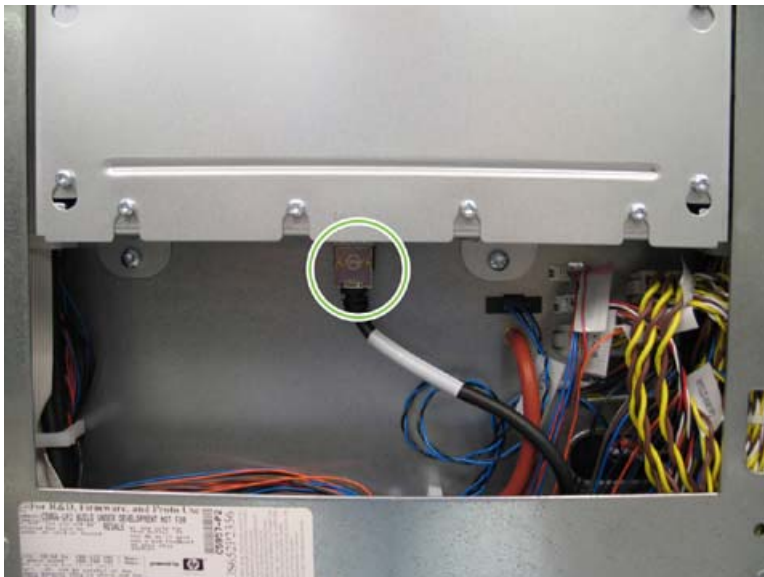
2. Disconnect all of the wire connectors from the top of the Image Processing PCA (A6).



3. Disconnect the data cable from the bottom of the enclosure.

 **NOTE:** The latch is on the back of the connector.

 **Reinstallation tip** Ensure this cable is not bent or kinked.



4. Remove two screws at the bottom of the enclosure, and then rotate the enclosure up from the bottom to unhook the top of the Image Processing PCA assembly from the back wall.

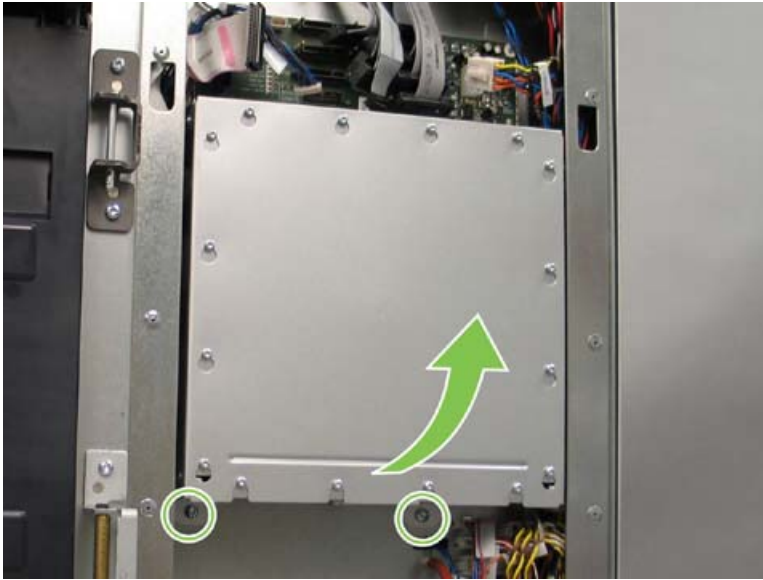
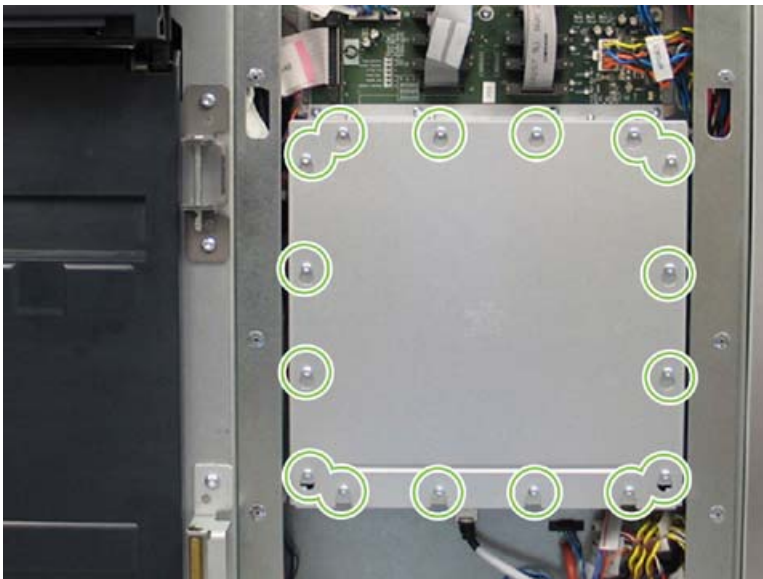


Image Processing PCA Cooling fan (FAN9)


1. Remove the upper right cover.
[Upper right cover on page 216](#)
2. Loosen sixteen screws, and remove the cover.



3. Disconnect the fan cable.



4. Lift out FAN9.

 **Reinstallation tip** Align the airflow indicators on the fan body and frame so that the arrows point in the same direction.

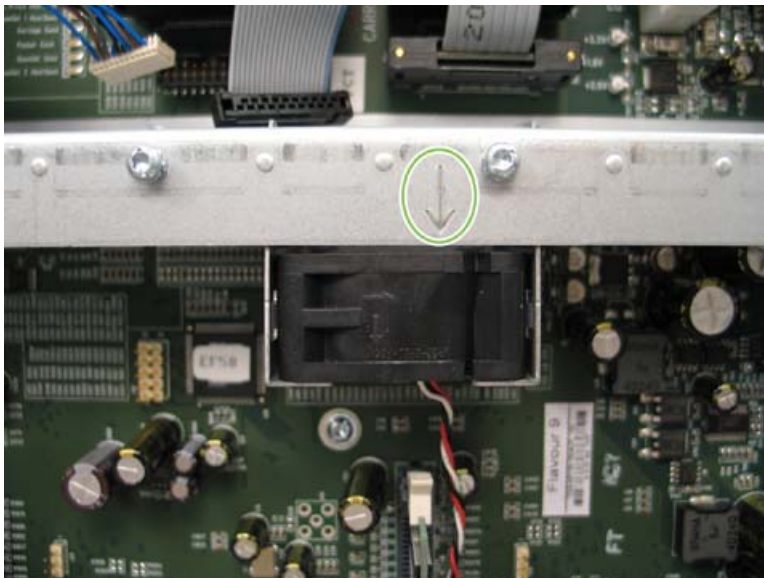
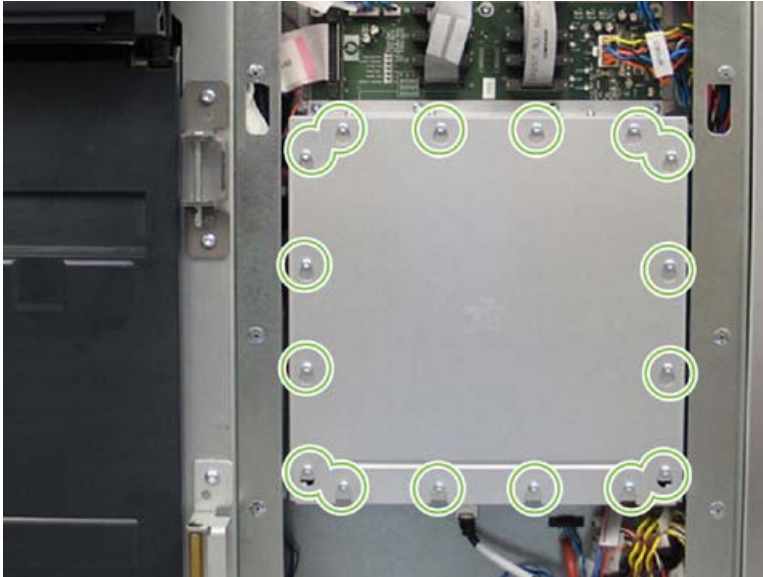


Image Processing PCA DIMMs

1. Remove the upper right cover.

[Upper right cover on page 216](#)

2. Loosen sixteen screws, and remove the cover.




3. Push down on the side tabs to eject the DIMM (DRAM 1 is callout 1; DRAM 2 is callout 2).



Carriage sensors

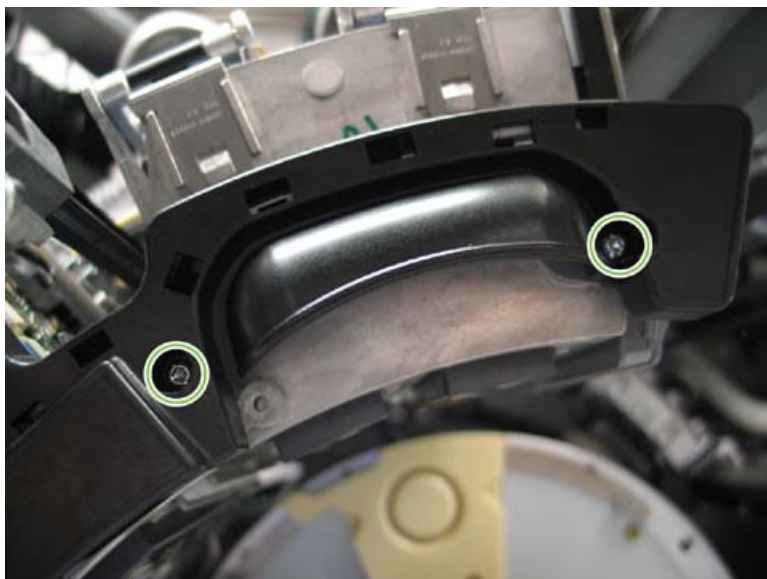
- [Tetris sensor \(SN58\)](#)
- [Carriage 1 Pen Protection sensor \(SN56\) and Carriage 2 Pen Protection sensor \(SN57\)](#)
- [Carriage Front thermistor \(SN61\) and Carriage Back thermistor \(SN62\)](#)
- [Top-of-form sensor \(SN22\)](#)

Tetris sensor (SN58)

 **NOTE:** Do not remove this sensor unless it has been determined to be bad. Extensive calibrations are required when this sensor is moved or replaced.

 **CAUTION:** Wear an ESD strap.


1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)
2. Extract the print carriage.
[Carriage extraction on page 178](#)
3. Pull the left pen carriage to the front.
4. Remove two screws, and then lift off the carriage handle.



5. Disconnect the sensor wire connector.

6. Remove the two screws that secure the sensor to the print carriage, and then remove the sensor.



 **NOTE:** The Tetris sensor (SN58) is a preventive maintenance item and is cleaned at scheduled intervals. See [Service intervals on page 79](#).

Reset the preventive maintenance counter for this item every time maintenance is performed.

NOTE: If the Tetris sensor (SN58) is replaced or removed, perform the following calibrations:

[Top-of-form Position calibration on page 163](#)

[First Nozzle Position calibration on page 164](#)

[Drum Position calibration on page 140](#)

[Media Side Edge calibration on page 139](#)

[Tetris sensor \(SN58\) calibration on page 163](#)

Carriage 1 Pen Protection sensor (SN56) and Carriage 2 Pen Protection sensor (SN57)

 **NOTE:** Each print carriage has a pen protection sensor.

Follow these steps for both carriage 1 and carriage 2.

1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover

[Upper inner cover on page 209](#)

2. Extract the print carriage.

[Carriage extraction on page 178](#)

3. Pull the pen carriage to the front.
4. Remove two screws, and then lift off the carriage handle.



5. Remove one screw from the rear of the pen carriage.



6. Remove one screw from the front of the pen carriage.



7. Disconnect one wire connector.
8. Using a small screwdriver, pry the front of the structure off of its locating pins.
9. Remove the sensor structure.


Carriage Front thermistor (SN61) and Carriage Back thermistor (SN62)

1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Muffler
[Muffler on page 219](#)
 - Back cover
[Back cover on page 219](#)
2. Extract the print carriage.
[Carriage extraction on page 178](#)

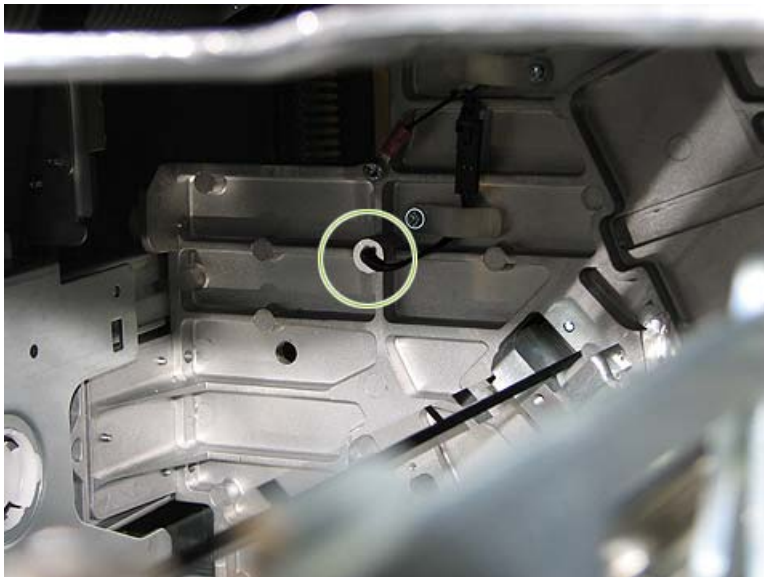
3. SN61 is located on the inside left side of the carriage front wall. Disconnect the wire connector, and then unscrew SN61 to remove it from the carriage wall.



4. SN62 is located on the inside left side of the carriage back wall. Disconnect the wire connector, and then unscrew SN62 to remove it from the carriage wall.

 **NOTE:** Removing the service station (optional) provides more space in which to access the back wall of the carriage.

[Service station assembly on page 648](#)




Top-of-form sensor (SN22)

1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
2. Extract the carriage.
[Carriage extraction on page 178](#)
3. Remove two screws, and then lift off the sensor cover. There are two components mounted to the metal plate that are replaced individually: the TOF sensor, and the TOF sensor PCA with a ribbon cable.



4. Disconnect the ribbon cable, and then remove the sensor and the PCA.

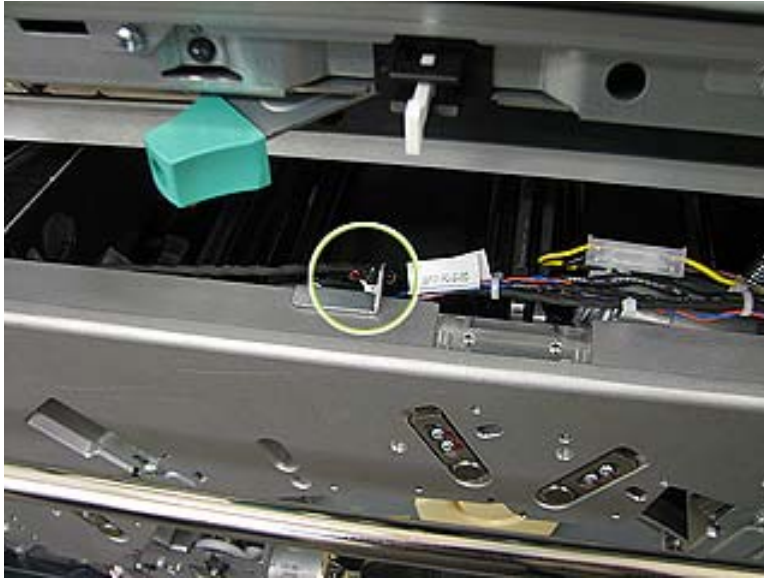
 **NOTE:** If the Top-of-form sensor (SN22) is replaced or removed, perform the following calibrations:

[Top-of-form Position calibration on page 163](#)

Carriage LED (LED10)

1. Extract the carriage structure.
[Carriage extraction on page 178](#)
2. Remove the carriage plate cover.
[Carriage plate cover on page 208](#)

3. Disconnect the LED wire connector, and then remove LED10.



Carriage pen-out-of-cap (POOC)

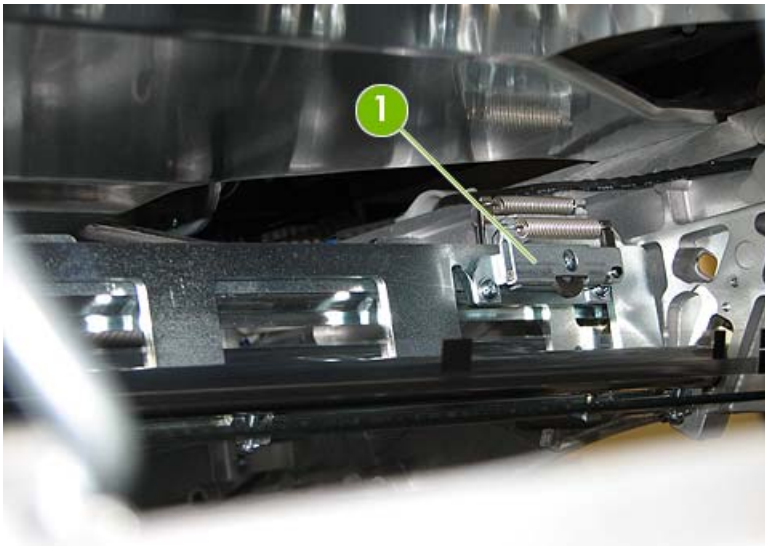
There is one carriage POOC for each pen carriage, located on the inside rails, towards the back of the carriage.

1. Remove the following items:
 - Muffler
[Muffler on page 219](#)
 - Back cover
[Back cover on page 219](#)
 - Service station assembly
[Service station assembly on page 648](#)
2. Extract the print carriage, and then pull the pen carriages to the front.
[Carriage extraction on page 178](#)

3. Remove one screw, and then remove the carriage 1 POOC (callout 1).



4. Remove one screw, and then remove the carriage 2 POOC (callout 1).

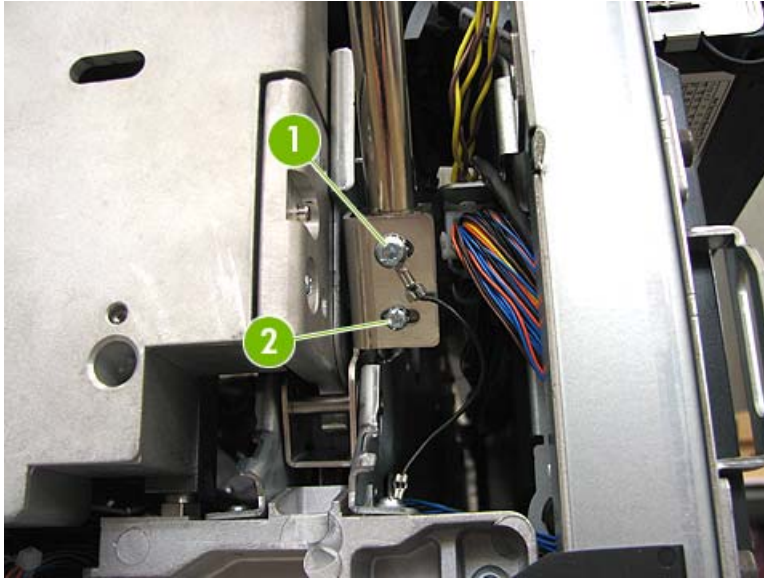



Carriage extraction mechanism

1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover

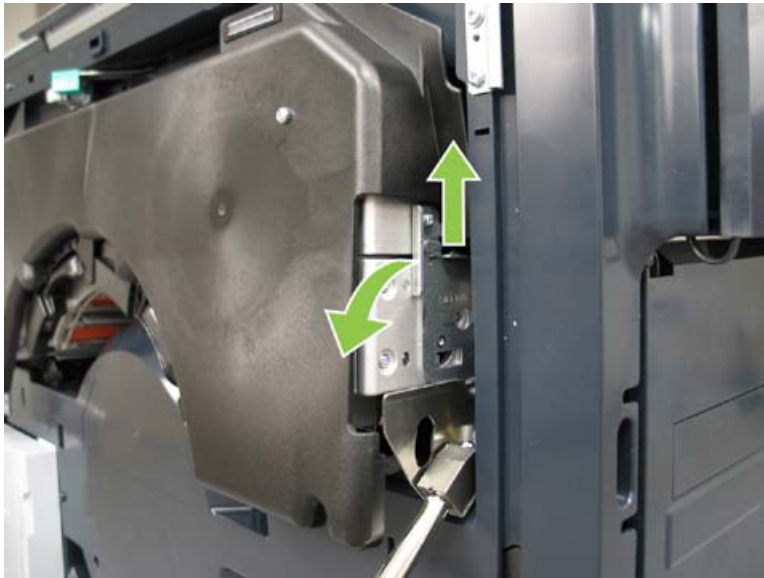
[Carriage plate cover on page 208](#)

2. On each side of the carriage structure locking bar, remove the top screw (callout 1), and then loosen the bottom screw (callout 2) just enough to remove the bar.



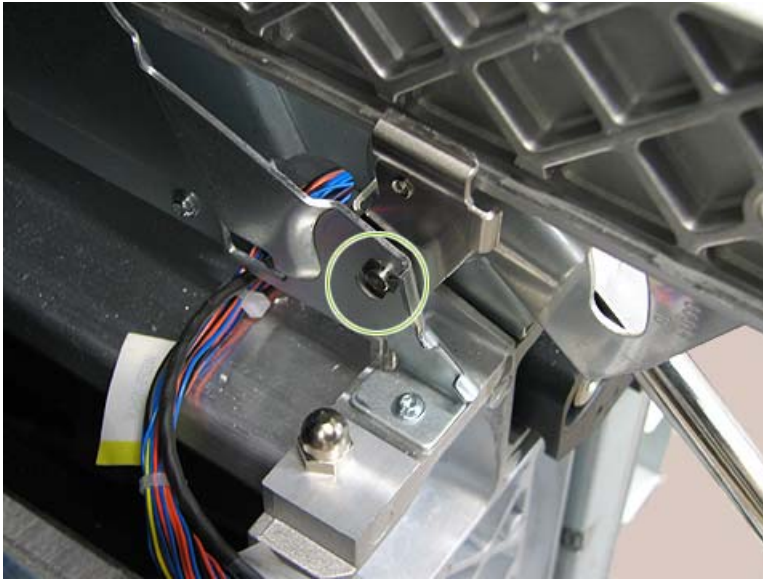
 **NOTE:** The top screw on the right extraction mechanism has a ground wire.


3. Lift up on the locking tabs (one tab on each of the side locking plates), and then rotate the locking plates toward the front of the carriage to unlock them (the plates will snap into the unlocked position).



4. Leaving the bar in place to use as leverage, push the bar down lifting the carriage, and then remove the bar.

5. Remove one inside retaining clip for each extraction mechanism, and then pull out the pin held by the clip.



 **NOTE:** Lift up on the carriage or place a support block under the carriage to take the weight off the pin as you pull the pin out.

6. Pull out the extraction mechanism for each side.

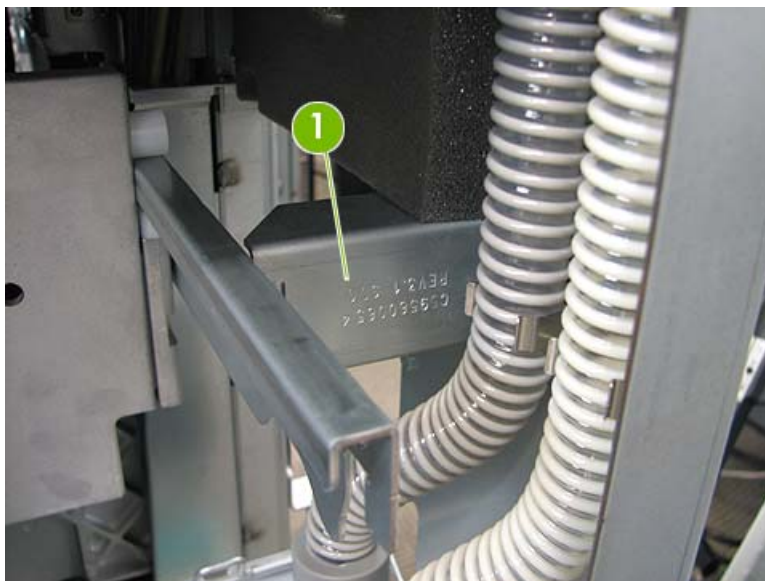
Carriage X-braces

1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Muffler
[Muffler on page 219](#)
 - Back cover
[Back cover on page 219](#)
 - Upper left cover
[Upper left cover on page 213](#)
2. Extract the carriage.
[Carriage extraction on page 178](#)

3. On the left side of the MFP, remove two screws.



4. Remove the left carriage brace (callout 1).




5. Remove two screws, and then remove the right carriage brace.



Ink delivery system (IDS)

- [Ink supply](#)
- [Pens](#)
- [IDS assembly](#)
- [Air pressure system \(APS\) assembly](#)
- [IDS relief valve](#)
- [Air pump assembly](#)
- [IDS PCAs](#)
- [IDS sensors](#)

 **NOTE:** A field replacement of ink tubes is filled with air and must be purged.

[IDS assembly replacement \(air purge procedure\) on page 606](#)


NOTE: Follow the cleaning spilled ink procedure, if necessary. See [Cleaning spilled ink on page 86](#).

Dispose of all wet material as appropriate. See [Handling and disposing of service parts and consumables on page 26](#).

 **CAUTION:** Use gloves and safety glasses when handling ink parts.

Ink supply

1. Open the IDS door.
2. Push the cartridge in and slightly lift up to release the retention hook on the bottom of the cartridge.

 **NOTE:** The cartridges are keyed and cannot be interchanged. Also note the label on the MFP that shows the correct positions for each color.



Pens

△ **CAUTION:** Pens require special care. See [Pen care on page 180](#) for guidelines.

CAUTION: Use gloves and safety glasses when handling ink parts.

1. Open the print carriage structure (which shuts down power to the pens), and then pull the pen carriages to the front.

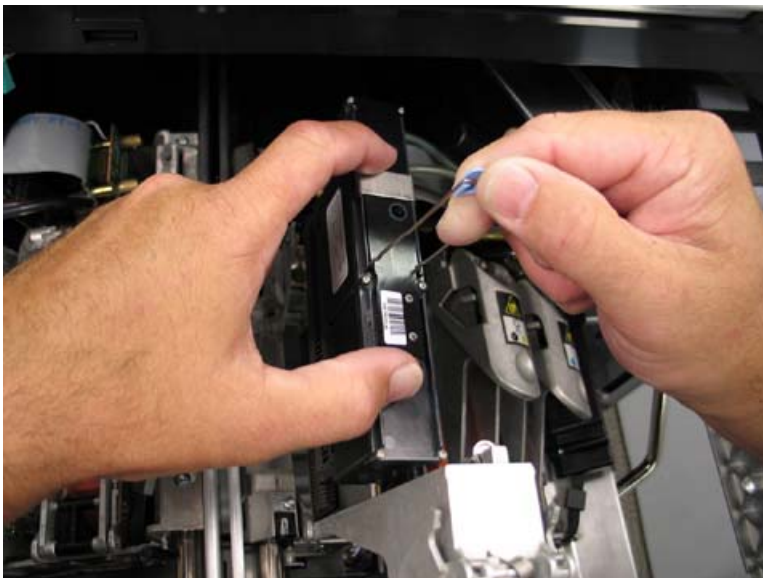
📄 **NOTE:** Ensure there is no interlock cheater installed.

2. Lift the pen pocket latch.



3. Lift the pen handle, and then pull the pen straight out of the carriage pocket.

📄 **NOTE:** You may need to move ink tubes out of the way.

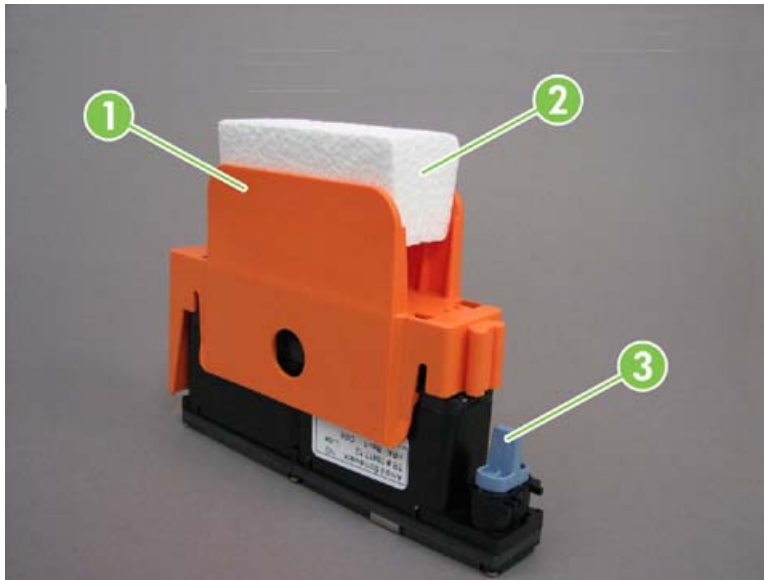


4. Cap the pens for storage. See [Pen care on page 180](#) for capping guidelines.


5. Take a new pen out of its packaging. Remove the polystyrene block (callout 2). Pull up on the needle plug (callout 3) to remove it, and then squeeze the top of the plastic nozzle cap (callout 1) and pull it off of the pen assembly.

⚠ **WARNING!** **Discard** all used orange pen nozzle caps and needle plugs. Reinstalling a used cap or plug on a pen other than the one it was removed from will damage the ink delivery system and cause print-quality problems.


⚠ **CAUTION:** The pen contacts are sensitive to electrostatic discharge (ESD). Do not touch the exposed side or bottom contacts on the pen after removing the cap.

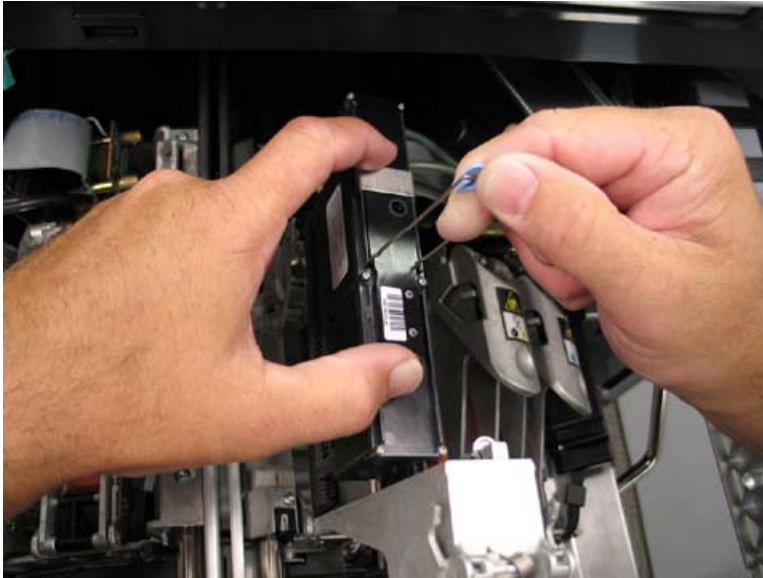


6. Place a pen in the carriage pocket and push it *straight down* into the pocket until it is seated. Close and latch the pen cover.

 **NOTE:** You may need to move ink tubes out of the way.

NOTE: The pens are keyed and cannot be interchanged. Also note the labels on the pens and pen latch that show the correct positions for each color.

 **Reinstallation tip** Make sure that you push the pen straight down into the pocket. Always use the pen handle and steady the pen with your fingers when installing it to avoid damage to the pen contacts, or any other part of the pen, in the pen pocket.




 **NOTE:** Run the New Pen Servicing routine when a pen is replaced.

[New Pen Servicing routine on page 150](#)

IDS assembly

- [IDS assembly removal](#)
- [IDS assembly replacement \(air purge procedure\)](#)

IDS assembly removal

 **NOTE:** Dispose of all wet material as appropriate. See [Handling and disposing of service parts and consumables on page 26](#).

 **CAUTION:** Use gloves and safety glasses when handling ink parts.

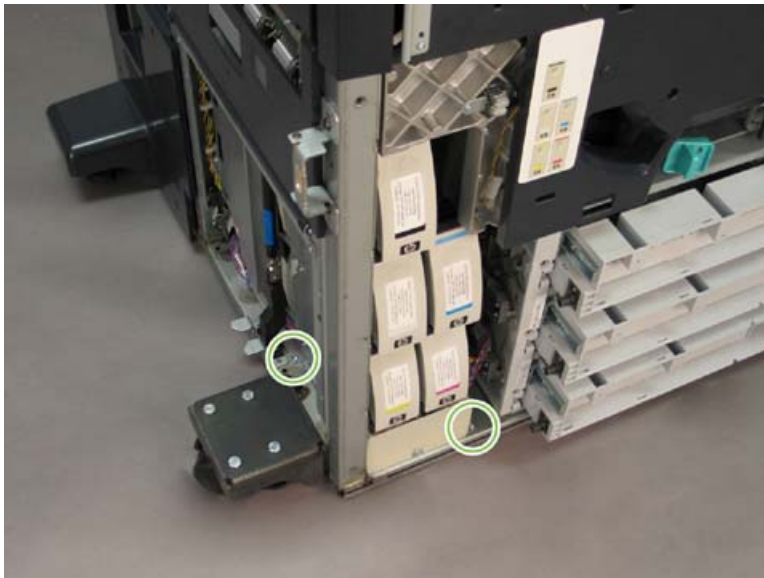
1. Remove the following items:
 - MFP front doors
[Front doors on page 204](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)

- Upper inner cover
[Upper inner cover on page 209](#)
- Tray 2–4 covers
[Trays 2, 3, and 4 covers on page 210](#)
- Lower inner cover
[Lower inner cover on page 211](#)
- Left side lower panel
[Left-side lower panel on page 215](#)
- Lower-left trim
[Lower left trim on page 214](#)
- Muffler
[Muffler on page 219](#)
- Back cover
[Back cover on page 219](#)
- Web wipe access case parts
[Web wipe access case parts on page 212](#)
- Web wipe cartridge
[Web wipe cartridge on page 664](#)
- Both aerosol hoses and aerosol manifolds
[Aerosol manifold and hose on page 528](#)
- Aerosol filter box
[Aerosol filter box on page 619](#)
- All five ink cartridges
[Ink supply on page 593](#)
- All six pens
[Pens on page 594](#)

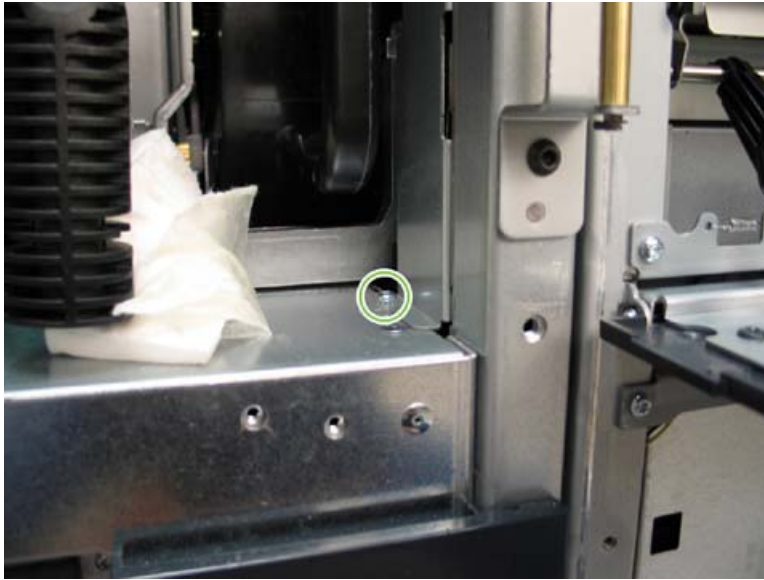
2. Remove three screws that secure the ink supply station (ISS):
 - a. Open the IDO output door, and then remove one screw from the top of the ink supply station (ISS).



- b. Remove two screws at the ISS base.



3. Peel back the absorber, and then remove one screw from the lower vertical tubes bracket. Lift up the bracket to release the upper catch.



4. For each print carriage, disconnect the IDS tubes:
 - a. From the front of the MFP, unsnap the IDS clips (callout 1) from underneath the e-chain to release the IDS tubes. Press the middle of the flat-sided IDS clips (or pry the side of the clip with a flat-bladed screwdriver) to release the IDS tubes.



- b. Disconnect the wire connectors (brass thumbscrews) for each of the pens.

 **NOTE:** The bonding-agent pockets on carriage 1 and carriage 2 have two wire connectors.



- c. Disconnect the IDS hoses for each pen by squeezing the top of the two sides of the IDS hose bracket assembly together, and then lifting up to remove the bracket.

💡 **Reinstallation tip** Push on both sides of the cradle to fully seat it.

⚠️ **CAUTION:** Be careful not to damage the trailing cables.



💡 **Reinstallation tip** Ensure the ink tubes are routed **in front** of the trailing cables.

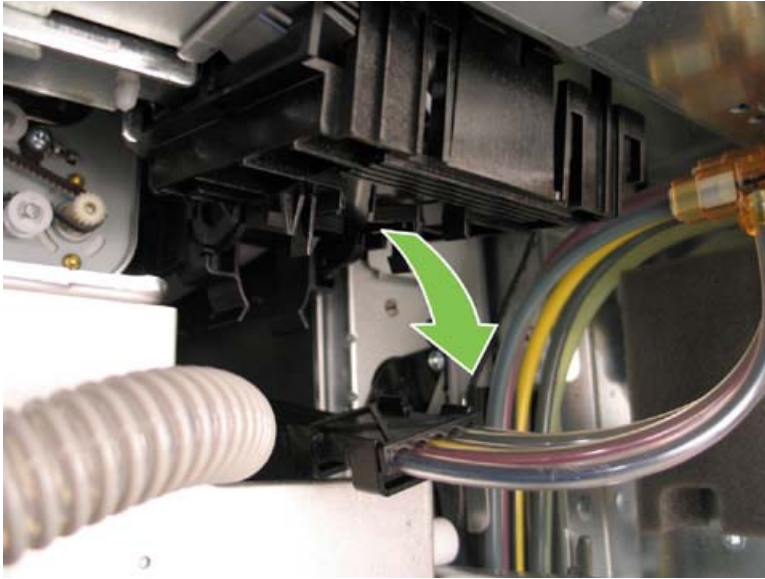


5. Push the cradles toward the rear of the MFP.


⚠️ **CAUTION:** Be careful not to damage the encoder strip.

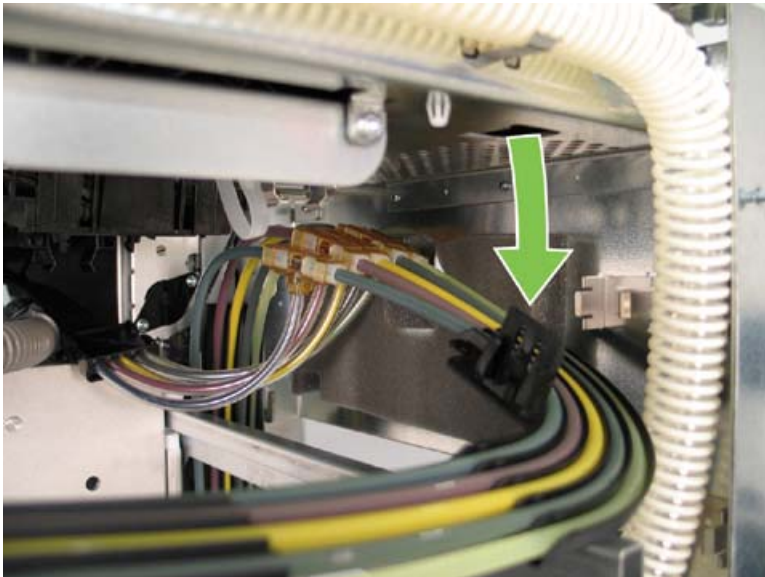
6. Remove the aerosol hose from its clips and lay it aside.

7. From the rear of the MFP, unsnap the two ink tube channels for each carriage.

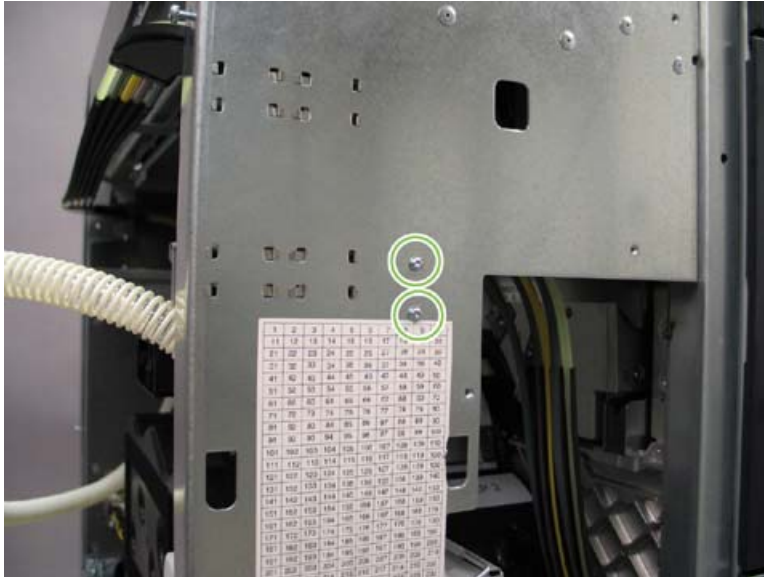


8. Unsnap the fixed end of the tubes at each e-chain, left and right, and remove the moving ends of the tubes on the carriage.

 **NOTE:** Remove the ink tubes only, not the trailing cables. The ink tubes are hinged, with the hinge to the inside of the e-chain.



9. On the left side of the MFP, remove two screws, and then remove the left carriage X-brace.



10. Disconnect two wire connectors from the ISS PCA:

- W11P16-A8J16
- W12P3-A4J3

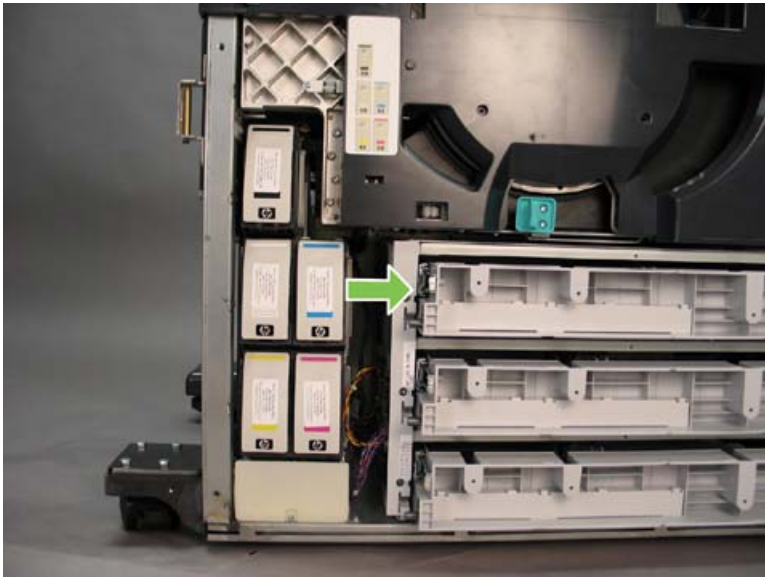


11. From the front of the MFP, unclip two cable saddles and free the Tray 2, 3, and 4 assembly cables from the right side of the ISS.

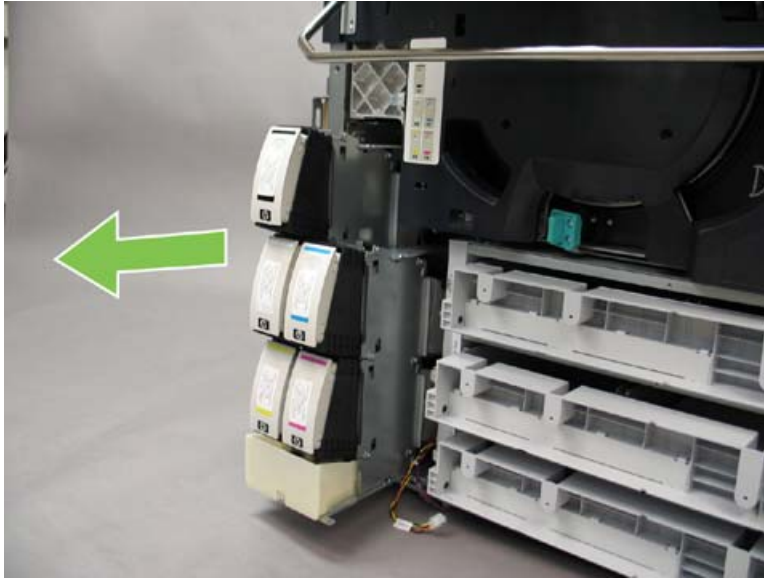


12. Slide the ISS approximately 30 mm (1.18 in) to the right, towards Trays 2, 3, and 4 to free the hooks at the back of the ISS.


△ **CAUTION:** Be careful not to damage the Trays 2, 3, and 4 controller PCA.




13. Slide the ISS forward and gently pull on the tubes until the slack is gone.



14. Alternating between the front and the rear of the MFP, feed and pull the tubes forward. Repeat until the ISS is out of the MFP and on the floor in front of the MFP.

 **NOTE:** If room allows, sit on the left side of the MFP and feed the tubes out. Pull with your right hand and guide with your left.

 **CAUTION:** Ink tube removal is awkward due to the relatively small openings, multiple ends, and the heavy ISS.

CAUTION: Do not kink the ink tubes to prevent ink leaks.

CAUTION: Many ink tube fittings and plastic parts can snag and cause additional damage, for example, to the encoder strip.



15. Repeat, as required, until the tubes are removed.

IDS assembly replacement (air purge procedure)

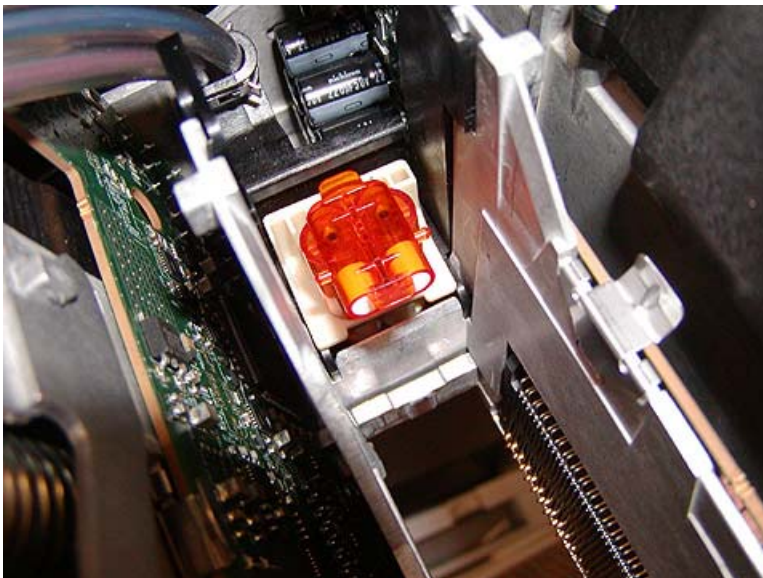
Replacement ink tubes are shipped dry (without ink) because of the environmental conditions and the physical behavior of the ink across a range of temperatures during shipment. Once the replacement tubes are installed, the air needs to be purged from the tubes and the tubes must be filled with ink. This process is called the *air purge procedure*.

△ **CAUTION:** Failure to perform a successful air purge procedure in an IDS replacement could result in having to replace all of the pens.


1. Install the IDS assembly, but do not install the pens or the ink cartridges.
2. Verify that the MFP is powered off.
3. Install the supplied setup pens (also called air purge pens).



Air purge pens are orange and intended for one-time use. Leave the carriage assembly extracted.




4. Install the five ink cartridges.


 **NOTE:** If one or more of the ink cartridges is missing or leaking, the following message is displayed:

The command could not be executed because the device is currently blocking it.

Troubleshooting suggestions:


- Reseat each ink cartridge
 - Visually check the electrical connections on both the ink cartridge and inside the IDS assembly
 - Replace ink cartridges with known good cartridges
5. Power up the MFP in PSM.
 6. Start the air purge routine:
 - a. Touch **Subsystems**.
 - b. Touch **IDS**.
 - c. Touch **IDS Components**.
 - d. Touch IDS Air Purge **Pressurize** button.

 **NOTE:** In firmware version 20070824 72.024.0 or older, the IDS air purge is located on the Engine Calibrations 2 page.

 **CAUTION:** During the air purge process, ink is pumped into the new replacement tubes. Visually confirm that there are no leaks during the air purge.

You can start, stop, and restart this process at any time by pressing **Pressurize/Depressurize**.

7. If necessary, replace any low ink cartridges as instructed by the air purge program.
8. When the ink appears in all air purge pens, press the button again to depressurize and stop the process. The process will automatically time-out after a few minutes if no button is pressed.
9. Visually confirm that there is ink in both chambers of each setup pen. If not, repeat the air purge procedure.

 **NOTE:** Repeating the procedure does not harm the ink tubes that are already purged.

10. Remove the setup pens.
11. Visually confirm there are no leaks, in case the IDS lines were damaged during installation.
12. Install the real pens. See [Pens on page 594](#).
13. Power cycle the system.

Air pressure system (APS) assembly

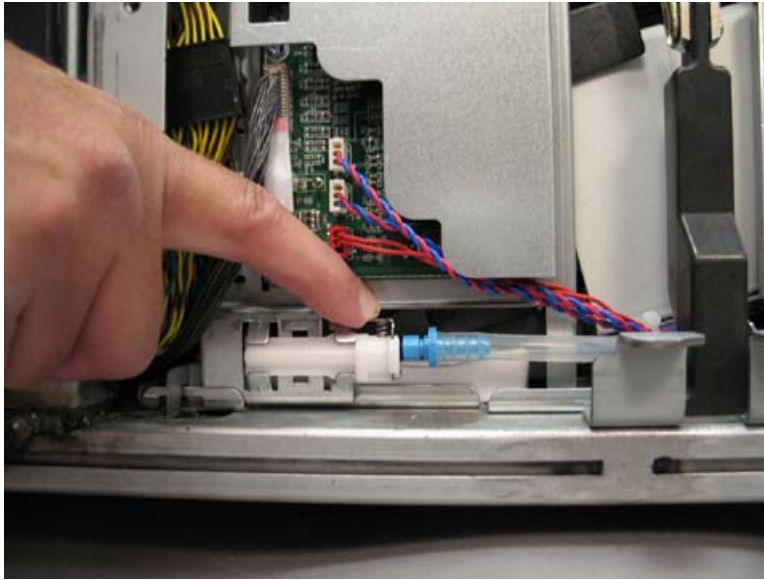
Gaining access to the air pressure system (APS) assembly makes the following sub-components readily available:

- Air pumps (2)
 - Relief valve
1. Remove the following covers and doors:
 - Lower inner cover (includes IDS door)
[Lower inner cover on page 211](#)
 - Left side lower panel
[Left-side lower panel on page 215](#)
 - Lower-left trim
[Lower left trim on page 214](#)
 2. Disconnect three wire connectors (two air pump connections and one relief valve control connection) from the ISS PCA.

 **NOTE:** The air pump connectors are interchangeable on the PCA.



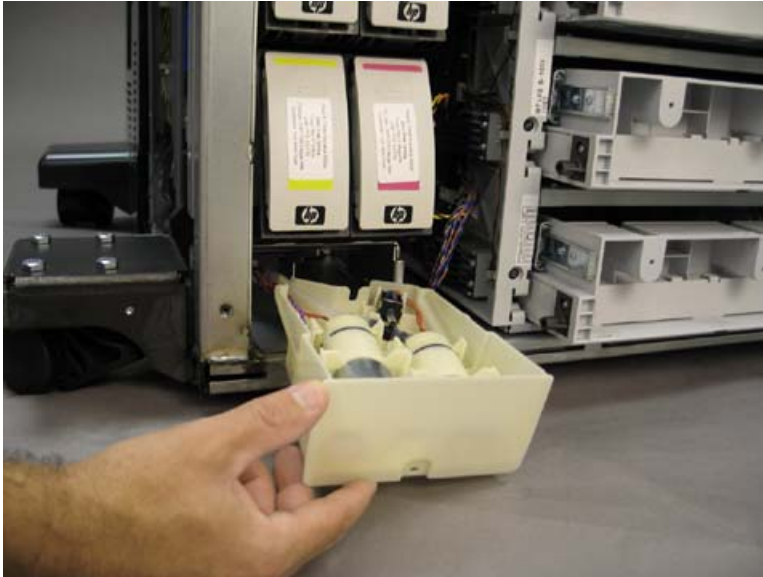
3. Disconnect the air tube by pinching the connector with your left hand while pulling out the tube with your right hand.



4. Remove one screw on the APS assembly.

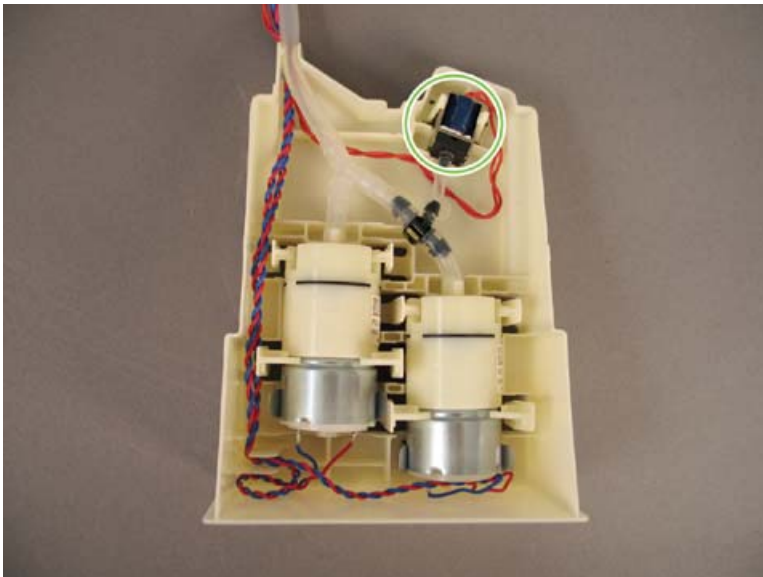


5. Slide the APS assembly out, guiding the three cables and one air tube through the opening.



IDS relief valve

1. Remove the APS assembly.
[Air pressure system \(APS\) assembly on page 608](#)
2. Unsnap the relief valve from its mounting clips.



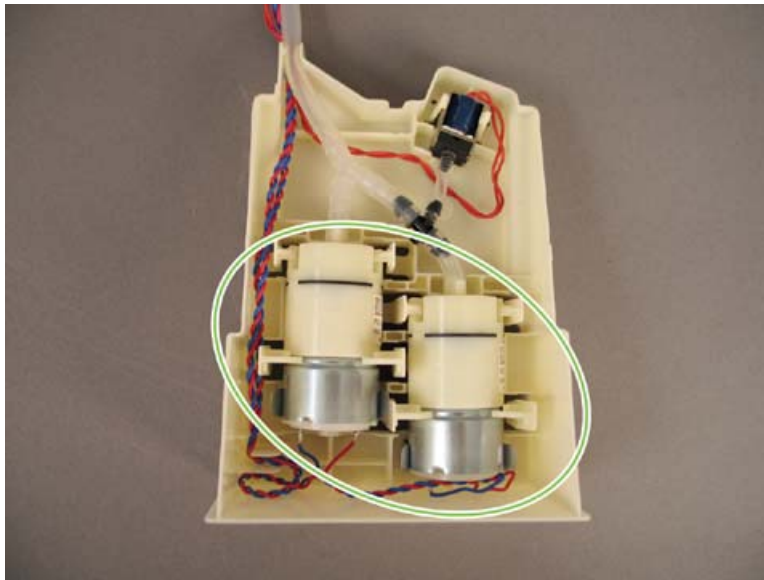
3. Pull the air tube to disconnect it from the relief valve. (You might have to cut one tie wrap to remove it completely.)

Air pump assembly

1. Remove the APS assembly.

[Air pressure system \(APS\) assembly on page 608](#)

2. Unsnap the air pumps from their mounting clips. (You might have to cut one tie wrap to remove them completely.)



IDS PCAs

- [Ink Assist PCA \(A3\)](#)
- [ISS PCA \(A8\)](#)

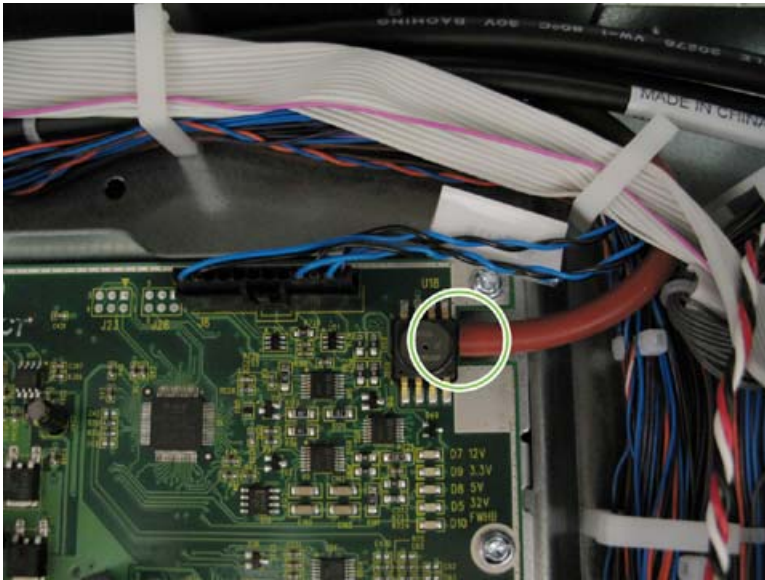
Ink Assist PCA (A3)

△ **CAUTION:** Wear an ESD strap.

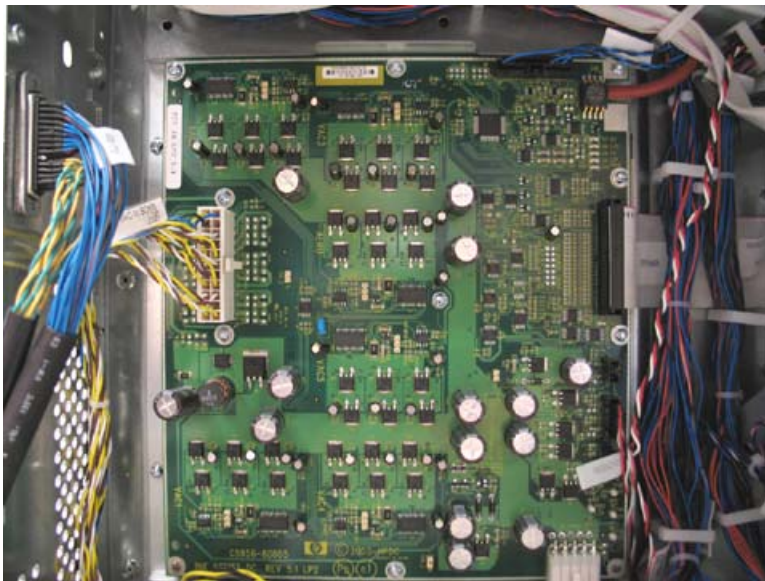
1. Remove the following items:
 - Muffler
[Muffler on page 219](#)
 - Electronics bay cover
[Electronics bay cover on page 220](#)
 - Lower right cover
[Lower right cover on page 216](#)
 - Power supply assembly
[Power supply assembly on page 697](#)
 - Motion PCA

[Motion PCA \(A2\) on page 700](#)

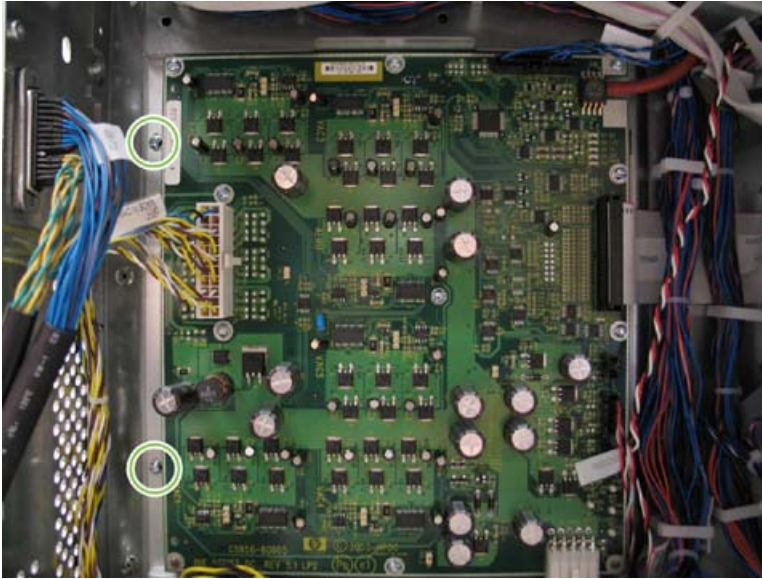
2. Disconnect the vacuum hose from the upper-right corner of A3.



3. Disconnect all of the wire connectors from A3.



4. Remove two screws, and then remove A3.



ISS PCA (A8)

△ **CAUTION:** Wear an ESD strap.

1. Remove the following items:
 - Left side middle panel
[Left-side lower panel on page 215](#)
 - Lower left trim
[Lower left trim on page 214](#)
2. Remove one screw, and then open the IDO door to gain access to the ISS side panel.

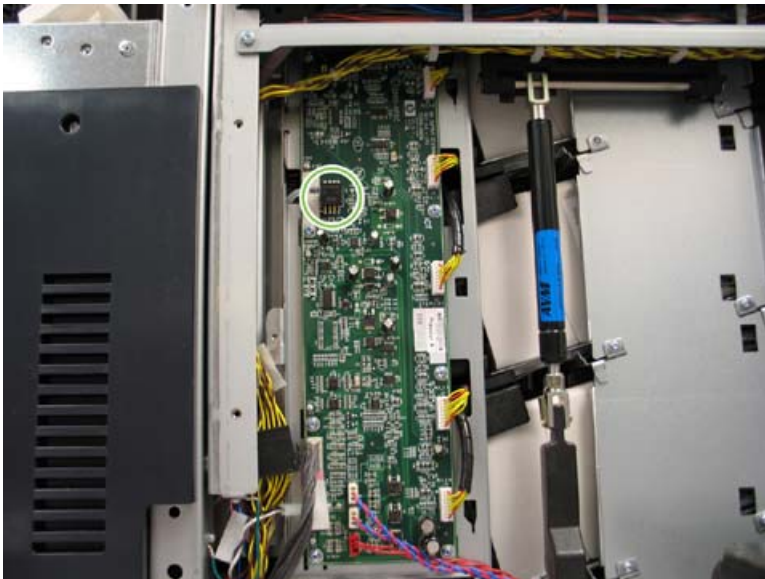


3. Lift up the panel (two hooks on the right side) to remove it and to gain access to A8.

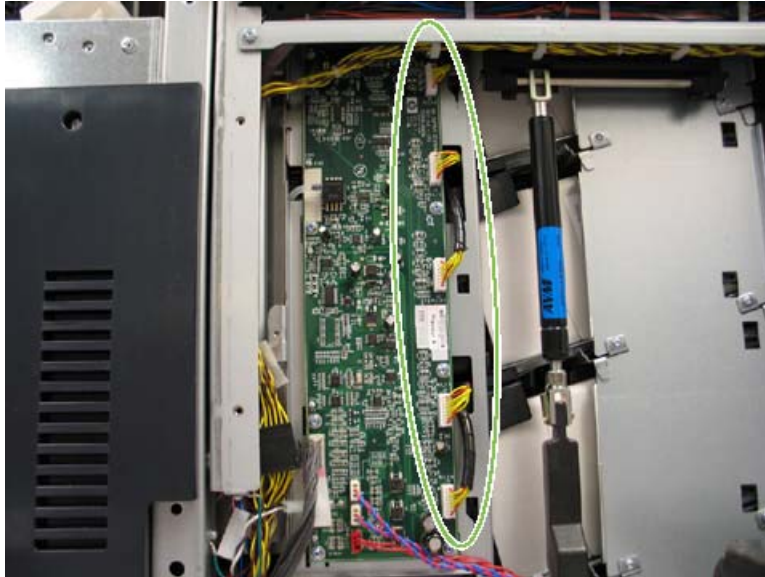


4. Disconnect the air pressure tube from A8.

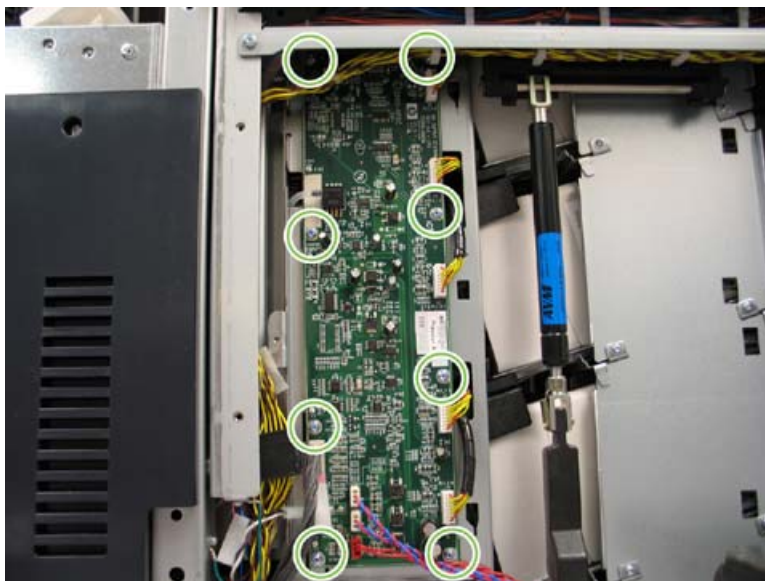
△ **CAUTION:** Do not let the air tube fall back into the unit. Secure the tube with tape.



5. Disconnect all of the wire connectors from A8.



6. Remove eight screws, and then remove A8.

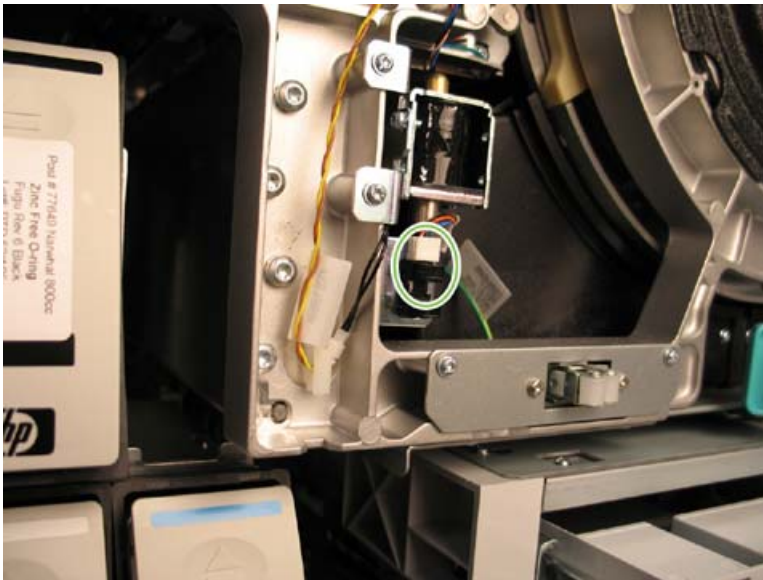


IDS sensors

- [Lower-left Door sensor \(SN18\)](#)
- [IDS Pressure sensor \(SN39\)](#)
- [Vacuum Pressure sensor \(SN40\)](#)

Lower-left Door sensor (SN18)

1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)
2. Pry the mounting tabs to release SN18.

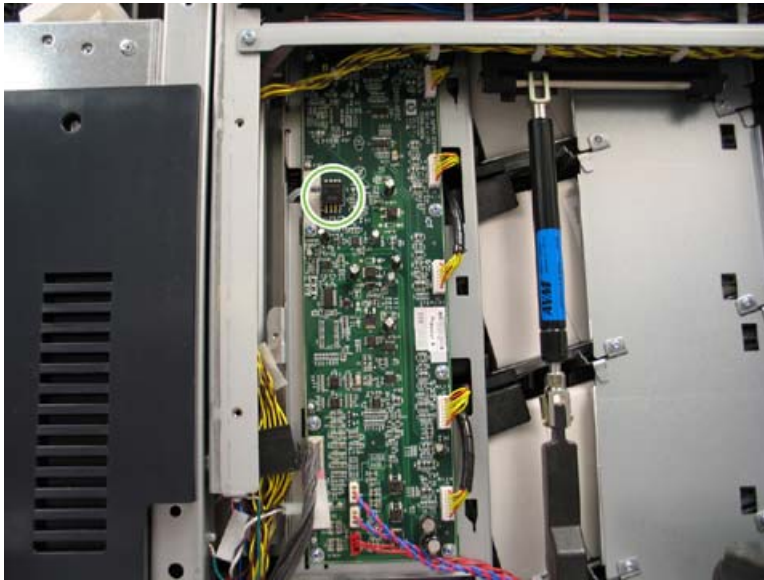


IDS Pressure sensor (SN39)

IDS Pressure sensor (SN39) is soldered onto the ISS PCA (A8).

- Follow the steps to replace A8.

[ISS PCA \(A8\) on page 613](#)

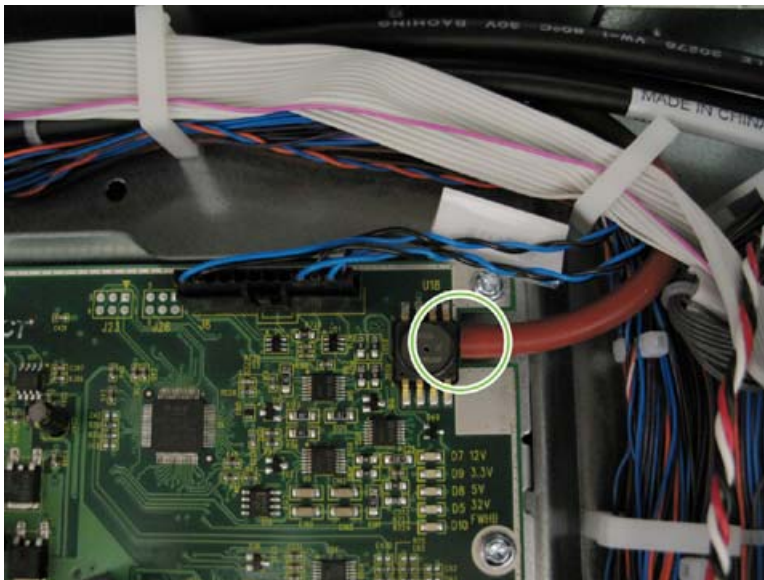


Vacuum Pressure sensor (SN40)

The Vacuum Pressure sensor (SN40) is soldered onto the Ink Assist PCA (A3).

- Follow the steps to replace the ink assist PCA.

[Ink Assist PCA \(A3\) on page 611](#)



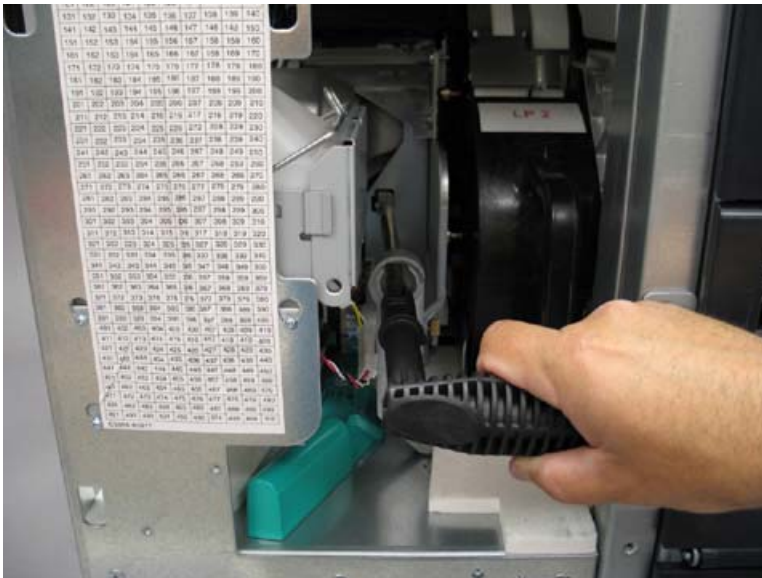
Aerosol

- [Aerosol filter](#)
- [Aerosol filter box](#)
- [Aerosol door](#)
- [Aerosol fan \(AERO\)](#)
- [Aerosol fan \(AERO\) cover](#)
- [Aerosol duct assembly](#)
- [Aerosol duct wipes](#)

△ **CAUTION:** Use gloves and safety glasses when handling ink parts.


Aerosol filter

1. Remove the web wipe access case parts.
[Web wipe access case parts on page 212](#)
2. Rotate the latch bar 90-degrees counterclockwise, and then pull out to remove the latch bar.



3. Lift the aerosol door latch, and then lower the aerosol door.

4. Pull out the aerosol filter.

 **NOTE:** The filter is a preventive maintenance item and is replaced at scheduled intervals. See [Service intervals on page 79](#).

Reset the preventive maintenance counter for this item every time maintenance is performed.

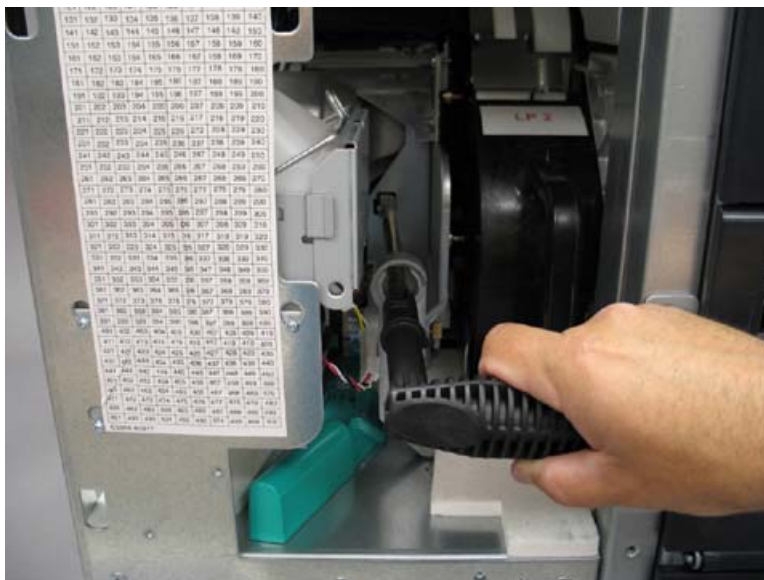


Aerosol filter box

1. Remove the web wipe access case parts.

[Web wipe access case parts on page 212](#)

2. Rotate the latch bar 90-degrees counterclockwise, and then pull out to remove the latch bar.



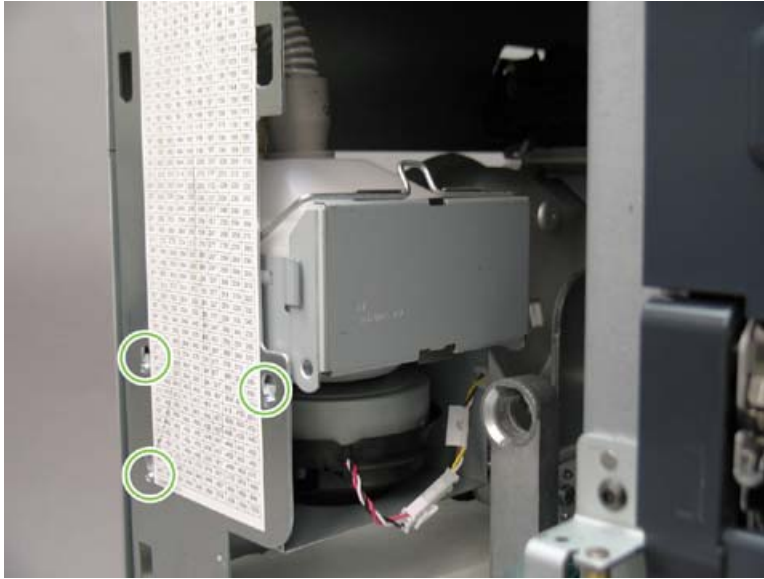
3. Disconnect the two hoses (callout 1) from the top of the aerosol filter box by holding the base of each hose and pulling up.



4. Disconnect the aerosol motor wire harness, and then unclip the wire harness from the side of the aerosol filter box.



5. Loosen the three mounting screws.



6. Extract the carriage tray.

[Carriage extraction on page 178](#)

7. Lift the box up to free the mounting screws from their keyed slots, and then remove the aerosol filter box.



Aerosol door

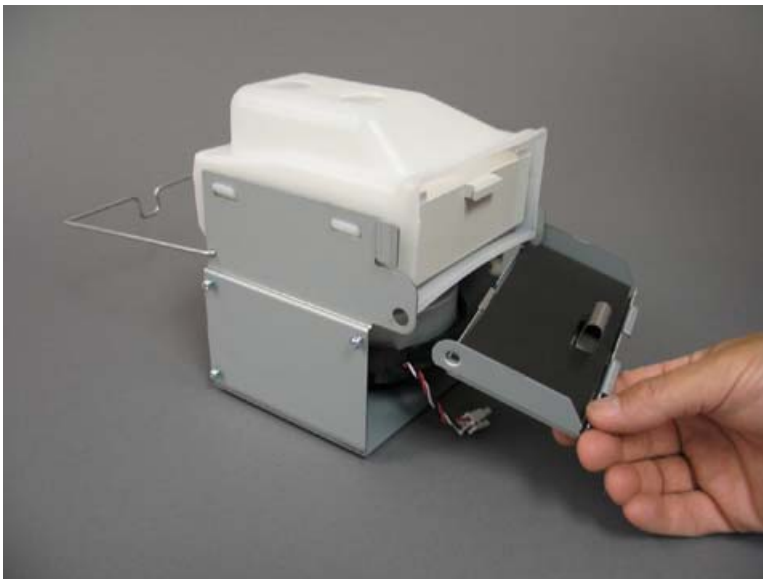
1. Remove the following items:
 - Web wipe access case parts
[Web wipe access case parts on page 212](#)
 - Aerosol filter box

[Aerosol filter box on page 619](#)

2. Lift up on the tab to unhook the wire clip, and then swing the door open.

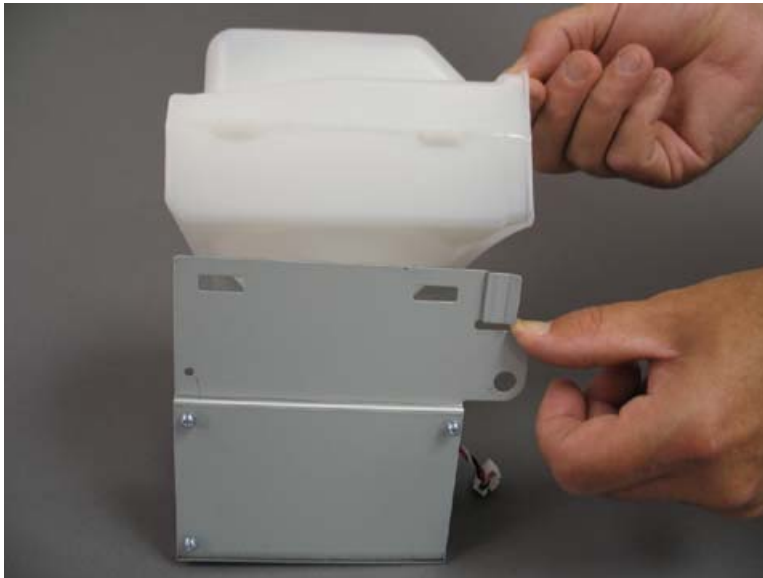


3. Flex one side of the door to release the hinge on one side, and then remove the door.

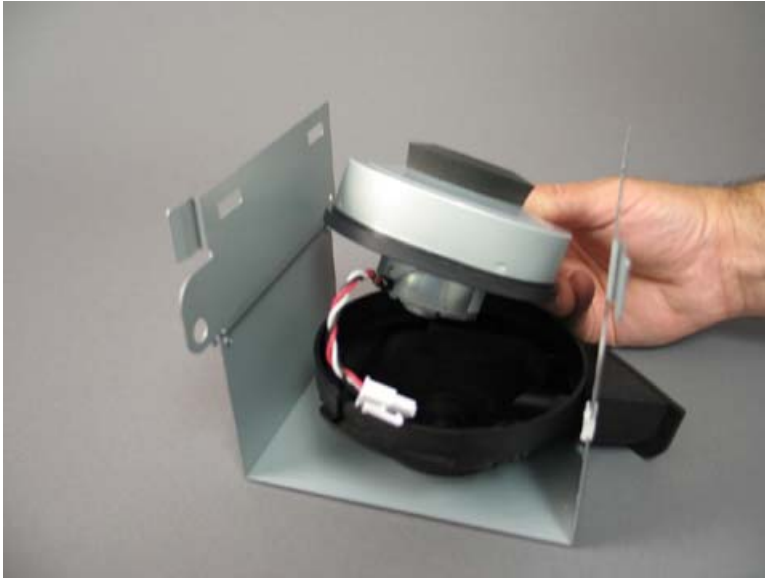



Aerosol fan (AERO)

1. Remove the following items:
 - Web wipe access case parts
[Web wipe access case parts on page 212](#)
 - Aerosol filter box
[Aerosol filter box on page 619](#)
 - Aerosol door
[Aerosol door on page 621](#)
2. Press down on the top of white plastic filter box while flexing the metal box sides to release the two plastic tabs on one side. Tilt the filter box to release the two tabs on the other side, and then remove it.



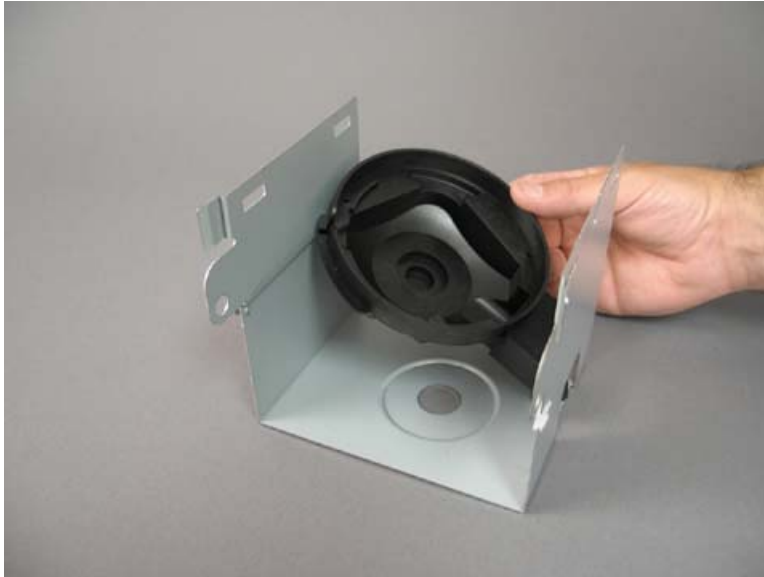
3. Remove the Aerosol fan (AERO).




 **Reinstallation tip** The aerosol fan has two locator pins that fit into the aerosol fan cover.

Aerosol fan (AERO) cover

- Lift and rotate the fan cover to free the exhaust vent from the side of the box.




 **Reinstallation tip** Ensure that the fan cover protrudes through the bracket and that the filter box and motor assembly are aligned so that there is a full seal with the vacuum cover on the service station.



Aerosol duct assembly

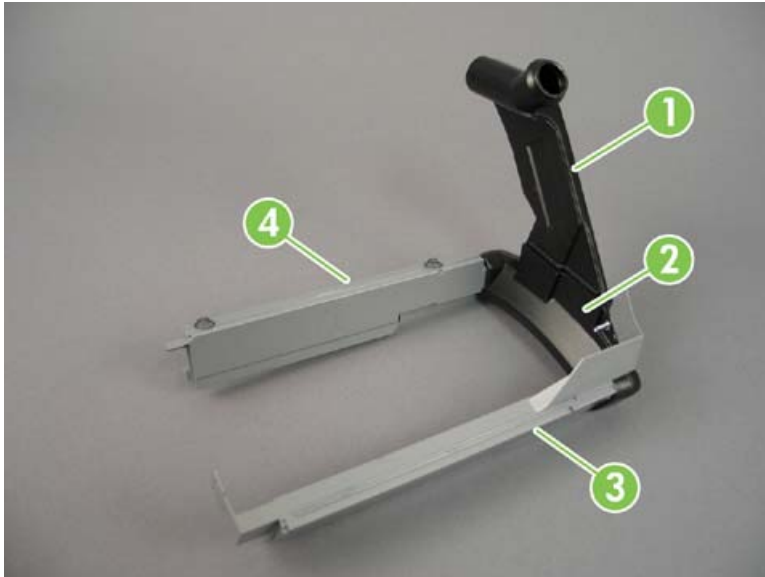
For each pen carriage, there is an aerosol manifold (callout 1) that fits into the top of a duct manifold (callout 2). Also attached to each duct manifold is one color aerosol duct on the right side (callout 3) and one bonding agent aerosol duct on the left side (callout 4). The removal procedure for the manifolds and ducts is similar for either pen carriage.

 **NOTE:** Dispose of all wet material as appropriate. See [Handling and disposing of service parts and consumables on page 26](#).

NOTE: The aerosol manifolds and ducts are preventive maintenance items and are replaced at scheduled intervals. See [Service intervals on page 79](#).

Reset the preventive maintenance counter for these items every time maintenance is performed.

△ **CAUTION:** Use gloves and safety glasses when handling ink parts.



1. Remove the following items:

- Muffler
[Muffler on page 219](#)
- Back cover
[Back cover on page 219](#)
- Door engine left
[Left front door on page 205](#)
- Door engine right
[Front door on page 205](#)
- Carriage plate cover
[Carriage plate cover on page 208](#)


2. From the rear of the MFP, remove two screws from the duct manifold.



3. Remove one screw from the color aerosol duct.



4. Remove one screw from the belt idler assembly.


 **NOTE:** The bonding agent aerosol duct is located under the belt idler assembly. The belt idler assembly has to be removed to access the bonding agent aerosol duct.

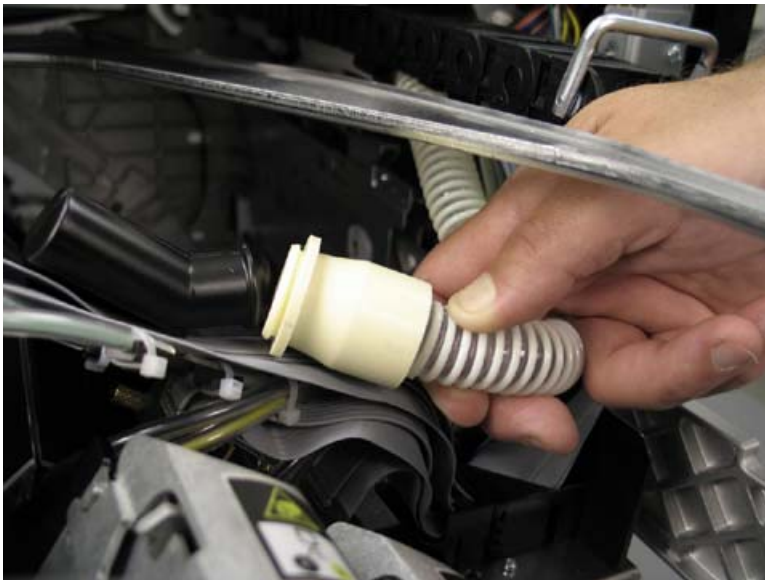


5. Extract the carriage tray.


[Carriage extraction on page 178](#)

6. Pull the pen carriage to the front.
7. Disconnect the aerosol hose from the aerosol manifold.

 **Reinstallation tip** After reinstalling the aerosol hose, push the pen carriage back and forth several times. Ensure that the aerosol hose remains attached to the e-chain, that there is no kinking in the hose, and that the hose does not catch on any other parts.



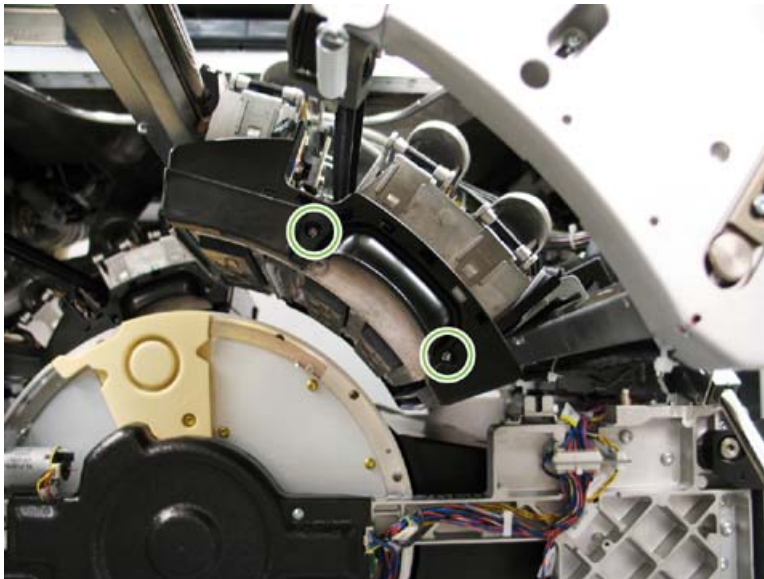
8. Pull out and remove the aerosol manifold, separating it from the duct manifold.

 **Reinstallation tip** Ensure the aerosol manifold sits in front of the aerosol manifold retainer and not behind it.

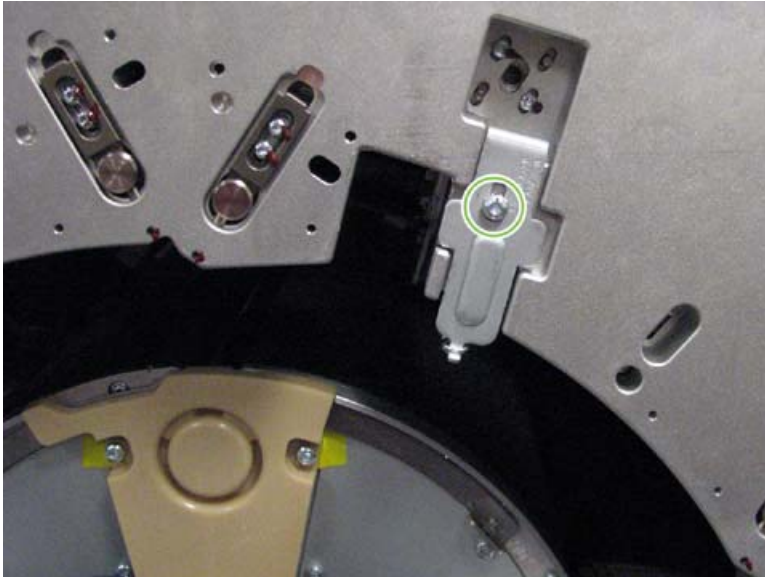


9. Remove two screws, set the carriage handle aside, and then remove the color aerosol duct. The right screw of the carriage handle secures the color aerosol duct.

 **NOTE:** You do not need to disconnect the cable that runs through the handle.



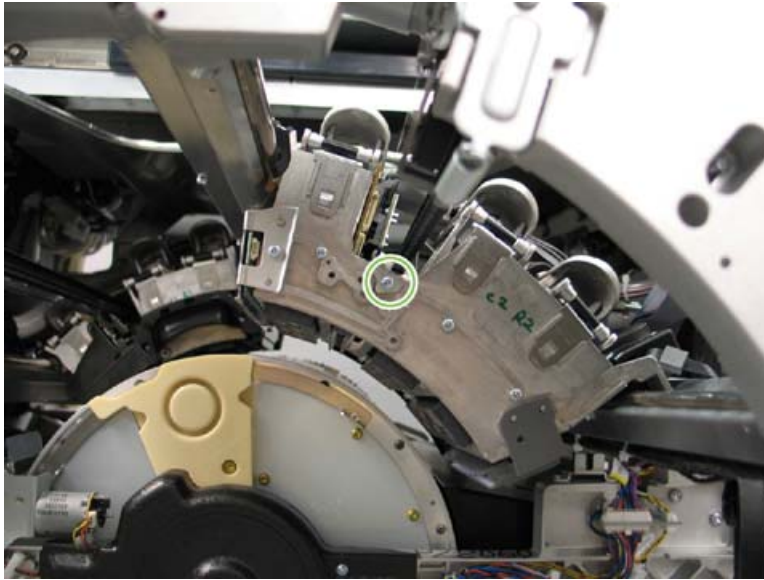
10. Loosen one screw to reduce the tension of the carriage drive belt.




11. Loosen two screws and disengage the carriage drive belt from the belt clamp assembly.



12. Remove one screw from the belt clamp assembly, and then remove the belt clamp assembly entirely. The bonding agent duct sits in a slot, held down by the belt clamp assembly.



13. Remove the bonding agent duct underneath the belt clamp assembly.


 **Reinstallation tip** To avoid damage to the duct, tilt the bonding agent duct down at an angle when inserting it into the duct manifold.

Reinstallation tip Ensure the encoder strip is properly seated.



Aerosol duct wipes

There are four duct wipes: two color aerosol duct wipes and two bonding agent duct wipes. One color aerosol duct wipe is located on the web wipe encoder assembly cover. The other color aerosol duct wipe is located on the cap assembly. Both bonding agent duct wipes are part of the drop detect spittoon.

 **NOTE:** The aerosol duct wipes are preventive maintenance items and are replaced at scheduled intervals. See [Service intervals on page 79](#).

Reset the preventive maintenance counter for this item every time maintenance is performed.


[Cap assembly on page 654](#)

[Web Advance encoder \(EN11\) on page 657](#)

[Drop detect spittoon on page 659](#)



Color aerosol duct wipes

 **NOTE:** Dispose of all wet material as appropriate. See [Handling and disposing of service parts and consumables on page 26](#).

 **CAUTION:** Use gloves and safety glasses when handling ink parts.

1. Remove the following items:

- Muffler

[Muffler on page 219](#)

- Back cover

[Back cover on page 219](#)


2. Remove one cap, remove one screw from the web wipe encoder assembly cover, and then remove the color aerosol duct wipe.



3. Remove one cap, and then, using a small flat-bladed screwdriver, reach behind the duct wipe holder and unclip the second color aerosol duct wipe.



Bonding agent duct wipes

 **NOTE:** Dispose of all wet material as appropriate. See [Handling and disposing of service parts and consumables on page 26](#).

△ **CAUTION:** Use gloves and safety glasses when handling ink parts.

1. Remove the following items:

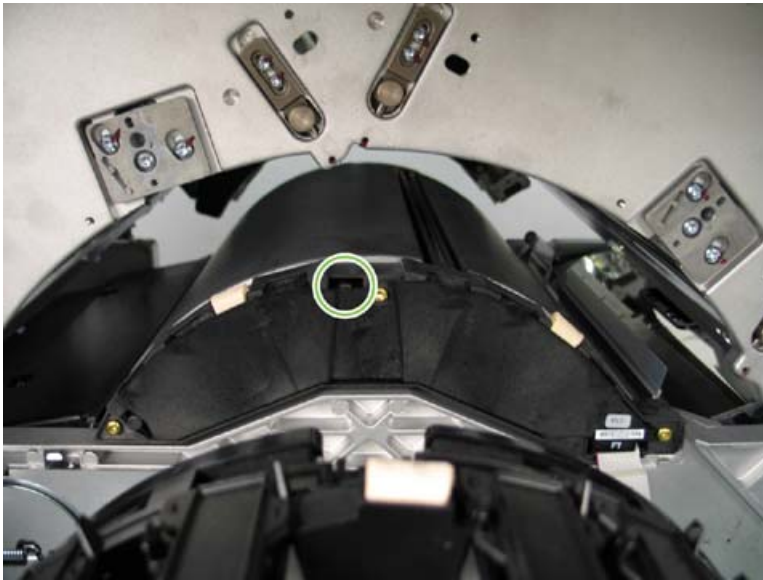
- Web wipe access case parts

[Web wipe access case parts on page 212](#)

- Web wipe cartridge

[Web wipe cartridge on page 664](#)

2. Lift the tab in the center of the drop detect assembly, and then remove the drop detect spittoon. The bonding agent duct wipes are part of the spittoon assembly.



Dryer

- [Dryer assembly](#)
- [Dryer heater assembly](#)
- [Dryer fan \(FAN5\)](#)
- [Dryer assembly right](#)
- [Dryer assembly left](#)
- [Dryer slider lever](#)
- [Dryer sensors](#)
- [Dryer LED \(LED6\)](#)

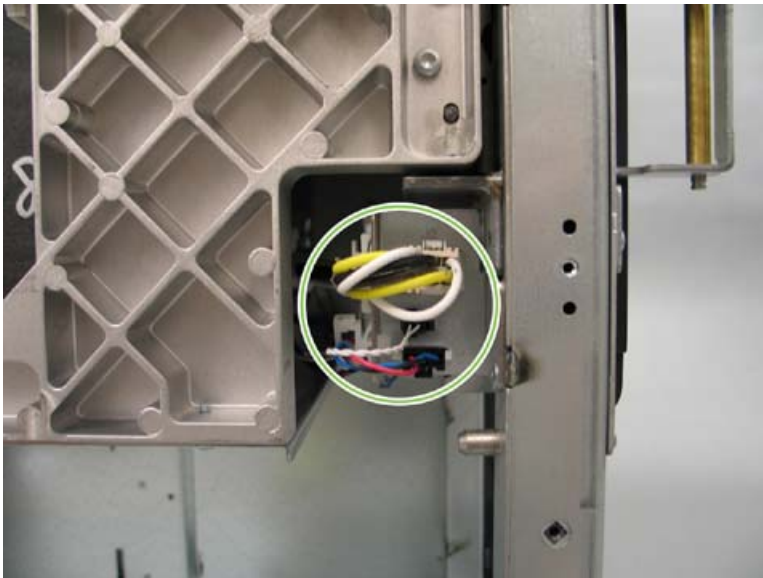
Dryer assembly

1. Remove the following items:
 - MFP front doors
[Front doors on page 204](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)
 - Lower inner cover
[Lower inner cover on page 211](#)
 - Lower right trim
[Lower right trim on page 218](#)
 - Trays 2, 3, and 4 assembly
[Trays 2, 3, and 4 assembly on page 321](#)

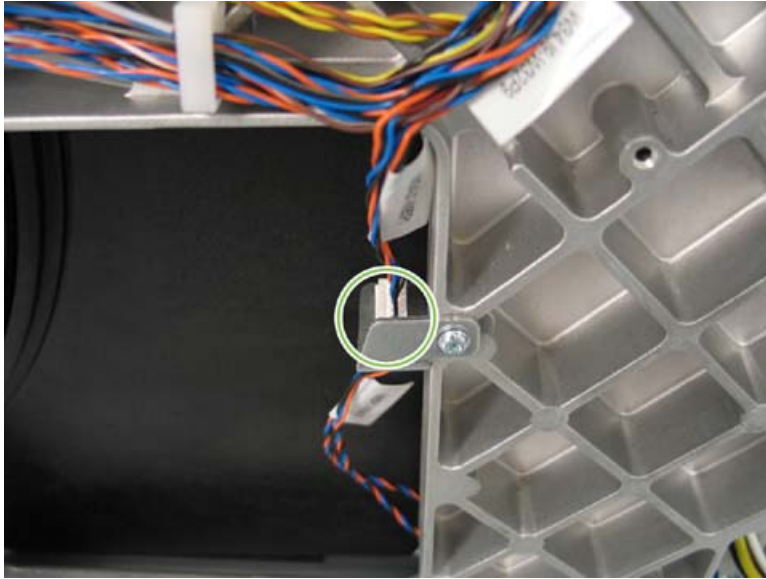
2. Remove one screw, and then remove the bracket.



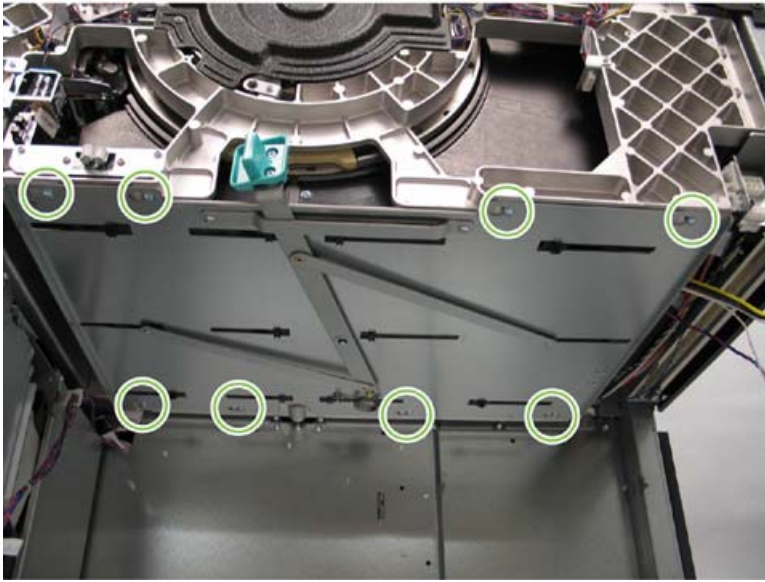
3. Unclip the wires from the cable saddles, and then disconnect three wire connectors.



4. Disconnect cable W85P1-W34J1.



5. Loosen eight screws underneath the dryer plate far enough that the dryer plate falls below the line-up pins.



- 💡 **Reinstallation tip** Tighten the front-left corner screw first. There is a locating pin in that corner to help with alignment of the dryer.



6. While supporting the dryer assembly from below, slide the dryer to the right, and then lower the dryer to the bottom of the MFP.

- 💡 **Reinstallation tip** Ensure all wires are moved out of the way before installing the dryer assembly.

Dryer heater assembly

- The dryer heater assembly is replaced as part of the dryer assembly right.

[Dryer assembly right on page 639](#)

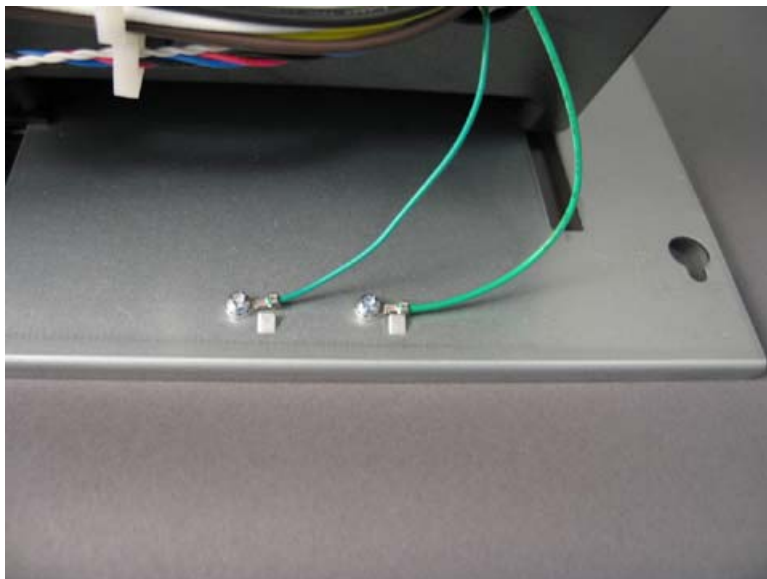
Dryer fan (FAN5)

- Dryer fan (FAN5) is replaced as part of the dryer assembly right.

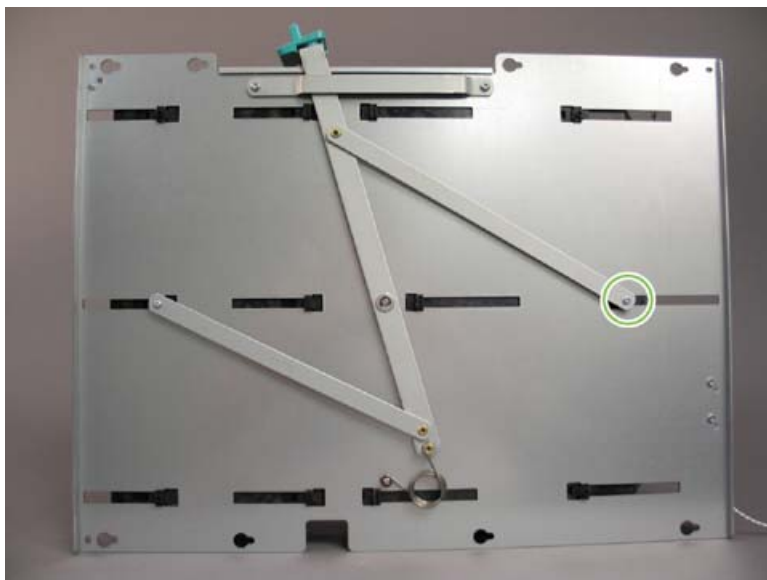
[Dryer assembly right on page 639](#)

Dryer assembly right

1. Remove the dryer assembly.
[Dryer assembly on page 635](#)
2. Remove the two ground wire screws.



3. On the underside of the dryer, remove one screw, and then lift the lever off the plastic pin.



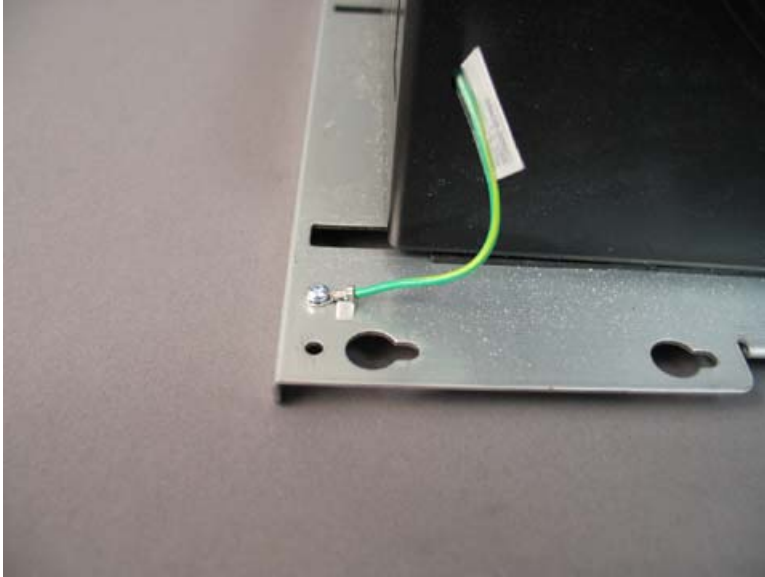
4. Push the dryer assembly right to the release position, and then lift the dryer assembly right off of the base.

Dryer assembly left

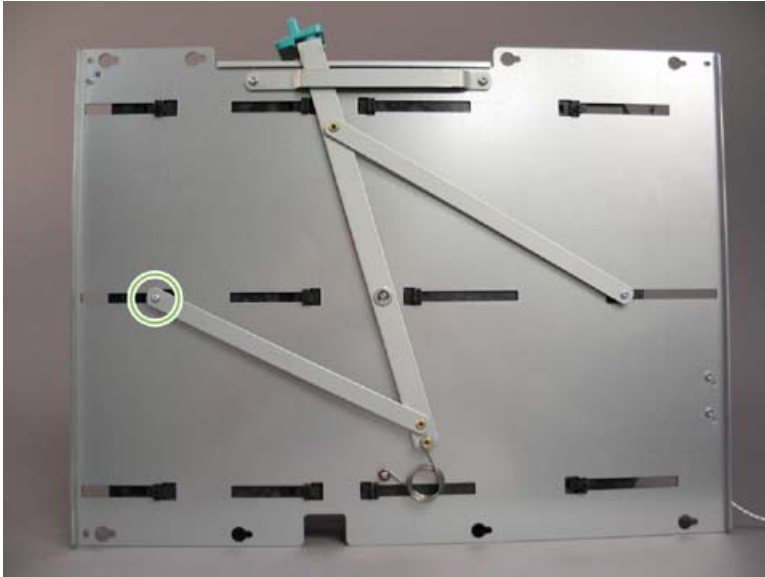
1. Remove the dryer assembly.

[Dryer assembly on page 635](#)

2. Remove the one ground wire screw.



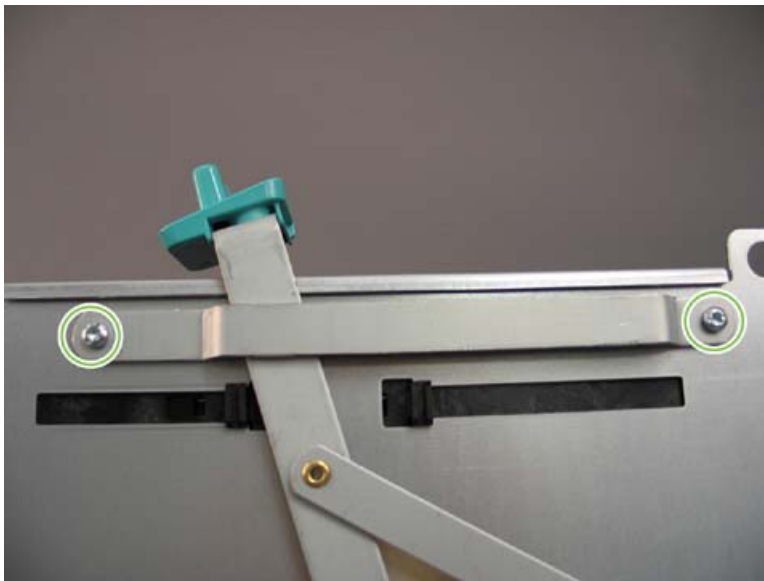
3. On the underside of the dryer, remove one screw, and then lift the lever off the plastic pin.



4. Push the dryer assembly left to the release position, and then lift the dryer assembly left off of the base.

Dryer slider lever

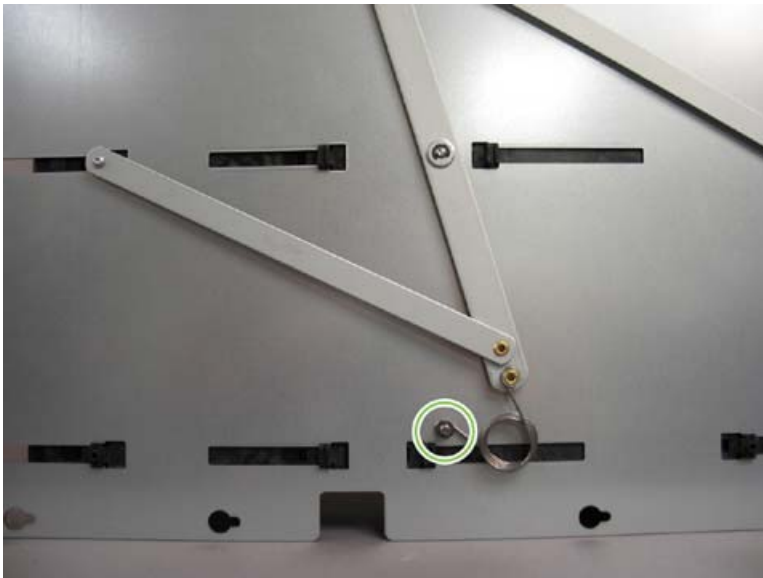
1. Remove the following items:
 - Dryer assembly
[Dryer assembly on page 635](#)
 - Dryer assembly right
[Dryer assembly right on page 639](#)
 - Dryer assembly left
[Dryer assembly left on page 640](#)
2. Remove two screws from the dryer lever restraint.



3. Remove the retaining clip at the dryer lever pivot.



4. Remove the retaining clip from the spring post.



5. Remove the dryer lever assembly.


Dryer sensors

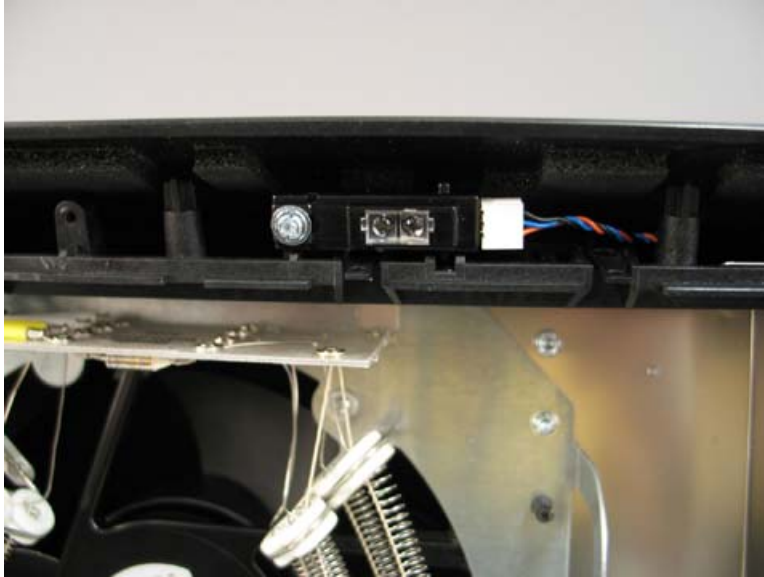
- [Drum 1 sensor \(SN33\)](#)
- [Drum 2 sensor \(SN34\)](#)
- [Dryer Temperature 1 sensor \(SN36\)](#)

Drum 1 sensor (SN33)


1. Remove the dryer assembly.

[Dryer assembly on page 635](#)

 **NOTE:** The Drum 1 sensor (SN33) is located on the upper-right of the dryer assembly right.



2. Remove SN33.

 **NOTE:** This is an Aleph OH series (OH-118-A5) reflective sensor. Be sure to install the correct sensor.

Drum 2 sensor (SN34)

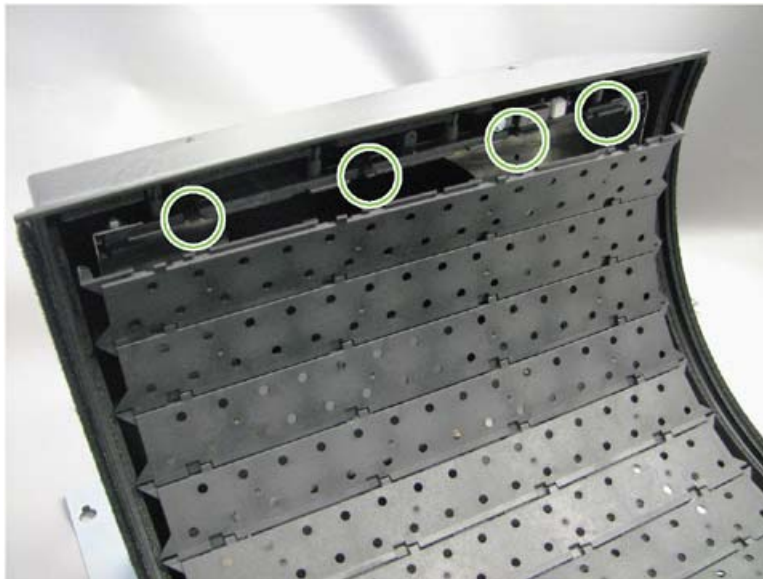
1. Remove the dryer assembly.

[Dryer assembly on page 635](#)


 **NOTE:** The Drum 2 sensor (SN34) is located at the base of the dryer assembly right.



2. Remove one screw (safety clip) at the top of the dryer assembly right, and then gently unlatch four plastic fingers across the top to remove the nozzle plate from the dryer assembly right.



3. Remove one screw, and then remove SN34.

 **NOTE:** This is an Aleph OH series (OH-118-A5) reflective sensor. Be sure to install the correct sensor.

Dryer Temperature 1 sensor (SN36)

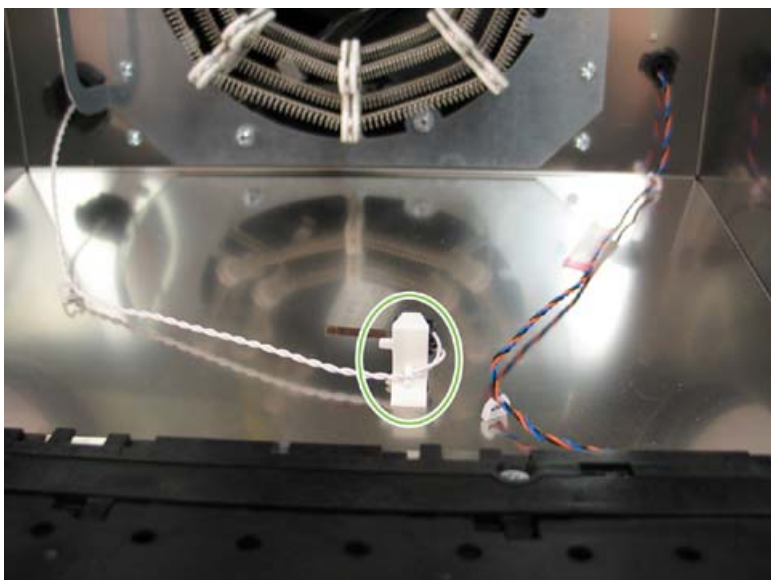
1. Remove the dryer assembly.

[Dryer assembly on page 635](#)

2. Remove the wires from the cable clips behind the dryer structure.
3. Remove one screw from the safety clip at the top of the dryer assembly right, and then gently unlatch four plastic fingers across the top to remove the nozzle plate from the dryer assembly right.

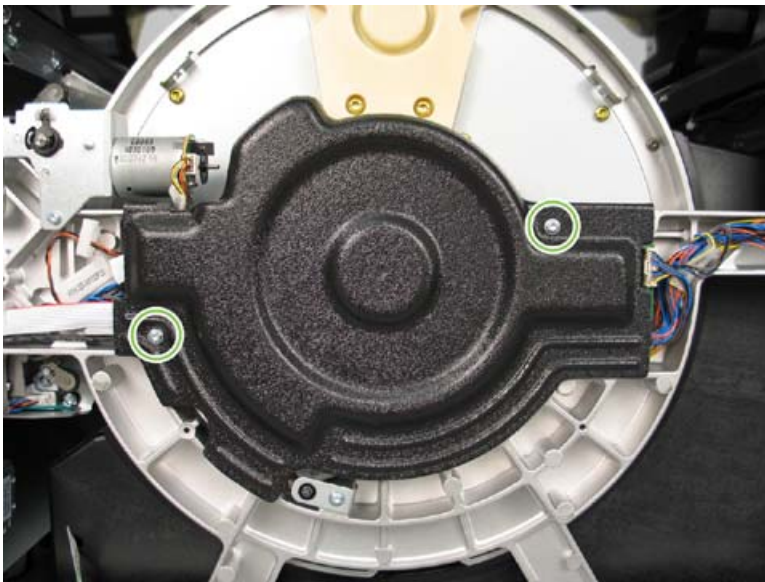


4. Unclip, and then remove SN36.

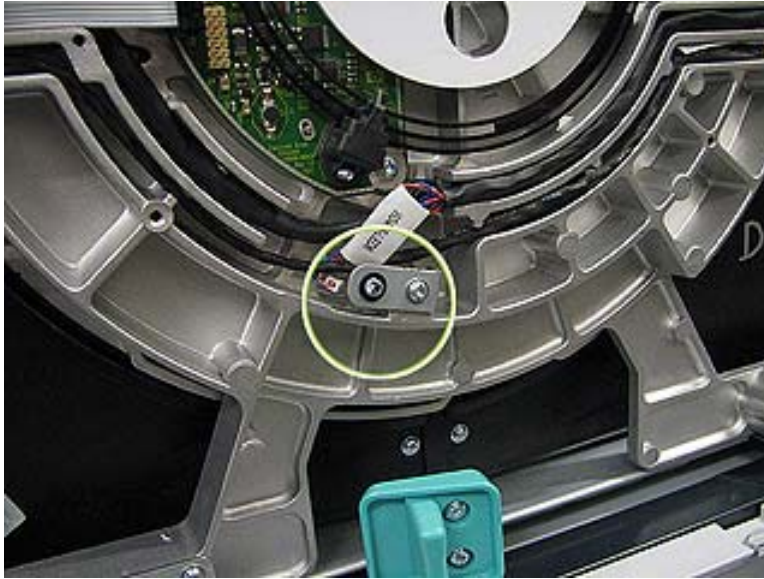


Dryer LED (LED6)

1. Remove the following items:
 - Door engine left
[Left front door on page 205](#)
 - Door engine right
[Front door on page 205](#)
 - Carriage plate cover
[Carriage plate cover on page 208](#)
 - Upper inner cover
[Upper inner cover on page 209](#)
2. Remove two screws from the drum encoder cover, and then remove the drum encoder cover.



3. Disconnect the LED wire connector, and then remove LED6.



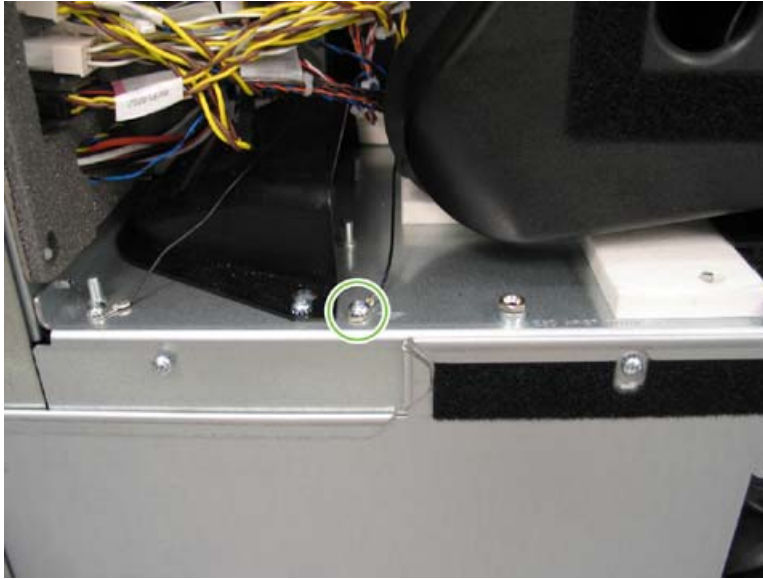
Service station

- [Service station assembly](#)
- [Web wipe cartridge guide](#)
- [Web Drive motor \(M5\)](#)
- [Cap assembly](#)
- [Web wipe material lift assembly](#)
- [Web Wipe Material Lift motor \(M4\)](#)
- [Web Advance encoder \(EN11\)](#)
- [Drop detect assembly](#)
- [Service station sensors](#)
- [Pen cooling fans assembly](#)

Service station assembly

1. Remove the following items:
 - Muffler
[Muffler on page 219](#)
 - Back cover
[Back cover on page 219](#)
 - Web wipe access case parts
[Web wipe access case parts on page 212](#)
 - Web wipe cartridge
[Web wipe cartridge on page 664](#)

2. Disconnect the grounding strap for the service station.



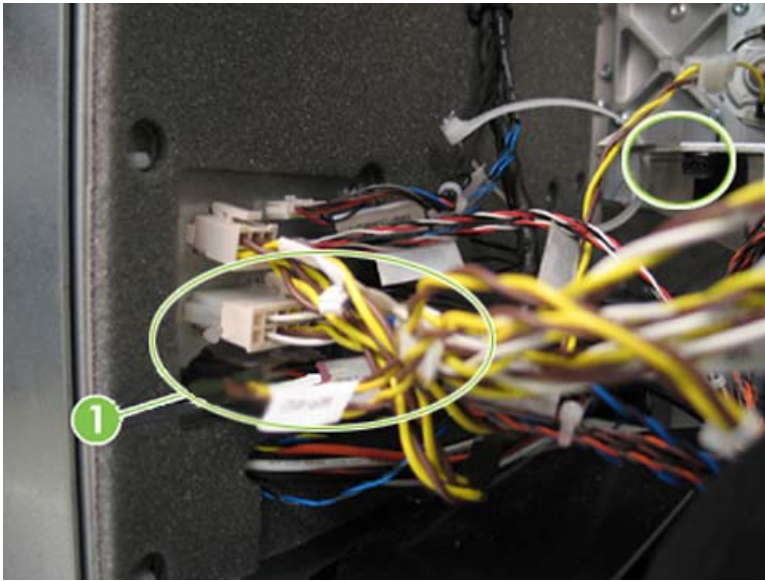
3. Remove the vacuum tube from the side of vacuum supply housing.



4. From the rear of the MFP on the left side, disconnect four wire connectors (callout 1) on the left sidewall:

- W40P8-W24J8
- W41P1-W10J1
- W33P12-W47J12
- W102JP2-W101J1

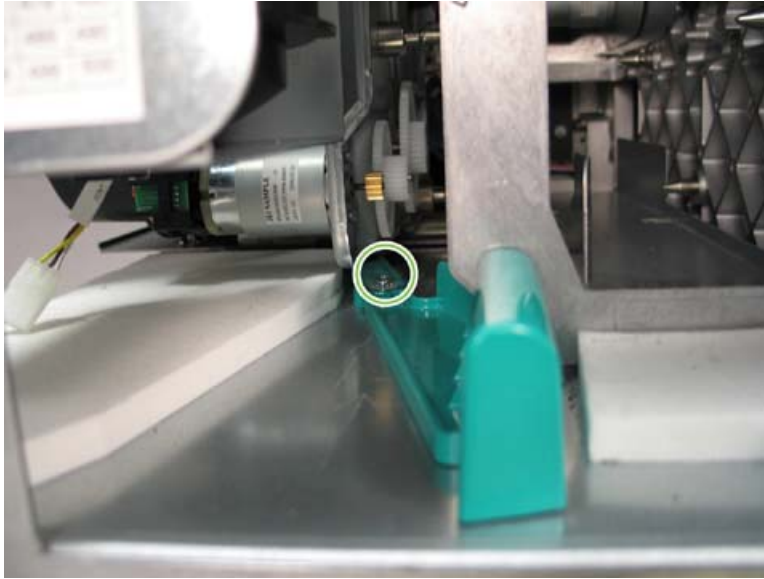
In addition, disconnect the wire connector for the Service Station Latch sensor (SN60).



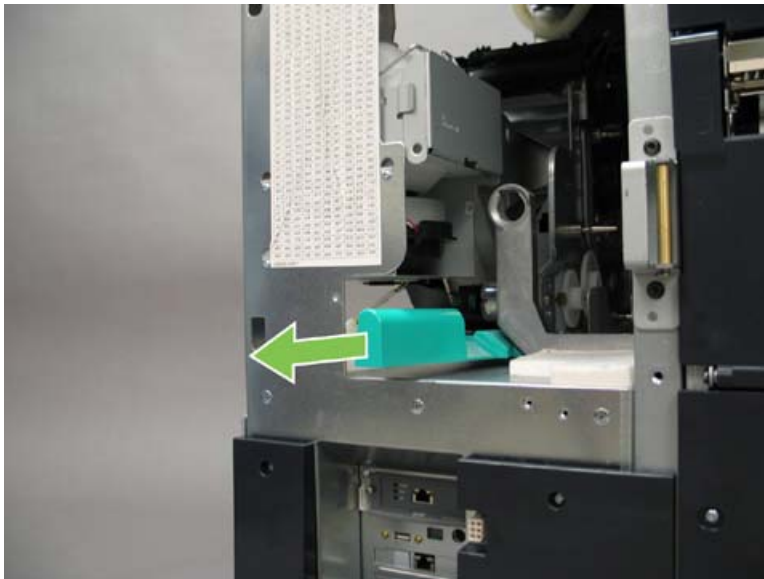
5. From the left side of the MFP, disconnect the wire connector to the Aerosol fan (AERO), and then unclip the wire harness from the side of the aerosol filter box.




6. Remove one screw and bushing from the service station pivot handle.

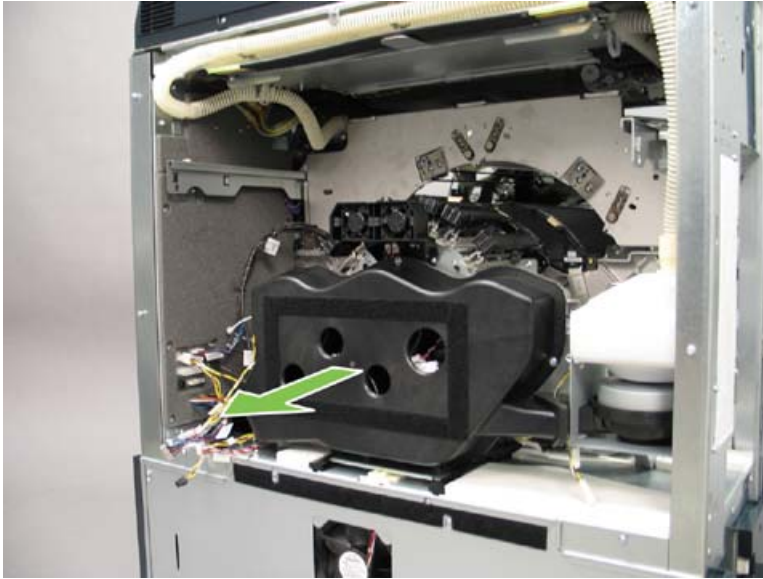


7. Lift the service station pivot handle off of the pivot post, and then remove the service station pivot handle.



 **NOTE:** When reinstalling the pivot handle, the forked end must be installed correctly for proper operation. Push the service station forward, and then align the pivot handle with the scribe marks on the service station shelf.

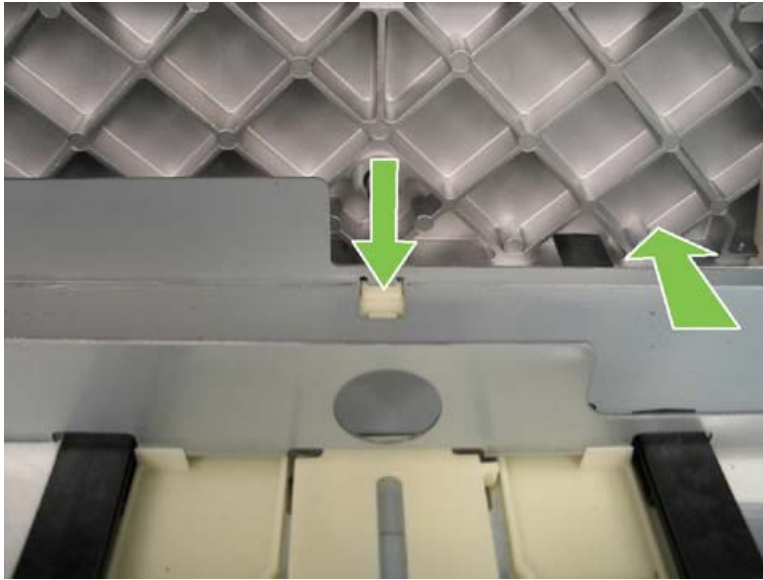
8. Pull the service station out, and then lift it free of the guide rails.



Web wipe cartridge guide


1. Remove the following items:
 - Muffler
[Muffler on page 219](#)
 - Back cover
[Back cover on page 219](#)
 - Service station assembly
[Service station assembly on page 648](#)

2. From the rear of the MFP, push down on the center snap, and then while holding the web wipe cartridge guide in place, push the cartridge guide forward.



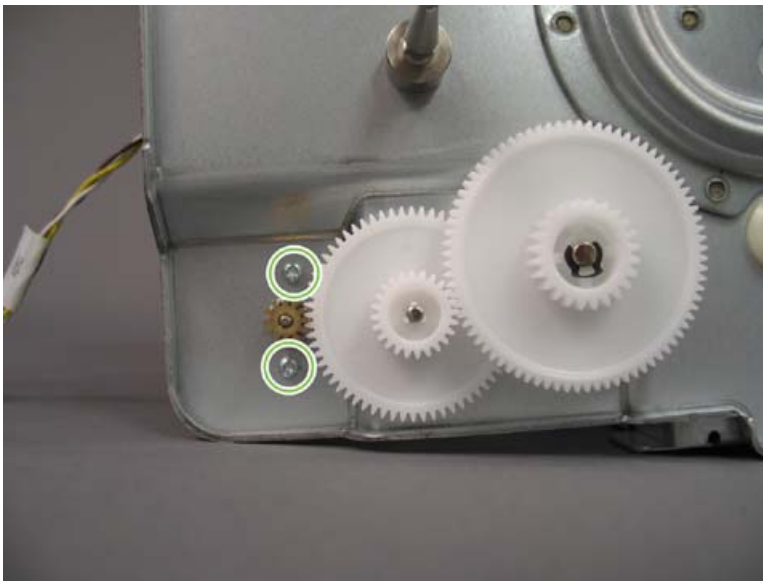
3. Lift to remove the cartridge guide.



 **Reinstallation tip** Ensure the flat metal key of the slide assembly fits over the embossed guide for proper operation of the cartridge guide.

Web Drive motor (M5)

1. Remove the following items:
 - Muffler
[Muffler on page 219](#)
 - Back cover
[Back cover on page 219](#)
 - Service station assembly
[Service station assembly on page 648](#)
2. Remove two screws.




3. Disconnect the M5 wire connector and the Web Drive Motor encoder (EN10) wire connector.
4. Remove M5.

Cap assembly

△ **CAUTION:** Use gloves and safety glasses when handling ink parts.

1. Remove the following items:
 - Muffler
[Muffler on page 219](#)
 - Back cover
[Back cover on page 219](#)

2. Lift the middle tab of the front clip, and then push forward and lift to remove the cap assembly.

 **NOTE:** Remove the pen cooling fans for easier access to several of the caps.

NOTE: When removing the pen cap assemblies, do not swap their locations. If the pen caps are swapped, the pens will be damaged by cross-contamination.



Web wipe material lift assembly

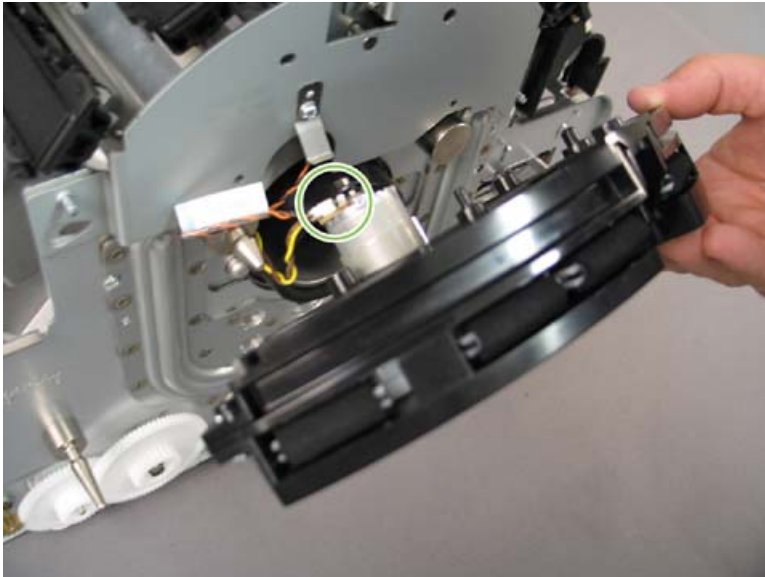
1. Remove the following items:
 - Muffler
[Muffler on page 219](#)
 - Back cover
[Back cover on page 219](#)
 - Service station assembly
[Service station assembly on page 648](#)

2. Remove three screws, and then remove the web wipe material lift assembly. The web wipe material lift motor is attached to the back of the assembly.

 **NOTE:** Hold the web wipe material lift assembly in place when removing the last screw.




3. Disconnect the Web Wipe Material Lift motor (M4) wire connector.



Web Wipe Material Lift motor (M4)

1. Remove the following items:
 - Muffler
[Muffler on page 219](#)
 - Back cover
[Back cover on page 219](#)
 - Service station assembly
[Service station assembly on page 648](#)
2. Remove two screws, and then remove M4.

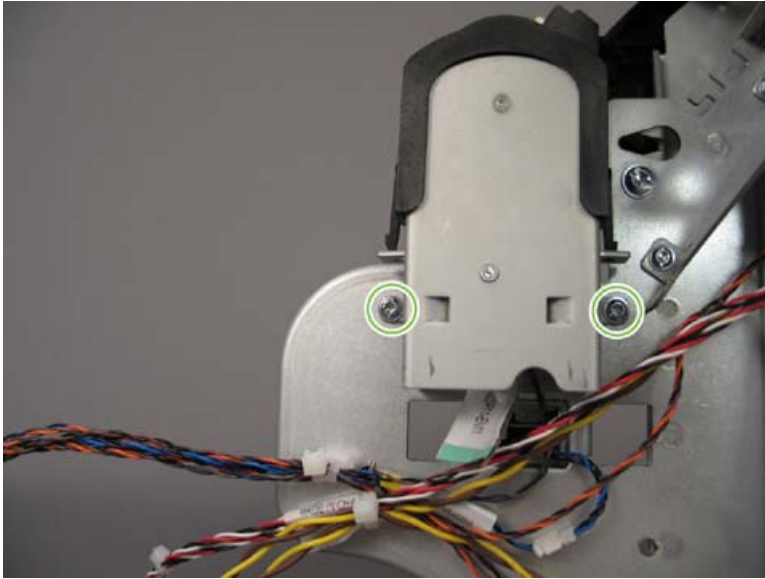
 **NOTE:** Remove the gasket for easier access to remove the motor.



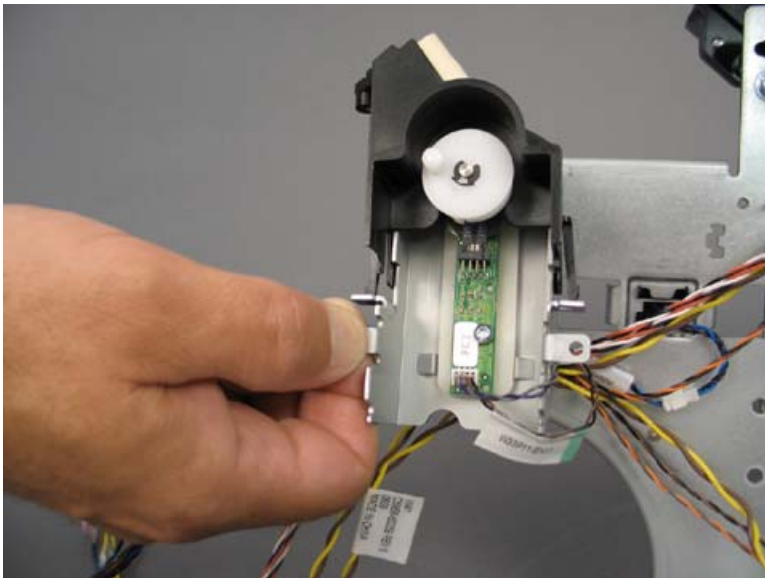
Web Advance encoder (EN11)

1. Remove the following items:
 - Muffler
[Muffler on page 219](#)
 - Back cover
[Back cover on page 219](#)
 - Vacuum supply housing
[Vacuum supply housing on page 520](#)

2. Remove two screws.



3. Remove EN11, and then disconnect the encoder wire connector.



Drop detect assembly

- [Drop detect spittoon](#)
- [Drop detect assembly](#)

Drop detect spittoon

△ **CAUTION:** Use gloves and safety glasses when handling ink parts.

1. Remove the following items:

- Web wipe access case parts

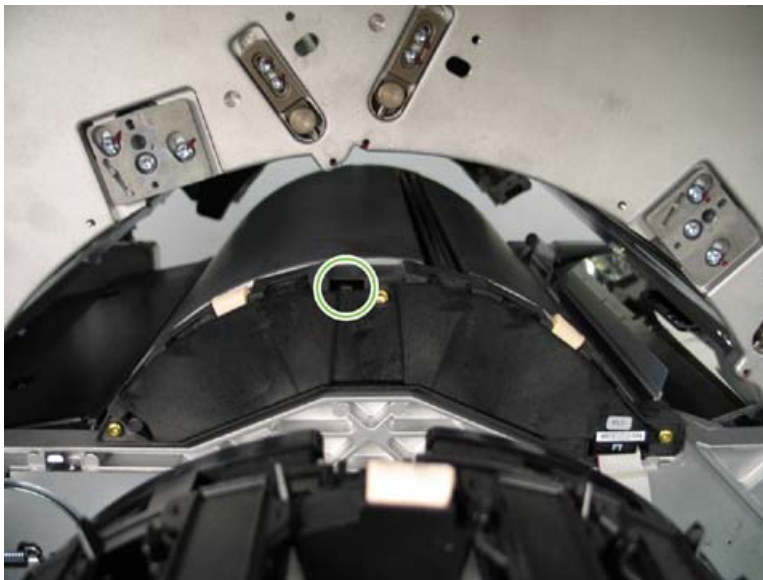
[Web wipe access case parts on page 212](#)

- Web wipe cartridge

[Web wipe cartridge on page 664](#)

2. Lift the tab in the center of the drop detect assembly, rotate the drop detect spittoon towards you approximately 30 degrees, and then remove the drop detect spittoon from the assembly.

△ **CAUTION:** Be careful not to damage the pens when removing the drop detect assembly.



Drop detect assembly

1. Remove the drop detect spittoon.

[Drop detect spittoon on page 659](#)

2. Disconnect the drop detect wire connector.



3. Loosen three screws, and then remove the drop detect assembly.



 **NOTE:** A drop detect calibration must be run after installing or reinstalling a drop detect assembly.

[Drop Detect Beam calibration on page 149](#)

Service station sensors

- [Service Station Latch sensor \(SN60\)](#)
- [Web Low sensor \(SN21\)](#)

Service Station Latch sensor (SN60)

1. Remove the following items:


- Muffler

[Muffler on page 219](#)

- Back cover

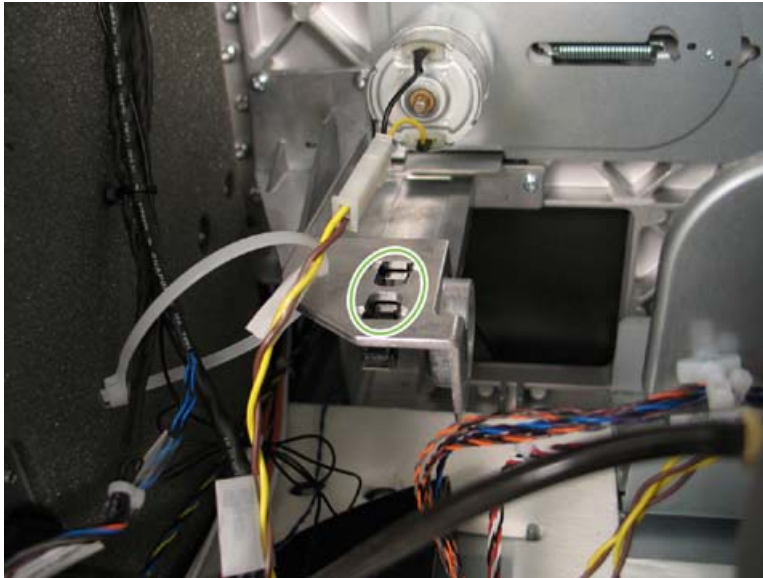
[Back cover on page 219](#)

2. From the rear of the MFP, turn the latch bar to disengage the latch bar from the bracket.

 **NOTE:** This step involves turning the latch bar from the rear of the MFP to eliminate the need to remove the web wipe access case parts.

3. Disconnect the wire connector.

4. Replace SN60.



Web Low sensor (SN21)

1. Remove the following items:

- Muffler

[Muffler on page 219](#)

- Back cover

[Back cover on page 219](#)

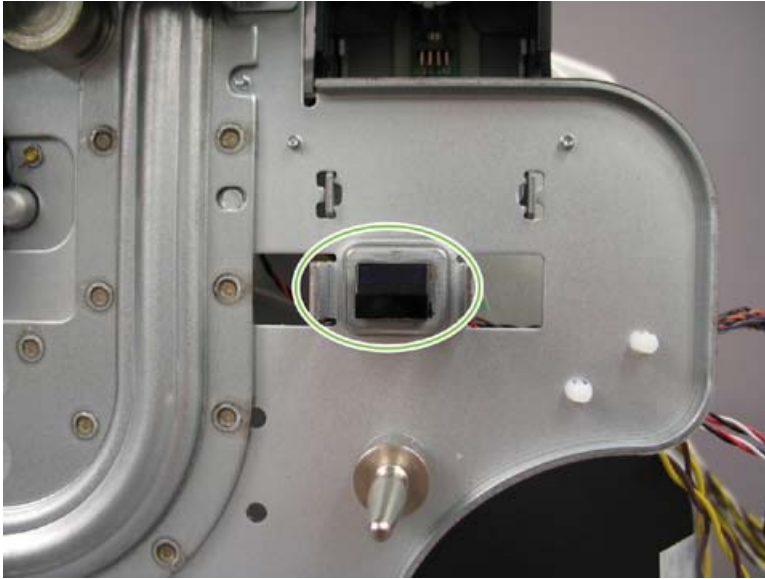
- Web wipe access case parts

[Web wipe access case parts on page 212](#)

- Web wipe cartridge

[Web wipe cartridge on page 664](#)

2. Remove the SN21 housing from the service station.



3. Disconnect the sensor wire connector.

Pen cooling fans assembly


1. Remove the following items:
 - Muffler
[Muffler on page 219](#)
 - Back cover
[Back cover on page 219](#)
2. Disconnect the two front wire connectors to the fan support bulkhead.



3. Loosen three screws, and then remove the fan support.



To remove the individual fans (Carriage 1 Cooling fan (FAN7) and Carriage 2 Cooling fan (FAN8)), disconnect the rear fan wires from the bulkhead, and then pry the side tabs holding the fans.

 **Reinstallation tip** Align the arrows on the fan body and the fan support so that they point in the same direction.

Web wipe

- [Web wipe cartridge](#)
- [Web wipe](#)
- [Web wipe encoder assembly](#)
- [Web wipe guide](#)

△ **CAUTION:** Use gloves and safety glasses when handling ink parts.

Web wipe cartridge

1. Remove the web wipe cartridge access case parts.

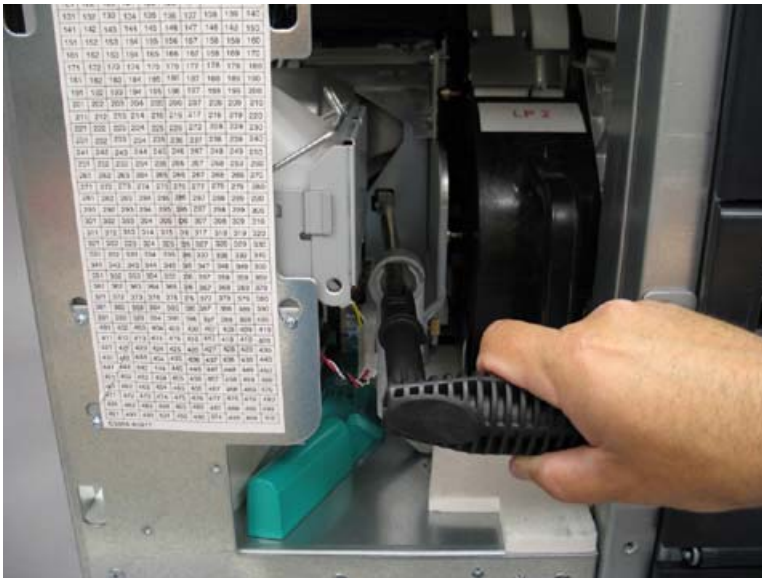
[Web wipe access case parts on page 212](#)

2. Open the MFP front doors, and then extract the print carriage structure.

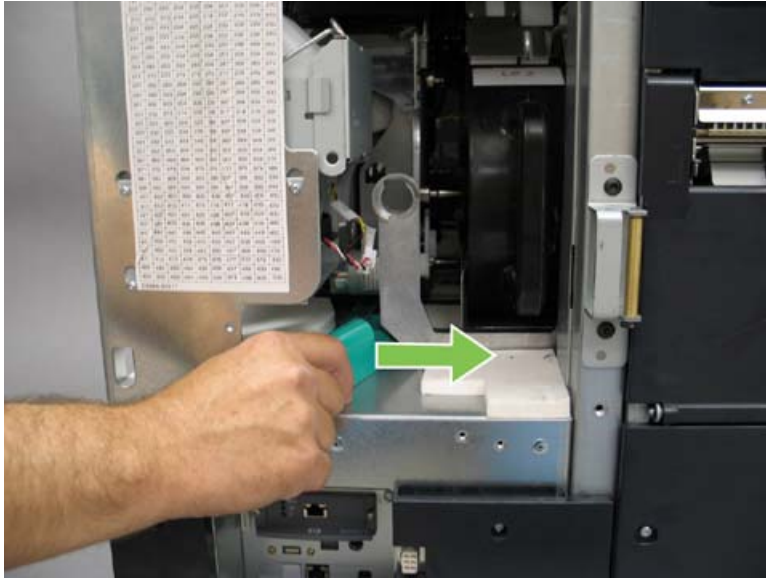
[Carriage extraction on page 178](#)

△ **CAUTION:** Failure to extract the print carriage structure before attempting to remove the web wipe cartridge can result in bonding agent pen 1 damage, such as leakage, from the web cartridge striking the pen.

3. Pull each of the print carriages to the front of the print carriage structure.
4. Rotate the latch bar 90-degrees counterclockwise, and then pull out to remove the latch bar.




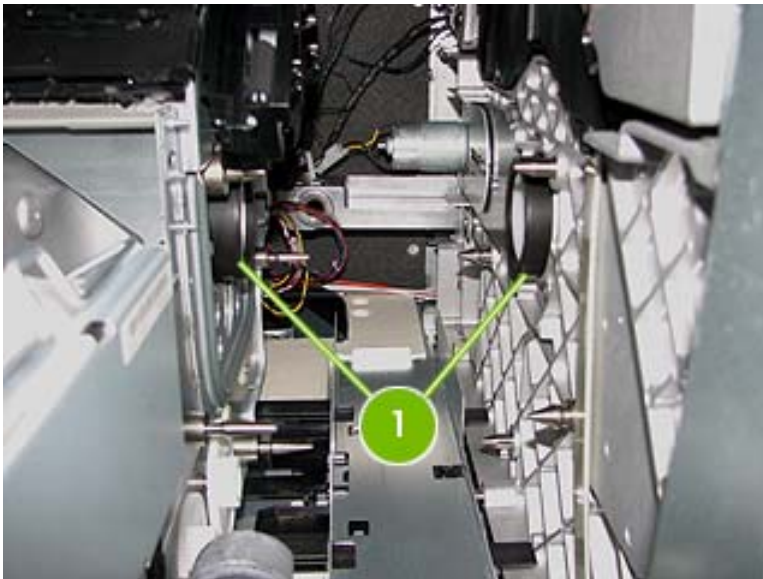
5. Slide the pivot handle to push the service station to the rear of the MFP.




6. Pull out the web wipe cartridge.



 **NOTE:** Ensure the two foam vacuum duct gaskets (callout 1) remain in place and are seated properly.



Web wipe

 **NOTE:** The web wipe is a preventive maintenance item and should be replaced when indicated by CDFT, based on usage. See [Service intervals on page 79](#).

 **CAUTION:** Use gloves and safety glasses when handling ink parts.

CAUTION: Replace the web wipe material *before* reinitializing the web wipe tool form in CDFT and power cycling the system. Enter PSM mode to reinitialize the web wipe material in CDFT.

CAUTION: Do not to turn the web wipe material take-up reel by hand when the web wipe cartridge is out of the MFP and there is no web wipe material replacement procedure required. If the web wipe material is turned by hand, it is likely that the pens could be cross-contaminated and damage the pens.

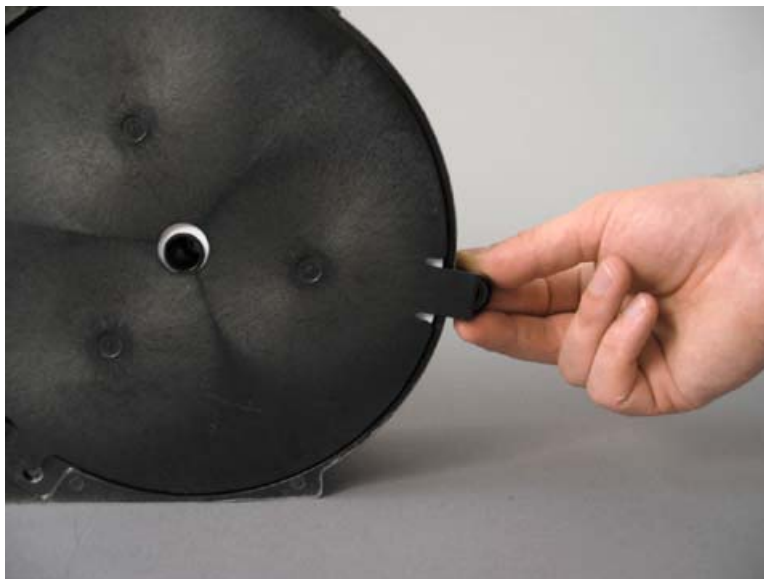
Removing used webs

1. Remove the web wipe cartridge, and then set it on a workspace with the cartridge handle on the left side.

[Web wipe cartridge on page 664](#)



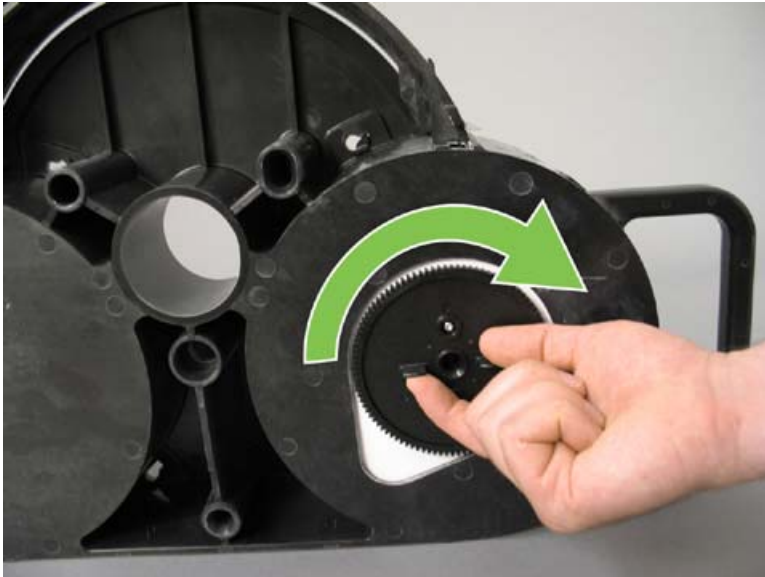
2. Release the catch from the feed spool cover on the right side and rotate the cover to release the two hooks near the top and the bottom. Remove the cover and set it aside.



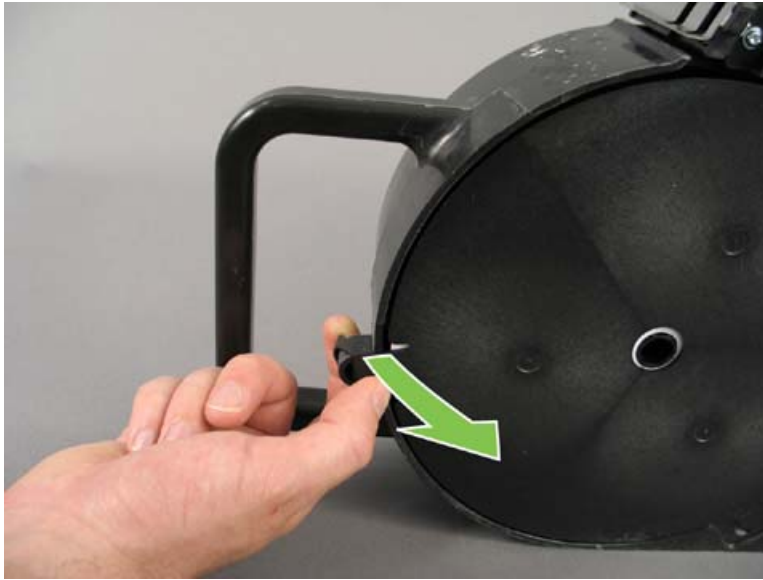
3. Using a pair of scissors, cut both the wide web wipe and the narrow web spit at the top of the feed spool, and then remove both spools.



4. Turn the cartridge around. Wind the used web completely onto the take-up spools.



5. Turn the cartridge back around and remove the take-up spool cover on the left side by releasing the catch and two hooks, similar to the right side.



6. Obtain a bag with the new feed spools. Open the bag and remove the new spools. Save the bag.
7. Remove the used web take-up spools and place them in the bag. This inhibits loose ends and ink from contaminating the web wipes.
8. Dispose of the used spools in an appropriate manner.
9. Clean up any ink that is on the outside of the steel guide with a dry lint-free wipe.

Installing new webs


There are two web sizes to install: a wide web wipe in the back, and a narrow web spit in the front.

1. Take the new wide web wipe and peel off the tape and strip of protective web from the roll.

 **NOTE:** There is a hard plastic end to assist in feeding the web wipe into the cartridge.

2. Lay the web wipe cartridge on its back. On the top of the cartridge, there is a diagram showing the spool layout.

3. Feed the plastic end into the lower slot in the housing with the spool in the correct orientation according to the diagram and with no twists in the web.

 **NOTE:** The shaft of the web wipe encoder assembly goes behind the wide web material and in front of the narrow web.



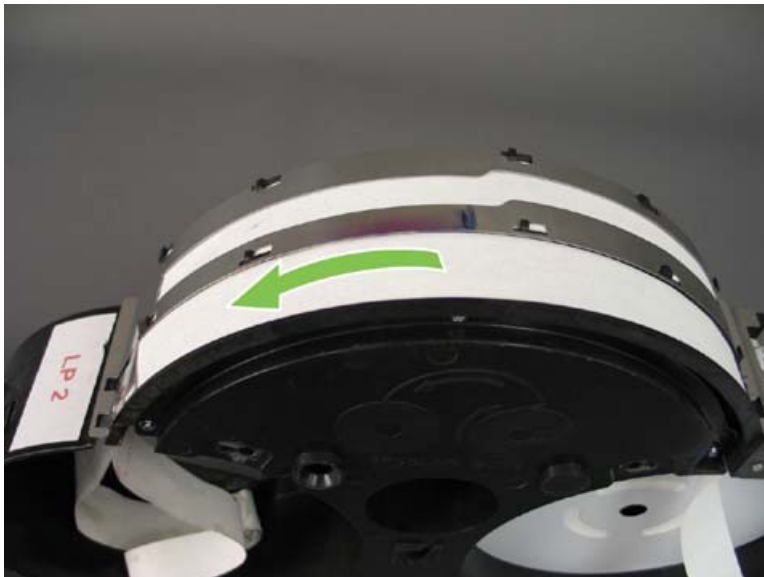
4. Place the spool into the web wipe cartridge.
5. Stand the web wipe cartridge up.
6. Pull the web wipe through the web wipe guide and cover, across the top, and to the other side of the cartridge. Untangle and guide any excess web into the cartridge.



7. Feed the web wipe down into the receiving side. Pull and guide enough web through that will eventually be attached to the take-up spool. Pull until the web is flat and smooth.



8. Place the web wipe cartridge back down on its side.
9. Pick up the web spit spool (the narrow spool with the post) and remove the tape.
10. Feed the plastic end of the web spit through the upper slot in the housing and out the top. This web lies in the guide and does not go under any metal guide.



11. Drop the spool in place.
12. Stand the web wipe cartridge up and pull the web spit across the top, ensuring it remains in the guides.
13. Feed the web into the take-up side.
14. Pull the narrow web wipe through until the web is lying flat across the top.

15. Replace the feed spool cover.



16. Retrieve a take-up spool assembly (has a gear attached to the assembly).
17. Take the wider web wipe first, and then remove the tape covering the adhesive on the plastic end. With the gear on the take-up spool facing away from you, press the adhesive to the center of the spool with the web wipe tape coming up.

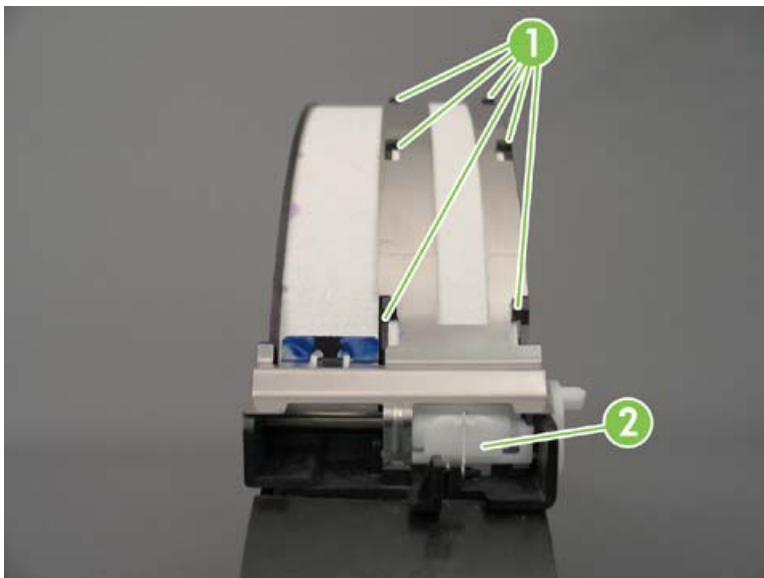


18. Take the plastic end of narrow web spit, peel the cover off the tape, and attach the web spit to the center of the take-up spool. Take care not to have any twists in either the web wipe or the web spit.
19. Slide the take-up spool assembly into the cartridge housing, winding up any excess.
20. Replace the take-up spool cover by aligning the two hooks, rotating counter clockwise, and snapping the latch closed.
21. Turn the assembly around and wind the take-up spool until both the web wipe and the web spit are moving together onto the take-up spool.

22. Check to be sure that the web wipe encoder assembly is turning.



23. As appropriate, fill in the change date and your initials on the web wipe cartridge label.
24. Check the metal web cover to ensure that all ten locking features (callout 1) are properly engaged and check the cam clamp (callout 2) to make sure that it is vertical and that it is seated in the groove.




25. After the web wipe cartridge has been physically changed, select **Initialize New Web** on the web wipe tool form in CDFT. The following message is displayed:

To complete the web initialization process, the system MUST be restarted. Please power cycle the system.

Restart the system following these steps:

- a. Press the on/off button on the control panel once to display the Power option menu.
- b. Touch **Restart**.
- c. Touch **Ok**.

 **NOTE:** In the case of error code C4.0202 (web wipe out) being declared, follow these steps to reset the web wipe:

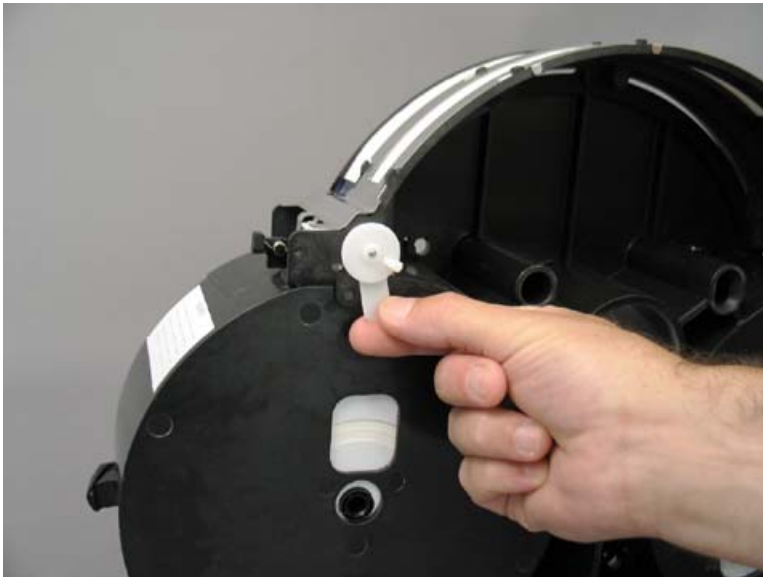
- a. Boot into PSM mode.
 - b. Physically replace the web wipe material.
 - c. While in PSM, access the web wipe PM button in CDFT, and then reset it.
 - d. Power cycle the system.
-

Web wipe encoder assembly

1. Remove the web wipe cartridge.


[Web wipe cartridge on page 664](#)

2. Pry the encoder tab away from the cartridge side, and then rotate the tab counterclockwise one quarter turn.



3. Remove the web wipe encoder assembly.



 **Reinstallation tip** The shaft goes behind the wide web material and in front of the narrow web.

Web wipe guide


1. Slide the metal web cover to release its ten locking features, and then remove the web cover.
2. Remove three screws, and then remove the web guide.



Formatter electronics

- [Formatter assembly](#)
- [Formatter access door](#)
- [Coprocessor](#)
- [Coprocessor hard disk and fan](#)
- [Formatter hard drive](#)
- [Formatter fan](#)
- [Formatter PCAs](#)
- [Formatter battery](#)

Formatter assembly

 **NOTE:** Before replacing the formatter assembly, perform an NVM backup or ensure that a current backup exists. To perform an NVM backup using CDFT, see [Manage non-volatile memory \(NVM\) on page 56](#).

In addition, verify the version of firmware installed and ensure that you have a copy of the RFU file for that version.

NOTE: Before replacing the formatter assembly, turn off automatic backup.

Click **Settings/Procedures**, click **NVM**, and then clear the checkbox for the **Automatic Backup** option.

After replacing the formatter assembly, turn **Automatic Backup** back on.

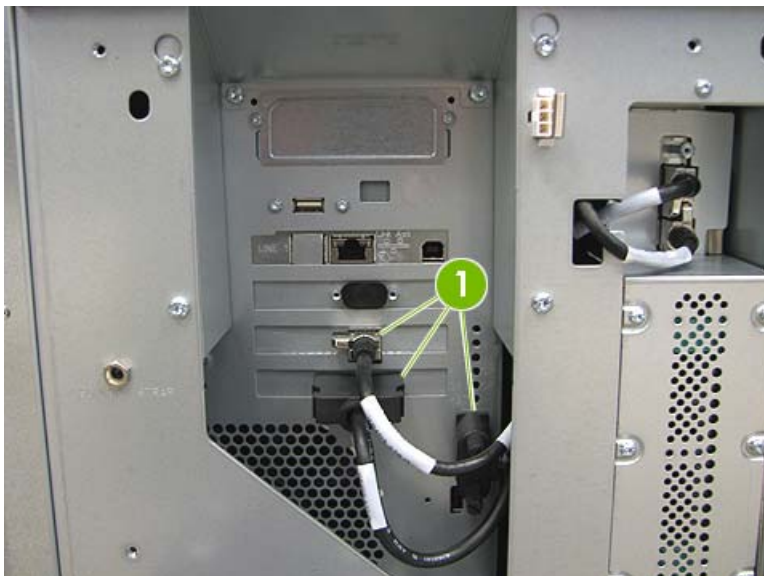
1. Remove the following assemblies:

- Rear muffler
[Muffler on page 219](#)
- Electronics bay cover
[Electronics bay cover on page 220](#)
- Lower-left cover
[Lower left cover on page 215](#)

2. Remove two screws from the left side of the MFP.



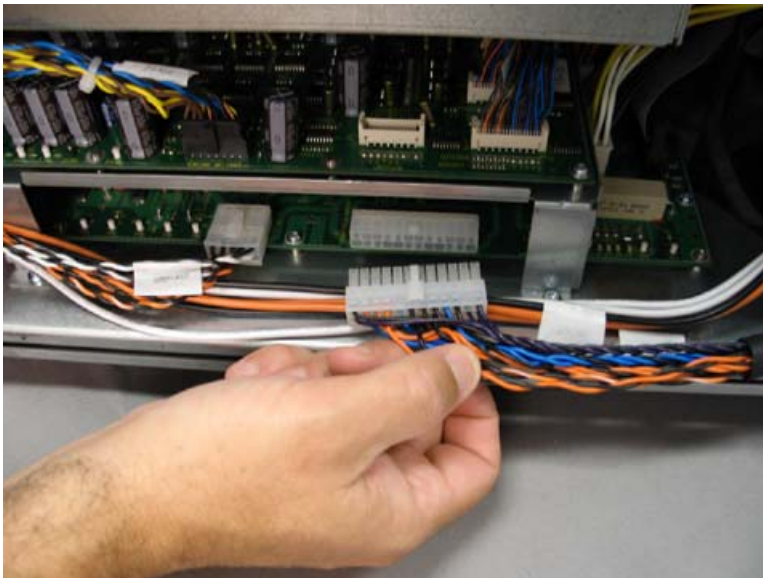
3. Disconnect three cables (callout 1).



4. Remove two wire connectors from the formatter assembly.



5. Disconnect the formatter wire connector from the power distribution PCA.




6. Loosen two screws from the base of the formatter.



7. Remove the formatter assembly from the MFP.



 **TIP:** To replace individual components within the formatter, it might be easier to remove the formatter assembly and set it on a workspace.

8. If installing a replacement formatter assembly, follow these steps:
 - a. Install the formatter assembly.
 - b. Turn on the MFP and enter Service mode and reinstate the original version of the firmware for the RFU.

To use CDFT to perform an RFU, see [Use CDFT to perform an RFU on page 56](#).
 - c. Power cycle the MFP.
 - d. Perform an NVM restore.

To perform an NVM restore using CDFT, see [Manage non-volatile memory \(NVM\) on page 56](#).

Formatter access door

1. Remove the following assemblies:

- Rear muffler


[Muffler on page 219](#)

- Electronics bay cover

[Electronics bay cover on page 220](#)

2. Loosen three screws, and then remove the door.



 **NOTE:** The coprocessor is attached to the inside of the formatter access door. Laying the access door flat provides access to the formatter components. To remove the access door entirely, disconnect the three coprocessor cables.




Coprocessor

1. Remove the following assemblies:
 - Rear muffler
[Muffler on page 219](#)
 - Electronics bay cover
[Electronics bay cover on page 220](#)
 - Formatter access door

[Formatter access door on page 680](#)

2. Disconnect three cables from the coprocessor.
3. Remove four screws from the formatter access door, and lift off the coprocessor.



 **Reinstallation tip** Replace the existing foam strip attached to the surface of the coprocessor with the new foam strip included with a replacement coprocessor.

After the coprocessor is replaced with a new coprocessor

Use this procedure when the coprocessor fails and needs to be replaced. This procedure will guide you through the proper steps required to bring the MFP back on-line.

1. Before starting the procedure, make sure that you have the following items:
 - The latest firmware downloaded to your laptop
 - USB cable
 - CDFT-L installed and running on your laptop
2. Connect your laptop to the USB port of the formatter using a USB cable.
3. Power up the MFP and enter the Startup Menu. (As soon as the "+" sign appears in the bottom left, press the **Stop** button on the control panel.)

The Startup Menu controls for this procedure are:

- **2** = Scroll up
 - **8** = Scroll down
 - **Start** = Enter
 - **Stop** = Esc
4. Scroll down to select **Sign in** and enter the service password.
 5. Scroll down to select **Service** tools and press **Enter** (Start button).

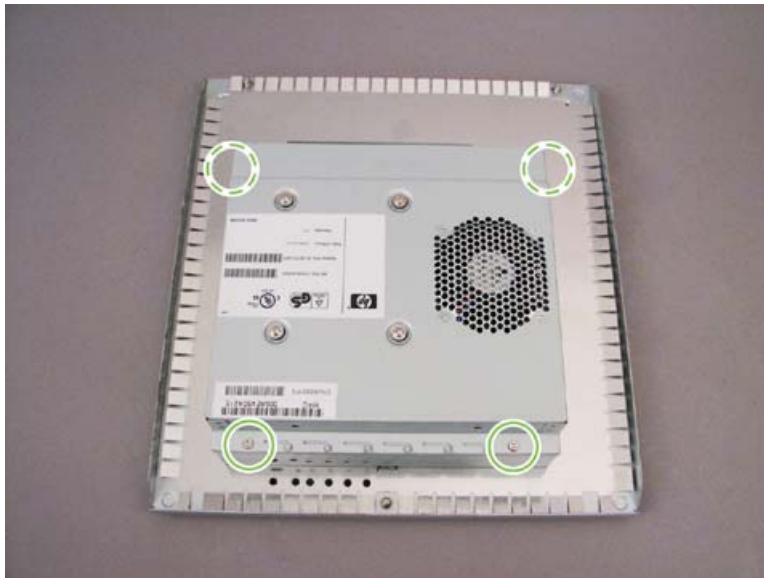
6. Select the check box for **Reinitialize NVRAM** by pressing **Enter** .
 7. Press **Stop** to return to the Startup menu.
 8. Scroll to select **Admin**, and then press **Enter**.
 9. Scroll to select **Firmware download**, and then press **Enter**.
 10. Select **Reinstall all subsystems** and **Reformat all drives**.
-
- △ **CAUTION:** Any user data on the coprocessor drive will be lost.
11. Scroll back up to select **Download now**, and then press **Enter**.
 12. Use CDFT-L to download the .rfu file from your laptop using the USB cable.
 13. If a warning message appears on CDFT-L, click **Yes**.
 14. Within ten seconds the progress bar should begin incrementing on the control panel. Once the download is complete, press **OK** to begin the update process. This process can take up to one hour.
 15. The laptop can be disconnected once the download portion is complete. The system will reboot upon completion of the firmware upgrade.

Coprocessor hard disk and fan

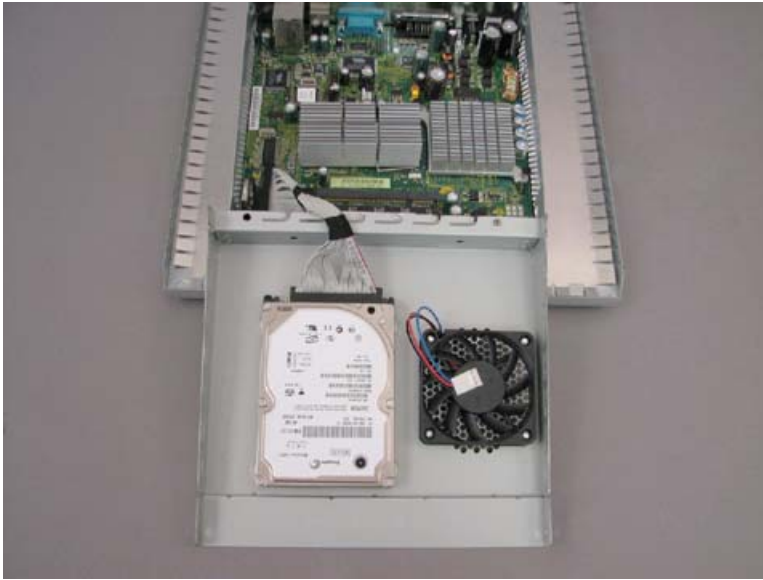
1. Remove the coprocessor.

[Coprocessor on page 681](#)

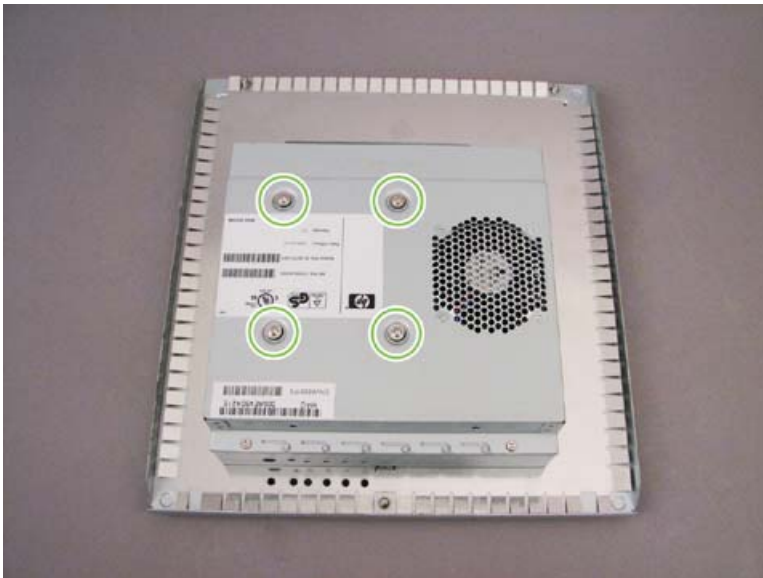
2. Remove four screws.



3. Lift the cover and set it next to the coprocessor chassis. The cover has the coprocessor hard drive and fan attached to it. Disconnect the fan to set the cover aside.




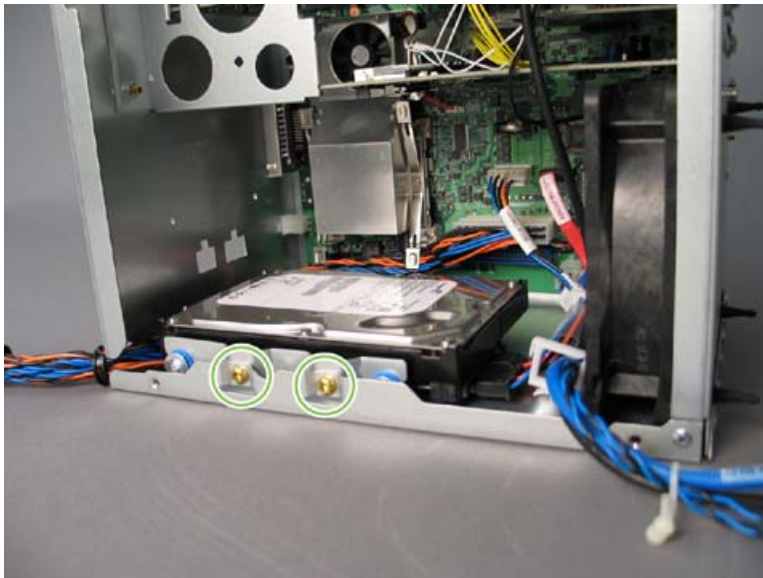
4. Disconnect the wire connector to the hard drive.
5. Remove four screws from the cover, and then remove the coprocessor hard disk.



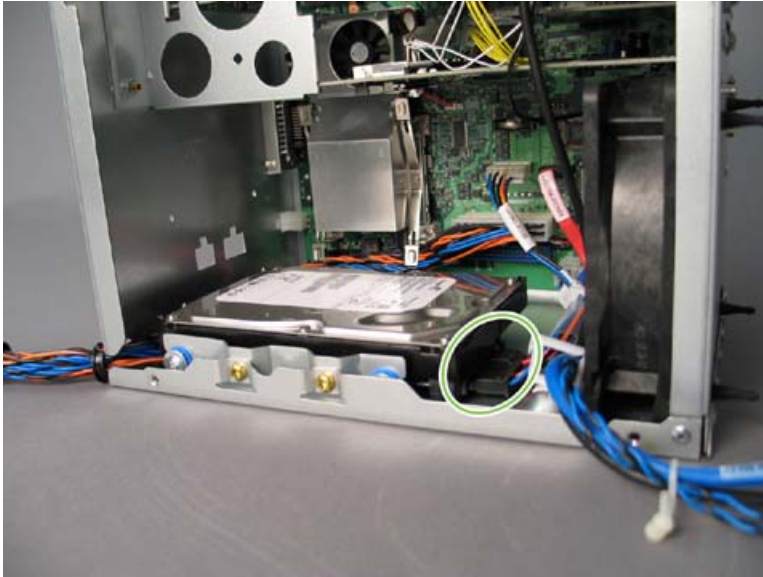
Formatter hard drive

1. Remove the following items:
 - Rear muffler
[Muffler on page 219](#)
 - Electronics bay cover
[Electronics bay cover on page 220](#)
 - Formatter access door
[Formatter access door on page 680](#)
2. Remove two screws, and then lift out the drive.

 **Reinstallation tip** Insert the drive at an angle so that the mounting tab on the drive support fits under the rear flange on the formatter chassis.



3. Disconnect two wire connectors from the drive.




Formatter fan

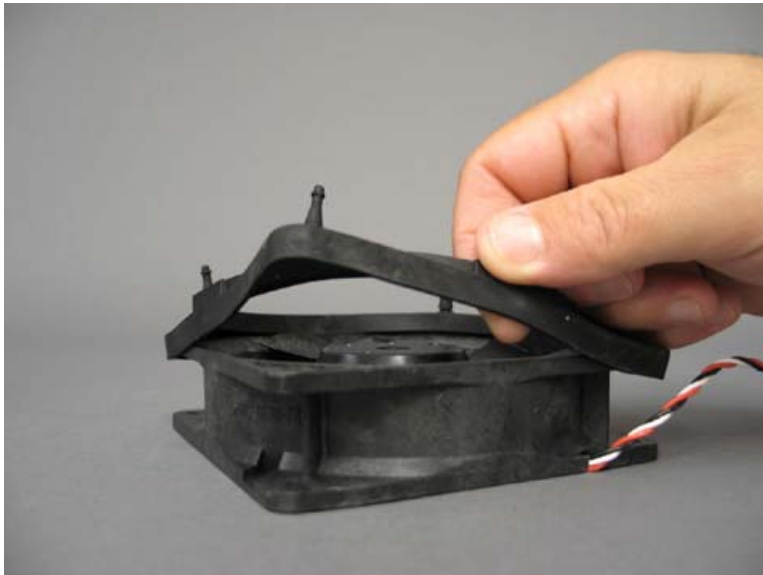
1. Remove the following items:
 - Rear muffler
[Muffler on page 219](#)
 - Electronics bay cover
[Electronics bay cover on page 220](#)
 - Formatter access door
[Formatter access door on page 680](#)

2. Unthread the cables in front of the fan connector, and then disconnect the fan cable.



3. Pry the fan from the flexible mounting support.

 **Reinstallation tip** Airflow indicators point into the formatter assembly. The flexible mounting support is keyed to align with the notch in the fan body. All fan corners are captured by the mounting support.



Formatter PCAs

- [Accessing formatter PCAs](#)
- [EIO Riser PCA \(A31\)](#)
- [Network/Fax PCA \(A30\)](#)
- [Finisher Interface PCA \(A29\)](#)

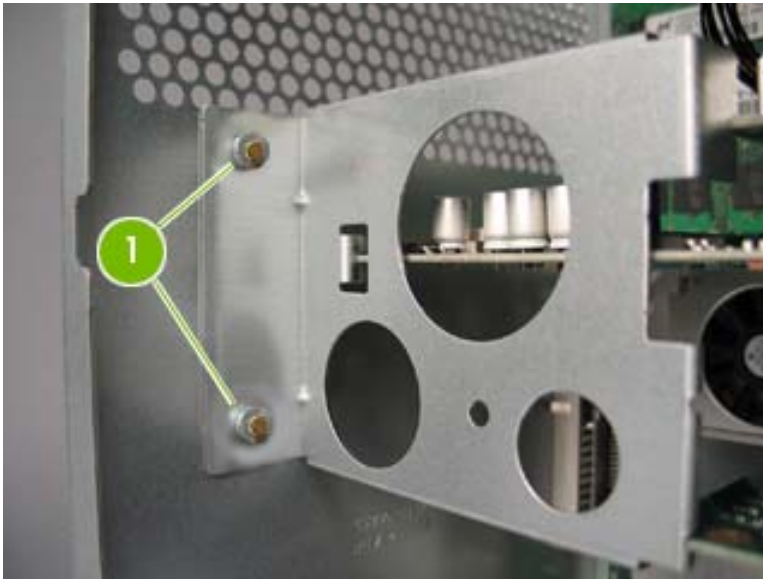
- [PCI Express PCA \(A28\)](#)
- [Copy Processing PCA \(A27\)](#)
- [Formatter Main PCA \(A26\)](#)

Accessing formatter PCAs

The following steps are common to access any of the formatter PCAs:

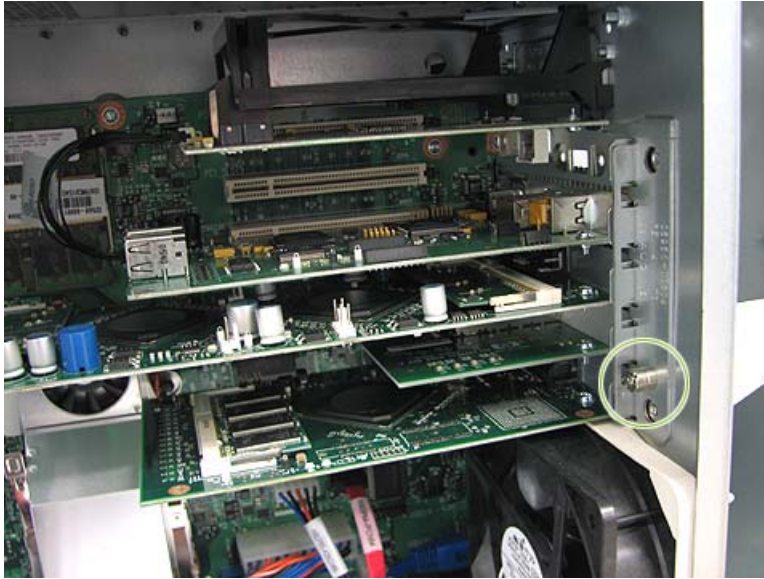
△ **CAUTION:** Wear an ESD strap.


1. Remove the following items:
 - Rear muffler
[Muffler on page 219](#)
 - Electronics bay cover
[Electronics bay cover on page 220](#)
 - Formatter access door
[Formatter access door on page 680](#)
2. Loosen two screws (callout 1), and then remove the anti-vibration bracket.



💡 **Reinstallation tip** Push down on the bracket when tightening the screws so that the bracket fits snugly against the PCAs. Ensure the PCAs are positioned in the bracket notches.

3. Loosen one screw, and then remove the PCA clamp.



 **Reinstallation tip** Slide the bent tab of the clamp into the slot in the chassis, and then rotate the clamp into position. Ensure the fingers of the clamp fit between the PCAs.

EIO Riser PCA (A31)

1. Access the formatter PCAs.

[Accessing formatter PCAs on page 688](#)


2. Disconnect the cable (C5956-60393) between A31 and the Network/Fax PCA (A30).

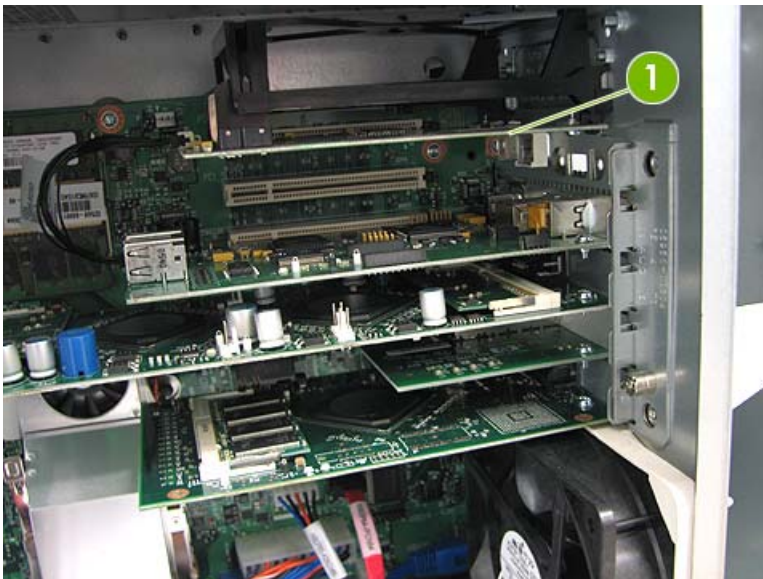


3. Remove the USB connector cable below A31 by removing two screws from the outside of the formatter chassis.



4. Remove the metal cover in the slot above A31.
5. Remove A31 and the attached card guide (callout 1).

 **Reinstallation tip** After A31 is seated, reinstall the metal cover. A31 installs in slot 6 of the Formatter Main PCA (A26).



Network/Fax PCA (A30)


1. Access the formatter PCAs.

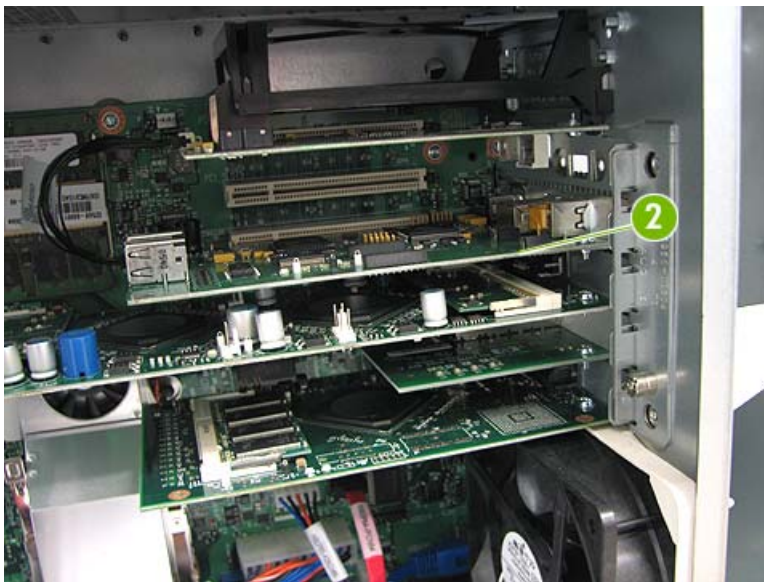
[Accessing formatter PCAs on page 688](#)

2. Disconnect the cable (C5956-60393) between A30 and the EIO Riser PCA (A31).



3. Remove A30 (callout 2).


 **Reinstallation tip** A30 installs in slot 4 of the Formatter Main PCA (A26).

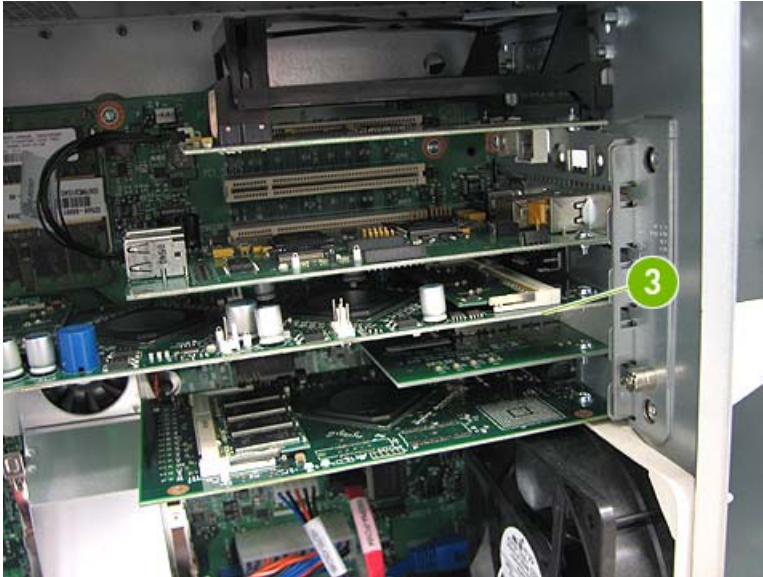



Finisher Interface PCA (A29)

1. Access the formatter PCAs.
[Accessing formatter PCAs on page 688](#)
2. Disconnect the cable from the optional finisher, if present.

3. Remove A29 (callout 3).


 **Reinstallation tip** A29 installs in slot 3 of the Formatter Main PCA (A26).

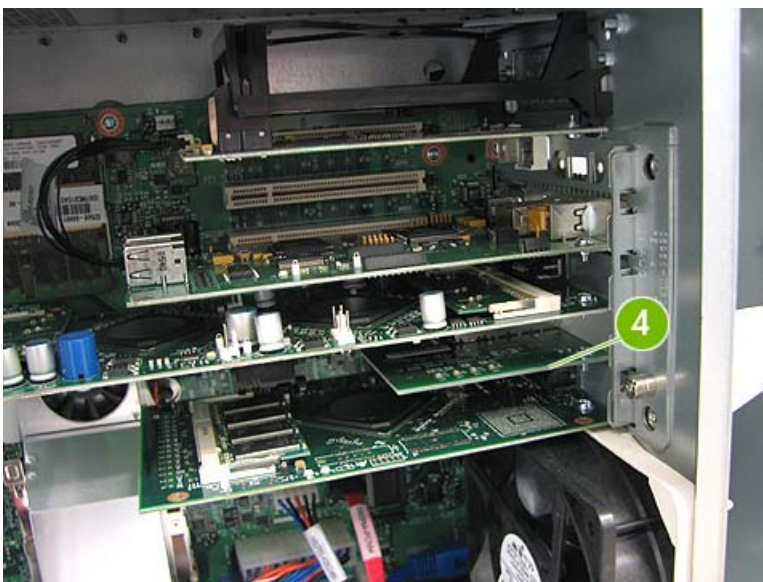


 **Reinstallation tip** A29 fits into the rear anti-vibration bracket.

PCI Express PCA (A28)

1. Access the formatter PCAs.
[Accessing formatter PCAs on page 688](#)
2. Disconnect cable W64P3-A28J3.
3. Remove A28 (callout 4).

 **Reinstallation tip** A28 installs in slot 2 of the Formatter Main PCA (A26).




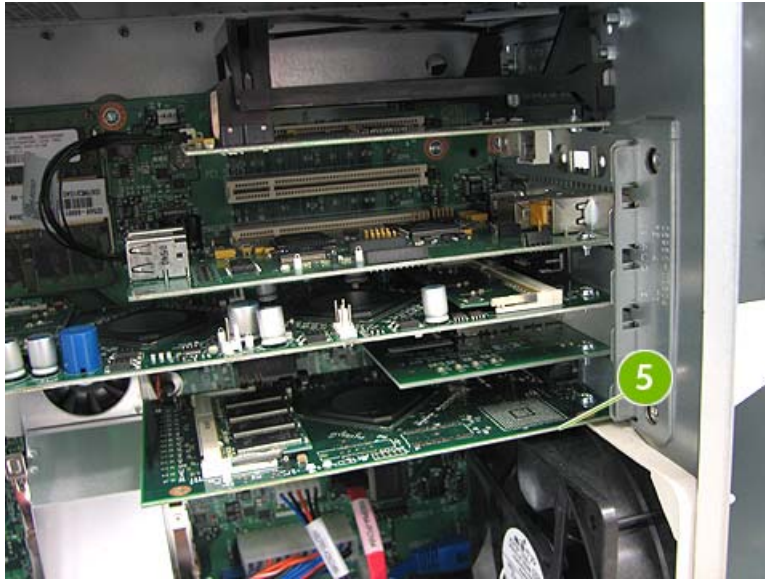
Copy Processing PCA (A27)

1. Access the formatter PCAs.

[Accessing formatter PCAs on page 688](#)

2. Disconnect cable W54P6-A27J6.
3. Remove A27 (callout 5).

 **Reinstallation tip** A27 installs in slot 1 of the Formatter Main PCA (A26).



Formatter Main PCA (A26)

1. Access the formatter PCAs.

[Accessing formatter PCAs on page 688](#)


2. Disconnect cables from the coprocessor.
3. Remove all formatter PCAs.
4. Remove the formatter hard drive.
[Formatter hard drive on page 685](#)
5. Remove the formatter fan.
[Formatter fan on page 686](#)
6. Disconnect the power cord.
7. Remove the small, rear anti-vibration bracket.
8. Disconnect the remaining cables to the PCA.

9. Remove eight screws.




10. Press down on two spring tabs, and remove the gasket.



 **Reinstallation tip** The flared corner of the gasket fits over the sheet metal edge of the chassis. Push the gasket until the spring tabs snap past the sheet metal wall.




11. Lift out A26.

 **Reinstallation tip** Push the PCA against the spring finger gasket when reinstalling the PCA screws.

Formatter battery

The Formatter real time clock battery is located on the Formatter Main PCA (A26). If a dead or missing battery is detected, an error message is displayed on the control panel.

1. Turn off the main power switch to the MFP.
2. Remove the following items:
 - Rear muffler
[Muffler on page 219](#)
 - Electronics bay cover
[Electronics bay cover on page 220](#)
 - Formatter access door
[Formatter access door on page 680](#)
3. Remove and replace the battery from A26.

 **Reinstallation tip** When installing the battery, the positive pole faces up.

 **NOTE:** The other formatter PCAs are not shown here for clarity.



4. Turn on the main power switch and power cycle the MFP. **The battery error message will reappear.**
5. Turn off the main power switch to the MFP again, and then wait 30 seconds. Power cycle the MFP. If the replaced battery is good, the system will now power up without a battery error message.

Power and control electronics

- [Power supply assembly](#)
- [Motion PCA \(A2\)](#)
- [Power Distribution PCA \(A1\)](#)
- [Main Engine PCA \(A5\)](#)
- [Electronics Bay Cooling fan \(FAN4\)](#)
- [Main Engine Backplane PCA \(A4\)](#)
- [Main Engine PCA Cooling fan \(FAN2\)](#)
- [Ink catch pan](#)

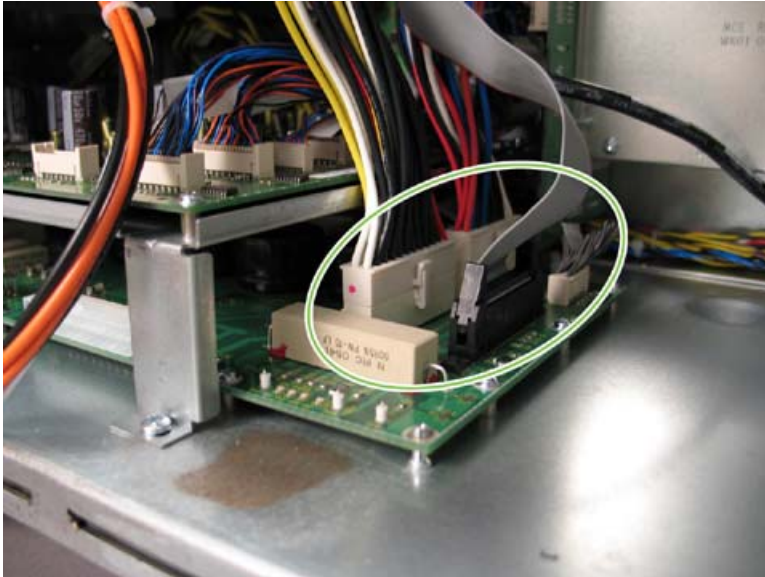
Power supply assembly

△ **CAUTION:** Wear an ESD strap.

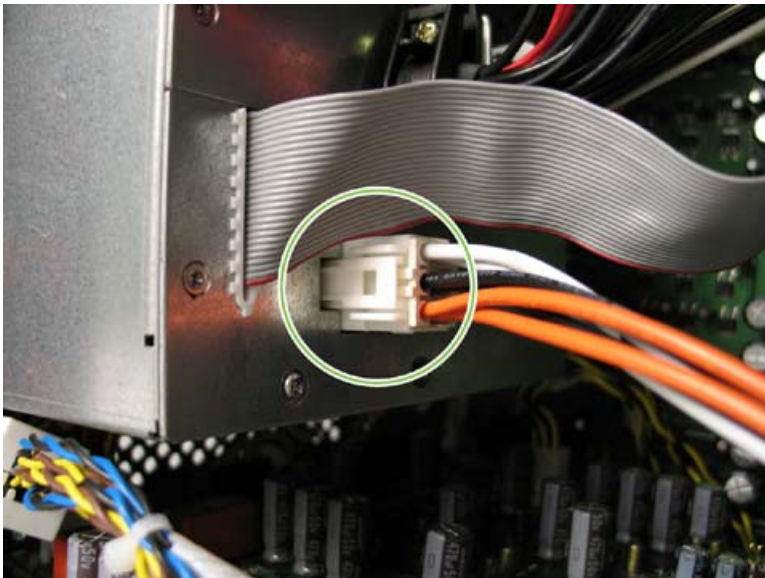
1. Remove the following items:
 - Muffler
[Muffler on page 219](#)
 - Electronics bay cover
[Electronics bay cover on page 220](#)
 - Lower right cover
[Lower right cover on page 216](#)
2. Remove the four screws that secure the power supply assembly to the MFP.




3. Disconnect three power supply wire connectors from the Power Distribution PCA (A1).




4. Remove the wire harness that connects to the rear of the power supply assembly.



5. Slide the power supply assembly out.

 **NOTE:** Be careful not to damage the wires when you remove the power supply.



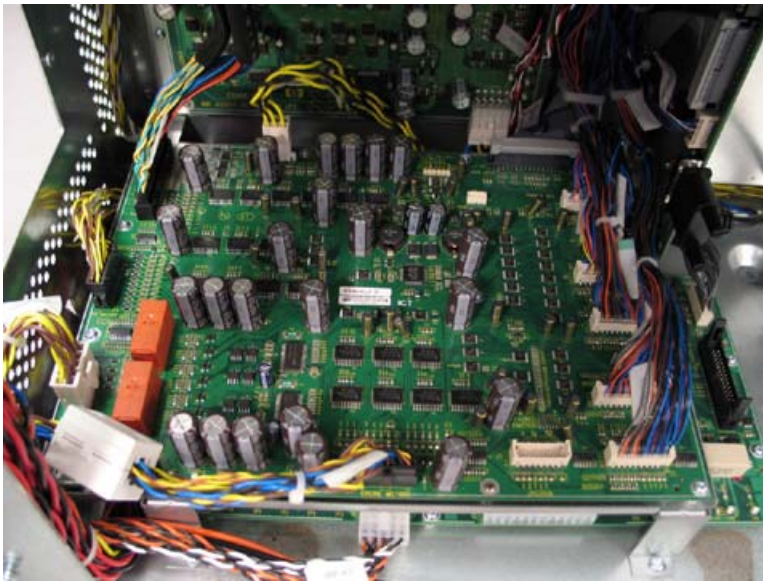
 **NOTE:** Tilt the front of the assembly up to clear the rear upper catches.



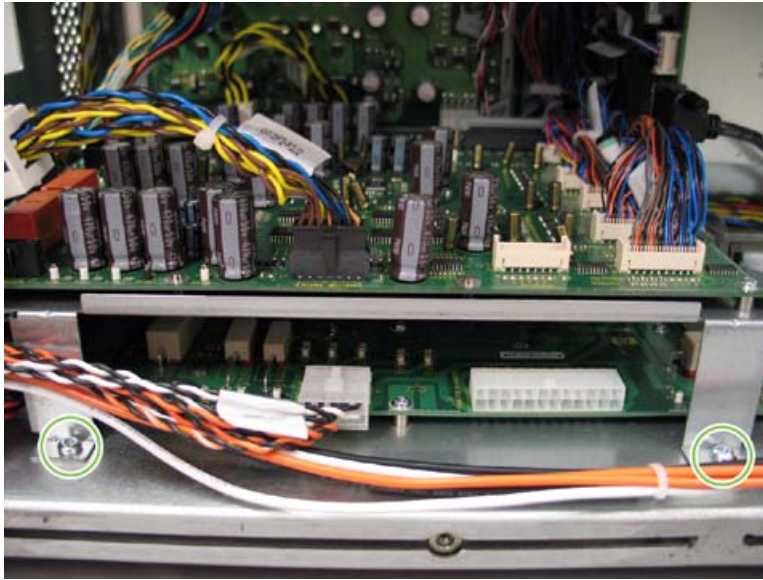
Motion PCA (A2)

△ **CAUTION:** Wear an ESD strap.


1. Remove the following items:
 - Muffler
[Muffler on page 219](#)
 - Electronics bay cover
[Electronics bay cover on page 220](#)
 - Lower right cover
[Lower right cover on page 216](#)
 - Power supply assembly
[Power supply assembly on page 697](#)
2. Disconnect all of the wire connectors from A2.



3. Open the two wire saddles that attach to the bracket along the edge of the Motion PCA, release the power cables, and then remove two screws on the front of the frame.



4. Disconnect wires from the Power Distribution PCA (A1), and then slide the frame slightly to the right to unhook the frame assembly from the back wall before removing the assembly.

 **NOTE:** When removing the assembly from the MFP, ensure the corners of the assembly do not snag any wires.

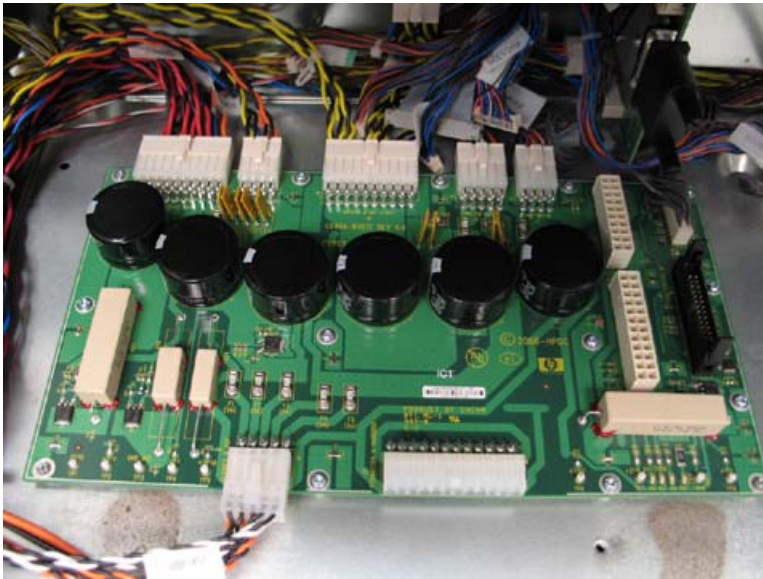
5. Remove ten screws, and then lift A2 from the frame.



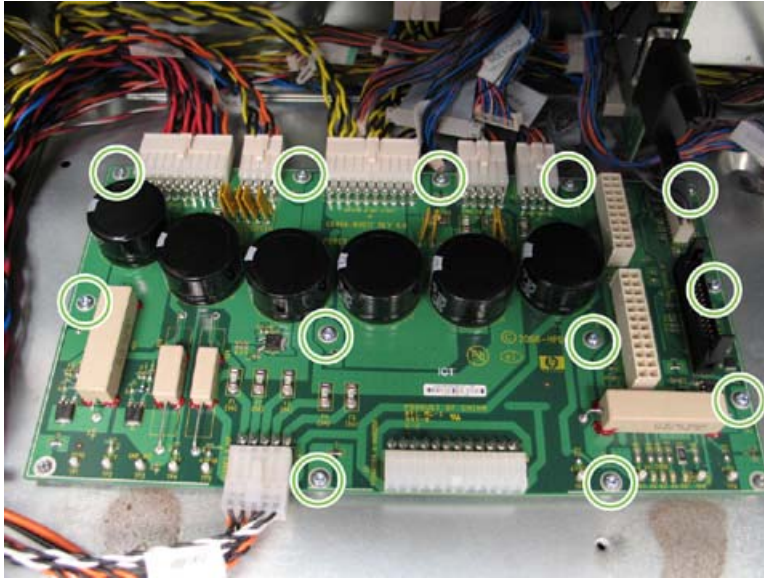
Power Distribution PCA (A1)

△ **CAUTION:** Wear an ESD strap.

1. Remove the following items:
 - Muffler
[Muffler on page 219](#)
 - Electronics bay cover
[Electronics bay cover on page 220](#)
 - Lower right cover
[Lower right cover on page 216](#)
 - Power supply assembly
[Power supply assembly on page 697](#)
 - Motion PCA
[Motion PCA \(A2\) on page 700](#)
2. Disconnect all of the wire connectors from A1.



3. Remove twelve screws, and then remove A1.



Main Engine PCA (A5)

- △ **CAUTION:** Wear an ESD strap.

CAUTION: To prevent damage to the MFP, a replacement Main Engine PCA (A5) must be new with all internal values remaining as set at the time of manufacture.

- 📝 **NOTE:** Before replacing the Main Engine PCA (A5), confirm there is a current NVM backup or perform an NVM backup to an external destination such as a USB storage device. To perform an NVM backup using CDFT, see [Manage non-volatile memory \(NVM\) on page 56](#).

- △ **CAUTION:** Before replacing the Main Engine PCA (A5), turn off automatic backup.

Click **Settings/Procedures**, click **NVM**, and then clear the checkbox for the **Automatic Backup** option.

After replacing the Main Engine PCA (A5), turn **Automatic Backup** back on.

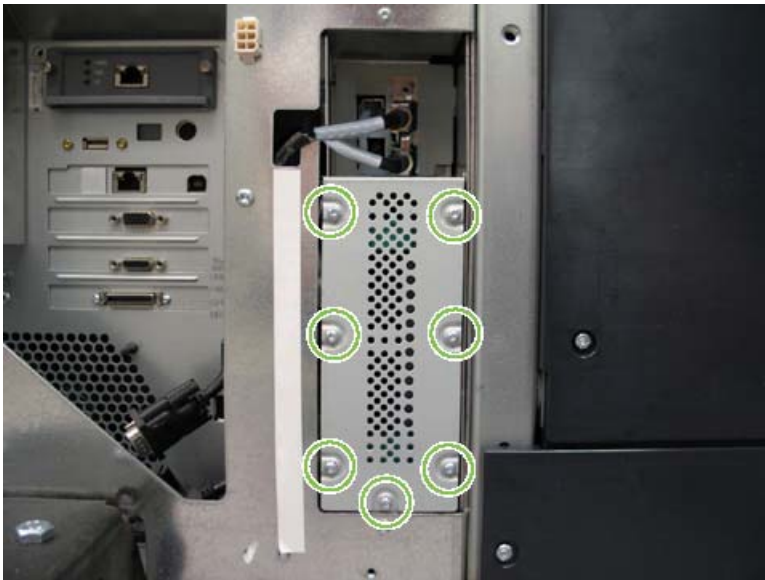
1. Remove the lower left cover.

[Lower left cover on page 215](#)


2. Disconnect the two cables that connect to A5. Both cables are latched and pull straight out.



3. Remove seven screws, and then remove the end cover.




4. Pull the handle to eject A5 from the enclosure.

 **NOTE:** When removing or installing A5, be careful not to bump or have any loose cords brush up against switches SW1 and SW2 (callout 1). These switches must be in the UP position. The MFP will not power up if the switches are set incorrectly.



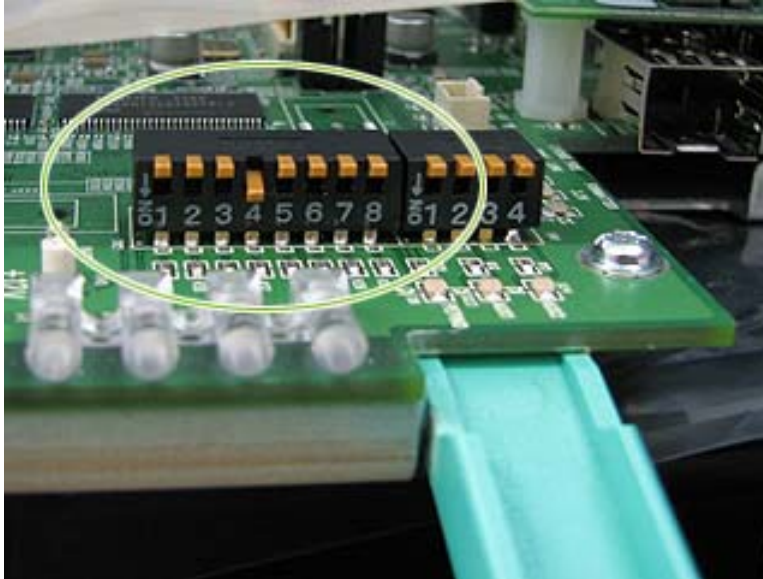
5. If replacing A5, follow these steps:

 **CAUTION:** Failure to follow these steps correctly can result in loss of vital setup and calibration data that is stored in NVM. If this happens, the product will perform poorly or stop working altogether.

- a. Ensure you have performed an NVM backup.

- b.** Before installing the replacement board, locate the block of eight DIP switches towards the front end of the board (near the handle), and then press down switch **4**. This switch position allows the MFP to start in engine recovery mode.

Engine recovery mode prevents components, primarily carriages, from moving when the MFP is powered on. It is necessary to activate this mode when a new PCA is installed because the new PCA comes with default control values which, if allowed to control the carriages, could result in crashes. This mode inhibits all movement until a NVM restore has been done and the actual values for that specific MFP are then used to control the mechanisms.



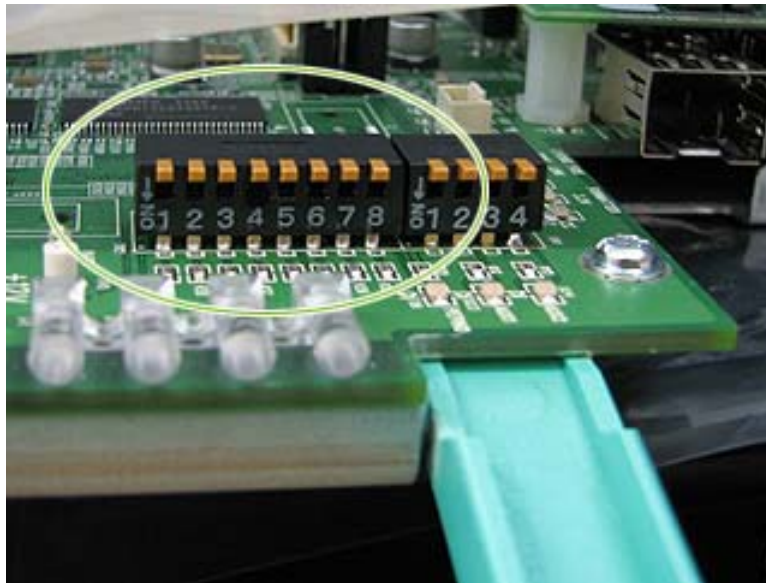
- c.** Install the replacement board.
- d.** Turn on the MFP.
- e.** After the MFP powers up successfully, perform an NVM restore using the backup that was done prior to starting the board replacement.

To perform an NVM restore using CDFT, see [Manage non-volatile memory \(NVM\) on page 56](#).

- f.** Shut down the MFP, making sure to turn off the main power switch, located on the bottom right side of the MFP.

- g. Remove the Main Engine PCA (A5), locate the block of eight DIP switches, and then lift up switch 4.

 **NOTE:** All of the DIP switches must be in the UP position.



- h. Reinstall A5.
i. Turn on the MFP.

Electronics Bay Cooling fan (FAN4)

1. Remove the following items:
 - Muffler
[Muffler on page 219](#)
 - Electronics bay cover
[Electronics bay cover on page 220](#)

2. Remove one screw, and then remove FAN4.




3. Unhook the cable from two wire retainers, and then disconnect the FAN4 wire connector from the Ink Assist PCA (A3).

Main Engine Backplane PCA (A4)


△ **CAUTION:** Wear an ESD strap.

1. Remove the following items:

- Muffler
[Muffler on page 219](#)
- Electronics bay cover
[Electronics bay cover on page 220](#)
- Lower right cover
[Lower right cover on page 216](#)
- Main Engine PCA (A5)
[Main Engine PCA \(A5\) on page 703](#)
- Power supply assembly
[Power supply assembly on page 697](#)

 **NOTE:** To allow for clearance in removing the main enclosure, slide the power supply assembly forward, but do not completely remove it.

- Motion PCA (A2)
[Motion PCA \(A2\) on page 700](#)

 **NOTE:** A2 does not have to be removed but it can make the task of removing A4 easier.

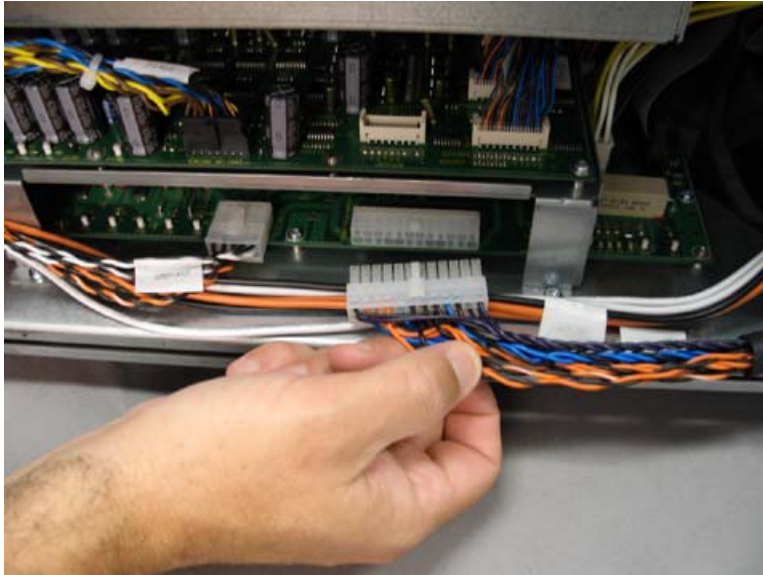
- Electronics Bay Cooling fan (FAN4)

[Electronics Bay Cooling fan \(FAN4\) on page 707](#)

2. Remove two wire connectors from the formatter assembly.



3. Disconnect the formatter wire connector from the Power Distribution PCA (A1).



4. Loosen two screws from the base of the formatter.



5. Remove two screws from the left side of the MFP.



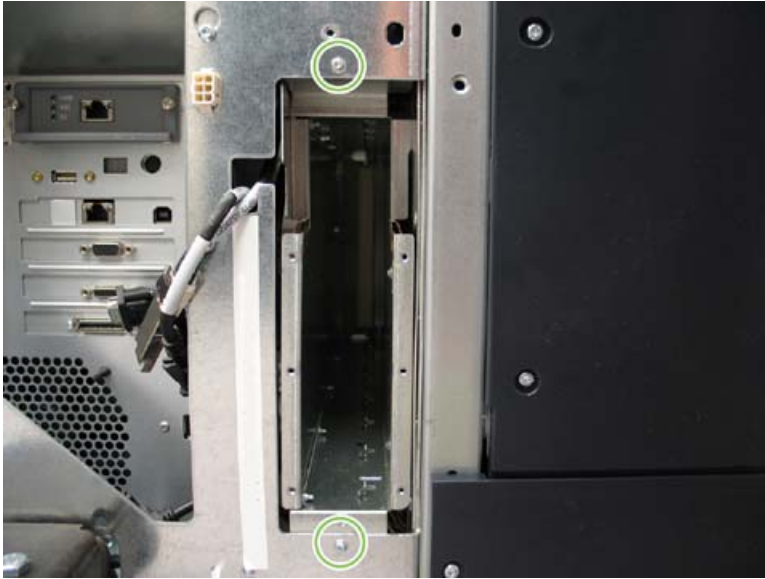
6. Disconnect three cables (callout 1).



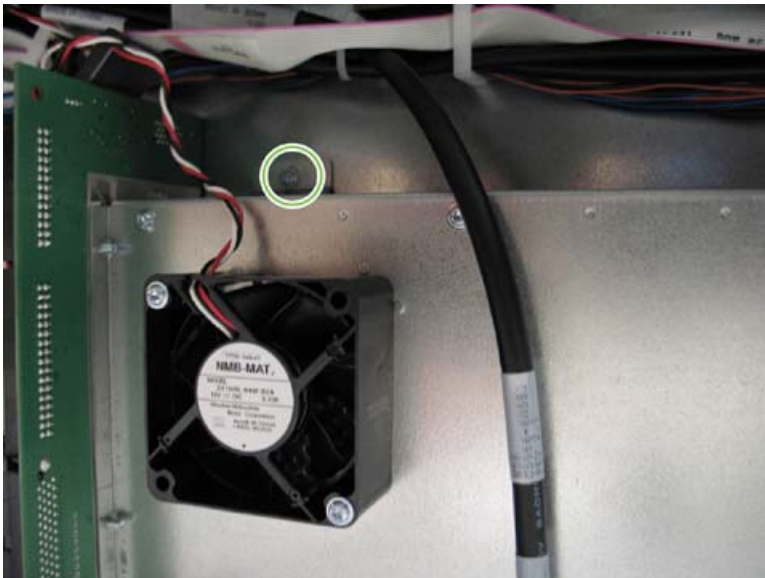
7. Rotate the formatter assembly out and set the formatter assembly aside.



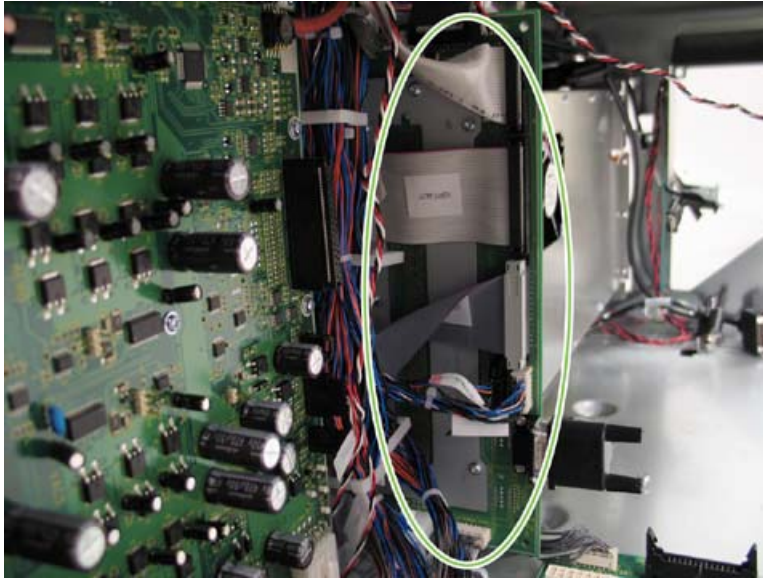
8. Remove two screws from the main enclosure.



9. Remove one screw from the enclosure above the Main Engine PCA Cooling fan (FAN2).



10. Disconnect all wire connectors from A4.



11. Lift the main enclosure and A4 assembly to unhook and remove it from the back wall.

Main Engine PCA Cooling fan (FAN2)

1. Remove the following assemblies:

- Muffler

[Muffler on page 219](#)

- Electronics bay cover


[Electronics bay cover on page 220](#)

- Lower right cover

[Lower right cover on page 216](#)


- Power supply assembly

[Power supply assembly on page 697](#)

 **NOTE:** To access the main enclosure, slide the power supply forward, but do not remove it completely.


- Electronics Bay Cooling fan (FAN4)

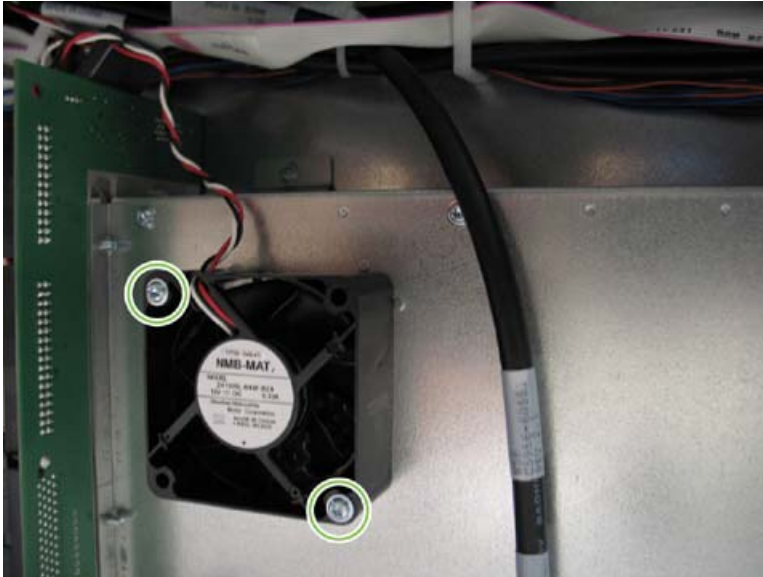
[Electronics Bay Cooling fan \(FAN4\) on page 707](#)

 **NOTE:** FAN4 does not have to be removed but it can make the task of removing FAN2 easier.

2. Disconnect the FAN2 wire connector from the Main Engine Backplane PCA (A4).

3. Remove two screws that secure FAN2 to the main enclosure.

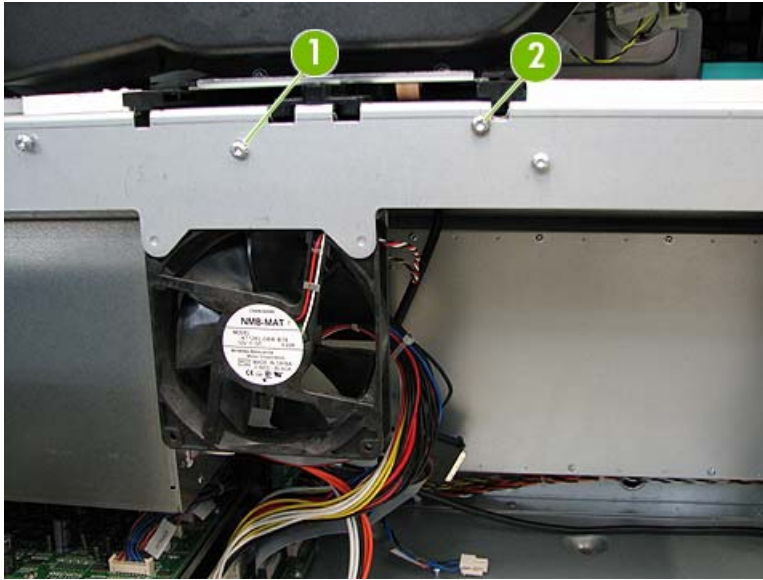
 **Reinstallation tip** The orientation of the fan is determined by standoffs on the main enclosure.



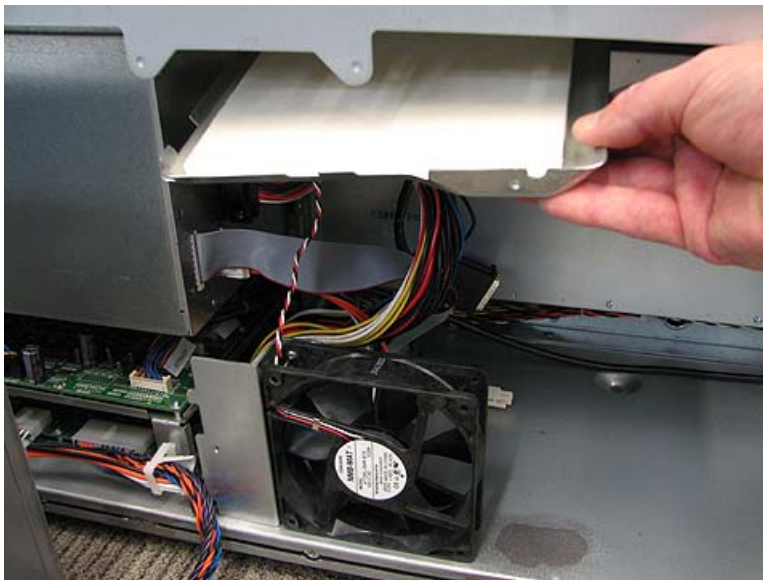
Ink catch pan

1. Remove the following assemblies:
 - Muffler
[Muffler on page 219](#)
 - Electronics bay cover
[Electronics bay cover on page 220](#)
 - Formatter assembly
[Formatter assembly on page 676](#)

2. Remove one screw (callout 1) from the Electronics Bay Cooling fan (FAN4), and then remove one screw (callout 2) from the ink catch pan.



3. Lower the ink catch pan. The pan is held in place by the one screw in front and two tabs that fit into the back wall.



Tray 5

- [Covers](#)
- [Ball slide extension](#)
- [Tray 5 hinges](#)
- [Latch assembly](#)
- [Elevator transmission](#)
- [Elevator cables](#)
- [Elevator tray](#)
- [Feed roller assembly](#)
- [Upper separator shaft assembly](#)
- [Lower separator encoder PCA](#)
- [Lower separator encoder disk](#)
- [Tray 5 rollers](#)
- [Pick arm assembly](#)
- [Media hold down assembly](#)
- [Tray 5 Pick clutch \(CL101\)](#)
- [Tray 5 Separator clutch \(CL102\)](#)
- [Tray 5 Distribution PCA \(A101\)](#)
- [Upper media path guide](#)
- [Sensors](#)
- [Motors](#)
- [LEDs](#)
- [Switches](#)

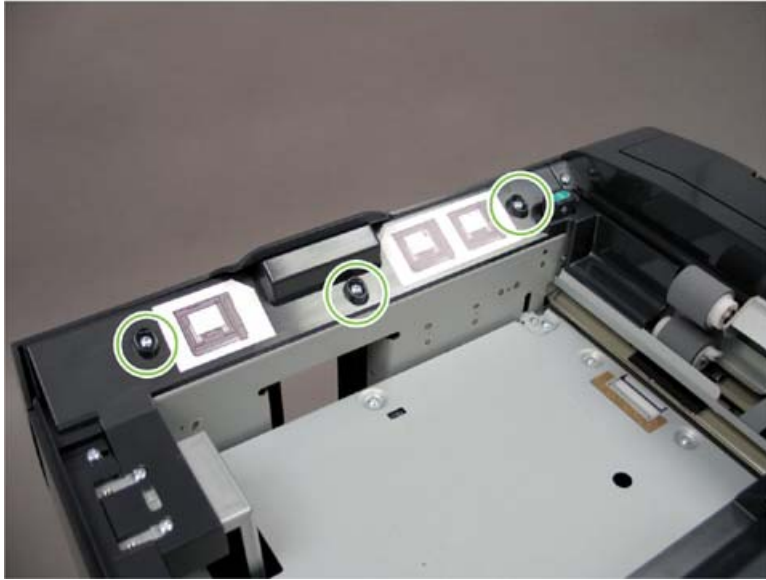
Covers

- [Top front cover](#)
- [Front cover](#)
- [Rear cover](#)
- [Right cover](#)
- [Tray 5 top door](#)
- [Pin alignment plate](#)
- [Left bottom panel](#)

- [Tray 5 top-left panel](#)

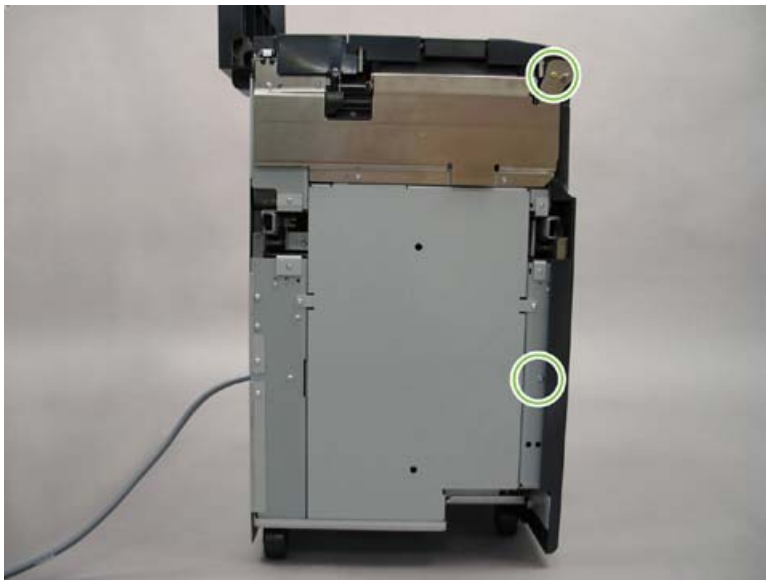
Top front cover

- Open the Tray 5 top door, remove three screws, and then remove the top front cover.




Front cover

1. Remove the top front cover.
[Top front cover on page 717](#)
2. Remove two screws from the left side.



3. Loosen two screws from the top, and then lift the front cover up and off.



 **Reinstallation tip** The release handle latch must be aligned with the latch slot.



Rear cover


1. Remove two screws from the left side at the power cord restraint.



2. Remove five screws on the back.



3. Carefully lift the rear panel off as to not damage the power cord.

 **NOTE:** Removing the rear panel must be done with the top door closed.

Right cover

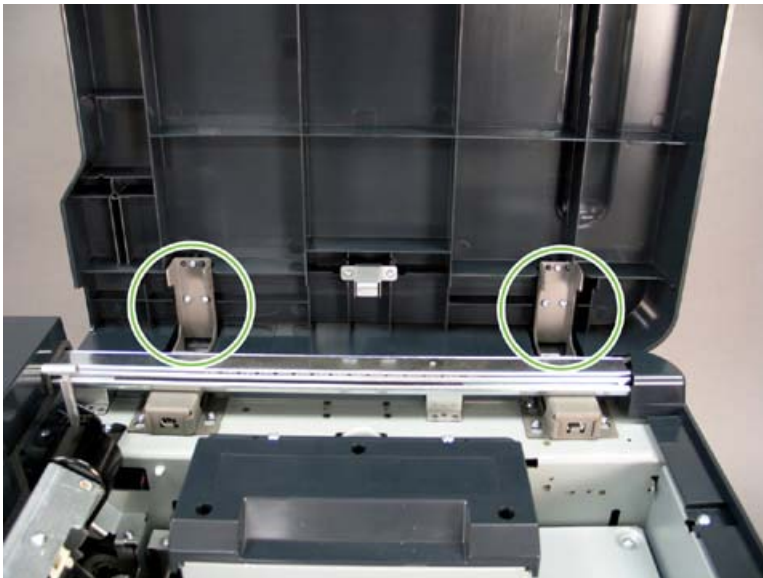
1. Remove two screws at the bottom of the cover, and then open the top door and remove two screws at the top of the cover.



2. Remove the right cover.

Tray 5 top door


1. Open the Tray 5 top door, and then remove three screws from each hinge.

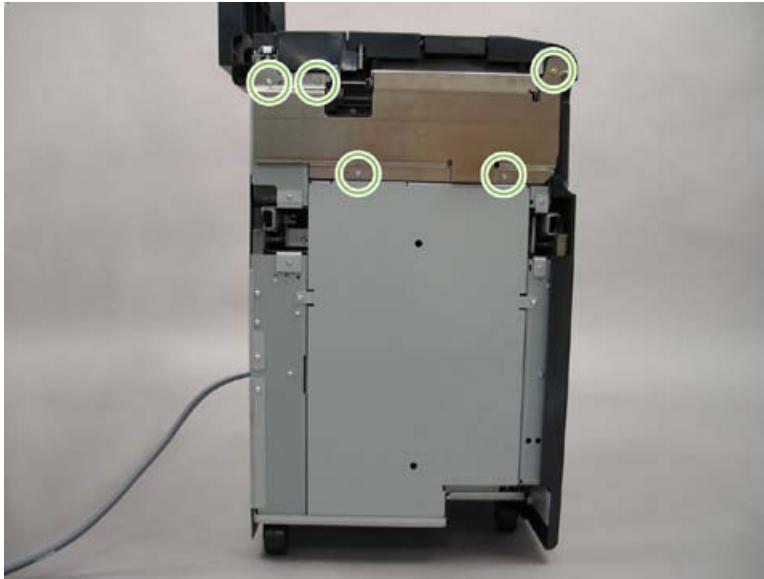


2. Remove the Tray 5 top door.

Pin alignment plate

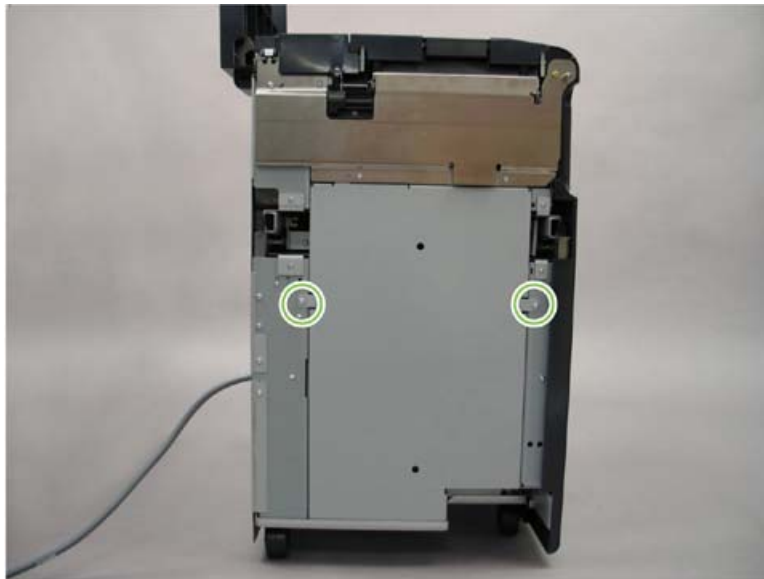
- Remove five screws, and then remove the plate.

 **NOTE:** The top right screw is longer than the other four screws.



Left bottom panel

- Remove two screws, and then remove the panel.



Tray 5 top-left panel

1. Remove the following covers:

- Top front cover

[Top front cover on page 717](#)

- Front cover

[Front cover on page 717](#)

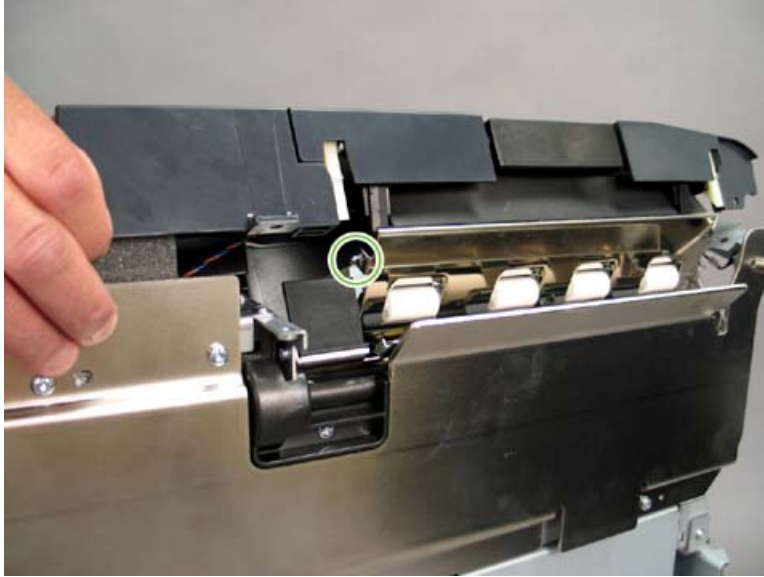
2. Remove three screws from the top cover.



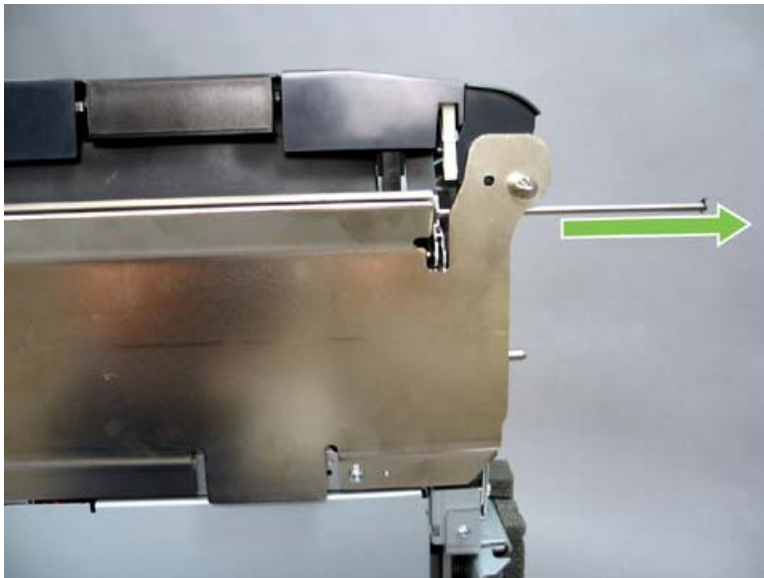
3. Tilt the top cover assembly up, and then unhook two springs.



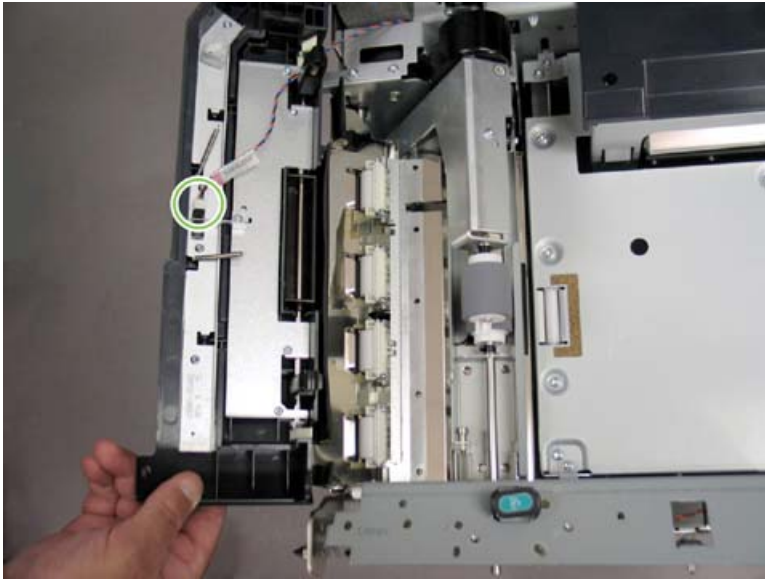
4. Remove the left retaining clip from the Tray 5 top-left panel lift shaft.



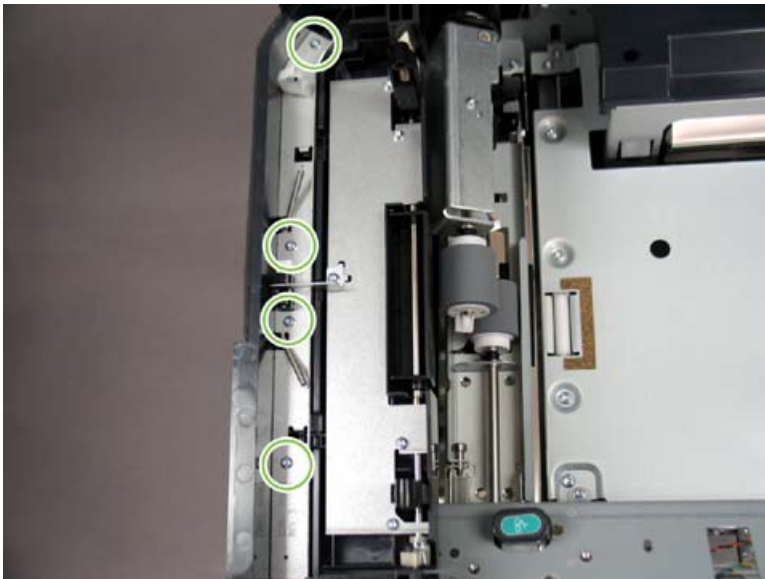
5. Remove the Tray 5 top-left panel lift shaft.



6. Turn the top cover over, release the wire from the cable saddle, and then disconnect the Tray 5 Top-left Panel sensor (SN112) wire harness from the top cover.

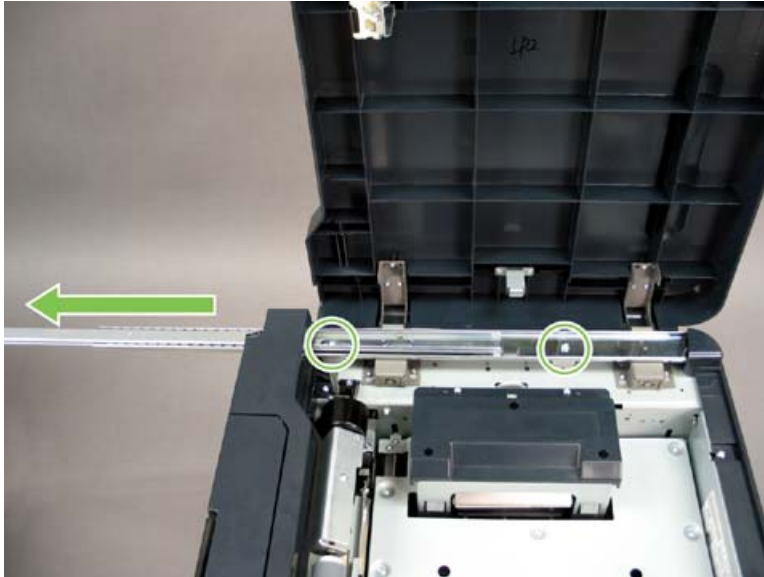


7. Remove four screws, and then remove the Tray 5 top-left panel.



Ball slide extension

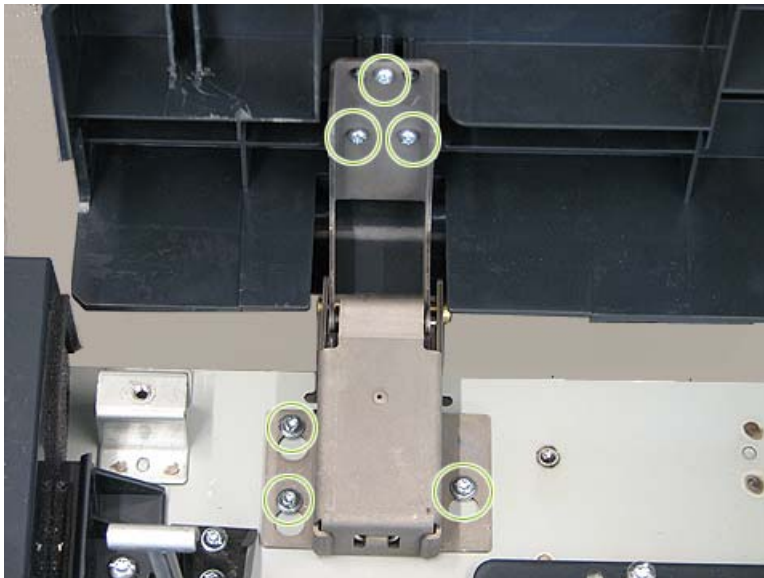
1. Open the Tray 5 top door, fully extend the ball slide, and then remove two screws.



2. Tilt up the ball slide, and then remove it from the right side.

Tray 5 hinges

1. Open the Tray 5 top door, and then remove the ball slide extension.
[Ball slide extension on page 725](#)
2. Remove six screws from each hinge.

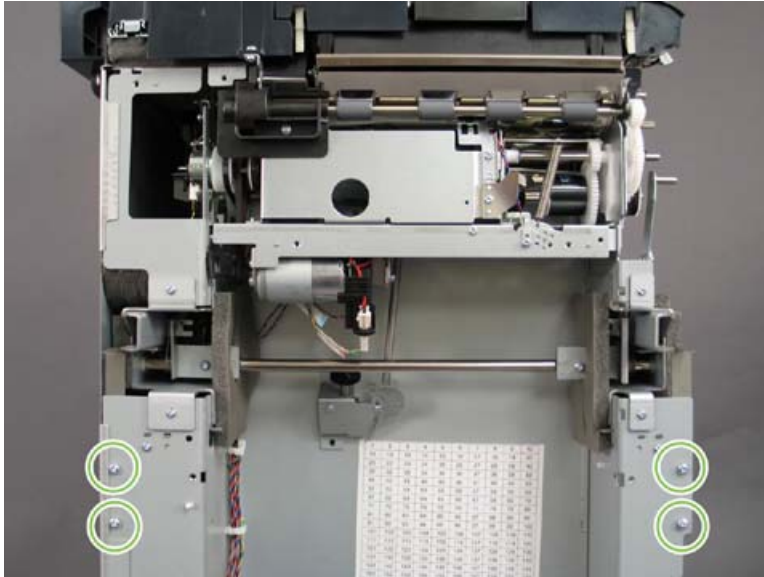


Latch assembly

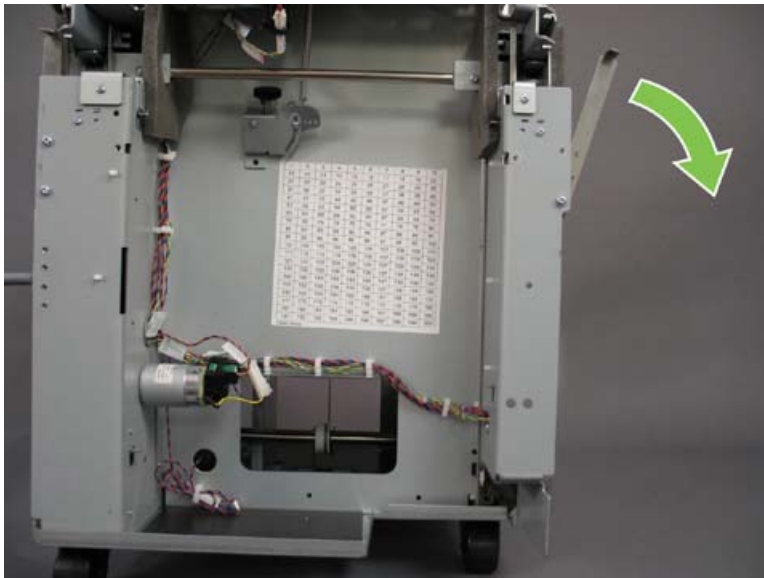
1. Remove the following items:
 - Top front cover
[Top front cover on page 717](#)
 - Front cover
[Front cover on page 717](#)
 - Rear cover
[Rear cover on page 719](#)
 - Left bottom panel
[Left bottom panel on page 721](#)
2. Remove four screws.



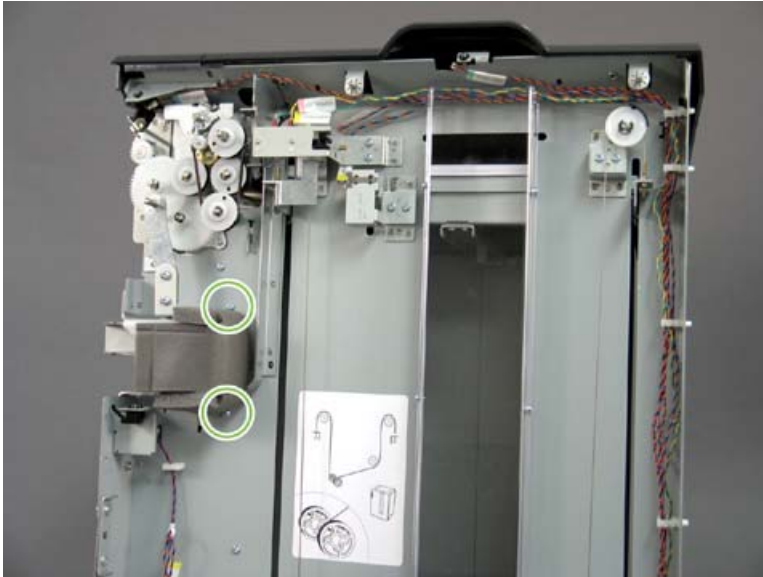
3. Remove the top screw, and then loosen the bottom screw for each spring.



4. Rotate each spring to the side.

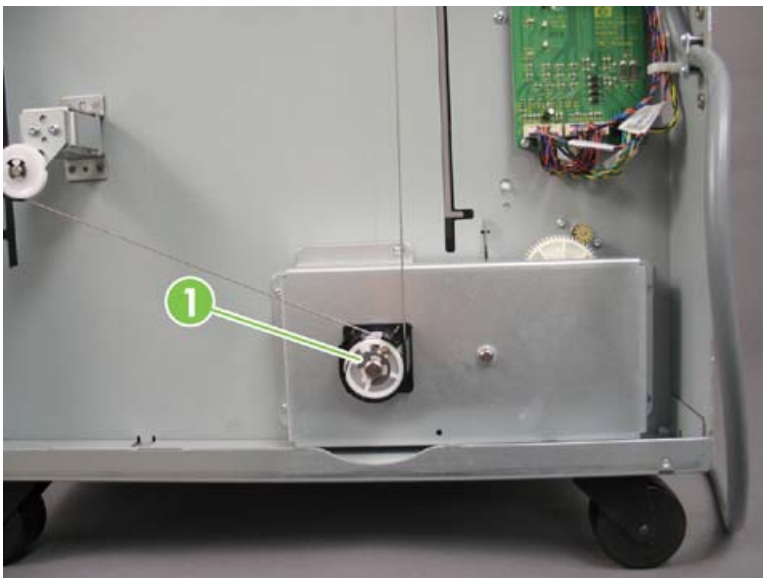


5. From both the front and rear sides, remove two screws, and then pull out the latch assembly.

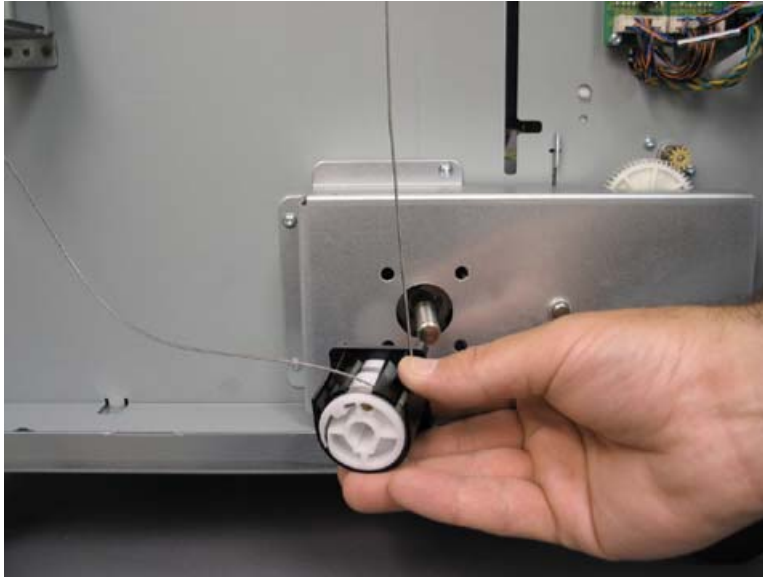


Elevator transmission

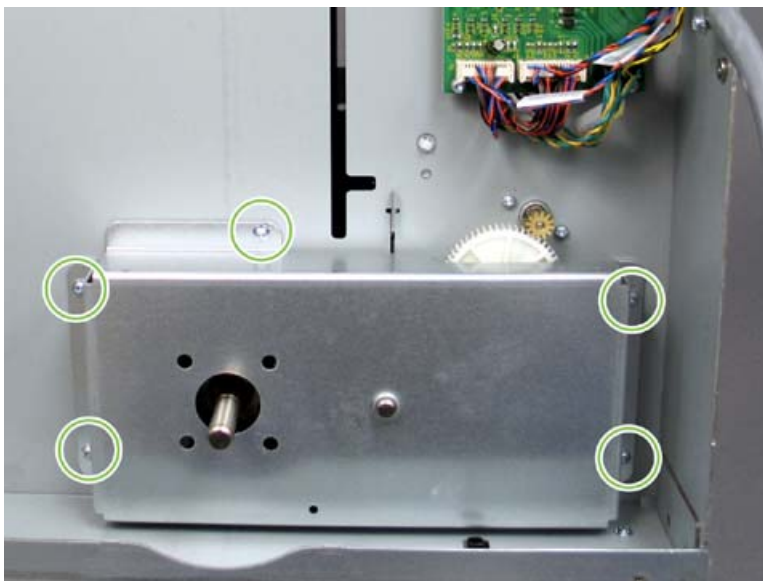
1. Remove the rear cover.
[Rear cover on page 719](#)
 2. From the rear of Tray 5, remove the retaining clip (callout 1) that holds the winder pulley assembly.
- △ **CAUTION:** Push the elevator tray all the way to the bottom before removing the winder pulley assembly.




3. Pull the winder pulley assembly off of the winder pulley shaft.



4. Remove five screws from the transmission cover.



5. Remove the cover.

 **Reinstallation tip** The winder pulley assembly is indexed by a separate pin on the winder pulley shaft. To reinstall the pulley assembly with the proper cable tension, fully wind the cable around each pulley, and then align the slots so that the elevator tray is level as you push the pulley assembly back onto the winder pulley shaft.

Elevator cables

- [Front and rear cables](#)
- [Downhaul cable](#)

Front and rear cables

The procedure for replacing either a front or rear cable is similar.

1. Remove the following covers:

- Rear cover

[Rear cover on page 719](#)

- Top front cover

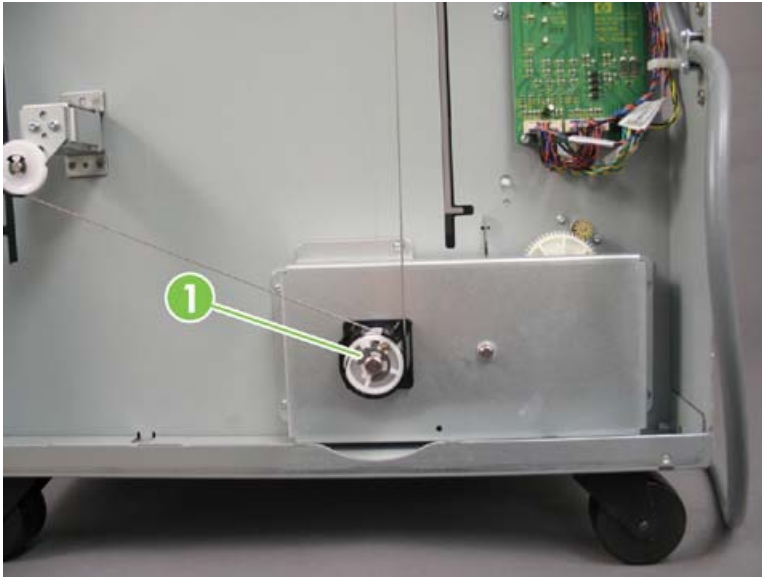
[Top front cover on page 717](#)


- Front cover

[Front cover on page 717](#)


2. Push the elevator tray all the way to the bottom.

3. Remove the retaining clip (callout 1) that holds the winder pulley assembly, and then pull off the winder pulley assembly from the winder pulley shaft.

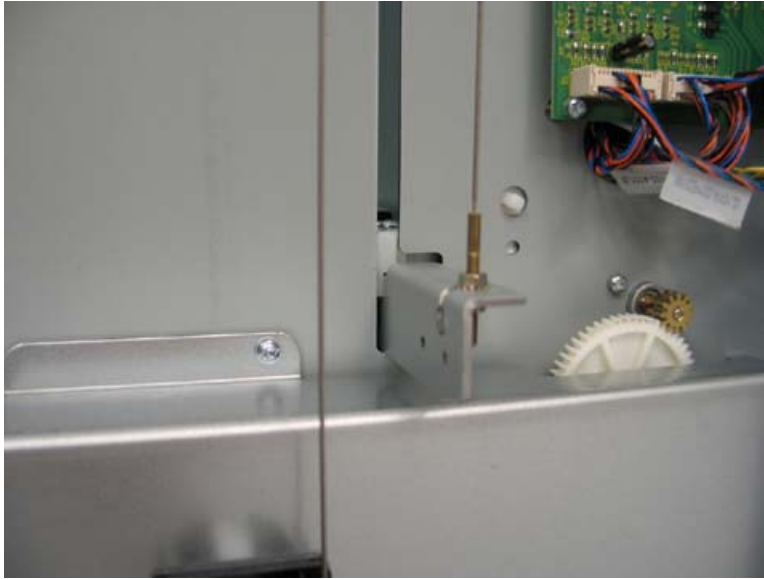



 **NOTE:** There are two different cable lengths. The short elevator cable attaches to the inside winder pulley. The long elevator cable attaches to the outside winder pulley.

4. Remove the broken cable.

 **NOTE:** Save the adjustment nuts and reuse them on the new cable.

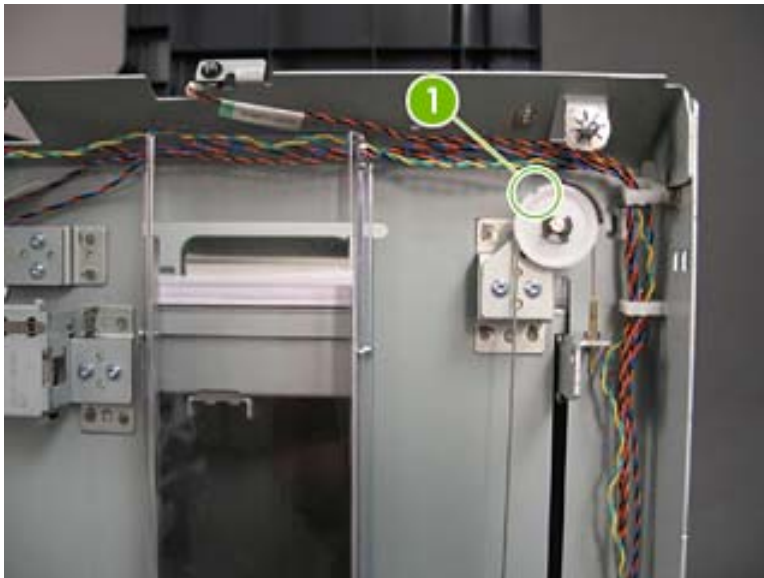
5. Insert the end of the new cable with the adjustment nuts into the keyed slot on the elevator lift bar.



 **NOTE:** To insert a short elevator cable on the front of the elevator lift bar requires removing two screws to remove a sensor flag.


6. Thread the cable over the pulleys as indicated by the cable path label.

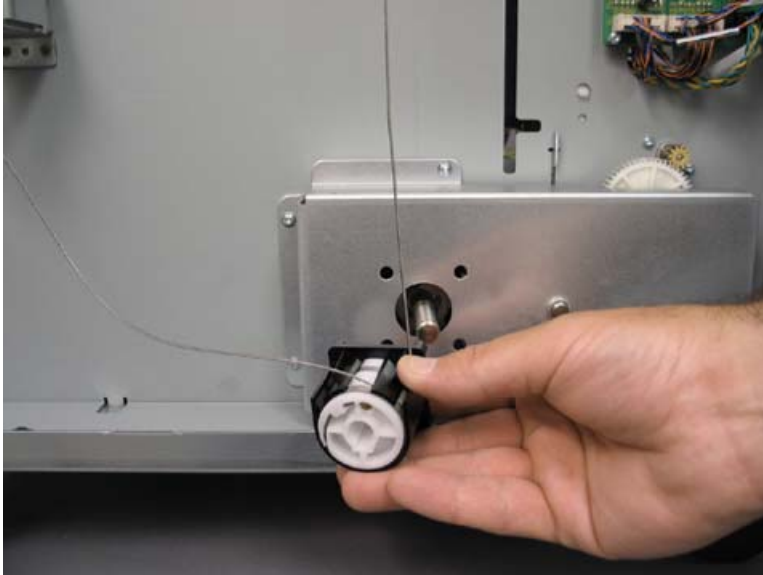
 **NOTE:** The idler pulleys have a notch (callout 1) to help feed the cable onto the pulley.



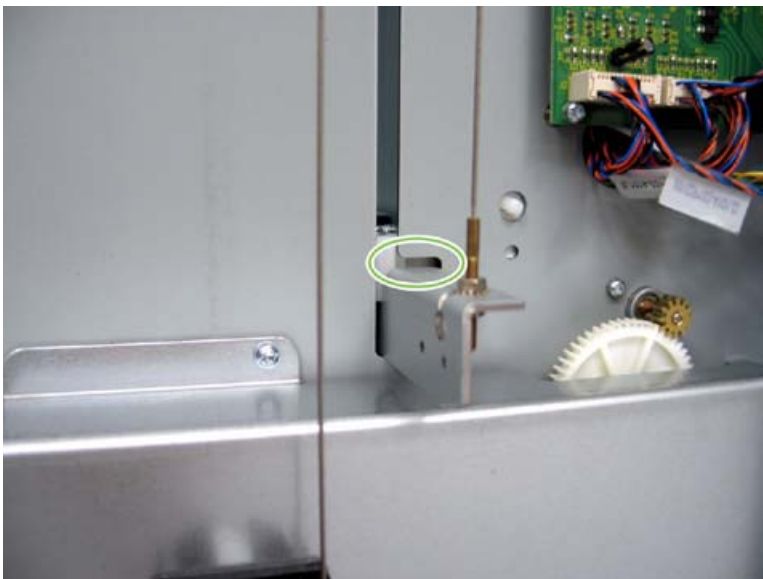
7. Attach the other end of the cable into the winder pulley and wind any slack around the pulley.

8. Insert the winder pulley assembly onto the winder pulley shaft.

 **NOTE:** The winder pulley assembly is indexed by a separate pin on the pulley shaft. To reinstall the pulley assembly with the proper cable tension, fully wind the cable around each pulley, and then align the slots so that the elevator tray is level as you push the pulley assembly back onto the shaft.



9. Replace the retaining clip for the winder pulley assembly.
10. Use the horizontal notches as a reference and level the elevator tray by adjusting the cable nuts on all four ends of the elevator lift bars.

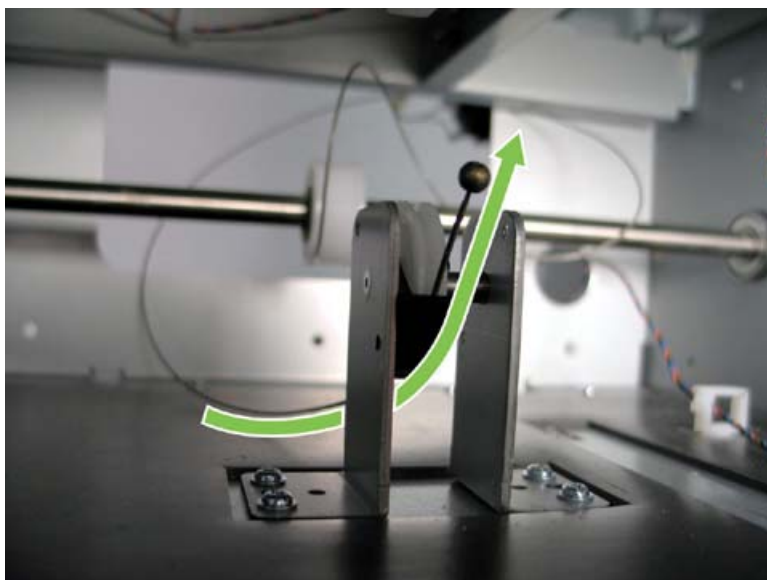


Downhaul cable

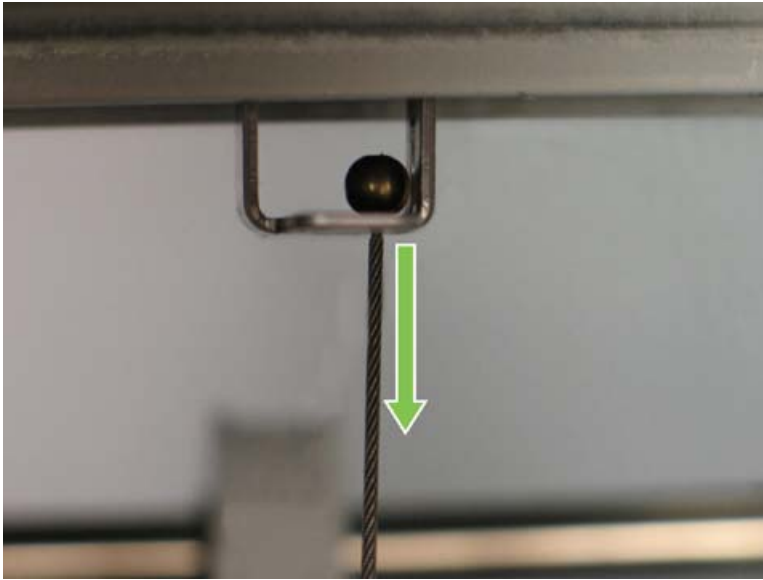
Use the following procedure to install a new downhaul cable. Remove the broken cable where appropriate.

1. Remove the following covers:
 - Left bottom panel
[Left bottom panel on page 721](#)
 - Right cover
[Right cover on page 720](#)
2. Push the elevator tray all the way to the bottom.
3. From the bottom right side, feed one end of the cable under the idler pulley.

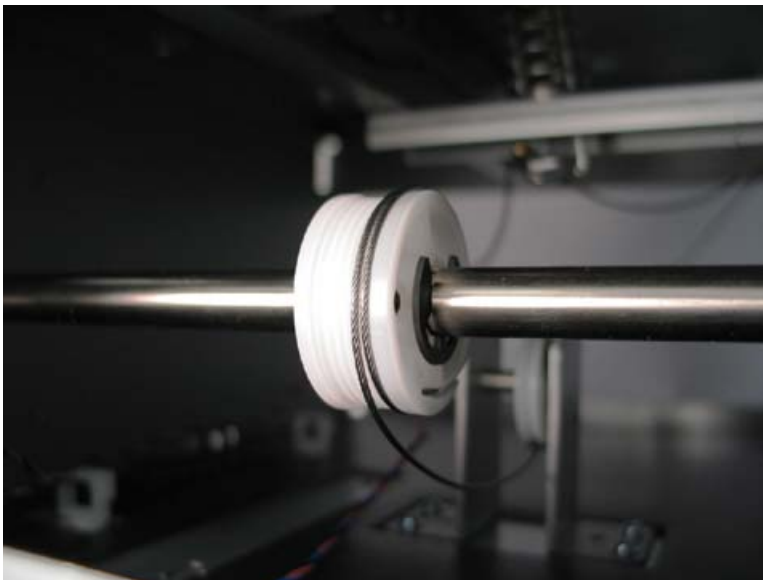
 **NOTE:** The idler pulley has a notch to help feed the cable onto the pulley.




4. Pull down on the spring-loaded downhaul pull bar, and then insert the other end of the cable into the keyed slot of the pull bar.



5. From the bottom left side, remove the retaining clip from the winder pulley shaft, and then slide the pulley off its pin so that it rotates freely.



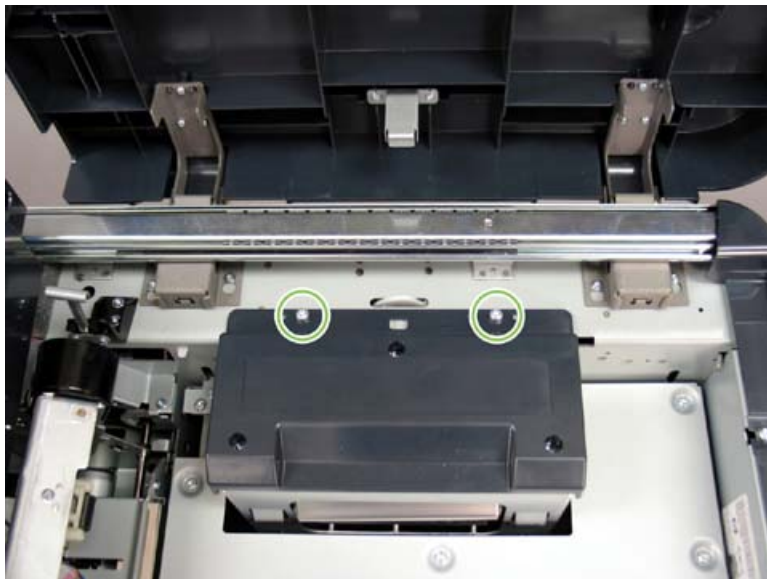
6. Attach the cable to the winder pulley. Use one hand to guide and hold the cable in place on the pulley as you wind the pulley with the other hand. When the cable is fully wound, slide the pulley back over the pin, and then replace the retaining clip.

 **NOTE:** Pull down the pull bar to rotate the downhaul winder pulley and align the pulley slot with the pin. When the winder pulley is assembled over the pin, release the pull bar and return the tension to the downhaul cable.

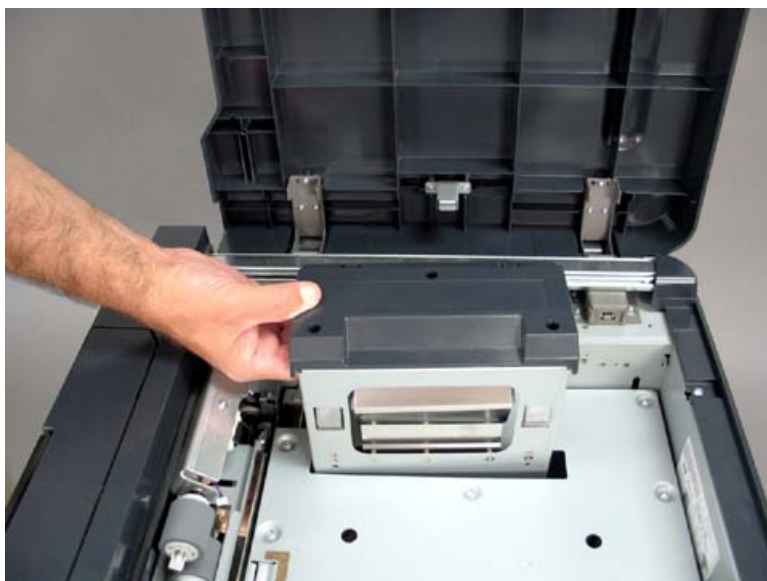
NOTE: All elevator cables should be assembled and the downhaul cable should be taught before making any level adjustments.


Elevator tray

1. Remove the two screws that secure the paper-width guide.



2. Remove the paper-width guide.



 **Reinstallation tip** Be careful not to pinch the wire harness of the Tray 5 Empty sensor (SN111) below the elevator tray when reinserting the paper-width guide.

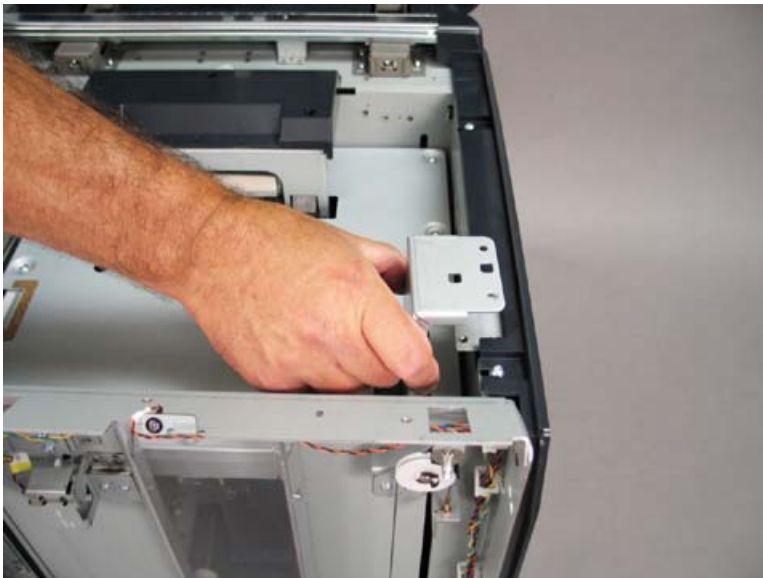
3. Remove the top front cover.

[Top front cover on page 717](#)

4. Remove two screws that secure the paper-length guide.



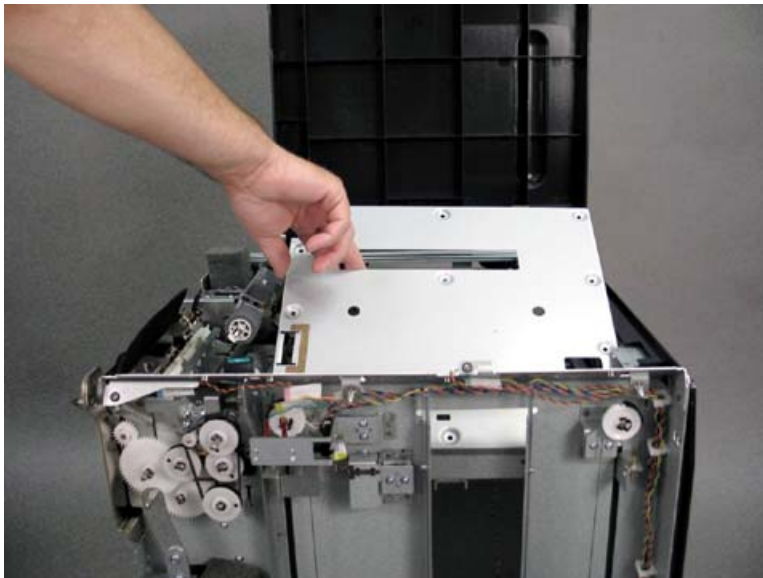
5. Remove the paper-length guide.



6. Remove eleven screws from the elevator tray.



7. Tilt the elevator tray to remove it.

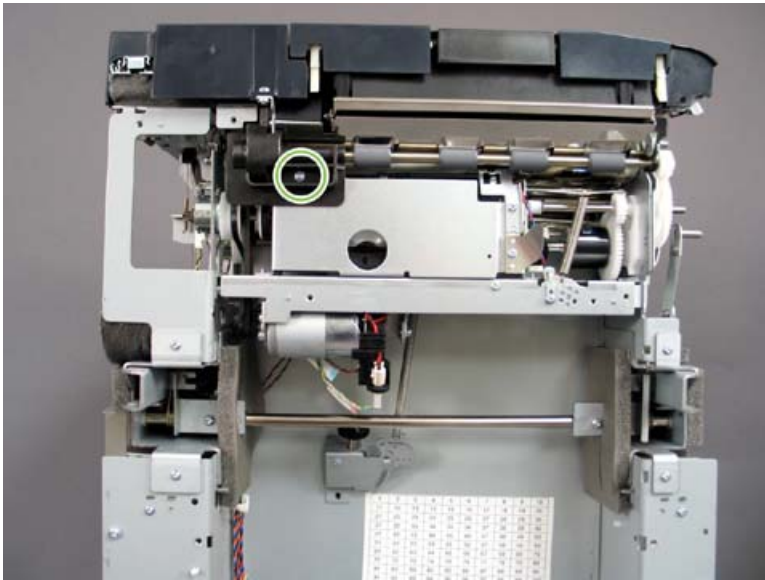


Feed roller assembly

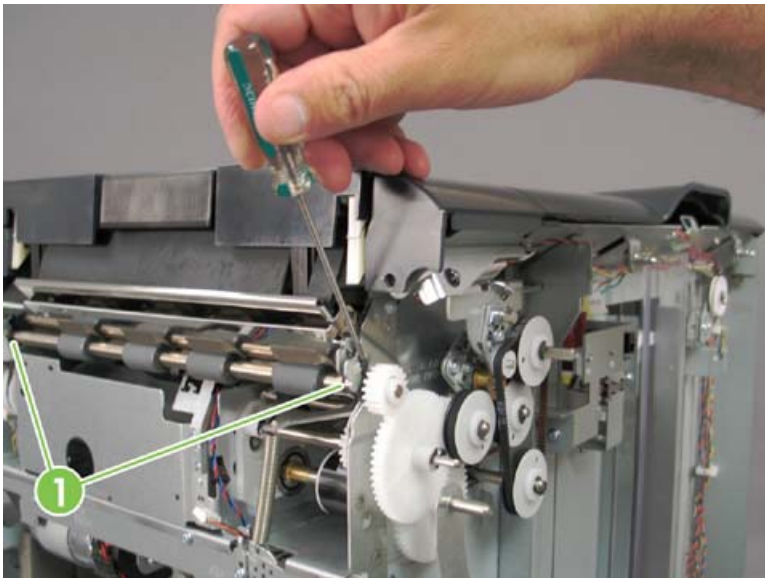
1. Remove the following items:
 - Top front cover
[Top front cover on page 717](#)
 - Front cover
[Front cover on page 717](#)
 - Pin alignment plate

[Pin alignment plate on page 721](#)


2. Remove one screw, and then remove the molded cover.

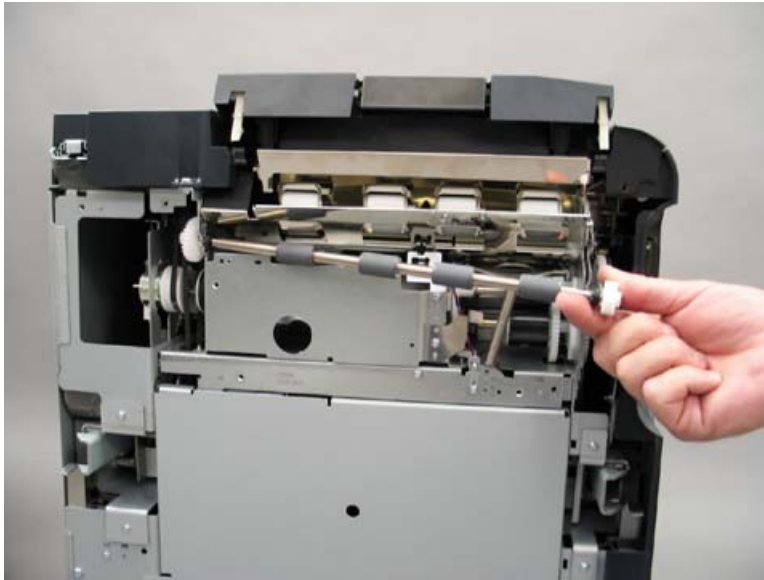


3. Use a small flat-bladed screwdriver to rotate the yokes (callout 1) clockwise on both ends of the feed roller shaft.



4. Pull out the feed roller assembly.


 **NOTE:** Apply a few drops of heavy grease to the gears on both ends of the feed roller assembly after installation.



Upper separator shaft assembly

1. Remove the following items:
 - Top front cover
[Top front cover on page 717](#)
 - Front cover
[Front cover on page 717](#)

2. Hold down the media release button, and then pinch the end of the feed roller and pull the roller off the upper separator shaft.

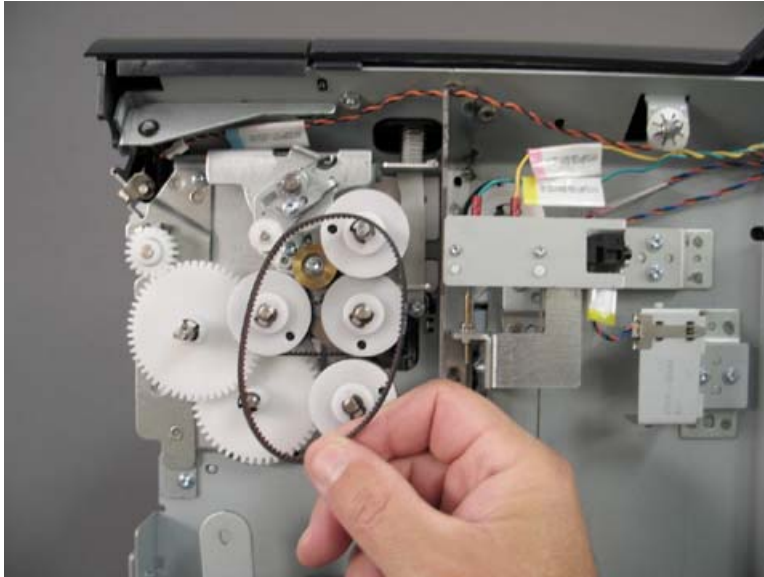
 **NOTE:** Holding down the media release button releases the friction pinch of the lower separator roller.



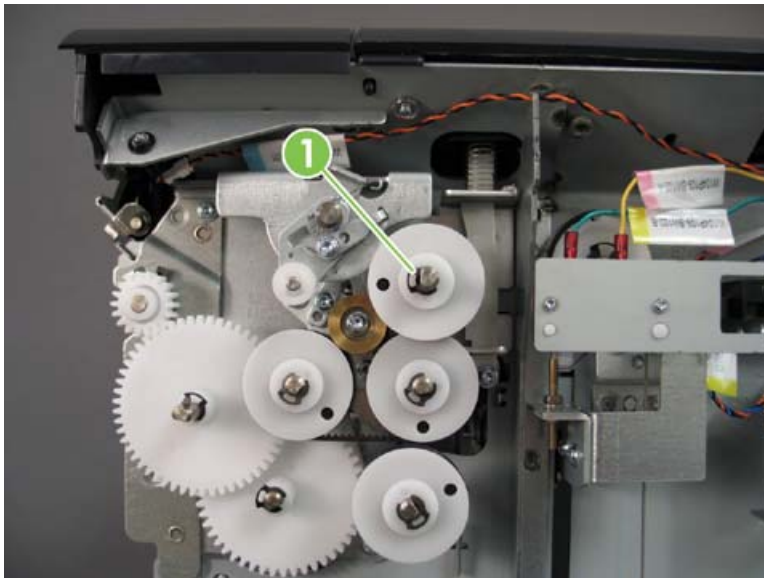
3. Loosen one screw to release the tensioner.



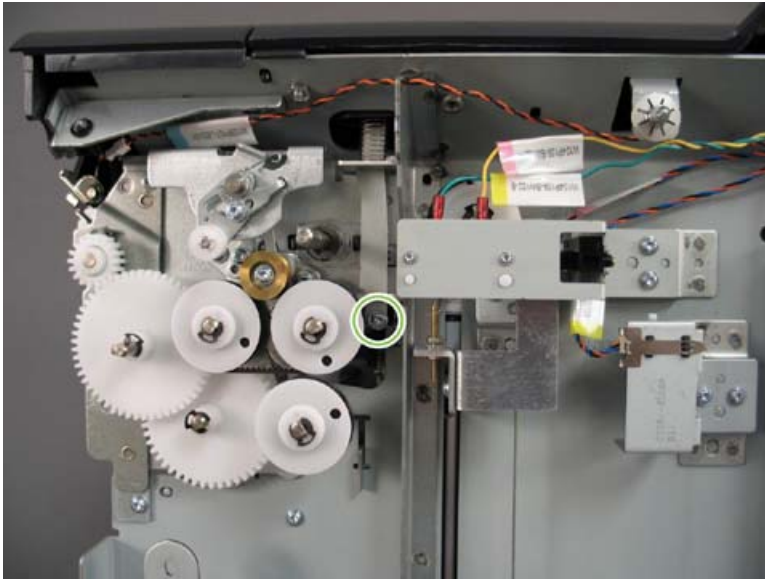
4. Remove the belt.



5. Remove the retaining clip (callout 1) and the outer washer, and then remove the pulley.



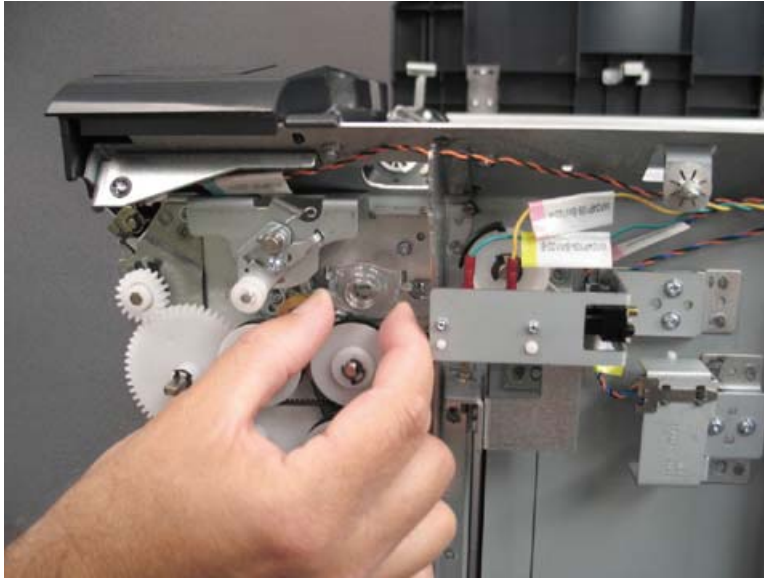
6. Remove one screw from the media release button push rod, and then remove the push rod assembly.



7. Remove the retaining clip and spacer, and then pull out the upper separator shaft.



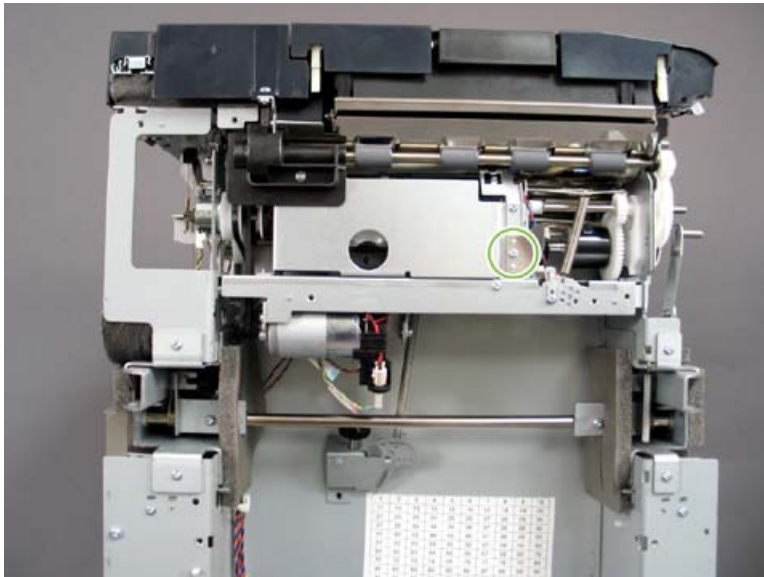
8. Unclip, and then pull out the clear plastic one-way bearing (sprag clutch).



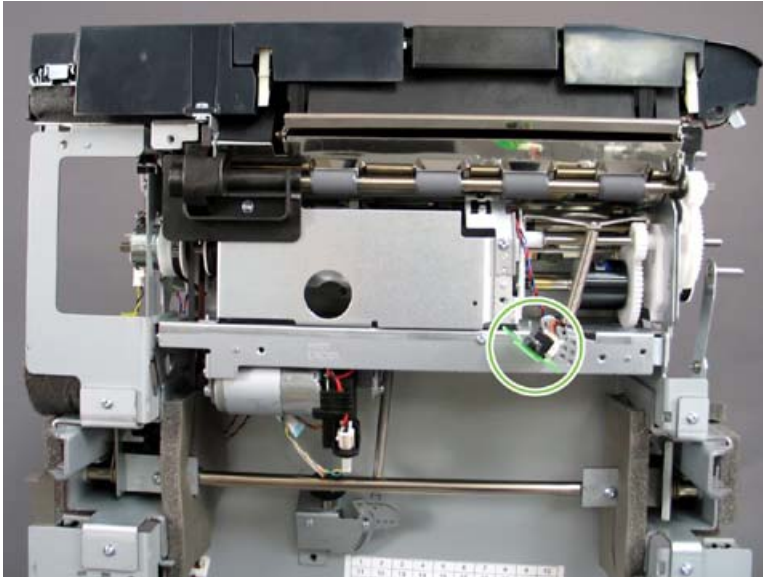
Lower separator encoder PCA

△ **CAUTION:** Wear an ESD strap.

1. Remove the pin alignment plate.
[Pin alignment plate on page 721](#)
2. Remove one screw, lift off the clamp and plastic cover, and then remove the PCA.




3. Disconnect the wire harness from the lower separator encoder PCA.

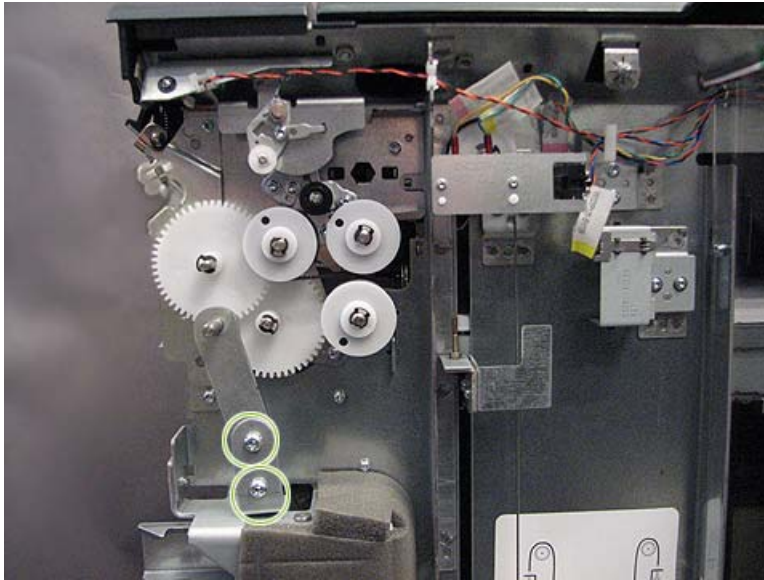


Lower separator encoder disk

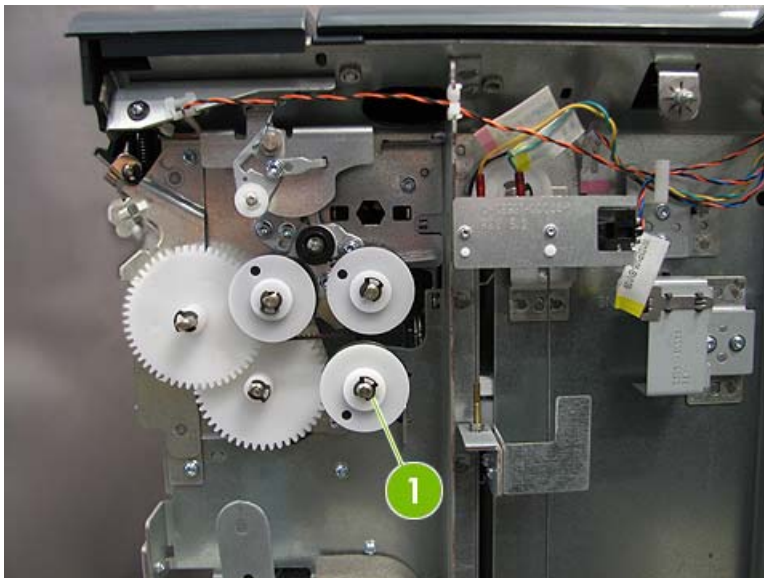
1. Remove the following items:
 - Top front cover
[Top front cover on page 717](#)
 - Front cover
[Front cover on page 717](#)
 - Pin alignment plate
[Pin alignment plate on page 721](#)
 - Feed roller assembly
[Feed roller assembly on page 737](#)
 - Upper separator shaft assembly
[Upper separator shaft assembly on page 739](#)
 - Lower separator encoder PCA
[Lower separator encoder PCA on page 743](#)


2. Remove two screws and remove the front latch actuator.

 **TIP:** Removing the bottom screw, and then just loosening the top screw allows the actuator to flip down out of the way.



3. Remove one retaining clip (callout 1), and then remove the retainer and pulley.

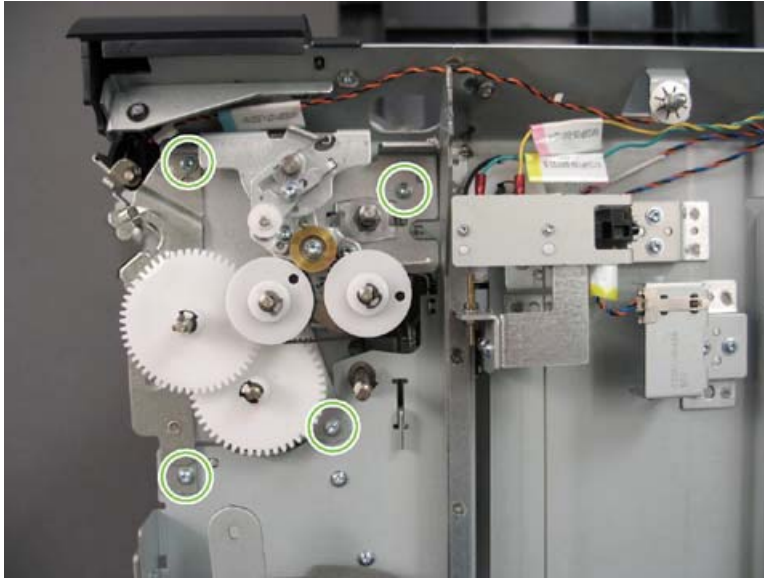



 **NOTE:** The lower pulley has a small retaining rod holding it in place.

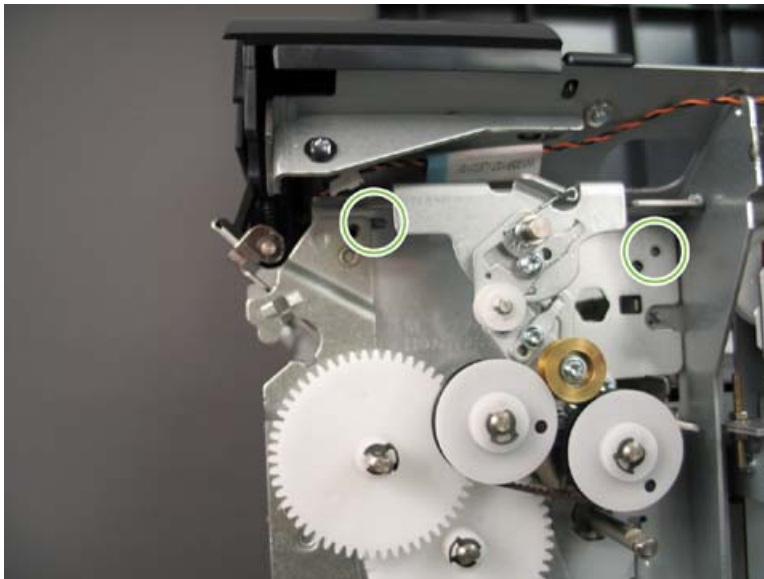
4. Unhook one spring from the left side of Tray 5.



5. Remove four screws.

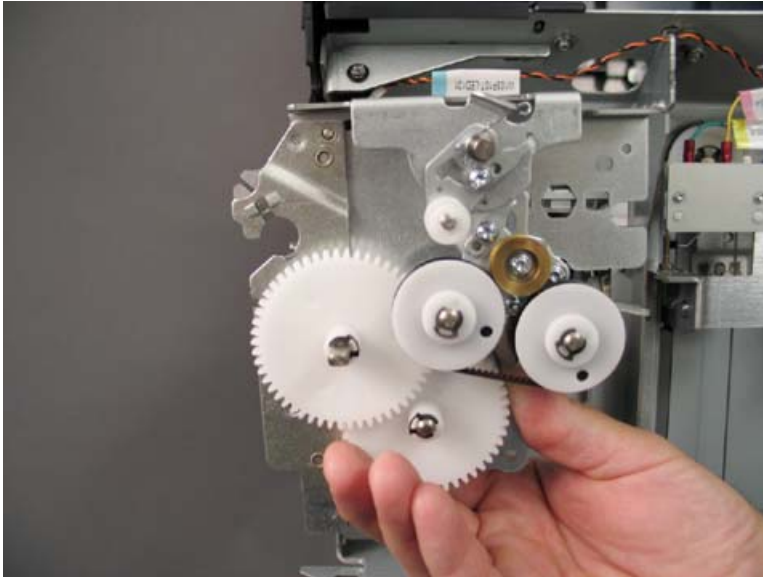


 **NOTE:** When reinstalling the lower separator assembly back into Tray 5, align the top two tabs and then tighten the top two screws before tightening the bottom two screws.



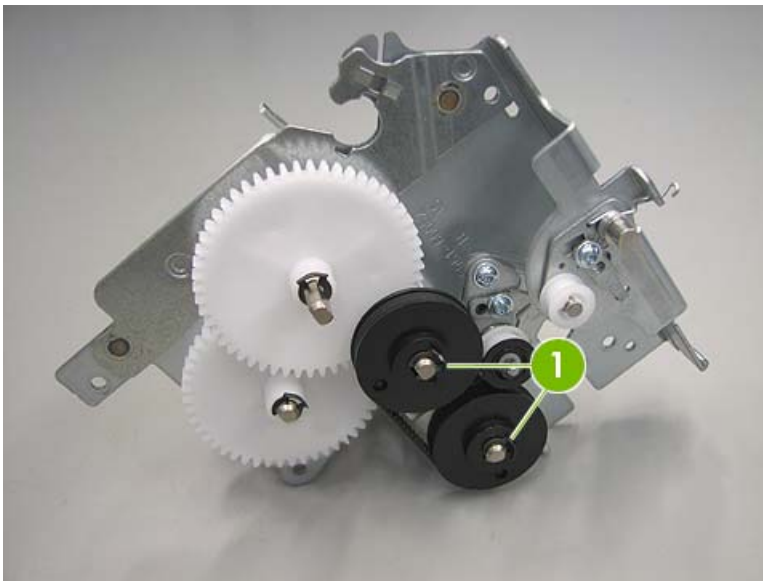
6. Pull out the lower separator module.

△ **CAUTION:** Be careful not to scratch the encoder disk.




7. Remove two retaining clips (callout 1), and then remove the underlying two covers, one belt, and two pulleys.

📝 **NOTE:** You do not need to loosen the belt tensioner to remove the belt.

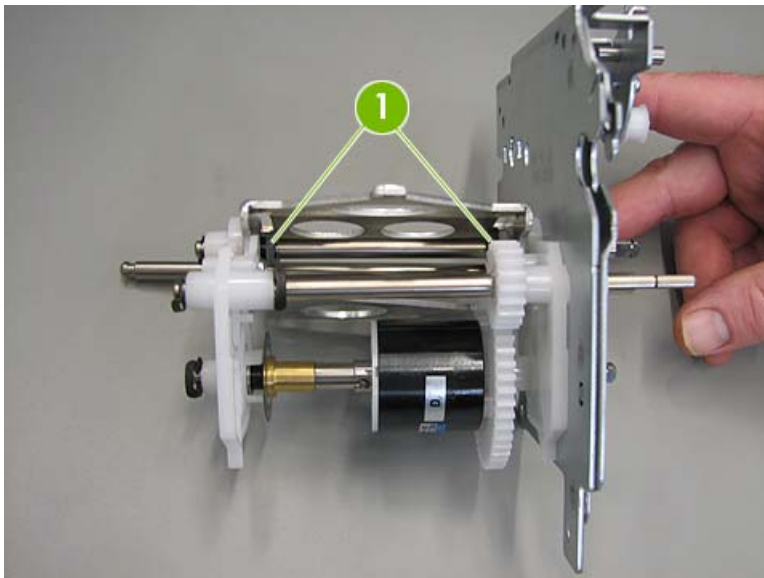


8. Remove two retaining clips (callout 1), and then remove the underlying large gears.

 **NOTE:** The outside gear is an H-drive and the inside gear is a D-drive. They cannot be interchanged.




9. Remove two inside retaining clips (callout 1) from the shaft with the pressed-on gear.

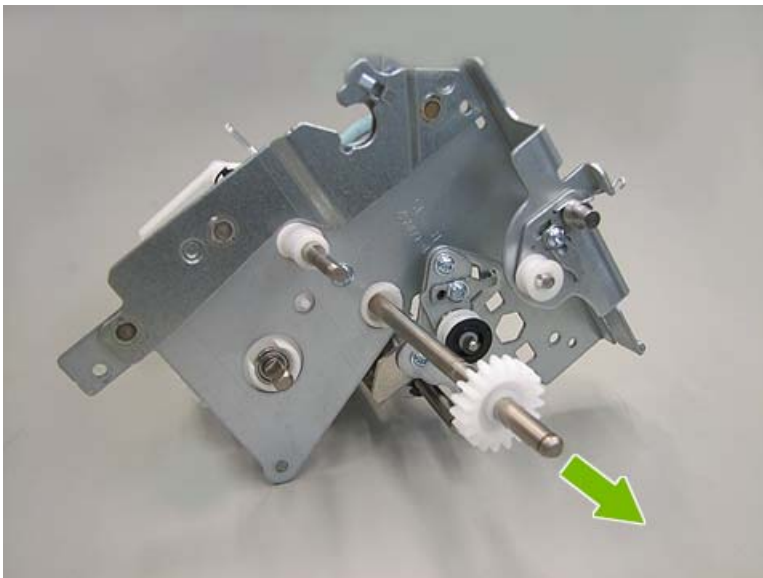


10. Remove one retaining clip on the outside of the LS bearing plate.

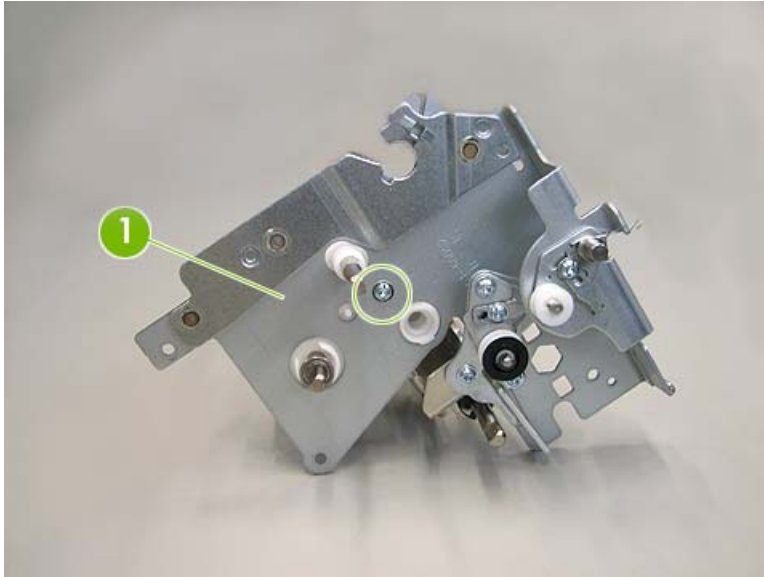


11. Pull out the shaft.

 **NOTE:** There are two spacers and two bearings on the shaft that might fall off as the shaft is removed.



12. Remove one screw, and then lift off the metal plate (callout 1).



13. Remove one bearing (callout 1) from the encoder shaft, and then remove the LS bearing plate (callout 2).



14. Remove one retaining clip from the encoder shaft.




15. Remove the encoder shaft.



16. Remove the bearing and spacer from the encoder shaft, and then remove the shaft from the clutch.

Tray 5 rollers

- [Pick roller](#)
- [Feed roller](#)
- [Separator roller](#)

 **NOTE:** The three identical Tray 5 rollers (pick, feed, and separation rollers) are preventive maintenance items and are replaced at scheduled intervals. See [Service intervals on page 79](#).

Reset the preventive maintenance counter for this item every time maintenance is performed.


Pick roller

- Open the Tray 5 top door, pinch the end of the pick roller, and then pull the roller off the pick arm shaft.



Feed roller

1. Open the Tray 5 top door.
2. Hold down the media release button, and then pinch the end of the feed roller and pull the roller off the upper separator shaft.


 **NOTE:** Holding down the media release button releases the friction pinch of the lower separator roller.




Separator roller

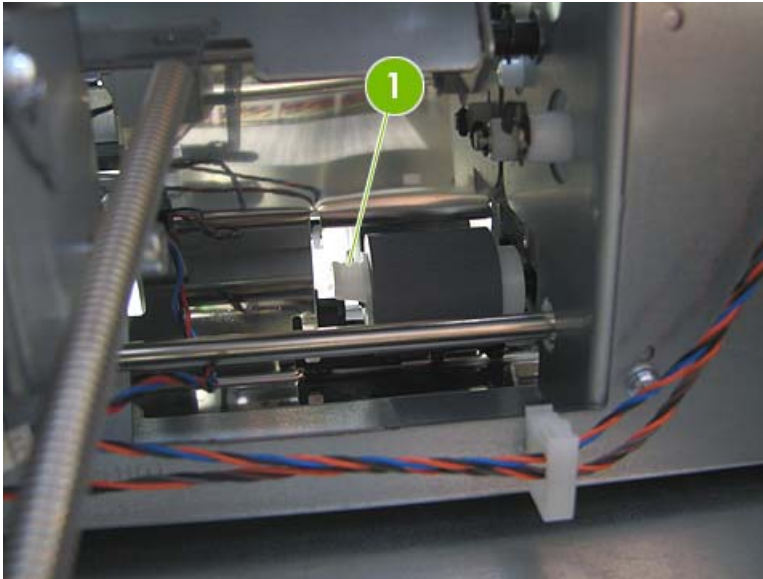
1. Remove the left bottom panel.

[Left bottom panel on page 721](#)

 **NOTE:** For better visibility of the separator roller, you can also remove the pin alignment plate. See [Pin alignment plate on page 721](#).

2. While holding down the media release button, reach underneath and pinch the end of the separator roller (callout 1), and then pull the roller off the lower separator shaft.

 **NOTE:** Holding down the media release button releases the friction pinch of the lower separator roller.



Pick arm assembly

1. Remove the following items:

- Right cover

[Right cover on page 720](#)

- Rear cover

[Rear cover on page 719](#)

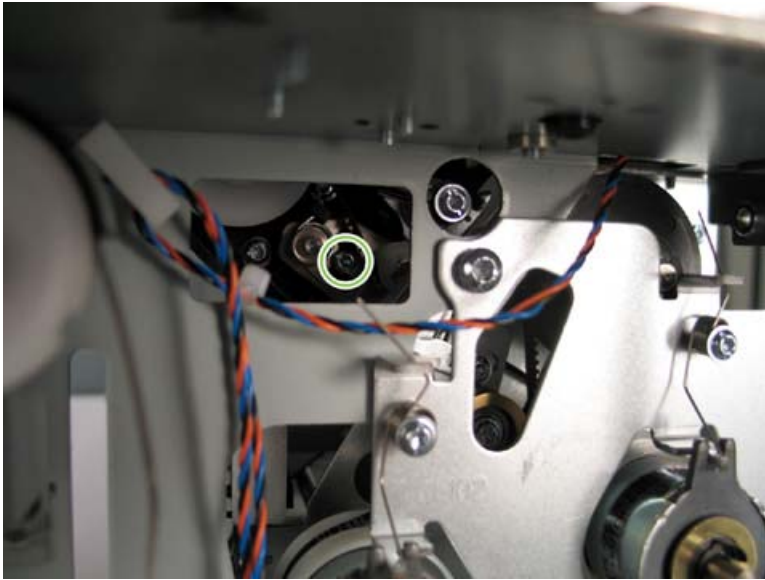
2. Pinch the end of the pick roller and pull the roller off the pick arm shaft.



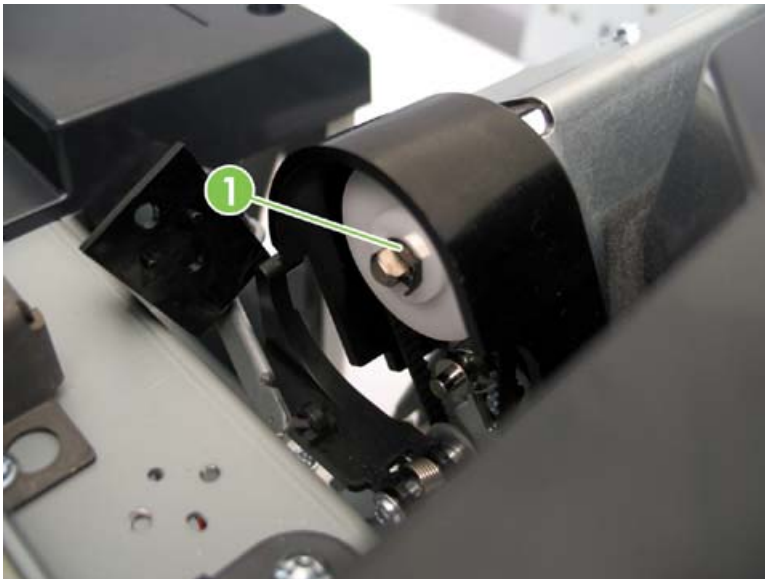
3. Remove the spacer and retaining clip (callout 1) from the pick arm shaft.




4. Through the screwdriver access opening in the rear of Tray 5, loosen the belt tension screw on the pick arm.



5. Remove the retaining clip (callout 1), belt, pulley, spacers, and bearing.



 **NOTE:** To remove the pick arm belt cover, remove two screws through the rear screwdriver access.

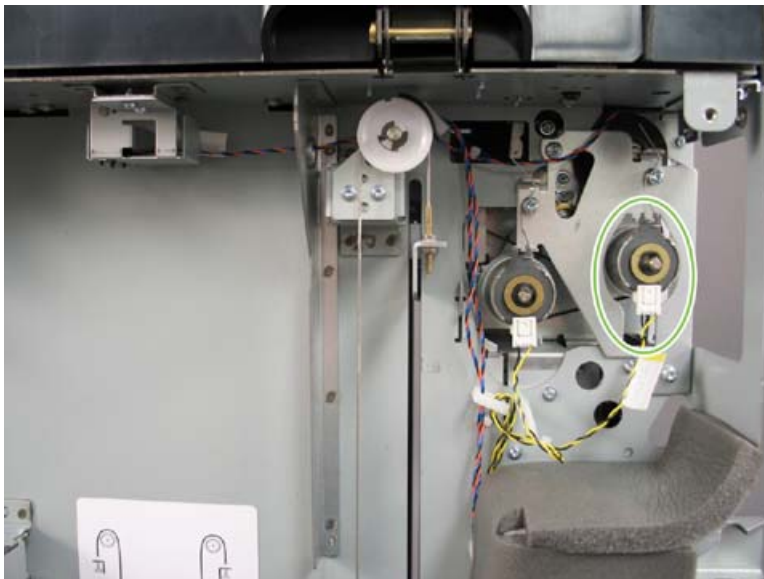
Media hold down assembly

- Remove four screws to remove the media hold down assembly.

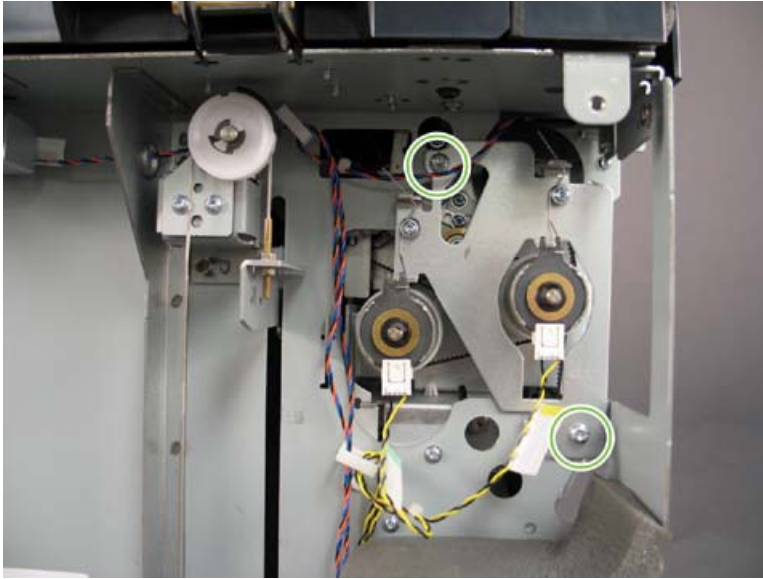


Tray 5 Pick clutch (CL101)

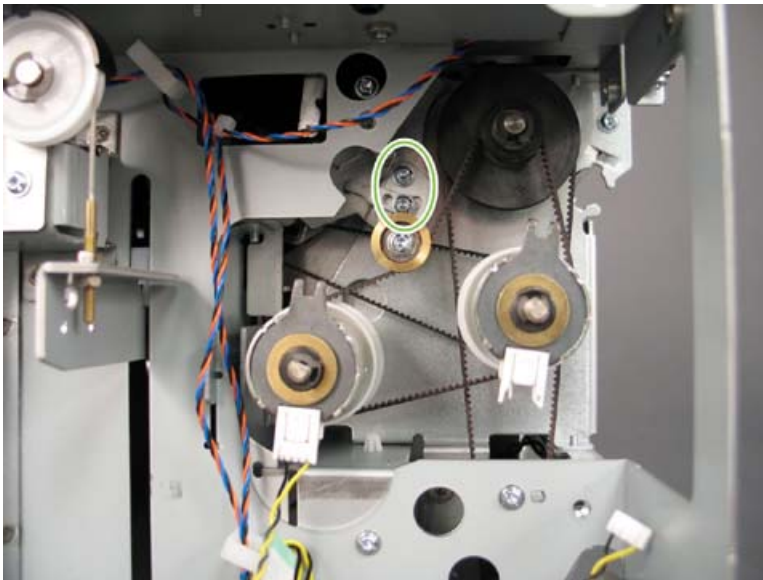
1. Remove the rear cover.
[Rear cover on page 719](#)
2. Disconnect the wire connector from CL101.



3. Remove two screws, release the two clutch springs, and then remove the clutch restraint plate.



4. Loosen two screws to release the belt tensioner, and then remove the belt from CL101.



5. Remove the clip from the end of the pick clutch shaft.



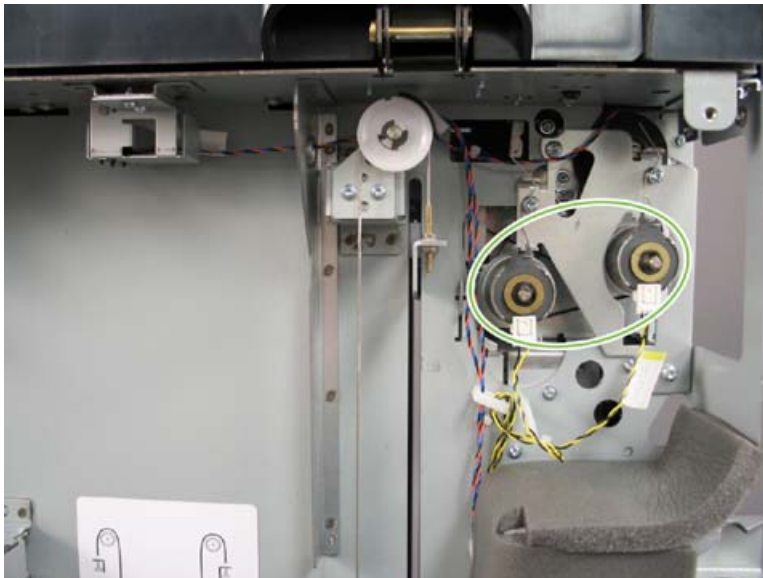
6. Pull CL101 off of the shaft.

Tray 5 Separator clutch (CL102)

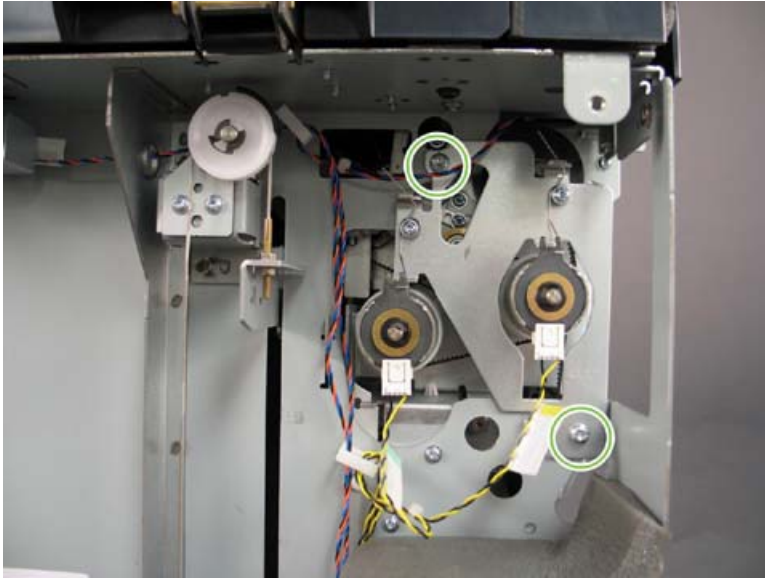
1. Remove the rear cover.

[Rear cover on page 719](#)

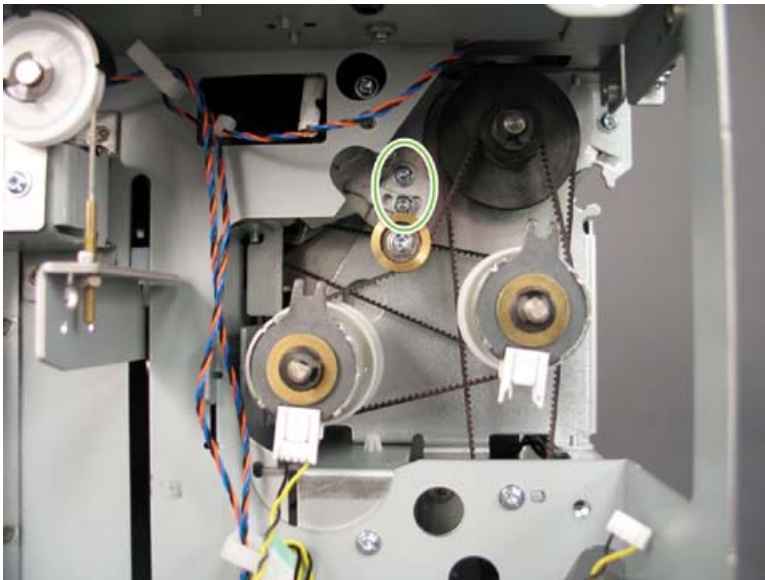
2. Disconnect the wire connector from CL102, and then disconnect the wire connector from the Tray 5 Pick clutch (CL101).



3. Remove two screws, release the two clutch springs, and then remove the clutch restraint plate.



4. Loosen two screws to release the belt tension, and then remove the belt from CL102.



5. Remove the clip from the end of the separator clutch shaft.

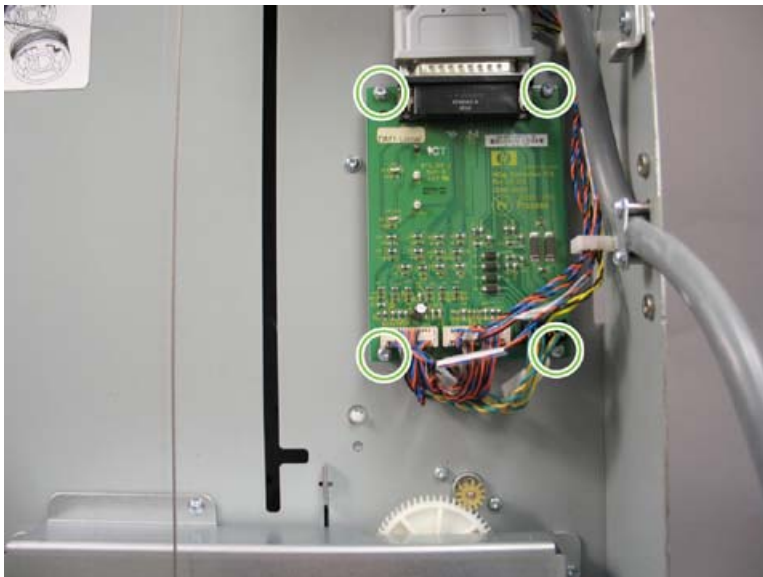


6. Pull CL102 off of the shaft.

Tray 5 Distribution PCA (A101)

△ **CAUTION:** Wear an ESD strap.

1. Remove the rear cover.
[Rear cover on page 719](#)
2. Disconnect all of the wire connectors from A101.
3. Remove four screws, and then remove A101.



Upper media path guide

1. Remove the Tray 5 top-left panel.

[Tray 5 top-left panel on page 722](#)

2. Remove two shoulder screws.



3. Remove the upper media-path guide.



Sensors

- [Tray 5 Media 1 sensor \(SN101\)](#)
- [Tray 5 Media 2 sensor \(SN103\)](#)
- [Tray 5 Stack Height sensor \(SN104\)](#)

- [Tray 5 Front Latch sensor \(SN105\)](#)
- [Tray 5 Back Latch sensor \(SN106\)](#)
- [Tray 5 Media Door Open sensor \(SN107\)](#)
- [Tray 5 Elevator Upper Limit sensor \(SN108\)](#)
- [Tray 5 Load Media sensor \(SN109\)](#)
- [Tray 5 Elevator Lower Limit sensor \(SN110\)](#)
- [Tray 5 Empty sensor \(SN111\)](#)
- [Tray 5 Top-left Panel sensor \(SN112\)](#)

Tray 5 Media 1 sensor (SN101)

1. Remove the pin alignment plate.
[Pin alignment plate on page 721](#)
2. Remove one screw through the access opening.

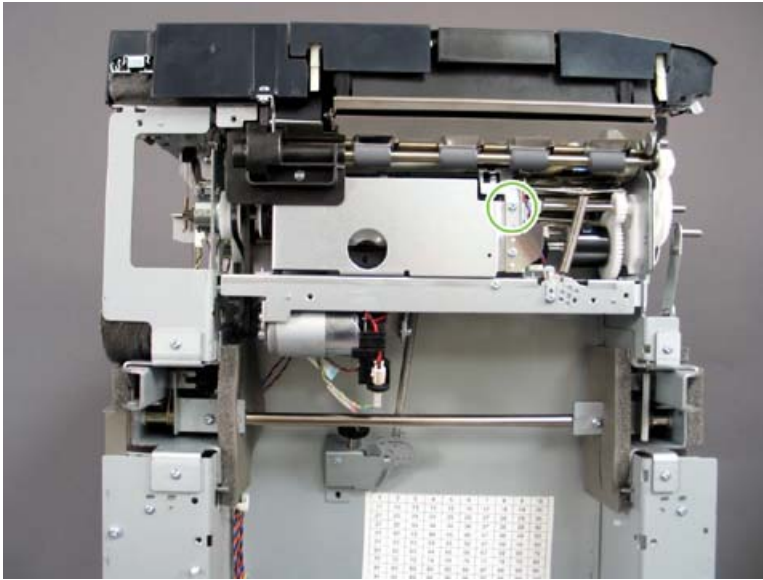


3. Reach underneath and disconnect the sensor wire connector, remove the mounting bracket, and then remove the sensor from the bracket.

Tray 5 Media 2 sensor (SN103)

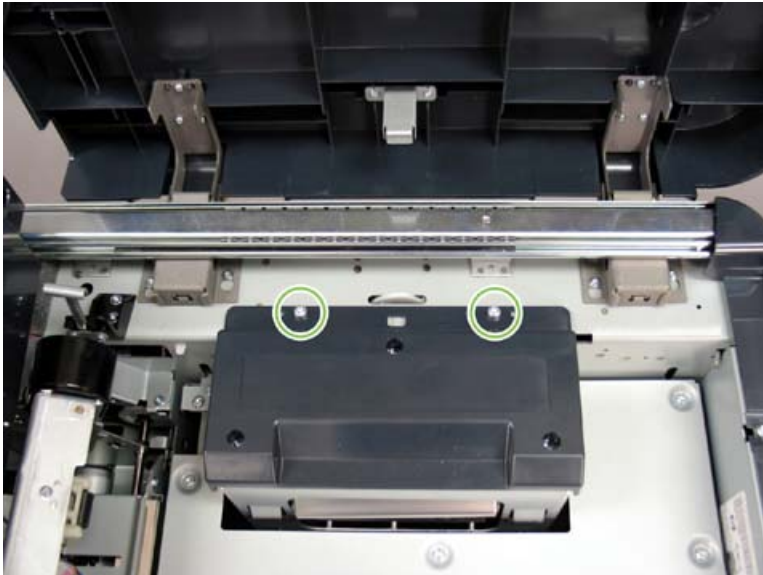
1. Remove the pin alignment plate.
[Pin alignment plate on page 721](#)

2. Remove one screw from the mounting bracket, and then remove the sensor from the mounting bracket and disconnect the wire connector.




Tray 5 Stack Height sensor (SN104)

1. Remove the two screws that secure the paper-width guide.

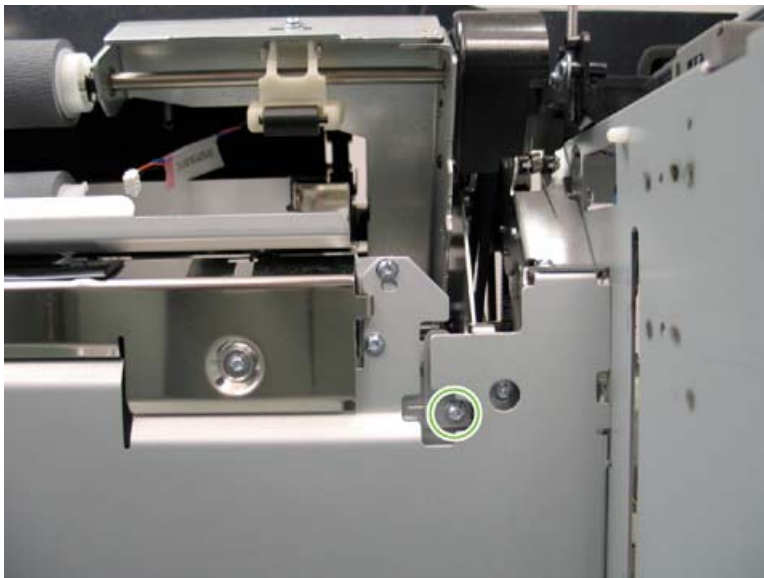


2. Remove the paper-width guide.

 **Reinstallation tip** Be careful not to pinch the wire harness of the Tray 5 Empty sensor (SN111) below the elevator tray when reinserting the paper-width guide.



3. Remove one screw, disconnect the wire cable, and then remove the mounting bracket.



4. Remove the sensor from the mounting bracket.

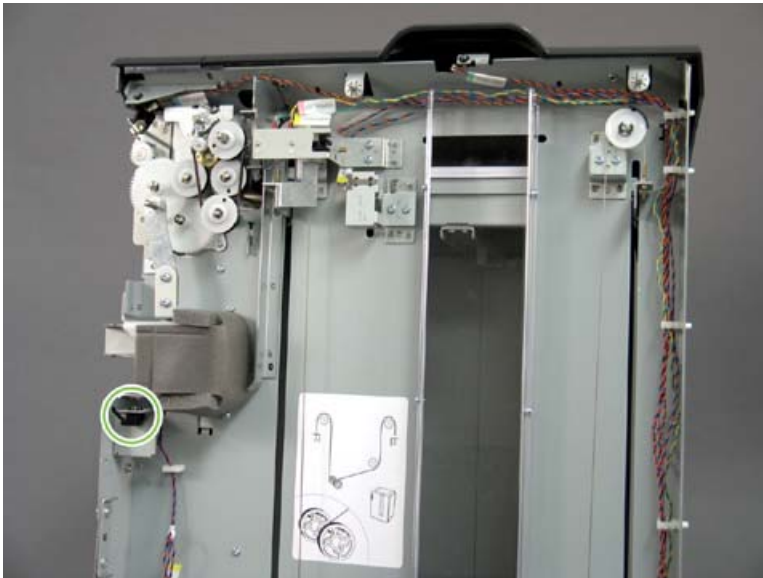
Tray 5 Front Latch sensor (SN105)

1. Remove the following covers:

- Top front cover
[Top front cover on page 717](#)
- Front cover

[Front cover on page 717](#)

2. Remove the sensor from the mounting bracket, and then disconnect the sensor wire connector.



Tray 5 Back Latch sensor (SN106)

1. Remove the rear cover.

[Rear cover on page 719](#)

2. Remove the sensor from the mounting bracket, and then disconnect the sensor wire connector.

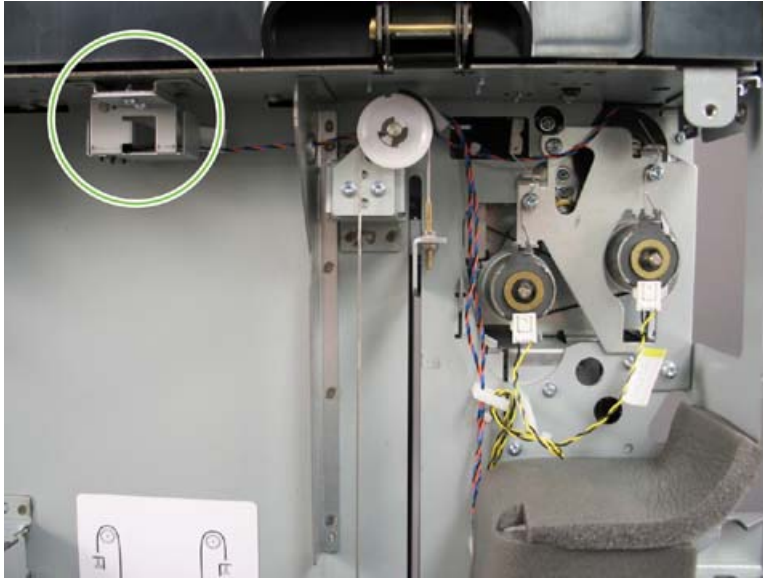


Tray 5 Media Door Open sensor (SN107)

1. Remove the rear cover.

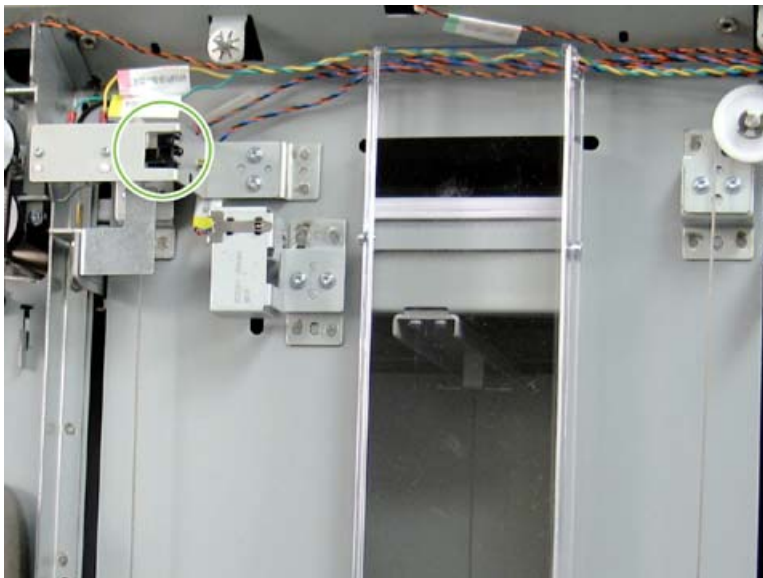
[Rear cover on page 719](#)

2. Remove the sensor from the mounting bracket, and then disconnect the sensor wire connector.



Tray 5 Elevator Upper Limit sensor (SN108)

1. Remove the following covers:
 - Top front cover
[Top front cover on page 717](#)
 - Front cover
[Front cover on page 717](#)
2. Remove the sensor from the mounting bracket, and then disconnect the sensor wire connector.



Tray 5 Load Media sensor (SN109)

1. Remove the following covers:

- Top front cover

[Top front cover on page 717](#)

- Front cover

[Front cover on page 717](#)

2. Remove the sensor from the mounting bracket, and then disconnect the sensor wire connector.



Tray 5 Elevator Lower Limit sensor (SN110)

1. Remove the following covers:

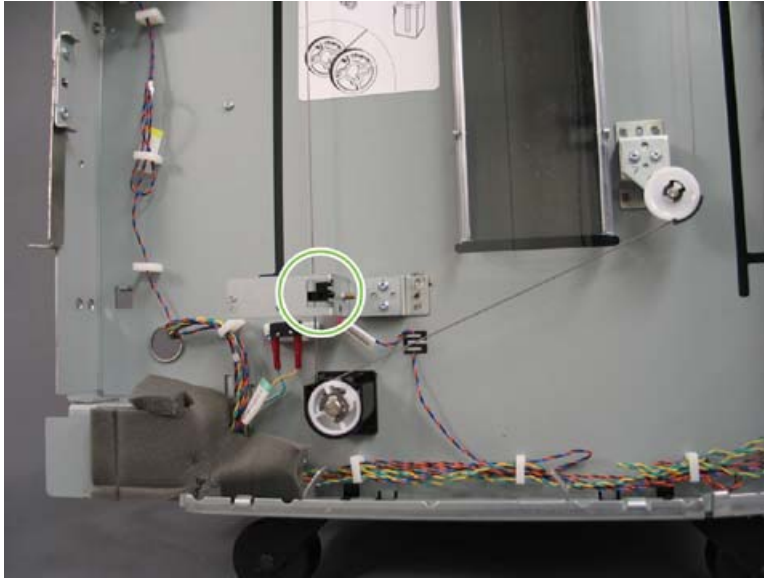
- Top front cover

[Top front cover on page 717](#)

- Front cover


[Front cover on page 717](#)

2. Remove the sensor from the mounting bracket, and then disconnect the sensor wire connector.



Tray 5 Empty sensor (SN111)

1. Remove the right cover.
[Right cover on page 720](#)
2. Push the elevator tray all the way to the bottom.
3. From the lower-right side of Tray 5, remove one screw, and then disconnect the cable.

 **NOTE:** This is an Aleph OH series (AH-218-A5) reflective sensor. Be sure to install the correct sensor.




Tray 5 Top-left Panel sensor (SN112)

1. Remove the Tray 5 top-left panel.

[Tray 5 top-left panel on page 722](#)



2. Remove the sensor from the plate.

 **NOTE:** For correct sensor orientation during reinstallation, ensure a plate screw is not covered by the sensor.

Motors

- [Tray 5 Pick motor \(M101\)](#)
- [Tray 5 Elevator motor \(M102\)](#)


Tray 5 Pick motor (M101)

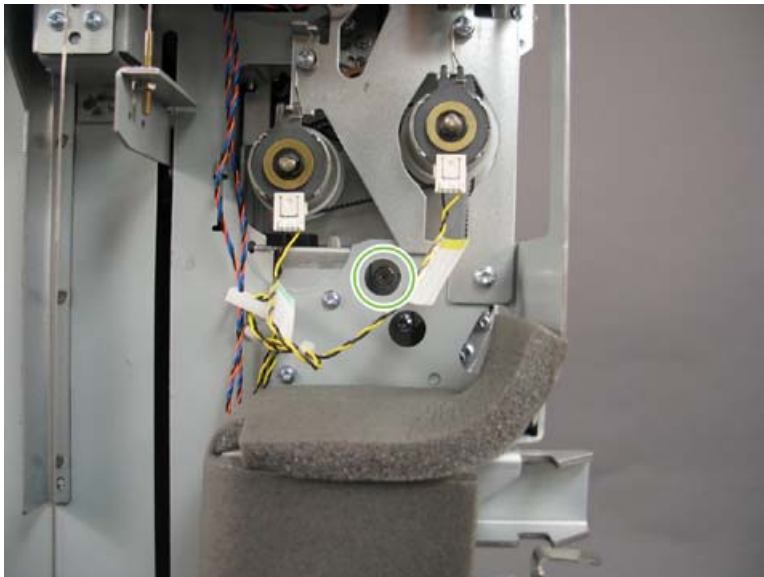
1. Remove the following items:

- Rear cover
[Rear cover on page 719](#)
- Left bottom panel
[Left bottom panel on page 721](#)
- Pin alignment plate
[Pin alignment plate on page 721](#)

2. Remove two shoulder screws from the motor bracket.



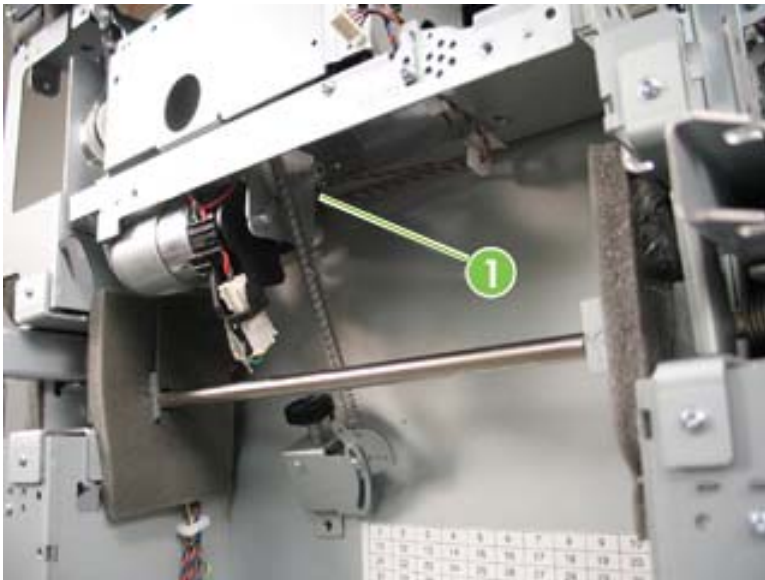
 **NOTE:** From the rear of Tray 5, remove the motor bracket shoulder screw through the access hole.



3. Remove two additional motor bracket screws from each side.




4. Tilt the motor bracket, and then remove the tension spring behind the motor (callout 1).

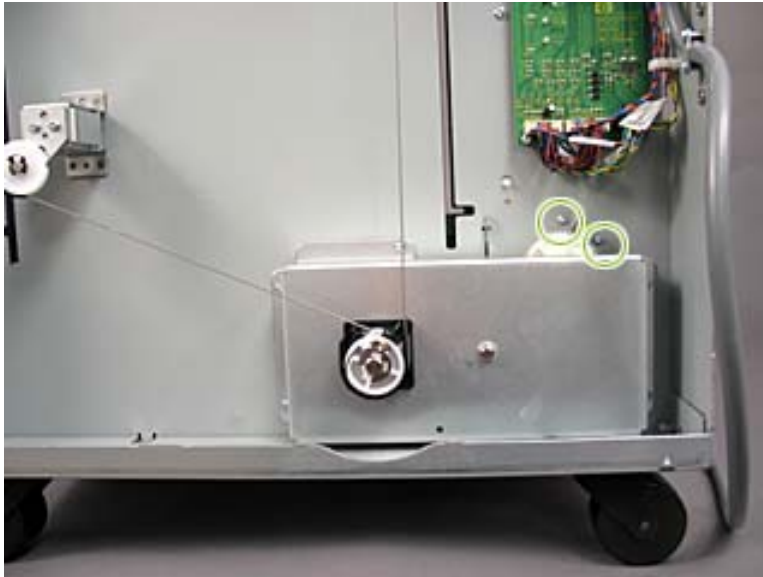


5. Disconnect the two wire connectors from M101:
 - W104P105-M101
 - W102P106-EN101
6. Remove two screws to remove M101 from the motor bracket.

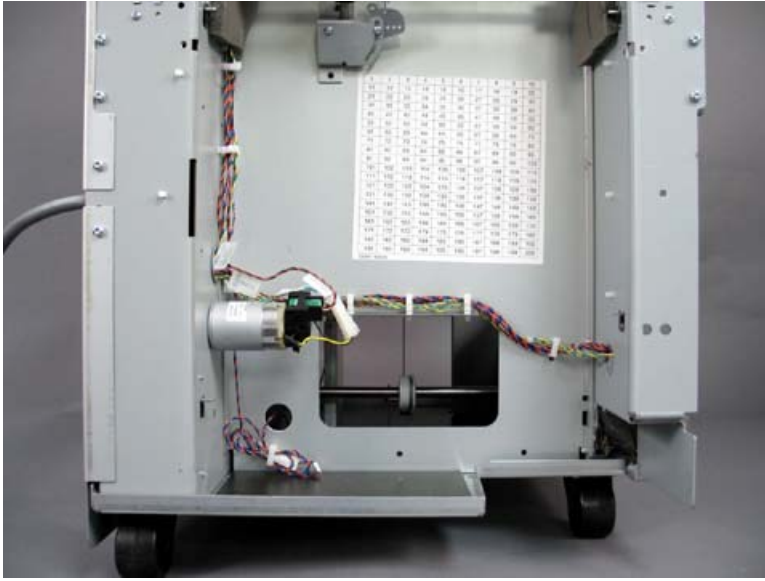
Tray 5 Elevator motor (M102)

 **NOTE:** The elevator will drop to the bottom of its travel when the Tray 5 Elevator motor (M102) is removed.

1. Remove the following items:
 - Rear cover
[Rear cover on page 719](#)
 - Left bottom panel
[Left bottom panel on page 721](#)
2. From the rear, remove two screws.



3. Disconnect two wire connectors from M102:
 - W104P108-M102
 - W103P108-EN102



4. Remove M102.

LEDs

- [Tray 5 Top-left Panel LED \(LED101\)](#)
- [Tray 5 Top Door LED \(LED102\)](#)

Tray 5 Top-left Panel LED (LED101)

1. Remove the following covers:
 - Top front cover
[Top front cover on page 717](#)
 - Front cover
[Front cover on page 717](#)

2. Remove the LED.



Tray 5 Top Door LED (LED102)

1. Remove the following covers:
 - Top front cover
[Top front cover on page 717](#)
 - Front cover
[Front cover on page 717](#)
2. Remove the LED.



Switches

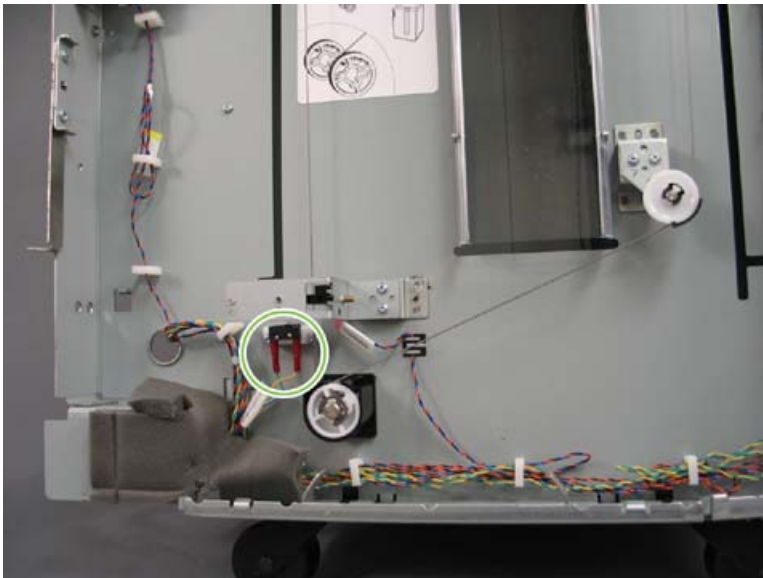
- [Elevator lower-limit switch \(SW101\)](#)
- [Elevator upper-limit switch \(SW102\)](#)

Elevator lower-limit switch (SW101)

1. Remove the following covers:
 - Top front cover
[Top front cover on page 717](#)
 - Front cover
[Front cover on page 717](#)
2. Disconnect two wire connectors, and then spread the white tabs through the holes to remove the switch.

△ **CAUTION:** When disconnecting the wires, be careful not to pull the terminals out of the switch body.

💡 **Reinstallation tip** The two wires can be reconnected to either terminal.



Elevator upper-limit switch (SW102)

1. Remove the following covers:
 - Top front cover
[Top front cover on page 717](#)
 - Front cover
[Front cover on page 717](#)
2. Push the elevator tray down far enough to provide enough access to remove the switch.

3. Disconnect two wire connectors, and then spread the white tabs through the holes to remove the switch.

△ **CAUTION:** When disconnecting the wires, be careful not to pull the terminals out of the switch body.

💡 **Reinstallation tip** The two wires can be reconnected to either terminal.



HP Multifunction Finisher

- [Doors and covers](#)
- [Output bins](#)
- [Lower output bin belts](#)
- [Stack holder assembly](#)
- [Job support assembly](#)
- [Input paper path](#)
- [Separator](#)
- [Stapler 1 assembly](#)
- [Stapler 2 assembly](#)
- [Accumulator](#)
- [Sensors](#)
- [Motors](#)
- [LEDs](#)
- [Switches](#)
- [Finisher Diverter solenoid \(SOL211\)](#)
- [Finisher Main PCA \(A200\)](#)

Doors and covers

- [Top door](#)
- [Top door left](#)
- [Top cover side](#)
- [Front upper cover](#)
- [Front lower cover](#)
- [Front latch adjustment](#)
- [Rear cover](#)
- [Left leg cover](#)
- [Edge protectors](#)
- [Stapler 1 door](#)
- [Stapler 2 door](#)
- [Stapler 2 covers](#)
- [Front structure frame cover](#)

- [Rear structure frame cover](#)
- [Separator covers](#)
- [Right side panel](#)
- [Handle 1 \(upper transport\)](#)
- [Handle 2 \(upper transport\)](#)
- [Handle 3 \(lower transport\)](#)
- [Lower middle cover](#)

Top door

- Remove two retaining clips, slide out the shaft, and then remove the top door.



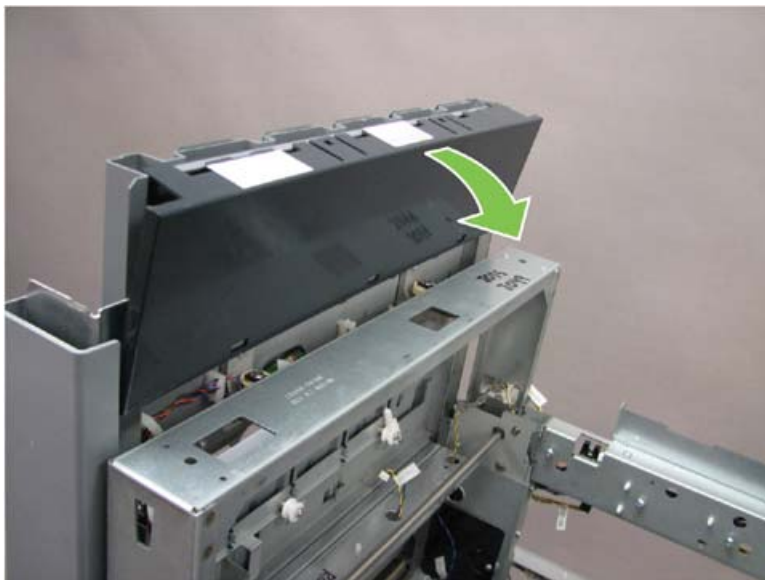
Top door left

- Remove one screw from the rear of the HP Multifunction Finisher, and then lift off the top door left.



Top cover side

1. Remove the separator paper guide.
[Separator paper guide on page 831](#)
2. Pry the side cover to remove.



Front upper cover

- Open the top door, remove one screw from the inside, and then remove two screws from the right side. Lift up to remove the front upper cover.



Front lower cover

1. Remove the front upper cover.
[Front upper cover on page 781](#)
2. Remove three screws from the right side, open the stapler 1 door, and then remove two screws from the front. Lift up to remove the front lower cover.



Front latch adjustment

1. Remove the following items:

- Front upper cover

[Front upper cover on page 781](#)

- Front lower cover

[Front lower cover on page 781](#)

2. Using a screwdriver through the right-side access hole, adjust the screw so that the latch guide lightly touches the sidewall. When not attached to the MFP, the latch guide and both latches on the right side should be in contact with the chassis.

△ **CAUTION:** Do not overtighten the screw.



Rear cover

- Remove one screw, and then lift up and slide the cover to the left to remove.



Left leg cover

- Remove two screws, and then remove the left leg cover.



Edge protectors

⚠ WARNING! On the Multifunction finisher, there are two sharp edges which require protective covers.

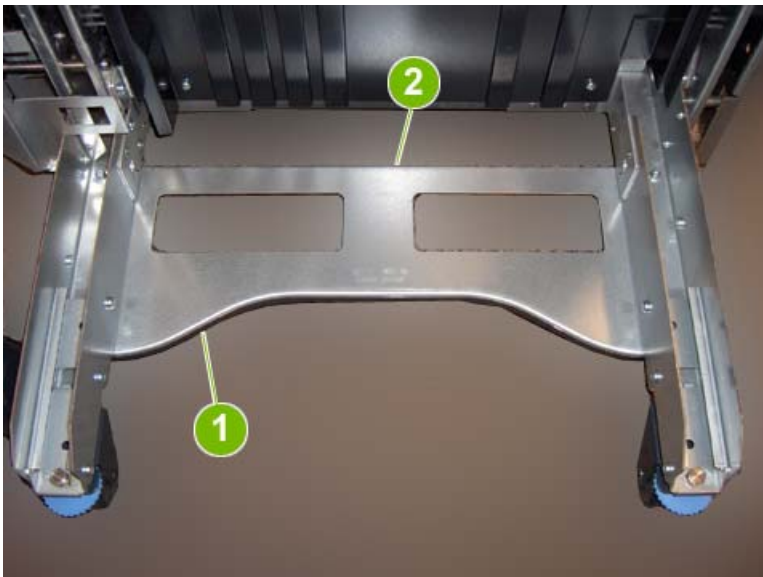
1. Lower bin 5 by covering up the bin full sensors, such as with a piece of paper (callout 1), and then remove bin 5.



2. Remove the left leg cover.

[Left leg cover on page 783](#)

3. Inspect the sheet metal edge protectors. The Multifunction finisher has two edge protectors:
 - Curved edge (434 mm long) (callout 1)
 - Straight edge (416 mm) (callout 2)



4. Before installing the edge protectors, insert a tool (ballpoint pen or some other blunt device) into one end of the plastic protectors to open them up for easier assembly.

△ **CAUTION:** It is recommended to use a blunt-end device, such as a ballpoint pen, to open up the end of the edge protectors. Screw drivers and other tools are sharp and the plastic protectors can sometimes be very difficult to open up. Use caution and proper safety precautions to prevent cutting or stabbing yourself. The best practice is to wear gloves and to point the tool away from your hand and body.



5. Install the two sheet metal edge protectors onto each sheet metal edge. Start on the front side of the finisher and carefully work your way towards the back securing the protector onto the sheet metal edge. Ensure the protectors are completely installed along the entire length of the edge.

△ **CAUTION:** Sheet metal edges are very sharp. Be careful when installing the edge protectors and **do not** run your hand along the unprotected edge. It is recommended to wear gloves while completing this installation.



Stapler 1 door

- Open the stapler 1 door, and then unsnap the door hinges.



Stapler 2 door

- Open the stapler 2 door, and then unsnap the door hinges.



Stapler 2 covers

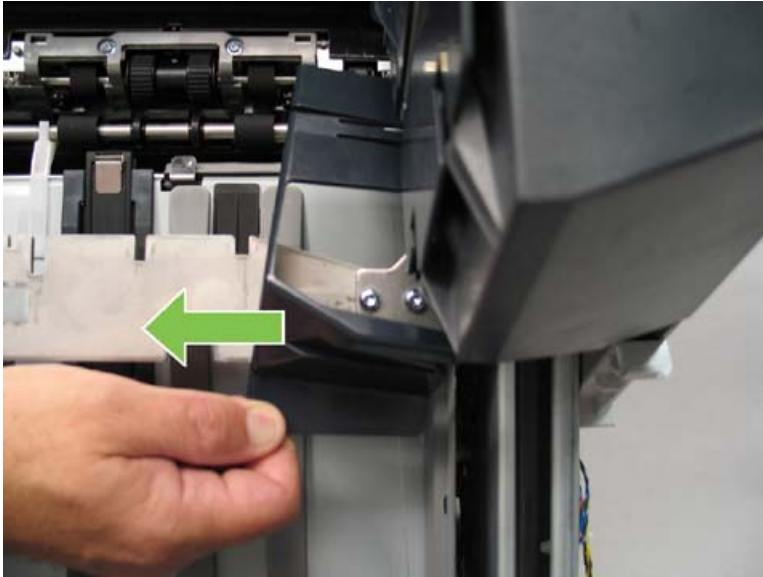
1. Open the stapler 2 door, and then remove two screws.



2. Remove one screw from the rear cover, and then remove the front and rear stapler 2 covers.

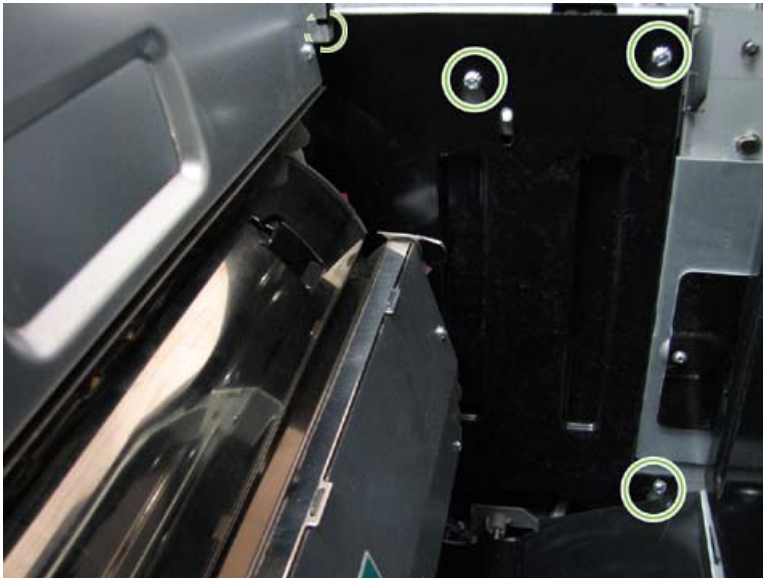


3. Unclip, and then slide out the stapler 2 wiring cover.



Front structure frame cover

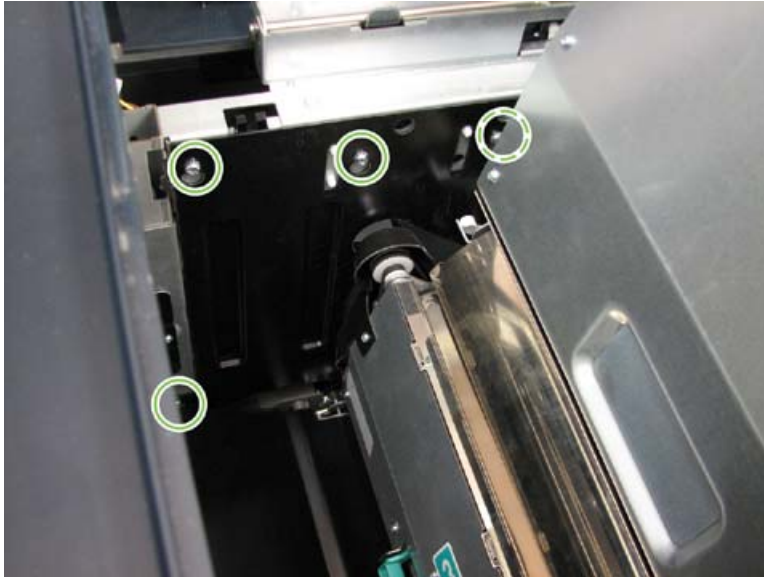
1. Open the top door, handle 1 (upper transport), and then handle 2 (upper transport).
2. Loosen four screws, and then remove the inner front panel.




Rear structure frame cover

1. Open the top door, handle 1 (upper transport), and then handle 2 (upper transport).

2. Loosen four screws, and then lift out the Inner rear panel.



Separator covers

 **NOTE:** Cover the accumulator opening with paper to eliminate hardware from falling down into the HP Multifunction Finisher.

1. Open the top door, handle 1 (upper transport), and then handle 2 (upper transport).
2. Remove three screws for the upper and middle covers, and then remove two screws for the lower separator covers:
 - Output media path cover (upper)
 - Paper gate cover (middle)
 - Offset mechanism cover (lower)

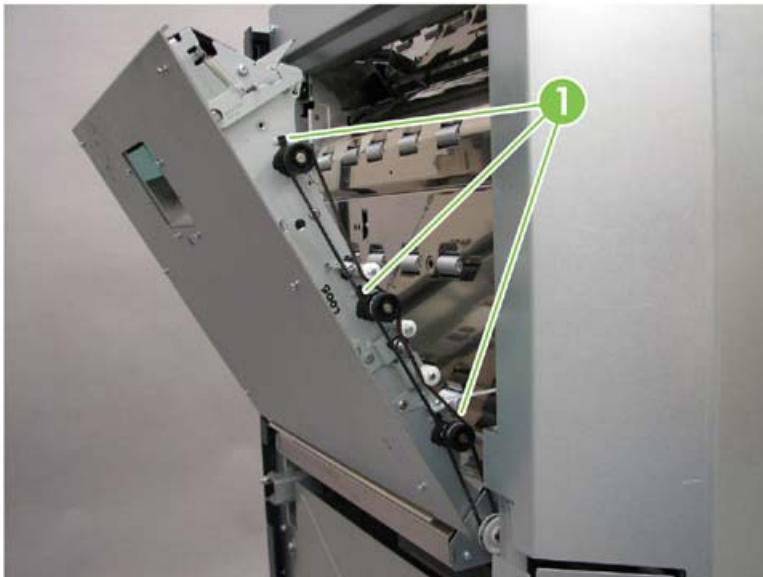


Right side panel

1. Open the right side panel, remove three screws, and then remove the right side panel transmission cover.



2. Unclip and rotate three yokes (callout 1) clockwise on the pulleys to loosen the belt tension.



3. Remove the two belts from the triple pulley directly below the door limit strap.



4. Remove one screw from each of the two door limit straps.



5. Loosen one screw and disconnect the ground wire.



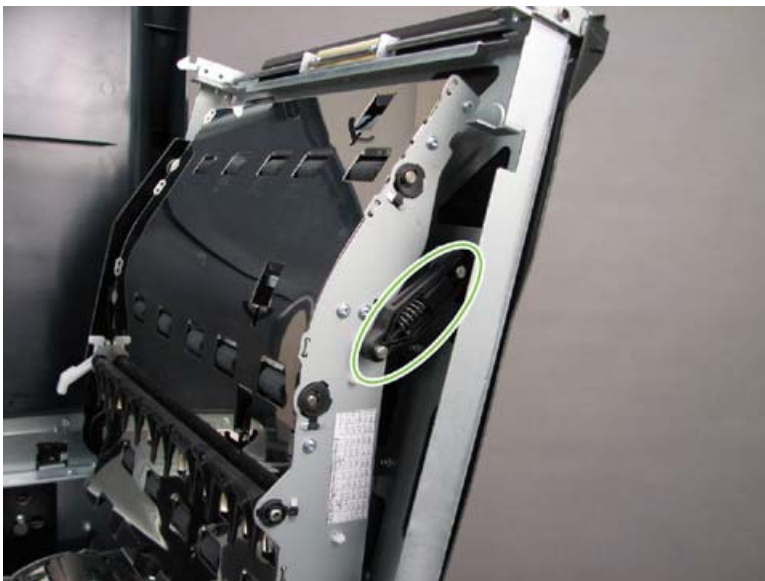
6. Tilt the right side panel down to its lowest position, and then remove the panel.

Handle 1 (upper transport)

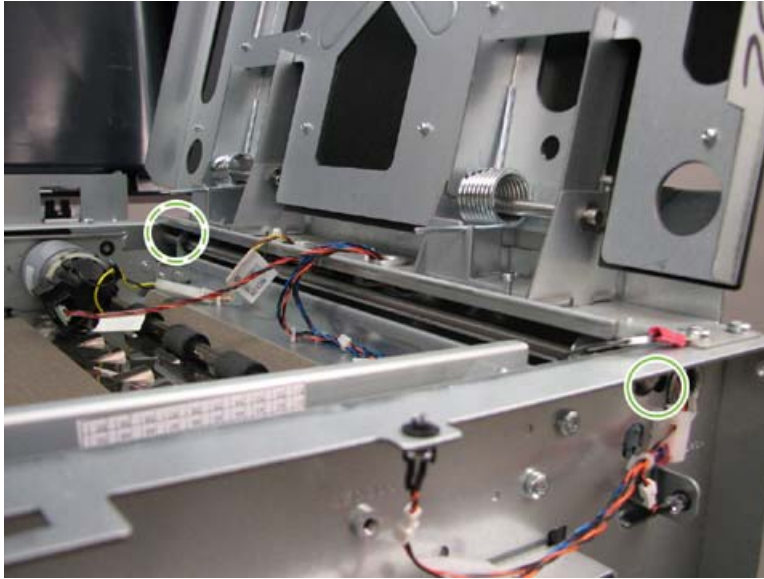
- [Handle 1 \(upper transport\) assembly](#)
- [Diverter assembly](#)

Handle 1 (upper transport) assembly

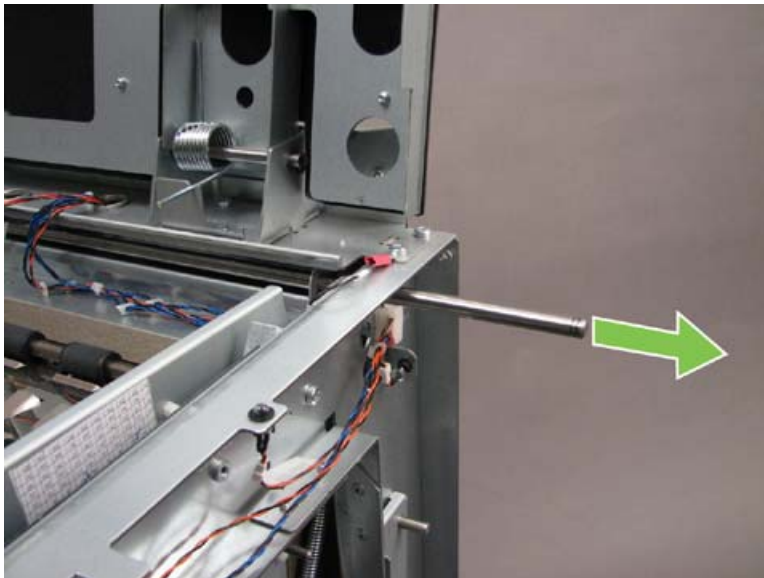
1. Open the top door, and then open handle 1 (upper transport).
2. Remove the two spring latches holding handle 1 (upper transport) to the handle 1 structure, and then lay handle 1 down.



3. Remove four retaining clips (two at either end) from the handle 1 (upper transport) hinge shaft.

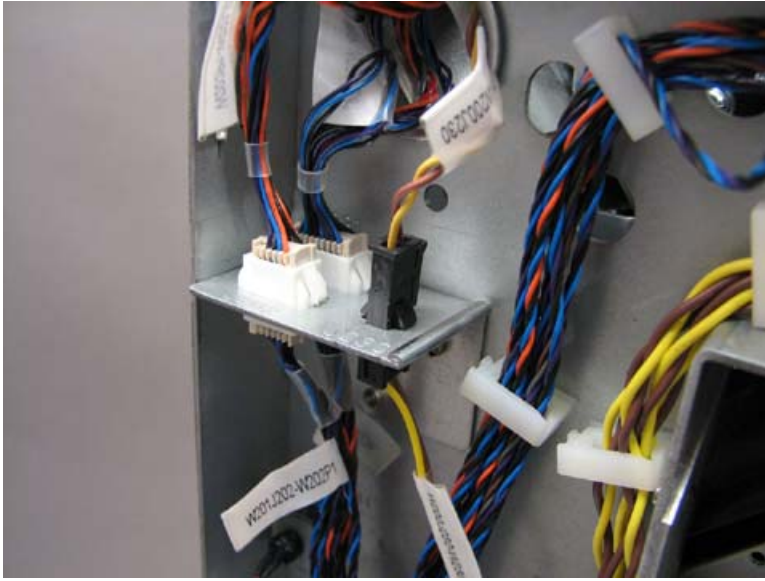


4. Slide the shaft out.

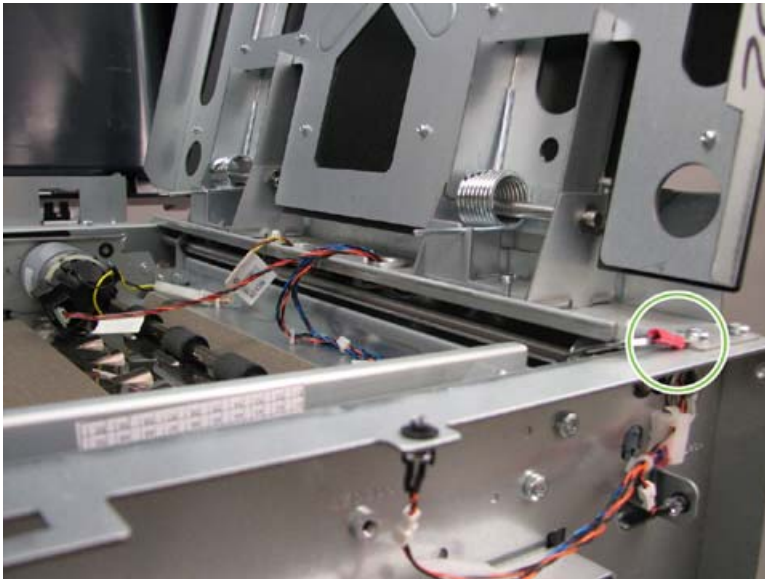


5. Disconnect the following wires:

- W231P2-E230
- W230P2-M230
- C5959-60121



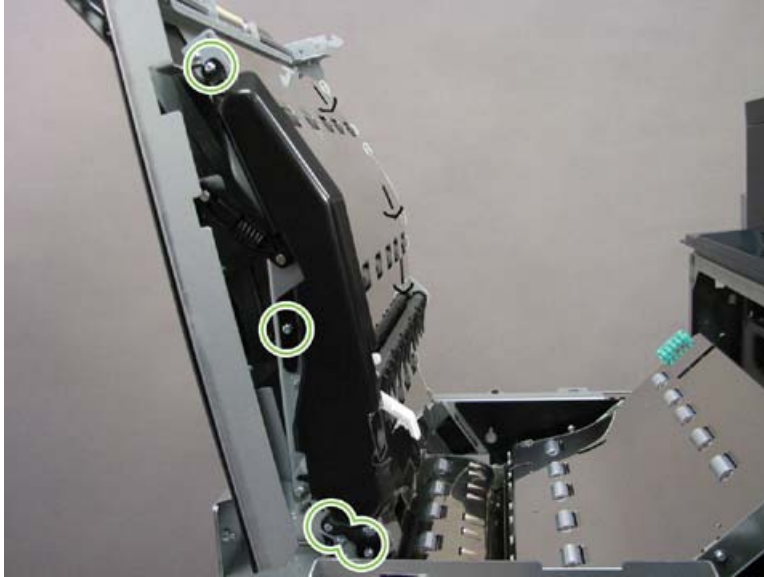
6. Disconnect the ground wire connecting handle 1 (upper transport) to the frame



7. Lift out handle 1 (upper transport).

Diverter assembly

1. Remove the top door, open handle 1 (upper transport), remove four screws from the handle 1 (upper transport) transmission cover, and then remove the cover.



2. Unhook the spring to the diverter assembly.



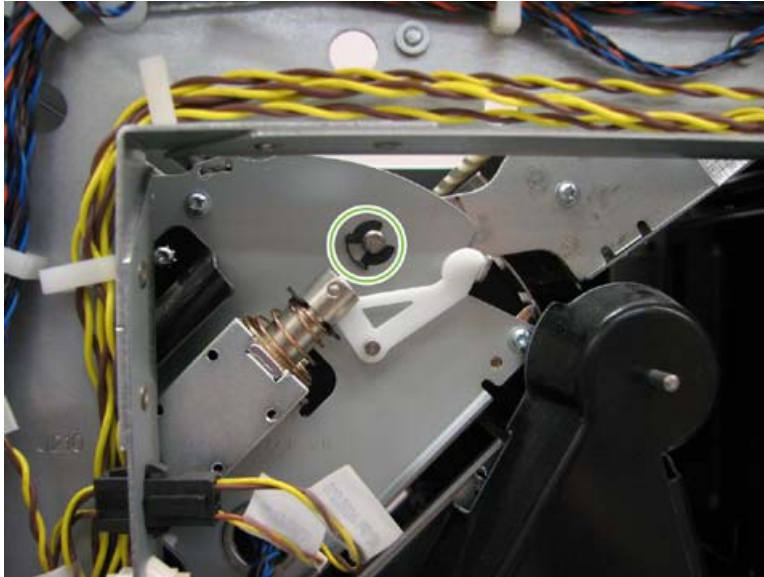
3. Rotate the yoke, and then lift out the diverter assembly.



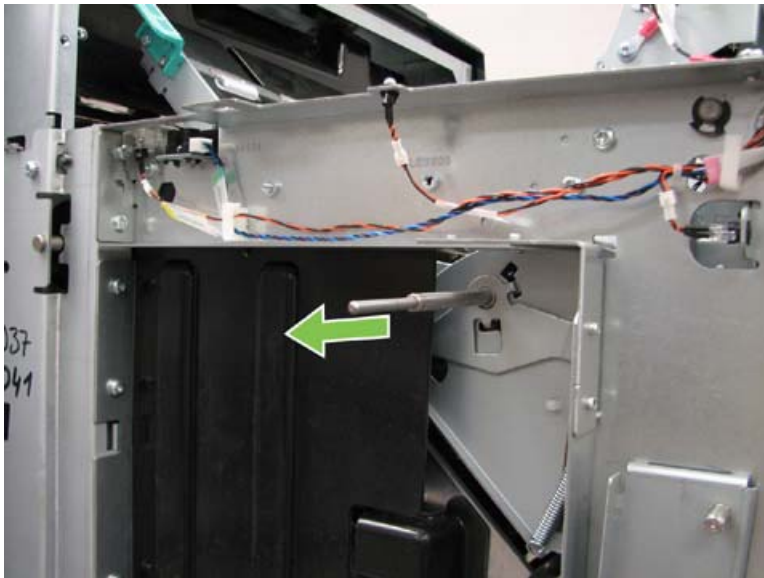
Handle 2 (upper transport)

1. Remove the following items:
 - Front upper cover
[Front upper cover on page 781](#)
 - Rear cover
[Rear cover on page 783](#)
 - Rear structure frame cover
[Rear structure frame cover on page 788](#)
2. Open the top door, and then open handle 1 (upper transport).

3. Remove the retaining clip from each end of the handle 2 (upper transport) hinge shaft.



4. Slide the shaft out, and then lift out handle 2 (upper transport).



Handle 3 (lower transport)

1. Remove the following items:
 - Front upper cover
[Front upper cover on page 781](#)
 - Rear cover
[Rear cover on page 783](#)
 - Front structure frame cover

[Front structure frame cover on page 788](#)

- Rear structure frame cover

[Rear structure frame cover on page 788](#)

2. Loosen four screws (two on each side).

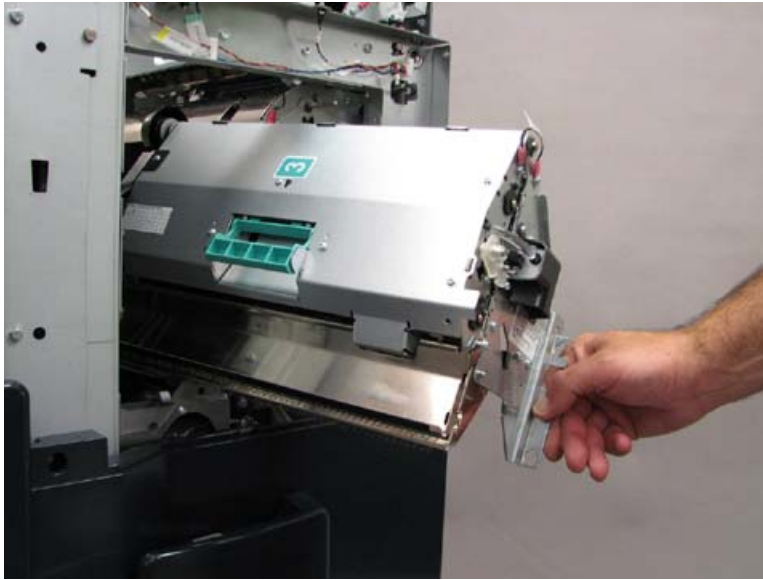


3. Disconnect two wire harnesses:

- C5959-60122
- C5959-60162



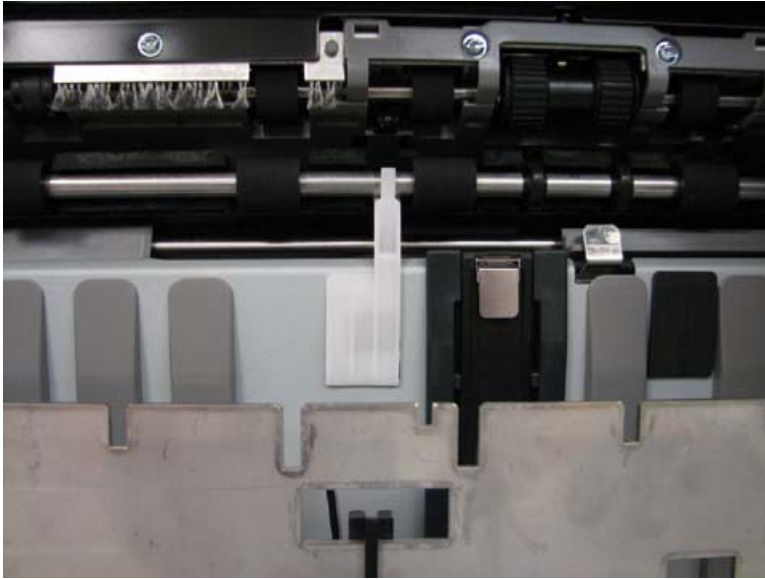
4. Lift up to unhook the handle 3 (lower transport) assembly, and then remove it from the HP Multifunction Finisher.




Lower middle cover

1. Remove the following items:
 - Front upper cover
[Front upper cover on page 781](#)
 - Front lower cover
[Front lower cover on page 781](#)
 - Rear cover
[Rear cover on page 783](#)
 - Job support front cover
[Job support assembly on page 814](#)
 - Stapler 2 assembly
[Stapler 2 assembly on page 844](#)
 - Left leg cover
[Left leg cover on page 783](#)
 - Lower output bin
[Lower output bin on page 803](#)
 - Finisher Lower Elevator motor (M250)
[Finisher Lower Elevator motor \(M250\) on page 923](#)

2. Remove the “Y” clip.



 **NOTE:** Lift the lower left corner, and then push down on the clip to release the hooks.

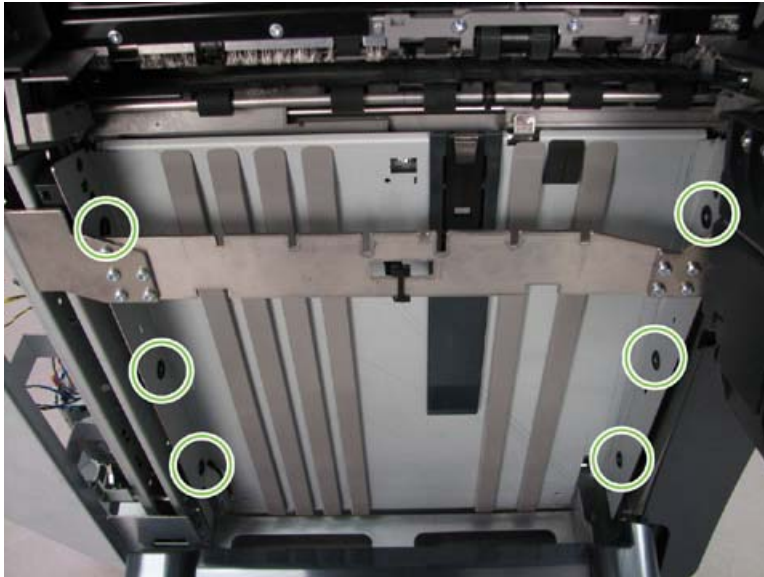


3. Remove the paper front and rear guides. Pry the side of each guide with a small flat-headed screwdriver, and then slide the entire guide down to remove.

 **NOTE:** Use the designated screwdriver slots.




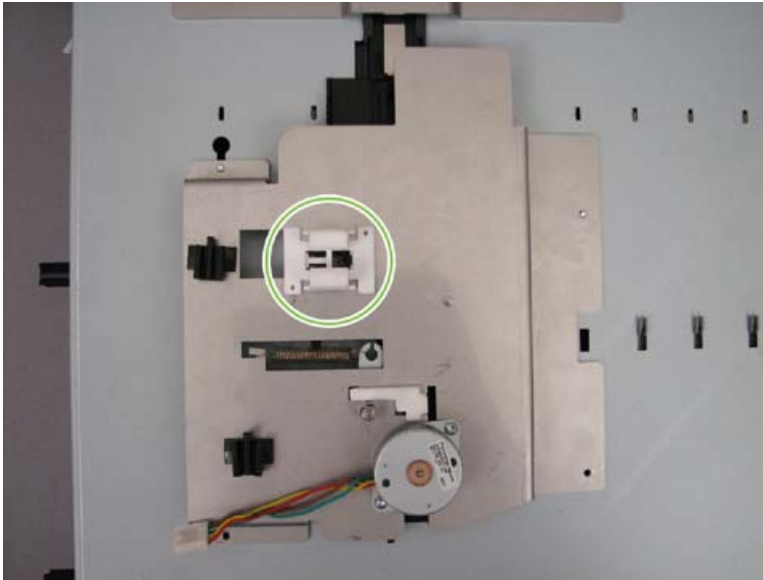
4. Remove six screws.



5. From the left side of the finisher, disconnect the Finisher Lower Elevator Stack Height sensor (SN257) from the upper-left corner of the lower middle cover.
6. Pull the top of the cover out and up.

7. Disconnect the wire connectors on the back of the lower mid cover for two other sensors (SN252 and SN258), and one motor (M252).

 **NOTE:** The entire Finisher Stack Holder sensor (SN252) holder can be removed by squeezing the tabs.



Output bins

- [Upper output bins](#)
- [Lower output bin](#)

Upper output bins


1. Push down to remove an upper output bin.



2. Disconnect the nylon tether on both sides of the output bin.



Lower output bin

1. Lower the lower output bin to prevent damaging the offsetters when removing the output bin.
 **NOTE:** If the HP Multifunction Finisher is still powered on, blocking the Finisher Lower Elevator Stack Height sensor (SN257) lowers the lower output bin.
2. Press in two tabs, and then lift off the lower output bin.




Lower output bin belts

This reinstallation procedure is similar for both lower output bin (bin 5) belts.


1. Remove the following items:
 - Front upper cover
[Front upper cover on page 781](#)
 - Front lower cover
[Front lower cover on page 781](#)
 - Rear cover
[Rear cover on page 783](#)
 - Stapler 1 assembly
[Stapler 1 assembly on page 842](#)
 - Job support bottom cover
[Job support assembly on page 814](#)
 - Lower output bin
[Lower output bin on page 803](#)
 - Accumulator assembly
[Accumulator assembly on page 848](#)
 - Finisher Lower Elevator motor (M250)
[Finisher Lower Elevator motor \(M250\) on page 923](#)

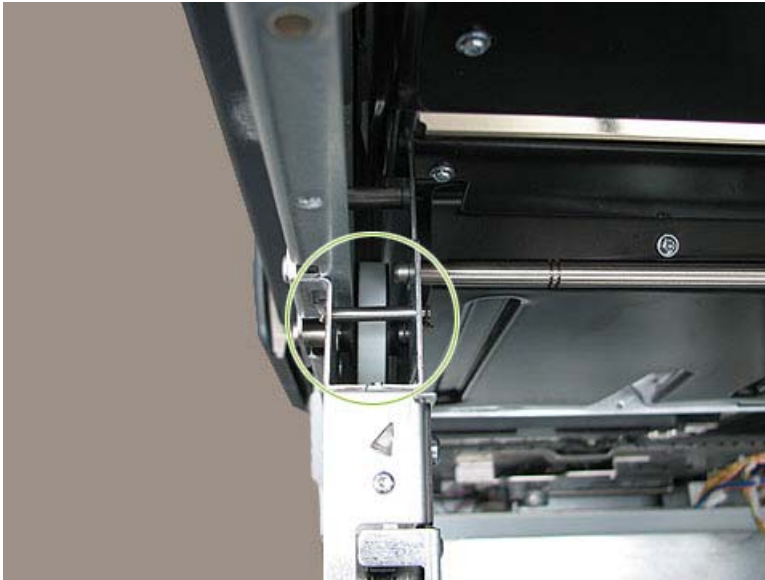
2. Attach channel locks to hold the lower output bin crossbar in a raised position so that the two belt blocks and connecting spring are visible in the inside opening.

 **NOTE:** Only the upper belt block is secured by a screw. The lower belt block can be knocked loose.

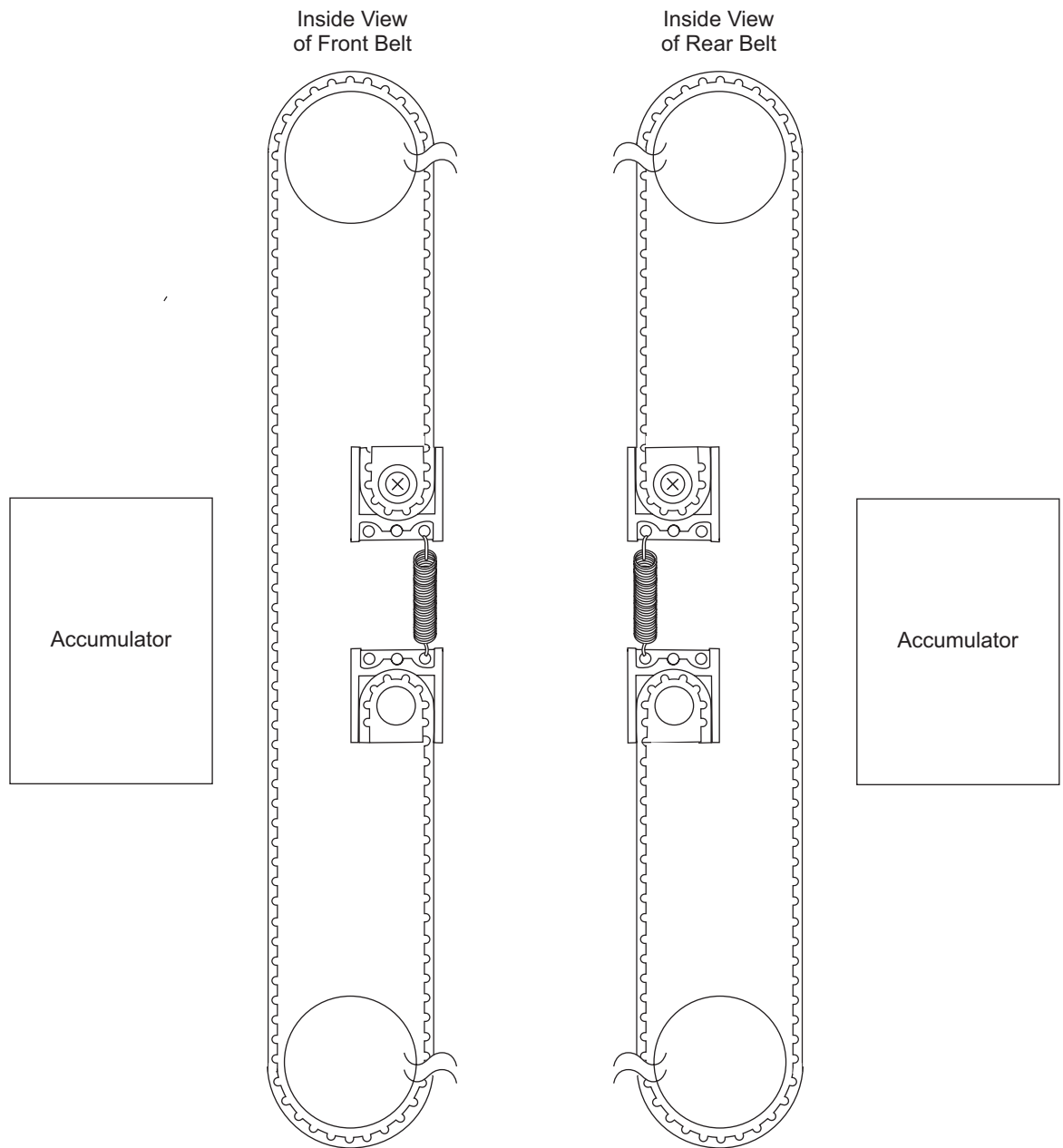


3. Verify the belt is properly positioned on the upper pulley, making sure the belt is not twisted.


 **NOTE:** If starting with the belt entirely out of the finisher, feed the belt over the upper pulley from the top. The pin centered above the pulley can be removed for easier access.




4. With the belt off the lower pulley, reinsert the ends of the belt into the belt blocks, orienting the belt as indicated in the following routing diagram:

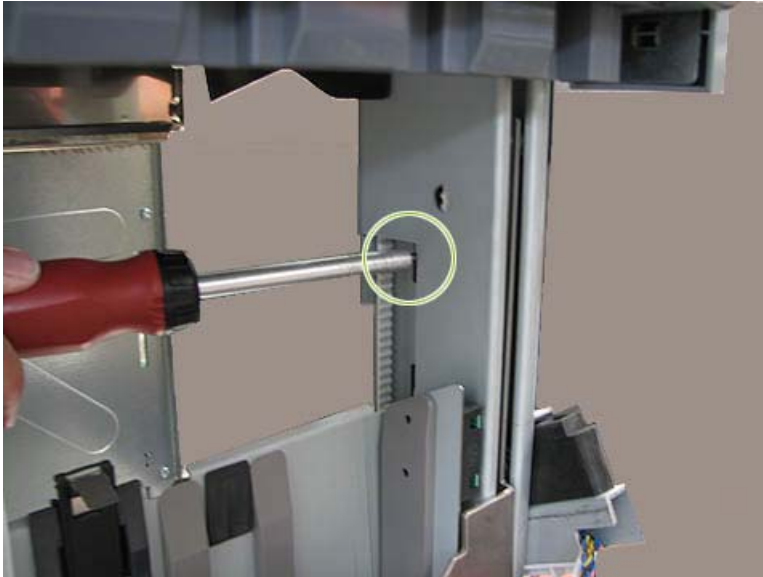


5. Attach the spring to the two belt blocks.

 **NOTE:** Each belt block has three holes. Use the holes indicated on the belt routing diagram.

6. Ensure the upper belt block is secured in position with a screw.

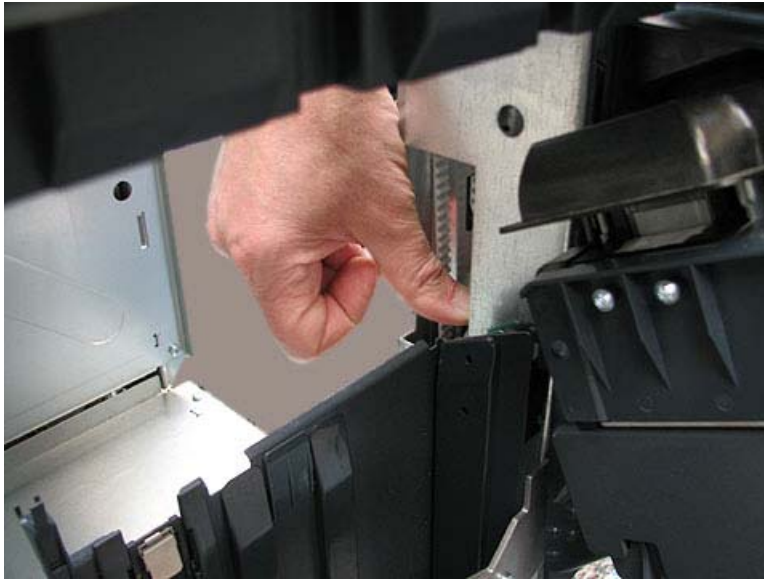
 **NOTE:** A T-20 bit with an extended shank is helpful to access this screw.



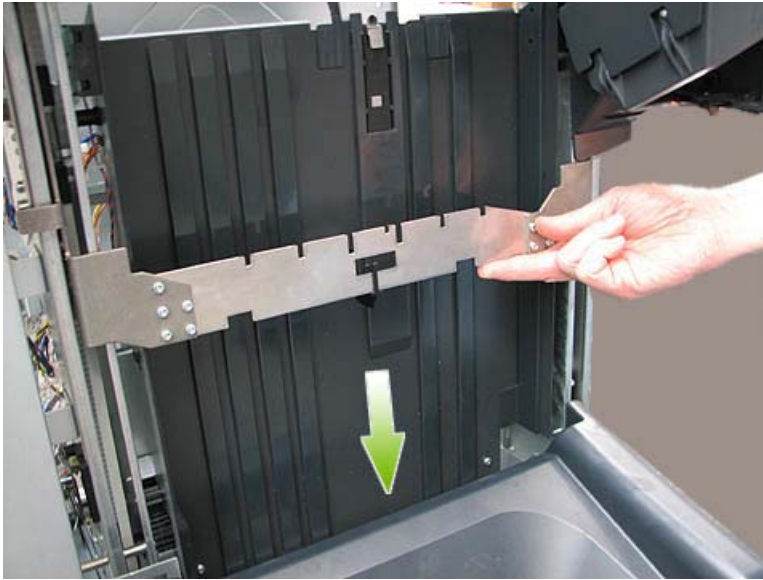
7. Position the lower belt block in its mounting slots.



8. While pushing down on the lower belt block to create slack in the belt, use a screwdriver to gently push and work the belt onto the lower pulley.



9. Verify the proper belt tension and alignment by raising the bin 5 crossbar to its highest position, and then letting it drop freely.




The crossbar should drop easily. If the crossbar is not level, it will not drop easily and could possibly bind. Force the bin 5 crossbar to its lowest position, and then push down on the higher end of the crossbar to align. Raise the crossbar to its highest position, and then repeat the drop test until the crossbar drops easily.



Stack holder assembly

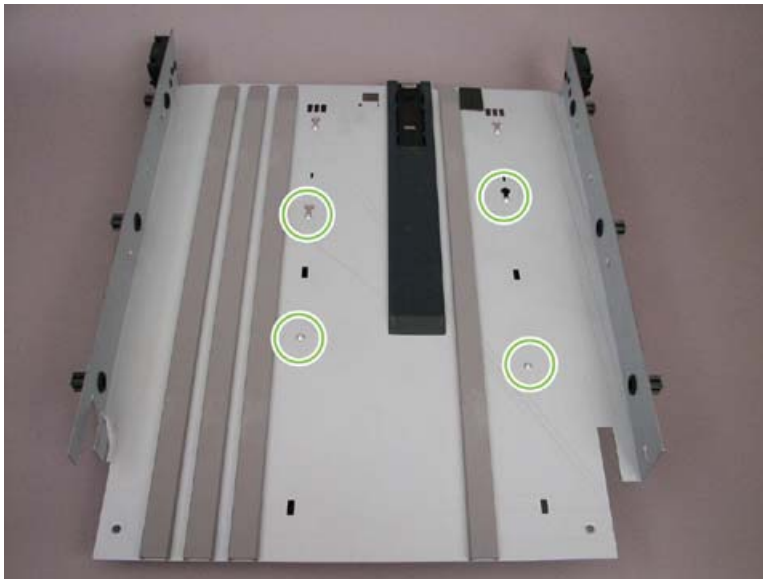
1. Remove the lower middle cover.
[Lower middle cover on page 799](#)

2. Remove two paper guides (the first and the third guides from the right) to access the screws for the motor support plate. Pry the side of each guide with a small flat-headed screwdriver, and then slide the entire guide down to remove.

 **NOTE:** The guides have screwdriver slots on the side for removing the guides. Ensure the guides lie flat when reinstalled.



3. Loosen the top two screws (keyed), and then remove the bottom two screws.

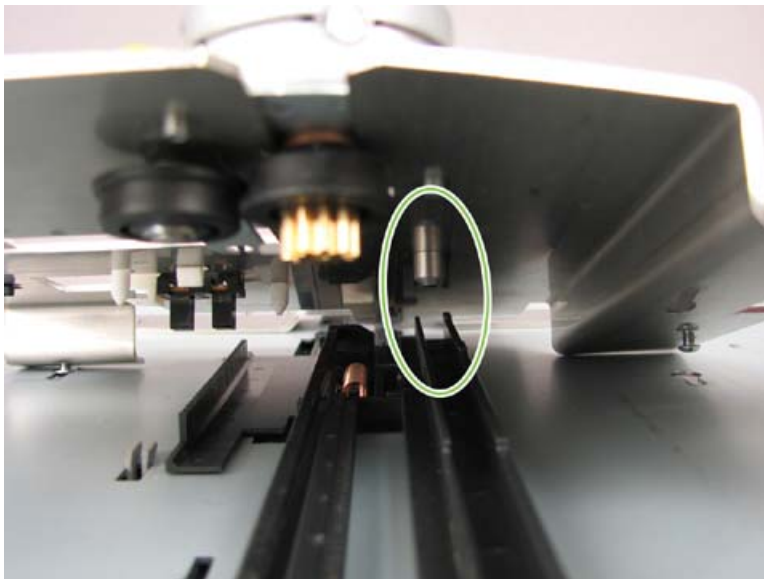


4. Turn the cover over, remove the spring, and then lift off the plate.

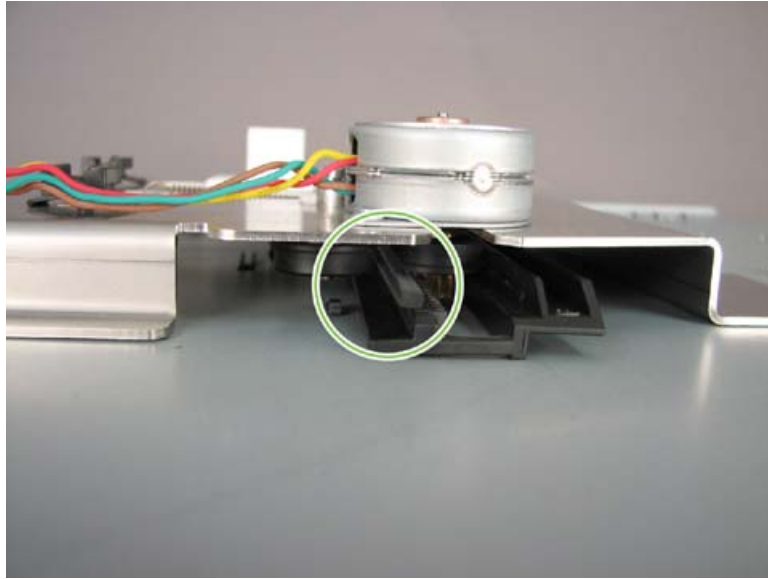


5. When reassembling, verify the following items:

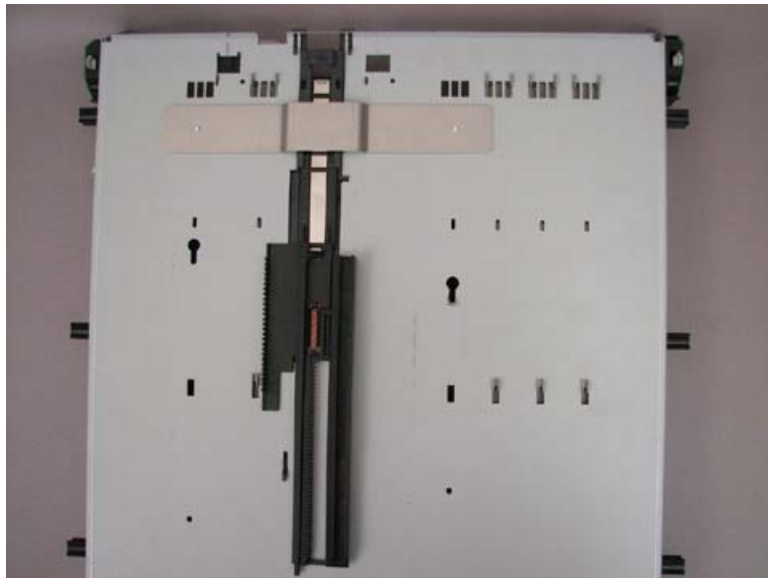
- Check that the pin on the motor support plate fits into the groove on the gear rack.



- Check that the control rod is between the two friction rollers.



- Check that the alignment of the control rod, gear rack, spring, and slider matches the photo.



- When fully assembled, check that the flipper at the top of the slider assembly is *out* when the slider is going down and *in* when the slider is going up.



Job support assembly

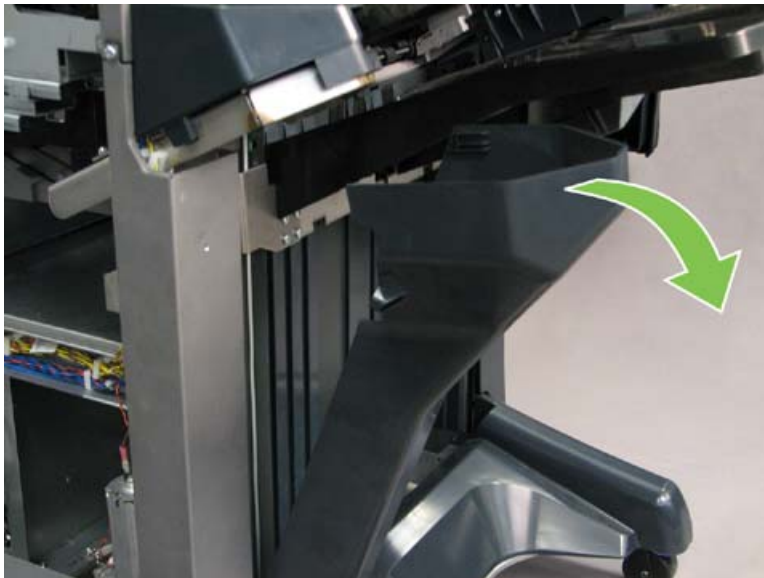
1. Remove the rear cover.
[Rear cover on page 783](#)
2. Move the job support arm into the disengaged position.



3. Remove one screw.



4. Unsnap the front and rear top of the job support bottom cover, and then tilt the cover to remove it.

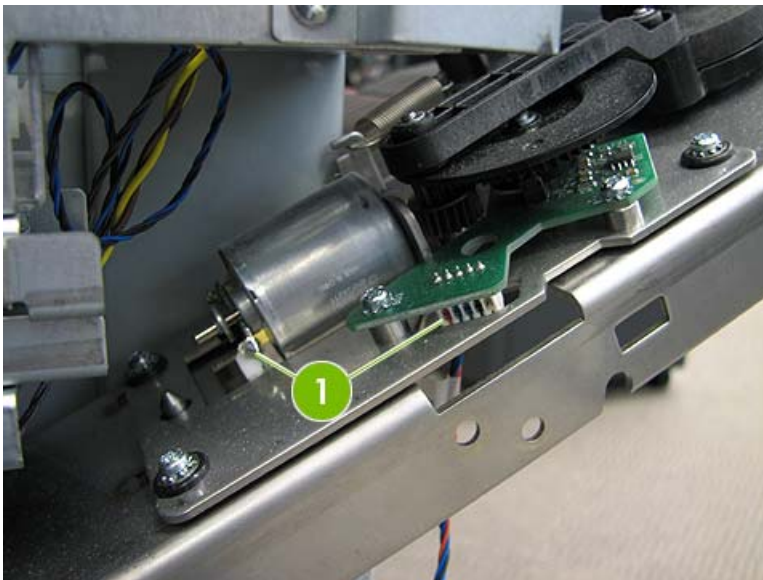


5. Remove three screws from the job support bracket.

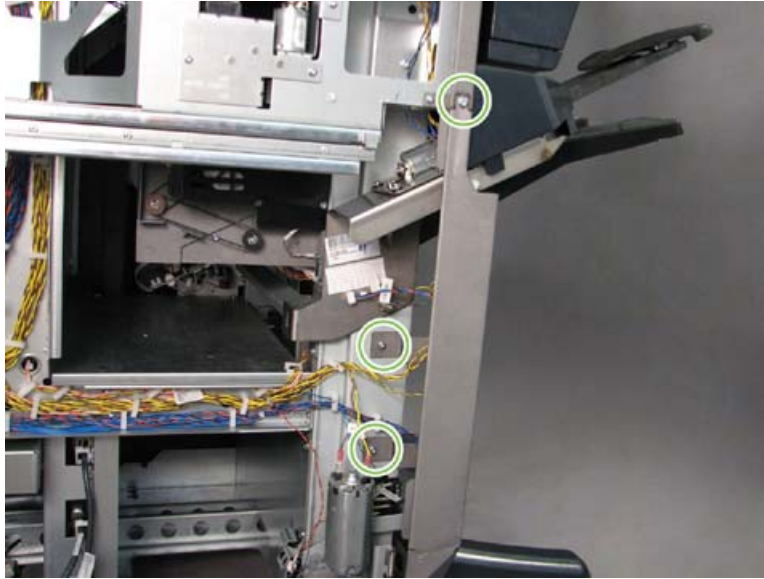


6. Disconnect two wire connectors (callout 1) to the Finisher Job Support Arm motor (M253) and to the job support PCA (A253):

- W251P7-M253/W251J3-W250P3
- W251P8-A253



7. Remove three screws from the rear lower cover.



8. Gently flex the upper portion of the rear lower cover, and then lift out the job support assembly.
9. If needed, unclip, and then remove the job support top cover.

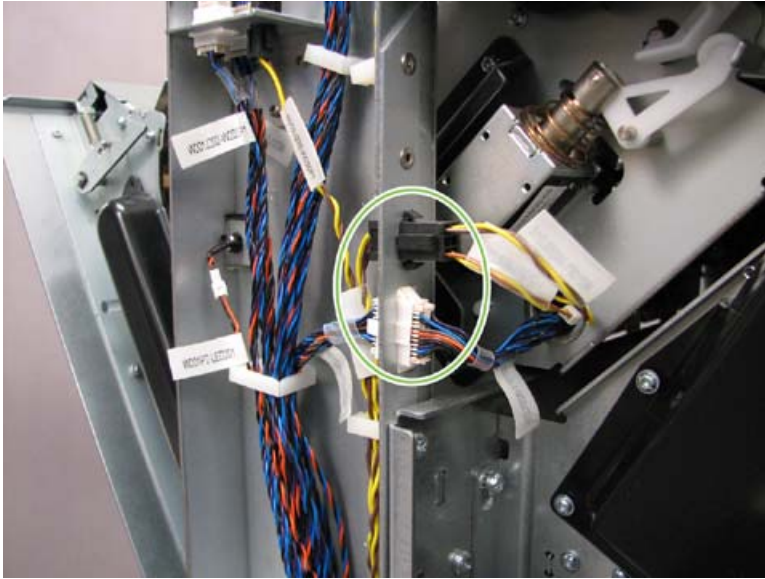
Input paper path

- [Input paper path assembly](#)
- [Input paper path guides](#)

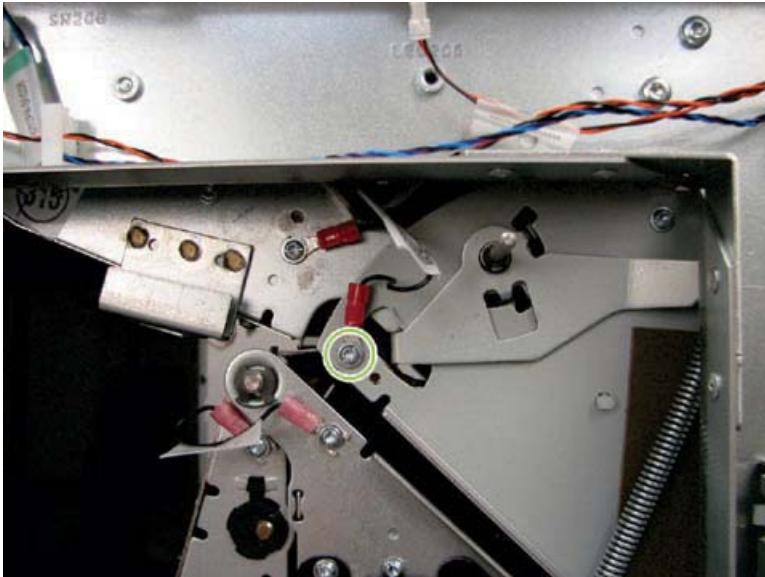
Input paper path assembly

1. Remove the following items:
 - Front upper cover
[Front upper cover on page 781](#)
 - Rear cover
[Rear cover on page 783](#)
 - Handle 2 (upper transport)
[Handle 2 \(upper transport\) on page 796](#)
 - Front structure frame cover
[Front structure frame cover on page 788](#)

2. Disconnect cable harness W200J210.



3. Remove one screw, and then disconnect the ground wire between the paper path and handle 2 (upper transport).



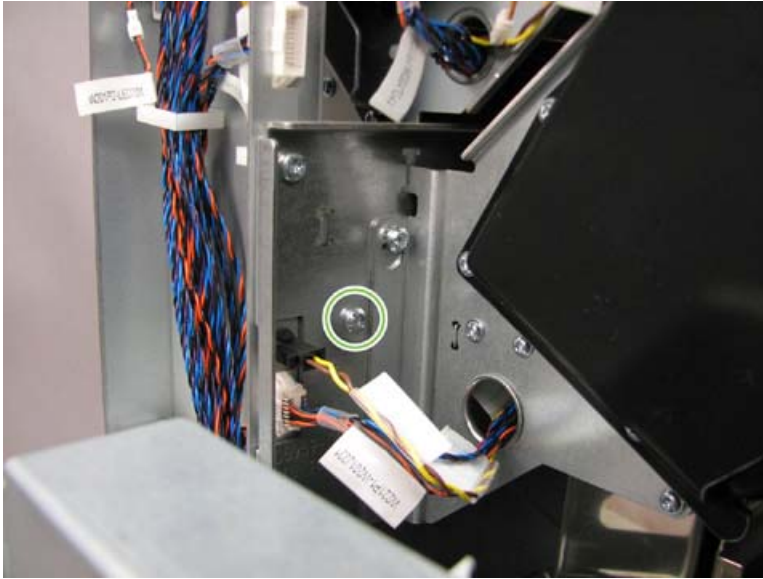
4. Remove two screws from the hinge bracket, and then remove the hinge bracket from the frame.



5. Remove one inside screw on the front side.



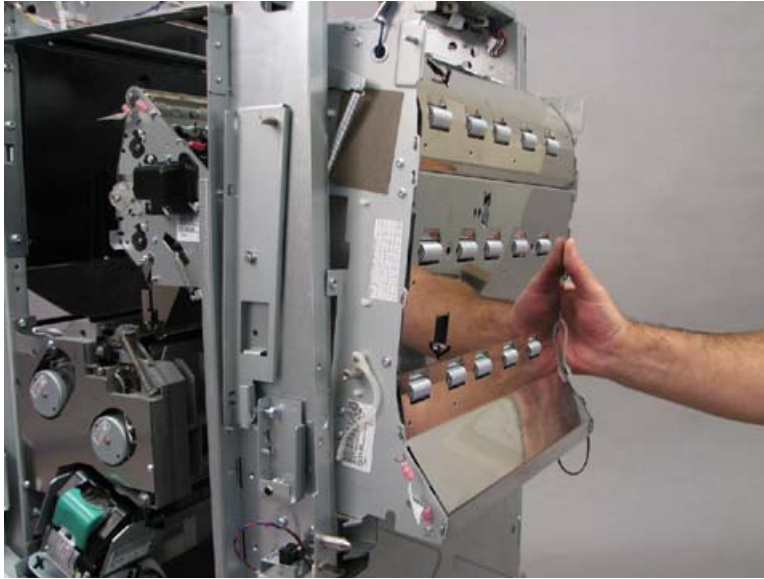
6. Remove one inside screw on the rear side.



7. Remove one screw from the front of the HP Multifunction Finisher.



8. Remove the input paper path assembly.




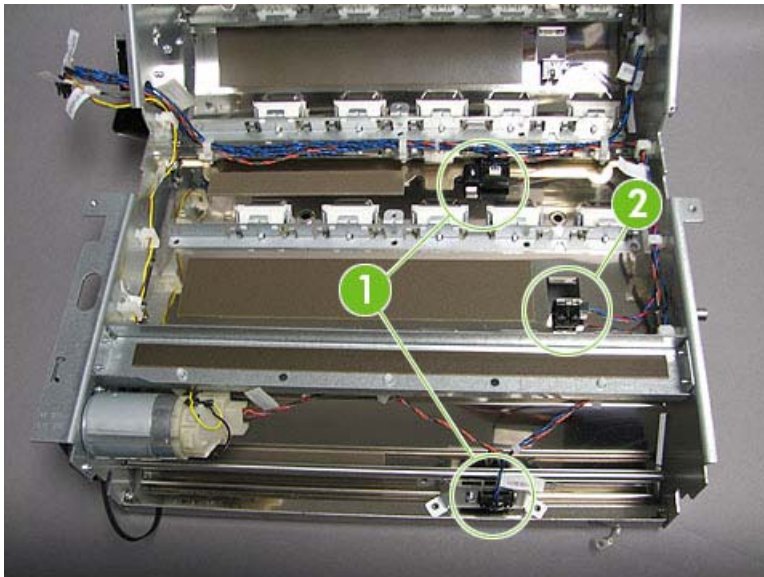
Input paper path guides

1. Remove the input paper path assembly.

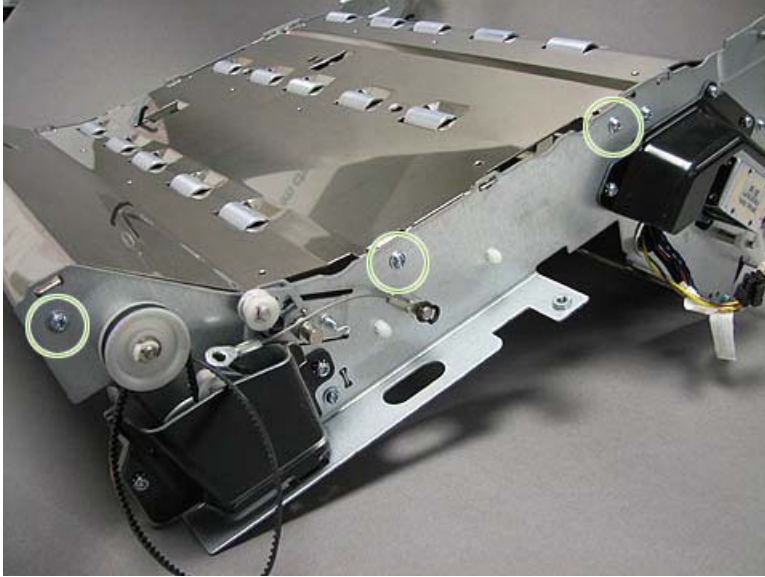
[Input paper path assembly on page 817](#)

2. Disconnect and then remove three sensors (Finisher Input 0 sensor (SN211), Finisher Input 1 sensor (SN212), and Finisher Input 2 sensor (SN213)) from the input paper assembly lower guide. These sensors will be reinstalled on the replacement guide.

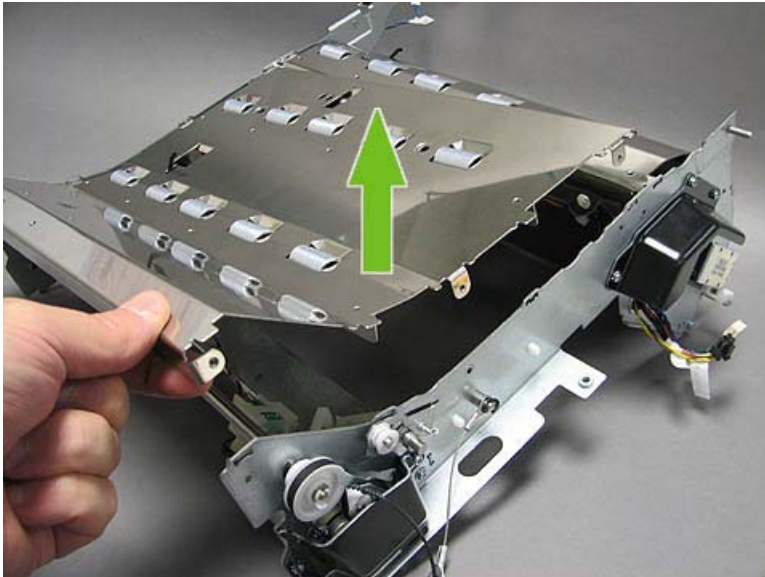
 **NOTE:** SN211 and SN213 (callout 1) are each mounted to the lower guide by one screw. Remove the screw, and then remove the sensor. Remove SN212 (callout 2) by pinching the mounting feet, and then lifting it off the bracket.



3. Remove three screws from each side (six screws total) of the input paper path assembly.



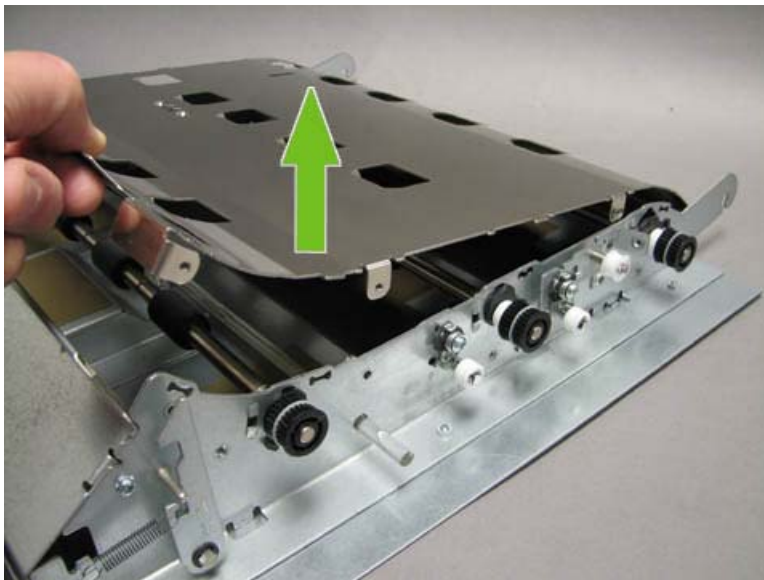
4. Gently pry between the input paper path frame and the guide, and then gently lift out the lower guide.




5. Remove four screws from each side (eight screws total) of the right side panel. (One screw holding a ground wire might have already been removed when the panel was removed.)



6. Rotate the bearing yokes on the pulley side of the three driver rollers, and then gently pry between the frame of the right side panel and the guide, and then gently lift out the guide.



7. Install sensors SN211, SN212, and SN213 onto the replacement lower guide of the input paper path assembly, and then reassemble both guides.

 **NOTE:** When reinstalling the guides, make sure the guide tabs are properly inserted into the slots on the frame.

Separator

- [Output media-path assembly](#)
- [Offset mechanism assembly](#)

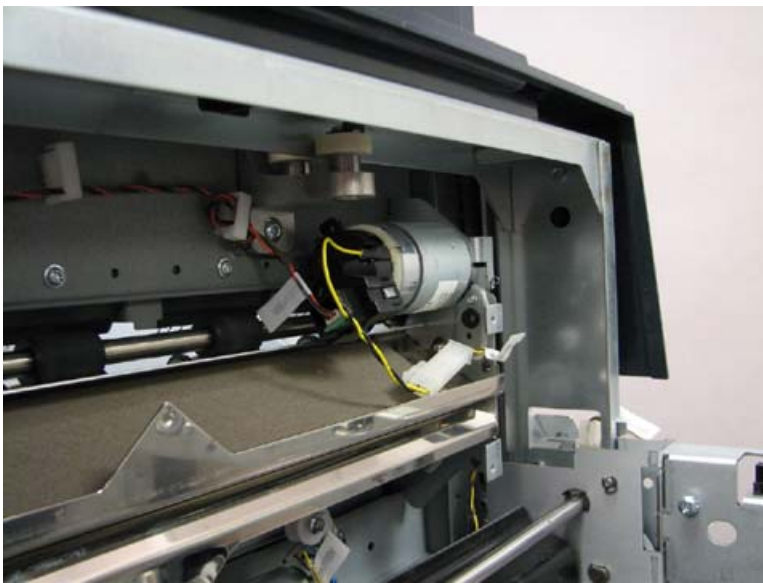
- [Paper gate assembly](#)
- [Separator wire harness](#)
- [Separator paper guide](#)
- [Separator structure](#)
- [Separator transmission](#)

Output media-path assembly


1. Open the top door, handle 1 (upper transport), and then handle 2 (upper transport).
2. Remove three screws from both the separator output media cover and the paper gate cover.

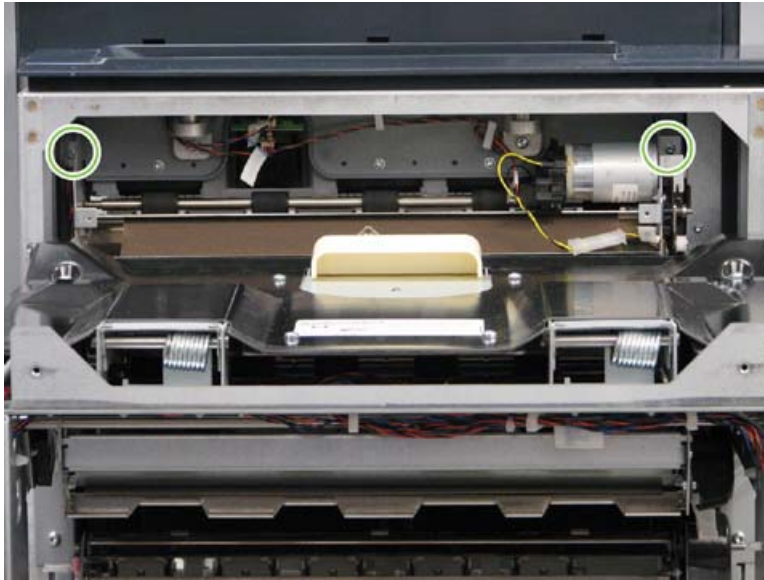
[Separator covers on page 789](#)


3. Disconnect two wire connectors from the Finisher Separator Input motor (M268):
 - W262P4-M268
 - W262P3-EN268

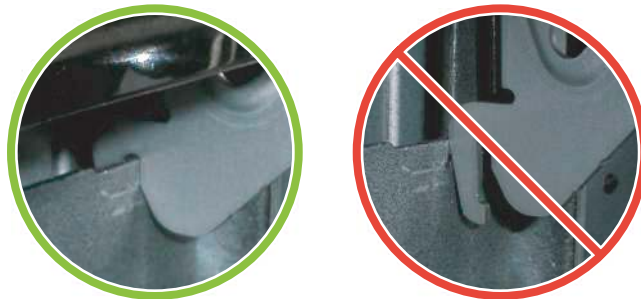


4. Remove two screws, and then lift up to unhook and remove the output media-path assembly.

 **Reinstallation tip** When reinstalling the assembly, be careful not to pinch the wiring between the finisher frame and the output media path assembly.



 **Reinstallation tip** Be sure that the hooks at the bottom of the output media path assembly are properly hooked onto the separator frame.

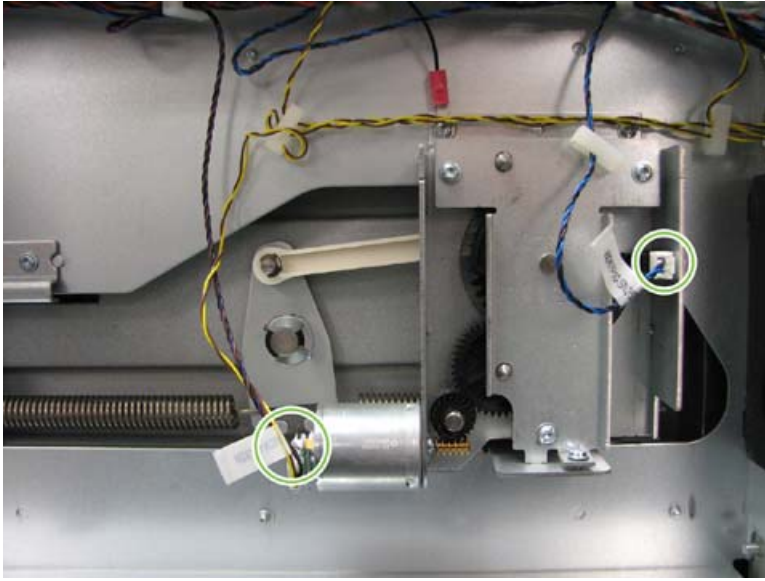


Offset mechanism assembly

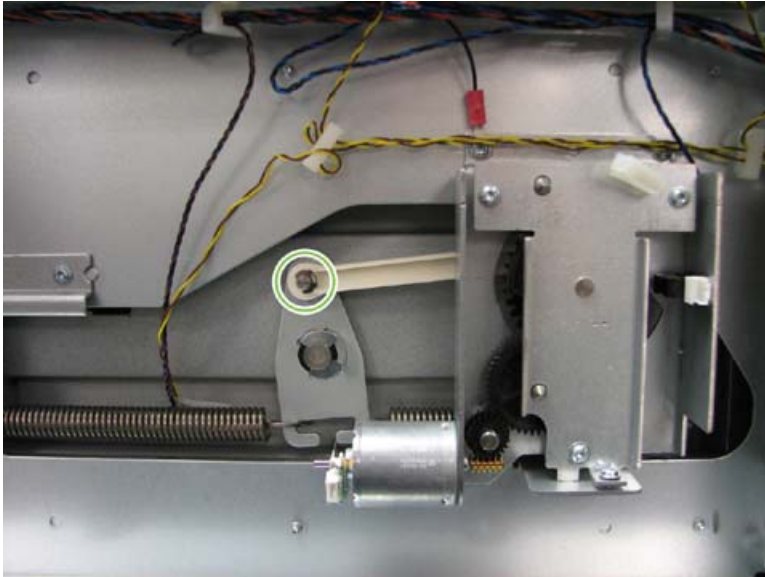
1. Open the top door, handle 1 (upper transport), and then handle 2 (upper transport).
2. Remove the separator offset mechanism cover.

[Separator covers on page 789](#)


3. Disconnect two wire connectors:
 - W267P8-M264 to the Finisher Separator Offset motor (M264)
 - W267P10-SN265 at the Finisher Job Separator Offset Back sensor (SN265)

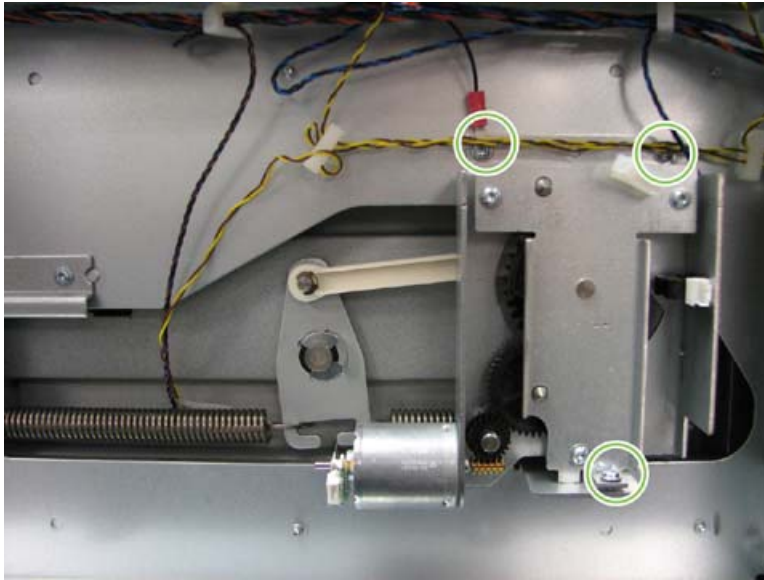


4. Remove the retaining clip from the arm of the offset mechanism.



5. Remove three screws, and then lift out the offset mechanism.

 **Reinstallation tip** When installing the offset mechanism, ensure that the grounding wire is installed under the hardware.

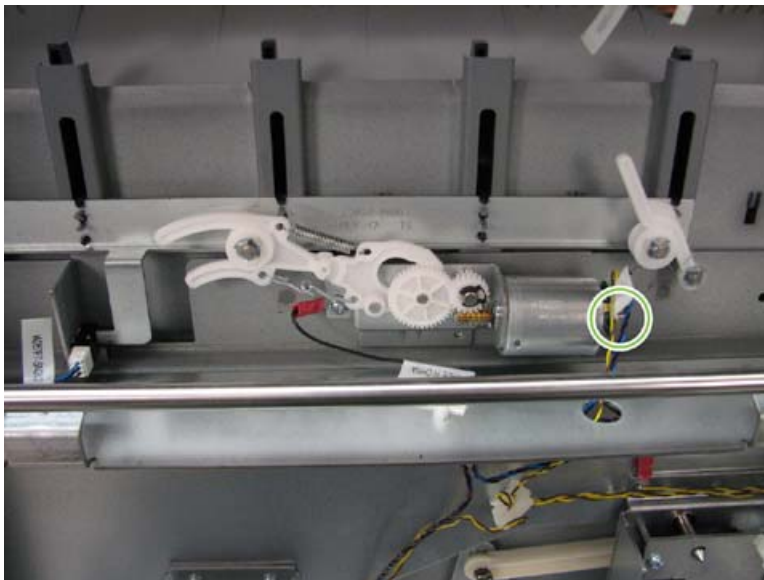


Paper gate assembly


1. Open the top door, handle 1 (upper transport), and then handle 2 (upper transport).
2. Remove the separator paper gate cover.

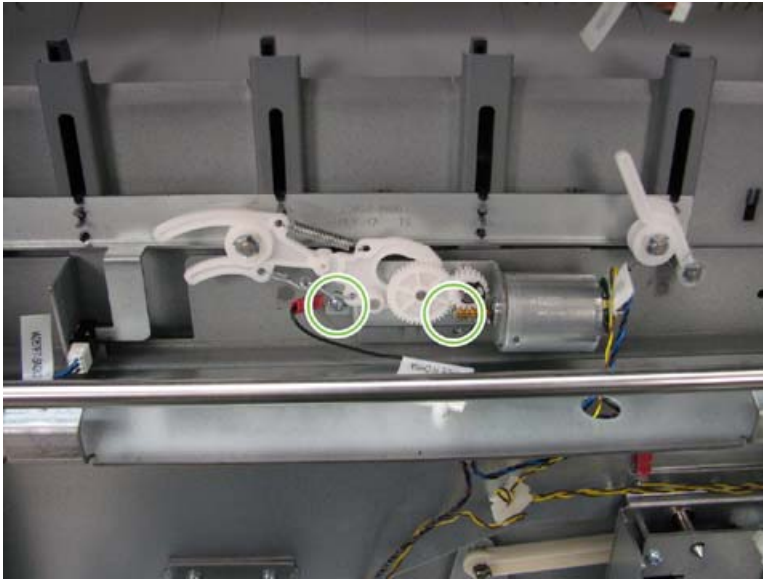
[Separator covers on page 789](#)

3. Disconnect cable harness W276P6-M262 to the Finisher Job Separator Gate motor (M262).



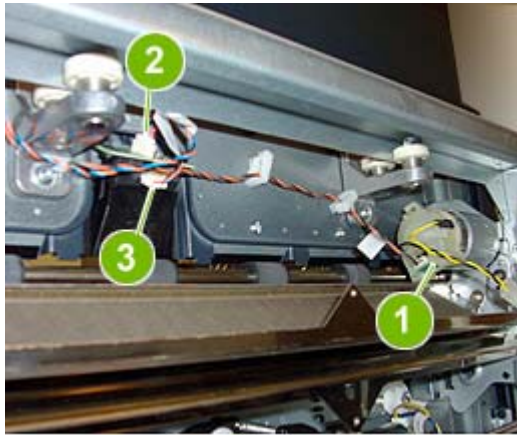
4. Remove two screws, and then slide the motor assembly to the rear to disengage the pulley and to remove the motor assembly.

 **NOTE:** The left screw has a ground wire connection.



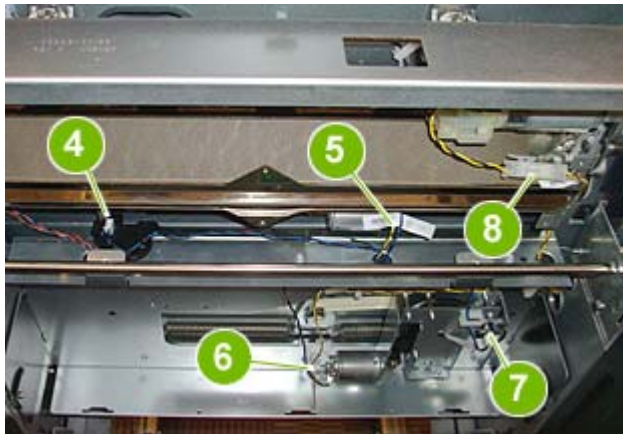
Separator wire harness

1. Remove the following items:
 - Rear cover
[Rear cover on page 783](#)
 - Top door left
[Top door left on page 780](#)
 - Separator covers
[Separator covers on page 789](#)
2. From inside the finisher, locate and disconnect the components of the job separator harness from the upper media path area:
 - EN268 (callout 1)
 - A267 (callout 2)
 - SN267 (callout 3)



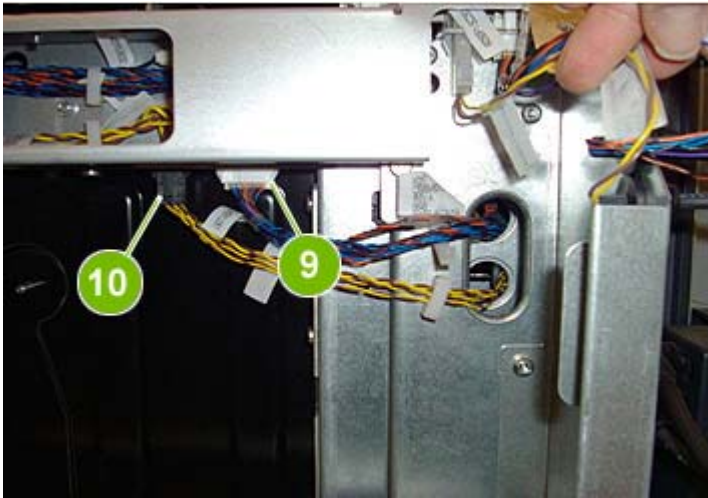
3. From inside the finisher, locate and disconnect the components of the job separator harness from the upper media path area:

- SN262 (callout 4)
- M262 and EN262 (callout 5)
- M264 and EN264 (callout 6)
- SN265 (callout 7)
- M268 (callout 8)



4. From the back of the finisher, locate and disconnect the components of the job separator harness.

- W260-J267 (callout 9)
- W261-J267 (callout 10)



5. On the new replacement wire harness, remove the wire tie on the SN262 cable (blue, black, and purple), if it is present.

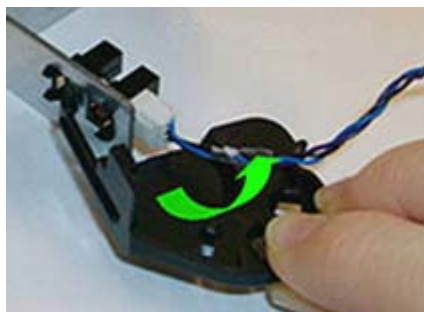
💡 **Reinstallation tip** Be sure to route the SN262 cable through the access hole (callout 1) near the rear of the finisher when connecting the cable to SN262.



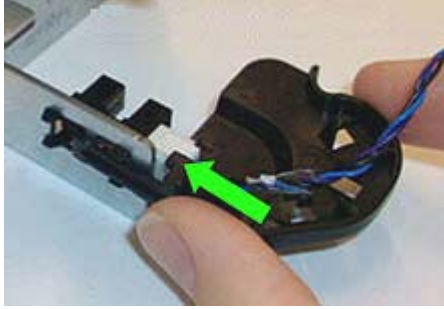
6. Install the new wire harness retainer:

💡 **Reinstallation tip** If the plastic retention tabs on the SN262 are bent, the retainer might not go in easily. Be sure to adjust as necessary. The retainer should snap into place without affecting the placement of the sensor.

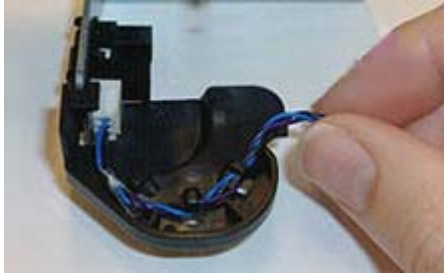
- a. Hook, and then rotate the retainer.



- b. Push to snap the retainer into position.

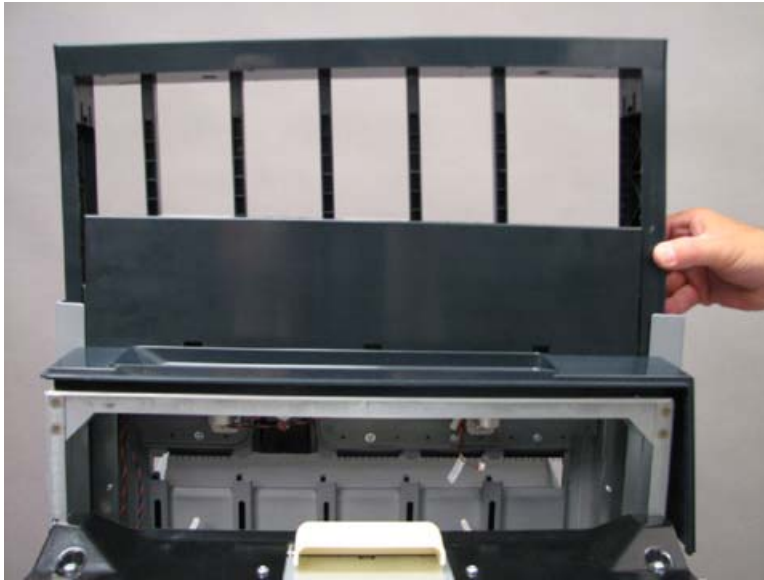


- c. Route the wire through the hooks and around the bend.



Separator paper guide

- Remove the guide from the separator by slightly prying apart the ends of the guide while lifting up.



Separator structure


1. Remove the following assemblies:
 - Front upper cover
[Front upper cover on page 781](#)
 - Top door left
[Top door left on page 780](#)
 - Top cover side
[Top cover side on page 780](#)
 - Separator covers
[Separator covers on page 789](#)
 - Paper-gate motor assembly
[Paper gate assembly on page 827](#)
 - Offset-mechanism motor assembly
[Offset mechanism assembly on page 825](#)
 - Output media-path assembly
[Output media-path assembly on page 824](#)
 - Output bins
[Upper output bins on page 802](#)
 - Stapler 2 assembly
[Stapler 2 assembly on page 844](#)

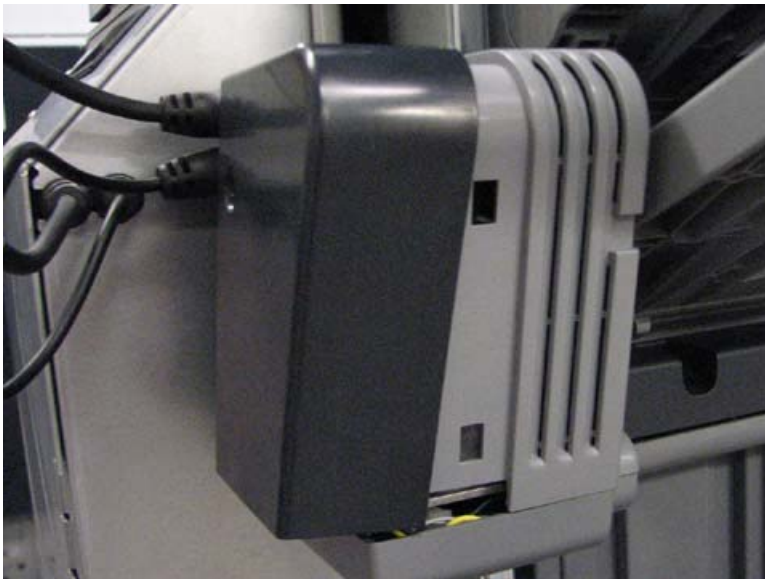
2. Pry the top tab on the front and rear tray supports, and then push up to remove each of the two supports.



3. Remove one screw, and then unsnap the rear cover of the separator motor. Detach the two cables from the rear cover.



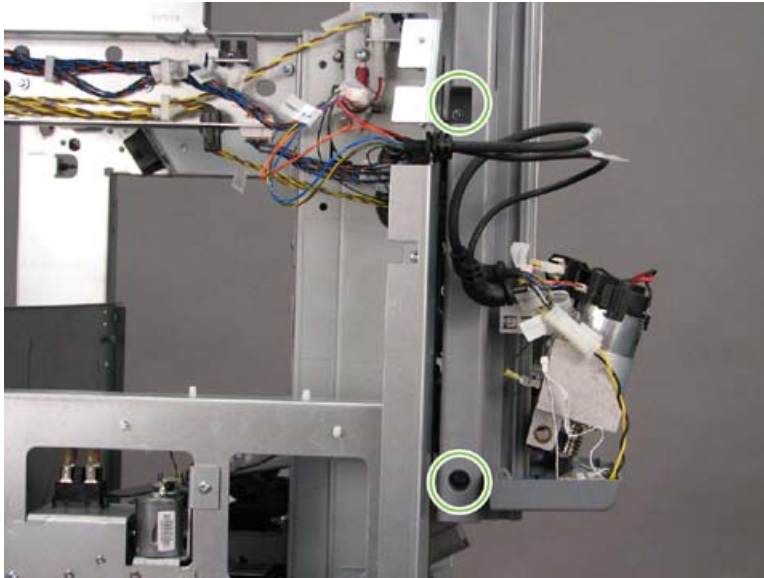
 **NOTE:** The rear separator cover snaps into two holes on the front separator cover.



4. Remove one screw on the bottom, and then remove the separator motor cover.



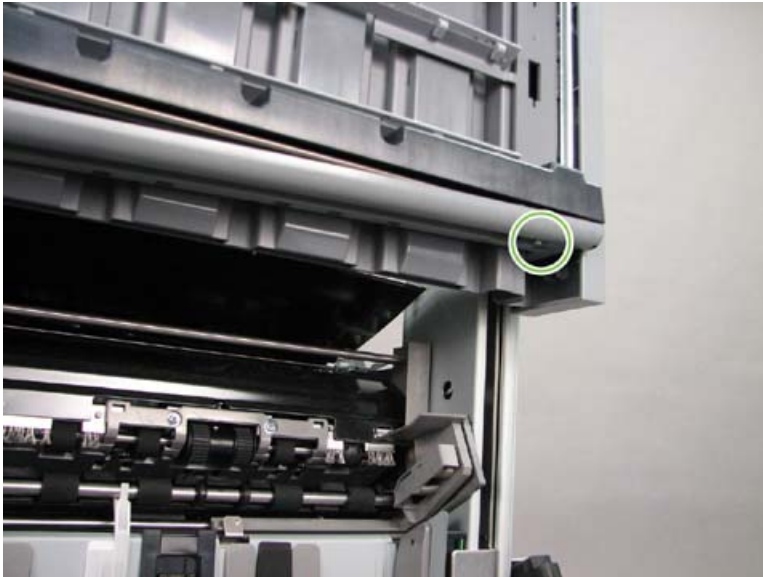
5. Remove two screws, and then remove the side rail cover.



6. Remove four screws, and then remove the shaft guide.



7. Remove one screw, disconnect the front and rear connectors, and then remove the anti-pinch switch.

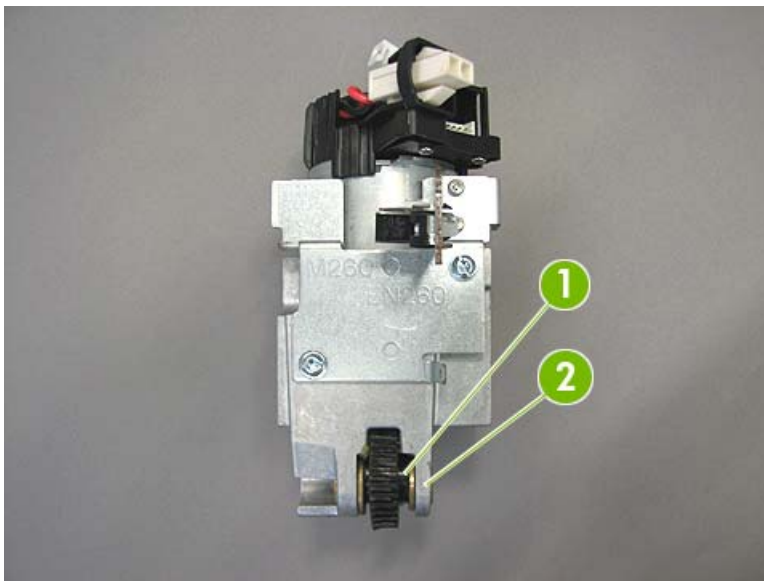


8. Remove one screw, disconnect the motor cables, and then remove the Finisher Separator Drive motor (M260).

△ **CAUTION:** Hold the separator while removing the motor to prevent the separator from falling.



💡 **Reinstallation tip** There is a loose gear that is directional at the bottom of M260 for the separator shaft. It is possible to install the gear in the wrong position. Ensure the gear is installed with the thick part of the gear (callout 1) facing the thin part of the motor (callout 2).



9. Remove two screws from each of the horizontal roller brackets, and then remove the brackets.



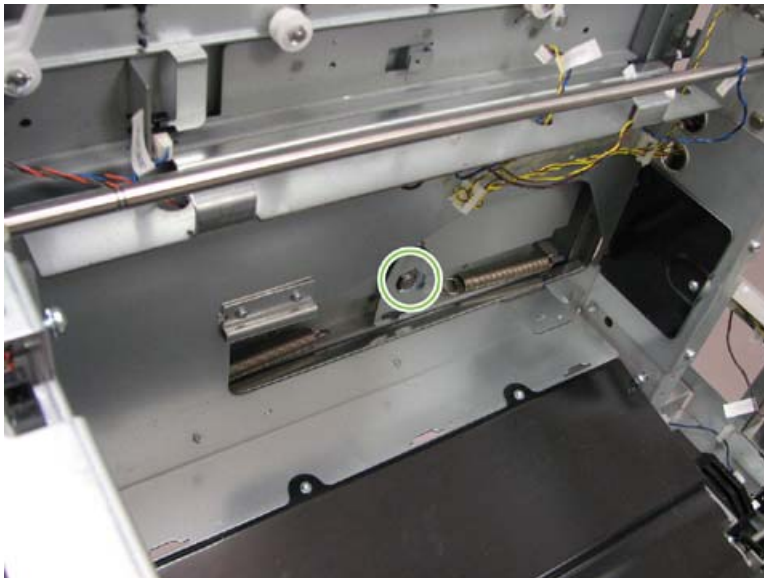
10. Remove two screws, and then remove the separator offset stop, if present.



11. Unhook the two offset springs.



12. Remove the retaining clip and bracket from the offset spring pivot.

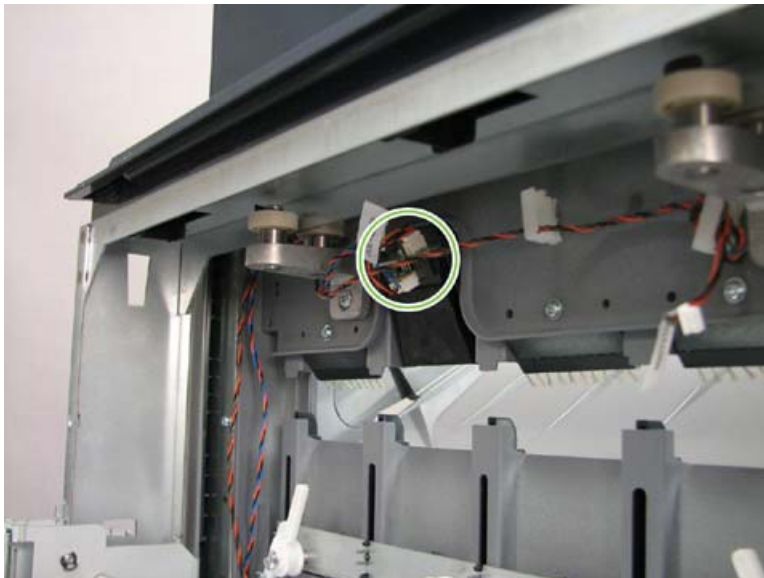


13. Disconnect two wire connectors, and then remove all wire harnesses from the cable saddles on the separator:


- W267P7-SN262 to the Finisher Job Separator Gate Open sensor (SN262)

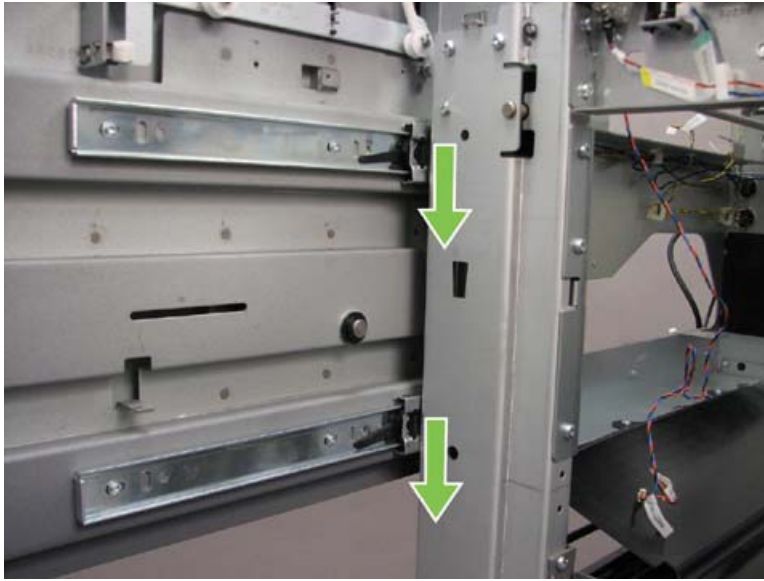


- W267P11-SN267 to the Finisher Job Separator Stack Height sensor (SN267)



14. Slide the rack to access the guide release latches. Press down on the two latches, and then slide the rack off the guides.

 **NOTE:** Tilt the rack slightly while sliding it to allow the sensors to clear the frame.



Separator transmission

1. Remove the separator structure.

[Separator structure on page 832](#)

2. Lift the separator rack to access the guide release latches. Press the two release latches, and then lift out the rack assembly.

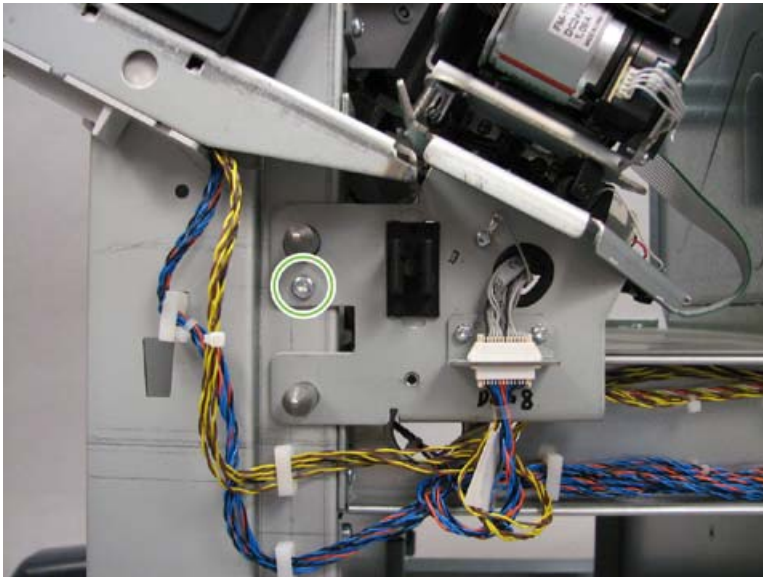


3. Remove six screws, and then remove the rack gear, and the sliderail and bracket assembly on each side.

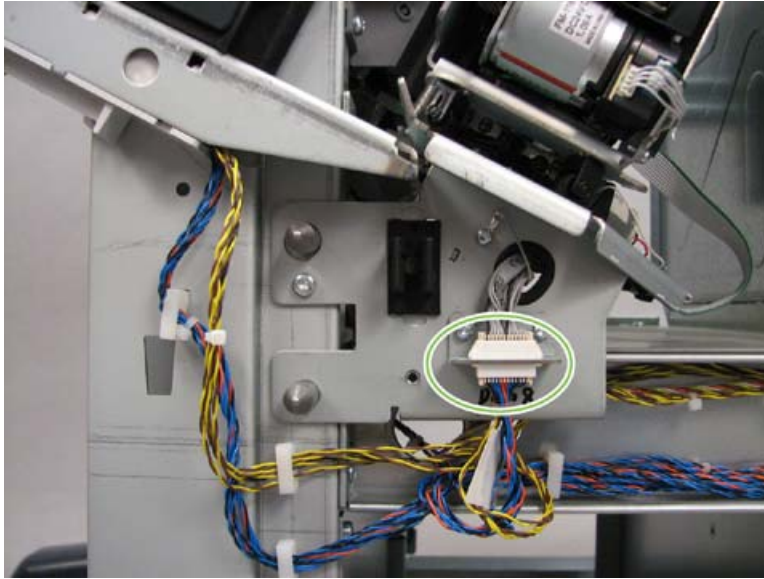


Stapler 1 assembly

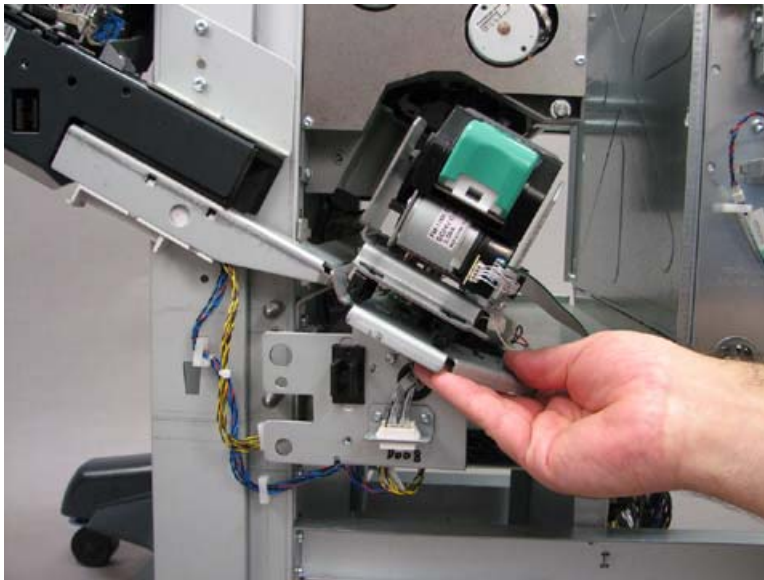
1. Remove the following items:
 - Front upper cover
[Front upper cover on page 781](#)
 - Front lower cover
[Front lower cover on page 781](#)
2. Remove one screw.




3. Disconnect the stapler 1 cable harness (W270J271-W271P1).



4. Slide out the stapler assembly.



 **NOTE:** When a stapler is replaced, run the following routine to adjust the staple position:


[Stapler alignment on page 72](#)

Stapler 2 assembly

1. Remove the following items:

- Front upper cover
[Front upper cover on page 781](#)
- Front lower cover
[Front lower cover on page 781](#)
- Stapler 2 covers
[Stapler 2 covers on page 787](#)

2. Remove one screw.

 **Reinstallation tip** If the stapler 2 assembly is removed or replaced, adjust this bracket so that it is snug against the arm of the stapler 2 assembly.



3. Disconnect the stapler 2 connector (W270J280-W280P1) underneath stapler 2, and then slide the stapler 2 assembly off the unit.



 **NOTE:** When a stapler is replaced, run the following routine to adjust the staple position:

[Stapler alignment on page 72](#)

Accumulator

- [Accumulator covers](#)
- [Accumulator assembly](#)
- [Guide bar assembly](#)
- [Bearing bracket assembly](#)
- [Accumulator Distribution PCA \(A240\)](#)
- [Lever support shaft](#)
- [Offset shaft](#)
- [Offsetters \(front and rear\)](#)
- [Lower eject shaft](#)
- [Paper guide complete](#)

Accumulator covers

- [Accumulator cover upper assembly](#)
- [Accumulator cover lower](#)

Accumulator cover upper assembly

- Remove two screws, and then remove the cover upper assembly.



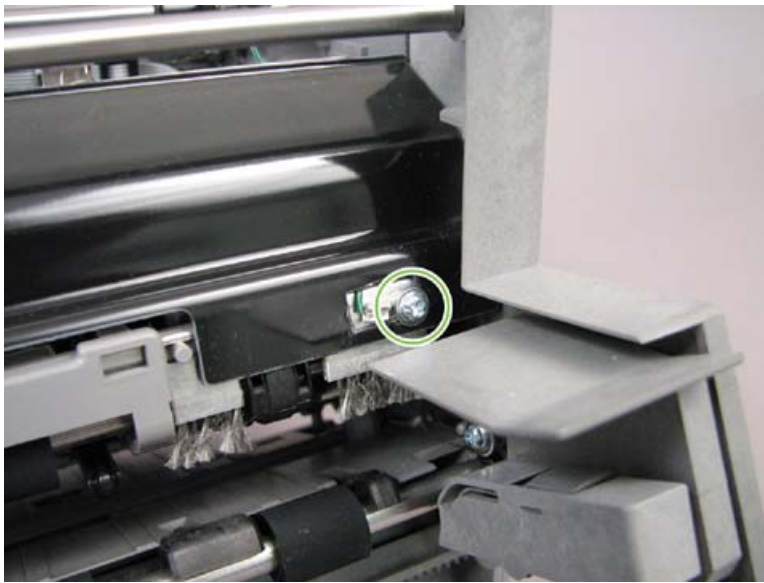
Accumulator cover lower

The accumulator cover lower attaches to the bearing bracket.

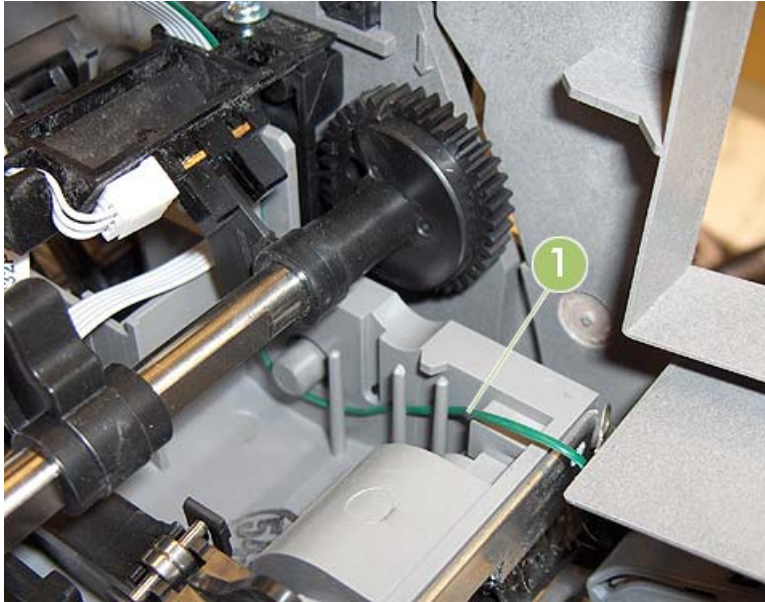
- Remove three screws, and then remove the accumulator cover lower.



 **NOTE:** The right screw captures the cover, a ground screw, and a static brush bar.



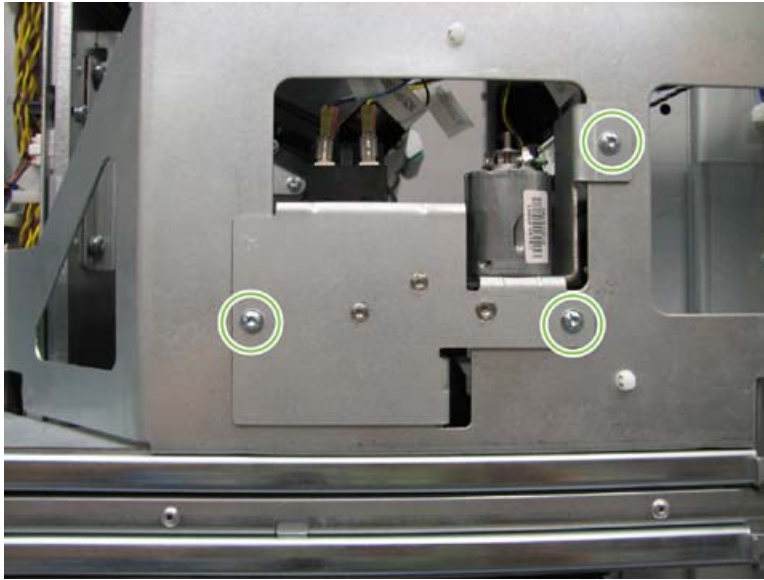
 **TIP:** Make sure to route the green grounding wire (callout 1) correctly as shown here.



Accumulator assembly

1. Remove the following items:
 - Rear cover
[Rear cover on page 783](#)
 - Front lower cover
[Front lower cover on page 781](#)
 - Accumulator cover upper assembly
[Accumulator cover upper assembly on page 846](#)

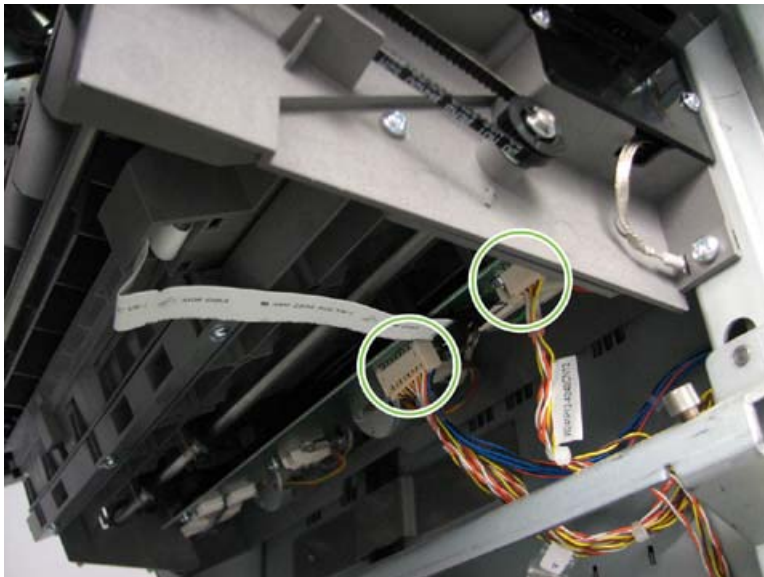
2. Remove three screws, and then set the accumulator open assembly bracket aside. You do not need to disconnect the motor or switch wires.



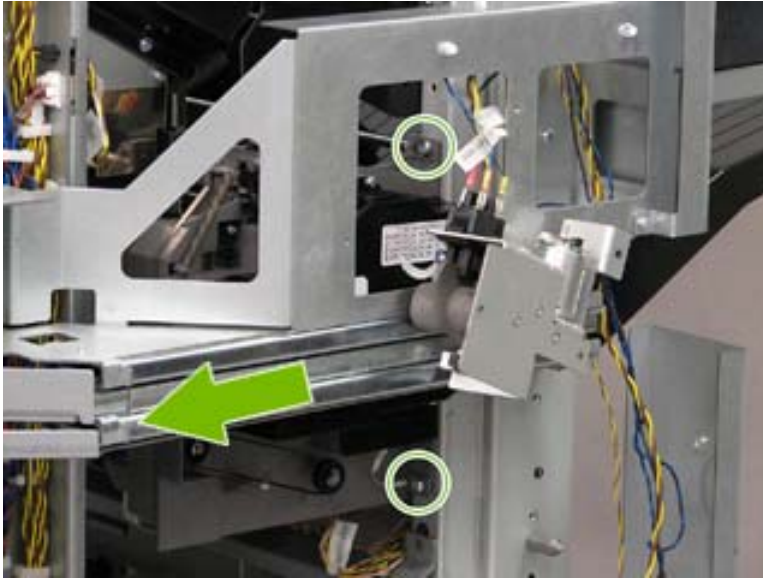
3. Remove stapler 1.

[Stapler 1 assembly on page 842](#)

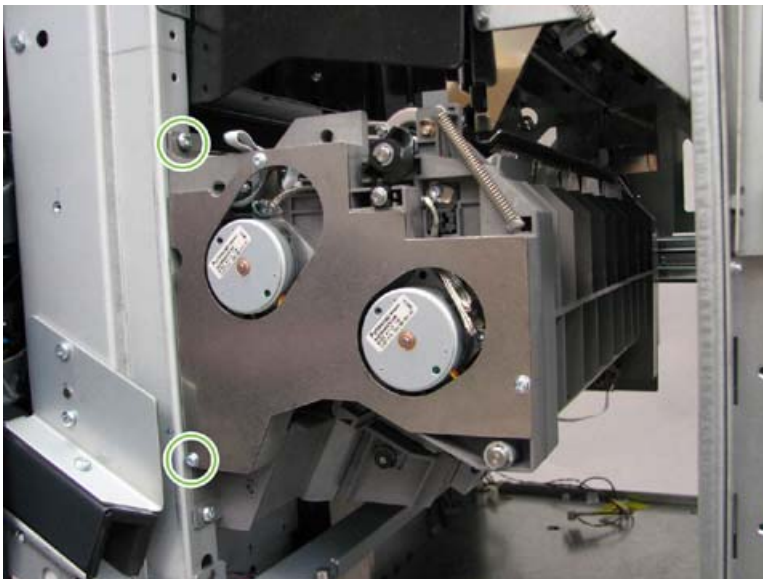
4. From the rear, disconnect two cable harnesses (W240P13-A240CN13 and W241P12-A240CN12) underneath the accumulator.



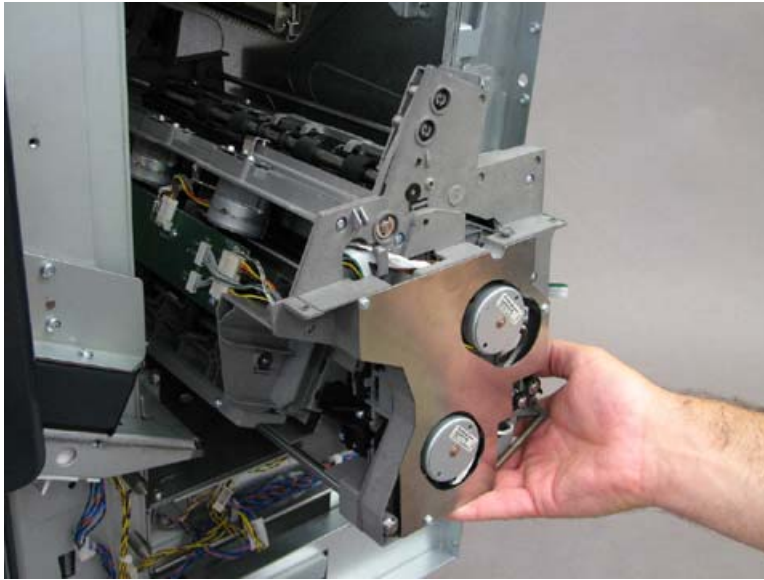
5. From the rear, remove two screws.



6. Extend the finisher slide arm.
7. From the front, remove two screws.



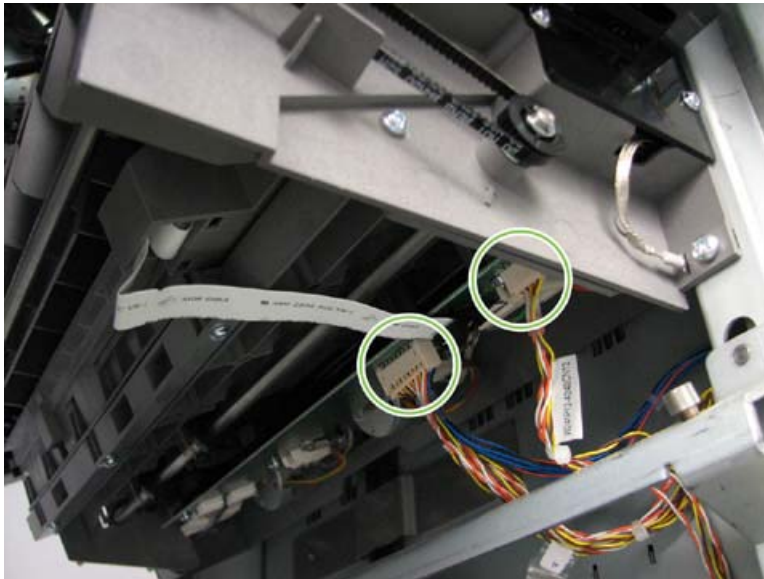
8. Lift up and lay the accumulator on the tray underneath. Rotate the accumulator, and then slide the accumulator out the front of the HP Multifunction Finisher.



△ **CAUTION:** Lift the accumulator by the ends only. Do not lift the accumulator by any of the bars to prevent damage to the accumulator.

💡 **Reinstallation tip** When reinstalling, slide the accumulator in, secure with four screws, and then reconnect the two cables. Ensure the accumulator shaft engages the Y-clip on the lower mid cover before tightening the four screws that secure the accumulator.

When reinstalling, be careful not to damage the flat ribbon cable.

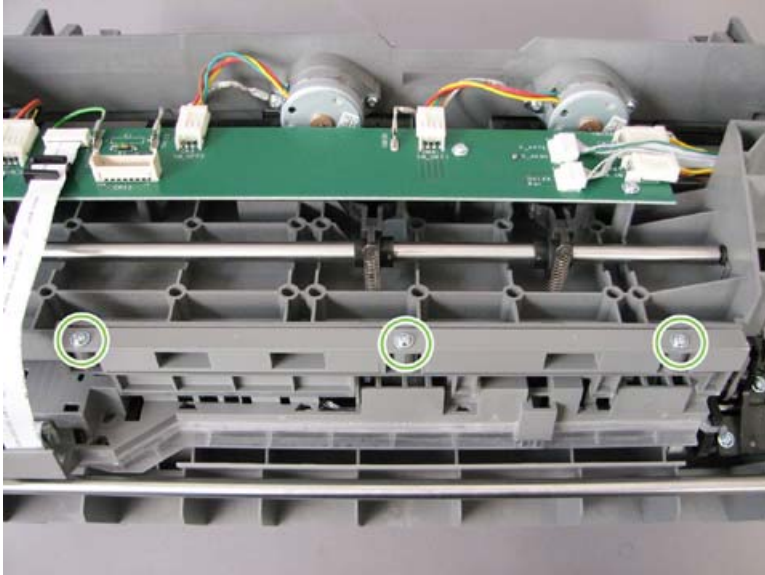


📄 **NOTE:** When an accumulator is replaced, run the following routine to adjust the accumulator offset alignment:

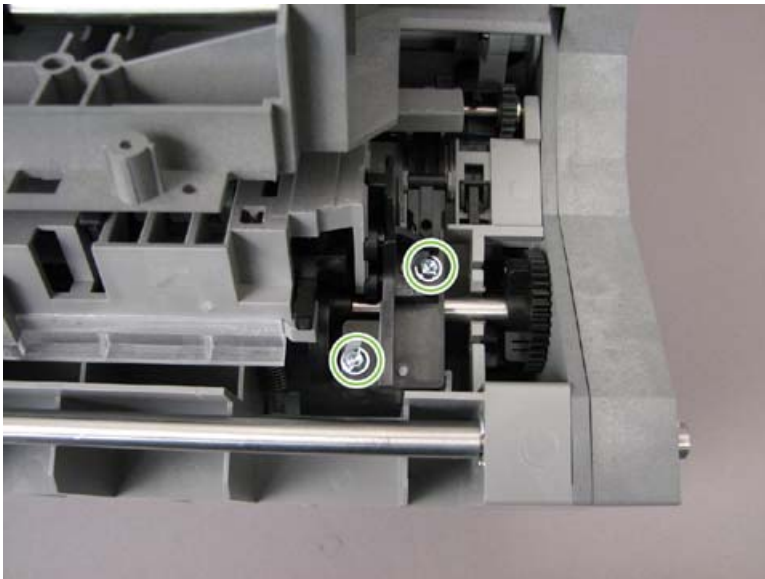
[Accumulator offset alignment on page 72](#)

Guide bar assembly

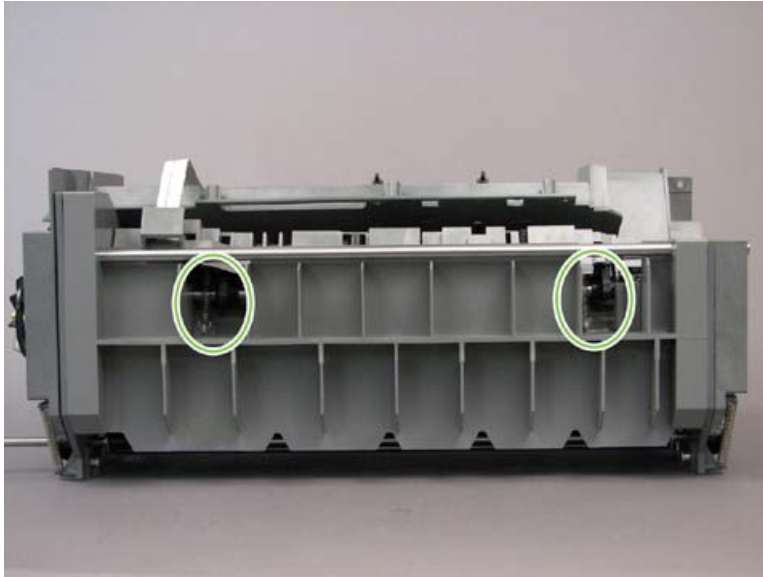
1. Remove the accumulator assembly.
[Accumulator assembly on page 848](#)
2. Remove three screws, and then lift out the alignment wall.



3. Remove two screws, and then lift out the retainer.



4. Unhook two springs.



5. Slide the ribbon cable retainer to disengage from the PCA, and then disconnect the ribbon cable from the connector on the Accumulator Distribution PCA (A240).

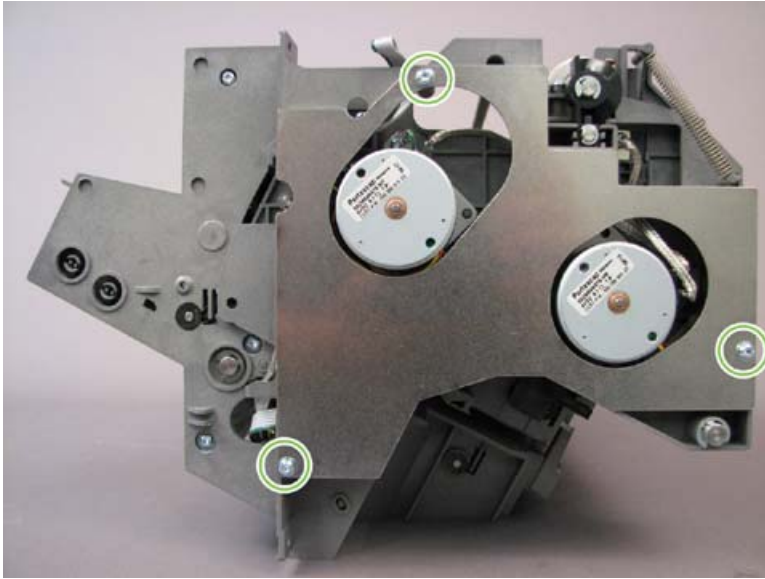


6. Lift out the guide bar assembly.

Bearing bracket assembly

1. Remove the accumulator assembly.
[Accumulator assembly on page 848](#)
2. Remove three screws, and then remove the accumulator cover lower.
[Accumulator cover lower on page 846](#)

3. Remove three screws, and then lift off the front plate.

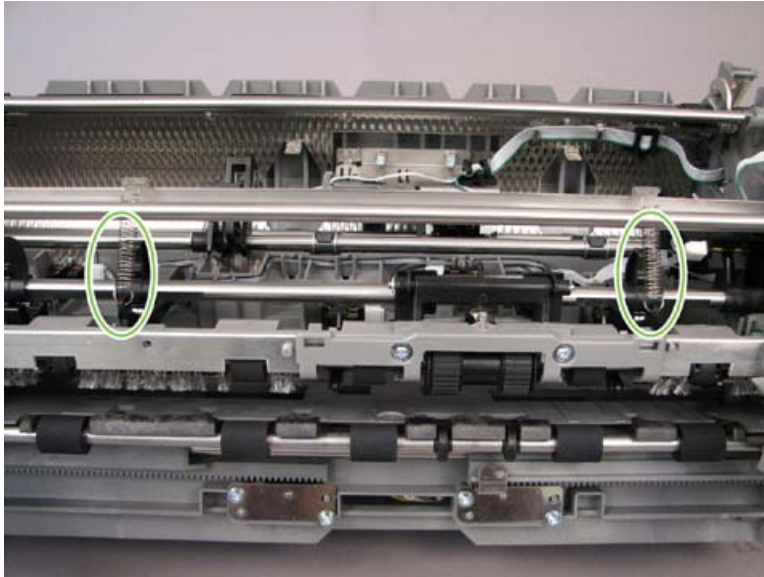


4. Remove five screws, and then lift off the rear cover.

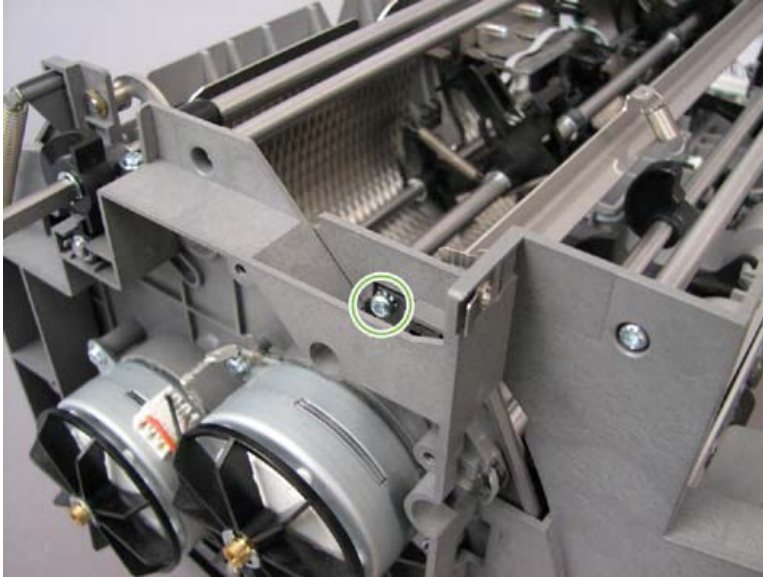



5. Unhook two springs from the bearing bracket.

△ **CAUTION:** Do not damage or over-stretch the springs when installing or removing them.



6. Remove two screws from the bearing bracket spring support bar (one on each end of the support), slightly push the mounting blocks that hold the support on each end to the outside, and then lift out the support bar.



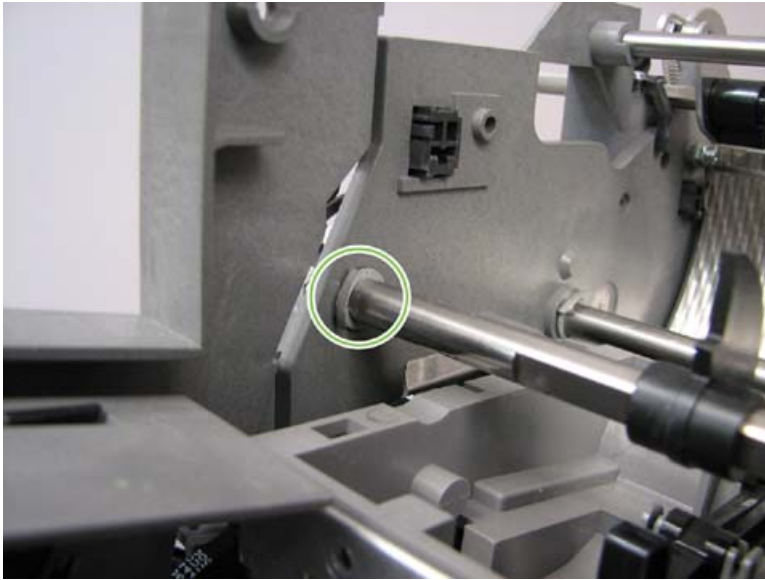
 **NOTE:** If the screws cannot be accessed through the side access holes, open the accumulator open assembly mechanism to gain access to the screws. A tool, such as a pair of channel locks, can be used as an open access handle lever. Be careful not to damage the shaft.




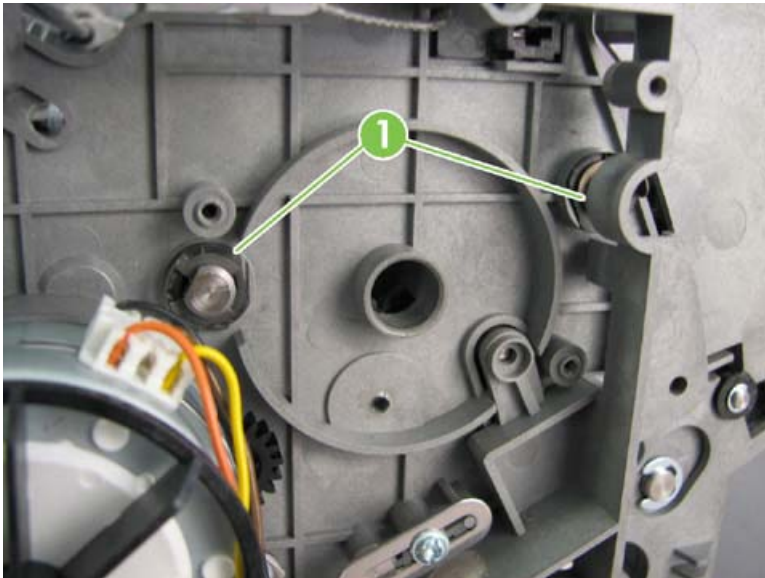
7. Remove two screws (one on each end of the shaft), and then lift off the top shaft.



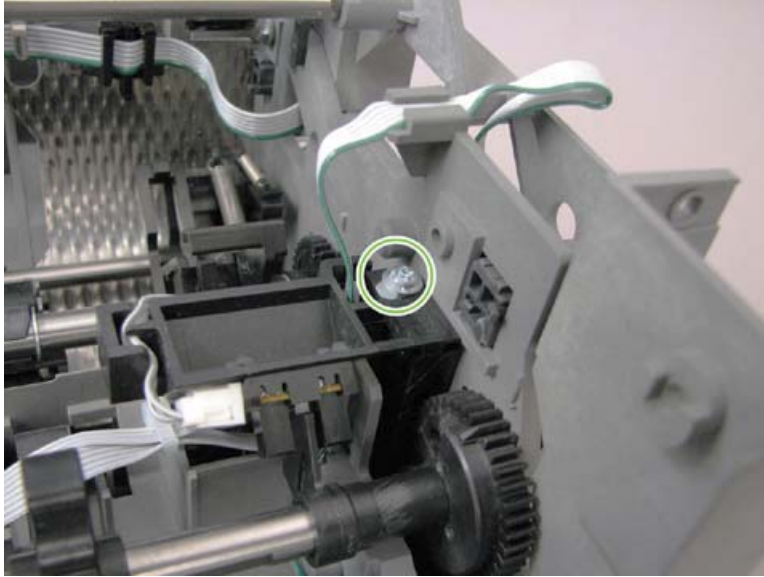
8. Remove two retaining clips (both on the same end) and a bushing from the bearing bracket cam shaft.



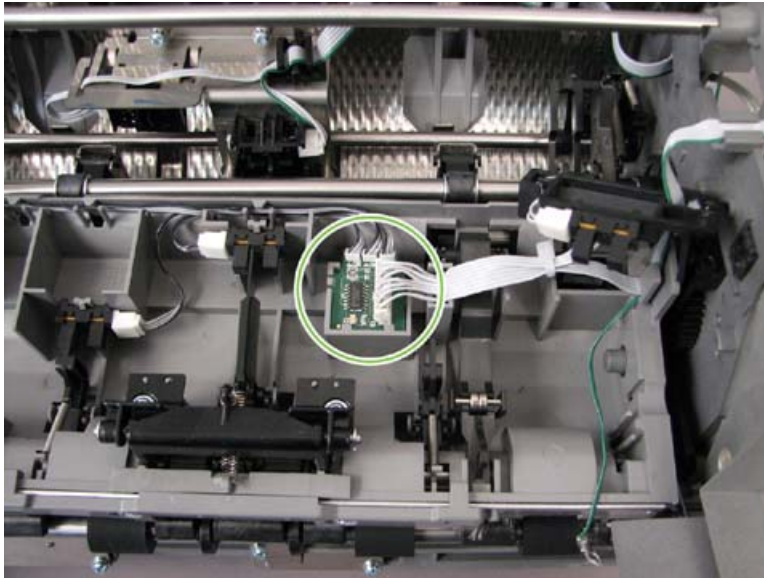
 **Reinstallation tip** This bushing is one of two bushings that have a specific orientation. Align the flat sides of the bushings (callout 1) with the lip of the mounting for proper operation.



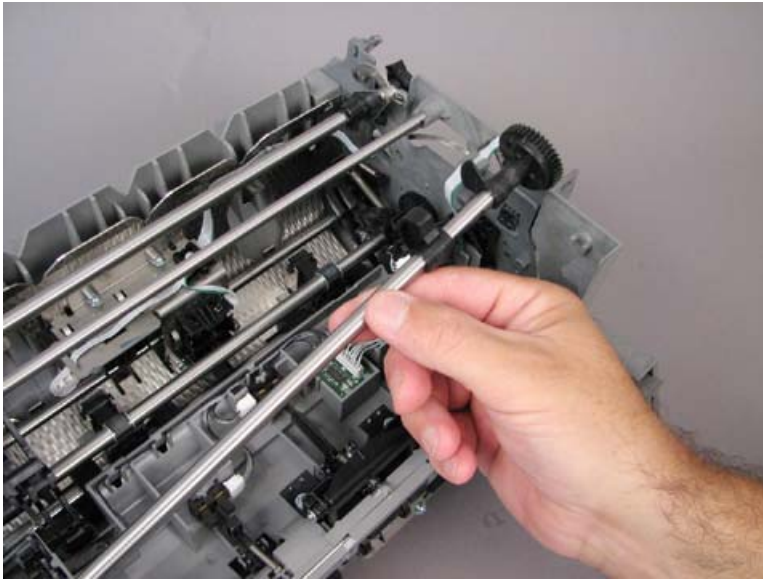
9. Remove one screw, and then set the sensor holder aside.



10. Disconnect one wire connector, and then unthread the cable from its cable straps.



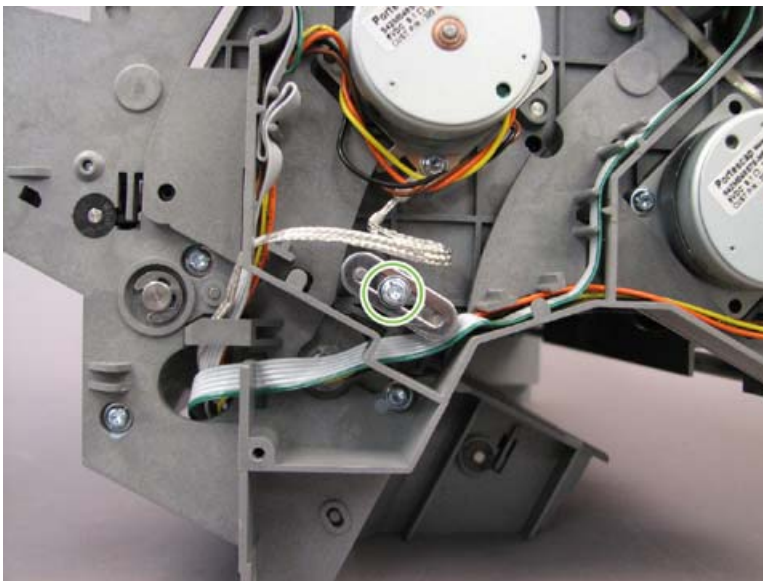
11. Partially slide the shaft to the rear, and then remove the gear from the end of the shaft. Slide the shaft in the opposite direction and remove the shaft completely.



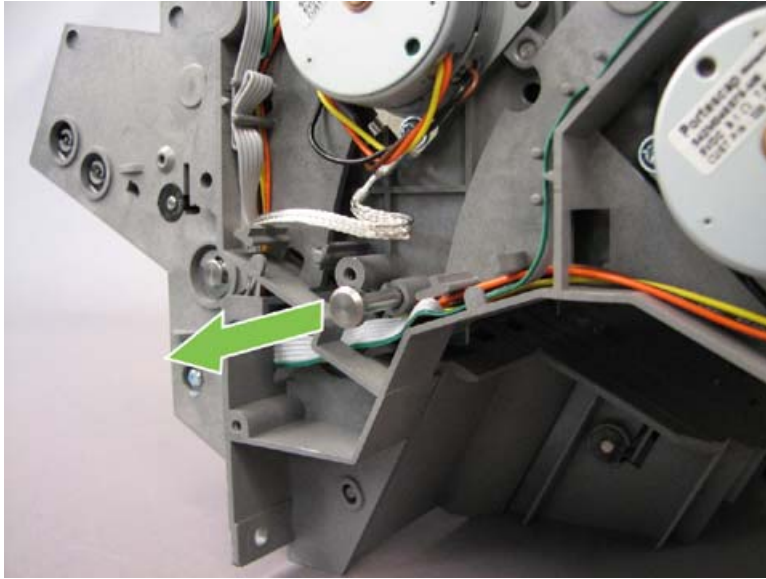
⚠ **WARNING!** When reinstalling, proper alignment of this gear and associated gear linkage is critical and requires using the accumulator alignment tools.

[Bearing bracket cam shaft and lever paper-switch cam shaft alignment on page 863](#)

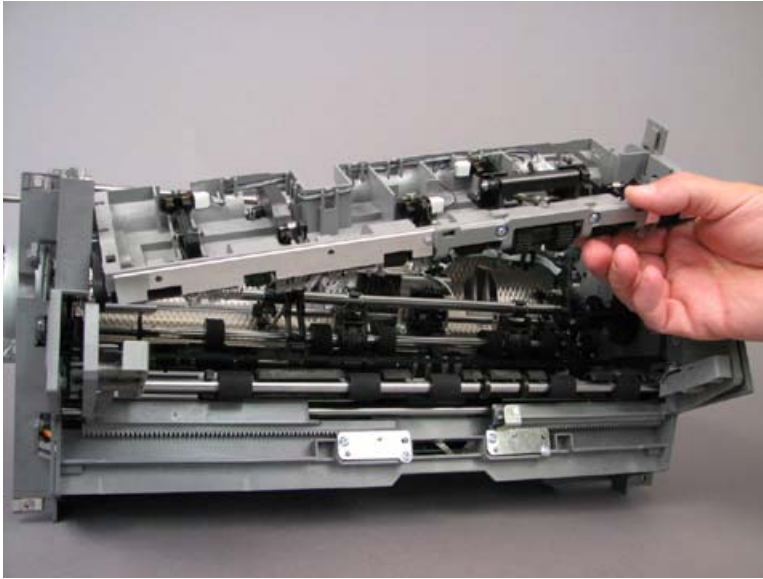
12. Remove two screws (one on each end), and then remove the two pin retainers.




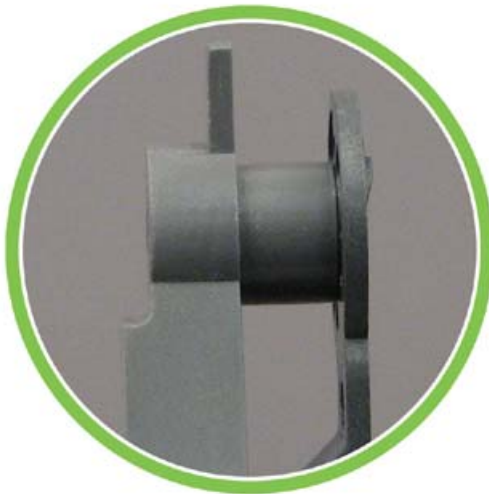
13. Pull out and remove two pins (one on each end).



14. Lift out the bearing bracket assembly.



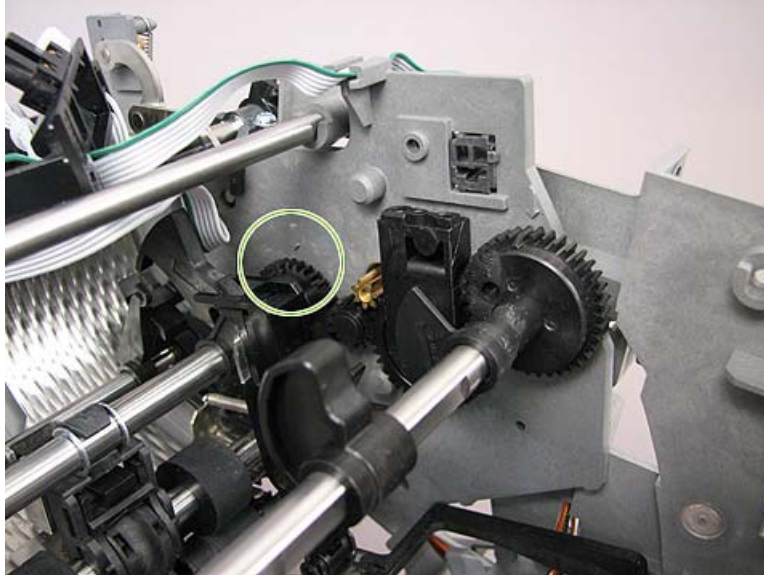
 **NOTE:** One of the bearing bracket hinges can be in a slightly open or closed position. It must be in the closed position (shown on the left) when reinstalled.



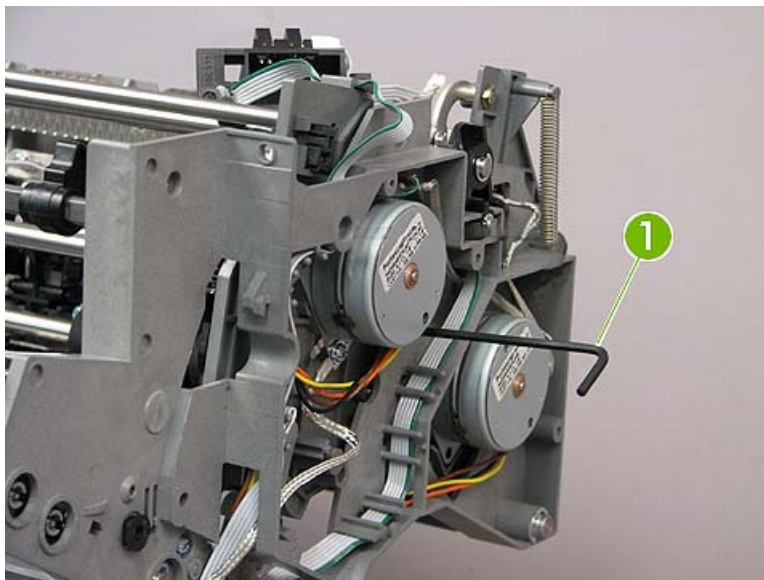
Bearing bracket cam shaft and lever paper-switch cam shaft alignment

The bearing bracket cam shaft and the lever paper-switch cam shaft must be realigned any time the gear linkage, or connection between them, is broken.

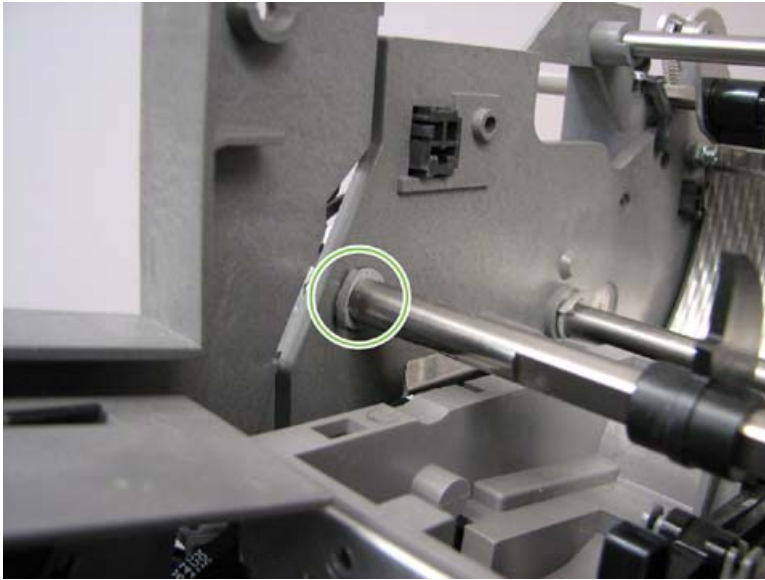
1. Align the timing mark on the lever paper-switch cam shaft gear with the arrow on the inside of the accumulator wall.




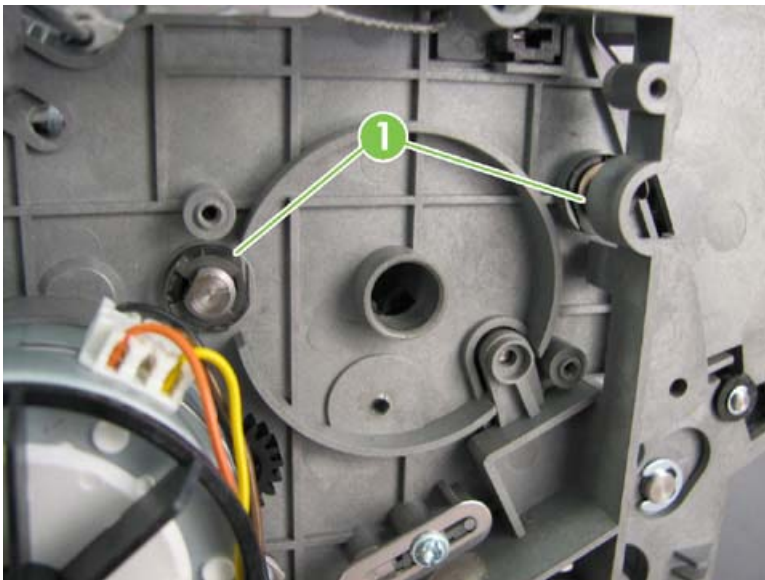
2. Insert an accumulator alignment tool (callout 1) (SVC TOOL-TIMING PINS, ACCUMULATOR, part number C5959-67314) through the sidewall hole and into the hole of the gear, maintaining the position of the timing marks on the inside wall.



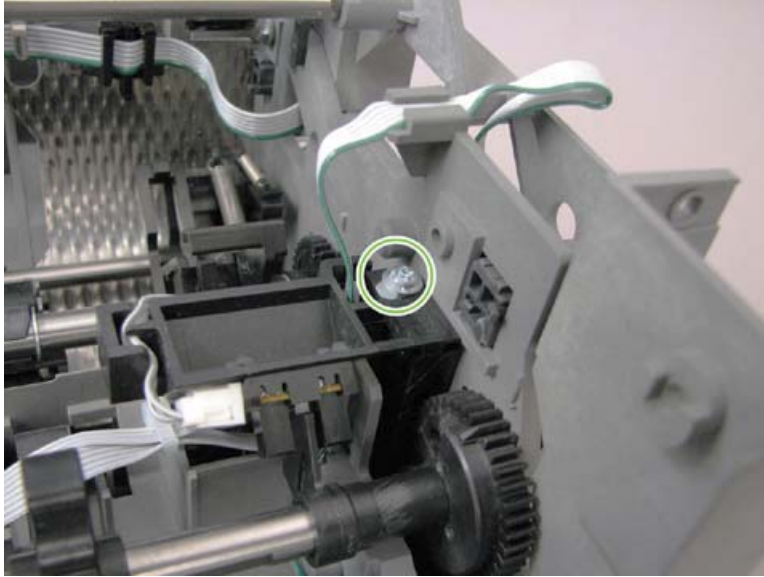
3. Remove two retaining clips (both on the same end) and a bushing from the bearing bracket cam shaft.



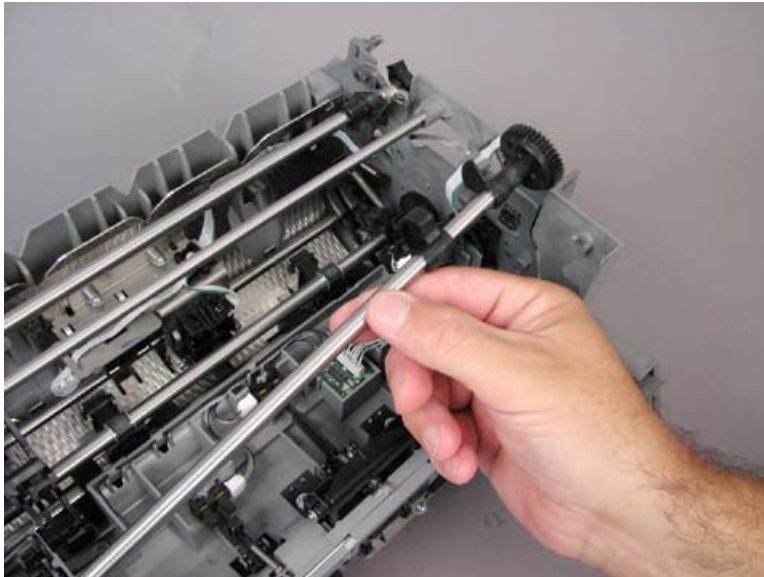
 **Reinstallation tip** This bushing is one of two bushings that have a specific orientation. Align the flat sides of the bushings (callout 1) with the lip of the mounting for proper operation.



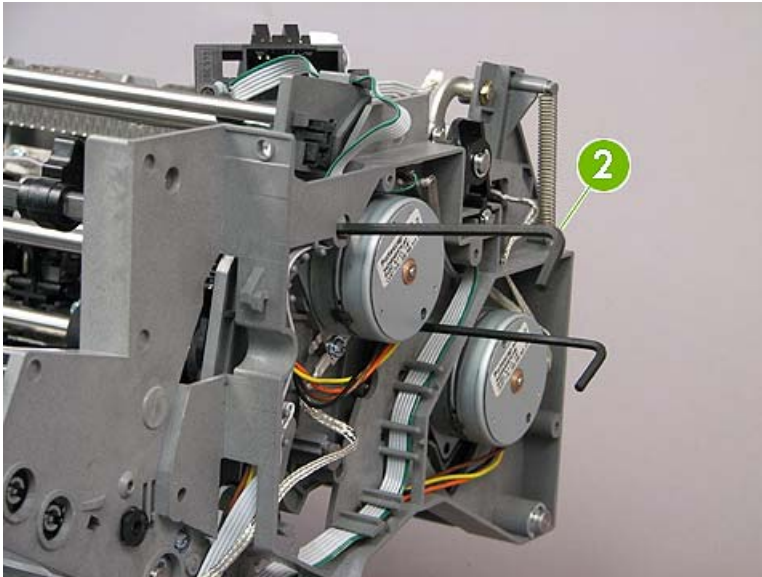
4. Remove one screw, and then set the sensor holder aside.



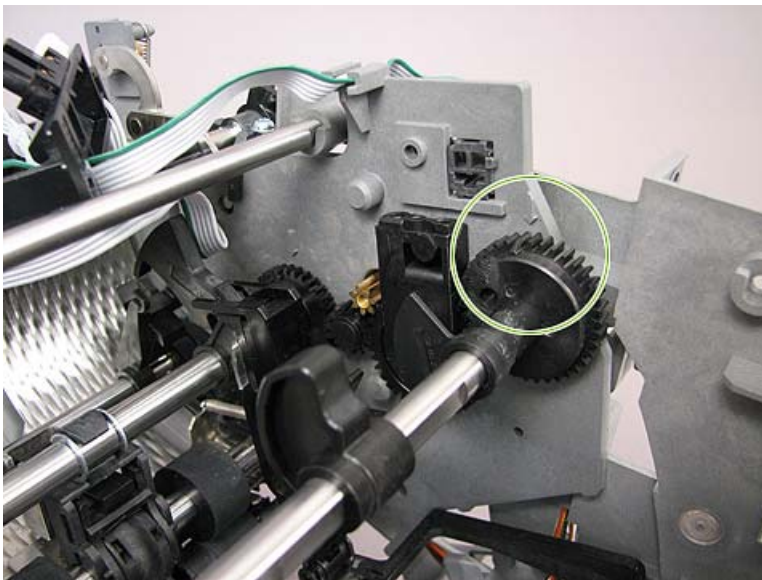
5. Partially slide the bearing bracket cam shaft to the rear, and then remove the bearing bracket cam shaft gear from the end of the shaft.



6. Place the cam shaft gear tight against the inside stop, aligning the timing marks, and then insert the second accumulator alignment tool (callout 2) through the sidewall hole and into the hole of the cam shaft gear.



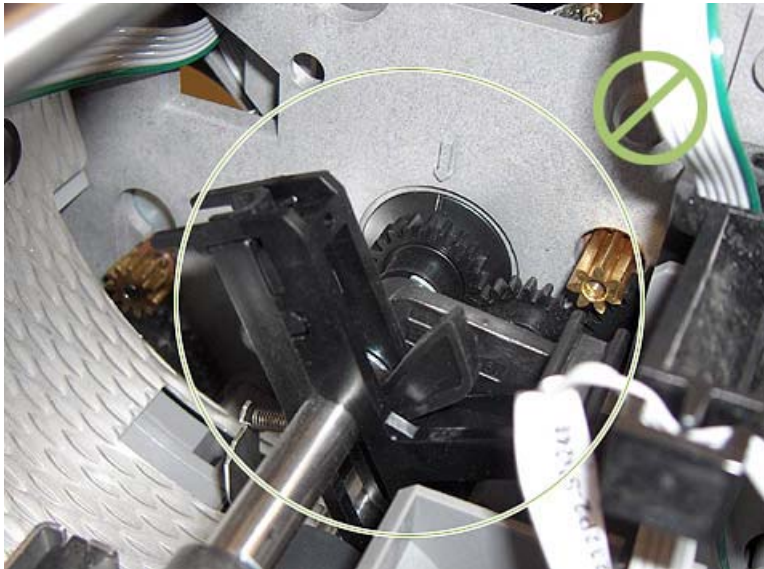
7. Insert the cam shaft into the gear, maintaining the position of the timing marks on the inside wall.



8. Ensure the finger is **correctly** positioned under and able to lift the L-shape piece, as shown here.



△ **CAUTION:** It is possible to align the timing marks but **incorrectly** position the finger in the middle of the L-shape piece, as shown here. The accumulator will not operate properly in this position. The finger must be positioned under the L-shape piece.




9. Remove the alignment tools.

Accumulator wheel shaft assembly

1. Remove the accumulator assembly.
[Accumulator assembly on page 848](#)
2. Remove the bearing bracket assembly.
[Bearing bracket assembly on page 853](#)

3. Loosen one screw, flex the belt tensioner, and then remove the belt from the shaft pulley.



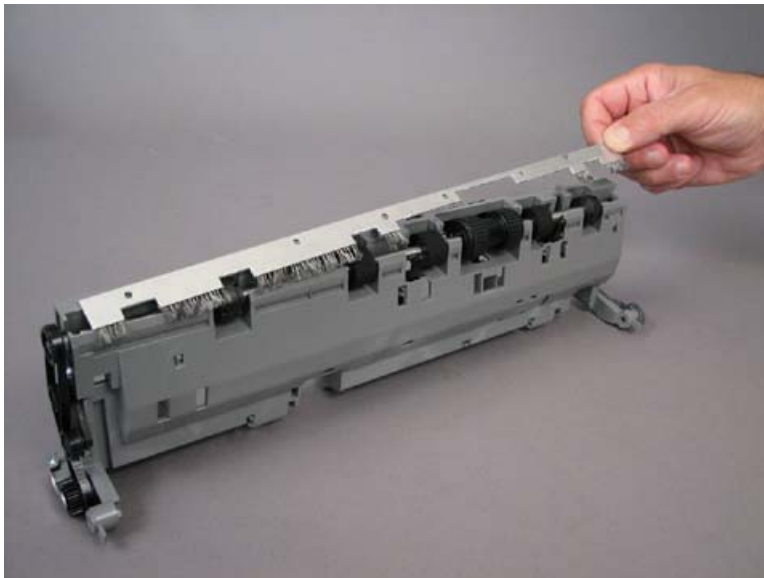
 **NOTE:** To remove the belt completely, loosen one screw, and then remove the belt.



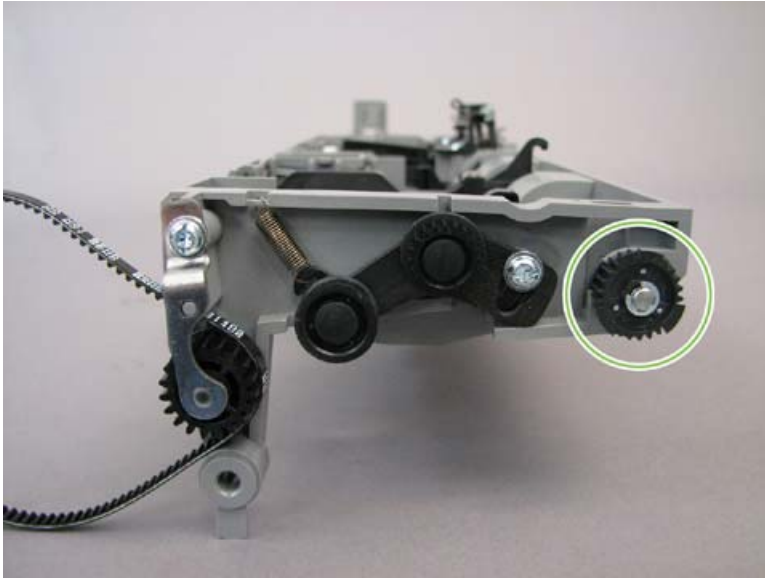
4. Remove two screws, and then lift off the shaft guide.



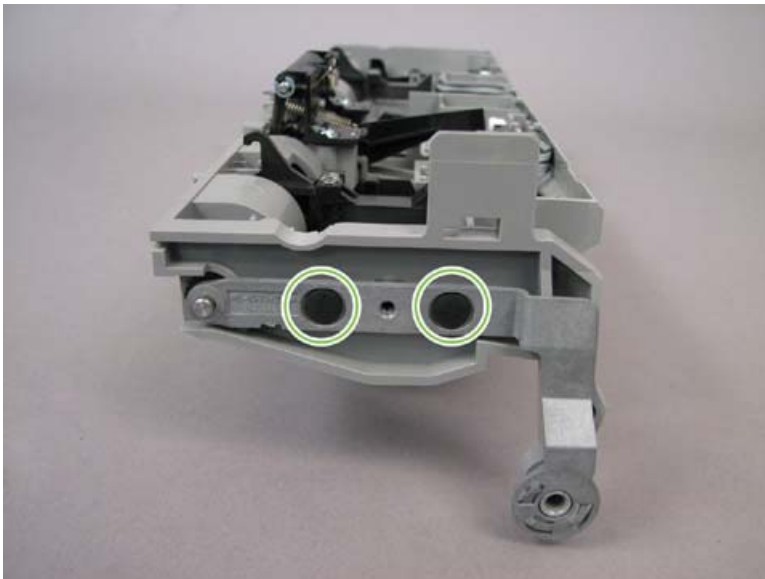
5. Lift off the static brush bar.



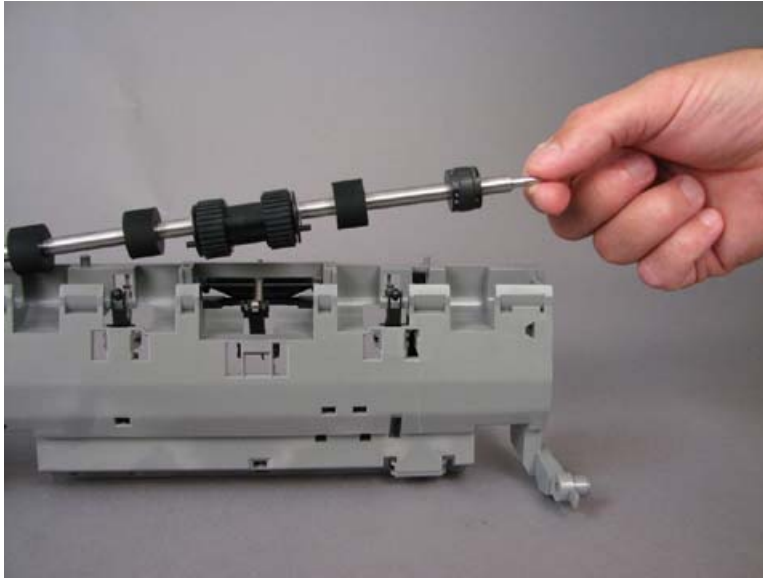
6. Remove one retaining clip, and then remove the pulley, washer, and bushing.




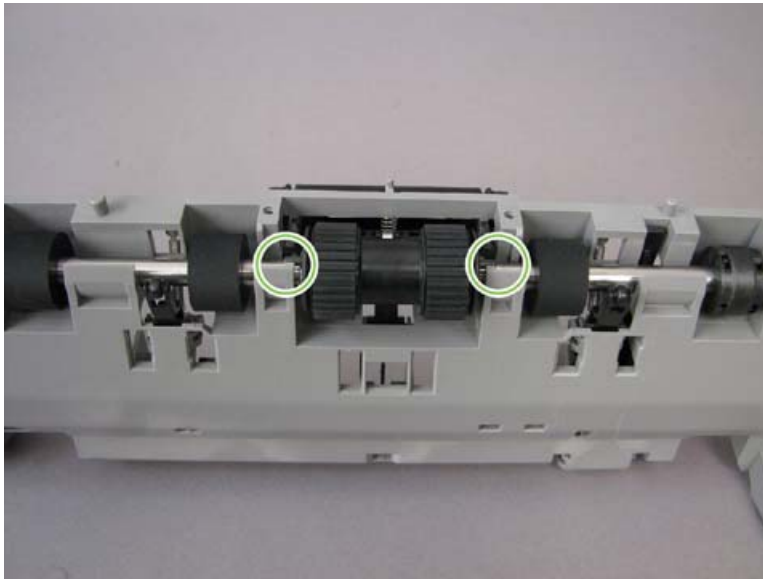
7. On the other end of the bearing bracket assembly, remove two snap caps, and then lift off the side bracket.



8. Remove the bushing, and then lift off the accumulator wheel shaft assembly.



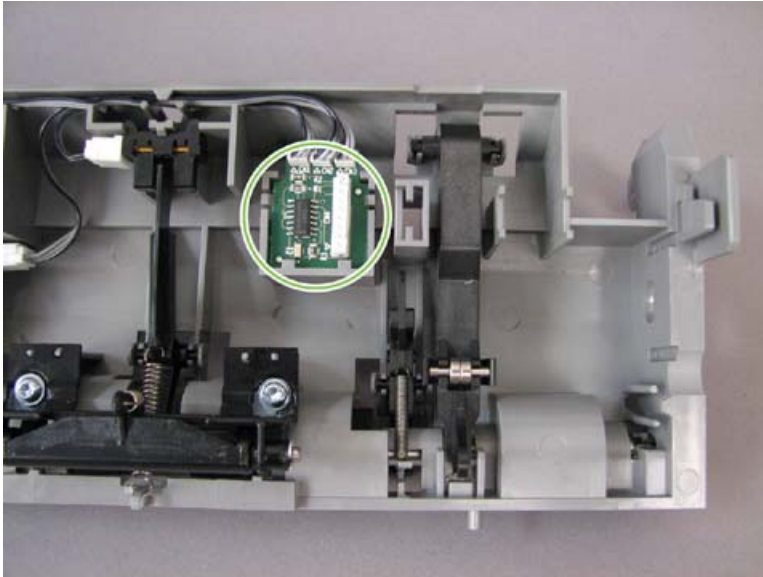
 **Reinstallation tip** When reinstalling the accumulator wheel shaft assembly, both posts on the accumulator wheel must rest against the outside support for proper operation. Also note that the spring-loaded lever should be positioned on top of the accumulator wheel. The accumulator wheel should pivot when the two screws of the guiding bar holding the wheel in place are tightened.



Bearing bracket PCA

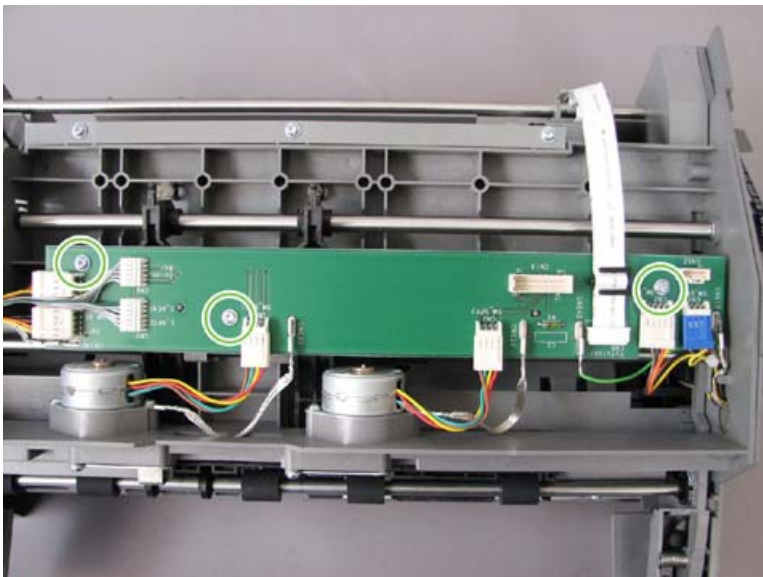
1. Remove the accumulator assembly.
[Accumulator assembly on page 848](#)
2. Remove the bearing bracket assembly.
[Bearing bracket assembly on page 853](#)

3. Disconnect all cables, and then unsnap the PCA.



Accumulator Distribution PCA (A240)

1. Remove the accumulator assembly.
[Accumulator assembly on page 848](#)
2. Remove three screws.

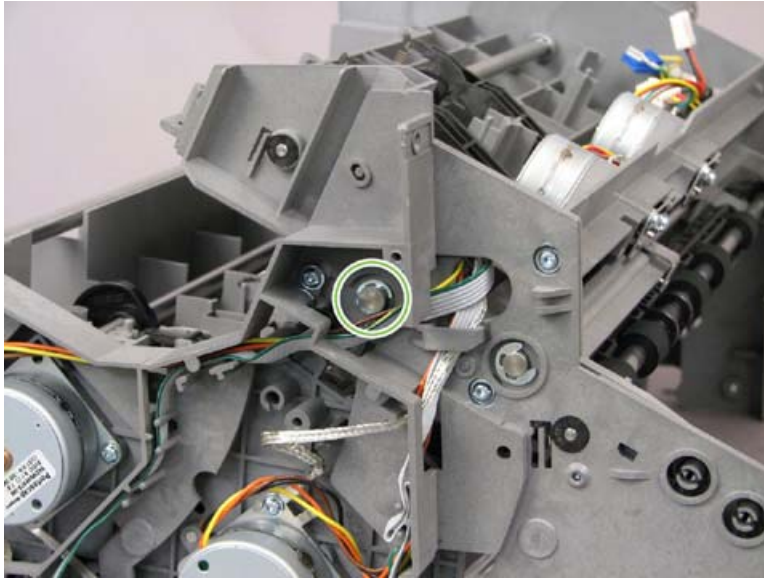


3. Disconnect all cables, and then lift off the distribution PCA.

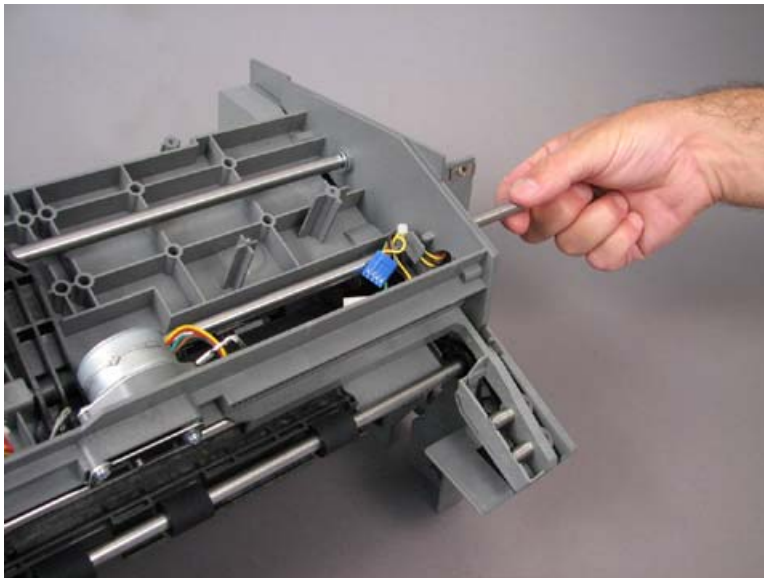
Lever support shaft

1. Remove the accumulator assembly.
[Accumulator assembly on page 848](#)

2. Remove one retaining clip (front side).



3. Slide out the lever support shaft.

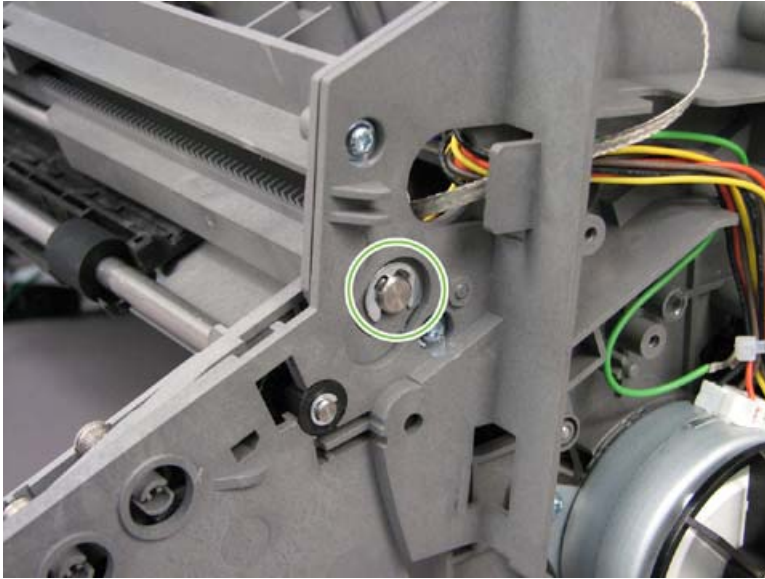


Offset shaft

1. Remove the accumulator assembly.

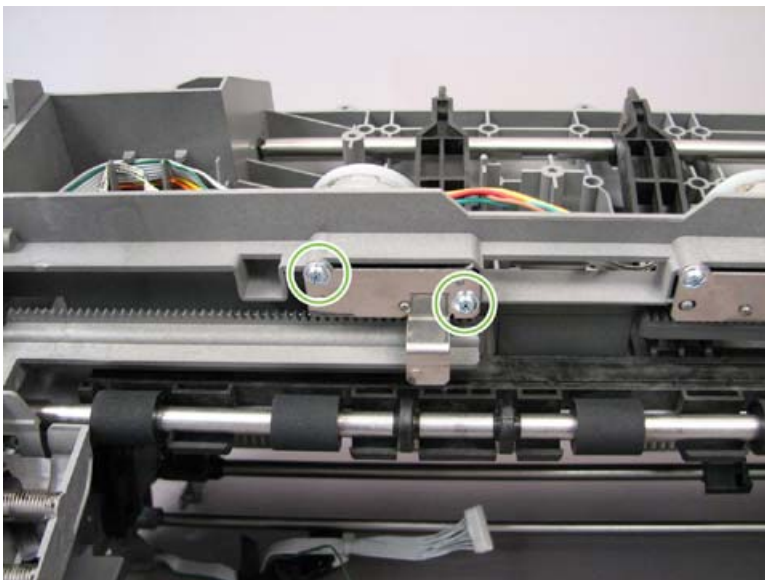
[Accumulator assembly on page 848](#)

2. Remove one retaining clip, and then slide the offset shaft out.



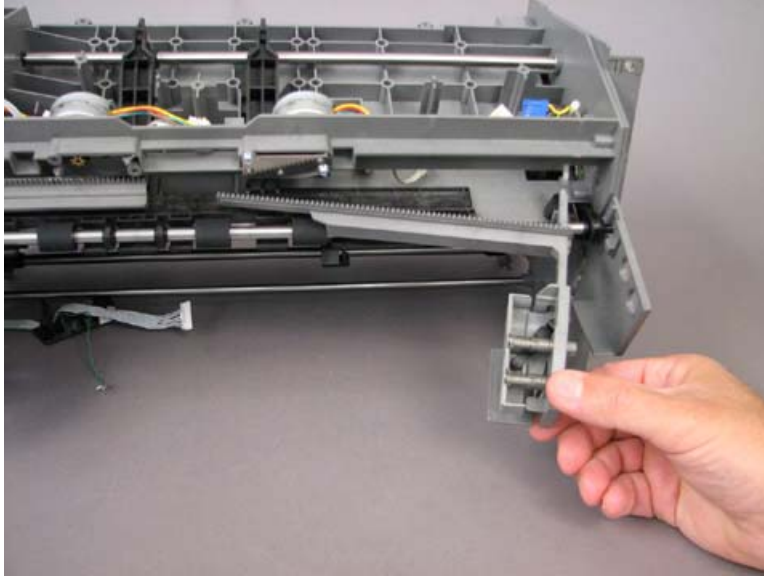
Offsetters (front and rear)

1. Remove the accumulator assembly.
[Accumulator assembly on page 848](#)
2. Remove the lever support shaft.
[Lever support shaft on page 872](#)
3. Remove two screws from each of the plates of the front and rear offsetter, and then remove the plates.



4. Remove the offset shaft.
[Offset shaft on page 873](#)

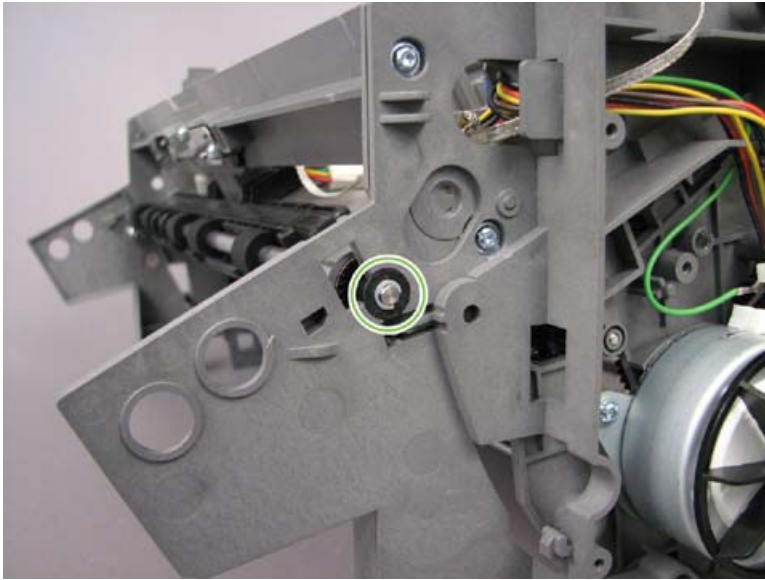
5. Remove the front and rear offsetters.



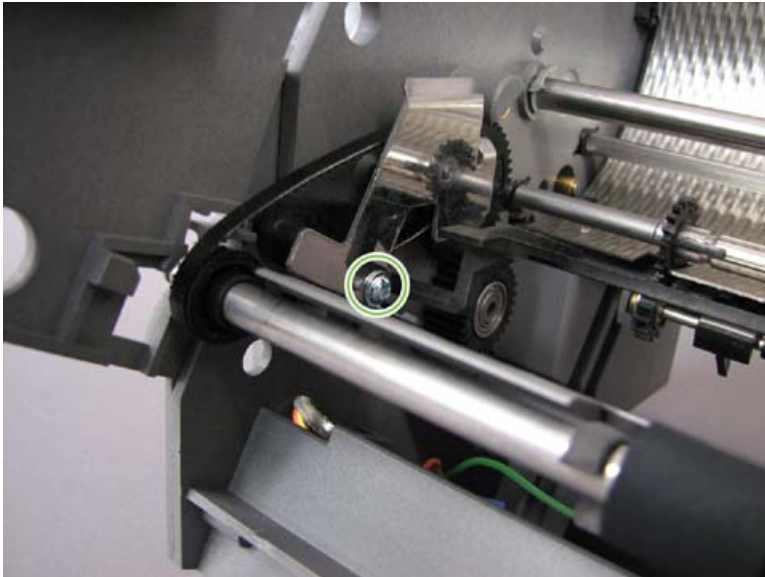
Lower eject shaft

1. Remove the following assemblies and shafts:
 - Accumulator assembly
[Accumulator assembly on page 848](#)
 - Lever support shaft
[Lever support shaft on page 872](#)
 - Offset shaft
[Offset shaft on page 873](#)
 - Offsetters
[Offsetters \(front and rear\) on page 874](#)

2. Remove one retaining clip (rear side), and then remove the two bushings (one from each end of the shaft).



3. Remove one screw, and then lift out the side plate and pulley assembly.

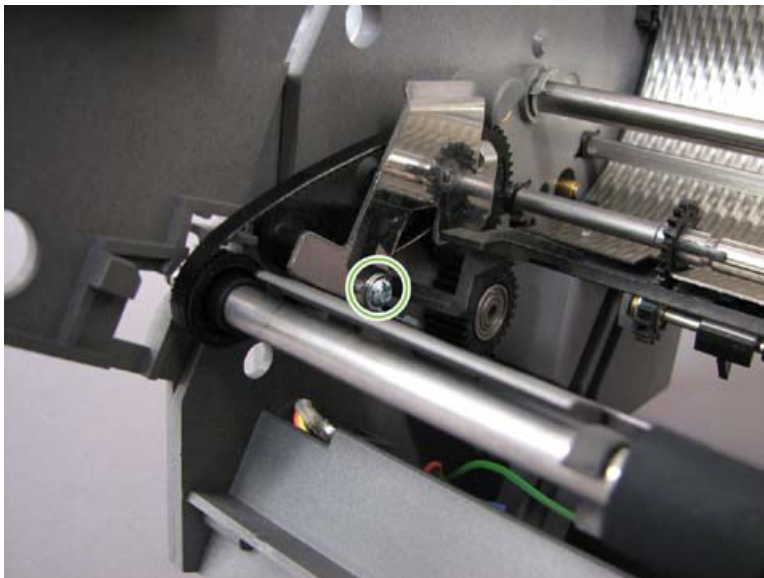


4. Angle the exit shaft in the side access opening, and then lift out the shaft.



Paper guide complete

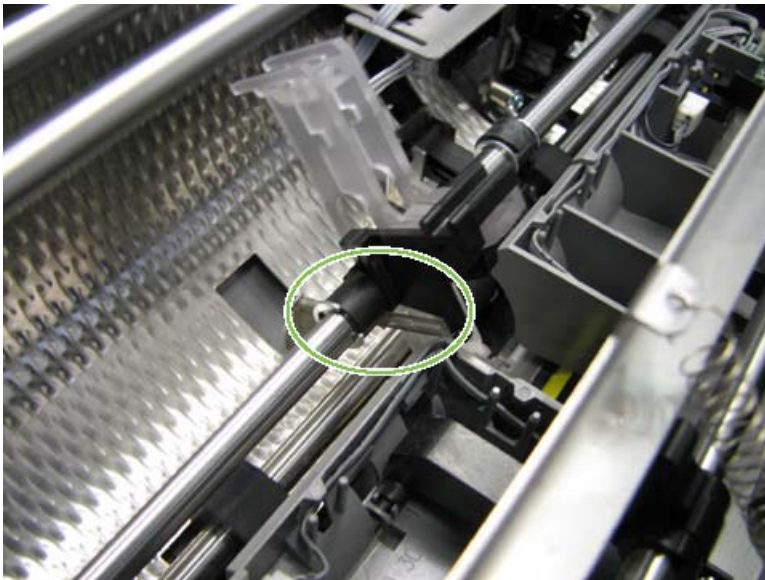
1. Remove the following items:
 - Accumulator assembly.
[Accumulator assembly on page 848](#)
 - Bearing bracket assembly.
[Bearing bracket assembly on page 853](#)
2. Remove one screw, and then lift out the side plate.



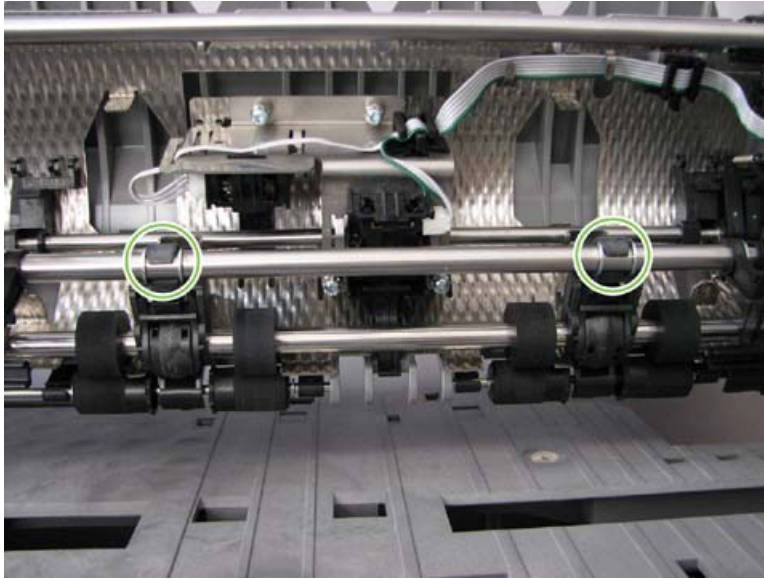
3. Remove one screw, and then slide out the lever paper switch.



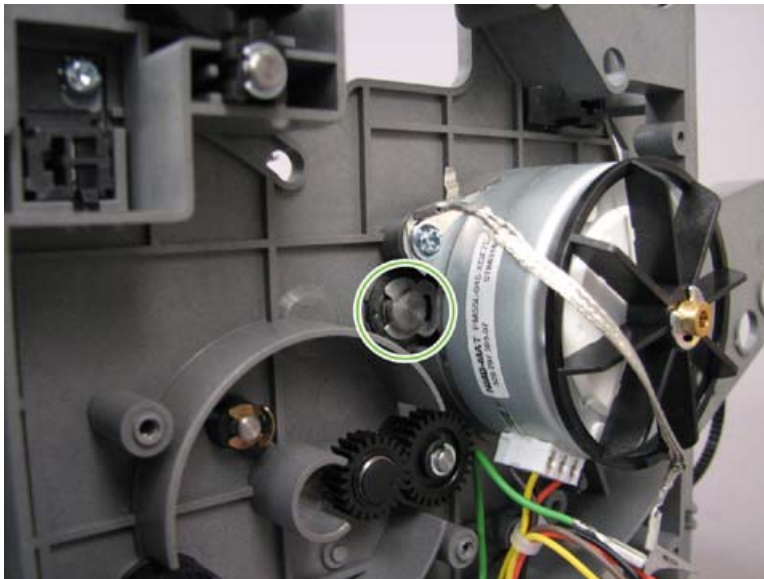
4. Unhook the springs connecting to the shaft.



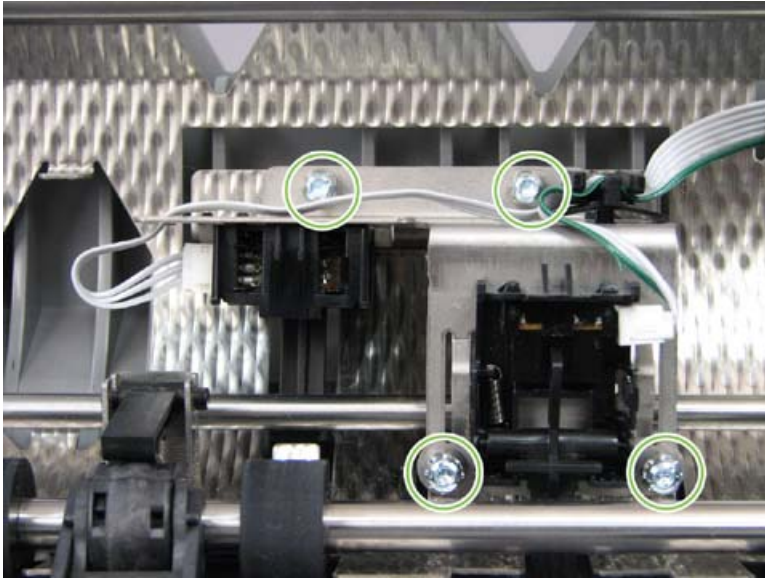
5. Unclip two shaft holders.



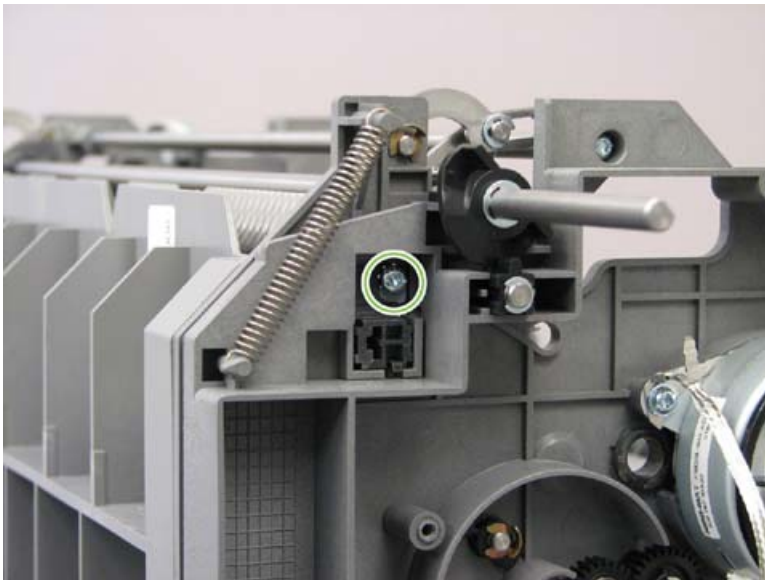
6. Remove two inner and outer retaining clips and bushing, and then remove the lever paper-switch cam shaft.



7. Remove four screws, and then remove the sensor bracket.

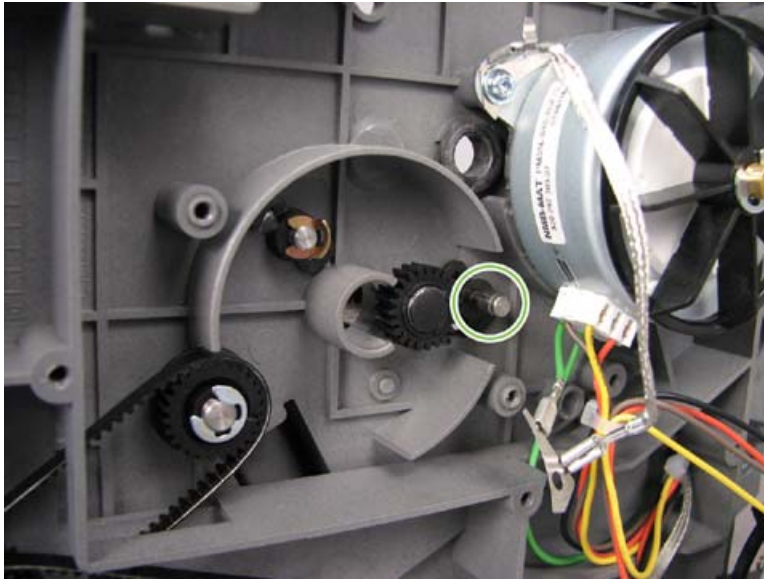


8. Remove one front and one rear screw, and then pull out the paper guide holders on each side.

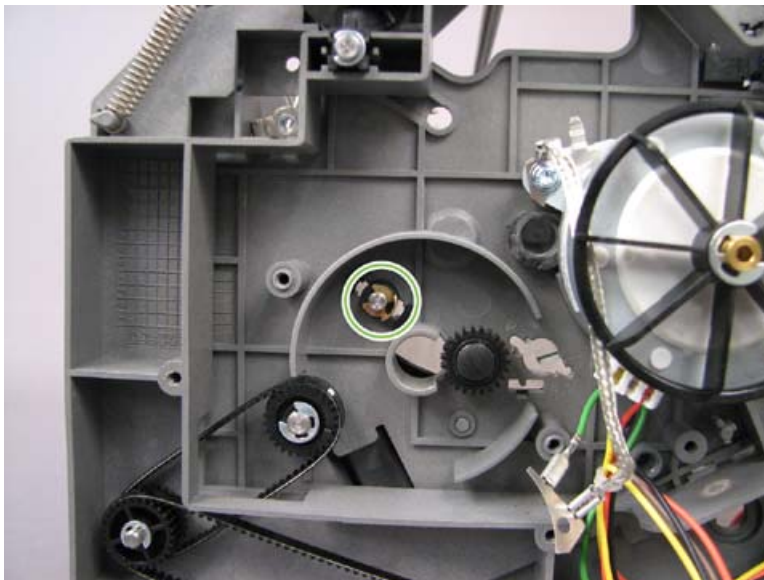


9. Remove the Accumulator Entry motor (M240).


10. Remove the retaining clip and gear, twist and remove the bushing, and then remove the upper entry shaft.

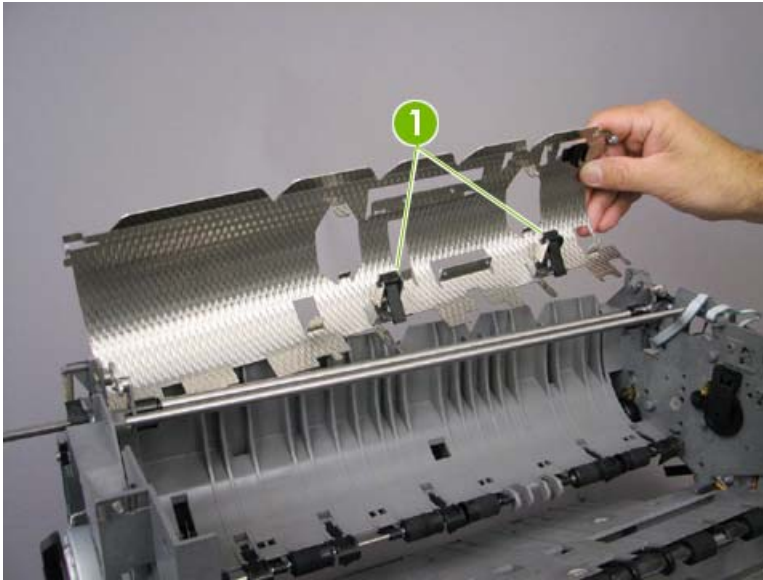


11. Remove one retaining clip, twist and remove the bushing, and then remove the lever pressure shaft.



12. Rotate the paper guide out of the accumulator.

 **Reinstallation tip** When reinstalling the paper guide, ensure the spring-loaded levers (callout 1) sit on top of the rollers and not under the rollers.



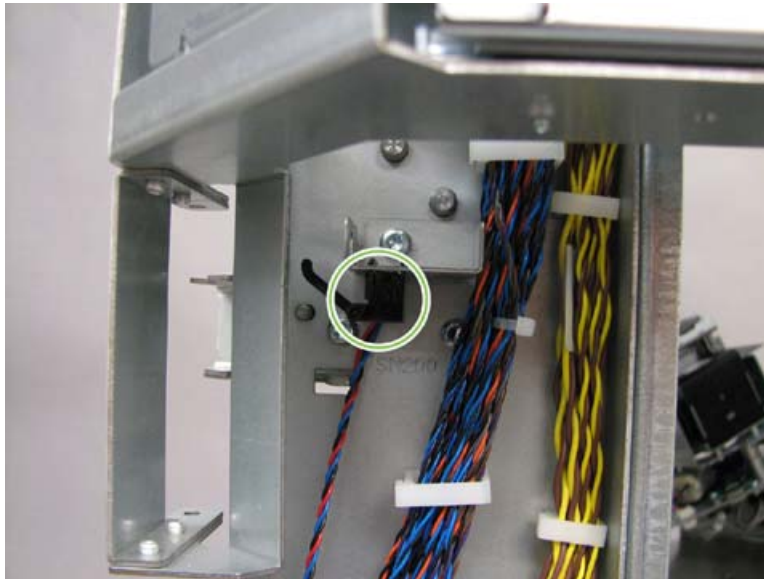
Sensors

- [Finisher Back Latch sensor \(SN200\)](#)
- [Finisher Handle 1 \(upper transport\) Back sensor \(SN202\)](#)
- [Finisher Front Latch sensor \(SN204\)](#)
- [Finisher Handle 1 \(upper transport\) Front sensor \(SN206\)](#)
- [Input paper path assembly sensors \(SN211, SN212, SN213, SN214, and SN215\)](#)
- [Finisher Right Side Panel sensor \(SN216\)](#)
- [Finisher Lower 2 sensor \(SN221\)](#)
- [Finisher Handle 3 \(lower transport\) sensor \(SN222\)](#)
- [Handle 1 \(upper transport\) sensors \(SN231, SN232, and SN233\)](#)
- [Accumulator bearing bracket sensors \(SN240, SN241, and SN242\)](#)
- [Accumulator guide bar sensors \(SN243, SN244, and SN245\)](#)
- [Accumulator Entry sensor \(SN246\) and Accumulator Paper Tension sensor \(SN247\)](#)
- [Accumulator Bearing Bracket Home sensor \(SN248\)](#)
- [Finisher Lower Elevator Move sensor \(SN250\)](#)
- [Finisher Stack Holder sensor \(SN252\)](#)
- [Job Support position sensors \(SN253 and SN254\)](#)
- [Accumulator Open sensor \(SN255\)](#)

- [Finisher Lower Elevator Stack Height sensor \(SN257\)](#)
- [Finisher Lower Elevator Paper Present sensor \(SN258\)](#)
- [Finisher Job Separator Lower Limit sensor \(SN260\)](#)
- [Finisher Job Separator Gate Open sensor \(SN262\)](#)
- [Finisher Job Separator Offset Back sensor \(SN265\)](#)
- [Finisher Job Separator Stack Height sensor \(SN267\)](#)
- [Stapler 1 Pivot Position 1 sensor \(SN271\) and Stapler 1 Pivot Position 2 sensor \(SN272\)](#)
- [Stapler 1 sensors \(SN274, SN275, and SN276\)](#)
- [Stapler 2 Guard Position 1 sensor \(SN280\) and Stapler 2 Guard Position 2 sensor \(SN281\)](#)
- [Stapler 2 sensors \(SN282, SN283, and SN284\)](#)

Finisher Back Latch sensor (SN200)

1. Remove the rear cover.
[Rear cover on page 783](#)
2. Disconnect the wire connector W201P1-SN200 to the Finisher Back Latch sensor (SN200).

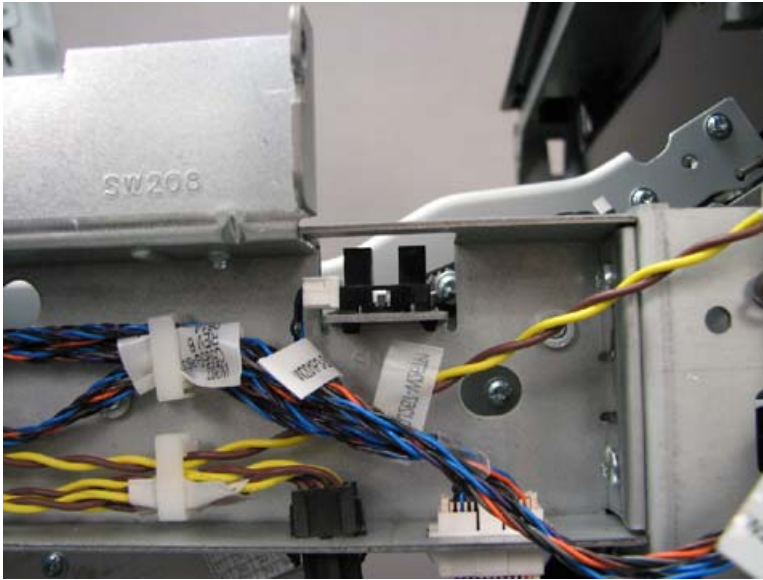


3. Replace SN200.

Finisher Handle 1 (upper transport) Back sensor (SN202)

1. Remove the rear cover.
[Rear cover on page 783](#)
2. Open the top door, and then open handle 1 (upper transport).

3. Disconnect the wire connector W201P3-SN202 to the Finisher Handle 1 (upper transport) Back sensor (SN202).



4. Replace SN202.

Finisher Front Latch sensor (SN204)

1. Remove the front upper cover.
[Front upper cover on page 781](#)
2. Disconnect the wire connector W252P4-SN204 to the Finisher Front Latch sensor (SN204).



3. Replace SN204.

Finisher Handle 1 (upper transport) Front sensor (SN206)

1. Remove the front upper cover.

[Front upper cover on page 781](#)

2. Open the top door, and then open handle 1 (upper transport).
3. Disconnect the wire connector W202P4-SN206 to the Finisher Handle 1 (upper transport) Front sensor (SN206).



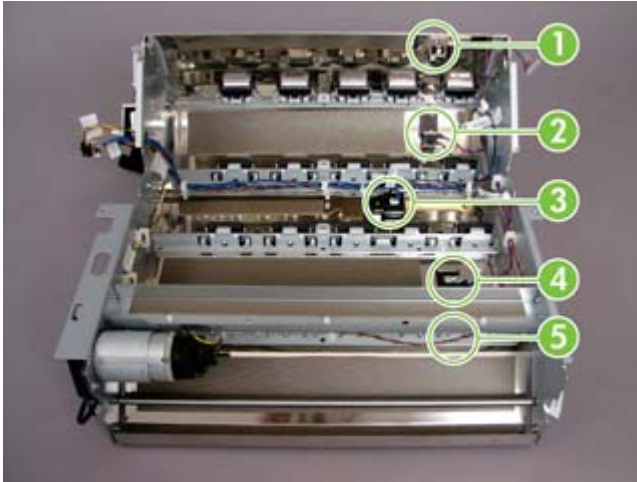
4. Replace SN206.

Input paper path assembly sensors (SN211, SN212, SN213, SN214, and SN215)

1. Remove the input paper path assembly.

[Input paper path on page 817](#)

2. Replace the appropriate sensor:



1	Finisher Lower 1 sensor (SN215)
2	Finisher Input 3 sensor (SN214)
3	Finisher Input 2 sensor (SN213)
4	Finisher Input 1 sensor (SN212)
5	Finisher Input 0 sensor (SN211)

Finisher Right Side Panel sensor (SN216)

1. Open the right side panel.
2. Disconnect the wire connector W211P7-SN216 to the Finisher Right Side Panel sensor (SN216).



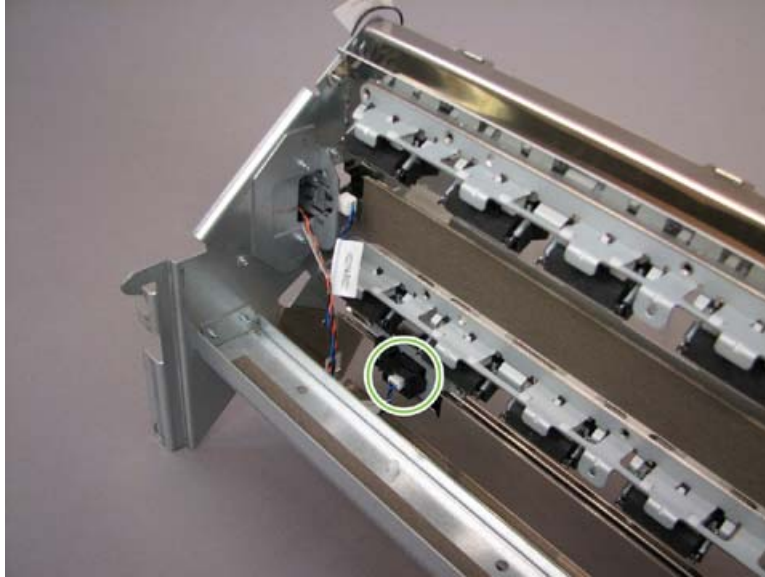
3. Replace SN216.

Finisher Lower 2 sensor (SN221)

1. Remove handle 3 (lower transport).

[Handle 3 \(lower transport\) on page 797](#)

2. Disconnect the wire connector W221P3-SN221 to the Finisher Lower 2 sensor (SN221).



3. Replace SN221.

Finisher Handle 3 (lower transport) sensor (SN222)

1. Remove handle 3 (lower transport).

[Handle 3 \(lower transport\) on page 797](#)

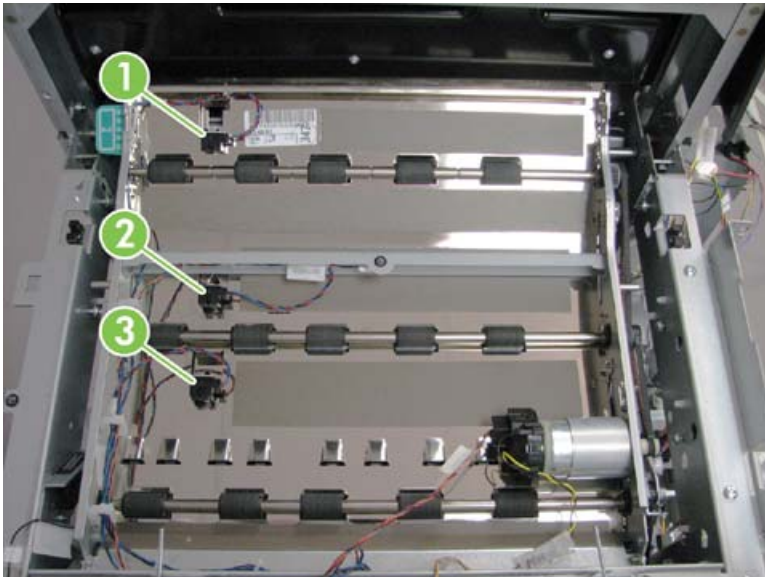
2. Disconnect the wire connector W221P4-SN222 to the Finisher Handle 3 (lower transport) sensor (SN222).



3. Replace SN222.

Handle 1 (upper transport) sensors (SN231, SN232, and SN233)

1. Access handle 1 (upper transport).
[Handle 1 \(upper transport\) on page 792](#)
2. Replace the appropriate sensor.



1	Finisher Upper 3 sensor (SN233)
2	Finisher Upper 2 sensor (SN232)
3	Finisher Upper 1 sensor (SN231)

Accumulator bearing bracket sensors (SN240, SN241, and SN242)

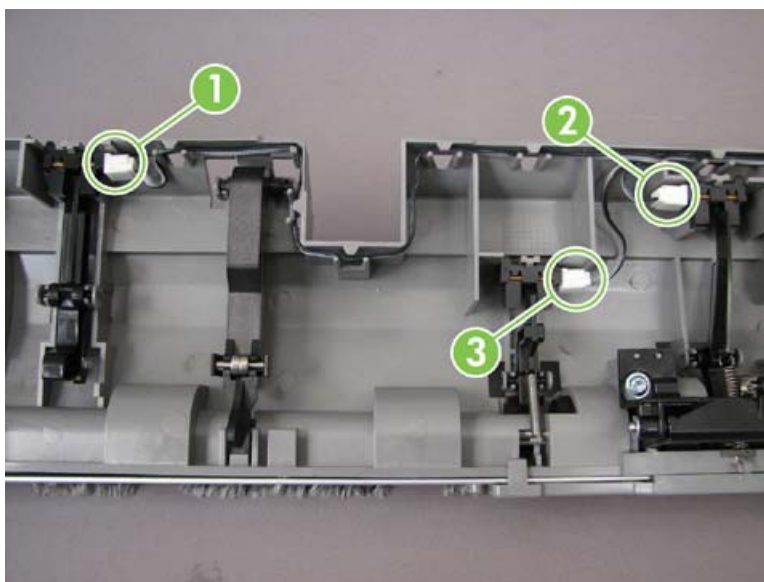
1. Remove the accumulator assembly.

[Accumulator assembly on page 848](#)

2. Remove the bearing bracket.

[Bearing bracket assembly on page 853](#)

3. Replace the appropriate sensor.



1	Accumulator Job Height sensor (SN240)
2	Accumulator Wheel sensor (SN241)
3	Accumulator Exit sensor (SN242)

Accumulator guide bar sensors (SN243, SN244, and SN245)

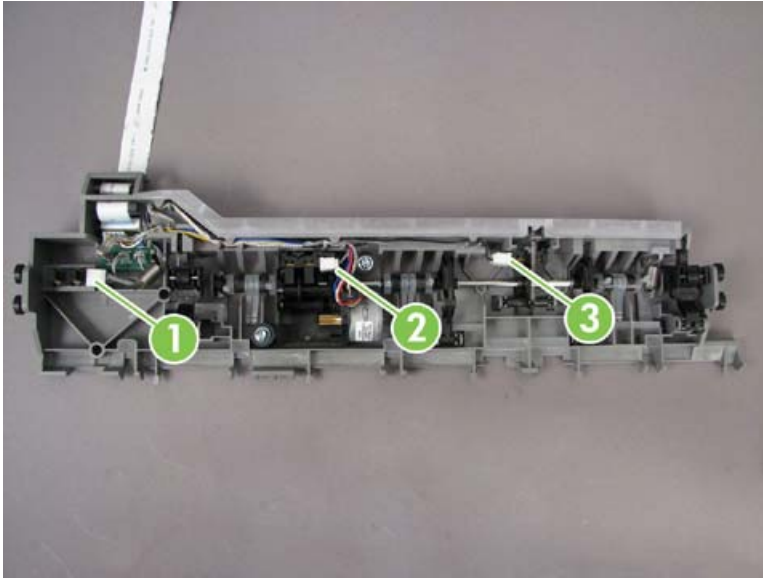
1. Remove the accumulator assembly.

[Accumulator assembly on page 848](#)

2. Remove the guide bar.

[Guide bar assembly on page 852](#)

3. Replace the appropriate sensor.



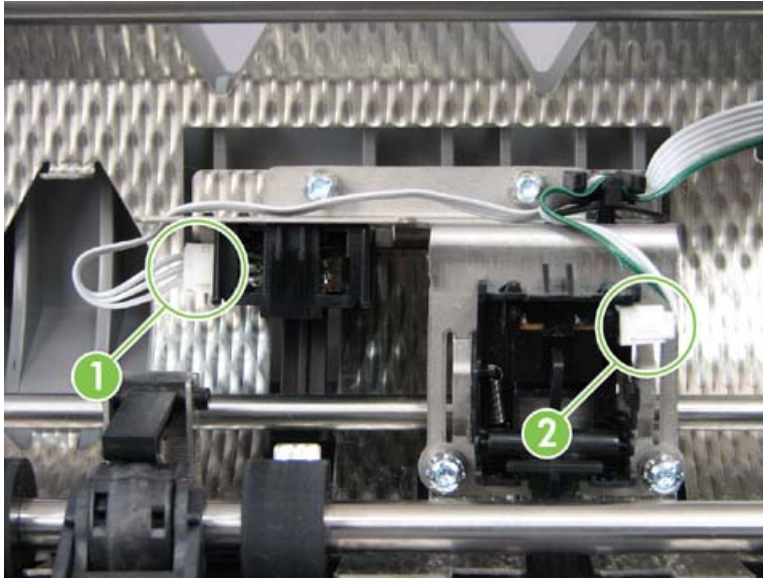
1	Accumulator Guide Bar Home sensor (SN245)
2	Accumulator Retainer Finger Shaft sensor (SN244)
3	Accumulator Guide Bar Position sensor (SN243)

Accumulator Entry sensor (SN246) and Accumulator Paper Tension sensor (SN247)


1. Remove the accumulator assembly.

[Accumulator assembly on page 848](#)

2. Remove the appropriate sensor.



1	Accumulator Paper Tension sensor (SN247)
2	Accumulator Entry sensor (SN246)

 **NOTE:** Access to SN247 is made easier by removing the shaft directly above the sensor. Unclip the assembly for SN247 by pressing on the top tab with a small flat-bladed screwdriver.



Accumulator Bearing Bracket Home sensor (SN248)

1. Remove the accumulator assembly.

[Accumulator assembly on page 848](#)

2. Remove one screw, and then replace SN248.



Finisher Lower Elevator Move sensor (SN250)

1. Remove the rear cover.
[Rear cover on page 783](#)
2. Disconnect the wire connector W251P1-SN250 to the Finisher Lower Elevator Move sensor (SN250).

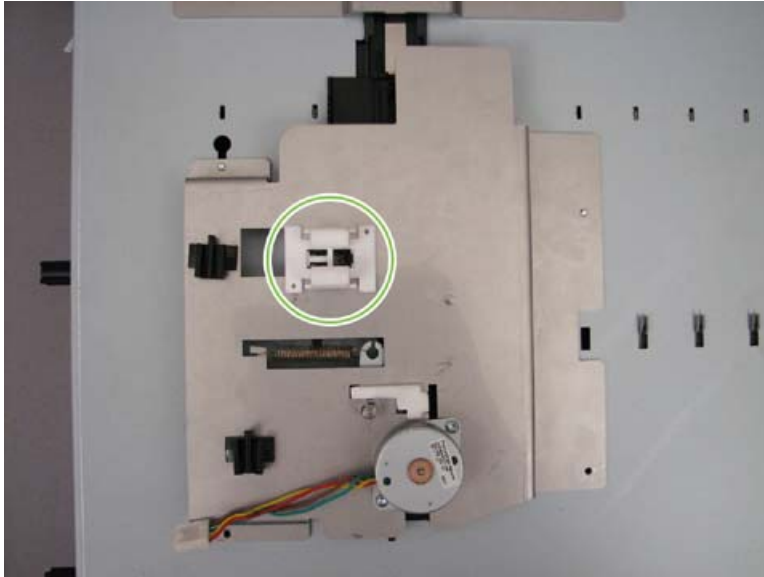


3. Replace SN250 by snapping, and then rotating upwards.

Finisher Stack Holder sensor (SN252)

1. Remove the lower middle cover.
[Lower middle cover on page 799](#)

2. Disconnect the wire connector W252P3-SN252 to the Finisher Stack Holder sensor (SN252).



3. Squeeze the tabs to remove the sensor bracket, and then replace SN252.

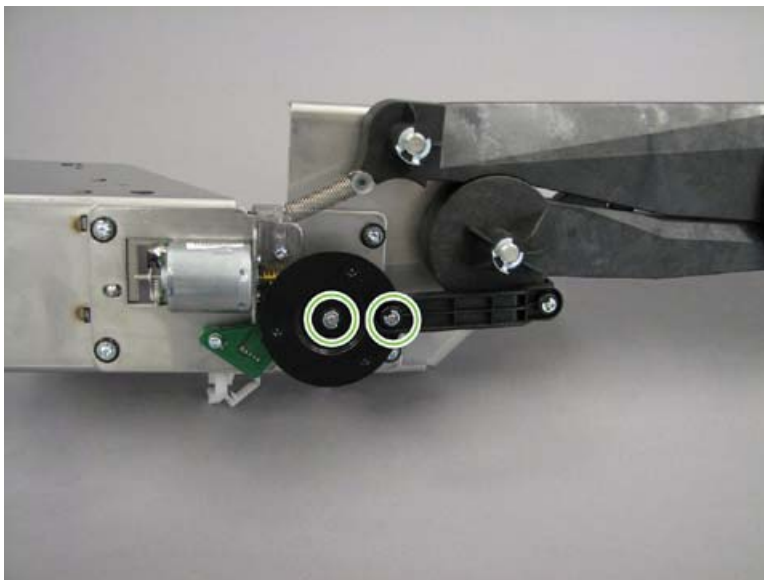
Job Support position sensors (SN253 and SN254)

Both job support position sensors, SN253 and SN254, are mounted on the job support PCA. Replace the PCA to replace either sensor.

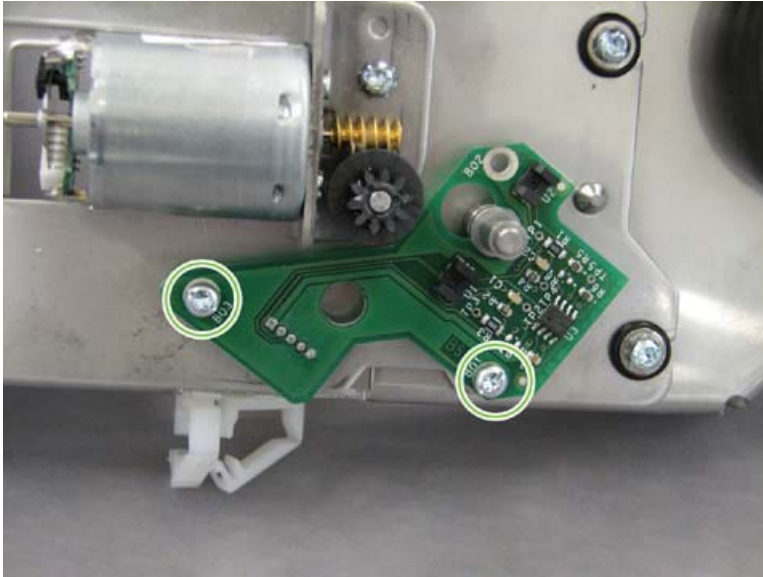
1. Remove the job support assembly.

[Job support assembly on page 814](#)

2. Remove two retaining clips, lift the arm from the gear, and then remove the gear.

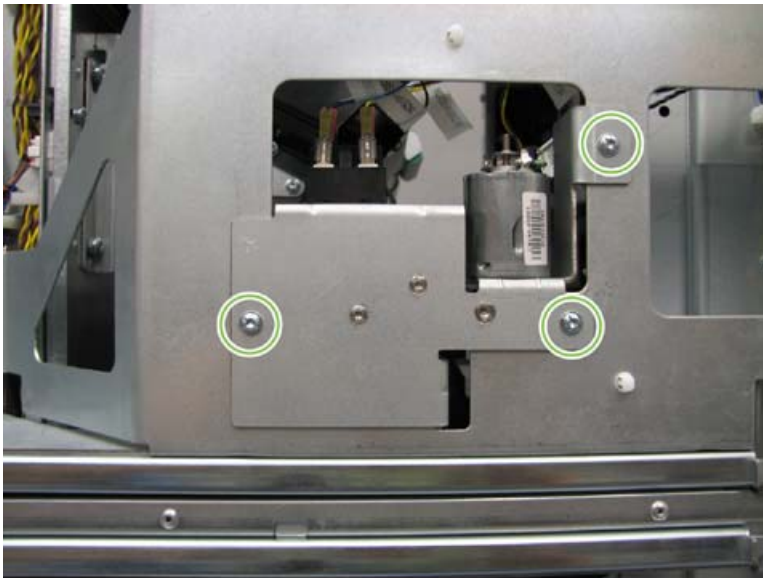


3. Remove two screws, slide the PCA sideways off the post, and then disconnect one wire connector.

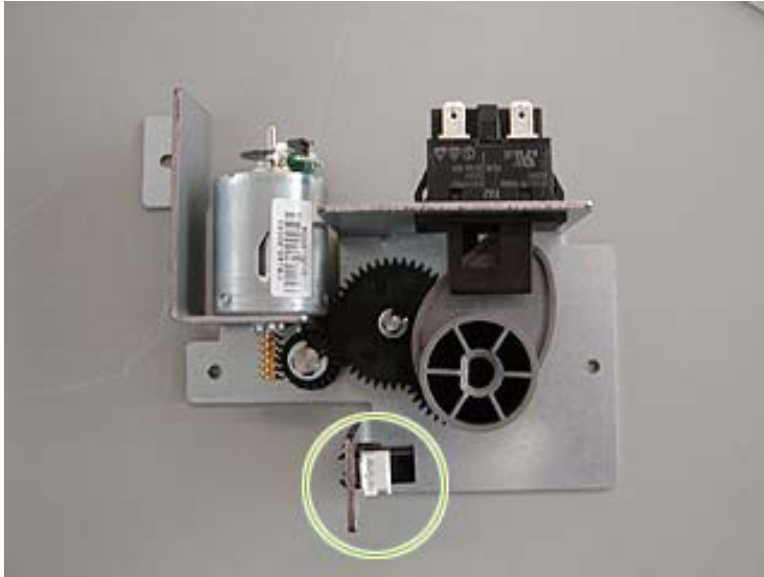


Accumulator Open sensor (SN255)

1. Remove the rear cover.
[Rear cover on page 783](#)
2. Disconnect the cable to M256, remove three screws, and then remove the accumulator open assembly bracket.



3. Disconnect the sensor wire connector, and then remove SN255.




Finisher Lower Elevator Stack Height sensor (SN257)

1. Remove the lower middle cover.
[Lower middle cover on page 799](#)
2. Disconnect the wire connector W251P6-SN257 to the Finisher Lower Elevator Stack Height sensor (SN257).



3. Replace SN257.

 **Reinstallation tip** The sensor is held on by double-sided tape. Remove tape residue and apply new tape for reinstallation.

Finisher Lower Elevator Paper Present sensor (SN258)

1. Remove the lower middle cover.

[Lower middle cover on page 799](#)

2. Disconnect the wire connector W252P1-SN258 to the Finisher Lower Elevator Paper Present sensor (SN258).



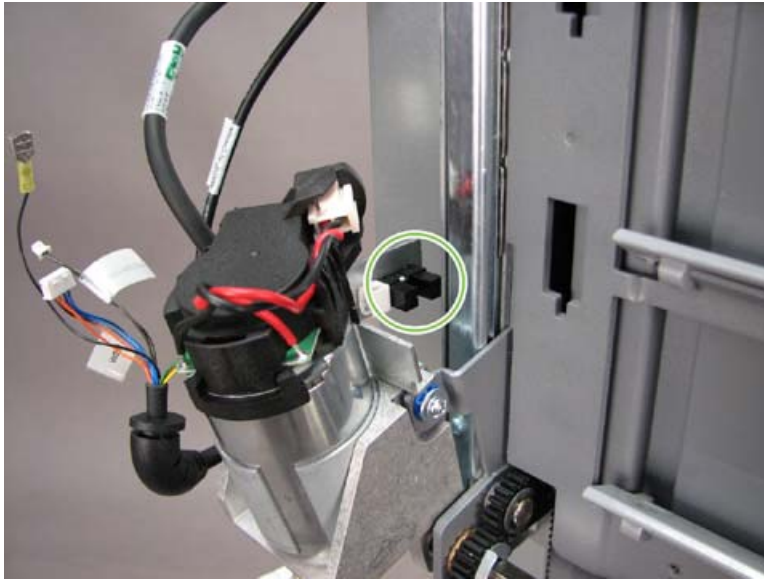
3. Replace SN258.

💡 **Reinstallation tip** The sensor is held on by double-sided tape. Remove tape residue and apply new tape for reinstallation.

Finisher Job Separator Lower Limit sensor (SN260)

1. Remove the separator motor cover.

2. Disconnect the wire connector W267P3-SN260 to the Finisher Job Separator Lower Limit sensor (SN260).



3. Replace SN260.

Finisher Job Separator Gate Open sensor (SN262)

1. Open the top door, handle 1 (upper transport), and then handle 2 (upper transport).
2. Remove the separator paper gate cover.

[Separator covers on page 789](#)

3. Disconnect the wire connector W267P7-SN262 to the Finisher Job Separator Gate Open sensor (SN262).



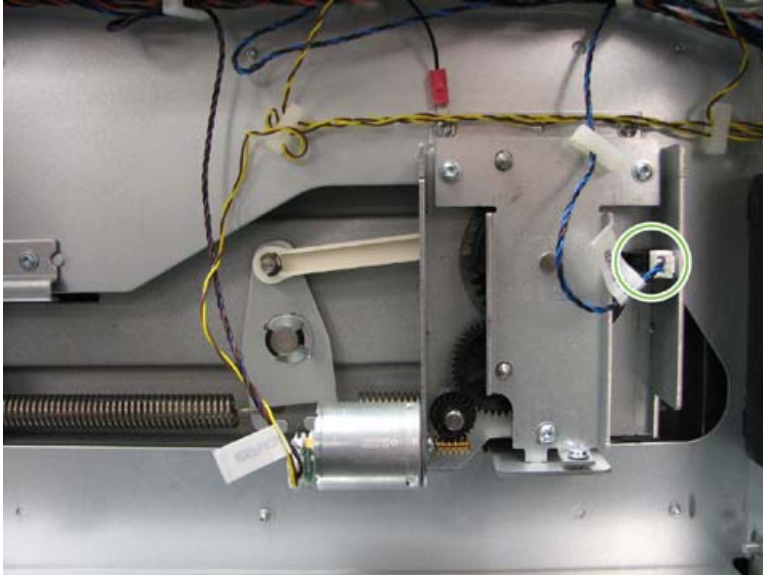
4. Replace SN262.

Finisher Job Separator Offset Back sensor (SN265)

1. Open the top door, handle 1 (upper transport), and then handle 2 (upper transport).
2. Remove the separator offset mechanism cover.

[Separator covers on page 789](#)

3. Disconnect the wire connector W267P10-SN265 to the Finisher Job Separator Offset Back sensor (SN265).



4. Replace SN265.

Finisher Job Separator Stack Height sensor (SN267)

1. Open the top door, handle 1 (upper transport), and then handle 2 (upper transport).
2. Remove the separator output media path cover.

[Separator covers on page 789](#)

3. Disconnect the wire connector W267P11-SN267 to the Finisher Job Separator Stack Height sensor (SN267).



4. Replace SN267.

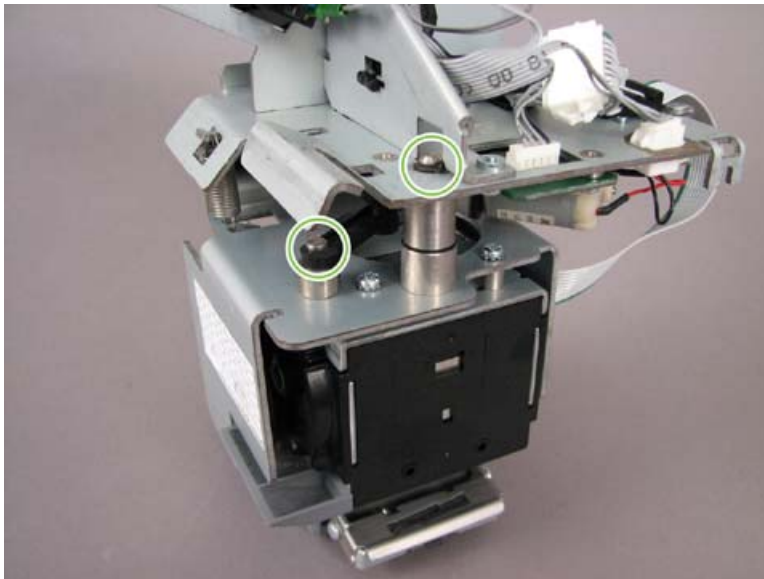
Stapler 1 Pivot Position 1 sensor (SN271) and Stapler 1 Pivot Position 2 sensor (SN272)

Both stapler 1 position sensors, SN271 and SN272, are mounted on the stapler 1 PCA. Replace the PCA to replace either sensor.

1. Remove the stapler 1 assembly.

[Stapler 1 assembly on page 842](#)

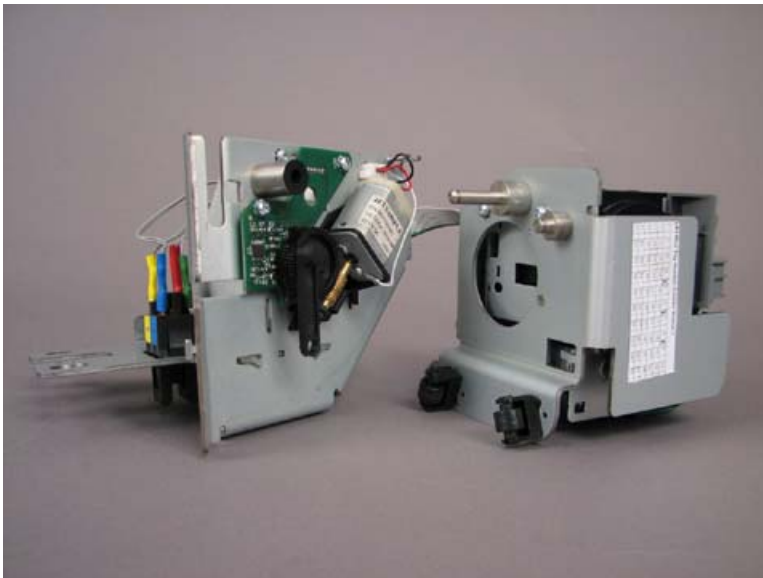
2. Remove two retaining clips.



3. Remove one spring.



4. Separate the stapler 1 assembly.



5. Remove one retaining clip, and then remove the gear.



6. Remove two screws, slide the PCA sideways off the post, and then disconnect one wire connector.



Stapler 1 sensors (SN274, SN275, and SN276)


Three sensors are found in the stapler 1 module. Replace the module if any of the following sensors need to be replaced:

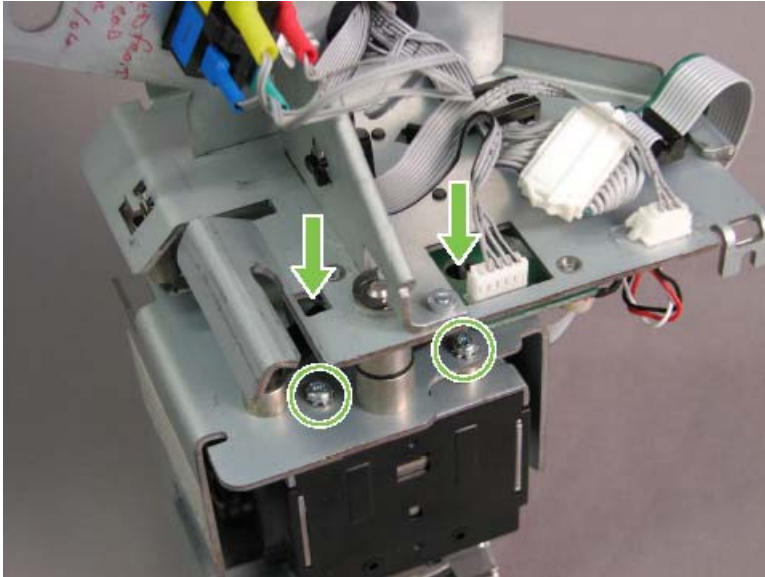
- Stapler 1 Low Staples sensor (SN274)
- Stapler 1 Ready sensor (SN275)
- Stapler 1 Home sensor (SN276)

1. Remove the stapler 1 assembly.

[Stapler 1 assembly on page 842](#)

2. Remove two screws.

 **NOTE:** Access these screws through access holes.



3. Disconnect two wire connectors from the motor, and then remove the module.



4. Remove the paper guide by prying the guide on one side, and then lifting off the guide from its locating pins. Replace the paper guide on the new module being installed.



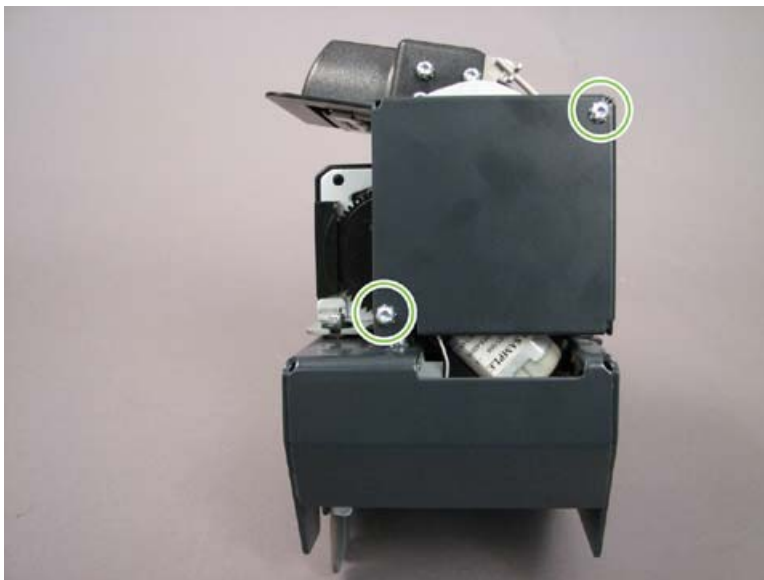
Stapler 2 Guard Position 1 sensor (SN280) and Stapler 2 Guard Position 2 sensor (SN281)

Both stapler 2 position sensors, SN280 and SN281, are mounted on the stapler 2 PCA. Replace the PCA to replace either sensor.

1. Remove the stapler 2 assembly.

[Stapler 2 assembly on page 844](#)

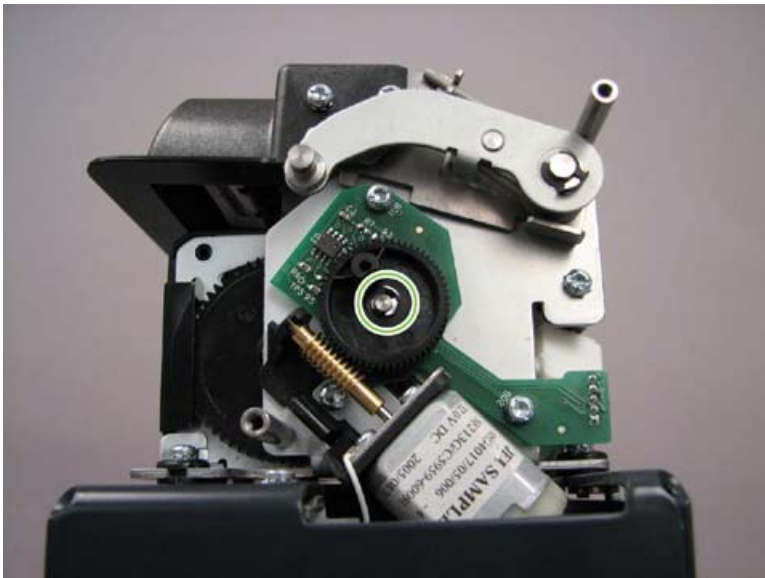
2. Remove two screws, and then remove the side cover.



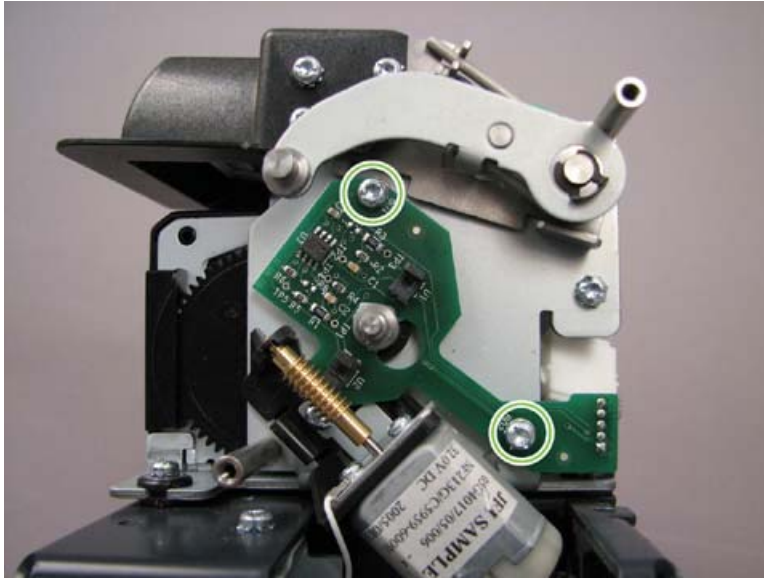
3. Remove one retaining clip, remove one snap cap and spacer, and then lift off the connecting lever.



4. Remove one retaining clip, and then remove the gear.



5. Remove two screws, slide the PCA sideways off the post, and then disconnect one wire connector.



Stapler 2 sensors (SN282, SN283, and SN284)

Three sensors are found in the stapler 2 module. Replace the module if any of the following sensors need to be replaced:

- Stapler 2 Low Staples sensor (SN282)
- Stapler 2 Ready sensor (SN283)
- Stapler 2 Home sensor (SN284)

1. Remove the stapler 2 assembly.

[Stapler 2 assembly on page 844](#)

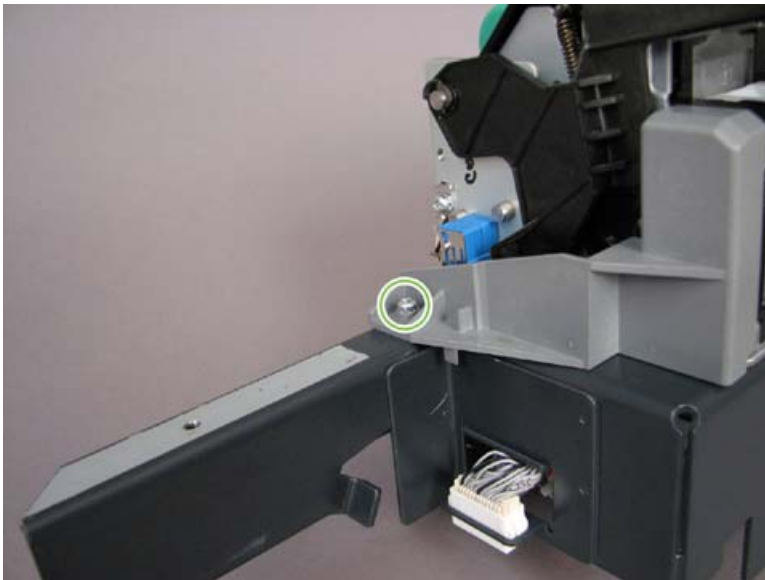
2. Remove one screw, and then remove the tray safety cover.



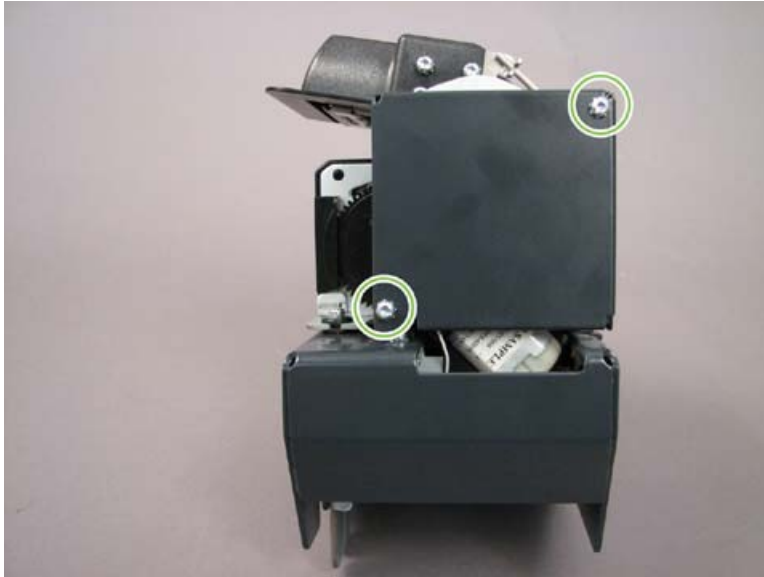
3. Remove two screws, and then remove the platform extension.



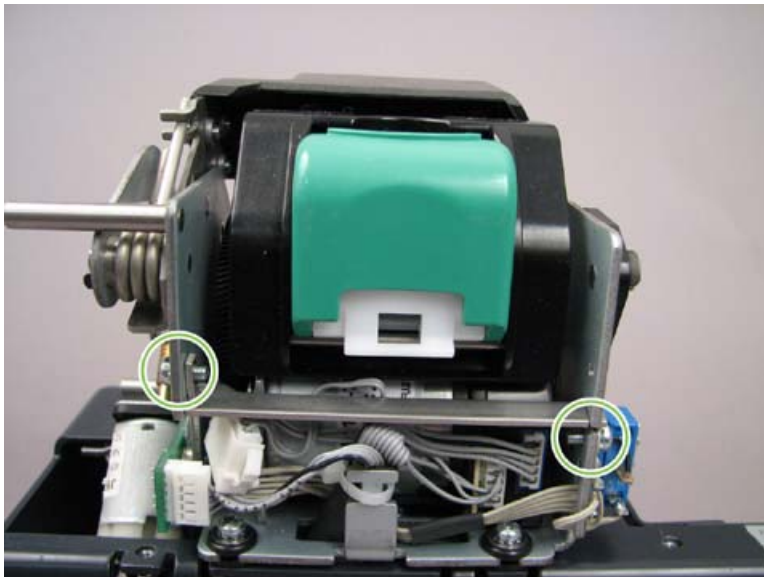
4. Remove one screw, and then slide the guide forward to unhook and remove the guide.



5. Remove two screws, and then remove the side cover.



6. Remove two screws, and then remove the horizontal bar. (Removing the right screw allows access to remove the bar.)



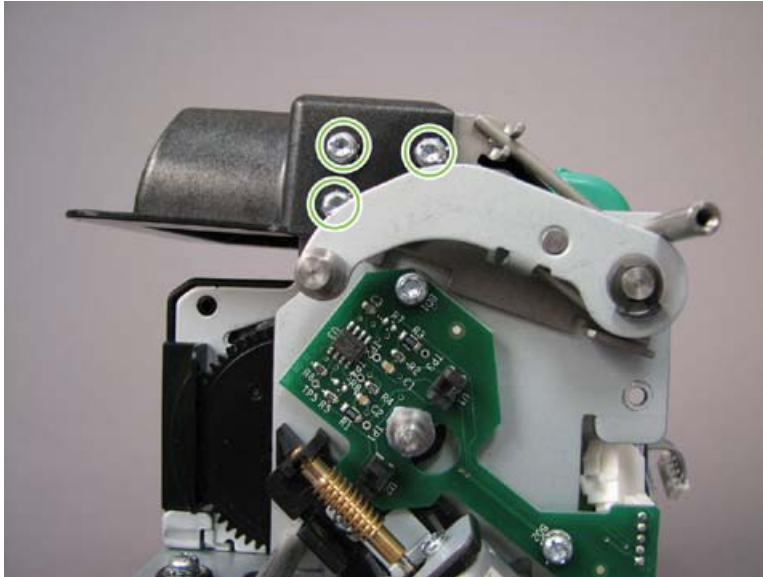
7. Remove two screws from underneath the base.



8. Disconnect two wire connectors on the motor.



9. Remove three screws from the top safety cover.



10. Lift out the stapler 2 module.

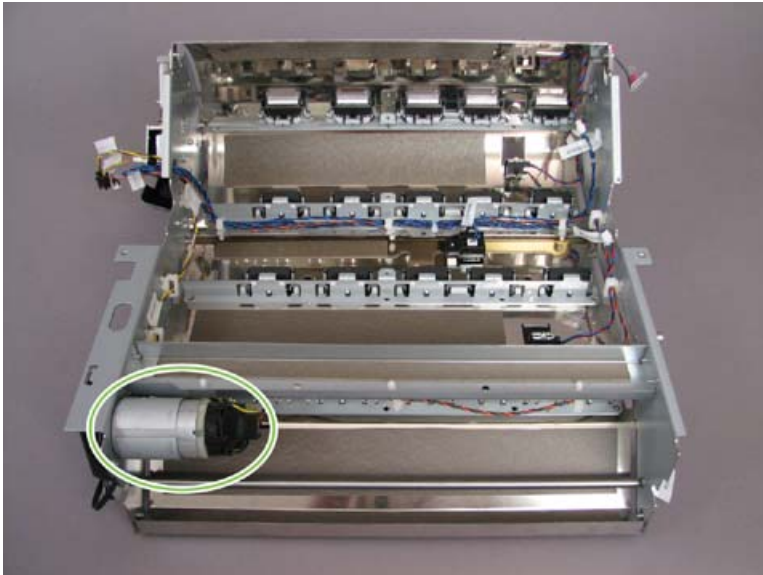
Motors

- [Finisher Input Paper Path motor \(M210\)](#)
- [Finisher Lower Paper Path motor \(M220\)](#)
- [Finisher Upper Paper Path motor \(M230\)](#)
- [Accumulator Entry motor \(M240\)](#)
- [Accumulator Exit motor \(M241\)](#)
- [Accumulator Bearing Bracket motor \(M242\)](#)
- [Accumulator Guide Bar motor \(M243\)](#)
- [Accumulator Offset 1 motor \(M244\)](#)
- [Accumulator Offset 2 motor \(M245\)](#)
- [Accumulator Retainer Finger motor \(M246\)](#)
- [Finisher Lower Elevator motor \(M250\)](#)
- [Finisher Stack Holder motor \(M252\)](#)
- [Finisher Job Support Arm motor \(M253\)](#)
- [Accumulator Open motor \(M256\)](#)
- [Finisher Separator Drive motor \(M260\)](#)
- [Finisher Job Separator Gate motor \(M262\)](#)
- [Finisher Separator Offset motor \(M264\)](#)

- [Finisher Separator Input motor \(M268\)](#)
- [Stapler 1 Rotate motor \(M271\)](#)
- [Stapler 1 motor \(M272\)](#)
- [Stapler 2 Safety motor \(M280\)](#)
- [Stapler 2 motor \(M281\)](#)

Finisher Input Paper Path motor (M210)

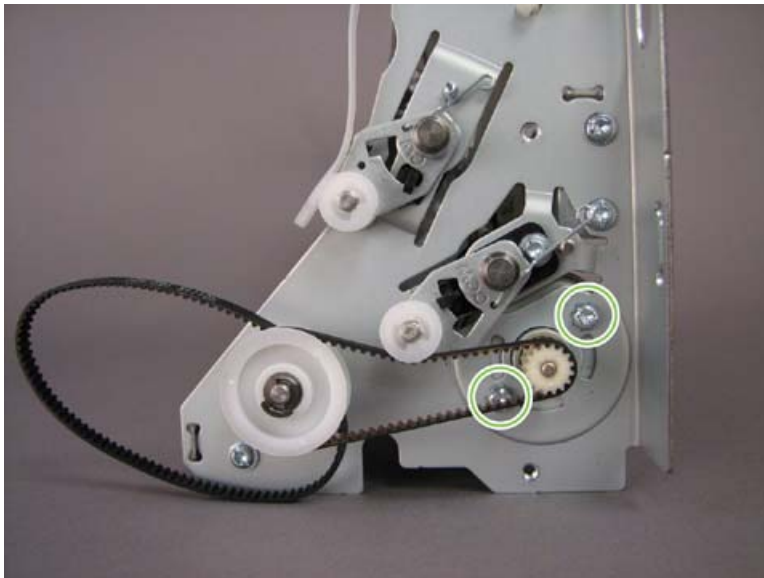
1. Remove the input paper path assembly.
[Input paper path on page 817](#)
2. Disconnect two wire connectors from M210.
 - W210P2-M210
 - W211P2-EN210



3. Remove two screws, and then remove the cover.



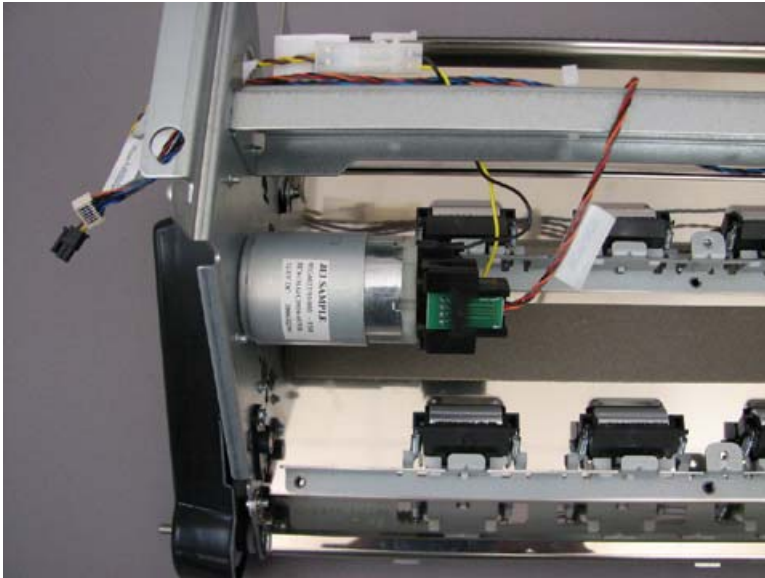
4. Remove two screws, and then remove M210.



Finisher Lower Paper Path motor (M220)

1. Access handle 3 (lower transport).

[Handle 3 \(lower transport\) on page 797](#)



2. Disconnect two wire connectors from M220:
 - W220P2-M220
 - W221P2-EN220
3. Remove three screws, and then remove the cover.

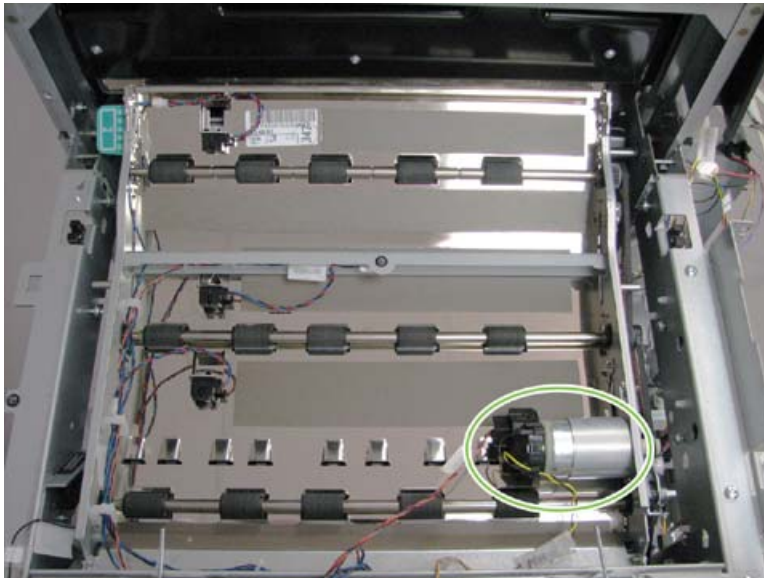


4. Remove two screws, and then remove M220.



Finisher Upper Paper Path motor (M230)

1. Access handle 1 (upper transport).
[Handle 1 \(upper transport\) on page 792](#)



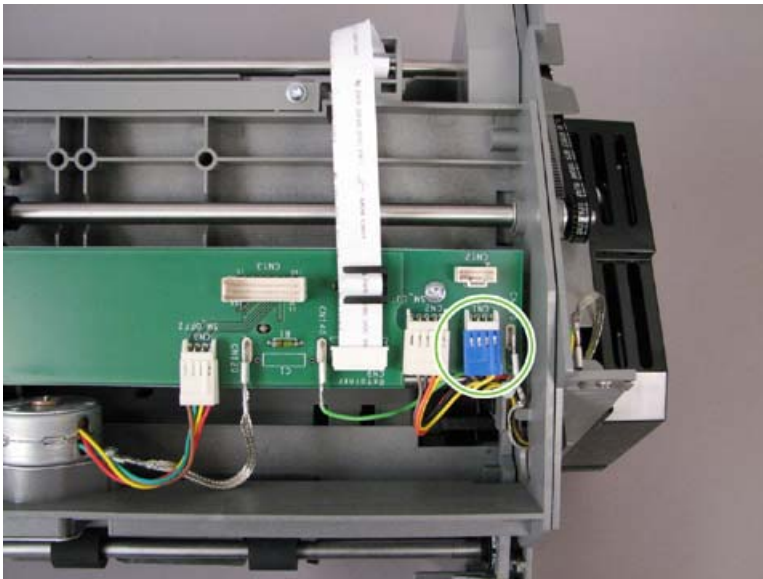
2. Disconnect two wire connectors from M230.
 - W230P2-M230
 - W231P2-EN230
3. Remove two screws, and then remove M230.

Accumulator Entry motor (M240)

1. Remove the accumulator assembly.
[Accumulator assembly on page 848](#)
2. Remove five screws, and then lift off the rear cover.



3. Disconnect the motor cable.



4. Remove two screws, and then remove M240.

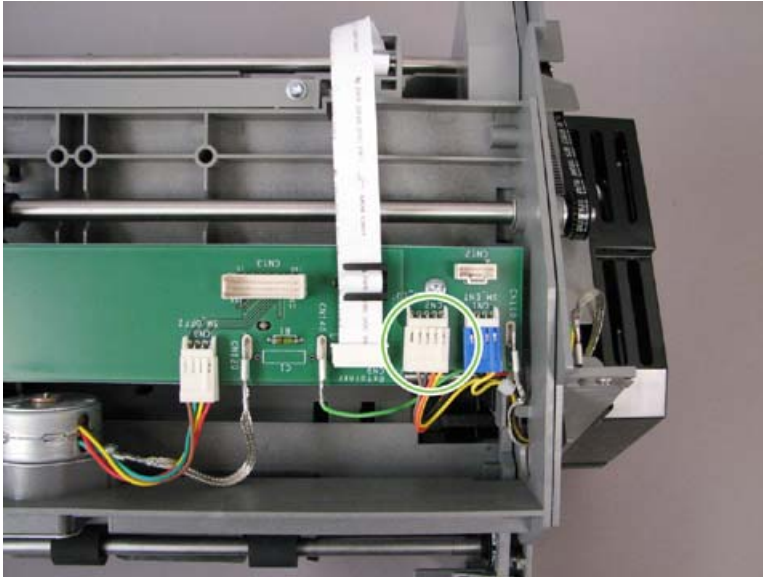


Accumulator Exit motor (M241)

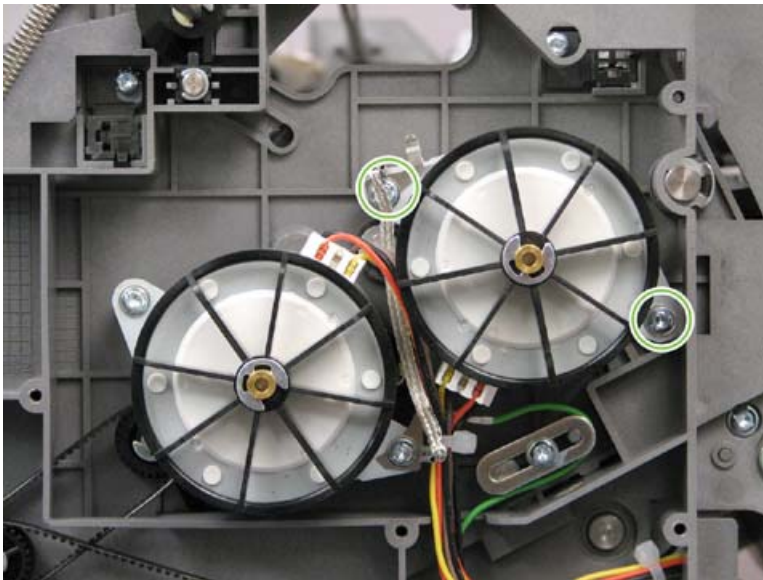
1. Remove the accumulator assembly.
[Accumulator assembly on page 848](#)
2. Remove five screws, and then lift off the rear cover.



3. Disconnect the motor cable.



4. Remove two screws, and then remove M241.

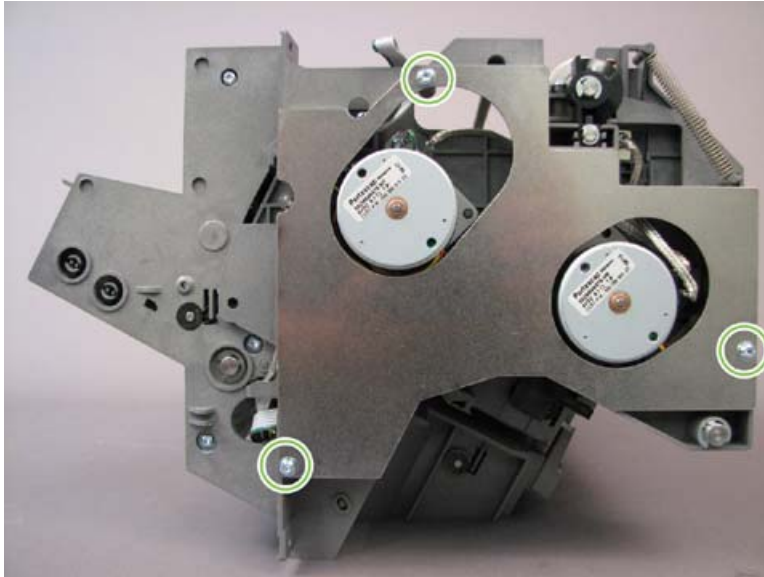


Accumulator Bearing Bracket motor (M242)

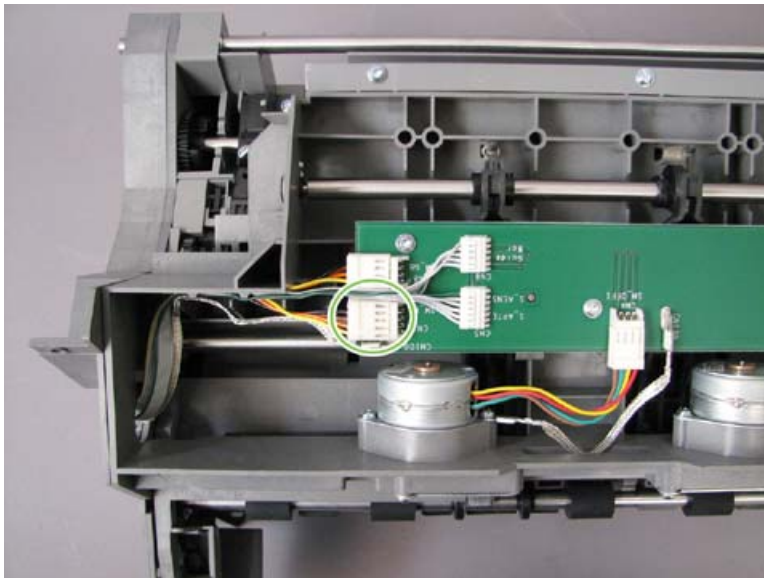
1. Remove the accumulator assembly.

[Accumulator assembly on page 848](#)

2. Remove three screws, and then lift off the front plate.



3. Disconnect the motor cable.

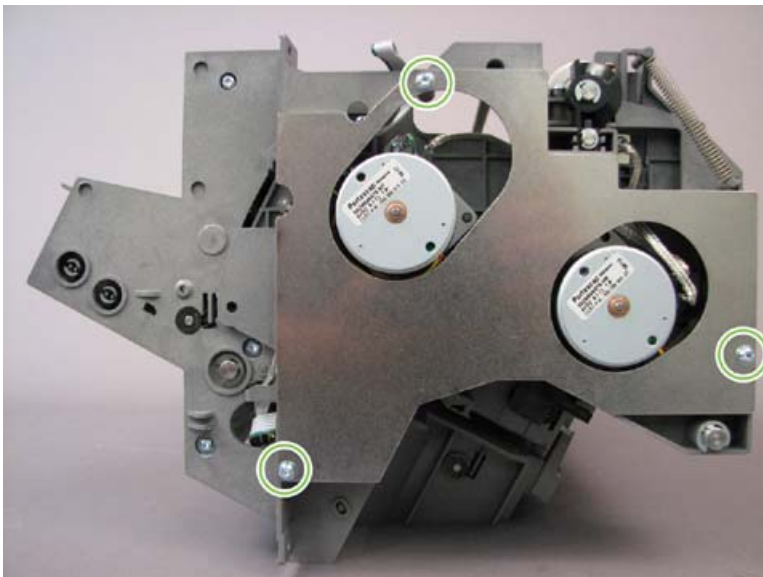


4. Remove two screws, and then remove M242.

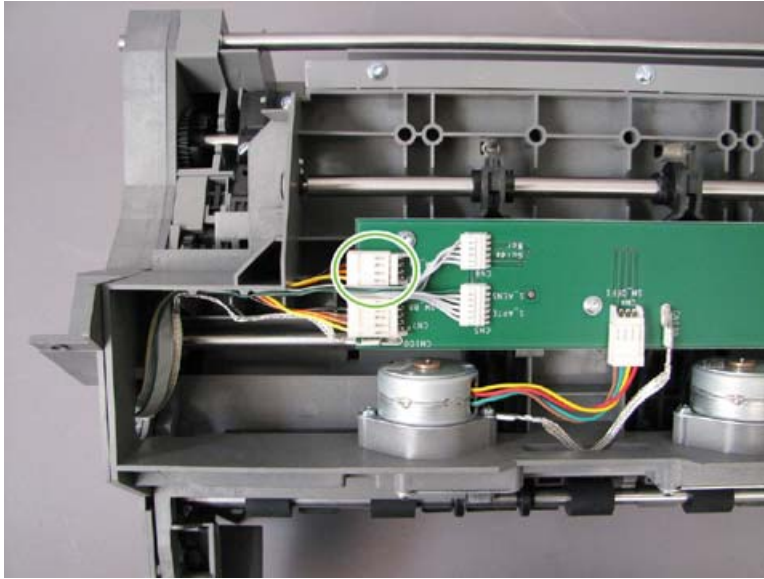


Accumulator Guide Bar motor (M243)

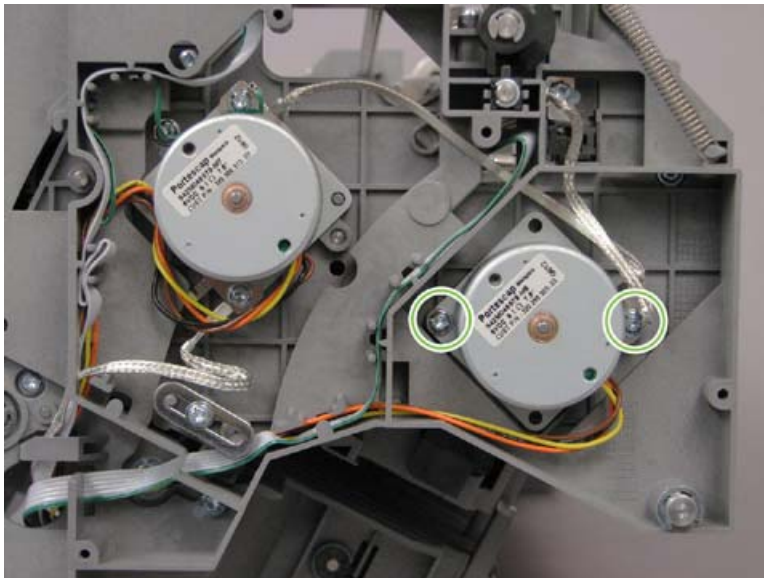
1. Remove the accumulator assembly.
[Accumulator assembly on page 848](#)
2. Remove three screws, and then lift off the front plate.



3. Disconnect the motor cable.



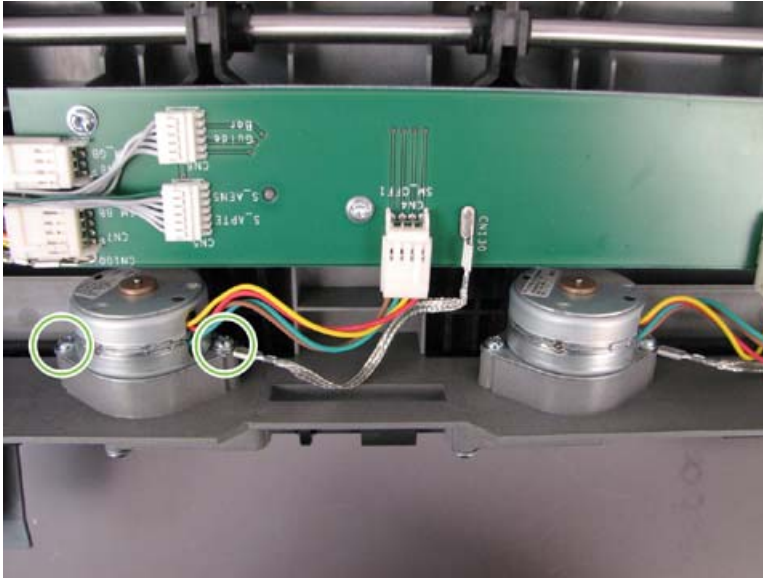
4. Remove two screws, and then remove M243.




Accumulator Offset 1 motor (M244)

1. Remove the accumulator assembly.
[Accumulator assembly on page 848](#)
2. Remove three screws from the PCA to provide access to the motor screws. You do not need to remove the PCA.

3. Remove two screws, disconnect the motor cable and ground wire, and then remove M244.



 **NOTE:** When an accumulator offset motor is replaced, run the following routine to adjust the accumulator offset alignment:

[Accumulator offset alignment on page 72](#)

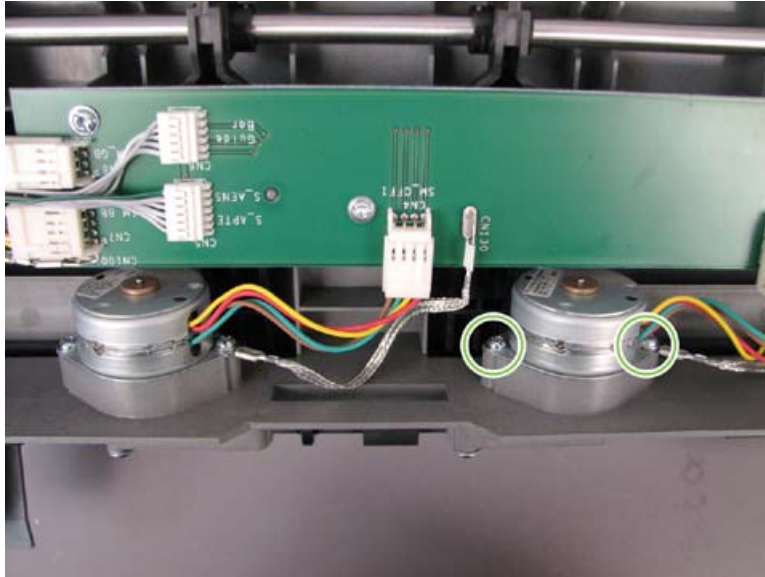
Accumulator Offset 2 motor (M245)


1. Remove the accumulator assembly.

[Accumulator assembly on page 848](#)

2. Remove three screws from the PCA to provide access to the motor screws. You do not need to remove the PCA.

3. Remove two screws, disconnect the motor cable and ground wire, and then remove M245.



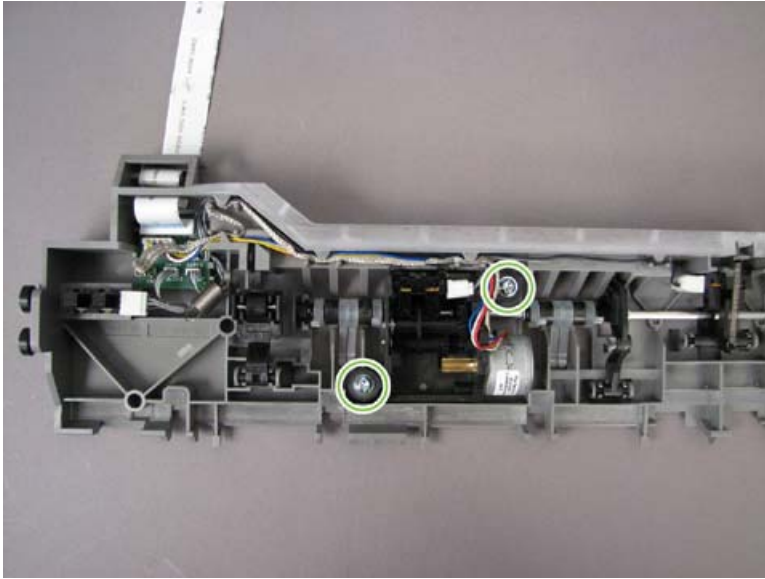
 **NOTE:** When an accumulator offset motor is replaced, run the following routine to adjust the accumulator offset alignment:

[Accumulator offset alignment on page 72](#)

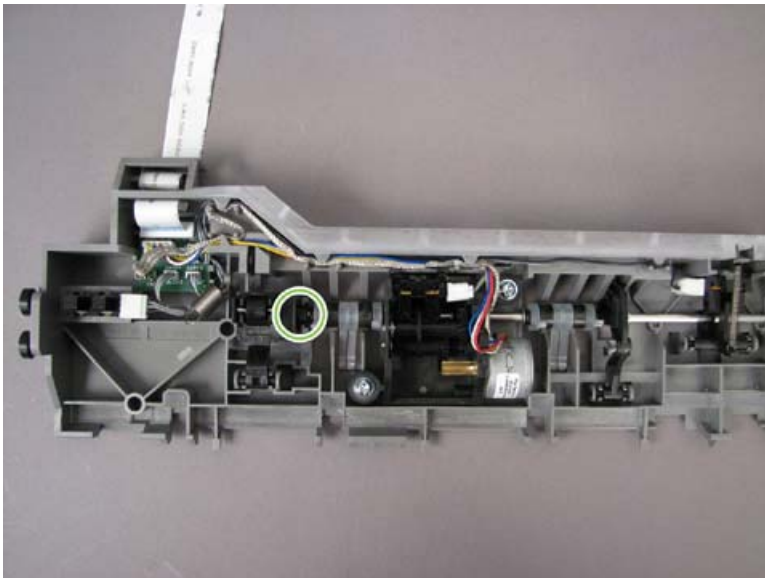
Accumulator Retainer Finger motor (M246)

1. Remove the following items:
 - Accumulator assembly
[Accumulator assembly on page 848](#)
 - Guide bar assembly
[Guide bar assembly on page 852](#)

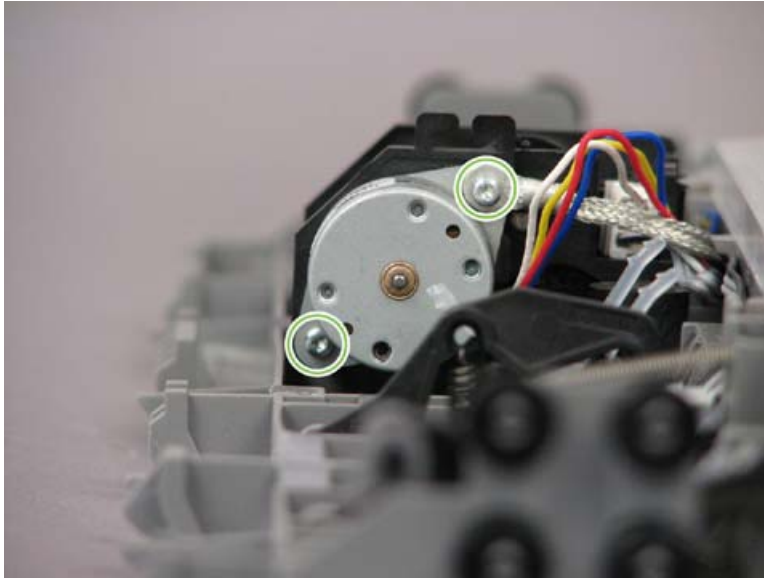
2. Remove two screws.



3. Unsnap the bushing, lift up the motor assembly, and then slide sideways to separate the shaft.

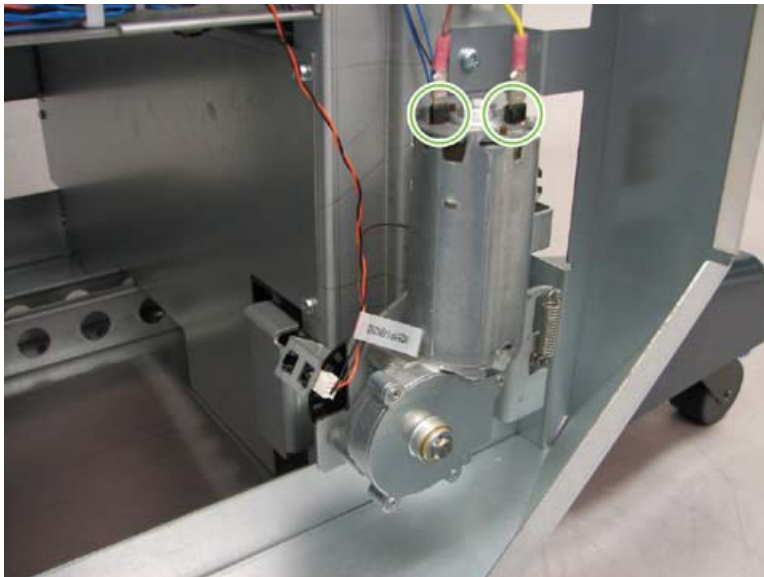


4. Remove two screws, and then remove M246 from the motor assembly.

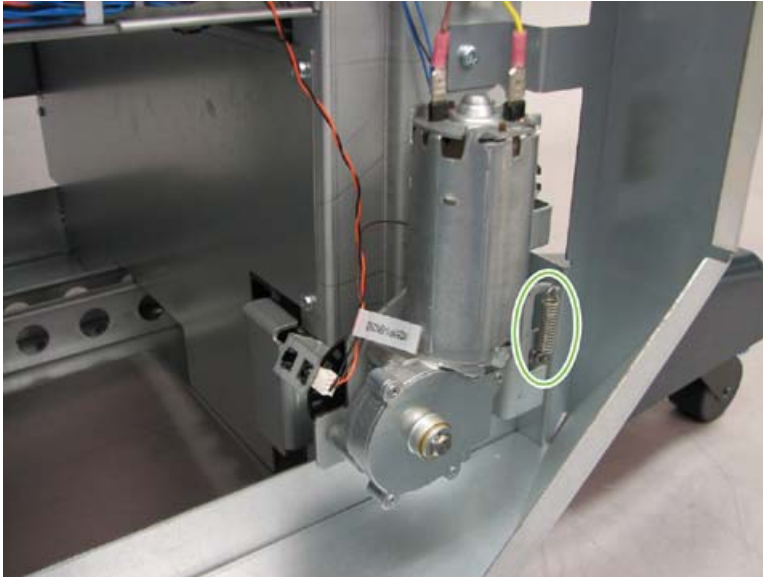


Finisher Lower Elevator motor (M250)


1. Remove the rear cover.
[Rear cover on page 783](#)
2. Disconnect two wire connectors from the top of the motor:
 - W250P1-M250
 - W250P2-M250



3. Unhook the spring.



4. Remove the retaining clip, and then slide the motor assembly off the shaft.

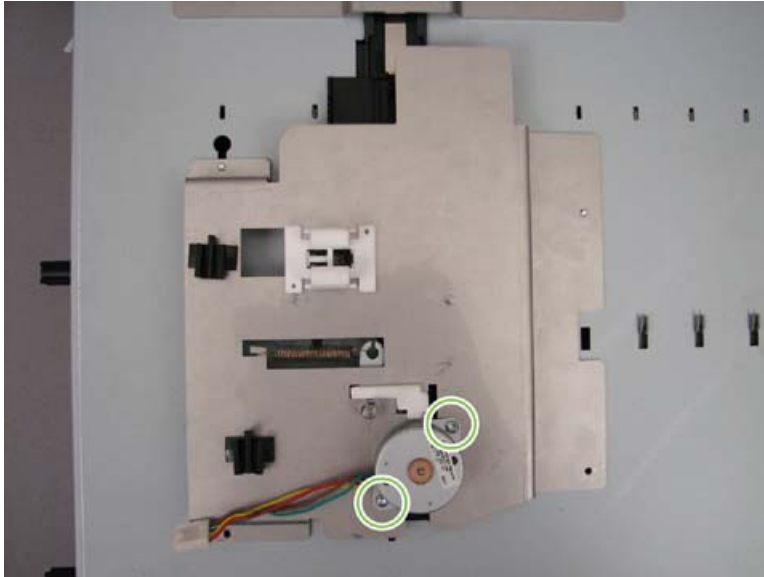
 **NOTE:** The shaft is under tension if the lower elevator is in a raised position. Hold the lower elevator while removing the lower elevator motor assembly, and then gently lower the lower elevator.



Finisher Stack Holder motor (M252)

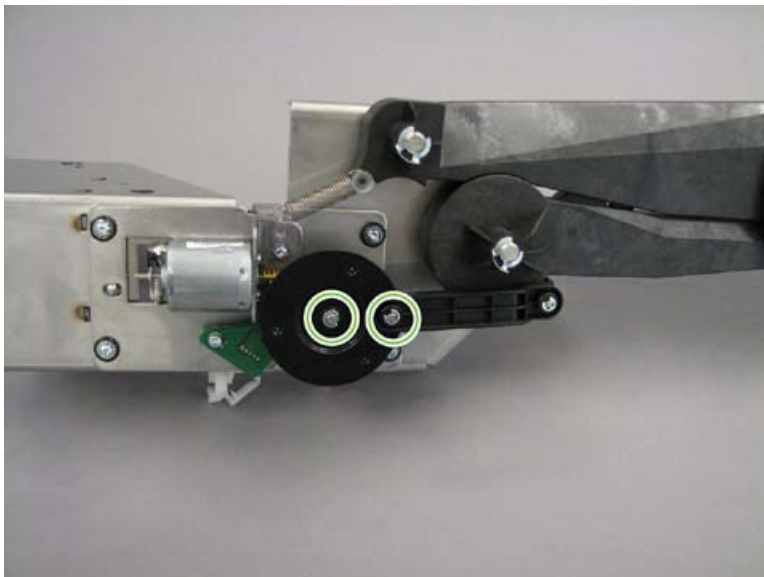
1. Remove the lower middle cover.
[Lower middle cover on page 799](#)
2. Disconnect the wire connector W252P2-M252 to the motor.

3. Remove two screws, and then slide the motor down and lift out.

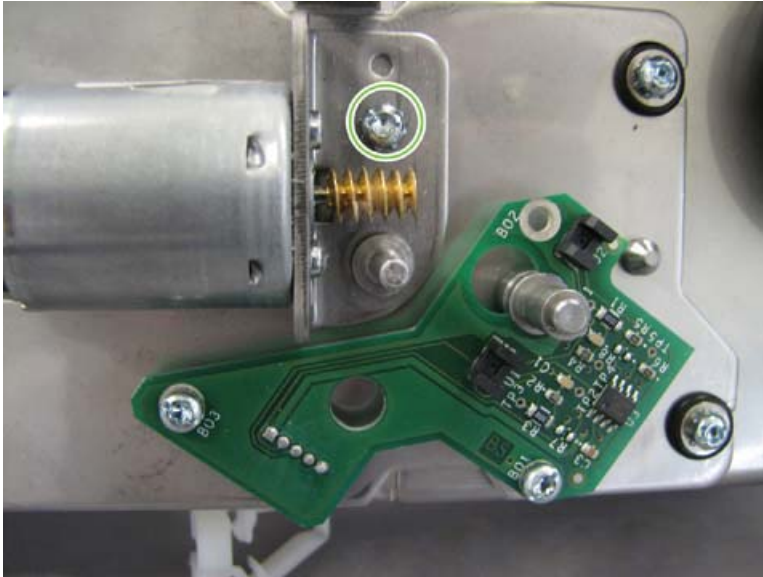


Finisher Job Support Arm motor (M253)

1. Remove the job support assembly.
[Job support assembly on page 814](#)
2. Remove two retaining clips, lift the arm from the gear, and then remove the gear.



3. Remove one screw, pull out the gear, and then lift out the motor bracket.



4. Remove one screw, and then remove the motor bracket.
5. Remove two screws, and then remove M253.

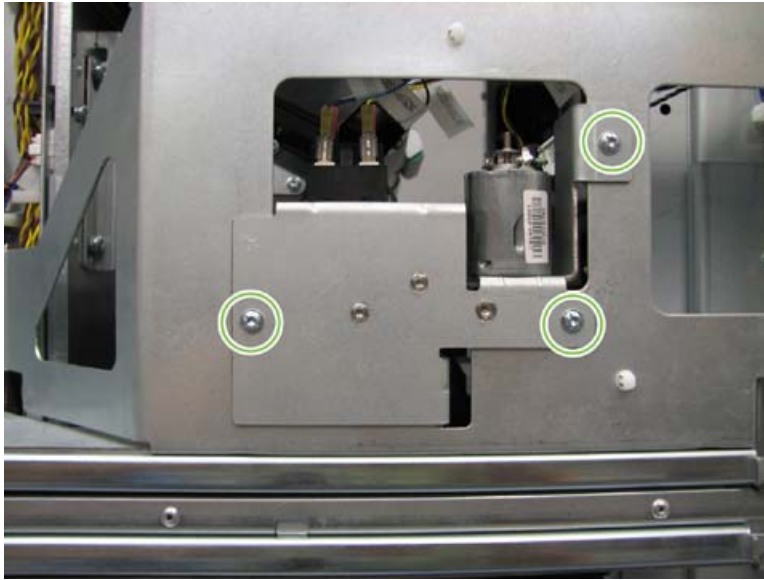



Accumulator Open motor (M256)

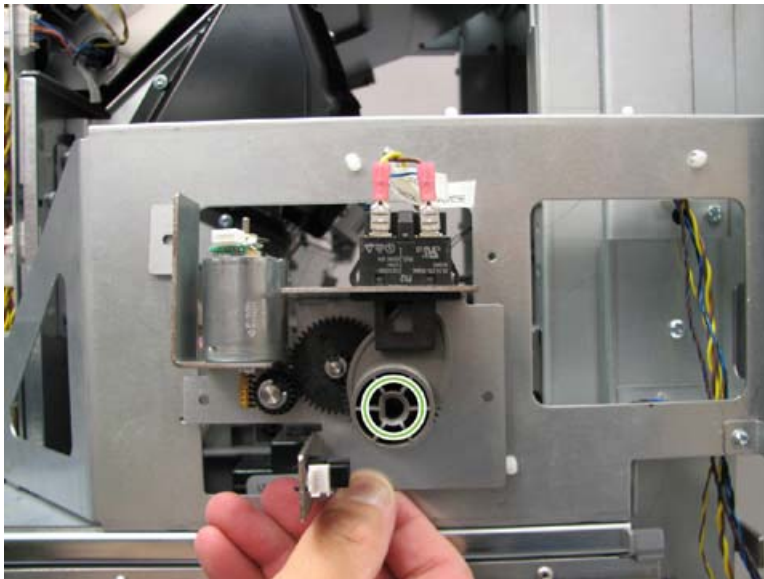
1. Remove the rear cover.

[Rear cover on page 783](#)

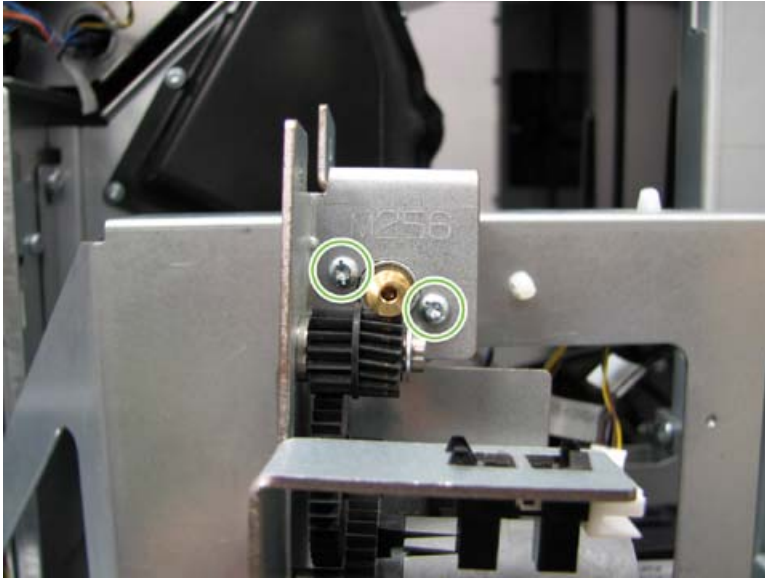
2. Disconnect the cable to M256, remove three screws, and then remove the accumulator open assembly bracket.



 **Reinstallation tip** Align the drive coupler and motor when reinstalling.




3. Remove two screws, and then lift M256 from the bracket.

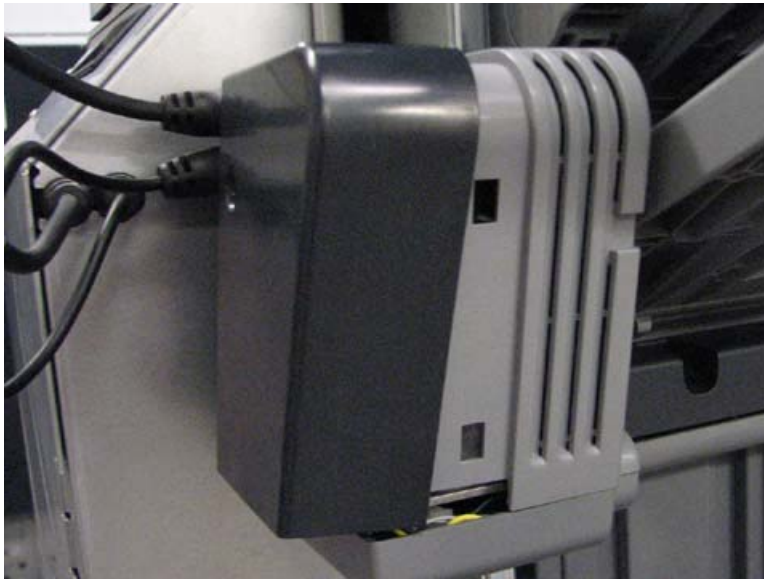


Finisher Separator Drive motor (M260)

1. Remove one screw, and then unsnap the rear cover of the separator motor. Detach the two cables from the rear cover.




 **NOTE:** The rear separator cover snaps into two holes on the front separator cover.



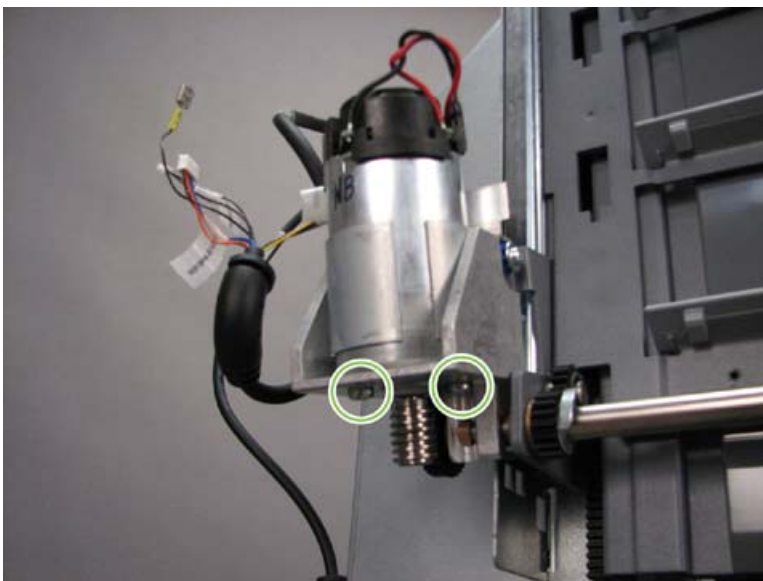
2. Remove one screw on the bottom, and then remove the separator motor cover.




3. Disconnect two wire connectors from the Finisher Separator Drive motor (M260):
 - W263P3-M260
 - W263P6-EN260
4. Remove two screws, and then lift the separator motor out.

 **NOTE:** One screw has a ground connection.

NOTE: Hold the separator assembly up before removing the motor. The separator assembly will drop when the motor is removed.



 **Reinstallation tip** To eliminate wire damage, ensure the motor wiring is dressed properly.

Finisher Job Separator Gate motor (M262)

1. Remove the paper gate assembly.
[Paper gate assembly on page 827](#)
2. Remove two screws, and then remove M262 from the assembly.



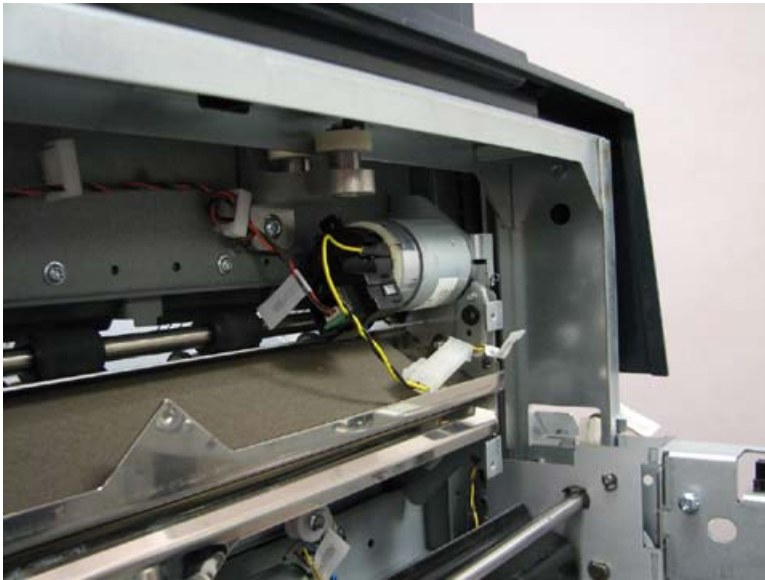
Finisher Separator Offset motor (M264)

1. Remove the offset mechanism assembly.
[Offset mechanism assembly on page 825](#)
2. Remove two screws, and then remove M264 from the assembly.

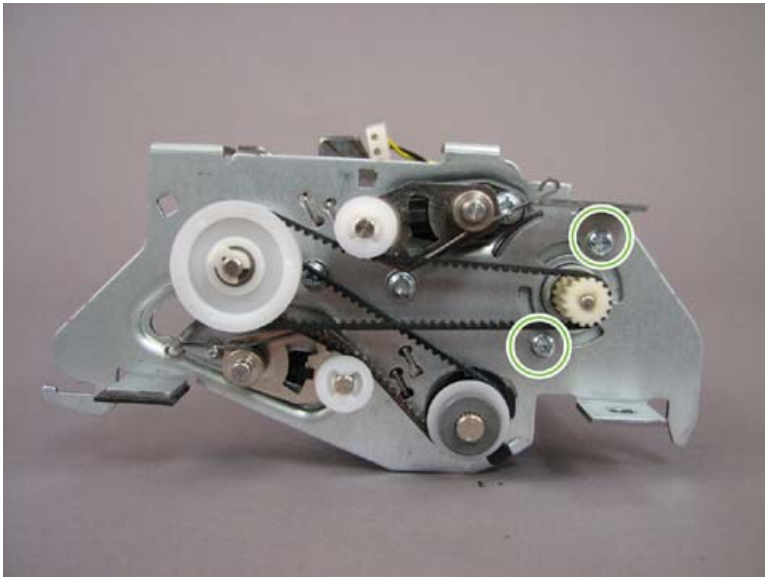


Finisher Separator Input motor (M268)

1. Remove the output media-path assembly.
[Output media-path assembly on page 824](#)
2. Disconnect two wire connectors from M268.
 - W267P5-M268
 - W267P4-EN268



3. Loosen the belt idler, remove two screws, and then remove M268.

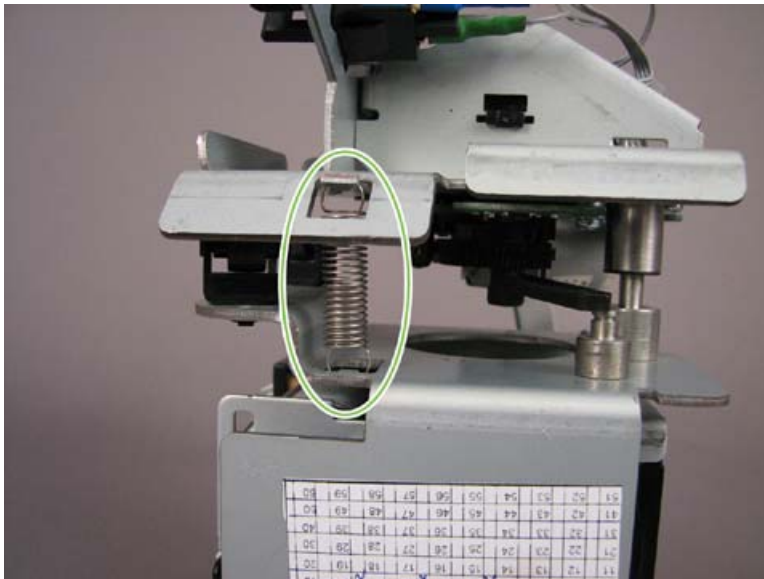


Stapler 1 Rotate motor (M271)

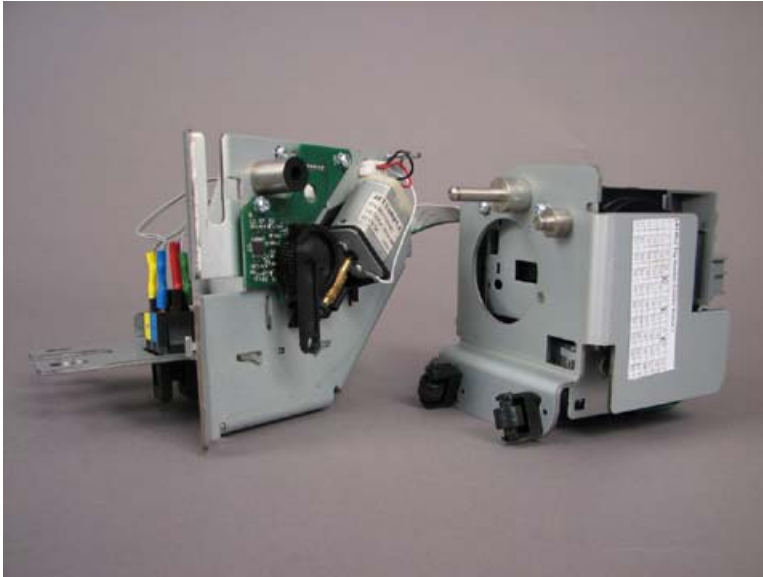
1. Remove the stapler 1 assembly.
[Stapler 1 assembly on page 842](#)
2. Remove two retaining clips.



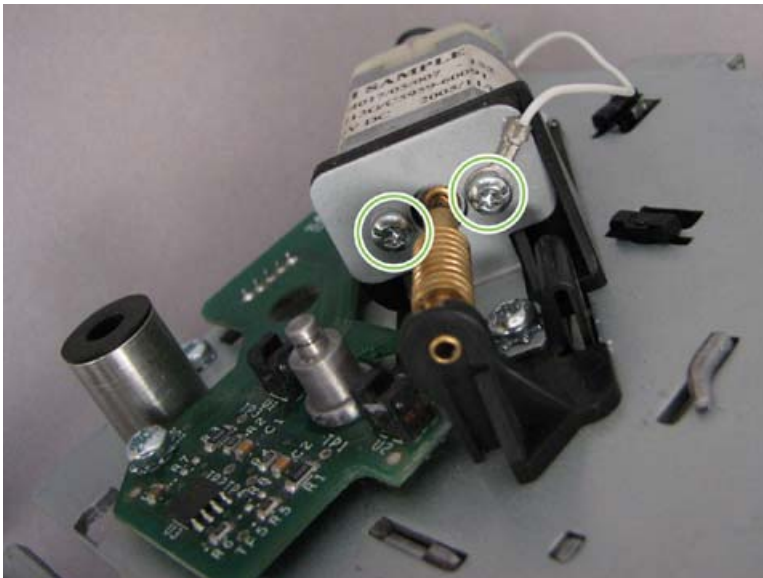
3. Remove one spring.



4. Separate the stapler 1 assembly.



5. Remove two screws, and then remove M271.



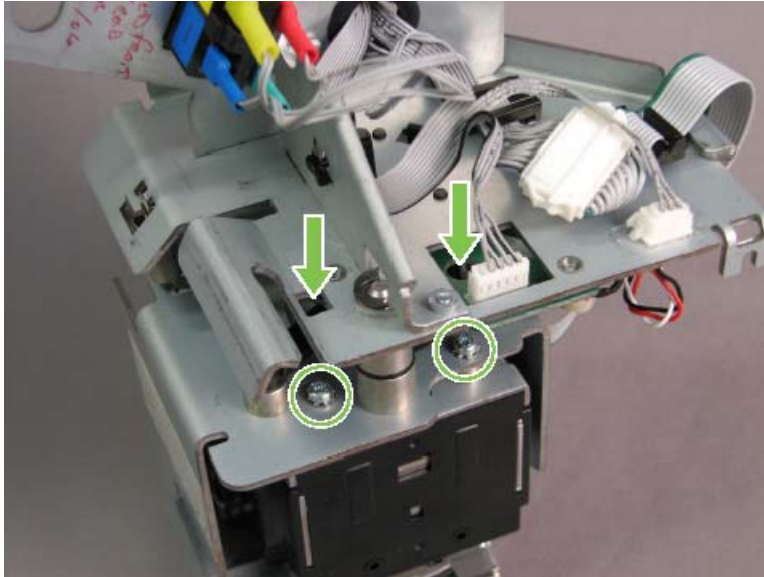
Stapler 1 motor (M272)

1. Remove the stapler 1 assembly.

[Stapler 1 assembly on page 842](#)

2. Remove two screws.

 **NOTE:** Access these screws through access holes.



3. Disconnect two wire connectors.



4. Remove M272.



5. Remove the paper guide by prying the guide on one side, and then lifting off the guide from its locating pins. Replace the paper guide on the new module being installed.

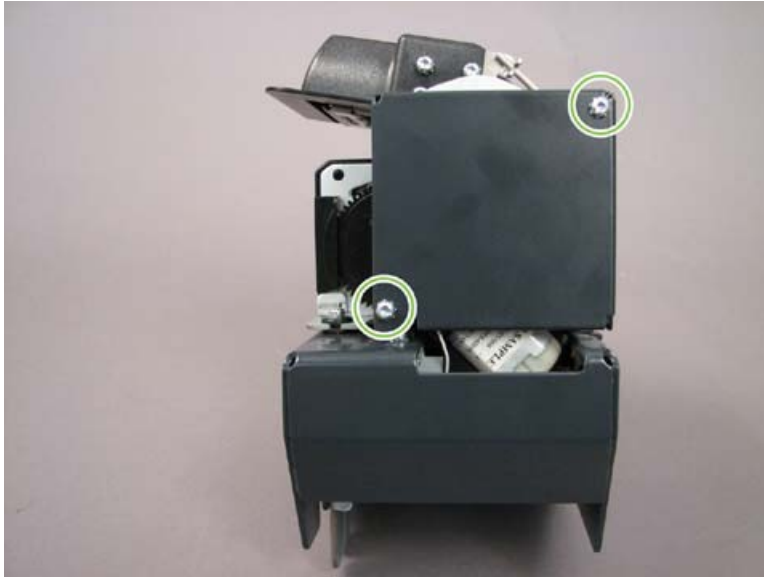


Stapler 2 Safety motor (M280)

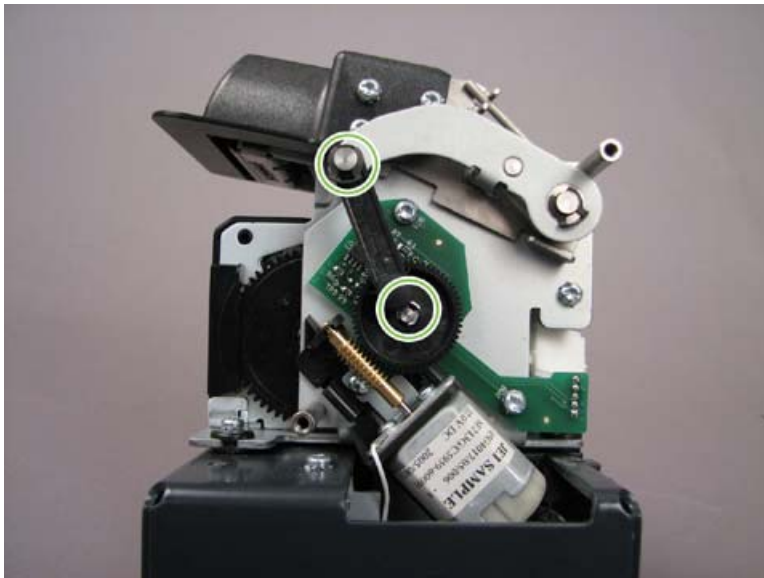
1. Remove the stapler 2 assembly.

[Stapler 2 assembly on page 844](#)

2. Remove two screws, and then remove the side cover.



3. Remove one retaining clip, remove one snap cap and spacer, and then lift off the connecting lever.



4. Remove one retaining clip, and then remove the gear.



5. Remove two screws, disconnect the wire, and then remove M280.



Stapler 2 motor (M281)

1. Remove the stapler 2 assembly.

[Stapler 2 assembly on page 844](#)

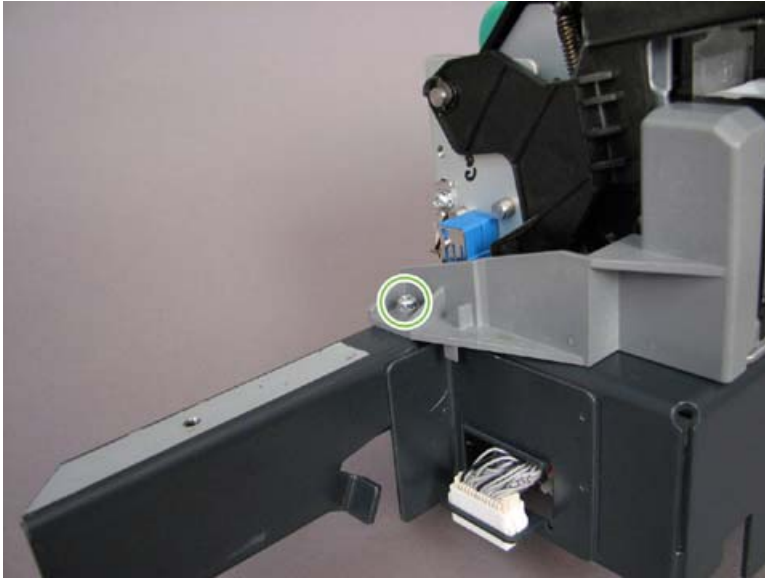
2. Remove one screw, and then remove the tray safety cover.



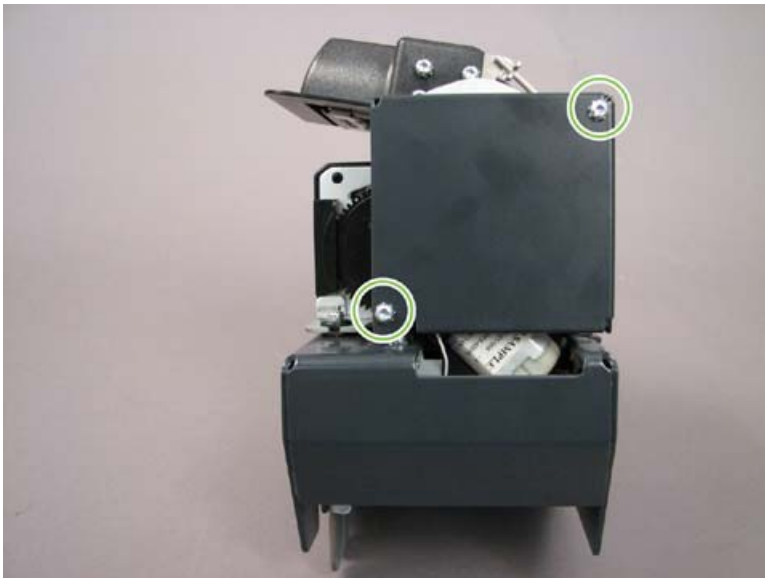
3. Remove two screws, and then remove the platform extension.



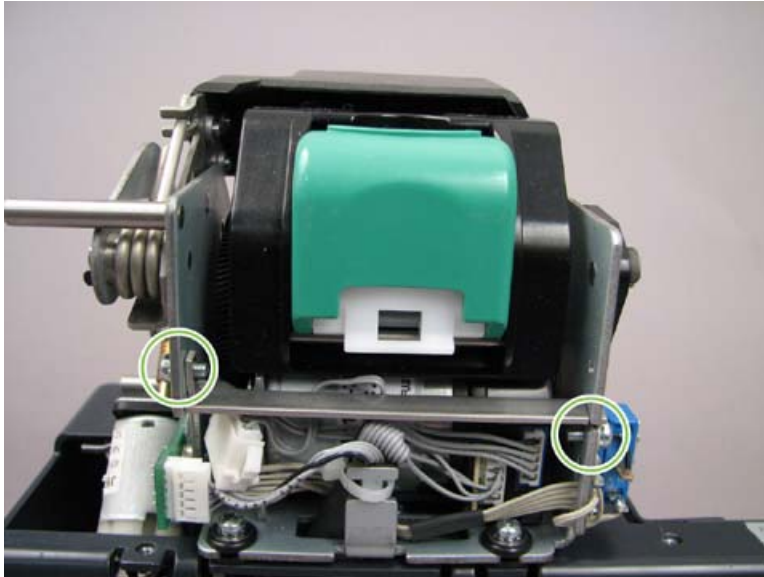
4. Remove one screw, and then remove the paper guide. Slide the guide forward to unhook the guide.



5. Remove two screws, and then remove the side cover.



6. Remove two screws, and then remove the horizontal bar.



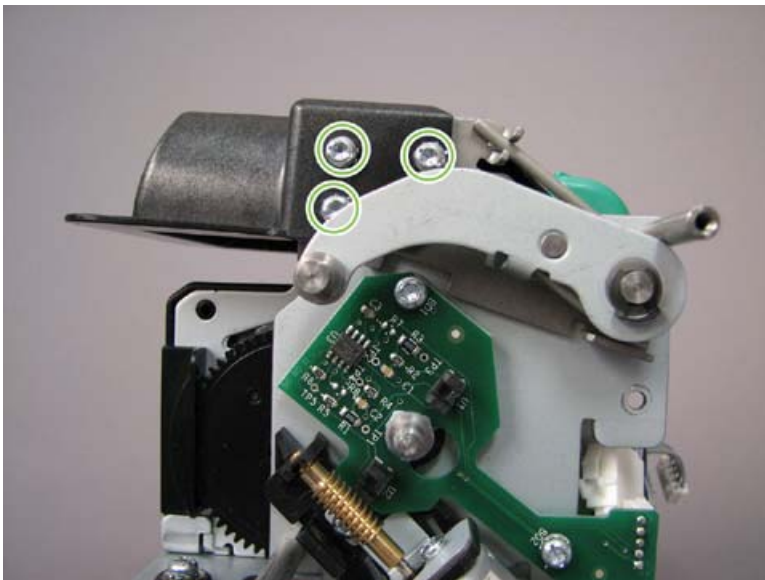
7. Remove two screws from underneath the base.



8. Disconnect two wire connectors on the motor.



9. Remove three screws from the top safety cover.



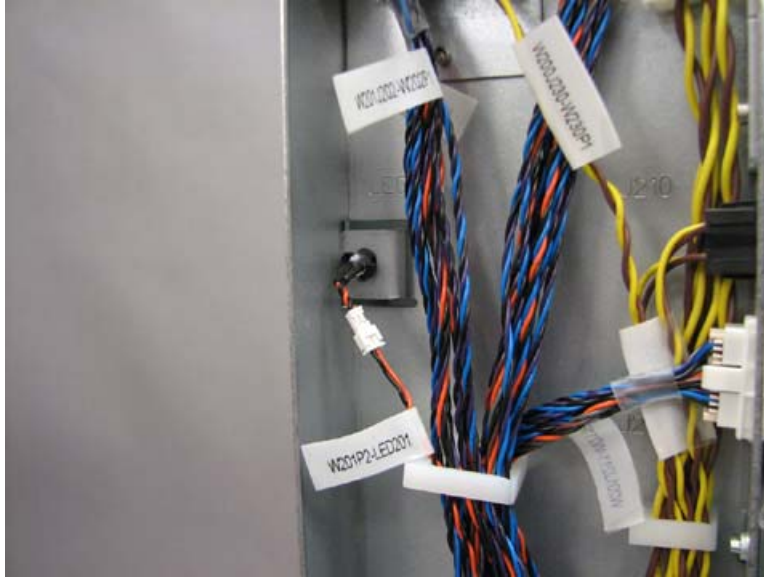
10. Lift out M281.

LEDs

- [Finisher Right-Side Panel LED \(LED201\)](#)
- [Finisher LED203, LED204, and LED205](#)
- [Finisher Handle 3 \(lower transport\) LED \(LED223\)](#)
- [Finisher Handle 1 \(upper transport\) LED \(LED234\)](#)

Finisher Right-Side Panel LED (LED201)

1. Remove the rear cover.
[Rear cover on page 783](#)
2. Disconnect wire connector W201P2-LED201.

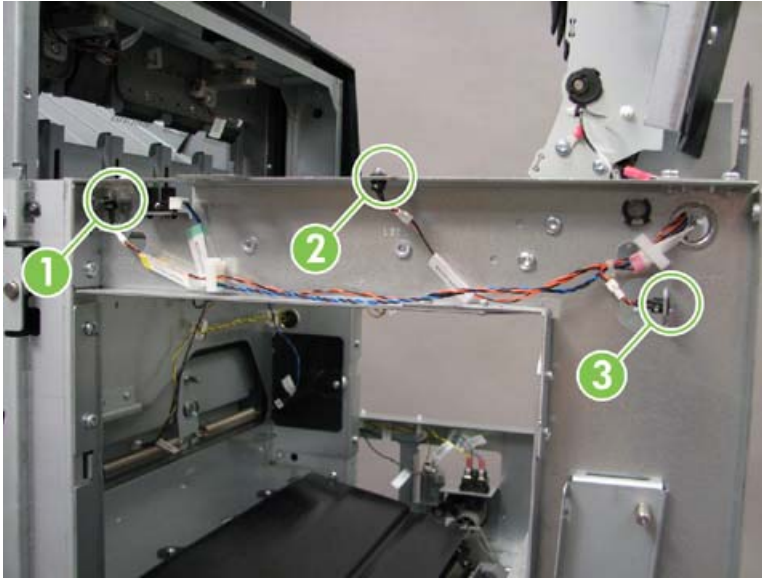


3. Replace the LED.

Finisher LED203, LED204, and LED205

1. Remove the front upper cover.
[Front upper cover on page 781](#)

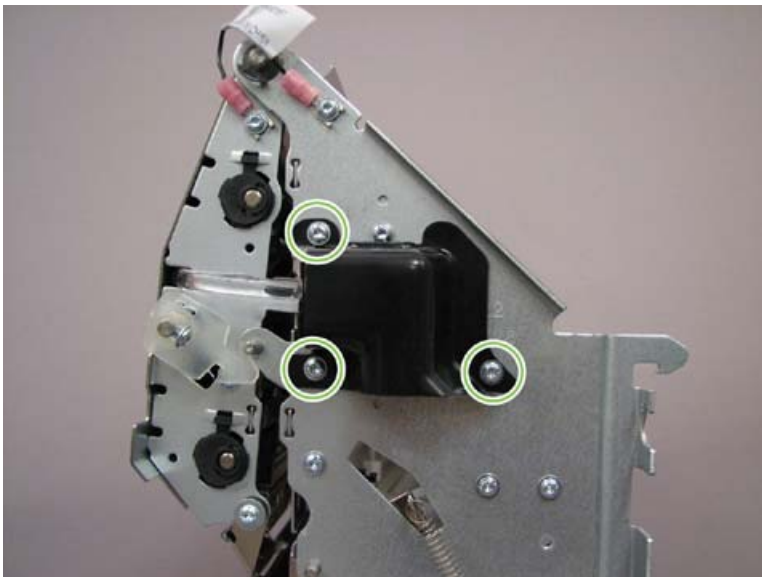
2. Disconnect the cable to the appropriate sensor, and then replace the LED.



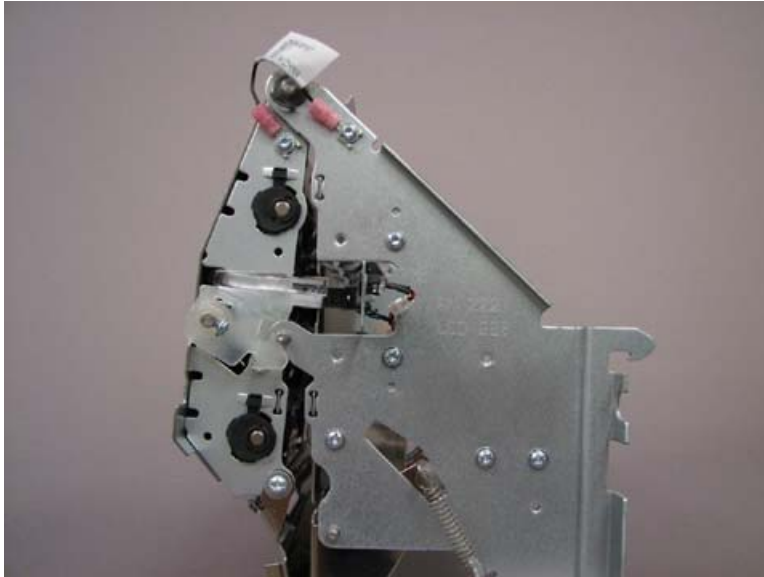
1	Finisher Handle 2 (upper transport) LED (LED203)
2	Finisher Top-Door LED (LED205)
3	Finisher Latch LED (LED204)

Finisher Handle 3 (lower transport) LED (LED223)

1. Remove the front upper cover.
[Front upper cover on page 781](#)
2. Remove the inner front panel.
3. Remove three screws, and then remove the cover.



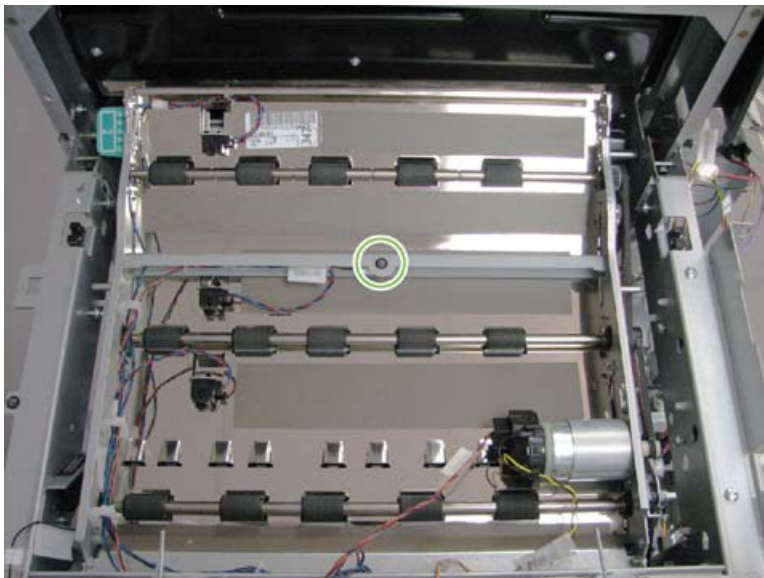
4. Disconnect wire connector W221P5-LED223.



5. Replace the LED.

Finisher Handle 1 (upper transport) LED (LED234)

1. Access handle 1 (upper transport).
[Handle 1 \(upper transport\) on page 792](#)
2. Disconnect wire connector W231P7-LED234.



3. Replace the LED.

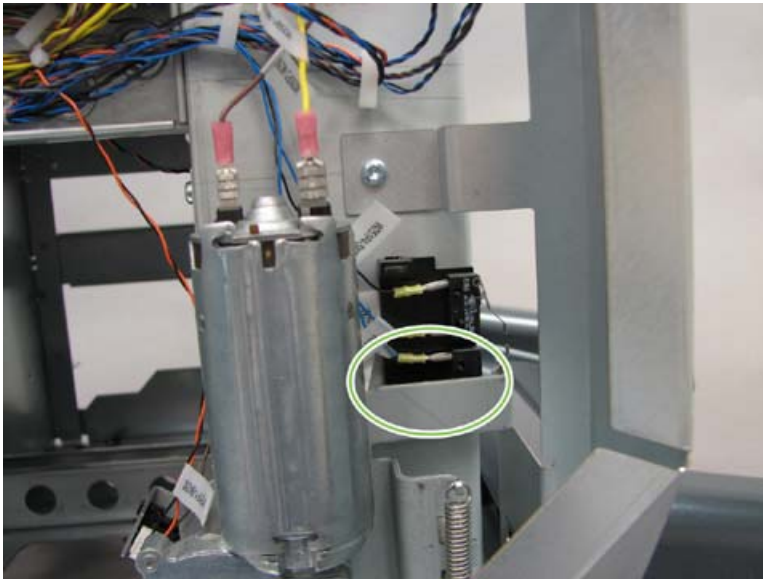
Switches

- [Finisher Lower Elevator Overload switch \(SW250\)](#)

- [Lower elevator bottom switch \(SW251\)](#)
- [Accumulator Closed switch \(SW256\)](#)
- [Finisher Separator Safety 1 switch \(SW261\)](#)
- [Finisher Separator Safety 2 switch \(SW264\)](#)
- [Stapler Door 1 switch \(SW273\)](#)
- [Stapler Door 2 switch \(SW282\)](#)
- [Stapler 2 safety cover interlock switches \(SW283 and SW284\)](#)
- [Stapler 2 pinch switches \(SW285, SW286, and SW287\)](#)

Finisher Lower Elevator Overload switch (SW250)

1. Remove the rear cover.
[Rear cover on page 783](#)
2. Disconnect two wire connectors:
 - W251P2-SW250
 - W251P3-SW250



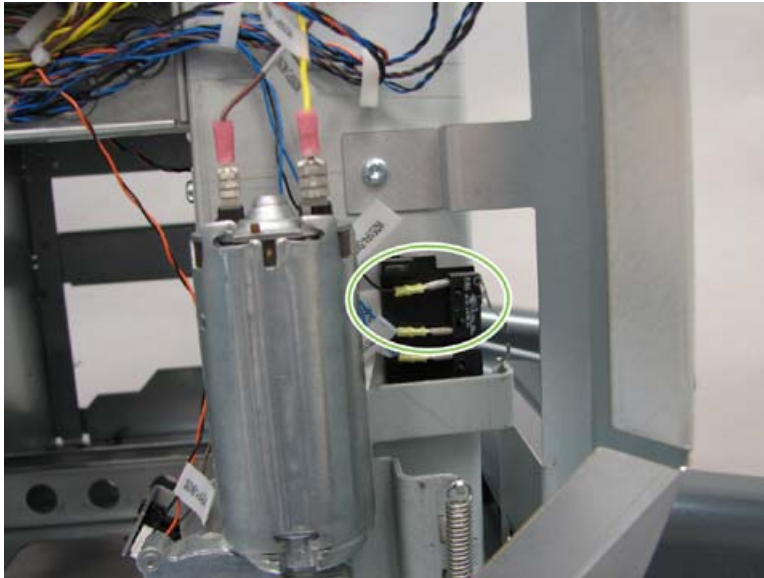
3. Replace the switch by pulling it from the posts.

Lower elevator bottom switch (SW251)

1. Remove the rear cover.
[Rear cover on page 783](#)

2. Disconnect two wire connectors:

- W251P4-SW250
- W251P5-SW250



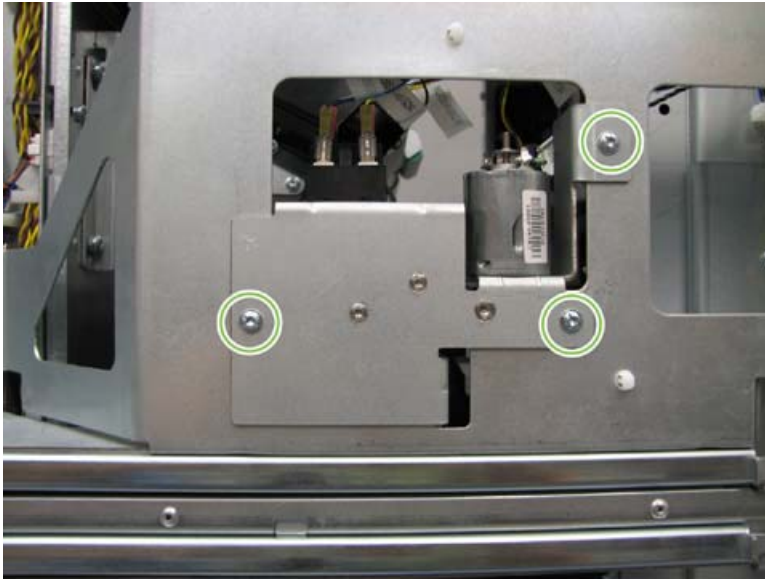
3. Replace the switch by pulling it from the posts.


Accumulator Closed switch (SW256)

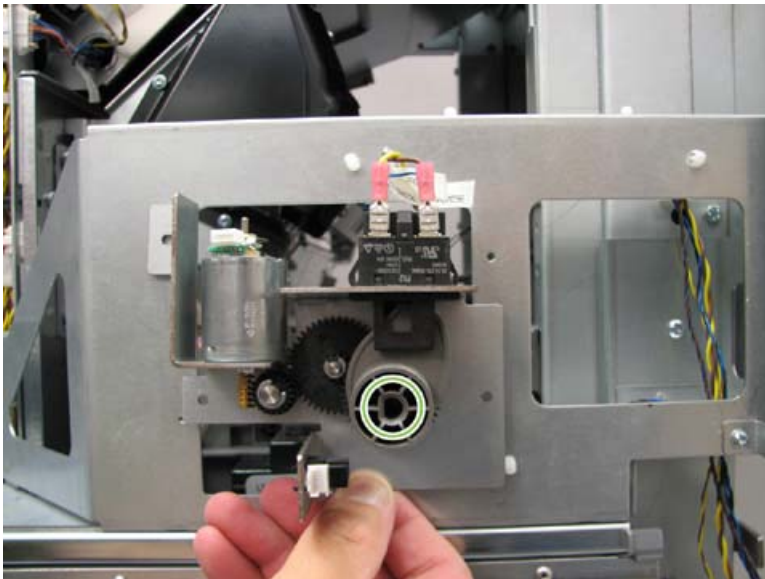
1. Remove the rear cover.

[Rear cover on page 783](#)


2. Disconnect the cable to M256, remove three screws, and then remove the accumulator open assembly bracket.



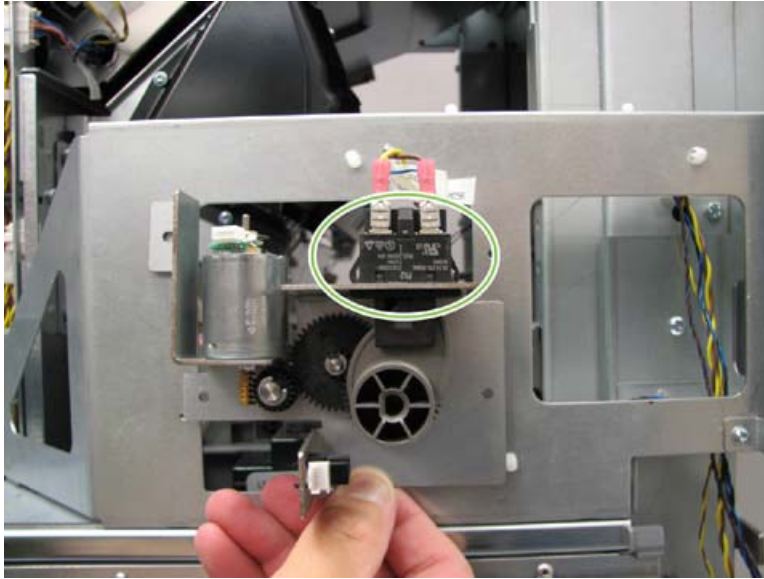
 **Reinstallation tip** Align the drive coupler and motor when reinstalling.



3. Manually rotate the drive motor to position the cam clear of the switch, and then pull off the cam.
4. Disconnect the cables to SW256.

 **NOTE:** The wire pairs are on the same side (front or rear).

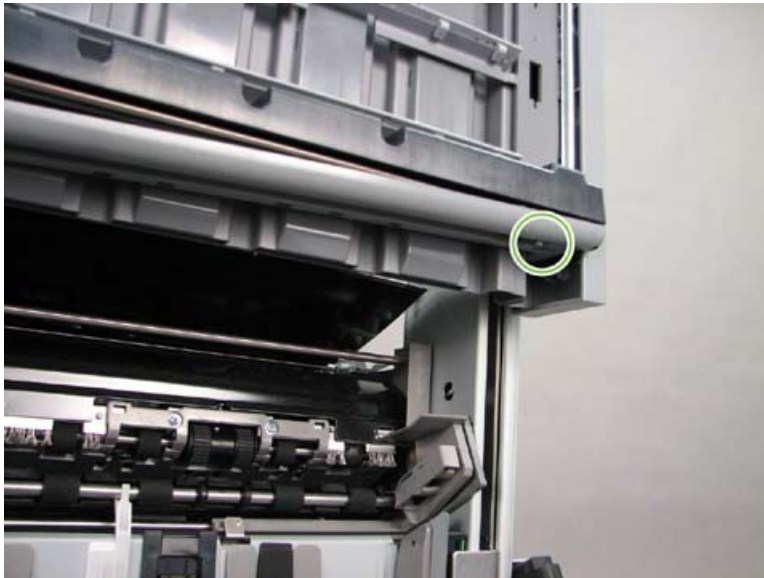
5. Press the tabs on the side of the switch, and then push the switch body down through the bracket.



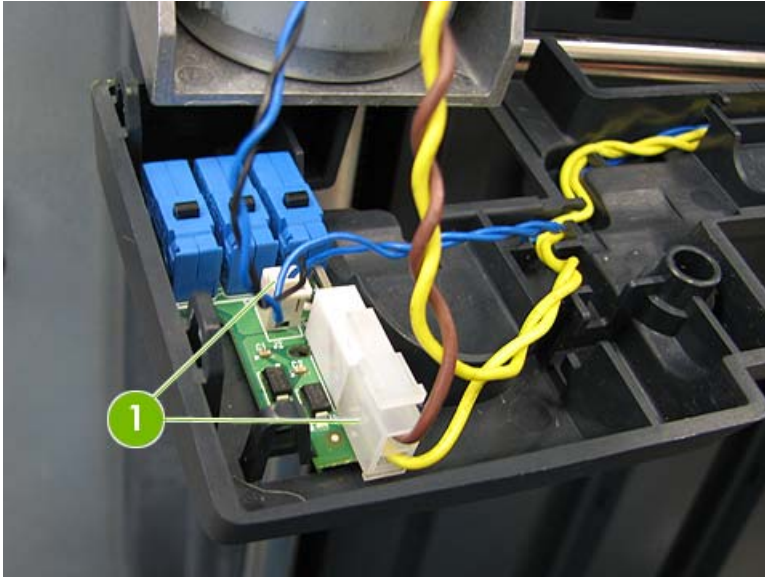
6. Replace SW256.

Finisher Separator Safety 1 switch (SW261)

1. Remove two screws, front and rear, from the anti-pinch switch.



2. Disconnect two wire connectors (callout 1).



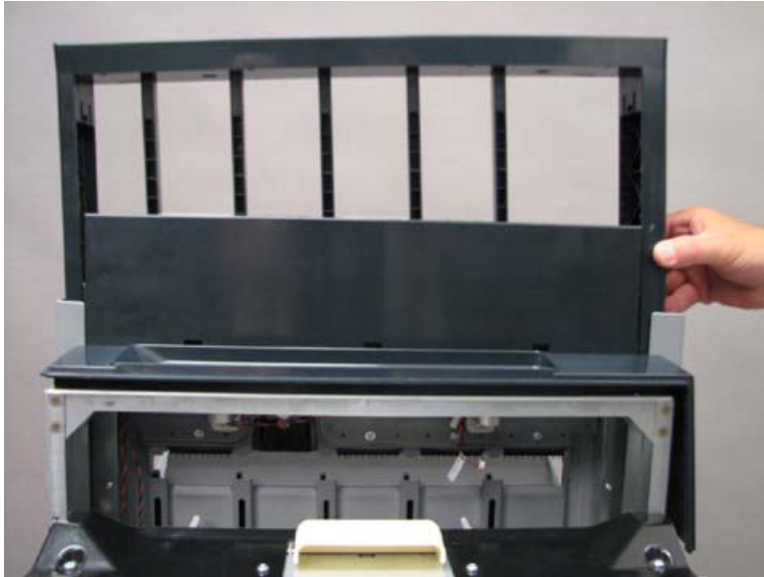
3. Remove the PCA (SW261).

Finisher Separator Safety 2 switch (SW264)

1. Remove all separator bins.



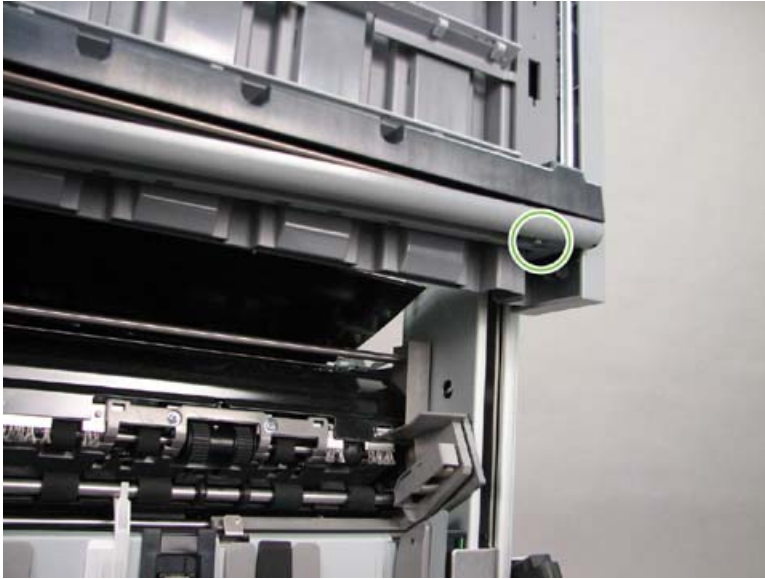
2. Remove the guide from the separator by slightly prying apart the ends of the guide while lifting up.



3. Pry the top tab on the front and rear tray supports, and then push up to remove each of the two supports.



4. Remove two screws, front and rear, from underneath the anti-pinch switch.



5. Remove four screws.



6. Gently lift up the shaft guide, and then disconnect two wire connectors (callout 1).



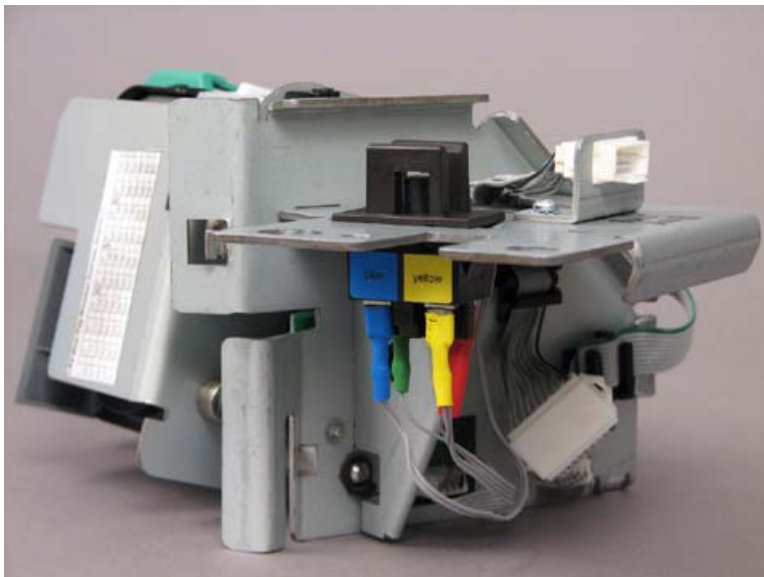
7. Remove the PCA (SW264) from underneath the shaft guide.

Stapler Door 1 switch (SW273)

1. Remove the stapler 1 assembly.

[Stapler 1 assembly on page 842](#)

2. Disconnect the four color-coded wires, press the side tabs of the switch body, and then remove SW273.



Stapler Door 2 switch (SW282)

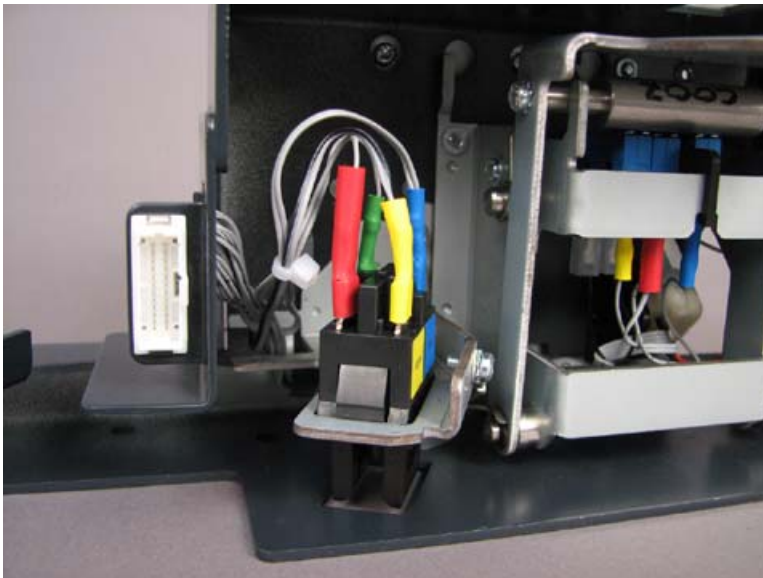
1. Remove the stapler 2 assembly.

[Stapler 2 assembly on page 844](#)

2. Remove one screw, and then remove the tray safety cover.



3. Disconnect the four color-coded wires.



4. Remove two screws from the switch bracket, press the side tabs of the switch body to push the switch through the bracket, and then remove SW282.

Stapler 2 safety cover interlock switches (SW283 and SW284)

These two switches are soldered together and are replaced as a single unit.

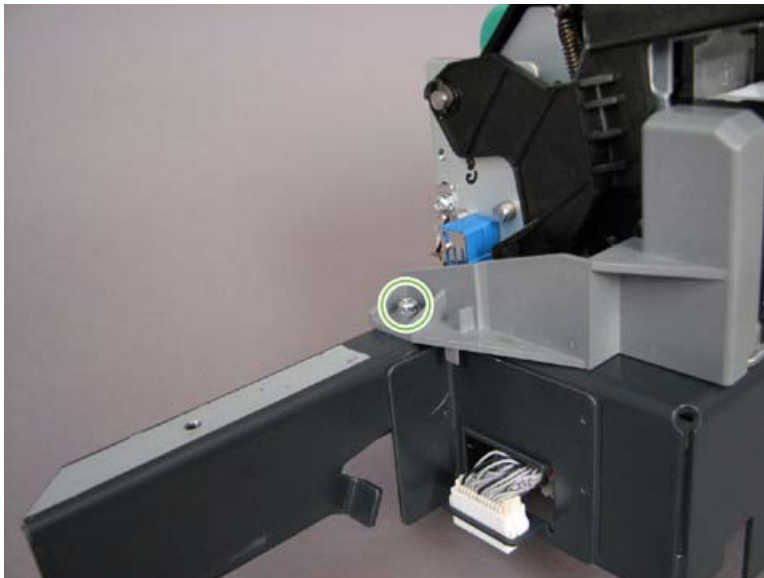
1. Remove the stapler 2 assembly.

[Stapler 2 assembly on page 844](#)


2. Remove two screws, and then remove the platform extension.



3. Remove one screw, and then remove the paper guide. Slide the guide forward to unhook the guide.

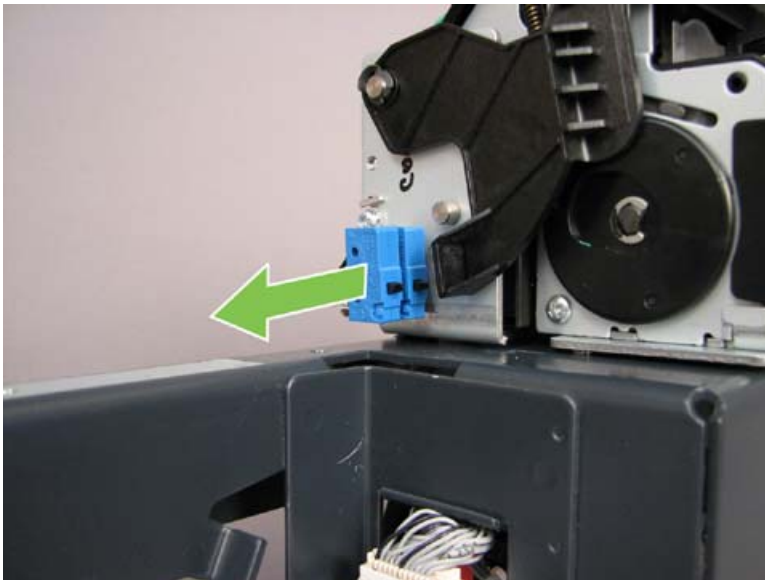


4. Pry the switch holder clip up, and then slide the clip down to remove the clip.

 **NOTE:** Be careful not to break the clip.



5. Slide the switches off the holder.



Stapler 2 pinch switches (SW285, SW286, and SW287)

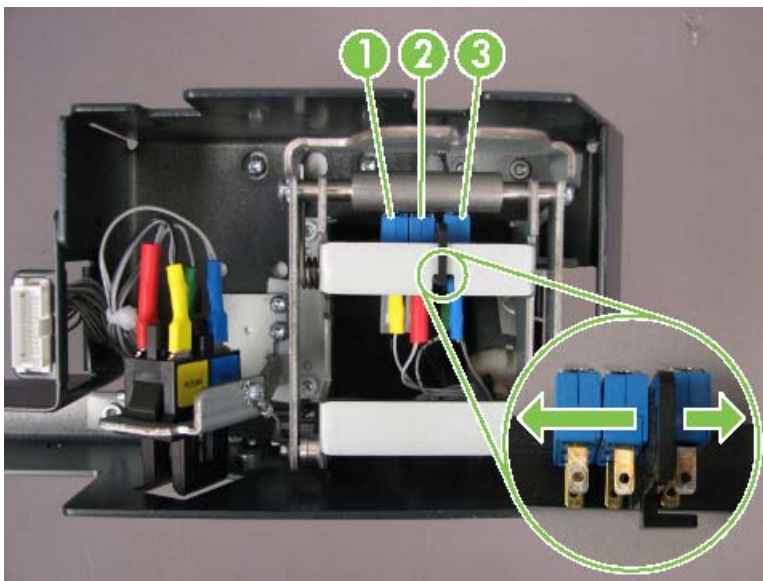
1. Remove the stapler 2 assembly.

[Stapler 2 assembly on page 844](#)

- Remove one screw, and then remove the tray safety cover.



- Disconnect the wires to the switches, and then slide the switches off the switch holder assembly.



1	Stapler 2 pinch interlock switch 1 (SW285), 5 amp, black button, yellow and clear connectors
2	Stapler 2 pinch interlock switch 2 (SW286), 5 amp, black button, red and clear connectors
3	Stapler 2 pinch switch (SW287), 2 amp, white button, blue and green connectors

Finisher Diverter solenoid (SOL211)

- Remove the input paper path assembly.

[Input paper path on page 817](#)

2. Disconnect the wire harness W210P3-SOL211.



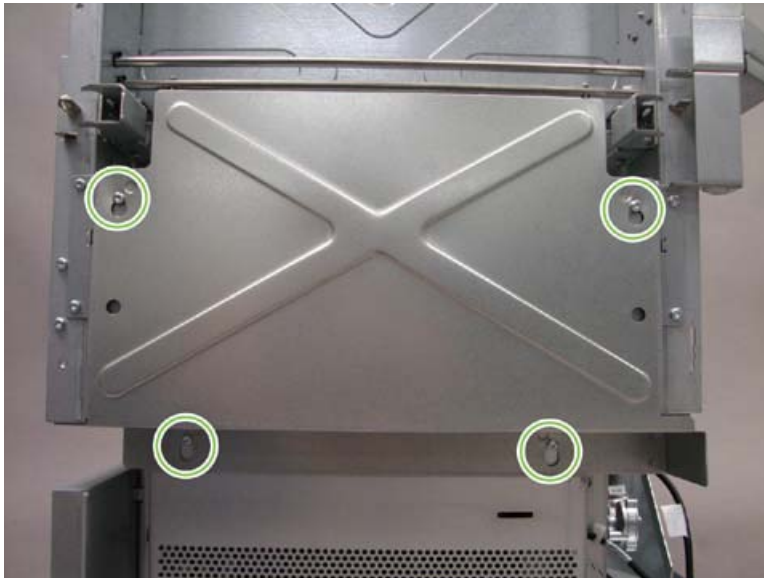
3. Remove two screws from the inside of the input paper path assembly, and then remove SOL211.



Finisher Main PCA (A200)

1. Shut down the MFP, making sure to turn off the main power switch, located on the bottom right side of the MFP.
2. Disconnect the finisher cables from the MFP, and then physically separate the two units.
3. Turn on the MFP.
4. Enter CDFT-E or CDFT-L and access the NVM utility.
5. Disable automatic NVM backup.
6. Perform a manual NVM backup to an external location, such as a USB storage device.

7. Exit CDFT and shut down the MFP, making sure to turn off the main power switch.
8. Loosen four screws, and then remove the side cover.



9. Loosen two screws, and then remove the PCA cover.



10. Disconnect all cables from the board.

11. Remove six screws, and then lift off A200.

△ **CAUTION:** A resistor in the upper right corner on the back side of the PCA can be damaged by the upper left standoff (as viewed from the front), which receives a screw through the mounting hole in the PCA. Use care not to scrape this resistor when removing or installing the PCA.



📄 **NOTE:** When the PCA is replaced, the PCA must be initialized through CDFT and an NVM value set to match the physical stapler 2 position (A4 or letter).

NOTE: When the Finisher Main PCA (A200) is replaced, run the following routine to adjust the accumulator offset alignment:

[Accumulator offset alignment on page 72](#)

12. Replace A200, and then reattach cables and covers, reconnecting the finisher to the MFP.
13. Turn on the MFP.
14. Enter CDFT-E or CDFT-L and access the **Finisher Settings** screen.
15. Touch **Clear Finisher NVM**, and then follow subsequent screens to do the following tasks:
 - Wipe the finisher PCA NVM.
 - Perform an NVM restore using the data that was backed up at the beginning of this procedure.
16. When prompted, exit CDFT and shut down the MFP, making sure to turn off the main power switch.
17. Turn on the MFP.
18. Enter CDFT, and then re-enable automatic NVM backup.
19. Perform a manual NVM backup to an external location, such as a USB storage device.

HP 4-Bin Job Separator

- [Covers](#)
- [Output bins](#)
- [Input media path](#)
- [Separator](#)
- [Sensors](#)
- [Motors](#)
- [Switches](#)
- [LEDs](#)
- [Finisher Main PCA \(A200\)](#)
- [Base components](#)

Covers

- [Front cover](#)
- [Top cover](#)
- [Rear cover](#)
- [Foot covers](#)
- [Edge protector](#)
- [Front job separator cover](#)
- [Rear job separator cover](#)
- [Separator paper guide](#)
- [Separator back panel](#)
- [Output media path cover](#)
- [Middle latch cover](#)
- [PCA access cover](#)

Front cover

1. Remove three screws.



2. Lift up, and then remove the front cover.

Top cover

1. Remove the front cover.

[Front cover on page 962](#)

2. Lift up the front edge of the top cover, and then slide to unhook and remove the cover.



Rear cover

- Loosen the upper six screws, remove one screw at the very bottom, and then grab the handle at the bottom and lift off the rear cover.



Foot covers

- [Front foot cover](#)
- [Foot cover](#)

Front foot cover

- Pry the front foot cover, and then remove.

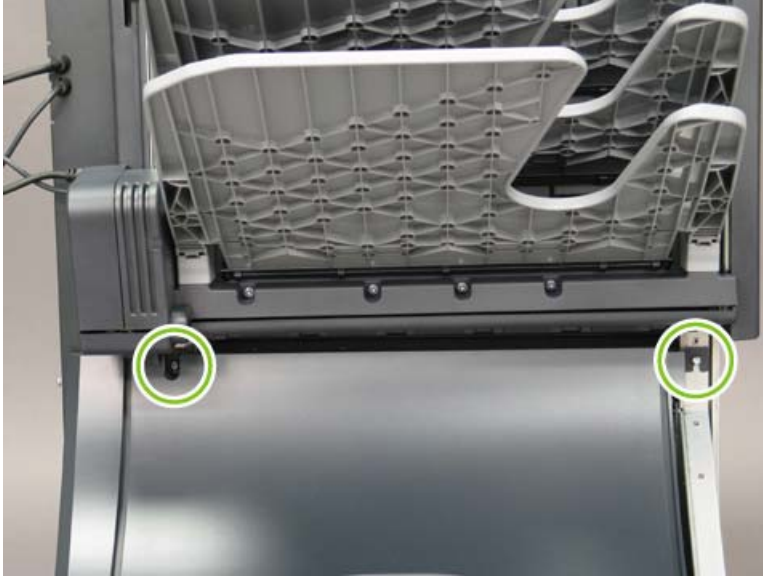


Foot cover

1. Remove the front foot cover.

[Front foot cover on page 963](#)

2. Remove two screws.



3. Pry the bottom edge of the cover to unlatch, and then lift off the foot cover.

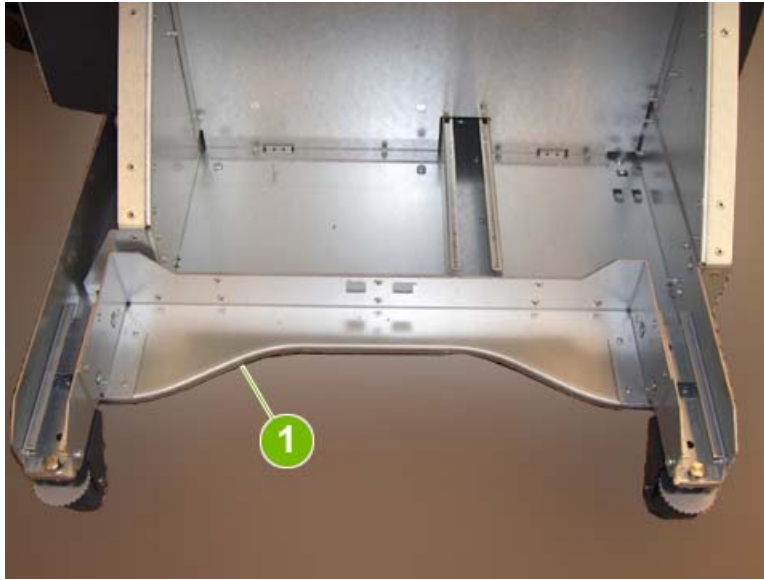
Edge protector

⚠ WARNING! On the 4-Bin separator finisher, there is one sharp edge which requires the protective cover.

1. Remove the foot covers.

[Foot covers on page 963](#)

2. Inspect the sheet metal edge protector. The 4-Bin separator finisher has one edge protector for the curved edge on the 4-bin separator (478 mm long) (callout 1).



3. Before installing the edge protector, insert a tool (ballpoint pen or some other blunt device) into one end of the plastic protector to open it up for easier assembly.

△ **CAUTION:** It is recommended to use a blunt-end device, such as a ballpoint pen, to open up the end of the edge protector. Screw drivers and other tools are sharp and the plastic protectors can sometimes be very difficult to open up. Use caution and proper safety precautions to prevent cutting or stabbing yourself. The best practice is to wear gloves and to point the tool away from your hand and body.



4. Install the sheet metal edge protector onto the curved sheet metal edge. Start on the front side of the finisher and carefully work your way towards the back securing the protector onto the sheet metal edge. Ensure the protector is completely installed along the entire length of the edge.

△ **CAUTION:** Sheet metal edges are very sharp. Be careful when installing the edge protector and **do not** run your hand along the unprotected edge. It is recommended to wear gloves while completing this installation.



Front job separator cover

1. Remove the front cover.

[Front cover on page 962](#)

2. Pry the left side of front separator cover, push it to the right, and then lift off.



Rear job separator cover

- Remove two screws, and then lift off the cover.



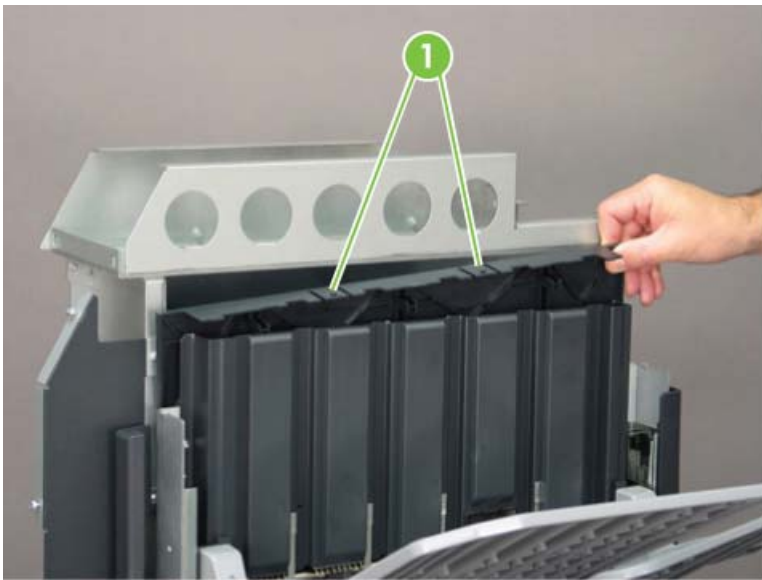
Separator paper guide

- Remove the guide from the separator by slightly prying apart the ends of the guide while lifting up.



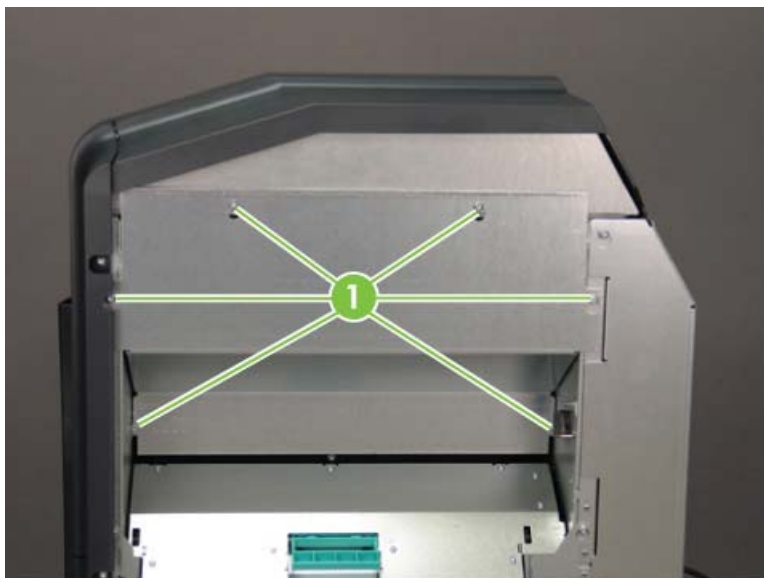
Separator back panel

1. Remove the following items:
 - Separator paper guide
[Separator paper guide on page 967](#)
 - Rear cover
[Rear cover on page 963](#)
 - Top cover
[Top cover on page 962](#)
2. Pry the tabs (callout 1) of the back panel to remove.



Output media path cover

1. Loosen six screws (callout 1).



2. Lift up, and then remove the output media path cover.

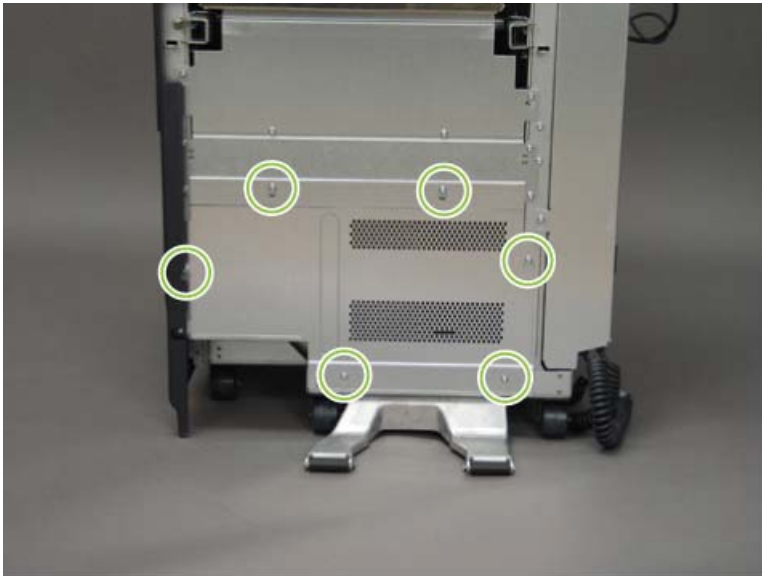
Middle latch cover

- Loosen four screws, and then lift off the middle latch cover.



PCA access cover

- Loosen six screws, and then lift off the PCA access cover.



Output bins

1. Push down to remove an output bin.



2. Disconnect the nylon tether on both sides of the output bin.



Input media path

- [Input media path assembly](#)
- [Input door](#)
- [Support door](#)

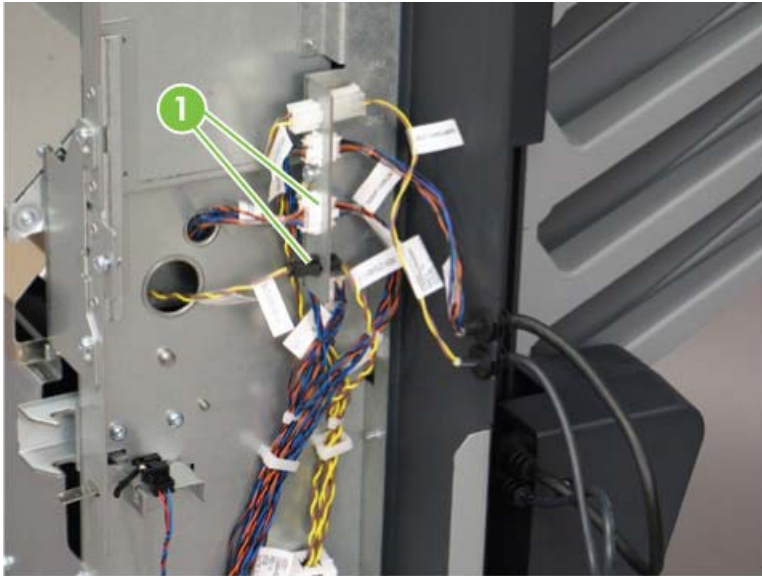
Input media path assembly

1. Remove the front cover.
[Front cover on page 962](#)
2. Loosen four screws.



3. From the rear, disconnect two wire connectors (callout 1):

- W211P1-W201J211
- W210P1-W261J210



4. Lift up, and then remove the input media path assembly.



Input door

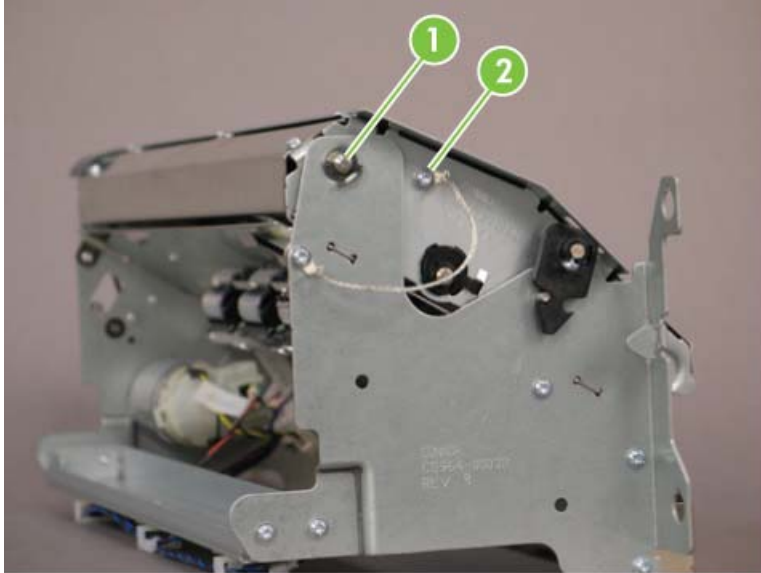
- [Input door assembly](#)
- [Input guide](#)
- [Input drive roller assembly](#)

Input door assembly

1. Remove the input media path assembly.

[Input media path assembly on page 971](#)

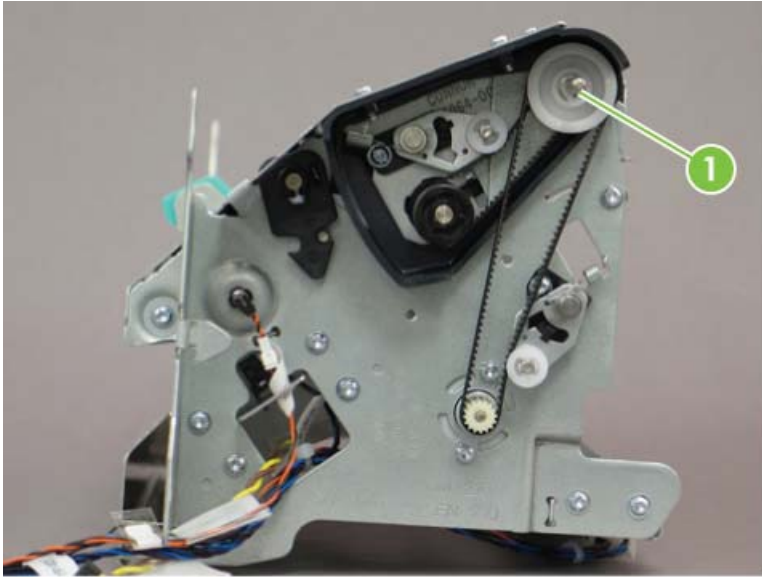
2. From the front side, remove one retaining clip (callout 1) and one grounding wire (callout 2).



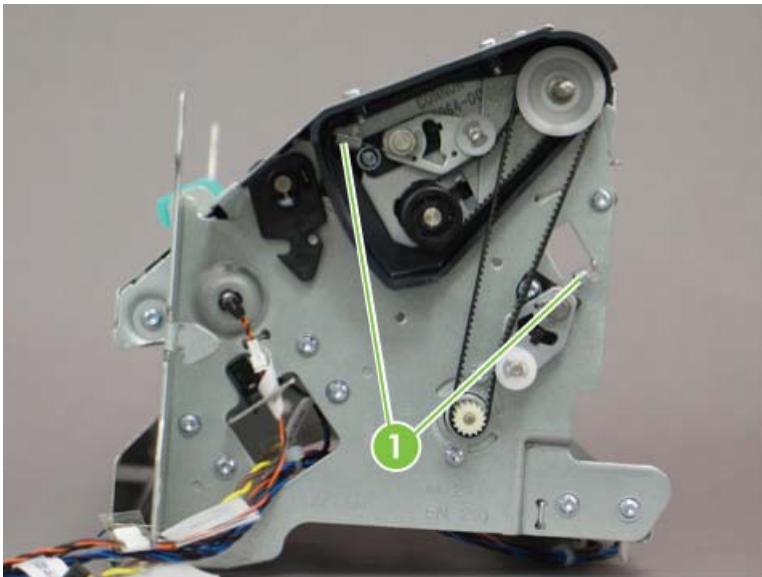
3. From the rear side, remove two screws, and then remove the cover.



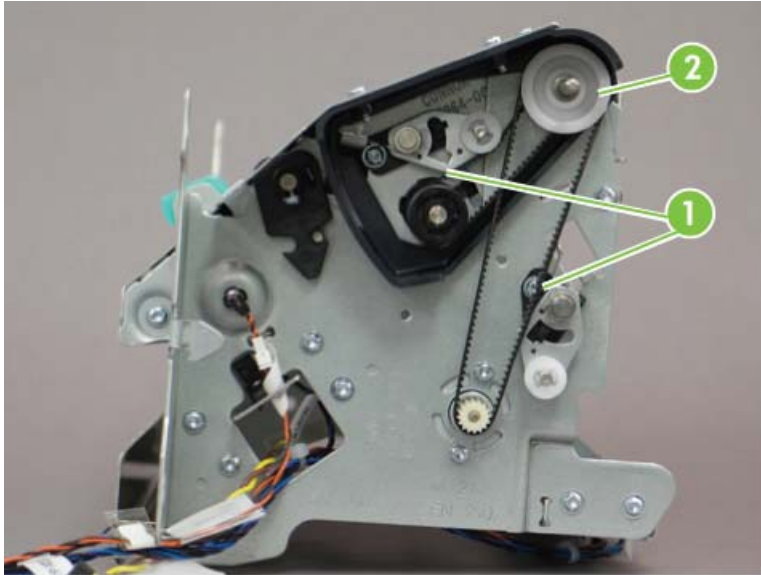
4. Remove the retaining clip (callout 1) holding the cluster pulley.



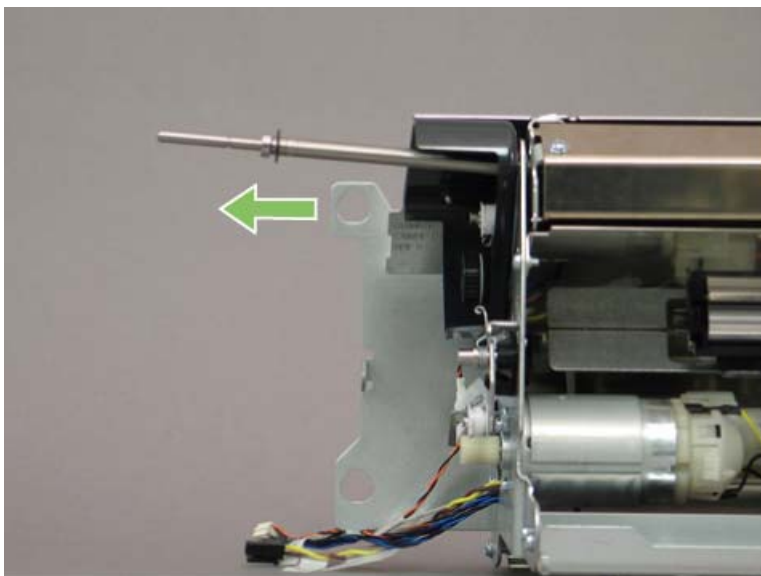
5. Unlatch the spring from the two input media path tensioners (callout 1), releasing the tension on the belts.



6. Remove the two belts (callout 1) and the cluster pulley (callout 2).



7. Slide out the shaft, and then remove the input door assembly.

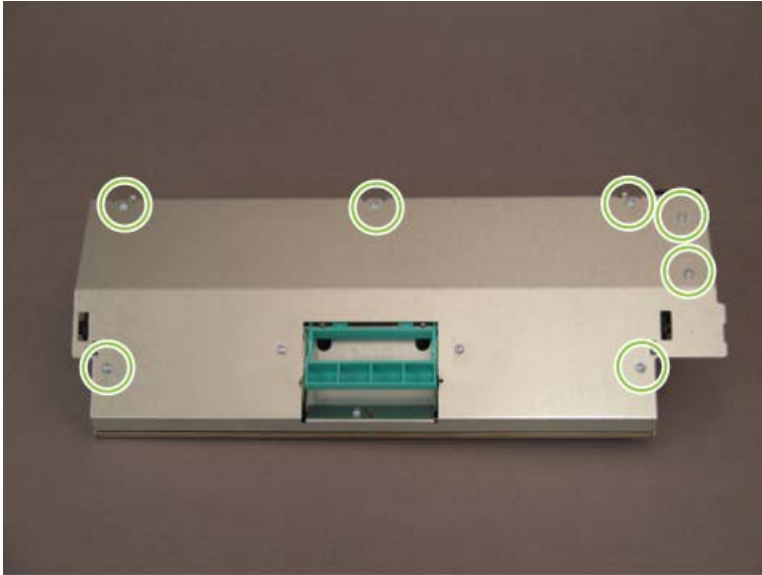


Input guide

1. Remove the input media path assembly.

[Input media path assembly on page 971](#)

2. From the top of the input door, remove seven screws.



3. Remove two screws from the input guide.

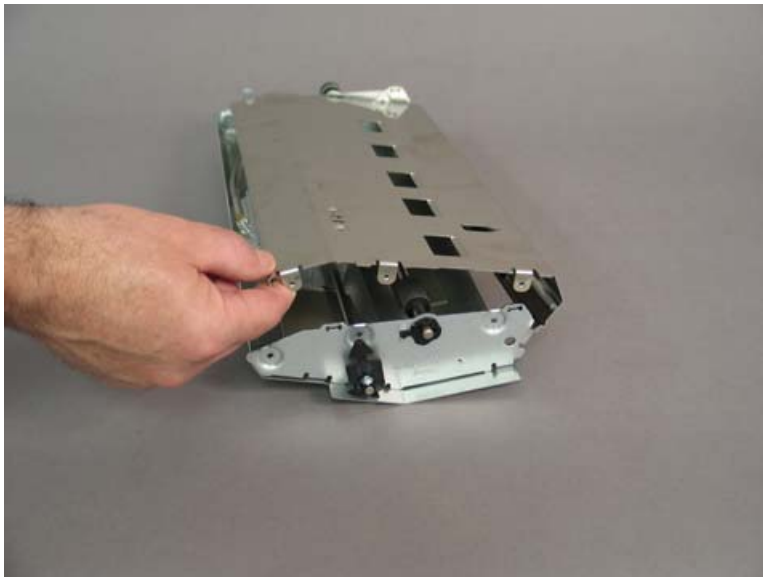


4. From both the front and rear sides, remove three screws (six screws total).

 **NOTE:** Lift the door handle to move the latch and access the middle screw on each side.



5. Gently pry the front and rear sides apart to release the input guide tabs, and then remove the input guide.



Input drive roller assembly

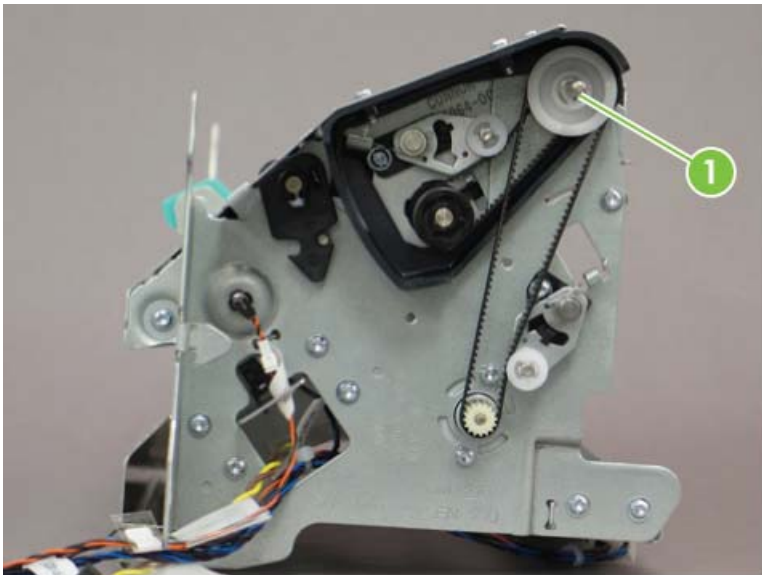
1. Remove the input media path assembly.

[Input media path assembly on page 971](#)

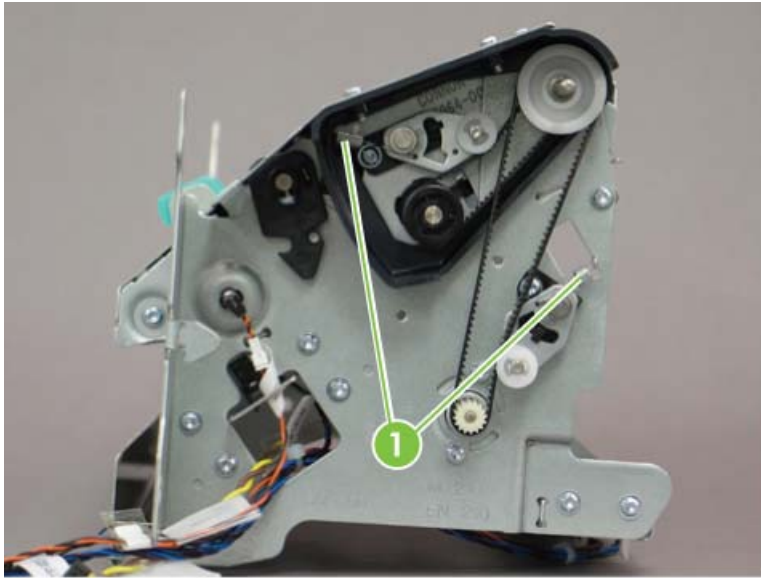
2. From the rear side, remove two screws, and then remove the cover.



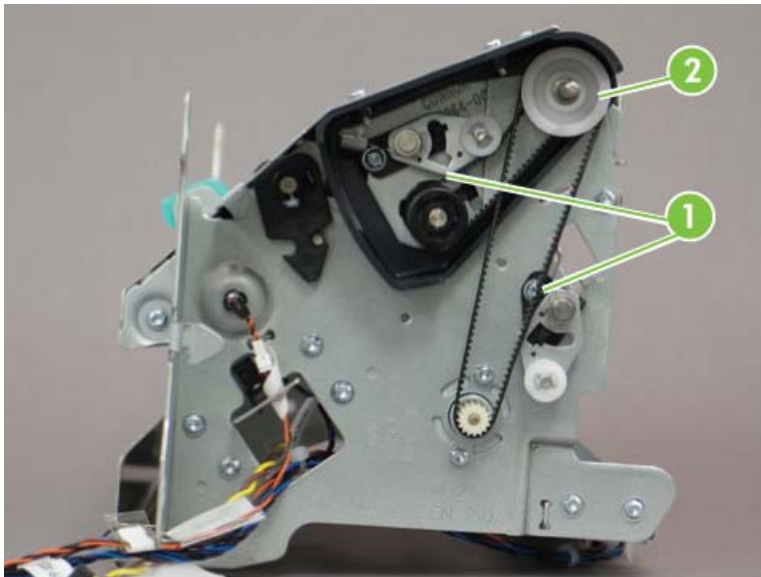
3. Remove the retaining clip (callout 1) holding the cluster pulley.



4. Unlatch the spring from the two input media path tensioners (callout 1), releasing the tension on the belts.



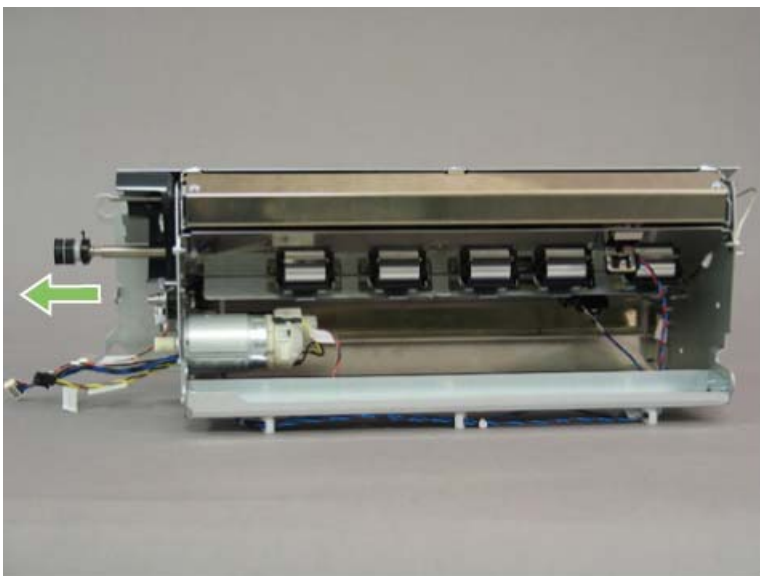
5. Remove the two belts (callout 1) and the cluster pulley (callout 2).



6. Rotate the bearing yoke on both ends of the drive roller shaft.



7. Slide out the drive roller.



Support door

- [Support door assembly](#)
- [Input pulley cluster 38T-20T](#)
- [Lower input guide](#)

Support door assembly

- Remove the following assemblies:
 - Input media path assembly
[Input media path assembly on page 971](#)
 - Input door assembly
[Input door assembly on page 973](#)

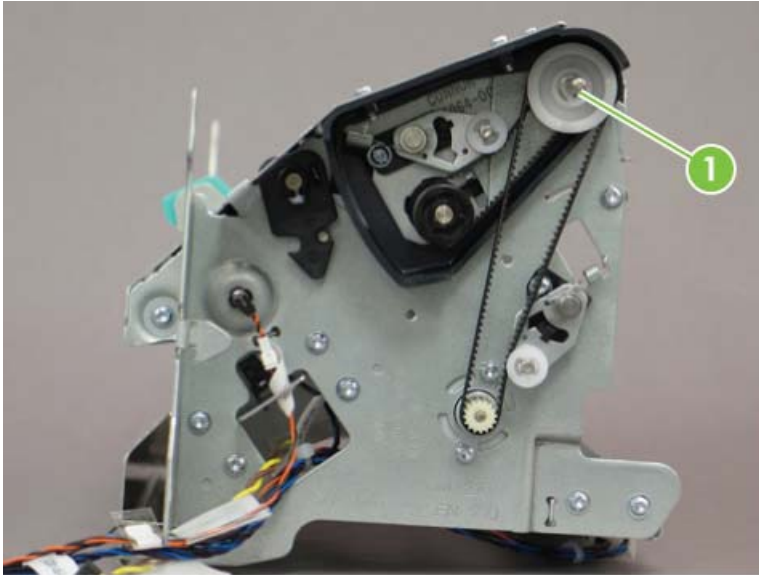
The input media path assembly is comprised of the input door assembly (top) and the support door assembly (bottom).

Input pulley cluster 38T-20T

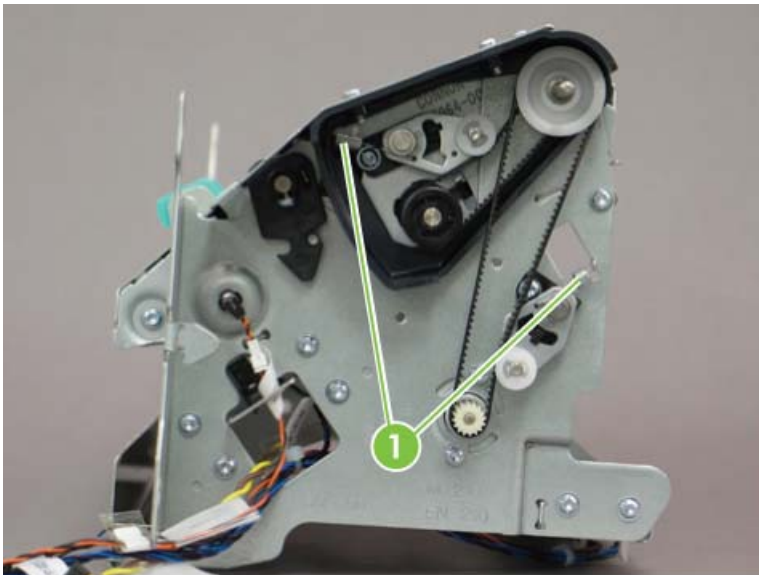
1. Remove the input media path assembly.
[Input media path assembly on page 971](#)
2. From the rear side, remove two screws, and then remove the cover.



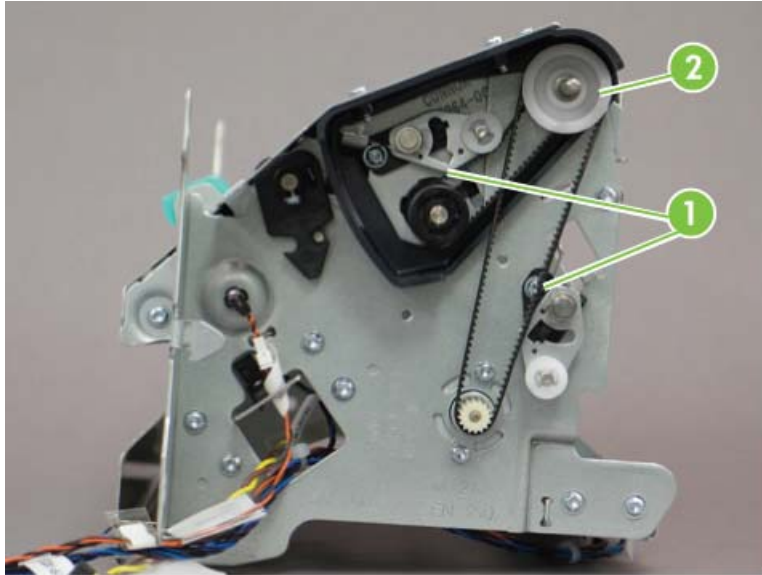
3. Remove the retaining clip (callout 1) holding the cluster pulley.



4. Unlatch the spring from the two input media path tensioners (callout 1), releasing the tension on the belts.

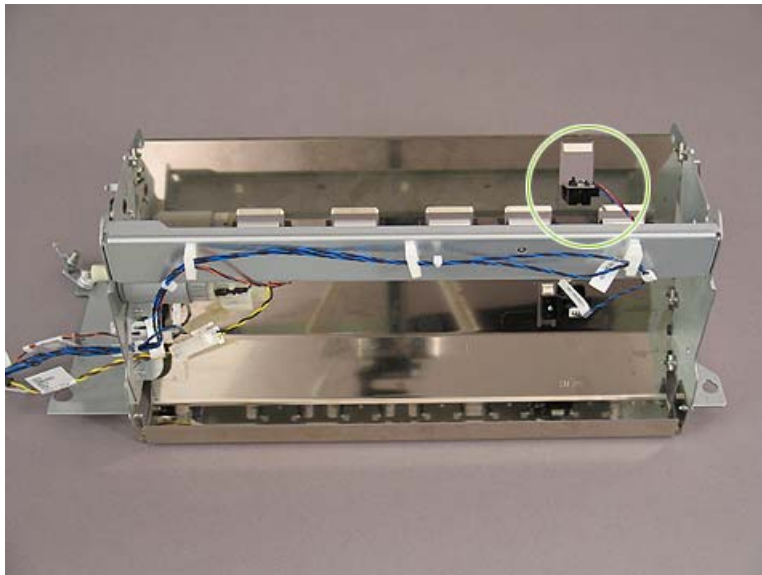


5. Remove the two belts (callout 1) and the cluster pulley (callout 2).



Lower input guide

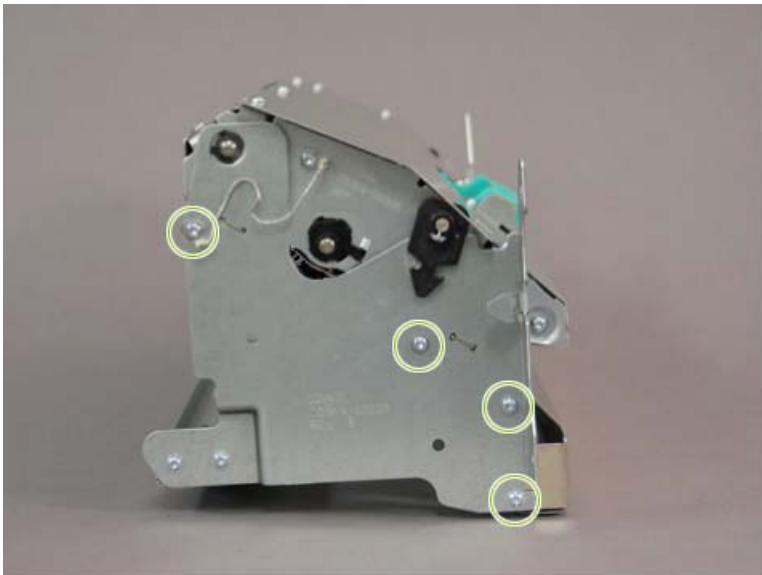
1. Remove the input media path assembly.
[Input media path assembly on page 971](#)
2. Disconnect the wire connector to the input paper path sensor (SN212).



3. From the rear side, remove two screws, and then remove the cover.



4. From both the front and rear sides, remove four screws (eight screws total).



5. Remove the lower input guide.

Separator

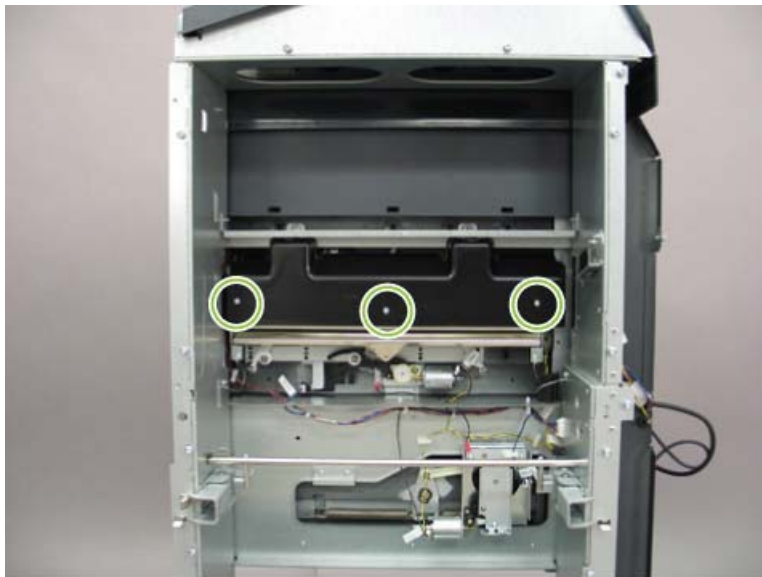
- [Output media path](#)
- [Paper gate assembly](#)
- [Offset mechanism assembly](#)
- [Separator structure](#)
- [Separator transmission](#)

Output media path

- [Output media path assembly](#)
- [Output pulley cluster 38T-20T](#)
- [Output drive roller assembly](#)

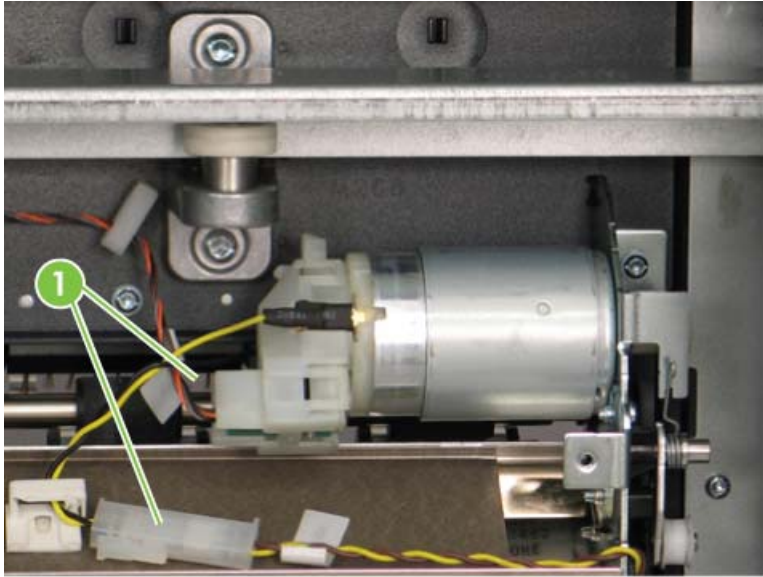
Output media path assembly


1. Remove the following items:
 - Output media path cover
[Output media path cover on page 969](#)
 - Input media path assembly
[Input media path assembly on page 971](#)
2. Remove three screws, and then remove the output media path assembly cover.

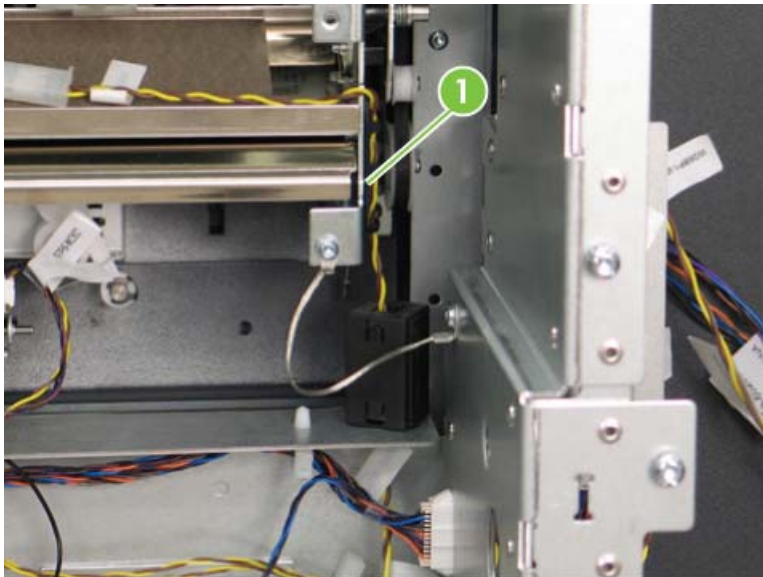


3. Disconnect two wire connectors (callout 1) from the Finisher Separator Input motor (M268):
 - W267P4-EN268

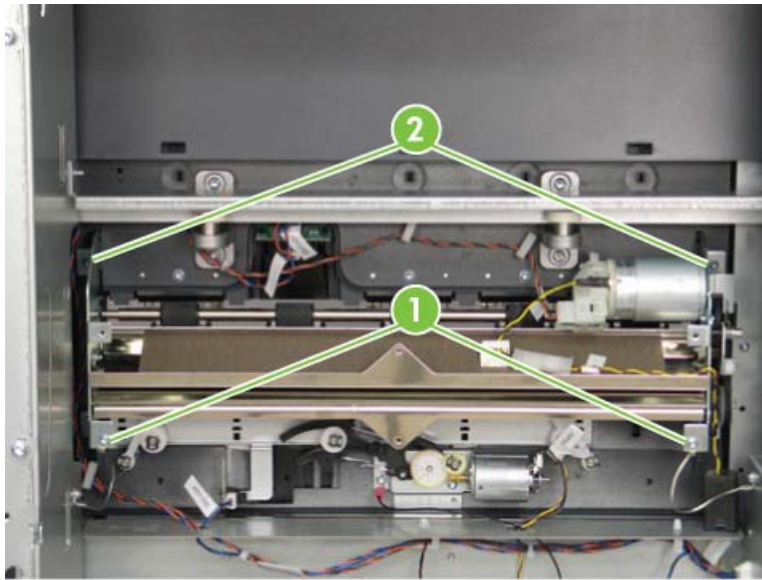
- W267P5-M268



 **NOTE:** Detach the motor cable retainer (callout 1) from the side of the output media path assembly.




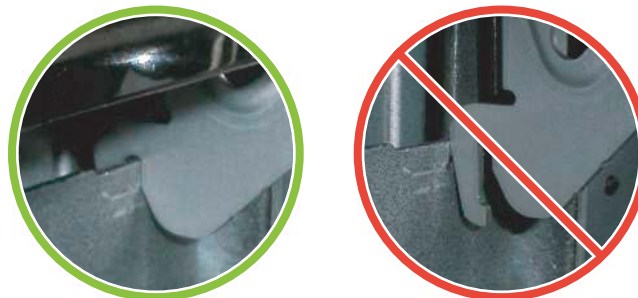
4. Remove two screws from grounding wires (callout 1), and then remove two screws at the top of the assembly (callout 2).



5. Lift the assembly up to unhook the lower feet, and then remove the assembly.



 **Reinstallation tip** Be sure that the hooks at the bottom of the output media path assembly are properly hooked onto the separator frame.

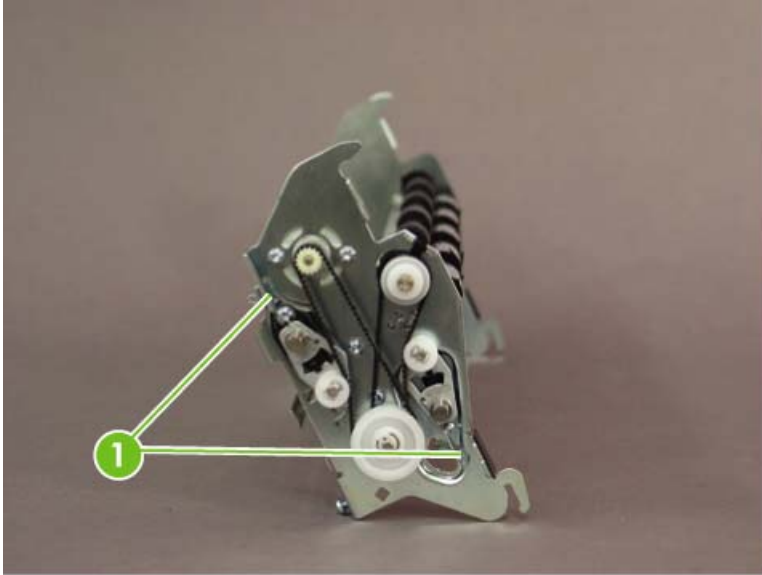


Output pulley cluster 38T-20T

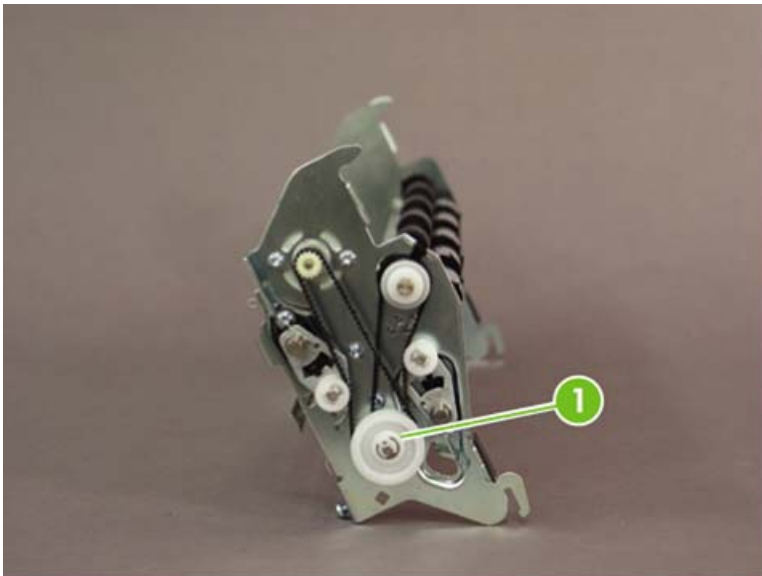
1. Remove the output media path assembly.

[Output media path assembly on page 985](#)

2. Unlatch the spring from the two output media path tensioners (callout 1), releasing the tension on the belts.



3. Remove the retaining clip holding the cluster pulley.

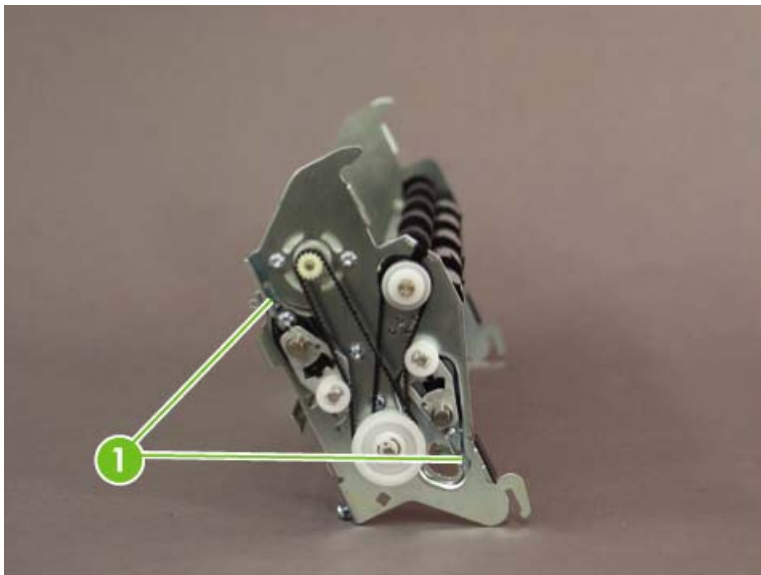


4. Remove the two belts (callout 1) and the cluster pulley (callout 2).

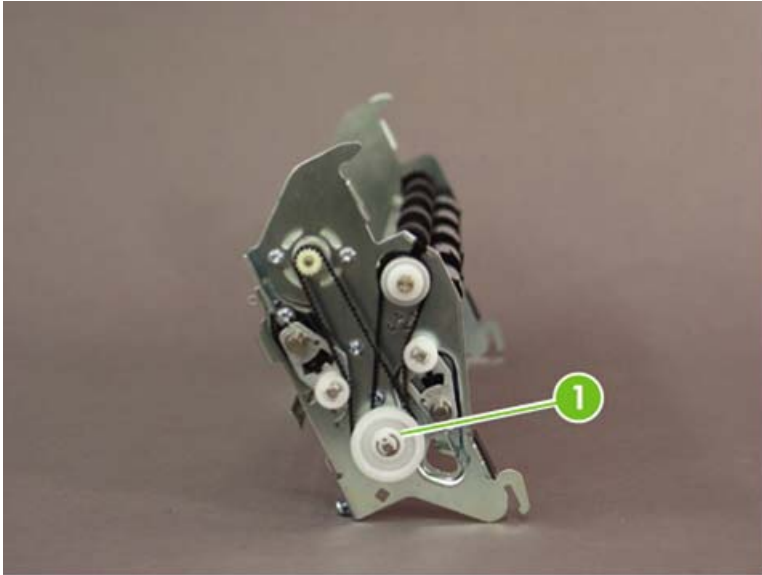


Output drive roller assembly

1. Remove the output media path assembly.
[Output media path assembly on page 985](#)
2. Unlatch the spring from the two output media path tensioners (callout 1), releasing the tension on the belts.



3. Remove the retaining clip holding the cluster pulley.



4. Remove the two belts (callout 1) and the cluster pulley (callout 2).



5. Rotate the bearing yoke on both ends of the drive roller shaft.



6. Slide out the drive roller.

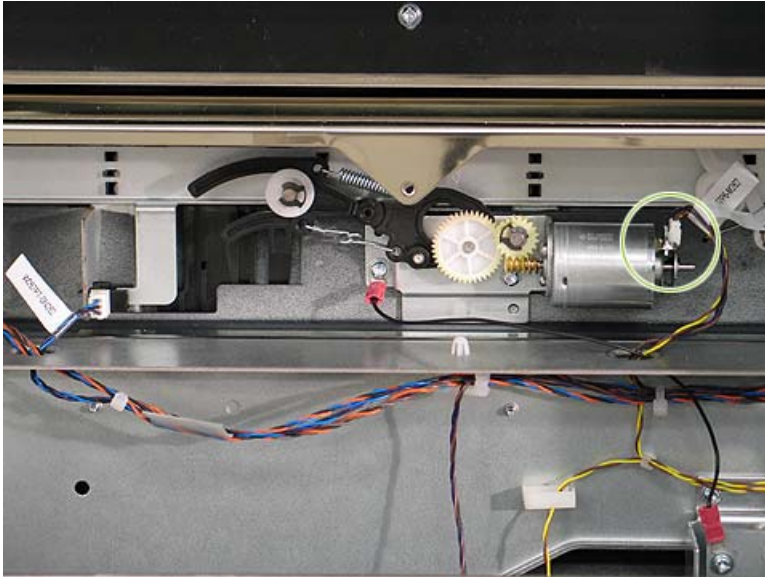


Paper gate assembly


1. Remove the input media path assembly.

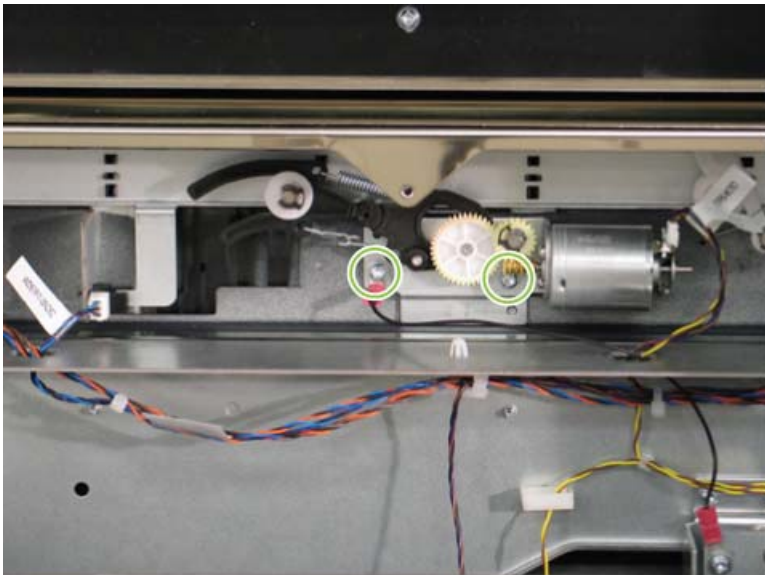
[Input media path assembly on page 971](#)

2. Disconnect cable harness W267P6-M262 to the Finisher Job Separator Gate motor (M262).



3. Remove two screws, and then slide the motor assembly to the rear to disengage the pulley and to remove the motor assembly.

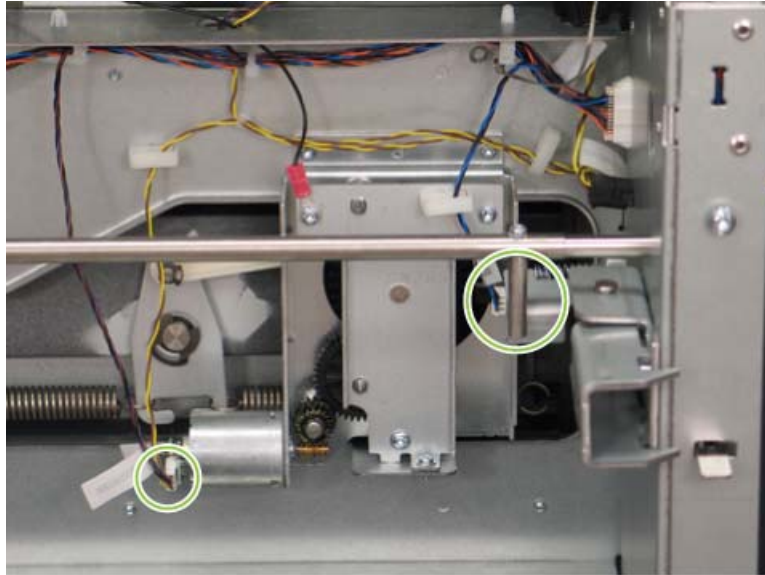
 **NOTE:** The left screw has a ground wire connection.



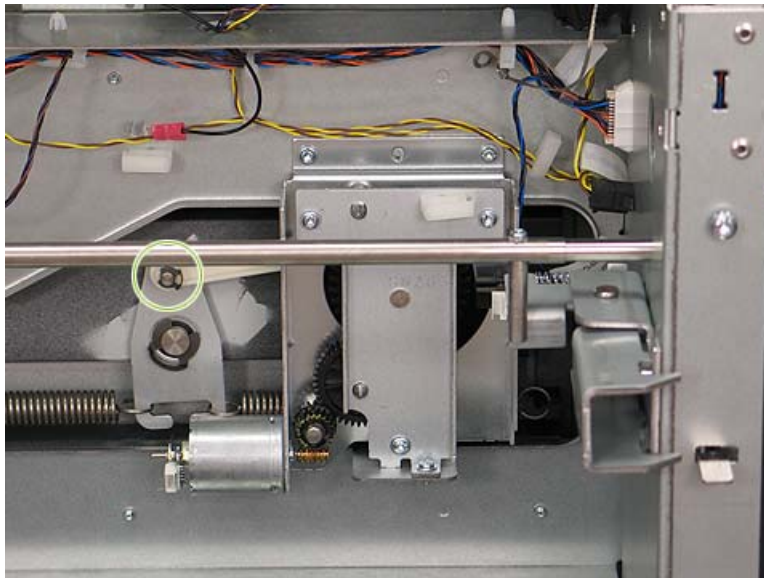
Offset mechanism assembly

1. Remove the middle latch cover.
[Middle latch cover on page 969](#)
2. Disconnect two wire connectors:
 - W267P8-M264 to the Finisher Separator Offset motor (M264)

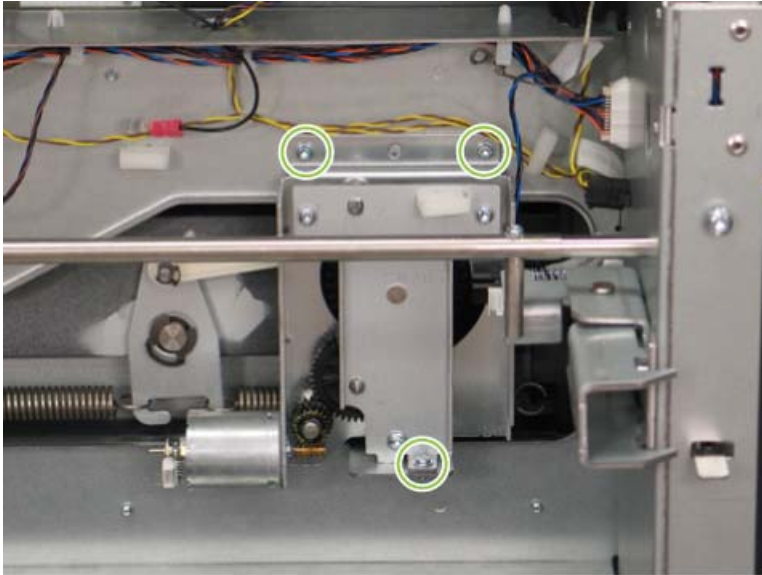
- W267P10-SN265 at the Finisher Job Separator Offset Back sensor (SN265)



3. Remove the retaining clip from the arm of the offset mechanism.



4. Remove three screws, and then lift out the offset mechanism.



Separator structure

1. Remove the following items:
 - Front cover
[Front cover on page 962](#)
 - Output bins
[Output bins on page 970](#)
 - Separator paper guide
[Separator paper guide on page 967](#)
 - Separator back panel
[Separator back panel on page 968](#)
 - Output media path cover
[Output media path cover on page 969](#)
 - Middle latch cover
[Middle latch cover on page 969](#)
 - Front separator cover
[Front job separator cover on page 966](#)
 - Rear separator cover
[Rear job separator cover on page 967](#)
 - Input media path assembly

[Input media path assembly on page 971](#)

- Output media path assembly

[Output media path assembly on page 985](#)

- Paper gate assembly

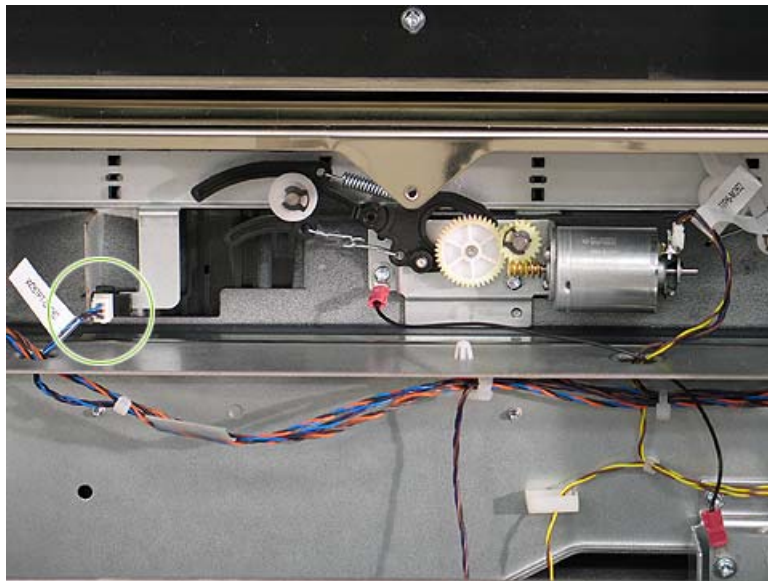
[Paper gate assembly on page 991](#)

- Offset mechanism assembly

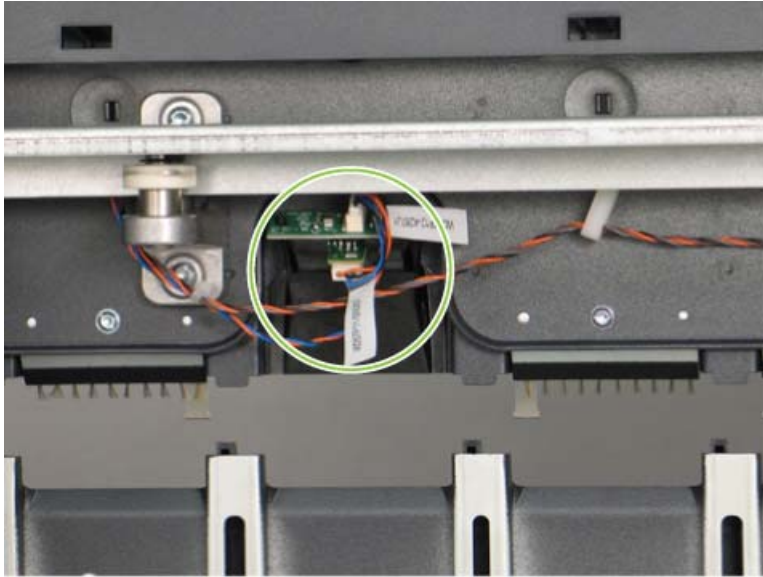
[Offset mechanism assembly on page 992](#)

2. Disconnect two wire connectors, and then remove all wire harnesses from their cable saddles on the separator.

- W267P7-SN262 to the Finisher Job Separator Gate Open sensor (SN262)



- W267P11-SN267 to the Finisher Job Separator Stack Height sensor (SN267)




3. Pry the top tab on the front and rear output tray brackets, and then push up on the brackets to remove them from the separator.



4. Remove one screw, and then unsnap the rear cover of the separator motor. Detach the two cables from the rear cover.



 **NOTE:** The rear separator cover snaps into two holes on the front separator cover.



5. Remove two screws, and then remove the lower shaft cover.



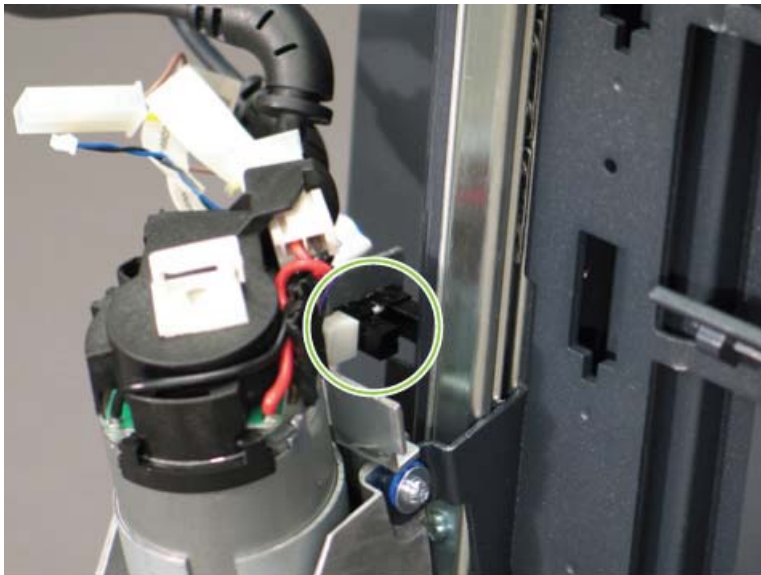
6. Remove one screw, and then remove the front separator motor cover.



7. Remove four screws, and then remove the upper shaft cover.



8. Disconnect the wire connector W267P3-SN260 to the Finisher Job Separator Lower Limit sensor (SN260).

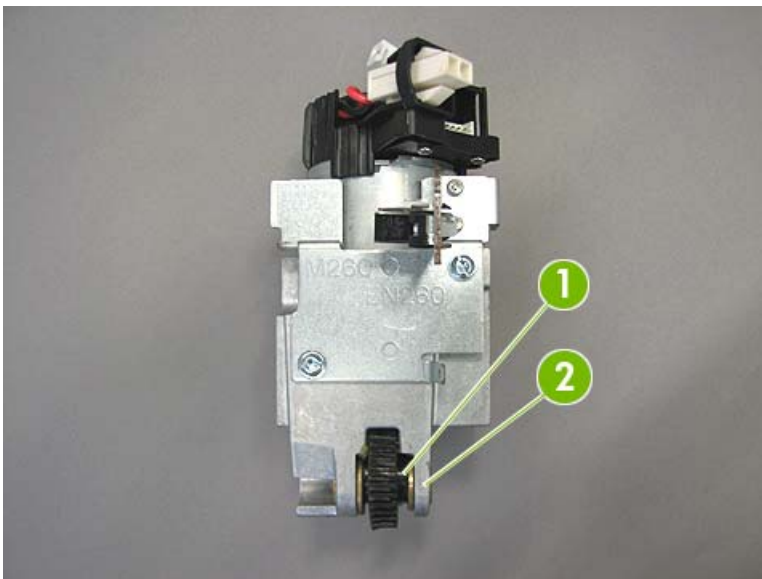


9. Remove one screw, disconnect the motor cables and ground connection, and then remove the Finisher Separator Drive motor (M260).

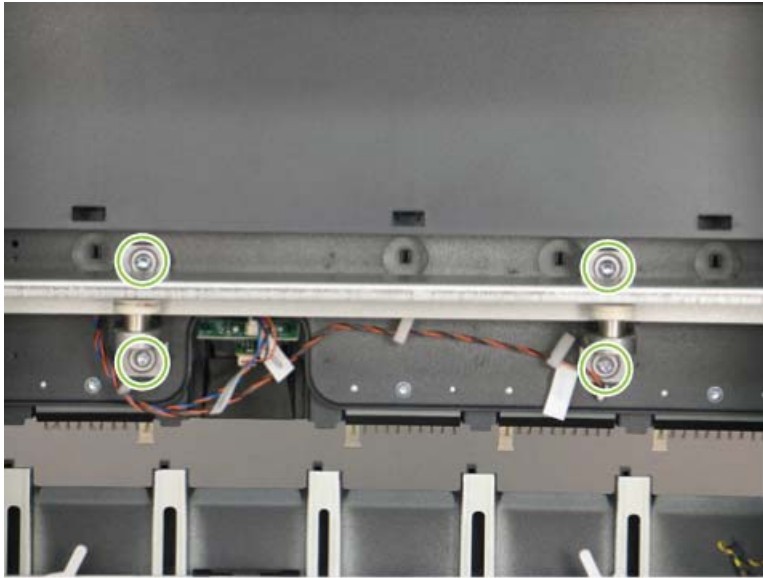
△ **CAUTION:** Hold the separator while removing the motor to prevent the separator from falling.



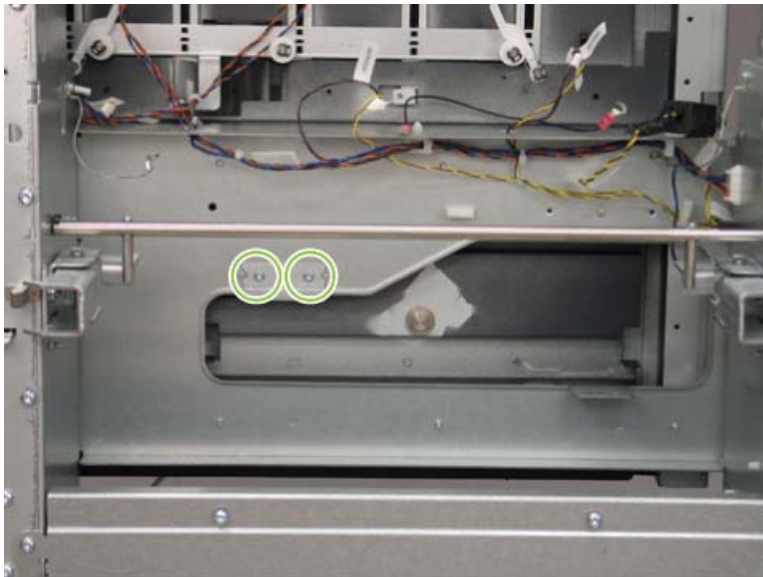
💡 **Reinstallation tip** There is a loose gear that is directional at the bottom of M260 for the separator shaft. It is possible to install the gear in the wrong position. Ensure the gear is installed with the thick part of the gear (callout 1) facing the thin part of the motor (callout 2).



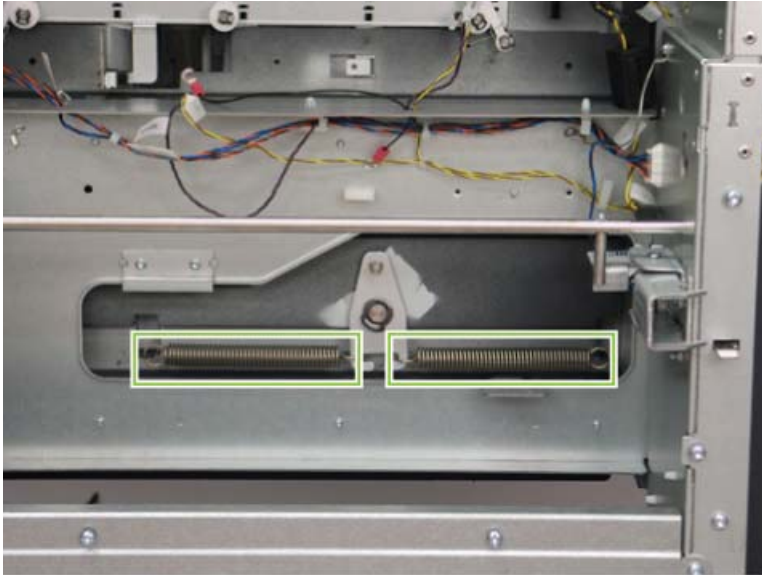
10. Remove two screws from each of the two horizontal roller brackets (callout 1), and then remove the brackets.



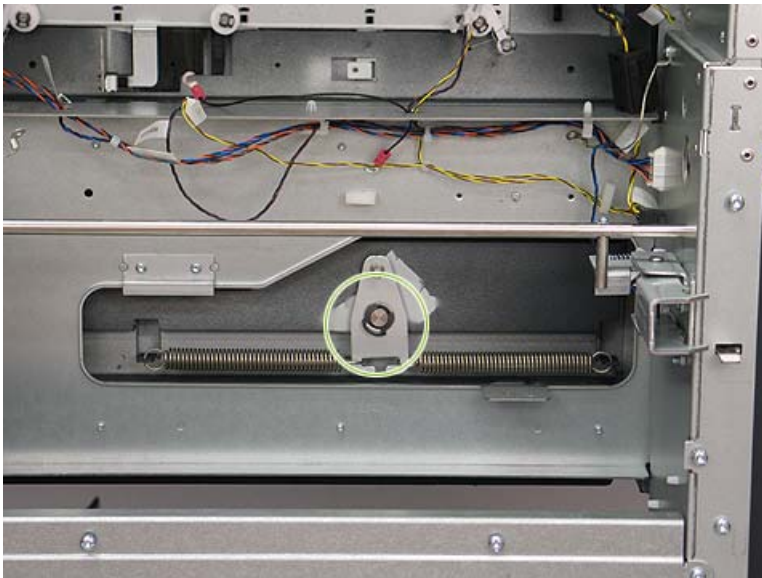
11. Remove two screws, and then remove the separator offset stop, if present.



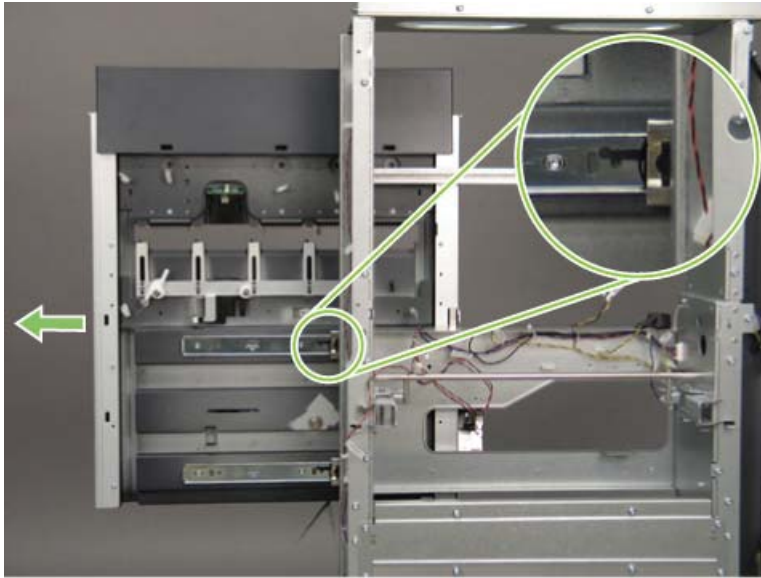
12. Unhook the two offset springs.



13. Remove the retaining clip and bracket from the offset spring pivot.



14. Slide the rack to access the guide release latches. Press down on the two latches, and then slide the rack off the guides.



Separator transmission

1. Remove the separator structure.
[Separator structure on page 994](#)
2. Lift the separator rack to access the guide release latches. Press the two release latches, and then lift out the rack assembly.



3. Remove six screws, and then remove the rack gear, and the sliderail and bracket assembly on each side.



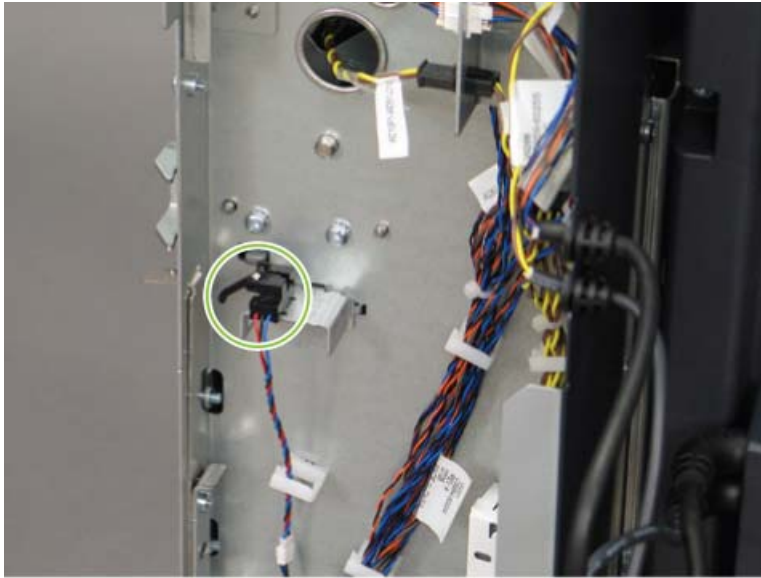
Sensors

- [Finisher Back Latch sensor \(SN200\)](#)
- [Finisher Front Latch sensor \(SN204\)](#)
- [Finisher Input 0 sensor \(SN211\)](#)
- [Finisher Input 1 sensor \(SN212\)](#)
- [Finisher Right Side Panel sensor \(SN216\)](#)
- [Finisher Job Separator Lower Limit sensor \(SN260\)](#)
- [Finisher Job Separator Gate Open sensor \(SN262\)](#)
- [Finisher Job Separator Offset Back sensor \(SN265\)](#)
- [Finisher Job Separator Stack Height sensor \(SN267\)](#)

Finisher Back Latch sensor (SN200)

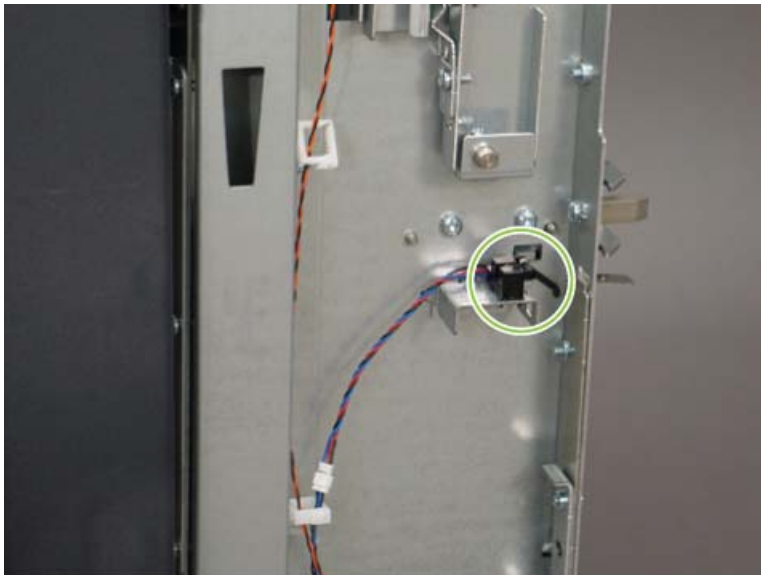
1. Remove the following items:
 - Rear cover
[Rear cover on page 963](#)
 - Middle latch cover
[Middle latch cover on page 969](#)

2. Disconnect the wire connector to the Finisher Back Latch sensor (SN200), and then remove the sensor.



Finisher Front Latch sensor (SN204)

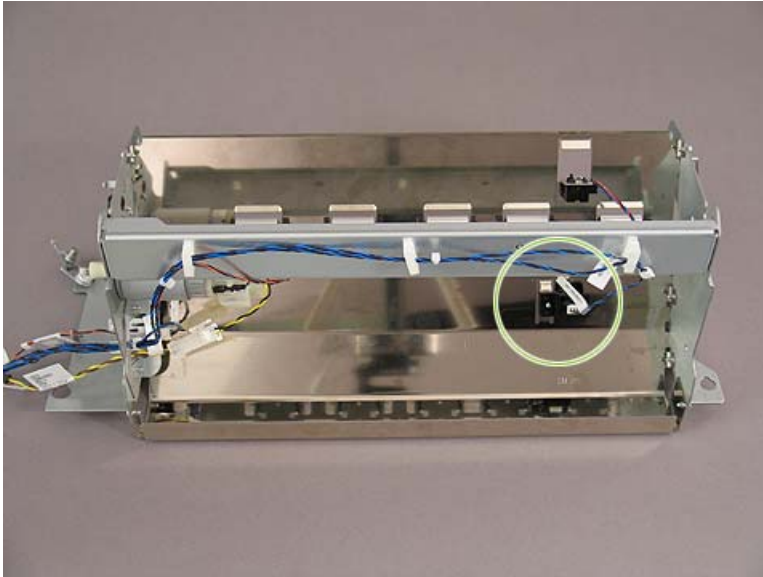
1. Remove the front cover.
[Front cover on page 962](#)
2. Disconnect the wire connector to the Finisher Front Latch sensor (SN204), and then remove the sensor.



Finisher Input 0 sensor (SN211)

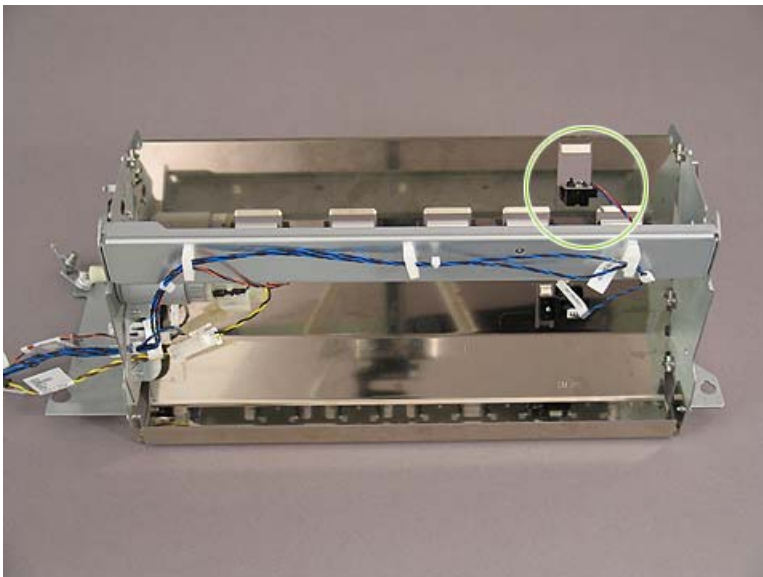
1. Remove the input media path assembly.
[Input media path assembly on page 971](#)

2. Disconnect the wire connector to the SN211, and then replace the sensor.



Finisher Input 1 sensor (SN212)

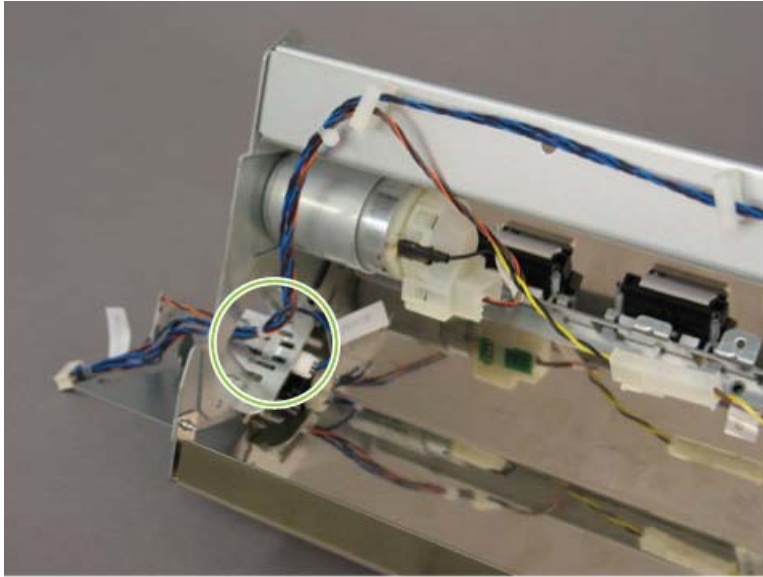
1. Remove the input media path assembly.
[Input media path assembly on page 971](#)
2. Disconnect the wire connector to the input paper path sensor (SN212), and then replace the sensor.



Finisher Right Side Panel sensor (SN216)

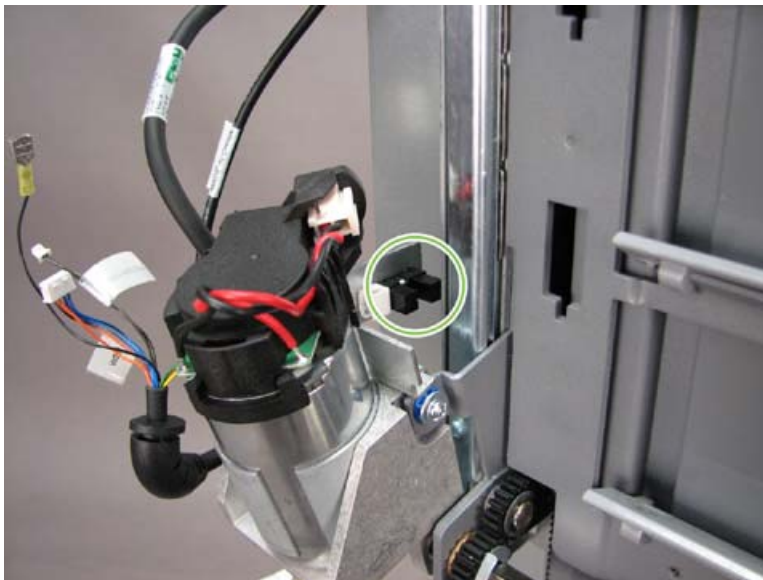
1. Remove the input media path assembly.
[Input media path assembly on page 971](#)

2. Disconnect the wire connector to SN216, and then replace the sensor.



Finisher Job Separator Lower Limit sensor (SN260)

1. Remove the separator motor cover.
2. Disconnect the wire connector W263P3-SN260 to the Finisher Job Separator Lower Limit sensor (SN260), and then remove the sensor.

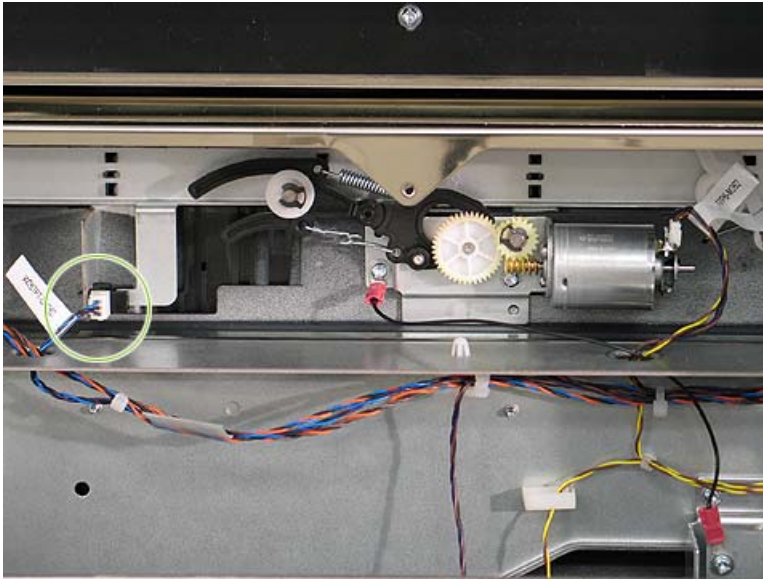


Finisher Job Separator Gate Open sensor (SN262)

1. Remove the input media path assembly.

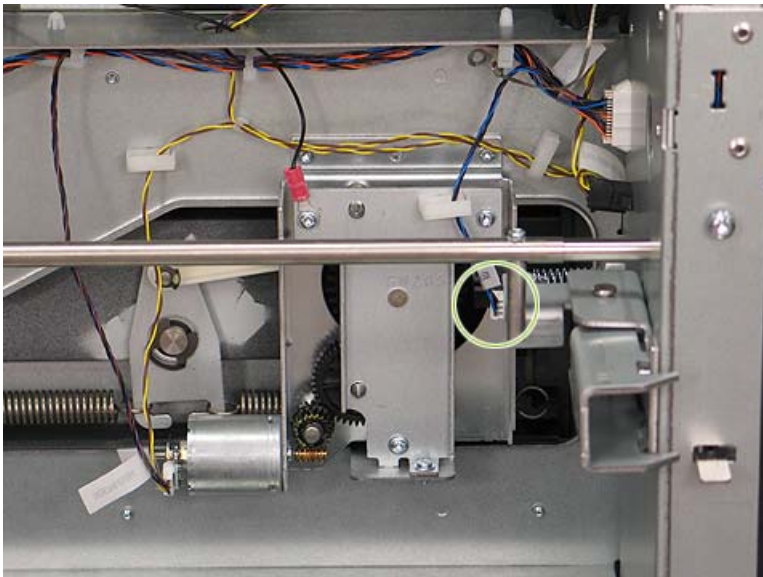
[Input media path assembly on page 971](#)

2. Disconnect the wire connector W267P7-SN262 to the Finisher Job Separator Gate Open sensor (SN262), and then remove the sensor.



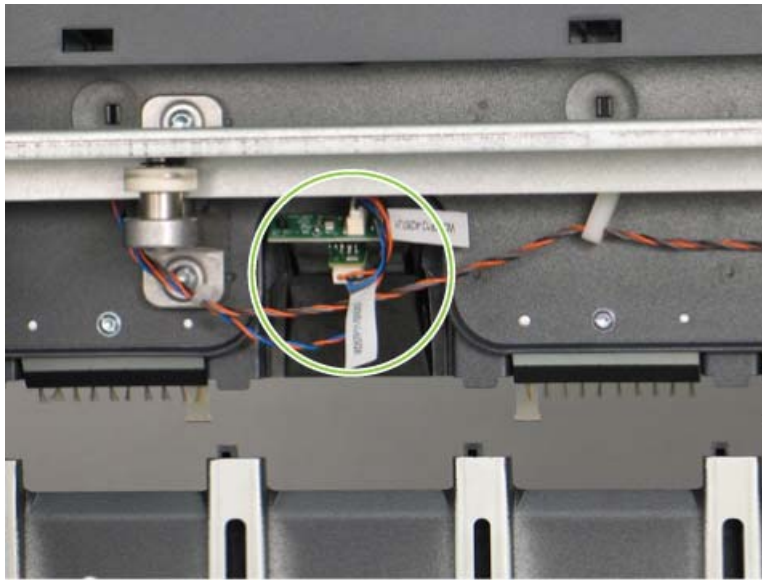
Finisher Job Separator Offset Back sensor (SN265)

1. Remove the middle latch cover.
[Middle latch cover on page 969](#)
2. Disconnect the wire connector W267P10-SN265 at the Finisher Job Separator Offset Back sensor (SN265), and then remove the sensor.



Finisher Job Separator Stack Height sensor (SN267)

1. Remove the following items:
 - Front cover
[Front cover on page 962](#)
 - Output media path cover
[Output media path cover on page 969](#)
2. Disconnect the wire connector W267P11-SN267 to the Finisher Job Separator Stack Height sensor (SN267).



Motors

- [Finisher Input Paper Path motor \(M210\)](#)
- [Finisher Separator Drive motor \(M260\)](#)
- [Finisher Job Separator Gate motor \(M262\)](#)
- [Finisher Separator Offset motor \(M264\)](#)
- [Output media path motor \(M268\)](#)

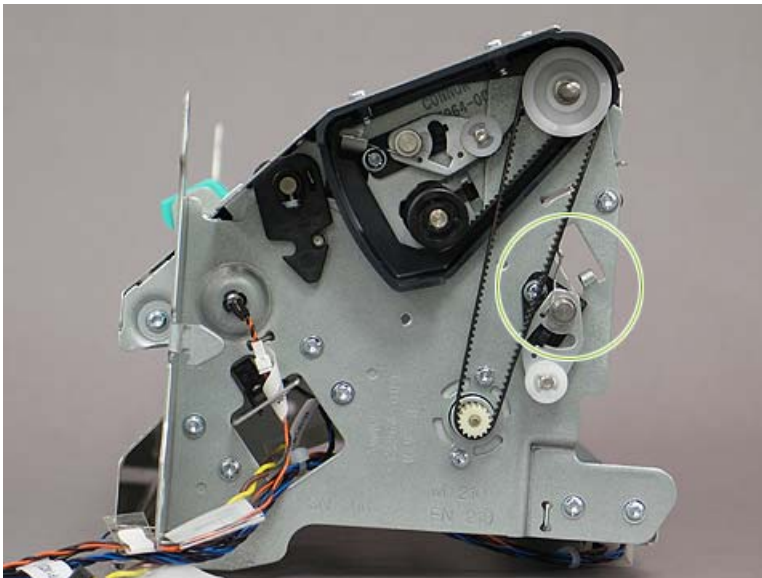
Finisher Input Paper Path motor (M210)

1. Remove the input media path assembly.
[Input media path assembly on page 971](#)

2. From the rear side, remove two screws, and then remove the cover.

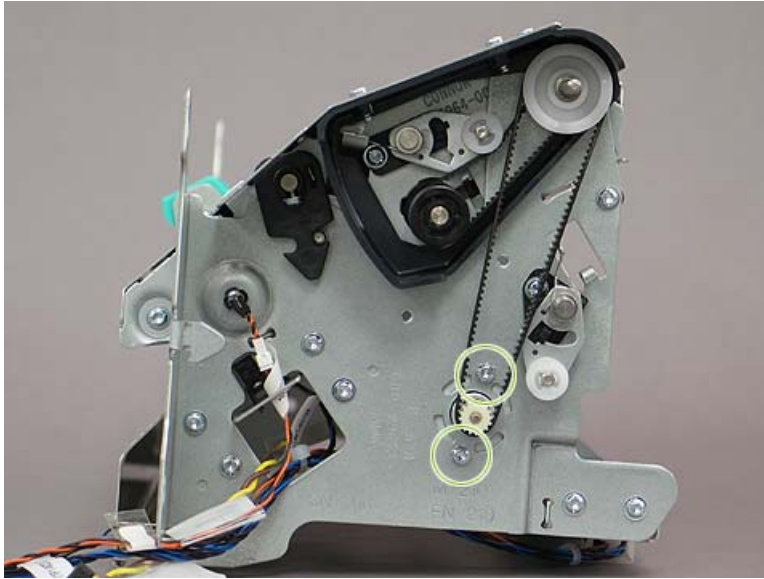


3. Unlatch the spring from the media path tensioner, releasing the tension on the belt.



4. Disconnect the wire connectors to the motor.

5. Remove two screws, and then remove M210.

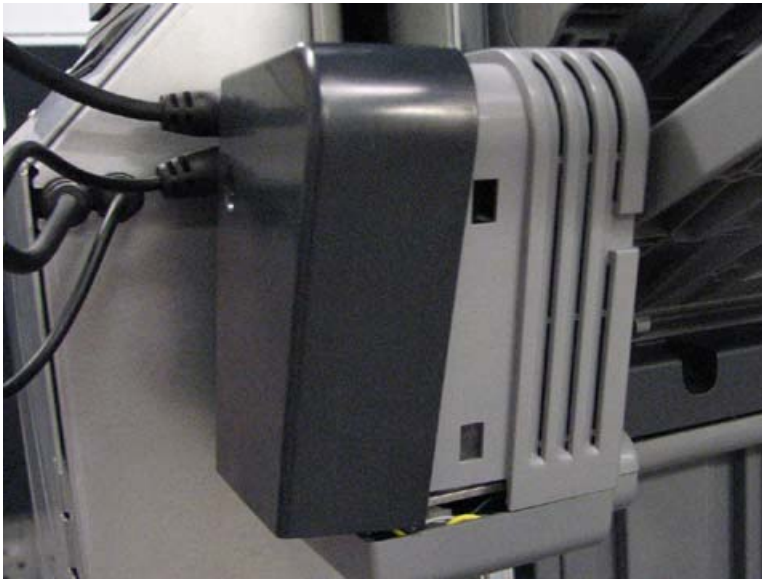


Finisher Separator Drive motor (M260)

1. Remove one screw, and then unsnap the rear cover of the separator motor. Detach the two cables from the rear cover.



 **NOTE:** The rear separator motor cover snaps into two holes on the front separator motor cover.



2. Loosen two screws from the lower shaft cover underneath the separator motor.




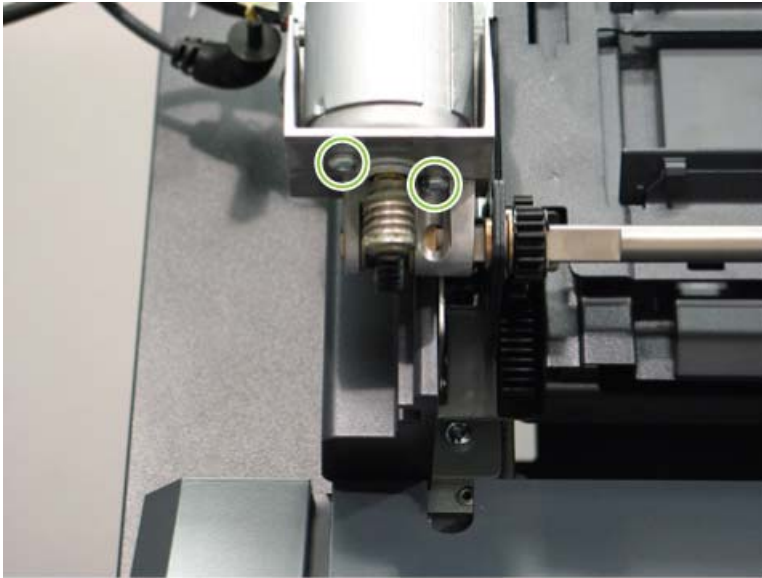
3. Remove one screw, and then remove the front separator motor cover.



4. Disconnect one ground clip and two wire connectors from the motor:
 - W268P3-M260
 - W263P6-EN260

5. Remove two screws, and then remove M260.

 **NOTE:** Hold the separator assembly up before removing the motor. The separator assembly will drop when the motor is removed.



Finisher Job Separator Gate motor (M262)

1. Remove the following items:
 - Input media path assembly
[Input media path assembly on page 971](#)
 - Paper gate assembly
[Paper gate assembly on page 991](#)
2. Remove two screws, and then remove M262 from the assembly.



Finisher Separator Offset motor (M264)

1. Remove the following items:
 - Middle latch cover
[Middle latch cover on page 969](#)
 - Offset mechanism assembly
[Offset mechanism assembly on page 992](#)
2. Remove two screws, and then remove M264 from the assembly.



Output media path motor (M268)

1. Remove the following items:
 - Front cover
[Front cover on page 962](#)
 - Output media path cover
[Output media path cover on page 969](#)
 - Output media path assembly
[Output media path assembly on page 985](#)
2. Disconnect two wire connectors from the motor:
 - W267P5-M268
 - W267P4-EN268

3. Unlatch the spring from the media path tensioner, releasing the tension on the belt.



4. Remove two screws, and then remove M268.

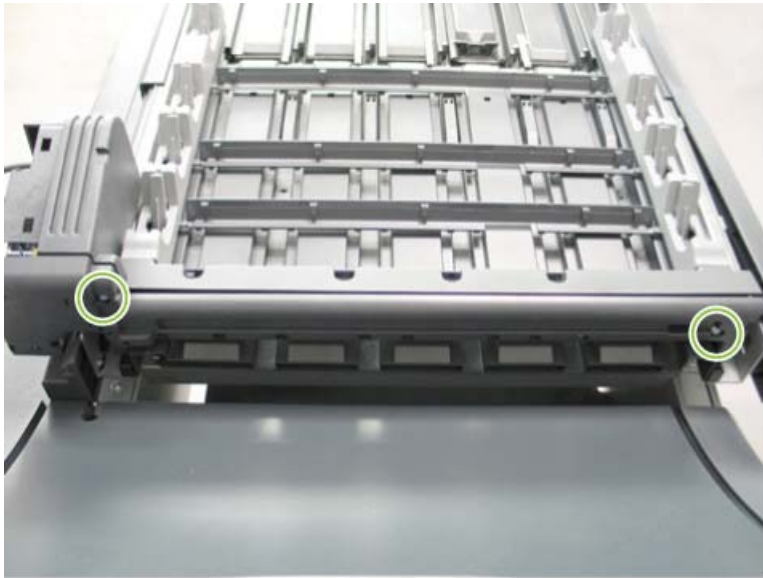


Switches

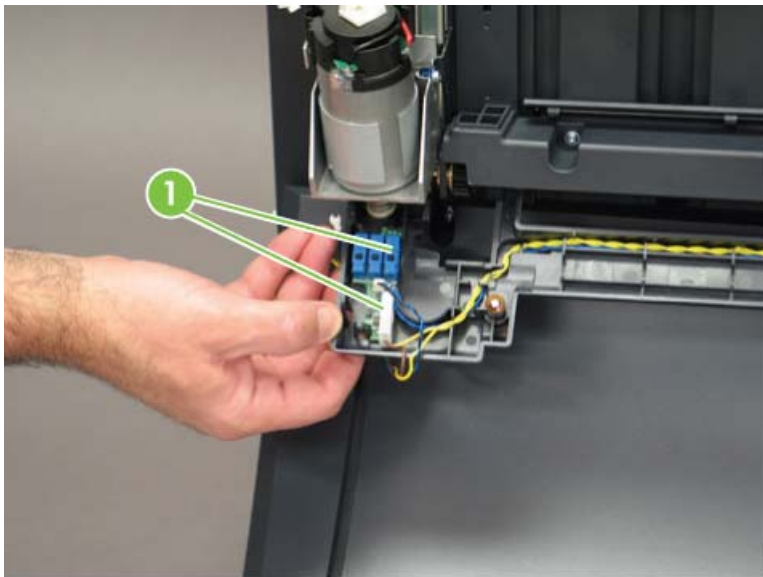
- [Finisher Separator Safety 1 switch \(SW261\)](#)
- [Finisher Separator Safety 2 switch \(SW264\)](#)

Finisher Separator Safety 1 switch (SW261)

1. Remove two screws, front and rear, from the lower shaft cover.



2. Disconnect two wire connectors (callout 1).



3. Remove the PCA (SW261).

Finisher Separator Safety 2 switch (SW264)

1. Remove all separator bins.



2. Remove the guide from the separator by slightly prying apart the ends of the guide while lifting up.



3. Pry the top tab on the front and rear tray supports, and then push up to remove each of the two supports.



4. Remove two screws, front and rear, from the lower shaft cover.



5. Remove four screws.



6. Gently lift up the shaft guide, and then disconnect two wire connectors (callout 1).



7. Remove the PCA (SW264) from underneath the shaft guide.

LEDs

- [Finisher Right-Side Panel LED \(LED201\)](#)
- [Finisher Latch LED \(LED204\)](#)

Finisher Right-Side Panel LED (LED201)

1. Remove the input media path assembly.
[Input media path assembly on page 971](#)

2. Disconnect the LED cable, and then remove the LED201.



Finisher Latch LED (LED204)

1. Remove the front cover.
[Front cover on page 962](#)
2. Disconnect the LED cable, and then remove LED204.



Finisher Main PCA (A200)

1. Shut down the MFP, making sure to turn off the main power switch, located on the bottom right side of the MFP.
2. Disconnect the finisher cables from the MFP, and then physically separate the two units.

3. Turn on the MFP.
4. Enter CDFT-E or CDFT-L and access the NVM utility.
5. Disable automatic NVM backup.
6. Perform a manual NVM backup to an external location, such as a USB storage device.
7. Exit CDFT and shut down the MFP, making sure to turn off the main power switch.
8. Remove the following items:
 - Front cover
[Front cover on page 962](#)
 - PCA access cover
[PCA access cover on page 970](#)
9. Disconnect all cables from A200.
10. Remove four screws, and then remove A200.



11. Replace A200, and then reattach cables and covers, reconnecting the 4-bin job separator to the MFP.
12. Turn on the MFP.
13. Enter CDFT-E or CDFT-L and access the **Finisher Settings** screen.
14. Touch **Clear Finisher NVM**, and then follow subsequent screens to do the following tasks:
 - Wipe the finisher PCA NVM.
 - Perform an NVM restore using the data that was backed up at the beginning of this procedure.
15. When prompted, exit CDFT and shut down the MFP, making sure to turn off the main power switch.
16. Turn on the MFP.

17. Enter CDFT, and then re-enable automatic NVM backup.
18. Perform a manual NVM backup to an external location, such as a USB storage device.

Base components

- [Adjustable casters](#)
- [Fixed casters](#)
- [Anti-tip limit guide](#)

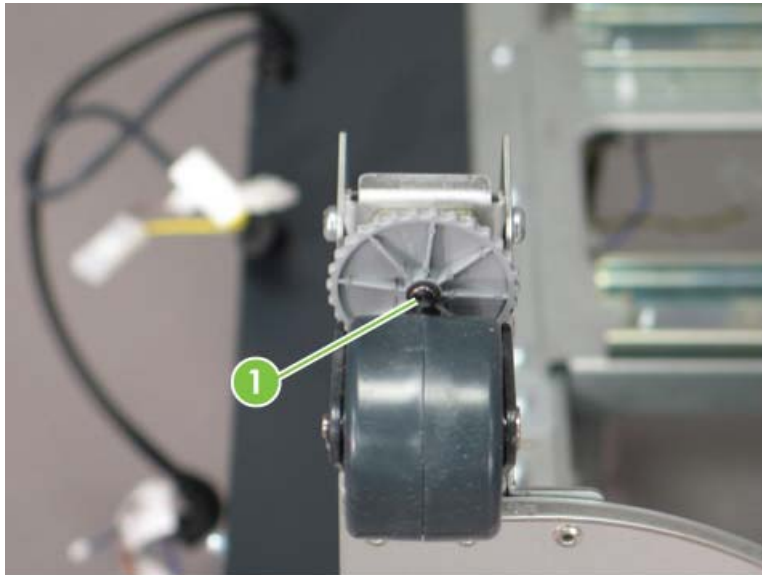
Adjustable casters

There are two adjustable casters on the left side of the finisher.

1. Remove the foot covers.

[Foot covers on page 963](#)

2. Lift the finisher leg, on the side with the caster to be removed, approximately 50 mm (2 in). Place a support underneath, for example a stack of paper.
3. Remove the retaining clip (callout 1) from the underside of the adjusting disk.



4. Remove one bolt.



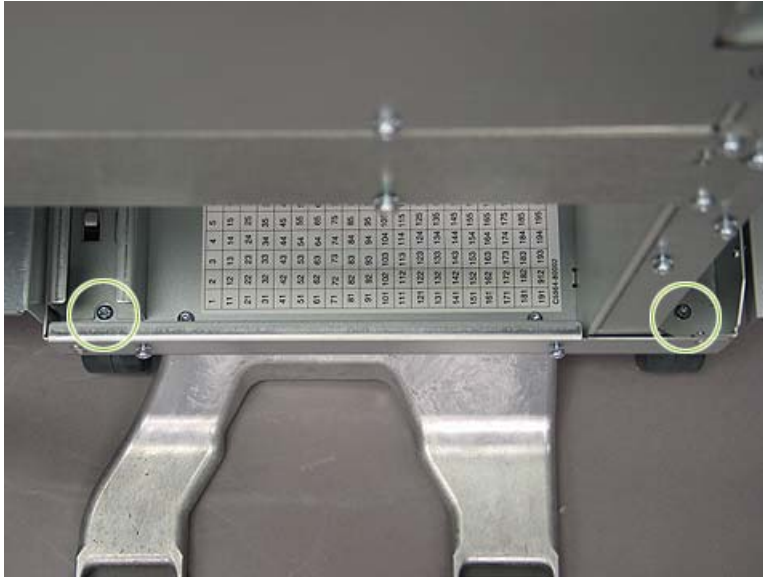
5. Rotate the caster assembly down, unhook the caster tabs, and then remove the caster assembly.

Fixed casters

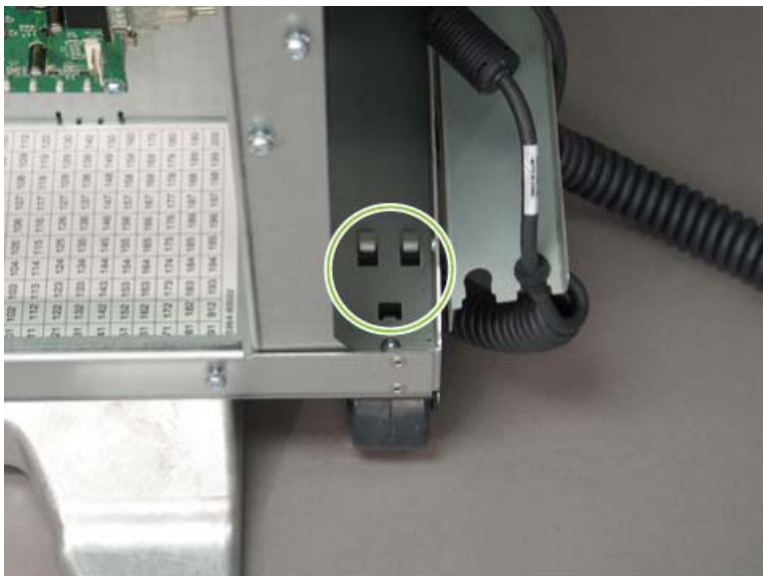
There are two fixed casters on the right side of the finisher.

1. Remove the following items:
 - Rear cover
[Rear cover on page 963](#)
 - PCA access cover
[PCA access cover on page 970](#)

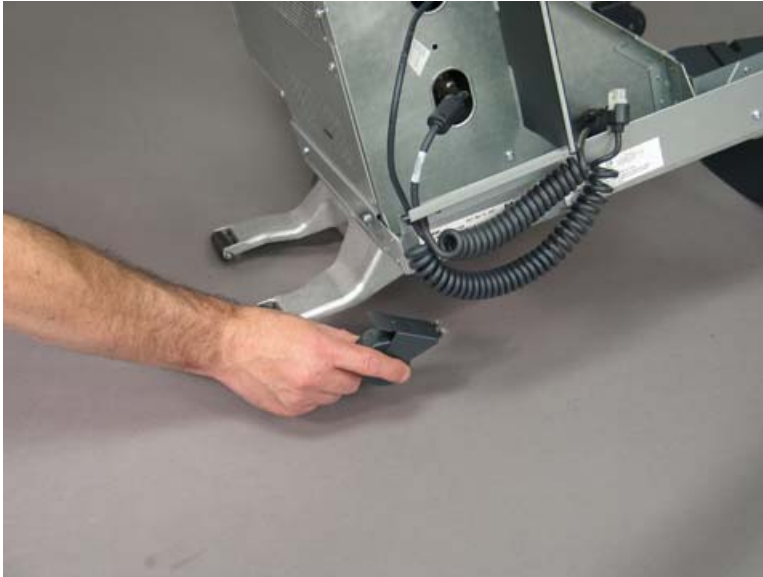
2. Remove one screw for each fixed caster to be removed.



3. Lift the corner of the finisher with the caster to be removed up approximately 50 mm (2 in). Place a support underneath, for example a stack of paper.
4. Rotate the caster assembly down to unhook the caster assembly tabs.



5. Remove the caster assembly.



Anti-tip limit guide

- [Anti-tip limit guide assembly](#)
- [Anti-tip limit guide rollers](#)

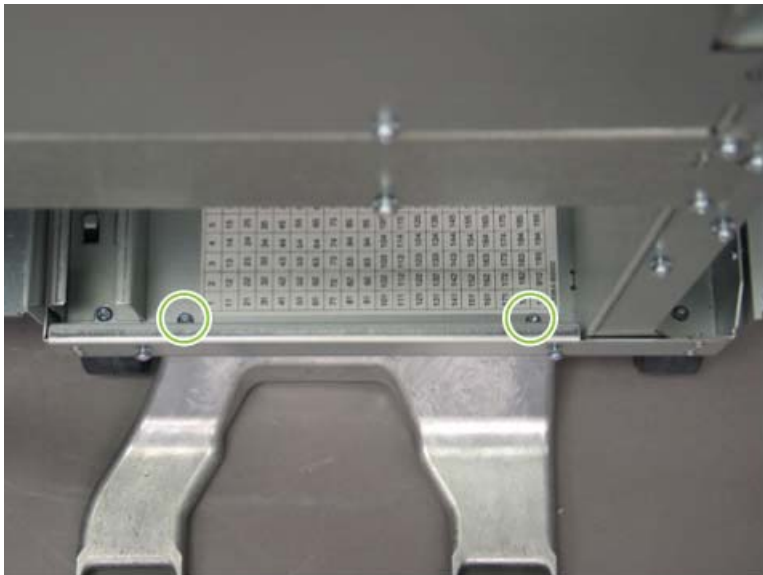
Anti-tip limit guide assembly

1. Remove the following items:
 - PCA access cover
[PCA access cover on page 970](#)
 - Foot covers
[Foot covers on page 963](#)

2. Remove two screws.

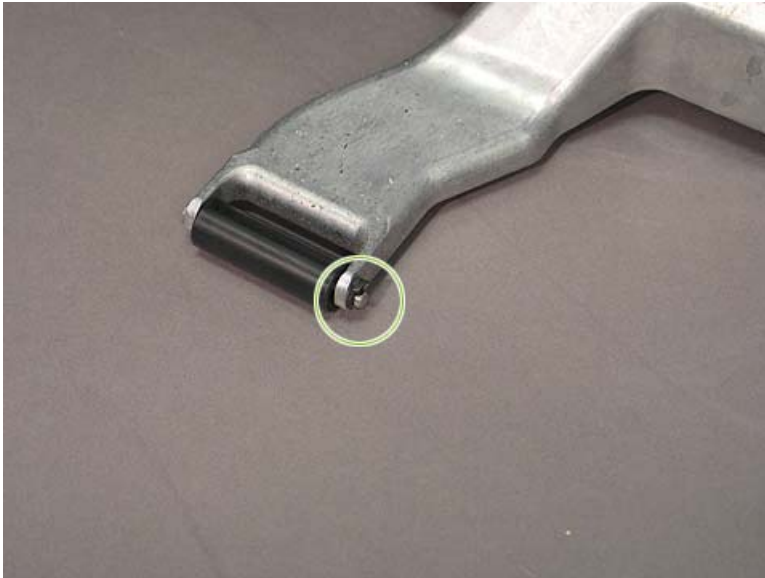


3. Remove two screws, and then remove the tip guide assembly.



Anti-tip limit guide rollers

1. Remove the retaining clip from the end of the roller shaft.



2. Remove the roller shaft, and then remove the roller.

7 Troubleshooting

This chapter contains information about the following topics:

- [Troubleshooting tools](#)
- [Problem conditions](#)
- [Control panel messages](#)

Troubleshooting tools

- [Protected Service Mode \(PSM\)](#)
- [How to test voltages](#)
- [Connector pin 1 reference](#)
- [How to test a stepper motor](#)


Protected Service Mode (PSM)

- [When to use Protected Service Mode \(PSM\)](#)
- [Starting PSM](#)

When to use Protected Service Mode (PSM)

When the MFP encounters a service fault, the print engine is shut down. A service fault is any fault that prevents the MFP from powering up. A service fault is normally indicated by a **Device Error** control panel message.

The only way to power cycle the MFP and diagnose the service fault is to use Protected Service Mode (PSM). In PSM, the MFP powers up and you can use the diagnostic software to diagnose the service fault. The MFP cannot print in PSM.

 **NOTE:** Some diagnostic tools might not be available in PSM. If a diagnostic tool is not available, you see a warning message indicating that the tool is not available.

For more information on Protected Service Mode (PSM), see [Protected Service Mode \(PSM\) on page 33](#).

Starting PSM

For more information on starting the Startup Menu, see [Startup Menu service functionality on page 101](#).

How to test voltages

- [Service Test Tool](#)
- [Overview](#)
- [How to determine which cable to use](#)
- [How to test voltage from the Motion PCA \(A2\)](#)
- [How to test continuity](#)

Service Test Tool

In order to not damage wire connectors when testing voltage levels, use the Service Test Tool (STT). The STT is designed to use only insulation displacement connectors (IDC). IDC connectors can vary in the number of rows and pins.

The STT consists of the following items:

- Voltage testing board
- A set of wire connectors

Overview

Use the Service Test tool (STT) to do the following actions:

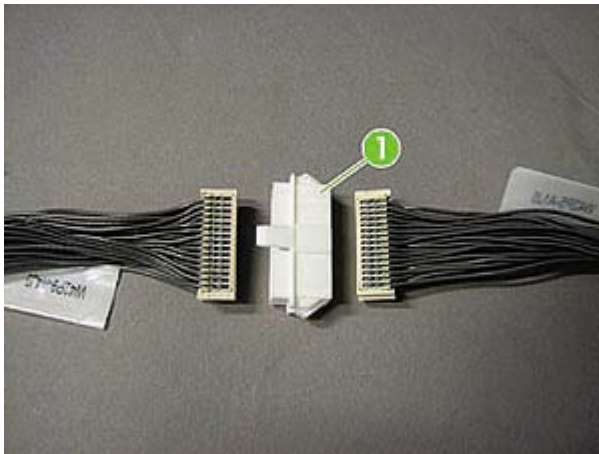
- Test the voltage at a IDC connector without damaging the connector
- Check wire continuity

Use the STT as a pass-through device when testing voltages and continuity. The test points on the STT correlate to the pin numbers on the wire connectors. The black test points are used to test pass-through voltages. Both white and black test points are used to test continuity.

△ **WARNING!** Use the grounding pin on the STT to connect the STT to ground. Be careful not to short across the black test points of the STT.

WARNING! Ensure you connect the service test tool connectors to the correct locations by connecting one cable to the wire harness and the other cable to the jumper from where the previous connector was disconnected. DO NOT connect both of the cables from the service test tool directly to the wire harnesses bypassing the connector jumper. If this happens, the system will declare unexpected errors and potentially damage components.

When following the documentation and using the STT to test voltages on cables that have an inline connector, connect the STT to the opposite side of the inline connector's release tab. Callout 1 shows the proper side to connect the STT to ensure the proper pinouts.



△ **CAUTION:** When connecting the STT, first turn the power to the system OFF, connect the cables to the STT, and then turn the power ON.

📝 **NOTE:** To prevent damage to an IDC connector while testing voltages, do not probe the connector from the side or in a pin socket.

How to determine which cable to use

Use this table to identify test cables when you are using the Service Test Tool.

Cable	Cable number
Service Test Tool base cable (ASSY-SERVICE TEST BASE CABLE)	C5957-67040
5 pin single row receptacle cable (CABLE,TEST,SGL ROW, 5-POS RECPT)	C5956-61211
6 pin single row receptacle cable (CABLE,TEST,SGL ROW, 6-POS RECPT)	C5956-61212
8 pin single row receptacle cable (CABLE,TEST,SGL ROW,8-POS RECPT)	C5956-61363
12 pin single row receptacle cable (CABLE,TEST,SGL ROW, 12-POS RECPT)	C5956-61213
18 pin single row receptacle cable (CABLE,TEST,SGL ROW, 18-POS RECPT)	C5956-61214
5 pin single row plug cable (CABLE,TEST,SGL ROW, 5-POS PLUG)	C5956-61215
6 pin single row plug cable (CABLE,TEST,SGL ROW, 6-POS PLUG)	C5956-61216
8 pin single row plug cable (CABLE,TEST,SGL ROW,8-POS PLUG)	C5956-61364
12 pin single row plug cable (CABLE,TEST,SGL ROW,12-POS PLUG)	C5956-61217
18 pin single row plug cable (CABLE,TEST,SGL ROW,18-POS PLUG)	C5956-61218
10 pin double row receptacle cable (CABLE,TEST,DBL ROW, 10-POS RECPT)	C5956-61219
12 pin double row receptacle cable (CABLE,TEST,DBL ROW, 12-POS RECPT)	C5956-61220
14 pin double row receptacle cable (CABLE,TEST,DBL ROW, 14-POS RECPT)	C5956-61221
16 pin double row receptacle cable (CABLE,TEST,DBL ROW, 16-POS RECPT)	C5956-61222
20 pin double row receptacle cable (CABLE,TEST,DBL ROW, 20-POS RECPT)	C5956-61223
22 pin double row receptacle cable (CABLE,TEST,DBL ROW, 22-POS RECPT)	C5956-61224
24 pin double row receptacle cable (CABLE,TEST,DBL ROW, 24-POS RECPT)	C5956-61225
26 pin double row receptacle cable (CABLE,TEST,DBL ROW, 26-POS RECPT)	C5956-61226
28 pin double row receptacle cable (CABLE,TEST,DBL ROW, 28-POS RECPT)	C5956-61227
30 pin double row receptacle cable (CABLE,TEST,DBL ROW, 30-POS RECPT)	C5956-61228
32 pin double row receptacle cable (CABLE,TEST,DBL ROW, 32-POS RECPT)	C5956-61229

Cable	Cable number
36 pin double row receptacle cable (CABLE,TEST,DBL ROW, 36-POS RECPT)	C5956-61230
40 pin double row receptacle cable (CABLE,TEST,DBL ROW, 40-POS RECPT)	C5956-61231
10 pin double row plug cable (CABLE,TEST,DBL ROW,10-POS PLUG)	C5956-61232
12 pin double row plug cable (CABLE,TEST,DBL ROW,12-POS PLUG)	C5956-61233
14 pin double row plug cable (CABLE,TEST,DBL ROW,14-POS PLUG)	C5956-61234
16 pin double row plug cable (CABLE,TEST,DBL ROW,16-POS PLUG)	C5956-61235
20 pin double row plug cable (CABLE,TEST,DBL ROW,20-POS PLUG)	C5956-61236
22 pin double row plug cable (CABLE,TEST,DBL ROW,22-POS PLUG)	C5956-61237
24 pin double row plug cable (CABLE,TEST,DBL ROW,24-POS PLUG)	C5956-61238
26 pin double row plug cable (CABLE,TEST,DBL ROW,26-POS PLUG)	C5956-61239
28 pin double row plug cable (CABLE,TEST,DBL ROW,28-POS PLUG)	C5956-61240
30 pin double row plug cable (CABLE,TEST,DBL ROW,30-POS PLUG)	C5956-61241
32 pin double row plug cable (CABLE,TEST,DBL ROW,32-POS PLUG)	C5956-61242
36 pin double row plug cable (CABLE,TEST,DBL ROW,36-POS PLUG)	C5956-61243
40 pin double row plug cable (CABLE,TEST,DBL ROW,40-POS PLUG)	C5956-61244

How to test voltage from the Motion PCA (A2)

Follow these steps to test the voltage from the Motion PCA (A2) to a component (such as a motor, solenoid, or sensor).

Overall instructions

1. Power off the MFP.
2. Disconnect the cable from the Motion PCA (A2).
3. Find a matching wire connector in the STT kit, and then use the cable to connect the Motion PCA (A2) to J1 on the STT.
4. Connect the cable you disconnected from the Motion PCA (A2) to J2 on the STT.
5. Power on the MFP.

6. Open the MFP diagnostic software, and run a voltage test for the component.

For more information, see [How to test voltages with CDFT on page 52](#).

7. Measure the voltage at the appropriate test points on the STT.

Follow any specific fault tree instructions.


Example

In this example, the voltage is tested from the Motion PCA (A2) to the IDO Duplex motor (M12). The expected voltage on the Motion PCA (A2) is 3.2 Vdc at J14 pins 4 to 13.

1. Power off the MFP.
2. Disconnect W43P14-A2J14 from J14 on the Motion PCA (A2).
3. Find a matching wire connector in the STT kit, and then use the cable to connect J14 on the Motion PCA (A2) to J1 on the STT.
4. Connect W43P14-A2J14 to J2 on the STT.
5. Power on the MFP.
6. Open the MFP diagnostic software, and run a voltage test for the IDO Duplex motor (M12).
7. Measure the voltage at test points 4A/4 and 13A/13 on the STT.

How to test continuity

Follow these steps to test the continuity from the Motion PCA (A2) to a component (such as a motor, solenoid, or sensor).

 **NOTE:** The Service Test Tool will not be able to test for continuity between the following cable wire numbers:

W14P10-A2J10 and W14P6-W36J6

W241P2-A200J2 and W241P12-A240CN12

W15P9-A2J9 and W15P5-W37J5

W21P2-A6J2 and W21P3-A7H2


W42P9-A4J9 and W42P5-A1J5

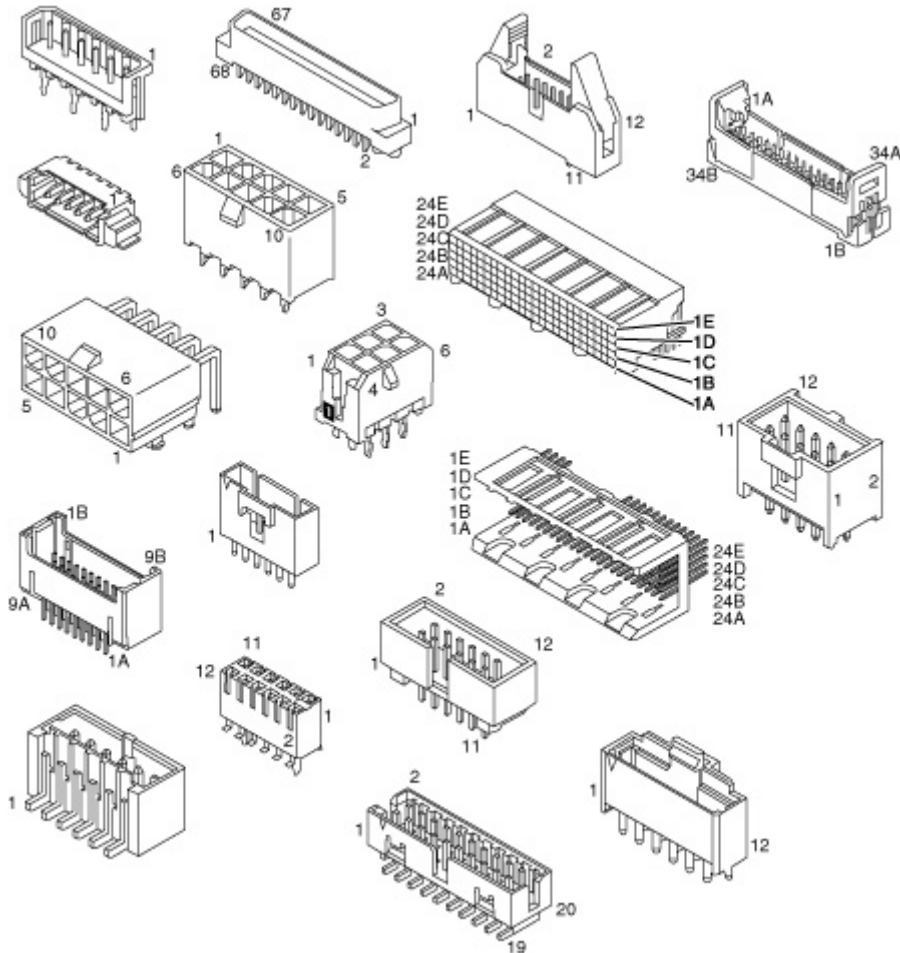
1. Power off the MFP.
2. Disconnect the cable from the Motion PCA (A2) and the component so that the cable is electrically disconnected.
3. Find the matching connectors in the STT kit, and then connect one STT cable to each end of the MFP cable you disconnected. The original cable will have an STT cable connected to each end.
4. Connect one free STT connector to J3 on the STT.
5. Connect the other free STT connector to either J1 or J2 on the STT.
6. Use the appropriate wiring diagram to determine which pins to test, and then test the appropriate test points on the STT.

See the Parts manual for a listing of Service Test Tool cables and part numbers.

Connector pin 1 reference

Use the following illustration as a guide for locating pin 1 on connectors found in the MFP.

 **NOTE:** This reference is for the pin pattern only. The actual number of pins per connector will vary in the system.



How to test a stepper motor

A stepper motor has coil windings with equal resistance. If a coil has a resistance that differs from the resistance of the other winding, then the motor is damaged. If the resistance between the coils is equal, then the motor is functioning correctly.

Follow these steps to test a stepper motor:

1. Disconnect the wire connector at the motor.
2. Measure the resistance of each winding of the motor.
3. Measure the resistance between two adjacent pins on one coil and the same pins on the other coil. The measurements should be equal.

4. Measure the resistance between the motor wire connector pins and the MFP frame.
5. Replace the motor if any of the following conditions is true:
 - The resistance between the coils is not equal
 - There is resistance between the pins on the connector of one coil to the pins on the connector of the other coil
 - There is any resistance between any of the pins on the motor connector to machine frame

Problem conditions

- [General MFP problems](#)
- [Pen problems](#)
- [Navigation LED does not light](#)
- [ADF and scanner problems](#)
- [Control panel problems](#)
- [Power supply \(PS1\) problems](#)
- [MFP door problems](#)
- [MFP paper path problems](#)
- [Boot-up problems](#)
- [CDFT-L direct connection problems](#)
- [Fax problems](#)
- [Remote Firmware Update \(RFU\) problems](#)
- [SMTP server problems](#)
- [Embedded Web Server problems](#)
- [Tray 1 problems](#)
- [Tray 5 problems](#)
- [HP Multifunction Finisher problems](#)
- [HP 4-Bin Job Separator problems](#)
- [Main Engine PCA \(A5\) LED error codes](#)

General MFP problems

- [Noises](#)
- [MFP power problems](#)
- [Intermittent problems](#)
- [MFP is running slow](#)
- [Odors](#)

Noises

- [Squeaks](#)
- [Knocking](#)
- [Clicking](#)
- [Cyclical noise](#)

- [Whistling](#)
- [Electrical noise](#)

Squeaks

Source	Root causes	Recommended actions
Cooling fans	Fan bearings	Use diagnostics to turn on each fan individually to find the fan that is making the noise. Repair or replace the fan.
Paper path	<ul style="list-style-type: none"> ● Contaminated, worn, or damaged drive roller idlers, bearings, or belt idlers ● Worn or misaligned drive belts 	Use diagnostics to turn on each paper path motor individually to find the part of the paper path that is making the noise. Replace parts as needed.
Drum drive area	<ul style="list-style-type: none"> ● Binding ● Worn or misaligned drive belts 	Open the dryer and rotate the drum by hand to check for binding. Check the drive belt and pulley for wear or damage.
Upper separator tire shaft	Worn shaft rubbing against the slip clutch	Replace the upper separator tire shaft.

Knocking

Source	Root causes	Recommended actions
Scanner carriage assembly	<ul style="list-style-type: none"> ● Drive belts ● Rails 	Check the drive belts and rails for damage or wear. Replace parts as needed.
Paper path	Worn or misaligned drive belts	Use diagnostics to turn on each paper path motor individually to find the part of the paper path that is making the noise. Replace parts as needed.

Clicking

Source	Root causes	Recommended actions
Cooling fans	Cooling fan blades catching on another part	Use diagnostics to turn on each fan individually to find the fan that is making the noise. Repair or replace the fan.

Cyclical noise

Source	Root causes	Recommended actions
Staplers	Stapler cartridge	<ol style="list-style-type: none"> 1. Remove any jammed staples from the staple cartridges. 2. Verify that the staple cartridges are correctly installed. 3. Verify that the correct stapler cartridges are being used.

Whistling

Source	Root causes	Recommended actions
Drum area	Vacuum fans	Use diagnostics to activate the fans and turn the drum by hand. Replace parts as needed.
Web wipe cartridge area	<ul style="list-style-type: none">• Foam seals• Vacuum fans	<ol style="list-style-type: none">1. Check the web wipe area foam seals for damage. Verify that the seals are correctly seated.2. Use diagnostics to activate the fans and turn the drum by hand. Replace parts as needed.
Print carriage aerosol hoses	Damaged or misaligned hoses	<ol style="list-style-type: none">1. Check the hoses for damage. Verify that the hoses are correctly installed.2. Use diagnostics to activate the aerosol fan, and then move each print carriage by hand.
Aerosol fan	Fan bearings	Use diagnostics to activate the aerosol fan.
Aerosol filter door	Damaged or worn gasket	<ol style="list-style-type: none">1. Check the gasket for damage. Verify that the gasket is correctly installed.2. Use diagnostics to activate the aerosol fan.

Electrical noise

Primary root causes	Recommended actions
<ul style="list-style-type: none">• Loose grounds, wiring, and connectors• Damaged wire harness or cables• Wire harnesses or cables not properly supported in their wire management features	<ol style="list-style-type: none">1. Verify that all ground locations are tight.2. Verify that all of the electrical connectors are secure.3. Check for damaged wires near components or the MFP frame.4. Verify that the AC power cord is correctly connected to the power supply and the wall receptacle.

MFP power problems

Table 7-1 No power to the MFP

Primary root causes	Recommended actions
<ul style="list-style-type: none">• Varied	<ol style="list-style-type: none">1. Check the wall receptacle for correct voltage and polarity.2. Verify that the LED on the outside of the power supply is lit.3. Verify that the power cord is correctly installed.4. Turn off and turn on the power switch on the power supply.5. Replace the power supply.

Table 7-2 MFP does not enter power saver mode

Primary root causes	Recommended actions
<ul style="list-style-type: none">• Wire harness between the control panel and the Formatter Main PCA (A26)• Wire harness between the scanner and A26• Wire harness between the MFP and the formatter• The following sensors<ul style="list-style-type: none">◦ Front Door Open switch (SW3)◦ Upper-left Door Open sensor (SN37)◦ Lower-left Door sensor (SN18)◦ Tray 1 Media sensor (SN27)◦ Tray 2 Empty sensor (SN45)◦ Tray 3 Empty sensor (SN49)◦ Tray 4 Empty sensor (SN53)◦ ADF Cover Open switch (SW402)◦ ADF Original Present sensor (SN403)• Firmware• A26• Main Engine PCA (A5)	<ol style="list-style-type: none">1. Check the wire connections to all of the listed components listed.2. Use diagnostics to test each of the listed sensors.3. Replace the control panel power switch.4. Reload the firmware.5. Replace A26.6. Replace A5.

Table 7-3 MFP does not recover from power saver mode

Primary root causes	Recommended actions
<ul style="list-style-type: none">● MFP is receiving a job from the LAN, fax, or a US connection● Wire harness between the control panel and the Formatter Main PCA (A26)● Wire harness between the scanner and A26● Wire harness between the MFP and the formatter● The following sensors:<ul style="list-style-type: none">○ Upper-left Door Open sensor (SN37)○ Lower-left Door sensor (SN18)○ Tray 1 Media sensor (SN27)○ Tray 2 Empty sensor (SN45)○ Tray 3 Empty sensor (SN49)○ Tray 4 Empty sensor (SN53)○ ADF Cover Open switch (SW402)○ ADF Original Present sensor (SN403)○ Front Door Open switch (SW3)● Firmware● A26● Main Engine PCA (A5)	<ol style="list-style-type: none">1. Check the wire connections to all of the listed components.2. Use diagnostics to test each of the listed sensors.3. Replace the control panel power switch.4. Reload the firmware.5. Replace A26.6. Replace A5.

Intermittent problems

Primary root causes	Recommended actions
<ul style="list-style-type: none">● Varied	<ol style="list-style-type: none">1. Check the service maintenance log. Recent service actions might provide information about the problem. For example, a component that was recently replaced to correct another problem might cause the new intermittent problem. Follow the troubleshooting procedures for any event codes.2. Run the machine in a mode that exercises the function in the suspected problem area. The machine might fault more frequently or may fault completely under these conditions. Look for signs of failure or abnormal operation.3. Verify that the AC and DC power to the MFP is within product specifications.4. Using a fault isolation approach that is associated with the symptom of the intermittent problem, examine all of the

Primary root causes	Recommended actions
	<p>components that are referenced in the fault isolation area. Look for the following conditions:</p> <ul style="list-style-type: none"> ◦ Contamination, such as pick rollers that have a build up of dirt ◦ Wear, such as gear teeth that are rounded or have excessive backlash ◦ Preventive maintenance items, even if they are not due for replacement or have not exceeded their specified life or print count value ◦ Wire chafing against components or the machine frame, especially against moving components. ◦ Misaligned, incorrectly adjusted, or incorrectly installed components ◦ Slow or slipping clutches and slow or binding solenoids ◦ Damaged components ◦ Excessive heat, or symptoms of excessive heat, such as the discoloration of a component, especially on PCAs ◦ Loose connectors, cables, or wires ◦ Bonding agent leaking on wire harnesses and running down the wires to the connector. This will cause a short circuit. Bonding agent can deteriorate the metal connectors and cause intermittent or solid shorts <p>5. Replace A26.</p> <p>6. Replace A5.</p>

MFP is running slow

Root causes

- Formatter not fully initialized.
- Environmental temperature and humidity
- Dryer

Recommended actions

1. Look for a formatter BIOS POST code. If a code is displayed, see [BIOS POST codes on page 1073](#).
2. Print one of the following test pages and count the number of times that the drum rotates:
 - DOM test page: 1 dry spin, 72 PPM
 - Text and Graphics test page: 3 dry spins, 47 PPM
 - All Colors test page: 0 to 1 dry spins, 57 PPMVerify that the PPM count exceeds product specifications.
3. Verify that the environmental temperature and humidity are within product specifications.
4. Check the Event log for any dryer-related codes. Follow the troubleshooting procedures for any dryer codes that are displayed.

Odors

Primary root causes

- Charcoal filter
- Muffler assembly and rear covers
- Damaged gaskets or seals

Recommended actions


1. Check to see if the charcoal filter is due for preventive maintenance.
2. Verify that all of the covers are correctly attached.
3. Verify that the rear muffler assembly gaskets are sealing correctly and that all exiting air is channeled through the charcoal filter.

Pen problems

- [Diagnosing and testing pen health](#)
- [Pen Health gauge indicates missing nozzles when a new pen is installed](#)
- [Extended power off situations](#)

Diagnosing and testing pen health

Adhere to these requirements when diagnosing and testing the integrity of the pen system.


 **NOTE:** Make sure to move the carriages back to the cap position before powering up the machine in case they were moved during a service action.

Action	Description	Why?	Requirements
Pen removal	A pen is removed, and then returned to the same pocket.	The pen might have interconnect problems or improper seating. <ul style="list-style-type: none"> Check the interconnect pads on the pen for dirty or bent pads While the pen is removed, check the pins on the pocket boards for bent pins 	No service routines need to be run.
Pen swapping	A pen in one carriage is swapped with the same color pen from the other carriage to see if a specific problem follows the pen.	Recommended to isolate electrical problems Ensure that interconnect pads and pocket board pins have been examined: <ul style="list-style-type: none"> Check the interconnect pads on the pen for dirty or bent pads While the pen is removed, check the pins on the pocket boards for bent pins 	After the pens are first swapped, turn Error hiding OFF and make a verification print to see if the problem follows the pen. After the problem has been identified, turn Error hiding ON before printing again.
Pen replacement	The suspect pen is replaced with a new pen.	All diagnostics and testing determine that the pen should be replaced. Ensure that interconnect pads and pocket board pins have been examined: <ul style="list-style-type: none"> Check the interconnect pads on the pen for dirty or bent pads Check the pins on the pocket boards for bent pins while the pen is removed 	When a new pen is installed, follow the pen installation and troubleshooting procedure in the next section.

Pen Health gauge indicates missing nozzles when a new pen is installed


Pens may show some missing nozzles the first time they are installed in a unit. These missing nozzles will cause the Pen Health Gauge to display a Red or Yellow status and some temporary streaking or banding may appear on the first printouts. This behavior is normal.

In most cases, running the New Pen Service routine should bring all the pens back to Green; however, sometimes the Pen Health Gauge will continue showing Red or Yellow even after running the service routine.

 **NOTE:** Never replace a pen showing Red status without going through the pen recovery procedure described in the “Bands of paper white or different shades of color” fault tree in the Image Quality Guide.

If new pens show Red or Yellow when they are installed for the first time, perform the following actions:

1. From the Printing Test screen, turn error hiding OFF. Select the All Colors test page, set the number of copies to 20, and then touch **Print**. Check the last page and confirm there are not white bands on the YCMK bars. Repeat the print job until no white bands are present or no change is observed from page 1 to 20.
2. From the Engine Calibrations 1 screen, touch **Drop Detect Beam** and check that the Drop Detect Beam button does not turn red after the calibration is done.

 **NOTE:** Check that the Drop Detect Beam button is not red after running any of the following routines: **Drop Detect**, **Drop Detect Beam**, **Pen Cleaning**, or **New Pen Service**. If the button is red, the Pen Health Gauge will show all gray and the Drop Detect Beam calibration needs to be run again.

Confirm the Drop Detect Beam calibration passed before running the New Pen Service routine.

3. Touch **New Pen Service**. When the calibration finishes, make sure it ran successfully. Check that no pens are Red. Print the Nozzle Health plot with error hiding ON and confirm there are not groups of missing nozzles. If any of the pens are Red and there are still missing nozzles in the Nozzle Health plot, refer to pen recovery procedure described in the "Bands of paper white or different shades of color" fault tree in the Image Quality Guide.
4. Touch **Automatic Pen Alignment**.
5. When it completes, touch **Pen Density Compensation**.

Extended power off situations

If the MFP is powered down and inactive for an extended period, the pen health can degrade. The customer can avoid this situation by powering on and printing with the MFP at least once every six weeks.

Extended periods of inactivity pose two risks to customer satisfaction:

- The pen health of one or more of the pens might degrade to the point that the pens are not recoverable and must be replaced
- The automatic pen cleaning routine that starts when the MFP is restarted and detects an unhealthy pen might take up to 20 minutes to run

Navigation LED does not light

- [Tray 1 LED \(LED12\) does not light](#)
- [Tray 2 LED \(LED15\) does not light](#)
- [Tray 3 LED \(LED16\) does not light](#)
- [Tray 4 LED \(LED17\) does not light](#)
- [Front Door LED \(LED7\) does not light](#)
- [Tray 5 Top-left Panel LED \(LED101\) does not light](#)
- [Tray 5 Top Door LED \(LED102\) does not light](#)
- [Drum Illumination 1 LED \(LED8\) does not light](#)

- [Drum Illumination 2 LED \(LED9\) does not light](#)
- [Dryer LED \(LED6\) does not light](#)
- [Horizontal Latch LED \(LED1\) does not light](#)
- [Left-side Middle Panel LED \(LED3\) does not light](#)
- [Output Bin LED \(LED14\) does not light](#)
- [IDO Curler LED \(LED2\) does not light](#)
- [Left-side Upper Panel LED \(LED5\) does not light](#)
- [Carriage LED \(LED10\) does not light](#)
- [Right-side Lower Panel LED \(LED18\) does not light](#)
- [Right-side Middle Panel LED \(LED13\) does not light](#)

Tray 1 LED (LED12) does not light

Primary root causes

- LED12
- Wire harness between LED12 and the Motion PCA (A2)

Recommended actions

1. Open the Tray 1 diagnostic page, and then test LED12.
2. Check the wire harness between LED12 and A2.
3. Test the voltage at LED12: 2 Vdc at pins 3A to 2A on W67p2-W36J2.
4. Test the voltage to LED12 on A2: -2 Vdc on J10 at pins 13B to 14B.

Reference links

- Fault tree: [A0.06C1: Tray 1 LED \(LED12\) not lit on page 1174](#)
- Diagnostic page: Click **Subsystems**, then click **Input Trays**, and then click **Tray 1**.
- Component locator: [Tray 1 component locator on page 2315](#)
- Wiring diagram: [Tray 1 wiring diagram on page 2219](#)
- Replace LED12: [Tray 1 LED \(LED12\) on page 376](#)

Tray 2 LED (LED15) does not light

Primary root causes

- LED15
- Wire harness between LED15 and the Trays 2, 3, and 4 Controller PCA (A23)

Recommended actions

1. Open the Trays 2, 3, 4 diagnostic page, and then test LED15.
2. Check the wire harness between LED15 and A23.
3. Test the voltage at LED15 : 5 Vdc at pins 1 to 2 on W77P2-LED15.
4. Test the voltage to LED15 on A23: 5 Vdc at W77P10 pins 2 to 1.

Reference links

- Fault tree: [A1.06C2: Tray 2 LED \(LED15\) not lit on page 1225](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)
- Replace LED15: [Trays 2, 3, and 4 LEDs on page 348](#)

Tray 3 LED (LED16) does not light

Primary root causes

- LED16
- Wire harness between LED16 and the Trays 2, 3, and 4 Controller PCA (A23)

Recommended actions

1. Open the Trays 2, 3, 4 diagnostic page, and then test LED16.
2. Check the wire harness between LED16 and A23.
3. Test the voltage at LED16 : 5 Vdc at pins 1 to 2 on W77P3-LED16.
4. Test the voltage to LED16 on A23: 5 Vdc at W77P10 pins 4 to 3.

Reference links

- Fault tree: [A1.06C3: Tray 3 LED \(LED16\) not lit on page 1227](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)
- Replace LED16: [Trays 2, 3, and 4 LEDs on page 348](#)

Tray 4 LED (LED17) does not light

Primary root causes

- LED17
- Wire harness between LED17 and the Trays 2, 3, and 4 Controller PCA (A23)

Recommended actions

1. Open the Trays 2, 3, 4 diagnostic page, and then test LED17.
2. Check the wire harness between LED17 and A23.
3. Test the voltage at LED17 : 5 Vdc at pins 1 to 2 on W77P4-LED18.
4. Test the voltage to LED17 on A23: 5 Vdc at W77P10 pins 6 to 5.

Reference links

- Fault tree: [A1.06C4: Tray 4 LED \(LED17\) not lit on page 1229](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)
- Replace LED17: [Trays 2, 3, and 4 LEDs on page 348](#)

Front Door LED (LED7) does not light

Primary root causes

- LED7
- Wire harness between LED7 and the Motion PCA (A2)

Recommended actions

1. Open the Covers diagnostic page, and then test LED7.
2. Check the wire harness between LED7 and A2.
3. Test the voltage at LED7: 2.0 Vdc at pins 3A to 4A on W32P9-W34J9.
4. Test the voltage to LED7 on A2: -2 Vdc at J8 pins 15A to 16A.

Reference links

- Fault tree: [00.06C1: Front Door LED \(LED7\) not lit on page 1166](#)
- Diagnostic page: Click **Subsystems**, and then click **Covers**.
- Component locator: [Covers component locator on page 2317](#)
- Wiring diagram: [Drum wiring diagram on page 2225](#)

Tray 5 Top-left Panel LED (LED101) does not light

Primary root causes

- LED101
- Wire harness between LED101, the Tray 5 Distribution PCA (A101), and the Motion PCA (A2)

Recommended actions

1. Open the Tray 5 diagnostic page, and then test LED101.
2. Check the wire harness between LED101, A101, and A2.
3. Test the voltage at LED101: 5 Vdc at pins 2 to 1 on W103P107-LED101.
4. Test the voltage to LED101 on A2: 5 Vdc on J13 at pins 21 to 14.

Reference links

- Fault tree: [A2.06C2: Tray 5 Top-left Panel LED \(LED101\) not lit on page 1273](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.
- Component locator: [Tray 5 component locator on page 2323](#)
- Wiring diagram: [Tray 5 wiring diagram on page 2241](#)
- Replace LED101: [LEDs on page 774](#)

Tray 5 Top Door LED (LED102) does not light

Primary root causes

- LED102
- Wire harness between LED102, the Tray 5 Distribution PCA (A101), and the Motion PCA (A2)

Recommended actions

1. Open the Tray 5 diagnostic page, and then test LED102.
2. Check the wire harness between LED102, A101, and A2.
3. Test the voltage at LED102: 5 Vdc at pins 2 to 1 on W103P111-LED102.
4. Test the voltage to LED102 on A2: 5 Vdc on J13 at pins 17 to 14.

Reference links

- Fault tree: [A2.06C1: Tray 5 Top Door LED \(LED102\) not lit on page 1271](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.
- Component locator: [Tray 5 component locator on page 2323](#)
- Wiring diagram: [Tray 5 wiring diagram on page 2241](#)
- Replace LED102: [LEDs on page 774](#)

Drum Illumination 1 LED (LED8) does not light

Primary root causes

- LED8
- Wire harness between LED8 and the Motion PCA (A2)

Recommended actions

1. Open the Drum diagnostic page, and then test LED8.
2. Check the wire harness between LED8 and A2.
3. Test the voltage at LED8: 0 Vdc unblocked, 2.97 Vdc blocked at pins 1A to 2A on W32P9-W34J9.
4. Test the voltage to LED8 on A2: 0 Vdc unblocked, -2.96 Vdc blocked on J8 at pins 17A to 18A.

Reference links

- Fault tree: [C1.06C1: Drum Illumination 1 LED \(LED8\) not lit on page 1376](#)
- Diagnostic page: Click **Subsystems**, and then click **Drum**.
- Component locator: [Drum component locator on page 2318](#)
- Wiring diagram: [Drum wiring diagram on page 2225](#)
- Replace LED8: [Drum Illumination 1 LED \(LED8\) and Drum Illumination 2 LED \(LED9\) on page 516](#)

Drum Illumination 2 LED (LED9) does not light

Primary root causes

- LED9
- Wire harness between LED9 and the Motion PCA (A2)

Recommended actions

1. Open the Drum diagnostic page, and then test LED9.
2. Check the wire harness between LED9 and A2.
3. Test the voltage at LED9: 0 Vdc unblocked, 2.93 Vdc with the LED on at pins 2B to 1B on W32P9-W34J9.
4. Test the voltage to LED9 on A2: 0 Vdc unblocked, 2.93 Vdc blocked at J8 pins 16B to 17B.

Reference links

- Fault tree: [C1.06C2: Drum Illumination 2 LED \(LED9\) not lit on page 1378](#)
- Diagnostic page: Click **Subsystems**, and then click **Drum**.
- Component locator: [Drum component locator on page 2318](#)
- Wiring diagram: [Drum wiring diagram on page 2225](#)
- Replace LED9: [Drum Illumination 1 LED \(LED8\) and Drum Illumination 2 LED \(LED9\) on page 516](#)

Dryer LED (LED6) does not light

Primary root causes

- LED6
- Wire harness between LED6 and the Motion PCA (A2)

Recommended actions

1. Open the Dryer diagnostic page, and then test LED6.
2. Check the wire harness between LED6 and A2.
3. Test the voltage at LED6: 0 Vdc unblocked, 2.14 Vdc with the LED on at pins 5A to 6A on W32P9-W34J9.
4. Test the voltage to LED6 on A2: 0 vdc unblocked, 2.14 with the LED on at J8 pins 14A to 13A.

Reference links

- Fault tree: [C2.06C1: Dryer LED \(LED6\) not lit on page 1385](#)
- Diagnostic page: Click **Subsystems**, and then click **Dryer**.
- Component locator: [Dryer component locator on page 2319](#)
- Wiring diagram: [Dryer wiring diagram on page 2227](#)

Horizontal Latch LED (LED1) does not light

Primary root causes

- LED1
- Wire harness between LED1 and the Motion PCA (A2)

Recommended actions

1. Open the Horizontal diagnostic page, and then test LED1.
2. Check the wire harness between LED1 and A2.
3. Test the voltage at LED1: 5 Vdc at pins 1 to 2 on W47P10-LED10.
4. Test the voltage to LED1 on A2: 5 Vdc on W47P7-A2J7 at pins 4A to 5A.

Reference links

- Fault tree: [B1.06C1: Horizontal Latch LED \(LED1\) not lit on page 1304](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **Horizontal**.
- Component locator: [Horizontal component locator on page 2324](#)
- Wiring diagram: [Horizontal wiring diagram on page 2243](#)
- Replace LED1: [Horizontal Latch LED \(LED1\) on page 398](#)

Left-side Middle Panel LED (LED3) does not light

Primary root causes

- LED3
- Wire harness between LED3 and the Motion PCA (A2)

Recommended actions

1. Open the IDO Sensors, Solenoids, LEDs diagnostic page, and then test LED3.
2. Check the wire harness between LED3 and A2.
3. Test the voltage at LED3: 2.17 Vdc at pins 7A to 6A on W96P6-W45J6.
4. Test the voltage to LED3 on A2: 2.18 Vdc at J5 pins 9A to 10A.

Reference links

- Fault tree: [B2.06C1: Left-side Middle Panel LED \(LED3\) not lit on page 1345](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [IDO motors and encoders wiring diagram on page 2244](#)
- Replace LED3: [IDO LEDs on page 489](#)

Output Bin LED (LED14) does not light

Primary root causes

- LED14
- Wire harness between LED14 and the Motion PCA (A2)

Recommended actions

1. Open the IDO Sensors, Solenoids, LEDs diagnostic page, and then test LED14.
2. Check the wire harness between LED14 and A2.
3. Test the voltage at LED14: 5 Vdc at pins 18B to 17B on W16J1-W96P5.
4. Test the voltage to LED14 on A2: 4.9 Vdc at J5 pins 18A to 18B.

Reference links

- Fault tree: [B2.06C2: Output Bin LED \(LED14\) not lit on page 1347](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.
- Component locator: [IDO component locator on page 2325](#)

- Wiring diagram: [IDO motors and encoders wiring diagram on page 2244](#)
- Replace LED14: [IDO LEDs on page 489](#)

IDO Curler LED (LED2) does not light

Primary root causes

- LED2
- Wire harness between LED2 and the Motion PCA (A2)

Recommended actions

1. Open the IDO Sensors, Solenoids, LEDs diagnostic page, and then test LED2.
2. Check the wire harness between LED2 and A2.
3. Test the voltage at LED2: 2.16 Vdc at pins 5A to 4A on W96P6-W45J6.
4. Test the voltage to LED2 on A2: 2.17 Vdc at J5 pins 11A to 12A.

Reference links

- Fault tree: [B2.06C3: IDO Curler LED \(LED2\) not lit on page 1349](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [IDO motors and encoders wiring diagram on page 2244](#)
- Replace LED2: [IDO LEDs on page 489](#)

Left-side Upper Panel LED (LED5) does not light

Primary root causes

- LED5
- Wire harness between LED5 and the Motion PCA (A2)

Recommended actions

1. Open the IDO Sensors, Solenoids, LEDs diagnostic page, and then test LED5.
2. Check the wire harness between LED5 and A2.
3. Test the voltage at LED5: 5 Vdc at pins 17a to 18a on w16j1-w96p5.
4. Test the voltage to LED5 on A2: 2.15 Vdc at J5 pins 17A to 18A.

Reference links

- Fault tree: [B2.06C4: Left-side Upper Panel LED \(LED5\) not lit on page 1351](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [IDO motors and encoders wiring diagram on page 2244](#)
- Replace LED5: [IDO LEDs on page 489](#)

Carriage LED (LED10) does not light

Primary root causes

- LED10
- Wire harness between LED10 and the Motion PCA (A2)

Recommended actions

1. Open the Carriage diagnostic page, and then test LED10.
2. Check the wire harness between LED10 and A2.
3. Test the voltage at LED10: 0 Vdc unblocked, 2.05 Vdc with the LED on at pins 7 to 8 on W48P13-W47J13.
4. Test the voltage to LED10 on A2: 0 Vdc unblocked, 2.06 Vdc with the LED on at J7 pins 9A to 8A.

Reference links

- Fault tree: [D1.06C1: Carriage LED \(LED10\) not lit on page 1447](#)
- Diagnostic page: Click **Subsystems**, click **Carriage**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)

Right-side Lower Panel LED (LED18) does not light

Primary root causes

- LED18
- Wire harness between LED18 and the Trays 2, 3, and 4 Controller PCA (A23)

Recommended actions

1. Open the Trays 2, 3, 4 diagnostic page, and then test LED18.
2. Check the wire harness between LED18 and A23.
3. Test the voltage at LED18 : 5 Vdc at pins 1 to 2 on W79P1-LED18.
4. Test the voltage to LED18 on A23: 5 Vdc on J8 at pins 2 to 1.

Reference links

- Fault tree: [A1.06C1: Right-side Lower Panel LED \(LED18\) not lit on page 1223](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)
- Replace LED18: [Trays 2, 3, and 4 LEDs on page 348](#)

Right-side Middle Panel LED (LED13) does not light

Primary root causes

- LED13
- Wire harness between LED13 and the Motion PCA (A2)

Recommended actions

1. Open the Vertical Transport diagnostic page, and then test LED13.
2. Check the wire harness between LED13 and A2.
3. Test the voltage at LED13 : 5 Vdc at pins 2B to 1B on W14P6-W36J6 .
4. Test the voltage to LED13 on A2: 5 Vdc on J10 at pins 7B to 9B.

Reference links

- Fault tree: [B0.06C1: Right-side Middle Panel LED \(LED13\) not lit on page 1288](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **Vertical Transport**.
- Component locator: [Vertical component locator on page 2332](#)
- Wiring diagram: [Vertical wiring diagram on page 2261](#)
- Replace LED13: [Right-side Middle Panel LED \(LED13\) on page 386](#)

ADF and scanner problems

- [The length of the original is not detected correctly](#)
- [The width of the original is not detected correctly](#)
- [Originals are not detected and a copy cannot be started from the ADF](#)
- [Original presence LED does not light or the amber LED does not light when a paper jam occurs](#)
- [The original size cannot be determined from the flatbed](#)
- [Original size is not detected correctly or the original length is not detected correctly from the flatbed](#)
- [Scanner Cooling fan \(FAN501\) or the Scanner Inverter PCA \(A504\) does not operate](#)
- [Adjust the ADF hinges to correct copy skew problems](#)
- [Adjust the scanner half-rate mirror to correct image distortion](#)

The length of the original is not detected correctly

Primary root causes

- Scanner default media size setting is incorrect
- ADF Length sensor (SN401)
- Wire harness between SN401 and the ADF Control PCA (A401)
- A401

Recommended actions

1. Click **Settings/Procedures**, click **Paper Size Settings**, and then verify that the scanner default media size is correct for inches or metric units.
2. Clean SN401.
3. Open the ADF diagnostic page, and then test SN401.
4. Check the wire harness between SN401 and A401.
5. Test the voltage at SN401: 5 V between pins 1 and 3 on the sensor connector.
6. Replace A401.

Reference links

- Diagnostic page: Click **Subsystems**, and then click **ADF**.
- Component locator: [ADF component locator on page 2313](#)
- Wiring diagram: [ADF wiring diagram on page 2218](#)
- Replace SN401: [Switches on page 246](#)
- Replace A401: [ADF Control PCA \(A401\) on page 245](#)

The width of the original is not detected correctly

Primary root causes

- Scanner default media size setting is incorrect
- ADF Width sensor (SN402)
- Wire harness between SN402 and the ADF Control PCA (A401)
- A401

Recommended actions

1. Click **Settings/Procedures**, click **Paper Size Settings**, and then verify that the scanner default media size is correct for inches or metric units.
2. Open the ADF diagnostic page, and then move the paper-width guide slowly and verify that the SN402 reading is in the range of 130 mm to 300 mm and that the reading changes uniformly.
3. Verify that the SN402 resistor cursor is in place.

4. Check the wire harness between SN402, the ADF input tray, and A401.
5. Test the voltage at SN402: 5 V between pins 1 and 3 on the sensor connector.
6. Test the resistance at SN402: 48,500 ohms between pins 1 and 3 on the sensor connector.
7. Test the resistance at SN402 while moving the paper-width guide: 4.8K to 44K ohms between pins 1 and 2 on the sensor connector.
8. Replace A401.

Reference links

- Diagnostic page: Click **Subsystems**, and then click **ADF**.
- Component locator: [ADF component locator on page 2313](#)
- Wiring diagram: [ADF wiring diagram on page 2218](#)
- Replace SN402: [Switches on page 246](#)
- Replace A401: [ADF Control PCA \(A401\) on page 245](#)

Originals are not detected and a copy cannot be started from the ADF

Primary root causes

- ADF Original Present sensor (SN403)
- Wire harness between SN403 and the ADF Control PCA (A401)
- A401

Recommended actions

1. Open the ADF diagnostic page, and then test SN403. It should change from L to H when an original is present.
2. Check the wire harness between SN403 and A401.
3. Verify that the sensor actuator moves freely and that the actuator spring is not broken or disconnected.
4. Test the voltage at SN403: 5 V between pins 1 and 3 on connector P403.
5. Connect SN403, manually actuate the sensor, and then check that the voltage goes from 5V to 0V when actuated at YC3 pin 9 on A401.
6. If the signal changes from 0V to 5V when SN403 is actuated, replace A401; otherwise, replace SN403.

Reference links

- Diagnostic page: Click **Subsystems**, and then click **ADF**.
- Component locator: [ADF component locator on page 2313](#)
- Wiring diagram: [ADF wiring diagram on page 2218](#)

- Replace SN403: [Switches on page 246](#)
- Replace A401: [ADF Control PCA \(A401\) on page 245](#)

Original presence LED does not light or the amber LED does not light when a paper jam occurs

Primary root causes

- Wire harness between ADF LED PCA (A402) and the ADF Control PCA (A401)
- Wire harness between ADF Original Present sensor (SN403) and the ADF Control PCA (A401)
- ADF Original Present sensor (SN403)
- ADF LED PCA (A402)
- A401

Recommended actions

1. Check the wire harness between A402 and A401.
2. Check the wire harness between SN403 and A401.
3. Test the voltage at SN403: 5 V between pins 1 and 3 on connector P403.
4. Connect SN403, manually actuate the sensor, and then verify that the voltage goes from 5V to 0V at YC3 pin 9 on A401.
5. If the signal changes from 5V to 0V when SN403 is actuated, replace A401; otherwise, replace SN403.
6. Actuate SN403, and then verify that the voltage changes from 0V to 5V at the connector on A402 pin 3. If the voltage does not increase, replace A401. If the voltage increases and the green LED does not light, replace A402.

Reference links

- Diagnostic page: Click **Subsystems**, and then click **ADF**.
- Component locator: [ADF component locator on page 2313](#)
- Wiring diagram: [ADF wiring diagram on page 2218](#)
- Replace A402: [ADF Original Present LED PCA \(A402\) on page 245](#)
- Replace A401: [ADF Control PCA \(A401\) on page 245](#)

The original size cannot be determined from the flatbed

Primary root causes

- Scanner default media size setting is incorrect
- Wire harness between the Scanner Original Size Detection sensor (SN501) and the Scanner Control PCA (A501)
- SN501

- Wire harness between the ADF Open Safety switch (SW401) and the ADF Control PCA (A401)
- SW401
- A501
- A401

Recommended actions

1. Click **Settings/Procedures**, click **Media Settings**, and then verify that the scanner default media size is correct for inches or metric units.
2. Lift the ADF and check for a **Flatbed cover open** message on the control panel. Close ADF and verify that the message disappears. If the message is still displayed, see [Flatbed cover open on page 1118](#).
3. Open the Scanner diagnostic page, and then test SN501.
4. Press the SN501 actuator in order to check the actuator for damage. Verify that the sensor actuator moves freely and that the actuator spring is not broken or disconnected.
5. Check the wire harness between SN501 and A501.
6. Test the voltage at SN501: 5 V between pins 1 and 3 on the sensor connector.
7. Connect SN501 and then verify that the voltage changes to 0.2 V at YC9 pin 2 on A501. If the voltage does not change, replace SN501.
8. Open the ADF diagnostic page, and then test SW401.
9. Check the wire harness between SW401 and the A401.
10. Replace SW401.
11. Replace A501.

Reference links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace SN501: [Scanner sensors on page 290](#)
- Replace A501: [Scanner PCAs on page 292](#)
- Diagnostic page: Click **Subsystems**, and then click **ADF**.
- Component locator: [ADF component locator on page 2313](#)
- Wiring diagram: [ADF wiring diagram on page 2218](#)
- Replace A401: [ADF Control PCA \(A401\) on page 245](#)
- Replace SW402: [Switches on page 246](#)

Original size is not detected correctly or the original length is not detected correctly from the flatbed

Primary root causes

- Flat cover open message when ADF is closed
- Scanner default media size setting is incorrect
- Scanner Length sensor (SN502)
- Wire harness between SN502 and the Scanner Control PCA (A501)
- Wire harness between A501 and the Copy Processing PCA (A27)
- A501

Recommended actions

1. Lift the ADF and check for a **Flatbed cover open** message on the control panel. Close ADF and verify that the message disappears. If the message is still displayed, see [Flatbed cover open on page 1118](#).
2. Click **Settings/Procedures**, click **Media Settings**, and then verify that the scanner default media size is correct for inches or metric units.
3. Open the Scanner diagnostic page, and then test SN502.
4. Clean SN502.
5. Check the wire harness between SN502 and A501.
6. Test the voltage at A501: 5 V between pins 1 and 3 on the sensor connector.
7. Replace A501.

Reference links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace SN502: [Scanner sensors on page 290](#)
- Replace A501: [Scanner PCAs on page 292](#)

Scanner Cooling fan (FAN501) or the Scanner Inverter PCA (A504) does not operate

Primary root causes

- FAN501
- Scanner Inverter PCA Cooling fan (FAN502)
- Wire harness between FAN501, FAN502, and the Scanner Control PCA (A501)
- A501

Recommended actions


1. Open the Scanner diagnostic page, and perform a carriage cycle. Both fans should start.
2. Check the wire harness between FAN501, FAN502, and A501.
3. Perform another carriage cycle. If one fan does not start, replace the fan. If both fans do not start, proceed to the next step.
4. Test the voltage on A501: 20 V between YC2 pin 2 and YC6 pin 2 (GND).
5. Perform another carriage cycle and verify that the voltage at YC6 pin 1 on A501 changes from 24 V to 0 V while the scanner is moving. If the voltage changes, replace both fans. If the voltage does not change, replace A501.

Reference links

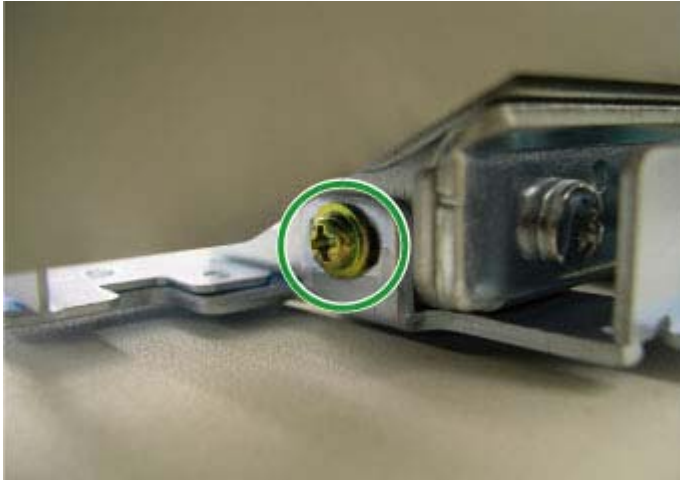
- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace: FAN501 or FAN502 : [Fans on page 296](#)
- Replace A501: [Scanner PCAs on page 292](#)

Adjust the ADF hinges to correct copy skew problems

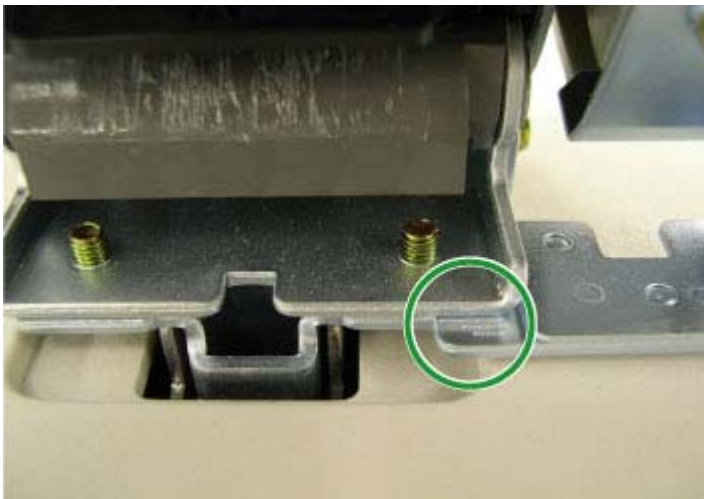
1. Load 11 x 17 (A3) size media in one of the paper trays.
2. Print one copy of the 11 x 17/A3 Dimensional IQ test page.
3. Load the Dimensional IQ test page in the ADF, and then make a single-sided copy.
4. Measure the distance from the paper leading edge to the center of the circle at **LE1** on the copy.
5. Measure the distance from the paper leading edge to the center of the circle at **LE2** on the copy.
6. Compare the measurements.

 **NOTE:** If the absolute difference between the measurements is less than 1 mm (0.04 in), then there is no need to make an adjustment. If the difference is greater than 1 mm (0.04 in), then continue with the adjustment.

7. Lift the ADF half way, and then loosen the M3*8 TP screw.



8. Use the marks on the front side of the hinge as a guide while turning the adjustment screw.



9. Turn the adjustment screw the corresponding direction to adjust the skew.



10. Tighten the M3*8 TP screw when you have finished the adjustment.

Adjust the scanner half-rate mirror to correct image distortion

1. Load 11 x 17 (A3) size media in one of the paper trays.
2. Print one copy of the 11 x 17/A3 grid test page. Make sure the top margin does not show skew.
3. Place the grid test page face down on the platen glass, and then make a copy.
4. Measure the right side margins at the top and bottom of the copy, at approximately the second horizontal line from the top and the second horizontal line from the bottom (approximately half an inch from media edges).
5. Check for the difference between top and bottom right side margins. If the difference is less than 1 mm, no adjustment is necessary; otherwise, continue to the next step.
6. Remove the scanner platen glass, loosen the two screws on the front pulley metal bracket of the half-rate carriage frame, and then adjust the position of the half rate mirror to the left or right.
7. Install the scanner platen glass.
8. Make another copy of the 11 x 17/A3 Dimensional IQ test page. Check the copy for distortion.
9. Repeat the adjustment until the image is correct.

Control panel problems

- [Control panel display is blank, white, unstable, or frozen. The control panel touch screen or key pad is not responsive](#)
- [Control panel display key pad, audio, brightness, soft power off button, and status LEDs are not responsive](#)

Control panel display is blank, white, unstable, or frozen. The control panel touch screen or key pad is not responsive

Primary root causes

- Wire harness between the formatter and the control panel
- Control panel

Recommended actions

1. Check the wire harness between the formatter and the control panel.
2. Replace the control panel.

Control panel display key pad, audio, brightness, soft power off button, and status LEDs are not responsive

Primary root causes

- Firmware
- Control panel calibration
- Control panel keys
- Wire harness between the formatter and the control panel
- Control panel

Recommended actions

1. Power cycle the MFP.
2. Perform a control panel calibration procedure.
3. Power cycle the MFP.
4. Check the wire harness between the formatter and the control panel.
5. Replace the key pad.
6. Replace the control panel.

Power supply (PS1) problems

- LED goes from amber to green to red after a few seconds during power up
- Red LED is lit
- Amber LED is flashing
- Amber LED is lit

LED goes from amber to green to red after a few seconds during power up

Primary root causes

- Shorted analog power
- Power supply (PS1)

Recommended actions

1. Unplug the 24 pin analog power cable J3 from PS1. If the short condition persists, replace PS1. If power supply power is good, then the problem is with the Power Distribution PCA (A1). Reconnect J3 to PS1. Unplug cables on A1 to isolate the short.
2. Replace PS1.

Red LED is lit

Primary root causes

- Over-voltage or over-current in any power supply (except the 5 volt standby)
- Over temperature inside of the Power supply (PS1)

Recommended actions

- Clear any airflow blockage to PS1.

Amber LED is flashing

Primary root causes

- The 5 volt standby output is shorted
- Power supply (PS1)

Recommended actions

1. Unplug the digital PS1 cable from connector J6 on the Power Distribution PCA (A1) If the condition remains, replace PS1.
2. Trace the short circuit on the 5 volt standby line.
3. Replace PS1.

Amber LED is lit

Primary root causes

- MFP in standby mode
- Formatter Main PCA (A26)
- Power supply (PS1) digital cable is unplugged
- PS1

Recommended actions

1. Press the power button on the control panel.
2. Check the wire harness between A26 and the Power Distribution PCA (A1).
3. Check all wire connections to A26.
4. Replace A26.
5. Verify that the 5 volt standby LED on A1 is lit.
6. Reseat the PS1 digital cable
7. Replace PS1.

MFP door problems

- [Front door cannot be opened when the MFP is idle](#)
- [Front door switch causes intermittent motor stalls](#)

Front door cannot be opened when the MFP is idle

Primary root causes

- Front Door Lock solenoid (SOL4)
- Front door lock mechanism and alignment
- Wire harness between SOL4 and the Motion PCA (A2)
- A2

Recommended actions

1. Check the front door hinges, latch, lock mechanism, and SOL4 for damage and correct alignment.
2. Open the Case Parts diagnostic page, and then cycle SOL4 and listen for consistent rhythm as the solenoid energizes and de-energizes.
3. Replace SOL4.
4. Replace the front door assembly.
5. Replace A2.

Front door switch causes intermittent motor stalls

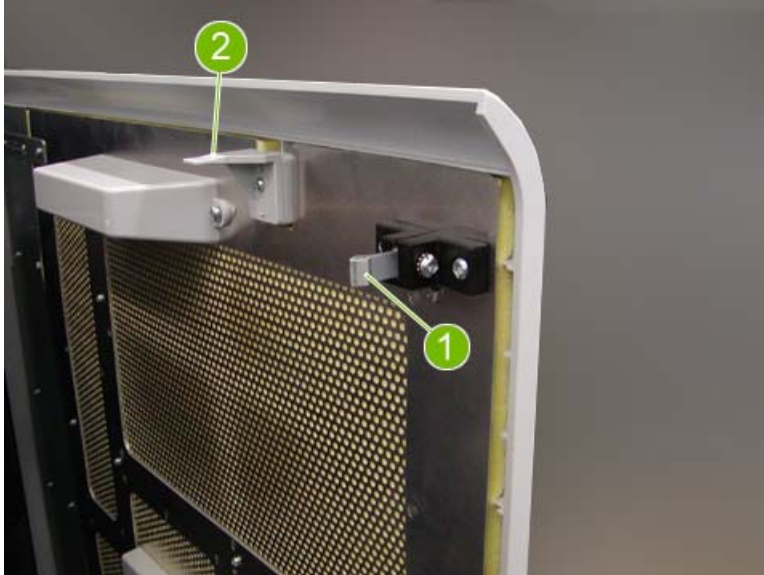
Some MFPs can experience intermittent motor stall errors due to a misadjusted upper right front door latch. An improperly adjusted door latch can cause motor stalls when minor front door movement causes the door actuator to open the door switch.

The following motor stalls can occur because of a door latch problem:

- C1.0101: Drum drive motor stall
- D1.0101: Left carriage drive motor 1 stall

- D1.0102: Right carriage drive motor 2 stall
- B2.0104: IDO media eject motor stall

The position of the door latch spear (callout 1) effects how far the door switch actuator (callout 2) pushes into the door switch. If the actuator does not push far enough into the door switch it can result in intermittent switch behavior.



The symptom often is a motor stall error that shuts the system down from once a day to once a week. Typically after rebooting the MFP, there are no more motor stalls until the next day or a few days later.

The motor stall problem can occur during the MFP power up process or during normal operation. This condition happens very quickly and can be triggered before the "Door Open" message appears, which makes troubleshooting the source of the stall difficult.

When the front door switch opens, the Motion PCA (A2) immediately shuts off power to the Drum motor (M3), both carriage motors, and the IDO Media Eject motor (M13). The motor stall that gets reported can be random, depending on which motors were operating at the time the door switch opened.

Check the Event log for multiple occurrences of the above motor stall errors. When examining the Event log, look for a pattern where any of the above motor stall errors are occurring from once a day to once a week. Typically the pattern will show random occurrences of the motor stalls. For example, a stall reported one day could be a C1.0101 Drum motor stall and the next time it might be a D1.0102 Carriage motor stall. The key to identifying a motor stall due to a front door switch is the random occurrence of the above errors.

If the Event log shows intermittent motor stalls, test the right front door switch and adjust the front door latch as needed using the following procedure:

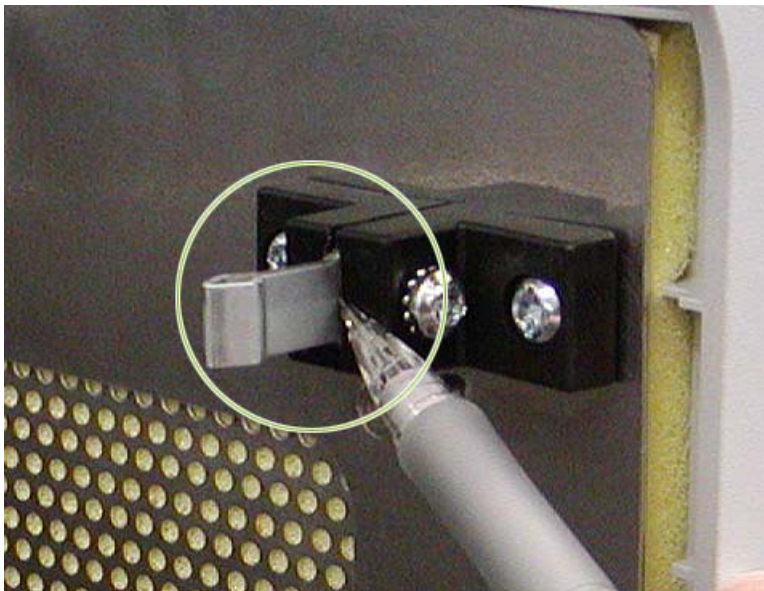
1. Test the door switch.
 - a. Close all the front doors.

- b.** With the MFP powered up, pull slightly on the upper right front door multiple times and watch the control panel for the message “Attention. Close front doors”. If the message appears then the door latch needs adjusting. Note that the door should not come unlatched with minor pulling.

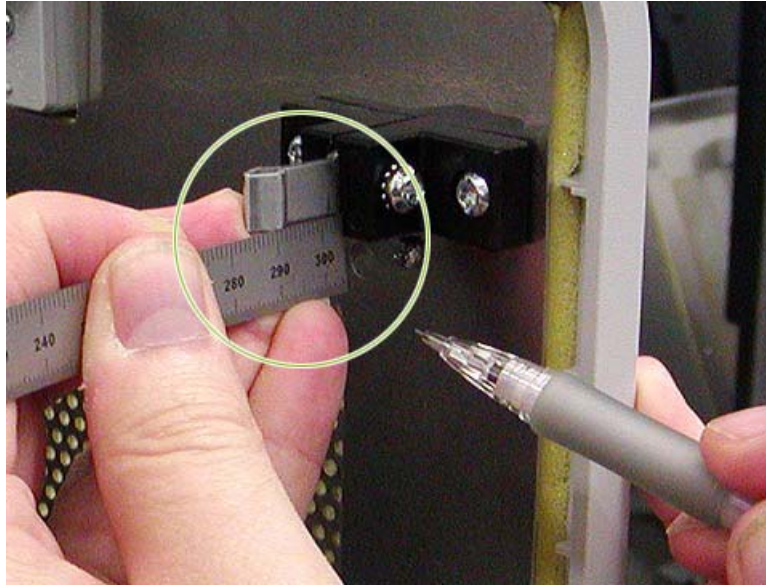


2. Adjust the upper door latch.

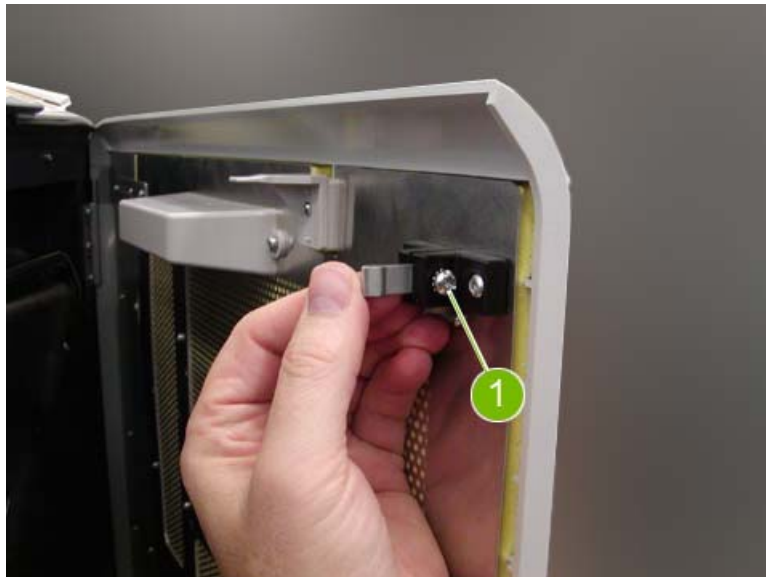
- a.** Mark the original location of the upper door latch spear with a pencil.



- b. Place a second shorter mark about 2 mm out from the first mark.



- c. Loosen the latch set screw (callout 1), push the spear in until the shorter 2 mm mark is just visible, and then tighten the set screw.



3. Test the door switch (repeat step 1) until the door closes properly.
4. Also check the lower right front door latch near the bottom of the door. Adjust this latch spear ONLY IF the door doesn't visually close properly. This adjustment does not affect the door switch.

5. If the above adjustment does not correct a door problem, measure the top right front door for straightness using a straight edge. The door should not bow more than approximately 1 mm.



Check both the horizontal and vertical straightness.



MFP paper path problems

- [Cannot open the left-side upper panel](#)
- [Intermittent or non-repeatable media jams](#)
- [Media jams on statement-sized media \(8.5 x 5.5 in\)](#)

Cannot open the left-side upper panel

Primary root causes

- IDO Interlock solenoid (SOL3)
- Wire harness between SOL3 and the Motion PCA (A2)
- Left-side upper panel not aligned to SOL3

Recommended actions

- Open the IDO Sensors, Solenoids, LEDs diagnostic page, and then test SOL3.
- Test the voltage at SOL3: 20 Vdc at pins 1 to 2 on W98P3-SOL3.
- Test the voltage to SOL3 on A2: 20 Vdc at J14 pins 9 to 18

Intermittent or non-repeatable media jams

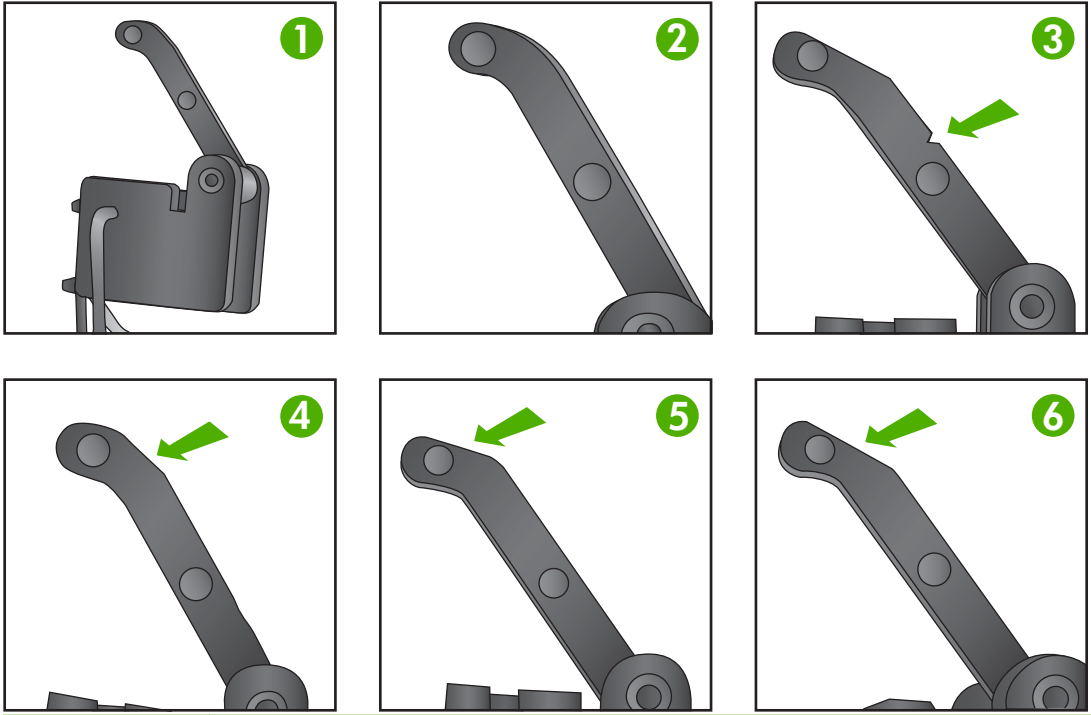
Primary root causes

- Worn down or nicked sensor actuators after approximately 750,000 media counts

Recommended actions

- Inspect the top of the sensor actuator near the initial area where the code is being declared. Look for a rounded top sensor actuator and not a flat spot.

Replace worn or damaged actuators.



1	Good actuator
2	Close-up of good arm
3	Worn arm (nick on arm)
4	Worn arm (flat spot —variation 1)
5	Worn arm (flat spot —variation 2)
6	Worn arm (flat spot —variation 3)

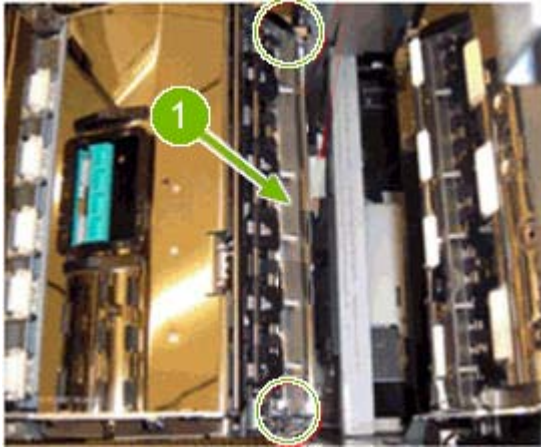
Media jams on statement-sized media (8.5 x 5.5 in)

Primary root causes

- IDO media guide

Recommended actions

- Order the media guide part number (C5957-67103) and the install the media guide (callout 1). Open the IDO, and then remove two screws. Mark off print engine (PE) tag 5.



Boot-up problems

- [BIOS POST codes](#)
- [Formatter POST codes](#)
- [Coprocessor electronics problems](#)

BIOS POST codes

- [80](#)
- [81](#)
- [82](#)
- [83](#)
- [84](#)
- [85](#)
- [86](#)
- [87](#)

80

Description	Primary root causes	Recommended actions
<ul style="list-style-type: none">• Copy Processing PCA (A27) not found	<ul style="list-style-type: none">• A27• Formatter Main PCA (A26)	<ol style="list-style-type: none">1. Reseat A27.2. Replace A27.3. Replace A26.

81

Description	Primary root causes	Recommended actions
<ul style="list-style-type: none"> Bad memory DIMM on the Copy Processing PCA (A27) 	<ul style="list-style-type: none"> A27 DIMM A27 Formatter Main PCA (A26) 	<ol style="list-style-type: none"> Reseat the A27 DIMM. Replace A27. Replace A26.

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Description	Primary root causes	Recommended actions
<ul style="list-style-type: none"> Unable to communicate with the main engine 	<ul style="list-style-type: none"> Wire harness between the PCI Express PCA (A28) and the EIO Riser PCA (A31) Wire harness between the Formatter Main PCA (A26) and the Main Engine PCA (A5) A26 A5 	<ol style="list-style-type: none"> Reseat A28 and A31. Check the wire harness between A28 and A31. Check the wire harness between A26 and A5. Replace A26. Replace A5.

83

Description	Primary root causes	Recommended actions
<ul style="list-style-type: none"> Network/Fax PCA (A30) not found 	<ul style="list-style-type: none"> A30 Formatter Main PCA (A26) 	<ol style="list-style-type: none"> Reseat A30. Replace A30. Replace A26.

84

Description	Primary root causes	Recommended actions
<ul style="list-style-type: none"> Finisher Interface PCA (A29) not found 	<ul style="list-style-type: none"> A29 Formatter Main PCA (A26) 	<ol style="list-style-type: none"> Reseat A29. Replace A29. Replace A26.

85

Description	Primary root causes	Recommended actions
<ul style="list-style-type: none"> Bad memory DIMM on the Finisher Interface PCA (A29) 	<ul style="list-style-type: none"> A29 DIMM A29 (AXX) Formatter Main PCA (A26) 	<ol style="list-style-type: none"> Reseat the A29 DIMM. Replace A29. Replace A26.

Description	Primary root causes	Recommended actions
<ul style="list-style-type: none"> Unsupported memory DIMM on the Finisher Interface PCA (A29) 	<ul style="list-style-type: none"> A29 Formatter Main PCA (A26) 	<ol style="list-style-type: none"> Verify that both sets of DIMMs on A29 are supported. Replace any unsupported DIMM. Replace A26.

Description	Primary root causes	Recommended actions
<ul style="list-style-type: none"> Unsupported memory DIMM on the Copy Processing PCA (A27) 	<ul style="list-style-type: none"> A27 DIMM Formatter Main PCA (A26) 	<ol style="list-style-type: none"> Verify that both sets of DIMMs on A27 are supported. Replace any unsupported DIMM. Replace A26.

Links

- Component locator: [Formatter component locator on page 2322.](#)
- Wiring diagram: [Formatter wiring diagram on page 2240.](#)
- Replace formatter PCAs: [Formatter PCAs on page 687.](#)
- Replace A5: [Main Engine PCA \(A5\) on page 703.](#)

Formatter POST codes

- [POST code look-up table](#)
- [POST code solutions](#)

POST code look-up table

Code	Meaning	Solution
No code	N/A	No code on page 1087
0	Normal behavior	N/A
1	<ul style="list-style-type: none"> HP-specific chipset configuration Restore cold/warm power cycle word in BDA 	Check the flash device on page 1087
2	<ul style="list-style-type: none"> HP-specific chipset configuration Configure L2 cache. Reconfigure PATA if needed. ICH6 Rev A workaround, Init ICH2 Southbridge. Init Alviso Northbridge, Disable L0/L1 ASPM for compatibility with HP PCIe devices. Enable IDE channels 	Replace Formatter Main PCA (A26) on page 1088
3	<ul style="list-style-type: none"> HP-specific chipset configuration Initialize and enter debugger if enabled 	Check the COM1 cable connection on page 1087

Code	Meaning	Solution
4	<ul style="list-style-type: none"> HP-specific chipset configuration Clear interrupts 	Replace Formatter Main PCA (A26) on page 1088
5	<ul style="list-style-type: none"> HP-specific chipset configuration Hide SMI RAM area 	Replace Formatter Main PCA (A26) on page 1088
6	<ul style="list-style-type: none"> HP-specific chipset configuration Initialize SMI subsystem. Cause initial SMI 	Replace Formatter Main PCA (A26) on page 1088
7	<ul style="list-style-type: none"> HP-specific chipset configuration Initialize Intel speed step technology 	Replace Formatter Main PCA (A26) on page 1088
8	<ul style="list-style-type: none"> HP-specific chipset configuration Read FBDA block from flash. Store in SMM 	Replace Formatter Main PCA (A26) on page 1088
9	<ul style="list-style-type: none"> HP-specific chipset configuration Wait for RTC to become ready. Clear CMOS DIAGS 	Replace Formatter Main PCA (A26) on page 1088
0B	<ul style="list-style-type: none"> HP-specific chipset configuration Disable PIC (8259) interrupts 	Replace Formatter Main PCA (A26) on page 1088
0C	<ul style="list-style-type: none"> HP-specific chipset configuration Disable RTC interrupts 	Replace Formatter Main PCA (A26) on page 1088
0D	<ul style="list-style-type: none"> HP-specific chipset configuration Program system timer and RAM refresh timer 	Replace Formatter Main PCA (A26) on page 1088
0E	<ul style="list-style-type: none"> HP-specific chipset configuration Check RTC for power loss. If so, restore CMOS from FBDA 	Replace Formatter Main PCA (A26) on page 1088
0F	<ul style="list-style-type: none"> HP-specific chipset configuration Check CMOS checksum 	Replace Formatter Main PCA (A26) on page 1088
10	<ul style="list-style-type: none"> HP-specific chipset configuration Initialize Parallel Peripheral Interface 	Replace Formatter Main PCA (A26) on page 1088
11	<ul style="list-style-type: none"> HP-specific chipset configuration Detect any Expansion Memory 	Replace Formatter Main PCA (A26) on page 1088
12	<ul style="list-style-type: none"> HP-specific chipset configuration Put disk controller into reset 	Replace Formatter Main PCA (A26) on page 1088
13	<ul style="list-style-type: none"> HP-specific chipset configuration Test if timer 0 working properly 	Replace Formatter Main PCA (A26) on page 1088
14	<ul style="list-style-type: none"> HP-specific chipset configuration Enable parity check 	Replace Formatter Main PCA (A26) on page 1088

Code	Meaning	Solution
15	<ul style="list-style-type: none"> HP-specific chipset configuration Initialize fs and gs 	Replace Formatter Main PCA (A26) on page 1088
16	<ul style="list-style-type: none"> HP-specific chipset configuration Clear first 64K of RAM (stack area) 	Replace Formatter Main PCA (A26) on page 1088
17	<ul style="list-style-type: none"> HP-specific chipset configuration Restore cold/warm power cycle word in BDA 	Replace Formatter Main PCA (A26) on page 1088
18	<ul style="list-style-type: none"> HP-specific chipset configuration Set up the interrupt vectors 	Replace Formatter Main PCA (A26) on page 1088
19	<ul style="list-style-type: none"> HP-specific chipset configuration Initialize the BDA (returns DS, ES = 40:0) 	Replace Formatter Main PCA (A26) on page 1088
1A	<ul style="list-style-type: none"> HP-specific chipset configuration Test DMA Mode and Page registers. If DMA fails, it will output xFA and halt 	Replace Formatter Main PCA (A26) on page 1088
1B	<ul style="list-style-type: none"> HP-specific chipset configuration Stage 2 Memory configuration 	Replace Formatter Main PCA (A26) on page 1088
1C	<ul style="list-style-type: none"> HP-specific chipset configuration Generates SW SMI to go in SMM and perform required initialization 	Replace Formatter Main PCA (A26) on page 1088
1D	<ul style="list-style-type: none"> HP-specific chipset configuration Map C000-E800/F000 to PCI bus 	Replace Formatter Main PCA (A26) on page 1088
1E	<ul style="list-style-type: none"> HP-specific chipset configuration Clear characters stuck in the 8042 	Replace Formatter Main PCA (A26) on page 1088
1F	<ul style="list-style-type: none"> HP-specific chipset configuration Test keyboard controller; will output 0xFB and die if fatal error 	Replace Formatter Main PCA (A26) on page 1088
20	<ul style="list-style-type: none"> PCIe Configuration of HP specific devices Test keyboard 	Replace Formatter Main PCA (A26) on page 1088
21	<ul style="list-style-type: none"> PCIe Configuration of HP specific devices Call phase 1 PCI/PnP POST initialization 	Check the formatter PCAs on page 1088
22	<ul style="list-style-type: none"> HP-specific chipset configuration Initialize sound subsystem 	Replace Formatter Main PCA (A26) on page 1088
23	<ul style="list-style-type: none"> HP-specific chipset configuration Fix any video bugs. Init registers before BIOS VGA initialization 	Replace Formatter Main PCA (A26) on page 1088

Code	Meaning	Solution
24	<ul style="list-style-type: none"> HP-specific chipset configuration Initialize external VGA if it exists 	Replace Formatter Main PCA (A26) on page 1088
25	<ul style="list-style-type: none"> HP-specific chipset configuration General purpose to fix anything after VGA initialization. Does nothing. 	Replace Formatter Main PCA (A26) on page 1088
27	<ul style="list-style-type: none"> HP-specific chipset configuration Generate SW SMI to initialize SMM subsystems (early) 	Replace Formatter Main PCA (A26) on page 1088
2A	<ul style="list-style-type: none"> HP-specific chipset configuration Display Ownership Tag 	Replace Formatter Main PCA (A26) on page 1088
2B	<ul style="list-style-type: none"> HP-specific chipset configuration Initialize and enter debugger if enabled 	Check the COM1 cable connection on page 1087
2C	<ul style="list-style-type: none"> HP-specific chipset configuration Does not test memory 	Replace Formatter Main PCA (A26) on page 1088
2F	<ul style="list-style-type: none"> HP-specific chipset configuration Display F10 prompt 	Replace Formatter Main PCA (A26) on page 1088
30	<ul style="list-style-type: none"> HP-specific chipset configuration Take disk controller out of reset 	Replace Formatter Main PCA (A26) on page 1088
32	<ul style="list-style-type: none"> HP-specific chipset configuration Enable USB legacy support 	Check the USB cable connection on page 1087
34	<ul style="list-style-type: none"> HP-specific chipset configuration Count serial/parallel ports. Update BDA 	Replace Formatter Main PCA (A26) on page 1088
35	<ul style="list-style-type: none"> HP-specific chipset configuration Enable timer 0 interrupt with upper limit of 60 mS 	Replace Formatter Main PCA (A26) on page 1088
36	<ul style="list-style-type: none"> HP-specific chipset configuration Turn on floppy drive motor 	Replace Formatter Main PCA (A26) on page 1088
37	<ul style="list-style-type: none"> HP-specific chipset configuration Check for coprocessor 	Replace Formatter Main PCA (A26) on page 1088
38	<ul style="list-style-type: none"> HP-specific chipset configuration Perform some initialization checks 	Replace Formatter Main PCA (A26) on page 1088
3A	<ul style="list-style-type: none"> HP-specific chipset configuration No function 	Replace Formatter Main PCA (A26) on page 1088
3B	<ul style="list-style-type: none"> HP-specific chipset configuration Initialize PNP code 	Replace Formatter Main PCA (A26) on page 1088

Code	Meaning	Solution
3C	<ul style="list-style-type: none"> HP-specific chipset configuration No function 	Replace Formatter Main PCA (A26) on page 1088
3D	<ul style="list-style-type: none"> HP-specific chipset configuration Set high word of all 32-bit registers to zero 	Replace Formatter Main PCA (A26) on page 1088
3E	<ul style="list-style-type: none"> HP-specific chipset configuration Option ROM memory initialization 	Replace Formatter Main PCA (A26) on page 1088
3F	<ul style="list-style-type: none"> HP-specific chipset configuration Call phase 2 PCI initialization 	Check the formatter PCAs on page 1088
41	<ul style="list-style-type: none"> HP-specific chipset configuration Enable I/O space for IDE 	Replace Formatter Main PCA (A26) on page 1088
42	<ul style="list-style-type: none"> HP-specific chipset configuration Detect all disk drives 	Check the cable connections to the formatter hard drive on page 1088
43	<ul style="list-style-type: none"> HP-specific chipset configuration Detects failures but does not output a POST code for failures 	Check the cable connections to the formatter hard drive on page 1088
44	<ul style="list-style-type: none"> HP-specific chipset configuration If legacy, install USB storage support 	Check the USB cable connection on page 1087
45	<ul style="list-style-type: none"> HP-specific chipset configuration Cause SW SMI to initialize SMM subsystems (late) 	Replace Formatter Main PCA (A26) on page 1088
46	<ul style="list-style-type: none"> HP-specific chipset configuration Set RAM segment 	Replace Formatter Main PCA (A26) on page 1088
47	<ul style="list-style-type: none"> HP-specific chipset configuration Initialize enhanced keyboard if detected 	Replace Formatter Main PCA (A26) on page 1088
48	<ul style="list-style-type: none"> HP-specific chipset configuration Check where initialization began 	Replace Formatter Main PCA (A26) on page 1088
4A	<ul style="list-style-type: none"> HP-specific chipset configuration Clear parity errors. enable NMI - PCI Bridge and HUB. ICH6 	Replace Formatter Main PCA (A26) on page 1088
4B	<ul style="list-style-type: none"> HP-specific chipset configuration Clear PCI parity status 	Replace Formatter Main PCA (A26) on page 1088
4C	<ul style="list-style-type: none"> HP-specific chipset configuration Check if RTC (real time clock) time is correct 	Replace Formatter Main PCA (A26) on page 1088
4D	<ul style="list-style-type: none"> HP-specific chipset configuration Enable IRQ 9 for the 8259 	Replace Formatter Main PCA (A26) on page 1088

Code	Meaning	Solution
4E	<ul style="list-style-type: none"> HP-specific chipset configuration Program 8042 vars for quicklock 	Replace Formatter Main PCA (A26) on page 1088
4F	<ul style="list-style-type: none"> HP-specific chipset configuration Initialize UUID structure 	Replace Formatter Main PCA (A26) on page 1088
50	<ul style="list-style-type: none"> HP-specific chipset configuration Initialize SMBIOS (DMI 2.1) - Entire DMI subsystem (memory cache etc) 	Replace Formatter Main PCA (A26) on page 1088
51	<ul style="list-style-type: none"> HP-specific chipset configuration Indicate that cold initialization is done 	Replace Formatter Main PCA (A26) on page 1088
52	<ul style="list-style-type: none"> HP-specific chipset configuration Enable processor interrupts 	Replace Formatter Main PCA (A26) on page 1088
53	<ul style="list-style-type: none"> HP-specific chipset configuration General purpose routine really does nothing 	Replace Formatter Main PCA (A26) on page 1088
54	<ul style="list-style-type: none"> HP-specific chipset configuration F10 initialization message 	Replace Formatter Main PCA (A26) on page 1088
55	<ul style="list-style-type: none"> HP-specific chipset configuration Lock TPM if present 	Replace Formatter Main PCA (A26) on page 1088
56	<ul style="list-style-type: none"> HP-specific chipset configuration Freeze the drives for security 	Replace Formatter Main PCA (A26) on page 1088
57	<ul style="list-style-type: none"> HP-specific chipset configuration Initialize time of day from RTC. Enable timer int. 	Replace Formatter Main PCA (A26) on page 1088
58	<ul style="list-style-type: none"> HP-specific chipset configuration Set no Ctrl-Alt-Del initialization mode 	Replace Formatter Main PCA (A26) on page 1088
59	<ul style="list-style-type: none"> HP-specific chipset configuration SWrite protect PCI option ROMs. Set secondary drive to master. Make unused memory addresses available to PCI bus. Initialize the ACPI subsystem. Turn off GPIO25. 	Replace Formatter Main PCA (A26) on page 1088
5A	<ul style="list-style-type: none"> HP-specific chipset configuration Set high word of all 32-bit registers to zero 	Replace Formatter Main PCA (A26) on page 1088
5B	<ul style="list-style-type: none"> HP-specific chipset configuration Clear keyboard buffer. Reset A20 line (8042) 	Replace Formatter Main PCA (A26) on page 1088
5C	<ul style="list-style-type: none"> HP-specific chipset configuration Disable A20 line 	Replace Formatter Main PCA (A26) on page 1088

Code	Meaning	Solution
5D	<ul style="list-style-type: none"> HP-specific chipset configuration Zero 0x3000 - 0x9000 conventional memory 	Replace Formatter Main PCA (A26) on page 1088
5F	<ul style="list-style-type: none"> HP-specific chipset configuration Clear ECMOS POST Flag 	Replace Formatter Main PCA (A26) on page 1088
60	<ul style="list-style-type: none"> HP-specific chipset configuration Write back to flash 	Replace Formatter Main PCA (A26) on page 1088
61	<ul style="list-style-type: none"> HP-specific chipset configuration Transitioning from flash execution to disk BIOS 	Perform a remote firmware upgrade (RFU) on page 1088
70	<ul style="list-style-type: none"> Formatter Memory Error Unsupported DIMM detected 	Check the formatter RAM on page 1088
71	<ul style="list-style-type: none"> Formatter Memory Error Mix of ECC and non-ECC DIMMs 	Check the formatter RAM on page 1088
72	<ul style="list-style-type: none"> Formatter Memory Error Unsupported number of sides 	Check the formatter RAM on page 1088
73	<ul style="list-style-type: none"> Formatter Memory Error Unsupported DIMM width 	Check the formatter RAM on page 1088
74	<ul style="list-style-type: none"> Formatter Memory Error TRFC timing problem with the DIMM 	Check the formatter RAM on page 1088
75	<ul style="list-style-type: none"> Formatter Memory Error Unsupported CAS latencies 	Check the formatter RAM on page 1088
76	<ul style="list-style-type: none"> Formatter Memory Error Unsupported refresh rate 	Check the formatter RAM on page 1088
77	<ul style="list-style-type: none"> Formatter Memory Error All DIMMs do not support byte length of 8 	Check the formatter RAM on page 1088
78	<ul style="list-style-type: none"> Formatter Memory Error Unsupported configuration populated 	Check the formatter RAM on page 1088
79	<ul style="list-style-type: none"> Formatter Memory Error Unsupported frequency combination 	Check the formatter RAM on page 1088
7A	<ul style="list-style-type: none"> Formatter Memory Error Unsupported DIMM size 	Check the formatter RAM on page 1088
7B	<ul style="list-style-type: none"> Formatter Memory Error Unknown DIMM Error 	Check the formatter RAM on page 1088
7C	<ul style="list-style-type: none"> Formatter Memory Error TRAS timing problem with the DIMM 	Check the formatter RAM on page 1088

Code	Meaning	Solution
7D	<ul style="list-style-type: none"> Formatter Memory Error TRP timing problem with the DIMM 	Check the formatter RAM on page 1088
7E	<ul style="list-style-type: none"> Formatter Memory Error TRCD timing problem with the DIMM 	Check the formatter RAM on page 1088
7F	<ul style="list-style-type: none"> Formatter Memory Error TWR timing problem with the DIMM 	Check the formatter RAM on page 1088
90	<ul style="list-style-type: none"> Driver installation/configuration Install base devices. Scan/detect PCI devices. Initialize mapping table for English characters. 	Check the formatter PCAs on page 1088
91	<ul style="list-style-type: none"> Driver installation/configuration Get all variable store device handles 	Replace Formatter Main PCA (A26) on page 1088
92	<ul style="list-style-type: none"> Driver installation/configuration Get all variable store device handles 	<p>Disconnect all USB devices from the MFP, and then power cycle the MFP. IF the error persists, check the formatter PCAs.</p> <p>Check the formatter PCAs on page 1088</p>
93	<ul style="list-style-type: none"> Driver installation/configuration Install and connect all built in EFI drivers 	<p>Disconnect all USB devices from the MFP, and then power cycle the MFP. If the error persists, check the formatter PCAs.</p> <p>Check the formatter PCAs on page 1088</p>
94	<ul style="list-style-type: none"> Driver installation/configuration Connect all consoles 	Replace Formatter Main PCA (A26) on page 1088
95	<ul style="list-style-type: none"> Driver installation/configuration Hook up NVM storage. Print banners. 	Replace Formatter Main PCA (A26) on page 1088
96	<ul style="list-style-type: none"> Driver installation/configuration Install and connect all built in EFI drivers 	<p>Disconnect all USB devices from the MFP, and then power cycle the MFP. If the error persists, check the formatter PCAs.</p> <p>Check the formatter PCAs on page 1088</p>
97	<ul style="list-style-type: none"> Driver installation/configuration Load all images that follow the EFI core image 	Replace Formatter Main PCA (A26) on page 1088
98	<ul style="list-style-type: none"> Driver installation/configuration Connect all devices and print banners 	Replace Formatter Main PCA (A26) on page 1088
99	<ul style="list-style-type: none"> Driver installation/configuration Display 9A 	Replace Formatter Main PCA (A26) on page 1088
9A	<ul style="list-style-type: none"> Driver installation/configuration Set up to support only English 	Replace Formatter Main PCA (A26) on page 1088
9B	<ul style="list-style-type: none"> Driver installation/configuration Initialize library 	Replace Formatter Main PCA (A26) on page 1088

Code	Meaning	Solution
9C	<ul style="list-style-type: none"> • Driver installation/configuration • Display 9D 	Replace Formatter Main PCA (A26) on page 1088
9D	<ul style="list-style-type: none"> • Driver installation/configuration • Create event to be signaled when exiting boot services 	Replace Formatter Main PCA (A26) on page 1088
B0	<ul style="list-style-type: none"> • Processor setup, BIOS validation • First thing to be seen on port 80h at power on/ reset. Segment registers placed in flat mode. Setup ICH6 for I/O. Turn on fan. 	Check the flash device on page 1087
B1	<ul style="list-style-type: none"> • Processor setup, BIOS validation • Configure SIO for serial/parallel port operation. Initialize COM1 debug port for output. 	Check the flash device on page 1087
B2	<ul style="list-style-type: none"> • Processor setup, BIOS validation • Jump to function to set reset type. This outputs a reset code. 	Check the flash device on page 1087
B3	<ul style="list-style-type: none"> • Set up base formatter chip sets and processor caching • Check the reset type. If warm initialization cleanup, go to C1 below. 	Replace Formatter Main PCA (A26) on page 1088
B4	<ul style="list-style-type: none"> • Set up base formatter chip sets and processor caching • Apply P6 CPU Patch 	Replace Formatter Main PCA (A26) on page 1088
B5	<ul style="list-style-type: none"> • Set up base formatter chip sets and processor caching • Initialize CPU internal registers. Disable caches. Flush cache/TLBs. Disable interrupts. Then enable L1 and L2 caches 	Replace Formatter Main PCA (A26) on page 1088
B6	<ul style="list-style-type: none"> • Set up base formatter chip sets and processor caching • Check if resuming from S3. Initializing port 92 (S3 should never happen). 	Replace Formatter Main PCA (A26) on page 1088
B7	<ul style="list-style-type: none"> • Set up PCIe and detect PCIe devices • Initialize PCI/PCI-e registers. Run through "blast" tables. 	Check the formatter PCAs on page 1088
B8	<ul style="list-style-type: none"> • Complete initialization of base formatter chip sets • Set up SMBUS handling 	Replace Formatter Main PCA (A26) on page 1088
B9	<ul style="list-style-type: none"> • Complete initialization of base formatter chip sets • Set up COM1 port for Debug output 	Replace Formatter Main PCA (A26) on page 1088

Code	Meaning	Solution
BA	<ul style="list-style-type: none"> Complete initialization of base formatter chip sets Disable caches 	Replace Formatter Main PCA (A26) on page 1088
BE	<ul style="list-style-type: none"> Complete initialization of base formatter chip sets Detect and configure DIMMs, enable caches 	Check the formatter RAM on page 1088
BF	<ul style="list-style-type: none"> Complete initialization of base formatter chip sets Jump to Start32 (RESET_32) 	Replace Formatter Main PCA (A26) on page 1088
C0	<ul style="list-style-type: none"> Set up base formatter chip sets and processor caching Write to ICH6M reset control port. Loop forever. Reset should occur. 	Replace Formatter Main PCA (A26) on page 1088
C1	<ul style="list-style-type: none"> Set up base formatter chip sets and processor caching Indicate warm initialization cleanup starting. 	Replace Formatter Main PCA (A26) on page 1088
C4	<ul style="list-style-type: none"> Set up base formatter chip sets and processor caching Check power management 	Replace Formatter Main PCA (A26) on page 1088
C5	<ul style="list-style-type: none"> Set up base formatter chip sets and processor caching Initialize PCI/PCI-e 	Replace Formatter Main PCA (A26) on page 1088
C6	<ul style="list-style-type: none"> Set up base formatter chip sets and processor caching E0h, bit 49 set 	Replace Formatter Main PCA (A26) on page 1088
C7	<ul style="list-style-type: none"> Set up base formatter chip sets and processor caching Set memory base enable access to XMM registers. Setup memory DIMMS 	Replace Formatter Main PCA (A26) on page 1088
CF	<ul style="list-style-type: none"> Set up base formatter chip sets and processor caching Jump to offset 6 in vectors tables F000:8006 	Replace Formatter Main PCA (A26) on page 1088
D0	<ul style="list-style-type: none"> Bad BIOS detected Check for official BIOS release 	Replace Formatter Main PCA (A26) on page 1088
D1	<ul style="list-style-type: none"> Bad BIOS detected If not official BIOS. load and call Boot Block Flash Recover driver. Polling I/O. 	Check the flash device on page 1087

Code	Meaning	Solution
D2	<ul style="list-style-type: none"> Bad BIOS detected Jump to POST Loader Entry Point. POST_Entry_Point() which jumps to POST16Start (in OVERRIDE dir). Dispatch loop to call all functions in the POST table. Copies them from ROM to RAM 	Check the flash device on page 1087
D8	<ul style="list-style-type: none"> HP-specific chipset configuration Initialize system tables 	Replace Formatter Main PCA (A26) on page 1088
D9	<ul style="list-style-type: none"> HP-specific chipset configuration Initialize memory map 	Replace Formatter Main PCA (A26) on page 1088
DA	<ul style="list-style-type: none"> HP-specific chipset configuration Set up interrupt vector mappings and mask 	Replace Formatter Main PCA (A26) on page 1088
DB	<ul style="list-style-type: none"> HP-specific chipset configuration Set up tick counter, install handler and enable interrupt 	Replace Formatter Main PCA (A26) on page 1088
DC	<ul style="list-style-type: none"> HP-specific chipset configuration Install the memory map 	Replace Formatter Main PCA (A26) on page 1088
DD	<ul style="list-style-type: none"> HP-specific chipset configuration Initialize library for use 	Replace Formatter Main PCA (A26) on page 1088
DE	<ul style="list-style-type: none"> HP-specific chipset configuration Build a core image handler 	Replace Formatter Main PCA (A26) on page 1088
DF	<ul style="list-style-type: none"> HP-specific chipset configuration Create watchdog timer, initialize support for calling BIOS functions 	Replace Formatter Main PCA (A26) on page 1088
E0	<ul style="list-style-type: none"> Processor setup, BIOS validation Execute macro to display code E1 	Check the flash device on page 1087
E1	<ul style="list-style-type: none"> Set up base formatter chip sets and processor caching Read power management register base from ICH6 	Check the flash device on page 1087
E2	<ul style="list-style-type: none"> Set up base formatter chip sets and processor caching System reset occurred. Init ICH6 registers 	Replace Formatter Main PCA (A26) on page 1088
E5	<ul style="list-style-type: none"> Set up base formatter chip sets and processor caching Read power management runtime register 	Replace Formatter Main PCA (A26) on page 1088
E6	<ul style="list-style-type: none"> Set up base formatter chip sets and processor caching Reset type is resume 	Replace Formatter Main PCA (A26) on page 1088

Code	Meaning	Solution
E7	<ul style="list-style-type: none"> Set up base formatter chip sets and processor caching Test warm reset 	Replace Formatter Main PCA (A26) on page 1088
E8	<ul style="list-style-type: none"> Set up base formatter chip sets and processor caching Warm reset, display E9 	Replace Formatter Main PCA (A26) on page 1088
E9	<ul style="list-style-type: none"> Set up base formatter chip sets and processor caching Display after E8. loop on key status up to 250 mS 	Replace Formatter Main PCA (A26) on page 1088
EA	<ul style="list-style-type: none"> Set up base formatter chip sets and processor caching Valid key status. Jump to set type. Return to caller 	Replace Formatter Main PCA (A26) on page 1088
EF	<ul style="list-style-type: none"> Set up base formatter chip sets and processor caching Reset type set 	Replace Formatter Main PCA (A26) on page 1088
F1	<ul style="list-style-type: none"> No power up Cannot initialize image on hard drive 	<p>Reload the MFP firmware. If the problem persists, check the formatter hard drive.</p> <p>Check the cable connections to the formatter hard drive on page 1088</p>
F6	<ul style="list-style-type: none"> HP-specific chipset configuration The stack was corrupted when executing all the POST functions in the POST Table. Can get here after RESET32_D2. 	Replace Formatter Main PCA (A26) on page 1088
F7	<ul style="list-style-type: none"> HP-specific chipset configuration Stack error in sleep handle 	Replace Formatter Main PCA (A26) on page 1088
F8	<ul style="list-style-type: none"> HP-specific chipset configuration Int_2 NMI Parity Error 	Replace Formatter Main PCA (A26) on page 1088
FA	<ul style="list-style-type: none"> HP-specific chipset configuration System Board Error 	Replace Formatter Main PCA (A26) on page 1088
FE	<ul style="list-style-type: none"> HP-specific chipset configuration Cannot transfer data from one memory device to another 	Replace Formatter Main PCA (A26) on page 1088

POST code solutions

- [No code](#)
- [Check the flash device](#)
- [Check the COM1 cable connection](#)

- [Check the USB cable connection](#)
- [Check the cable connections to the formatter hard drive](#)
- [Perform a remote firmware upgrade \(RFU\)](#)
- [Replace Formatter Main PCA \(A26\)](#)
- [Check the formatter PCAs](#)
- [Check the formatter RAM](#)

No code

Primary root causes	Recommended actions
<ul style="list-style-type: none"> ● Power problem to Formatter Main PCA (A26) ● EIO Riser PCA (A31) ● Flash device on A26 	<ol style="list-style-type: none"> 1. Check the power LED on A26. 2. Reseat or replace A31. 3. Reseat the flash memory device on A26. If the error persists, replace A26.

Check the flash device

Primary root causes	Recommended actions
<ul style="list-style-type: none"> ● Formatter Main PCA (A26) ● Flash device on A26 	<ol style="list-style-type: none"> 1. Reseat the flash memory device on A26. If the error persists, replace A26. 2. Replace A26.

Check the COM1 cable connection

Primary root causes	Recommended actions
<ul style="list-style-type: none"> ● Cable connected to COM1 ● Formatter Main PCA (A26) 	<ol style="list-style-type: none"> 1. If a cable is connected to COM1 on A26, disconnect the cable, and then power cycle the MFP. 2. Replace A26.

Check the USB cable connection

Primary root causes	Recommended actions
<ul style="list-style-type: none"> ● External USB connection ● Formatter Main PCA (A26) 	<ol style="list-style-type: none"> 1. Disconnect the external USB devices, and then power cycle the MFP. 2. Replace A26.

Check the cable connections to the formatter hard drive

Primary root causes	Recommended actions
<ul style="list-style-type: none">• Cable connections to the formatter hard drive	<ol style="list-style-type: none">1. Check the cable connections to the formatter hard drive.
<ul style="list-style-type: none">• Formatter hard drive	<ol style="list-style-type: none">2. Replace the formatter hard drive.
<ul style="list-style-type: none">• Formatter Main PCA (A26)	<ol style="list-style-type: none">3. Replace A26.

Perform a remote firmware upgrade (RFU)

Primary root causes	Recommended actions
<ul style="list-style-type: none">• MFP firmware needs to be upgraded	<ol style="list-style-type: none">1. Perform a remote firmware upgrade (RFU). For more information, see Firmware upgrade on page 118.
<ul style="list-style-type: none">• Formatter Main PCA (A26)	<ol style="list-style-type: none">2. Replace A26.

Replace Formatter Main PCA (A26)

Primary root causes	Recommended actions
<ul style="list-style-type: none">• Formatter Main PCA (A26)	<ol style="list-style-type: none">1. Replace A26.

Check the formatter PCAs

Primary root causes	Recommended actions
<ul style="list-style-type: none">• Formatter Main PCA (A26)	<ol style="list-style-type: none">1. Reseat each formatter PCA.
<ul style="list-style-type: none">• Network/Fax PCA (A30)	<ol style="list-style-type: none">2. Starting at the top of the formatter assembly, remove one of the formatter PCAs, and then power cycle the MFP. If the BIOS code is not installed, then the problem PCA is the one that you last removed. If you remove all of the formatter PCAs, the MFP will hang at the 80 codes.
<ul style="list-style-type: none">• Copy Processing PCA (A27)	
<ul style="list-style-type: none">• EIO Riser PCA (A31)	
<ul style="list-style-type: none">• PCI Express PCA (A28)	<ol style="list-style-type: none">3. If none of the formatter PCAs were causing the problem, then replace A26

Check the formatter RAM

Primary root causes	Recommended actions
<ul style="list-style-type: none">• DIMMs on the Formatter Main PCA (A26)	<ol style="list-style-type: none">1. Replace the DIMMS on A26.
<ul style="list-style-type: none">• A26	<ol style="list-style-type: none">2. Replace A26.

Reference links

- Component locator: [Formatter component locator on page 2322.](#)
- Wiring diagram: [Formatter wiring diagram on page 2240.](#)
- Replace A26: [Formatter Main PCA \(A26\) on page 693](#)

Coprocessor electronics problems

Problem	LED Sequence	Primary Root causes	Recommended actions
Start POST (power on self test) (All LEDs on briefly, then turn off)	LED sequence HW: Red A1: Yellow A2: Yellow SW: Yellow	● Coprocessor	1. Power cycle the MFP, and then check the Coprocessor LED for another error sequence.
Hardware failed: BIOS failed	HW: Red A1: Yellow A2: Yellow SW: Off	● Coprocessor	1. Power cycle the MFP, and then check the Coprocessor LED for another error sequence. 2. Replace the Coprocessor.
Hardware failed: Flash memory failed	HW: Red A1: Yellow A2: Off SW: Off	● Coprocessor	1. Power cycle the MFP, and then check the Coprocessor LED for another error sequence. 2. Replace the Coprocessor.
Hardware failed: RAM failed	HW: Red A1: Off A2: Yellow SW: Off	● Coprocessor	1. Power cycle the MFP, and then check the Coprocessor LED for another error sequence. 2. Replace the Coprocessor.
Hardware failed: Other hardware-related problem	HW: Red A1: Off A2: Off SW: Off	● Coprocessor	1. Power cycle the MFP, and then check the Coprocessor LED for another error sequence. 2. Replace the Coprocessor.
Software error: No platform or XPe and/or Coprocessor platform did not power up correctly	HW: Off A1: Yellow A2: Yellow SW: Yellow	● Corrupt Coprocessor image ● Coprocessor hard drive	1. Power cycle the MFP, and then check the Coprocessor LED for another error sequence. 2. Reload the Coprocessor image. 3. Replace the Coprocessor hard drive.

Problem	LED Sequence	Primary Root causes	Recommended actions
Software error: File system initialization failure on Coprocessor	HW: Off A1: Yellow A2: Off SW: Yellow	<ul style="list-style-type: none"> Wire harness between the Coprocessor and the Network/Fax PCA (A30) Corrupt Coprocessor image Coprocessor hard drive A30 	<ol style="list-style-type: none"> Power cycle the MFP, and then check the Coprocessor LED for another error sequence. Reload the Coprocessor RFU bundle (both the platform image and the applications). Check the wire harness between the Coprocessor and the A30. Replace the Coprocessor hard drive.
Software error: RFU failed	HW: Off A1: Off A2: Yellow SW: Yellow	<ul style="list-style-type: none"> Coprocessor RFU bundle 	<ol style="list-style-type: none"> Power cycle the MFP, and then check the Coprocessor LED for another error sequence. Reload the Coprocessor RFU bundle (both the platform image and the applications).
Software error: application failed	HW: Off A1: Off A2: Off SW: Yellow	<ul style="list-style-type: none"> Coprocessor RFU bundle applications 	<ol style="list-style-type: none"> Power cycle the MFP, and then check the Coprocessor LED for another error sequence. Reload the Coprocessor RFU bundle applications only.

Reference links


- Component locator: [Formatter component locator on page 2322](#).
- Wiring diagram: [Formatter wiring diagram on page 2240](#).


CDFT-L direct connection problems

- Ensure that the LAN cable is properly connected between the laptop and the MFP. LEDs should be blinking at both connections.
- Ensure that the MFP is either the HP CM8050 or HP CM8060 model. CDFT-L only supports these MFPs.
- Ensure the MFP has an IP address. On the control panel home screen, touch **Network**, (if available) or print out the configuration pages. If the MFP does not have an IP address, temporarily plug the MFP into the LAN to reestablish its address.
- Ensure any third-party firewall on the laptop is turned off.
- Try power cycling the MFP.

6. Try power cycling the laptop.
7. Ensure the laptop is running an English version of Windows XP. CDFT-L is not supported on non-English versions of Windows XP.

Fax problems

 **NOTE:** Before following these procedures, see the fax troubleshooting section in the system administrator guide.

 **WARNING!** For protection against overvoltage, use a minimum 26 AWG cable to connect to the modem module.

- [Fax button does not display on the home screen](#)
- [Cannot print the fax activity logs](#)
- [Cannot send a fax from a PC to the machine and then through the PC fax](#)
- [Fax e-mail notification failed](#)
- [Fax not received but no error message is displayed](#)
- [Fax receiving problems](#)
- [Print report pages error message list](#)
- [Fax print quality problems](#)
- [Fax error messages](#)

Fax button does not display on the home screen

Primary root cause	Recommended actions
<ul style="list-style-type: none"> • Incomplete fax setup • Network/Fax PCA (A30) 	<ol style="list-style-type: none"> 1. Verify that the fax module is completely set up. 2. Reseat A30. 3. Replace A30.

Cannot print the fax activity logs

Primary root cause	Recommended actions
<ul style="list-style-type: none"> • Network/Fax PCA (A30) 	<ol style="list-style-type: none"> 1. Reseat A30. 2. Replace A30.

Cannot send a fax from a PC to the machine and then through the PC fax

Primary root cause	Recommended actions
<ul style="list-style-type: none"> • Driver on user PC • Feature not enabled 	<ol style="list-style-type: none"> 1. Verify that the user PC has the correct driver loaded. 2. Enable this feature. See the user guide for help.

Fax e-mail notification failed

Primary root cause	Recommended actions
<ul style="list-style-type: none">• Network• E-mail gateway	<ol style="list-style-type: none">1. Verify that the user is able to send e-mail from the MFP.

Fax not received but no error message is displayed

Primary root cause	Recommended actions
<ul style="list-style-type: none">• Firmware• Network/Fax PCA (A30)	<ol style="list-style-type: none">1. Reload the firmware.2. Replace A30.

Fax receiving problems

Primary root cause	Recommended actions
<ul style="list-style-type: none">• The fax firmware needs to be upgraded• The fax module needs to be replaced	<ol style="list-style-type: none">1. Upgrade the fax firmware. See Firmware Download on page 102.2. Replace the fax module. See Network/Fax PCA (A30) on page 690.

Print report pages error message list

Primary root cause	Recommended actions
<ul style="list-style-type: none">• Varied	<ol style="list-style-type: none">1. For help printing the fax report pages, see Service information pages on page 2278.

Fax print quality problems

Primary root cause	Recommended actions
<ul style="list-style-type: none">• Ink supplies• Pens• Fax original is bad• Sender's fax settings are incompatible	<ol style="list-style-type: none">1. Check the ink, fixer, etc.2. Check the pens.3. Try receiving the fax on another machine and check the fax quality.4. Check the sender's fax settings.

Fax error messages

Error message	Description	Primary Root Causes	Recommended actions
D3.3401	<ul style="list-style-type: none">• Fax result invalid	<ul style="list-style-type: none">• Firmware	<ol style="list-style-type: none">1. Update the MFP firmware.

Error message	Description	Primary Root Causes	Recommended actions
D3.3402	<ul style="list-style-type: none"> Fax result submitted failed: The analog fax component (AFAX) failed while accepting a job 	<ul style="list-style-type: none"> Hard drive 	<ol style="list-style-type: none"> Replace the MFP hard drive.
D3.3403	<ul style="list-style-type: none"> Fax result modem fail 	<ul style="list-style-type: none"> Modem firmware Copy Processing PCA (A27) 	<ol style="list-style-type: none"> Update the MFP firmware. Replace A27.
D3.3404	<ul style="list-style-type: none"> Fax result space fail 	<ul style="list-style-type: none"> Hard drive lacks space 	<ol style="list-style-type: none"> Check the space available on the hard drive. Replace the hard drive.
D3.3405	<ul style="list-style-type: none"> Fax result page fail 	<ul style="list-style-type: none"> Communication error Error on a page subset of the communication error 	<ol style="list-style-type: none"> Resend the fax. Try receiving the fax on another fax machine.
D3.3406	<ul style="list-style-type: none"> Memory error 	<ul style="list-style-type: none"> Damaged or corrupted RAM 	<ol style="list-style-type: none"> Upgrade the RAM. Update the MFP firmware.
D3.3407	<ul style="list-style-type: none"> Memory error 	<ul style="list-style-type: none"> Electrical noise on the fax line Receiving fax protocol 	<ol style="list-style-type: none"> Reconnect the fax line between the MFP and the wall jack. Check the condition of the fax line. Connect a phone to the fax line wall jack, and then verify that the wall jack has a dial tone. Replace the fax line. Use the fax line supplied with the fax accessory.
D3.3408	<ul style="list-style-type: none"> Fax printing failed 	<ul style="list-style-type: none"> Printer error 	<ol style="list-style-type: none"> Fix any errors or warnings recorded in the Event Log.
D3.3409	<ul style="list-style-type: none"> Fax result poll invalid 	<ul style="list-style-type: none"> Sender fax not ready 	<ol style="list-style-type: none"> Polling send-and-receive is a feature in which the sender does not dial out to the receiver. The sender keeps the fax data ready and waits for the receiver to dial the sender and request any faxes. Try receiving the fax from another device with the feature in order to verify that the sending fax supports this feature.

Error message	Description	Primary Root Causes	Recommended actions
D3.3410	<ul style="list-style-type: none"> General job failure while reading data from the hard drive 	<ul style="list-style-type: none"> Hard drive 	<ol style="list-style-type: none"> Check the hard drive for errors. Replace the hard drive.
D3.3411	<ul style="list-style-type: none"> Power failure 	<ul style="list-style-type: none"> Power cut while sending a fax 	<ol style="list-style-type: none"> Ask the customer if the power to the MFP was cut.
D3.3412	<ul style="list-style-type: none"> Communication error 	<ul style="list-style-type: none"> Electrical noise on the fax line Receiving fax protocol 	<ol style="list-style-type: none"> Reconnect the fax line between the MFP and the wall jack. Check the condition of the fax line. Connect a phone to the fax line wall jack, and then verify that the wall jack has a dial tone. Replace the fax line. Use the fax line supplied with the fax accessory.

Error message	Description	Primary Root Causes	Recommended actions
D3.34E1	<ul style="list-style-type: none"> Fax result fail busy: Fax number to which this fax was sent was busy 	<ul style="list-style-type: none"> Phone line 	<ol style="list-style-type: none"> Resend the fax. Verify that the fax line is not connected to a phone-line splitter or a surge protector. Verify that the fax line is not connected to a roll-over phoneline or a PBX phone line. If the fax line is connected to an answering machine or a voice messaging service, verify that the rings-to-answer threshold for the answering machine or voice messaging service is greater than the rings-to-answer threshold for the MFP fax accessory. Reconnect the fax line between the MFP and the wall jack. Check the condition of the fax line. Connect a phone to the fax line wall jack, and then verify that the wall jack has a dial tone. Replace the fax line. Use the fax line supplied with the fax accessory.

Error message	Description	Primary Root Causes	Recommended actions
D3.34E2	<ul style="list-style-type: none"> Fax result no answer: Fax number to which this fax was sent did not answer the call 	<ul style="list-style-type: none"> Phone line 	<ol style="list-style-type: none"> Resend the fax. Verify that the fax line is not connected to a phone-line splitter or a surge protector. Verify that the fax line is not connected to a roll-over phone-line or a PBX phone line. If the fax line is connected to an answering machine or a voice messaging service, verify that the rings-to-answer threshold for the answering machine or voice messaging service is greater than the rings-to-answer threshold for the MFP fax accessory. Reconnect the fax line between the MFP and the wall jack. Check the condition of the fax line. Connect a phone to the fax line wall jack, and then verify that the wall jack has a dial tone. Replace the fax line. Use the fax line supplied with the fax accessory.
D3.34E3	<ul style="list-style-type: none"> Fax result failed cancelled 	<ul style="list-style-type: none"> User cancelled the fax 	<ol style="list-style-type: none"> Resend the fax.

Error message	Description	Primary Root Causes	Recommended actions
D3.34E4	<ul style="list-style-type: none"> Fax result no dial: The receiving fax might not be connected, no dial tone was detected. 	<ul style="list-style-type: none"> Phone line 	<ol style="list-style-type: none"> Disable the detect dial tone feature, and then resend the fax. Verify that the fax line is not connected to a phone-line splitter or a surge protector. Verify that the fax line is not connected to a roll-over phone-line or a PBX phone line. If the fax line is connected to an answering machine or a voice messaging service, verify that the rings-to-answer threshold for the answering machine or voice messaging service is greater than the rings-to-answer threshold for the MFP fax accessory. Reconnect the fax line between the MFP and the wall jack. Check the condition of the fax line. Connect a phone to the fax line wall jack, and then verify that the wall jack has a dial tone. Replace the fax line. Use the fax line supplied with the fax accessory.
	Fax result compression error.	<ul style="list-style-type: none"> Image compression error Bad data sent by the sender 	<ol style="list-style-type: none"> Reconnect the fax line between the MFP and the wall jack. Check the condition of the fax line. Connect a phone to the fax line wall jack, and then verify that the wall jack has a dial tone. Replace the fax line. Use the fax line supplied with the fax accessory. Check for compatibility issues with the sender

Reference Links

- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace the MFP hard drive: [Formatter hard drive on page 685](#)

Remote Firmware Update (RFU) problems

- [A Resent upgrade message is displayed on the control panel after you perform an RFU](#)
- [Problems with the Startup Menu RFU](#)
- [Fax modem fails to upgrade firmware](#)
- [The coprocessor fails to upgrade firmware](#)
- [Finisher fails to upgrade firmware](#)
- [MFP fails to upgrade firmware](#)

A Resent upgrade message is displayed on the control panel after you perform an RFU

If a **Resent upgrade** message is displayed on the control panel after you perform an RFU, do the following actions:

1. Resend the upgrade in **Ready** mode.
2. If the upgrade is not successful, do the following actions:
 - a. Obtain an RFU file that contains the version of the MFP firmware that was on the MFP before you attempted the upgrade.
 - b. Use the RFU file that contains the previous MFP firmware to perform an RFU. During this RFU, reformat the formatter and coprocessor hard disks.
 - c. After the RFU is complete, restore the formatter and coprocessor hard disks from the NVM backup that you created before attempting the upgrade.
 - d. After the restore is successful, use the RFU file that contains the new firmware to perform an RFU.
3. If the upgrade is not successful, do the following actions:
 - a. Perform an NVM initialization. See [NVRAM initialization on page 115](#).
 - b. Power cycle the MFP.
 - c. Repeat step 2 above.

Problems with the Startup Menu RFU

One of the following error messages might display on the MFP control panel during an RFU:

Load Error, Invalid Parameter, Unsupported, Bad Buffer Size, Buffer Too Small, Not Ready, Device Error, Write Protected, Out of Resources, Volume Corrupt, Volume Full, No Media, Media changed, Not Found, Access Denied, No Response, No mapping, Time out, Not started, Already started, Aborted, ICMP Error, TFTP Error, Protocol Error

Primary root cause	Recommended actions
<ul style="list-style-type: none"> • USB cable • Firmware • Hard drive • Network/Fax PCA (A30) • Formatter Main PCA (A26) 	<p>Pre Boot Installer failures</p> <p>Follow these steps if the error occurs with the Pre Boot Installer:</p> <ol style="list-style-type: none"> 1. Retry the firmware download. 2. Select the Force All installation option, and then retry the firmware download. 3. Use Disk Reformat to download the firmware. 4. Replace the formatter hard disk. 5. Replace A26. <p>Download failures</p> <p>Follow these steps if the error occurs during the firmware download:</p> <ol style="list-style-type: none"> 1. Retry the firmware download. 2. Check the USB connection. 3. Use a different firmware version. 4. Use Disk Reformat to download the firmware. 5. Replace the formatter hard disk. 6. Replace A30. 7. Replace A26.

Fax modem fails to upgrade firmware

If the fax firmware fails to update, the following message is displayed: **The Fax modem subsystem failed to upgrade the Fax firmware.**

Primary root cause	Recommended actions
<ul style="list-style-type: none"> • Firmware • Power problem • Network/Fax PCA (A30) • Fax modem 	<ol style="list-style-type: none"> 1. Power cycle the MFP. 2. Check the connection between A30 and the fax modem. 3. Upgrade the fax modem subsystem from the Startup Menu. 4. Retry the firmware download. 5. Upgrade the entire system from Startup Menu. 6. Reinstall the original firmware version (the one that is being replaced). If the original firmware installs correctly, it indicates that the hardware is functional, but that the new RFU code for this subsystem is either not right or is unsupported by the hardware. 7. Replace the fax modem.

The coprocessor fails to upgrade firmware

If the fax firmware fails to update, one of the following messages is displayed:

The Companion subsystem failed to upgrade its application firmware

The Companion subsystem failed to upgrade its Image FW

Primary root cause	Recommended actions
<ul style="list-style-type: none">• Firmware• Power problem• Coprocessor	<ol style="list-style-type: none">1. Power cycle the MFP.2. Check the connection between the coprocessor and the Formatter Main PCA (A26).3. Upgrade the Coprocessor Apps subsystem from the Startup Menu.4. Reformat the Coprocessor from the Startup Menu.5. Retry the firmware download.6. Reinstall the original firmware version (the one that is being replaced). If the original firmware installs correctly, it indicates that the hardware is functional, but that the new RFU code for this subsystem is either not right or is unsupported by the hardware.7. Replace the coprocessor.

Finisher fails to upgrade firmware

If the finisher firmware fails to update, the following message is displayed: **The Finisher subsystem failed to upgrade its FW.**

Primary root cause	Recommended actions
<ul style="list-style-type: none">• Firmware• Power problem• Formatter Main PCA (A26)	<ol style="list-style-type: none">1. Power cycle the MFP.2. Check the connection between the finisher and the A26.3. Upgrade the Finisher subsystem from the Startup Menu.4. Retry the firmware download.5. Upgrade the entire system from Startup Menu.6. Reinstall the original firmware version (the one that is being replaced). If the original firmware installs correctly, it indicates that the hardware is functional, but that the new RFU code for this subsystem is either not right or is unsupported by the hardware.7. Replace A26.

MFP fails to upgrade firmware

If the finisher firmware fails to update, the following message is displayed: **The Finisher subsystem failed to upgrade its FW.**

Primary root cause	Recommended actions
<ul style="list-style-type: none"> Firmware Power problem Main Engine PCA (A5) 	<ol style="list-style-type: none"> Power cycle the MFP. Check the connection between A5 and the A26. Upgrade the print engine subsystem from the Startup Menu. Retry the firmware download. Upgrade the entire system from Startup Menu. Reinstall the original firmware version (the one that is being replaced). If the original firmware installs correctly, it indicates that the hardware is functional, but that the new RFU code for this subsystem is either not right or is unsupported by the hardware. Replace A5.

Reference links

- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace formatter hard disk: [Formatter hard drive on page 685](#)
- Replace A26: [Formatter Main PCA \(A26\) on page 693](#)

SMTP server problems

- [SMTP server issues](#)
- [SMTP fault tree](#)

The following tables provide instructions and troubleshooting tips on configuring an SMTP server in the Embedded Web Server (EWS). The instructions apply to both the Notification server required for the EWS Alerts and Autosend features, and to the Digital Send “send to email” feature.

SMTP server issues

Root cause	Description	Resolution
Authentication Required: SMTP server requires authentication	Authentication is always required for ISPs and often in enterprise environments.	Provide authentication if possible. The EWS Digital Send interface does provide authentication functionality. In some cases that require authentication for externally routed mail, a workaround might be the creation of a special Exchange user with authentication credentials. Messages from the MFP are forwarded to the special Exchange user that is able to send them out of the corporate environment.
SMTP server IP Address or host name incorrect	The SMTP server host/IP is incorrect.	Get the correct host/IP name from the customer's network administrator.

Root cause	Description	Resolution
SMTP host name cannot be resolved	The SMTP server host name cannot be resolved.	Only use the IP address.
Port 25 not open on the SMTP server	SMTP server has not been configured to have the standard port 25 open. Another, non-standard port may be used in the customer environment.	Find out if a non-standard port is being used for this purpose and connect to that one. If no port is open for SMTP, request that the customer make one available.
Recipient email address rejected by SMTP server	The recipient's domain is not listed as an allowed outgoing domain, or forwarding is not enabled for this recipient. The SMTP server will not relay the message.	Make sure the MailMessage.From is a valid email address that exists on the Smtplib.SmtpServer. Allow relaying for your MailMessage.From address (see your specific mail server documentation for more information). Allow relaying for your IP Address (see your specific mail server documentation for more information).
Relaying Denied	The SMTP server is not configured for open relaying, or authentication is required for relaying. This is used to reduce unwanted email.	You may need to add the sending email address to the SMTP servers list of authorized senders. In addition, you will likely need to provide authentication. Make sure the domains for all the email addresses in the distribution lists are listed as allowed outgoing domains.

SMTP fault tree

Steps	Details	Examples
1. Open a Windows Command Prompt.	Click Start , click Run , type <code>CMD</code>	
2. Telnet to your SMTP server.	Type <code>telnet smtp_host_name 25</code> where <i>smtp_host_name</i> is the host name or IP address of the SMTP server.	<code>telnet smtpserver.companyx.com 25</code>
3. Receive reply from SMTP server.	IF REPLY 220 : The SMTP server is listening. ELSE: The SMTP host or IP name is incorrect, the SMTP server is listening on a port other than 25, is not accepting mail, or telnet is not supported by the SMTP server. Verify the server name, and then try an IP address instead of host name. Make sure the server is running. Verify that port 25 is the correct port, or find a new server.	<code>220 smtpserver.companyx.com</code>
4. Identify yourself.	Type <code>HELO your_host_name</code> where <i>your_host_name</i> is the host name or IP address of the machine from which you are telneting.	<code>HELO your.hostname.com</code>

Steps	Details	Examples
5. Receive reply.	<p>IF 250, the SMTP server acknowledges the HELO</p> <p>ELSE IF 500, 501, 502, 503, or 504: Indicates a syntax or parameter error. Check the syntax of your command and retry.</p> <p>ELSE 550 or any other reply code: Indicates something is terminally wrong with the server. Try another server.</p>	<pre>250 smtpserver.companyx.com Hello your.hostname.com</pre>
6. Attempt authorization.	Type AUTH	AUTH
7. Receive reply.	<p>IF REPLY 503: Authentication is not required or available.</p> <p>ELSE 250 or 334: Authorization is required and Alerts and Autosend will not work until authentication functionality is added to the Notification Server.</p>	503 5.3.3 AUTH not available
8. Verify the SMTP server recognizes the sending email account.	Type MAIL FROM: <sender@domain.com> where <sender@domain.com> is the email address of the MFP.	MAIL FROM: <CompanyXMFP@companyx.com>
9. Receive reply.	<p>IF REPLY 250: The sending email address is available and recognized by the SMTP server</p> <p>ELSE IF 500, 501, 502, 503, 504: Syntax or parameter error. Check the syntax of your command and retry.</p> <p>ELSE IF 550 or 553: The server may not be able to find the mailbox for that address or the mailbox name may have a syntax error or the mailbox may not be allowed. Make sure the MAIL FROM is a valid email address that exists on the SMTP server. Allow relaying for your MAIL FROM address (see your specific mail server documentation for this) . Allow relaying for the IP Address of the MFP and the machine you are telneting from (see your specific mail server documentation for this).</p> <p>ELSE 552 (storage max exceeded), 451 (Error in processing), 452 (Insufficient system storage) or any other reply: Address the problems as noted in parentheses.</p>	<pre>250 <CompanyXMFP@companyx.com>...S ender ok</pre>
10. Verify the server will relay to the receiving email address.	Type RCPT TO:<recipient@example.com> where <recipient@example.com> is the receiving email address.	

Steps	Details	Examples
11. Receive reply.	<p>IF REPLY 250: The receiving email address is okay</p> <p>ELSE IF 500, 501, 502, 503, 504: Syntax or parameter error. Check the syntax of your command and retry</p> <p>ELSE IF 550, 553 or 551: Relaying may not be turned on for the SMTP server, or the email address is being blocked for this domain. Check that the SMTP server has open relaying, or that the domains for all the email addresses in the distribution list are listed as allowed outgoing domains. Make sure the email address is correct. Make sure that mailbox has not been eliminated.</p> <p>ELSE 552 (exceeded storage allocation), or 450 (mailbox busy), or 452 (insufficient storage) or any other error code: Work with the email administrator to remedy the problem described in parentheses.</p>	
12. Send a mail message to prove the communication path.	Type DATA.	DATA
13. Receive reply.	<p>IF REPLY 354: Send your test data.</p> <p>ELSE something is terminally wrong and the SMTP server is not accepting mail data.</p>	354 Please start mail input.
14. Send your mail data.	Type your mail data followed by<CRLF>.<CRLF><text goes here><CRLF>.<CRLF>	<text goes here>
15. Receive reply.	IF REPLY 250 : The mail has been accepted. The communication path has been proven and the mailboxes are all valid.	250 Mail queued for delivery

Embedded Web Server problems

- [Security alert in the Embedded Web Server](#)

Security alert in the Embedded Web Server

Primary root cause	Recommended actions
<ul style="list-style-type: none">Date of certificate has expired <p>NOTE: This is due to a manufacturing configuration issue and is not related to a real security issue.</p>	<p>There are two options for handling this issue.</p> <p>NOTE: If an admin password has been established on the Embedded Web Server, that password will be required to resolve this issue.</p> <ol style="list-style-type: none">This is due to a manufacturing configuration issue and is not related to a real security issue.Complete one of the following options:<ol style="list-style-type: none">The customer installs a certificate that they trust. The self-signed certificate that ships with the MFP provides a minimal level of security and is meant to be replaced by the customer with a certificate that they trust. This is the most secure option. HP cannot generate a certificate for the customer for technical reasons. Assuming the customer has requested and received a certificate from a Certificate Authority, the next step is to import the certificate.Refresh the self-signed certificate. This is the easiest option.

Tray 1 problems

- [Tray 1 is binding](#)

Tray 1 is binding

Primary root cause	Recommended actions
<ul style="list-style-type: none">Dirty Tray 1 track	<ol style="list-style-type: none">Use a cotton swab and clean any dirt out of the Tray 1 track.Apply one small dot of light grease (C5957-67075) to the track.Open and close Tray 1 several times to make sure the grease is applied to the entire Tray 1 track.

Tray 5 problems

- [Elevator failed to move down when media was loaded](#)
- [Elevator does not go all the way to the bottom](#)

Elevator failed to move down when media was loaded

Primary root causes

- Tray 5 Media Door Open sensor (SN107)
- Tray 5 Load Media sensor (SN109)
- Wire harness between the Tray 5 Distribution PCA (A101), SN107, SN109, and the Motion PCA (A2)

Recommended actions

- Open the Tray 5 diagnostic page, and then test SN107 and SN109.
- Check the wire harness between A101, SN107, SN109, and A2.
- Test the voltage at SN107: 3.22 Vdc at pins 1 to 2 and 5 Vdc at pins 3 to 2 on W103P106-SN107.
- Test the voltage at SN109: 4.95 Vdc on pins 3 to 2 and pins 1 to 2 on W103P105-SN109.
- Test the voltage to SN107 on A101: 1.16 vdc both blocked and unblocked at pins 7A to 9A and 3.24 Vdc unblocked, 0.12 Vdc blocked at pins 8A to 9A on W103P103-A101J3.
- Test the voltage to SN109 on A101: 1.16 Vdc both blocked and unblocked at pins 4A to 6A and 4.92 vdc unblocked, 0.08 Vdc blocked at pins 5A to 6A on W103P103-A101J3.
- Test the voltage to SN107 on A2: 5 Vdc at J13 pins 18 to 13, 14, 37, and 38 (GND) and pins 15 to 13, 14, 37, and 38 (GND).
- Test the voltage to SN109 on A2: 5 Vdc on J13 pins 15 to 13, 14, 37, and 38 (GND) and on pins 20 to 13, 14, 37, and 38 (GND).

Elevator does not go all the way to the bottom

Primary root causes

- Tray 5 Media Door Open sensor (SN107)
- Tray 5 Load Media sensor (SN109)
- Wire harness between the Tray 5 Distribution PCA (A101), SN107, SN109, and the Motion PCA (A2)

Recommended actions

- Open the Tray 5 diagnostic page, and then test SN107 and SN109.
- Check the wire harness between A101, SN107, SN109, and A2.
- Test the voltage at SN107: 3.22 Vdc at pins 1 to 2 and 5 Vdc at pins 3 to 2 on W103P106-SN107.
- Test the voltage at SN109: 4.95 Vdc on pins 3 to 2 and pins 1 to 2 on W103P105-SN109.
- Test the voltage to SN107 on A101: 1.16 vdc both blocked and unblocked at pins 7A to 9A and 3.24 Vdc unblocked, 0.12 Vdc blocked at pins 8A to 9A on W103P103-A101J3.
- Test the voltage to SN109 on A101: 1.16 Vdc both blocked and unblocked at pins 4A to 6A and 4.92 vdc unblocked, 0.08 Vdc blocked at pins 5A to 6A on W103P103-A101J3.

- Test the voltage to SN107 on A2: 5 Vdc at J13 pins 18 to 13, 14, 37, and 38 (GND) and pins 15 to 13, 14, 37, and 38 (GND).
- Test the voltage to SN109 on A2: 5 Vdc on J13 pins 15 to 13, 14, 37, and 38 (GND) and on pins 20 to 13, 14, 37, and 38 (GND).

HP Multifunction Finisher problems

- [Job separator moves down when not full](#)
- [Lower elevator goes all the way down to the bottom and declares an elevator full message even though it is not full](#)
- [Lower elevator not moving smoothly](#)
- [Communication between the Finisher Main PCA \(A200\) and the print engine has failed](#)

Job separator moves down when not full

Primary root causes

- Finisher Job Separator Stack Height sensor (SN267)
- Wire harness between SN267 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Clean SN267.
2. Verify that SN267 is correctly mounted.
3. Open the Finisher Separator diagnostic page, and then test SN267.
4. Check the wire harness between SN267 and A200.
5. Replace A200.

Lower elevator goes all the way down to the bottom and declares an elevator full message even though it is not full

Primary root causes

- Finisher Lower Elevator Paper Present sensor (SN258)
- Wire harness between SN258 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Verify that light is not shining on SN258.
2. Open the Finisher Lower Elevator diagnostic page, and then test SN258.
3. Check the wire harness between SN258 and A200.
4. Replace A200.

Lower elevator not moving smoothly

Primary root causes

- Broken stack holder tab
- Finisher Stack Holder sensor (SN252)
- Finisher Stack Holder motor (M252)
- Wire harness between SN252 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Check the stack holder tab for damage.
2. Open the Event log and look for a A3.02A9 or A3.0160 code. If the code is displayed, follow the troubleshooting procedures for that code.
3. Open the Finisher Lower Elevator diagnostic page, and then run M252 and verify that the SN252 count changes and that there is no binding.
4. Check the wire harness between SN258 and A200.
5. Test the voltage at SN258: 5.0 Vdc at pins 1 to 3 and 3.3 Vdc at pins 2 to 3 on W252P1-SN258.
6. Replace A200.

Communication between the Finisher Main PCA (A200) and the print engine has failed

Primary root causes

- Both print engine to finisher cables failed

Recommended actions

1. Verify that the power LEDs on A200 are lit.
2. Verify that the voltage on each of the A200 test points is within specification.
3. Verify the wiring inside the print engine, between the A200 and the print engine bulkhead, is not damaged.
4. Replace both of the cables between the print engine and A200.
5. Replace the A200.

Reference links

- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)

HP 4-Bin Job Separator problems

- [Communication between the Finisher Main PCA \(A200\) and the print engine has failed](#)

Communication between the Finisher Main PCA (A200) and the print engine has failed

Primary root causes

- Both print engine to finisher cables failed


Recommended actions

- Verify that the power LEDs on A200 are lit.
- Verify that the voltage on each of the A200 test points is within specification.
- Verify the wiring inside the print engine, between the A200 and the print engine bulkhead, is not damaged.
- Replace both of the cables between the print engine and A200.
- Replace A200.

Reference links

- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)

Main Engine PCA (A5) LED error codes

 **NOTE:** A black filled-in circle in the table indicates the LED is on. “0” is at the top of the Main Engine PCA (A5).

○ 0 ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7	● 0 ○ 1 ● 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7	○ 0 ● 1 ○ 2 ● 3 ○ 4 ○ 5 ○ 6 ○ 7
Start of initialization	Failed decompression	Failed to detect impact ASIC
● 0 ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7	○ 0 ● 1 ● 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7	● 0 ● 1 ○ 2 ● 3 ○ 4 ○ 5 ○ 6 ○ 7
CPU test failed	Failed to decompress product application	Failed to detect Kiwi ASIC
○ 0 ● 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7	● 0 ● 1 ● 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7	○ 0 ○ 1 ● 2 ● 3 ○ 4 ○ 5 ○ 6 ○ 7
RAM test failed	Failed to start product application	Failed to detect Gumby ASIC

-
- 0
 - 1
 - 2
 - 3
 - 4
 - 5
 - 6
 - 7

ROM CRC test failed

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7

Waiting for ROM image from formatter

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7

Failed to detect Raven ASIC

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7

Failed to turn off dithering for PCI_e

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7

Recovery image failed CRC

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7

PCI_e link failed

Control panel messages

- [Calibration messages](#)
- [MFP door open messages](#)
- [MFP media messages](#)
- [MFP tray messages](#)
- [Tray 5 messages](#)
- [HP Multifunction Finisher messages](#)
- [HP 4-Bin Job Separator messages](#)

Calibration messages

- [Please wait. Calibrating...](#)

Please wait. Calibrating...

Root causes

- Calibration in progress
- Firmware

Recommended actions

1. Wait for the calibration to complete.
2. Power cycle the MFP.

MFP door open messages

- [Close front doors](#)
- [Close lower-left door](#)
- [Close front doors](#)
- [Document feeder top cover open](#)
- [Flatbed cover open](#)
- [Close right-side lower panel](#)
- [Close left-side upper panel](#)
- [Close left-side middle panel](#)
- [Close left-side lower panel](#)
- [Close upper paper path](#)
- [Close right-side middle panel](#)
- [Close right-side upper panel](#)

Close front doors

Primary root causes

- Upper-left Door Open sensor (SN37)
- Upper-left door alignment
- Wire harness between SN37 and the Main Engine Backplane PCA (A4)

Recommended actions

1. Open the Covers diagnostic page, and then test SN37.
2. Verify that the front door is correctly aligned with SN37.
3. Clean SN37.
4. Check the wire harness between SN37 and A4.
5. Test the voltage at SN37: 5 Vdc at pins 3 and 2 (GND) on W95P2-SN37.

Additional root causes

- Main Engine PCA (A5)

Reference links

- Diagnostic page: Click **Subsystems**, and then click **Covers**.
- Component locator: [Covers component locator on page 2317](#)

- Wiring diagram: [Covers wiring diagram on page 2223](#)
- A5: [D4.0702 on page 2057](#)

Close lower-left door

Primary root causes

- Lower-left Door sensor (SN18)
- Upper-left door alignment
- Wire harness between SN18 and the Motion PCA (A2)

Recommended actions

1. Open the Covers diagnostic page, and then test SN18.
2. Verify that the lower-left door is correctly aligned with SN18.
3. Clean SN18.
4. Check the wire harness between SN18 and A2.
5. Test the voltage at SN18: 3.26 Vdc blocked, 0.15 Vdc unblocked at pins 18A to 17A and 1.18 Vdc both blocked and unblocked at pins 16A to 17A on W32P9-W34J9.
6. Test the voltage to SN18 from A2: 5 Vdc at J8 pins 3A and 2A (GND).

Additional root causes

- A2

Reference links

- Diagnostic page: Click **Subsystems**, and then click **Covers**.
- Component locator: [Covers component locator on page 2317](#)
- Wiring diagram: [Covers wiring diagram on page 2223](#)
- Replace SN18: [IDS sensors on page 615](#)
- A2: [D4.0705 on page 2060](#)

Close front doors

Primary root causes

- Front Door Open switch (SW3)
- Front door alignment
- Wire harness between SW3 and the Motion PCA (A2)
- Wire harness between SW3 and the Main Engine Backplane PCA (A4)

Recommended actions

1. Open the Covers diagnostic page, and then test SW3.
2. Verify that the front door is correctly aligned with SW3.
3. Clean SW3.
4. Check the wire harness between SW3 and A4.
5. Test the voltage at SW3: 5 Vdc at pins 1 and 2 (GND) on W95P3-SW3J1 and W13P1-SW3J2.

Additional root causes

- A2

Reference links

- Diagnostic page: Click **Subsystems**, and then click **Covers**.
- Component locator: [Covers component locator on page 2317](#)
- Wiring diagram: [Covers wiring diagram on page 2223](#)
- A2: [D4.0705 on page 2060](#)

Document feeder top cover open

Primary root causes

- ADF Cover Open switch (SW402)
- Wiring between SW402 and the ADF Control PCA (A401)

Recommended actions

1. Open the ADF diagnostic page, and then test SW402.
2. Check the wire harness between SW402 and A401.
3. Reseat the switch wire connector.
4. Check switch actuator.
5. Replace SW402.
6. Replace A401.

Reference links

- Diagnostic page: Click **Subsystems**, and then click **ADF**.
- Component locator: [ADF component locator on page 2313](#)
- Wiring diagram: [ADF wiring diagram on page 2218](#)
- Replace SW402: [Switches on page 246](#)
- Replace A401: [ADF Control PCA \(A401\) on page 245](#)

Flatbed cover open

Primary root causes

- The ADF or flatbed cover is not activating Scanner Original Size Detection sensor (SN501) because the sensor actuator is missing or broken
- Wire harness between SN501 and the Scanner Control PCA (A501)
- SN501
- Wiring between the ADF Open Safety switch (SW401) and the ADF Control PCA (A401)
- SW401
- A501
- A401

Recommended actions

1. Open the Scanner diagnostic page, and then test SN501.
2. Press the SN501 actuator in order to check for damage. Verify that the sensor actuator moves freely and that the actuator spring is not broken or dislodged.
3. Check the wire harness between SN501 and A501.
4. Test the voltage at SN5015 V between pins 1 and 3 on the sensor connector.
5. Connect SN501, and then verify that the voltage changes to 0.2 V at YC9 pin 2 on A501. If the voltage does not change, replace SN501.
6. Open the ADF diagnostic page, and then test SW401.
7. Check the wire harness between SW401 and A401.
8. Reseat the switch wire connector.
9. Check switch actuator.
10. Replace SW401.
11. Replace A401.

Reference links

- Diagnostic page: Click **Subsystems**, and then click **ADF**.
- Component locator: [ADF component locator on page 2313](#)
- Wiring diagram: [ADF wiring diagram on page 2218](#)
- Replace SW401: [Switches on page 246](#)
- Replace A401: [ADF Control PCA \(A401\) on page 245](#)
- Diagnostic page: Click **Subsystems**, and then click **ADF**.
- Component locator: [ADF component locator on page 2313](#)

- Wiring diagram: [ADF wiring diagram on page 2218](#)
- Replace SW402: [Switches on page 246](#)
- Replace A401: [ADF Control PCA \(A401\) on page 245](#)

Close right-side lower panel

Primary root causes

- Right-side Lower Panel Open sensor (SN43)
- Wire harness between SN43 and the Trays 2, 3, and 4 Controller PCA (A23)
- Misaligned door latch
- Tray 2 exit sensor wire routing

Recommended actions

1. Open the Trays 2, 3, 4 diagnostic page, and then test SN43.
2. Test the voltage at SN43: 5 Vdc at pins 1 to 2 (GND) on W80P1-SN43.
3. Test the voltage to SN43 on A23: 5 Vdc at J4 pins 4 to 5 (GND).
4. Ensure tray 2 exit sensor wires are routed behind the Right-side Lower Panel Open sensor (SN43) to eliminate flag actuator binding.

Additional root causes

- A23

Reference links

- Fault tree: [A1.02EF: Close right-side lower panel on page 1221](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)
- Replace SN43: [Trays 2, 3, and 4 sensors on page 340](#)
- A23: [A1.0701 on page 1649](#)

Close left-side upper panel

Primary root causes

- Left-side Upper Panel switch (SW8)
- Wire harness between SW8 and the Motion PCA (A2)
- Misaligned door

Recommended actions

1. Open the IDO Sensors, Solenoids, LEDs diagnostic page, and then test SW8.
2. Verify that the door opens and closes correctly.
3. Test the voltage at SW8: 3.3 Vdc at pins 1 to 2 on W95P8-SW8J1.
4. Test the voltage to SW8 on A2: 3.3 Vdc at J2 pins 5 to 12.

Additional root causes

- A2

Reference links

- Fault tree: [B2.02E3: Close left-side upper panel on page 1337](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [IDO motors and encoders wiring diagram on page 2244](#)
- Replace SW8: [IDO sensors on page 480](#)
- A2: [D4.0705 on page 2060](#)

Close left-side middle panel

Primary root causes

- Left-side Middle Panel sensor (SN13)
- Wire harness between SN13 and the Motion PCA (A2)
- Misaligned door

Recommended actions

1. Open the IDO Sensors, Solenoids, LEDs diagnostic page, and then test SN13.
2. Verify that the door opens and closes correctly.
3. Test the voltage at SN13: 3.3 Vdc at pins 3A to 2A and 1A to 2A on W97P7-W44J7.
4. Test the voltage to SN13 on A2: 3.26 Vdc blocked, 0.13 Vdc unblocked at J4 pins 16A to 17A and 1.16 Vdc both unblocked and blocked at pins 18A to 17A.

Additional root causes

- A2

Reference links

- Fault tree: [B2.02E2: Close left-side middle panel on page 1335](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [IDO motors and encoders wiring diagram on page 2244](#)
- Replace SN13: [IDO sensors on page 480](#)
- A2: [D4.0705 on page 2060](#)

Close left-side lower panel

Primary root causes

- Left-side Lower Panel sensor (SN14)
- Wire harness between SN14 and the Motion PCA (A2)
- Misaligned door

Recommended actions

1. Open the IDO Sensors, Solenoids, LEDs diagnostic page, and then test SN14.
2. Verify that the door opens and closes correctly.
3. Test the voltage at SN14: 3.20 Vdc blocked, 0.18 Vdc unblocked at pins 1 to 2 and 1.16 Vdc both unblocked and blocked at pins 3 to 2 on W96J14-SN14.
4. Test the voltage to SN14 on A2: 3.16 Vdc blocked, 0.20 Vdc unblocked at J5 pins 14A to 15A and 0 Vdc both blocked and unblocked at pins 13A to 15A.

Additional root causes

- A2

Reference links

- Fault tree: [B2.02E1: Close left-side lower panel on page 1333](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [IDO motors and encoders wiring diagram on page 2244](#)
- Replace SN14: [IDO sensors on page 480](#)
- A2: [D4.0705 on page 2060](#)

Close upper paper path

Primary root causes

- Horizontal Open sensor (SN4)
- Wire harness between SN4 and the Motion PCA (A2)
- Misaligned door latch

Recommended actions

1. Open the Horizontal diagnostic page, and then test SN4.
2. Verify that the door opens and closes correctly.
3. Test the voltage at SN4: 3.3 Vdc at pins 8B to 7B (GND) and 9B to 7B (GND) on W15P5-W37J5.
4. Test the voltage to SN4 on A2: 3.3 Vdc at J9 pins 9B to 7B (GND) and 8B to 7B (GND).

Additional root causes

- A2

Reference links

- Fault tree: [B1.02E1: Close upper paper path on page 1301](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **Horizontal**.
- Component locator: [Horizontal component locator on page 2324](#)
- Wiring diagram: [Horizontal wiring diagram on page 2243](#)
- Replace SN4: [Horizontal sensors on page 396](#)
- A2: [D4.0705 on page 2060](#)

Close right-side middle panel

Primary root causes

- Right-side Middle Panel sensor (SN23)
- Wire harness between SN23 and the Motion PCA (A2)
- Misaligned door latch

Recommended actions

1. Open the Vertical diagnostic page, and then test SN23.
2. Verify that the door opens and closes correctly.
3. Test the voltage at SN23: 3.3 Vdc at pins 17A to 18A (GND) and 16A to 18A (GND) on W14P6-W36J6.
4. Test the voltage to SN23 on A2: 3.3 Vdc at pins 2A to 1A (GND) and 3A to 1A (GND).

Additional root causes

- A2

Reference links

- Fault tree: [B0.02E2: Close right-side middle panel on page 1286](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **Vertical**.
- Component locator: [Vertical component locator on page 2332](#)
- Wiring diagram: [Vertical wiring diagram on page 2261](#)
- Replace SN23: [Vertical sensors on page 386](#)
- A2: [D4.0705 on page 2060](#)

Close right-side upper panel

Primary root causes

- Tray 1 Door Open sensor (SN30)
- Wire harness between SN30 and the Motion PCA (A2)
- Misaligned latch on Tray 1

Recommended actions

1. Open the Tray 1 diagnostic page, and then test SN30.
2. Verify that the Tray 1 latch works correctly.
3. Test the voltage at SN30: 3.3 Vdc at pins 17B to 16B (GND) and 18B to 16B (GND) on W14P6-W36J6.
4. Test the voltage to SN30 on A2: 3.3 Vdc at J10 pins 2B to 3B (GND) and 1B to 3B (GND).

Additional root causes

- A2

Reference links

- Fault tree: [B0.02E1: Close right-side upper panel on page 1284](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Tray 1**.
- Component locator: [Vertical component locator on page 2332](#)
- Wiring diagram: [Vertical wiring diagram on page 2261](#)
- Replace SN30: [Vertical sensors on page 386](#)
- A2: [D4.0705 on page 2060](#)

MFP media messages

- Wrong media type
- Output bin is full
- Media size mismatch

Wrong media type

Primary root causes

- Condition of the media

Recommended actions

1. Check the condition of the media.
2. Check the paper path for obstructions.
3. Verify that the width and length guides are registered to the media.

Additional root causes

- Transparency sensor 1 (SN1)

Reference links

- Fault tree: [B1.02E2: Wrong media type on page 1303](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **Horizontal**.
- Component locator: [Horizontal component locator on page 2324](#)
- Wiring diagram: [Horizontal wiring diagram on page 2243](#)
- SN1: [B1.1301 on page 1818](#)
- SN58: [Tetris sensor \(SN58\) on page 581](#)


Output bin is full

Primary root causes

- Paper dust or obstruction covering Output Bin Full sensor (SN17)
- Output Bin Full sensor (SN17)
- Wire harness between SN17 and the Motion PCA (A2)

Recommended actions

1. Clean the Output Bin Full sensor (SN17) window.
2. Open the IDO Motors diagnostic page, and then test SN17.
3. Check the wire harness between SN17 and A2.

 **NOTE:** To allow the system to print or copy while the finisher is electrically and mechanically disconnected from the print engine, and the system does not have the Output Bin Full sensor (SN17) installed, install an output bin bypass jumper (C5957-67078) on connector W96P17-SN17.


Media size mismatch

Primary root causes

- Media guides in the source tray not set correctly, broken media guides
- Mixed media sizes in the source tray
- Media length calibration failed
- Worn out horizontal transport drive rollers
- Horizontal transport drive rollers PM item not reset after replacing the rollers
- Media length calibration not performed after replacing the horizontal transport drive rollers or calibration not completed successfully

Recommended actions

1. Check the condition of the media; look for mixed media sizes in the source tray.
2. Verify that the width and length guides are registered to the media and confirm the control panel indicates the correct media size in the Supply status screen.
3. Check PM counter for the horizontal transport drive rollers, if the PM is due perform these steps in the order shown:
 - Replace the horizontal transport drive rollers.
 - Reset the corresponding PM counter.
 - Load more than 25 sheets of 8.5 x 11 or A4 paper in tray 2, adjust media guides correctly, and then confirm media size is reported correctly in the supplies status screen.
 - With the ADF closed, go to the **Copy** menu, select Tray 2 as the source tray, select 25 copies, and then press the **Start** key. This will trigger the media length detection calibration.

 **NOTE:** Make sure this copy job runs successfully from start to end. If a jam occurs or there is any service fault that interrupts the copy job, power cycle the unit and repeat step 3.

4. Check event log for error or warning associated with TOF sensor or transparency sensor that may indicate a problem with those sensors, follow recommended actions for those codes.

Additional root causes

- Transparency sensor 1 (SN1)
- Top-of-form sensor (SN22)

Reference links

- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **Horizontal**.
- Component locator: [Horizontal component locator on page 2324](#)
- Wiring diagram: [Horizontal wiring diagram on page 2243](#)
- SN1: [B1.1301 on page 1818](#)
- Diagnostic page: Click **Subsystems**, and then click **Drum**.

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)


MFP tray messages

- [Tray 1 empty](#)
- [Tray 2 empty](#)
- [Tray 3 empty](#)
- [Tray 4 empty](#)
- [Tray 2 low](#)
- [Tray 3 low](#)
- [Tray 4 low](#)
- [Tray 2 open](#)
- [Tray 3 open](#)
- [Tray 4 open](#)

Tray 1 empty

Primary root causes

- Tray 1 Width sensor (SN24) empty
- Wire harness between SN24 and the Motion PCA (A2)
- Tray 1 Media Edge sensor (SN38)
- Wire harness between the Motion PCA (A2) and SN38
- Tray 1 Media sensor (SN27)
- Wire harness between the Motion PCA (A2) and SN27

 **NOTE:** Ensure the wiring to the Tray 1 Media sensor (SN27) is not blocking the SN27 actuator. If so install print engine (PE) tag 3.

Recommended actions

1. Test SN24.
 - a. Open the Tray 1 diagnostic page, and then test SN24.
 - b. Check the wire harness between SN24 and A2.
2. Test SN38.
 - a. Open the Tray 1 diagnostic page, and then test SN38.
 - b. Test the voltage at SN38: 3.3 Vdc at pins 4 to 2 (GND) and 5 to 2 (GND) on W67P1-W36J3.
 - c. Test the voltage to SN38 on A2: 3.21 Vdc at J10 pins 7A to 5A.
3. Test SN27.
 - a. Open the Tray 1 diagnostic page, and then test SN27.
 - b. Test the voltage at SN27: 3.3 Vdc at pins 5 to 4 (GND) and 6 to 4 (GND) on W76p2-W37J2.
 - c. Test the voltage to SN27 on A2: 2.47 V dc blocked and unblocked at J10 pins 10B to 12B.

Additional root causes

- A2

Reference links

Fault tree ●

- [A0.02E1: Tray 1 empty on page 1168](#)
- [A0.02E2:Tray 1 empty on page 1169](#)
- [A0.02E3: Tray 1 empty on page 1171](#)
- Diagnostic page: Click **Subsystems**, and then click **Tray 1**.
- Wiring diagram: [Tray 1 wiring diagram on page 2219](#)
- Component locator: [Tray 1 component locator on page 2315](#)
- Replace SN24: [Tray 1 sensors on page 375](#)
- A2: [D4.0705 on page 2060](#)

Tray 2 empty

Primary root causes

- Tray 2 Empty sensor (SN45)
- Pick arm
- Paper tray
- Tray 2 Distribution PCA (A33)

Recommended actions

1. Open the Trays 2, 3, 4 diagnostic page, and then test SN45.
2. Verify that the other tray paper empty sensors work.
3. Check the voltage to the pick arm from A33: 5 Vdc at J4 pins 6 to 4 (GND).
4. Check the voltage to A33 from the Trays 2, 3, and 4 Controller PCA (A23): 5 Vdc at J1 pins 3 to 2 (GND).

Additional root causes

- A23

Reference links

- Fault tree: [A1.02E1: Tray 2 empty on page 1203](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)
- Replace SN45: [Trays 2, 3, and 4 sensors on page 340](#)
- A23: [A1.0701 on page 1649](#)

Tray 3 empty

Primary root causes

- Tray 3 Empty sensor (SN49)
- Pick arm
- Paper tray
- Tray 3 Distribution PCA (A33)

Recommended actions

1. Open the Trays 2, 3, 4 diagnostic page, and then test SN49.
2. Verify that the other tray paper empty sensors work.
3. Check the voltage to the pick arm from A33: 5 Vdc at J4 pins 6 to 4 (GND).
4. Check the voltage to A33 from the Trays 2, 3, and 4 Controller PCA (A23): 5 Vdc at J1 pins 3 to 2 (GND).

Additional root causes

- A23

Reference links

- Fault tree: [A1.02E2: Tray 3 empty on page 1205](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)
- Replace SN49: [Trays 2, 3, and 4 sensors on page 340](#)
- A23: [A1.0701 on page 1649](#)

Tray 4 empty

Primary root causes

- Tray 4 Empty sensor (SN53)
- Pick arm
- Paper tray
- Tray 4 Distribution PCA (A33)

Recommended actions

1. Open the Trays 2, 3, 4 diagnostic page, and then test SN53.
2. Verify that the other tray paper empty sensors work.
3. Check the voltage to the pick arm from A33: 5 Vdc at J4 pins 6 to 4 (GND).
4. Check the voltage to A33 from the Trays 2, 3, and 4 Controller PCA (A23): 5 Vdc at J1 pins 3 to 2 (GND).

Additional root causes

- A23

Reference links

- Fault tree: [A1.02E3: Tray 4 empty on page 1207](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)
- Replace SN53: [Trays 2, 3, and 4 sensors on page 340](#)
- A23: [A1.0701 on page 1649](#)

Tray 2 low

Primary root causes

- Tray 2 Low sensor (SN44)
- Pick arm
- Tray 2 Distribution PCA (A33)
- Wire harness between the A33 and the Trays 2, 3, and 4 Controller PCA (A23)

Recommended actions

1. Open the Trays 2, 3, 4 diagnostic page, and then test SN44.
2. Verify that the other tray paper low sensors work.
3. Check the wire harness between the A33 and A23.
4. Test the voltage to SN44 on A33: 5 Vdc at J2 pins 1 to 2 (GND).
5. Test the voltage to A33 from A23: 1.2 Vdc at J2 pins 3 to 2 (GND).

Additional root causes

- A23

Reference links

- Fault tree: [A1.02E4: Tray 2 low on page 1209](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)
- Replace SN44: [Trays 2, 3, and 4 sensors on page 340](#)
- A23: [A1.0701 on page 1649](#)

Tray 3 low

Primary root causes

- Tray 3 Low sensor (SN48)
- Pick arm
- Tray 3 Distribution PCA (A33)
- Wire harness between the A33 and the Trays 2, 3, and 4 Controller PCA (A23)

Recommended actions

1. Open the Trays 2, 3, 4 diagnostic page, and then test SN48.
2. Verify that the other tray paper low sensors work.
3. Check the wire harness between the A33 and A23.
4. Test the voltage to SN48 on A33: 5 Vdc at J2 pins 1 to 2 (GND).
5. Test the voltage to A33 from A23: 1.2 Vdc at J2 pins 3 to 2 (GND).

Additional root causes

- A23

Reference links

- Fault tree: [A1.02E5: Tray 3 low on page 1211](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)
- Replace SN48: [Trays 2, 3, and 4 sensors on page 340](#)
- A23: [A1.0701 on page 1649](#)

Tray 4 low

Primary root causes

- Tray 4 Low sensor (SN52)
- Pick arm
- Tray 4 Distribution PCA (A33)
- Wire harness between the A33 and the Trays 2, 3, and 4 Controller PCA (A23)

Recommended actions

1. Open the Trays 2, 3, 4 diagnostic page, and then test SN52.
2. Verify that the other tray paper low sensors work.
3. Check the wire harness between the A33 and A23.
4. Test the voltage to SN52 on A33: 5 Vdc at J2 pins 1 to 4 (GND).
5. Test the voltage to A33 from A23: 1.2 Vdc at J2 pins 3 to 2 (GND).

Additional root causes

- A23

Reference links

- Fault tree: [A1.02E6: Tray 4 low on page 1213](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)
- Replace SN52: [Trays 2, 3, and 4 sensors on page 340](#)
- A23: [A1.0701 on page 1649](#)

Tray 2 open

Primary root causes

- Paper tray
- Tray 2 Open switch (SW9)

Recommended actions

1. Check the paper tray for damage.
2. Check for obstructions behind the paper tray.
3. Verify that the tray open message appears only when the tray is open.
4. Open the Trays 2, 3, 4 diagnostic page, and then test SW9.
5. Verify that the SW9 actuator moves freely.

Additional root causes

- A23

Reference links

- Fault tree: [A1.02EC: Tray 2 open on page 1215](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)
- Replace SW9: [Trays 2, 3, and 4 sensors on page 340](#)
- A23: [A1.0701 on page 1649](#)

Tray 3 open

Primary root causes

- Paper tray
- Tray 3 Open switch (SW14)

Recommended actions

1. Check the paper tray for damage.
2. Check for obstructions behind the paper tray.
3. Verify that the tray open message appears only when the tray is open.
4. Open the Trays 2, 3, 4 diagnostic page, and then test SW14.
5. Verify that the SW14 actuator moves freely.

Additional root causes

- A23

Reference links

- Fault tree: [A1.02ED: Tray 3 open on page 1217](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)
- Replace SW14: [Trays 2, 3, and 4 sensors on page 340](#)
- A23: [A1.0701 on page 1649](#)

Tray 4 open

Primary root causes

- Paper tray
- Tray 4 Open switch (SW19)

Recommended actions

1. Check the paper tray for damage.
2. Check for obstructions behind the paper tray.
3. Verify that the tray open message appears only when the tray is open.
4. Open the Trays 2, 3, 4 diagnostic page, and then test SW19.
5. Verify that the SW19 actuator moves freely.

Additional root causes

- A23

Reference links

- Fault tree: [A1.02EE: Tray 4 open on page 1219](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)
- Replace SW19: [Trays 2, 3, and 4 sensors on page 340](#)
- A23: [A1.0701 on page 1649](#)

Tray 5 messages

- [Reattach Tray 5](#)
- [Tray 5 \(the high capacity tray\) has too much paper loaded](#)
- [Tray 5 empty](#)
- [Close Tray 5 top-left panel](#)
- [Close Tray 5 top door](#)

Reattach Tray 5

Primary root causes

- Tray 5 Front Latch sensor (SN105)
- Wire harness between SN105, the Tray 5 Distribution PCA (A101), and the Motion PCA (A2)

Recommended actions

- Open the Tray 5 diagnostic page, and then test SN105.
- Test the voltage at SN105: 5 Vdc at pins 1 to 3 and 2 to 3 on W103P110-SN105.
- Test the voltage to SN105 on A101: 1.2 Vdc at pins 13B to 11B and 0.08 Vdc unblocked and 4.9 vdc blocked at pins 12B to 11B on W103P103-A101J3
- Test the voltage to SN105 on A2: 3.8 Vdc on pins 22 to 13, 14, 37, and 38 (GND) and 5 Vdc at pins 15 to 13, 14, 37, and 38 (GND).

Additional root causes

- A2

Reference links

- Fault tree: [A2.02E6: Tray 5 empty on page 1269](#)
- Diagnostic page: Click **Subsystems**, and then click **Tray 5**.
- Component locator: [Tray 5 component locator on page 2323](#)
- Wiring diagram: [Tray 5 wiring diagram on page 2241](#)
- Replace SN105: [Sensors on page 762](#)
- A2: [D4.0705 on page 2060](#)

Tray 5 (the high capacity tray) has too much paper loaded

Primary root causes

- Tray 5 Elevator Lower Limit sensor (SN110)
- Wire harness between SN110, the Tray 5 Distribution PCA (A101), and the Motion PCA (A2)

Recommended actions

1. Open the Tray 5 diagnostic page, and then test SN110.
2. Test the voltage at SN110: 5 Vdc at pins 1 to 2 and 3 to 2 on W103P109-SN110.
3. Test the voltage to SN110 on A101: 4.91 Vdc blocked and unblocked at pins 16B to 14B and 0.01 Vdc unblocked, 4.92 Vdc blocked at pins 15B to 14B on W103P103-A101J3.
4. Test the voltage to SN110 on A2: 5 Vdc on J13 pins 30 to 13, 14, 37, and 38 (GND) and pins 15 to 13, 14, 37, and 38 (GND).

Additional root causes

- Tray 5 Elevator motor (M102)
- A2

Reference links

- Fault tree: [A2.02E6: Tray 5 empty on page 1269](#)
- Diagnostic page: Click **Subsystems**, and then click **Tray 5**.
- Component locator: [Tray 5 component locator on page 2323](#)
- Wiring diagram: [Tray 5 wiring diagram on page 2241](#)
- Replace SN110: [Sensors on page 762](#)
- A2: [D4.0705 on page 2060](#)
- M102: [D4.0705 on page 2060](#)

Tray 5 empty

Primary root causes

- Tray 5 Empty sensor (SN111)
- Wire harness between SN111, the Tray 5 Distribution PCA (A101), and the Motion PCA (A2)

Recommended actions

1. Open the Tray 5 diagnostic page, and then test SN111.
2. Test the voltage at SN111: 5 Vdc at pins 2 to 3 and 1 to 3 on W102P107-SN111.
3. Test the voltage to SN111 on A101: 4.93 Vdc unblocked and blocked at pins 6B to 4B and 0.01 vdc unblocked and 4.92 vdc blocked at pins 5B to 4B on W102P102-A101J2.
4. Test the voltage to SN111 on A2: 5 Vdc on J13 pins 35 to 13, 14, 37, and 38 (GND) and on pins 15 to 13, 14, 37, and 38 (GND).

Additional root causes

- A2

Reference links

- Fault tree: [A2.02E6: Tray 5 empty on page 1269](#)
- Diagnostic page: Click **Subsystems**, and then click **Tray 5**.
- Component locator: [Tray 5 component locator on page 2323](#)
- Wiring diagram: [Tray 5 wiring diagram on page 2241](#)
- Replace SN111: [Sensors on page 762](#)
- A2: [D4.0705 on page 2060](#)

Close Tray 5 top-left panel

Primary root causes

- Tray 5 Top-left Panel sensor (SN112)
- Wire harness between SN112, the Tray 5 Distribution PCA (A101), and the Motion PCA (A2)
- Tray 5 Top-left panel

Recommended actions

1. Open the Tray 5 diagnostic page, and then test SN112.
2. Verify that the Tray 5 Top-left panel opens and closes correctly.
3. Test the voltage at SN112: 5 Vdc on pins 3 to 2 and 1 to 2 on W102P106-SN112.
4. Test the voltage to SN112 on A101: 1.16 Vdc both blocked and unblocked at pins 11A to 13A and 4.91 Vdc unblocked, 0.11 Vdc blocked at pins 12A to 13A on W102P102-A101J2.
5. Test the voltage to SN112 on A2: 5 Vdc at J13 pins 19 to 13, 14, 37, and 38 (GND) and pins 15 to 13, 14, 37, and 38 (GND).

Additional root causes

- A2

Reference links

- Fault tree: [A2.02E3: Close Tray 5 top-left panel on page 1261](#)
- Diagnostic page: Click **Subsystems**, and then click **Tray 5**.
- Component locator: [Tray 5 component locator on page 2323](#)
- Wiring diagram: [Tray 5 wiring diagram on page 2241](#)
- Replace SN112: [Sensors on page 762](#)
- A2: [D4.0705 on page 2060](#)

Close Tray 5 top door

Primary root causes

- Tray 5 Media Door Open sensor (SN107)
- Wire harness between SN107, the Tray 5 Distribution PCA (A101), and the Motion PCA (A2)
- Tray 5 Media door

Recommended actions

1. Open the Tray 5 diagnostic page, and then test SN107.
2. Verify that the Tray 5 Media door opens and closes correctly.
3. Test the voltage at SN107: 3.22 Vdc at pins 1 to 2 and 5 Vdc at pins 3 to 2 on W103P106-SN107.
4. Test the voltage to SN107 on A101: 1.16 vdc both blocked and unblocked at pins 7A to 9A and 3.24 Vdc unblocked, 0.12 Vdc blocked at pins 8A to 9A on W103P103-A101J3.
5. Test the voltage to SN107 on A2: 5 Vdc at J13 pins 18 to 13, 14, 37, and 38 (GND) and pins 15 to 13, 14, 37, and 38 (GND).

Additional root causes

- A2

Reference links

- Fault tree: [A2.02E4: Close Tray 5 top door on page 1264](#)
- Diagnostic page: Click **Subsystems**, and then click **Tray 5**.
- Component locator: [Tray 5 component locator on page 2323](#)
- Wiring diagram: [Tray 5 wiring diagram on page 2241](#)
- Replace SN107: [Sensors on page 762](#)
- A2: [D4.0705 on page 2060](#)

HP Multifunction Finisher messages

- [Stapler 1 is low](#)
- [Close Stapler 1 door](#)
- [Stapler 1 is empty](#)
- [Stapler 2 is low](#)
- [Stapler 2 is empty](#)
- [Close Stapler 2 door](#)
- [Close finisher right-side panel](#)
- [Close finisher upper paper path](#)

- [Close finisher upper paper path](#)
- [Close finisher lower paper path](#)
- [Too many sheets to staple](#)
- [Output Bin 5 is overloaded](#)
- [Output Bin 5 is full](#)
- [Output bin x is full, remove all paper from bin](#)
- [Reattach finisher to device](#)
- [Reattach finisher to device](#)

Stapler 1 is low

Primary root causes

- Stapler 1 cartridge
- Stapler 1 assembly
- Stapler 1 Low Staples sensor (SN274)
- Wire harness between SN274 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Remove the Stapler 1 cartridge, and then install the Stapler 2 cartridge in Stapler 1 and verify that SN274 activates.
2. Open the Finisher Stapler diagnostic page, and then test SN274.
3. Check the wire harness between SN274 and A200.
4. Check the voltage at SN274: 5 Vdc at pins 2B to 1B on W270J271-W271P1.
5. Replace A200.

Reference links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Stapler**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- Replace SN274: [Sensors on page 882](#)

Close Stapler 1 door

Primary root causes

- Stapler Door 1 switch (SW273)
- Stapler 2 door
- Wire harness between SW273 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SW273.
2. Check the Stapler 1 door latch and hinges for correct operation and alignment.
3. Check the wire harness between SW273A200.
4. Check the voltage at SW273: 5 Vdc at pins 10B to 9B and 33 Vdc at pins 8A to 1B and 9A to 1B on W270J271-W271P1.
5. Replace A200.

Reference links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Stapler**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- Replace SW273: [Sensors on page 882](#)

Stapler 1 is empty

Primary root causes

- Staple sheet is too short and is not feeding straight causing a staple empty message or possibly no sets being stapled
- Stapler 1 cartridge
- Stapler 1 assembly
- Stapler 1 Ready sensor (SN275)
- Wire harness between SN275 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Remove the staple cartridge and turn it over to inspect the staple sheet (6 staples in length) and determine if the sheet is too short. If it is too short, remove the short staple sheet from the cartridge, reinsert the cartridge, and then retry stapling a set.
2. Remove the Stapler 1 cartridge, and then install the Stapler 2 cartridge in Stapler 1 and verify that SN275 activates.
3. Open the Finisher Stapler diagnostic page, and then test SN275.
4. Check the wire harness between SN275 and A200.
5. Check the voltage at SN275: 3.3 Vdc at pins 3B to 1B on W270J271-W271P1.
6. Replace A200.

Reference links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Stapler**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- Replace SN275: [Sensors on page 882](#)

Stapler 2 is low

Primary root causes

- Stapler 2 cartridge
- Stapler 2 assembly
- Stapler 2 Low Staples sensor (SN282)
- Wire harness between SN282 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Remove the Stapler 2 cartridge, and then install the Stapler 1 cartridge in Stapler 2 and verify that SN282 activates.
2. Open the Finisher Stapler diagnostic page, and then test SN282.
3. Check the wire harness between SN282 and A200.
4. Check the voltage at SN282: 5 Vdc at pins 2B to 1B on W270J280-W280P1.
5. Replace A200.

Reference links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Stapler**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- Replace SN282: [Sensors on page 882](#)

Stapler 2 is empty

Primary root causes

- Staple sheet is too short and is not feeding straight causing a staple empty message or possibly no sets being stapled
- Stapler 2 cartridge
- Stapler 2 assembly
- Stapler 2 Ready sensor (SN283)
- Wire harness between SN283 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Remove the staple cartridge and turn it over to inspect the staple sheet (6 staples in length) and determine if the sheet is too short. If it is too short, remove the short staple sheet from the cartridge, reinsert the cartridge, and then retry stapling a set.
2. Remove the Stapler 2 cartridge, and then install the Stapler 1 cartridge in Stapler 2 and verify that SN283 activates.
3. Open the Finisher Stapler diagnostic page, and then test SN283.
4. Check the wire harness between SN283 and A200.
5. Check the voltage at SN283: 3.3 Vdc at pins 3B to 1B on W270J280-W280P1.
6. Replace A200.

Reference links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Stapler**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- Replace SN283: [Sensors on page 882](#)

Close Stapler 2 door

Primary root causes

- Stapler Door 2 switch (SW282)
- Stapler 2 door
- Wire harness between SW282 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Stapler diagnostic page, and then test SW282.
2. Check the Stapler 2 door latch and hinges for correct operation and alignment.
3. Check the wire harness between SW282 and A200.
4. Check the voltage at SW282: 5 Vdc at pins 10B to 9B and 33 Vdc at pins 9A to 6A and 10A to 6A on W270J280-W280P1.
5. Replace A200.

Reference links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Stapler**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- Replace SW282: [Sensors on page 882](#)

Close finisher right-side panel

Primary root causes

- Finisher Right Side Panel sensor (SN216)
- Right-side door latch and hinges
- Wire harness between SN216 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN216.
2. Check the right-side door latch and hinges for correct operation and alignment.
3. Check the wire harness between SN216 and A200.

4. Check the voltage at SN216: 5 Vdc at pins 2A to 1A and 3.3 Vdc at pins 3A to 1A on W211P1-W201J211.
5. Replace A200.

Reference links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- Replace SN216: [Sensors on page 882](#)

Close finisher upper paper path

Primary root causes

- Finisher Handle 1 (upper transport) Front sensor (SN206)
- Right-side door latch and hinges
- Wire harness between SN206 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN206.
2. Check the right-side door latch and hinges for correct operation and alignment.
3. Check the wire harness between SN206 and A200.
4. Check the voltage at SN206: 5 Vdc at pins 1 to 2 and 3.3 Vdc at pins 3 to 2 on W202P4-SN206.
5. Replace A200.

Reference links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- Replace SN206: [Sensors on page 882](#)

Close finisher upper paper path

Primary root causes

- Finisher Handle 1 (upper transport) Back sensor (SN202)
- Right-side door latch and hinges

- Wire harness between SN202 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN202.
2. Check the right-side door latch and hinges for correct operation and alignment.
3. Check the wire harness between SN202 and A200.
4. Check the voltage at SN202: 3.3 Vdc at pins 2 to 3 and 5.0 Vdc at pins 1 to 2 on W201P3-SN202.
5. Replace A200.

Reference links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- Replace SN202: [Sensors on page 882](#)

Close finisher lower paper path

Primary root causes

- Finisher Handle 3 (lower transport) sensor (SN222)
- Door latch and hinges
- Wire harness between SN222 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN222.
2. Check the door latch and hinges for correct operation and alignment.
3. Check the wire harness between SN222 and A200.
4. Replace A200.

Reference links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

- Replace SN222: [Sensors on page 882](#)
- Replace SN250: [Sensors on page 882](#)

Too many sheets to staple

Primary root causes

- Stapler capacity has been exceeded

Recommended actions

- See the MFP user guide for the maximum number of sheets that can be stapled.

Reference links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Stapler**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)

Output Bin 5 is overloaded

Primary root causes

- Lower elevator
- Finisher Lower Elevator motor (M250)
- Lower elevator lift assembly
- Finisher Lower Elevator Stack Height sensor (SN257)
- Wire harness between M250 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Remove any paper from the lower elevator, and then check for obstructions underneath the elevator.
2. Open the Finisher Lower Elevator diagnostic page, and then run M250 and check for binding.
3. Verify that the SN257 spring and the M250 bracket are not damaged.
4. Check the voltage at M250: -24 Vdc at pins W250P1-M250 to W250P2-M250 driving the motor in the down direction, and +24 Vdc on pins W250P1-M250 to W250P2-M250 driving the motor in the up direction.
5. Replace A200.

Reference links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Lower Elevator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)

Output Bin 5 is full

Primary root causes

- Lower elevator overload spring
- Finisher Lower Elevator motor (M250)
- M250 bracket
- Finisher Lower Elevator Stack Height sensor (SN257)
- Finisher Lower Elevator Move sensor (SN250)
- Finisher Lower Elevator Overload switch (SW250)
- Wire harness between SN257, SN250, and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Remove any paper from the lower elevator, and then check for obstructions underneath the elevator.
2. Open the Finisher Lower Elevator diagnostic page, and then test SN257 and SN250/SW250. (Note: The same CDFT sensor window will light up when you physically trip either SN250 or SW250. This is normal behavior.)
3. Run the Finisher Lower Elevator motor (M250) and check for binding.
4. Verify that the lower elevator overload spring is not missing and that the M250 bracket is not damaged.
5. Check the wire harness between SN257, SN250, and A200.
6. Check the voltage at M250: -24 Vdc at pins W250P1-M250 to W250P2-M250 driving the motor in the down direction, and +24 Vdc on pins W250P1-M250 to W250P2-M250 driving the motor in the up direction.
7. Replace A200.

Reference links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Lower Elevator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

- Replace SN257: [Sensors on page 882](#)
- Replace SN250: [Sensors on page 882](#)
- Replace SW250: [Switches on page 945](#)

Output bin x is full, remove all paper from bin

Primary root causes

- Finisher Job Separator Stack Height sensor (SN267)
- Wire harness between SN267 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Clean SN267, and then verify that it is properly seated.
2. Open the Finisher Separator diagnostic page, and then test SN267.
3. Check the wire harness between SN267 and A200.
4. Replace A200.

Reference links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- Replace SN267: [Sensors on page 882](#)

Reattach finisher to device

Primary root causes

- Finisher Back Latch sensor (SN200)
- Wire harness between SN200 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN200.
2. Check the wire harness between SN200 and A200.
3. Check the voltage at SN200: 3.3 Vdc at pins 1 to 3 and 5.0 Vdc at pins 2 to 3 on W201P1-SN200.
4. Replace A200.

Reference links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- Replace SN200: [Sensors on page 882](#)

Reattach finisher to device

Primary root causes

- Finisher Front Latch sensor (SN204)
- Wire harness between SN204 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN204.
2. Check the wire harness between SN204 and A200.
3. Check the voltage at SN204: 3.3 Vdc at pins 1 to 3 and 5.0 Vdc at pins 2 to 3 on W252P4-SN204.
4. Replace A200.

Reference links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- Replace SN204: [Sensors on page 882](#)

HP 4-Bin Job Separator messages

- [Output bin x is full, remove all paper from bin](#)
- [Reattach finisher to device](#)

Output bin x is full, remove all paper from bin

Primary root causes

- Finisher Job Separator Stack Height sensor (SN267)
- Wire harness between SN267 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Clean SN267, and then verify that it is properly seated.
2. Open the Finisher Separator diagnostic page, and then test SN267.
3. Check the wire harness between SN267 and A200.
4. Replace A200.

Reference links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- Replace SN267: [Sensors on page 882](#)

Reattach finisher to device

Primary root causes

- Finisher Back Latch sensor (SN200)
- Wire harness between SN200 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN200.
2. Check the wire harness between SN200 and A200.
3. Check the voltage at SN200: 3.3 Vdc at pins 1 to 3 and 5.0 Vdc at pins 2 to 3 on W201P1-SN200.
4. Replace A200.

Reference links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- Replace SN200: [Sensors on page 882](#)

8 Hardware fault trees

- [00.06C1: Front Door LED \(LED7\) not lit](#)
- [A0.02E1: Tray 1 empty](#)
- [A0.02E2:Tray 1 empty](#)
- [A0.02E3: Tray 1 empty](#)
- [A0.03A1: Failed to pick from Tray 1, and then recovered](#)
- [A0.06C1: Tray 1 LED \(LED12\) not lit](#)
- [A0.1301: No pick Tray 1](#)
- [A1.0102: Tray 2 Pick motor \(M19\) stall](#)
- [A1.0103: Tray 3 Pick motor \(M20\) stall](#)
- [A1.0104: Tray 4 Pick motor \(M21\) stall](#)
- [A1.01A2: Failed to pick from Tray 2, and then recovered](#)
- [A1.01A3: Failed to pick from Tray 3, and then recovered](#)
- [A1.01A4: Failed to pick from Tray 4, and then recovered](#)
- [A1.01C1: Trays 2, 3, and 4 Transport motor \(M18\)](#)
- [A1.02C1:Tray 2, 3, and 4 Ambient Temperature sensor \(SN41\)](#)
- [A1.02C3: Tray 2, 3, and 4 Humidity sensor \(SN42\)](#)
- [A1.02E1: Tray 2 empty](#)
- [A1.02E2: Tray 3 empty](#)
- [A1.02E3: Tray 4 empty](#)
- [A1.02E4: Tray 2 low](#)
- [A1.02E5: Tray 3 low](#)
- [A1.02E6: Tray 4 low](#)
- [A1.02EC: Tray 2 open](#)
- [A1.02ED: Tray 3 open](#)
- [A1.02EE: Tray 4 open](#)

- [A1.02EF: Close right-side lower panel](#)
- [A1.06C1: Right-side Lower Panel LED \(LED18\) not lit](#)
- [A1.06C2: Tray 2 LED \(LED15\) not lit](#)
- [A1.06C3: Tray 3 LED \(LED16\) not lit](#)
- [A1.06C4: Tray 4 LED \(LED17\) not lit](#)
- [A1.0701: Trays 2, 3, and 4 Controller PCA \(A23\) failure](#)
- [A1.07A1: Trays 2, 3, and 4 Controller PCA \(A23\) voltage out-of-range](#)
- [A1.1302: Paper jam at Tray 2](#)
- [A1.1304: Paper jam at Tray 4](#)
- [A2.0101: Tray 5 Pick motor \(M101\) stall](#)
- [A2.0102: Tray 5 Elevator motor \(M102\) stall](#)
- [A2.0201: Tray 5 Elevator Upper Limit sensor \(SN108\) failed](#)
- [A2.0202: Tray 5 Stack Height sensor \(SN104\) failed](#)
- [A2.02C2: Elevator does not go all the way to the bottom](#)
- [A2.02E1: Reattach Tray 5](#)
- [A2.02E3: Close Tray 5 top-left panel](#)
- [A2.02E4: Close Tray 5 top door](#)
- [A2.02E5: Tray 5 overfilled](#)
- [A2.02E6: Tray 5 empty](#)
- [A2.06C1: Tray 5 Top Door LED \(LED102\) not lit](#)
- [A2.06C2: Tray 5 Top-left Panel LED \(LED101\) not lit](#)
- [A2.1301: Paper jam at Tray 5 Media 1 sensor \(SN101\)](#)
- [A2.1302: Paper jam at Tray 5 Media 2 sensor \(SN103\)](#)
- [B0.0101: Vertical motor \(M6\) stall](#)
- [B0.02E1: Close right-side upper panel](#)
- [B0.02E2: Close right-side middle panel](#)
- [B0.06C1: Right-side Middle Panel LED \(LED13\) not lit](#)
- [B0.1301: Paper jam at Vertical Transport 1 sensor \(SN35\)](#)
- [B0.1302: Paper jam at Vertical Transport 2 sensor \(SN28\)](#)
- [B0.1303: Paper jam at Vertical Transport 3 sensor \(SN25\)](#)
- [B0.1304: Paper jam at Vertical transport 4 sensor \(SN26\)](#)

- [B1.0101: Horizontal motor \(M7\) stall](#)
- [B1.02E1: Close upper paper path](#)
- [B1.02E2: Wrong media type](#)
- [B1.06C1: Horizontal Latch LED \(LED1\) not lit](#)
- [B1.1301: Paper jam at Transparency sensor 1 \(SN1\)](#)
- [B1.1302: Paper jam at Horizontal Transport 2 sensor \(SN3\)](#)
- [B1.1303: Paper jam at Horizontal Transport 3 sensor \(SN2\)](#)
- [B1.1304: Paper jam at Horizontal Transport 4 sensor \(SN5\)](#)
- [B2.0101: IDO Input 1 motor \(M8\) stall](#)
- [B2.0102: IDO Input 2 motor \(M10\) stall](#)
- [B2.0103: IDO Curler motor \(M15\) stall](#)
- [B2.0104: IDO Media Eject motor \(M13\) stall](#)
- [B2.0105: IDO Duplex motor \(M12\) stall](#)
- [B2.0106: IDO Output motor \(M11\) stall](#)
- [B2.02E1: Close left-side lower panel](#)
- [B2.02E2: Close left-side middle panel](#)
- [B2.02E3: Close left-side upper panel](#)
- [B2.0301: Able to open locked left-side upper panel](#)
- [B2.03C1: IDO Diverter solenoid \(SOL2\)](#)
- [B2.03C2: Cannot open left-side upper panel](#)
- [B2.06C1: Left-side Middle Panel LED \(LED3\) not lit](#)
- [B2.06C2: Output Bin LED \(LED14\) not lit](#)
- [B2.06C3: IDO Curler LED \(LED2\) not lit](#)
- [B2.06C4: Left-side Upper Panel LED \(LED5\) not lit](#)
- [B2.1301: Paper jam at IDO Input Staging 2 sensor \(SN10\)](#)
- [B2.1302: Paper jam at IDO Media Thickness encoder \(EN14\)](#)
- [B2.1303: Paper jam at IDO Input Staging 1 sensor \(SN7\)](#)
- [B2.1304: Paper jam at IDO Input Media sensor \(SN8\)](#)
- [B2.1305: Paper jam at IDO Output Media sensor \(SN9\)](#)
- [B2.1306: Paper jam at IDO Output 1 sensor \(SN15\)](#)
- [B2.1307: Paper jam at IDO Output 2 sensor \(SN12\)](#)

- B2.1308: Paper jam at IDO Duplex Staging sensor (SN11)
- B2.1309: Paper jam at IDO Duplex Media sensor (SN16)
- C1.0101: Drum motor (M3) stall
- C1.01A1: Drum motor (M3) requires higher than normal power (PWM) to operate
- C1.06C1: Drum Illumination 1 LED (LED8) not lit
- C1.06C2: Drum Illumination 2 LED (LED9) not lit
- C1.06C3: Noise in the drum drive area
- C2.0201: Dryer Temperature sensor (SN36) problem
- C2.06C1: Dryer LED (LED6) not lit
- C2.0901: Dryer fan (FAN5) problem
- C2.09A1: Dryer fan (FAN5) RPM too low
- C2.0C01: Dryer heater (HTR1) problem
- C4.0101: Web Drive motor (M5) stall
- C4.0102: Web Wipe Material Lift motor (M4) stall
- C4.0201: Spit web not detected
- C4.0202: Change web wipe supply
- C4.02A1: Low Web wipe supply
- C4.0501: Web Advance encoder (EN11) stall
- C7.0B06: IDS system will not pressurize
- C7.0B07: IDS system will not depressurize
- C7.0B08: IDS leak detected
- C7.0B10: Black ink supply is empty
- C7.0B11: Black ink supply has failed
- C7.0B12: Black ink supply is missing
- C7.0B13: Black ink supply is non-HP
- C7.0B20: Cyan ink supply is empty
- C7.0B21: Cyan ink supply has failed
- C7.0B22: Cyan ink supply is missing
- C7.0B23: Cyan ink supply is non-HP
- C7.0B30: Magenta ink supply is empty
- C7.0B31: Magenta ink supply has failed

- C7.0B32: Magenta ink supply is missing
- C7.0B33: Magenta ink supply is non-HP
- C7.0B40: Yellow ink supply is empty
- C7.0B41: Yellow ink supply has failed
- C7.0B42: Yellow ink supply is missing
- C7.0B43: Yellow ink supply is non-HP
- C7.0B50: Bonding Agent supply is empty
- C7.0B51: Bonding Agent supply has failed
- C7.0B52: Bonding Agent supply is missing
- C7.0B53: Bonding Agent supply is non-HP
- C7.0BA0: Magenta ink supply has expired
- C7.0BA1: Black ink supply is low
- C7.0BA2: Black ink supply has expired
- C7.0BA3: Bonding Agent supply has expired
- C7.0BA4: Bonding Agent supply is low
- C7.0BA5: Yellow cartridge low warning
- C7.0BA6: Yellow ink supply has expired
- C7.0BA7: Cyan ink supply is low
- C7.0BA8: Cyan ink supply has expired
- C7.0BA9: Magenta ink supply is low
- D1.06C1: Carriage LED (LED10) not lit
- D4.0705: Motion PCA (A2) power not good

00.06C1: Front Door LED (LED7) not lit

Initial Steps

1. Check the covers for damage.

[Covers component locator on page 2317](#)

Test the Front Door LED (LED7)

1. Activate LED7.
2. Verify that the LED turns on and off.

TIP: Click **Subsystems**, and then click **Covers**.

Does the LED turn on and off?

No **Yes**

Check for problems that might cause intermittent behavior

1. Check the wire harness between the Motion PCA (A2) and the LED.

[Drum wiring diagram on page 2225](#)

1. 2. Check the LED mounting and surrounding area for any obvious problems. Repair as needed.

Check the Front Door LED (LED7) and wire harness

1. Check the LED mounting and surrounding area for any obvious problems. Repair as needed.

[Drum wiring diagram on page 2225](#)

2. Check the wire harness between the Motion PCA (A2) and the LED.

Test the Front Door LED (LED7)

1. Activate LED7.
2. Verify that the LED turns on and off.

TIP: Click **Subsystems**, and then click **Covers**.

Does the LED turn on and off?

No **Yes**

1. [Final activities on page 24](#)

Test the voltage to the Front Door LED (LED7) on the Motion PCA (A2)

1. Disconnect J8 from A2.
2. Activate LED7.
3. Test the voltage to LED7 on A2: -2 Vdc at J8 pins 15A to 16A.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage at the Front Door LED (LED7)

1. Verify that J8 is connected on the Motion PCA (A2).
2. Disconnect the LED wire connector.
3. Activate LED7.
4. Test the voltage at LED7 on: 2.0 Vdc at pins 3A to 4A on W32P9-W34J9.

1 Is the voltage correct?

1 **No Yes**

Replace the Front Door LED (LED7)

- 1
- 2 **1.** Replace the LED.

Check the wire harness between the LED and the Motion PCA (A2)

1. Check the wire harness between A2 and the LED.

1 [Drum wiring diagram on page 2225](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

A0.02E1: Tray 1 empty

Initial Steps

1. Verify that the paper-width guide touches the edge of the paper stack.

NOTE: Ensure the wiring to the Tray 1 Media sensor (SN27) is not blocking the SN27 actuator. If so install print engine (PE) tag 3.

NOTE: The sensor is a potentiometer.

2. Check the condition of the paper in Tray 1.

[Tray 1 component locator on page 2315](#)

Test the Tray 1 Width sensor (SN24)

1. Remove any paper from the tray.
2. Slide the SN24 from the minimum position to the maximum position. The value should change between 100 mm (3.93 in) at the minimum position to 320 mm (12.59 in) at the maximum position.

[Tray 1 component locator on page 2315](#)

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 1**.

Does the sensor state change?

No **Yes**

Test the voltage to the Tray 1 Width sensor (SN24) on the Motion PCA (A2)

1. Turn off the MFP, disconnect J10 from A2 and connect the Service Test Tool, and then turn on the MFP.
2. Test the voltage to the SN24 on A2: 3.25 Vdc at J10 pins 8A to 5A and 4A to 5A.

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Check the wire harness between the sensor and the Motion PCA (A2)

1. Check the wire harness between the Tray 1 Width sensor (SN24) and A2. Repair as needed.

[Tray 1 wiring diagram on page 2219](#)

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

Replace the Tray 1 Width sensor (SN24)

1. Replace the sensor.

[Tray 1 sensors on page 375](#)

A0.02E2:Tray 1 empty

Initial Steps

1. Verify that the paper-width guide touches the edge of the paper stack.

NOTE: Ensure the wiring to the Tray 1 Media sensor (SN27) is not blocking the SN27 actuator. If so install print engine (PE) tag 3.

2. Check the condition of the paper used in Tray 1.

[Tray 1 component locator on page 2315](#)

Test the Tray 1 Media Edge sensor (SN38)

1. Manually actuate SN38.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 1**.

Does the sensor state change?

No **Yes**

Check the following conditions

1. Check the wire harness between the Tray 1 Media Edge sensor (SN38) and the Motion PCA (A2).

[Tray 1 wiring diagram on page 2219](#)

2. Check the sensor for contamination.

3. Manually actuate SN38.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 1**.

Does the sensor state change?

No **Yes**

[Final activities on page 24](#)

Replace the Tray 1 Media Edge sensor (SN38) assembly

1. If the problem persists, replace Tray 1. The ribbon cable and/or the SN38 cable might be damaged.

[Tray 1 sensors on page 375](#)

Test the voltage to the Tray 1 Media Edge sensor (SN38) on the Motion PCA (A2)

1. Turn off the MFP, disconnect J10 from A2 and connect the Service Test Tool, and then turn on the MFP.
2. Test the voltage to SN38 on A2: 3.21 Vdc at J10 pins 7A to 5A.

[Tray 1 wiring diagram on page 2219](#)

Is the voltage correct?

No **Yes**

Test the voltage at the Tray 1 Media Edge sensor (SN38)

1. Verify that J10 is connected on the Motion PCA (A2).
2. Disconnect W67P1-W36J3.
3. Test the voltage at SN38: 3.3 Vdc at pins pins 4 to 2 (GND) and 5 to 2 (GND) on W67P1-W36J3.

[Tray 1 wiring diagram on page 2219](#)

1 Is the voltage correct?

1 **No** **Yes**

Repair or replace the wire harness between the Motion PCA (A2) and the Tray 1 Media Edge sensor (SN38)

1. Check the wire harness and connections between A2 and SN38.

1 2 [Tray 1 wiring diagram on page 2219](#)

Replace the Tray 1 Media Edge sensor (SN38) assembly

1. If the problem persists, replace Tray 1. The ribbon cable and/or the SN38 cable might be damaged.

1 [Tray 1 sensors on page 375](#)

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

A0.02E3: Tray 1 empty

Initial Steps

1. Verify that the width guide touches the edge of the paper stack.

NOTE: Ensure the wiring to the Tray 1 Media sensor (SN27) is not blocking the SN27 actuator. If so install print engine (PE) tag 3.

[Tray 1 component locator on page 2315](#)

2. Check the condition of the paper used in Tray 1.

Test the Tray 1 Media sensor (SN27)

1. Manually actuate SN27.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 1**.

Does the sensor change state?

No **Yes**

Check the following conditions

1. Verify that the sensor is correctly located.
2. Check that any flag actuator has free movement.
3. Check the wire harness between the sensor and the Motion PCA (A2).

[Tray 1 wiring diagram on page 2219](#)

[Tray 1 component locator on page 2315](#)

Test the voltage to the Tray 1 Media sensor (SN27) on the Motion PCA (A2)

1. Disconnect J10 from A2.
2. Test the voltage to SN27 on A2: 2.47 V dc blocked and unblocked at J10 pins 10B to 12B.

[Tray 1 wiring diagram on page 2219](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Test the voltage at the Tray 1 Media sensor (SN27)

1. Verify that J10 is connected on the Motion PCA (A2).
2. Disconnect W76P2-W37J2.
3. Test the voltage at SN27: 3.3 Vdc at pins 5 to 4 (GND) and 6 to 4 (GND) on W76p2-W37J2 on the wire harness.

[Tray 1 wiring diagram on page 2219](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Replace the Tray 1 Media sensor (SN27)

1. Replace the sensor.

[Tray 1 sensors on page 375](#)

Repair or replace the wire harness between the Motion PCA (A2) and the Tray 1 Media sensor (SN27)

1. Check the wire harness between the sensor and A2.
2. Repair as needed.

[Tray 1 wiring diagram on page 2219](#)

WARNING! Use an ESD strap.

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

A0.03A1: Failed to pick from Tray 1, and then recovered

Initial Steps

1. [Tray 1 component locator on page 2315](#)

NOTE: Ensure the wiring to the Tray 1 Media sensor (SN27) is not blocking the SN27 actuator. If so install print engine (PE) tag 3.

Check the preventive maintenance counter for the Tray 1 pick roller and separation pad

1. Check the PM counter to determine if the roller and separation pads are due for replacement.

[Tray 1 component locator on page 2315](#)

Are the pick roller and separation pads due for replacement?

No **Yes**

Perform preventive maintenance

1. Replace the Tray 1 pick roller and the separation pad.
2. Reset the preventive maintenance counter.

Check the following conditions

1. Check the condition of the paper used in Tray 1.
2. Verify that the paper-width guide touches the edge of the paper stack.
3. Verify that the paper loaded in Tray 1 is within the product specifications.
4. Load fresh paper into Tray 1.
5. Pick 100 sheets of paper.

Was an A0.03.A1 warning declared?

No **Yes**

Clean the pick roller and separation pad

1. Clean the pick roller and the separation pad with a damp cloth. Use water to wet the cloth.
2. Load fresh paper into Tray 1.
3. Pick 100 sheets of paper.

Was an A0.03.A1 warning declared?

No **Yes**

[A0.1301: No pick Tray 1 on page 1176](#)

[Final activities on page 24](#)

[Final activities on page 24](#)

A0.06C1: Tray 1 LED (LED12) not lit

Initial Steps

1. [Tray 1 component locator on page 2315](#)

Test the Tray 1 LED (LED12)

1. Activate LED12.
2. Verify that the LED turns on and off.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 1**.

Does the LED turn on and off?

No **Yes**

Check for problems that might cause intermittent behavior

1. Check the wire harness between the Motion PCA (A2) and the LED.

[Tray 1 wiring diagram on page 2219](#)

2. Check the LED mounting and surrounding area for any obvious problems. Repair as needed.

Check the LED and wire harness

1. Verify that the LED is correctly located.
[Tray 1 wiring diagram on page 2219](#)
2. Check the wire harness between the Motion PCA (A2) and the LED.

Test the Tray 1 LED (LED12)

1. Activate LED12.
TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 1**.
2. Verify that the LED turns on and off.

Does the LED turn on and off?

No **Yes**

1. [Final activities on page 24](#)

Test the voltage to the Tray 1 LED (LED12) on the Motion PCA (A2)

1. Disconnect J10 from A2.
2. Activate the LED, and then test the voltage to LED12 on A2: -2 Vdc on J10 at pins 13B to 14B.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage at the Tray 1 LED (LED12)

1. Verify that J10 is connected on the Motion PCA (A2).
2. Disconnect W36P12 from the LED.
3. Activate the LED, and then test the voltage to LED12: 2 Vdc at pins 3A to 2A on W67p2-W36J2.

1 Is the voltage correct?

1 **No** **Yes**

Replace the Tray 1 LED (LED12)000

- 1
- 2 **1.** Replace the LED.

Check the wire harness between the Motion PCA (A2) and the Tray 1 LED (LED12)

1. Check the wire harness between A2 and the LED. Repair as needed.

1 [Tray 1 wiring diagram on page 2219](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

A0.1301: No pick Tray 1

Initial Steps

1. Verify that the Tray 1 door is closed and latched.

Check the condition of the paper used in Tray 1.

Verify that the paper meets product specifications.

Verify that the paper loaded in Tray 1 has the paper curl facing up.

Verify that the paper is correctly loaded.

Verify that the paper-width guide touches the edge of the paper stack.

Verify that the customer has not overfilled the paper tray.

Ensure the wiring to the Tray 1 Media sensor (SN27) is not blocking the SN27 actuator. If so install print engine (PE) tag 3.

[Tray 1 component locator on page 2315](#)

Test the Tray 1 Pick solenoid (SOL1)

1. Activate SOL1.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 1**.

Does the solenoid activate?

No **Yes**

Cycle the Tray 1 Pick solenoid (SOL1)

1. Open the Tray 1 door, and then cycle SOL1.
2. Look and listen for the solenoid to cycle at a consistent rate.

CAUTION: To safely activate SOL1, the Tray 1 door must be open and the vertical drive must be off.

Before closing the Tray 1 door, verify that the Tray 1 pick roller is in the pick (home) position. Damage to SOL1 can occur when the Tray 1 door is closed and the pick roller is not in the pick (home) position.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 1**.

Does SOL1 cycle with a consistent rhythm?

No **Yes**

Check the following conditions

1. Verify that the pick roller rotates when the Tray 1 Pick solenoid (SOL1) activates.
2. Check the wire harness between the solenoid and the Motion PCA (A2).

[Tray 1 wiring diagram on page 2219](#)

2. Check SOL1 for contamination.

Replace the Tray 1 Pick solenoid (SOL1)

1. Replace the solenoid.

[Tray 1 Pick solenoid \(SOL1\) on page 351](#)

Test the voltage to the Tray 1 Pick solenoid (SOL1) on the Motion PCA (A2)

1. Test the voltage to SOL1 on A2: 3.8 Vdc at J2 pins 2 to 9 (GND).

[Tray 1 wiring diagram on page 2219](#)

[Tray 1 component locator on page 2315](#)

Is the voltage correct?

No Yes

Test the voltage at the Tray 1 Pick solenoid (SOL1)

1. Verify that J2 is connected to the Motion PCA (A2).
2. Disconnect W20P1-SOL1 from SOL1.
3. Test the voltage to SOL1: 20 Vdc at pins 1 to 2 (GND) on W20P1-SOL1.

[Tray 1 wiring diagram on page 2219](#)

[Tray 1 component locator on page 2315](#)

1 Is the voltage correct?

No Yes

Replace the Tray 1 Pick solenoid (SOL1)

1. Replace the solenoid.

[Tray 1 Pick solenoid \(SOL1\) on page 351](#)

Check the wire harness between the Motion PCA (A2) and the Tray 1 Pick solenoid (SOL1)

1. Check the wire harness and connections between A2 and the solenoid.

[Tray 1 wiring diagram on page 2219](#)

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

A1.0102: Tray 2 Pick motor (M19) stall

Initial Steps

1. Check the condition of the paper in the tray.
2. Verify that the paper guides are set correctly.
3. Verify that the right-side lower panel is latched.
4. Verify that the paper meets product specifications.
5. Verify that the paper-length guide functions correctly.
6. Check the preventive maintenance list for pick roller replacement.
7. If maintenance is due, replace the Tray 2 pick roller.

[Pick roller on page 331](#)

8. Check the pick roller mounting locations for damage.

Check the 24 Vdc and 32 Vdc LEDs on the Trays 2, 3, and 4 Controller PCA (A23)

1. Verify that the LEDs are lit.

[Trays 2, 3, and 4 controller PCA diagram on page 2258](#)

Are the 24 Vdc and 32 Vdc LEDs on A23 lit?

No **Yes**

Test the Tray 2 Pick motor (M19)

1. Pull out Tray 2.
2. Turn on M19.

CAUTION: Running the motor before pulling out the tray can damage the pick arm.

Do not turn on M19 with paper in the tray without having the paper transport running. Possible damage could be done to the pick arm assembly.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does M19 turn on?

No **Yes**

Check the pick arm conditions

1. Verify that the pick arm moves up and down freely.
2. Check the pick arm alignment. There might be a misaligned pin on the back of the tray.

Does the pick arm move freely?

No **Yes**

[Final activities on page 24](#)

Align the Tray 2 pick arm assembly

1. Align the Tray 2 pick arm assembly.

Test the voltage to the Tray 2 Pick motor (M19) motor on the Trays 2, 3, and 4 Controller PCA (A23)

1. Disconnect J6 from A23.
2. Test the voltage to M19 on A23: 24 Vdc at J6 pins 9 to 7 (GND).

[Tray 2 wiring diagram on page 2256](#)

WARNING! Use an ESD strap.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

1 Is the voltage correct?

1 **No Yes**

Test the voltage to the Tray 2 Pick motor (M19) on the Tray 2 Distribution PCA (A33)

1. Verify that J6 is connected on the Trays 2, 3, and 4 Controller PCA (A23).
2. Disconnect J4 from A33.
3. Test the voltage to M19 on A33: 24 Vdc at J4 pins 1 to 4 (GND).

[Tray 2 wiring diagram on page 2256](#)

WARNING! Use an ESD strap.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

1 2 Is the voltage correct?

1 2 **No Yes**

Replace the Tray 2 pick arm assembly

1. Replace the Tray 2 pick arm assembly.

1 2 3 [Pick arm assembly on page 328](#)

Test the voltage on the wire harness between the Trays 2, 3, and 4 Controller PCA (A23) and the Tray 2 Distribution PCA (A33)

1. Disconnect J1 from A33.
2. Test the voltage to A33 from A23: 24 Vdc at J1 pins 8 to 7 (GND) and 9 to 7 (GND).

1 2 Is the voltage correct?

1 2 **No Yes**

Replace the Tray 2 Distribution PCA (A33)

1. Replace A33.

[Trays 2, 3, and 4 distribution PCA on page 338](#)

1 2 3 **WARNING!** Use an ESD strap.

Check the wire harness between the Tray 2 Distribution PCA (A33) and the Trays 2, 3, and 4 Controller PCA (A23)

1. Check the wire harness between A33 and A23.
2. Repair wiring as needed.

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

1 2 **WARNING!** Use an ESD strap.

Replace the Trays 2, 3, and 4 Controller PCA (A23)

1. Replace A23.

[Trays 2, 3, and 4 Controller PCA \(A23\) on page 339](#)

1 **WARNING!** Use an ESD strap.

Check the input voltage to the Trays 2, 3, and 4 Controller PCA (A23)

1. Disconnect J1 from A23.
2. Test the input voltage to A23: 32 Vdc at J1 pins 3 to 2 (GND).

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Replace the Trays 2, 3, and 4 Controller PCA (A23)

1. Replace A23.

[Trays 2, 3, and 4 Controller PCA \(A23\) on page 339](#)

1 **WARNING!** Use an ESD strap.

Test the voltage at the Power Distribution PCA (A1)

1. Disconnect J8 from A1.
2. Test the voltage to the Trays 2, 3, and 4 Controller PCA (A23) on A1: 32 Vdc at J8 pins 8 to 5.

[Power Distribution PCA \(A1\) diagram on page 2271](#)

Is the voltage correct?

No **Yes**

Check the wire harness between the Power Distribution PCA (A1) and the Trays 2, 3, and 4 Controller PCA (A23)

1. Check the wire harness between M19, the Tray 2 Distribution PCA (A33), and A23.
2. Repair the wiring as needed.

[Tray 2 wiring diagram on page 2256](#)

1 **WARNING!** Use an ESD strap.

Replace the Power Distribution PCA (A1)

1. Replace A1.

[Power Distribution PCA \(A1\) on page 702](#)

A1.0103: Tray 3 Pick motor (M20) stall

Initial Steps

1. Check the condition of the paper in the tray.
2. Verify that the paper guides are set correctly.
3. Verify that the right-side lower panel is latched.
4. Verify that the paper meets product specifications.
5. Verify that the paper-length guide functions correctly.
6. Check the preventive maintenance list for pick roller replacement.
7. If maintenance is due, replace the Tray 3 pick roller.

[Pick roller on page 331](#)

8. Check the pick roller mounting locations for damage.

Check the 24 Vdc and 32 Vdc LEDs on the Trays 2, 3, and 4 Controller PCA (A23)

1. Verify that the LEDs are lit.

[Trays 2, 3, and 4 controller PCA diagram on page 2258](#)

Are the 24 Vdc and 32 Vdc LEDs on A23 lit?

No Yes

Turn on the Tray 3 Pick motor (M20)

1. Pull out Tray 3.
2. Turn on M20.

CAUTION: Running the motor before pulling out the tray can damage the pick arm.

Do not turn on M20 with paper in the tray without having the paper transport running. Possible damage could be done to the pick arm assembly.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

1 Does M20 turn on?

1 No Yes

Check the pick arm conditions

1. Verify that the pick arm moves up and down freely.
2. Check the pick arm alignment. There might be a misaligned pin on the back of the tray.

1 2 Does the pick arm move freely?

1 2 No Yes

1 2 3 [Final activities on page 24](#)

Align the Tray 3 pick arm assembly

1 2 1. Align the Tray 3 pick arm assembly.

Test the voltage to the Tray 3 Pick motor (M20) on the Trays 2, 3, and 4 Controller PCA (A23)

1. Disconnect J7 from A23.
2. Test the voltage to M20 on A23: 24 Vdc at J7 pins 9 to 7 (GND).

[Tray 3 wiring diagram on page 2257](#)

WARNING! Use an ESD strap.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Is the voltage correct?

No **Yes**

Test the voltage to the Tray 3 Pick motor (M20) on the Tray 3 Distribution PCA (A33)

1. Verify that J7 is connected on the Trays 2, 3, and 4 Controller PCA (A23).
2. Disconnect J4 from A33.
3. Test the voltage to M20 on A33: 24 Vdc at J4 pins 1 to 4 (GND).

[Tray 3 wiring diagram on page 2257](#)

WARNING! Use an ESD strap.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Is the voltage correct?

No **Yes**

Replace the Tray 3 pick arm assembly

1. Replace the Tray 3 pick arm assembly.

[Pick arm assembly on page 328](#)

Test the voltage on the wire harness between the Trays 2, 3, and 4 Controller PCA (A23) and the Tray 3 Distribution PCA (A33)

1. Disconnect J1 from A33.
2. Test the voltage to A33 from A23: 24 Vdc at J1 pins 8 to 7 (GND) and 9 to 7 (GND).

Is the voltage correct?

No **Yes**

Replace the Tray 3 Distribution PCA (A33)

1. Replace A33.

[Trays 2, 3, and 4 distribution PCA on page 338](#)

WARNING! Use an ESD strap.

Check the wire harness between the Tray 3 Distribution PCA (A33) and the Trays 2, 3, and 4 Controller PCA (A23)

1. Check the wire harness between A33 and A23.
2. Repair wiring as needed.

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

WARNING! Use an ESD strap.

Replace the Trays 2, 3, and 4 Controller PCA (A23)

1. Replace A23.

[Trays 2, 3, and 4 Controller PCA \(A23\) on page 339](#)

1 **WARNING!** Use an ESD strap.

Check the input voltage to the Trays 2, 3, and 4 Controller PCA (A23)

1. Disconnect J1 from A23.
2. Test the input voltage to A23: 32 Vdc at J1 pins 3 to 2 (GND).

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Replace the Trays 2, 3, and 4 Controller PCA (A23)

1. Replace A23.

[Trays 2, 3, and 4 Controller PCA \(A23\) on page 339](#)

1 **WARNING!** Use an ESD strap.

Test the voltage at the Power Distribution PCA (A1)

1. Disconnect J8 from A1.
2. Test the voltage to the Trays 2, 3, and 4 Controller PCA (A23) on A1: 32 Vdc at J8 pins 8 to 5.

[Power Distribution PCA \(A1\) diagram on page 2271](#)

[Electronics component locator on page 2327](#)

Is the voltage correct?

No Yes

Check the wire harness between the Power Distribution PCA (A1) and the Trays 2, 3, and 4 Controller PCA (A23)

1. Check the wire harness between M20, the Tray 3 Distribution PCA (A33), and A23.
2. Repair the wiring as needed.

[Tray 3 wiring diagram on page 2257](#)

1 **WARNING!** Use an ESD strap.

Replace the Power Distribution PCA (A1)

1. Replace A1.

[Power Distribution PCA \(A1\) on page 702](#)

A1.0104: Tray 4 Pick motor (M21) stall

Initial Steps

1. Check the condition of the paper in the tray.
2. Verify that the paper guides are set correctly.
3. Verify that the right-side lower panel is latched.
4. Verify that the paper meets product specifications.
5. Verify that the paper-length guide functions correctly.
6. Check the preventive maintenance list for pick roller replacement.
7. If maintenance is due, replace the Tray 4 pick roller.

[Pick roller on page 331](#)

8. Check the pick roller mounting locations for damage.

Check the 24 Vdc and 32 Vdc LEDs on the Trays 2, 3, and 4 Controller PCA (A23)

1. Verify that the LEDs are lit.

[Trays 2, 3, and 4 controller PCA diagram on page 2258](#)

Are the 24 Vdc and 32 Vdc LEDs on A23 lit?

No Yes

Turn on the Tray 4 Pick motor (M21)

1. Pull out Tray 4.
2. Turn on M21.

CAUTION: Running the motor before pulling out the tray can damage the pick arm.

Do not turn on M21 with paper in the tray without having the paper transport running. Possible damage could be done to the pick arm assembly.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does M21 turn on?

No Yes

Check the pick arm conditions

1. Verify that the pick arm moves up and down freely.
2. Check the pick arm alignment. There might be a misaligned pin on the back of the tray.

Does the pick arm move freely?

No Yes

[Final activities on page 24](#)

Align the Tray 4 pick arm assembly

1. Align the Tray 3 pick arm assembly.

Test the voltage to the Tray 4 Pick motor (M21) on the Trays 2, 3, and 4 Controller PCA (A23)

1. Disconnect J10 from A23.
2. Test the voltage to M21 on A23: 24 Vdc at J10 pins 9 to 7 (GND).

[Tray 4 wiring diagram on page 2258](#)

WARNING! Use an ESD strap.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Is the voltage correct?

No **Yes**

Test the voltage on the Tray 4 Distribution PCA (A33)

1. Verify that J10 is connected on the Trays 2, 3, and 4 Controller PCA (A23).
2. Disconnect J4 from A33.
3. Test the voltage to M21 on A33: 24 Vdc at J4 pins 1 to 4 (GND).

[Tray 4 wiring diagram on page 2258](#)

WARNING! Use an ESD strap.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Is the voltage correct?

No **Yes**

Replace the Tray 4 pick arm assembly

1. Replace the Tray 3 pick arm assembly.

[Pick arm assembly on page 328](#)

Test the voltage on the wire harness between the Trays 2, 3, and 4 Controller PCA (A23) and the Tray 4 Distribution PCA (A33)

1. Disconnect J1 from A33.
2. Test the voltage to A33 on A23: 24 Vdc at J1 pins 8 to 7 (GND) and 9 to 7 (GND).

Is the voltage correct?

No **Yes**

Replace the Tray 4 Distribution PCA (A33)

1. Replace A33.

[Trays 2, 3, and 4 distribution PCA on page 338](#)

WARNING! Use an ESD strap.

Check the wire harness between the Tray 4 Distribution PCA (A33) and the Trays 2, 3, and 4 Controller PCA (A23)

1. Check the wire harness between A33 and A23.
2. Repair wiring as needed.

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

WARNING! Use an ESD strap.

Replace the Trays 2, 3, and 4 Controller PCA (A23)

1. Replace A23.

[Trays 2, 3, and 4 Controller PCA \(A23\) on page 339](#)

1 **WARNING!** Use an ESD strap.

Check the input voltage to the Trays 2, 3, and 4 Controller PCA (A23)

1. Disconnect J1 from A23.
2. Test the input voltage to A23: 32 Vdc at J1 pins 3 to 2 (GND).

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Replace the Trays 2, 3, and 4 Controller PCA (A23)

1. Replace A23.

[Trays 2, 3, and 4 Controller PCA \(A23\) on page 339](#)

1 **WARNING!** Use an ESD strap.

Test the voltage at the Power Distribution PCA (A1)

1. Disconnect J8 from the A1.
2. Test the voltage to the Trays 2, 3, and 4 Controller PCA (A23) on A1: 32 Vdc at J8 pins 8 to 5.

[Power Distribution PCA \(A1\) diagram on page 2271](#)

[Electronics component locator on page 2327](#)

Is the voltage correct?

No **Yes**

Check the wire harness between the Power Distribution PCA (A1) and the Trays 2, 3, and 4 Controller PCA (A23)

1. Check the wire harness between M20, the Tray 3 Distribution PCA (A33), and A23.
2. Repair the wiring as needed.

[Tray 4 wiring diagram on page 2258](#)

1 **WARNING!** Use an ESD strap.

Replace the Power Distribution PCA (A1)

1. Replace A1.

[Power Distribution PCA \(A1\) on page 702](#)

A1.01A2: Failed to pick from Tray 2, and then recovered

Initial Steps

1. Look for intermittent operation of components.
2. Check the condition of the paper in the tray.
3. Check the pick rollers and idler rollers for wear.
4. Verify that the Tray 2 Exit sensor (SN47) actuator moves freely.
5. Check for similar warnings for other paper trays.

NOTE: Each paper tray has a pick head calibration pin located at the rear of the tray. Swapping trays can create pick problems. Return trays to their original positions after swapping for any testing.

Test the Tray 2 Exit sensor (SN47)

1. Open the right-side lower panel.
2. Manually move the plastic fingers to toggle SN47. If the fingers do not return to the extended position, check the spring on the end of the plastic shaft.

NOTE: Each paper tray has two plastic fingers on a plastic shaft.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the sensor state change?

No **Yes**

Test the one-way clutch

1. Manually move the drive rollers. One direction should move freely. The other direction should have some resistance.
2. Turn the rollers back and forth multiple times looking for a spot that might be slipping.

[Trays 2, 3, and 4 component locator on page 2330](#)

Does the one-way clutch slip?

No **Yes**

Replace the drive rollers

1. Replace the drive rollers.

Check the pick rollers

1. Check the pick rollers for contamination and wear.

[Trays 2, 3, and 4 component locator on page 2330](#)

Are the pick rollers dirty or worn?

No **Yes**

Clean or replace the pick rollers

1. Clean the pick rollers with a damp cloth.
2. If the pick rollers do not work after being cleaned, replace the pick rollers.

[Final activities on page 24](#)

[A1.1302: Paper jam at Tray 2 on page 1235](#)

A1.01A3: Failed to pick from Tray 3, and then recovered

Initial Steps

1. Look for intermittent operation of components.
2. Check the condition of the paper in the tray.
3. Check the pick rollers and idler rollers for wear.
4. Verify that the Tray 3 Exit sensor (SN51) actuator moves freely.
5. Check for similar warnings for other paper trays.

NOTE: Each paper tray has a pick head calibration pin located at the rear of the tray. Swapping trays can create pick problems. Return trays to their original positions after swapping for any testing.

Test the Tray 3 Exit sensor (SN51)

1. Open the right-side lower panel.
2. Manually move the plastic fingers to toggle SN51. If the fingers do not return to the extended position, check the spring on the end of the plastic shaft.

NOTE: Each paper tray has two plastic fingers on a plastic shaft.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the sensor state change?

No Yes

Test the one-way clutch

1. Manually move the drive rollers. One direction should move freely. The other direction should have some resistance.
2. Turn the rollers back and forth multiple times looking for a spot that might be slipping.

[Trays 2, 3, and 4 component locator on page 2330](#)

Does the one-way clutch slip?

No Yes

Replace the drive rollers

1. Replace the drive rollers.

Check the pick rollers

1. Check the pick rollers for contamination and wear.

[Trays 2, 3, and 4 component locator on page 2330](#)

Are the pick rollers dirty or worn?

No Yes

Clean or replace the pick rollers

1. Clean the pick rollers with a damp cloth.
2. If the pick rollers do not work after being cleaned, replace the pick rollers.

[Final activities on page 24](#)

Check the Tray 3 Exit sensor (SN51)

1. Verify that SN51 is functioning. If not, check the sensor for damage, and test the voltage to the sensor.

A1.01A4: Failed to pick from Tray 4, and then recovered

Initial Steps

1. Look for intermittent operation of components.
2. Check the condition of the paper in the tray.
3. Check the pick rollers and idler rollers for wear.
4. Verify that the Tray 4 Exit sensor (SN55) actuator moves freely.
5. Check for similar warnings for other paper trays.

NOTE: Each paper tray has a pick head calibration pin located at the rear of the tray. Swapping trays can create pick problems. Return trays to their original positions after swapping for any testing.

Test the Tray 4 Exit sensor (SN55)

1. Open the right-side lower panel.
2. Manually move the plastic fingers to toggle SN55. If the fingers do not return to the extended position, check the spring on the end of the plastic shaft.

NOTE: Each paper tray has two plastic fingers on a plastic shaft.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the sensor state change?

No Yes

Test the one-way clutch

1. Manually move the drive rollers. One direction should move freely. The other direction should have some resistance.
2. Turn the rollers back and forth multiple times looking for a spot that might be slipping.

[Trays 2, 3, and 4 component locator on page 2330](#)

Does the one-way clutch slip?

No Yes

Replace the drive rollers

1. Replace the drive rollers.

Check the pick rollers

1. Check the pick rollers for contamination and wear.

[Trays 2, 3, and 4 component locator on page 2330](#)

Are the pick rollers dirty or worn?

No Yes

Clean or replace the pick rollers

1. Clean the pick rollers with a damp cloth.
2. If the pick rollers do not work after being cleaned, replace the pick rollers.

[Electronics component locator on page 2327](#)

[Final activities on page 24](#)

A1.1304: Paper jam at Tray 4 on page 1238

A1.01C1: Trays 2, 3, and 4 Transport motor (M18)

Initial Steps

1. Check the electrical connection at J9 on the Trays 2, 3, and 4 Controller PCA (A23).

Test the voltage at the Power Distribution PCA (A1)

1. Disconnect J8 from A1.
2. Test the voltage to the Trays 2, 3, and 4 Controller PCA (A23) on A1: 32 Vdc at J8 pins 8 to 5.

[Power Distribution PCA \(A1\) diagram on page 2271](#)

[Electronics component locator on page 2327](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Check the 32 Vdc LED on the Trays 2, 3, and 4 Controller PCA (A23)

1. Verify that the LED is lit.

[Trays 2, 3, and 4 controller PCA diagram on page 2258](#)

1 Is the 32 Vdc LED lit?

1 No Yes

Test the Trays 2, 3, and 4 Transport motor (M18)

1. Run M18.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

1 2 Does M18 run?

1 2 No Yes

Check the input voltage to the Trays 2, 3, and 4 Controller PCA (A23)

1. Disconnect J1 from A23.
2. Test the voltage to A23: 32 Vdc at J1 pins 3 to 2 (GND).

[Trays 2, 3, and 4 controller PCA diagram on page 2258](#)

WARNING! Use an ESD strap.

1 2 3 Is the voltage correct?

1 2 3 No Yes

Check the wire harness between the Trays 2, 3, and 4 Controller PCA (A23) and the Trays 2, 3, and 4 Transport motor (M18)

1. Check the wire harness between A23 and M18. Repair as needed.

1 2 3 4 [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

Check the wire harness between the Power Distribution PCA (A1) and the Trays 2, 3, and 4 Controller PCA (A23)

1. Check the wire harness between A1 and A23.

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

Replace the Trays 2, 3, and 4 Transport motor (M18)

1. Replace M18.

[Trays 2, 3, and 4 Transport motor \(M18\) on page 331](#)

Replace the Trays 2, 3, and 4 Controller PCA (A23)

1. Replace A23.

[Trays 2, 3, and 4 Controller PCA \(A23\) on page 339](#)

WARNING! Use an ESD strap.

Replace the Power Distribution PCA (A1)

1. Replace A1.

[Power Distribution PCA \(A1\) on page 702](#)

WARNING! Use an ESD strap.

A1.02C1:Tray 2, 3, and 4 Ambient Temperature sensor (SN41)

Initial Steps

1. Check the electrical connections at the Tray 2, 3, and 4 Ambient Temperature sensor (SN41) and at J5 on the Trays 2, 3, and 4 Controller PCA (A23). Verify that the sensor is free of obstructions.

NOTE: If the MFP runs slowly, there might be a problem with SN41.

Cover the Tray 2, 3, and 4 Ambient Temperature sensor (SN41)

1. Cover SN41 with your hand. The temperature reading should change quickly.

[Trays 2, 3, and 4 component locator on page 2330](#)

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the temperature reading change?

No Yes

Check the temperature reading

1. The temperature reading should match the MFP environmental conditions. For example, a typical room temperature is approximately between 70 and 80 Fahrenheit (21 to 26 Celsius).

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the temperature reading match environmental conditions?

No Yes

Check the following conditions

1. Verify that the Tray 2, 3, and 4 Ambient Temperature sensor (SN41) is clean and has no obstructions.
2. Check the electrical connections and wiring between SN41 and the Trays 2, 3, and 4 Controller PCA (A23).

Check the 5, 24, and 32 Vdc LEDs on the Trays 2, 3, and 4 Controller PCA (A23)

1. Verify that the LEDs are lit.

[Trays 2, 3, and 4 controller PCA diagram on page 2258](#)

Are the 5, 24, and 32 Vdc LEDs lit?

No Yes

Test the voltage to the Tray 2, 3, and 4 Ambient Temperature sensor (SN41) on the Trays 2, 3, and 4 Controller PCA (A23)

1. Disconnect J5 from A23.
2. Test the voltage to SN41 on A23: 5 Vdc at J5 pins 1 to 4 (GND).

[Trays 2, 3, and 4 controller PCA diagram on page 2258](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Check the resistance at the Tray 2, 3, and 4 Ambient Temperature sensor (SN41)

1. Verify that J5 is connected on the Trays 2, 3, and 4 Controller PCA (A23).
2. Disconnect the connector from SN41.
3. Check the resistance at pins 2 to 4 on the wire harness.

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

NOTE: If SN41 is touched, the temperature reading changes quickly.

Is the resistance approximately 12000 ohms (70F/20C) and 9600 ohms (80F/26C) at SN41?

No Yes

Check the following conditions

1. Verify that the Tray 2, 3, and 4 Ambient Temperature sensor (SN41) is clean and has no obstructions.
2. Check the electrical connections and wiring between SN41 and the Trays 2, 3, and 4 Controller PCA (A23).

Replace the Tray 2, 3, and 4 Ambient Temperature sensor (SN41)

1. Verify that SN41 is clean and has no obstructions.
2. Check the electrical connections and wiring between SN41 and the Trays 2, 3, and 4 Controller PCA (A23).
3. If SN41 is clean and the connections are secure, then replace the sensor.

[Trays 2, 3, and 4 sensors on page 340](#)

WARNING! Use an ESD strap.

Replace the Trays 2, 3, and 4 Controller PCA (A23)

1. Replace A23.

[Trays 2, 3, and 4 Controller PCA \(A23\) on page 339](#)

WARNING! Use an ESD strap.

Test the voltage at the 32 Vdc and 5 Vdc test points on the Power Distribution PCA (A1)

1. Test the voltage at the 32 Vdc and 5 Vdc test points on A1.

[Power Distribution PCA \(A1\) diagram on page 2271](#)

Is the voltage 32 Vdc at the 32 Vdc test point and 5 Vdc at the 5 Vdc test point?

No Yes

Check the wire harness between the Trays 2, 3, and 4 Controller PCA (A23) and the Power Distribution PCA (A1)

1. Check the wiring between A1 and A23.
2. Repair or replace as needed.

[Power Distribution PCA \(A1\) diagram on page 2271](#)

[Trays 2, 3, and 4 controller PCA diagram on page 2258](#)

Test the voltage at the Power Distribution PCA (A1)

1. Disconnect J3 from the A1.
2. Disconnect J6 from the A1.
3. Test the voltage to J3 on A1: 32 Vdc at J3 pins 3 to 15, 4 to 16, 5 to 17, and 6 to 18.
4. Test the voltage to J6 on A1: 5 Vdc at J6 pins 6 to 3, 4 to 3, 19 to 3, and 20 to 3.

[Electronics component locator on page 2327](#)

[Power Distribution PCA \(A1\) diagram on page 2271](#)

Are the voltages correct?

No Yes

Replace the Power Distribution PCA (A1)

1. Replace A1.

[Power Distribution PCA \(A1\) on page 702](#)

Replace the Power supply (PS1)

1. Replace PS1.

[Power supply assembly on page 697](#)

Check the 5, 24, and 32 Vdc LEDs on the Trays 2, 3, and 4 Controller PCA (A23)

1. Verify that the LEDs are lit.

[Trays 2, 3, and 4 controller PCA diagram on page 2258](#)

Are the 5, 24, and 32 Vdc LEDs lit?

No Yes

Test the voltage to the Tray 2, 3, and 4 Ambient Temperature sensor (SN41) on the Trays 2, 3, and 4 Controller PCA (A23)

1. Disconnect J5 from A23.
2. Test the voltage to SN41 on A23: 5 Vdc at J5 pins 1 to 4 (GND).

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Check the resistance at the Tray 2, 3, and 4 Ambient Temperature sensor (SN41)

1. Verify that J5 is connected on the Trays 2, 3, and 4 Controller PCA (A23).
2. Disconnect the connector from SN41.
3. Check the resistance at pins 2 to 4 on the wire harness.

[Trays 2, 3, and 4 component locator on page 2330](#)

NOTE: If SN41 is touched, the temperature reading changes quickly.

Is the resistance approximately 12000 ohms (70F/20C) and 9600 ohms (80F/26C)?

No Yes

Check the following conditions

1. Verify that the Tray 2, 3, and 4 Ambient Temperature sensor (SN41) is clean and has no obstructions.
2. Check the electrical connections and wiring between SN41 and the Trays 2, 3, and 4 Controller PCA (A23).

Replace the Tray 2, 3, and 4 Ambient Temperature sensor (SN41)

1. Verify that SN41 is clean and has no obstructions.
2. Check the electrical connections and wiring between SN41 and the Trays 2, 3, and 4 Controller PCA (A23).
3. If SN41 is clean and the connections are secure, then replace the sensor.

[Trays 2, 3, and 4 sensors on page 340](#)

WARNING! Use an ESD strap.

Replace the Trays 2, 3, and 4 Controller PCA (A23)

1. Replace A23.

[Trays 2, 3, and 4 Controller PCA \(A23\) on page 339](#)

WARNING! Use an ESD strap.

Test the voltage at the 32 Vdc and 5 Vdc test points on the Power Distribution PCA (A1)

1. Test the voltage at the 32 Vdc and 5 Vdc test points.

[Power Distribution PCA \(A1\) diagram on page 2271](#)

Is the voltage 32 Vdc at the 32 Vdc test point and 5 Vdc at the 5 Vdc test point?

No **Yes**

Check the wire harness between the Trays 2, 3, and 4 Controller PCA (A23) and the Power Distribution PCA (A1)

1. Check the wire harness between A1 and A23.
2. Repair or replace as needed.

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

[Power Distribution PCA \(A1\) diagram on page 2271](#)

Test the voltage at the Power Distribution PCA (A1)

1. Disconnect J3 from A1.
2. Disconnect J6 from A1.
3. Test the voltage to J3 on A1: 32 Vdc at J3 pins 3 to 15, 4 to 16, 5 to 17, and 6 to 18.
4. Test the voltage to J6 on A1: 5 Vdc at J6 pins 6 to 3, 4 to 3, 19 to 3, and 20 to 3.

[Electronics component locator on page 2327](#)

[Power Distribution PCA \(A1\) diagram on page 2271](#)

Are the voltages correct?

No **Yes**

Replace the Power Distribution PCA (A1)

1. Replace A1.

[Power Distribution PCA \(A1\) on page 702](#)

Replace the Power supply (PS1)

1. Replace PS1.

[Power supply assembly on page 697](#)

A1.02C3: Tray 2, 3, and 4 Humidity sensor (SN42)

Initial Steps

1. Check the wire harness between the Tray 2, 3, and 4 Humidity sensor (SN42) and the Trays 2, 3, and 4 Controller PCA (A23). Verify that the sensor is free of obstructions.

NOTE: If the MFP runs slowly, there might be a problem with SN42.

Check the humidity reading

1. Check the humidity reading.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Is the humidity reading between 5 and 95 per cent humidity?

No **Yes**

Cover the Tray 2, 3, and 4 Humidity sensor (SN42)

1. Cover SN42 and check the humidity reading.

NOTE: The humidity reading should change quickly.

[Trays 2, 3, and 4 component locator on page 2330](#)

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Did the humidity reading change?

No **Yes**

Check the following conditions

1. Verify that the Tray 2, 3, and 4 Humidity sensor (SN42) is clean and has no obstructions.
2. Check the electrical connections and wiring between SN42 and the Trays 2, 3, and 4 Controller PCA (A23).

Check the 5, 24, and 32 Vdc LEDs on the Trays 2, 3, and 4 Controller PCA (A23)

1. Verify that the LEDs are lit.

[Trays 2, 3, and 4 controller PCA diagram on page 2258](#)

Are the 5, 24, and 32 Vdc LEDs illuminated?

No **Yes**

Test the voltage to Tray 2, 3, and 4 Humidity sensor (SN42) on the Trays 2, 3, and 4 Controller PCA (A23)

1. Disconnect J5 from A23.
2. Test the voltage to SN42 on A23: 5 Vdc at J5 pins 1 to 4 (GND).

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Replace the Tray 2, 3, and 4 Humidity sensor (SN42)

1. Verify that SN42 is clean and has no obstructions.
2. Check the electrical connections and wiring between the sensor and the Trays 2, 3, and 4 Controller PCA (A23).
3. If SN42 is clean and the connections are secure, replace the sensor.

[Trays 2, 3, and 4 sensors on page 340](#)

WARNING! Use an ESD strap.

Replace the Trays 2, 3, and 4 Controller PCA (A23)

1. Replace A23.

[Trays 2, 3, and 4 Controller PCA \(A23\) on page 339](#)

WARNING! Use an ESD strap.

Test the voltage at the 32 Vdc and 5 Vdc test points on the Power Distribution PCA (A1)

1. Test the voltage at the 32 Vdc and 5 Vdc test points.

[Power Distribution PCA \(A1\) diagram on page 2271](#)

Is the voltage 32 Vdc at the 32 Vdc test point and 5 Vdc at the 5 Vdc test point?

No **Yes**

Check the wire harness between the Trays 2, 3, and 4 Controller PCA (A23) and the Power Distribution PCA (A1)

1. Check the wire harness between A1 and A23.
2. Repair or replace as needed.

[Trays 2, 3, and 4 controller PCA diagram on page 2258](#)

[Power Distribution PCA \(A1\) diagram on page 2271](#)

Test the voltage at the Power Distribution PCA (A1)

1. Disconnect J3 from A1.
2. Disconnect J6 from A1.
3. Test the voltage to J3 on A1: 32 Vdc at J3 pins 3 to 15, 4 to 16, 5 to 17, and 6 to 18.
4. Test the voltage to J6 on A1: 5 Vdc at J6 pins 6 to 3, 4 to 3, 19 to 3, and 20 to 3.

[Electronics component locator on page 2327](#)

[Power Distribution PCA \(A1\) diagram on page 2271](#)

Are the voltages correct?

No **Yes**

Replace the Power Distribution PCA (A1)

1. Replace A1.

[Power Distribution PCA \(A1\) on page 702](#)

Replace the Power supply (PS1)

1. Replace PS1.

[Power supply assembly on page 697](#)

Check the 5, 24, and 32 Vdc LEDs on the Trays 2, 3, and 4 Controller PCA (A23)

1. Verify that the LEDs are lit.

[Trays 2, 3, and 4 controller PCA diagram on page 2258](#)

Are the 5, 24, and 32 Vdc LEDs lit?

No Yes

Test the voltage to the Tray 2, 3, and 4 Humidity sensor (SN42) on the Trays 2, 3, and 4 Controller PCA (A23)

1. Disconnect J5 from A23.
2. Test the voltage to SN42 on A23: 5 Vdc at J5 pins 1 to 4 (GND).

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Replace the Tray 2, 3, and 4 Humidity sensor (SN42)

1. Verify that SN42 is clean and has no obstructions.
2. Check the electrical connections and wiring between the sensor and the Trays 2, 3, and 4 Controller PCA (A23).
3. If SN42 is clean and the connections are secure, replace the sensor.

[Trays 2, 3, and 4 sensors on page 340](#)

WARNING! Use an ESD strap.

Replace the Trays 2, 3, and 4 Controller PCA (A23)

1. Replace A23.

[Trays 2, 3, and 4 Controller PCA \(A23\) on page 339](#)

WARNING! Use an ESD strap.

Test the voltage at the 32 Vdc and 5 Vdc test points on the Power Distribution PCA (A1)

1. Test the voltage at the 32 Vdc and 5 Vdc test points.

[Power Distribution PCA \(A1\) diagram on page 2271](#)

Is the voltage 32 Vdc at the 32 Vdc test point and 5 Vdc at the 5 Vdc test point?

No Yes

Check the wire harness between the Trays 2, 3, and 4 Controller PCA (A23) and the Power Distribution PCA (A1)

1. Check the wire harness between A1 and A23.
2. Repair or replace as needed.

[Trays 2, 3, and 4 controller PCA diagram on page 2258](#)

[Power Distribution PCA \(A1\) diagram on page 2271](#)

Test the voltage at the Power Distribution PCA (A1)

1. Disconnect J3 from the A1.
2. Disconnect J6 from the A1.
3. Test the voltage to J3 on A1: 32 Vdc at J3 pins 3 to 15, 4 to 16, 5 to 17, and 6 to 18.
4. Test the voltage to J6 on A1: 5 Vdc at J6 pins 6 to 3, 4 to 3, 19 to 3, and 20 to 3.

[Electronics component locator on page 2327](#)

[Power Distribution PCA \(A1\) diagram on page 2271](#)

Are the voltages correct?

No Yes

Replace the Power Distribution PCA (A1)

1. Replace A1.

1 [Power Distribution PCA \(A1\) on page 702](#)

Replace the Power supply (PS1)

1. Replace PS1.

[Power supply assembly on page 697](#)

A1.02E1: Tray 2 empty

Initial Steps

1. Verify that the tray has paper. If not, load the tray with paper.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

Test the Tray 2 Empty sensor (SN45)

1. Open Tray 2.
2. Reach inside Tray 2, and then reach upwards to the pick arm and toggle the SN45 actuator on the pick arm.

[Trays 2, 3, and 4 component locator on page 2330](#)

3. Check if the SN45 actuator has popped out of its holder.
4. Check SN45 for dust or paper debris. Clean as needed.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the sensor state change?

No **Yes**

Repair or align the tray

1. Repair or align the tray.

¹ [Trays 2, 3, and 4 component locator on page 2330](#)

Check another tray paper empty sensor

1. Open a different tray.
2. Reach inside the tray, and then reach upwards to the pick arm and toggle the tray paper empty sensor actuator on the pick arm.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the other paper empty sensor change state?

No **Yes**

Switch the cables on Trays 2, 3, and 4 Controller PCA (A23)

1. Disconnect the Tray 3 cable from J7 on A23.
2. Disconnect the Tray 2 cable from J6 on A23.
3. Connect the Tray 2 cable to J7 on A23.
4. Toggle the Tray 2 Empty sensor (SN45). This sensor is now detected as the Tray 3 Empty sensor (SN49).

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

[Trays 2, 3, and 4 component locator on page 2330](#)

NOTE: A23 connectors J10 (Tray 4), J7 (Tray 3), and J6 (Tray 2) are identical. Cables can be swapped between connectors for troubleshooting purposes.

WARNING! Use an ESD strap.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

¹ Does the sensor state change?

1		No	Yes
			<p>Test the voltage to the Tray 2 Empty sensor (SN45)</p> <ol style="list-style-type: none"> 1. On the Trays 2, 3, and 4 Controller PCA (A23), connect the Tray 2 cable to J6, and then connect the Tray 3 cable to J7. 2. Disconnect J4 from the Tray 2 Distribution PCA (A33). 3. Test the voltage to SN45 on A33: 5 Vdc at J4 pins 6 to 4 (GND). <p>Trays 2, 3, and 4 component locator on page 2330</p>
1	2		Is the voltage correct?
1	2	No	Yes
			<p>Replace the pick arm</p> <ol style="list-style-type: none"> 1. Replace the pick arm. <p>Pick arm assembly on page 328</p>
1	2	3	
			<p>Test the voltage to the Tray 2 Distribution PCA (A33)</p> <ol style="list-style-type: none"> 1. Verify that the Tray 2 cable is connected to J4 on A33. 2. Disconnect J1 from A33. 3. Test the voltage input voltage to A33: 3.3 Vdc at J1 pins 7 to 4.
1	2		Is the voltage correct?
1	2	No	Yes
			<p>Replace the Tray 2 Distribution PCA (A33)</p> <ol style="list-style-type: none"> 1. Replace A33. <p>Trays 2, 3, and 4 distribution PCA on page 338</p>
1	2	3	
			<p>Replace the cable</p> <ol style="list-style-type: none"> 1. Tray 2 wiring diagram on page 2256 <p>A1.0701: Trays 2, 3, and 4 Controller PCA (A23) failure on page 1231</p>
1			A1.0701: Trays 2, 3, and 4 Controller PCA (A23) failure on page 1231

A1.02E2: Tray 3 empty

Initial Steps

1. Verify that the tray has paper. If not, load the tray with paper.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

Test the Tray 3 Empty sensor (SN49)

1. Open Tray 3.
2. Reach inside Tray 3, and then reach upwards to the pick arm and toggle the SN49 actuator on the pick arm.

[Trays 2, 3, and 4 component locator on page 2330](#)

3. Check if the SN49 actuator has popped out of its holder.
4. Check SN49 for dust or paper debris. Clean as needed.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does sensor state change?

No **Yes**

Repair or align the tray with the pick arm sensor

1. Repair or align the tray.

¹ [Trays 2, 3, and 4 component locator on page 2330](#)

Check another tray paper empty sensor

1. Open a different tray.
2. Reach inside the tray, and then reach upwards to the pick arm and toggle the tray paper empty sensor actuator on the pick arm.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the other paper empty sensor change state?

No **Yes**

Switch the cables on Trays 2, 3, and 4 Controller PCA (A23)

1. Disconnect the Tray 2 cable from J6 on A23.
2. Disconnect the Tray 3 cable from J7 on A23.
3. Connect the Tray 3 cable to J6 on A23.
4. Toggle the Tray 3 Empty sensor (SN49). This sensor is now detected as the Tray 2 Empty sensor (SN45).

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

[Trays 2, 3, and 4 component locator on page 2330](#)

NOTE: A23 connectors J10 (Tray 4), J7 (Tray 3), and J6 (Tray 2) are identical. Cables can be swapped between connectors for troubleshooting purposes.

WARNING! Use an ESD strap.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

¹ Does the sensor state change?

1		No	Yes
			<p>Test the voltage to Tray 3 Empty sensor (SN49)</p> <ol style="list-style-type: none"> 1. On the Trays 2, 3, and 4 Controller PCA (A23), connect the Tray 2 cable to J6, and then connect the Tray 3 cable to J7. 2. Disconnect J4 from the Tray 3 Distribution PCA (A33). 3. Test the voltage to SN49 on A33: 5 Vdc at J4 pins 6 to 4 (GND). <p>Trays 2, 3, and 4 component locator on page 2330</p>
1	2		Is the voltage correct
1	2	No	Yes
			<p>Replace the pick arm</p> <ol style="list-style-type: none"> 1. Replace the pick arm. <p>Pick arm assembly on page 328</p>
1	2	3	<p>Test the voltage to the Tray 3 Distribution PCA (A33)</p> <ol style="list-style-type: none"> 1. Verify that the Tray 3 cable is connected to J4 on A33. 2. Disconnect J1 from A33. 3. Test the voltage input voltage to A33: 3.3 Vdc at J1 pins 7 to 4. <p>Trays 2, 3, and 4 component locator on page 2330</p> <p>Trays 2, 3, and 4 assembly wiring diagram on page 2256</p>
1	2		Is the voltage correct?
1	2	No	Yes
			<p>Replace the Tray 3 Distribution PCA (A33)</p> <ol style="list-style-type: none"> 1. Replace A33. <p>Trays 2, 3, and 4 distribution PCA on page 338</p>
1	2	3	<p>Replace the cable</p> <ol style="list-style-type: none"> 1. Tray 3 wiring diagram on page 2257
1			A1.0701: Trays 2, 3, and 4 Controller PCA (A23) failure on page 1231
			A1.0701: Trays 2, 3, and 4 Controller PCA (A23) failure on page 1231

A1.02E3: Tray 4 empty

Initial Steps

1. Verify that the tray has paper. If not, load the tray with paper.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

Test the Tray 4 Empty sensor (SN53)

1. Open Tray 4.
2. Reach inside Tray 4, and then reach upwards to the pick arm and toggle the SN53 actuator on the pick arm.

[Trays 2, 3, and 4 component locator on page 2330](#)

3. Check if the SN53 actuator has popped out of its holder.
4. Examine SN53 for dust or paper debris. Clean as needed.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the sensor state change?

No **Yes**

Repair or align the tray with the pick arm sensor

1. Repair or align the tray.

Check another tray paper empty sensor

1. Open a different tray.
2. Reach inside the tray, and then reach upwards to the pick arm and toggle the tray paper empty sensor actuator on the pick arm.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the other paper empty sensor change state?

No **Yes**

Switch the cables on Trays 2, 3, and 4 Controller PCA (A23)

1. Disconnect the Tray 3 cable from J7 on A23.
2. Disconnect the Tray 4 cable from J10 on A23.
3. Connect the Tray 4 cable to J7 on A23.
4. Toggle the Tray 4 Empty sensor (SN53). This sensor is now detected as the Tray 3 Empty sensor (SN49).

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

[Trays 2, 3, and 4 component locator on page 2330](#)

NOTE: A23 connectors J10 (Tray 4), J7 (Tray 3), and J6 (Tray 2) are identical. Cables can be swapped between connectors for troubleshooting purposes.

WARNING! Use an ESD strap.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the sensor state change?

No **Yes**

Test the voltage to the Tray 4 Empty sensor (SN53)

1. On the Trays 2, 3, and 4 Controller PCA (A23), connect the Tray 4 cable to J10, and then connect the Tray 3 cable to J7.
2. Disconnect J4 from the Tray 4 Distribution PCA (A33).
3. Test the voltage to SN53 on A33: 5 Vdc at J4 pins 6 to 4 (GND).

[Trays 2, 3, and 4 component locator on page 2330](#)

Is the voltage correct?

No Yes

Replace the pick arm

1. Replace the pick arm.

[Pick arm assembly on page 328](#)

Test the voltage to the Tray 4 Distribution PCA (A33)

1. Verify that the Tray 4 cable is connected to J4 on A33.
2. Disconnect J1 from A33.
3. Test the voltage input voltage to A33: 3.3 Vdc at J1 pins 7 to 4.

Is the voltage correct?

No Yes

Replace the Tray 4 Distribution PCA (A33)

1. Replace A33.

[Trays 2, 3, and 4 distribution PCA on page 338](#)

Replace the cable

1. [Tray 4 wiring diagram on page 2258](#)

[A1.0701: Trays 2, 3, and 4 Controller PCA \(A23\) failure on page 1231](#)

[A1.0701: Trays 2, 3, and 4 Controller PCA \(A23\) failure on page 1231](#)

A1.02E4: Tray 2 low

Initial Steps

1. [Trays 2, 3, and 4 component locator on page 2330](#)

Check the Tray 2 Low sensor (SN44)

1. Verify that the tray contains approximately ten sheets of paper.
2. Check SN44 for dust or paper debris. Clean as needed.

[Trays 2, 3, and 4 component locator on page 2330](#)

3. Open and close the tray to toggle SN44 on the pick arm.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the sensor state change?

No **Yes**

Check for intermittent behavior

1. Place varying amounts of paper in the tray.
2. Open and close the tray to toggle the Tray 2 Low sensor (SN44) on the pick arm.

1 [Trays 2, 3, and 4 component locator on page 2330](#)

Test another paper tray

1. Open a different tray.
2. Verify that the tray contains approximately ten sheets of paper.
3. Open and close the tray to toggle the tray paper low sensor on the pick arm.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the sensor state change?

No **Yes**

Switch the tray cables

1. On the Trays 2, 3, and 4 Controller PCA (A23), disconnect the Tray 3 cable from J7.
2. On A23, disconnect the Tray 2 cable from J6.
3. Connect the Tray 2 cable to J7 on A23.
4. Open and close Tray 2. Tray 2 is now detected as Tray 3.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

1 Does the sensor state change?

1 **No** **Yes**

1 2 [A1.0701: Trays 2, 3, and 4 Controller PCA \(A23\) failure on page 1231](#)

Test the voltage to the Tray 2 Low sensor (SN44)

1. On the Trays 2, 3, and 4 Controller PCA (A23), connect the Tray 2 cable to J6, and then connect the Tray 3 cable to J7.
2. Disconnect J7 from the Tray 2 Distribution PCA (A33).
3. Test the voltage to SN44 on A33: 5 Vdc at J2 pins 1 to 2 (GND).

[Trays 2, 3, and 4 distribution PCA \(A33\) diagram on page 2259](#)

1 Is the voltage correct?

1 **No Yes**

Clean or replace the pick arm assembly

1. Verify that the Tray 2 Low sensor (SN44) on the pick arm is clear of debris. Clean if needed.
2. If the problem is not resolved, replace the pick arm assembly.

2 [Pick arm assembly on page 328](#)

Test the voltage from the Trays 2, 3, and 4 Controller PCA (A23)

1. Connect J2 on the Tray 2 Distribution PCA (A33).
2. Disconnect J1 from A33.
3. Test the input voltage to SN44 on A33: 5 Vdc at J1 pins 7 to 1.

1 Is the voltage correct?

1 **No Yes**

Replace the Tray 2 Distribution PCA (A33)

1. Replace A33.

2 [Trays 2, 3, and 4 distribution PCA on page 338](#)

Check the wire harness between the Tray 2 Distribution PCA (A33) and the Trays 2, 3, and 4 Controller PCA (A23)

1. Check the wire harness between A33 and A23. Repair or replace as needed.

1 [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

[A1.0701: Trays 2, 3, and 4 Controller PCA \(A23\) failure on page 1231](#)

A1.02E5: Tray 3 low

Initial Steps

1. [Trays 2, 3, and 4 component locator on page 2330](#)

Check the Tray 3 Low sensor (SN48)

1. Verify that the tray contains approximately ten sheets of paper.
2. Check SN48 for dust or paper debris. Clean as needed.

[Trays 2, 3, and 4 component locator on page 2330](#)

3. Open and close the tray to toggle SN48 on the pick arm.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the sensor state change?

No **Yes**

Check for intermittent behavior

1. Place varying amounts of paper in the tray.
2. Open and close the tray to toggle the Tray 3 Low sensor (SN48) on the pick arm.

1 [Trays 2, 3, and 4 component locator on page 2330](#)

Test another paper tray

1. Open a different tray.
2. Verify that the tray contains approximately 10 sheets of paper.
3. Open and close the paper tray to toggle the tray paper low sensor on the pick arm.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Do the sensor state change?

No **Yes**

Switch the tray cables

1. On the Trays 2, 3, and 4 Controller PCA (A23), disconnect the Tray 3 cable from J7.
2. On A23, disconnect the Tray 2 cable from J6.
3. Connect the Tray 3 cable to J6 on A23.
4. Open and close Tray 3. Tray 3 is now detected as Tray 2.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

1 Does the paper low sensor change state?

1 **No** **Yes**

1 2 [A1.0701: Trays 2, 3, and 4 Controller PCA \(A23\) failure on page 1231](#)

Test the voltage to the Tray 3 Low sensor (SN48)

1. On the Trays 2, 3, and 4 Controller PCA (A23), connect the Tray 3 cable to J7, and then connect the Tray 2 cable to J6.
2. Disconnect J2 from the Tray 3 Distribution PCA (A33).
3. Test the voltage to SN48 on A33: 5 Vdc at J2 pins 1 to 2 (GND).

[Trays 2, 3, and 4 component locator on page 2330](#)

1 Is the voltage correct?

1 **No Yes**

Clean or replace the pick arm assembly

1. Verify that the Tray 3 Low sensor (SN48) on the pick arm is clear of debris. Clean if needed.
2. If the problem is not resolved, replace the pick arm assembly.

2 [Pick arm assembly on page 328](#)

Test the voltage from the Trays 2, 3, and 4 Controller PCA (A23)

1. Connect J2 on the Tray 3 Distribution PCA (A33).
2. Disconnect J1 from A33.
3. Test the input voltage to SN48 on A33: 5 Vdc at J1 pins 7 to 1.

1 Is the voltage correct?

1 **No Yes**

Replace the Tray 3 Distribution PCA (A33)

1. Replace A33.

2 [Trays 2, 3, and 4 distribution PCA on page 338](#)

Repair or replace the wire harness between the Tray 3 Distribution PCA (A33) and the Trays 2, 3, and 4 Controller PCA (A23)

1. Check the wire harness between A33 and A23. Repair or replace as needed.

1 [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

[A1.0701: Trays 2, 3, and 4 Controller PCA \(A23\) failure on page 1231](#)

A1.02E6: Tray 4 low

Initial Steps

1. [Trays 2, 3, and 4 component locator on page 2330](#)

Check the Tray 4 Low sensor (SN52)

1. Verify that the tray contains approximately ten sheets of paper.
2. Check SN52 for dust or paper debris. Clean as needed.

[Trays 2, 3, and 4 component locator on page 2330](#)

3. Open and close the tray to toggle SN52 on the pick arm.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the sensor state change?

No **Yes**

Check for intermittent behavior

1. Place varying amounts of paper in the tray.
2. Open and close the tray to toggle Tray 4 Low sensor (SN52) on the pick arm.

Test another paper tray

1. Open a different tray.
2. Verify that the tray contains approximately ten sheets of paper.
3. Open and close the paper tray to toggle the tray paper low sensor on the pick arm.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Do the sensor state change?

No **Yes**

Switch the tray cables

1. On the Trays 2, 3, and 4 Controller PCA (A23), disconnect the Tray 4 cable from J10.
2. On A23, disconnect the Tray 3 cable from J7.
3. Connect the Tray 4 cable to J7 on A23.
4. Toggle the Tray 4 Low sensor (SN52) indicator by opening and closing Tray 4. Tray 4 is now detected as Tray 3.

[Trays 2, 3, and 4 component locator on page 2330](#)

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the sensor state change?

No **Yes**

2. [A1.0701: Trays 2, 3, and 4 Controller PCA \(A23\) failure on page 1231](#)

Test the voltage to the Tray 4 Low sensor (SN52)

1. On the Trays 2, 3, and 4 Controller PCA (A23), connect the Tray 4 cable to J10, and then connect the Tray 3 cable to J7.
2. Disconnect J2 from the Tray 4 Distribution PCA (A33).
3. Test the voltage to SN52 on A33: 5 Vdc at J2 pins 1 to 4 (GND).

Is the voltage correct?

No Yes

Clean or replace the pick arm assembly

1. Verify that the Tray 4 Low sensor (SN52) on the pick arm is clear of debris. Clean if needed.
2. If the problem is not resolved, replace the pick arm assembly.

[Pick arm assembly on page 328](#)

Test the voltage from the Trays 2, 3, and 4 Controller PCA (A23)

1. Connect J2 on the Tray 4 Distribution PCA (A33).
2. Disconnect J1 from A33.
3. Test the input voltage to SN52 on A33: 5 Vdc at J1 pins 7 to 1.

Is the voltage correct?

No Yes

Replace the Tray 4 Distribution PCA (A33)

1. Replace A33.

[Trays 2, 3, and 4 distribution PCA on page 338](#)

Repair or replace the wire harness between the A33 and the Trays 2, 3, and 4 Controller PCA (A23)

1. Check the wire harness between A33 and A23. Repair or replace as needed.

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

[A1.0701: Trays 2, 3, and 4 Controller PCA \(A23\) failure on page 1231](#)

A1.02EC: Tray 2 open

Initial Steps

1. Verify that the tray closes completely and latches securely.
2. Check for any obstructions behind the tray.

[Trays 2, 3, and 4 component locator on page 2330](#)

Check the control panel messages

1. Open and close Tray 2 and verify that the Tray 2 open message is displayed and then not displayed on the control panel.

Is the Tray 2 open message displayed when the tray is open and then not displayed when the tray is closed?

No **Yes**

1 | [Final activities on page 24](#)

Check the 5, 24, and 32 Vdc LEDs on the Trays 2, 3, and 4 Controller PCA (A23)

1. Verify that the LEDs are lit.

Are the 5, 24, and 32 Vdc LEDs on A23 lit?

No **Yes**

Check the Tray 2 Open switch (SW9)

1. Pull out the tray.
2. Manually actuate SW9.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the switch change state?

No **Yes**

Check the paper tray leaf spring actuator for damage or misalignment

1. Check the tray leaf spring actuator for damage and correct mounting location.

CAUTION: When checking the paper tray leaf spring be careful not to bend or damage the leaf spring.

Check the control panel messages

1. Open and close Tray 2 and verify that the Tray 2 open message is displayed and then not displayed on the control panel.

Is the Tray 2 open message displayed when the tray is open and then not displayed when the tray is closed?

No **Yes**

3 | [Final activities on page 24](#)

Replace the tray drawer

1. Replace Tray 2.

Replace the Tray 2 Open switch (SW9)

1. Replace SW9.

[Trays 2, 3, and 4 sensors on page 340](#)

WARNING! Use an ESD strap.

Check the input voltage to the Trays 2, 3, and 4 Controller PCA (A23)

1. Disconnect J1 from A23.
2. Test the input voltage to A23: 32 Vdc at J1 pins 3 to 2 (GND).

[Trays 2, 3, and 4 controller PCA diagram on page 2258](#)

[Trays 2, 3, and 4 component locator on page 2330](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No	Yes
	Check the 32 Vdc and 5 Vdc LEDs on the Power Distribution PCA (A1)
	1. Verify that the LEDs are lit.
1	Are the 32 Vdc and 5 Vdc LEDs on A1 lit?
1	No Yes
	Replace the Trays 2, 3, and 4 Controller PCA (A23)
	1. Replace A23.
	Trays 2, 3, and 4 Controller PCA (A23) on page 339
1	2 WARNING! Use an ESD strap.
	Replace the Power Distribution PCA (A1)
	1. Replace A1.
	Power Distribution PCA (A1) on page 702
1	WARNING! Use an ESD strap.

Check the wire harness between the Trays 2, 3, and 4 Controller PCA (A23) and the Power Distribution PCA (A1)

1. Check the wire harness between A23 and A1.
- [Trays 2, 3, and 4 controller PCA diagram on page 2258](#)
- [Power Distribution PCA \(A1\) diagram on page 2271](#)

A1.02ED: Tray 3 open

Initial Steps

1. Verify that the tray closes completely and latches securely.
2. Check for any obstructions behind the tray.

[Trays 2, 3, and 4 component locator on page 2330](#)

Check the control panel messages

1. Open and close Tray 3 and verify that the Tray 3 open message is displayed and then not displayed on the control panel.

Is the Tray 3 open message displayed when the tray is open and then not displayed when the tray is closed?

No **Yes**

1 | [Final activities on page 24](#)

Check the 5, 24, and 32 Vdc LEDs on the Trays 2, 3, and 4 Controller PCA (A23)

1. Verify that the LEDs are lit.

Are the 5, 24, and 32 Vdc LEDs on A23 lit?

No **Yes**

Check the Tray 2 Open switch (SW9)

1. Pull out the tray.
2. Manually actuate SW14.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the switch state change?

No **Yes**

Check the paper tray leaf spring actuator for damage or misalignment

1. Check the tray leaf spring actuator for damage and proper mounting location.

CAUTION: When checking the paper tray leaf spring be careful not to bend or damage the leaf spring.

Check the control panel messages

1. Open and close Tray 3 and verify that the Tray 3 open message is displayed and then not displayed on the control panel.

Is the Tray 3 open message displayed when the tray is open and then not displayed when the tray is closed?

No **Yes**

3 | [Final activities on page 24](#)

Replace the tray drawer

1. Replace Tray 3.

Replace the Tray 3 Open switch (SW14)

1. Replace SW14.

[Trays 2, 3, and 4 sensors on page 340](#)

WARNING! Use an ESD strap.

Check the input voltage to the Trays 2, 3, and 4 Controller PCA (A23)

1. Disconnect J1 from A23.
2. Test the input voltage to A23: 32 Vdc at J1 pins 3 to 2 (GND).

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

[Trays 2, 3, and 4 component locator on page 2330](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Check the 32 Vdc and 5 Vdc LEDs on the Power Distribution PCA (A1)

1. Verify that the LEDs are lit.

1 Are the 32 Vdc and 5 Vdc LEDs on A1 lit?

1 **No** **Yes**

Replace the Trays 2, 3, and 4 Controller PCA (A23)

1. Replace A23.

[Trays 2, 3, and 4 Controller PCA \(A23\) on page 339](#)

1 2 **WARNING!** Use an ESD strap.

Replace the Power Distribution PCA (A1)

1. Replace A1.

[Power Distribution PCA \(A1\) on page 702](#)

1 **WARNING!** Use an ESD strap.

Repair or replace the wiring harness between the Trays 2, 3, and 4 Controller PCA (A23) and the Power Distribution PCA (A1)

1. Check the wire harness between A23 and A1.

[Trays 2, 3, and 4 controller PCA diagram on page 2258](#)

[Power Distribution PCA \(A1\) diagram on page 2271](#)

A1.02EE: Tray 4 open

Initial Steps

1. Verify that the tray closes completely and latches securely.
2. Check for any obstructions behind the tray.

[Trays 2, 3, and 4 component locator on page 2330](#)

Check the control panel messages

1. Open and close Tray 4 and verify that the Tray 4 open message is displayed and then not displayed on the control panel.

Is the Tray 4 open message displayed when the tray is open and then not displayed when the tray is closed?

No **Yes**

1 | [Final activities on page 24](#)

Check the 5, 24, and 32 Vdc LEDs on the Trays 2, 3, and 4 Controller PCA (A23)

1. Verify that the LEDs are lit.

Are the 5, 24, and 32 Vdc LEDs on the A23 lit?

No **Yes**

Check the Tray 4 Open switch (SW19)

1. Pull out the tray.
2. Manually actuate the SW19.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the switch state change?

No **Yes**

Check the paper tray leaf spring actuator for damage or misalignment

1. Check the tray leaf spring actuator for damage and proper mounting location.

CAUTION: When checking the paper tray leaf spring be careful not to bend or damage the leaf spring.

Check the control panel messages

1. Open and close Tray 4 and verify that the Tray 4 open message is displayed and then not displayed on the control panel.

Is the Tray 4 open message displayed when the tray is open and then not displayed when the tray is closed?

No **Yes**

3 | [Final activities on page 24](#)

Replace the tray drawer

1. Replace Tray 4.

Replace the Tray 2 Open switch (SW9)

1. Replace SW9.

[Trays 2, 3, and 4 sensors on page 340](#)

WARNING! Use an ESD strap.

Check the input voltage to the Trays 2, 3, and 4 Controller PCA (A23)

1. Disconnect J1 from A23.
2. Test the input voltage to A23: 32 Vdc at J1 pins 3 to 2 (GND).

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

[Trays 2, 3, and 4 component locator on page 2330](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Check the 32 Vdc and 5 Vdc LEDs on the Power Distribution PCA (A1)

1. Verify that the LEDs are lit.

1 Are the 32 Vdc and 5 Vdc LEDs on A1 lit?

1 **No** **Yes**

Replace the Trays 2, 3, and 4 Controller PCA (A23)

1. Replace A23.

[Trays 2, 3, and 4 Controller PCA \(A23\) on page 339](#)

1 2 **WARNING!** Use an ESD strap.

Replace the Power Distribution PCA (A1)

1. Replace A1.

[Power Distribution PCA \(A1\) on page 702](#)

1 **WARNING!** Use an ESD strap.

Repair or replace the wiring harness between the Trays 2, 3, and 4 Controller PCA (A23) and the Power Distribution PCA (A1)

1. Check the wire harness between A23 and A1.

[Trays 2, 3, and 4 controller PCA diagram on page 2258](#)

[Power Distribution PCA \(A1\) diagram on page 2271](#)

A1.02EF: Close right-side lower panel

Initial Steps

1. [Trays 2, 3, and 4 component locator on page 2330](#)

Check the Right-side Lower Panel Open sensor (SN43)

1. Open and close the right-side lower panel to manually activate SN43.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the sensor state change?

No **Yes**

Repair the right-side lower panel

1. Check the door latch alignment to the Right-side Lower Panel Open sensor (SN43).
2. Check the door handle.
3. Check the door hinge.
4. Repair as needed.

Check the following conditions

1. Make sure that the sensor is correctly located.
2. Clean the sensor and the surrounding area.
3. Verify that the flag actuator has free movement.
NOTE: Ensure tray 2 exit sensor wires are routed behind SN43 (right side lower panel sensor) to eliminate flag actuator binding.
4. Check the right-side lower panel hinges and latch.
5. Check the wire harness between the Right-side Lower Panel Open sensor (SN43) and the Trays 2, 3, and 4 Controller PCA (A23).

Check the Right-side Lower Panel Open sensor (SN43)

1. Open and close the right-side lower panel to manually activate SN43.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the sensor state change?

No **Yes**

[Final activities on page 24](#)

Test the voltage to the Right-side Lower Panel Open sensor (SN43) on the Trays 2, 3, and 4 Controller PCA (A23)

1. Disconnect J4 from A23.
2. Test the voltage to SN43 on A23: 5 Vdc at J4 pins 4 to 5 (GND).

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Test the voltage at the Right-side Lower Panel Open sensor (SN43)

1. Verify that J4 is connected on the Trays 2, 3, and 4 Controller PCA (A23).
2. Disconnect the wire harness from SN43.
3. Test the voltage at SN43: 5 Vdc at pins 1 to 2 (GND) on W80P1-SN43.

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

1 Is the voltage correct?

1 **No** **Yes**

Replace the Right-side Lower Panel Open sensor (SN43)

1. Replace SN43.

2 [Trays 2, 3, and 4 sensors on page 340](#)

Check the wire harness between the Trays 2, 3, and 4 Controller PCA (A23) and the Right-side Lower Panel Open sensor (SN43)

1. Check the wire harness between A23 and SN43.

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

2. Repair as needed.

[A1.0701: Trays 2, 3, and 4 Controller PCA \(A23\) failure on page 1231](#)

A1.06C1: Right-side Lower Panel LED (LED18) not lit

Initial Steps

1. [Trays 2, 3, and 4 component locator on page 2330](#)

Test the Right-side Lower Panel LED (LED18)

1. Activate LED18.
2. Verify that LED18 turns on and off.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the LED turn on and off?

No **Yes**

Check for problems that might cause intermittent behavior

1. Check the wire harness between the Motion PCA (A2) and the Right-side Lower Panel LED (LED18).
[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

1. Check the LED mounting and surrounding area for any obvious problems. Repair as needed.

Check the Right-side Lower Panel LED (LED18) and wire harness

1. Verify that the LED is correctly located.
[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)
2. Check the wire harness between the Motion PCA (A2) and the Right-side Lower Panel LED (LED18).

Test the Right-side Lower Panel LED (LED18)

1. Activate LED18.
2. Verify that LED18 turns on and off.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the LED turn on and off?

No **Yes**

1. [Final activities on page 24](#)

Test the voltage on the Motion PCA (A2)

1. Disconnect J6 from A2.
2. Test the voltage to the Right-side Lower Panel LED (LED18) on A2: 5 Vdc on J8 at pins 2 to 1.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage at the Right-side Lower Panel LED (LED18)

1. Verify that J6 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from LED18.
3. Test the voltage at LED18: 5 Vdc at pins 1 to 2 on W79P1-LED18.

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

1 Is the voltage correct?

1 **No** **Yes**

Replace the Right-side Lower Panel LED (LED18)

1. Replace the LED.

2 [Trays 2, 3, and 4 LEDs on page 348](#)

Check the wire harness between the Motion PCA (A2) and the Right-side Lower Panel LED (LED18)

1. Check the wire harness between A2 and LED18. Repair as needed.

1 [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

A1.06C2: Tray 2 LED (LED15) not lit

Initial Steps

1. [Trays 2, 3, and 4 component locator on page 2330](#)

Test the Tray 2 LED (LED15)

1. Activate LED15.
2. Verify that the LED turns on and off.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the LED turn on and off?

No **Yes**

Check for problems that might cause intermittent behavior

1. Check the wire harness between the Motion PCA (A2) and the Tray 2 LED (LED15).

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

1. Check the LED mounting and surrounding area for any obvious problems. Repair as needed.

Check the LED and wire harness

1. Verify that the LED is correctly located.
[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)
2. Check the wire harness between the Motion PCA (A2) and the Tray 2 LED (LED15).

Test the Tray 2 LED (LED15)

1. Activate LED15.
2. Verify that the LED turns on and off.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the LED turn on and off?

No **Yes**

1. [Final activities on page 24](#)

Test the voltage on the Motion PCA (A2)

1. Disconnect J6 from A2.
2. Test the voltage to the Tray 2 LED (LED15) on A2: 5 Vdc at W77P10 pins 2 to 1.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage at the Tray 2 LED (LED15)

1. Verify that J6 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the LED.
3. Test the voltage at Tray 2 LED (LED15): 5 Vdc at pins 1 to 2 on W77P2-LED15.

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

1 Is the voltage correct?

1 **No** **Yes**

Replace the Tray 2 LED (LED15)

1. Replace the LED.

1 2 [Trays 2, 3, and 4 LEDs on page 348](#)

Check the wire harness between the Motion PCA (A2) and the Tray 2 LED (LED15)

1. Check the wire harness between A2 and LED15. Repair as needed.

1 [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

A1.06C3: Tray 3 LED (LED16) not lit

Initial Steps

1. [Trays 2, 3, and 4 component locator on page 2330](#)

Test the Tray 3 LED (LED16)

1. Activate LED16.
2. Verify that the LED turns on and off.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the LED turn on and off?

No **Yes**

Check for problems that might cause intermittent behavior

1. Check the wire harness between the Motion PCA (A2) and the Tray 3 LED (LED16).

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

1. **2.** Visually check the LED mounting and surrounding area for any obvious problems. Repair as needed.

Check the LED and wire harness

1. Verify that the LED is correctly located.
[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)
2. Check the wire harness between the Motion PCA (A2) and the Tray 3 LED (LED16).

Test the Tray 3 LED (LED16)

1. Activate LED16.
2. Verify that the LED turns on and off.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the LED turn on and off?

No **Yes**

1. [Final activities on page 24](#)

Test the voltage on the Motion PCA (A2)

1. Disconnect J6 from A2.
2. Test the voltage to the Tray 3 LED (LED16) on A2: 5 Vdc at W77P10 pins 4 to 3.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage at the Tray 3 LED (LED16)

1. Verify that J6 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the LED.
3. Test the voltage at LED16: 5 Vdc at pins 1 to 2 on W77P3-LED16.

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

1 Is the voltage correct?

1 **No** **Yes**

Replace the Tray 3 LED (LED16)

1. Replace the LED.

1 2 [Trays 2, 3, and 4 LEDs on page 348](#)

Check the wire harness between the Motion PCA (A2) and the LED

1. Check the wire harness between A2 and LED16. Repair as needed.

1 [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

A1.06C4: Tray 4 LED (LED17) not lit

Initial Steps

1. [Trays 2, 3, and 4 component locator on page 2330](#)

Test the Tray 4 LED (LED17)

1. Activate LED17.
2. Verify that the LED turns on and off.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the LED turn on and off?

No **Yes**

Check for problems that might cause intermittent behavior

1. Check the wire harness between the Motion PCA (A2) and the Tray 4 LED (LED17).

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

1. Visually check the LED mounting and surrounding area for any obvious problems. Repair as needed.

Check Tray 4 LED (LED17) and that wire harness

1. Verify that the LED is correctly located.
[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)
2. Check the wire harness between the Motion PCA (A2) and LED17.

Test the Tray 4 LED (LED17)

1. Activate LED17.
2. Verify that the LED turns on and off.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the LED turn on and off?

No **Yes**

1. [Final activities on page 24](#)

Test the voltage on the Motion PCA (A2)

1. Disconnect J6 from A2.
2. Test the voltage to the Tray 4 LED (LED17) on A2: 5 Vdc at W77P10 pins 6 to 5.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage at the Tray 4 LED (LED17)

1. Verify that J6 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the LED.
3. Test the voltage at LED17: 5 Vdc at pins 1 to 2 on W77P4-LED18.

Is the voltage correct?

No Yes

Replace the Tray 4 LED (LED17)

1. Replace the LED.

[Trays 2, 3, and 4 LEDs on page 348](#)

Check the wire harness between the Motion PCA (A2) and the Tray 4 LED (LED17)

1. Check the wire harness between A2 and LED17. Repair as needed.

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

A1.0701: Trays 2, 3, and 4 Controller PCA (A23) failure

Initial Steps

1. Check all electrical connections on the Trays 2, 3, and 4 Controller PCA (A23).

Check the 3.3, 5, 12, 24, 32, and 52 Vdc LEDs on the Power Distribution PCA (A1)

1. Verify that the LEDs are lit.

Are the 3.3, 5, 12, 24, 32, and 52 Vdc LEDs on A1 lit?

No **Yes**

Check the 5, 24, and 32 Vdc LEDs on the Trays 2, 3, and 4 Controller PCA (A23)

1. Verify that the LEDs are lit.

[Power Distribution PCA \(A1\) diagram on page 2271](#)

Are the 5, 24, and 32 Vdc LEDs on A23 lit?

No **Yes**

Check the wire harness between the Trays 2, 3, and 4 Controller PCA (A23) and the Power Distribution PCA (A1)

1. Check the wire harness between A23 and A1. Repair as needed.

[Trays 2, 3, and 4 controller PCA diagram on page 2258](#)

[Power Distribution PCA \(A1\) diagram on page 2271](#)

Check the following conditons

1. Check the wire harness between the Trays 2, 3, and 4 Controller PCA (A23) and the Power Distribution PCA (A1). Repair as needed.

[Trays 2, 3, and 4 controller PCA diagram on page 2258](#)

[Power Distribution PCA \(A1\) diagram on page 2271](#)

2. Verify that the 5, 24, and 32 Vdc LEDs on A23 are lit.

[Trays 2, 3, and 4 controller PCA diagram on page 2258](#)

Is the wire harness in good condition and are the LEDs lit?

No **Yes**

[Final activities on page 24](#)

Test the voltage at the 32 Vdc and 5 Vdc test points on the Trays 2, 3, and 4 Controller PCA (A23)

1. Test the voltage at the 32 Vdc and 5 Vdc test points.

[Trays 2, 3, and 4 controller PCA diagram on page 2258](#)

WARNING! Use an ESD strap.

Is the voltage 32 Vdc at the 32 Vdc test point and 5 Vdc at the 5 Vdc test point on A23?

No **Yes**

Replace the Trays 2, 3, and 4 Controller PCA (A23)

1. Replace A23.

[Trays 2, 3, and 4 Controller PCA \(A23\) on page 339](#)

WARNING! Use an ESD strap.

Test the voltage at the 32 Vdc and 5 Vdc test points on the Power Distribution PCA (A1)

1. Test the voltage at the 32 Vdc and 5 Vdc test points.

[Power Distribution PCA \(A1\) diagram on page 2271](#)

WARNING! Use an ESD strap.

Is the voltage 32 Vdc at the 32 Vdc test point and 5 Vdc at the 5 Vdc test point on A1?

No **Yes**

Check the wire harness between the Trays 2, 3, and 4 Controller PCA (A23) and the Power Distribution PCA (A1)

1. Check the wire harness between A23 and A1. Repair as needed.

[Trays 2, 3, and 4 controller PCA diagram on page 2258](#)

[Power Distribution PCA \(A1\) diagram on page 2271](#)

Test the voltage on the Power Distribution PCA (A1)

1. Disconnect J3 from A1.
2. Disconnect J6 from A1.
3. Test the voltage at J3 on A1: 32 Vdc at J3 pins 3 to 15, 4 to 16, 5 to 17, and 6 to 18.
4. Test the voltage at J6 on A1: 5 Vdc at J6 pins 6 to 3, 4 to 3, 19 to 3, and 20 to 3.

[Electronics component locator on page 2327](#)

[Power Distribution PCA \(A1\) diagram on page 2271](#)

Are the voltages correct?

No **Yes**

Replace the Power Distribution PCA (A1)

1. Replace A1.

[Power Distribution PCA \(A1\) on page 702](#)

WARNING! Use an ESD strap.

Replace the Power supply (PS1)

1. Replace PS1.

[Power supply assembly on page 697](#)

Check voltage at the 32 Vdc and 5 Vdc test points on the Power Distribution PCA (A1)

1. Check voltage at the 32 Vdc and 5 Vdc test points.

[Power Distribution PCA \(A1\) diagram on page 2271](#)

WARNING! Use an ESD strap.

Is the voltage 32 Vdc at the 32 Vdc test point and 5 Vdc at the 5 Vdc test point on A1?

No Yes

Check the wire harness between the Trays 2, 3, and 4 Controller PCA (A23) and the Power Distribution PCA (A1)

1. Check the wire harness between A23 and A1.

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

1

[Power Distribution PCA \(A1\) diagram on page 2271](#)

Test the voltage on the Power Distribution PCA (A1)

1. Disconnect J3 from A1.
2. Disconnect J6 from A1.
3. Test the voltage at J3 on A1: 32 Vdc at J3 pins 3 to 15, 4 to 16, 5 to 17, and 6 to 18
4. Test the voltage at J6 on A1: 5 Vdc at J6 pins 6 to 3, 4 to 3, 19 to 3, and 20 to 3.

[Electronics component locator on page 2327](#)

[Power Distribution PCA \(A1\) diagram on page 2271](#)

Are the voltages correct?

No Yes

Replace the Power Distribution PCA (A1)

1. Replace A1.

[Power Distribution PCA \(A1\) on page 702](#)

1

WARNING! Use an ESD strap.

Replace the Power supply (PS1)

1. Replace PS1.

[Power supply assembly on page 697](#)

A1.07A1: Trays 2, 3, and 4 Controller PCA (A23) voltage out-of-range

Initial Steps

1. [Trays 2, 3, and 4 component locator on page 2330](#)

Check the following conditions

1. Check the wire harness between the Trays 2, 3, and 4 Controller PCA (A23) and the Power Distribution PCA (A1).

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

[Power Distribution PCA \(A1\) diagram on page 2271](#)

Is the problem resolved?

No **Yes**

- 1 | [Final activities on page 24](#)

[A1.0701: Trays 2, 3, and 4 Controller PCA \(A23\) failure on page 1231](#)

A1.1302: Paper jam at Tray 2

Initial Steps

1. Check the condition of the paper in the tray.
2. Check the pick rollers and idler rollers for wear.
3. Check that the pick roller is mounted securely.
4. Check the plastic actuator finger movement in the paper path.
5. Verify that the tray operates correctly.

NOTE: Each tray has a pick head calibration pin located at the rear of the tray. Swapping Trays 2, 3, and 4 can create pick problems. Return trays to their original positions after swapping for testing.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

Test the Tray 2 Exit sensor (SN47)

1. Open the right-side lower panel.
2. Manually move the plastic fingers to toggle SN47. If the fingers do not return to the extended position, check the spring on the end of the plastic shaft.

[Trays 2, 3, and 4 component locator on page 2330](#)

NOTE: Each tray has two plastic fingers on a plastic shaft.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the sensor change state?

No **Yes**

Check the one-way clutch

1. Manually move the drive rollers. One direction should move freely. The other direction should have some resistance.
2. Turn the rollers back and forth multiple times looking for a spot that might be slipping.

[Trays 2, 3, and 4 component locator on page 2330](#)

Does the one-way clutch slip?

No **Yes**

Replace the drive roller

1. Replace the drive roller.

Check the pick rollers

1. Check the pick rollers for damage and wear.

[Trays 2, 3, and 4 component locator on page 2330](#)

Are the pick rollers dirty or worn?

No **Yes**

Clean or replace the pick rollers

1. Clean the pick rollers with a damp cloth.
2. If the problem is not resolved, replace the pick rollers.

Check the drive belt

1. Check the drive belt for missing teeth, proper tension, and delamination.

[Trays 2, 3, and 4 component locator on page 2330](#)

Is the drive belt damaged?

No **Yes**

Replace the drive belt

1. Replace the drive belt.

[A1.01C1: Trays 2, 3, and 4 Transport motor \(M18\) on page 1192](#)

Test the other tray exit sensors

1. With the right-side lower panel open, press the flag actuators on Tray 3 and Tray 4 to toggle the tray exit sensors.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Do the sensors change state?

No **Yes**

Switch the tray cables

1. On the Trays 2, 3, and 4 Controller PCA (A23), disconnect the Tray 3 cable from J7.
2. On A23, disconnect the Tray 2 cable from J6.
3. Connect the Tray 2 cable to J7 on A23.
4. Toggle the Tray 2 flag actuators. This sensor is now detected as the Tray 3 Empty sensor (SN49).

WARNING! Use an ESD strap.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the sensor state change?

No **Yes**

[A1.0701: Trays 2, 3, and 4 Controller PCA \(A23\) failure on page 1231](#)

Test the voltage to the Tray 2 Exit sensor (SN47)

1. On the Trays 2, 3, and 4 Controller PCA (A23), connect the Tray 2 cable to J6, and then connect the Tray 3 cable to J7.
2. Disconnect J3 from the Tray 2 Distribution PCA (A33).
3. Test the voltage to SN47 on A33: 5 Vdc at J3 pins 1 to 2 (GND).

Is the voltage correct?

No **Yes**

Clean or replace the pick arm assembly

1. Verify that the sensor on the pick arm is clear of debris. Clean if needed.
2. If the problem is not resolved, replace the pick arm assembly.

[Pick arm assembly on page 328](#)

Test the voltage from the Trays 2, 3, and 4 Controller PCA (A23)

1. Connect J3 on the Tray 2 Distribution PCA (A33).
2. Disconnect J1 from A33.
3. Test the input voltage to A33: 3.3 Vdc at J1 pins 2 to 7.

[Trays 2, 3, and 4 controller PCA diagram on page 2258](#)

Is the voltage correct?

No Yes

Replace the Tray 2 Distribution PCA (A33)

1. Replace A33.

[Trays 2, 3, and 4 distribution PCA on page 338](#)

Check the wire harness between the Tray 2 Distribution PCA (A33) and the Trays 2, 3, and 4 Controller PCA (A23)

1. Check the wire harness between A33 and A23.

[Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

[A1.0701: Trays 2, 3, and 4 Controller PCA \(A23\) failure on page 1231](#)

A1.1304: Paper jam at Tray 4

Initial Steps

1. Check the condition of the paper in the tray.
2. Check the pick rollers and idler rollers for wear.
3. Check that the pick roller is mounted securely.
4. Check the plastic actuator finger movement in the paper path.
5. Verify that the tray operates correctly.

NOTE: Each tray has a pick head calibration pin located at the rear of the tray. Swapping trays can create pick problems. Return trays to their original positions after swapping for testing.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

Test the Tray 4 Exit sensor (SN55)

1. Open the right-side lower panel.
2. Manually move the plastic fingers to toggle SN55. If the fingers do not return to the extended position, check the spring on the end of the plastic shaft.

[Trays 2, 3, and 4 component locator on page 2330](#)

NOTE: Each tray has two plastic fingers on a plastic shaft.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the sensor change state?

No Yes

Check the one-way clutch

1. Manually move the drive rollers. One direction should move freely. The other direction should have some resistance.
2. Turn the rollers back and forth multiple times looking for a spot that might be slipping.

[Trays 2, 3, and 4 component locator on page 2330](#)

1 Does the one-way clutch slip?

1 No Yes

Replace the drive roller

- 1
- 2 1. Replace the drive roller.

Check the pick rollers

1. Check the pick rollers for damage and wear.

[Trays 2, 3, and 4 component locator on page 2330](#)

1 Are the pick rollers dirty or worn?

1 No Yes

Clean or replace the pick rollers

1. Clean the pick rollers with a damp cloth.
2. If the problem is not resolved, replace the pick rollers.

Check the drive belt

1. Check the drive belt for missing teeth, proper tension, and delamination.

Is the drive belt damaged?

No **Yes**

Replace the drive belt

1. Replace the drive belt.

[A1.01C1: Trays 2, 3, and 4 Transport motor \(M18\) on page 1192](#)

Test the other tray exit sensors

1. With the right-side lower panel open, press the flag actuators on Tray 2 and Tray 3 to toggle the tray exit sensors.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Do the sensors change state?

No **Yes**

Switch the tray cables

1. On the Trays 2, 3, and 4 Controller PCA (A23), disconnect the Tray 4 cable from J10.
2. On A23, disconnect the Tray 3 cable from J7.
3. Connect the Tray 4 cable to J7 on A23.
4. Toggle the Tray 4 flag actuators. This sensor is now detected as the Tray 3 Empty sensor (SN49).

WARNING! Use an ESD strap.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.

Does the sensor change state?

No **Yes**

[A1.0701: Trays 2, 3, and 4 Controller PCA \(A23\) failure on page 1231](#)

Test the voltage to the Tray 4 Exit sensor (SN55)

1. On the Trays 2, 3, and 4 Controller PCA (A23), connect the Tray 4 cable to J10, and then connect the Tray 3 cable to J7.
2. Disconnect J3 from the Tray 4 Distribution PCA (A33).
3. Test the voltage to SN55 on A33: 5 Vdc at J3 pins 1 to 2 (GND).

Is the voltage correct?

No **Yes**

Clean or replace the pick arm assembly

1. Verify that the sensor on the pick arm is clear of debris. Clean if needed.
2. If the problem is not resolved, replace the pick arm assembly.

[Motion PCA \(A2\) on page 700](#)

Test the voltage from the Trays 2, 3, and 4 Controller PCA (A23)

1. Connect J3 on the Tray 3 Distribution PCA (A33).
2. Disconnect J1 from the A33.
3. Test the input voltage to A33: 3.3 Vdc at J1 pins 2 to 7.

[Trays 2, 3, and 4 controller PCA diagram on page 2258](#)

1 Is the voltage correct?

1 **No** **Yes**

Replace the Tray 4 Distribution PCA (A33)

1. Replace A33.

1 2 [Trays 2, 3, and 4 distribution PCA on page 338](#)

Check the wire harness between the Tray 4 Distribution PCA (A33) and the Trays 2, 3, and 4 Controller PCA (A23)

1. Check the wire harness between A33 and A23.

1 [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)

[A1.0701: Trays 2, 3, and 4 Controller PCA \(A23\) failure on page 1231](#)

A2.0101: Tray 5 Pick motor (M101) stall

Initial Steps

1. Set DVM to the appropriate range for the voltage.

NOTE: If a servo motor is powered on, it will feel like there is a bind.

[Tray 5 component locator on page 2323](#)

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Turn the Tray 5 Pick Motor encoder (EN101) by hand

1. Manually turn EN101.

[Tray 5 component locator on page 2323](#)

TIP: Click **Subsystems**, click Trays 2, 3, 4, and then click **Tray 5**.

Does the encoder count change?

No Yes

Check the voltage to the Tray 5 Pick motor (M101) on the Tray 5 Distribution PCA (A101)

1. Disconnect J4 from A101.
2. Test the voltage to M101 on A101: -12.9 Vdc at J4 pins 1 to 2.

[Tray 5 distribution PCA diagram on page 2242](#)

WARNING! Use an ESD strap.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

1 Is the voltage correct?

1 No Yes

Test the voltage at the Tray 5 Pick motor (M101)

1. Verify that J4 is connected on the Tray 5 Distribution PCA (A101).
2. Disconnect the wore connector from the motor.
3. Test the voltage at M101: 5 Vdc at pins 1 to 2 on W104P101-M101.

[Tray 5 wiring diagram on page 2241](#)

WARNING! Use an ESD strap.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

1 2 Is the voltage correct?

1 2 No Yes

Replace the Tray 5 Pick motor (M101)

1. Replace M101.

1 2 3 [Tray 5 Pick motor \(M101\) on page 770](#)

Check the wire harness between the Tray 5 Distribution PCA (A101) and the Tray 5 Pick motor (M101)

1. Check the wire harness between A101 and M101.

[Tray 5 wiring diagram on page 2241](#)

Test the voltage to the Tray 5 Pick motor (M101) on the Motion PCA (A2)

1. Verify that J4 is connected on the Tray 5 Distribution PCA (A101).
2. Disconnect J13 from A2.
3. Test the voltage to M101 on A2: -4.89 Vdc at J13 pins 7 and 8.

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Check the wire harness between the Motion PCA (A2) and the Tray 5 Distribution PCA (A101)

1. Check the wire harness between A2 and A101.
2. [Tray 5 wiring diagram on page 2241](#)

WARNING! Use an ESD strap.

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

WARNING! Use an ESD strap.

Test the voltage to the Tray 5 Pick Motor encoder (EN101) on the Tray 5 Distribution PCA (A101)

1. Disconnect J2 from A101.
2. Test the voltage to EN101 on A101: 0.11 Vdc unblocked, 2.18 Vdc blocked at pins 10A to 7A, 4.92 Vdc unblocked and blocked at pins 9A to 7A, and 0.11 Vdc unblocked, 2.12 Vdc blocked at pins 8A to 7A on W102P102-A101J2.

[Tray 5 distribution PCA diagram on page 2242](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Test the voltage at the Tray 5 Pick Motor encoder (EN101)

1. Verify that J2 is connected on the Tray 5 Distribution PCA (A101).
2. Disconnect the wire connector from the encoder.
3. Test the voltage at EN101: 5 Vdc at pins 1 to 4, 2 to 4, and 3 to 4 on W102P105-EN101.

[Tray 5 wiring diagram on page 2241](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Replace the Tray 5 Pick Motor encoder (EN101)

1

2

1. Replace EN101.

Check the wire harness between the Tray 5 Distribution PCA (A101) and the Tray 5 Pick Motor encoder (EN101)

1. Check the wire harness between A101 and EN101.

1

[Tray 5 wiring diagram on page 2241](#)

Test the voltage for the Tray 5 Pick Motor encoder (EN101) on the Motion PCA (A2)

1. Verify that J2 is connected to the Tray 5 Distribution PCA (A101).
2. Disconnect J13 from A2.
3. Test the voltage to EN101 on A2: 5 Vdc at J13 pins 15 and 13, 14, 37, and 38 (GND) and pins 27 and 13, 14, 37, and 38 (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Check the wire harness between the Motion PCA (A2) and the Tray 5 Distribution PCA (A101)

1. Check the wire harness between A2 and A101.
2. [Tray 5 wiring diagram on page 2241](#)

1

WARNING! Use an ESD strap.

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

WARNING! Use an ESD strap.

A2.0102: Tray 5 Elevator motor (M102) stall

Initial Steps

1. Verify that the Tray 5 paper tray is level.
2. Verify that the paper is loaded correctly.
3. Verify that the paper guides are positioned correctly.
4. Check the condition of the cabling and connection between the print engine and Tray 5.
5. Verify that the elevator cables are correctly located.
6. If the elevator is at one of its limits, then manually move the tray off of the limit. Remove the Tray 5 rear cover and access the drive gears in order to turn them to move the tray.

NOTE: If a servo motor is powered on, it will feel like there is a bind.

Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

Check the movement of the elevator tray

1. Open the Tray 5 top cover.

Does the elevator tray move down approximately the thickness of a single ream of paper (50 to 76 mm) (2 to 3 in)?

No Yes

Check the movement of the elevator while holding down the Tray 5 Media Door Open sensor (SN107)

1. Manually press SN107.

[Tray 5 component locator on page 2323](#)

1 Does the elevator tray move down while you hold down SN107?

1 No Yes

1 2 [Final activities on page 24](#)

1 [A2.02C2: Elevator does not go all the way to the bottom on page 1254](#)

Check for a tray overfull message

1. Check the control panel for a tray 5 overfilled message.

NOTE: Ensure the Tray 5 Stack Height sensor (SN104) is straight up and down and not twisted after adjusting and securing the sensor. Also test the alignment of the pick arm actuator to the sensor and ensure the pick arm actuates the sensor.

Is there a tray overfull message on the control panel?

No Yes

1 [A2.02E5: Tray 5 overfilled on page 1267](#)

Test the Tray 5 Media Door Open sensor (SN107)

1. Manually activate SN107.

[Tray 5 component locator on page 2323](#)

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the sensor state change?

No **Yes**

Check the Tray 5 Elevator Motor encoder (EN102)

1. Turn the Tray 5 Elevator motor (M102) by hand.

[Tray 5 component locator on page 2323](#)

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Did the encoder count change?

No **Yes**

Check the voltage to Tray 5 Elevator motor (M102) on the Tray 5 Distribution PCA (A101)

1. Disconnect J4 from A101.
2. Test the voltage to M102 on A101: -12.9 Vdc at J4 pins 7 to 8 at pins 7 to 8..

[Tray 5 distribution PCA diagram on page 2242](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Test the voltage at the Tray 5 Elevator motor (M102)

1. Verify that J4 is connected on the Tray 5 Distribution PCA (A101).
2. Disconnect the wire connector from M102.
3. Test the voltage at M102: -12.9 Vdc at pins 1 to 2 on W4P102-M102.

[Tray 5 wiring diagram on page 2241](#)

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Is the voltage correct?

No **Yes**

Replace the Tray 5 Elevator motor (M102)

1. Replace M102.

[Tray 5 Elevator motor \(M102\) on page 773](#)

Check the wire harness between the Tray 5 Distribution PCA (A101) and the Tray 5 Elevator motor (M102)

1. Check the wire harness between A101 and M102.

[Tray 5 wiring diagram on page 2241](#)

2. Repair as needed.

Test the voltage to the Tray 5 Elevator motor (M102) on the Motion PCA (A2)

1. Verify that J4 is connected on the Tray 5 Distribution PCA (A101).
2. Test the voltage to M102 on A2: -12.9 Vdc at J13 pins 1 to 2.

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Check the wire harness between the Motion PCA (A2) and the Tray 5 Distribution PCA (A101)

1. Check the wire harness between A2 and A101.
2. Repair as needed.
3. If no problem is found, replace the following in order:
 - 1) Cabling between Tray 5 and print engine.
 - 2) A101.
 - 3) Wire harness between A2 and the print engine bulkhead.

[Tray 5 wiring diagram on page 2241](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

WARNING! Use an ESD strap.

Test the voltage to the Tray 5 Elevator Motor encoder (EN102) on the Tray 5 Distribution PCA (A101)

1. Disconnect J3 from A101.
2. Test the voltage to EN102 on A101: 4.9 Vdc at pins 14A to 12A on W103P103-A101J3.

[Tray 5 distribution PCA diagram on page 2242](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Test the voltage for encoder channels A and B on the Tray 5 Distribution PCA (A101)

1. Verify that J3 is disconnected on the A101.
2. Test the voltage to EN102 channel A and B on A101: 3.3 Vdc at J3 pins 13A to 12A and 16A to 12A.

[Tray 5 distribution PCA diagram on page 2242](#)

Is the voltage correct?

No Yes

Test the voltage at the Tray 5 Elevator Motor encoder (EN102)

1. Verify that J3 is connected on the Tray 5 Distribution PCA (A101).
2. Disconnect the wire connector from the encoder.
3. Test the voltage at EN102: 5 Vdc at J3 pins 2 to 1, 4 to 1, and 3 to 1 on W103P108-EN102.

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Replace the Tray 5 Elevator motor (M102)

1. Replace M102.

[Tray 5 Elevator motor \(M102\) on page 773](#)

Check the wire harness between the Tray 5 Distribution PCA (A101) and the Tray 5 Elevator Motor encoder (EN102)

1. Check the wire harness between and A101 and EN102.

[Tray 5 wiring diagram on page 2241](#)

2. Repair as needed.

Test the voltage to Horizontal Motor encoder (EN3) channels A and B on the Motion PCA (A2)

1. Verify that J3 is connected on the Tray 5 Distribution PCA (A101).
2. Test the voltage to EN3 on A2: 5 Vdc pins 7A to 10A (GND) and pins 9A to 10A (GND) on W15P5-W37J5.

[Motion PCA \(A2\) diagram on page 2268](#)

[Tray 5 component locator on page 2323](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Check the wire harness between the Motion PCA (A2) and the Tray 5 Distribution PCA (A101)

1. Check the wire harness between A2 and A101.
2. Repair as needed.
3. If no problem is found, replace the following in order:
 - 1) Cabling between Tray 5 and print engine.
 - 2) A101.
 - 3) Wire harness between A2 and the print engine bulkhead.

[Tray 5 wiring diagram on page 2241](#)

Replace the Motion PCA (A2)

1. Replace A2.

WARNING! Use an ESD strap.

Check the encoder voltage on the Motion PCA (A2)

1. Verify that J3 is connected on the Tray 5 Distribution PCA (A101).
2. Test the voltage to the Tray 5 Elevator Motor encoder (EN102) on A2: 5 Vdc at J13 pins 15 and 13, 14, 37, and 38 (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

1 Is the voltage correct?

1 **No** **Yes**

Check the wire harness between the Motion PCA (A2) and the Tray 5 Distribution PCA (A101)

1. Check the wire harness between A2 and A101.
2. Repair as needed.
3. If no problem is found, replace the following in order:
 - 1) Cabling between Tray 5 and print engine.
 - 2) A101.
 - 3) Wire harness between A2 and the print engine bulkhead.

1 2 [Tray 5 wiring diagram on page 2241](#)

Replace the Motion PCA (A2)

1. Replace A2.

1 **WARNING!** Use an ESD strap.

[A2.02E4: Close Tray 5 top door on page 1264](#)

A2.0201: Tray 5 Elevator Upper Limit sensor (SN108) failed

Initial Steps

1. Verify that the Tray 5 paper tray is level.

[Tray 5 component locator on page 2323](#)

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Test the Tray 5 Elevator Upper Limit sensor (SN108)

1. Manually activate SN108.

[Tray 5 wiring diagram on page 2241](#)

NOTE: If the Tray 5 paper tray is touching SN108, manually move the tray off of the sensor.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the sensor state change?

No **Yes**

- 1 | [A2.0102: Tray 5 Elevator motor \(M102\) stall on page 1244](#)

Check the following conditions

1. Make sure that the sensor is correctly located.
2. Clean the sensor and the surrounding area.
3. Check the wire harness between on the Tray 5 Elevator Upper Limit sensor (SN108) and the Motion PCA (A2).

Test the Tray 5 Elevator Upper Limit sensor (SN108)

1. Manually activate SN108.

[Tray 5 wiring diagram on page 2241](#)

NOTE: If the Tray 5 paper tray is touching SN108, manually move the tray off of the sensor.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the sensor state change?

No **Yes**

- 1 | [Final activities on page 24](#)

Test the voltage to the Tray 5 Elevator Upper Limit sensor (SN108) on the Tray 5 Distribution PCA (A101)

1. Disconnect J3 from A101.
2. Test the voltage to SN108 on A101: 4.91 Vdc blocked and unblocked at 103P103-A101J3 pins 1A to 3A and 0.01 Vdc unblocked, 4.91 Vdc blocked at pins 2A to 3A.

[Tray 5 distribution PCA diagram on page 2242](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Test the voltage at the Tray 5 Elevator Upper Limit sensor (SN108)

1. Verify that J3 is connected on the Tray 5 Distribution PCA (A101).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN108: 5 Vdc on pins 3 to 2 and 1 to 2 on W103P104-SN108.

[Tray 5 wiring diagram on page 2241](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Replace the Tray 5 Elevator Upper Limit sensor (SN108)

1. Replace SN108.

[Sensors on page 762](#)

Check the wire harness between the Tray 5 Distribution PCA (A101) and the Tray 5 Elevator Upper Limit sensor (SN108)

1. Check the wire harness between A101 and SN108.

[Tray 5 wiring diagram on page 2241](#)

2. Repair as needed.

Test the voltage to the Tray 5 Elevator Upper Limit sensor (SN108) on the Motion PCA (A2)

1. Verify that J3 is connected on the Tray 5 Distribution PCA (A101).
2. Test the voltage to SN108 on A2: 5 Vdc on pins 28 to 13, 14, 37, and 38 (GND) and pins 15 to 13, 14, 37, and 38 (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No Yes

Check the wire harness between the Tray 5 Distribution PCA (A101) and the Motion PCA (A2)

1. Check the wire harness between A101 and A2.

[Tray 5 wiring diagram on page 2241](#)

2. Repair as needed.

3. If no problem is found, replace the following in order: 1) the cabling between Tray 5 and print engine 2) A101, 3) the wire harness between A2 and the print engine bulkhead.

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

CAUTION: Use an ESD strap.

A2.0202: Tray 5 Stack Height sensor (SN104) failed

Initial Steps

1. Disconnect the pick arm cable from the Tray 5 top cover.

NOTE: Set DVM to the appropriate range for the voltage.

Check that the pick arm moves freely and does not interfere with the pick arm sensor.

[Tray 5 component locator on page 2323](#)

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Test the Tray 5 Stack Height sensor (SN104)

1. Manually activate SN104 by moving the pick arm up and down.

[Tray 5 wiring diagram on page 2241](#)

NOTE: If the Tray 5 paper tray is touching the pick arm, manually move the tray off of the pick arm.

TIP: Click **Subsystems**, click **Trays 2, 3, 4**, and then click **Tray 5**.

Does the sensor state change?

No **Yes**

- | | |
|---|--|
| 1 | A2.0102: Tray 5 Elevator motor (M102) stall on page 1244 |
|---|--|

Check the following conditions

1. Make sure that the sensor is correctly located.
2. Make sure the pick arm moves freely up and down.
3. Clean the sensor and the surrounding area.
4. Check the wire harness between the Tray 5 Stack Height sensor (SN104) and the Motion PCA (A2).

Test the Tray 5 Stack Height sensor (SN104)

1. Manually activate SN104 by moving the pick arm up and down.

[Tray 5 wiring diagram on page 2241](#)

NOTE: If the Tray 5 paper tray is touching the pick arm, manually move the tray off of the pick arm.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the sensor state change?

No **Yes**

- | | |
|---|---|
| 1 | Final activities on page 24 |
|---|---|

Test the voltage to the Tray 5 Stack Height sensor (SN104) on the Tray 5 Distribution PCA (A101)

1. Disconnect J3 from A101.
2. Test the voltage to SN104 on A101: 0.13 Vdc unblocked, 4.92 Vdc blocked at 103P103-A101J3 pins 4B to 3B and 1.16 Vdc blocked and unblocked at pins 5B to 3B.

[Tray 5 distribution PCA diagram on page 2242](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Test the voltage at the Tray 5 Stack Height sensor (SN104)

1. Verify that J3 is connected on the Tray 5 Distribution PCA (A101).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN104: 5 Vdc on pins 1 to 2 and 3 to 2 on W103P113-SN104.

[Tray 5 wiring diagram on page 2241](#)

CAUTION: Use an ESD strap.

1 Is the voltage correct?

1 **No Yes**

Replace the Tray 5 Stack Height sensor (SN104)

1. Replace SN104.

1 2 [Sensors on page 762](#)

Check the wire harness between the Tray 5 Distribution PCA (A101) and the Tray 5 Stack Height sensor (SN104)

1. Check the wire harness between A101 and SN104.

[Tray 5 wiring diagram on page 2241](#)

1 2. Repair as needed.

Test the voltage on the Motion PCA (A2)

1. Verify that J3 is connected on the Tray 5 Distribution PCA (A101).
2. Test the voltage to the Tray 5 Stack Height sensor (SN104) on A2: 5 Vdc on pins 35 to 13, 14, 37, and 38 (GND) and on pins 15 to 13, 14, 37, and 38 (GND).

Is the voltage correct?

No Yes

Check the wire harness between the Tray 5 Distribution PCA (A101) and the Motion PCA (A2)

1. Check the wire harness between A101 and A2.

[Tray 5 wiring diagram on page 2241](#)

2. Repair as needed.

3. If no problem is found, replace the following in order:

1) Cabling between Tray 5 and print engine

2) A101

3) Wire harness between A2 and the print engine bulkhead

1

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

WARNING! Use an ESD strap.

A2.02C2: Elevator does not go all the way to the bottom

Initial Steps

1. If the power is removed from the system and there is more than one ream of paper in the tray, the elevator tray could drift all the way to the bottom of the elevator travel. This is normal behavior. There is no brake to stop the elevator.

NOTE: Set DVM to the appropriate range for the voltage.

[Tray 5 component locator on page 2323](#)

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Test the Tray 5 Load Media sensor (SN109)

1. Manually activate SN109.

[Tray 5 component locator on page 2323](#)

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the sensor state change?

No **Yes**

Test the Tray 5 Media Door Open sensor (SN107)

1. Manually activate SN107.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

1 Does the sensor state change?

1 **No** **Yes**

1 2 | [Final activities on page 24](#)

1 [A2.02E4: Close Tray 5 top door on page 1264](#)

Check the following conditions

1. Make sure that the sensor is correctly located.
2. Clean the sensor and the surrounding area.
3. If the sensor has a flag actuator, check that the flag actuator has free movement.
4. Check the wire harness between the Tray 5 Media Door Open sensor (SN107) and the Motion PCA (A2).

[Tray 5 wiring diagram on page 2241](#)

Test the Tray 5 Load Media sensor (SN109)

1. Manually activate SN109.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the sensor state change?

No **Yes**

1 | [Final activities on page 24](#)

Test the voltage to Tray 5 Load Media sensor (SN109) on the Tray 5 Distribution PCA (A101)

1. Disconnect J3 from the A101.
2. Test the voltage to SN109 on A101: 1.16 Vdc both blocked and unblocked at pins 4A to 6A and 4.92 vdc unblocked, 0.08 Vdc blocked at pins 5A to 6A on W103P103-A101J3.

[Tray 5 distribution PCA diagram on page 2242](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Test the voltage at the Tray 5 Load Media sensor (SN109)

1. Verify that J3 is connected on the Tray 5 Distribution PCA (A101).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN109: 4.95 Vdc on pins 3 to 2 and pins 1 to 2 on W103P105-SN109.

[Tray 5 wiring diagram on page 2241](#)

CAUTION: Use an ESD strap.

Is the voltage correct?

No Yes

Replace the Tray 5 Load Media sensor (SN109)

1. Replace SN109.

[Sensors on page 762](#)

Check the wire harness between the Tray 5 Distribution PCA (A101) and Tray 5 Load Media sensor (SN109)

1. Check the wire harness between A101 and SN109.

[Tray 5 wiring diagram on page 2241](#)

2. Repair as needed.

Test the voltage to Tray 5 Load Media sensor (SN109) on the Motion PCA (A2)

1. Verify that J3 is connected on the Tray 5 Distribution PCA (A101).
2. Test the voltage to SN109 on A2: 5 Vdc on J13 pins 15 to 13, 14, 37, and 38 (GND) and on pins 20 to 13, 14, 37, and 38 (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Check the wire harness between the Tray 5 Distribution PCA (A101) and the Motion PCA (A2)

1. Check the wire harness between A101 and A2.

[Tray 5 wiring diagram on page 2241](#)

2. Repair as needed.

3. If no problem is found, replace the following in order:

- 1) Cabling between Tray 5 and print engine.

- 2) A101.

- 3) Wire harness between A2 and the print engine bulkhead.

1

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

WARNING! Use an ESD strap.

A2.02E1: Reattach Tray 5

Initial Steps

1. [Tray 5 component locator on page 2323](#)

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Test the Tray 5 Front Latch sensor (SN105)

1. Manually activate SN105.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the sensor state change?

No **Yes**

Test the Tray 5 Back Latch sensor (SN106)

1. Manually activate SN106.

[Tray 5 component locator on page 2323](#)

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the sensor state change?

No **Yes**

[Final activities on page 24](#)

Check the following conditions

1. Make sure that the sensor is correctly located.
2. Check that any flag actuator has free movement.
3. Clean the sensor and the surrounding area.
4. Check the wire harness between the Tray 5 Back Latch sensor (SN106) and the Motion PCA (A2).

[Tray 5 component locator on page 2323](#)

Test the Tray 5 Back Latch sensor (SN106)

1. Manually activate SN106.

[Tray 5 component locator on page 2323](#)

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the sensor state change?

No **Yes**

[Final activities on page 24](#)

Test the voltage to the Tray 5 Back Latch sensor (SN106) on the Tray 5 Distribution PCA (A101)

1. Test the voltage to SN106 on A101: Tray 5 unlatched: 1.19 Vdc both blocked and unblocked at pins 8B to 6B on W103P103-A101J3 . Tray 5 latched: 1.0VDC at pins 8B to 6B on W103P103-A101J3 and 0.09 vdc unblocked, 4.91 vdc blocked at pins 1B to 6B on W103P103-A101J3.

[Tray 5 distribution PCA diagram on page 2242](#)

[Tray 5 component locator on page 2323](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Test the voltage at the Tray 5 Back Latch sensor (SN106)

1. Verify that J3 is connected on the Tray 5 Distribution PCA (A101).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN106: 4.96 Vdc at pins 1 to 3 and 2 to 3 on W103P112-SN106.

[Tray 5 wiring diagram on page 2241](#)

[Tray 5 component locator on page 2323](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Repair or replace the Tray 5 Back Latch sensor (SN106)

1. Verify that the latch is correctly adjusted and makes contact between Tray 5 and the print engine.
2. If the latch is working correctly, replace SN106.

[Sensors on page 762](#)

WARNING! Use an ESD strap.

Check the wire harness between the Tray 5 Distribution PCA (A101) and the Tray 5 Back Latch sensor (SN106)

1. Check the wire harness and connections between A101 and SN106.

[Tray 5 wiring diagram on page 2241](#)

[Tray 5 component locator on page 2323](#)

Test the voltage to the Tray 5 Back Latch sensor (SN106) on the Motion PCA (A2)

1. Verify that J3 is connected on the Tray 5 Distribution PCA (A101).
2. Remove the power supply from the MFP, and then electrically reconnect the power supply outside of the MFP.
3. Test the voltage to SN106 on A2: 3.8 Vdc on J13 pins 22 to 13, 14, 37, and 38 (GND) and 5 Vdc on pins 15 to 13, 14, 37, and 38 (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Check the wire harness between the Tray 5 Distribution PCA (A101) and the Motion PCA (A2)

1. Check the wire harness between A101 and A2. Repair as needed.
2. If no problem is found, replace the following in order:
 - 1) Cabling between Tray 5 and print engine.
 - 2) A101.
 - 3) Wire harness between A2 and the print engine bulkhead.

[Tray 5 component locator on page 2323](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

WARNING! Use an ESD strap.

Check the following conditions:

1. Make sure that the sensor is correctly located.
2. If the sensor has a flag actuator, check that the flag actuator has free movement.
3. Clean the sensor and the surrounding area.
4. Check the wire harness between the Tray 5 Front Latch sensor (SN105) and the Motion PCA (A2).

Test the Tray 5 Front Latch sensor (SN105)

1. Manually activate SN105.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the sensor state change?

No **Yes**

[Final activities on page 24](#)

Test the voltage to the Tray 5 Front Latch sensor (SN105) on the Tray 5 Distribution PCA (A101)

1. Test the voltage to SN105 on A101: 1.2 Vdc at pins 13B to 11B and 0.08 Vdc unblocked and 4.9 vdc blocked at pins 12B to 11B on W103P103-A101J3.

[Tray 5 distribution PCA diagram on page 2242](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Test the voltage at the Tray 5 Front Latch sensor (SN105)

1. Verify that J3 is connected on the Tray 5 Distribution PCA (A101).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN105: 5 Vdc at pins 1 to 3 and 2 to 3 on W103P110-SN105.

[Tray 5 wiring diagram on page 2241](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Replace the Tray 5 Front Latch sensor (SN105)

1. Replace SN105.

[Sensors on page 762](#)

WARNING! Use an ESD strap.

Check the wire harness between the Tray 5 Front Latch sensor (SN105) and the Tray 5 Distribution PCA (A101)

1. Check the wire harness between SN105 and A101.

[Tray 5 wiring diagram on page 2241](#)

Test the voltage to the Tray 5 Front Latch sensor (SN105) on the Motion PCA (A2)

1. Verify that J3 is connected on the Tray 5 Distribution PCA (A101).
2. Remove the power supply from the MFP, and then electrically reconnect the power supply outside of the MFP.
3. Test the voltage to SN105 on A2: 3.8 Vdc on pins 22 to 13, 14, 37, and 38 (GND) and 5 Vdc at pins 15 to 13, 14, 37, and 38 (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Check the wire harness between the Tray 5 Distribution PCA (A101) and Motion PCA (A2)

1. Check the wire harness between A101 and A2.
2. If no problem is found, replace the following in order:
 - 1) Cabling between Tray 5 and print engine.
 - 2) A101.
 - 3) Wire harness between A2 and the print engine bulkhead.

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

WARNING! Use an ESD strap.

A2.02E3: Close Tray 5 top-left panel

Initial Steps

1. [Tray 5 component locator on page 2323](#)

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Careful working around electricity.

Moving parts can cause injury.

CAUTION: Do not use frame as ground.

Test the Tray 5 Top-left Panel sensor (SN112)

1. Manually actuate SN112.

[Tray 5 component locator on page 2323](#)

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the sensor state change?

No **Yes**

Test the Tray 5 top-left panel

1. Manually open and close the Tray 5 top-left panel. Look and listen for the latching mechanism to work.
2. Check the alignment between the door actuator and the sensor.

1 Does the Tray 5 top-left panel latch function correctly?

1 **No** **Yes**

1 2 [Final activities on page 24](#)

Check the Tray 5 top-left panel

1. Check the Tray 5 top-left panel latching, sensor actuator, and hinge mechanisms. Verify that they are making contact with the sensor. Replace the Tray 5 top-left panel if necessary.

Check the following

1. Make sure that the sensor is correctly located.
2. Clean the sensor and the surrounding area.
3. Check that any flag actuator has free movement.
4. Check the wire harness between the Tray 5 Top-left Panel sensor (SN112) and the Motion PCA (A2).

[Tray 5 wiring diagram on page 2241](#)

Test the Tray 5 Top-left Panel sensor (SN112)

1. Manually actuate SN112.

[Tray 5 component locator on page 2323](#)

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the sensor state change?

No **Yes**

1 [Final activities on page 24](#)

Test the voltage to the Tray 5 Top-left Panel sensor (SN112) on the Tray 5 Distribution PCA (A101)

1. Disconnect J2 from A101.
2. Test the voltage to SN112 on A101: 1.16 Vdc both blocked and unblocked at pins 11A to 13A and 4.91 Vdc unblocked, 0.11 Vdc blocked at pins 12A to 13A on W102P102-A101J2.

[Tray 5 distribution PCA diagram on page 2242](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Test the voltage at the Tray 5 Top-left Panel sensor (SN112)

1. Verify that J2 is connected on the Tray 5 Distribution PCA (A101).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN112: 5 Vdc on pins 3 to 2 and 1 to 2 on W102P106-SN112.

[Tray 5 wiring diagram on page 2241](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Replace the Tray 5 Top-left Panel sensor (SN112)

1. Replace SN112.

[Sensors on page 762](#)

Check the wire harness between the Tray 5 Distribution PCA (A101) and the Tray 5 Top-left Panel sensor (SN112)

1. Check the wire harness and connections between A101 and SN112.

[Tray 5 wiring diagram on page 2241](#)

WARNING! Use an ESD strap.

Test the voltage to Tray 5 Top-left Panel sensor (SN112) on the Motion PCA (A2)

1. Verify that J2 is connected on the Tray 5 Distribution PCA (A101).
2. Disconnect J13 from A2.
3. Test the voltage to SN112 on A2: 5 Vdc at J13 pins 19 to 13, 14, 37, and 38 (GND) and pins 15 to 13, 14, 37, and 38 (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Check the wire harness between the Motion PCA (A2) and the Tray 5 Distribution PCA (A101)

1. Check the wire harness and connections between A2 and A101.
2. If no problem is found, replace the following in order:
 - 1) Cabling between Tray 5 and print engine.
 - 2) A101.
 - 3) Wire harness between A2 and the print engine bulkhead.

[Tray 5 wiring diagram on page 2241](#)

1

WARNING! Use an ESD strap.

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

WARNING! Use an ESD strap.

A2.02E4: Close Tray 5 top door

Initial Steps

1. [Tray 5 component locator on page 2323](#)

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Careful working around electricity.

Moving parts can cause injury.

CAUTION: Do not use frame as ground.

Test the Tray 5 Media Door Open sensor (SN107)

1. Manually actuate SN107.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the sensor state change?

No	Yes
Test the Tray 5 top door	
<ol style="list-style-type: none">1. Manually open and close the Tray 5 top door. Look and listen for the latching mechanism to work.2. Check the alignment between the door actuator and the sensor.	
Tray 5 component locator on page 2323	
1	Does the Tray 5 top door latch function correctly?
1	No Yes
1	2 Final activities on page 24
Check the Tray 5 top door	
1	<ol style="list-style-type: none">1. Visually check the Tray 5 top door latch, sensor actuator, and hinge mechanisms. Verify that they are making contact with the Tray 5 Media Door Open sensor (SN107). Replace the door if necessary.

Check the following

1. Make sure that the sensor is correctly located.
2. Clean the sensor and the surrounding area.
3. Check that any flag actuator has free movement.
4. Check the wire harness between the Tray 5 Media Door Open sensor (SN107) and the Motion PCA (A2).

[Tray 5 wiring diagram on page 2241](#)

Test the Tray 5 Media Door Open sensor (SN107)

1. Manually actuate SN107.

[Tray 5 component locator on page 2323](#)

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the sensor state change?

No	Yes
1	Final activities on page 24

Test the voltage to the Tray 5 Media Door Open sensor (SN107) on the Tray 5 Distribution PCA (A101)

1. Disconnect J3 from A101.
2. Test the voltage to SN107 on A101: 1.16 vdc both blocked and unblocked at pins 7A to 9A and 3.24 Vdc unblocked, 0.12 Vdc blocked at pins 8A to 9A on W103P103-A101J3.

[Tray 5 distribution PCA diagram on page 2242](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Test the voltage at the Tray 5 Media Door Open sensor (SN107)

1. Verify that J3 is connected on the Tray 5 Distribution PCA (A101).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN107: 3.22 Vdc at pins 1 (left side blue pin) to 2 and 5 Vdc at pins 3 (right side orange pin) to 2 on W103P106-SN107.

[Tray 5 wiring diagram on page 2241](#)

WARNING! Use an ESD strap.

1 Is the voltage correct?

No Yes

Replace the Tray 5 Media Door Open sensor (SN107)

1. Replace SN107.

[Sensors on page 762](#)

Check the wire harness between the Tray 5 Distribution PCA (A101) and the Tray 5 Media Door Open sensor (SN107)

1. Check the wire harness and connections between A101 and SN107.

[Tray 5 wiring diagram on page 2241](#)

WARNING! Use an ESD strap.

Test the voltage to the Tray 5 Media Door Open sensor (SN107) on the Motion PCA (A2)

1. Verify that J3 is connected on the Tray 5 Distribution PCA (A101).
2. Disconnect J13 from A2.
3. Test the voltage to SN107 on A2: 5 Vdc at J13 pins 18 to 13, 14, 37, and 38 (GND) and pins 15 to 13, 14, 37, and 38 (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Check the wire harness between the Motion PCA (A2) and the Tray 5 Distribution PCA (A101)

1. Check the wire harness and connections between A2 and A101.
2. If no problem is found, replace the following in order:
 - 1) Cabling between Tray 5 and print engine.
 - 2) A101.
 - 3) Wire harness between A2 and the print engine bulkhead.

[Tray 5 wiring diagram on page 2241](#)

1

WARNING! Use an ESD strap.

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

WARNING! Use an ESD strap.

A2.02E5: Tray 5 overfilled

Initial Steps

1. Verify that Tray 5 is level.

[Tray 5 component locator on page 2323](#)

NOTE: Set DVM to the appropriate range for the voltage.

NOTE: If the stack height calibration was recently done, check the pick arm height sensor in CDFT for proper actuation.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Check the Tray 5 Elevator Lower Limit sensor (SN110)

1. Manually activate SN110.

NOTE: If the Tray 5 elevator tray is touching the sensor, manually move the tray off of the sensor.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the state of the sensor change?

No **Yes**

1 | [A2.0102: Tray 5 Elevator motor \(M102\) stall on page 1244](#)

Check the following conditions

1. Make sure that the sensor is correctly located.
2. Clean the sensor and the surrounding area.
3. Check the wire harness between the Tray 5 Elevator Lower Limit sensor (SN110) and the Motion PCA (A2).

Check the Tray 5 Elevator Lower Limit sensor (SN110)

1. Manually activate SN110.

NOTE: If the Tray 5 elevator tray is touching the sensor, manually move the tray off of the sensor.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the sensor state change?

No **Yes**

1 | [Final activities on page 24](#)

Test the voltage to the Tray 5 Elevator Lower Limit sensor (SN110) on the Tray 5 Distribution PCA (A101)

1. Disconnect J3 on A101.
2. Test the voltage to SN110 on A101: 4.91 Vdc blocked and unblocked at pins 16B to 14B and 0.01 Vdc unblocked, 4.92 Vdc blocked at pins 15B to 14B on W103P103-A101J3.

[Tray 5 distribution PCA diagram on page 2242](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Test the voltage at the Tray 5 Elevator Lower Limit sensor (SN110)

1. Verify that J3 is connected on A101.
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN110: 5 Vdc at pins 1 to 2 and 3 to 2 on W103P109-SN110.

[Tray 5 wiring diagram on page 2241](#)

CAUTION: Use an ESD strap.

Is the voltage correct?

No Yes

Replace the Tray 5 Elevator Lower Limit sensor (SN110)

1. Replace SN110.

[Sensors on page 762](#)

Check the wire harness between the Tray 5 Distribution PCA (A101) and the Tray 5 Elevator Lower Limit sensor (SN110)

1. Check the wire harness and connections between A101 and SN110.

[Tray 5 wiring diagram on page 2241](#)

2. Repair as needed.

Test the voltage to the Tray 5 Elevator Lower Limit sensor (SN110) on the Motion PCA (A2)

1. Verify that J3 is connected on the Tray 5 Distribution PCA (A101).
2. Test the voltage to SN110 on A2: 5 Vdc on J13 pins 30 to 13, 14, 37, and 38 (GND) and pins 15 to 13, 14, 37, and 38 (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No Yes

Check the wire harness between the Tray 5 Distribution PCA (A101) and Motion PCA (A2)

1. Check the wire harness and connections between A101 and A2.

[Tray 5 wiring diagram on page 2241](#)

2. Repair as needed.

3. If no problem is found, replace the following in order:

1) Cabling between Tray 5 and print engine.

2) A101.

3) Wire harness between A2 and the print engine bulkhead.

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

WARNING! Use an ESD strap.

A2.02E6: Tray 5 empty

Initial Steps

1. Check the condition of the paper.

[Tray 5 component locator on page 2323](#)

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Test the Tray 5 Empty sensor (SN111)

1. Manually activate SN111.

[Tray 5 wiring diagram on page 2241](#)

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the sensor state change?

No **Yes**

1 | [Final activities on page 24](#)

Check the following conditions

1. Make sure that the sensor is correctly located.
2. Clean the sensor and the surrounding area.
3. Check the wire harness between the Tray 5 Empty sensor (SN111) and the Motion PCA (A2).

[Tray 5 wiring diagram on page 2241](#)

Test the Tray 5 Empty sensor (SN111)

1. Manually activate SN111.

[Tray 5 wiring diagram on page 2241](#)

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the sensor state change?

No **Yes**

1 | [Final activities on page 24](#)

Test the voltage to the Tray 5 Empty sensor (SN111) on the Tray 5 Distribution PCA (A101)

1. Disconnect J2 from A101.
2. Test the voltage to SN111 on A101: 4.93 Vdc unblocked and blocked at pins 6B to 4B and 0.01 vdc unblocked and 4.92 vdc blocked at pins 5B to 4B on W102P102-A101J2.

[Tray 5 distribution PCA diagram on page 2242](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Test the voltage at the Tray 5 Empty sensor (SN111)

1. Connect J2 on the Tray 5 Distribution PCA (A101).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN111: 5 Vdc at pins 2 to 3 and 1 to 3 on W102P107-SN111.

[Tray 5 wiring diagram on page 2241](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Replace the Tray 5 Empty sensor (SN111)

1. Replace SN111.

[Sensors on page 762](#)

Check the wire harness between the Tray 5 Distribution PCA (A101) and the Tray 5 Empty sensor (SN111)

1. Check the wire harness and connections between A101 and SN111.

[Tray 5 wiring diagram on page 2241](#)

2. Repair as needed.

Test the voltage to the Tray 5 Empty sensor (SN111) on the Motion PCA (A2)

1. Verify that J2 is connected on the Tray 5 Distribution PCA (A101).
2. Test the voltage to SN111 on A2: 5 Vdc on J13 pins 35 to 13, 14, 37, and 38 (GND) and on pins 15 to 13, 14, 37, and 38 (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Check the wire harness between the Tray 5 Distribution PCA (A101) and the Motion PCA (A2)

1. Check the wire harness and connections between A101 and A2.

[Tray 5 wiring diagram on page 2241](#)

2. Repair as needed.

3. If no problem is found, replace the following in order:

1) Cabling between Tray 5 and print engine.

2) A101.

3) Wire harness between A2 and the print engine bulkhead.

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

WARNING! Use an ESD strap.

A2.06C1: Tray 5 Top Door LED (LED102) not lit

Initial Steps

1. [Tray 5 component locator on page 2323](#)

Test the Tray 5 Top Door LED (LED102)

1. Activate LED102.
2. Verify that LED102 turns on and off.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the LED turn on and off?

No **Yes**

Check for problems that might cause intermittent behavior

1. Check the wire harness between the Motion PCA (A2) and the LED.

[Tray 5 wiring diagram on page 2241](#)

1. Check the LED mounting and surrounding area for any obvious problems. Repair as needed.

Check the Tray 5 Top Door LED (LED102) and wire harness

1. Verify that the LED is correctly located.
[Tray 5 wiring diagram on page 2241](#)
2. Check the wire harness between the Motion PCA (A2) and the LED.

[Tray 5 wiring diagram on page 2241](#)

Test the Tray 5 Top Door LED (LED102)

1. Activate LED102.
2. Verify that the LED turns on and off.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the LED turn on and off?

No **Yes**

1. [Final activities on page 24](#)

Test the voltage to the Tray 5 Top Door LED (LED102) on the Motion PCA (A2)

1. Disconnect J13 from A2.
2. Test the voltage to the LED102 on A2: 5 Vdc on J13 at pins 17 to 14.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage at the Tray 5 Top Door LED (LED102)

1. Verify that J13 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the LED.
3. Test the voltage at LED102: 5 Vdc at pins 2 to 1 on W103P111-LED102.

Is the voltage correct?

No Yes

Replace the Tray 5 Top Door LED (LED102)

1. Replace LED102.

[LEDs on page 774](#)

Check the wire harness between the Motion PCA (A2) and the Tray 5 Top Door LED (LED102)

1. Check the wire harness between A2 and the LED. Repair as needed.

[Tray 5 wiring diagram on page 2241](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

A2.06C2: Tray 5 Top-left Panel LED (LED101) not lit

Initial Steps

1. [Trays 2, 3, and 4 component locator on page 2330](#)

Test the Tray 5 Top-left Panel LED (LED101)

1. Activate LED101.
2. Check to see if the LED turns on and off.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the LED turn on and off?

No **Yes**

Check for problems that might cause intermittent behavior

1. Check the wire harness between the Motion PCA (A2) and the LED.

[Tray 5 wiring diagram on page 2241](#)

1. Check the LED mounting and surrounding area for any obvious problems. Repair as needed.

Inspect the Tray 5 Top-left Panel LED (LED101) and wire harness for bad conditions

1. Verify that the LED is correctly located.
[Tray 5 wiring diagram on page 2241](#)
2. Check the wire harness between the Motion PCA (A2) and the LED.

Test the Tray 5 Top-left Panel LED (LED101)

1. Activate LED101.
2. Verify that the LED turns on and off.

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the LED turn on and off?

No **Yes**

1. [Final activities on page 24](#)

Test the voltage to the Tray 5 Top-left Panel LED (LED101) on the Motion PCA (A2)

1. Disconnect J13 from the Motion PCA (A2).
2. Test the voltage to the Tray 5 Top-left Panel LED (LED101) on A2: 5 Vdc on J13 at pins 21 to 14.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage at the Tray 5 Top-left Panel LED (LED101)

1. Verify that J13 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the LED.
3. Test the voltage at LED101: 5 Vdc at pins 2 to 1 on W103P107-LED101.

Is the voltage correct?

No Yes

Replace the Tray 5 Top-left Panel LED (LED101)

1. Replace LED101.

[LEDs on page 774](#)

Check the wire harness between the Motion PCA (A2) and the LED

1. Check the wire harness between A2 and the LED. Repair as needed.

[Tray 5 wiring diagram on page 2241](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

A2.1301: Paper jam at Tray 5 Media 1 sensor (SN101)

Initial Steps

1. Check for obstructions in the paper path.
 2. Check the condition of the paper.
 3. Verify that the paper meets product specifications.
- NOTE:** Set DVM to the appropriate range for the voltage.
- WARNING!** Be careful when working around electricity.
- Moving parts can cause injury.
- CAUTION:** Do not use the frame as ground.

Test the Tray 5 Media 1 sensor (SN101)

1. Manually activate SN101.
- [Tray 5 component locator on page 2323](#)
- TIP:** Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the sensor state change?

No **Yes**

- 1 | [A2.02E1: Reattach Tray 5 on page 1257](#)

Check the following conditions

1. Verify that the sensor is correctly located.
2. Verify that all of the idler rollers are properly seated and that the drive roller surfaces are free of defects.
3. Clean the sensor and the surrounding area.
4. If the sensor has a flag actuator, check that the flag actuator has free movement.
5. Check the wire harness between the Tray 5 Media 1 sensor (SN101) and the Motion PCA (A2).

[Tray 5 wiring diagram on page 2241](#)

Test the Tray 5 Media 1 sensor (SN101)

1. Manually activate SN101.
- [Tray 5 component locator on page 2323](#)
- TIP:** Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the sensor state change?

No **Yes**

- 1 | [Final activities on page 24](#)

Test the voltage to the Tray 5 Media 1 sensor (SN101) on the Tray 5 Distribution PCA (A101)

1. Disconnect J2 from A101.
2. Test the voltage to SN101 on A101: 1.19 Vdc unblocked and blocked at pins 1A to 3A and 4.90 vdc unblocked, 0.12 vdc blocked at pins 2A to 3A on W102P102-A101J2.

[Tray 5 distribution PCA diagram on page 2242](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Test the voltage at the Tray 5 Media 1 sensor (SN101)

1. Verify that J2 is connected on the Tray 5 Distribution PCA (A101).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN101: 5 Vdc at pins 1 to 3 and pins 2 to 3 on W102P103-SN101.

[Tray 5 wiring diagram on page 2241](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Replace the Tray 5 Media 1 sensor (SN101)

1. Replace SN101.

[Sensors on page 762](#)

Check the wire harness between the Tray 5 Distribution PCA (A101) and Tray 5 Media 1 sensor (SN101)

1. Check the wire harness and connections between A101 and SN101.

[Tray 5 wiring diagram on page 2241](#)

2. Repair as needed.

Test the voltage to the Tray 5 Media 1 sensor (SN101) on the Motion PCA (A2)

1. Verify that J2 is connected on the Tray 5 Distribution PCA (A101).
2. Test the voltage to SN101 on A2: 5 Vdc on pins 32 to 13, 14, 37, and 38 (GND) and pins 15 to 13, 14, 37, and 38 (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Check the wire harness between the Tray 5 Distribution PCA (A101) and the Motion PCA (A2)

1. Check the wire harness and connections between A101 and A2.

[Tray 5 wiring diagram on page 2241](#)

2. Repair as needed.

3. If no problem is found, replace the following in order:

1) Cabling between Tray 5 and print engine.

2) A101.

3) Wire harness between A2 and the print engine bulkhead.

1

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

WARNING! Use an ESD strap.

A2.1302: Paper jam at Tray 5 Media 2 sensor (SN103)

Initial Steps

1. Check for obstructions in the paper path.
2. Check the condition of the paper.

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Test the Tray 5 Media 2 sensor (SN103)

1. Manually activate SN103.

[Tray 5 component locator on page 2323](#)

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the sensor state change?

No **Yes**

1 | [Final activities on page 24](#)

Check the following conditions

1. Verify that the sensor is correctly located.
2. Verify that all of the idler rollers are properly seated and that the drive roller surfaces are free of defects.
3. Clean the sensor and the surrounding area.
4. If the sensor has a flag actuator, check that the flag actuator has free movement.
5. Check the wire harness between the Tray 5 Media 2 sensor (SN103) and the Motion PCA (A2).

[Tray 5 wiring diagram on page 2241](#)

Test the Tray 5 Media 2 sensor (SN103)

1. Manually activate SN103.

[Tray 5 component locator on page 2323](#)

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.

Does the sensor state change?

No **Yes**

1 | [Final activities on page 24](#)

Test the voltage to the Tray 5 Media 2 sensor (SN103) on the Tray 5 Distribution PCA (A101)

1. Disconnect J2 from A101.
2. Test the voltage to SN103 on A101: 4.91 Vdc unblocked, 0.09 Vdc blocked at pins 5A to 6A and 1.19 Vdc unblocked at pins 4A to 6A on W102P102-A101J2.

[Tray 5 distribution PCA diagram on page 2242](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Test the voltage at the Tray 5 Media 2 sensor (SN103)

1. Verify that J2 is connected on the Tray 5 Distribution PCA (A101).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN1035 Vdc on pins 1 to 3 and pins 2 to 3 on W102P104-SN103.

[Tray 5 wiring diagram on page 2241](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Replace the Tray 5 Media 2 sensor (SN103)

1. Replace SN103.

[Sensors on page 762](#)

Check the wire harness between the Tray 5 Distribution PCA (A101) and the Tray 5 Media 2 sensor (SN103)

1. Check the wire harness and connections between A101 and SN103.

[Tray 5 wiring diagram on page 2241](#)

2. Repair as needed.

Test the voltage to the Tray 5 Media 2 sensor (SN103) on the Motion PCA (A2)

1. Verify that J2 is connected on the Tray 5 Distribution PCA (A101).
2. Test the voltage to SN103 on A2: 5 Vdc on pins 36 to 13, 14, 37, and 38 (GND) and on pins 15 to 13, 14, 37, and 38 (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Check the wire harness between the Tray 5 Distribution PCA (A101) and the Motion PCA (A2)

1. Check the wire harness and connections between A101 and A2.

[Tray 5 wiring diagram on page 2241](#)

2. Repair as needed.

3. If no problem is found, replace the following in order:

- 1) Cabling between Tray 5 and print engine.

- 2) A101.

- 3) Wire harness between the Motion PCA (A2) and the print engine bulkhead.

1

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

WARNING! Use an ESD strap.

B0.0101: Vertical motor (M6) stall

Initial Steps

1. [Vertical component locator on page 2332](#)

NOTE: If a servo motor is powered on, it will feel like there is a bind.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Set DVM to the appropriate range for the voltage.

Do not use the frame as ground.

Turn the Vertical motor (M6) by hand

1. Turn M6 by hand with Tray 1 engaged. All of the rollers should turn.

[Vertical component locator on page 2332](#)

Do the rollers turn?

No Yes

Check the Vertical Motor encoder (EN12) count

1. Turn the drive roller by hand.

[Vertical component locator on page 2332](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **Vertical Transport**.

Does the encoder count change?

No Yes

Test the Vertical motor (M6)

1. Run M6.

TIP: Click **Subsystems**, click **Paper Path**, and then click **Vertical Transport**.

Does the motor turn?

No Yes

Check the rollers and drive belt

1. Check the bearing, shaft, and rollers on the transport roll assembly.
2. Check the idler rollers.
3. Check the transport drive belt tension.
4. Visually check the drive belts to the rollers.
5. Disconnect the drive belt from motor and turn the rollers. Check for binding or damage.
6. Repair as needed.

Test the voltage to the Vertical motor (M6) on the Motion PCA (A2)

1. Disconnect J2 from A2.
2. Test the voltage to M6 on A2: 12 Vdc at J2 pins 1 to 8.

[Motion PCA \(A2\) diagram on page 2268](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **Vertical Transport**.

Is the voltage correct?

No **Yes**

Test the voltage at the Vertical motor (M6)

1. Verify that J2 is connected to the Motion PCA (A2).
2. Disconnect the wire connector from the motor.
3. Test the voltage at M6: 12 Vdc at pins 1 to 2 on W20P6-M6.

[Vertical wiring diagram on page 2261](#)

[Vertical component locator on page 2332](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **Vertical Transport**.

Is the voltage correct?

No **Yes**

Replace the Vertical motor (M6)

1. Replace M6.

[Vertical motor \(M6\) on page 383](#)

Check the wire harness between the Motion PCA (A2) and the Vertical motor (M6)

1. Check the wire harness and connections between A2 and M6.
2. Repair as needed.

[Vertical wiring diagram on page 2261](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

Test the voltage at the Vertical Motor encoder (EN12)

1. Verify that J10 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from EN12.
3. Test the voltage at EN12: 5 Vdc at pins 3A to 1A (GND) on W14P6-W36J6.

[Vertical wiring diagram on page 2261](#)

[Vertical component locator on page 2332](#)

Is the voltage correct?

No **Yes**

Test the voltage to the Vertical Motor encoder (EN12) on the Motion PCA (A2)

1. Disconnect J10 from A2.
2. Test the voltage to EN12 on A2: 5 Vdc at J10 pins 16A to 18A (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No Yes

Test the voltage for Vertical Motor encoder (EN12) channels A and B

1. With W36P12 disconnected, test the voltage at EN12:5 Vdc pins 2A to 1A (GND) and 4A to 1A (GND) on W14P6-W36J6.

[Vertical wiring diagram on page 2261](#)

Is the voltage correct?

No Yes

Replace the Vertical motor (M6)

1. Replace M6.

[Vertical motor \(M6\) on page 383](#)

Check the wire harness between the Motion PCA (A2) and the Vertical Motor encoder (EN12)

1. Check the wire harness between A2 and EN12.
2. Repair as needed.

[Vertical wiring diagram on page 2261](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

Check the wire harness between the Motion PCA (A2) and the Vertical Motor encoder (EN12)

1. Check the wire harness and connections between EN12 and A2.

[Vertical wiring diagram on page 2261](#)

Replace the belt

1. Replace the belt.

B0.02E1: Close right-side upper panel

Initial Steps

1. [Vertical component locator on page 2332](#)

Test the Tray 1 Door Open sensor (SN30)

1. Open and close the right-side upper panel (Tray 1) to manually activate SN30.

[Vertical component locator on page 2332](#)

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 1**.

Does the sensor state change?

No **Yes**

Service Tray 1

1. Check the alignment of the latch to the sensor.
2. Check the tray handle.
3. Check the tray hinge.
4. Repair as needed.

1

Check the following conditions

1. Verify that the sensor is correctly located.
2. Verify that all of the idler rollers are correctly seated and that the drive roller surfaces are free of defects.
3. Clean the sensor and the surrounding area.
4. If the sensor has a flag actuator, verify that the flag actuator has free movement.
5. Check the wire harness between the Tray 1 Door Open sensor (SN30) and the Motion PCA (A2).

[Vertical wiring diagram on page 2261](#)

Test the Tray 1 Door Open sensor (SN30)

1. Open and close the right-side upper panel (Tray 1) to manually activate SN30.

[Vertical component locator on page 2332](#)

TIP: Click **Subsystems**, click **Input Trays**, and then click **Tray 1**.

Does the sensor state change?

No **Yes**

[Final activities on page 24](#)

1

Test the voltage to the Tray 1 Door Open sensor (SN30) on the Motion PCA (A2)

1. Disconnect J10 from A2.
2. Test the voltage to SN30 on A2: 3.3 Vdc at J10 pins 2B to 3B (GND) and 1B to 3B (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

CAUTION: Use an ESD strap.

Is the voltage correct?

No Yes

Test the voltage at the Tray 1 Door Open sensor (SN30)

1. Verify that J10 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN30: 3.3 Vdc at pins 17B to 16B (GND) and 18B to 16B (GND) on W14P6-W36J6.

[Vertical wiring diagram on page 2261](#)

1 Is the voltage correct?

1 No Yes

Replace the Tray 1 Door Open sensor (SN30)

1. Replace SN30.

1 2 [Vertical sensors on page 386](#)

Check the wire harness between the Motion PCA (A2) and the Tray 1 Door Open sensor (SN30)

1. Check the wire harness and connections between A2 and SN30.

[Vertical wiring diagram on page 2261](#)

[Vertical component locator on page 2332](#)

- 1 2. Repair as needed.

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

B0.02E2: Close right-side middle panel

Initial Steps

1. [Vertical component locator on page 2332](#)

Test the Right-side Middle Panel sensor (SN23)

1. Open and close the right-side middle panel to manually activate SN23.

TIP: Click **Subsystems**, click **Paper Path**, and then click **Vertical Transport**.

Does the sensor state change?

No Yes

Service the right-side middle panel

1. Check the alignment of the latch to the sensor.
2. Check the right-side middle panel handle.
3. Check the right-side middle panel hinge.
4. Repair as needed.

1

Check the following conditions

1. Verify that the sensor is correctly located.
2. Verify that all of the idler rollers are correctly seated and that the drive roller surfaces are free of defects.
3. Clean the sensor and the surrounding area.
4. If the sensor has a flag actuator, check that the flag actuator has free movement.
5. Check the wire harness between the Right-side Middle Panel sensor (SN23) and the Motion PCA (A2).

[Vertical component locator on page 2332](#)

Test the Right-side Middle Panel sensor (SN23)

1. Open and close the right-side middle panel to manually activate SN23.

TIP: Click **Subsystems**, click **Paper Path**, and then click **Vertical Transport**.

Does the sensor state change?

No Yes

[Final activities on page 24](#)

1

Test the voltage to the Right-side Middle Panel sensor (SN23) on the Motion PCA (A2)

1. Disconnect J10 from A2.
2. Test the voltage to SN23 on A2: 3.3 Vdc at pins 2A to 1A (GND) and 3A to 1A (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

CAUTION: Use an ESD strap.

Is the voltage correct?

No Yes

Test the voltage at the Right-side Middle Panel sensor (SN23)

1. Verify that J10 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN23: 3.3 Vdc at pins 17A to 18A (GND) and 16A to 18A (GND) on W14P6-W36J6.

[Vertical wiring diagram on page 2261](#)

1 Is the voltage correct?

1 **No Yes**

Replace the Right-side Middle Panel sensor (SN23)

1. Replace SN23.

2 [Vertical sensors on page 386](#)

Check the wire harness between the Motion PCA (A2) and the Right-side Middle Panel sensor (SN23)

1. Check the wire harness and connections between A2 and SN23.

[Vertical wiring diagram on page 2261](#)

[Vertical component locator on page 2332](#)

2. Repair as needed.

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

B0.06C1: Right-side Middle Panel LED (LED13) not lit

Initial Steps

1. [Vertical component locator on page 2332](#)

Test the Right-side Middle Panel LED (LED13)

1. Activate LED13.
2. Verify that LED13 turns on and off.

[Vertical component locator on page 2332](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **Vertical Transport**.

Does the LED turn on and off?

No **Yes**

Check for problems that might cause intermittent behavior

1. Check the wire harness between the Motion PCA (A2) and the LED.

[Vertical wiring diagram on page 2261](#)

1.
 2. Visually check the LED mounting and surrounding area for any obvious problems. Repair as needed.

Check the Right-side Middle Panel LED (LED13) and wire harness

1. Verify that the LED is correctly located.
[Vertical wiring diagram on page 2261](#)
2. Check the wire harness between the Motion PCA (A2) and the LED.

Test the Right-side Middle Panel LED (LED13)

1. Activate LED13.
2. Verify that the LED turns on and off.

[Vertical component locator on page 2332](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **Vertical Transport**.

Does the LED turn on and off?

No **Yes**

1. [Final activities on page 24](#)

Test the voltage to the Right-side Middle Panel LED (LED13) on the Motion PCA (A2)

1. Disconnect J10 from A2.
2. Test the voltage to LED13 on A2: 5 Vdc on J10 at pins 7B to 9B.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage at the Right-side Middle Panel LED (LED13)

1. Verify that J10 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the LED.
3. Test the voltage at LED13: 5 Vdc at pins 2B to 1B on W14P6-W36J6 .

[Vertical wiring diagram on page 2261](#)

1 Is the voltage correct?

1 **No Yes**

Replace the Right-side Middle Panel LED (LED13)

1. Replace LED13.

1 2 [Right-side Middle Panel LED \(LED13\) on page 386](#)

Check the wire harness between the Motion PCA (A2) and the LED

1. Check the wire harness between A2 and the LED.

1 [Vertical wiring diagram on page 2261](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

B0.1301: Paper jam at Vertical Transport 1 sensor (SN35)

Initial Steps

1. Check for obstructions in the paper path.
2. Check the input trays for damaged paper and ensure that the length and width adjusters are set properly.

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Test the Vertical Transport 1 sensor (SN35)

1. Manually activate SN35.

[Vertical component locator on page 2332](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **Vertical Transport**.

Does the sensor state change?

No **Yes**

1 | [B0.0101: Vertical motor \(M6\) stall on page 1281](#)

Check the following conditions

1. Verify that the sensor is correctly located.
2. Verify that all of the idler rollers are properly seated and that the drive roller surfaces are free of defects.
3. Clean the sensor and the surrounding area.
4. If the sensor has a flag actuator, check that the flag actuator has free movement.
5. Check the wire harness between the Motion PCA (A2) and the Vertical Transport 1 sensor (SN35).

[Vertical wiring diagram on page 2261](#)

Test the Vertical Transport 1 sensor (SN35)

1. Manually activate SN35.

[Vertical component locator on page 2332](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **Vertical Transport**.

Does the sensor state change?

No **Yes**

1 | [Final activities on page 24](#)

Test the voltage at the Vertical Transport 1 sensor (SN35)

1. Verify that J10 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN35: 3.3 Vdc at pins 14B to 13B (GND) and 15B to 13B (GND) on W14P6-W36J6.

[Vertical wiring diagram on page 2261](#)

Is the voltage correct?

No **Yes**

Replace the Vertical Transport 1 sensor (SN35)

1. Replace SN35.

[Vertical sensors on page 386](#)

Test the voltage to the Vertical Transport 1 sensor (SN35) on the Motion PCA (A2)

1. Disconnect J10 from A2.
2. Test the voltage to SN35 on A2: 3.3 Vdc at J10 pins 5B to 6B (GND) and 4B to 6B (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

CAUTION: Use an ESD strap.

Is the voltage correct?

No **Yes**

Check the wire harness between the Motion PCA (A2) and the Vertical Transport 1 sensor (SN35)

1. Check the wire harness and connections between A2 and SN35.

[Vertical wiring diagram on page 2261](#)

[Vertical component locator on page 2332](#)

2. Repair as needed.

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

B0.1302: Paper jam at Vertical Transport 2 sensor (SN28)

Initial Steps

1. Check for obstructions in the paper path.
2. Check the input trays for damaged paper and ensure that the length and width adjusters are set properly.

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Test the Vertical Transport 2 sensor (SN28)

1. Manually activate SN28.

[Vertical component locator on page 2332](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **Vertical Transport**.

Does the sensor state change?

No **Yes**

1 | [B0.0101: Vertical motor \(M6\) stall on page 1281](#)

Check the following conditions

1. Verify that the sensor is correctly located.
2. Verify that all of the idler rollers are properly seated and that the drive roller surfaces are free of defects.
3. Clean the sensor and the surrounding area.
4. If the sensor has a flag actuator, check that the flag actuator has free movement.
5. Check the wire harness between the Motion PCA (A2) and the Vertical Transport 2 sensor (SN28).

[Vertical wiring diagram on page 2261](#)

Test the Vertical Transport 2 sensor (SN28)

1. Manually activate SN28.

[Vertical component locator on page 2332](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **Vertical Transport**.

Does the sensor state change?

No **Yes**

1 | [Final activities on page 24](#)

Test the voltage at the Vertical Transport 2 sensor (SN28)

1. Verify that J10 is connected on the Motion PCA (A2).
2. Disconnect the wire harness from the sensor.
3. Test the voltage at SN28: 3.3 Vdc at pins 2 to 3 (GND) and 1 to 3 (GND) on W36P28-SN28.

[Vertical wiring diagram on page 2261](#)

Is the voltage correct?

No **Yes**

Replace the Vertical Transport 2 sensor (SN28)

1. Replace SN28.

[Vertical sensors on page 386](#)

Test the voltage to the Vertical Transport 2 sensor (SN28) on the Motion PCA (A2)

1. Disconnect J10 from A2.
2. Check voltage to SN28 on A2: 3.3 Vdc at J10 pins 7B to 9B (GND) and 8B to 9B (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

CAUTION: Use an ESD strap.

Is the voltage correct?

No **Yes**

Check the wire harness between the Motion PCA (A2) and the Vertical Transport 2 sensor (SN28)

1. Check the wire harness and connections between A2 and SN28.

[Vertical wiring diagram on page 2261](#)

[Vertical component locator on page 2332](#)

2. Repair as needed.

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

B0.1303: Paper jam at Vertical Transport 3 sensor (SN25)

Initial Steps

1. Check for obstructions in the paper path.
2. Check the input trays for damaged paper and ensure that the length and width adjusters are set properly. If Tray 5 is present, check to make sure that Tray 5 is latching properly, and that the pick and separator tires are not worn out.

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Test the Vertical Transport 3 sensor (SN25)

1. Manually activate SN25.

[Vertical component locator on page 2332](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **Vertical Transport**.

Does the sensor state change?

No **Yes**

1 | [B0.0101: Vertical motor \(M6\) stall on page 1281](#)

Check the following conditions

1. Verify that the sensor is correctly located.
2. Verify that all of the idler rollers are correctly seated and that the drive roller surfaces are free of defects.
3. Clean the sensor and the surrounding area.
4. If the sensor has a flag actuator, check that the flag actuator has free movement.
5. Check the wire harness between the Vertical Transport 3 sensor (SN25) and the Motion PCA (A2).

[Vertical wiring diagram on page 2261](#)

Test the Vertical Transport 3 sensor (SN25)

1. Manually activate SN25.

[Vertical component locator on page 2332](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **Vertical Transport**.

Does the sensor state change?

No **Yes**

1 | [Final activities on page 24](#)

Test the voltage at the Vertical Transport 3 sensor (SN25)

1. Verify that J10 is connected on Motion PCA (A2).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN25: 3.3 Vdc at pins 9A to 10A (GND) and 8A to 10A (GND) on W14P6-W36J6.

[Vertical wiring diagram on page 2261](#)

Is the voltage correct?

No **Yes**

Replace the Vertical Transport 3 sensor (SN25)

1. Replace SN25.

[Vertical sensors on page 386](#)

Test the voltage to the Vertical Transport 3 sensor (SN25) on the Motion PCA (A2)

1. Disconnect J10 from A2.
2. Test the voltage to SN25 on A2: 3.3 Vdc at J10 pins 11A to 9A (GND) and 10A to 9A (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

CAUTION: Use an ESD strap.

Is the voltage correct?

No **Yes**

Check the wire harness between the Motion PCA (A2) and the Vertical Transport 3 sensor (SN25)

1. Check the wire harness and connections between A2 and SN25.

[Vertical wiring diagram on page 2261](#)

[Vertical component locator on page 2332](#)

2. Repair as needed.

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

B0.1304: Paper jam at Vertical transport 4 sensor (SN26)

Initial Steps

1. Check for obstructions in the paper path.
2. Check the input trays for damaged paper and ensure that the length and width adjusters are set properly. If Tray 5 is present, check to make sure that Tray 5 is latching properly, and that the pick and separator tires are not worn out.

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Test the Vertical transport 4 sensor (SN26)

1. Manually activate SN26.

[Horizontal wiring diagram on page 2243](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **Horizontal Transport**.

Does the sensor state change?

No **Yes**

1 | [B0.0101: Vertical motor \(M6\) stall on page 1281](#)

Verify that the sensor conditions are proper

1. Verify that the sensor is correctly located.
2. Verify that all of the idler rollers are correctly seated and that the drive roller surfaces are free of defects.
3. Clean the sensor and the surrounding area.
4. If the sensor has a flag actuator, check that the flag actuator has free movement.
5. Check the wire harness between the Vertical transport 4 sensor (SN26) and the Motion PCA (A2).

[Horizontal component locator on page 2324](#)

Test the Vertical transport 4 sensor (SN26)

1. Manually activate SN26.

[Horizontal wiring diagram on page 2243](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **Horizontal Transport**.

Does the sensor state change?

No **Yes**

1 | [Final activities on page 24](#)

Test the voltage to the Vertical transport 4 sensor (SN26) on the Motion PCA (A2)

1. Disconnect J10 from A2.
2. Test the voltage at SN26 on A2: 3.3 Vdc at J10 pins 13A to 12A (GND) and 14A to 12A (GND)

[Motion PCA \(A2\) diagram on page 2268](#)

CAUTION: Use an ESD strap.

Is the voltage correct?

No Yes

Test the voltage at the Vertical transport 4 sensor (SN26)

1. Verify that J10 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN26: 3.3 Vdc at pins 6A to 7A (GND) and 5A to 7A (GND) on W14P6-W36J6.

[Horizontal component locator on page 2324](#)

Is the voltage correct?

No Yes

Replace the Vertical transport 4 sensor (SN26)

1. Replace SN26.

[Vertical sensors on page 386](#)

Check the wire harness between the Motion PCA (A2) and the Vertical transport 4 sensor (SN26)

1. Check the wire harness and connections between A2 and SN26.

[Horizontal component locator on page 2324](#)

[Horizontal wiring diagram on page 2243](#)

2. Repair as needed.

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

B1.0101: Horizontal motor (M7) stall

Initial Steps

1. [Horizontal wiring diagram on page 2243](#)

NOTE: If a servo motor is powered on, it will feel like there is a bind.

Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Turn the Horizontal motor (M7) by hand

1. Turn M7 by hand with Tray 1 engaged. All of the rollers should turn.

[Horizontal wiring diagram on page 2243](#)

Do the rollers turn?

No **Yes**

Check the Horizontal Motor encoder (EN3) count

1. Turn the drive roller by hand.

[Horizontal wiring diagram on page 2243](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **Horizontal Transport**.

1 Does the encoder count change?

1 **No** **Yes**

Test the Horizontal motor (M7)

1. Run M7.

TIP: Click **Subsystems**, click **Paper Path**, and then click **Horizontal Transport**.

1 2 Does the motor turn?

1 2 **No** **Yes**

Check the rollers and drive belt

1. Check the bearing, shaft, and rollers on the transport roll assembly.
2. Check the idler rollers.
3. Check the transport drive belt tension.
4. Check the drive belts to the rollers.
5. Disconnect the drive belt from the motor and turn the rollers. Check for binding or damage.
6. Repair as needed.

1 2 3 [Horizontal wiring diagram on page 2243](#)

Test the voltage at the Horizontal motor (M7)

1. Verify that J2 is connected to the Motion PCA (A2).
2. Disconnect the wire connector from the motor.
3. Test the voltage at M7: 12 Vdc at pins 1 to 2 on W18P7-M7.

[Horizontal component locator on page 2324](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **Horizontal Transport**.

Is the voltage correct?

No **Yes**

Replace the Horizontal motor (M7)

1. Replace M7.

[Horizontal motor \(M7\) on page 392](#)

Test the voltage to the Horizontal motor (M7) on the Motion PCA (A2)

1. Disconnect J2 from A2.
2. Test the voltage to M7 on A2: 12 Vdc at J2 pins 3 to 10 .

[Motion PCA \(A2\) diagram on page 2268](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **Horizontal Transport**.

Is the voltage correct?

No **Yes**

Check the wire harness between the Motion PCA (A2) to the Horizontal motor (M7)

1. Check the wire harness and connections between A2 and M7.
2. Repair as needed.

[Horizontal component locator on page 2324](#)

Replace the Motion PCA (A2)

1. Replace A2

[Motion PCA \(A2\) on page 700](#)

Test the voltage at the Horizontal Motor encoder (EN3)

1. Verify that J9 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the encoder.
3. Test the voltage at EN3: 5 Vdc at pins 8A to 10A (GND) on W15P5-W37J5.

[Horizontal component locator on page 2324](#)

Is the voltage correct?

No **Yes**

Test the voltage for Horizontal Motor encoder (EN3) channels A and B

1. With W37P3 disconnected, test the voltage at EN3: 5 Vdc pins 7A to 10A (GND) and pins 9A to 10A (GND) on W15P5-W37J5.

[Horizontal component locator on page 2324](#)

Is the voltage correct?

No Yes

Replace the Horizontal motor (M7)

1. Replace M7.

[Horizontal motor \(M7\) on page 392](#)

Check the wire harness between the Motion PCA (A2) and the Horizontal Motor encoder (EN3)

1. Check the wire harness between A2 and EN3.
2. Repair as needed.

[Horizontal component locator on page 2324](#)

Test the voltage on the Motion PCA (A2) to the Horizontal Motor encoder (EN3)

1. Disconnect J9 from A2.
2. Test the voltage to EN3 on A2: 5 Vdc at pins 8A to 10A (GND) on W15P5-W37J5.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No Yes

Check the wire harness between the Motion PCA (A2) and the Horizontal Motor encoder (EN3)

1. Check the connections and wiring between EN3 and A2.

[Horizontal component locator on page 2324](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

Replace the belt

1. Replace the belt.

B1.02E1: Close upper paper path

Initial Steps

1. [Horizontal wiring diagram on page 2243](#)

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Careful working around electricity.

Moving parts can cause injury.

CAUTION: Do not use frame as ground.

Test the Horizontal Open sensor (SN4)

1. Open and close the horizontal jam access guide to manually activate SN4.

TIP: Click **Subsystems**, click **Paper Path**, and then click **Horizontal Transport**.

Does the sensor state change?

No **Yes**

Check the alignment of the horizontal jam access

1. Check the alignment of the Horizontal Open sensor (SN4) actuator alignment and the horizontal jam access guide latch.

Check the following conditions

1. Verify that the sensor is correctly located.
2. Verify that all of the idler rollers are correctly seated and that the drive roller surfaces are free of defects.
3. Clean the sensor and the surrounding area.
4. If the sensor has a flag actuator, check that the flag actuator has free movement.
5. Check the wire harness between the Horizontal Open sensor (SN4) and the Motion PCA (A2).

[Horizontal component locator on page 2324](#)

Test the Horizontal Open sensor (SN4)

1. Open and close the horizontal transport jam access door to manually activate SN4.

TIP: Click **Subsystems**, click **Paper Path**, and then click **Horizontal Transport**.

Does the sensor state change?

No **Yes**

[Final activities on page 24](#)

Test the voltage to the Horizontal Open sensor (SN4) on the Motion PCA (A2)

1. Disconnect J9 from A2.
2. Test the voltage to SN4 on A2: 3.3 Vdc at J9 pins 9B to 7B (GND) and 8B to 7B (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

CAUTION: Use an ESD strap.

Is the voltage correct?

No **Yes**

Test the voltage at the Horizontal Open sensor (SN4)

1. Verify that J9 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN4: 3.3 Vdc at pins 8B to 7B (GND) and 9B to 7B (GND) on W15P5-W37J5.

[Horizontal component locator on page 2324](#)

1 Is the voltage correct?

1 **No** **Yes**

Replace the Horizontal Open sensor (SN4)

1. Replace SN4.

2 [Horizontal sensors on page 396](#)

Check the wire harness between the Motion PCA (A2) and the Horizontal Open sensor (SN4)

1. Check the wire harness and connections between A2 and SN4.

[Horizontal component locator on page 2324](#)

[Horizontal wiring diagram on page 2243](#)

2. Repair as needed.

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

B1.02E2: Wrong media type

Initial Steps

1. [Horizontal wiring diagram on page 2243](#)

Check the following conditions

1. Verify that the media loaded in the paper trays matches the media selected on the control panel.
2. Verify that hole punched paper is oriented correctly in the paper tray.
3. Check for obstructions in the paper path.
4. Check the condition of the paper.
5. Clean the sensor and the surrounding area.
6. Verify that the media guides in the trays are registered to the media.
7. Manually activate the Transparency sensor 1 (SN1).

Is the problem resolved?

No **Yes**

- 1 | [Final activities on page 24](#)

[B1.1301: Paper jam at Transparency sensor 1 \(SN1\) on page 1306](#)

B1.06C1: Horizontal Latch LED (LED1) not lit

Initial Steps

1. [Horizontal wiring diagram on page 2243](#)

Test the Horizontal Latch LED (LED1)

1. Activate LED1.
2. Verify that the LED turns on and off.

[Horizontal wiring diagram on page 2243](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **Horizontal Transport**.

Does the LED turn on and off?

No **Yes**

Check for problems that might cause intermittent behavior

1. Check the wire harness between the Motion PCA (A2) and the LED.

[Horizontal component locator on page 2324](#)

1. 2. Check the LED mounting and surrounding area for any obvious problems. Repair as needed.

Check the Horizontal Latch LED (LED1) and wire harness

1. Verify that the LED is correctly located.
2. Check the wire harness between the Motion PCA (A2) and the LED.

[Horizontal component locator on page 2324](#)

Test the Horizontal Latch LED (LED1)

1. Activate LED1.
2. Verify that the LED turns on and off.

[Horizontal wiring diagram on page 2243](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **Horizontal Transport**.

Does the LED turn on and off?

No **Yes**

1. [Final activities on page 24](#)

Test the voltage to the Horizontal Latch LED (LED1) on the Motion PCA (A2)

1. Disconnect J7 from A2.
2. Test the voltage to LED1 on A2: 5 Vdc on W47P7-A2J7 at pins 4A to 5A.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage at the Horizontal Latch LED (LED1)

1. Verify that J7 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the LED.
3. Test the voltage at LED1: 5 Vdc at pins 1 to 2 on W47P10-LED10.

[Horizontal component locator on page 2324](#)

1 Is the voltage correct?

1 **No Yes**

Replace the Horizontal Latch LED (LED1)

1. Replace LED1.

1 2 [Horizontal Latch LED \(LED1\) on page 398](#)

Check the wire harness between the Motion PCA (A2) and the LED

1. Check the wire harness between A2 and the LED.

1 [Horizontal component locator on page 2324](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

B1.1301: Paper jam at Transparency sensor 1 (SN1)

Initial Steps

1. Check for obstructions in the paper path.
2. Check the input trays for damaged paper and ensure that the length and width adjusters are set properly.

[Horizontal wiring diagram on page 2243](#)

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Test the Transparency sensor 1 (SN1)

1. Manually activate SN1.

TIP: Click **Subsystems**, click **Paper Path**, and then click **Horizontal Transport**.

Does the sensor state change?

No **Yes**

- | | |
|---|---|
| 1 | B1.0101: Horizontal motor (M7) stall on page 1298 |
|---|---|

Verify that the sensor conditions are proper

1. Verify that the sensor is correctly located.
2. Verify that all of the idler rollers are correctly seated and that the drive roller surfaces are free of defects.
3. Clean the sensor and the surrounding area.
4. If the sensor has a flag actuator, check that the flag actuator has free movement.
5. Check the wire harness between the Transparency sensor 1 (SN1) and the Motion PCA (A2).

[Horizontal component locator on page 2324](#)

Test the Transparency sensor 1 (SN1)

1. Manually activate SN1.

TIP: Click **Subsystems**, click **Paper Path**, and then click **Horizontal Transport**.

Does the sensor state change?

No **Yes**

- | | |
|---|---|
| 1 | Final activities on page 24 |
|---|---|

Test the voltage to the Transparency sensor 1 (SN1) on the Motion PCA (A2)

1. Disconnect J9 from A2.
2. Test the voltage to SN1 on A2: 1.15 Vdc unblocked and blocked at J9 pins 12A to 11A (GND) and 0.45VDC unblocked and 2.81VDC blocked at pins 10A to 11A (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Test the voltage at the Transparency sensor 1 (SN1)

1. Verify that J9 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN1: 0.45 Vdc unblocked and 2.78 Vdc blocked at pins 3A to 2A (GND) and 1.14 Vdc blocked and unblocked at pins 1A to 2A (GND) on W15P5-W37J5.

[Horizontal component locator on page 2324](#)

1 Is the voltage correct?

1 No Yes

Replace the Transparency sensor 1 (SN1)

1. Replace SN1.

2 [Horizontal wiring diagram on page 2243](#)

Check the wire harness between the Motion PCA (A2) and the Transparency sensor 1 (SN1)

1. Check the wire harness and connections between A2 and SN1.

[Horizontal component locator on page 2324](#)

[Horizontal wiring diagram on page 2243](#)

2. Repair as needed.

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

B1.1302: Paper jam at Horizontal Transport 2 sensor (SN3)

Initial Steps

1. Check for obstructions in the paper path.
2. Check the input trays for damaged paper and ensure that the length and width adjusters are set properly.

[Horizontal wiring diagram on page 2243](#)

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Test the Horizontal Transport 2 sensor (SN3)

1. Manually activate SN3.

[Horizontal wiring diagram on page 2243](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **Horizontal Transport**.

Does the sensor state change?

No **Yes**

1 | [B1.0101: Horizontal motor \(M7\) stall on page 1298](#)

Check the following conditions

1. Verify that the sensor is correctly located.
2. Verify that all of the idler rollers are correctly seated and that the drive roller surfaces are free of defects.
3. Clean the sensor and the surrounding area.
4. If the sensor has a flag actuator, check that the flag actuator has free movement.
5. Check the wire harness between the Horizontal Transport 2 sensor (SN3) and the Motion PCA (A2).

[Horizontal component locator on page 2324](#)

Test the Horizontal Transport 2 sensor (SN3)

1. Manually activate SN3.

[Horizontal wiring diagram on page 2243](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **Horizontal Transport**.

Does the sensor state change?

No **Yes**

1 | [Final activities on page 24](#)

Test the voltage to the Horizontal Transport 2 sensor (SN3) on the Motion PCA (A2)

1. Disconnect J9 from A2.
2. Test the voltage to SN3 on A2: Test 1.18 Vdc unblocked at J9 pins 7B to 9B (GND) and 3.25 Vdc unblocked, 0.10 Vdc blocked at pins 8B to 9B (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Test the voltage at the Horizontal Transport 2 sensor (SN3)

1. Verify that J9 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN3: 3.24 Vdc unblocked, 0.09 Vdc blocked at pins 5B to 4B (GND) and 1.17 Vdc both unblocked and blocked at pins 6B to 4B (GND) on W15P5-W37J5.

[Horizontal component locator on page 2324](#)

Is the voltage correct?

No Yes

Replace the Horizontal Transport 2 sensor (SN3)

1. Replace SN3.

[Sensors on page 762](#)

Check the wire harness between the Motion PCA (A2) and the Horizontal Transport 2 sensor (SN3)

1. Check the wire harness and connections between A2 and SN3.

[Horizontal component locator on page 2324](#)

[Horizontal wiring diagram on page 2243](#)

2. Repair as needed.

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

B1.1303: Paper jam at Horizontal Transport 3 sensor (SN2)

Initial Steps

1. Check for obstructions in the paper path.
2. Check the input trays for damaged paper and ensure that the length and width adjusters are set properly.

[Horizontal wiring diagram on page 2243](#)

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Test the Horizontal Transport 3 sensor (SN2)

1. Manually activate SN2.

TIP: Click **Subsystems**, click **Paper Path**, and then click **Horizontal Transport**.

Does the sensor state change?

No **Yes**

1 | [B1.0101: Horizontal motor \(M7\) stall on page 1298](#)

Check the following conditions

1. Verify that the sensor is correctly located.
2. Verify that all of the idler rollers are correctly seated and that the drive roller surfaces are free of defects.
3. Clean the sensor and the surrounding area.
4. If the sensor has a flag actuator, check that the flag actuator has free movement.
5. Check the wire harness between the Horizontal Transport 3 sensor (SN2) and the Motion PCA (A2).

[Horizontal component locator on page 2324](#)

Test the Horizontal Transport 3 sensor (SN2)

1. Manually activate Horizontal Transport 3 sensor (SN2).

TIP: Click **Subsystems**, click **Paper Path**, and then click **Horizontal Transport**.

Does the sensor state change?

No **Yes**

1 | [Final activities on page 24](#)

Test the voltage to the Horizontal Transport 3 sensor (SN2) on the Motion PCA (A2)

1. Disconnect J9 from A2.
2. Test the voltage to SN2 on A2: 3.3 Vdc at J9 pins 8A to 7A (GND).

[Horizontal component locator on page 2324](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Test the voltage at the Horizontal Transport 3 sensor (SN2)

1. Verify that J9 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN2: 4.96 Vdc unblocked and blocked at pins 8A to 10A (GND) and 0.12 Vdc unblocked and blocked at pins 9A to 10A (GND) on W15P5-W37J5.

[Horizontal component locator on page 2324](#)

1 Is the voltage correct?

1 No Yes

Replace the Horizontal Transport 3 sensor (SN2)

1. Replace SN2.

2 [Horizontal sensors on page 396](#)

Check the wire harness between the Motion PCA (A2) and the Horizontal Transport 3 sensor (SN2)

1. Check the wire harness and connections between A2 and SN2.

[Horizontal component locator on page 2324](#)

[Horizontal wiring diagram on page 2243](#)

2. Repair as needed.

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

B1.1304: Paper jam at Horizontal Transport 4 sensor (SN5)

Initial Steps

1. Check for obstructions in the paper path.
2. Check the condition of the paper.

[Horizontal wiring diagram on page 2243](#)

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

3. Check the horizontal transport drive rollers for excessive wear.

Test the Horizontal Transport 4 sensor (SN5)

1. Manually activate SN5.

TIP: Click **Subsystems**, click **Paper Path**, and then click **Horizontal Transport**.

Does the sensor state change?

No **Yes**

1 | [B1.0101: Horizontal motor \(M7\) stall on page 1298](#)

Check the following conditions

1. Verify that the sensor is correctly located.
2. Verify that all of the idler rollers are correctly seated and that the drive roller surfaces are free of defects.
3. Clean the sensor and the surrounding area.
4. If the sensor has a flag actuator, check that the flag actuator has free movement.
5. Check the wire harness between the Horizontal Transport 4 sensor (SN5) and the Motion PCA (A2).

[Horizontal component locator on page 2324](#)

Test the Horizontal Transport 4 sensor (SN5)

1. Manually activate SN5.

TIP: Click **Subsystems**, click **Paper Path**, and then click **Horizontal Transport**.

Does the sensor state change?

No **Yes**

1 | [Final activities on page 24](#)

Test the voltage to the Horizontal Transport 4 sensor (SN5) on the Motion PCA (A2)

1. Disconnect J9 from A2.
2. Test the voltage to SN5 on A2: 3.3 Vdc at J9 pins 2B to 3B (GND) and 1B to 3B (GND).

[Horizontal component locator on page 2324](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Test the voltage at the Horizontal Transport 4 sensor (SN5)

1. Verify that J9 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at Horizontal Transport 4 sensor (SN5): 1.18 Vdc blocked and unblocked at pins 12B to 10B (GND) and 3.25 Vdc unblocked, 0.09 Vdc blocked at pins 11B to 10B (GND) on W15P5-W37J5.

[Horizontal component locator on page 2324](#)

Is the voltage correct?

No Yes

Replace the Horizontal Transport 4 sensor (SN5)

1. Replace SN5.

[Horizontal sensors on page 396](#)

Check the wire harness between the Motion PCA (A2) and the Horizontal Transport 4 sensor (SN5)

1. Check the wire harness and connections between A2 and SN5.

[Horizontal component locator on page 2324](#)

[Horizontal wiring diagram on page 2243](#)

2. Repair as needed.

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

B2.0101: IDO Input 1 motor (M8) stall

Initial Steps

1. [IDO component locator on page 2325](#)

NOTE: If a servo motor is powered on, it will feel like there is a bind.

Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Turn the IDO Input 1 motor (M8) by hand

1. Turn M8 by hand with Tray 1 engaged. All of the rollers should turn.

[IDO component locator on page 2325](#)

Do the rollers turn?

No **Yes**

Check the IDO Input 1 Motor encoder (EN9) count

1. Turn drive roller by hand.

[IDO component locator on page 2325](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

1 Does the encoder count change?

1 **No** **Yes**

Test the IDO Input 1 motor (M8)

1. Run on M8.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

1 2 Does the motor turn?

1 2 **No** **Yes**

Check the rollers and drive belt

1. Check the bearing, shaft, and rollers on the transport roll assembly.
2. Check the idler rollers.
3. Check the transport drive belt tension.
4. Visually check the drive belts to the rollers.
5. Disconnect the drive belt from the motor and turn the rollers; check for binding or damage.
6. Repair as needed.

1 2 3 [IDO component locator on page 2325](#)

Test the voltage to the IDO Input 1 motor (M8) on the Motion PCA (A2)

1. Test the voltage to M8 on A2: 17.88 Vdc (not using voltage test routine) at J14 pins 7 to 16.

[Motion PCA \(A2\) diagram on page 2268](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

Is the voltage correct?

No **Yes**

Test the voltage at the IDO Input 1 motor (M8)

1. Verify that J14 is connected to the Motion PCA (A2).
2. Disconnect the wire connector from the motor.
3. Test the voltage at M8: 5 Vdc at pins 1 to 2 on W19P8-M8.

[IDO motors and encoders wiring diagram on page 2244](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

Is the voltage correct?

No **Yes**

Replace the IDO Input 1 motor (M8)

1. Replace M8.

[IDO Input 1 motor \(M8\) on page 414](#)

Check the wire harness

1. Check the wire harness between the Motion PCA (A2) and the IDO Input 1 motor (M8).
2. Repair as needed.

[IDO motors and encoders wiring diagram on page 2244](#)

Replace the Motion PCA (A2)

1. Replace A2

[Motion PCA \(A2\) on page 700](#)

Test the voltage to the IDO Input 1 Motor encoder (EN9) on the Motion PCA (A2)

1. Disconnect J4 from A2.
2. Test the voltage to EN9 on A2: -1.0 Vdc at J4 pins 2B to 4B.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage at the IDO Input 1 Motor encoder (EN9)

1. Verify that J4 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the encoder.
3. Test the voltage at EN9: 5 Vdc at pins 2B to 4B on W97P7-W44J7.

[IDO motors and encoders wiring diagram on page 2244](#)

Is the voltage correct?

No Yes

Test the voltage for IDO Input 1 Motor encoder (EN9) channels A and B

1. With W44P9 disconnected, test the voltage at EN9: 5 Vdc at pins 1B to 4B and pins 3B to 4B on W97P7-W44J7.

[IDO motors and encoders wiring diagram on page 2244](#)

Is the voltage correct?

No Yes

Replace the IDO Input 1 motor (M8)

1. Replace M8.

[IDO Input 1 motor \(M8\) on page 414](#)

Check wire harness

1. Check the wire harness between the Motion PCA (A2) and the encoder.
2. Repair as needed.

[IDO motors and encoders wiring diagram on page 2244](#)

Check the wire harness

1. Check the wire harness between the Motion PCA (A2) and the encoder.

[IDO motors and encoders wiring diagram on page 2244](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

Replace the belt

1. Replace the belt.

B2.0102: IDO Input 2 motor (M10) stall

Initial Steps

1. [IDO component locator on page 2325](#)

NOTE: If a servo motor is powered on, it will feel like there is a bind.

Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Turn the IDO Input 2 motor (M10) by hand

1. Turn M10 by hand. All of the rollers should turn.

[IDO component locator on page 2325](#)

Do the rollers turn?

No Yes

Check the IDO Input 2 Motor encoder (EN5) count

1. Turn the drive roller by hand.

[IDO component locator on page 2325](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

Does the encoder count change?

No Yes

Test the IDO Input 2 motor (M10)

1. Run M10.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

Does the motor turn?

No Yes

Check the rollers and drive belt

1. Check the bearing, shaft, and rollers on the transport roll assembly.
2. Check the idler rollers.
3. Check the transport drive belt tension.
4. Visually check the drive belts to the rollers.
5. Disconnect the drive belt from the motor and turn the rollers; check for binding or damage.
6. Repair as needed.

[IDO component locator on page 2325](#)

Test the voltage to the IDO Input 2 motor (M10) on the Motion PCA (A2)

1. Test the voltage to M10 on A2: 19.2 Vdc (not using the voltage test routine) at J14 pins 2 to 11.

[Motion PCA \(A2\) diagram on page 2268](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

Is the voltage correct?

No **Yes**

Test the voltage at the IDO Input 2 motor (M10)

1. Verify that J14 is connected to the Motion PCA (A2).
2. Disconnect the wire connector from the motor.
3. Test the voltage at M10: 5.23 Vdc at pins 1 to 2 on W19P10-M10.

[IDO motors and encoders wiring diagram on page 2244](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

Is the voltage correct?

No **Yes**

Replace the IDO Input 2 motor (M10)

1. Replace M10.

Check the wire harness

1. Check the wire harness between the Motion PCA (A2) the IDO Input 2 motor (M10).
2. Repair as needed.

[IDO motors and encoders wiring diagram on page 2244](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

Test the voltage to the IDO Input 2 Motor encoder (EN5) on the Motion PCA (A2)

1. Disconnect J4 from A2.
2. Test the voltage to EN5 on A2: 5 Vdc at J4 pins 13B to 11B.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage at the IDO Input 2 Motor encoder (EN5)

1. Verify that J4 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the encoder.
3. Test the voltage at EN5: 5 Vdc at pins 6B to 8B on W97P7-W44J7.

[IDO motors and encoders wiring diagram on page 2244](#)

Is the voltage correct?

1
1
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1

2
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2
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No
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3

Yes
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4

Test the voltage for IDO Input 2 Motor encoder (EN5) channels A and B

1. With W44P5 disconnected, test the voltage at EN5: 5 Vdc at pins 5B to 8B and pins 7B to 8B on W97P7-W44J7.

[IDO motors and encoders wiring diagram on page 2244](#)

Is the voltage correct?

No Yes

Replace the IDO Input 2 motor (M10)

1. Replace M10

[IDO Input 2 motor \(M10\) on page 415](#)

Check the wire harness

1. Check the wire harness between the Motion PCA (A2) and the encoder.
2. Repair as needed.

[IDO motors and encoders wiring diagram on page 2244](#)

Check the wire harness

1. Check the wire harness between the Motion PCA (A2) and the encoder.

[IDO motors and encoders wiring diagram on page 2244](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

Replace the belt

1. Replace the belt.

B2.0103: IDO Curler motor (M15) stall

Initial Steps

1. [IDO component locator on page 2325](#)

NOTE: If a servo motor is powered on, it will feel like there is a bind.

Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Turn the IDO Curler motor (M15) by hand

1. Turn M15 by hand with Tray 1 engaged. All of the rollers should turn.

[IDO component locator on page 2325](#)

Do the rollers turn?

No **Yes**

Check the IDO Curler Motor encoder (EN15) count

1. Turn the drive roller by hand.

[IDO component locator on page 2325](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

1 Does the encoder count change?

1 **No** **Yes**

Test the IDO Curler motor (M15)

1. Run M15.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

1 2 Does the motor turn?

1 2 **No** **Yes**

Check the rollers and drive belt

1. Check the bearing, shaft, and rollers on the transport roll assembly.
2. Check the idler rollers.
3. Check the transport drive belt tension.
4. Visually check the drive belts to the rollers.
5. Disconnect the drive belt from the motor and turn the rollers and check for binding or damage.
6. Repair as needed.

1 2 3 [IDO component locator on page 2325](#)

Test the voltage to the IDO Curler motor (M15) on the Motion PCA (A2)

1. Test the voltage to M15 on A2: 17.75 Vdc at J14 pins 1 to 10.

[Motion PCA \(A2\) diagram on page 2268](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

Is the voltage correct?

No **Yes**

Test the voltage at the IDO Curler motor (M15)

1. Verify that J14 is connected to the Motion PCA (A2).
2. Disconnect the wire connector from the motor.
3. Test the voltage at M15: 5.23 Vdc at pins 1 to 2 on W19P1-W86J1.

[IDO motors and encoders wiring diagram on page 2244](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

Is the voltage correct?

No **Yes**

Replace the IDO Curler motor (M15)

1. Replace M15.

Check the wire harness

1. Check the wire harness between the Motion PCA (A2) and the IDO Curler motor (M15).
2. Repair as needed.

[IDO paper path 1 wiring diagram on page 2245](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

Test the voltage to the IDO Curler Motor encoder (EN15) on the Motion PCA (A2)

1. Disconnect J5 from A2.
2. Test the voltage to EN15 on A2: 5 Vdc at J5 pins 3A to 1A.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage at the IDO Curler Motor encoder (EN15)

1. Verify that J5 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the encoder.
3. Test the voltage to EN15: 5 Vdc at pins 13A to 15A on W45P2-W87J2.

[IDO paper path 1 wiring diagram on page 2245](#)

Is the voltage correct?

1	2	No	Yes
		Test the voltage for IDO Curler Motor encoder (EN15) channels A and B	
		<ol style="list-style-type: none"> With W87P15 disconnected, test the voltage at EN15: 5 Vdc at pins 4 to 1 and pins 2 to 1 on w45p2-w87j2. IDO paper path 1 wiring diagram on page 2245 	
1	2	3	Is the voltage correct?
1	2	3	No Yes
			Replace the IDO Curler motor (M15)
			<ol style="list-style-type: none"> Replace M15 IDO Curler motor (M15) on page 421
1	2	3	4
			Check the wire harness
			<ol style="list-style-type: none"> Check the wire harness between the Motion PCA (A2) and the encoder. Repair as needed.
1	2	3	IDO paper path 1 wiring diagram on page 2245
			Check the wire harness
			<ol style="list-style-type: none"> Check the wire harness between the Motion PCA (A2) and the encoder.
1	2		IDO paper path 1 wiring diagram on page 2245
			Replace the Motion PCA (A2)
			<ol style="list-style-type: none"> Replace A2. Motion PCA (A2) on page 700
1			
			Replace the belt
			<ol style="list-style-type: none"> Replace the belt.

B2.0104: IDO Media Eject motor (M13) stall

Initial Steps

1. [IDO component locator on page 2325](#)

NOTE: If a servo motor is powered on, it will feel like there is a bind.

Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Test the IDO Media Eject motor (M13)

1. Open the IDO.
2. Turn on M13.

Watch for the media eject fingers to cycle in and out.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

Does the motor turn and do the media eject fingers cycle in and out?

No **Yes**

Check the media eject assembly and wiring

1. Visually check the media eject mechanism and wiring for damage, burrs on ends of media eject fingers, and burrs on upper media eject guide.
2. Repair as needed.

1 [IDO component locator on page 2325](#)

Check the IDO Media Eject Motor encoder (EN17) count

1. Open the IDO.
2. Run IDO Media Eject motor (M13).

[IDO component locator on page 2325](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

Does the encoder count change?

No **Yes**

Check the mechanism for binding or damage

1. Check the IDO Media Eject motor (M13) for binding or damage.

[IDO component locator on page 2325](#)

1

2. Repair as needed.

Test the voltage to the IDO Media Eject motor (M13) on the Motion PCA (A2)

1. Test the voltage to M13 on A2: 5 Vdc at J14 pins 5 to 14.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No Yes

Test the voltage to the IDO Media Eject Motor encoder (EN17) on the Motion PCA (A2)

- 1. Disconnect J4 on A2.
- 2. Test the voltage to EN17 on A2: 1.2 Vdc at J4 pins 4A to 3A.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No Yes

Test the voltage at the IDO Media Eject motor (M13)

- 1. Verify that J14 is connected to the Motion PCA (A2).
- 2. Disconnect the wire connector from the motor.
- 3. Test the voltage at IDO Media Eject motor (M13): 5 Vdc at pins 1 to 2 on W44P17-EN17/M3.

[IDO paper path 2 wiring diagram on page 2245](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

Is the voltage correct?

No Yes

Test the voltage at the IDO Media Eject Motor encoder (EN17)

- 1. Verify that J4 is connected on the Motion PCA (A2).
- 2. Disconnect the wire connector from the encoder.
- 3. Test the voltage at EN17: 1.2 Vdc at pins 15A to 16A on W97P7-W44J7.

[IDO paper path 1 wiring diagram on page 2245](#)

Is the voltage correct?

No Yes

Test the voltage for IDO Media Eject Motor encoder (EN17) channels A and B

- 1. With W44P17 disconnected, test the voltage at EN17: 0 to -4.0 Vdc at pins 17A to 16A on W97P7-W44J7.

[IDO paper path 2 wiring diagram on page 2245](#)

Is the voltage correct?

No Yes

Replace the IDO Media Eject motor (M13)

- 1. Replace M13.

Check the wire harness

- 1. Check the wire harness between the Motion PCA (A2) and the encoder.
- 2. Repair as needed.

[IDO paper path 2 wiring diagram on page 2245](#)

Check the wire harness

1. Check the wire harness between the Motion PCA (A2) and the encoder.

[IDO paper path 2 wiring diagram on page 2245](#)

Check the wire harness

1. Check the wire harness between the Motion PCA (A2) and the IDO Media Eject motor (M13).
2. Repair as needed.

[IDO paper path 1 wiring diagram on page 2245](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

B2.0105: IDO Duplex motor (M12) stall

Initial Steps

1. [IDO component locator on page 2325](#)

NOTE: If a servo motor is powered on, it will feel like there is a bind.

Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Turn the IDO Duplex motor (M12) by hand

1. Open the IDO.
2. Turn M12 by hand. All the rollers should turn.

[IDO component locator on page 2325](#)

Do the duplex transport paper path rollers turn?

No Yes

Check the IDO Duplex Motor encoder (EN7) count

1. Turn the drive roller by hand.

[IDO component locator on page 2325](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

1 Does the encoder count change?

1 No Yes

Turn the IDO Duplex motor (M12) forward

1. Turn on M12 in the forward direction.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

1 2 Does the motor turn?

1 2 No Yes

Turn the IDO Duplex motor (M12) in reverse

1. Turn on M12 in the reverse direction.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

1 2 3 Does the motor turn?

1 2 3 No Yes

Check the rollers and drive belt

1. Check the bearing, shaft, and rollers on the transport roll assembly.
2. Check the idler rollers.
3. Check the transport drive belt tension.
4. Visually check the drive belts to the rollers.
5. Disconnect the drive belt from the motor and turn the rollers; check for binding or damage.
6. Repair as needed.

[IDO component locator on page 2325](#)

Test the voltage to the IDO Duplex motor (M12) on the Motion PCA (A2) for the reverse direction

1. Test the voltage to M12 on A2: 3.2 Vdc at J14 pins 4 to 13.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage for the reverse direction at the IDO Duplex motor (M12)

1. [IDO motors and encoders wiring diagram on page 2244](#)
2. Verify that J14 is connected to the Motion PCA (A2).
3. Disconnect the wire connector from the motor.
4. Test the voltage at M12: -5 Vdc in the forward direction and 5 Vdc in the reverse direction at pins 1 to 2 on W19P12-M12.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

Is the voltage correct?

No **Yes**

Replace the IDO Duplex motor (M12)

1. Replace M12.

[IDO Duplex motor \(M12\) on page 418](#)

Check the wire harness

1. Check the wire harness between the Motion PCA (A2) and the IDO Duplex motor (M12).
2. Repair as needed.

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

Test the voltage for the forward direction at the IDO Duplex motor (M12)

1. [IDO motors and encoders wiring diagram on page 2244](#)
2. Verify that J14 is connected to the Motion PCA (A2).
3. Disconnect the wire connector from the motor.
4. Test the voltage at M12: -5 Vdc in the forward direction and 5 Vdc in the reverse direction at pins 1 to 2 on W19P12-M12.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

Is the voltage correct?

No **Yes**

Test the voltage to the IDO Duplex motor (M12) on the Motion PCA (A2) for the forward direction

1. Test the voltage to IDO Duplex motor (M12) on A2:3.2 Vdc at J14 pins 4 to 13.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Replace the IDO Duplex motor (M12)

1. Replace M12.

[IDO Duplex motor \(M12\) on page 418](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

Check the wire harness

1. Check the wiring between the Motion PCA (A2) and the IDO Duplex motor (M12).
2. Repair as needed.

[IDO motors and encoders wiring diagram on page 2244](#)

Test the voltage to the IDO Duplex Motor encoder (EN7) on the Motion PCA (A2)

1. Disconnect J4 from A2.
2. Test the voltage to EN7 on A2: 5 Vdc at J4 pins 6A to 8A.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage at the IDO Duplex Motor encoder (EN7)

1. Verify that J4 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the encoder.
3. Test the voltage at EN7: 5 Vdc at pins 13A to 11A on W97P7-W44J7.

[IDO motors and encoders wiring diagram on page 2244](#)

Is the voltage correct?

No Yes

Test the voltage for IDO Duplex Motor encoder (EN7) channels A and B

1. With W44P7 disconnected, test the voltage at EN7: 5 Vdc at pins 14A to 11A and pins 12A to 11A on W97P7-W44J7.

[IDO motors and encoders wiring diagram on page 2244](#)

Is the voltage correct?

No Yes

Replace the IDO Duplex motor (M12)

1. Replace M12.

[IDO Duplex motor \(M12\) on page 418](#)

Check the wire harness

1. Check the wire harness between the Motion PCA (A2) and the encoder.
2. Repair as needed.

[IDO motors and encoders wiring diagram on page 2244](#)

Check the wire harness

1. Check the wire harness between the Motion PCA (A2) and the encoder.

[IDO motors and encoders wiring diagram on page 2244](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

Check the belts and rollers

1. Replace and repair as needed.

B2.0106: IDO Output motor (M11) stall

Initial Steps

1. [IDO component locator on page 2325](#)

NOTE: If a servo motor is powered on, it will feel like there is a bind.

Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Turn the IDO Output motor (M11) by hand

1. Turn M11 with Tray 1 engaged. All of the rollers should turn.

[IDO component locator on page 2325](#)

Do the rollers turn?

No Yes

Check the IDO Output Motor encoder (EN4) count

1. Turn the drive roller by hand.

[IDO component locator on page 2325](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

1 Does the encoder count change?

1 No Yes

Turn the IDO Output motor (M11)

1. Run M11.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

1 2 Does the motor turn?

1 2 No Yes

Check the rollers and drive belt

1. Check the bearing, shaft, and rollers on the transport roll assembly.
2. Check the idler rollers.
3. Check the transport drive belt tension.
4. Visually check the drive belts to the rollers.
5. Disconnect the drive belt from the motor and turn the rollers; check for binding or damage.
6. Repair as needed.

1 2 3 [IDO component locator on page 2325](#)

Test the voltage to the IDO Output motor (M11) on the Motion PCA (A2)

1. Test the voltage to M11 on A2: 5 Vdc at J14 pins 3 to 12.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage at the IDO Output motor (M11)

1. Verify that J14 is connected to the Motion PCA (A2).
2. Disconnect the wire connector from the motor.
3. Test the voltage at M11: 5.23 Vdc at pins 1 to 2 on W19P11-M11.

[IDO motors and encoders wiring diagram on page 2244](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

Is the voltage correct?

No **Yes**

Replace the IDO Output motor (M11)

1. Replace M11.

[IDO Output motor \(M11\) on page 417](#)

Check the wire harness

1. Check the wire harness between the Motion PCA (A2) and the IDO Output motor (M11).
2. Repair as needed.

[IDO motors and encoders wiring diagram on page 2244](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

Test the voltage to the IDO Output Motor encoder (EN4) on the Motion PCA (A2)

1. Disconnect J4 on A2.
2. Test the voltage to EN4 on A2: 5 Vdc at J4 pins 10A to 12A.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage at the IDO Output Motor encoder (EN4)

1. Verify that J4 is connected on the Motion PCA (A2).
2. Disconnect the wire connector.
3. Test the voltage at EN4: 5 Vdc at pins 9A to 7A on W97P7-W44J7.

[IDO motors and encoders wiring diagram on page 2244](#)

Is the voltage correct?

1	2	No	Yes	
				Test the voltage for IDO Ouput Motor encoder (EN4) channels A and B
				1. With W44P4 disconnected, test the voltage at EN4: 5 Vdc pins 10A to 7A and pins 8A to 7A on W97P7-W44J7.
				IDO motors and encoders wiring diagram on page 2244
1	2	3		Is the voltage correct?
1	2	3	No	Yes
				Replace the IDO Output motor (M11)
				1. Replace M11.
1	2	3	4	IDO Output motor (M11) on page 417
				Check the wire harness
				1. Check the wire harness between the Motion PCA (A2) and the encoder.
				2. Repair as needed.
1	2	3		IDO motors and encoders wiring diagram on page 2244
				Check the wire harness
				1. Check the wire harness between the Motion PCA (A2) and the encoder.
1	2			IDO motors and encoders wiring diagram on page 2244
				Replace the Motion PCA (A2)
				1. Replace A2.
1				Motion PCA (A2) on page 700

- Replace the belt**
1. Replace the belt.

B2.02E1: Close left-side lower panel

Initial Steps

1. [IDO component locator on page 2325](#)

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Test the Left-side Lower Panel sensor (SN14)

1. Manually activate SN14.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the sensor state change?

No **Yes**

Service the left-side lower panel

1. Check the alignment of the left-side lower panel to the Left-side Lower Panel sensor (SN14).
2. Check the left-side lower panel hinges.

Check the following

1. Verify that the sensor is correctly located.
2. Clean the sensor and the surrounding area.
3. If the sensor has a flag actuator, check that the flag actuator has free movement.
4. Check the wire harness between the Left-side Lower Panel sensor (SN14) and the Motion PCA (A2).

[IDO component locator on page 2325](#)

[IDO H-bar wiring diagram on page 2246](#)

Test the Left-side Lower Panel sensor (SN14)

1. Manually activate SN14.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the sensor state change?

No **Yes**

1. [Final activities on page 24](#)

Test the voltage to the Left-side Lower Panel sensor (SN14) on the Motion PCA (A2)

1. Disconnect J5 from A2.
2. Test the voltage to SN14 on A2: 3.16 Vdc blocked, 0.20 Vdc unblocked at J5 pins 14A to 15A and 0 Vdc both blocked and unblocked at pins 13A to 15A.

[IDO H-bar wiring diagram on page 2246](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Test the voltage at the Left-side Lower Panel sensor (SN14)

1. Verify that J5 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN14: 3.20 Vdc blocked, 0.18 Vdc unblocked at pins 1 to 2 and 1.16 Vdc both unblocked and blocked at pins 3 to 2 on W96J14-SN14.

[IDO H-bar wiring diagram on page 2246](#)

1 Is the voltage correct?

1 No Yes

Replace the Left-side Lower Panel sensor (SN14)

1. Replace SN14.

1 [IDO sensors on page 480](#)

Check the wire harness

1. Check the wire harness and connections between the Left-side Lower Panel sensor (SN14) and the Motion PCA (A2).

[IDO H-bar wiring diagram on page 2246](#)

1. Repair as needed.

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

B2.02E2: Close left-side middle panel

Initial Steps

1. [IDO component locator on page 2325](#)

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use frame as ground.

Test the Left-side Middle Panel sensor (SN13)

1. Manually activate SN13.

[IDO component locator on page 2325](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the sensor state change?

No **Yes**

Fix the door

1. Check the alignment of the left-side middle panel alignment to the Left-side Middle Panel sensor (SN13).
2. Check the left-side middle panel hinges.

Check the following conditions

1. Verify that the sensor is correctly located.
2. Clean the sensor and the surrounding area.
3. If the sensor has a flag actuator, check that the flag actuator has free movement.
4. Check the wiring harness between the Left-side Middle Panel sensor (SN13) and the Motion PCA (A2).

[IDO component locator on page 2325](#)

[IDO paper path 2 wiring diagram on page 2245](#)

Test the Left-side Middle Panel sensor (SN13)

1. Manually activate SN13.

[IDO component locator on page 2325](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the sensor state change?

No **Yes**

1. [Final activities on page 24](#)

Test the voltage to the Left-side Middle Panel sensor (SN13) on the Motion PCA (A2)

1. Disconnect J4 from A2.
2. Test the voltage to SN13 on A2: 3.26 Vdc blocked, 0.13 Vdc unblocked at J4 pins 16A to 17A and 1.16 Vdc both unblocked and blocked at pins 18A to 17A.

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Test the voltage at the Left-side Middle Panel sensor (SN13)

1. Verify that J4 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN13: 3.3 Vdc at pins 3A to 2A and 1A to 2A on W97P7-W44J7.

[IDO paper path 2 wiring diagram on page 2245](#)

Is the voltage correct?

No **Yes**

Replace the Left-side Middle Panel sensor (SN13)

1. Replace SN13.

[IDO sensors on page 480](#)

Check the wire harness

1. Check the wire harness and connections between the Left-side Middle Panel sensor (SN13) and the Motion PCA (A2).

[IDO paper path 2 wiring diagram on page 2245](#)

2. Repair as needed.

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

B2.02E3: Close left-side upper panel

Initial Steps

1. [IDO component locator on page 2325](#)

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use frame as ground.

Test the Left-side Upper Panel switch (SW8)

1. Manually activate SW8.

[IDO component locator on page 2325](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the switch work?

No **Yes**

Service the left-side upper panel

1. Check the alignment of the left-side upper panel to the Left-side Upper Panel switch (SW8).
2. Check the left-side upper panel hinges.

Check the following conditions

1. Verify that the switch is correctly located.
2. Clean the switch and the surrounding area.
3. If the switch has a flag actuator, check that the flag actuator has free movement.
4. Check the wire harness between the Left-side Upper Panel switch (SW8) and the Motion PCA (A2).

[IDO component locator on page 2325](#)

Test the Left-side Upper Panel switch (SW8)

1. Manually activate SW8.

[IDO component locator on page 2325](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the switch work?

No **Yes**

1. [Final activities on page 24](#)

Test the voltage to the Left-side Upper Panel switch (SW8) on the Motion PCA (A2)

1. Disconnect J2 from A2.
2. Test the voltage to SW8 on A2: 3.3 Vdc at J2 pins 5 to 12.

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Test the voltage at the Left-side Upper Panel switch (SW8)

1. Verify that J2 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the switch.
3. Test the voltage at SW8: 3.3 Vdc at pins 1 to 2 on W95P8-SW8J1.

[IDO motors and encoders wiring diagram on page 2244](#)

Is the voltage correct?

No Yes

Replace the Left-side Upper Panel switch (SW8)

1. Replace SW8.

[IDO H-bar interlock on page 472](#)

Check the wire harness

1. Check the wire harness and connections between the Left-side Upper Panel switch (SW8) and the Motion PCA (A2).

[IDO motors and encoders wiring diagram on page 2244](#)

2. Repair as needed.

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

B2.0301: Able to open locked left-side upper panel

Initial Steps

1. Check the solenoid for mechanical binding, contamination, excessive wear, and correct installation.

[IDO component locator on page 2325](#)

NOTE: Set the DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Test the IDO Interlock solenoid (SOL3)

1. Select and deselect SOL3.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the solenoid energize and de-energize?

No **Yes**

Service the IDO Interlock solenoid (SOL3)

1. Check the alignment of the solenoid to the latch.
2. Check the left-side upper panel alignment, handle, and hinge.
3. Adjust or repair as needed.

Check the following conditions

1. Check the wire harness between the IDO Interlock solenoid (SOL3) and the Motion PCA (A2).

[IDO H-bar wiring diagram on page 2246](#)

Test the IDO Interlock solenoid (SOL3)

1. Select and deselect SOL3.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the solenoid energize and de-energize?

No **Yes**

[Final activities on page 24](#)

Test the voltage to the IDO Interlock solenoid (SOL3) on the Motion PCA (A2)

1. Disconnect J14 from A2.
2. Test the voltage to SOL3 on A2: 20 Vdc at J14 pins 9 to 18.

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Test the voltage at the IDO Interlock solenoid (SOL3)

1. Verify that J14 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the solenoid.
3. Test the voltage at SOL3: 20 Vdc at pins 1 to 2 on W98P3-SOL3.

[IDO motors and encoders wiring diagram on page 2244](#)

1 Is the voltage correct?

1 **No Yes**

Replace the IDO Interlock solenoid (SOL3)

1. Replace SOL3.

1 2 [IDO Interlock solenoid \(SOL3\) on page 471](#)

Check the wire harness

1. Check the wire harness and connections between the Motion PCA (A2) and the IDO Interlock solenoid (SOL3).

[IDO motors and encoders wiring diagram on page 2244](#)

[Motion PCA \(A2\) diagram on page 2268](#)

- 1 2. Repair as needed.

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

B2.03C1: IDO Diverter solenoid (SOL2)

Initial Steps

1. Check the solenoid for mechanical binding, contamination, excessive wear, and correct installation.

[IDO component locator on page 2325](#)

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Test the IDO Diverter solenoid (SOL2)

1. Select and deselect SOL2.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the solenoid energize and de-energize?

No **Yes**

Service the solenoid

1. Check the solenoid for mechanical binding, contamination, excessive wear, and correct installation.
2. Adjust or repair as needed.

Check the following conditions

1. Check the solenoid for mechanical binding, contamination, excessive wear, and correct installation.
2. Check the wire harness between the IDO Diverter solenoid (SOL2) and the Motion PCA (A2).

[IDO paper path 1 wiring diagram on page 2245](#)

Test IDO Diverter solenoid (SOL2)

1. Select and deselect SOL2.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the solenoid energize and de-energize?

No **Yes**

[Final activities on page 24](#)

Test the voltage to the IDO Diverter solenoid (SOL2) on the Motion PCA (A2)

1. Disconnect J14 from A2.
2. Test the voltage to SOL2 on A2: 20 Vdc at J14 pins 6 to 15.

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Test the voltage at the IDO Diverter solenoid (SOL2)

1. Verify that J14 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the solenoid.
3. Test the voltage at SOL2: 20 Vdc at pins 1 to 2 on W19P2-SOL2.

[IDO paper path 1 wiring diagram on page 2245](#)

1 Is the voltage correct?

1 **No** **Yes**

Replace the IDO Diverter solenoid (SOL2)

1. Replace SOL2.

2 [IDO Diverter solenoid \(SOL2\) on page 457](#)

Check the wire harness

1. Check the wire harness and connections between the Motion PCA (A2) and the IDO Diverter solenoid (SOL2).

[IDO paper path 1 wiring diagram on page 2245](#)

2. Repair as needed.

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

B2.03C2: Cannot open left-side upper panel

Initial Steps

1. Check the solenoid for mechanical binding, contamination, excessive wear, and correct installation.

[IDO component locator on page 2325](#)

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Test the IDO Interlock solenoid (SOL3)

1. Select and deselect SOL3.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the solenoid energize and de-energize?

No **Yes**

Service the IDO Interlock solenoid (SOL3)

1. Check the SOL3 latch alignment.
2. Check the left—side upper panel alignment, handle, and hinge.
3. Adjust or repair as needed.

Check the following conditions

1. Check the wire harness between the IDO Interlock solenoid (SOL3) and the Motion PCA (A2).

[IDO H-bar wiring diagram on page 2246](#)

Test the IDO Interlock solenoid (SOL3)

1. Select and deselect SOL3.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the solenoid energize and de-energize?

No **Yes**

[Final activities on page 24](#)

Test the voltage to the IDO Diverter solenoid (SOL2) on the Motion PCA (A2)

1. Disconnect J14 from A2.
2. Test the voltage to SOL3 on A2: 20 Vdc at J14 pins 9 to 18.

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Test the voltage at the IDO Interlock solenoid (SOL3)

1. Verify that J14 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the solenoid.
3. Test the voltage at SOL3: 20 Vdc at pins 1 to 2 on W98P3-SOL3.

[IDO motors and encoders wiring diagram on page 2244](#)

1 Is the voltage correct?

1 **No** **Yes**

Replace the IDO Interlock solenoid (SOL3)

1. Replace SOL3.

1 2 [IDO Interlock solenoid \(SOL3\) on page 471](#)

Check the wire harness

1. Check the wire harness and connections between the Motion PCA (A2) and the IDO Interlock solenoid (SOL3).

[IDO motors and encoders wiring diagram on page 2244](#)

- 1 2. Repair as needed.

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

B2.06C1: Left-side Middle Panel LED (LED3) not lit

Initial Steps

1. [IDO component locator on page 2325](#)

Test the Left-side Middle Panel LED (LED3)

1. Activate LED3.
2. Verify that the LED turns on and off.

[IDO component locator on page 2325](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the LED turn on and off?

No **Yes**

Check for problems that might cause intermittent behavior

1. Check the wire harness between the Motion PCA (A2) and the LED.

[IDO paper path 1 wiring diagram on page 2245](#)

1. 2. Visually check the LED mounting and surrounding area for any obvious problems. Repair as needed.

Check the Left-side Middle Panel LED (LED3) and wire harness

1. Verify that the LED is correctly located.
2. Check the wire harness between the Motion PCA (A2) and the LED.

[IDO component locator on page 2325](#)

[IDO paper path 1 wiring diagram on page 2245](#)

Test the Left-side Middle Panel LED (LED3)

1. Activate LED3.
2. Verify that the LED turns on and off.

[IDO component locator on page 2325](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the LED turn on and off?

No **Yes**

1. [Final activities on page 24](#)

Test the voltage to the Left-side Middle Panel LED (LED3) on the Motion PCA (A2)

1. Disconnect J5 from A2.
2. Test the voltage on LED3 on A2:2.18 Vdc at J5 pins 9A to 10A.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage at the Left-side Middle Panel LED (LED3)

1. Verify that J5 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the LED.
3. Test the voltage at LED3: 2.17 Vdc at pins 7A to 6A on W96P6-W45J6.

Is the voltage correct?

No Yes

Replace the Left-side Middle Panel LED (LED3)

1. Replace LED3.

[IDO LEDs on page 489](#)

Check the wire harness between the Motion PCA (A2) and the Left-side Middle Panel LED (LED3)

1. Check the wire harness between A2 and the LED.

[IDO motors and encoders wiring diagram on page 2244](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

B2.06C2: Output Bin LED (LED14) not lit

Initial Steps

1. [IDO component locator on page 2325](#)

Test the Output Bin LED (LED14)

1. Activate LED14.
2. Verify that the LED turns on and off.

[IDO component locator on page 2325](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the LED turn on and off?

No **Yes**

Check for problems that might cause intermittent behavior

1. Check the wire harness between the Motion PCA (A2) and the LED.

[IDO H-bar wiring diagram on page 2246](#)

1. **2.** Visually check the LED mounting and surrounding area for any obvious problems. Repair as needed.

Check the LED and wire harness

1. Verify that the LED is correctly located.
2. Check the wire harness between the Motion PCA (A2) and the LED.

[IDO component locator on page 2325](#)

[IDO H-bar wiring diagram on page 2246](#)

Test the Output Bin LED (LED14)

IDO.LED.14 mode:

1. Activate LED14.
2. Verify that the LED turns on and off.

[IDO component locator on page 2325](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the LED turn on and off?

No **Yes**

1. [Final activities on page 24](#)

Test the voltage to the Output Bin LED (LED14) on the Motion PCA (A2)

1. Disconnect J5 from A2.
2. Test the voltage to LED14 on A2: 4.9 Vdc at J5 pins 18A to 18B.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage at the Output Bin LED (LED14)

1. Verify that J5 is connected on the Motion PCA (A2).
2. Disconnect the wire harness from the LED.
3. Test the voltage to LED14: 5 Vdc at pins 18B to 17B on W16J1-W96P5.

[IDO motors and encoders wiring diagram on page 2244](#)

1 Is the voltage correct?

1 **No** **Yes**

Replace the Output Bin LED (LED14)

1. Replace LED14.

2 [IDO LEDs on page 489](#)

Check the wire harness between the Motion PCA (A2) and the LED

1. Check the wire harness between A2 and the LED.

1 [IDO H-bar wiring diagram on page 2246](#)

Replace the Motion PCA (A2)

1. Replace A2

[Motion PCA \(A2\) on page 700](#)

B2.06C3: IDO Curler LED (LED2) not lit

Initial Steps

1. [IDO component locator on page 2325](#)

Test the IDO Curler LED (LED2)

1. Activate LED2.
2. Verify that the LED turns on and off.

[IDO component locator on page 2325](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the LED turn on and off?

No **Yes**

Check for problems that might cause intermittent behavior

1. Check the wire harness between the Motion PCA (A2) and the LED.

[IDO paper path 1 wiring diagram on page 2245](#)

1. 2. Visually check the LED mounting and surrounding area for any obvious problems. Repair as needed.

Check the IDO Curler LED (LED2) and wire harness

1. Verify that the LED is correctly located.
2. Check the wire harness between the Motion PCA (A2) and the LED.

[IDO component locator on page 2325](#)

[IDO paper path 1 wiring diagram on page 2245](#)

Test the IDO Curler LED (LED2)

1. Activate LED2.
2. Verify that the LED turns on and off.

[IDO component locator on page 2325](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the LED turn on and off?

No **Yes**

1. [Final activities on page 24](#)

Test the voltage to the IDO Curler LED (LED2) on the Motion PCA (A2)

1. Disconnect J5 from A2.
2. Test the voltage to LED2 on A2: 2.17 Vdc at J5 pins 11A to 12A.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage at the IDO Curler LED (LED2)

1. Verify that J5 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the LED.
3. Test the voltage at LED2: 2.16 Vdc at pins 5A to 4A on W96P6-W45J6.

[IDO motors and encoders wiring diagram on page 2244](#)

1 Is the voltage correct?

1 **No** **Yes**

Replace the IDO Curler LED (LED2)

1. Replace LED2.

2 [IDO LEDs on page 489](#)

Check the wire harness between the Motion PCA (A2) and the LED

1. Check the wire harness between A2 and the LED.

1 [IDO paper path 1 wiring diagram on page 2245](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

B2.06C4: Left-side Upper Panel LED (LED5) not lit

Initial Steps

1. [IDO component locator on page 2325](#)

Test the Left-side Upper Panel LED (LED5)

1. Activate LED5.
2. Verify that the LED turns on and off.

[IDO component locator on page 2325](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the LED turn on and off?

No **Yes**

Check for problems that might cause intermittent behavior

1. Check the wire harness between the Motion PCA (A2) and the LED.
2. Visually check the LED mounting and surrounding area for any obvious problems. Repair as needed.

1 [IDO H-bar wiring diagram on page 2246](#)

Check the Left-side Upper Panel LED (LED5) and wire harness

1. Verify that the LED is correctly located.
[IDO H-bar wiring diagram on page 2246](#)
2. Check the wire harness between the Motion PCA (A2) and the LED.

Test the Left-side Upper Panel LED (LED5)

1. Activate LED5.
2. Verify that the LED turns on and off.

[IDO component locator on page 2325](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the LED turn on and off?

No **Yes**

1 [Final activities on page 24](#)

Test the voltage to the Left-side Upper Panel LED (LED5) on the Motion PCA (A2)

1. Disconnect J5 from A2.
2. Test the voltage to LED5 on A2: 2.15 Vdc at J5 pins 17A to 18A.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage at the Left-side Upper Panel LED (LED5)

1. Verify that J5 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the LED.
3. Test the voltage at LED5: 5 Vdc at pins 17a to 18a on w16j1-w96p5.

[IDO motors and encoders wiring diagram on page 2244](#)

1 Is the voltage correct?

1 **No** **Yes**

Replace the Left-side Upper Panel LED (LED5)

1. Replace LED5.

2 [IDO LEDs on page 489](#)

Check the wire harness between the Motion PCA (A2) and the LED

1. Check the wire harness between A2 and the LED.

1 [IDO H-bar wiring diagram on page 2246](#)

Replace the Motion PCA (A2)

1. [Motion PCA \(A2\) on page 700](#)

B2.1301: Paper jam at IDO Input Staging 2 sensor (SN10)

Initial Steps

1. Check for obstructions in the paper path.
2. Check the condition of the paper.

[IDO component locator on page 2325](#)

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

3. Check the horizontal transport drive rollers for excessive wear.

Test the IDO Input Staging 2 sensor (SN10)

1. Manually activate SN10.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the sensor state change?

No **Yes**

- | | | |
|---|--|--|
| 1 | | B2.0101: IDO Input 1 motor (M8) stall on page 1314 |
|---|--|--|

Check the following

1. Verify that the sensor is correctly located.
2. Check the IDO printzone interface-to-horizontal transport alignment. Refer to the IDO printzone interface and horizontal transport alignment procedure.
3. Verify that all of the idler rollers are correctly seated and that the drive roller surfaces are free of defects.
4. Clean the sensor and the surrounding area.
5. If the sensor has a flag actuator, check that the flag actuator has free movement.
6. Check the wire harness between the IDO Input Staging 2 sensor (SN10) and the Motion PCA (A2).

[IDO component locator on page 2325](#)

Test the IDO Input Staging 2 sensor (SN10)

1. Manually activate SN10.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the sensor state change?

No **Yes**

- | | | |
|---|--|---|
| 1 | | Final activities on page 24 |
|---|--|---|

Test the voltage to the IDO Input Staging 2 sensor (SN10) on the Motion PCA (A2)

1. Disconnect J4 from A2.
2. Test the voltage to SN10 on A2: 1.19 Vdc unblocked and blocked at J4 pins 4B to 3B and 0.15 vdc unblocked, 3.25 vdc blocked at pins 2B to 3B.

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Test the voltage at the IDO Input Staging 2 sensor (SN10)

1. Verify that J4 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN10:3.25 Vdc at pins 17B to 16B and 1.18 Vdc at pins15B to 16B on W97P7-W44J7.

[IDO motors and encoders wiring diagram on page 2244](#)

Is the voltage correct?

No **Yes**

Replace the IDO Input Staging 2 sensor (SN10)

1. Replace SN10.

[IDO sensors on page 480](#)

Check the wire harness

1. Check the wire harness between the IDO Input Staging 2 sensor (SN10) and the Motion PCA (A2).

[IDO motors and encoders wiring diagram on page 2244](#)

[IDO component locator on page 2325](#)

2. Repair as needed.

Replace the Motion PCA (A2).

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

B2.1302: Paper jam at IDO Media Thickness encoder (EN14)

Initial Steps

1. Check for obstructions in the paper path. In the case of multifeeds, check the input trays for worn separator parts. Check media for damage.
2. Check the condition of the media thickness sensor roller surfaces.

[IDO component locator on page 2325](#)

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Recalibrate the IDO Media Thickness encoder (EN14)

1. Test EN14.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the media thickness sensor pass?

No **Yes**

1 | [D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

Test the IDO Media Thickness encoder (EN14)

1. Open the IDO assembly.
2. Push on the sensor roller to see if the media thickness reading changes.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the sensor reading change?

No **Yes**

1 | [B2.0102: IDO Input 2 motor \(M10\) stall on page 1317](#)

Test the voltage to the IDO Media Thickness encoder (EN14) on the Motion PCA (A2)

1. Disconnect J8 from A2.
2. Test the voltage to EN14 on A2: 3.13 Vdc unblocked at J8 pins 2B to 1B, 3.26 Vdc unblocked at pins 3B to 1B, and 3.13 Vdc unblocked at pins 4B to 1B.

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Test the voltage at the IDO Media Thickness encoder (EN14)

1. Verify that J8 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from EN14.
3. Test the voltage at EN14: 3.3 Vdc at pins 1 to 6, 2 to 6, and 5 to 6 on W32P10-W50J10.

[IDO motors and encoders wiring diagram on page 2244](#)

1 Is the voltage correct?

1 **No** **Yes**

Replace the IDO Media Thickness encoder (EN14)

1. Replace EN14.

2 [IDO Media Thickness encoder \(EN14\) on page 480](#)

Check the wire harness

1. Check the wire harness and connections between the Motion PCA (A2) and the IDO Media Thickness encoder (EN14).

[IDO motors and encoders wiring diagram on page 2244](#)

2. Repair as needed.

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

B2.1303: Paper jam at IDO Input Staging 1 sensor (SN7)

Initial Steps

1. Check for obstructions in the paper path.
2. In the case of multifeeds, check the input trays for worn separator parts. Check media for damage.

[IDO component locator on page 2325](#)

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Test the IDO Input Staging 1 sensor (SN7)

1. Put a sheet of paper in front of SN7.
2. Manually activate SN7.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the sensor state change?

No **Yes**

1 | [B2.0102: IDO Input 2 motor \(M10\) stall on page 1317](#)

Verify that the sensor conditions are proper

1. Verify that the sensor is correctly located.
2. Verify that all of the idler rollers are correctly seated and that the drive roller surfaces are free of defects.
3. Clean the sensor and the surrounding area.
4. If the sensor has a flag actuator, check that the flag actuator has free movement.
5. Check the wire harness between the IDO Input Staging 1 sensor (SN7) and the Motion PCA (A2).

[IDO component locator on page 2325](#)

Test the IDO Input Staging 1 sensor (SN7)

1. Put a sheet of paper in front of SN7.
2. Manually activate SN7.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the sensor state change?

No **Yes**

1 | [Final activities on page 24](#)

Test the voltage to the IDO Input Staging 1 sensor (SN7) on the Motion PCA (A2)

1. Disconnect J4 from A2.
2. Test the voltage at SN7 on A2: 1.18 Vdc blocked and unblocked at J8 pins 7B to 6B and 0.19 Vdc unblocked, 3.25 Vdc blocked at pins 5B to 6B.

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Test the voltage at the IDO Input Staging 1 sensor (SN7)

1. Verify that J4 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN7: 1.18 Vdc unblocked, 3.25 Vdc blocked at pins 14B to 13B and 1.18 Vdc blocked and unblocked at pins 12B to 13B on W97P7-W44J7.

[IDO motors and encoders wiring diagram on page 2244](#)

Is the voltage correct?

No Yes

Replace the IDO Input Staging 1 sensor (SN7)

1. Replace SN7.

[IDO sensors on page 480](#)

Check the wire harness

1. Check the wire harness and connections between the Motion PCA (A2) and the IDO Input Staging 1 sensor (SN7).

[IDO paper path 2 wiring diagram on page 2245](#)

[Motion PCA \(A2\) diagram on page 2268](#)

2. Repair as needed.

Replace the Motion PCA (A2).

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

B2.1304: Paper jam at IDO Input Media sensor (SN8)

Initial Steps

1. Check for obstructions in the paper path.
2. Check the condition of the paper.

[IDO component locator on page 2325](#)

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

3. Check the sensor for excessive paper dust.

Test the IDO Input Media sensor (SN8)

1. Manually activate SN8.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the sensor state change?

No **Yes**

1 | [B2.0103: IDO Curler motor \(M15\) stall on page 1320](#)

Check the following

1. Verify that the sensor is correctly located.
2. Verify that all of the idler rollers are correctly seated and that the drive roller surfaces are free of defects.
3. Clean the sensor and the surrounding area.
4. If the sensor has a flag actuator, check that the flag actuator has free movement.
5. Check the wire harness between the IDO Input Media sensor (SN8) and the Motion PCA (A2).

[IDO paper path 1 wiring diagram on page 2245](#)

Test the IDO Input Media sensor (SN8)

1. Manually activate SN8.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the sensor state change?

No **Yes**

1 | [Final activities on page 24](#)

Test the voltage to the IDO Input Media sensor (SN8) on the Motion PCA (A2)

1. Disconnect J5 from A2.
2. Test the voltage at SN8 on A2: 0 Vdc blocked and unblocked at pins 10B to 11B and -5 Vdc blocked and unblocked at pins 12B to 11B on W96P6-W45J6.

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Test the voltage at the IDO Input Media sensor (SN8)

1. Verify that J5 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN8: 1.18 Vdc unblocked and blocked at pins 10B to 11B and 0.20 Vdc unblocked, 3.25 Vdc blocked at pins 12B to 11B on W96P6-W45J6.

[IDO paper path 1 wiring diagram on page 2245](#)

Is the voltage correct?

No Yes

Replace the IDO Input Media sensor (SN8)

1. Replace SN8.

[IDO sensors on page 480](#)

Check the wire harness

1. Check the wire harness and connections between the IDO Input Media sensor (SN8) and the Motion PCA (A2).

[IDO paper path 1 wiring diagram on page 2245](#)

2. Repair as needed.

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

B2.1305: Paper jam at IDO Output Media sensor (SN9)

Initial Steps

1. Check for obstructions in the paper path.
2. Check the condition of the paper.

[IDO component locator on page 2325](#)

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

3. Verify that the media eject fingers are clear and undamaged.

Test the IDO Output Media sensor (SN9)

1. Manually activate SN9.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the sensor state change?

No **Yes**

Test the IDO Media Eject motor (M13)

1. Run M13.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

1 Does M13 function properly?

1 **No** **Yes**

1 2 | [B2.0106: IDO Output motor \(M11\) stall on page 1330](#)

1 | [B2.0104: IDO Media Eject motor \(M13\) stall on page 1323](#)

Check the following conditions

1. Verify that the sensor is correctly located.
2. Verify that all of the idler rollers are correctly seated and that the drive roller surfaces are free of defects.
3. Clean the sensor and the surrounding area.
4. If the sensor has a flag actuator, check that the flag actuator has free movement.
5. Check the wire harness between the IDO Output Media sensor (SN9) and the Motion PCA (A2).

[IDO motors and encoders wiring diagram on page 2244](#)

Test the IDO Output Media sensor (SN9)

1. Manually activate SN9.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the sensor state change?

No **Yes**

1 | [Final activities on page 24](#)

Test the voltage to the IDO Output Media sensor (SN9) on the Motion PCA (A2)

1. Disconnect J5 from A2.
2. Test the voltage to SN9 on A2: 5 Vdc unblocked, 0 Vdc blocked at J4 pins 14B to 15B and 5 Vdc unblocked and blocked at pins 13B to 15B.

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Test the voltage at the IDO Output Media sensor (SN9)

1. Verify that J5 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN9: 5 Vdc unblocked, 0 Vdc blocked at pins 2B to 1B and 5 Vdc unblocked, 5 Vdc blocked at pins 3B to 1B on W96P6-W45J6.

[IDO paper path 1 wiring diagram on page 2245](#)

1 | Is the voltage correct?

1 | **No** **Yes**

Replace the IDO Output Media sensor (SN9)

1. Replace SN9.

1 | 2 | [IDO sensors on page 480](#)

Check the wire harness

1. Check the wire harness and connections between the IDO Output Media sensor (SN9) and the Motion PCA (A2).

[IDO paper path 1 wiring diagram on page 2245](#)

- 1 | 2. Repair as needed.

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

B2.1306: Paper jam at IDO Output 1 sensor (SN15)

Initial Steps

1. Check for obstructions in the paper path.
2. Check the condition of the paper.

[IDO component locator on page 2325](#)

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

3. Verify that the media eject fingers are clear and undamaged.

Test the IDO Output 1 sensor (SN15)

1. Manually activate SN15.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the sensor state change?

No **Yes**

Test the IDO Media Eject motor (M13)

1. Run M13.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.

Does M13 function properly?

No **Yes**

[B2.0106: IDO Output motor \(M11\) stall on page 1330](#)

[B2.0104: IDO Media Eject motor \(M13\) stall on page 1323](#)

Check the following

1. Verify that the sensor is correctly located.
2. Verify that all of the idler rollers are correctly seated and that the drive roller surfaces are free of defects.
3. Clean the sensor and the surrounding area.
4. If the sensor has a flag actuator, check that the flag actuator has free movement.
5. Check the wire harness between IDO Output 1 sensor (SN15) the and the Motion PCA (A2).

[IDO component locator on page 2325](#)

Test the IDO Output 1 sensor (SN15)

1. Manually activate SN15.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the sensor state change?

No **Yes**

1 | [Final activities on page 24](#)

Test the voltage to the IDO Output 1 sensor (SN15) on the Motion PCA (A2)

1. Disconnect J5 from A2.
2. Test the voltage to SN15 on A2: 5 Vdc unblocked and blocked at J5 pins 7B to 9B and 5 Vdc unblocked, 0 Vdc blocked at pins 8B to 9B.

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Test the voltage at the IDO Output 1 sensor (SN15)

1. Verify that J5 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN15: 5 Vdc unblocked, 0 Vdc blocked at pins 8B to 7B and 5 Vdc unblocked at pins 9B to 7B on W96P6-W45J6.

[IDO paper path 1 wiring diagram on page 2245](#)

1 | Is the voltage correct?

1 | **No** **Yes**

Replace the IDO Output 1 sensor (SN15)

1. Replace SN15.

2 | [IDO sensors on page 480](#)

Check the wire harness

1. Check the wire harness and connections between the IDO Output 1 sensor (SN15) and the Motion PCA (A2).

[IDO paper path 1 wiring diagram on page 2245](#)

[Motion PCA \(A2\) diagram on page 2268](#)

2. Repair as needed.

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

B2.1307: Paper jam at IDO Output 2 sensor (SN12)

Initial Steps

1. Check for obstructions in the paper path.
2. Check the condition of the paper.

[IDO component locator on page 2325](#)

Check the alignment of the engine to the finisher.

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Determine if the last print job was a duplex job

1. Ask the customer if the last print job was a duplex job.

Was the last print job a duplex job?

No **Yes**

- 1 | [B2.03C1: IDO Diverter solenoid \(SOL2\) on page 1341](#)

Test the IDO Output 2 sensor (SN12)

1. Manually activate SN12.

[IDO component locator on page 2325](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the sensor state change?

No **Yes**

- 1 | [B2.0106: IDO Output motor \(M11\) stall on page 1330](#)

Check the following conditions

1. Verify that the sensor is correctly located.
2. Verify that all of the idler rollers are correctly seated and that the drive roller surfaces are free of defects.
3. Clean the sensor and the surrounding area.
4. If the sensor has a flag actuator, check that the flag actuator has free movement.
5. Check the wire harness between the IDO Output 2 sensor (SN12) and the Motion PCA (A2).
6. Manually activate SN12.

[IDO component locator on page 2325](#)

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the sensor state change?

No **Yes**

- 1 | [Final activities on page 24](#)

Test the voltage to the IDO Output 2 sensor (SN12) on the Motion PCA (A2)

1. Disconnect J5 from A2.
2. Test the voltage at SN12 on A2: 5 Vdc blocked and unblocked at J5 pins 11B to 12B and 10B to 12B.

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Test the voltage at the IDO Output 2 sensor (SN12)

1. Verify that J5 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN12: 5 Vdc blocked or unblocked at pins 6B to 4B and 5 Vdc unblocked, 0 Vdc blocked at pins 5B to 4B on W96P6-W45J6.

[IDO paper path 1 wiring diagram on page 2245](#)

Is the voltage correct?

No Yes

Replace the IDO Output 2 sensor (SN12)

1. Replace SN12

[IDO sensors on page 480](#)

Check the wire harness

1. Check the wire harness and connections between the IDO Output 2 sensor (SN12) and the Motion PCA (A2).

[IDO paper path 1 wiring diagram on page 2245](#)

[Motion PCA \(A2\) diagram on page 2268](#)

2. Repair as needed.

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

B2.1308: Paper jam at IDO Duplex Staging sensor (SN11)

Initial Steps

1. Check for obstructions in the paper path.
2. Check the condition of the paper.

[IDO component locator on page 2325](#)

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Determine if the last print job was a duplex job

1. Ask the customer if the last print job was a duplex job.

Was the last print job was a duplex job?

No **Yes**

- 1 | [B2.03C1: IDO Diverter solenoid \(SOL2\) on page 1341](#)

Test the IDO Duplex Staging sensor (SN11)

1. Manually activate SN11.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the sensor state change?

No **Yes**

- 1 | [B2.0105: IDO Duplex motor \(M12\) stall on page 1326](#)

Check the following conditions

1. Verify that the sensor is correctly located.
2. Verify that all of the idler rollers are correctly seated and that the drive roller surfaces are free of defects.
3. Clean the sensor and the surrounding area.
4. If the sensor has a flag actuator, check that the flag actuator has free movement.
5. Check the wire harness between the IDO Duplex Staging sensor (SN11) and the Motion PCA (A2).
6. Manually activate SN11.

[IDO component locator on page 2325](#)

Does the sensor state change?

No **Yes**

- 1 | [Final activities on page 24](#)

Test the voltage to the IDO Duplex Staging sensor (SN11) on the Motion PCA (A2)

1. Disconnect J4 from A2.
2. Test the voltage at SN11 on A2: 1.18 Vdc for blocked and unblocked at J4 pins 13A to 14A and 0.15 Vdc unblocked, 3.24 Vdc blocked at pins 15A to 14A.

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Test the voltage at the IDO Duplex Staging sensor (SN11)

1. Verify that J4 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the sensor.
3. Test the voltage at SN11: 1.18 Vdc unblocked and blocked at pins 6A to 5A and 0.15 Vdc unblocked, 3.23 Vdc blocked at pins 4A to 5A on W97P7-W44J7.

[IDO motors and encoders wiring diagram on page 2244](#)

Is the voltage correct?

No Yes

Replace the IDO Duplex Staging sensor (SN11)

1. Replace SN11.

[IDO sensors on page 480](#)

Check the wire harness

1. Check the wire harness and connections between the IDO Duplex Staging sensor (SN11) and the Motion PCA (A2).

[IDO paper path 1 wiring diagram on page 2245](#)

[Motion PCA \(A2\) diagram on page 2268](#)

2. Repair as needed.

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

B2.1309: Paper jam at IDO Duplex Media sensor (SN16)

Initial Steps

1. Check for obstructions in the paper path.
2. Check the condition of the paper.

[IDO component locator on page 2325](#)

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Test the IDO Duplex Media sensor (SN16)

1. Manually activate SN16.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the sensor state change?

No **Yes**

- 1 | [B2.0105: IDO Duplex motor \(M12\) stall on page 1326](#)

Check the following

1. Verify that the sensor is correctly located.
2. Verify that all of the idler rollers are correctly seated and that the drive roller surfaces are free of defects.
3. Clean the sensor and the surrounding area.
4. If the sensor has a flag actuator, check that the flag actuator has free movement.
5. Check the wire harness between the IDO Duplex Media sensor (SN16) and the Motion PCA (A2).

[IDO component locator on page 2325](#)

Test the IDO Duplex Media sensor (SN16)

1. Manually activate SN16.

TIP: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.

Does the sensor state change?

No **Yes**

- 1 | [Final activities on page 24](#)

Test the voltage to the IDO Duplex Media sensor (SN16) on the Motion PCA (A2)

1. Disconnect J4 from A2.
2. Test the voltage to SN16 on A2: 3.25 Vdc unblocked, 0.08 Vdc blocked at J4 pins 9B to 10B and 1.18 Vdc unblocked and blocked at pins 8B to 10B.

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Test the voltage at the IDO Duplex Media sensor (SN16)

1. Verify that J4 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the sensor.
3. Test the voltage to SN16: 3.24 Vdc unblocked, 0.08 Vdc blocked at pins 10B to 9B and 1.18 Vdc unblocked or blocked at pins 11B to 9B on W97P7-W44J7.

[IDO paper path 1 wiring diagram on page 2245](#)

1 Is the voltage correct?

1 No Yes

Replace the IDO Duplex Media sensor (SN16)

1. Replace SN16.

1 [IDO sensors on page 480](#)

Check the wire harness

1. Check the wire harness and connections between the IDO Duplex Media sensor (SN16) and the Motion PCA (A2).

[IDO paper path 1 wiring diagram on page 2245](#)

[Motion PCA \(A2\) diagram on page 2268](#)

1. Repair as needed.

[D4.0705: Motion PCA \(A2\) power not good on page 1449](#)

C1.0101: Drum motor (M3) stall

Initial Steps

1. Check the drum area for media jams or other obstructions.

Check the Event Log for other entries associated with the Motion PCA (A2).

Multiple different entries might indicate a A2 problem.

Turn the drum by hand

1. Check for binding at the drum and rotate the drum multiple revolutions by hand.

[Drum component locator on page 2318](#)

2. Open the dryer access lever and check for binding.

NOTE: The drum should spin with some slight resistance due to the attached gears, belt and motor. There should be no major binding.

Does the drum turn without binding?

No **Yes**

Turn the drum by hand

1. [Drum component locator on page 2318](#)

TIP: Click **Subsystems**, and then click **Drum**.

Does the drum encoder count change?

No **Yes**

Run the Drum motor (M3)

DD.M.3 mode: ClosedLoop

1. Run M3.

[Drum component locator on page 2318](#)

TIP: Click **Subsystems**, and then click **Drum**.

Does the drum run?

No **Yes**

Check the power connector to the Drum motor (M3)

1. [Drum wiring diagram on page 2225](#)

Check for voltage to the Drum motor (M3)

1. Test the voltage at M3: 5 Vdc at pins 1 to 2 on W35P3-M3.

TIP: Click **Subsystems**, and then click **Drum**.

Is the voltage correct?

No **Yes**

Test the Drum motor (M3)

1. Reconnect the M3.
2. Remove the M3 assembly. Examine it for belt and pulley binding.
3. Check for belt tension from the spring. The tension is not critical.

WARNING! Moving parts can cause injury.

TIP: Click **Subsystems**, and then click **Drum**.

Does the motor run?

No **Yes**

Reinstall the Drum motor (M3) assembly

1. Reinstall the M3 assembly and look for mechanical sources for potential binding. The motor might be weak and in need of replacement.

Test the Drum motor (M3)

1. Remove the drive belt from M3.

[Drum component locator on page 2318](#)

TIP: Click **Subsystems**, and then click **Drum**.

Does the motor run?

No **Yes**

Reinstall the drive belt

1. Reinstall the drive belt and look for mechanical sources for binding on the Drum motor (M3) assembly. The motor might be weak and in need of replacement.

Replace the Drum motor (M3)

1. Replace M3.

[Drum component locator on page 2318](#)

Test the voltage at the Drum motor (M3)

1. Test the voltage at M3: 5 Vdc at pins 1 to 2 on W35P3-M3.

[Drum wiring diagram on page 2225](#)

Does the voltage correct?

No **Yes**

Repair or replace the wire harness

1. [Drum wiring diagram on page 2225](#)

Check for voltage to the Drum motor (M3) on the Motion PCA (A2)

1. Disconnect J15 from A2.

[Motion PCA \(A2\) diagram on page 2268](#)

2. Test the voltage to M3 on A2: 5 Vdc at J15 pins 3 to 8.

Does the voltage correct?

- | | | |
|---|---|---|
| 1 | 2 | <p>No Yes</p> <p>Replace the wire harness</p> |
| 1 | 2 | <p>3</p> <p>1. Motion PCA (A2) diagram on page 2268</p> <p>Check the power LEDs on the Motion PCA (A2)</p> <p>1. Verify that the LEDs are lit.</p> <p>Motion PCA (A2) diagram on page 2268</p> |
| 1 | 2 | <p>Are the power LEDs lit?</p> |
| 1 | 2 | <p>No Yes</p> <p>Check the Motion PCA (A2) connections</p> <p>1. Reseat the cables and connectors on A2.</p> |
| 1 | 2 | <p>3</p> <p>Motion PCA (A2) diagram on page 2268</p> |
| 1 | 2 | <p>D4.0705: Motion PCA (A2) power not good on page 1449</p> <p>Service the drum encoder assembly</p> <p>1. Check the drum encoder assembly for damage, contamination, and loose electrical connections.</p> |

Turn the drum by hand

1. Remove the Drum motor (M3) assembly.
[Drum component locator on page 2318](#)
2. Check M3 assembly for pulley and belt problems.
3. Check that there is belt tension from the spring. The tension is not critical.

Does the drum turn without binding?

No Yes

Turn the Drum motor (M3) by hand

1. Remove the drive belt from M3.
[Drum component locator on page 2318](#)

Does the drum drive motor turn without binding with the drive belt removed?

No Yes

Reinstall the drive belt

1. Reinstall the drive belt and look for mechanical sources for binding on the Drum motor (M3) assembly. The motor might be weak and needing replacement.

Replace the Drum motor (M3)

1. Replace M3.
[Drum motor \(M3\) on page 504](#)

Replace the print engine

1. Replace the entire print zone.
[HP 4-Bin Job Separator wiring diagram on page 2238](#)

C1.01A1: Drum motor (M3) requires higher than normal power (PWM) to operate

Initial Steps

1. Check the drum area for media jams or other obstructions.
2. Check the Event Log for other entries associated with the Motion PCA (A2). Multiple different entries might indicate an A2 problem.

Turn the drum by hand

1. Check for binding at the drum and rotate the drum multiple revolutions by hand.
2. Open the dryer access lever and check for binding there.

NOTE: The drum should spin with some slight resistance due to the attached gears, belt and motor. There should be no major binding.

Does the drum turn without binding?

No Yes

Run the Drum motor (M3)

1. Run M3.

WARNING! Moving parts can cause injury.

TIP: Click **Subsystems**, and then click **Drum**.

1 Does M3 turn the drum?

1 No Yes

Test the voltage to the Drum motor (M3)

1. Disconnect the wire connector from M3.

[Drum component locator on page 2318](#)

[Drum wiring diagram on page 2225](#)

2. Test the voltage at M3: 5 Vdc at pins 1 to 2 on W35P3-M3.

TIP: Click **Subsystems**, and then click **Drum**.

1 2 Is the voltage correct?

1 2 No Yes

Reseat wiring harness to the Drum motor (M3)

1. Reseat the wire connector on M3

1 2 3 [Drum wiring diagram on page 2225](#)

Check to see if the voltage is below 25 volts to the motor

1. Remove the M3 assembly. Keep the motor electrically connected and measure the voltage to the drum motor wires at connector W35P1-W10J1.

[Drum motor \(M3\) on page 504](#)

2. Run the motor.

WARNING! Moving parts can cause injury.

TIP: Click **Subsystems**, and then click **Drum**.

Is the voltage below 25 volts to M3?

No **Yes**

Check for drum binding

1. Check for any binding at the drum causing the voltage increase. There may be excess friction in the drum.

Test the voltage to the Drum motor (M3)

1. Remove the drum drive belt from M3.

[Drum component locator on page 2318](#)

2. Run Drum motor (M3).

WARNING! Moving parts can cause injury.

TIP: Click **Subsystems**, and then click **Drum**.

Is the Drum motor (M3) voltage below 25 volts?

No **Yes**

Look for other sources

1. Reinstall the drive belt and look for mechanical sources of friction. Repair as needed.

Replace the motor

1. Replace M3.

[C1.0101: Drum motor \(M3\) stall on page 1371](#)

[C1.0101: Drum motor \(M3\) stall on page 1371](#)

C1.06C1: Drum Illumination 1 LED (LED8) not lit

Initial Steps

1. [Drum component locator on page 2318](#)

Test the Drum Illumination 1 LED (LED8)

1. Activate LED8.
2. Verify that LED8 turns on and off.

TIP: Click **Subsystems**, and then click **Drum**.

Does the LED turn on and off?

No **Yes**

Check for problems that might cause intermittent behavior

1. Check the wire harness between the Motion PCA (A2) and the LED.

[Drum wiring diagram on page 2225](#)

2. Check the LED mounting and surrounding area for any obvious problems. Repair as needed.

Check the Drum Illumination 1 LED (LED8) and wire harness

1. Verify that the LED is correctly located.
[Drum wiring diagram on page 2225](#)
2. Check the wire harness between the Motion PCA (A2) and the LED.

Test the Drum Illumination 1 LED (LED8)

1. Activate LED8.
2. Verify that LED8 turns on and off.

TIP: Click **Subsystems**, and then click **Drum**.

Does the LED turn on and off?

No **Yes**

[Final activities on page 24](#)

Test the voltage to the Drum Illumination 1 LED (LED8) on the Motion PCA (A2)

1. Disconnect J8 from A2.
2. Test the voltage to LED8 on A2: 0 Vdc unblocked, -2.96 Vdc blocked on J8 at pins 17A to 18A.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage at the Drum Illumination 1 LED (LED8)

1. Verify that J8 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the LED.
3. Test the voltage at LED8: 0 Vdc unblocked, 2.97 Vdc blocked at pins 1A to 2A on W32P9-W34J9.

1 Is the voltage correct?

1 **No** **Yes**

Replace the Drum Illumination 1 LED (LED8)

1. Replace LED8.

1 2 [Drum encoder disk on page 507](#)

Check the wire harness between the Motion PCA (A2) and the Drum Illumination 1 LED (LED8)

1. Check the wire harness between A2 and LED8. Repair as needed.

1 [Drum wiring diagram on page 2225](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

C1.06C2: Drum Illumination 2 LED (LED9) not lit

Initial Steps

1. [Drum component locator on page 2318](#)

Test the Drum Illumination 2 LED (LED9)

1. Activate LED9.
2. Verify that LED9 turns on and off.

TIP: Click **Subsystems**, and then click **Drum**.

Does the LED turn on and off?

No **Yes**

Check for problems that might cause intermittent behavior

1. Check the wire harness between the Motion PCA (A2) and the LED.

[Drum wiring diagram on page 2225](#)

1. 2. Check the Drum Illumination 2 LED (LED9) mounting and surrounding area for any obvious problems. Repair as needed.

Check the Drum Illumination 2 LED (LED9) and wire harness

1. Verify that LED9 is correctly located.
[Drum wiring diagram on page 2225](#)
2. Check the wire harness between the Motion PCA (A2) and the LED.

Test the Drum Illumination 2 LED (LED9)

1. Activate LED9.
2. Verify that the LED9 turns on and off.

TIP: Click **Subsystems**, and then click **Drum**.

Does the LED turn on and off?

No **Yes**

1. [Final activities on page 24](#)

Test the voltage to the Drum Illumination 2 LED (LED9) on the Motion PCA (A2)

1. Disconnect J8 from A2.
2. Test the voltage to LED9 on A2: 0 Vdc unblocked, 2.93 Vdc blocked at J8 pins 16B to 17B.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage at the Drum Illumination 2 LED (LED9)

1. Verify that J8 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the LED.
3. Test the voltage at LED9: 0 Vdc unblocked, 2.93 Vdc with the LED on at pins 2B to 1B on W32P9-W34J9.

1 Is the voltage correct?

1 **No** **Yes**

Replace the Drum Illumination 2 LED (LED9)

- 1
- 2 **1.** Replace LED9

Check the wire harness between the Motion PCA (A2) and the Drum Illumination 2 LED (LED9)

1. Check the wire harness between A2 and LED9. Repair as needed.

1 [Drum wiring diagram on page 2225](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

C1.06C3: Noise in the drum drive area

Initial Steps

1. Noise is a subjective issue and can be difficult to isolate and resolve. The environment around the equipment can play a part in how noise is transmitted.

Check that all equipment panels are closed and are properly in place.

Try to determine the approximate area where the excessive noise is heard.

Turn on the Drum motor (M3)

1. Check the drum area for paper or other obstructions.

The motor may need to run for a few minutes if the noise is intermittent.

TIP: Click **Subsystems**, and then click **Drum**.

Does the excessive noise occur when M3 is running?

No Yes

Turn on the Drum motor (M3)

1. Remove the M3 assembly and keep the motor electrically connected.
2. Examine the belt and spring for proper tension. Spring tension is not critical.

WARNING! Moving parts can cause injury.

TIP: Click **Subsystems**, and then click **Drum**.

1 Does the excessive noise occur when M3 is running?

1 No Yes

Turn on the Drum motor (M3)

1. Remove the drum drive belt from M3.

[Drum component locator on page 2318](#)

WARNING! Moving parts can cause injury.

TIP: Click **Subsystems**, and then click **Drum**.

1 2 Does the excessive noise occur when M3 is running with the drive belt removed?

1 2 No Yes

Replace the drum motor

1. Replace M3.

[Drum Guide motor \(M22\) on page 502](#)

1 2 3 **Repair or replace the belt and pulley**

1. Examine the belt and pulley area for the source of the noise.

1 2

2. Repair as needed and reinstall the Drum motor (M3) assembly.

Repair the drum

1. Examine the drum area.
2. Open the dryer access door.
3. Turn the drum by hand and check for binding or specific areas of drum rotation causing the noise.
4. Repair as needed and reinstall the Drum motor (M3) assembly.

1

[Final activities on page 24](#)

C2.0201: Dryer Temperature sensor (SN36) problem

Initial Steps

1. [Dryer component locator on page 2319](#)

Check the temperature reading

1. Temperature should be approximately between 127 and 129 Fahrenheit (53 to 54 Celsius).

Does the temperature reading match the product operating conditions?

No **Yes**

Check the wire harness between the Dryer Temperature sensor (SN36) and the Ink Assist PCA (A3)

1. Check the wire harness between SN36 and A3.

[Dryer wiring diagram on page 2227](#)

Test the voltage to the Dryer Temperature sensor (SN36) at the dryer bulkhead

1. Test the voltage to SN36: 1.89 and 2.2 Vdc at J36 pins 1 to 2.

[Dryer wiring diagram on page 2227](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Test the resistance of the Dryer Temperature sensor (SN36)

1. Disconnect dryer connector J36 at the dryer bulkhead.

[Dryer wiring diagram on page 2227](#)

2. Measure the resistance between pins 1 and 2 on J36 going to SN36.

Is the resistance approximately 6,500 ohms (129F/54C ready mode)?

No **Yes**

Check the wire harness between the Dryer Temperature sensor (SN36) and the Ink Assist PCA (A3)

1. Check the wire harness between SN36 and A3.

[Dryer wiring diagram on page 2227](#)

Check the wire harness between the Dryer Temperature sensor (SN36) and the Ink Assist PCA (A3)

1. Check the wire harness between SN36 and A3.

If the wire harness is in good condition, replace SN36.

[Dryer wiring diagram on page 2227](#)

Check the voltage LEDs on the Ink Assist PCA (A3)

1. Verify that the 12, 24, and 32 Vdc and system good LEDs are lit.

[Ink Assist PCA \(A3\) diagram on page 2264](#)

Are the LEDs lit?

No **Yes**

Test the voltage to the Dryer Temperature sensor (SN36) on the Ink Assist PCA (A3)

1. Test the voltage to SN36 on A3: 1.89 to 2.2 Vdc at J4 pins 6 to 8.

[Dryer wiring diagram on page 2227](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Check the wire harness between the Dryer Temperature sensor (SN36) and the Ink Assist PCA (A3)

1. Check the wire harness between SN36 and A3.

[Dryer wiring diagram on page 2227](#)

Replace the Ink Assist PCA (A3)

1. Replace A3

[Ink Assist PCA \(A3\) on page 611](#)

Check the voltage LEDs on the Power Distribution PCA (A1)

1. Verify that the 3.3, 5, 12, 24, 32, and 52 Vdc LEDs are lit.

[Power Distribution PCA \(A1\) diagram on page 2271](#)

Are the LEDs lit?

No Yes

Check the wire harness between the Power Distribution PCA (A1) and the Ink Assist PCA (A3)

1. Check the wire harness between A1 and A3.

[Electronics component locator on page 2327](#)

Check the voltage at the 32 Vdc and 5 Vdc test points on the Power Distribution PCA (A1)

1. Check for 32 Vdc at the 32 Vdc test point and 5 Vdc at the 5 Vdc test point on A1.

[Electronics component locator on page 2327](#)

Are 32 Vdc and 5 Vdc available on A1?

No Yes

Check the wire harness between the Power Distribution PCA (A1) and the Ink Assist PCA (A3)

1. Check the wire harness between A1 and the A3. Repair or replace as needed.

[Electronics component locator on page 2327](#)

Test the voltage on the Power Distribution PCA (A1)

1. With J3 connected to A1 check for 32 Vdc on J3 at pins 3 to 15, 4 to 16, 5 to 17, and 6 to 18.

2. Check for 5 Vdc at J6 at pins 6 to 3, 4 to 3, 19 to 3, and 20 to 3.

Are the voltages correct?

No Yes

Replace the Power Distribution PCA (A1)

1. Replace A1.

1

[Power Distribution PCA \(A1\) on page 702](#)

Replace the Power supply (PS1)

1. Replace PS1.

[Power supply assembly on page 697](#)

C2.06C1: Dryer LED (LED6) not lit

Initial Steps

1. [Dryer component locator on page 2319](#)

Test the Dryer LED (LED6)

1. Activate LED6.
2. Verify that LED turns on and off.

TIP: Click **Subsystems**, and then click **Dryer**.

Does the LED turn on and off?

No **Yes**

Check for problems that might cause intermittent behavior

1. Check the wire harness between the Motion PCA (A2) and the LED.

[Drum wiring diagram on page 2225](#)

- 1 **2.** Check the LED mounting and surrounding area for any obvious problems. Repair as needed.

Check the LED and wire harness

1. Verify that the LED is correctly located.
[Drum wiring diagram on page 2225](#)
2. Check the wire harness between the Motion PCA (A2) and the LED.

[Dryer wiring diagram on page 2227](#)

Test the Dryer LED (LED6)

1. Activate LED6.
2. Verify that the LED turns on and off.

TIP: Click **Subsystems**, and then click **Dryer**.

Does the LED turn on and off?

No **Yes**

- 1 **Final activities on page 24**

Test the voltage to the Dryer LED (LED6) on the Motion PCA (A2)

1. Disconnect J8 from A2.
2. Test the voltage to LED6 on A2:0 vdc unblocked, 2.14 with the LED on at J8 pins 14A to 13A.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage at the Dryer LED (LED6)

1. Verify that J8 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the LED.
3. Test the voltage at LED6: 0 Vdc unblocked, 2.14 Vdc with the LED on at pins 5A to 6A on W32P9-W34J9.

[Drum wiring diagram on page 2225](#)

1 Is the voltage correct?

1 **No** **Yes**

Replace the Dryer LED (LED6)

- 2
1. Replace LED6.

Check the wire harness between the Motion PCA (A2) and the LED

1. Check the wire harness between A2 and the LED. Repair as needed.

1 [Drum wiring diagram on page 2225](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

C2.0901: Dryer fan (FAN5) problem

Initial Steps

1. [Dryer component locator on page 2319](#)

Check the Dryer fan (FAN5) RPM on the diagnostics screen

1. Select the minimal temperature/fan button and read the RPM.

TIP: Click **Subsystems**, and then click **Dryer**.

Is the fan RPM between 4700 and 5000?

No **Yes**

Check the wire harness between the Dryer fan (FAN5) and the Main Engine PCA (A5)

1. Check the wire harness between FAN5 and A5.

[Dryer wiring diagram on page 2227](#)

1 **WARNING!** Use an ESD strap.

Test the voltage to the Dryer fan (FAN5) voltage on the dryer bulkhead

1. Select the minimal temp/fan button.
2. Test the voltage to FAN5: 28 Vdc at J14 pins 1 to 2 (GND) and approximately 1 to 2 Vdc at J14 pins 3 to 2 (GND).

Is the voltage correct?

No **Yes**

Check the wire harness between the Dryer fan (FAN5) and the dryer assembly

1. Check the wire harness between FAN5 and the dryer assembly.

If the wire harness is in good condition, replace FAN5.

[Dryer wiring diagram on page 2227](#)

1 **WARNING!** Use an ESD strap.

Check the 32 Vdc LED on the Ink Assist PCA (A3)

1. Verify that the LED is lit.

[Ink Assist PCA \(A3\) diagram on page 2264](#)

Is the LED lit?

No **Yes**

Test the voltage to the Dryer fan (FAN5) on the Ink Assist PCA (A3)

1. Select the minimal temp/fan button.
2. Test the voltage to FAN5 on A3: 24 to 32 Vdc at J5 pins 11 to 10 (GND) and approximately 3.3 Vdc at pins 22 to 10 (GND).

WARNING! Use an ESD strap.

1 Is the voltage correct?

1 **No** **Yes**

Check the wire harness between the Dryer fan (FAN5) and the Ink Assist PCA (A3)

1. Check the wire harness between FAN5 and A3.

[Dryer wiring diagram on page 2227](#)

WARNING! Use an ESD strap.

Check the wire harness between the Ink Assist PCA (A3), the Main Engine Backplane PCA (A4), and the Main Engine PCA (A5)

1. Check the wire harness between A3, A4, and A5

[Electronics component locator on page 2327](#)

WARNING! Use an ESD strap.

Were any of these items loose?

No	Yes
----	-----

Repair or replace any loose item as needed

1. [Electronics component locator on page 2327](#)

Check the following conditions

1. Replace the following items in order:
 - 1) Wire harness W3P17-A4J17 to W3P8-A3J8.
 - 2) Ink Assist PCA (A3)
 - 3) Main Engine PCA (A5).
 - 4) Main Engine Backplane PCA (A4).

WARNING! Use an ESD strap.

Diagnose a power problem to the Ink Assist PCA (A3)

1. Diagnose a power problem to A3.

[Ink Assist PCA \(A3\) diagram on page 2264](#)

C2.09A1: Dryer fan (FAN5) RPM too low

Initial Steps

1. [Dryer component locator on page 2319](#)

Check the RPM Dryer fan (FAN5) RPM

1. Select the minimal temperature/fan button and read the RPM.

TIP: Click **Subsystems**, and then click **Dryer**.

Is the FAN5 RPM between 4700 and 5000?

No **Yes**

Check the wire harness between the Dryer fan (FAN5) and the Main Engine PCA (A5)

1. Check the wire harness between FAN5 and A5.

[Dryer wiring diagram on page 2227](#)

- 1 **WARNING!** Use an ESD strap.

Measure the voltage to the Dryer fan (FAN5) on the dryer bulkhead

1. Select the minimal temp/fan button.
2. Test the voltage to FAN5 at the dryer bulkhead: 28 Vdc at J14 pins 1 to 2 (GND) and approximately 1 to 2 Vdc at J14 pins 3 to 2 (GND).

Is the voltage correct?

No **Yes**

Check the wire harness between the Dryer fan (FAN5) and the dryer assembly

1. Check the wire harness between FAN5 and the dryer assembly.

If the connections are in good condition, replace FAN5.

[Dryer fan \(FAN5\) on page 639](#)

- 1 **WARNING!** Use an ESD strap.

Check the 32 Vdc LED on the Ink Assist PCA (A3)

1. Verify that the LED is lit.

[Ink Assist PCA \(A3\) diagram on page 2264](#)

[Electronics component locator on page 2327](#)

Is the LED lit?

No **Yes**

Test the voltage to the Dryer fan (FAN5) on the Ink Assist PCA (A3)

1. Select the minimal temp/fan button.
2. Test the voltage to FAN5 on A3: 24 to 32 Vdc at J5 pins 11 to 10 (GND) and approximately 3.3 Vdc at pins 22 to 10 (GND).

WARNING! Use an ESD strap.

- 1 Is the voltage correct?

1 **No** **Yes**

Check the wire harness between the Dryer fan (FAN5) and the Ink Assist PCA (A3)

1. Check the wire harness between FAN5 and A3.

[Dryer wiring diagram on page 2227](#)

WARNING! Use an ESD strap.

Check the wire harness between the Ink Assist PCA (A3) on the Main Engine Backplane PCA (A4), and the Main Engine PCA (A5)

1. Check the wire harness between A3 on A4, and A5.

[Electronics component locator on page 2327](#)

[Dryer wiring diagram on page 2227](#)

WARNING! Use an ESD strap.

Were any of these items loose?

No	Yes
----	-----

Repair or replace any loose item as needed

1. [Dryer component locator on page 2319](#)

Check the following conditions

1. Replace the following items in order:

1) Wire harness W3P17-A4J17 to W3P8-A3J8

2) Ink Assist PCA (A3)

3) Main Engine PCA (A5)

- Main Engine Backplane PCA (A4)

WARNING! Use an ESD strap.

Diagnose a power problem to the Ink Assist PCA (A3)

1. Diagnose a power problem to A3.

[Ink Assist PCA \(A3\) diagram on page 2264](#)

C2.0C01: Dryer heater (HTR1) problem

Initial Steps

1. [Dryer component locator on page 2319](#)

WARNING! There is high AC (110/220) voltage when measuring dryer coil voltage with power applied.

Check the constant wattage

1. Check the constant wattage reading.

TIP: Click **Subsystems**, and then click **Dryer**.

Is the constant wattage 300 watts?

No **Yes**

Intermittent connection

1. Check the electrical connections and wiring between the dryer and the Main Engine PCA (A5) for an intermittent connection.

1 [Dryer wiring diagram on page 2227](#)

Measure the resistance of the four dryer coils on W22P1-PS1

1. Disconnect W22P1-PS1 on the Power supply (PS1).

[Dryer component locator on page 2319](#)

[Dryer wiring diagram on page 2227](#)

2. Measure the resistance on W22P1-PS1 pins 1 to 2, 2 to 3, 4 to 5, and 5 to 6.

The resistance should be approximately 28 (+/- .5) ohms between each set of pins.

Is the resistance 28 (+/- .5) ohms on each coil?

No **Yes**

Verify that the connectors and boards are correctly seated

1. Reconnect W22P1-PS1.
2. Verify that J4 and J5 on the Power Distribution PCA (A1), J9 on the Main Engine Backplane PCA (A4), and the Main Engine PCA (A5) are securely seated.

1 Are J4, J5, J9, and the A5 securely seated?

1 **No** **Yes**

Measure the two dryer signals

1. Measure the two dryer signals from the Main Engine PCA (A5) to J5 on the Power Distribution PCA (A1).

[Dryer wiring diagram on page 2227](#)

2. Disconnect J5 from A1.

NOTE: The signal voltage availability is based on the dryer coil temperature. When the dryer cools down, the Dryer Temperature sensor (SN36) sends a signal to A5 requesting the Power supply (PS1) to turn on the dryer coils. The dryer signal voltage can be intermittent.

1 2 Does the voltage measure approximately 3.3 Vdc between pins B14 to B15 (GND) and A1 to A2 (GND) on the wire harness from A5?

1 2 **No** **Yes**

Replace the Power Distribution PCA (A1) or the Power supply (PS1)

1. Replace the PS1 first, and then the A1.

[Power supply assembly on page 697](#)

[Power Distribution PCA \(A1\) on page 702](#)

Check the following conditions

1. Check or replace the wire harness between the Power Distribution PCA (A1) and the Main Engine PCA (A5).
2. Replace the Main Engine Backplane PCA (A4).

Reseat J4, J5, and J9 connectors and the Main Engine PCA (A5).

1. [Main Engine PCA \(A5\) diagram on page 2266](#)

Measure the resistance of the four dryer coils at J2

1. Reconnect W22P1-PS1.

[Dryer component locator on page 2319](#)

[Dryer wiring diagram on page 2227](#)

2. Disconnect J2 at the dryer bulkhead.
3. Measure the resistance of the four dryer coils on J2 pins 1 to 2, 2 to 3, 4 to 5, and 5 to 6.

The resistance should be approximately 28 (+/- .5) ohms between each set of pins.

Is the resistance 28 (+/- .5) ohms on each coil?

No Yes

Repair or replace the wire harness

1. Check the wire harness between the power supply (W22P1-PS1) and the dryer bulkhead (J2) for damage. Repair or replace the wire harness, as needed.

Replace the dryer coil assembly

1. Check the wiring to the dryer coil assembly or replace the dryer coil assembly.

C4.0101: Web Drive motor (M5) stall

Initial Steps

1. [Web wipe component locator on page 2333](#)

NOTE: If a servo motor is powered on, it feels like there is a bind.

Set DVM to the appropriate range for the voltage.

When testing the web drive motor remove the web wipe cartridge. Removing the web wipe cartridge saves web material.

WARNING! Be careful when working around electricity.

CAUTION: Do not use the frame as ground.

Check the web wipe cartridge installation

1. Verify that the web wipe cartridge is correctly installed.

Is the web wipe cartridge correctly installed and latched?

No **Yes**

Check the Web Drive Motor encoder (EN10) count

1. Remove the web wipe cartridge from the unit.
2. Turn the Web Drive motor (M5) by hand.

[Web wipe component locator on page 2333](#)

TIP: Click **Subsystems**, and then click **Web Wipe**.

Does the EN10 count change?

No **Yes**

Test the Web Drive motor (M5)

1. With the web wipe cartridge removed, turn on M5.

[Web wipe component locator on page 2333](#)

TIP: Click **Subsystems**, and then click **Web Wipe**.

Does the M5 turn in the forward direction?

No **Yes**

Test the Web Drive motor (M5)

1. With the web wipe cartridge removed, turn on M5.

[Web wipe component locator on page 2333](#)

TIP: Click **Subsystems**, and then click **Web Wipe**.

Does the M5 turn in the reverse direction?

No **Yes**

Check the web wipe cartridge for binding and reels

1. Check the web wipe cartridge for binding.
2. Verify that the web wipe cartridge reels are correctly installed.

[Web wipe component locator on page 2333](#)

Test the voltage at the Web Drive motor (M5)

1. Disconnect the wire connector from M5.
2. Test the voltage at M5: 12 Vdc at pins 1 to 2 (GND) on W41P5-M5.

[Web wipe component locator on page 2333](#)

[Web wipe wiring diagram on page 2262](#)

WARNING! Use an ESD strap.

TIP: Click **Subsystems**, and then click **Web Wipe**.

Is the voltage correct?

No **Yes**

Replace the Web Drive motor (M5)

1. Replace M5.

[Web Wipe Material Lift motor \(M4\) on page 657](#)

Test the voltage to the Web Drive motor (M5) on the Motion PCA (A2)

1. Verify that W41P5 is connected to M5.
2. Disconnect J15 from A2.
3. Test the voltage to M5 on A2:12 Vdc at J15 pins 5 to 10 (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

TIP: Click **Subsystems**, and then click **Web Wipe**.

Is the voltage correct?

No **Yes**

Check the wire harness between the Web Drive motor (M5) and the Motion PCA (A2)

1. Check the wire harness between M5 and A2.

[Web wipe wiring diagram on page 2262](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

WARNING! Use an ESD strap.

1 2 3 4
1 2 3
1 2 3
1 2 3
1 2 3
1 2 3
1 2 3

Test the voltage at the Web Drive motor (M5)

1. Disconnect the wire connector from M5.
2. Test the voltage at M5: 12 Vdc at pins 1 to 2 (GND) on W41P5-M5.

[Web wipe component locator on page 2333](#)

[Web wipe wiring diagram on page 2262](#)

WARNING! Use an ESD strap.

TIP: Click **Subsystems**, and then click **Web Wipe**.

Is the voltage correct?

No **Yes**

Replace the Web Drive motor (M5)

1. Replace M5.

[Web Drive motor \(M5\) on page 654](#)

Test the voltage to the Web Drive motor (M5) on the Motion PCA (A2)

1. Verify that W41P5 is connected to M5.
2. Disconnect J15 from A2.
3. Test the voltage to M5 on A2: 12 Vdc at J15 pins 5 to 10 (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

TIP: Click **Subsystems**, and then click **Web Wipe**.

Is the voltage correct?

No **Yes**

Check the wire harness between the Web Drive motor (M5) and the Motion PCA (A2)

1. Check the wire harness between M5 and A2.

[Web wipe wiring diagram on page 2262](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

WARNING! Use an ESD strap.

Test the voltage at the Web Drive Motor encoder (EN10)

1. Disconnect the wire connector from EN10.
2. Test the voltage at EN10: 5 Vdc at pins 3 to 1 (GND) on W33P12-W47J12.

[Web wipe component locator on page 2333](#)

[Web wipe wiring diagram on page 2262](#)

WARNING! Use an ESD strap.

Is the voltage correct?

1

No Yes

Test the voltage at Web Drive Motor encoder (EN10)channels A and B

- 1. Test the voltage at EN10: 5 Vdc at pins 4 to 1 (GND) and 2 to 1 (GND) on W33P12-W47J12.

[Web wipe component locator on page 2333](#)

[Web wipe wiring diagram on page 2262](#)

WARNING! Use an ESD strap.

1

2 Is the voltage correct?

1

2 **No Yes**

Replace the Web Drive Motor encoder (EN10)

- 1. Replace EN10.

[Web wipe component locator on page 2333](#)

1

2 3 [Web Advance encoder \(EN11\) on page 657](#)

Check the wire harness between the Web Drive Motor encoder (EN10) and the Motion PCA (A2)

- 1. Check the wire harness between EN10 and A2.

1

2 [Web wipe wiring diagram on page 2262](#)

Test the voltage to the Web Drive Motor encoder (EN10) on the Motion PCA (A2)

- 1. Verify that W33P10 is connected to EN10.
- 2. Disconnect J7 from A2.
- 3. Test the voltage to EN10 on A2: 5 Vdc at J7 pins 3B to 1B (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

1

Is the voltage correct?

1

No Yes

Check the wire harness between the Web Drive Motor encoder (EN10) and the Motion PCA (A2)

- 1. Check the wire harness between EN10 and A2.

1

2 [Web wipe wiring diagram on page 2262](#)

Replace the Motion PCA (A2)

- 1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

1

WARNING! Use an ESD strap.

Reinstall the web wipe cartridge

- 1. Reinstall the web wipe cartridge.
- 2. Verify that the web wipe cartridge is correctly latched.

C4.0102: Web Wipe Material Lift motor (M4) stall

Initial Steps

1. [Web wipe component locator on page 2333](#)

NOTE: If a servo motor is powered on, it feels like there is a bind.

Set DVM to the appropriate range for the voltage.

When testing the Web Wipe Material Lift motor (M4), remove the web wipe cartridge. Removing the web wipe cartridge saves web material.

WARNING! Be careful when working around electricity.

CAUTION: Do not use the frame as ground.

Check the web wipe cartridge installation

1. [Web wipe component locator on page 2333](#)

Is the web wipe cartridge properly installed and latched?

No Yes

Check the Web Backer Motor encoder (EN13) count

1. Remove the web wipe cartridge from the unit.
2. Turn the Web Wipe Material Lift motor (M4) a full cycle by hand using the drive gear on the motor. The motor should turn smoothly through the entire cycle.

[Web wipe component locator on page 2333](#)

TIP: Click **Subsystems**, and then click **Web Wipe**.

Does the EN13 count change?

No Yes

Test the Web Wipe Material Lift motor (M4)

1. With the web cartridge latched, run M4 and verify the web material moves up and down.

[Web wipe component locator on page 2333](#)

TIP: Click **Subsystems**, and then click **Web Wipe**.

Does the web wipe backer assembly complete a full up and down cycle?

No Yes

[Final activities on page 24](#)

Test the voltage at the Web Wipe Material Lift motor (M4)

1. Disconnect the wire connector from M4.
2. Test the voltage at M4: 5 Vdc at J15 pins 4 to 9 (GND).

[Web wipe component locator on page 2333](#)

[Web wipe wiring diagram on page 2262](#)

WARNING! Use an ESD strap.

TIP: Click **Subsystems**, and then click **Web Wipe**.

Is the voltage correct?

No **Yes**

Replace the Web Wipe Material Lift motor (M4)

1. Replace M4.

[Web Wipe Material Lift motor \(M4\) on page 657](#)

Test the voltage to the Web Wipe Material Lift motor (M4) on the Motion PCA (A2)

1. Verify that W41P2-W10J2 is connected to M4.
2. Disconnect J15 from A2.
3. Test the voltage to M4 on A2: 5 Vdc at J15 pins 4 to 9 (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

TIP: Click **Subsystems**, and then click **Web Wipe**.

Is the voltage correct?

No **Yes**

Check the wire harness between the Web Wipe Material Lift motor (M4) and the Motion PCA (A2)

1. Check the wire harness between M4 and A2.

[Web wipe wiring diagram on page 2262](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

WARNING! Use an ESD strap.

Test the voltage at the Web Backer Motor encoder (EN13)

1. Disconnect the wire connector from EN13.
2. Test the voltage at EN13: 5 Vdc at pins 13 to 14 (GND) and 15 to 14 (GND) on W33P12-W47J12.

[Web wipe component locator on page 2333](#)

[Service station wiring diagram on page 2254](#)

WARNING! Use an ESD strap.

Is the voltage correct?

1
1
1
1
1
1
1
1
1

No Yes

Replace the Web Backer Motor encoder (EN13)

1. Replace EN13.

[Web Advance encoder \(EN11\) on page 657](#)

Test the voltage to the Web Backer Motor encoder (EN13) on the Motion PCA (A2)

1. Verify that W47J12 is connected to EN13.
2. Disconnect J7 from A2.
3. Test the voltage to EN13 on A2:5 Vdc at J7 pins 13B to 14B (GND) and 13B to 15B (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Check the wire harness between the Web Backer Motor encoder (EN13) and the Motion PCA (A2)

1. Check the wire harness between EN13 and A2.

[Web wipe wiring diagram on page 2262](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

WARNING! Use an ESD strap.

Reinstall the web wipe cartridge

1. Reinstall the web wipe cartridge.
2. Verify that the web wipe cartridge is correctly latched.

C4.0201: Spit web not detected

Initial Steps

1. [Web wipe component locator on page 2333](#)

NOTE: A C4.0201 error can only be declared after the web material has been replaced and the preventive maintenance counter for the web material has been reset.

Check the web wipe cartridge for correct installation

1. Verify that the web wipe cartridge is correctly installed.

Is the web wipe cartridge correctly installed and latched?

No Yes

Check the installation of the web material

1. Check for correct web material routing and orientation.

[Web wipe component locator on page 2333](#)

2. Verify that the web material is not pinched or damaged.

Is the web material correctly installed after the web material was replaced?

No Yes

Check for a C4.0501 error code

1. Check the Event Log for a C4.0501 error code.

Is a C4.0501 error code displayed?

No Yes

[C4.0501: Web Advance encoder \(EN11\) stall on page 1406](#)

Check for a D1.0201 error code

1. Check the Event Log for a C4.0501 error code. If the code is displayed, follow the troubleshooting procedures for the code.

Verify that the web material is correctly installed

1. After the web wipe cartridge has been reinstalled and correctly latched, reset the web material preventive maintenance counter again to force a spit web detect routine.
2. After resetting the counter, watch the spit web detect routine to verify that the spit web material moves and that the Tetris sensor (SN58) is correctly located over the spit web.

[Web wipe component locator on page 2333](#)

NOTE: By running a spit web detect routine, a certain amount of web material is used. Do not reset the web material counter without replacing the web material.

Reinstall the web wipe cartridge

1. Reinstall the web wipe material.

C4.0202: Change web wipe supply

Initial Steps

1. Check the preventive maintenance list for web replacement.
2. If maintenance is due, replace the web material, and then reset the preventive maintenance counters.

Look for a C4.0202 error code

1. Check the Event Log for a C4.0202 error code.

Is a C4.0202 error code displayed?

No **Yes**

Check the web wipe cartridge and the Web Low sensor (SN21)

1. Reinstall the web wipe cartridge.
2. Clean SN21.

[Web wipe component locator on page 2333](#)

Is the web wipe cartridge correctly installed, and are SN21 and the web wipe cartridge window surfaces clean?

No **Yes**

Test the Web Low sensor (SN21)

1. Unlatch the web cartridge.

NOTE: Using a piece of paper or blocking the sensor by hand will not cause the sensor state to change.

This sensor is designed to detect a state change at a fixed distance using the web wipe cartridge.

TIP: Click **Subsystems**, and then click **Web Wipe**.

Does the sensor state change?

No **Yes**

Clean and check the Web Low sensor (SN21)

1. Remove the web wipe cartridge.
2. Check for dirt on SN21 and the cartridge window surface.
3. Check the wire harness between the Motion PCA (A2) and SN21.
4. Verify that SN21 is correctly mounted.

Check the wire harness between the Motion PCA (A2) and the Web Low sensor (SN21)

1. Check the wire harness between A2 and SN21.

[Web wipe wiring diagram on page 2262](#)

[Web wipe component locator on page 2333](#)

Is the wire harness in good condition?

No **Yes**

Test the voltage to the Web Low sensor (SN21) on the Motion PCA (A2)

1. Verify that W33P21 is connected to SN21.
2. Disconnect J7 from A2.
3. Test the voltage to SN21 on A2: 1.22 Vdc blocked and unblocked on J7 at pins 7B to 6B and 0.18 Vdc blocked, 3.19 Vdc unblocked at pins 5B to 6B.

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Test the voltage at the Web Low sensor (SN21)

1. Disconnect the wire connector from SN21.
2. Test the voltage at SN21: 0.18 Vdc blocked, 2.91 Vdc unblocked at pins 5 to 6 and 1.21 Vdc blocked and unblocked at pins 7 to 6 on W33P12-W47J12.

[Web wipe wiring diagram on page 2262](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Replace the Web Low sensor (SN21)

1. Replace SN21.

[Service station sensors on page 660](#)

Check the wire harness between the Web Low sensor (SN21) and the Motion PCA (A2)

1. Check the wire harness between SN21 and A2.

[Web wipe wiring diagram on page 2262](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

WARNING! Use an ESD strap.

Check the wire harness between the Motion PCA (A2) and the Web Low sensor (SN21)

1. Check the wire harness between A2 and SN21.

[Web wipe wiring diagram on page 2262](#)

Reinstall the web wipe cartridge and clean the Web Low sensor (SN21)

1. Reinstall the web wipe cartridge.
2. Clean SN21.

[Web wipe component locator on page 2333](#)

[Final activities on page 24](#)

C4.02A1: Low Web wipe supply

Initial Steps

1. Check to see if the web wipe is due for replacement.
2. If maintenance is due, replace the web material, and then reset the preventive maintenance counters.

Check the Event Log

1. Check the Event log for a C4.0202 code.

Is there a C4.0202 code in the Event Log?

No **Yes**

Check the web wipe cartridge and the Web Low sensor (SN21)

1. Reinstall the web wipe cartridge.
2. Clean SN21.

[Web wipe component locator on page 2333](#)

Is the web wipe cartridge correctly installed, and are the SN21 and the web wipe cartridge window surfaces clean?

No **Yes**

Test the Web Low sensor (SN21)

1. Remove the web wipe cartridge from the unit.

NOTE: Using a piece of paper or blocking the sensor by hand will not cause the sensor state to change.

This sensor is designed to detect a state change at a fixed distance using the web wipe cartridge/material.

TIP: Click **Subsystems**, and then click **Web Wipe**.

Does the sensor state change?

No **Yes**

Clean and check the Web Low sensor (SN21)

1. Remove the web wipe cartridge.
2. Check for dirt on SN21 and the cartridge window surface.
3. Check the wire harness between the Motion PCA (A2) and SN21.
4. Verify that SN21 is properly mounted.

Check the wire harness between the Motion PCA (A2) and the Web Low sensor (SN21)

1. Check the wire harness between A2 and SN21.

[Web wipe wiring diagram on page 2262](#)

[Web wipe component locator on page 2333](#)

Are connections and wire harness in good condition?

No **Yes**

Test the voltage at the Web Low sensor (SN21)

1. Disconnect the wire connector from SN21.
2. Test the voltage at Web Low sensor (SN21): 0.18 Vdc blocked, 2.91 Vdc unblocked at pins 5 to 6 and 1.21 Vdc blocked and unblocked at pins 7 to 6 on W33P12-W47J12.

[Web wipe wiring diagram on page 2262](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Test the voltage at the Web Advance encoder (EN11)

1. Disconnect the wire connector from EN11.
2. Test the voltage at EN11: 3.24 Vdc at pins 9 to 11 on W33P12-W47J12.

[Web wipe wiring diagram on page 2262](#)

[Web wipe component locator on page 2333](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Replace the Web Low sensor (SN21)

1. Replace SN21.

[Service station sensors on page 660](#)

Test the voltage to the Web Low sensor (SN21) on the Motion PCA (A2)

1. Verify that W33P21 is connected to SN21.
2. Disconnect J7 from A2.
3. Test the voltage to SN21 on A2: 1.22 Vdc blocked and unblocked on J7 at pins 7B to 6B and 0.18 Vdc blocked, 3.19 Vdc unblocked at pins 5B to 6B.

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No Yes

Check the wire harness between the Web Advance encoder (EN11) and the Motion PCA (A2)

1. Check the wire harness between EN11 and A2.

[Web wipe wiring diagram on page 2262](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

WARNING! Use an ESD strap.

1 2 3
1 2 3
1 2 3 4
1 2 3 4
1 2 3 4
1 2 3 4
1 2 3 4
1 2 3 4

Test the voltage to the Web Low sensor (SN21) on the Motion PCA (A2)

1. Verify that W33P21 is connected to SN21.
2. Disconnect J7 from A2.
3. Test the voltage to SN21 on A2: 1.22 Vdc blocked and unblocked on J7 at pins 7B to 6B and 0.18 Vdc blocked, 3.19 Vdc unblocked at pins 5B to 6B.

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Check the wire harness between the Web Low sensor (SN21) and the Motion PCA (A2)

1. Check the wire harness between SN21 and A2.

[Web wipe wiring diagram on page 2262](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

WARNING! Use an ESD strap.

Check the wire harness between the Motion PCA (A2) and the Web Low sensor (SN21)

1. Check the wire harness between A2 and SN21.

[Web wipe wiring diagram on page 2262](#)

Reinstall the web wipe cartridge and clean the Web Low sensor (SN21)

1. Reinstall the web wipe cartridge.
2. Clean SN21.

[Web wipe component locator on page 2333](#)

[Final activities on page 24](#)

C4.0501: Web Advance encoder (EN11) stall

Initial Steps

1. [Web wipe component locator on page 2333](#)

Check the preventive maintenance log

1. Check the preventive maintenance log for web replacement.

Is the web material due for replacement and a C4.0202 message displayed?

No **Yes**

Perform preventive maintenance

1. Replace the web material and reset the preventive maintenance counters.

Check the web wipe cartridge installation

1. Verify that the web wipe cartridge is correctly installed.

Is the web wipe cartridge seated correctly?

No **Yes**

Test the Web Advance encoder (EN11)

1. Remove the web wipe cartridge and turn EN11 by hand.

[Web wipe component locator on page 2333](#)

TIP: Click **Subsystems**, and then click **Web Wipe**.

Does the EN11 count change?

No **Yes**

Check for damage to the Web Advance encoder (EN11)

2. Remove the web wipe cartridge and check for damage at the EN11 to web wipe cartridge interface.

Check the electrical connections to the Web Advance encoder (EN11)

1. Verify that W33P13-EN11 is connected to EN11.

[Web wipe wiring diagram on page 2262](#)

Are the electrical connections in good condition?

No **Yes**

Test the voltage at the Web Advance encoder (EN11)

1. Disconnect the wire connector from EN11.
2. Test the voltage at EN11: 3.24 Vdc at pins 9 to 11 on W33P12-W47J12.

[Web wipe wiring diagram on page 2262](#)

[Web wipe component locator on page 2333](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Check the web advance encoder channel voltage at the Web Advance encoder (EN11)

1. Disconnect the wire connector from EN11.
2. Test the voltage at EN11: 3.12 Vdc at pins 10 to 11 and 0.09 Vdc at pins 8 to 11 on W33P12-W47J12

[Web wipe wiring diagram on page 2262](#)

[Web wipe component locator on page 2333](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Replace the Web Advance encoder (EN11)

1. Replace EN11.

[Web Advance encoder \(EN11\) on page 657](#)

Check the Web Advance encoder (EN11) channel voltage at the Motion PCA (A2)

1. Verify that W33P11 is connected to EN11.
2. Disconnect J7 from A2.
3. Test the voltage at on A2: 3.26 Vdc on J7 at pins 9B to 11B (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Check the wire harness from the Motion PCA (A2) to the Web Advance encoder (EN11)

1. Check the wire harness from A2 to EN11.

[Web wipe wiring diagram on page 2262](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

WARNING! Use an ESD strap.

Test the voltage on the Motion PCA (A2) to the Web Advance encoder (EN11)

1. Verify that W33P11 is connected to EN11.
2. Disconnect J7 from A2.
3. Test the voltage to EN11 on A2: 3.26 Vdc on J7 at pins 9B to 11B (GND).

[Motion PCA \(A2\) diagram on page 2268](#)

WARNING! Use an ESD strap.

Is the voltage correct?

No **Yes**

Check the wire harness from the Motion PCA (A2) to the Web Advance encoder (EN11)

1. Check the wire harness from A2 to EN11.

[Web wipe wiring diagram on page 2262](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

WARNING! Use an ESD strap.

Connect the wire harness at the Web Advance encoder (EN11)

1. Connect W33P13-EN11 to EN11.

[Web wipe wiring diagram on page 2262](#) 1+

Reinstall the web wipe cartridge

1. Reinstall the web wipe cartridge.

C7.0B06: IDS system will not pressurize

Initial Steps

1. Check for ink leaks in the following areas:
 - 1) The floor underneath the unit
 - 2) IDS connections
 - 3) Pens
 - 4) Near or around the ISS (ink supply station) unit
 - 5) Ink cartridges

NOTE: The typical time to pressurize five empty ink supplies is 50 seconds.

The typical time to pressurize five full ink supplies is 15 seconds.

Look for a message indicating that the lower-left door is open

1. Check the control panel for a message indicating that the lower-left door is open.

Is a message indicating that the lower-left door is open displayed on the control panel?

No **Yes**

Do the following actions to service the lower-left door

1. Test the Lower-left Door sensor (SN18).
2. Check the alignment and the hinges of the lower-left door.
3. Check the wire harness between SN18 and the Motion PCA (A2).
4. Clean SN18.
5. Test the voltage at SN18: 3.26 Vdc blocked, 0.15 Vdc unblocked at pins 18A to 17A and 1.18 Vdc both blocked and unblocked at pins 16A to 17A on W32P9-W34J9.
6. Replace the lower-left door assembly.

Check for a broken bag

1. Open the Ink Supply Status page, and then check to see if one of the ink cartridge has a broken bag.

Does one of the ink cartridges have a broken bag?

No **Yes**

[C7.0B08: IDS leak detected on page 1414](#)

Pressurize the IDS for 50 seconds

1. Pressurize the IDS for 50 seconds.

Did the IDS pressurize between 39.65 and 43.09 kPa (5.75 and 6.25 PSI) in 50 seconds?

No **Yes**

Pressurize the IDS three times

1. Pressurize the IDS for 50 seconds three times in a row.

Did the IDS pressurize between 39.65 and 43.09 kPa (5.75 and 6.25 PSI) in 50 seconds each time?

No **Yes**

Remove the air pressure system (APS)

1. Remove the APS.

[Air pressure system \(APS\) assembly on page 608](#)

2. Check the APS air system and wire harness for damage. Replace the APS as needed.

Check the following items

1. Check the following system air connections for air leaks: air hose connections, air hose connector manifold, air pumps, relief valve, IDS Pressure sensor (SN39), ink supply connectors, and the porex plug (the white plug at the bottom of each ink supply).

[IDS component locator on page 2326](#)

2. Check the electrical connections at the air pumps and the relief valve.

Test the IDS relief valve

1. Cycle the IDS relief valve.

[IDS component locator on page 2326](#)

Does the relief valve work?

No Yes

Test the IDS air pumps

1. Remove the ink cartridges.
2. Test the IDS air pumps.

Do the air pumps work?

No Yes

Test the IDS Pressure sensor (SN39)

1. Pressurize the IDS for 60 seconds. Verify that the pressure increases by 6.89 kPa (1 PSI).
2. Depressurize the IDS. Verify that the pressure drops to 0 kPa (0 PSI).

Does the IDS pressurize and depressurize correctly?

No Yes

Repressurize the IDS

1. Repressurize the IDS for 60 seconds. Verify that the pressure increases by 6.89 kPa (1 PSI).

Does the IDS pressurize correctly?

No Yes

[Final activities on page 24](#)

Replace the IDS assembly

1. Replace the IDS assembly.

[IDS assembly on page 596](#)

Check the IDS Pressure sensor (SN39)

1. Check the air hose to SN39 for leaks.

[IDS component locator on page 2326](#)

2. If the air hose is in good condition, replace SN39.

[IDS sensors on page 615](#)

Replace the air pressure system (APS)

1. Replace the APS.

[Air pressure system \(APS\) assembly on page 608](#)

Replace the air pressure system (APS)

1. Replace the APS.

[Air pressure system \(APS\) assembly on page 608](#)

C7.0B07: IDS system will not depressurize

Initial Steps

1. Open the Ink Status page and determine if one of the ink cartridges has a broken bag. If an ink cartridge has a broken bag, use the C7.0B08 fault tree.

[IDS component locator on page 2326](#)

NOTE: If the ink supplies are not depressurized, it is very difficult to remove any ink supply from the product.

Look for a message indicating that the lower-left door is open

1. Check the control panel for a message indicating that the lower-left door is open.

Is a message indicating that the lower-left door is open displayed on the control panel?

No **Yes**

Do the following actions to service the lower-left door

1. Test the Lower-left Door sensor (SN18).
2. Check the alignment and the hinges of the lower-left door.
3. Check the wire harness between SN18 and the Motion PCA (A2).
4. Clean SN18.
5. Test the voltage at SN18: 3.26 Vdc blocked, 0.15 Vdc unblocked at pins 18A to 17A and 1.18 Vdc both blocked and unblocked at pins 16A to 17A on W32P9-W34J9.
6. Replace the lower-left door assembly.

1

Depressurize the IDS

1. Depressurize the IDS.

Did the IDS pressure reading drop to 0?

No **Yes**

Check the following items

1. Check the system air hoses to the relief valve for kinks or damage.
[IDS component locator on page 2326](#)
2. Check the air hose connected to the IDS Pressure sensor (SN39) for leaks.
3. Check the wire harness between the relief valve and the ISS PCA (A8).

1

Activate and deactivate the relief valve

1. Cycle the relief valve.

NOTE: The relief valve is normally closed. If the Pressurize button is selected the valve will not actuate.

[IDS component locator on page 2326](#)

Does the relief valve work?

No **Yes**

Check the IDS wire harness and air connections

1. Check the IDS wire harness and air connections for leaks and damage.

[IDS component locator on page 2326](#)

2. Repair or replace as necessary.

Test the voltage to the relief valve on the ISS PCA (A8)

1. Test the voltage to the relief valve on A8: 24 Vdc at J17 pins 2 to 3.

Is the voltage correct?

No Yes

Test the voltage at the relief valve

1. Test the voltage at the relief valve: 24 Vdc between the two pins.

Is the voltage correct?

No Yes

Replace the relief valve

1. Replace the relief valve.

[IDS relief valve on page 610](#)

Check the wire harness between the relief valve and the ISS PCA (A8)

1. Check the wire harness between the relief valve and A8. Repair and replace as needed.

Replace the ISS PCA (A8)

1. Replace A8.

[ISS PCA \(A8\) on page 613](#)

C7.0B08: IDS leak detected

Initial Steps

1. Check for ink leaks in the following areas:
 - 1) The floor underneath the unit
 - 2) IDS connections
 - 3) Pens
 - 4) Near or around the ISS (ink supply station) unit
 - 5) Ink cartridges

CAUTION: Do not remove an air hose. You will not be able to remove an ink cartridge.

Check for a broken bag

1. Open the Ink Status page and determine if one of the ink cartridges has a broken bag.

Does one of the ink cartridges have a broken bag?

	No	Yes	
			Determine if the ink cartridges are pressurized
			1. Determine if the ink cartridges are pressurized.
1			Are the ink cartridges pressurized?
1			No Yes
			Follow the procedure to remove a pressurized ink cartridge
1	2		1. Follow the procedure to remove a pressurized ink cartridge.
			Remove the ink cartridges
			1. Remove the ink cartridges.
			2. Open the Ink Status page and determine if any of the ink cartridges are indicated to have a broken bag.
1			Are any of the ink cartridges indicated to have a broken bag?
1			No Yes
			Disconnect the acumen cable
			1. Disconnect the acumen cable to the ink cartridge that is indicated to have the broken bag.
			2. Open the Ink Status page and determine if the ink cartridge is indicated to have a broken bag.
1	2		Is the ink cartridge indicated to have a broken bag?
1	2		No Yes
			Disconnect the acumen cables from the ISS PCA (A8)
			1. Disconnect all of the acumen cables from A8.
			2. Open the Ink Status page and determine if the ink cartridge is indicated to have a broken bag.
1	2	3	Is the ink cartridge indicated to have a broken bag?
1	2	3	No Yes

Replace the ISS PCA (A8)

1. Replace A8.

[ISS PCA \(A8\) on page 613](#)

Replace the acumen cables

1. Replace the acumen cables one-by-one until the broken bag indicator clears.

Replace the acumen cable

1. Replace the acumen cable to the ink cartridge that is indicated to have the broken bag.

Reinstall the ink cartridges

1. Reinstall the ink cartridges.

Look for leaking ink

1. Check the IDS and the entire length of the ink tubes for leaking ink.

Is there leaking ink?

No **Yes**

Replace the IDS assembly

1. Replace the IDS assembly.

[IDS assembly on page 596](#)

Test each ink cartridge

1. Determine which ink cartridge is the emptiest or the latest installed, and then replace this ink cartridge with a new ink cartridge of the same type.
2. Pressurize the IDS.
3. Track the time it takes for the IDS to depressurize.

NOTE: Do not depressurize the IDS yourself. Allow the pressure to decay as the IDS is idle.

4. Repeat steps 1 to 3 for each ink cartridge. If the time for the pressure to decay significantly lengthens, then the ink cartridge you just replaced was the source of the leak. For example, if you replace the cyan cartridge and the time for the pressure to decay doubles, then the cyan cartridge was the source of the leak.

NOTE: If an ink cartridge is the source of the leak, replace that ink cartridge only. You can reinstall any original ink cartridges that you removed during this test.

Was an ink cartridge the source of the leak?

No **Yes**

[Final activities on page 24](#)

Replace the IDS relief valve

1. Replace the relief valve.

[IDS relief valve on page 610](#)

2. Pressurize the IDS, and then track the time it takes for the IDS to depressurize. If the time for the pressure to decay significantly lengthens, then the relief valve was the source of the leak.

Was the relief valve the source of the leak?

No **Yes**

1 | [Final activities on page 24](#)

Replace the air pressure system (APS)

1. Replace the APS.

[Air pressure system \(APS\) assembly on page 608](#)

2. Pressurize the IDS, and then track the time it takes for the IDS to depressurize. If the time for the pressure to decay significantly lengthens, then the APS was the source of the leak.

Was the APS the source of the leak?

No Yes

1 | [Final activities on page 24](#)

Replace the IDS assembly

1. Replace the IDS assembly.

[IDS assembly on page 596](#)

C7.0B10: Black ink supply is empty

Initial Steps

1. Check the supply status screen for the appropriate ink cartridge and look for the ink level indicator.

Check for any error message or code

1. Replace the suspected empty ink cartridge with a new ink cartridge.

Is a message prompting you to replace the ink cartridge displayed on the control panel?

No **Yes**

Check the cartridge brand

1. Verify that the ink cartridge is an HP ink cartridge.

Is the ink cartridge an HP ink cartridge?

No **Yes**

Check for contamination

1. Check for any moisture, ink, or PEG on the ink cartridge connector and surrounding area.
2. Check for any ink off of the wire harness between the ISS PCA (A8) and the ink cartridge connectors.

Is there moisture, ink, or PEG on the cartridge connector?

No **Yes**

Clean the contamination as needed

1. If the problem continues, replace the ink cartridge connector.

Check the connector pins

1. Remove the suspected ink cartridge and check for bent pins on the ink cartridge connector.

Are the pins bent on the ink cartridge connector?

No **Yes**

Repair the pins on the ink cartridge connector

1. Remove the ink cartridge connector and try reforming the pins. If the problem continues, replace the ink cartridge connector.

[Final activities on page 24](#)

Check the administrative settings

1. Verify that the "Empty Override" setting is on for non-HP ink.

By default, printing will not occur if the supply is non-HP ink. Original HP ink is needed to maintain pen nozzle health.

[Final activities on page 24](#)

C7.0B11: Black ink supply has failed

Initial Steps

1. Verify that the ink cartridge is fully inserted and latched.

Replace the suspected failed ink cartridge with a new ink cartridge

1. Replace the ink cartridge.

[Ink supply on page 593](#)

Is a message prompting you to replace the ink cartridge displayed on the control panel?

No **Yes**

Check for multiple errors

1. Look for other failed ink cartridge messages.

1 Are there multiple failed ink cartridge messages and codes displayed?

1 **No** **Yes**

Check the input power and internal power LEDs on the ISS PCA (A8)

1. Verify that the LEDs are lit.

[IDS component locator on page 2326](#)

1 2 Are both LEDs lit?

1 2 **No** **Yes**

1 2 3 [C7.0B08: IDS leak detected on page 1414](#)

Diagnose a power problem to the ISS PCA (A8)

1. Diagnose a power problem to A8.

1 2 [ISS PCA \(A8\) diagram on page 2250](#)

1 [C7.0B08: IDS leak detected on page 1414](#)

[Final activities on page 24](#)

C7.0B12: Black ink supply is missing

Initial Steps

1. Verify that the ink cartridge is fully inserted and latched.

Reinstall the original ink cartridge

1. Reinstall the ink cartridge.

Is a message prompting you to replace the ink cartridge displayed on the control panel?

No **Yes**

Replace the suspected failed ink cartridge with a new ink cartridge

1. Replace the ink cartridge with a new ink cartridge.

Is a message prompting you to replace the ink cartridge displayed on the control panel?

No **Yes**

Check for contamination

1. Check for moisture, ink, or PEG on the ink cartridge connector.
2. Check the wire harness between the ISS PCA (A8) and the ink cartridge connector.

NOTE: Verify that the ink cartridge connector on A8 is properly seated.

Is there moisture, ink, or PEG on the ink cartridge connector?

No **Yes**

Clean the contamination as needed

1. If problem continues, replace the ink cartridge connector.

Check for bent pins

1. Remove the suspected ink cartridge and check for bent pins on the ink cartridge connector.

Are the pins bent on the ink cartridge connector?

No **Yes**

Try repairing the bent pins

1. Remove the ink cartridge connector and try re-forming the pins.
2. If problem continues, replace the ink cartridge connector.

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[Final activities on page 24](#)

C7.0B13: Black ink supply is non-HP

Initial Steps

1. Check the supply status screen for the appropriate ink cartridge and look for an HP icon next to the cartridge name and an ink level indicator. If the HP icon and the ink level indicator are displayed, this is an original HP ink cartridge.

Check for a non-HP cartridge message

1. Look for a message indicating that an ink cartridge is non-HP and that the associated color has not been enabled for non-HP ink displayed on the control panel.

Is such a message displayed?

No **Yes**

Verify the administrator settings

1. Check the administrator settings and make sure the Non-HP ink cartridge setting is enabled.

¹ **NOTE:** Using non-HP ink could result in an image quality problem.

Review the Event Log

1. Check the Event Log for any ink cartridge related codes.

C7.0B20: Cyan ink supply is empty

Initial Steps

1. Check the supply status screen for the appropriate ink cartridge and look for the ink level indicator.

Check for any error message or code

1. Replace the suspected empty ink cartridge with a new ink cartridge.

Is a message prompting you to replace the ink cartridge displayed on the control panel?

No **Yes**

Check the cartridge brand

1. Verify that the ink cartridge is an HP ink cartridge.

Is the ink cartridge an HP ink cartridge?

No **Yes**

Check for contamination

1. Check for any moisture, ink, or PEG on the ink cartridge connector and surrounding area.
2. Check for any ink off of the wire harness between the ISS PCA (A8) and the ink cartridge connectors.

Is there moisture, ink, or PEG on the cartridge connector?

No **Yes**

Clean the contamination as needed

1. If the problem continues, replace the ink cartridge connector.

Check the connector pins

1. Remove the suspected ink cartridge and check for bent pins on the ink cartridge connector.

Are the pins bent on the ink cartridge connector?

No **Yes**

Repair the pins on the ink cartridge connector

1. Remove the ink cartridge connector and try reforming the pins. If the problem continues, replace the ink cartridge connector.

[Final activities on page 24](#)

Check the administrative settings

1. Verify that the "Empty Override" setting is on for non-HP ink.

By default, printing will not occur if the supply is non-HP ink. Original HP ink is needed to maintain pen nozzle health.

[Final activities on page 24](#)

C7.0B21: Cyan ink supply has failed

Initial Steps

1. Verify that the ink cartridge is fully inserted and latched.

Replace the suspected failed ink cartridge with a new ink cartridge

1. Replace the ink cartridge.

[Ink supply on page 593](#)

Is a message prompting you to replace the ink cartridge displayed on the control panel?

No **Yes**

Check for multiple errors

1. Look for other failed ink cartridge messages.

1 Are there multiple failed ink cartridge messages and codes displayed?

1 **No** **Yes**

Check the input power and internal power LEDs on the ISS PCA (A8)

1. Verify that the LEDs are lit.

[IDS component locator on page 2326](#)

1 2 Are both LEDs lit?

1 2 **No** **Yes**

1 2 3 [C7.0B08: IDS leak detected on page 1414](#)

Diagnose a power problem to the ISS PCA (A8)

1. Diagnose a power problem to A8.

1 2 [ISS PCA \(A8\) diagram on page 2250](#)

1 [C7.0B08: IDS leak detected on page 1414](#)

[Final activities on page 24](#)

C7.0B22: Cyan ink supply is missing

Initial Steps

1. Verify that the ink cartridge is fully inserted and latched.

Reinstall the original ink cartridge

1. Reinstall the ink cartridge.

Is a message prompting you to replace the ink cartridge displayed on the control panel?

No **Yes**

Replace the suspected failed ink cartridge with a new ink cartridge

1. Replace the ink cartridge with a new ink cartridge.

Is a message prompting you to replace the ink cartridge displayed on the control panel?

No **Yes**

Check for contamination

1. Check for moisture, ink, or PEG on the ink cartridge connector.
2. Check the wire harness between the ISS PCA (A8) and the ink cartridge connector.

NOTE: Verify that the ink cartridge connector on A8 is properly seated.

Is there moisture, ink, or PEG on the ink cartridge connector?

No **Yes**

Clean the contamination as needed

1. If problem continues, replace the ink cartridge connector.

Check for bent pins

1. Remove the suspected ink cartridge and check for bent pins on the ink cartridge connector.

Are the pins bent on the ink cartridge connector?

No **Yes**

Try repairing the bent pins

1. Remove the ink cartridge connector and try re-forming the pins.
2. If problem continues, replace the ink cartridge connector.

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C7.0B23: Cyan ink supply is non-HP

Initial Steps

1. Check the supply status screen for the appropriate ink cartridge and look for an HP icon next to the cartridge name and an ink level indicator. If the HP icon and the ink level indicator are displayed, this is an original HP ink cartridge.

Check for a non-HP cartridge message

1. Look for a message indicating that an ink cartridge is non-HP and that the associated color has not been enabled for non-HP ink displayed on the control panel.

Is such a message displayed?

No **Yes**

Verify the administrator settings

1. Check the administrator settings and make sure the Non-HP ink cartridge setting is enabled.

¹ **NOTE:** Using non-HP ink could result in an image quality problem.

Review the Event Log

1. Check the Event Log for any ink cartridge related codes.

C7.0B30: Magenta ink supply is empty

Initial Steps

1. Check the supply status screen for the appropriate ink cartridge and look for the ink level indicator.

Check for any error message or code

1. Replace the suspected empty ink cartridge with a new ink cartridge.

Is a message prompting you to replace the ink cartridge displayed on the control panel?

No **Yes**

Check the cartridge brand

1. Verify that the ink cartridge is an HP ink cartridge.

Is the ink cartridge an HP ink cartridge?

No **Yes**

Check for contamination

1. Check for any moisture, ink, or PEG on the ink cartridge connector and surrounding area.
2. Check for any ink off of the wire harness between the ISS PCA (A8) and the ink cartridge connectors.

Is there moisture, ink, or PEG on the cartridge connector?

No **Yes**

Clean the contamination as needed

1. If the problem continues, replace the ink cartridge connector.

Check the connector pins

1. Remove the suspected ink cartridge and check for bent pins on the ink cartridge connector.

Are the pins bent on the ink cartridge connector?

No **Yes**

Repair the pins on the ink cartridge connector

1. Remove the ink cartridge connector and try reforming the pins. If the problem continues, replace the ink cartridge connector.

[Final activities on page 24](#)

Check the administrative settings

1. Verify that the "Empty Override" setting is on for non-HP ink.

By default, printing will not occur if the supply is non-HP ink. Original HP ink is needed to maintain pen nozzle health.

[Final activities on page 24](#)

C7.0B31: Magenta ink supply has failed

Initial Steps

1. Verify that the ink cartridge is fully inserted and latched.

Replace the suspected failed ink supply with a new ink supply

1. Replace the ink cartridge.

[Ink supply on page 593](#)

Is a message prompting you to replace the ink cartridge displayed on the control panel?

No **Yes**

Check for multiple errors

1. Look for other failed ink supply messages.

1 Are there multiple failed ink supply messages and codes displayed?

1 **No** **Yes**

Check the input power and internal power LEDs on the ISS PCA (A8)

1. Verify that the LEDs are lit.

[IDS component locator on page 2326](#)

1 2 Are both LEDs lit?

1 2 **No** **Yes**

1 2 3 [C7.0B08: IDS leak detected on page 1414](#)

Diagnose a power problem to the ISS PCA (A8)

1. Diagnose a power problem to A8.

1 2 [ISS PCA \(A8\) diagram on page 2250](#)

1 [C7.0B08: IDS leak detected on page 1414](#)

[Final activities on page 24](#)

C7.0B32: Magenta ink supply is missing

Initial Steps

1. Verify that the ink cartridge is fully inserted and latched.

Reinstall the original ink cartridge

1. Reinstall the ink cartridge.

Is a message prompting you to replace the ink cartridge displayed on the control panel?

No **Yes**

Replace the suspected failed ink cartridge with a new ink cartridge

1. Replace the ink cartridge with a new ink cartridge.

Is a message prompting you to replace the ink cartridge displayed on the control panel?

No **Yes**

Check for contamination

1. Check for moisture, ink, or PEG on the ink cartridge connector.
2. Check the wire harness between the ISS PCA (A8) and the ink cartridge connector.

NOTE: Verify that the ink cartridge connector on A8 is properly seated.

Is there moisture, ink, or PEG on the ink cartridge connector?

No **Yes**

Clean the contamination as needed

1. If problem continues, replace the ink cartridge connector.

Check for bent pins

1. Remove the suspected ink cartridge and check for bent pins on the ink cartridge connector.

Are the pins bent on the ink cartridge connector?

No **Yes**

Try repairing the bent pins

1. Remove the ink cartridge connector and try re-forming the pins.
2. If problem continues, replace the ink cartridge connector.

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C7.0B33: Magenta ink supply is non-HP

Initial Steps

1. Check the supply status screen for the appropriate ink cartridge and look for an HP icon next to the cartridge name and an ink level indicator. If the HP icon and the ink level indicator are displayed, this is an original HP ink cartridge.

Check for a non-HP cartridge message

1. Look for a message indicating that an ink cartridge is non-HP and that the associated color has not been enabled for non-HP ink displayed on the control panel.

Is such a message displayed?

No **Yes**

Verify the administrator settings

1. Check the administrator settings and make sure the Non-HP ink cartridge setting is enabled.

¹ **NOTE:** Using non-HP ink could result in an image quality problem.

Review the Event Log

1. Check the Event Log for any ink cartridge related codes.

C7.0B40: Yellow ink supply is empty

Initial Steps

1. Check the supply status screen for the appropriate ink cartridge and look for the ink level indicator.

Check for any error message or code

1. Replace the suspected empty ink cartridge with a new ink cartridge.

Is a message prompting you to replace the ink cartridge displayed on the control panel?

No **Yes**

Check the cartridge brand

1. Verify that the ink cartridge is an HP ink cartridge.

Is the ink cartridge an HP ink cartridge?

No **Yes**

Check for contamination

1. Check for any moisture, ink, or PEG on the ink cartridge connector and surrounding area.
2. Check for any ink off of the wire harness between the ISS PCA (A8) and the ink cartridge connectors.

Is there moisture, ink, or PEG on the cartridge connector?

No **Yes**

Clean the contamination as needed

1. If the problem continues, replace the ink cartridge connector.

Check the connector pins

1. Remove the suspected ink cartridge and check for bent pins on the ink cartridge connector.

Are the pins bent on the ink cartridge connector?

No **Yes**

Repair the pins on the ink cartridge connector

1. Remove the ink cartridge connector and try reforming the pins. If the problem continues, replace the ink cartridge connector.

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Check the administrative settings

1. Verify that the "Empty Override" setting is on for non-HP ink.

By default, printing will not occur if the supply is non-HP ink. Original HP ink is needed to maintain pen nozzle health.

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C7.0B41: Yellow ink supply has failed

Initial Steps

1. Verify that the ink cartridge is fully inserted and latched.

Replace the suspected failed ink cartridge with a new ink cartridge

1. Replace the ink cartridge.

[Ink supply on page 593](#)

Is a message prompting you to replace the ink cartridge displayed on the control panel?

No **Yes**

Check for multiple errors

1. Look for other failed ink cartridge messages.

1 Are there multiple failed ink cartridge messages and codes displayed?

1 **No** **Yes**

Check the input power and internal power LEDs on the ISS PCA (A8)

1. Verify that the LEDs are lit.

[IDS component locator on page 2326](#)

1 2 Are both LEDs lit?

1 2 **No** **Yes**

1 2 3 [C7.0B08: IDS leak detected on page 1414](#)

Diagnose a power problem to the ISS PCA (A8)

1. Diagnose a power problem to A8.

1 2 [ISS PCA \(A8\) diagram on page 2250](#)

1 [C7.0B08: IDS leak detected on page 1414](#)

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C7.0B42: Yellow ink supply is missing

Initial Steps

1. Verify that the ink cartridge is fully inserted and latched.

Reinstall the original ink cartridge

1. Reinstall the ink cartridge.

Is a message prompting you to replace the ink cartridge displayed on the control panel?

No **Yes**

Replace the suspected failed ink cartridge with a new ink cartridge

1. Replace the ink cartridge with a new ink cartridge.

Is a message prompting you to replace the ink cartridge displayed on the control panel?

No **Yes**

Check for contamination

1. Check for moisture, ink, or PEG on the ink cartridge connector.
2. Check the wire harness between the ISS PCA (A8) and the ink cartridge connector.

NOTE: Verify that the ink cartridge connector on A8 is properly seated.

Is there moisture, ink, or PEG on the ink cartridge connector?

No **Yes**

Clean the contamination as needed

1. If problem continues, replace the ink cartridge connector.

Check for bent pins

1. Remove the suspected ink cartridge and check for bent pins on the ink cartridge connector.

Are the pins bent on the ink cartridge connector?

No **Yes**

Try repairing the bent pins

1. Remove the ink cartridge connector and try re-forming the pins.
2. If problem continues, replace the ink cartridge connector.

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C7.0B43: Yellow ink supply is non-HP

Initial Steps

1. Check the supply status screen for the appropriate ink cartridge and look for an HP icon next to the cartridge name and an ink level indicator. If the HP icon and the ink level indicator are displayed, this is an original HP ink cartridge.

Check for a non-HP cartridge message

1. Look for a message indicating that an ink cartridge is non-HP and that the associated color has not been enabled for non-HP ink displayed on the control panel.

Is such a message displayed?

No Yes

Verify the administrator settings

1. Check the administrator settings and make sure the Non-HP ink cartridge setting is enabled.

¹ **NOTE:** Using non-HP ink could result in an image quality problem.

Review the Event Log

1. Check the Event Log for any ink cartridge related codes.

C7.0B50: Bonding Agent supply is empty

Initial Steps

1. Check the supply status screen for the Bonding Agent cartridge and look for the Bonding Agent level indicator.

Check for any error message or code

1. Replace the suspected empty Bonding Agent cartridge with a new Bonding Agent cartridge.

Is a message prompting you to replace the Bonding Agent cartridge displayed on the control panel?

No **Yes**

Check the cartridge brand

1. Verify that the Bonding Agent cartridge is an HP Bonding Agent cartridge.

Is the Bonding Agent cartridge an HP Bonding Agent cartridge?

No **Yes**

Check for contamination

1. Check for any moisture, Bonding Agent, or PEG on the Bonding Agent cartridge connector and surrounding area.
2. Check for any Bonding Agent off of the wire harness between the ISS PCA (A8) and the Bonding Agent cartridge connectors.

Is there moisture, Bonding Agent, or PEG on the cartridge connector?

No **Yes**

Clean the contamination as needed

1. If the problem continues, replace the Bonding Agent cartridge connector.

Check the connector pins

1. Remove the suspected Bonding Agent cartridge and check for bent pins on the Bonding Agent cartridge connector.

Are the pins bent on the Bonding Agent cartridge connector?

No **Yes**

Repair the pins on the Bonding Agent cartridge connector

1. Remove the Bonding Agent cartridge connector and try reforming the pins. If the problem continues, replace the Bonding Agent cartridge connector.

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Check the administrative settings

1. Verify that the "Empty Override" setting is on for non-HP Bonding Agent.

By default, printing will not occur if the supply is non-HP Bonding Agent. Original HP Bonding Agent is needed to maintain pen nozzle health.

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C7.0B51: Bonding Agent supply has failed

Initial Steps

1. Verify that the Bonding Agent cartridge is fully inserted and latched.

Replace the suspected failed Bonding Agent cartridge with a new Bonding Agent cartridge

1. Replace the Bonding Agent cartridge.

[Ink supply on page 593](#)

Is a message prompting you to replace the Bonding Agent cartridge displayed on the control panel?

No **Yes**

Check for multiple errors

1. Look for other failed Bonding Agent cartridge messages.

1 Are there multiple failed Bonding Agent cartridge messages and codes displayed?

1 **No** **Yes**

Check the input power and internal power LEDs on the ISS PCA (A8)

1. Verify that the LEDs are lit.

[IDS component locator on page 2326](#)

1 2 Are both LEDs lit?

1 2 **No** **Yes**

1 2 3 [C7.0B08: IDS leak detected on page 1414](#)

Diagnose a power problem to the ISS PCA (A8)

1. Diagnose a power problem to A8.

1 2 [ISS PCA \(A8\) diagram on page 2250](#)

1 [C7.0B08: IDS leak detected on page 1414](#)

[Final activities on page 24](#)

C7.0B52: Bonding Agent supply is missing

Initial Steps

1. Verify that the Bonding Agent cartridge is fully inserted and latched.

Reinstall the original Bonding Agent cartridge

1. Reinstall the Bonding Agent cartridge.

Is a message prompting you to replace the Bonding Agent cartridge displayed on the control panel?

No **Yes**

Replace the suspected failed Bonding Agent cartridge with a new Bonding Agent cartridge

1. Replace the Bonding Agent cartridge with a new Bonding Agent cartridge.

Is a message prompting you to replace the Bonding Agent cartridge displayed on the control panel?

No **Yes**

Check for contamination

1. Check for moisture, ink, or PEG on the Bonding Agent cartridge connector.
2. Check the wire harness between the ISS PCA (A8) and the Bonding Agent cartridge connector.

NOTE: Verify that the Bonding Agent cartridge connector on A8 is properly seated.

Is there moisture, ink, or PEG on the Bonding Agent cartridge connector?

No **Yes**

Clean the contamination as needed

1. If problem continues, replace the Bonding Agent cartridge connector.

Check for bent pins

1. Remove the suspected Bonding Agent cartridge and check for bent pins on the Bonding Agent cartridge connector.

Are the pins bent on the Bonding Agent cartridge connector?

No **Yes**

Try repairing the bent pins

1. Remove the Bonding Agent cartridge connector and try reforming the pins.
2. If problem continues, replace the Bonding Agent cartridge connector.

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C7.0B53: Bonding Agent supply is non-HP

Initial Steps

1. Check the supply status screen for the appropriate Bonding Agent cartridge and look for an HP icon next to the cartridge name and an Bonding Agent level indicator. If the HP icon and the Bonding Agent level indicator are displayed, this is an original HP Bonding Agent cartridge.

Check for a non-HP cartridge message

1. Look for a message indicating that an Bonding Agent cartridge is non-HP and that the associated color has not been enabled for non-HP Bonding Agent displayed on the control panel.

Is such a message displayed?

No **Yes**

Verify the administrator settings

1. Check the administrator settings and make sure the Non-HP Bonding Agent cartridge setting is enabled.

¹ **NOTE:** Using non-HP Bonding Agent could result in an image quality problem.

Review the Event Log

1. Check the Event Log for any Bonding Agent cartridge related codes.

C7.0BA0: Magenta ink supply has expired

Initial Steps

1. [IDS component locator on page 2326](#)

Check the cartridge expiration date

1. Check the Supplies Status screen and validate that the suspected expired ink cartridge has actually expired.

Is the expiration date valid?

No **Yes**

Replace the expired ink cartridge

1. Replace the ink cartridge.

Check for message

1. Replace the suspected expired ink cartridge with a new ink cartridge.

Is a message prompting you to replace the ink cartridge displayed on the control panel?

No **Yes**

Validate that the system date is correct

1. Check the system date.

Is the system date correct?

No **Yes**

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Adjust the date

1. Correct the system date.

[Final activities on page 24](#)

C7.0BA1: Black ink supply is low

Initial Steps

1. Check the Supply Status screen for the appropriate ink cartridge and look for the ink level indicator.

Check for a message

1. Replace the suspected low ink cartridge with a new ink cartridge.

Is a message indicating that the ink cartridge is low displayed on the control panel?

No **Yes**

Check the administrator settings and verify the stop printing on low setting is off

1. Check the administrator settings and verify the stop printing on low setting is off.

[Final activities on page 24](#)

C7.0BA2: Black ink supply has expired

Initial Steps

1. [IDS component locator on page 2326](#)

Check the cartridge expiration date

1. Check the Supplies Status screen and validate that the suspected expired ink cartridge has actually expired.

Is the expiration date valid?

No **Yes**

Replace the expired ink cartridge

1. Replace the ink cartridge.

Check for message

1. Replace the suspected expired ink cartridge with a new ink cartridge.

Is a message prompting you to replace the ink cartridge displayed on the control panel?

No **Yes**

Validate that the system date is correct

1. Check the system date.

Is the system date correct?

No **Yes**

[Final activities on page 24](#)

Adjust the date

1. Correct the system date.

[Final activities on page 24](#)

C7.0BA3: Bonding Agent supply has expired

Initial Steps

1. [IDS component locator on page 2326](#)

Check the cartridge expiration date

1. Check the Supplies Status screen and validate that the suspected expired Bonding Agent cartridge has actually expired.

Is the expiration date valid?

No **Yes**

Replace the expired Bonding Agent cartridge

1. Replace the Bonding Agent cartridge.

Check for message

1. Replace the suspected expired Bonding Agent cartridge with a new Bonding Agent cartridge.

Is a message prompting you to replace the Bonding Agent cartridge displayed on the control panel?

No **Yes**

Validate that the system date is correct

1. Check the system date.

Is the system date correct?

No **Yes**

2. [Final activities on page 24](#)

Adjust the date

1. Correct the system date.

[Final activities on page 24](#)

C7.0BA4: Bonding Agent supply is low

Initial Steps

1. Check the Supply Status screen for the appropriate Bonding Agent cartridge and look for the Bonding Agent level indicator.

Check for a message

1. Replace the suspected low Bonding Agent cartridge with a new Bonding Agent cartridge.

Is a message indicating that the Bonding Agent cartridge is low displayed on the control panel?

No **Yes**

Check the administrator settings and verify the stop printing on low setting is off

1. Check the administrator settings and verify the stop printing on low setting is off.

[Final activities on page 24](#)

C7.0BA5: Yellow cartridge low warning

Initial Steps

1. Check the Supply Status screen for the appropriate ink cartridge and look for the ink level indicator.

Check for a message

1. Replace the suspected low ink cartridge with a new ink cartridge.

Is a message indicating that the ink cartridge is low displayed on the control panel?

No **Yes**

Check the administrator settings and verify the stop printing on low setting is off

1. Check the administrator settings and verify the stop printing on low setting is off.

[Final activities on page 24](#)

C7.0BA6: Yellow ink supply has expired

Initial Steps

1. [IDS component locator on page 2326](#)

Check the cartridge expiration date

1. Check the Supplies Status screen and validate that the suspected expired ink cartridge has actually expired.

Is the expiration date valid?

No **Yes**

Replace the expired ink cartridge

1. Replace the ink cartridge.

Check for message

1. Replace the suspected expired ink cartridge with a new ink cartridge.

Is a message prompting you to replace the ink cartridge displayed on the control panel?

No **Yes**

Validate that the system date is correct

1. Check the system date.

Is the system date correct?

No **Yes**

[Final activities on page 24](#)

Adjust the date

1. Correct the system date.

[Final activities on page 24](#)

C7.0BA7: Cyan ink supply is low

Initial Steps

1. Check the Supply Status screen for the appropriate ink cartridge and look for the ink level indicator.

Check for a message

1. Replace the suspected low ink cartridge with a new ink cartridge.

Is a message indicating that the ink cartridge is low displayed on the control panel?

No **Yes**

Check the administrator settings and verify the stop printing on low setting is off

1. Check the administrator settings and verify the stop printing on low setting is off.

[Final activities on page 24](#)

C7.0BA8: Cyan ink supply has expired

Initial Steps

1. [IDS component locator on page 2326](#)

Check the cartridge expiration date

1. Check the "Supplies status > details" screen and validate that the suspected expired supply has actually expired.

Is the expiration date valid?

No **Yes**

Replace the expired ink supply

1. [Ink supply on page 593](#)

Check for message

1. Replace the suspected expired ink supply with a new ink supply.

Does the "Cyan cartridge expired" message and code appear?

No **Yes**

Validate that the system date is correct

1. Validate that the system date is correct.

1. Is the system date correct?

No **Yes**

2. [Final activities on page 24](#)

Adjust the date

1. PUT SOMETHING HERE.

[Final activities on page 24](#)

C7.0BA9: Magenta ink supply is low

Initial Steps

1. Check the Supply Status screen for the appropriate ink cartridge and look for the ink level indicator.

Check for a message

1. Replace the suspected low ink cartridge with a new ink cartridge.

Is a message indicating that the ink cartridge is low displayed on the control panel?

No **Yes**

Check the administrator settings and verify the stop printing on low setting is off

1. Check the administrator settings and verify the stop printing on low setting is off.

[Final activities on page 24](#)

D1.06C1: Carriage LED (LED10) not lit

Initial Steps

1. [Carriage component locator on page 2316](#)

Test the Carriage LED (LED10)

1. Activate LED10.
2. Verify that the LED turns on and off.

TIP: Click **Subsystems**, and then click **Carriage**.

Does the LED turn on and off?

No **Yes**

Check for problems that might cause intermittent behavior

1. Check the wire harness between the Motion PCA (A2) and the LED.

[Carriage wiring diagram on page 2220](#)

1. Check the LED mounting and surrounding area for any obvious problems. Repair as needed.

Check the LED and wire harness

1. Verify that the LED is correctly located.
[Carriage wiring diagram on page 2220](#)
2. Check the wire harness between the Motion PCA (A2) and the LED.

Test the Carriage LED (LED10)

1. Activate LED10.
2. Verify that the LED turns on and off.

TIP: Click **Subsystems**, and then click **Carriage**.

Does the LED turn on and off?

No **Yes**

1. [Final activities on page 24](#)

Test the voltage to the Carriage LED (LED10) on the Motion PCA (A2)

1. Disconnect J7 from A2.
2. Test the voltage to LED10 on A2: 0 Vdc unblocked, 2.06 Vdc with the LED on at J7 pins 9A to 8A.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the voltage correct?

No **Yes**

Test the voltage at the Carriage LED (LED10)

1. Verify that J7 is connected on the Motion PCA (A2).
2. Disconnect the wire connector from the LED.
3. Test the voltage at LED10: 0 Vdc unblocked, 2.05 Vdc with the LED on at pins 7 to 8 on W48P13-W47J13.

1 Is the voltage correct?

1 **No** **Yes**

Replace the Carriage LED (LED10)

- 1
- 2 **1.** Replace Carriage LED (LED10).

Check the wire harness between the Motion PCA (A2) and the LED

1. Check the wire harness between A2 and the LED. Repair as needed.

1 [Carriage wiring diagram on page 2220](#)

Replace the Motion PCA (A2)

1. Replace A2.

[Motion PCA \(A2\) on page 700](#)

D4.0705: Motion PCA (A2) power not good

Initial Steps

1. [Electronics component locator on page 2327](#)

NOTE: Set DVM to the appropriate range for the voltage.

WARNING! Be careful when working around electricity.

Moving parts can cause injury.

CAUTION: Do not use the frame as ground.

Check the "Power good" LED on the Motion PCA (A2)

1. Verify that the LED is lit.

[Motion PCA \(A2\) diagram on page 2268](#)

Is the LED lit?

No **Yes**

Check the wire harness between the Main Engine Backplane PCA (A4) and the Motion PCA (A2)

1. Check the wire harness between A4 and A2.

[Electronics component locator on page 2327](#)

1 Is the wire harness in good condition?

1 **No** **Yes**

Replace the Motion PCA (A2)

1. Replace A2.

1 2 [Motion PCA \(A2\) on page 700](#)

Repair or replace the wire harness as needed

1. Repair or replace the wire harness as needed.

Check the 32 Vdc LED on the Motion PCA (A2)

1. Verify that the LED is lit.

Is the LED lit?

No **Yes**

Check the 3.3 and 5 Vdc test points on the Motion PCA (A2)

1. Test the voltage at the the 3.3 and 5 Vdc test points.

1 Does the voltage measure 3.3 and 5 Vdc on the A2 test points?

1 **No** **Yes**

Check the wire harness between the Main Engine Backplane PCA (A4) and the Motion PCA (A2)

1. Check the wire harness between A4 and A2.

[Electronics component locator on page 2327](#)

1 2 Is the wire harness correctly installed?

1 2 **No Yes**

Replace the Motion PCA (A2)

- 1. Replace A2.

1 2 3 [Motion PCA \(A2\) on page 700](#)

Reseat the wire harness between the Motion PCA (A2) and the Main Engine Backplane PCA (A4)

- 1. Reseat the wire harness between A2 and A4.

Check the 3.3 and 5 Vdc test points on the Motion PCA (A2)

- 1. Disconnect J4, J5, J7, J8, J9, and J10 from A2.

[Motion PCA \(A2\) diagram on page 2268](#)

- 2. Measure the voltage at the 3.3 and 5 Vdc test points on A2.

Does the voltage measure 3.3 and 5 Vdc at the test points on A2?

1 **No Yes**

There is a short on one of the 3.3 Vdc and/or 5 Vdc signal wires

- 1. Troubleshoot the wire issue.

1 2 [Motion PCA \(A2\) diagram on page 2268](#)

Replace the Motion PCA (A2)

- 1. Replace A2.

1 [Motion PCA \(A2\) on page 700](#)

Check the 24, 32, and 52 Vdc LEDs on the Power Distribution PCA (A1)

- 1. Verify that the LEDs are lit.

[Power Distribution PCA \(A1\) diagram on page 2271](#)

Are the LEDs lit?

No Yes

Check the 32 Vdc test point on the Motion PCA (A2)

- 1. Test the voltage at the 32 Vdc test point.

[Motion PCA \(A2\) diagram on page 2268](#)

1 Is the voltage correct?

1 **No Yes**

Replace the Motion PCA (A2)

- 1. Replace A2.

1 2 [Motion PCA \(A2\) on page 700](#)

Check the 32 Vdc test point on the Power Distribution PCA (A1)

- 1. Test the voltage at the 32 Vdc test point.

[Power Distribution PCA \(A1\) diagram on page 2271](#)

1 Is the voltage correct?

1

No Yes

Check the wire harness between the Power Distribution PCA (A1) and the Motion PCA (A2)

- 1. Check the wire harness between A1 and A2. Repair or replace as needed.

1

2

[Electronics component locator on page 2327](#)

Test for 32 Vdc at J3 on the Power Distribution PCA (A1)

- 1. Verify J3 is connected to the Power Distribution PCA (A1).

[Power Distribution PCA \(A1\) diagram on page 2271](#)

- 2. Test the voltage at J3: 32 Vdc on J3 pins 3 to 15, 4 to 16, 5 to 17, and 6 to 18.

1

Is the voltage correct?

1

No Yes

Replace the Power Distribution PCA (A1)

- 1. Replace A1.

1

2

[Power Distribution PCA \(A1\) on page 702](#)

Replace the Power supply (PS1)

- 1. Replace PS1.

1

[Power supply assembly on page 697](#)

Test for 32 Vdc at J3 on the Power Distribution PCA (A1)

- 1. Verify that J3 is connected to the A1.

[Power Distribution PCA \(A1\) diagram on page 2271](#)

- 2. Test the voltage at J3: 32 Vdc on J3 pins 3 to 15, 4 to 16, 5 to 17, and 6 to 18.

Is the voltage correct?

No Yes

Replace the Power Distribution PCA (A1)

- 1. Replace A1.

1

[Electronics component locator on page 2327](#)

Replace the Power supply (PS1)

- 1. Replace PS1.

[Power supply assembly on page 697](#)

A Event Log codes

- [Event Log code format](#)
- [Event Log error and warning codes](#)

Event Log code format

Event Log codes have the following format: **XX.YYZZ**. Otherwise, the code indicates an error.

- **XX** indicates the subsystem in which the error or warning occurred
- **YY** indicates the type of error or warning
- **ZZ** represents the number of the error or warning.


 **NOTE:** If this part of the code starts with an **A** or a **B** (**XX.YYAZ** or **XX.YYBZ**), then the code is a warning code.

Table A-1 Event Log code prefixes (XX)

Code	Subsystem or function
00	Covers and interlocks
30	Scanner
31	ADF
32	Memory
49	Firmware
67	Printer
68	NVRAM
79	Printer
80	Communications
81/85/86	Network
99	RFU
A0	Tray 1
A1	Trays 2, 3, and 4
A2	Tray 5
A3	HP Multifunction Finisher
A4	HP 4-Bin Job Separator
B0	Vertical transport
B1	Horizontal transport
B2	IDO
C0	Vacuum and drum vacuum
C1	Drum drive and drum encoder
C2	Dryer
C3	Image quality
C4	Service Station and Web wipe
C5	Aerosol
C6	Drum spittoon

Table A-1 Event Log code prefixes (XX) (continued)

Code	Subsystem or function
C7	IDS
D0	Power electronics
D1/D2	Imaging electronics
D3	Formatter electronics
D4	Run control electronics
D5	Coprocessor and Digital Send
Ex	System firmware

Table A-2 Event Log code event type abbreviations (YY)

Code	Type of event
0A	Pen
0B	Ink
0C	Heater
0D	Vacuum
01	Motor
02	Sensor or switch
03	Solenoid
04	Clutch
05	Encoder
06	LED
07	Non-formatter PCA
08	Power supply
09	Fan or blower
10	Digital send
11	Formatter real-time clock
13	Paper jam
20	Memory
21/22	Image-quality
38	Firmware
00	Other

Table A-3 Event Log code event number descriptions (ZZ)

Code	Event description
Ax/Bx	Warning

Table A-3 Event Log code event number descriptions (ZZ) (continued)

Code	Event description
0x - 9x	Error
Ex - Fx	System message
Cx - Dx	Condition

Event Log error and warning codes

- [00.02E2](#)
- [00.0301](#)
- [30.0701](#)
- [30.0702](#)
- [30.0703](#)
- [30.0704](#)
- [30.0705](#)
- [30.0706](#)
- [30.0707](#)
- [30.0708](#)
- [30.0709](#)
- [30.0710](#)
- [30.0711](#)
- [30.0712](#)
- [30.0713](#)
- [30.0714](#)
- [30.0715](#)
- [30.0716](#)
- [30.0717](#)
- [30.0718](#)
- [30.0719](#)
- [30.0720](#)
- [30.0721](#)
- [30.0722](#)
- [30.0723](#)
- [30.0724](#)
- [30.0725](#)
- [30.0726](#)
- [31.1301](#)
- [31.1302](#)

- [31.1303](#)
- [31.1305](#)
- [31.1307](#)
- [31.1308](#)
- [31.1310](#)
- [31.1311](#)
- [31.1312](#)
- [32.0500](#)
- [32.08A1](#)
- [32.08A2](#)
- [32.08A3](#)
- [32.0B03](#)
- [32.0C00](#)
- [32.0C01](#)
- [32.1C03](#)
- [32.1C04](#)
- [32.1C05](#)
- [32.1C06](#)
- [32.1C07](#)
- [32.1C08](#)
- [32.1C09](#)
- [32.1C0A](#)
- [32.1C0B](#)
- [32.1C0C](#)
- [32.1C0D](#)
- [32.1C0E](#)
- [32.1C0F](#)
- [32.1C10](#)
- [32.1C11](#)
- [32.1C12](#)
- [32.1C13](#)

- [32.1C14](#)
- [32.1C15](#)
- [32.1C16](#)
- [32.1C17](#)
- [32.1C18](#)
- [32.1800](#)
- [32.1801](#)
- [32.1802](#)
- [32.1803](#)
- [32.1804](#)
- [32.1805](#)
- [32.1900](#)
- [32.1901](#)
- [32.1902](#)
- [32.1903](#)
- [32.1904](#)
- [32.1905](#)
- [32.1906](#)
- [32.2100](#)
- [32.2301](#)
- [32.2302](#)
- [32.2600](#)
- [32.38E1](#)
- [32.4400](#)
- [32.4401](#)
- [32.4402](#)
- [32.4403](#)
- [32.5C00](#)
- [49.0B01](#)
- [49.0B05](#)
- [49.144B](#)

- [49.144D](#)
- [49.205A](#)
- [49.2F04](#)
- [49.4C02](#)
- [49.4C27](#)
- [49.5001](#)
- [49.60zz](#)
- [49.yyzz](#)
- [67.yyzz](#)
- [68.3801](#)
- [68.8001](#)
- [68.8002](#)
- [68.8003](#)
- [68.8A20](#)
- [68.9449](#)
- [68.yyzz](#)
- [79.yyzz](#)
- [80.0180](#)
- [80.0181](#)
- [80.0182](#)
- [80.018B](#)
- [80.018C](#)
- [80.0301](#)
- [80.0302](#)
- [80.0303](#)
- [80.0304](#)
- [80.0305](#)
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- [80.0315](#)
- [80.0316](#)
- [80.0317](#)
- [80.0318](#)
- [81.yyzz](#)
- [85.yyzz](#)
- [86.yyzz](#)
- [99.000A](#)
- [99.000C](#)
- [99.000D](#)
- [99.000E](#)
- [99.000F](#)
- [99.0001](#)
- [99.0002](#)
- [99.0004](#)
- [99.0006](#)
- [99.0007](#)
- [99.0009](#)
- [99.0013](#)
- [99.0014](#)
- [99.0015](#)
- [99.0016](#)
- [99.0017](#)
- [99.0018](#)
- [99.38E2](#)
- [A0.03A1](#)
- [A0.1301](#)

- [A1.0102](#)
- [A1.0103](#)
- [A1.0104](#)
- [A1.01A2](#)
- [A1.01A3](#)
- [A1.01A4](#)
- [A1.01C1](#)
- [A1.0201](#)
- [A1.02C1](#)
- [A1.02C3](#)
- [A1.0701](#)
- [A1.07A1](#)
- [A1.1302](#)
- [A1.1304](#)
- [A2.0101](#)
- [A2.0102](#)
- [A2.0201](#)
- [A2.0202](#)
- [A1.0201](#)
- [A2.03A1](#)
- [A2.04A1](#)
- [A2.04A2](#)
- [A2.04A3](#)
- [A2.04A4](#)
- [A2.04A5](#)
- [A2.04A6](#)
- [A2.05A1](#)
- [A2.1301](#)
- [A2.1302](#)
- [A3.0101](#)
- [A3.0102](#)

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- [A3.0240](#)
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- [A3.0261](#)
- [A3.0263](#)
- [A3.0264](#)
- [A3.02A0](#)
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- [A3.1360](#)
- [A3.3801](#)
- [A3.3836](#)
- [A3.3839](#)
- [A3.3880](#)
- [A3.38zz](#)
- [A4.0101](#)
- [A4.0103](#)
- [A4.0140](#)
- [A4.0141](#)
- [A4.0142](#)
- [A4.0143](#)
- [A4.01A1](#)
- [A4.01A2](#)
- [A4.01A7](#)
- [A4.01A9](#)
- [A4.0200](#)
- [A4.0201](#)
- [A4.0210](#)
- [A4.0211](#)
- [A4.0212](#)
- [A4.0240](#)
- [A4.0241](#)
- [A4.0242](#)
- [A4.0243](#)
- [A4.0244](#)
- [A4.06A0](#)

- [A4.06A6](#)
- [A4.0702](#)
- [A4.0703](#)
- [A4.0704](#)
- [A4.0709](#)
- [A4.07A1](#)
- [A4.07A2](#)
- [A4.1300](#)
- [A4.1301](#)
- [A4.3880](#)
- [A4.38zz](#)
- [B0.0101](#)
- [B0.1301](#)
- [B0.1302](#)
- [B0.1303](#)
- [B0.1304](#)
- [B1.0101](#)
- [B1.0201](#)
- [B1.1301](#)
- [B1.1302](#)
- [B1.1303](#)
- [B1.1304](#)
- [B2.0101](#)
- [B2.0102](#)
- [B2.0103](#)
- [B2.0104](#)
- [B2.0105](#)
- [B2.0106](#)
- [B2.01A1](#)
- [B2.01A2](#)
- [B2.01A3](#)

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- [B2.0301](#)
- [B2.03C1](#)
- [B2.1301](#)
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- [B2.1309](#)
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- [C0.0103](#)
- [C0.0104](#)
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- [C0.0108](#)
- [C0.01A1](#)
- [C0.01A2](#)
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00.02E2

Description

- Close lower-left door

Primary root causes

- Lower-left Door sensor (SN18)
- Lower-left door alignment
- Wire harness between SOL4 and the Motion PCA (A2)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Open the Covers diagnostic page, and then test SN18.
3. Check the alignment and the hinges of the lower-left door.
4. Check the wire harness between SN18 and A2.
5. Clean SN18.
6. Test the voltage at SN18: 3.26 Vdc blocked, 0.15 Vdc unblocked at pins 18A to 17A and 1.18 Vdc both blocked and unblocked at pins 16A to 17A on W32P9-W34J9.
7. Replace the lower-left door assembly.

Additional root causes

- A2

Links

- Diagnostic page: Click **Subsystems**, and then click **Covers**.
- Component locator: [Covers component locator on page 2317](#)
- Wiring diagram: [Drum wiring diagram on page 2225](#)
- Replace SN18: [IDS sensors on page 615](#)
- A2: [D4.0705 on page 2060](#)

00.0301

Description

- Able to open the front door when it is locked

Primary root causes

- SOL4
- Front door alignment
- Front door lock mechanism
- Wire harness between SOL4 and the Motion PCA (A2)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Check the front door, front door lock mechanism, and SOL4 for the correct alignment and engagement.
3. Open the Covers diagnostic page, and then activate and deactivate SOL4.
4. Cycle SOL4 and listen for a consistent rhythm.
5. Verify that the front door is correctly aligned with the Front Door Open switch (SW3).
6. Check the wire harness between SOL4 and A2.
7. Test the voltage at SOL4: 5 Vdc at pins 1 and 2 (GND) on W100P4-SOL4.
8. Test the voltage to SOL4 on A2: 5 Vdc at J2 pins 4 and 11 (GND).

Additional root causes

- A2

Links

- Diagnostic page: Click **Subsystems**, and then click **Covers**.
- Component locator: [Covers component locator on page 2317](#)
- Wiring diagram: [Drum wiring diagram on page 2225](#)
- Replace SOL4: [Front Door Lock solenoid \(SOL4\) on page 211](#)
- A2: [D4.0705 on page 2060](#)

30.0701

Description

- Scanner Control PCA (A501) backup memory data error

Primary root causes

- Failure when reading EEPROM data to flash memory in A501, A501 EEPROM IC, and A501

Recommended actions

1. Turn off the MFP, reseal U11 IC on A501, and then turn on the MFP.
2. Replace A501.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace A501: [Scanner Control PCA \(A501\) on page 292](#)

30.0702

Description

- Scanner Control PCA (A501) memory R/W error

Primary root causes

- A501

Recommended actions

1. Turn off the MFP, reseal the connectors on A501, and then turn on the MFP.
2. Replace A501.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace A501: [Scanner Control PCA \(A501\) on page 292](#)

30.0703

Description

- Scanner main data transfer error

Primary root causes

- Wire harness between the AFE PCA (A502), the Scanner Control PCA (A501), and the Copy Processing PCA (A27)
- A502
- A501
- A27

Recommended actions

1. Turn off the MFP, check the wire harness between A502, A501, and A27. Reseat the connectors on each PCA, and then turn on the MFP.
2. Replace A501.
3. Replace A502.
4. Replace A27.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace A501: [Scanner Control PCA \(A501\) on page 292](#)
- Replace A502: [AFE PCA \(A502\) on page 295](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

30.0704

Description

- ADF Control PCA (A401) data transfer error

Primary root causes

- Wire harness between the A401 and the Scanner Control PCA (A501)
- A401
- A501

Recommended actions

1. Verify that the ADF cable is undamaged and securely connected to the MFP.
2. Turn off the MFP, check the wire harness between A401 and A501, reseal the connectors on A401 and A501, and then turn on the MFP.
3. Verify that the 5 V and 24 V LEDs on A401 and A501 are lit.
4. Check the heartbeat LED on A401. If the LED is not lit, replace A401.
5. Check the heartbeat LED on A501. If the LED is not lit, replace A501.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace A501: [Scanner Control PCA \(A501\) on page 292](#)
- Replace A401: [ADF Control PCA \(A401\) on page 245](#)

30.0705

Description

- ADF EEPROM error

Primary root causes

- ADF Control PCA (A401)

Recommended actions

1. Turn off the MFP, check the wire harness between A401 and the Scanner Control PCA (A501), reseal the connectors on A401, and then turn on the MFP.
2. Verify that the 5 V and 24 V LEDs on A401 and A501 are lit.
3. Verify that the heartbeat LED on A401 is lit.
4. Replace A401.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace A401: [ADF Control PCA \(A401\) on page 245](#)

30.0706

Description

- Shading correction data transfer error

Primary root causes

- A502 or Copy Processing PCA (A27)
- Scanner Control PCA (A501)

Recommended actions

1. Turn off the MFP, check the wire harness between A502 and A501 and between A502 and Copy Processing PCA (A27), reseal the connectors on each PCA, and then turn on the MFP.
2. Replace A501. If the problem persists, replace A502.
3. Replace the A27.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace A502: [AFE PCA \(A502\) on page 295](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

30.0707

Description

- Scanner motor (M501) stalled, scanner position cannot be found after M501 is turned on

Primary root causes

- Wire harness between the Scanner Control PCA (A501) and M501
- A501
- M501
- M501 timing belt
- Scanner carriages
- Wire harness between A501 and the Scanner Home Position sensor (SN503)
- SN503

Recommended actions

1. Open the Scanner diagnostic page, and then run a Cycle - Lamp Off test to test M501.
2. Verify that the 5 V, 5 V CCD, 5 V standby, and 24 V LEDs on A501 are lit. If M501 ran in step 1, skip to step 7.
3. Check the wire harness between A501 and M501.
4. Disconnect M501, and then test the continuity at the following pins: pins 1 to 2 and 3, 4 to 5 and 6
5. Test the voltage to M501 on A501: 24 V at YC11 pins 1 to 6.
6. Run the Cycle - Lamp Off and test the signal to M501 on A501 at the following location: YC11 pins 3 to 6. If the signal does not go low, replace M501.
7. Check the wire harness between A501 and SN503.
8. Test the voltage to SN503 on A501: 5 V at YC2 pins 3 and 5.
9. Activate SN503 and test the signal to SN503 on A501 at the following location: 5 to 0 V at YC2 pin 4.
10. If a scanner wire has recently been installed, reinstall the scanner wire.
11. Manually move the scanner carriage in order to verify that the rails are smooth and lubricated.
12. Replace A501.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace SN503: [Scanner sensors on page 290](#)

- Replace A501: [Scanner Control PCA \(A501\) on page 292](#)
- Replace M501: [Scanner motor \(M501\) on page 288](#)

30.0708

Description

- Scanner CCD PCA (A503) detects no light from the scanner exposure lamp

Primary root causes

- Scanner exposure lamp
- Scanner Inverter PCA (A504)
- Wire harness between the scanner exposure lamp, A504, and the Scanner Control PCA (A501)
- Wire harness between the Scanner CCD PCA (A503), AFE PCA (A502), and A501
- A503
- A502
- A501

Recommended actions

1. Lift the ADF, and then close it and verify that the scanner exposure lamp turns on. If the scanner exposure lamp turns on, skip to step 8.
2. Check the wire harness between the scanner exposure lamp and A504.
3. Check the wire harness between A504 and A501. Reseat the connectors on both A504 and A501.
4. Test the voltage at the scanner exposure lamp: 24 V at pins 1 and 6 on CN YC3.
5. Open the Scanner diagnostic page, and then run the Cycle - Lamp On test while testing the signal to the scanner exposure lamp on A501 at the following location: YC3 pin 3. If the voltage does not drop, then replace A501.
6. Replace the scanner exposure lamp.
7. Replace A504.
8. Check the scanner exposure lamp PM counter. Replace the scanner exposure lamp if it is expired.
9. Check and clean the shading correction plate and SN503.
10. Check the wire harness between A502 and A501. Reseat the connectors on A502 and A501.
11. Check the wire harness between A502 and A503. Reseat the connectors on A502 and A503.
12. Replace A502.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)

- Replace the scanner exposure lamp: [Scanner exposure lamp on page 280](#)
- Replace scanner PCAs: [Scanner PCAs on page 292](#)

30.0709

Description

- CCD readings are out of range during shading correction or auto gain-control adjustment

Primary root causes

- Scanner exposure lamp
- Scanner Inverter PCA (A504)
- Wire harness between the scanner exposure lamp, A504, and the Scanner Control PCA (A501)
- Wire harness between the Scanner CCD PCA (A503), AFE PCA (A502), and A501
- A504 or A501
- Shading correction plate
- Scanner home position or shading position
- A502

Recommended actions

1. Lift the ADF or platen cover, and then close it to turn the scanner exposure lamp on. Skip to step 5 if lamp turns on.
2. Check the wire harness between the scanner exposure lamp and A504 and between A504 and A501. Reseat the connectors on each PCA.
3. Test for 24 V at YC3 pin 1 (GND) to pin 4. Test for 24 V at YC3 pin 1 (GND) to pin 5. Run the Carriage Cycle-lamp on routine and verify that the voltage at YC3 pin 3 on A501 goes low. If not, replace A501.
4. Replace the scanner exposure lamp. If the problem persists, replace A502.
5. Check the PM counter for the scanner exposure lamp. Check and clean the shading correction plate and SN503. Check the wire harness between A502, A503, and A501. Reseat the connectors on each PCA. If the problem persists, replace A502.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace scanner PCAs: [Scanner PCAs on page 292](#)
- Replace the scanner exposure lamp: [Scanner exposure lamp on page 280](#)
- Replace the scanner assembly: [Scanner assembly on page 276](#)

30.0710

Description

- Failed to connect to scanner

Primary root causes

- Firmware
- Data error during scanner flash
- Scanner Control PCA (A501)

Recommended actions

1. Power cycle the MFP.
2. Check the wire harness between the AFE PCA (A502) and the print engine.
3. Check the wire harness between the A501 and the print engine.
4. Reseat the connectors on A502 and A501.
5. Check the voltage to A502 on A501: 5.1 V at pins 4, 5, 6, and 2 on CN-YC3.
6. Replace A502.
7. Replace A501.
8. Replace Copy Processing PCA (A27).

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace scanner PCAs: [Scanner PCAs on page 292](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

30.0711

Description

- Byte parity error

Primary root causes

- Data corruption and poor communication between the scanner and the Copy Processing PCA (A27)
- Corrupted NVRAM on A27 or the Scanner Control PCA (A501)
- AFE PCA (A502)
- A27

Recommended actions

1. Turn off the MFP.
2. Check the wire harness and continuity between A502 and A27.
3. Check the wire harness and continuity between A501 and A502.
4. Reseat the connectors on A502 and A501.
5. Check the wire harness between A501 and the print engine.
6. Turn on the MFP.
7. Replace A501.
8. Replace A502.
9. Replace A27.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace scanner PCAs: [Scanner PCAs on page 292](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

30.0712

Description

- Message parity error

Primary root causes

- Data corruption between the scanner and the Copy Processing PCA (A27)
- Data corruption and poor communication between the AFE PCA (A502) and A27
- Data corruption in the NVRAM for A502 and A27
- A502
- A27

Recommended actions

1. Turn off the MFP.
2. Check the wire harness and continuity between A502 and A27.
3. Check the wire harness and continuity between A501 and A502.
4. Reseat the connectors on A502 and A501.
5. Check the wire harness between A501 and the print engine.
6. Turn on the MFP.
7. Replace A501.
8. Replace A502.
9. Replace A27.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace scanner PCAs: [Scanner PCAs on page 292](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

30.0713

Description

- Scanner detected unknown operation code

Primary root causes

- Data corruption between the scanner and the Copy Processing PCA (A27)
- Data corruption in the NVRAM for A502 and A27
- A502
- A27

Recommended actions

1. Turn off the MFP.
2. Check the wire harness and continuity between A502 and A27.
3. Check the wire harness and continuity between A501 and A502.
4. Reseat the connectors on A502 and A501.
5. Check the wire harness between A501 and the print engine.
6. Turn on the MFP.
7. Replace A501.
8. Replace A502.
9. Replace A27.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace scanner PCAs: [Scanner PCAs on page 292](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

30.0714

Description

- Scanner detect message format error

Primary root causes

- Data corruption between the scanner and the Copy Processing PCA (A27)
- Data corruption in the NVRAM for A502 and A27
- A502
- A27

Recommended actions

1. Turn off the MFP.
2. Check the wire harness and continuity between A502 and A27.
3. Check the wire harness and continuity between A501 and A502.
4. Reseat the connectors on A502 and A501.
5. Check the wire harness between A501 and the print engine.
6. Turn on the MFP.
7. Replace A501.
8. Replace A502.
9. Replace A27.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace A502: [AFE PCA \(A502\) on page 295](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

30.0715

Description

- Scanner detected memory address error

Primary root causes

- Data corruption in the Scanner Control PCA (A501) NVRAM
- AFE PCA (A502)
- A501

Recommended actions

1. Turn off the MFP.
2. Replace A501.
3. Check the wire harness and continuity between A501 and A502.
4. Reseat the wire connectors on A501 and A502.
5. Turn on the MFP.
6. Replace A502.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace A501: [Scanner Control PCA \(A501\) on page 292](#)
- Replace A502: [AFE PCA \(A502\) on page 295](#)

30.0716

Description

- Scanner detected data frame error

Primary root causes

- Data corruption and poor communication between the scanner and the Copy Processing PCA (A27)
- Data corruption in the NVRAM for A502 and A27
- A502
- A27

Recommended actions

1. Turn off the MFP.
2. Check the wire harness and continuity between A502 and A27.
3. Check the wire harness and continuity between A501 and A502.
4. Reseat the connectors on A502 and A501.
5. Check the wire harness between A501 and the print engine.
6. Turn on the MFP.
7. Replace A501.
8. Replace A502.
9. Replace A27.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace scanner PCAs: [Scanner PCAs on page 292](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

30.0717

Description

- Scanner detected command overrun error

Primary root causes

- Data corruption and poor communication between the scanner and the Copy Processing PCA (A27)
- A27

Recommended actions

1. Turn off the MFP.
2. Check the wire harness and continuity between A502 and A27.
3. Check the wire harness and continuity between A501 and A502.
4. Reseat the connectors on A502 and A501.
5. Check the wire harness between A501 and the print engine.
6. Turn on the MFP.
7. Replace A501.
8. Replace A502.
9. Replace A27.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace A502: [AFE PCA \(A502\) on page 295](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

30.0718

Description

- Scanner detected data overrun error

Primary root causes

- Data corruption and poor communication between the scanner and the Copy Processing PCA (A27)
- A27

Recommended actions

1. Turn off the MFP.
2. Check the wire harness and continuity between A502 and A27.
3. Check the wire harness and continuity between A501 and A502.
4. Reseat the connectors on A502 and A501.
5. Check the wire harness between A501 and the print engine.
6. Turn on the MFP.
7. Replace A501.
8. Replace A502.
9. Replace A27.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

30.0719

Description

- Scanner timeout

Primary root causes

- Data corruption and poor communication between the scanner and the Copy Processing PCA (A27)
- Scanner Control PCA (A501)
- A27

Recommended actions

1. Turn off the MFP.
2. Check the wire harness and continuity between A502 and A27.
3. Check the wire harness and continuity between A501 and A502.
4. Reseat the connectors on A502 and A501.
5. Check the wire harness between A501 and the print engine.
6. Turn on the MFP.
7. Replace A501.
8. Replace A502.
9. Replace A27.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace A502: [AFE PCA \(A502\) on page 295](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

30.0720

Description

- UART overrun error

Primary root causes

- Data corruption in NVRAM for the Scanner Control PCA (A501) and the Copy Processing PCA (A27)
- AFE PCA (A502)
- A27

Recommended actions

1. Turn off the MFP.
2. Check the wire harness and continuity between A502 and A27.
3. Check the wire harness and continuity between A501 and A502.
4. Reseat the connectors on A502 and A501.
5. Check the wire harness between A501 and the print engine.
6. Turn on the MFP.
7. Replace A501.
8. Replace A502.
9. Replace A27.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace scanner PCAs: [Scanner PCAs on page 292](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

30.0721

Description

- UART frame error

Primary root causes

- Data corruption in NVRAM for the Scanner Control PCA (A501) and the Copy Processing PCA (A27)
- AFE PCA (A502)
- A27

Recommended actions

1. Turn off the MFP.
2. Check the wire harness and continuity between A502 and A27.
3. Check the wire harness and continuity between A501 and A502.
4. Reseat the connectors on A502 and A501.
5. Check the wire harness between A501 and the print engine.
6. Turn on the MFP.
7. Replace A501.
8. Replace A502.
9. Replace A27.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace scanner PCAs: [Scanner PCAs on page 292](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

30.0722

Description

- UART parity error

Primary root causes

- Data corruption in NVRAM for the Scanner Control PCA (A501) and the Copy Processing PCA (A27)
- AFE PCA (A502)
- A27

Recommended actions

1. Turn off the MFP.
2. Check the wire harness and continuity between A502 and A27.
3. Check the wire harness and continuity between A501 and A502.
4. Reseat the connectors on A502 and A501.
5. Check the wire harness between A501 and the print engine.
6. Turn on the MFP.
7. Replace A501.
8. Replace A502.
9. Replace A27.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace scanner PCAs: [Scanner PCAs on page 292](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

30.0723

Description

- Copy Processing PCA (A27) detected message parity error

Primary root causes

- Data corruption between the scanner and the A27
- Data corruption in NVRAM for Scanner Control PCA (A501) and the A27
- AFE PCA (A502)
- A27

Recommended actions

1. Turn off the MFP.
2. Check the wire harness and continuity between A502 and A27.
3. Check the wire harness and continuity between A501 and A502.
4. Reseat the connectors on A502 and A501.
5. Check the wire harness between A501 and the print engine.
6. Turn on the MFP.
7. Replace A501.
8. Replace A502.
9. Replace A27.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace scanner PCAs: [Scanner PCAs on page 292](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

30.0724

Description

- Unknown operation code

Primary root causes

- Data corruption or poor communication between the scanner and the Copy Processing PCA (A27)
- Data corruption in the NVRAM for A502 and A27
- AFE PCA (A502)
- A27

Recommended actions

1. Turn off the MFP.
2. Check the wire harness and continuity between A502 and A27.
3. Check the wire harness and continuity between A501 and A502.
4. Reseat the connectors on A502 and A501.
5. Check the wire harness between A501 and the print engine.
6. Turn on the MFP.
7. Replace A501.
8. Replace A502.
9. Replace A27.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace scanner PCAs: [Scanner PCAs on page 292](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

30.0725

Description

- Scanner detected an error during initialization routine, AGC, scanner carriage homing, or Scanner motor (M501) movement

Primary root causes

- Power supply wire harness between the Power Distribution PCA (A1) and the Scanner Control PCA (A501)
- Power supply to A501
- Data wire harness between the Copy Processing PCA (A27) and the AFE PCA (A502)
- A501
- A502
- A27

Recommended actions

1. Verify that the 5 V, 5 V standby, and 24 V LEDs are lit on A501.
2. Check the wire harness between A1 and A501.
3. Check the fuses to the scanner on A1.
4. Check the wire harness and continuity between A502 and A27.
5. Check the wire harness and continuity between A502 and A501.
6. Reseat the connectors on A502 and A501.
7. Check the wire harness between A501 and the print engine.
8. Replace A501.
9. Replace A502.
10. Replace A27.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace A501: [Scanner Control PCA \(A501\) on page 292](#)
- Replace A401: [ADF Control PCA \(A401\) on page 245](#)

30.0726

Description

- Copy Processing PCA (A27) detected an internal operation error

Primary root causes

- A27
- Corrupted A27 NVM RAM
- Firmware

Recommended actions

1. Turn off the MFP.
2. Check the wire harness and continuity between A502 and A27.
3. Check the wire harness and continuity between A501 and A502.
4. Reseat the connectors on A502 and A501.
5. Check the wire harness between A501 and the Power Distribution PCA (A1).
6. Turn on the MFP.
7. Replace A27.

Links

- Diagnostic page: Click **Subsystems**, and then click **Scanner**.
- Component locator: [Scanner component locator on page 2328](#)
- Wiring diagram: [Scanner wiring diagram on page 2251](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

31.1301

Description

- Original document mispick

Primary root causes

- ADF Original Lift solenoid (SOL401)
- ADF Feed clutch (CL401)
- ADF Feed motor (M401)
- ADF Conveying motor (M402)
- ADF Feed sensor (SN404)
- Original feed roller
- ADF Duplex Pressure solenoid (SOL403)
- ADF Eject Shift solenoid (SOL404)
- Separation pad
- One-way clutch
- Eject/duplex shift guide
- ADF Control PCA (A401)

Recommended actions

1. Open the ADF diagnostic page, and then test each device. Replace any device that does not function. Verify that ADF Open Safety switch (SW401) is closed before you test motors and solenoids.
2. Verify that the 5 V, 5 V standby, and 24 V LEDs are lit on A401.
3. Check the wire harness between SOL401, CL401, and A401.
4. Disconnect SOL401 and CL401, and then test the continuity on each wire connector. Replace the solenoid if the continuity is open.
5. Test the voltage to SOL401 on A401: 24 V at YC2 pin 14.
6. Test the voltage to CL401 on A401: 24 V at YC4 pin 2.
7. Check the wire harness between M401, M402, and A401.
8. Disconnect M401, and then test the continuity between the following pins on the wire connector: pins 1 to 2, 1 to 3, 4 to 5, and 4 to 6. Replace the motor if the continuity is open.
9. Disconnect M402, and then test the continuity between the following pins on the wire connector: pins 1 to 2, 1 to 3, 4 to 5, and 4 to 6. Replace the motor if the continuity is open.
10. Test the voltage to M401 on A401: 24 V at YC2 pins 1 to 6.

11. Activate M401, and then test the signal to M401 on A401 at the following location: YC2 pins 3 to 6. If the signal does not go low, replace A401.
12. Test the voltage to M402 on A401: YC2 pins 7 to 12.
13. Activate M402, and then test the signal to M402 on A401 at the following location: YC2 pins 9 to 12. If the signal does not go low, replace A401.
14. Check the wire harness between SN404 and A401.
15. Test the voltage at SN404: 5 V at pins 1 and 3 on the connector.
16. Check the original feed roller and separation pad for wear and contamination.
17. Check the feed shaft one-way clutch.
18. Check the wire harness between SOL403, SOL404, and A401.
19. Disconnect SOL403 and SOL404, and then test the continuity on each wire connector. Replace the solenoid if the continuity is open.
20. If all components work from CDFT, check the eject guide for damage. Make sure the two metal springs at the rear and front of the guide are not deformed. Also check that the bent end of the spring is not mounted on top of the plastic guide.

Links

- Diagnostic page: Click **Subsystems**, and then click **ADF**.
- Component locator: [ADF component locator on page 2313](#)
- Wiring diagram: [ADF wiring diagram on page 2218](#)
- Replace ADF components: [Automatic document feeder \(ADF\) on page 226](#)

31.1302

Description

- Jam at ADF Feed sensor (SN404)

Primary root causes

- ADF Feed motor (M401)
- SN404
- ADF Feed clutch (CL401)
- Original feed roller
- Separation pad
- One-way clutch
- ADF Control PCA (A401)

Recommended actions

1. Close the ADF and then remove all paper from the ADF. Open the ADF diagnostic page, and then test each device. Replace any device that does not function.
2. Verify that the 5 V, 5 V standby, and 24 V LEDs on A401 are lit.
3. Check the wire harness between SOL401, CL401, and A401.
4. Disconnect SOL401, CL401, and then test the continuity on each connector. Replace either component if the continuity is open.
5. Test the signal to SOL401 on A401: YC2 pin 14. Replace A401 if the signal does not go low.
6. Test the signal to CL401 on A401: YC4 pin 2. Replace A401 if the signal does not go low.
7. Check the wire harness between M401, M402, and A401.
8. Test the continuity on the M402 coils at the following pins: pins 1 to 2, 1 to 3, 4 to 5, and 4 to 6. Replace the motor if the continuity is open.
9. Test the continuity on the M401 coils at the following pins: pins 1 to 2, 1 to 3, 4 to 5, and 4 to 6. Replace the motor if the continuity is open.
10. Test the voltage to M401 on A401: 24 V at YC2 pins 1 to 6.
11. Test the voltage to M402 on A401: YC2 pins 7 to 12.
12. Test the signal to M401 on A401: YC2 pins 3 to 6. Replace A401 if the signal does not go low.
13. Test the signal to M402 on A401: YC2 pins 9 to 12. Replace A401 if the signal does not go low.
14. Check the wire harness between SN404 and A401.
15. Test the voltage at SN404: 5 V at pins 1 and 3 on the connector.
16. Check the original feed roller and separation pad for wear and contamination.
17. Check the feed shaft one-way clutch.

Links

- Diagnostic page: Click **Subsystems**, and then click **ADF**.
- Component locator: [ADF component locator on page 2313](#)
- Wiring diagram: [ADF wiring diagram on page 2218](#)
- Replace ADF components: [Automatic document feeder \(ADF\) on page 226](#)

31.1303

Description

- Jam at ADF Timing sensor (SN406)

Primary root causes

- Paper dust on the black surface in front of SN406
- Paper path obstructions
- ADF Duplex Shift solenoid (SOL402)
- Dislodge spring in SOL402
- Conveying rollers and pulleys
- ADF Control PCA (A401)

Recommended actions

1. Open the ADF diagnostic page, and then test each device. Perform a paper pick test for simplex printing with paper. Replace any device that does not function.
2. Verify that the 5 V, 5 V standby, and 24 V LEDs are lit on A401.
3. Check the wire harness between SN406 and A401.
4. Clean SN406 and the black surface in front of it.
5. Test the voltage at SN406: 5 V at pins 1 and 3 (GND) on the sensor connector.
6. Check the paper path conveying rollers and pulleys for wear and contamination.
7. Verify that the ADF top cover spring presses the registration guide when the ADF is closed.
8. Check the operation of the ADF Duplex Shift solenoid (SOL402) and make sure the duplex shift guide returns to up position when SOL402 is OFF.
9. Check the duplex shift guide and make sure it is not in the lower position when the ADF is idle.
10. Check the spring mounted to the duplex shift solenoid plunger and make sure it is in place.
11. Check the registration rollers and pulleys for wear and contamination.
12. Verify that the ADF conveyance guide is installed correctly.
13. Activate SN406, and then test the signal to SN406 on A401 at the following pins: 0 to 5 V at YC4 pin 7. If the signal does not change replace A401.

Links

- Diagnostic page: Click **Subsystems**, and then click **ADF**.
- Component locator: [ADF component locator on page 2313](#)
- Wiring diagram: [ADF wiring diagram on page 2218](#)
- Replace ADF components: [Automatic document feeder \(ADF\) on page 226](#)

31.1305

Description

- Jam at reverse sensor during switchback

Primary root causes

- ADF Duplex Pressure solenoid (SOL403)
- Dislodged spring in eject shift solenoid
- SN405

Recommended actions

1. Use the ADF tool page in the CDFT to test SOL403 and SN405. SW401 must be closed (L) to operate motors and solenoids. With all paper removed from the ADF, all sensors should show L when ADF is empty and door closed.
2. Check eject paper path for obstructions, check eject shift diverter fingers for mechanical binding.
3. If SOL403 does not work, check wiring from SOL403 to CN-YC3 (pins 16 - 18) in the ADF board.
4. Disconnect SOL403. Check coil continuity between pins 1(Red) - 2(Brown) and 1(Red) - 3(Green). Replace if open.
5. Connect SOL403. Measure 24V in YC3-17 and YC3-18, and then activate SOL403 from CDFT. If the signal does not go low when actuated, replace ADF Control PCA (A401); otherwise, replace SOL403.
6. Check actuator in SN405. Ensure it moves freely up and down.
7. Activate SN405. If it fails, check the wiring from SN405 (pins 1-3) to YC4 (pins 3-5) on the ADF Control PCA (A401).
8. Disconnect SN405, and then measure 5V at pins 1 and 3 in the connector.
9. Replace SN405.
10. Connect the sensor. If voltage at pin YC4-4 in A401 goes from 0 to 5V when sensor is actuated, replace A401.

31.1307

Description

- Jam between feed and reverse sensor simplex

Primary root causes

- Paper dust on the black surface in front of SN406
- Paper path obstructions
- Conveying rollers and pulleys
- ADF Control PCA (A401)

Recommended actions

1. Open the ADF diagnostic page, and then test each device. Perform a paper pick test for simplex printing with paper. Replace any device that does not function.
2. Verify that the 5 V, 5 V standby, and 24 V LEDs are lit on A401.
3. Check the wire harness between SN406 and A401.
4. Clean SN406 and the black surface in front of it.
5. Test the voltage at SN406: 5 V at pins 1 and 3 (GND) on the sensor connector.
6. Check the paper path conveying rollers and pulleys for wear and contamination.
7. Verify that the ADF top cover spring presses the registration guide when the ADF is closed.
8. Verify that the ADF conveyance guide is installed correctly.
9. Activate SN406, and then test the signal to SN406 on A401 at the following pins: 0 to 5 V at YC4 pin 7. If the signal does not change, replace A401.

31.1308

Description

- Jam detected between the ADF Feed sensor (SN404) and the ADF Reverse sensor (SN405) during duplex copying

Primary root causes

- ADF Duplex Shift solenoid (SOL402)
- SN405
- ADF Control PCA (A401)

Recommended actions

1. Open the ADF diagnostic page, and then test each device. Perform a paper pick test for duplex copying with paper. Replace any device that does not function.
2. Clear all paper from the ADF, close the ADF, and then verify that all sensors indicate that paper is not present.
3. Check the paper path for obstructions.
4. Check the diverter fingers for binding.
5. Check the wire harness between SOL402 and A401.
6. Test the continuity on the SOL402 coil. Replace SOL402 if the continuity is open.
7. Test the voltage to SOL402 on A401: 24 V at YC3 pin 2.
8. Activate SOL402, and then test the signal to SOL402 on A401. If the signal does not go down, replace A401.
9. Verify that the SN405 actuator moves freely.
10. Check the wire harness between SN405 and A401.
11. Test the voltage at SN405: 5 V at pins 1 to 3 on the sensor connector.
12. Replace SN405.
13. Activate SN405, and then test the signal to SN405 on A401 at the following location: 0 to 5 V at YC4 pin 4. If the signal does not go low, replace A401.

Links

- Diagnostic page: Click **Subsystems**, and then click **ADF**.
- Component locator: [ADF component locator on page 2313](#)
- Wiring diagram: [ADF wiring diagram on page 2218](#)
- Replace ADF components: [Automatic document feeder \(ADF\) on page 226](#)

31.1310

Description

- Jam between ADF Reverse sensor (SN405), ADF Timing sensor (SN406), and ADF Eject Shift solenoid (SOL404).

Primary root causes

- ADF Eject Shift solenoid (SOL404)
- Dislodged spring in eject shift solenoid
- ADF Reverse sensor (SN405)

Recommended actions

1. Use the ADF tool page in the CDFT to test SOL404 and SN405 . SW401 must be closed (L) to operate motors and solenoids. Remove all paper from the ADF, all sensors should show L when ADF is empty and door closed.
2. Check eject paper path for obstructions, check eject shift diverter fingers for mechanical binding.
3. If SOL404 does not work, check wiring from SOL404 to CN-YC3 (pins 3 - 4) in ADF board.
4. Disconnect SOL404. Check coil continuity, and then replace if open.
5. Connect SOL402 and measure 24V in YC3-4. Activate SOL402 from CDFT. If the signal does not go low when actuated, replace the ADF Control PCA (A401); otherwise, replace SOL404.
6. Check spring mounted to eject shift solenoid plunger, and make sure it is in place.
7. Check actuator in SN405 and verify that it moves freely up and down.
8. Activate SN405 and if it fails, check the wiring from SN405 (pins 1-3) to YC4 (pins 3-5) in the ADF Control PCA (A401).
9. Disconnect SN405 and measure 5V at pins 1 and 3 in the connector.
10. Replace SN405.
11. Connect the sensor. If the voltage at pin YC4-4 in A401 goes from 0 to 5V when sensor is actuated, replace A401.

31.1311

Description

- Jam detected between the ADF Timing sensor (SN406) and the ADF Reverse sensor (SN405)

Primary root causes

- ADF Conveying motor (M402)
- SN405
- SN406
- ADF Duplex Shift solenoid (SOL402)
- Conveying rollers and pulleys
- Original sheet guides
- ADF Control PCA (A401)

Recommended actions

1. Open the ADF diagnostic page, and then test each device. Perform a paper pick test for duplex printing with paper. Verify that the ADF Open Safety switch (SW401) is closed before you test motors and solenoids. Replace any device that does not function.
2. Check the wire harness between M402, SN405, and A401.
3. Check the paper path, the lower conveying rollers, and the registration rollers for wear and contamination.
4. Check the original sheet guides in the reading area for damage.
5. Test the voltage at SN406: 5 V at pins 1 and 3 (GND) on the sensor connector.
6. Clean or replace SN406.
7. Check the wire harness between SOL402 and A401.
8. Clean or replace the eject guide rollers.
9. Replace A401.

Links

- Diagnostic page: Click **Subsystems**, and then click **ADF**.
- Component locator: [ADF component locator on page 2313](#)
- Wiring diagram: [ADF wiring diagram on page 2218](#)
- Replace ADF components: [Automatic document feeder \(ADF\) on page 226](#)

31.1312

Description

- Jam detected at ADF Timing sensor (SN406) during conveying

Primary root causes

- Eject guides
- ADF alignment
- SN406
- SOL404
- Dislodged spring in SOL404
- ADF Control PCA (A401)

Recommended actions

1. Open the ADF diagnostic page, and then test each device. Perform a paper pick test for duplex printing with paper. Verify that the ADF Open Safety switch (SW401) is closed before you test motors and solenoids. Replace any device that does not function.
2. Check the eject guide for damage. Make sure the two metal springs at the rear and front of the guide are not deformed. Also check that the bent end of the spring is not mounted on top of the plastic guide.
3. Check the leading edge of the original for damage or skew.
4. Check the copies for skew or image deformation near the top of the page. If these defects are present, adjust the ADF alignment screw at the rear of the right hinge.
5. Check the wire harness between SN406 and A401.
6. Test the voltage at SN406: 5 V at pins 1 and 3 (GND) on the sensor connector.
7. Replace SN406.
8. If SOL404 does not work, check wiring from SOL404 to CN-YC3 (pins 3 - 4) in the ADF board.
9. Disconnect SOL404 check coil continuity and replace if open.
10. Connect ADF Duplex Shift solenoid (SOL402), measure 24V in YC3-4, and then activate SOL402 from CDFT. If the signal does not go low when actuated, replace the ADF Control PCA (A401), otherwise, replace SOL404.
11. Check the spring mounted to the eject shift solenoid plunger and make sure it is in place.
12. Replace A401.

Links

- Diagnostic page: Click **Subsystems**, and then click **ADF**.
- Component locator: [ADF component locator on page 2313](#)

- Wiring diagram: [ADF wiring diagram on page 2218](#)
- Replace ADF components: [Automatic document feeder \(ADF\) on page 226](#)

32.0500

Description

- Insufficient memory to load fonts and data

Primary root causes

- Too many fonts are installed on the hard disk to load into RAM
- Corrupt font file
- Corrupt RAM

Recommended actions

1. Print the Configuration page, and then check the available RAM against the RAM available on the MFP.
2. Power cycle the MFP.
3. Uninstall any third-party software that consumes RAM.
4. Install more RAM.
5. Remove and reinstall some or all of the fonts on the hard disk.
6. Install the latest driver and RFU firmware.
7. Check the health of the hard disk.

Links

- Configuration page: Click **Settings/Procedures**, and then click **Print Information Pages**.

32.08A1

Description

- Device power cycled without proper shutdown

Primary root causes

- User power cycled device without first performing a proper shutdown
- External power outage caused device to lose power without a proper shutdown

Recommended actions

- Discuss proper shutdown procedures with customer.

32.08A2

Description

- Turn Power off (Device shutting down)

Primary root causes

- None

Recommended actions

- No action required. The device shut down normally.

32.08A3

Description

- Ready (Device rebooting)

Primary root causes

- None

Recommended actions

- No action required. The device powered up normally.

32.0B03

Description

- The control panel is not present

Primary root causes

- Control panel
- Wire harness between the control panel and the MFP
- Formatter Main PCA (A26)

Recommended actions

1. Check the wire harness between the control panel and A26.
2. Validate that the control panel is calibrated and functional.
3. Replace the control panel.
4. Replace A26.

Links

- Wiring diagram: [Control panel wiring diagram on page 2224](#)
- Replace the control panel: [Control panel assembly on page 309](#)
- Replace A26: [Formatter Main PCA \(A26\) on page 693](#)

32.0C00

Description

- Restore Factory Settings succeeded

Primary root causes

- N/A

Recommended actions

- N/A

32.0C01

Description

- Restore Factory Settings failed

Primary root causes

- Failed formatter NVRAM

Recommended actions

- Replace the Formatter Main PCA (A26).

Links

- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A26: [Formatter Main PCA \(A26\) on page 693](#)

32.1C03

Description

- NVM B/R customer backup started

Primary root causes

- N/A

Recommended actions

- N/A

32.1C04

Description

- NVM B/R customer restore started

Primary root causes

- N/A

Recommended actions

- N/A

32.1C05

Description

- NVM B/R operation complete

Primary root causes

- N/A

Recommended actions

- N/A

32.1C06

Description

- NVM B/R bad parameters error (invalid parameters passed to BackupMachineData or RestoreMachineData)

Primary root causes

- Invalid entry

Recommended actions

- Verify the settings, and then re-enter them.

32.1C07

Description

- NVM B/R file permissions error (unable to access destination)

Primary root causes

- The customer-specified drive is either not writable or not readable by the MFP

Recommended actions

- Check the destination location and the permissions of the specified destination path. Permissions could be either on the directories or the files.

32.1C08

Description

- NVM B/R file error (Disk full or other file access errors)

Primary root causes

- There is not enough space on the destination location to complete the operation

Recommended actions

- Check the destination location for available space. Free up space, if possible.

32.1C09

Description

- NVM B/R wrong machine error (tried to restore machine data to the wrong machine or the backup file being restored was created on a different machine)

Primary root causes

- The serial number in the file does not match the MFP serial number. The file specified was created on a different.

Recommended actions

- Validate the machine serial number, and then upload the file that was created on this MFP.

32.1C0A

Description

- NVM B/R data integrity error (data corrupt, or other encryption/decryption errors)

Primary root causes

- Corrupt file
- Wrong encryption key

Recommended actions

1. Verify that the encryption key is correct.
2. If the error persists, try a different file.

32.1C0B

Description

- NVM B/R firmware version error. Tried to restore firmware backup from a different firmware version.

Primary root causes

- Firmware on the MFP is new or older than the firmware you are trying to restore

Recommended actions

- Verify that the MFP is running the same firmware version that was used when creating the backup file. Do not upgrade the MFP firmware before doing the firmware restore.

32.1C0C

Description

- NVM B/R aborted

Primary root causes

- The user aborted the operation from the embedded Web server (EWS)

Recommended actions

- N/A

32.1C0D

Description

- NVM B/R unknown error

Primary root causes

- Unknown

Recommended actions

- Retry the backup.

32.1C0E

Description

- NVM B/R formatter timeout

Primary root causes

- Unknown firmware condition prevented the operation from completing

Recommended actions

1. Retry the backup.
2. If the error persists, perform an RFU upgrade.

32.1C0F

Description

- NVM B/R Coprocessor timeout

Primary root causes

- Unknown firmware condition prevented the operation from completing

Recommended actions

1. Retry the backup.
2. If the error persists, perform an RFU upgrade.

32.1C10

Description

- NVM B/R scanner timeout

Primary root causes

- Unknown firmware condition prevented the operation from completing

Recommended actions

1. Retry the backup.
2. If the error persists, perform an RFU upgrade.

32.1C11

Description

- NVM B/R engine timeout

Primary root causes

- Unknown firmware condition prevented the operation from completing

Recommended actions

1. Retry the backup.
2. If the error persists, perform an RFU upgrade.

32.1C12

Description

- NVM B/R disk timeout

Primary root causes

- Unknown firmware condition prevented the operation from completing

Recommended actions

1. Retry the backup.
2. If the error persists, perform an RFU upgrade.

32.1C13

Description

- NVM B/R auto backup timeout

Primary root causes

- Unknown firmware condition prevented the operation from completing

Recommended actions

1. Retry the backup.
2. If the error persists, perform an RFU upgrade.

32.1C14

Description

- NVM B/R formatter error

Primary root causes

- The error appears in the warning log if the condition occurs during an automatic internal backup. Otherwise, the error appears in the error log and will be returned to the application initiating the operation (either WJA or CDFT) for interpretation and display.

Recommended actions

- N/A

32.1C15

Description

- NVM B/R coprocessor error

Primary root causes

- The error appears in the warning log if the condition occurs during an automatic internal backup. Otherwise, the error appears in the error log and will be returned to the application initiating the operation (either WJA or CDFT) for interpretation and display.

Recommended actions

- N/A

32.1C16

Description

- NVM B/R scanner error

Primary root causes

- Scanner cable is loose
- Scanner NVM is corrupt

Recommended actions

1. Check the scanner cable and make sure it is connected to the scanner and scanner board properly.
2. Check the scanner values in the CDFTe to ensure they are correct.
3. Perform an NVM Init and try the restore again.

32.1C17

Description

- NVM B/R engine error

Primary root causes

- The error appears in the warning log if the condition occurs during an automatic internal backup. Otherwise, the error appears in the error log and will be returned to the application initiating the operation (either WJA or CDFT) for interpretation and display.

Recommended actions

- N/A

32.1C18

Description

- NVM B/R disk error

Primary root causes

- The error appears in the warning log if the condition occurs during an automatic internal backup. Otherwise, the error appears in the error log and will be returned to the application initiating the operation (either WJA or CDFT) for interpretation and display.

Recommended actions

- N/A

32.1800

Description

- Parallel port buffer overflow

Primary root causes

- MFP firmware
- Parallel cable
- Host PC

Recommended actions

1. Power cycle the MFP.
2. Power cycle the host PC.
3. Update the MFP firmware.
4. Replace the parallel cable.
5. Replace the EIO Riser PCA (A31).

Links

- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A31: [EIO Riser PCA \(A31\) on page 689](#)

32.1801

Description

- Serial port buffer overflow

Primary root causes

- MFP firmware
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Reinstall A27.
3. Replace A27.

Links

- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

32.1802

Description

- USB buffer overflow

Primary root causes

- MFP firmware
- USB cable
- Host PC

Recommended actions

1. Power cycle the MFP.
2. Power cycle the host PC.
3. Replace the USB cable.
4. Reinstall the Copy Processing PCA (A27).
5. Replace A27.

Links

- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

32.1803

Description

- EIO X buffer overflow. Third-party PCA might be attached to the host PC.

Primary root causes

- MFP firmware
- Network cable between host PC and the MFP
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Power cycle the host PC, switch, or hub.
3. Replace the network cable.
4. Reinstall A27.
5. Replace A27.

Links

- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

32.1804

Description

- EIO bad transition. Third-party PCA might be attached to the host PC.

Primary root causes

- MFP firmware
- Network cable between host PC and the MFP
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Power cycle the host PC, switch, or hub.
3. Replace the network cable.
4. Reinstall A27.
5. Replace A27.

Links

- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

32.1805

Description

- Bad serial port transition

Primary root causes

- Cable between host PC and the MFP
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Power cycle the host PC.
3. Replace the cable.
4. Reinstall A27.
5. Replace A27.

Links

- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

32.1900

Description

- File operation failed

Primary root causes

- USB device has been removed
- Hard disk problem
- File not found
- No free file descriptors
- Invalid number of bits
- File with the same name exists
- Illegal field name
- Incorrect permissions to delete a file or a directory
- Trying to perform file operations on an item that is not a file
- Trying to perform directory operations on an item that is not a directory
- Directory is full
- File is write-only
- Corrupt system file
- No available RAM on formatter main PCA

Recommended actions

1. Reinstall a removed USB device.
2. Delete unnecessary files.
3. Power cycle the MFP.
4. Perform a hard disk initialization procedure.
5. Use the reformat option to download and reinstall firmware.
6. Replace the hard disk.

Links

- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace the hard disk: [Formatter hard drive on page 685](#)

32.1901

Description

- File system is full

Primary root causes

- Hard disk is full

Recommended actions

1. Delete user files.
2. Delete stored files.

32.1902

Description

- Disk is write-protected

Primary root causes

- The hard disk or USB drive is write-protected. The file is protected by a PML command or write-protected from the USB or hard disk.

Recommended actions

1. Unprotect the USB drive or the hard disk.
2. Perform a disk initialization procedure.

32.1903

Description

- File system is not initialized

Primary root causes

- USB not initialized

Recommended actions

- Format the USB drive.

32.1904

Description

- Unable to copy job

Primary root causes

- Too many customer jobs on the hard drive

Recommended actions

- Delete the customer jobs from the hard drive.

32.1905

Description

- Unable to store job

Primary root causes

- Too many customer jobs on the hard drive

Recommended actions

- Delete the customer jobs from the hard drive.

32.1906

Description

- Formatter hard disk is full

Primary root causes

- The MFP hard disk does not have enough space to process additional jobs.

Recommended actions

- Delete jobs on the hard disk. If necessary, contact the system administrator.

32.2100

Description

- Corrupt firmware in external accessory

Primary root causes

- Corrupt finisher firmware
- Finisher Main PCA (A200)

Recommended actions

1. Power cycle the MFP.
2. Update the MFP firmware.
3. Check the voltages on A200 at the 3.3, 5, 32, 42, and 52 Vdc test points.
4. Replace A200.

Links

- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#).
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#).

32.2301

Description

- ENGCOR (engine communication) unknown configuration from Main Engine PCA (A5). The NVM value returned from A5 does not match the NVM value in the Formatter Main PCA (A26).

Primary root causes

- A5 was replaced but the NVM was not set for the current product configuration
- No communication between A5 and A26
- A5 NVM is corrupted

Recommended actions

1. If A5 was replaced, restore NVM.
2. Check the wire harness between A5 and A26.

Links

- Component locator: [Formatter component locator on page 2322](#).
- Wiring diagram: [Formatter wiring diagram on page 2240](#).

32.2302

Description

- ENGC0M (engine communication) configuration changed. The Formatter Main PCA (A26) EFI (extensible firmware interface) NVM value does not match the Main Engine PCA (A5) NVM value.

Primary root causes

- A5 or A26 was replaced but the NVM was not set for the current product configuration

Recommended actions

- This is normal behavior. The A26 EFI (extensible firmware interface) NVM value and the A5 NVM value resolve after the MFP is powered up. No action is required.

Links

- Component locator: [Formatter component locator on page 2322](#).
- Wiring diagram: [Formatter wiring diagram on page 2240](#).

32.2600

Description

- Not enough memory to print current page or page is too complex

Primary root causes

- Memory leak is causing previous jobs to consume too much memory
- Memory leak in current job
- Previous pages in this job have fragmented the memory too much for this page to print
- Other software is consuming memory
- Corrupted RAM

Recommended actions

1. Print the Configuration page, and then check the available RAM against the RAM available on the MFP.
2. Power cycle the MFP.
3. Uninstall other systems that consume RAM, such as compact flash, third-party software, and extra DIMMS.
4. Install more RAM.
5. Print only the page that failed to print.
6. Try another PDL driver and select less complex device options.
7. Try a different PDL (XL to PS, PS to XL, PCL2, PDF).
8. Update the MFP firmware and printer driver.

Links

- Configuration page: Click **Settings/Procedures**, and then click **Print Information Pages**.

32.38E1

Description

- Adjusting print speed for image density or paper type

Primary root causes

- Printing on large media (A3/11 x 17) for the following paper type selections: plain, bond, colored, letterhead, recycled or any paper type that has heavy coverage or is in the unsupported set. Printing will be in six-pass mode. This is normal behavior to avoid cockle and potential damage to the print engine and pens.

Recommended actions

1. Verify that the paper size is being reported correctly. This message should appear only for A3 or 11 x 17.
2. If the customer is using A3 or 11 x 17 HP Office LG 80 g or heavy media (120 g or greater), verify that the paper type is selected correctly in order to ensure optimized printing.
3. If the customer is using A3 or 11 x 17 with a short grain (SG) orientation, this is normal behavior. Do not change the settings.

32.4400

Description

- File operation failed

Primary root causes

- USB device has been removed
- Hard disk problem
- File not found
- No free file descriptors
- Invalid number of bits
- File with the same name exists
- Illegal field name
- Incorrect permissions to delete a file or a directory
- Trying to perform file operations on an item that is not a file
- Trying to perform directory operations on an item that is not a directory
- Directory is full
- File is write-only
- Corrupt system file
- No available RAM on formatter main PCA

Recommended actions

1. Reinstall a removed USB device.
2. Delete unnecessary files.
3. Power cycle the MFP.
4. Perform a hard disk initialization procedure.
5. Use the reformat option to download and reinstall firmware.
6. Replace the hard disk.

Links

- Component locator: [Formatter component locator on page 2322.](#)
- Wiring diagram: [Formatter wiring diagram on page 2240.](#)
- Replace the hard disk: [Formatter hard drive on page 685](#)

32.4401

Description

- File system is full

Primary root causes

- Hard disk is full

Recommended actions

1. Delete user files.
2. Delete user stored files.

32.4402

Description

- Disk is write-protected

Primary root causes

- The hard disk or USB drive is write-protected. The file is protected by a PML command or write-protected from the USB or hard disk.

Recommended actions

1. Unprotect the USB drive or the hard disk.
2. Perform a disk initialization procedure.

32.4403

Description

- Disk is not initialized

Primary root causes

- USB drive is not initialized

Recommended actions

- Reformat the USB drive.

32.5C00

Description

- Failure reading color table from disk

Primary root causes

- Not enough RAM to load color tables
- Corrupted color file
- Too many color files on the hard disk
- Corrupted RAM

Recommended actions

1. Print the Configuration page, and then check the available RAM against the RAM available on the MFP.
2. Power cycle the MFP.
3. Uninstall other systems that consume RAM, such as compact flash, third-party software, and extra DIMMS.
4. Install more RAM.
5. Reinstall the standard or custom color tables.
6. Uninstall the custom color tables.
7. Remake the custom color tables for the appropriate firmware version.
8. Update the MFP firmware and printer driver.
9. Check the health of the hard disk.

Links

- Configuration page: Click **Settings/Procedures**, and then click **Print Information Pages**.

49.0B01

Description

- Formatter cannot communicate with Coprocessor. Error occurred in the communication path between Coprocessor Windows Service and Coprocessor State Manager.

Primary root causes

- If this error begins to occur on the device, there is a possibility of coprocessor hardware failure. However, if it is associated with a firmware update, the coprocessor update might be wrong.

Recommended actions

1. Format coprocessor HDD and reload firmware.
2. Replace the coprocessor unit.

49.0B05

Description

- The formatter did not receive ready event from Windows Service

Primary root causes

- Coprocessor application installation might be corrupt
- Formatter HDD might be bad

Recommended actions

1. Format the Coprocessor HDD and reload firmware.
2. Format both HDDs, reinstall firmware, and restore from an external backup.

49.144B

Description

- Communication error between the Copy Processing PCA (A27) and the Formatter Main PCA (A26).

Primary root causes

- Loose cable between the A27 and A26
- Loose or faulty A27 or A26 PCAs

Recommended actions

1. Power cycle the MFP.
2. Reseat the cable between the A27 and A26.
3. Replace the Copy Processing PCA (A27).
4. Replace the A26.

49.144D

Description

- Scanner Service Agent check assert

Primary root causes

- Faulty copy processor board
- Corrupt component data
- Loose scanner cable
- Partially locked scanner

Recommended actions

1. Check the scanner cable.
2. Check the scanner lock and ensure it is completely unlocked.
3. Reseat the copy processor board (CPB).
4. Format both HDDs and reinstall firmware.
5. Replace the copy processor board (CPB).
6. Replace the formatter board.

49.205A

Description

- Media size is invalid. The size is too big for the requested tray.

Primary root causes

- Unexpected media size

Recommended actions

1. Power cycle the MFP.
2. Check the job media size against the tray configuration.
3. Check media to ensure its size is supported.
4. Cancel, and then resend the job.

49.2F04

Description

- Video controller internal software error

Primary root causes

- This is a generic software error. If repeatable, the Export Data debug information is needed to diagnose.

Recommended actions

1. Power cycle the MFP.
2. Obtain the Export Data debug file for analysis..

49.4C02

Description

- A null pointer error associated with running out of memory

Primary root causes

- There are no primary causes of this error; it can have multiple causes

Recommended actions

- Power cycle the MFP.

49.4C27

Description

- Fatal system error on startup. Unable to allocate memory stack.

Primary root causes

- Corrupt formatter NVRAM
- Corrupt formatter HDD
- Formatter Main PCA (A26)

Recommended actions

1. Power cycle the MFP and perform an NVRAM INIT.
2. Perform a formatter disk initialization.
3. Replace the A26.

49.5001

Description

- Out of memory

Primary root causes

- Memory corruption on the Formatter PCA NVRAM

Recommended actions

1. Power cycle the MFP.
2. Perform an NVRAM initialization.
3. Perform a formatter disk initialization.

49.60zz

Description

- Firmware fault during data access on the formatter disk

Primary root causes

- Corrupt component data
- Formatter HDD might be bad

Recommended actions

1. Power cycle the MFP.
2. Perform a formatter disk initialization.
3. Format the formatter disk and reload firmware.
4. Replace the formatter HDD.

49.yyzz

Description

- Firmware fault

Primary root causes

- This is a problem in the system firmware
- This is not a hardware related issue, do not attempt to replace parts to resolve this problem

Recommended actions

1. If you have not already done so, power cycle the MFP.
2. Check the support site for service bulletins.
3. If you can recreate the problem, put the details in your call closure comments.

67.yyzz

Description

- Printer error

Primary root causes

- Corrupted NVRAM permanent storage

Recommended actions

1. Power cycle the MFP.
2. Reset the MFP to the factory settings. For more informations, see the system administrator guide.

68.3801

Description

- The warning log NVRAM data for Error Manager is reset

Primary root causes

- Improper power cycling is a common cause

Recommended actions

- None.

68.8001

Description

- Formatter NVRAM storage error settings changed

Primary root causes

- System power turned off while NVM data was being written to the NVRAM
- Corrupted NVM, version, or size in the permanent storage block has changed
- Formatter Main PCA (A26)

Recommended actions

1. Restore NVRAM.
2. Power cycle the MFP.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.

68.8002

Description

- NVRAM permanent storage is full

Primary root causes

- Formatter Main PCA (A26)

Recommended actions

1. Restore NVM.
2. Replace A26.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A26: [Formatter Main PCA \(A26\) on page 693](#)

68.8003

Description

- Formatter NVRAM write failed. This problem indicates a hardware failure. On the next power cycle, the NVRAM permanent storage block with the offending location will be ignored by the firmware.

Primary root causes

- Formatter Main PCA (A26)

Recommended actions

1. Power cycle the MFP.
2. Replace A26.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A26: [Formatter Main PCA \(A26\) on page 693](#)

68.8A20

Description

- PrintMeter component NVM change

Primary root causes

- This is a normal error that occurs when the data structure has been changed between firmware versions

Recommended actions

- None.

68.9449

Description

- DAMUtility component for the pending calibration NVM change

Primary root causes

- This is a normal error that occurs when a calibration type has been changed or added between firmware versions

Recommended actions

- None.

68.yyzz

Description

- NVM read/write error

Primary root causes

- Corrupt NVM data on the formatter HDD
- Data collision while processing a job

Recommended actions

1. Power cycle the MFP.
2. Perform a formatter disk initialization.
3. Perform an NVRAM initialization.

79.yyzz

Description

- Printer error

Primary root causes

- This code has many possible root causes

Recommended actions

1. Power cycle the MFP.
2. Restore NVM, and then power cycle the MFP.
3. Reload the system firmware.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.

80.0180

Description

- No heartbeat

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.
5. Replace A27.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

80.0181

Description

- Reclaim timeout

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.
5. Replace A27.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

80.0182

Description

- Invalid data length

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.
5. Replace A27.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

80.018B

Description

- Invalid maximum outstanding packet header field

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.
5. Replace A27.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

80.018C

Description

- Invalid channel mapping response

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.
5. Replace A27.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

80.0301

Description

- No PGP buffers

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.
5. Replace A27.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

80.0302

Description

- Channel table full

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.
5. Replace A27.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

80.0303

Description

- Producer index not reset

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.
5. Replace A27.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

80.0304

Description

- Consumer index not reset

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.
5. Replace A27.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

80.0305

Description

- Queue position size too small

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.
5. Replace A27.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

80.0306

Description

- Transport overflow

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.
5. Replace A27.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

80.0307

Description

- No overflow packets

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.
5. Replace A27.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

80.0308

Description

- Invalid identify response

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.
5. Replace A27.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

80.0309

Description

- Invalid channel map return status

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.
5. Replace A27.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

80.0310

Description

- Invalid reclaim return status

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.
5. Replace A27.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

80.0312

Description

- Datagram invalid buffer

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.
5. Replace A27.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

80.0313

Description

- Max stream channels

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.
5. Replace A27.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

80.0314

Description

- Max datagram channels

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.
5. Replace A27.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

80.0315

Description

- Card reset failed

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.
5. Replace A27.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

80.0316

Description

- Self-test failure

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.
5. Replace A27.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

80.0317

Description

- Unknown PGP packet

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.
5. Replace A27.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

80.0318

Description

- Duplicate I/O channel

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.
5. Replace A27.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

81.yyzz

Description

- Undefined networking problem

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.

85.yyzz

Description

- Undefined networking problem

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM
- Copy Processing PCA (A27)

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.
5. Replace A27.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.
- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A27: [Copy Processing PCA \(A27\) on page 693](#)

86.yyzz

Description

- Undefined networking problem

Primary root causes

- Network configuration
- Corrupt firmware
- Corrupt NVM

Recommended actions

1. Power cycle the MFP.
2. Verify that the network configuration is correct. See the system administrator guide for help.
3. Restore NVM, and then power cycle the MFP.
4. Reload the system firmware.

Links

- Restore NVM: Click **Settings/Procedures**, click **NVM**, and then click **Manual NVM Restore**.

99.000A

Description

- Job cancel detected during the reading of the second part of the RFU header

Primary root causes

- Job was cancelled

Recommended actions

- If job cancel was intended, no action is needed. Otherwise, resend the RFU file.

99.000C

Description

- Header size mismatch for version 1 header

Primary root causes

- Corrupt or incorrectly generated RFU file

Recommended actions

- Resend the RFU file.

99.000D

Description

- Header size mismatch for version 2 header

Primary root causes

- Corrupt or incorrectly generated RFU file

Recommended actions

- Resend the RFU file.

99.000E

Description

- Header size mismatch for version 3 header

Primary root causes

- Corrupt or incorrectly generated RFU file

Recommended actions

- Resend the RFU file.

99.000F

Description

- Failure detected when preparing the media for upgrade

Primary root causes

- Bad media

Recommended actions

- Check the cables and reseal the hardware as appropriate.

99.0001

Description

- Bad image received

Primary root causes

- Error detected in the image received

Recommended actions

- Resend file or send a new image.

99.0002

Description

- I/O timeout when receiving the RFU file

Primary root causes

- Bad I/O connection between the host and the MFP
- Congested network

Recommended actions

1. Verify that the host has not crashed while sending the RFU file.
2. Check the physical connection between the host and the MFP.
3. Verify that the RFU file is not truncated.
4. Resend the RFU file.

99.0004

Description

- I/O timeout occurred when receiving the RFU header

Primary root causes

- Bad I/O connection between the host and the MFP
- Congested network

Recommended actions

1. Verify that the host has not crashed while sending the RFU file.
2. Check the physical connection between the host and the MFP.
3. Verify that the RFU file is not truncated.
4. Resend the RFU file.

99.0006

Description

- Read error during the reading of the first part of the RFU header

Primary root causes

- Unknown

Recommended actions

- Resend the RFU file.

99.0007

Description

- Read byte error during the reading of the second part of the RFU header

Primary root causes

- Unknown

Recommended actions

- Resend the RFU file.

99.0009

Description

- Job cancel detected during the reading of the first part of the RFU header

Primary root causes

- Job was cancelled

Recommended actions

- If job cancel was intended, no action is needed. Otherwise, resend the RFU file.

99.0013

Description

- Failed to get image buffer during writing of the media

Primary root causes

- Bad media

Recommended actions

- Check the cables and reseal the hardware as appropriate.

99.0014

Description

- Write error detected during the write of the boot area

Primary root causes

- Bad media

Recommended actions

- Check the cables and reseal the hardware as appropriate.

99.0015

Description

- Write error detected during the write of the main part of the code

Primary root causes

- Bad media

Recommended actions

- Check the cables and reseal the hardware as appropriate.

99.0016

Description

- Write error detected during the writing of the end of the code

Primary root causes

- Bad media

Recommended actions

- Check the cables and reseal the hardware as appropriate.

99.0017

Description

- Image size too big

Primary root causes

- RFU image receive is too big for the hard disk partition

Recommended actions

- Verify that the RFU file received is correct for this product.

99.0018

Description

- No media access

Primary root causes

- Media cannot be opened

Recommended actions

- Check the cables and reseal the hardware as appropriate.

99.38E2

Description

- Failure to upgrade the coprocessor image firmware

Primary root causes

- Faulty coprocessor HDD
- Faulty cable between formatter and coprocessor
- Faulty formatter board

Recommended actions

- None.

A0.03A1

Description

- Failed to pick from Tray 1, and then recovered

Primary root causes

- Preventive maintenance is due
- Pick roller
- Separation pad

Recommended actions

1. Check the preventive maintenance counter for the Tray 1 pick roller.
2. Load fresh paper into Tray 1.
3. Verify that the paper-width guide touches the edge of the paper stack.
4. Verify that the paper is within the product specifications.
5. Clean the pick roller and separation pad.

Additional root causes

- Tray 1 Pick solenoid (SOL1)

Links

- Fault tree: [A0.03A1: Failed to pick from Tray 1, and then recovered on page 1173](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Tray 1**.
- Component locator: [Tray 1 component locator on page 2315](#)
- Wiring diagram: [Tray 1 wiring diagram on page 2219](#)
- SOL1: [A0.1301 on page 1638](#)

A0.1301

Description

- No pick Tray 1

Primary root causes

- Tray 1 Pick solenoid (SOL1)
- Wire harness between the Motion PCA (A2) and SOL1

Recommended actions

1. Open the Tray 1 diagnostic page, and then activate SOL1 and verify that the pick roller rotates.
2. Cycle SOL1.
3. Check the wire harness between SOL1 and A2.
4. Check SOL1 for contamination.
5. Activate SOL1 and then test the voltage at the solenoid connector: 20 Vdc at pins 1 to 2 (GND) on W20P1-SOL1.
6. Activate SOL1 and then test the voltage to SOL1 on A2: 3.8 Vdc at J2 pins 2 to 9 (GND).

Additional root causes

- A2

Links

- Fault tree: [A0.1301: No pick Tray 1 on page 1176](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Tray 1**.
- Component locator: [Tray 1 component locator on page 2315](#)
- Wiring diagram: [Tray 1 wiring diagram on page 2219](#)
- Replace SOL1: [Tray 1 Pick solenoid \(SOL1\) on page 351](#)
- A2: [D4.0705 on page 2060](#)

A1.0102

Description

- Failed to pick from tray 2

Primary root causes

- Pick roller
- Media condition
- M19
- Tray 2 Distribution PCA (A33)
- Wire harness between A33 and the Trays 2, 3, and 4 Controller PCA (A23)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Open the Trays 2, 3, 4 diagnostic page, pull out Tray 2, and then turn on M19 to see if the motor runs.
3. Verify that the pick arm moves up and down freely and that it is aligned correctly.
4. Test the voltage on the wire harness to A33 from A23: 24 Vdc at J1 pins 8 to 7 (GND) and 9 to 7 (GND).
5. Test the voltage to M19 on A33: 24 Vdc at J4 pins 1 to 4 (GND).
6. Test the voltage to M19 on A23: 24 Vdc at J6 pins 9 to 7 (GND).

Additional root causes

- A23

Links

- Fault tree: [A1.0102: Tray 2 Pick motor \(M19\) stall on page 1178](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Tray 2 wiring diagram on page 2256](#)
- Replace M19: [Pick arm assembly on page 328](#)
- A23: [A1.0701 on page 1649](#)

A1.0103

Description

- Failed to pick from tray 3

Primary root causes

- Pick roller
- Media condition
- M20
- Tray 3 Distribution PCA (A33)
- Wire harness between the A33 and the Trays 2, 3, and 4 Controller PCA (A23)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Open the Trays 2, 3, 4 diagnostic page, pull out Tray 3, and then turn on M20 to see if the motor runs.
3. Verify that the pick arm moves up and down freely and that it is aligned correctly.
4. Test the voltage on the wire harness to A33 from A23: 24 Vdc at J1 pins 8 to 7 (GND) and 9 to 7 (GND).
5. Test the voltage to M20 on A33: 24 Vdc at J4 pins 1 to 4 (GND).
6. Test the voltage to M20 on A23: 24 Vdc at J7 pins 9 to 7 (GND).

Additional root causes

- A23

Links

- Fault tree: [A1.0103: Tray 3 Pick motor \(M20\) stall on page 1181](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Tray 3 wiring diagram on page 2257](#)
- Replace M20: [Pick arm assembly on page 328](#)
- A23: [A1.0701 on page 1649](#)

A1.0104

Description

- Failed to pick from tray 4

Primary root causes

- Pick roller
- Media condition
- M21
- Tray 4 Distribution PCA (A33)
- Wire harness between A33 and the Trays 2, 3, and 4 Controller PCA (A23)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Open the Trays 2, 3, 4 diagnostic page, pull out Tray 4, and then turn on M21 to see if the motor runs.
3. Verify that the pick arm moves up and down freely and that it is aligned correctly.
4. Test the voltage on the wire harness to A33 from A23: 24 Vdc at J1 pins 8 to 7 (GND) and 9 to 7 (GND).
5. Test the voltage to M21 on A33: 24 Vdc at J4 pins 1 to 4 (GND).
6. Test the voltage to M21 on A23: 24 Vdc at J10 pins 9 to 7 (GND).

Additional root causes

- A23

Links

- Fault tree: [A1.0104: Tray 4 Pick motor \(M21\) stall on page 1184](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Tray 4 wiring diagram on page 2258](#)
- Replace M21: [Pick arm assembly on page 328](#)
- A23: [A1.0701 on page 1649](#)

A1.01A2

Description

- Failed to pick from Tray 2, and then recovered

Primary root causes

- Media condition
- Paper jam
- Pick rollers

Recommended actions

1. Manually toggle the Tray 2 Exit sensor (SN47). If the fingers do not return to the extended position, check the spring on the end of the plastic shaft.
2. Verify that the drive rollers turn freely in one direction and have some resistance in the other direction. Turn the rollers back and forth multiple times, looking for a spot that slips.
3. Check the pick rollers for contamination and wear.

Links

- Fault tree: [A1.01A2: Failed to pick from Tray 2, and then recovered on page 1187](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Tray 2 wiring diagram on page 2256](#)
- Replace SN47: [Trays 2, 3, and 4 sensors on page 340](#)

A1.01A3

Description

- Failed to pick from Tray 3, and then recovered

Primary root causes

- Media condition
- Paper jam
- Pick rollers

Recommended actions

1. Open the Trays 2, 3, 4 diagnostic page, and then manually toggle the Tray 3 Exit sensor (SN51). If the fingers do not return to the extended position, check the spring on the end of the plastic shaft.
2. Verify that the drive rollers turn freely in one direction and have some resistance in the other direction. Turn the rollers back and forth multiple times, looking for a spot that slips.
3. Check the pick rollers for contamination and wear.

Links

- Fault tree: [A1.01A3: Failed to pick from Tray 3, and then recovered on page 1188](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Tray 3 wiring diagram on page 2257](#)
- Replace SN51: [Trays 2, 3, and 4 sensors on page 340](#)

A1.01A4

Description

- Failed to pick from Tray 4, and then recovered

Primary root causes

- Media condition
- Paper jam
- Pick rollers

Recommended actions

1. Open the Trays 2, 3, 4 diagnostic page, and then manually toggle the Tray 4 Exit sensor (SN55). If the fingers do not return to the extended position, check the spring on the end of the plastic shaft.
2. Verify that the drive rollers turn freely in one direction and have some resistance in the other direction. Turn the rollers back and forth multiple times, looking for a spot that slips.
3. Check the pick rollers for contamination and wear.

Links

- Fault tree: [A1.01A4: Failed to pick from Tray 4, and then recovered on page 1190](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Tray 4 wiring diagram on page 2258](#)
- Replace SN55: [Trays 2, 3, and 4 sensors on page 340](#)

A1.01C1

- Trays 2, 3, and 4 Transport motor (M18) problem

Primary root causes

- M18
- Trays 2, 3, and 4 Controller PCA (A23)
- Wire harness between M18 and A23
- Wire harness between A23 and the Power Distribution PCA (A1)
- A1

Recommended actions

1. Open the Trays 2, 3, 4 diagnostic page, and then test M18.
2. Check the wire harness between M18 and A23.
3. Test the voltage at M18.
4. Test the voltage to M18 on A23.
5. Verify that the 32 Vdc LED on A23 is lit.
6. Check the wire harness between A23 and A1.
7. Test the input voltage to A23: 5 Vdc at J1 pins 3 to 2 (GND).
8. Test the voltage to A23 on A1: 32 Vdc at J8 pins 8 to 5.

Links

- Fault tree: [A1.01C1: Trays 2, 3, and 4 Transport motor \(M18\) on page 1192](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)
- Replace M18: [Trays 2, 3, and 4 Transport motor \(M18\) on page 331](#)
- Replace A23: [Trays 2, 3, and 4 Controller PCA \(A23\) on page 339](#)
- Replace A1: [Power Distribution PCA \(A1\) on page 702](#)

A1.0201

Description

- Tray 2, 3, and 4 temperature/humidity sensor error

Primary root causes

- SN41/SN42
- Trays 2, 3, and 4 Controller PCA (A23)
- Wire harness between SN41/SN42 and A23
- Wire harness between A23 and the Power Distribution PCA (A1)

Recommended actions

1. Open the Trays 2, 3, 4 diagnostic page, and check the SN41 and SN42 reading.
2. Check the resistance at SN41/SN42.
3. Check the wire harness between A23 and A1.
4. Verify that the input voltage LEDs on A23 are lit.
5. Test the input voltage to A23: 5 Vdc at J1 pins 3 to 2 (GND).
6. Test the voltage to A23 on A1: 32 Vdc at J8 pins 8 to 5.

Links

- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)
- Replace SN41/SN42: [Trays 2, 3, and 4 sensors on page 340](#)
- Replace A23: [Trays 2, 3, and 4 Controller PCA \(A23\) on page 339](#)
- Replace A1: [Power Distribution PCA \(A1\) on page 702](#)

A1.02C1

Description

- Tray 2, 3, and 4 Ambient Temperature sensor (SN41) problem

Root causes

- SN41
- Trays 2, 3, and 4 Controller PCA (A23)
- Wire harness between SN41 and A23
- Wire harness between A23 and the Power Distribution PCA (A1)
- A1

Recommended actions

1. Open the Trays 2, 3, 4 diagnostic page, and check the SN41 reading.
2. Check the resistance at SN41.
3. Check the wire harness between A23 and A1.
4. Verify that the input voltage LEDs on A23 are lit.
5. Test the input voltage to A23: 5 Vdc at J1 pins 3 to 2 (GND).
6. Test the voltage to A23 on A1: 32 Vdc at J8 pins 8 to 5.

Links

- Fault tree: [A1.02C1:Tray 2, 3, and 4 Ambient Temperature sensor \(SN41\) on page 1194](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)
- Replace SN41: [Trays 2, 3, and 4 sensors on page 340](#)
- Replace A23: [Trays 2, 3, and 4 Controller PCA \(A23\) on page 339](#)
- Replace A1: [Power Distribution PCA \(A1\) on page 702](#)

A1.02C3

Description

- Tray 2, 3, and 4 Humidity sensor (SN42) problem

Root causes

- SN42
- Trays 2, 3, and 4 Controller PCA (A23)
- Wire harness between SN42 and A23
- Wire harness between A23 and the Power Distribution PCA (A1)
- A1

Recommended actions

1. Open the Trays 2, 3, 4 diagnostic page, and check the SN42 reading.
2. Check the resistance at SN42.
3. Check the wire harness between A23 and A1.
4. Verify that the input voltage LEDs on A23 are lit.
5. Test the input voltage to A23: 5 Vdc at J1 pins 3 to 2 (GND).
6. Test the voltage to A23 on A1: 32 Vdc at J8 pins 8 to 5.

Links

- Fault tree: [A1.02C3: Tray 2, 3, and 4 Humidity sensor \(SN42\) on page 1199](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)
- Replace SN42: [Trays 2, 3, and 4 sensors on page 340](#)
- Replace A23: [Trays 2, 3, and 4 Controller PCA \(A23\) on page 339](#)
- Replace A1: [Power Distribution PCA \(A1\) on page 702](#)

A1.0701

Description

- Trays 2, 3, and 4 Controller PCA (A23) failure

Primary root causes

- Wire harness between the Power Distribution PCA (A1) and A23
- A23
- A1
- Power supply

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Verify that the 3.3, 5, 12, 24, 32, and 52 Vdc LEDs on A1 are lit.
3. Check the voltage at the 32 Vdc and 5 Vdc test points on A23.
4. Check the voltage at the 32 Vdc and 5 Vdc test points on A1.
5. Verify that the 5, 24, and 32 Vdc LEDs on the A23 are lit.
6. Check the voltage at J3 and J6 on A1.

Links

- Fault tree: [A1.0701: Trays 2, 3, and 4 Controller PCA \(A23\) failure on page 1231](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)
- Replace A23: [Trays 2, 3, and 4 Controller PCA \(A23\) on page 339](#)

A1.07A1

Description

- Trays 2, 3, and 4 Controller PCA (A23) voltage out of range

Primary root causes

- Trays 2, 3, and 4 Controller PCA (A23)

Recommended actions

- Check the electrical connections between A23 and the Power Distribution PCA (A1).

Links

- Fault tree: [A1.07A1: Trays 2, 3, and 4 Controller PCA \(A23\) voltage out-of-range on page 1234](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Trays 2, 3, and 4 assembly wiring diagram on page 2256](#)
- Replace A23: [Trays 2, 3, and 4 Controller PCA \(A23\) on page 339](#)

A1.1302

Description

- Paper jam at Tray 2

Primary root causes

- Pick rollers and drive belt
- Tray 2 Exit sensor (SN47)
- Tray 2 Pick motor (M19)
- Wire harness between the Tray 2 Distribution PCA (A33) and the Trays 2, 3, and 4 Controller PCA (A23)
- A33

Recommended actions

1. Open the Trays 2, 3, 4 diagnostic page, and then manually toggle SN47. If the fingers do not return to the extended position, check the spring on the end of the plastic shaft.
2. Check the pick rollers and drive belt for wear.
3. Turn the rollers back and forth multiple times, looking for a spot that slips.
4. Test SN47 and M19.
5. Test the voltage to SN47 on A33: 5 Vdc at J3 pins 1 to 2 (GND).
6. Test the voltage to M19 on A33: 24 Vdc at J4 pins 1 to 4 (GND).
7. Test the voltage to A33 on A23 : 5 Vdc at J6 pins 3 to 7 (GND).

Additional root causes

- A23

Links

- Fault tree: [A1.1302: Paper jam at Tray 2 on page 1235](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Tray 2 wiring diagram on page 2256](#)
- Replace M19: [Pick arm assembly on page 328](#)
- Replace SN47: [Trays 2, 3, and 4 sensors on page 340](#)
- A23: [A1.0701 on page 1649](#)

A1.1304

Description

- Paper jam at Tray 4

Primary root causes

- Pick rollers and drive belt
- Tray 4 Exit sensor (SN55)
- Tray 4 Pick motor (M21)
- Wire harness between the Tray 4 Distribution PCA (A33) and the Trays 2, 3, and 4 Controller PCA (A23)
- A33

Recommended actions

1. Open the Trays 2, 3, 4 diagnostic page, and then manually toggle SN55. If the fingers do not return to the extended position, check the spring on the end of the plastic shaft.
2. Check the pick rollers and drive belt for wear.
3. Turn the rollers back and forth multiple times, looking for a spot that slips.
4. Test SN55 and M21.
5. Test the voltage to SN55 on A33: 5 Vdc at J3 pins 1 to 2 (GND).
6. Test the voltage to M21 on A33: 24 Vdc at J4 pins 1 to 4 (GND).
7. Test the voltage to A33 on A23: 5 Vdc at J10 pins 3 to 7 (GND).

Additional root causes

- A23

Links

- Fault tree: [A1.1304: Paper jam at Tray 4 on page 1238](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Trays 2, 3, 4**.
- Component locator: [Trays 2, 3, and 4 component locator on page 2330](#)
- Wiring diagram: [Tray 4 wiring diagram on page 2258](#)
- Replace M21: [Pick arm assembly on page 328](#)
- Replace SN55: [Trays 2, 3, and 4 sensors on page 340](#)
- A23: [A1.0701 on page 1649](#)

A2.0101

Description

- Tray 5 Pick motor (M101) stall

Primary root causes

- M101
- Tray 5 Pick Motor encoder (EN101)
- Wire harness between the Tray 5 Distribution PCA (A101), M101, and EN101
- Wire harness between the Motion PCA (A2) and A101

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Open the Tray 5 diagnostic page, and then manually turn M101 and verify that the EN101 count changes.
3. Test the voltage at M101: 5 Vdc at pins 1 to 2 on W104P101-M101.
4. Test the voltage at EN101: 5 Vdc at pins 1 to 4, 2 to 4, and 3 to 4 on W102P105-EN101.
5. Test the voltage to M101 on the A101 : -12.9 Vdc at J4 pins 1 to 2.
6. Test the voltage to EN101 on the A101: 0.11 Vdc unblocked, 2.18 Vdc blocked at pins 10A to 7A, 4.92 Vdc unblocked and blocked at pins 9A to 7A, and 0.11 Vdc unblocked, 2.12 Vdc blocked at pins 8A to 7A on W102P102-A101J2.
7. Test the voltage to M101 and on A2: -4.89 Vdc at J13 pins 7 and 8.
8. Test the voltage to EN101 on the A2: 5 Vdc at J13 pins 15 and 13, 14, 37, and 38 (GND) and pins 27 and 13, 14, 37, and 38 (GND).

Additional root causes

- A2

Links

- Fault tree: [A2.0101: Tray 5 Pick motor \(M101\) stall on page 1241](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.
- Component locator: [Tray 5 component locator on page 2323](#)
- Wiring diagram: [Tray 5 wiring diagram on page 2241](#)
- Replace M101: [Tray 5 Pick motor \(M101\) on page 770](#)
- A2: [D4.0705 on page 2060](#)

A2.0102

Description

- Tray 5 Elevator motor (M102) stall

Primary root causes

- M102
- Tray 5 Elevator Motor encoder (EN102)
- Tray 5 Media Door Open sensor (SN107)
- Wire harness between the Tray 5 Distribution PCA (A101), M102, and EN102
- Wire harness between the Motion PCA (A2) and the A101

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Open the Tray 5 diagnostic page, and then test SN107.
3. Check the movement of the elevator tray.
4. Manually turn M102 and verify that the encoder count changes.
5. Check the movement of the elevator while holding down the Tray 5 Load Media sensor (SN109).
6. Test the voltage at M102: -12.9 Vdc at pins 1 to 2 on W4P102-M102.
7. Test the voltage at EN102: 5 Vdc at J3 pins 2 to 1, 4 to 1, and 3 to 1 on W103P108-EN102.
8. Test the voltage to M102 on A101: -12.9 Vdc at J4 pins 7 to 8.
9. Test the voltage to EN102 on A101: 4.9 Vdc at pins 14A to 12A on W103P103-A101J3.
10. Test the voltage to M102 and on A2: -12.9 Vdc at J13 pins 1 to 2.
11. Test the voltage to EN102 on A2: 5 Vdc at J13 pins 15 and 13, 14, 37, and 38 (GND).

Additional root causes

- A2

Links

- Fault tree: [A2.0102: Tray 5 Elevator motor \(M102\) stall on page 1244](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.
- Component locator: [Tray 5 component locator on page 2323](#)
- Wiring diagram: [Tray 5 wiring diagram on page 2241](#)
- Replace M102: [Tray 5 Elevator motor \(M102\) on page 773](#)
- A2: [D4.0705 on page 2060](#)

A2.0201

Description

- Tray 5 Elevator Upper Limit sensor (SN108) failed

Primary root causes

- SN108
- Wire harness between the Tray 5 Distribution PCA (A101) and SN108
- Wire harness between the A101 and the Motion PCA (A2)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Open the Tray 5 diagnostic page, and then manually activate SN108 and verify that the sensor state changes.
3. Verify that SN108 is correctly seated and clean.
4. Test the voltage at SN108: 5 Vdc on pins 3 to 2 and 1 to 2 on W103P104-SN108.
5. Test the voltage to SN108 from the A101: 4.91 Vdc blocked and unblocked at 103P103-A101J3 pins 1A to 3A and 0.01 Vdc unblocked, 4.91 Vdc blocked at pins 2A to 3A.
6. Test the voltage to SN108 from A2: 5 Vdc on pins 28 to 13, 14, 37, and 38 (GND) and pins 15 to 13, 14, 37, and 38 (GND).

Additional root causes

- A2
- Tray 5 Elevator motor (M102)

Links

- Fault tree: [A2.0201: Tray 5 Elevator Upper Limit sensor \(SN108\) failed on page 1249](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.
- Component locator: [Tray 5 component locator on page 2323](#)
- Wiring diagram: [Tray 5 wiring diagram on page 2241](#)
- Replace SN108: [Sensors on page 762](#)
- M102: [A2.0102 on page 1654](#)
- A2: [D4.0705 on page 2060](#)

A2.0202

Description

- Tray 5 Stack Height sensor (SN104) failed

Primary root causes

- SN104
- Wire harness between the Tray 5 Distribution PCA (A101) and SN104
- Wire harness between the A101 and the Motion PCA (A2)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Open the Tray 5 diagnostic page, and then manually activate SN104 and verify that the sensor state changes.
3. Verify that SN104 is correctly seated and clean.
4. Verify that the Tray 5 pick arm moves freely up and down.
5. Test the voltage at SN104: 5 Vdc on pins 1 to 2 and 3 to 2 on W103P113-SN104.
6. Test the voltage to SN104 on the A101: 0.13 Vdc unblocked, 4.92 Vdc blocked at 103P103-A101J3 pins 4B to 3B and 1.16 Vdc blocked and unblocked at pins 5B to 3B.
7. Test the voltage to SN104 on A2: 5 Vdc on pins 35 to 13, 14, 37, and 38 (GND) and on pins 15 to 13, 14, 37, and 38 (GND)

Additional root causes

- Tray 5 Elevator motor (M102)
- A2

Links

- Fault tree: [A2.0202: Tray 5 Stack Height sensor \(SN104\) failed on page 1251](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.
- Component locator: [Tray 5 component locator on page 2323](#)
- Wiring diagram: [Tray 5 wiring diagram on page 2241](#)
- M102: [A2.0102 on page 1654](#)
- A2: [D4.0705 on page 2060](#)

A1.0201

Description

- Tray 5 Elevator Lower Limit sensor (SN110) failed

Primary root causes

- SN110
- Wire harness between the Tray 5 Distribution PCA (A101) and SN110
- Wire harness between the A101 and the Motion PCA (A2)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Open the Tray 5 diagnostic page, and then manually activate SN110 and verify that the sensor state changes.
3. Verify that SN110 is correctly seated and clean.
4. Test the voltage at SN110: 5 Vdc on pins 3 to 2 and 1 to 2 on W103P104-SN108.
5. Test the voltage to SN110 from the A101: 4.91 Vdc blocked and unblocked at 103P103-A101J3 pins 1A to 3A and 0.01 Vdc unblocked, 4.91 Vdc blocked at pins 2A to 3A.
6. Test the voltage to SN110 from A2: 5 Vdc on pins 28 to 13, 14, 37, and 38 (GND) and pins 15 to 13, 14, 37, and 38 (GND).

Additional root causes

- A2
- Tray 5 Elevator motor (M102)

Links

- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.
- Component locator: [Tray 5 component locator on page 2323](#)
- Wiring diagram: [Tray 5 wiring diagram on page 2241](#)
- Replace SN110: [Sensors on page 762](#)
- M102: [A2.0102 on page 1654](#)
- A2: [D4.0705 on page 2060](#)

A2.03A1

Description

- Tray 5 separator worn

Primary root causes

- Pick roller assembly

Recommended actions

- Replace the pick roller assembly.

Links

- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.
- Component locator: [Tray 5 component locator on page 2323](#)
- Wiring diagram: [Tray 5 wiring diagram on page 2241](#)

A2.04A1

Description

- Tray 5 Pick clutch (CL101) failed

Primary root causes

- CL101

Recommended actions

- Replace CL101.

Links

- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.
- Component locator: [Tray 5 component locator on page 2323](#)
- Wiring diagram: [Tray 5 wiring diagram on page 2241](#)
- Replace CL101: [Tray 5 Pick clutch \(CL101\) on page 757](#)

A2.04A2

Description

- Unusual lower separator tire motion when no motion should be observed

Primary root causes

- Worn separation tires
- Upper separator shaft sprag bearing

Recommended actions

1. Replace the upper and lower separator rollers, and then close the top door to rerun the self-test.
2. If the self-test fails, continue with the following step.
3. Replace the upper separator sprag bearing.

Links

- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.
- Component locator: [Tray 5 component locator on page 2323](#)
- Wiring diagram: [Tray 5 wiring diagram on page 2241](#)

A2.04A3

Description

- Tray 5 one-way clutch failed

Primary root causes

- Upper separator roller shaft
- Upper separator one-way clutch assembly

Recommended actions

- Replace the upper separator roller shaft and upper separator one-way clutch assembly.

Links

- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.
- Component locator: [Tray 5 component locator on page 2323](#)
- Wiring diagram: [Tray 5 wiring diagram on page 2241](#)

A2.04A4

Description

- Lower separator encoder indicates a disconnection from the separation tire shafts

Primary root causes

- Separation tires not properly snapped in
- 85T drive belt
- 85T drive belt idler
- Media Release button
- Media Release button push rod
- Media Release button spring

Recommended actions

- Inspect each part listed under the primary root causes heading. Replace parts as needed.

Links

- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.
- Component locator: [Tray 5 component locator on page 2323](#)
- Wiring diagram: [Tray 5 wiring diagram on page 2241](#)

A2.04A5

Description

- Tray 5 slip clutch drive failed

Primary root causes

- 54 tooth gear
- 48 tooth gear
- Slip clutch
- Feed roller module assembly
- Separator transfer shaft assembly

Recommended actions

- Inspect each part listed under the primary root causes heading. Replace parts as needed.

Links

- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.
- Component locator: [Tray 5 component locator on page 2323](#)
- Wiring diagram: [Tray 5 wiring diagram on page 2241](#)

A2.04A6

Description

- Tray 5 Separator clutch (CL102) failed

Primary root causes

- 145T drive belt
- 116T drive belt
- Power harness
- CL102
- Media path tensioner assembly
- Upper separator roller drive shaft
- Pick arm pivot shaft
- 48T one-way clutch
- 48T D drive pulley
- Ball bearing idler assembly
- Clutch restraint plate
- Belt area cover
- Tensioner clamp
- Lower separator mount assembly
- 177T drive belt
- Separator wire harness
- Lower separator encoder assembly
- Gear cluster assembly
- Lower separator slip clutch shaft
- Encoder clamp
- Tray 5 Pick motor (M101) mount plate
- Motor bracket
- Lower separator encoder clamp

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Press and hold down the **Jam Release** button, and then close the Tray 5 media door.

3. If an A2.04A6 code is displayed, inspect each of the following parts: 177T drive belt, separator harness, lower separator encoder assembly, gear cluster assembly, lower separator slip clutch shaft, encoder clamp, paper motor mount plate, motor bracket, and the lower separator encoder clamp.
4. If an A2.04A4 code is displayed, inspect each of the following parts: media path tensioner assembly, upper separator transfer shaft, pick arm pivot shaft, 48T one-way clutch, 48T D drive pulley, ball bearing idler assembly, clutch restraint plate, belt area cover, tensioner clamp, and the lower separator mount assembly.

Links

- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.
- Component locator: [Tray 5 component locator on page 2323](#)
- Wiring diagram: [Tray 5 wiring diagram on page 2241](#)

A2.05A1

Description

- Abnormally small Tray 5 Lower Separator encoder (EN103) motion detected

Primary root causes

- Worn separation tires
- Tray 5 Lower Separator encoder (EN103)
- Wire harness between EN103, the Tray 5 Distribution PCA (A101), and the Motion PCA (A2)
- Tray 5 Separator clutch (CL102)
- Tray 5 Pick motor (M101)

Recommended actions

1. Replace the upper and lower separator rollers, and then close the top door to rerun the self-test.
2. If the self-test fails, continue with the following steps.
3. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
4. Check to see if maintenance is due.
5. Check the drive path for loose belt idlers, damaged belts, and damaged gears.
6. Open the Tray 5 diagnostic page, and then manually turn the separator rollers and verify that the EN103 count changes.
7. Manually turn EN103 and verify that the encoder count changes.
8. With CL101 cycling, verify that M101 runs and that the separator rollers turn.
9. Test the voltage at EN103: 5 Vdc at pins 3 to 1, 4 to 1, and 2 to 1 on W102P104-EN103.
10. Test the voltage to EN103 from the A101: 5 Vdc on W102P102-A101J2 at pins 7B to 10B, 8B to 10B, and 9B to 10B.
11. Test the voltage to EN103 from A2: 5 Vdc at pins 15 to 13, 14, 37, and 38 (GND) and 31 to 13, 14, 37, and 38 (GND).

Additional root causes

- A2

Links

- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.
- Component locator: [Tray 5 component locator on page 2323](#)
- Wiring diagram: [Tray 5 wiring diagram on page 2241](#)
- Replace EN103: [Lower separator encoder PCA on page 743](#)
- A2: [D4.0705 on page 2060](#)

A2.1301

Description

- Paper jam at Tray 5 Media 1 sensor (SN101)

Primary root causes

- SN101
- Tray 5 Pick clutch (CL101)
- Wire harness between SN101, the Tray 5 Distribution PCA (A101), and the Motion PCA (A2)

Recommended actions

1. Open the Tray 5 diagnostic page, and then manually activate SN101 and verify that the sensor state changes.
2. Verify that SN101 is correctly seated and clean.
3. Verify that the idler rollers are correctly seated and clean.
4. Test the voltage at SN101: 5 Vdc at pins 1 to 3 and pins 2 to 3 on W102P103-SN101.
5. Test the voltage to SN101 from the A101: 1.19 Vdc unblocked and blocked at pins 1A to 3A and 4.90 vdc unblocked, 0.12 vdc blocked at pins 2A to 3A on W102P102-A101J2.
6. Test the voltage to SN101 from A2: 5 Vdc on pins 32 to 13, 14, 37, and 38 (GND) and pins 15 to 13, 14, 37, and 38 (GND).

Additional root causes

- A2
- Interference between the Tray 5 pickarm cover and elevator surface. (See Service Note c01279520.)

Links

- Fault tree: [A2.1301: Paper jam at Tray 5 Media 1 sensor \(SN101\) on page 1275](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.
- Component locator: [Tray 5 component locator on page 2323](#)
- Wiring diagram: [Tray 5 wiring diagram on page 2241](#)
- Replace SN101: [Sensors on page 762](#)
- A2: [D4.0705 on page 2060](#)

A2.1302

Description

- Paper jam at Tray 5 Media 2 sensor (SN103)

Primary root causes

- SN103
- Wire harness between SN103, the Tray 5 Distribution PCA (A101) and the Motion PCA (A2)

Recommended actions

1. Open the Tray 5 diagnostic page, and then manually activate SN103 and verify that the sensor state changes.
2. Verify that SN103 is correctly seated and clean.
3. Verify that the idler rollers are correctly seated and clean.
4. Test the voltage at SN103: 5 Vdc on pins 1 to 3 and pins 2 to 3 on W102P104-SN103.
5. Test the voltage to SN103 on the A101: 4.91 Vdc unblocked, 0.09 Vdc blocked at pins 5A to 6A and 1.19 Vdc unblocked at pins 4A to 6A on W102P102-A101J2.
6. Test the voltage to SN103 from A2: 5 Vdc on pins 36 to 13, 14, 37, and 38 (GND) and on pins 15 to 13, 14, 37, and 38 (GND).

Additional root causes

- A2

Links

- Fault tree: [A2.1302: Paper jam at Tray 5 Media 2 sensor \(SN103\) on page 1278](#)
- Diagnostic page: Click **Subsystems**, click **Input Trays**, and then click **Tray 5**.
- Component locator: [Tray 5 component locator on page 2323](#)
- Wiring diagram: [Tray 5 wiring diagram on page 2241](#)
- Replace SN101: [Sensors on page 762](#)
- A2: [D4.0705 on page 2060](#)

A3.0101

Description

- Finisher Input Paper Path motor (M210) stall

Primary root causes

- M210
- Finisher Input Paper Path Motor encoder (EN210)
- Drive roller bearings and idlers
- Wire harness between the Finisher Main PCA (A200) and M210
- A200
- Transport drive belts

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then run M210 to verify that the motor turns and that the EN210 count changes.
2. Manually turn M210 and verify that the drive system does not bind.
3. Check the belt tension.
4. Check the wire harness between M210 and A200.
5. Test the voltage at M210: 1.0 Vdc at pins 1 to 4 on W210P1-W200J210.
6. Test the voltage at EN210: 5.0 Vdc at pins 6A to 4A, 5A to 4A, and 7A to 4A on W211P1-W201J211.
7. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 5 wiring diagram on page 2231](#)
- Replace M210: [Finisher Input Paper Path motor \(M210\) on page 910](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0102

Description

- Finisher Upper Paper Path motor (M230) stall

Primary root causes

- M230
- Finisher Upper Paper Path Motor encoder (EN230)
- Drive roller bearings and idlers
- Wire harness between the Finisher Main PCA (A200) and M230
- A200
- Transport drive belts

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then run M230 to verify that the motor turns and that the EN230 count changes.
2. Manually turn M230 and verify that the drive system does not bind.
3. Check the belt tension.
4. Check the wire harness between M230 and A200.
5. Test the voltage at M230: 1.0 Vdc at pins 2 to 1 on the motor connector.
6. Test the voltage at EN230: 5.0 Vdc at pins 5A to 4A, 6A to 4A, and 7A to 4A on W231P1-W201J231.
7. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 8 wiring diagram on page 2233](#)
- Replace M230: [Finisher Upper Paper Path motor \(M230\) on page 913](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0103

Description

- Finisher Separator Input motor (M268) stall

Primary root causes

- M268
- Finisher Separator Input Motor encoder (EN268)
- Drive roller bearings and idlers
- Wire harness between the Finisher Main PCA (A200) and M268
- A200
- Transport drive belts

Recommended actions

1. Open the Finisher Separator diagnostic page, and then run M268 to verify that the motor turns and that the EN268 count changes.
2. Manually turn M268 and verify that the drive system does not bind.
3. Check the belt tension.
4. Check the wire harness between M268 and A200.
5. Test the voltage at M268: 1.0 Vdc at pins 2 to 1 on the motor connector.
6. Test the voltage at EN268: 5.0 Vdc at pins 3 to 1, 2 to 1, and 4 to 1 on the encoder connector.
7. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 3 wiring diagram on page 2229](#)
- Replace M268: [Finisher Separator Input motor \(M268\) on page 932](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0104

Description

- Finisher Lower Paper Path motor (M220) stall

Primary root causes

- M220
- Finisher Lower Paper Path Motor encoder (EN220)
- Drive roller bearings and idlers
- Wire harness between the Finisher Main PCA (A200) and M220
- A200
- Transport drive belts

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then run M220 to verify that the motor turns and that the EN220 count changes.
2. Manually turn M220 and verify that the drive system does not bind.
3. Check the belt tension.
4. Check the wire harness between M220 and A200.
5. Test the voltage at M220: 1.0 Vdc at pins 2 to 1 on the motor connector.
6. Test the voltage at EN220: 5.0 Vdc at pins 4A to 3A, 5A to 3A, and 6A to 3A on W221P1-W201J221.
7. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 7 wiring diagram on page 2232](#)
- Replace M220: [Finisher Lower Paper Path motor \(M220\) on page 912](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0122

Description

- Accumulator Offset 1 motor (M244) failed connect test

Primary root causes

- M244
- Wire harness between the Finisher Main PCA (A200), Accumulator Distribution PCA (A240), and M244
- A200
- A240

Recommended actions

1. Open the Finisher Accumulator diagnostic page, and then run M244 and verify that the motor turns.
2. Check the wire harness between M244 and A200.
3. Using the stepper motor test procedure, test the voltage to M244 on A240: CN4 pins 1 to 2 and 3 to 4.
4. Replace A200.
5. Replace A240.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Accumulator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 9 wiring diagram on page 2234](#)
- Stepper motor procedure: [How to test a stepper motor on page 1035](#)
- Replace M244: [Accumulator Offset 1 motor \(M244\) on page 919](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- Replace A240: [Accumulator Distribution PCA \(A240\) on page 872](#)

A3.0123

Description

- Accumulator Offset 2 motor (M245) failed connect test

Primary root causes

- M245
- Wire harness between the Finisher Main PCA (A200), Accumulator Distribution PCA (A240), and M245
- A200
- A240

Recommended actions

1. Open the Finisher Accumulator diagnostic page, and then run M245 and verify that the motor turns.
2. Check the wire harness between M245 and A240.
3. Using the stepper motor test procedure, test the voltage to M245 on A240: CN3 pins 1 to 2 and 3 to 4.
4. Replace A200.
5. Replace A240.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Accumulator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 9 wiring diagram on page 2234](#)
- Stepper motor procedure: [How to test a stepper motor on page 1035](#)
- Replace M245: [Accumulator Offset 2 motor \(M245\) on page 920](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- Replace A240: [Accumulator Distribution PCA \(A240\) on page 872](#)

A3.0124

Description

- Accumulator Guide Bar motor (M243) failed connect test

Primary root causes

- M243
- Wire harness between the Finisher Main PCA (A200), Accumulator Distribution PCA (A240), and M243
- A200
- A240

Recommended actions

1. Open the Finisher Accumulator diagnostic page, and then run M243 normally and verify that the motor turns.
2. Check the wire harness between M243 and A240.
3. Using the stepper motor test procedure, test the voltage to M243 on A240: CN8 pins 1 to 2 and 3 to 4.
4. Replace A200.
5. Replace A240.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Accumulator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 9 wiring diagram on page 2234](#)
- Stepper motor procedure: [How to test a stepper motor on page 1035](#)
- Replace M243: [Accumulator Guide Bar motor \(M243\) on page 918](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- Replace A240: [Accumulator Distribution PCA \(A240\) on page 872](#)

A3.0125

Description

- Accumulator Bearing Bracket motor (M242) failed connect test

Primary root causes

- M242
- Wire harness between the Finisher Main PCA (A200), Accumulator Distribution PCA (A240), and M242
- A200
- A240

Recommended actions

1. Open the Finisher Accumulator diagnostic page, and then run M242 and verify that the motor turns.
2. Check the wire harness between M242 and A240.
3. Using the stepper motor test procedure, test the voltage to M242 on A240: CN7 on pins 1 to 2 and 3 to 4.
4. Replace A200.
5. Replace A240.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Accumulator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 9 wiring diagram on page 2234](#)
- Stepper motor procedure: [How to test a stepper motor on page 1035](#)
- Replace M242: [Accumulator Bearing Bracket motor \(M242\) on page 916](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- Replace A240: [Accumulator Distribution PCA \(A240\) on page 872](#)

A3.0126

Description

- Accumulator Retainer Finger motor (M246) failed connect test

Primary root causes

- M246
- Wire harness between the Finisher Main PCA (A200), Accumulator Distribution PCA (A240), and M246
- A200
- A240
- Flat flexible cable

Recommended actions

1. Open the Finisher Accumulator diagnostic page, and then run M246 and verify that the motor turns.
2. Check the wire harness between M246 and A240.
3. Using the stepper motor test procedure, test the voltage to M246 on A240: CN4 pins 1 to 2 and 3 to 4.
4. Replace A200.
5. Replace A240.
6. Replace the flat flexible cable on the accumulator.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Accumulator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 9 wiring diagram on page 2234](#)
- Stepper motor procedure: [How to test a stepper motor on page 1035](#)
- Replace M246: [Accumulator Retainer Finger motor \(M246\) on page 921](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- Replace A240: [Accumulator Distribution PCA \(A240\) on page 872](#)

A3.0140

Description

- Finisher Separator Drive motor (M260) stall

Primary root causes

- Finisher top bin overloaded
- Finisher Job Separator Lower Limit sensor (SN260)
- Separator mechanical assembly and structure
- M260
- Finisher Separator Drive Motor encoder (EN260)
- Wire harness between the Finisher Main PCA (A200) and M260
- A200

Recommended actions

1. Check the finisher top bin for damage.
2. Check the wire harness between M260 and A200.
3. Open the Finisher Separator diagnostic page, and then test SN260.
4. Run M260, look for binding, and verify that the EN260 count changes.
5. Test the voltage at M260: 1.25 Vdc at pins 1 to 2 on the motor connector.
6. Test the voltage at EN260: 5.0 Vdc at pins 2A to 1A, 3A to 1A, and 4A to 1A on W263P1-W260J263.
7. Replace M260.
8. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 2 wiring diagram on page 2229](#)
- Replace M260: [Finisher Separator Drive motor \(M260\) on page 929](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0141

Description

- Finisher Job Separator Gate motor (M262) stall

Primary root causes

- One or more broken gate pickets causing interference with the movement of the gate
- Finisher Job Separator Gate Open sensor (SN262) not completely blocked by the J-shaped “flag” when it is in the down position
- Incorrect installation of the job separator wire harness. (See service manual for job separator wire harness replacement instructions.)
- Bad connection to SN262 or M262 due to damage in the job separator wire harness or damage to the component
- Finisher Separator Input motor (M268)
- A200

Recommended actions

1. Visually inspect the gate pickets. (See Parts Manual - Finisher Separator paper gate assembly parts diagram)
 - Remove output Bins 1-4 to observe the gate pickets. Each picket should sit firmly in its slot without any slop or movement. Try to move each one separately. If a loose picket is found, remove and replace it with a new picket.

△ **CAUTION:** The latch tabs on the pickets are very fragile and will only withstand enough pressure to put them in once. Loose pickets will need to be replaced with new parts.

 - Open the Finisher Separator diagnostic page in CDFT, and activate M262. Check that each picket moves easily up and down with smooth operation in both directions. Start and stop the test several times paying particular attention to any erratic operation. Replace any loose pickets as required.
2. Visually inspect the movement of the J-shaped “flag” which activates SN262.

In CDFT, activate M262 and verify the following:

 - M262 moves the J-shaped 'flag' up and down. Check the wiring going to M262 and M264 to ensure that the correct wire is going to the correct motor. HINT: M262 is the motor which is next to SN262.
 - Finisher Separator Gate Motor encoder (EN262) count changes and that SN262 toggles H and L. (Note: SN262 is slow to react and might not show a correct count. This is normal.)
 - The J-shaped “flag” completely blocks SN262 at every down position. Check for mechanical obstacles or damage to the M262 transmission assembly. Repair as required.

Check the tag matrix for Tags 8 and 9 and replace the job separator wire harness, if necessary. (See the service manual for Job separator wire Harness replacement instructions.)
3. Open the Finisher Separator diagnostic page, and then test SN262.

4. Run M262 and verify that the EN262 count changes.
5. Run M268 and verify that the EN268 count changes.
6. Check M262 and M268 for binding and damage.
7. Test the voltage at M262: 33.0 Vdc at pins 2 to 1 on the motor connector.
8. Test the voltage at EN262: 3.3 Vdc at pins 9B to 10B and 11B to 10B on W267P1-W260J267.
9. Test the voltage at M268: 33.0 Vdc at pins 1 to 2 on the motor connector.
10. Test the voltage at EN268: 5.0 Vdc at pins 3 to 1, 2 to 1, and 4 to 1 on the encoder connector.
11. Test the voltage at SN262: 3.3 Vdc at pins 3A to 1A and 2A to 1A on W267P1-W260J267.
12. Replace M262.
13. Replace M268.
14. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 3 wiring diagram on page 2229](#)
- Replace M262: [Finisher Job Separator Gate motor \(M262\) on page 931](#)
- Replace M268: [Finisher Separator Input motor \(M268\) on page 932](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- Replace separator wire harness: [Separator wire harness on page 828](#)

A3.0142

Description

- Finisher Separator Drive motor (M260) stalls while moving down

Primary root causes

- Finisher top bin overloaded
- Finisher Job Separator Lower Limit sensor (SN260)
- Separator mechanical assembly and structure
- M260
- Finisher Separator Drive Motor encoder (EN260)
- Wire harness between the Finisher Main PCA (A200) and M260
- A200

Recommended actions

1. Check the finisher top bin for damage.
2. Check the wire harness between M260 and A200.
3. Open the Finisher Separator diagnostic page, and then test SN260.
4. Run M260, look for binding, and verify that the EN260 count changes.
5. Replace M260.
6. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 2 wiring diagram on page 2229](#)
- Replace M260: [Finisher Separator Drive motor \(M260\) on page 929](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0143

Description

- Finisher Separator Drive motor (M260) stalls while moving up

Primary root causes

- Finisher top bin overloaded
- Finisher Job Separator Lower Limit sensor (SN260)
- Separator mechanical assembly and structure
- M260
- Finisher Separator Drive Motor encoder (EN260)
- Wire harness between the Finisher Main PCA (A200) and M260
- A200
- Gate open springs

Recommended actions

1. Check the Event Log for an A3.0140 code. If such an entry exists, SN260 is probably malfunctioning.
2. Check the finisher top bin for damage.
3. Check the wire harness between M260 and A200.
4. Open the Finisher Separator diagnostic page, and then test SN260.
5. Run M260, look for binding, and verify that the EN260 count changes.
6. Test the voltage at M260: 1.25 Vdc at pins 1 to 2 on the motor connector.
7. Test the voltage at EN260: 5.0 Vdc at pins 2A to 1A, 3A to 1A, and 4A to 1A on W263P1-W260J263.
8. Replace A200.
9. Visually check the two gate open springs for proper mounting and function.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 2 wiring diagram on page 2229](#)
- Replace M260: [Finisher Separator Drive motor \(M260\) on page 929](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0160

Description

- Finisher Stack Holder motor (M252) failed connect test

Primary root causes

- M252
- Finisher Stack Holder sensor (SN252)
- Lower stack holder assembly
- Wire harness between the Finisher Main PCA (A200) and M252.
- A200

Recommended actions

1. Open the Finisher Lower Elevator diagnostic page, run M252, look for binding, and verify that the SN252 count changes. SN252 serves as an encoder for M252.
2. Check the wire harness between M252 and A200.
3. Using the stepper motor test procedure, test the voltage at M252: Pins 1 to 2 and 3 to 4 on the motor connector.
4. Replace SN252.
5. Replace M252
6. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Lower Elevator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 4 wiring diagram on page 2230](#)
- Stepper motor procedure: [How to test a stepper motor on page 1035](#)
- Replace M252: [Finisher Stack Holder motor \(M252\) on page 924](#)
- Replace SN252: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.01A1

Description

- Finisher motor driver 1 temperature is warm

Primary root causes

- Finisher Separator Drive motor (M260)
- Finisher Diverter solenoid (SOL211)
- Finisher Separator Offset motor (M264)
- Finisher Job Separator Gate motor (M262)
- Finisher Main PCA (A200)

Recommended actions

1. Open the Event Log and look for one of the following codes: A3.0140, A3.0141, A3.0142, A3.0143, A3.01A9, or A3.0301. Follow the troubleshooting procedures for the code.
2. Replace A200.

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.01A2

Description

- Finisher motor driver 2 temperature is warm

Primary root causes

- Finisher Separator Drive motor (M260)
- Finisher Main PCA (A200)

Recommended actions

1. Open the Event Log and look for one of the following codes: A3.0140, A3.0142, A3.0143, or A3.0241. Follow the troubleshooting procedures for the code.
2. Replace A200.

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.01A3

Description

- Finisher motor driver 3 temperature is warm

Primary root causes

- Stapler 1 motor (M272)
- Stapler 2 motor (M281)
- Finisher Lower Elevator motor (M250)
- Finisher Main PCA (A200)

Recommended actions

1. Open the Event Log and look for one of the following codes: A3.01E1, A3.01E2, A3.01C1 or A3.01C2. Follow the troubleshooting procedures for the code.
2. Replace A200.

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.01A4

Description

- Finisher motor driver 4 temperature is warm

Primary root causes

- Finisher Lower Paper Path motor (M220)
- Stapler 2 Safety motor (M280)
- Finisher Main PCA (A200)

Recommended actions

1. Open the Event Log and look for one of the following codes: A3.0104, A3.0232 or A3.0233. Follow the troubleshooting procedures for the code.
2. Replace A200.

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.01A5

Description

- Finisher motor driver 5 temperature is warm

Primary root causes

- Finisher Upper Paper Path motor (M230)
- Stapler 1 Rotate motor (M271)
- Finisher Main PCA (A200)

Recommended actions

1. Open the Event Log and look for one of the following codes: A3.0102, A3.0103, A3.01C1, A3.0229, and A3.0230. Follow the troubleshooting procedures for the code.
2. Replace A200.

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.01A6

Description

- Finisher motor driver 6 temperature is warm

Primary root causes

- Finisher Input Paper Path motor (M210)
- Finisher Separator Input motor (M268)
- Finisher Main PCA (A200)

Recommended actions

1. Open the Event Log and look for one of the following codes: A3.0101 and A3.1360. Follow the troubleshooting procedures for the code.
2. Replace A200.

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.01A7

Description

- Finisher motor driver 7 temperature is warm

Primary root causes

- Finisher Separator Drive motor (M260)
- Finisher Main PCA (A200)

Recommended actions

1. Open the Event Log and look for one of the following codes: A3.0140, A3.0142, A3.0143, or A3.0241. Follow the troubleshooting procedures for the code.
2. Replace A200.

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.01A8

Description

- Finisher motor driver 8 temperature is warm

Primary root causes

- Accumulator Open motor (M256)
- Finisher Main PCA (A200)

Recommended actions

1. Open the Event Log and look for an A3.0227 entry. Follow the troubleshooting procedures for the code.
2. Replace A200.

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.01A9

Description

- Finisher Separator Offset motor (M264) stall

Primary root causes

- Finisher Job Separator Offset Back sensor (SN265)
- Finisher Separator Offset Motor encoder (EN264)
- M264 assembly
- Wire harness between the Finisher Main PCA (A200) and M264
- A200

Recommended actions

1. Open the Finisher Separator diagnostic page, and then run M264 and look for binding.
2. Test and clean SN265.
3. Check the M264 assembly for damage.
4. Test the voltage at M264: 3.44 Vdc at pins 1 to 2 on the motor connector.
5. Test the voltage at EN264: 5.0 Vdc at pins 8A to 10A and 9A to 10A on W267P1-W260J267.
6. Test the voltage at SN265: 3.3 Vdc at pins 6B to 8B and 7B to 8B on W267P1-W260J267.
7. Check the wire harness between M264, EN264, SN265, and A200.
8. Replace SN265.
9. Replace M264.
10. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 3 wiring diagram on page 2229](#)
- Replace SN265: [Sensors on page 882](#)
- Replace M264: [Finisher Separator Offset motor \(M264\) on page 931](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.01C1

Description

- Stapler 1 motor (M272) problem

Primary root causes

- Worn or damaged clincher assembly
- M272
- Wire harness between the Finisher Main PCA (A200) and M272
- Bent stapler bracket
- A200
- Incorrectly set CDFT paper sizes

Recommended actions

1. Load fresh paper in the paper trays, and then try to recreate the problem.
2. Remove the staple cartridge from the stapler, open the Finisher Stapler diagnostic page, and then cycle M272.
3. Print a Paper Path Foot Print test page, and then verify that the stapler alignment and location are correct.
4. Run the M271.
5. Check the link between the pivot gear and the stapler.
6. Insert two sheets of paper in the Stapler 1 assembly, cycle M272, and then check the quality of the stapling job.
7. Check the Stapler 1 assembly for correct mounting and damage.
8. Check the wire harness between A200 and M272.
9. Test the voltage at M272: 1.56 Vcd at pins 1 or 2 to 3 or 4 on the motor connector.
10. Replace A200.
11. Verify that the CDFT paper sizes are set correctly. See [Stapler 2 paper-size adjustment on page 167](#) and [Set the HP 4000-sheet input tray paper size on page 73](#).

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Stapler**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 1 wiring diagram on page 2228](#)
- Replace M271: [Stapler 1 motor \(M272\) on page 934](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.01C2

Description

- Stapler 2 motor (M281) problem

Primary root causes

- Worn or damaged clincher assembly
- M281
- Wire harness between the Finisher Main PCA (A200) and M281
- Missing or damaged rubber grommets
- Bent stapler bracket
- A200
- Incorrectly set CDFT paper sizes

Recommended actions

1. Load fresh paper in the paper trays, and then try to recreate the problem.
2. If the problem occurs with the middle staple, remove any obstructions from the accumulator assembly, and check the accumulator eject rollers for damage.
3. Remove the staple cartridge from the stapler, open the Finisher Stapler diagnostic page, and then cycle M281.
4. Print a Paper Path Foot Print test page, and then verify that the stapler alignment and location are correct.
5. Insert two sheets of paper in the Stapler 2 assembly, run M281, and then check the quality of the stapling job.
6. Check the Stapler 2 assembly for correct mounting and damage.
7. Check the wire harness between A200 and M281.
8. Test the voltage at M281: 1.56 Vcd at pins 1 or 2 to 3 or 4 on the motor connector.
9. Replace A200.
10. Verify that the CDFT paper sizes are set correctly. See [Stapler 2 paper-size adjustment on page 167](#) and [Set the HP 4000-sheet input tray paper size on page 73](#).

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Stapler**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 1 wiring diagram on page 2228](#)
- Replace M281: [Stapler 2 motor \(M281\) on page 938](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.01E1

Description

- Output Bin 5 is overloaded

Root causes

- Lower elevator
- M250
- Lower elevator lift assembly
- Finisher Lower Elevator Stack Height sensor (SN257)
- Wire harness between M250 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Remove any paper from the lower elevator, and then check for obstructions underneath the elevator.
2. Open the Finisher Lower Elevator diagnostic page, and then run M250 and check for binding.
3. Verify that the SN257 spring and the M250 bracket are not damaged.
4. Check the voltage at M250.
5. Check the voltage to M250 from A200.
6. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Lower Elevator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 10 wiring diagram on page 2234](#)

A3.0200

Description

- Finisher Input 0 sensor (SN211) failed connect test

Primary root causes

- SN211
- Wire harness between SN211 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN211.
2. Check the wire harness between SN211 and A200.
3. Check the voltage at SN211: 3.3 Vdc at pins 8A to 10A and 9A to 10A on W211P1-W201J211.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace SN211: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0201

Description

- Finisher Input 1 sensor (SN212) failed connect test

Primary root causes

- SN212
- Wire harness between SN212 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN212.
2. Check the wire harness between SN212 and A200.
3. Check the voltage at SN212: 3.3 Vdc at pins 2B to 11A and 1B to 11A on W211P1-W201J211.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 6 wiring diagram on page 2232](#)
- Replace SN212: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0202

Description

- Finisher Input 2 sensor (SN213) failed connect test

Primary root causes

- SN213
- Wire harness between SN213 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN213.
2. Check the wire harness between SN213 and A200.
3. Check the voltage at SN213: 3.3 Vdc at pins 4B to 5B and 3B to 5B on W211P1-W201J211.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 6 wiring diagram on page 2232](#)
- Replace SN213: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0203

Description

- Finisher Input 3 sensor (SN214) failed connect test

Primary root causes

- SN214
- Wire harness between SN214 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN214.
2. Check the wire harness between SN214 and A200.
3. Check the voltage at SN214: 3.3 Vdc at pins 8B to 6B and 7B to 6B on W211P1-W201J211.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 6 wiring diagram on page 2232](#)
- Replace SN214: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0204

Description

- Finisher Upper 1 sensor (SN231) failed connect test

Primary root causes

- SN231
- Wire harness between SN231 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN231.
2. Check the wire harness between SN231 and A200.
3. Check the voltage at SN231: 3.3 Vdc at pins 1B to 8A and 2B to 8A on W231P1-W201J231.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 8 wiring diagram on page 2233](#)
- Replace SN231: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0205

Description

- Finisher Upper 2 sensor (SN232) failed connect test

Primary root causes

- SN232
- Wire harness between SN232 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN232.
2. Check the wire harness between SN232 and A200.
3. Check the voltage at SN232: 3.3 Vdc at pins 4B to 5B and 3B to 5B on W231P1-W201J231.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 8 wiring diagram on page 2233](#)
- Replace SN232: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0206

Description

- Finisher Upper 3 sensor (SN233) failed connect test

Primary root causes

- SN233
- Wire harness between SN233 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN233.
2. Check the wire harness between SN233 and A200.
3. Check the voltage at SN233: 3.3 Vdc at pins 7B to 6B and 8B to 6B on W231P1-W201J231.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 8 wiring diagram on page 2233](#)
- Replace SN233: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0207

Description

- Finisher Lower 1 sensor (SN215) failed connect test

Primary root causes

- SN215
- Wire harness between SN215 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN215.
2. Check the wire harness between SN215 and A200.
3. Check the voltage at SN215: 3.3 Vdc at pins 9B to 11B and 10B to 11B on W211P1-W201J211.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 6 wiring diagram on page 2232](#)
- Replace SN215: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0208

Description

- Finisher Lower 2 sensor (SN221) failed connect test

Primary root causes

- SN221
- Wire harness between SN221 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN221.
2. Check the wire harness between SN221 and A200.
3. Check the voltage at SN221: 3.3 Vdc at pins 1 to 2 and 3 to 2 on W221P1-W201J221.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 7 wiring diagram on page 2232](#)
- Replace SN221: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0210

Description

- Finisher Front Latch sensor (SN204) failed connect test

Primary root causes

- SN204
- Wire harness between SN204 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN204.
2. Check the wire harness between SN204 and A200.
3. Check the voltage at SN204: 3.3 Vdc at pins 1 to 3 and 5.0 Vdc at pins 2 to 3 on W252P4-SN204.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 4 wiring diagram on page 2230](#)
- Replace SN204: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0211

Description

- Finisher Back Latch sensor (SN200) failed connect test

Primary root causes

- SN200
- Wire harness between SN200 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN200.
2. Check the wire harness between SN200 and A200.
3. Check the voltage at SN200: 3.3 Vdc at pins 1 to 3 and 5.0 Vdc at pins 2 to 3 on W201P1-SN200.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 8 wiring diagram on page 2233](#)
- Replace SN200: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0212

Description

- Finisher Right Side Panel sensor (SN216) failed connect test

Primary root causes

- SN216
- Finisher right-side door latch and hinges
- Wire harness between SN216 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN216.
2. Check the Finisher right-side door latch and hinges.
3. Check the wire harness between SN216 and A200.
4. Check the voltage at SN216: 5 Vdc at pins 2A to 1A and 3.3 Vdc at pins 3A to 1A on W211P1-W201J211.
5. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 6 wiring diagram on page 2232](#)
- Replace SN216: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0213

Description

- Finisher Handle 1 (upper transport) Front sensor (SN206) failed connect test

Primary root causes

- SN206
- Finisher right-side door latch and hinges
- Wire harness between SN206 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN206.
2. Check the Finisher right-side door latch and hinges.
3. Check the wire harness between SN206 and A200.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 5 wiring diagram on page 2231](#)
- Replace SN206: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0214

Description

- Finisher Handle 1 (upper transport) Back sensor (SN202) failed connect test

Primary root causes

- SN202
- Finisher Door 2 latch and hinges
- Wire harness between SN202 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN202.
2. Check the Finisher Door 2 latch and hinges.
3. Check the wire harness between SN202 and A200.
4. Check the voltage at SN202: 3.3 Vdc at pins 2 to 3 and 5.0 Vdc at pins 1 to 2 on W201P3-SN202.
5. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 8 wiring diagram on page 2233](#)
- Replace SN202: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0215

Description

- Finisher Handle 3 (lower transport) sensor (SN222) failed connect test

Primary root causes

- SN222
- Finisher Door 4 latch and hinges
- Wire harness between SN222 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN222.
2. Check the Finisher Door 4 latch and hinges.
3. Check the wire harness between SN222 and A200.
4. Check the voltage at SN222: 5 Vdc pins 5B to 6B and 3.3 Vdc 4B to 6B on W221P1-W201J221.
5. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 7 wiring diagram on page 2232](#)
- Replace SN222: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0220

Description

- Accumulator Open sensor (SN255) failed

Primary root causes

- Accumulator door mechanical linkage
- Accumulator Open motor (M256)
- Accumulator Open Motor encoder (EN256)
- SN255
- Wire harness between SN255 and the Finisher Main PCA (A200)
- Wire harness between M256, EN256, the Accumulator Distribution PCA (A240) and A200
- A240
- A200

Recommended actions

1. Open the Finisher Accumulator diagnostic page, and then test SN255.
2. Check the accumulator door mechanical linkage for damage.
3. Check the wire harness between SN255 and A200.
4. Check the voltage at SN255: 3.3 Vdc at pins 1 to 2 and 3 to 2 on W251P10-SN255.
5. Run M256.
6. Check the wire harness between M256, EN256, A240, and A200.
7. Check the voltage at M256: 33 Vdc at pins 1 to 2 on the motor connector
8. Check the voltage at EN256: 3.3 Vdc at pins 3 to 4 and 0 Vdc at pin 5 to 4 on W251P9-EN256
9. Replace A200.
10. Replace A240.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Accumulator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 10 wiring diagram on page 2234](#)
- Replace SN255: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- M243: [A3.0124 on page 1675](#)

A3.0226

Description

- Accumulator Open sensor (SN255) failed connect test

Primary root causes

- SN255
- Accumulator door mechanical linkage
- Wire harness between SN255 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Accumulator diagnostic page, and then test SN255.
2. Check the accumulator door mechanical linkage.
3. Check the wire harness between SN255 and A200.
4. Check the voltage at SN255: 3.3 Vdc at pins 1 to 2 and 3 to 2 on W251P10-SN255.
5. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Accumulator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 10 wiring diagram on page 2234](#)
- Replace SN255: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0227

Description

- Accumulator Closed switch (SW256) failed

Primary root causes

- SW256
- Accumulator door mechanism
- Wire harness between SW256 and the Finisher Main PCA (A200)
- Accumulator Open motor (M256)
- Accumulator Open Motor encoder (EN256)
- Wire harness between M256, EN256, the Accumulator Distribution PCA (A240) and A200
- A240
- A200

Recommended actions

1. Open the Finisher Accumulator diagnostic page, and then test SW256.
2. Check the accumulator door mechanism for damage.
3. Check the wire harness between SW256 and A200.
4. Check the voltage at SW256: 33 Vdc between W251P4 and W251P5 and 5.0 Vdc between W251P12 and W251P11.
5. Run M256.
6. Check the wire harness between M256, EN256, A240, and A200.
7. Check the voltage at M256: 33 Vdc at pins 1 to 2 on the motor connector
8. Check the voltage at EN256: 3.3 Vdc at pins 3 to 4 and 0 Vdc at pin 5 to 4 on W251P9-EN256
9. Replace A200.
10. Replace A240.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Accumulator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 10 wiring diagram on page 2234](#)
- Replace SW256: [Switches on page 945](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0232

Description

- Stapler 2 Guard Position 1 sensor (SN280) failed

Primary root causes

- SN280
- Stapler 1 assembly
- Wire harness between SN280 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Stapler diagnostic page, and then test SN280.
2. Check the mechanical pivot link in the Stapler 1 assembly.
3. Check the wire harness between SN280 and A200.
4. Check the voltage at SN280: 3.3 Vdc at pins 7B to 9B on W270J280-W280P1.
5. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Stapler**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 1 wiring diagram on page 2228](#)
- Replace SN280: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0233

Description

- Stapler 2 Guard Position 2 sensor (SN281) failed

Primary root causes

- SN281
- Stapler 1 assembly
- Wire harness between SN281 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Stapler diagnostic page, and then test SN281.
2. Check the mechanical pivot link in the Stapler 1 assembly.
3. Check the wire harness between SN281 and A200.
4. Check the voltage at SN281: 3.3 Vdc at pins 8B to 9B on W270J280-W280P1.
5. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Stapler**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 1 wiring diagram on page 2228](#)
- Replace SN281: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0240

Description

- Finisher Job Separator Lower Limit sensor (SN260) failed test

Primary root causes

- SN260
- Wire harness between SN260 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Separator diagnostic page, and then test SN260.
2. Check the wire harness between SN260 and A200.
3. Check the voltage at SN260: 3.3 Vdc at pins 3B to 1B and 2B to 1B on W263P1-W260J263.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 2 wiring diagram on page 2229](#)
- Replace SN260: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0241

Description

- Separator does not move down when full

Primary root causes

- Finisher Job Separator Stack Height sensor (SN267)
- Wire harness between SN267 and the Finisher Main PCA (A200)
- A200
- Binding separator slide

Recommended actions

1. Clean SN267, and then verify that it is correctly seated.
2. Open the Finisher Separator diagnostic page, and then test SN267.
3. Check the wire harness between SN267 and A200.
4. Replace A200.
5. Ensure finisher tag 2 is installed.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 3 wiring diagram on page 2229](#)
- Replace SN267: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0242

Description

- Problem with the Finisher Separator safety switches

Primary root causes

- Finisher Separator Safety 1 switch (SW261)
- Finisher Separator Safety 2 switch (SW264)
- Mechanical binding in the separator assembly or safety assembly
- Wire harness between SW261, SW264, and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Check the Event Log for the following codes: A3.0241 and A3.0142. Follow the troubleshooting procedures for the code.
2. Open the Finisher Separator diagnostic page, and then test SW261 and SW264.
3. Verify that the separator assembly and the safety assembly are functioning correctly.
4. Check the wire harness between SW261, SW264, and A200.
5. Replace A200.

Additional root causes

- Finisher Separator Drive motor (M260)

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 2 wiring diagram on page 2229](#)
- Replace SW261: [Switches on page 945](#)
- Replace SW264: [Switches on page 945](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- M260: [A3.0142 on page 1681](#)

A3.0243

Description

- Finisher Job Separator Gate Open sensor (SN262) sensor connect test

Primary root causes

- SN262
- Wire harness between SN262 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Separator diagnostic page, and then test SN262.
2. Check the wire harness between SN262 and the A200.
3. Test the voltage at SN262: 3.3 Vdc at pins 3A to 1A and 2A to 1A on W267P1-W260J267.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 3 wiring diagram on page 2229](#)
- Replace SN262: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0244

Description

- Finisher Job Separator Offset Back sensor (SN265) sensor connect test

Primary root causes

- SN265
- Wire harness between SN265 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Separator diagnostic page, and then test SN265.
2. Check the wire harness between SN265 and the A200.
3. Test the voltage at SN265: 3.3 Vdc at pins 6B to 8B and 7B to 8B on W267P1-W260J267.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 3 wiring diagram on page 2229](#)
- Replace SN265: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0260

Description

- Finisher Lower Elevator Stack Height sensor (SN257) failed

Primary root causes

- SN257
- Wire harness between SN257 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Verify that there is no light shining on SN257.
2. Open the Finisher Lower Elevator diagnostic page, and then test SN257.
3. Check the wire harness between SN257 and A200.
4. Check the voltage at SN257: 5.0 Vdc at pins 1 to 3 and 3.3 Vdc at pins 2 to 3 on W251P6-SN257.
5. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Lower Elevator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 10 wiring diagram on page 2234](#)
- Replace SN257: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0261

Description

- Finisher Lower Elevator Paper Present sensor (SN258) failed

Primary root causes

- SN258
- Wire harness between SN258 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Verify that there is no light shining on SN258.
2. Open the Finisher Lower Elevator diagnostic page, and then test SN258.
3. Check the wire harness between SN258 and A200.
4. Check the voltage at SN258: 5.0 Vdc at pins 1 to 3 and 3.3 Vdc at pins 2 to 3 on W252P1-SN258.
5. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Lower Elevator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 4 wiring diagram on page 2230](#)
- Replace SN258: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0263

Description

- Finisher Job Support Pivot Position 1 sensor (SN253) failed

Primary root causes

- SN253
- Finisher job support arm assembly
- Wire harness between SN253 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Lower Elevator diagnostic page, and then run Finisher Job Support Arm motor (M253) and verify that SN253 activates.
2. Check the Finisher job support arm assembly for binding and damage.
3. Check the wire harness between SN253 and A200.
4. Test the voltage at SN253: 3.3 Vdc at pins 2 to 4, 3 to 4 on W251P8-A253.
5. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Lower Elevator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 3 wiring diagram on page 2229](#)
- Replace SN253: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0264

Description

- Finisher Job Support Pivot Position 2 sensor (SN254) failed

Primary root causes

- SN254
- Finisher job support arm assembly
- Wire harness between SN254 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Lower Elevator diagnostic page, and then run Finisher Job Support Arm motor (M253) and verify that SN254 activates.
2. Check the Finisher job support arm assembly for binding and damage.
3. Check the wire harness between SN254 and A200.
4. Test the voltage at SN254: 3.3 Vdc at pins 2 to 4, 3 to 4 on W251P8-A253.
5. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Lower Elevator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 3 wiring diagram on page 2229](#)
- Replace SN254: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.02A0

Description

- Accumulator Guide sensor (SN243) late

Primary root causes

- SN243
- Wire harness between SN243 and the Finisher Main PCA (A200)
- Accumulator guide bar assembly
- Accumulator Distribution PCA (A240)
- A200

Recommended actions

1. Open the Finisher Accumulator diagnostic page, and then test SN243.
2. Check the accumulator guide bar assembly for damage.
3. Check the wire harness between SN243 and A200.
4. Check the voltage at SN243: 5.0 Vdc at pins 1 to 3 and 3.3 Vdc at pins 2 to 3 on the sensor connector.
5. Replace A200.
6. Replace A240.

Additional root causes

- Accumulator Guide Bar motor (M243)

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Accumulator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 9 wiring diagram on page 2234](#)
- Replace SN243: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- Replace A240: [Accumulator Distribution PCA \(A240\) on page 872](#)
- M243: [A3.0124 on page 1675](#)

A3.02A1

Description

- Accumulator Guide Bar Home sensor (SN245) late

Primary root causes

- SN245
- Wire harness between SN245 and the Finisher Main PCA (A200)
- Accumulator guide bar assembly
- Accumulator Distribution PCA (A240)
- A200

Recommended actions

1. Open the Finisher Accumulator diagnostic page, and then test SN245.
2. Check the accumulator guide bar assembly for damage.
3. Check the wire harness between SN245 and A200.
4. Check the voltage at SN245: 5.0 Vdc at pins 1 to 3 and 3.3 Vdc at pins 2 to 3 on the sensor connector.
5. Replace A200.
6. Replace A240.

Additional root causes

- Accumulator Guide Bar motor (M243)

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Accumulator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 9 wiring diagram on page 2234](#)
- Replace SN245: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- Replace A240: [Accumulator Distribution PCA \(A240\) on page 872](#)
- M243: [A3.0124 on page 1675](#)

A3.02A2

Description

- Accumulator Retainer Finger Shaft sensor (SN244) is late

Primary root causes

- SN244
- Drive gear assembly
- Wire harness between SN244 and the Finisher Main PCA (A200)
- Retainer finger shaft assembly
- A200

Recommended actions

1. Remove any obstruction from the accumulator.
2. Open the Finisher Accumulator diagnostic page, and then run the Accumulator Retainer Finger motor (M246) in order to test SN244.
3. Check the wire harness between SN244 and A200.
4. Check the voltage at SN244: 5.0 Vdc at pins 1 to 3 and 3.3 Vdc at pins 2 to 3 on the sensor connector.
5. Replace A200.

Additional root causes

- M246

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Accumulator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 9 wiring diagram on page 2234](#)
- Replace SN244: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- M246: [A3.0126 on page 1677](#)

A3.02A3

Description

- Accumulator Job Height sensor (SN240) late

Primary root causes

- SN240
- Accumulator springs
- Bearing bracket assembly and drive gear
- Wire harness between SN240 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Accumulator diagnostic page, and then test SN240.
2. Check the SN240 actuator, springs, and drive gear.
3. Check the wire harness between SN240 and A200.
4. Check the voltage at SN240: 5.0 Vdc at pins 1 to 3 and 3.3 Vdc at pins 2 to 3 on the sensor connector.
5. Replace A200.

Additional root causes

- Accumulator Bearing Bracket motor (M242)
- Accumulator Bearing Bracket Home sensor (SN248)

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Accumulator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 9 wiring diagram on page 2234](#)
- Replace SN240: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- M242: [A3.0125 on page 1676](#)
- SN248: [A3.02A5 on page 1730](#)

A3.02A4

Description

- Accumulator Wheel sensor (SN241) late

Primary root causes

- Accumulator wheel
- SN241
- Accumulator springs
- Bearing bracket assembly and drive gear
- Wire harness between SN241 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Verify that the accumulator wheel has free movement.
2. Open the Finisher Accumulator diagnostic page, and then test SN241.
3. Check the SN241 actuator, springs, and drive gear.
4. Check the wire harness between SN241 and A200.
5. Check the voltage at SN241: 5.0 Vdc at pins 1 to 3 and 3.3 Vdc at pins 2 to 3 on the sensor connector.
6. Replace A200.

Additional root causes

- Accumulator Bearing Bracket motor (M242)

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Accumulator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 9 wiring diagram on page 2234](#)
- Replace SN241: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- M242: [A3.0125 on page 1676](#)

A3.02A5

Description

- Accumulator Bearing Bracket Home sensor (SN248) late

Primary root causes

- SN248
- Accumulator springs
- Bearing bracket bushing
- Bearing bracket assembly and drive gear
- Wire harness between SN248 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Accumulator diagnostic page, and then test SN248.
2. Check the SN248 actuator, springs, and drive gear.
3. Check the wire harness between SN248 and A200.
4. Verify that flat section on the bearing bracket bushing is correctly aligned with the flat section on the accumulator.
5. Check the voltage at SN248: 5.0 Vdc at pins 1 to 3 and 3.3 Vdc at pins 2 to 3 on the sensor connector.
6. Replace A200.

Additional root causes

- Accumulator Bearing Bracket motor (M242)
- Accumulator Job Height sensor (SN240)

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Accumulator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 9 wiring diagram on page 2234](#)
- Replace SN248: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- M242: [A3.0125 on page 1676](#)
- SN240: [A3.02A3 on page 1728](#)

A3.02A6

Description

- Accumulator Entry sensor (SN246) activated too long

Primary root causes

- SN246
- Wire harness between SN246 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Check the sensor actuator for damage.
2. Open the Finisher Accumulator diagnostic page, and then test SN246.
3. Check the wire harness between SN246 and A200.
4. Check the voltage at SN246: 5.0 Vdc at pins 1 to 3 and 3.3 Vdc at pins 2 to 3 on the sensor connector.
5. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Accumulator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 9 wiring diagram on page 2234](#)
- Replace SN246: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.02A7

Description

- Stapler 1 Pivot Position 1 sensor (SN271) failed

Primary root causes

- SN271
- Stapler 1 assembly
- Wire harness between SN271 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Stapler diagnostic page, and then run the Stapler 1 motor (M272) and verify that SN271 activates.
2. Check the mechanical pivot link in the Stapler 1 assembly.
3. Check the wire harness between SN271 and A200.
4. Check the voltage at SN271: 3.3 Vdc at pins 7B to 9B on W270J271-W271P1.
5. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Stapler**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 1 wiring diagram on page 2228](#)
- Replace SN271: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.02A8

Description

- Stapler 1 Pivot Position 2 sensor (SN272) failed

Primary root causes

- SN272
- Stapler 1 assembly
- Wire harness between SN272 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Stapler diagnostic page, and then run the Stapler 1 motor (M272) and verify that SN272 activates.
2. Check the mechanical pivot link in the Stapler 1 assembly.
3. Check the wire harness between SN272 and A200.
4. Check the voltage at SN272: 3.3 Vdc at pins 8B to 9B on W270J271-W271P1.
5. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Stapler**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 1 wiring diagram on page 2228](#)
- Replace SN272: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.02A9

Description

- Finisher Stack Holder sensor (SN252) failed

Primary root causes

- Stack holder tab
- SN252
- Finisher Stack Holder motor (M252)
- Stack holder assembly
- Wire harness between SN252 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Check the stack holder tab for damage.
2. Open the Finisher Lower Elevator diagnostic page, and then run M252 and verify that SN252 activates.
3. Run M252 and verify that the SN252 count changes and that there is no binding.
4. Check the wire harness between SN252 and A200.
5. Check the voltage at SN252: 5.0 Vdc at pins 1 to 3 and 3.3 Vdc at pins 2 to 3 on W252P3-SN252.
6. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Lower Elevator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 4 wiring diagram on page 2230](#)
- Replace SN252: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0301

Description

- Finisher Diverter solenoid (SOL211) failed connectivity test

Primary root causes

- SOL211
- Wire harness between SOL211 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then activate SOL211. If the error is reported intermittently, cycle SOL211 and listen for a constant rhythm.
2. Check the Finisher top door and hinges for correct operation and alignment.
3. Check the wire harness between SOL211 and A200.
4. Check the voltage at SOL211: 33.0 Vdc at pins 2 to 1 on the solenoid connector.
5. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 5 wiring diagram on page 2231](#)
- Replace SOL211: [Finisher Diverter solenoid \(SOL211\) on page 957](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.06A0

Description

- Finisher Right-Side Panel LED (LED201) failure

Primary root causes

- LED201
- Wire harness between LED201 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then activate LED201.
2. Check the wire harness between LED201 and A200.
3. Replace LED201.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 8 wiring diagram on page 2233](#)
- Replace LED201: [LEDs on page 942](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.06A1

Description

- Finisher Top-Door LED (LED205) failure

Primary root causes

- LED205
- Wire harness between LED205 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then activate LED205.
2. Check the wire harness between LED205 and A200.
3. Replace LED205.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 5 wiring diagram on page 2231](#)
- Replace LED205: [LEDs on page 942](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.06A2

Description

- Finisher Handle 1 (upper transport) LED (LED234) failure

Primary root causes

- LED234
- Wire harness between LED234 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then activate LED234.
2. Check the wire harness between LED234 and A200.
3. Replace LED234.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 8 wiring diagram on page 2233](#)
- Replace LED234: [LEDs on page 942](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.06A3

Description

- Finisher Handle 2 (upper transport) LED (LED203) failure

Primary root causes

- LED203
- Wire harness between LED203 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then activate LED203.
2. Check the wire harness between LED203 and A200.
3. Replace LED203.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 5 wiring diagram on page 2231](#)
- Replace LED203: [LEDs on page 942](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.06A4

Description

- Finisher Handle 3 (lower transport) LED (LED223) failure

Primary root causes

- LED223
- Wire harness between LED223 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then activate LED223.
2. Check the wire harness between LED223 and A200.
3. Replace LED223.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 7 wiring diagram on page 2232](#)
- Replace LED223: [LEDs on page 942](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.06A6

Description

- Finisher Latch LED (LED204) failure

Primary root causes

- LED204
- Wire harness between LED204 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then activate LED204.
2. Check the wire harness between LED204 and A200.
3. Replace LED204.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 5 wiring diagram on page 2231](#)
- Replace LED204: [LEDs on page 942](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0702

Description

- No communication between the Finisher Main PCA (A200) and the formatter

Primary root causes

- Wire harness between A200 and the formatter
- A200

Recommended actions

1. Verify that the power LEDs on A200 are lit.
2. Test the voltage at each of the test points on A200.
3. Check the wire harness between the MFP formatter and the MFP bulkhead.
4. Replace the wire harness between A200 and the MFP.
5. Replace A200.

Links

- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.0703

Description

- Finisher Main PCA (A200) motor driver 1 over temperature

Primary root causes

- A200

Recommended actions

1. Open the Event Log and look for one of the following codes: A3.0140, A3.0141, A3.0142, A3.0143, A3.01A9, or A3.0301. Follow the troubleshooting procedures for the code.
2. Replace A200.

Additional root causes

- Finisher Separator Drive motor (M260)
- Finisher Diverter solenoid (SOL211)
- Finisher Separator Offset motor (M264)
- Finisher Job Separator Gate motor (M262)

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- M260: [A3.0103 on page 1671](#)
- SOL211: [A3.0301 on page 1735](#)
- M264: [A3.01A9 on page 1692](#)
- M262: [A3.0141 on page 1679](#)

A3.0704

Description

- Finisher Main PCA (A200) motor driver 2 over temperature

Primary root causes

- A200

Recommended actions

1. Open the Event Log and look for one of the following codes: A3.0140, A3.0142, or A3.0143. Follow the troubleshooting procedures for the code.
2. Replace A200.

Additional root causes

- Finisher Separator Drive motor (M260)

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- M260: [A3.0140 on page 1678](#)

A3.0705

Description

- Finisher Main PCA (A200) motor driver 3 over temperature

Primary root causes

- A200

Recommended actions

1. Open the Event Log and look for one of the following codes: A3.01E1, A3.01E2, A3.01C1 or A3.01C2. Follow the troubleshooting procedures for the code.
2. Replace A200.

Additional root causes

- Stapler 1 motor (M272)
- Stapler 2 motor (M281)
- Finisher Lower Elevator motor (M250)

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- M272: [A3.01C1 on page 1693](#)
- M281: [A3.01C2 on page 1694](#)
- M250: [Output Bin 5 is overloaded on page 1155](#)

A3.0706

Description

- Finisher Main PCA (A200) motor driver 4 over temperature

Primary root causes

- A200

Recommended actions

1. Open the Event Log and look for one of the following codes: A3.0104, A3.0232 or A3.0233. Follow the troubleshooting procedures for the code.
2. Replace A200.

Additional root causes

- Finisher Lower Paper Path motor (M220)
- Stapler 2 Safety motor (M280)

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- M220: [A3.0104 on page 1672](#)
- M280: [A3.0232 on page 1714](#)

A3.0707

Description

- Finisher Main PCA (A200) motor driver 5 over temperature

Primary root causes

- A200

Recommended actions

1. Open the Event Log and look for one of the following codes: A3.0102, A3.0103, A3.01C1, A3.0229, or A3.0230. Follow the troubleshooting procedures for the code.
2. Replace A200.

Additional root causes

- Finisher Upper Paper Path motor (M230)
- Stapler 1 Rotate motor (M271)

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- M230: [A3.0102 on page 1670](#)
- M271: [A3.01C1 on page 1693](#)

A3.0708

Description

- Finisher Main PCA (A200) motor driver 6 over temperature

Primary root causes

- A200

Recommended actions

1. Open the Event Log and look for one of the following codes: A3.0101 or A3.1360. Follow the troubleshooting procedures for the code.
2. Replace A200.

Additional root causes

- Finisher Input Paper Path motor (M210)
- Finisher Job Support Arm motor (M253)

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- M210: [A3.0101 on page 1669](#)
- M253: [A3.1360 on page 1772](#)

A3.0709

Description

- Finisher Main PCA (A200) motor driver 7 over temperature

Primary root causes

- A200

Recommended actions

1. Open the Event Log and look for one of the following codes: A3.0140, A3.0142, or A3.0143. Follow the troubleshooting procedures for the code.
2. Replace A200.

Additional root causes

- Finisher Separator Drive motor (M260)

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- M260: [A3.0140 on page 1678](#)

A3.0710

Description

- Finisher Main PCA (A200) motor driver 8 over temperature

Primary root causes

- A200

Recommended actions

1. Open the Event Log and look for an A3.0227 error code. Follow the troubleshooting procedures for the code.
2. Replace A200.

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.07A1

Description

- Finisher Main PCA (A200) 32 Vdc is out of specification

Primary root causes

- A200

Recommended actions

1. Verify that the power and firmware heartbeat LEDs on A200 are lit.
2. Verify that the voltage on each of the A200 test points is within specification.
3. Replace A200.

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.07A2

Description

- Finisher Main PCA (A200) 3.3 Vdc is out of specification

Primary root causes

- A200

Recommended actions

1. Verify that the power LEDs on A200 are lit.
2. Verify that the voltage on each of the A200 test points is within specification.
3. Replace A200.

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.07A3

Description

- Finisher Main PCA (A200) 42 Vdc is out of specification

Primary root causes

- Accumulator Entry motor (M240)
- Accumulator Exit motor (M241)
- Wire harness between A200, M240, and M241
- A200

Recommended actions

1. Verify that the 42 Vdc LED on A200 is lit.
2. Test the voltage at the 42 Vdc test point on A200.
3. Open the Finisher Accumulator diagnostic page, and then run M240 and M241.
4. Perform the stepper motor checkout procedure.
5. Check the wire harness between A200, M240, and M241.
6. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Accumulator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A3.1300

Description

- Finisher Input 0 sensor (SN211) problem

Primary root causes

- SN211
- Transport drive belt damage and tension
- Transport drive rollers and idler rollers
- Right-door latch and hinges
- Wire harness between the Finisher Main PCA (A200) and SN211
- A200

Recommended actions

1. Clean SN211, and then verify that SN211 is correctly installed.
2. Verify that the door latch and hinges operate correctly.
3. Open the Finisher Paper Path diagnostic page, and then test SN211.
4. Check the transport drive belts, drive rollers, and idlers for damage, contamination, and correct tension.
5. Check the wire harness between A200 and SN211.
6. Check the voltage at SN211: 3.3 Vdc at pins 8A to 10A and 9A to 10A on W211P1-W201J211.
7. Replace A200.

Additional root causes

- Finisher Input Paper Path motor (M210)

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher Main PCA \(A200\) diagram on page 2235](#)
- Replace SN211: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- M210: [A3.0101 on page 1669](#)

A3.1301

Description

- Finisher Input 1 sensor (SN212)

Primary root causes

- SN212
- Transport drive belt damage and tension
- Transport drive rollers and idler rollers
- Right-door latch and hinges
- Wire harness between the Finisher Main PCA (A200) and SN212
- A200

Recommended actions

1. Clean SN212, and then verify that SN212 is correctly installed.
2. Verify that the door latch and hinges operate correctly.
3. Open the Finisher Paper Path diagnostic page, and then test SN212.
4. Check the transport drive belts, drive rollers, and idlers for damage, contamination, and correct tension.
5. Check the wire harness between A200 and SN212.
6. Check the voltage at SN212: 3.3 Vdc at pins 2B to 11A and 1B to 11A on W211P1-W201J211.
7. Replace A200.

Additional root causes

- Finisher Input Paper Path motor (M210)

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 6 wiring diagram on page 2232](#)
- Replace SN212: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- M210: [A3.0101 on page 1669](#)

A3.1302

Description

- Finisher Input 2 sensor (SN213)

Primary root causes

- SN213
- Transport drive belt damage and tension
- Transport drive rollers and idler rollers
- Right-door latch and hinges
- Wire harness between Finisher Main PCA (A200) and SN213
- A200

Recommended actions

1. Clean SN213, and then verify that SN213 is correctly installed.
2. Verify the door latch and hinges operate correctly.
3. Open the Finisher Paper Path diagnostic page, and then test SN213.
4. Check the transport drive belts, drive rollers, and idlers for damage, contamination, and correct tension.
5. Check the wire harness between the A200 and the SN213.
6. Test the voltage at SN213: 3.3 Vdc at pins 4B to 5B and 3B to 5B on W211P1-W201J211.
7. Replace A200.

Additional root causes

- Finisher Input Paper Path motor (M210)

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 6 wiring diagram on page 2232](#)
- Replace SN213: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- M210: [A3.0101 on page 1669](#)

A3.1303

Description

- Finisher Input 3 sensor (SN214)

Primary root causes

- SN214
- Transport drive belt damage and tension
- Transport drive rollers and idler rollers
- Right-door latch and hinges
- Wire harness between Finisher Main PCA (A200) and SN214
- A200

Recommended actions

1. Clean SN214, and then verify that SN214 is correctly installed.
2. Verify the door latch and hinges operate correctly.
3. Open the Finisher Paper Path diagnostic page, and then test SN214.
4. Check the transport drive belts, drive rollers, and idlers for damage, contamination, and correct tension.
5. Check the wire harness between A200 and SN214.
6. Test the voltage at SN214: 3.3 Vdc at pins 8B to 6B and 7B to 6B on W211P1-W201J211.
7. Replace A200.

Additional root causes

- Finisher Input Paper Path motor (M210)

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 6 wiring diagram on page 2232](#)
- Replace SN214: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- M210: [A3.0101 on page 1669](#)

A3.1304

Description

- Finisher Upper 1 sensor (SN231)

Primary root causes

- SN231
- Transport drive belt damage and tension
- Transport drive rollers and idler rollers
- Top-door latch and hinges
- Wire harness between Finisher Main PCA (A200) and the SN231
- A200

Recommended actions

1. Clean SN231, and then verify that SN231 is correctly installed.
2. Verify the door latch and hinges operate correctly.
3. Open the Finisher Paper Path diagnostic page, and then test SN231.
4. Check the transport drive belts, drive rollers, and idlers for damage, contamination, and correct tension.
5. Check the wire harness between the A200 and SN231.
6. Check the voltage at SN231: 3.3 Vdc at pins 1B to 8A and 2B to 8A on W231P1-W201J231.
7. Replace A200.

Additional root causes

- Finisher Upper Paper Path motor (M230)

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 8 wiring diagram on page 2233](#)
- Replace SN231: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- M230: [A3.0102 on page 1670](#)

A3.1305

Description

- Finisher Upper 2 sensor (SN232)

Primary root causes

- SN232
- Transport drive belt damage and tension
- Transport drive rollers and idler rollers
- Top-door latch and hinges
- Wire harness between Finisher Main PCA (A200) and SN232
- A200

Recommended actions

1. Clean SN232, and then verify that SN232 is correctly installed.
2. Verify the door latch and hinges operate correctly.
3. Open the Finisher Paper Path diagnostic page, and then test SN232.
4. Check the transport drive belts, drive rollers, and idlers for damage, contamination, and correct tension.
5. Check the wire harness between A200 and SN232.
6. Test the voltage at SN232: 3.3 Vdc at pins 4B to 5B and 3B to 5B on W231P1-W201J231.
7. Replace A200.

Additional root causes

- Finisher Upper Paper Path motor (M230)

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 8 wiring diagram on page 2233](#)
- Replace SN232: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- M230: [A3.0102 on page 1670](#)

A3.1306

Description

- Finisher Upper 3 sensor (SN233)

Primary root causes

- SN233
- Transport drive belt damage and tension
- Transport drive rollers and idler rollers
- Top-door latch and hinges
- Wire harness between Finisher Main PCA (A200) and the SN233
- A200

Recommended actions

1. Clean SN233, and then verify that SN233 is correctly installed.
2. Verify the door latch and hinges operate correctly.
3. Open the Finisher Paper Path diagnostic page, and then test SN233.
4. Check the transport drive belts, drive rollers, and idlers for damage, contamination, and correct tension.
5. Check the wire harness between A200 and SN233.
6. Test the voltage at SN233: 3.3 Vdc at pins 7B to 6B and 8B to 6B on W231P1-W201J231.
7. Replace A200.

Additional root causes

- Finisher Upper Paper Path motor (M230)
- Finisher Job Separator Gate Open sensor (SN262)

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 8 wiring diagram on page 2233](#)
- Replace SN233: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- M230: [A3.0102 on page 1670](#)
- SN262: [A3.0141 on page 1679](#)

A3.1307

Description

- Finisher Lower 1 sensor (SN215)

Primary root causes

- SN215
- Transport drive belt damage and tension
- Transport drive rollers and idler rollers
- Top-door latch and hinges
- Wire harness between the Finisher Main PCA (A200) and SN215
- A200
- Finisher Diverter solenoid (SOL211)

Recommended actions

1. Clean SN215, and then verify that SN215 is correctly installed.
2. Verify that the door latch and hinges operate correctly.
3. Open the Finisher Paper Path diagnostic page, and then test SN215 and SOL211 using the diagnostics.
4. Check the transport drive belts, drive rollers, and idlers for damage, contamination, and correct tension.
5. Check the wire harness between A200 and SN215.
6. Test the voltage at SN215: 3.3 Vdc at pins 9B to 11B and 10B to 11B on W211P1-W201J211.
7. Replace A200.

Additional root causes

- Finisher Lower Paper Path motor (M220)

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 6 wiring diagram on page 2232](#)
- Replace SN215: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- M220: [A3.0104 on page 1672](#)

A3.1308

Description

- Finisher Lower 2 sensor (SN221)

Primary root causes

- SN221
- Transport drive belt damage and tension
- Transport drive rollers and idler rollers
- Top-door latch and hinges
- Bearing bracket bushing
- Wire harness between Finisher Main PCA (A200) and SN221
- Accumulator Entry motor (M240)
- Wire harness between M240, the Accumulator Distribution PCA (A240), and A200
- A200
- A240

Recommended actions

1. Clean SN221, and then verify that SN221 is correctly installed.
2. Verify that the door latch and hinges operate correctly.
3. Open the Finisher Paper Path diagnostic page, and then test SN221 using the diagnostics.
4. Check the transport drive belts, drive rollers, and idlers for damage, contamination, and correct tension.
5. Verify that flat section on the bearing bracket bushing is correctly aligned with the flat section on the accumulator.
6. Check the wire harness between A200 and SN221.
7. Test the voltage at SN221: 3.3 Vdc at pins 1 to 2 and 3 to 2 on W221P1-W201J221.
8. Run Accumulator Entry motor (M240).
9. Check the wire harness between M240, A240, and A200.
10. Use the stepper motor test procedure to test M240.
11. Replace M240.
12. Replace A240.
13. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 7 wiring diagram on page 2232](#)
- Replace SN221: [Sensors on page 882](#)
- Replace M240: [Accumulator Entry motor \(M240\) on page 914](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- Replace A240: [Accumulator Distribution PCA \(A240\) on page 872](#)

A3.1320

Description

- Accumulator Entry sensor (SN246)

Primary root causes

- SN246
- Accumulator Entry motor (M240)
- Bearing bracket bushing
- Wire harness between SN246, M240, the Accumulator Distribution PCA (A240), and the Finisher Main PCA (A200) and
- A200
- A240
- Stapler 2 cover (catching media)

Recommended actions

1. Open the Finisher Accumulator diagnostic page, and then test SN246.
2. Verify that flat section on the bearing bracket bushing is correctly aligned with the flat section on the accumulator.
3. Replace the stapler 2 cover, particularly if media is being damaged during this jam in the top left corner, or if media is bunching up in the stapler 2 area.
4. Check the wire harness between A200, M240, and SN246.
5. Test the voltage at SN246: 5.0 Vdc at pins 1 to 3 and 3.3 Vdc at pins 2 to 3 on the sensor connector.
6. Using the stepper motor test procedure, test the voltage to M240 on A200: CN1 pins 1 to 2 and 3 to 4.
7. Replace M240.
8. Replace A200.
9. Replace A240.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Accumulator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 9 wiring diagram on page 2234](#)
- Replace SN246: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

- Replace M240: [Accumulator Entry motor \(M240\) on page 914](#)
- Replace M240: [Accumulator Entry motor \(M240\) on page 914](#)

A3.1321

Description

- General accumulator paper jam

Primary root causes

- Guide bar motor stalling due to retainer finger issue
- Media obstruction
- Bearing bracket bushing
- Accumulator Bearing Bracket Home sensor (SN248)
- Accumulator springs
- Bearing bracket assembly or bearing bracket to paper lever gear timing
- Wire harness between SN248 and the Finisher Main PCA (A200)
- Incorrect orientation of accumulator bushings

Recommended actions

1. Clear any obstruction in the accumulator area.

Check the device Event Log and Warning Log. Usually warnings are logged in the Warning Log together with the A3.1321 jams in the event Log (same date, time and page count). These warning logs help diagnose the reason for the accumulator A3.1321 error.

- If the pair of codes is Error Code = A3.1321 and Warning Code = A3.02A2, the root cause is the retainer finger sensor. Replace the guide bar assembly (C5959-67125, SVC-BAR-RETAINER CPL).
 - If the pair of codes is Error Code = A3.1321 and Warning Code = A3.02A1, the root cause is the guide bar home sensor late. Replace the accumulator (C5959-67104, SVC-ACCUMULATOR).
2. Verify that flat section on the bearing bracket bushing is correctly aligned with the flat section on the accumulator. Using the bearing bracket to paper lever alignment pins, align the two gears.
 3. Open the Event Log and look for one of the following codes: A3.0125, A3.0126, A3.02A0, A3.02A1, A3.02A2, A3.02A3, A3.02A4, and A3.02A5. Follow the troubleshooting procedures for the code.
 4. Open the Finisher Accumulator diagnostic page, and then test SN248.
 5. Check the wire harness between SN248 and A200.
 6. Replace A200.
 7. Check the two bushings on the accumulator which have specific orientations. Align the flat sides of the bushings with the lip of the accumulator wall mounting location for proper operation. Note: If the symptom is the second sheet that is fed into the accumulator jams half way out or the accumulator and displays error A3.1321, check the bushing orientation.

Additional root causes

- M242
- SN240
- SN241

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Accumulator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 9 wiring diagram on page 2234](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- M242: [A3.0125 on page 1676](#)
- SN240: [A3.02A3 on page 1728](#)
- SN241: [A3.02A4 on page 1729](#)

A3.1322

Description

- Accumulator Exit sensor (SN242)

Primary root causes

- SN242
- Accumulator Exit motor (M241)
- Accumulator gears, eject shaft
- Damaged bearing bracket
- Wire harness between the Finisher Main PCA (A200), M241, and SN242
- A200
- Accumulator Distribution PCA (A240)

Recommended actions

1. Open the Finisher Accumulator diagnostic page, and then test SN242.
2. Check the bearing bracket for damage.
3. Check the wire harness between A200, M241, and SN242.
4. Test the voltage at SN242: 5.0 Vdc at pins 1 to 3 and 3.3 Vdc at pins 2 to 3 on the sensor connector.
5. Using the stepper motor test procedure, test the voltage to M241 on A200: CN2 pins 1 to 2 and 3 to 4.
6. Replace M241.
7. Replace A200.
8. Replace A240.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Accumulator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 9 wiring diagram on page 2234](#)
- Replace SN242: [Sensors on page 882](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- Replace M241: [Accumulator Exit motor \(M241\) on page 915](#)

A3.1323

Description

- Stapler 1 paper jam

Primary root causes

- Mechanical jam in the stapler
- Media curl
- Stapler 1 Home sensor (SN276)
- Wire harness between SN276 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Check the stapler for mechanical binding, contamination, excessive wear, and correct installation.
2. Verify that the media curl is out of specifications.
3. Remove any paper from the Stapler 1 area.
4. Open the Finisher Stapler diagnostic page, and then run the Stapler 1 motor (M272) and verify that SN276 activates.
5. Check the wire harness between SN276 and A200.
6. Test the voltage at SN276: 3.3 Vdc at pins 4B to 9B and 5.0 Vdc at pins 5B to 9B on W270J271-W271P1.
7. Replace A200.

Additional root causes

- M272
- Accumulator Open sensor (SN255)

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Stapler**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 1 wiring diagram on page 2228](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- SN255: [A3.0226 on page 1712](#)
- M272: [A3.01C1 on page 1693](#)

A3.1324

Description

- Stapler 2 paper jam

Primary root causes

- Media curl
- Stapler 2 Home sensor (SN284)
- Wire harness between SN284 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Verify that the media curl is out of specifications.
2. Remove any paper from the Stapler 2 area.
3. Open the Finisher Stapler diagnostic page, and then test SN284.
4. Check the wire harness between SN284 and A200.
5. Test the voltage at SN284: 3.3 Vdc at pins 4B to 9B and 5 Vdc at pins 5B to 9B on W270J280-W280P1.
6. Replace A200.

Additional root causes

- Stapler 2 motor (M281)

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Stapler**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 1 wiring diagram on page 2228](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- M281: [A3.01C2 on page 1694](#)

A3.1325

Description

- Finisher Separator does not move up

Primary root causes

- SW287
- Wire harness between the Finisher Main PCA (A200) and SW287
- A200

Recommended actions

1. Open the Finisher Stapler diagnostic page, and then test SW287.
2. Check the wire harness between the A200 and SW287.
3. Test the voltage at SW287: 5.0 Vdc at pins 1A to 2A on W270J280-W280P1.
4. Replace A200.

Additional root causes

- Finisher Lower Elevator motor (M250)

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Stapler**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 1 wiring diagram on page 2228](#)
- Replace SW287: [Switches on page 945](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- M250: [Output Bin 5 is overloaded on page 1155](#)

A3.1360

Description

- Job support assembly arm failed to move

Primary root causes

- M253
- Finisher Job Support Arm motor encoder (EN253)
- Job support arm assembly
- Wire harness between the Finisher Main PCA (A200), M253, and EN253
- A200

Recommended actions

1. Open the Finisher Separator diagnostic page, and then run M253 and verify that the EN253 count changes.
2. Check the Finisher job support arm assembly for binding and damage.
3. Check the wire harness between the A200, M253, and EN253.
4. Test the voltage at M253: 33.0 Vdc at pins 2 to 1 on the motor connector.
5. Test the voltage at EN253: 3.3 Vdc at pins 3 to 4 and 5 to 4 on W251p7-EN253.
6. Replace A200.

Additional root causes

- Stapler 2 Home sensor (SN284)

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP Multi-function Finisher component locator on page 2320](#)
- Wiring diagram: [Finisher 10 wiring diagram on page 2234](#)
- Replace M253: [Finisher Job Support Arm motor \(M253\) on page 925](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)
- SN284: [A3.1324 on page 1770](#)

A3.3801

Description

- Finisher Input 0 sensor (SN211) detects paper (stays High) in the finisher input even when no paper is present. This causes intermittent or frequent A3.3801 finisher firmware faults. This error can begin happening on units that have previously been running fine. It can also come and go unexpectedly.

Primary root causes

- Sheet metal in right-side panel and input paper path are not positioned correctly for SN211 to detect paper properly.
- SN211
- Engine firmware fault (very infrequent)

Recommended actions

If the A3.3801 error is seen repeatedly but the sensor diagnostic shows SN211 is functional, you might need to replace the input paper path assembly and the right-side panel assembly. Note: The Service Manual lists instructions for removing both of these components separately. However, it is recommended for this job that you remove both parts as a unit, without removing the right-side panel first.

1. Check the unit Event Log.

Isolated occurrences of the A3.3801 error DO NOT necessarily indicate a problem with SN211. However, if there are clusters of A3.3801 errors in the event log, or groups of several of these errors happening in the same day, within hours, and then going away and reappearing on a different day, this problem should be addressed proactively. Escalate through the call center.

Verify that SN211 is tripping on and off through CDFT:

- a. Open CDFT. Select **Subsystems > Finisher > Finisher Paper Path**.
 - b. Slide the finisher away from the MFP to access the right-side panel.
 - c. Insert a piece of paper into the input of the right-side panel. Verify that the Finisher Input 0 sensor (SN211) trips on and off as you insert and remove the paper.
 - d. Replace the sensor if it stays Low and never trips to High.
2. If the Event Log shows clusters of A3.3801 errors, but the sensor appears to be working correctly (it DOES trip on and off), this indicates that the problem is intermittent. If the Event Log shows clusters of A3.3801 errors, and the sensor DOES NOT appear to be working correctly (stays High or does not trip reliably), complete the short term fix to disable the SN211 sensor through CDFT (see the following instructions).

 **NOTE:** This functionality is only available with 73.022.0 or later firmware.

3. **IMPORTANT!** You will also need to complete the long term fix by replacing the input paper path assembly and the right-side panel assembly. See Service Note c01384229 for information disabling SN211, replacing the input path assembly, and enabling SN211.

A3.3836

Description

- One of the accumulator offsetting arms failed to home

Primary root causes

- Lack of proper calibration. (The offset stall detect calibration must be performed whenever a PCA or accumulator is replaced, or when NVRAM has been lost. This calibration can be done through CDFT.)
- Accumulator Offset 1 motor (M244) and/or Accumulator Offset 2 motor (M245)
- Offset arms, track, and other drive mechanisms
- Finisher Main PCA (A200)

Recommended actions

1. Open the Finisher Calibrations page and perform the offset stall detect calibration.
2. Check the offset mechanism hardware for any broken or damaged parts. Verify that the offset arms move smoothly when the motor is moved in both directions and that they do not flop around. Also verify that the offset arms do not have any excess movement up or down, as this indicates that they are damaged in some way.
3. Open the Finisher Accumulator diagnostic page, and then run M244 and M245 to verify that the motors turn.
4. Using the stepper motor test procedure, test the voltage to M244 on A240: CN4 pins 1 to 2 and 3 to 4.
5. Using the stepper motor test procedure, test the voltage to M245 on A240: CN3 pins 1 to 2 and 3 to 4.
6. Replace the accumulator, and then perform the offset stall detect calibration.
7. Replace A200, and then perform the offset stall detect calibration.

A3.3839

Description

- One of the accumulator offsetting arms failed to home

Primary root causes

- Lack of proper calibration. (The offset stall detect calibration must be performed whenever a PCA or accumulator is replaced, or when NVRAM has been lost. This calibration can be done through CDFT.)
- Offset motors Accumulator Offset 1 motor (M244) or Accumulator Offset 2 motor (M245)
- Offset arms, track, and other drive mechanisms
- Finisher Main PCA (A200)

Recommended actions

1. Open the Finisher Calibrations page and perform the **Offset stall** detect calibration.
2. Check the offset mechanism hardware for any broken or damaged parts. Verify that the offset arms move smoothly when the motor is moved in both directions and that they do not flop around. Also verify that the offset arms do not have any excess movement up or down, as this indicates that they are damaged.
3. Open the Finisher Accumulator diagnostic page, and then run M244 and M245 to verify that the motors turn.
4. Using the stepper motor test procedure, test the voltage to M244 on A240: CN4 pins 1 to 2 and 3 to 4.
5. Using the stepper motor test procedure, test the voltage to M245 on A240: CN3 pins 1 to 2 and 3 to 4.
6. Replace the accumulator, and then perform the **Offset stall** detect calibration.
7. Replace A200, and then perform the **Offset stall** detect calibration.

A3.3880

Description

- An A3.3880 code and an orange, hideable "recoverable finisher error" window is displayed when a finisher motor, sensor, or solenoid is selected in CDFT. The error window will not reappear until CDFT is exited or a print job is initiated (which takes the finisher out of service mode).

Primary root causes

- This is normal system behavior

Recommended actions

1. Exiting CDFT clears this error.
2. No further action or repair is required.

A3.38zz

Description

- Finisher firmware fault

Primary root causes

- Corrupt finisher firmware or the wire harness between the finisher and the MFP
- Cable connection between the MFP and the finisher

Recommended actions

1. Check the wire harness between the finisher and the MFP, and then power cycle the MFP.
2. Verify that the cable connection between the MFP and the finisher is secure.

A4.0101

Description

- Finisher Input Paper Path motor (M210) stall

Primary root causes

- M210
- Finisher Input Paper Path Motor encoder (EN210)
- Drive roller bearings and idlers
- Wire harness between the Finisher Main PCA (A200) and M210
- A200
- Transport drive belts

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then run M210 to verify that the motor turns and that the EN210 count changes.
2. Manually turn M210 and verify that the drive system does not bind.
3. Check the belt tension.
4. Check the wire harness between M210 and A200.
5. Test the voltage at M210: 1.0 Vdc at pins 1 to 4 on W210P1-W200J210.
6. Test the voltage at EN210: 5.0 Vdc at pins 6A to 4A, 5A to 4A, and 7A to 4A on W211P1-W201J211.
7. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator wiring diagram on page 2238](#)
- Replace M210: [Finisher Input Paper Path motor \(M210\) on page 1009](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)

A4.0103

Description

- Finisher Separator Input motor (M268) stall

Primary root causes

- M268
- Finisher Separator Input Motor encoder (EN268)
- Drive roller bearings and idlers
- Wire harness between the Finisher Main PCA (A200) and M268
- A200
- Transport drive belts

Recommended actions

1. Open the Finisher Separator diagnostic page, and then run M268 to verify that the motor turns and that the EN268 count changes.
2. Manually turn M268 and verify that the drive system does not bind.
3. Check the belt tension.
4. Check the wire harness between M268 and A200.
5. Test the voltage at M268: 1.0 Vdc at pins 2 to 1 on the motor connector.
6. Test the voltage at EN268: 5.0 Vdc at pins 3 to 1, 2 to 1, and 4 to 1 on the encoder connector.
7. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator wiring diagram on page 2238](#)
- Replace M268: [Finisher Separator Drive motor \(M260\) on page 1012](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 958](#)

A4.0140

Description

- Finisher Separator Drive motor (M260) stall

Primary root causes

- Finisher top bin overloaded
- Finisher Job Separator Lower Limit sensor (SN260)
- Separator mechanical assembly and structure
- M260
- Finisher Separator Drive Motor encoder (EN260)
- Wire harness between the Finisher Main PCA (A200) and M260
- A200

Recommended actions

1. Check the finisher top bin for damage.
2. Check the wire harness between M260 and A200.
3. Open the Finisher Separator diagnostic page, and then test SN260.
4. Run M260, look for binding, and verify that the EN260 count changes.
5. Test the voltage at M260: 1.25 Vdc at pins 1 to 2 on the motor connector.
6. Test the voltage at EN260: 5.0 Vdc at pins 2A to 1A, 3A to 1A, and 4A to 1A on W263P1-W260J263.
7. Replace M260.
8. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator wiring diagram on page 2238](#)
- Replace M260: [Finisher Separator Drive motor \(M260\) on page 1012](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)

A4.0141

Description

- Finisher Job Separator Gate motor (M262) stall

Primary root causes

- One or more broken gate pickets causing interference with the movement of the gate
- Finisher Job Separator Gate Open sensor (SN262) not completely blocked by the J-shaped “flag” when it is in the down position
- Incorrect installation of the job separator wire harness. (See service manual for job separator wire harness replacement instructions.)
- Bad connection to SN262 or M262 due to damage in the job separator wire harness or damage to the component
- Finisher Separator Input motor (M268)
- A200

Recommended actions

1. Visually inspect the gate pickets. (See Parts Manual - Finisher Separator paper gate assembly parts diagram)
 - Remove output Bins 1-4 to observe the gate pickets. Each picket should sit firmly in its slot without any slop or movement. Try to move each one separately. If a loose picket is found, remove and replace it with a new picket.

△ **CAUTION:** The latch tabs on the pickets are very fragile and will only withstand enough pressure to put them in once. Loose pickets will need to be replaced with new parts.

 - Open the Finisher Separator diagnostic page in CDFT, and activate M262. Check that each picket moves easily up and down with smooth operation in both directions. Start and stop the test several times paying particular attention to any erratic operation. Replace any loose pickets as required.
2. Visually inspect the movement of the J-shaped “flag” which activates SN262.

In CDFT, activate M262 and verify the following:

 - M262 moves the J-shaped 'flag' up and down. Check the wiring going to M262 and M264 to ensure that the correct wire is going to the correct motor. HINT: M262 is the motor which is next to SN262.
 - Finisher Separator Gate Motor encoder (EN262) count changes and that SN262 toggles H and L. (Note: SN262 is slow to react and might not show a correct count. This is normal.)
 - The J-shaped “flag” completely blocks SN262 at every down position. Check for mechanical obstacles or damage to the M262 transmission assembly. Repair as required.

Check the tag matrix for Tags 8 and 9 and replace the job separator wire harness, if necessary. (See the service manual for Job separator wire Harness replacement instructions.)
3. Open the Finisher Separator diagnostic page, and then test SN262.

4. Run M262 and verify that the EN262 count changes.
5. Run M268 and verify that the EN268 count changes.
6. Check M262 and M268 for binding and damage.
7. Test the voltage at M262: 33.0 Vdc at pins 2 to 1 on the motor connector.
8. Test the voltage at EN262: 3.3 Vdc at pins 9B to 10B and 11B to 10B on W267P1-W260J267.
9. Test the voltage at M268: 33.0 Vdc at pins 1 to 2 on the motor connector.
10. Test the voltage at EN268: 5.0 Vdc at pins 3 to 1, 2 to 1, and 4 to 1 on the encoder connector.
11. Test the voltage at SN262: 3.3 Vdc at pins 3A to 1A and 2A to 1A on W267P1-W260J267.
12. Replace M262.
13. Replace M268.
14. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator wiring diagram on page 2238](#)
- Replace M262: [Finisher Job Separator Gate motor \(M262\) on page 1014](#)
- Replace M268: [Output media path motor \(M268\) on page 1015](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)
- Replace separator wire harness: [Separator wire harness on page 828](#)

A4.0142

Description

- Finisher Separator Drive motor (M260) stalls while moving down

Primary root causes

- Finisher top bin overloaded
- Finisher Job Separator Lower Limit sensor (SN260)
- Separator mechanical assembly and structure
- M260
- Finisher Separator Drive Motor encoder (EN260)
- Wire harness between the Finisher Main PCA (A200) and M260
- A200

Recommended actions

1. Check the finisher top bin for damage.
2. Check the wire harness between M260 and A200.
3. Open the Finisher Separator diagnostic page, and then test SN260.
4. Run M260, look for binding, and verify that the EN260 count changes.
5. Replace M260.
6. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator wiring diagram on page 2238](#)
- Replace M260: [Finisher Separator Drive motor \(M260\) on page 1012](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)

A4.0143

Description

- Finisher Separator Drive motor (M260) stalls while moving up

Primary root causes

- Finisher top bin overloaded
- Finisher Job Separator Lower Limit sensor (SN260)
- Separator mechanical assembly and structure
- M260
- Finisher Separator Drive Motor encoder (EN260)
- Wire harness between the Finisher Main PCA (A200) and M260
- A200

Recommended actions

1. Check the Event Log for an A4.0140 code. If such an entry exists, SN260 is probably malfunctioning.
2. Check the finisher top bin for damage.
3. Check the wire harness between M260 and A200.
4. Open the Finisher Separator diagnostic page, and then test SN260.
5. Run M260, look for binding, and verify that the EN260 count changes.
6. Test the voltage at M260: 1.25 Vdc at pins 1 to 2 on the motor connector.
7. Test the voltage at EN260: 5.0 Vdc at pins 2A to 1A, 3A to 1A, and 4A to 1A on W263P1-W260J263.
8. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator wiring diagram on page 2238](#)
- Replace M260: [Finisher Separator Drive motor \(M260\) on page 1012](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)

A4.01A1

Description

- Finisher motor driver 1 temperature is warm

Primary root causes

- Finisher Separator Drive motor (M260)
- Finisher Diverter solenoid (SOL211)
- Finisher Separator Offset motor (M264)
- Finisher Job Separator Gate motor (M262)
- Finisher Main PCA (A200)

Recommended actions

1. Open the Event Log and look for one of the following codes: A4.0140, A4.0141, A4.0142, A4.0143, A4.0144, or A4.0301. Follow the troubleshooting procedures for the code.
2. Replace A200.

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator wiring diagram on page 2238](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)

A4.01A2

Description

- Finisher motor driver 2 temperature is warm

Primary root causes

- Finisher Separator Drive motor (M260)
- Finisher Main PCA (A200)

Recommended actions

1. Open the Event Log and look for one of the following codes: A4.0140, A4.0142, A4.0143, or A4.0241. Follow the troubleshooting procedures for the code.
2. Replace A200.

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator wiring diagram on page 2238](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)

A4.01A7

Description

- Finisher motor driver 7 temperature is warm

Primary root causes

- Finisher Separator Drive motor (M260)
- Finisher Main PCA (A200)

Recommended actions

1. Open the Event Log and look for one of the following codes: A4.0140, A4.0142, A4.0143, or A4.0241. Follow the troubleshooting procedures for the code.
2. Replace A200.

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator wiring diagram on page 2238](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)

A4.01A9

Description

- Finisher Separator Offset motor (M264) stall

Primary root causes

- Finisher Job Separator Offset Back sensor (SN265)
- Finisher Separator Offset Motor encoder (EN264)
- M264 assembly
- Wire harness between the Finisher Main PCA (A200) and M264
- A200

Recommended actions

1. Open the Finisher Separator diagnostic page, run M264, look for binding, and verify that the EN264 count changes.
2. Test and clean SN265.
3. Check the M264 assembly for damage.
4. Test the voltage at M264: 3.44 Vdc at pins 1 to 2 on the motor connector.
5. Test the voltage at EN264: 5.0 Vdc at pins 8A to 10A and 9A to 10A on W267P1-W260J267.
6. Test the voltage at SN265: 3.3 Vdc at pins 6B to 8B and 7B to 8B on W267P1-W260J267.
7. Check the wire harness between M264, EN264, SN265, and A200.
8. Replace SN265.
9. Replace M264.
10. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator wiring diagram on page 2238](#)
- Replace SN265: [Sensors on page 1004](#)
- Replace M264: [Finisher Separator Offset motor \(M264\) on page 1015](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)

A4.0200

Description

- Finisher Input 0 sensor (SN211) failed connect test

Primary root causes

- SN211
- Wire harness between SN211 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN211.
2. Check the wire harness between SN211 and A200.
3. Check the voltage at SN211: 3.3 Vdc at pins 8A to 10A and 9A to 10A on W211P1-W201J211.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator wiring diagram on page 2238](#)
- Replace SN211: [Sensors on page 1004](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)

A4.0201

Description

- Finisher Input 1 sensor (SN212) failed connect test

Primary root causes

- SN212
- Wire harness between SN212 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN212.
2. Check the wire harness between SN212 and A200.
3. Check the voltage at SN212: 3.3 Vdc at pins 2B to 11A and 1B to 11A on W211P1-W201J211.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator wiring diagram on page 2238](#)
- Replace SN212: [Sensors on page 1004](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)

A4.0210

Description

- Finisher Front Latch sensor (SN204) failed connect test

Primary root causes

- SN204
- Wire harness between SN204 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN204.
2. Check the wire harness between SN204 and A200.
3. Check the voltage at SN204: 3.3 Vdc at pins 1 to 3 and 5.0 Vdc at pins 2 to 3 on W252P4-SN204.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator wiring diagram on page 2238](#)
- Replace SN204: [Sensors on page 1004](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)

A4.0211

Description

- Finisher Back Latch sensor (SN200) failed connect test

Primary root causes

- SN200
- Wire harness between SN200 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN200.
2. Check the wire harness between SN200 and A200.
3. Check the voltage at SN200: 3.3 Vdc at pins 1 to 3 and 5.0 Vdc at pins 2 to 3 on W201P1-SN200.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator wiring diagram on page 2238](#)
- Replace SN200: [Sensors on page 1004](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)

A4.0212

Description

- Finisher Right Side Panel sensor (SN216) failed connect test

Primary root causes

- SN216
- Finisher right-side door latch and hinges
- Wire harness between SN216 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then test SN216.
2. Check the Finisher right-side door latch and hinges.
3. Check the wire harness between SN216 and A200.
4. Check the voltage at SN216: 5 Vdc at pins 2A to 1A and 3.3 Vdc at pins 3A to 1A on W211P1-W201J211.
5. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator wiring diagram on page 2238](#)
- Replace SN216: [Sensors on page 1004](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)

A4.0240

Description

- Finisher Job Separator Lower Limit sensor (SN260) failed test

Primary root causes

- SN260
- Wire harness between SN260 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Separator diagnostic page, and then test SN260.
2. Check the wire harness between SN260 and A200.
3. Check the voltage at SN260: 3.3 Vdc at pins 3B to 1B and 2B to 1B on W263P1-W260J263.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator wiring diagram on page 2238](#)
- Replace SN260: [Sensors on page 1004](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)

A4.0241

Description

- Separator does not move down when full

Primary root causes

- Finisher Job Separator Stack Height sensor (SN267)
- Wire harness between SN267 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Clean SN267, and then verify that it is correctly seated.
2. Open the Finisher Separator diagnostic page, and then test SN267.
3. Check the wire harness between SN267 and A200.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator wiring diagram on page 2238](#)
- Replace SN267: [Sensors on page 1004](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)

A4.0242

Description

- Problem with the Finisher Separator safety switches

Primary root causes

- Finisher Separator Safety 1 switch (SW261)
- Finisher Separator Safety 2 switch (SW264)
- Mechanical binding in the separator assembly or safety assembly
- Wire harness between SW261, SW264, and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Check the Event Log for the following codes: A4.0241 and A4.0142. Follow the troubleshooting procedures for the code.
2. Open the Finisher Separator diagnostic page, and then test SW261 and SW264.
3. Verify that the separator assembly and the safety assembly are functioning correctly.
4. Check the wire harness between SW261, SW264, and A200.
5. Replace A200.

Additional root causes

- Finisher Separator Drive motor (M260)

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator wiring diagram on page 2238](#)
- Replace SW261: [Switches on page 1016](#)
- Replace SW264: [Switches on page 1016](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)
- M260: [A4.0142 on page 1783](#)

A4.0243

Description

- Finisher Job Separator Gate Open sensor (SN262) sensor connect test

Primary root causes

- SN262
- Wire harness between SN262 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Separator diagnostic page, and then test SN262.
2. Check the wire harness between SN262 and the A200.
3. Test the voltage at SN262: 3.3 Vdc at pins 3A to 1A and 2A to 1A on W267P1-W260J267.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator wiring diagram on page 2238](#)
- Replace SN262: [Sensors on page 1004](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)

A4.0244

Description

- Finisher Job Separator Offset Back sensor (SN265) sensor connect test

Primary root causes

- SN265
- Wire harness between SN265 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Separator diagnostic page, and then test SN265.
2. Check the wire harness between SN265 and the A200.
3. Test the voltage at SN265: 3.3 Vdc at pins 6B to 8B and 7B to 8B on W267P1-W260J267.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Separator**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator wiring diagram on page 2238](#)
- Replace SN265: [Sensors on page 1004](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)

A4.06A0

Description

- Finisher Right-Side Panel LED (LED201) failure

Primary root causes

- LED201
- Wire harness between LED201 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then activate LED201.
2. Check the wire harness between LED201 and A200.
3. Replace LED201.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator wiring diagram on page 2238](#)
- Replace LED201: [LEDs on page 1020](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)

A4.06A6

Description

- Finisher Latch LED (LED204) failure

Primary root causes

- LED204
- Wire harness between LED204 and the Finisher Main PCA (A200)
- A200

Recommended actions

1. Open the Finisher Paper Path diagnostic page, and then activate LED204.
2. Check the wire harness between LED204 and A200.
3. Replace LED204.
4. Replace A200.

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator wiring diagram on page 2238](#)
- Replace LED204: [LEDs on page 1020](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)

A4.0702

Description

- No communication between the Finisher Main PCA (A200) and the formatter

Primary root causes

- Wire harness between A200 and the formatter
- A200

Recommended actions

1. Verify that the power LEDs on A200 are lit.
2. Test the voltage at each of the test points on A200.
3. Check the wire harness between the MFP formatter and the MFP bulkhead.
4. Replace the wire harness between A200 and the MFP.
5. Replace A200.

Links

- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator Main PCA \(A200\) on page 2239](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)

A4.0703

Description

- Finisher Main PCA (A200) motor driver 1 over temperature

Primary root causes

- A200

Recommended actions

1. Open the Event Log and look for one of the following codes: A4.0140, A4.0141, A4.0142, A4.0143, A4.0144, or A4.0301. Follow the troubleshooting procedures for the code.
2. Replace A200.

Additional root causes

- Finisher Separator Drive motor (M260)
- Finisher Diverter solenoid (SOL211)
- Finisher Separator Offset motor (M264)
- Finisher Job Separator Gate motor (M262)

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator Main PCA \(A200\) on page 2239](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)
- M260: [A4.0103 on page 1779](#)
- M264: [A4.01A9 on page 1788](#)
- M262: [A4.0141 on page 1781](#)

A4.0704

Description

- Finisher Main PCA (A200) motor driver 2 over temperature

Primary root causes

- A200

Recommended actions

1. Open the Event Log and look for one of the following codes: A4.0140, A4.0142, or A4.0143. Follow the troubleshooting procedures for the code.
2. Replace A200.

Additional root causes

- Finisher Separator Drive motor (M260)

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator Main PCA \(A200\) on page 2239](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)
- M260: [A4.0140 on page 1780](#)

A4.0709

Description

- Finisher Main PCA (A200) motor driver 7 over temperature

Primary root causes

- A200

Recommended actions

1. Open the Event Log and look for one of the following codes: A4.0140, A4.0142, or A4.0143. Follow the troubleshooting procedures for the code.
2. Replace A200.

Additional root causes

- Finisher Separator Drive motor (M260)

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator Main PCA \(A200\) on page 2239](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)
- M260: [A4.0140 on page 1780](#)

A4.07A1

Description

- Finisher Main PCA (A200) 32 Vdc is out of specification

Primary root causes

- A200

Recommended actions

1. Verify that the power and firmware heartbeat LEDs on A200 are lit.
2. Verify that the voltage on each of the A200 test points is within specification.
3. Replace A200.

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator Main PCA \(A200\) on page 2239](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)

A4.07A2

Description

- Finisher Main PCA (A200) 3.3 Vdc is out of specification

Primary root causes

- A200

Recommended actions

1. Verify that the power LEDs on A200 are lit.
2. Verify that the voltage on each of the A200 test points is within specification.
3. Replace A200.

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator Main PCA \(A200\) on page 2239](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)

A4.1300

Description

- Finisher Input 0 sensor (SN211) problem

Primary root causes

- SN211
- Transport drive belt damage and tension
- Transport drive rollers and idler rollers
- Right-door latch and hinges
- Wire harness between the Finisher Main PCA (A200) and SN211
- A200

Recommended actions

1. Clean SN211, and then verify that SN211 is correctly installed.
2. Verify that the door latch and hinges operate correctly.
3. Open the Finisher Paper Path diagnostic page, and then test SN211.
4. Check the transport drive belts, drive rollers, and idlers for damage, contamination, and correct tension.
5. Check the wire harness between A200 and SN211.
6. Check the voltage at SN211: 3.3 Vdc at pins 8A to 10A and 9A to 10A on W211P1-W201J211.
7. Replace A200.

Additional root causes

- Finisher Input Paper Path motor (M210)

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator wiring diagram on page 2238](#)
- Replace SN211: [Sensors on page 1004](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)
- M210: [A4.0101 on page 1778](#)

A4.1301

Description

- Finisher Input 1 sensor (SN212)

Primary root causes

- SN212
- Transport drive belt damage and tension
- Transport drive rollers and idler rollers
- Right-door latch and hinges
- Wire harness between the Finisher Main PCA (A200) and SN212
- A200

Recommended actions

1. Clean SN212, and then verify that SN212 is correctly installed.
2. Verify that the door latch and hinges operate correctly.
3. Open the Finisher Paper Path diagnostic page, and then test SN212.
4. Check the transport drive belts, drive rollers, and idlers for damage, contamination, and correct tension.
5. Check the wire harness between A200 and SN212.
6. Check the voltage at SN212: 3.3 Vdc at pins 2B to 11A and 1B to 11A on W211P1-W201J211.
7. Replace A200.

Additional root causes

- Finisher Input Paper Path motor (M210)

Links

- Diagnostic page: Click **Subsystems**, click **Finisher**, and then click **Finisher Paper Path**.
- Component locator: [HP 4-Bin Job Separator component locator on page 2321](#)
- Wiring diagram: [HP 4-Bin Job Separator wiring diagram on page 2238](#)
- Replace SN212: [Sensors on page 1004](#)
- Replace A200: [Finisher Main PCA \(A200\) on page 1021](#)
- M210: [A4.0101 on page 1778](#)

A4.3880

Description

- An A4.3880 code and an orange, hideable "recoverable finisher error" window is displayed when a finisher motor, sensor, or solenoid is selected in CDFT. The error window will not reappear until CDFT is exited or a print job is initiated (which takes the finisher out of service mode).

Primary root causes

- This is normal system behavior

Recommended actions

- No action is required.

A4.38zz

Description

- Finisher firmware fault

Primary root causes

- Corrupt finisher firmware or the wire harness between the finisher and the MFP

Recommended actions

- Check the wire harness between the finisher and the MFP, and then power cycle the MFP.

B0.0101

Description

- Vertical motor (M6) stall

Primary root causes

- Drive belt
- M6
- Vertical Motor encoder (EN12)
- Wire harness between M6, EN12, and the Motion PCA (A2)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Manually turn M6 and verify that the drive rollers turn.
3. Open the Vertical Transport diagnostic page, and then manually turn the drive roller and verify that the EN12 count changes.
4. Run M6.
5. Test the voltage at M6: 12 Vdc at pins 1 to 2 on W20P6-M6.
6. Test the voltage at EN12: 5 Vdc at pins 3A to 1A (GND) on W14P6-W36J6.
7. Test the voltage to M6 on A2: 12 Vdc at J2 pins 1 to 8.
8. Test the voltage to EN12 on A2: 5 Vdc at J10 pins 16A to 18A (GND).

Additional root causes

- A2

Links

- Fault tree: [B0.0101: Vertical motor \(M6\) stall on page 1281](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **Vertical Transport**.
- Component locator: [Vertical component locator on page 2332](#)
- Wiring diagram: [Vertical wiring diagram on page 2261](#)
- Replace M6: [Vertical motor \(M6\) on page 383](#)
- A2: [D4.0705 on page 2060](#)

B0.1301

Description

- Paper jam at Vertical Transport 1 sensor (SN35)

Primary root causes

- Damaged or improperly loaded media
- SN35
- Wire harness between the Motion PCA (A2) and SN35

Recommended actions

1. Check the input trays for damaged paper and ensure that the length and width guides are properly set.
2. Open the Vertical Transport diagnostic page, and then manually activate SN35 and verify that the sensor state changes.
3. Verify that SN35 is properly seated and clean.
4. Verify that the idler rollers are properly seated and clean.
5. Test the voltage at SN35: 3.3 Vdc at pins 14B to 13B (GND) and 15B to 13B (GND) on W14P6-W36J6.
6. Test the voltage to SN35 on A2: 3.3 Vdc at J10 pins 5B to 6B (GND) and 4B to 6B (GND).

Additional root causes

- Vertical motor (M6)
- A2

Links

- Fault tree: [B0.1301: Paper jam at Vertical Transport 1 sensor \(SN35\) on page 1290](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **Vertical Transport**.
- Component locator: [Vertical component locator on page 2332](#)
- Wiring diagram: [Vertical wiring diagram on page 2261](#)
- Replace SN35: [Vertical sensors on page 386](#)
- M6: [B0.0101 on page 1811](#)
- A2: [D4.0705 on page 2060](#)

B0.1302

Description

- Paper jam at Vertical Transport 2 sensor (SN28)

Primary root causes

- Damaged or improperly loaded media
- SN28
- Wire harness between the Motion PCA (A2) and SN28

Recommended actions

1. Check the input trays for damaged paper and ensure that the length and width guides are properly set.
2. Open the Vertical Transport diagnostic page, and then manually activate SN28 and verify that the sensor state changes.
3. Verify that SN28 is properly seated and clean.
4. Verify that the idler rollers are properly seated and clean.
5. Test the voltage at SN28: 3.3 Vdc at pins 2 to 3 (GND) and 1 to 3 (GND) on W36P28-SN28.
6. Test the voltage to SN28 on A2: 3.3 Vdc at J10 pins 7B to 9B (GND) and 8B to 9B (GND).

Additional root causes

- Vertical motor (M6)
- A2

Links

- Fault tree: [B0.1302: Paper jam at Vertical Transport 2 sensor \(SN28\) on page 1292](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **Vertical Transport**.
- Component locator: [Vertical component locator on page 2332](#)
- Wiring diagram: [Vertical wiring diagram on page 2261](#)
- Replace SN28: [Vertical sensors on page 386](#)
- M6: [B0.0101 on page 1811](#)
- A2: [D4.0705 on page 2060](#)

B0.1303

Description

- Paper jam at Vertical Transport 3 sensor (SN25)

Primary root causes

- Damaged or improperly loaded media
- SN25
- Wire harness between the Motion PCA (A2) and SN25

Recommended actions

1. Check the input trays for damaged paper and ensure that the length and width guides are properly set.
2. Open the Vertical Transport diagnostic page, and then manually activate SN25 and verify that the sensor state changes.
3. Verify that SN25 is properly seated and clean.
4. Verify that the idler rollers are properly seated and clean.
5. Test the voltage at SN25: 3.3 Vdc at pins 9A to 10A (GND) and 8A to 10A (GND) on W14P6-W36J6.
6. Test the voltage to SN25 on A2: 3.3 Vdc at J10 pins 11A to 9A (GND) and 10A to 9A (GND).

Additional root causes

- Vertical motor (M6)
- A2

Links

- Fault tree: [B0.1303: Paper jam at Vertical Transport 3 sensor \(SN25\) on page 1294](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **Vertical Transport**.
- Component locator: [Vertical component locator on page 2332](#)
- Wiring diagram: [Vertical wiring diagram on page 2261](#)
- Replace SN25: [Vertical sensors on page 386](#)
- M6: [B0.0101 on page 1811](#)
- A2: [D4.0705 on page 2060](#)

B0.1304

Description

- Paper jam at Vertical transport 4 sensor (SN26)

Primary root causes

- Damaged or improperly loaded media
- SN26
- Wire harness between the Motion PCA (A2) and SN26

Recommended actions

1. Check the input trays for damaged paper and ensure that the length and width guides are properly set.
2. Open the Vertical Transport diagnostic page, and then manually activate SN26 and verify that the sensor state changes.
3. Verify that SN26 is properly seated and clean.
4. Verify that the idler rollers are properly seated and clean.
5. Test the voltage at SN26: 3.3 Vdc at pins 6A to 7A (GND) and 5A to 7A (GND) on W14P6-W36J6.
6. Test the voltage to SN26 on A2: 3.3 Vdc at J10 pins 13A to 12A (GND) and 14A to 12A (GND).

Additional root causes

- Vertical motor (M6)
- A2

Links

- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **Vertical Transport**.
- Component locator: [Vertical component locator on page 2332](#)
- Wiring diagram: [Vertical wiring diagram on page 2261](#)
- Replace SN26: [Vertical sensors on page 386](#)
- M6: [B0.0101 on page 1811](#)
- A2: [D4.0705 on page 2060](#)

B1.0101

Description

- Horizontal motor (M7) stall

Primary root causes

- Drive belts
- M7
- Horizontal Motor encoder (EN3)
- Wire harness between M7, EN3, and the Motion PCA (A2)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Open the Horizontal Transport diagnostic page, and then manually turn M7 with Tray 1 engaged and verify that the rollers turn.
3. Run M7.
4. Manually turn the drive roller and verify that the EN3 count changes.
5. Check the rollers and belts for damage and wear.
6. Test the voltage at M7: 12 Vdc at pins 1 to 2 on W18P7-M7.
7. Test the voltage at EN3: 5 Vdc at pins 8A to 10A (GND) on W15P5-W37J5.
8. Test the voltage to M7 on A2: 12 Vdc at J2 pins 3 to 10 .
9. Test the voltage to EN3 on A2: 5 Vdc at J9 pins 5A to 3A (GND).

Additional root causes

- A2

Links

- Fault tree: [B1.0101: Horizontal motor \(M7\) stall on page 1298](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **Horizontal Transport**.
- Component locator: [Horizontal component locator on page 2324](#)
- Wiring diagram: [Horizontal wiring diagram on page 2243](#)
- Replace M7: [Horizontal motor \(M7\) on page 392](#)
- A2: [D4.0705 on page 2060](#)

B1.0201

Description

- Transparency sensor 1 (SN1) failed calibration

Primary root causes

- SN1
- Wire harness between the Motion PCA (A2) and SN1

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Open the Horizontal Transport diagnostic page, and then manually activate SN1 and verify that the sensor state changes.
3. Verify that SN1 is properly seated and clean.
4. Verify that the idler rollers are properly seated and clean.
5. Test the voltage at SN1: 0.45 Vdc unblocked and 2.78 Vdc blocked at pins 3A to 2A (GND) and 1.14 Vdc blocked and unblocked at pins 1A to 2A (GND) on W15P5-W37J5.
6. Test the voltage to SN1 on A2: 1.15 Vdc unblocked and blocked at J9 pins 12A to 11A (GND) and 0.45VDC unblocked and 2.81VDC blocked at pins 10A to 11A (GND).

Additional root causes

- Horizontal motor (M7)
- A2

Links

- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **Horizontal Transport**.
- Component locator: [Horizontal component locator on page 2324](#)
- Wiring diagram: [Horizontal wiring diagram on page 2243](#)
- Replace SN1: [Horizontal sensors on page 396](#)
- M7: [B1.0101 on page 1816](#)
- A2: [D4.0705 on page 2060](#)

B1.1301

Description

- Paper jam at Transparency sensor 1 (SN1)

Primary root causes

- Damaged or improperly loaded media
- SN1
- Wire harness between the Motion PCA (A2) and SN1
- Trays 2, 3, and 4 wire harness is interfering the actuators on the Trays 2, 3, and 4 sensors

Recommended actions

1. Check the input trays for damaged paper and ensure that the length and width guides are properly set.
2. Open the Horizontal Transport diagnostic page, and then manually activate SN1 and verify that the sensor state changes.
3. Verify that SN1 is properly seated and clean.
4. Verify that the idler rollers are properly seated and clean.
5. Verify that the rays 2, 3, and 4 wire harness is not interfering the actuators on the Trays 2, 3, and 4 sensors.
6. Test the voltage at SN1: 0.45 Vdc unblocked and 2.78 Vdc blocked at pins 3A to 2A (GND) and 1.14 Vdc blocked and unblocked at pins 1A to 2A (GND) on W15P5-W37J5.
7. Test the voltage to SN1 on A2: 1.15 Vdc unblocked and blocked at J9 pins 12A to 11A (GND) and 0.45VDC unblocked and 2.81VDC blocked at pins 10A to 11A (GND).

Additional root causes

- Horizontal motor (M7)
- A2
- Check the wire harness to the trays 2, 3, 4 assembly for correct routing and not interfering with any tray media size/open metal fingers on the A23.

Links

- Fault tree: [B1.1301: Paper jam at Transparency sensor 1 \(SN1\) on page 1306](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **Horizontal Transport**.
- Component locator: [Horizontal component locator on page 2324](#)
- Wiring diagram: [Horizontal wiring diagram on page 2243](#)
- Replace SN1: [Horizontal sensors on page 396](#)

- M7: [B1.0101 on page 1816](#)
- A2: [D4.0705 on page 2060](#)

B1.1302

Description

- Paper jam at Horizontal Transport 2 sensor (SN3)

Primary root causes

- Damaged or improperly loaded media
- SN3
- Wire harness between the Motion PCA (A2) and SN3
- SN3 sensor actuator worn

Recommended actions

1. Check the input trays for damaged paper and ensure that the length and width guides are properly set.
2. Open the Horizontal Transport diagnostic page, and then manually actuate SN3 and verify that the sensor state changes.
3. Verify that SN3 is properly seated and clean.
4. Verify that the idler rollers are properly seated and clean.
5. Test the voltage at SN3: 3.24 Vdc unblocked, 0.09 Vdc blocked at pins 5B to 4B (GND) and 1.17 Vdc both unblocked and blocked at pins 6B to 4B (GND) on W15P5-W37J5 .
6. Test the voltage to SN3 on A2: 1.18 Vdc unblocked at J9 pins 7B to 9B (GND) and 3.25 Vdc unblocked, 0.10 Vdc blocked at pins 8B to 9B (GND).
7. Check the sensor actuator for wear. Look for flat spots on the actuator and compare the actuator to other similar sensor actuators.

Additional root causes

- Horizontal motor (M7)
- A2

Links

- Fault tree: [B1.1302: Paper jam at Horizontal Transport 2 sensor \(SN3\) on page 1308](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **Horizontal Transport**.
- Component locator: [Horizontal component locator on page 2324](#)
- Wiring diagram: [Horizontal wiring diagram on page 2243](#)
- Replace SN3: [Horizontal sensors on page 396](#)
- M7: [B1.0101 on page 1816](#)
- A2: [D4.0705 on page 2060](#)

B1.1303

Description

- Paper jam at Horizontal Transport 3 sensor (SN2)

Primary root causes

- Damaged or improperly loaded media
- SN2
- Wire harness between the Motion PCA (A2) and SN2
- Tray 1 paper-width guide is not calibrated correctly

Recommended actions

1. Check the input trays for damaged paper and ensure that the length and width guides are properly set.
2. Calibrate the Tray 1 paper-width guide.
3. Open the Horizontal Transport diagnostic page, and then manually activate SN2 and verify that the sensor state changes.
4. Verify that SN2 is properly seated and clean.
5. Verify that the idler rollers are properly seated and clean.
6. Test the voltage at SN2: 4.96 Vdc unblocked and blocked at pins 8A to 10A (GND) and 0.12 Vdc unblocked and blocked at pins 9A to 10A (GND) on W15P5-W37J5.
7. Test the voltage to SN2 on A2: 3.3 Vdc at J9 pins 8A to 7A (GND).

Additional root causes

- Horizontal motor (M7)
- A2

Links

- Fault tree: [B1.1303: Paper jam at Horizontal Transport 3 sensor \(SN2\) on page 1310](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **Horizontal Transport**.
- Component locator: [Horizontal component locator on page 2324](#)
- Wiring diagram: [Horizontal wiring diagram on page 2243](#)
- Replace SN2: [Horizontal sensors on page 396](#)
- M7: [B1.0101 on page 1816](#)
- A2: [D4.0705 on page 2060](#)

B1.1304

Description

- Paper jam at Horizontal Transport 4 sensor (SN5)

Primary root causes

- Worn horizontal transport drive rollers
- SN5
- Wire harness between the Motion PCA (A2) and SN5
- Tray 1 paper-width guide is not calibrated correctly

Recommended actions

1. Check the horizontal transport drive rollers for excessive wear.
2. Open the Horizontal Transport diagnostic page, and then manually actuate SN5 and verify that the sensor state changes.
3. Calibrate the Tray 1 paper-width guide.
4. Verify that SN5 is properly seated and clean.
5. Verify that the idler rollers are properly seated and clean.
6. Test the voltage at SN5: 1.18 Vdc blocked and unblocked at pins 12B to 10B (GND) and 3.25 Vdc unblocked, 0.09 Vdc blocked at pins 11B to 10B (GND) on W15P5-W37J5.
7. Test the voltage to SN5 on A2: 3.3 Vdc at J9 pins 2B to 3B (GND) and 1B to 3B (GND).

Additional root causes

- Horizontal motor (M7)
- A2

Links

- Fault tree: [B1.1304: Paper jam at Horizontal Transport 4 sensor \(SN5\) on page 1312](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **Horizontal Transport**.
- Component locator: [Horizontal component locator on page 2324](#)
- Wiring diagram: [Horizontal wiring diagram on page 2243](#)
- Replace SN5: [Horizontal sensors on page 396](#)
- M7: [B1.0101 on page 1816](#)
- A2: [D4.0705 on page 2060](#)

B2.0101

Description

- IDO Input 1 motor (M8) stall

Primary root causes

- Drive belt
- M8
- IDO Input 1 Motor encoder (EN9)
- Wire harness between M8, EN9, and the Motion PCA (A2)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Manually turn M8 with Tray 1 engaged and verify that the rollers turn.
3. Open the IDO Motors diagnostic page, and then run M8.
4. Manually turn the drive roller and verify that the EN9 count changes.
5. Check the rollers and belts for damage and wear.
6. Test the voltage at M8: 5 Vdc at pins 1 to 2 on W19P8-M8.
7. Test the voltage at EN9: 5 Vdc at pins 2B to 4B on W97P7-W44J7.
8. Test the voltage to M8 on A2: 17.88 Vdc (not using voltage test routine) at J14 pins 7 to 16.
9. Test the voltage to EN9 on A2: 5 Vdc at pins 2B to 4B on W97P7-W44J7.

Additional root causes

- A2

Links

- Fault tree: [B2.0101: IDO Input 1 motor \(M8\) stall on page 1314](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [IDO motors and encoders wiring diagram on page 2244](#)
- Replace M8: [IDO Input 1 motor \(M8\) on page 414](#)
- A2: [D4.0705 on page 2060](#)

B2.0102

Description

- IDO Input 2 motor (M10) stall

Primary root causes

- Drive belt
- M10 problem
- IDO Input 2 Motor encoder (EN5)
- Wire harness between M10, EN5, and the Motion PCA (A2)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Manually turn M10 and verify that the rollers turn.
3. Open the IDO Motors diagnostic page, and then run M10.
4. Manually turn the drive roller and verify that the EN5 count changes.
5. Check the rollers and belts for damage and wear.
6. Test the voltage at M10: 5.23 Vdc at pins 1 to 2 on W19P10-M10.
7. Test the voltage at EN5: 5 Vdc at pins 6B to 8B on W97P7-W44J7.
8. Test the voltage to M10 on A2: 5.23 Vdc at pins 1 to 2 on W19P10-M10.
9. Test the voltage to EN5 on A2: 5 Vdc at pins 6B to 8B on W97P7-W44J7.

Additional root causes

- A2

Links

- Fault tree: [B2.0102: IDO Input 2 motor \(M10\) stall on page 1317](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [IDO motors and encoders wiring diagram on page 2244](#)
- Replace M10: [IDO Input 2 motor \(M10\) on page 415](#)
- A2: [D4.0705 on page 2060](#)

B2.0103

Description

- IDO Curler motor (M15) stall

Primary root causes

- Drive belt
- M15
- IDO Curler Motor encoder (EN15)
- Wire harness between the M15, EN15, and the Motion PCA (A2)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Manually turn M15 and verify that the rollers turn.
3. Open the IDO Motors diagnostic page, and then run M15.
4. Manually turn the drive roller and verify that the EN15 count changes.
5. Check the rollers and belts for damage and wear.
6. Test the voltage at M15: 5.23 Vdc at pins 1 to 2 on W88P1-M15.
7. Test the voltage at EN15: 5 Vdc at pins 13A to 15A on W96P6-W45J6.
8. Test the voltage to M15 on A2: 17.75 Vdc at J14 pins 1 to 10.
9. Test the voltage at EN15: 5 Vdc at J5 pins 3A to 1A.

Additional root causes

- A2

Links

- Fault tree: [B2.0103: IDO Curler motor \(M15\) stall on page 1320](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [IDO paper path 1 wiring diagram on page 2245](#)
- Replace M15: [IDO Curler motor \(M15\) on page 421](#)
- A2: [D4.0705 on page 2060](#)

B2.0104

Description

- IDO Media Eject motor (M13) stall

Primary root causes

- Media eject mechanism
- M13
- IDO Media Eject Motor encoder (EN17)
- Wire harness between M13, EN17, and the Motion PCA (A2)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Open the IDO Motors diagnostic page, and then run M13 and verify that the media-eject fingers cycle in and out.
3. Perform a voltage test on M13 and verify that the EN17 count changes.
4. Check the media-eject mechanism for damage and wear.
5. Test the voltage at M13: 5 Vdc at pins 1 to 2 on W44P17-EN17/M3.
6. Test the voltage at EN17: 1.2 Vdc at pins 15A to 16A on W97P7-W44J7.
7. Test the voltage to M13 on A2: 5 Vdc at J14 pins 5 to 14.
8. Test the voltage to EN17 on A2: 1.2 Vdc at J4 pins 4A to 3A.

Additional root causes

- A2

Links

- Fault tree: [B2.0104: IDO Media Eject motor \(M13\) stall on page 1323](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [IDO motors and encoders wiring diagram on page 2244](#)
- Replace M13: [IDO Media Eject motor \(M13\) on page 420](#)
- A2: [D4.0705 on page 2060](#)

B2.0105

Description

- IDO Duplex motor (M12) stall

Primary root causes

- Drive belt
- M12
- IDO Duplex Motor encoder (EN7)
- Wire harness between M12, EN7, and the Motion PCA (A2)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Manually turn M12 and verify that the rollers turn.
3. Open the IDO Motors diagnostic page, and then manually turn the drive roller and verify that the EN7 count changes.
4. Turn on M12 in both the forward and reverse directions and verify that the EN7 count changes.
5. Check the rollers and belts for damage and wear.
6. Test the voltage at M12 for both the forward and reverse directions: -5 Vdc in the forward direction and 5 Vdc in the reverse direction at pins 1 to 2 on W19P12-M12.
7. Test the voltage at EN7: 5 Vdc at pins 13A to 11A on W97P7-W44J7.
8. Test the voltage to M12 on A2: 3.2 Vdc at J14 pins 4 to 13.
9. Test the voltage to EN7 on A2: 5 Vdc at J4 pins 6A to 8A.

Additional root causes

- A2

Links

- Fault tree: [B2.0105: IDO Duplex motor \(M12\) stall on page 1326](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [IDO motors and encoders wiring diagram on page 2244](#)
- Replace M12: [IDO Duplex motor \(M12\) on page 418](#)
- A2: [D4.0705 on page 2060](#)

B2.0106

Description

- IDO Output motor (M11) stall

Primary root causes

- Drive belt
- M11
- IDO Output Motor encoder (EN4)
- Wire harness between M11, EN4, and the Motion PCA (A2)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Manually turn M11 with Tray 1 engaged and verify that the rollers turn.
3. Open the IDO Motors diagnostic page, and then run M11.
4. Manually turn the drive roller and verify that the EN4 count changes.
5. Check the rollers and belts for damage and wear.
6. Test the voltage at M11: 5.23 Vdc at pins 1 to 2 on W19P11-M11.
7. Test the voltage at EN4: 5 Vdc at pins 9A to 7A on W97P7-W44J7.
8. Test the voltage to M11 on A2: 5 Vdc at J14 pins 3 to 12.
9. Test the voltage to EN4 on A2: 5 Vdc at J4 pins 10A to 12A.

Additional root causes

- A2

Links

- Fault tree: [B2.0106: IDO Output motor \(M11\) stall on page 1330](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [IDO motors and encoders wiring diagram on page 2244](#)
- Replace M11: [IDO Output motor \(M11\) on page 417](#)
- A2: [D4.0705 on page 2060](#)

B2.01A1

Description

- Active decurler failure

Primary root causes

- M17
- IDO Decurler Motor encoder (EN16)
- Wire harness between M17, EN16, and the Motion PCA (A2)

Recommended actions

1. Open the IDO Motors diagnostic page, and then run M17 and verify that the active decurler moves.
2. Perform a voltage test on M17 and verify that the EN16 count changes.
3. Check the decurler mechanism for damage and wear.
4. Test the voltage at M17: 5 Vdc at pins 5 to 6 on W45P16-M17.
5. Test the voltage at EN16: 3.3 Vdc at pins 1 to 4, 3 to 4, 2 to 4 on W45P16-EN16.
6. Test the voltage to M17 on A2: 5 Vdc at pins 8 to 17 on W43P14-A2J14.
7. Test the voltage to EN16 on A2: 3.3 Vdc at pins 8A to 5A, 7A to 5A, 6A to 5A on W16P5-A2 J5.

Additional root causes

- A2

Links

- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [IDO paper path 1 wiring diagram on page 2245](#)
- Replace M17: [IDO Media Eject motor \(M13\) on page 420](#)
- A2: [D4.0705 on page 2060](#)

B2.01A2

Description

- IDO curler speed has changed

Primary root causes

- Drive belt
- M15
- IDO Curler Motor encoder (EN15)
- Wire harness between the M15, EN15, and the Motion PCA (A2)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Manually turn M15 and verify that the rollers turn.
3. Open the IDO Motors diagnostic page, and then run M15.
4. Manually turn the drive roller and verify that the EN15 count changes.
5. Check the rollers and belts for damage and wear.
6. Test the voltage at M15: 5.23 Vdc at pins 1 to 2 on W88P1-M15.
7. Test the voltage at EN15: 5 Vdc at pins 13A to 15A on W96P6-W45J6.
8. Test the voltage to M15 on A2: 17.75 Vdc at J14 pins 1 to 10.
9. Test the voltage at EN15: 5 Vdc at J5 pins 3A to 1A.

Additional root causes

- A2


Links

- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [IDO paper path 1 wiring diagram on page 2245](#)
- Replace M15: [IDO Curler motor \(M15\) on page 421](#)
- A2: [D4.0705 on page 2060](#)


B2.01A3

Description

- Eject fingers mechanism failed to home the minimum distance


 **NOTE:** If the system is running FW version 73.022.0, the event log will show DD.051D Device warning instead of B2.01A3.

NOTE: Check the event log for media jams code B2.1306 paper jam at IDO output 1 sensor. If the unit has several entries of this jam, use a soft lint-free cloth dampened with water and clean the eject fingers claws. Continue in this fault tree if the jams occur after cleaning the eject finger claws.

 **TIP:** Open the IDO and use an interlock cheater to activate the right cover interlock switch. Enter CDFT and click **Subsystems**, click **Paper Path**, click **IDO motors**, and then activate the IDO Media Eject motor (M13) to get better access to the claws during cleaning.

Primary root causes

- Assy-d-shaft nuge catscratcher in the eject motor is slipping on its shaft
- Loose screws on the media eject mechanism, particularly the screw on the media eject drive arm
- Misalignment or excessive friction between draglink pivotlink and draglink follower arm
- Mechanical interference of the eject mechanism and other parts in the IDO
- M13

 **NOTE:** Refer to the IDO media eject assembly parts diagram in the Parts Manual.

Recommended actions

1. Replace the ASSY-D-SHAFT NUGE CATSCRATCHER assembly.
2. Retighten the screws on the media eject mechanism, particularly the screw on the media eject drive arm. Check that the threads are not stripped.
3. Inspect the alignment of the draglink pivotlink and draglink follower arms.
4. Check for excessive wear or dirt on the three bronze bushing in the eject mechanism. Clean and lubricate as needed.
5. Use CDFT to verify the IDO Media Eject motor (M13) and encoder operation.

Links

- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Motors**.
- Component locator: [IDO component locator on page 2325](#)

B2.0201

Description

- IDO Media Thickness encoder (EN14) calibration failed

Primary root causes

- EN14
- Wire harness between EN14 and the Motion PCA (A2)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Open and close the IDO assembly to recalibrate EN14.
3. Open the IDO Sensors, Solenoids, LEDs diagnostic page, and then open the IDO and push on the EN14 roller and verify that the sensor state changes.
4. Test the voltage at EN14: 3.3 Vdc at pins 1 to 6, 2 to 6, and 5 to 6 on W32P10-W50J10.
5. Test the voltage to EN14 on A2: 3.13 Vdc unblocked at J8 pins 2B to 1B, 3.26 Vdc unblocked at pins 3B to 1B, and 3.13 Vdc unblocked at pins 4B to 1B.

Additional root causes

- IDO Input 2 motor (M10)
- A2

Links

- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [Motion PCA \(A2\) diagram on page 2268](#)
- Replace EN14: [IDO Media Thickness encoder \(EN14\) on page 480](#)
- M10: [B2.0102 on page 1824](#)
- A2: [D4.0705 on page 2060](#)

B2.0301

Description

- Able to open locked left-side upper panel

Primary root causes

- Misaligned IDO door
- IDO Interlock solenoid (SOL3)
- Bad wire harness between the Motion PCA (A2) and SOL3

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Check the alignment of the IDO door.
3. Open the IDO Sensors, Solenoids, LEDs diagnostic page, and then activate SOL3.
4. Check the voltage at SOL3: 20 Vdc at pins 1 to 2 on W98P3-SOL3.
5. Check the voltage to SOL3 on A2: 20 Vdc at J14 pins 9 to 18.

Additional root causes

- A2

Links

- Fault tree: [B2.0301: Able to open locked left-side upper panel on page 1339](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [IDO H-bar wiring diagram on page 2246](#)
- A2: [D4.0705 on page 2060](#)

B2.03C1

Description

- IDO Diverter solenoid (SOL2)

Primary root causes

- IDO Diverter solenoid (SOL2)
- Wire harness between SOL2 and the Motion PCA (A2)

Recommended actions

1. Open the IDO Sensors, Solenoids, LEDs diagnostic page, and then activate and deactivate SOL2.
2. Check SOL2 for mechanical binding, contamination, excessive wear, and correct installation.
3. Test the voltage at SOL2: 20 Vdc at pins 1 to 2 on W19P2-SOL2.
4. Test the voltage to SOL2 on A2: 20 Vdc at J14 pins 6 to 15.

Additional root causes

- A2

Links

- Fault tree: [B2.03C1: IDO Diverter solenoid \(SOL2\) on page 1341](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [IDO paper path 1 wiring diagram on page 2245](#)
- Replace SOL2: [IDO Diverter solenoid \(SOL2\) on page 457](#)
- A2: [D4.0705 on page 2060](#)

B2.1301

Description

- Paper jam at IDO Input Staging 2 sensor (SN10)

Primary root causes

- Worn horizontal transport drive rollers
- SN10
- Wire harness between SN10 and the Motion PCA (A2)

Recommended actions

1. Check the horizontal transport drive rollers for excessive wear.
2. Open the IDO Sensors, Solenoids, LEDs diagnostic page, and then manually activate SN10 and verify that the sensor state changes.
3. Verify that SN10 is correctly seated and clean.
4. Verify that the idler rollers are correctly seated and clean.
5. Test the voltage at SN10: 3.25 Vdc at pins 17B to 16B and 1.18 Vdc at pins 15B to 16B on W97P7-W44J7.
6. Test the voltage to SN10 on A2: 1.19 Vdc unblocked and blocked at J4 pins 4B to 3B and 0.15 vdc unblocked, 3.25 vdc blocked at pins 2B to 3B.
7. Check the horizontal transport to IDO PI (printzone interface) adjustment. Refer to the horizontal transport to IDO PI adjustment procedure.

Additional root causes

- M10
- A2
- If SN10 and SN7 indicate a low "highlighted in green", the horizontal transport to IDO PI (print interface) is misadjusted.

Links

- Fault tree: [B2.1301: Paper jam at IDO Input Staging 2 sensor \(SN10\) on page 1353](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [IDO paper path 2 wiring diagram on page 2245](#)
- Replace SN10: [IDO sensors on page 480](#)
- M10: [B2.0102 on page 1824](#)
- A2: [D4.0705 on page 2060](#)

B2.1302

Description

- Paper jam at IDO Media Thickness encoder (EN14)

Primary root causes

- Multifeed
- EN14
- Wire harness between EN14 and the Motion PCA (A2)

Recommended actions

1. Check the input trays for worn separator parts. Check the media for damage.
2. Inspect the IDO Media Thickness encoder (EN14), visually and physically, to ensure it is securely in place.
3. Open and close the IDO assembly to recalibrate EN14.
4. Open the IDO Sensors, Solenoids, LEDs diagnostic page, and then open the IDO and push on the EN14 roller and verify that the sensor state changes.
5. Test the voltage at EN14: 3.3 Vdc at pins 1 to 6, 2 to 6, and 5 to 6 on W32P10-W50J10.
6. Test the voltage to EN14 on A2: 3.13 Vdc unblocked at J8 pins 2B to 1B, 3.26 Vdc unblocked at pins 3B to 1B, and 3.13 Vdc unblocked at pins 4B to 1B.

Additional root causes

- IDO Input 2 motor (M10)
- A2

Links

- Fault tree: [B2.1302: Paper jam at IDO Media Thickness encoder \(EN14\) on page 1355](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [Motion PCA \(A2\) diagram on page 2268](#)
- Replace EN14: [IDO Media Thickness encoder \(EN14\) on page 480](#)
- M10: [B2.0102 on page 1824](#)
- A2: [D4.0705 on page 2060](#)

B2.1303

Description

- Paper jam at IDO Input Staging 1 sensor (SN7)

Primary root causes

- Multifeed
- SN7
- IDO Media Thickness encoder (EN14)
- Wire harness between SN7 and the Motion PCA (A2)
- Dirty sensor

Recommended actions

1. Check the input trays for worn separator parts. Check the media for damage.
2. Verify that SN7 is correctly seated and clean.
3. Inspect the IDO Media Thickness encoder (EN14), visually and physically, to ensure it is securely in place.
4. Open and close the IDO assembly to recalibrate EN14.
5. Open the IDO Sensors, Solenoids, LEDs diagnostic page, and then manually activate SN7 and verify that the sensor state changes.
6. While still on the IDO Sensors, Solenoids, LEDs diagnostic page, note the value of EN14 in its idle state. The value should be low, approximately 1. If it is high, EN14 is probably the cause and should be replaced.
7. If in the previous step the idle state value for EN14 was normal, open the IDO, push on the EN14 roller, and then verify that the sensor state changes.
8. Verify that the idler rollers are correctly seated and clean.
9. Test the voltage at SN7: 1.18 Vdc unblocked, 3.25 Vdc blocked at pins 14B to 13B and 1.18 Vdc blocked and unblocked at pins 12B to 13B on W97P7-W44J7.
10. Test the voltage to SN7 on A2: 1.18 Vdc blocked and unblocked at J8 pins 7B to 6B and 0.19 Vdc, unblocked 3.25 Vdc blocked at pins 5B to 6B.

Additional root causes

- M10
- A2
- [B2.1302 on page 1836](#)

Links

- Fault tree: [B2.1303: Paper jam at IDO Input Staging 1 sensor \(SN7\) on page 1357](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [IDO paper path 2 wiring diagram on page 2245](#)
- Replace SN7: [IDO sensors on page 480](#)
- Replace EN14: [IDO Media Thickness encoder \(EN14\) on page 480](#)
- M10: [B2.0102 on page 1824](#)
- A2: [D4.0705 on page 2060](#)

B2.1304

Description

- Paper jam at IDO Input Media sensor (SN8)

Primary root causes

- Dirty sensor
- SN8
- Wire harness between SN8 and the Motion PCA (A2)
- IDO curler drive transmission issue

Recommended actions

1. Open the IDO Sensors, Solenoids, LEDs diagnostic page, and then manually activate SN8 and verify that the sensor state changes.
2. Verify that SN8 is correctly seated and clean.
3. Verify that the idler rollers are correctly seated and clean.
4. Test the voltage at SN8: 0 Vdc blocked and unblocked at pins 10B to 11B and -5 Vdc blocked and unblocked at pins 12B to 11B on W96P6-W45J6.
5. Test the voltage to SN8 on A2: 3.3 Vdc at J5 pins 6B to 5B and 4B to 5B.

Additional root causes

- M15
- A2

Links

- Fault tree: [B2.1304: Paper jam at IDO Input Media sensor \(SN8\) on page 1359](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [IDO paper path 1 wiring diagram on page 2245](#)
- Replace SN8: [IDO sensors on page 480](#)
- M15: [B2.0103 on page 1825](#)
- A2: [D4.0705 on page 2060](#)

B2.1305

Description

- Paper jam at IDO Output Media sensor (SN9)

Primary root causes

- Media eject system issues
- SN9
- Wire harness between SN9 and the Motion PCA (A2)

Recommended actions

1. Verify that the media eject fingers are clear and undamaged.
2. Open the IDO Sensors, Solenoids, LEDs diagnostic page, and then manually activate SN9 and verify that the sensor state changes.
3. Verify that SN9 is correctly seated and clean.
4. Verify that the idler rollers are correctly seated and clean.
5. Test the voltage at SN9: 5 Vdc unblocked, 0 Vdc blocked at pins 2B to 1B and 5 Vdc unblocked, 5 Vdc blocked at pins 3B to 1B on W96P6-W45J6.
6. Test the voltage to SN9 on A2: 5 Vdc unblocked, 0 Vdc blocked at J4 pins 14B to 15B and 5 Vdc unblocked and blocked at pins 13B to 15B.

Additional root causes

- M11
- M13
- A2
- B4, B5 (intermittent jams) and C6 (consistently jams) 16 lb media could result in media eject finger jams

Links

- Fault tree: [B2.1305: Paper jam at IDO Output Media sensor \(SN9\) on page 1361](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [IDO paper path 1 wiring diagram on page 2245](#)
- Replace SN9: [IDO sensors on page 480](#)
- M11: [B2.0106 on page 1828](#)
- M13: [B2.0104 on page 1826](#)
- A2: [D4.0705 on page 2060](#)

B2.1306

Description

- Paper jam at IDO Output 1 sensor (SN15)

Primary root causes

- SN15
- Wire harness between SN15 and the Motion PCA (A2)
- Misaligned IDO Input Staging 2 sensor (SN10)
- Worn and slipping D-Shaft, Nuge, Catscratcher
- Excessive axial play in the IDO Media Eject motor (M13) drive shaft

Recommended actions

1. Open the IDO Sensors, Solenoids, LEDs diagnostic page, and then manually activate SN15 and verify that the sensor state changes.
2. Verify that the idler rollers are correctly seated and clean.
3. Test the voltage at SN15: 5 Vdc unblocked, 0 Vdc blocked at pins 8B to 7B and 5 Vdc unblocked at pins 9B to 7B on W96P6-W45J6.
4. Test the voltage to SN15 on A2: 5 Vdc unblocked and blocked at J5 pins 7B to 9B and 5 Vdc unblocked, 0 Vdc blocked at pins 8B to 9B.
5. Adjust the printer interface (engine side) portion of the IDO upward to realign the sensor halves.
Refer to the service manual for the printer interface adjustment procedure.
6. Verify that SN15 and SN12 are correctly seated and clean.
7. Inspect the media eject fingers. Ensure they are clear of obstructions and not damaged. Clean any ink or dust build-up
8. Inspect the drum screen for ink residue. If it is found to be dirty, clean the drum screen and replace the drum spittoon.
9. Verify that the media eject linkage is adequately lubricated where the brass bushing slides in a slot. If it seems to be sticking, lubricate with tri-flow or other lubricant.
10. Inspect the media eject mechanism for any other obvious issues, paying special attention to ensuring the drive arm screw is seated tightly.
11. Check the gears and the tension in the belts at the rear and front of the curler assembly.
12. Check for looseness in the gear post of the decurler, and then check the output transmission belts and tensioners.
13. Replace D-Shaft, Nuge, Catscratcher and M13

Additional root causes

- M11
- M13
- A2

Links

- Fault tree: [B2.1306: Paper jam at IDO Output 1 sensor \(SN15\) on page 1363](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [IDO paper path 1 wiring diagram on page 2245](#)
- Replace SN15: [IDO sensors on page 480](#)
- M11: [B2.0106 on page 1828](#)
- M13: [B2.0104 on page 1826](#)
- A2: [D4.0705 on page 2060](#)

B2.1307

Description

- Paper jam at IDO Output 2 sensor (SN12)

Primary root causes

- Paper jams at the engine-finisher interface
- SN12
- Wire harness between SN12 and the Motion PCA (A2)

Recommended actions

1. Check the alignment of the engine-to-finisher interface.
2. Open the IDO Sensors, Solenoids, LEDs diagnostic page, and then manually activate SN12 and verify that the sensor state changes.
3. Verify that SN12 is correctly seated and clean.
4. Verify that the idler rollers are correctly seated and clean.
5. Test the voltage at SN12: 5 Vdc blocked or unblocked at pins 6B to 4B and 5 Vdc unblocked, 0 Vdc blocked at pins 5B to 4B on W96P6-W45J6.
6. Test the voltage to SN12 from A2: 5 Vdc blocked and unblocked at J5 pins 11B to 12B and 10B to 12B.

Additional root causes

- M11
- SOL2
- A2

Links

- Fault tree: [B2.1307: Paper jam at IDO Output 2 sensor \(SN12\) on page 1365](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [IDO paper path 1 wiring diagram on page 2245](#)
- Replace SN12: [IDO sensors on page 480](#)
- M11: [B2.0106 on page 1828](#)
- SOL2: [B2.03C1 on page 1834](#)
- A2: [D4.0705 on page 2060](#)

B2.1308

Description

- Paper jam at IDO Duplex Staging sensor (SN11)

Primary root causes

- Dirty sensors (SN11, SN15)
- SN11
- Wire harness between SN11 and the Motion PCA (A2)

Recommended actions

1. Open the IDO Sensors, Solenoids, LEDs diagnostic page, and then manually activate SN11 and verify that the sensor state changes.
2. Verify that SN11 and SN15 are correctly seated and clean.
3. Verify that the idler rollers are correctly seated and clean.
4. Test the voltage at SN11: 1.18 Vdc unblocked and blocked at pins 6A to 5A and 0.15 Vdc unblocked, 3.23 Vdc blocked at pins 4A to 5A on W97P7-W44J7.
5. Test the voltage to SN11 on A2: 1.18 Vdc for blocked and unblocked at J4 pins 13A to 14A and 0.15 Vdc unblocked, 3.24 Vdc blocked at pins 15A to 14A.

Additional root causes

- SOL2
- M12
- A2

Links

- Fault tree: [B2.1308: Paper jam at IDO Duplex Staging sensor \(SN11\) on page 1367](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [IDO paper path 2 wiring diagram on page 2245](#)
- Replace SN11: [IDO sensors on page 480](#)
- SOL2: [B2.03C1 on page 1834](#)
- M12: [B2.0105 on page 1827](#)
- A2: [D4.0705 on page 2060](#)

B2.1309

Description

- Paper jam at IDO Duplex Media sensor (SN16)

Primary root causes

- SN16
- Wire harness between SN16 and the Motion PCA (A2)

Recommended actions

1. Open the IDO Sensors, Solenoids, LEDs diagnostic page, and then manually activate SN16 and verify that the sensor state changes.
2. Verify that SN16 is correctly seated and clean.
3. Verify that the idler rollers are correctly seated and clean.
4. Test the voltage at SN16: 3.24 Vdc unblocked, 0.08 Vdc blocked at pins 10B to 9B and 1.18 Vdc unblocked or blocked at pins 11B to 9B on W97P7-W44J7.
5. Test the voltage to SN16 from A2: 3.25 Vdc unblocked, 0.08 Vdc blocked at J4 pins 9B to 10B and 1.18 Vdc unblocked and blocked at pins 8B to 10B.

Additional root causes

- M12
- A2

Links

- Fault tree: [B2.1309: Paper jam at IDO Duplex Media sensor \(SN16\) on page 1369](#)
- Diagnostic page: Click **Subsystems**, click **Paper Path**, and then click **IDO Sensors, Solenoids, LEDs**.
- Component locator: [IDO component locator on page 2325](#)
- Wiring diagram: [IDO paper path 2 wiring diagram on page 2245](#)
- Replace SN16: [IDO sensors on page 480](#)
- M12: [B2.0105 on page 1827](#)
- A2: [D4.0705 on page 2060](#)

C0.0101

Description

- Vacuum 1 motor (VAC1) failed to start after three attempts

Primary root causes

- VAC1
- Wire harness between the VAC1 motor, the Ink Assist PCA (A3), and the Main Engine PCA (A5)
- A3

Recommended actions

1. Replace the VAC1 motor or exchange it with a different vacuum motor to confirm a motor problem.
2. Check the wire harness connection to motor VAC1. Disconnect the VAC1 cable to the motor and look for any connector discoloration that may indicate a connection problem.
3. Test the wire harness for continuity by rebooting the MFP in Protected Service mode (PSM).
4. Enter the Vacuum tool page, press the **Voltage Test** button, and follow the on-screen directions.
5. Disconnect motor VAC1.
6. Test the wire harness for continuity by measuring the voltage at the VAC1 cable end that connects to the motor. Use the AC setting on the voltmeter. The AC setting is used because the voltage is a high frequency DC and cannot be accurately measured with a DC setting.
7. The voltage measured should be from 2 to 12 Vac when measured from VAC1 pins 1 to 2, pins 1 to 3 and pins 2 to 3. All voltages should be approximately equal.
8. If any voltage is missing at the VAC1 connector, test the voltage at the Ink Assist PCA (A3) connector J5 to determine if the wiring harness or Ink Assist PCA is bad.
9. The voltage measured should be from 2 to 12 Vac when measured from J5 pins 1 to 2, pins 1 to 3 and pins 2 to 3. All voltages should be approximately equal.
10. Replace the Ink Assist PCA (A3).

Links

- Diagnostic page: Click **Subsystems**, and then click **Vacuum**.
- Component locator: [Vacuum component locator on page 2331](#)
- Wiring diagram: [Vacuum and aerosol wiring diagram on page 2260](#)

C0.0102

Description

- Vacuum 2 motor (VAC2) failed to start after three attempts

Primary root causes

- VAC2
- Wire harness between the VAC2 motor, the Ink Assist PCA (A3), and the Main Engine PCA (A5)
- A3

Recommended actions

1. Replace the VAC2 motor or exchange it with a different vacuum motor to confirm a motor problem.
2. Check the wire harness connection to motor VAC2. Disconnect the VAC2 cable to the motor and look for any connector discoloration that may indicate a connection problem.
3. Test the wire harness for continuity by rebooting the MFP in Protected Service mode (PSM).
4. Enter the Vacuum tool page, press the **Voltage Test** button, and follow the on-screen directions.
5. Disconnect motor VAC2.
6. Test the wire harness for continuity by measuring the voltage at the VAC2 cable end that connects to the motor. Use the AC setting on the voltmeter. The AC setting is used because the voltage is a high frequency DC and cannot be accurately measured with a DC setting.
7. The voltage measured should be from 2 to 12 Vac when measured from VAC2 pins 1 to 2, pins 1 to 3 and pins 2 to 3. All voltages should be approximately equal.
8. If any voltage is missing at the VAC2 connector, test the voltage at the Ink Assist PCA (A3) connector J5 to determine if the wiring harness or Ink Assist PCA is bad.
9. The voltage measured should be from 2 to 12 Vac when measured from J5 pins 4 to 5, pins 4 to 6 and pins 5 to 6. All voltages should be approximately equal.
10. Replace the Ink Assist PCA (A3).

Links

- Diagnostic page: Click **Subsystems**, and then click **Vacuum**.
- Component locator: [Vacuum component locator on page 2331](#)
- Wiring diagram: [Vacuum and aerosol wiring diagram on page 2260](#)

C0.0103

Description

- Vacuum 3 motor (VAC3) failed to start after three attempts

Primary root causes

- VAC3
- Wire harness the between VAC3 motor, the Ink Assist PCA (A3), and the Main Engine PCA (A5)
- A3

Recommended actions

1. Replace the VAC3 motor or exchange it with a different vacuum motor to confirm a motor problem.
2. Check the wire harness connection to motor VAC3. Disconnect the VAC3 cable to the motor and look for any connector discoloration that may indicate a connection problem.
3. Test the wire harness for continuity by rebooting the MFP in Protected Service mode (PSM).
4. Enter the Vacuum tool page, press the **Voltage Test** button, and follow the on-screen directions.
5. Disconnect motor VAC3.
6. Test the wire harness for continuity by measuring the voltage at the VAC3 cable end that connects to the motor. Use the AC setting on the voltmeter. The AC setting is used because the voltage is a high frequency DC and cannot be accurately measured with a DC setting.
7. The voltage measured should be from 2 to 12 Vac when measured from VAC3 pins 1 to 2, pins 1 to 3 and pins 2 to 3. All voltages should be approximately equal.
8. If any voltage is missing at the VAC3 connector, test the voltage at the Ink Assist PCA (A3) connector J5 to determine if the wiring harness or Ink Assist PCA is bad.
9. The voltage measured should be from 2 to 12 Vac when measured from J5 pins 7 to 8, pins 7 to 9 and pins 8 to 9. All voltages should be approximately equal.
10. Replace the Ink Assist PCA (A3).

Links

- Diagnostic page: Click **Subsystems**, and then click **Vacuum**.
- Component locator: [Vacuum component locator on page 2331](#)
- Wiring diagram: [Vacuum and aerosol wiring diagram on page 2260](#)

C0.0104

Description

- Vacuum 4 motor (VAC4) failed to start after three attempts

Primary root causes

- VAC4
- Wire harness between the VAC4 motor, the Ink Assist PCA (A3), and the Main Engine PCA (A5)
- A3

Recommended actions

1. Replace the VAC4 motor or exchange it with a different vacuum motor to confirm a motor problem.
2. Check the wire harness connection to motor VAC4. Disconnect the VAC4 cable to the motor and look for any connector discoloration that may indicate a connection problem.
3. Test the wire harness for continuity by rebooting the MFP in Protected Service mode (PSM).
4. Enter the Vacuum tool page, press the **Voltage Test** button, and follow the on-screen directions.
5. Disconnect motor VAC4.
6. Test the wire harness for continuity by measuring the voltage at the VAC4 cable end that connects to the motor. Use the AC setting on the voltmeter. The AC setting is used because the voltage is a high frequency DC and cannot be accurately measured with a DC setting.
7. The voltage measured should be from 2 to 12 Vac when measured from VAC4 pins 1 to 2, pins 1 to 3 and pins 2 to 3. All voltages should be approximately equal.
8. If any voltage is missing at the VAC4 connector, test the voltage at the Ink Assist PCA (A3) connector J5 to determine if the wiring harness or Ink Assist PCA is bad.
9. The voltage measured should be from 2 to 12 Vac when measured from J5 pins 12 to 13, pins 12 to 14 and pins 13 to 14. All voltages should be approximately equal.
10. Replace the Ink Assist PCA (A3).

Links

- Diagnostic page: Click **Subsystems**, and then click **Vacuum**.
- Component locator: [Vacuum component locator on page 2331](#)
- Wiring diagram: [Vacuum and aerosol wiring diagram on page 2260](#)

C0.0105

Description

- Vacuum 5 motor (VAC5) failed to start after three attempts

Primary root causes

- VAC5
- Wire harness between the VAC5 motor, the Ink Assist PCA (A3), and the Main Engine PCA (A5)
- A3

Recommended actions

1. Replace the VAC5 motor or exchange it with a different vacuum motor to confirm a motor problem.
2. Check the wire harness connection to motor VAC5. Disconnect the VAC5 cable to the motor and look for any connector discoloration that may indicate a connection problem.
3. Test the wire harness for continuity by rebooting the MFP in Protected Service mode (PSM).
4. Enter the Vacuum tool page, press the **Voltage Test** button, and follow the on-screen directions.
5. Disconnect motor VAC5.
6. Test the wire harness for continuity by measuring the voltage at the VAC5 cable end that connects to the motor. Use the AC setting on the voltmeter. The AC setting is used because the voltage is a high frequency DC and cannot be accurately measured with a DC setting.
7. The voltage measured should be from 2 to 12 Vac when measured from VAC5 pins 1 to 2, pins 1 to 3 and pins 2 to 3. All voltages should be approximately equal.
8. If any voltage is missing at the VAC5 connector, test the voltage at the Ink Assist PCA (A3) connector J5 to determine if the wiring harness or Ink Assist PCA is bad.
9. The voltage measured should be from 2 to 12 Vac when measured from J5 pins 15 to 16, pins 15 to 17 and pins 16 to 17. All voltages should be approximately equal.
10. Replace the Ink Assist PCA (A3).

Links

- Diagnostic page: Click **Subsystems**, and then click **Vacuum**.
- Component locator: [Vacuum component locator on page 2331](#)
- Wiring diagram: [Vacuum and aerosol wiring diagram on page 2260](#)

C0.0106

Description

- Aerosol fan (AERO) failed to start after three attempts

Primary root causes

- AERO
- Wire harness between the AERO motor, the Ink Assist PCA (A3), and the Main Engine PCA (A5)
- A3

Recommended actions

1. Replace the AERO motor or exchange it with a different vacuum motor to confirm a motor problem.
2. Check the wire harness connection to motor AERO. Disconnect the AERO cable to the motor and look for any connector discoloration that may indicate a connection problem.
3. Test the wire harness for continuity by rebooting the MFP in Protected Service mode (PSM).
4. Enter the Vacuum tool page, press the **Voltage Test** button, and follow the on-screen directions.
5. Disconnect motor AERO.
6. Test the wire harness for continuity by measuring the voltage at the AERO cable end that connects to the motor. Use the AC setting on the voltmeter. The AC setting is used because the voltage is a high frequency DC and cannot be accurately measured with a DC setting.
7. The voltage measured should be from 2 to 12 Vac when measured from AERO pins 1 to 2, pins 1 to 3 and pins 2 to 3. All voltages should be approximately equal.
8. If any voltage is missing at the AERO connector, test the voltage at the Ink Assist PCA (A3) connector J5 to determine if the wiring harness or Ink Assist PCA is bad.
9. The voltage measured should be from 2 to 12 Vac when measured from J5 pins 18 to 19, pins 18 to 20 and pins 19 to 20. All voltages should be approximately equal.
10. Replace the Ink Assist PCA (A3).

Links

- Diagnostic page: Click **Subsystems**, and then click **Vacuum**.
- Component locator: [Aerosol component locator on page 2314](#)
- Wiring diagram: [Vacuum and aerosol wiring diagram on page 2260](#)

C0.0107

Description

- Low vacuum pressure

Primary root causes

- Vacuum duct gaskets at the Web wipe cartridge
- Loose or disconnected tubing between the vacuum motor housing and A3
- Ink Assist PCA (A3)
- Vacuum motor housing
- Vacuum motors
- Poppet valves
- MFP altitude above 2438.4 m (8000 ft.)

Recommended actions

1. Power cycle the MFP normally. This error will not occur during normal power up. It will only occur when the MFP attempts to print. A normal power up allows the CDFT Vacuum tool page to operate.
2. Open the Vacuum diagnostic page, and then click **Run All Motors**. Verify that the vacuum motors deliver 2.4 kPa (10 inches of water). You might need to adjust the RPM value to attain correct pressure.
3. Verify that the vacuum motors run at approximately the same RPM. Replace any motor that runs abnormally.
4. Check the two vacuum duct gaskets at the Web wipe cartridge for vacuum leaks.
5. Verify that the SN40 tubing from the vacuum motor housing to A3 is not damaged, blocked, or disconnected.
6. Test SN40. Disconnect the tubing to the vacuum motor housing and use the tubing like a straw to apply a vacuum pressure while observing the CDFT vacuum pressure. If the sensor is faulty, replace A3.
7. Check for a drum zone that leaks by running all the vacuum motors and sealing off the drum surface with sheets of paper.
8. Check the vacuum motor housing for leaks.

Links

- Diagnostic page: Click **Subsystems**, and then click **Vacuum**.
- Component locator: [Vacuum component locator on page 2331](#)
- Wiring diagram: [Vacuum and aerosol wiring diagram on page 2260](#)
- Replace A3: [Ink Assist PCA \(A3\) on page 611](#)

C0.0108

Description

- Vacuum motors were shut down for protection because a watchdog timer on the Ink Assist PCA (A3) tripped after a 15 second signal loss

Primary root causes

- Other system error conditions

Recommended actions

- Fix any errors or warnings recorded in the Event Log.

Links

- Event Log: Click **View Log and Troubleshoot**.
- Component locator: [Vacuum component locator on page 2331](#)
- Wiring diagram: [Vacuum and aerosol wiring diagram on page 2260](#)

C0.01A1

Description

- Vacuum 1 motor (VAC1) failed to start on the first or second attempt but started by the third attempt

Primary root causes

- VAC1 wire harness
- VAC1

Recommended actions

1. Open the Vacuum diagnostic page, and then run VAC1 multiple times, looking for startup problems.
2. Check the error and warning logs for all vacuum-related entries.
3. Check the VAC1 wire connector.

Links

- Diagnostic page: Click **Subsystems**, and then click **Vacuum**.
- Component locator: [Vacuum component locator on page 2331](#)
- Wiring diagram: [Vacuum and aerosol wiring diagram on page 2260](#)

C0.01A2

Description

- Vacuum 2 motor (VAC2) failed to start on the first or second attempt but started by the third attempt

Primary root causes

- VAC2 wire harness
- VAC2

Recommended actions

1. Open the Vacuum diagnostic page, and then run VAC2 multiple times, looking for startup problems.
2. Check the error and warning logs for all vacuum-related entries.
3. Check the VAC2 wire connector.

Links

- Diagnostic page: Click **Subsystems**, and then click **Vacuum**.
- Component locator: [Vacuum component locator on page 2331](#)
- Wiring diagram: [Vacuum and aerosol wiring diagram on page 2260](#)

C0.01A3

Description

- Vacuum 3 motor (VAC3) failed to start on the first or second attempt but started by the third attempt

Primary root causes

- VAC3 wire harness
- VAC3

Recommended actions

1. Open the Vacuum diagnostic page, and then run VAC3 multiple times, looking for startup problems.
2. Check the error and warning logs for all vacuum-related entries.
3. Check the VAC3 wire connector.

Links

- Diagnostic page: Click **Subsystems**, and then click **Vacuum**.
- Component locator: [Vacuum component locator on page 2331](#)
- Wiring diagram: [Vacuum and aerosol wiring diagram on page 2260](#)

C0.01A4

Description

- Vacuum 4 motor (VAC4) failed to start on the first or second attempt but started by the third attempt

Primary root causes

- VAC4 wire harness
- VAC4

Recommended actions

1. Open the Vacuum diagnostic page, and then run VAC4 multiple times, looking for startup problems.
2. Check the error and warning logs for all vacuum-related entries.
3. Check the VAC4 wire connector.

Links

- Diagnostic page: Click **Subsystems**, and then click **Vacuum**.
- Component locator: [Vacuum component locator on page 2331](#)
- Wiring diagram: [Vacuum and aerosol wiring diagram on page 2260](#)

C0.01A5

Description

- Vacuum 5 motor (VAC5) failed to start on the first or second attempt but started by the third attempt

Primary root causes

- VAC5 wire harness
- VAC5

Recommended actions

1. Open the Vacuum diagnostic page, and then run VAC5 multiple times, looking for startup problems.
2. Check the error and warning logs for all vacuum-related entries.
3. Check the VAC5 wire connector.

Links

- Diagnostic page: Click **Subsystems**, and then click **Vacuum**.
- Component locator: [Vacuum component locator on page 2331](#)
- Wiring diagram: [Vacuum and aerosol wiring diagram on page 2260](#)

C0.01A6

Description

- Aerosol fan (AERO) failed to start on the first or second attempt but started by the third attempt

Primary root causes

- AERO wire harness
- AERO

Recommended actions

1. Open the Vacuum diagnostic page, and then run AERO multiple times, looking for startup problems.
2. Check the error and warning logs for all aerosol-related entries.
3. Check the AERO wire connector.

Links

- Diagnostic page: Click **Subsystems**, and then click **Vacuum**.
- Component locator: [Aerosol component locator on page 2314](#)
- Wiring diagram: [Vacuum and aerosol wiring diagram on page 2260](#)

C0.01A7

Description

- Total power needed to operate the vacuum motors (VAC1 to VAC5) and the Aerosol fan (AERO) exceeded 400 watts

Primary root causes

- VAC1, VAC2, VAC3, VAC4, and VAC5,
- AERO
- MFP altitude above 2438.4 m (8000 ft.)
- Vacuum leak
- Ink Assist PCA (A3)

Recommended actions

1. Open the Vacuum diagnostic page, and then click **Run All Motors**. Verify that the vacuum motors deliver 2.4 kPa (10 inches of water). You might need to adjust the RPM value to attain correct pressure.
2. Verify that VAC1 to VAC5 and AERO consume approximately the same amount of power. AERO normally consumes less power because it runs at a fixed rate of approximately 13,000 RPM. Replace any motor that consumes too much power.
3. Check the Web wipe cartridge gasket for leaks.
4. Check for a drum zone that leaks.
5. Check the vacuum motor housing for leaks.
6. Replace A3.

Links

- Diagnostic page: Click **Subsystems**, and then click **Vacuum**.
- Component locator: [Vacuum component locator on page 2331](#)
- Wiring diagram: [Vacuum and aerosol wiring diagram on page 2260](#)
- Replace A3: [Ink Assist PCA \(A3\) on page 611](#)

C0.01A8

Description

- Vacuum: Analog to Digital conversion bad

Primary root causes

- Ink Assist PCA (A3)

Recommended actions

- Replace A3.

Links

- Diagnostic page: Click **Subsystems**, and then click **Vacuum**.
- Component locator: [Vacuum component locator on page 2331](#)
- Wiring diagram: [Vacuum and aerosol wiring diagram on page 2260](#)
- Replace A3: [Ink Assist PCA \(A3\) on page 611](#)

C0.01AA

Description

- Vacuum 1 motor (VAC1) stalls during printing

Primary root causes

- VAC1
- Wire harness between VAC1, the Ink Assist PCA (A3), and the Main Engine PCA (A5)

Recommended actions

1. Open the Vacuum diagnostic page, and then run VAC1.
2. Test the voltage at VAC1: 2 to 12 V on VAC1 pins 1 to 2, 1 to 3, and 2 to 3.
3. Test the voltage to VAC1 from A3: 2 to 12 V at J5 pins 1 to 2, 1 to 3, 2 to 3.

Additional root causes

- A3
- A5

Links

- Diagnostic page: Click **Subsystems**, and then click **Vacuum**.
- Component locator: [Vacuum component locator on page 2331](#)
- Wiring diagram: [Vacuum and aerosol wiring diagram on page 2260](#)
- A3: [D4.0703 on page 2058](#)
- A5: [D4.0702 on page 2057](#)

C0.01AB

Description

- Warning Vacuum 2 motor (VAC2) stalls during printing

Primary root causes

- VAC2
- Wire harness between VAC2, the Ink Assist PCA (A3), and the Main Engine PCA (A5)

Recommended actions

1. Open the Vacuum diagnostic page, and then run VAC2.
2. Test the voltage at VAC2: 2 to 12 V on VAC2 pins 1 to 2, 1 to 3, and 2 to 3.
3. Test the voltage to VAC2 on A3: 2 to 12 V at J5 pins 4 to 5, 4 to 6, and 5 to 6.

Additional root causes

- A3
- A5

Links

- Diagnostic page: Click **Subsystems**, and then click **Vacuum**.
- Component locator: [Vacuum component locator on page 2331](#)
- Wiring diagram: [Vacuum and aerosol wiring diagram on page 2260](#)
- A3: [D4.0703 on page 2058](#)
- A5: [D4.0702 on page 2057](#)

C0.01AC

Description

- Vacuum 3 motor (VAC3) stalls during printing

Primary root causes

- VAC3
- Wire harness between VAC3, the Ink Assist PCA (A3), and the Main Engine PCA (A5)

Recommended actions

1. Open the Vacuum diagnostic page, and then run VAC3.
2. Test the voltage at VAC3: 2 to 12 V on VAC3 pins 1 to 2, 1 to 3, and 2 to 3.
3. Test the voltage to VAC3 on A3: 2 to 12 V at J5 pins 7 to 8, 7 to 9, and 8 to 9.

Additional root causes

- A3
- A5

Links

- Diagnostic page: Click **Subsystems**, and then click **Vacuum**.
- Component locator: [Vacuum component locator on page 2331](#)
- Wiring diagram: [Vacuum and aerosol wiring diagram on page 2260](#)
- A3: [D4.0703 on page 2058](#)
- A5: [D4.0702 on page 2057](#)

C0.01AD

Description

- Vacuum 4 motor (VAC4) stalls during printing

Primary root causes

- VAC4
- Wire harness between VAC4, the Ink Assist PCA (A3), and the Main Engine PCA (A5)

Recommended actions

1. Open the Vacuum diagnostic page, and then run VAC4.
2. Test the voltage at VAC4: 2 to 12 V on VAC4 pins 1 to 2, 1 to 3, and 2 to 3.
3. Test the voltage to VAC4 from A3: 2 to 12 V at J5 pins 12 to 13, 12 to 14, and 13 to 14.

Additional root causes

- A3
- A5

Links

- Diagnostic page: Click **Subsystems**, and then click **Vacuum**.
- Component locator: [Vacuum component locator on page 2331](#)
- Wiring diagram: [Vacuum and aerosol wiring diagram on page 2260](#)
- A3: [D4.0703 on page 2058](#)
- A5: [D4.0702 on page 2057](#)

C0.01AE

Description

- Vacuum 5 motor (VAC5) stalls during printing

Primary root causes

- VAC5
- Wire harness between VAC5, the Ink Assist PCA (A3), and the Main Engine PCA (A5)

Recommended actions

1. Open the Vacuum diagnostic page, and then run VAC5.
2. Test the voltage at VAC5: 2 to 12 V on VAC5 pins 1 to 2, 1 to 3, and 2 to 3.
3. Test the voltage to VAC5 on A3: 2 to 12 V at J5 pins 15 to 16, 15 to 17, and 16 to 17.

Additional root causes

- A3
- A5

Links

- Diagnostic page: Click **Subsystems**, and then click **Vacuum**.
- Component locator: [Vacuum component locator on page 2331](#)
- Wiring diagram: [Vacuum and aerosol wiring diagram on page 2260](#)
- A3: [D4.0703 on page 2058](#)
- A5: [D4.0702 on page 2057](#)

C0.01AF

Description

- Aerosol fan (AERO) stalls during printing

Primary root causes

- AERO
- Wire harness between AERO, the Ink Assist PCA (A3), and the Main Engine PCA (A5)

Recommended actions

1. Open the Vacuum diagnostic page, and then run AERO.
2. Test the voltage at AERO: 2 to 12 V on AERO pins 1 to 2, 1 to 3, and 2 to 3.
3. Test the voltage to AERO on A3: 2 to 12 V at J5 pins 18 to 19, 18 to 20, and 19 to 20.

Additional root causes

- A3
- A5

Links

- Diagnostic page: Click **Subsystems**, and then click **Vacuum**.
- Component locator: [Aerosol component locator on page 2314](#)
- Wiring diagram: [Vacuum and aerosol wiring diagram on page 2260](#)
- A3: [D4.0703 on page 2058](#)
- A5: [D4.0702 on page 2057](#)

C0.0DC2

Description

- The media placement on the drum varies, resulting in margin variation

Primary root causes

- Media condition
- Dirty drum screen

Recommended actions

1. Verify that the media being used meets product specifications.
2. Clean the drum screen.

Additional root causes

- Top-of-form sensor (SN22)
- Low vacuum pressure

Links

- Diagnostic page: Click **Subsystems**, and then click **Drum**.
- Component locator: [Drum component locator on page 2318](#)
- Wiring diagram: [Drum wiring diagram on page 2225](#)
- SN22: [C1.0203 on page 1872](#)
- Low vacuum pressure: [C0.0107 on page 1852](#)

C1.0101

Description

- Drum motor (M3) stall

Primary root causes

- Drum Encoder PCA (EN2)
- Drum motor (M3)
- Drive belt and pulley
- Motion PCA (A2)
- Wire harness between M3, Drum Encoder PCA (EN2), and the Motion PCA (A2)
- Drum bearing

Recommended actions

1. Open the MFP front door and rotate the drum by hand to check for binding. If binding is present, remove and inspect the drum motor assembly, and then rotate the drum again with the assembly removed to check for binding.
2. Boot into Protected Service mode (PSM).
3. Open the Drum tool page and rotate the drum by hand, and then check that the drum encoder count (EN1 Drum) changes from 0-5719. If the encoder does not count at all, or the count is not accurate, the problem is in the drum encoder system (encoder disk, Drum Encoder PCA (EN2), Motion PCA (A2)).
4. If the encoder counts are good, close the front doors and try running the Drum motor (M3). Verify that the motor can run for two to three minutes without any problems.
5. If needed, perform a voltage check at the Drum motor (M3) and the Motion PCA (A2) using the CDFT voltage test.
6. Test the voltage at M3: 5 Vdc at pins 1 to 2 on W35P3-M3.
7. Test the voltage to M3 on A2: 5 Vdc at J15 pins 3 to 8.

Links

- Diagnostic page: Click **Subsystems**, and then click **Drum**.
- Component locator: [Drum component locator on page 2318](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)

C1.0102

Description

- Drum Guide motor (M22) stall

Primary root causes

- Jammed drum guide gears
- M22
- Wire harness between M22 and the Motion PCA (A2)

Recommended actions

1. Check the drum guide position and verify that the drum guide gears are not jammed. If the gears are jammed, remove the drum guide assembly from the MFP, and then remove the white gear that connects to the drum guide motor gear in order to release tension on the gears. Reassemble the drum guide assembly and reinstall it in the MFP.
2. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
3. Check M22 for obstructions. Clean as needed.
4. Open the Drum diagnostic page, and then test M22.
5. Check the M22 assembly for damage.
6. Check the wire harness between M22 and A2.

Links

- Diagnostic page: Click **Subsystems**, and then click **Drum**.
- Component locator: [Drum component locator on page 2318](#)
- Wiring diagram: [Drum wiring diagram on page 2225](#)
- Replace M22: [Drum Guide motor \(M22\) on page 502](#)

C1.01A1

Description

- Drum motor (M3) requires higher than normal power (PWM) to operate

Primary root causes

- Drive belt
- M3
- Wire harness between M3 and the Motion PCA (A2)

Recommended actions

1. Turn the drum by hand to check for binding.
2. Open the Drum diagnostic page, and then run M3 and verify that the drum turns.
3. Test the voltage at M3: 5 Vdc at pins 1 to 2 on W35P3-M3.
4. Test the voltage to M3 on A2: 5 Vdc at J15 pins 3 to 8.

Additional root causes

- A2

Links

- Diagnostic page: Click **Subsystems**, and then click **Drum**.
- Component locator: [Drum component locator on page 2318](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- A2: [D4.0705 on page 2060](#)

C1.0203

Description

- Top-of-form sensor (SN22) problem

Primary root causes

- SN22
- Wire harness between SN22, the Main Engine Backplane PCA (A4), Image Processing PCA (A6), and the Motion PCA (A2)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Open the Drum diagnostic page, and then check that each of the LEDs operates.
3. Verify that the gloss measurement is works.
4. Test the voltage at SN22: 3 Vdc at pins 2 to 3 on W84P2-SN22.
5. Test the voltage to SN22 on A6: 3 Vdc at J5 pins 16 to 17.
6. Test the voltage to SN22 on A2: 3 Vdc at J7 pins 13A to 14A.

Additional root causes

- A2
- A6

Links

- Diagnostic page: Click **Subsystems**, and then click **Drum**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- A2: [D4.0705 on page 2060](#)
- A6: [D2.0703 on page 2020](#)

C1.0204

Description

- Top-of-form sensor (SN22) calibration failed

The Top-of-Form sensor calibration is performed each time the MFP powers up. During the power up process, the four colored Top-of-Form LEDs light up and shine on the drum screen. The drum rotates and the reflected LED light is measured by the Top-of-Form sensor. The power to the sensor is adjusted lower until the reflected light from the black drum screen surface is no longer detected. This power setting becomes the sensor calibration value until the MFP is powered up again.

Primary root causes

- Drum screen needs cleaning
- SN22

Recommended actions

1. Check the entire drum surface for shiny reflective spots where the sensor shines during the power-up calibration. The drum screen under the sensor must not be shiny for proper sensor calibration. Clean the drum screen and then power cycle the MFP to run the sensor calibration.
2. If needed, power cycle the MFP in Protected Service mode (PSM).
3. In CDFT, open the Drum diagnostic page.
4. Press the LED button SN22 Top-of-form and check that all four LEDs turn on (red, orange, blue, green).
5. Press the sensor button SN22 Top-of-Form to take a sensor reading of the black drum screen and record the value (for example, 50). Values below 20 can indicate a sensor problem.
6. Hold a piece of white paper under the sensor and take another reading (for example, 180). Values above 300 can indicate a sensor problem.
7. Verify the white paper reading is much higher than the black screen reading.

Links

- Diagnostic page: Click **Subsystems**, and then click **Drum**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)

C1.02A1

Description

- The LED voltage needed to operate the Drop Detect sensors is higher than normal.

Primary root causes

- Drop detect assembly

Recommended actions

1. Open the Drum page, and then check all six Drop Detect channel values to identify which channel has the highest value.
2. Clean the Drop Detect sensor and LED lenses.
3. Replace the Drop Detect assembly.

Links

- Diagnostic page: Click **Subsystems**, and then click **Drum**.
- Component locator: [Drop Detect PCA \(A22\) diagram on page 2263](#)
- Wiring diagram: [Drum wiring diagram on page 2225](#)

C1.02A2

Description

- Drop Detect failed self-test

Primary root causes

- Drop Detect assembly
- Wire harness between the Drop Detect and the Main Engine Backplane PCA (A4)
- Main Engine PCA (A5)

Recommended actions

1. Open the Drum diagnostic page, and then examine the six Drop Detect channels in order to identify a problem channel. All channels should display similar values from 10 ma to 30 ma.
2. Test the voltage at the Drop Detect assembly: 3.3 Vdc at pins 9 to 11 on W1P1-A22J1.
3. Test the voltage to the Drop Detect assembly from A4: 3.3 Vdc at J2 pins 9 to 11.

Links

- Diagnostic page: Click **Subsystems**, and then click **Drum**.
- Component locator: [Drum component locator on page 2318](#)
- Wiring diagram: [Drop Detect PCA \(A22\) diagram on page 2263](#)

C1.02A3

Description

- One or more of the six Drop Detect channels has an occluded sensor

Primary root causes

- Drop Detect assembly

Recommended actions

1. Open the Drum diagnostic page, and then examine the six Drop Detect channels in order to identify a problem channel. A completely blocked channel should display a value of 50 ma.
2. Clean the Drop Detect sensor and LED lenses of the problem channel.
3. Replace the Drop Detect assembly, if cleaning the sensor does not help.

Links

- Diagnostic page: Click **Subsystems**, and then click **Drum**.
- Component locator: [Drum component locator on page 2318](#)
- Wiring diagram: [Drop Detect PCA \(A22\) diagram on page 2263](#)

C1.02A4

Description

- Drop Detect Beam calibration failed

Primary root causes

- Drop Detect assembly
- Printhead
- Carriage positioning problem

Recommended actions

1. Open the Engine Calibrations 1 page, and then run the Drop Detect Beam calibration. Doing this will resolve a failure due to a temperature or humidity change.
2. Print one copy of the Nozzle Health plot with error hiding on and one copy with error hiding off. Look for missing nozzles on the edges of each die.
3. Run a Pen Cleaning routine.
4. Open the Carriage diagnostic page, and then test the carriage positioning behavior.

Links

- Diagnostic page: Click **Subsystems**, and then click **Drum**.
- Component locator: [Drum component locator on page 2318](#)
- Wiring diagram: [Drop Detect PCA \(A22\) diagram on page 2263](#)

C1.02A5

Description

- The Drop Detect nozzle testing procedure was unable to complete successfully. The Drop Detect NVM value has been set to an uncalibrated condition. A recalibration of the Drop Detect Beam center will be automatically triggered to run the next time that the Drop Detect nozzle test is performed.

Primary root causes

- Temperature or humidity changes
- Printheads

Recommended actions

1. Open the Engine Calibrations 1 page, and then run the Drop Detect Beam calibration. Doing this will resolve a failure due to a temperature or humidity change.
2. Print one copy of the Nozzle Health plot with error hiding on and one copy with error hiding off. Look for missing nozzles on the edges of each die.
3. Run a Pen Cleaning routine.
4. Open the Carriage diagnostic page, and then test the carriage positioning behavior.

Links

- Calibration page: Click **Settings/Procedures**, click **Calibrations**, and then click **Engine Calibrations 1**.

C1.0501

Description

- Drum encoder reported bad count or index.

The Motion PCA (A2) has reported a wrong drum encoder count or a wrong drum index count during the MFP initialization process (at power up, waking from sleep, or after jam clearance). During the MFP initialization process, the drum is rotated multiple revolutions and the encoder system is tested. A2 receives encoder signals and index signals from the Drum Encoder PCA (EN2) when the drum encoder disk rotates through the sensors. The encoder signals are used by A2 for maintaining the drum RPM speed and the index signals are used for determining drum position.

Primary root causes

- Drum encoder disk
- Drum Encoder PCA (EN2)
- Motion PCA (A2)
- Drum motor assembly
- Wire harness between EN2 and the Drum Encoder Averager PCA (EN1)

Recommended actions

1. Power cycle the MFP and enter Protected Service mode (PSM).
2. In CDFT, open the **Drum** tool page.
3. Press the encoder Reset button to make sure both Drum Encoder Averager PCA (EN1) and Drum Encoder PCA (EN2) values are equal.
4. Run the Drum motor (M3) until Drum Encoder Averager PCA (EN1) latched value is non-zero.
5. Stop the motor (M3) and record the Drum Encoder Averager PCA (EN1) latched value. This number should remain the same until the MFP is power cycled.
6. Run the Drum motor (M3) for 1-2 minutes (for intermittent problems the drum may be run for longer periods of time).
7. Stop the motor and check the values displayed for Drum Encoder Averager PCA (EN1) and Drum Encoder PCA (EN2). These values should range from 0-5719 and be equal to each other + or – 1 count. The EN1 value is reported from the Image Processing PCA (A6) and the EN2 value is reported from the Motion PCA (A2). Equal values mean that both PCAs are detecting the same number of encoder counts. If the encoder counts are not equal then check the EN1 latched value that was written down to see if it has changed. If the number never changed then this confirms a problem with the A2 encoder path.
8. Check the drum encoder disk for contamination or damage in the outer encoder band and the inner index band. Note that most encoder disks will show some wear marks in the 3 solid black positioning bands that circle the disk. There can be some white dust accumulation on the disk and around the sensors. This disk wear is normal and does not indicate an encoder disk problem. Clean the sensors and encoder disk as needed.
9. Visually check for wire damage on the wire harness to EN2. Reseat the wire connectors on EN2.

The drum may also be rotated by hand to confirm encoder counts.

1. Open the front door or remove any front door cheater plug.
2. Press the Reset button if needed to make Drum Encoder Averager PCA (EN1) and Drum Encoder PCA (EN2) equal values.
3. Turn the drum clockwise by hand and verify that Drum Encoder Averager PCA (EN1) and Drum Encoder PCA (EN2) counts change from 0 to 5719 and that they remain equal values + or – 1 count.

Links

- Diagnostic page: Click **Subsystems**, and then click **Drum**.
- Component locator: [Drum component locator on page 2318](#)
- Wiring diagram: [Drum wiring diagram on page 2225](#)
- Replace the drum encoder disk: [Drum encoder disk on page 507](#)

C1.0503

Description

- Drum encoder average failure

The Image Processing PCA (A6) has reported a wrong drum encoder count or a wrong drum index count during an attempt to print. When the drum rotates during printing, A6 continuously monitors the drum encoder counts and Index mark coming from the Drum Encoder Averager PCA (EN1). The encoder count is averaged from 3 separate encoder sensors surrounding the encoder disk. A6 also receives the drum index signals from the Drum Encoder PCA (EN2) through the EN1 connection. The encoder signals are used by A6 for printhead timing and the Index signals are used to confirm the correct number of encoder counts per drum revolution.

Primary root causes

- Drum encoder disk
- Image Processing PCA (A6)
- Drum Encoder Averager PCA (EN1)
- Wire harness between Drum Encoder Averager PCA (EN1) and the Image Processing PCA (A6)

Recommended actions

1. Power cycle the MFP and enter Protected Service mode (PSM). Note that PSM mode will allow you to test the drum encoder without having to reboot when drum encoder errors are detected.
2. In CDFT, open the Drum diagnostic page.
3. Press the encoder Reset button to make sure both EN1 and EN2 values are equal.
4. Run the Drum motor (M3) until EN1 latched count displays the **first** non-zero value.
5. Stop M3 until and record the first EN1 latched value. This number should remain the same during testing until the MFP is power cycled.
6. Run M3 for 1-2 minutes. (For intermittent problems, the drum can be run longer.)
7. Stop the motor and check the values displayed for EN1 and EN2. These values should range from 0-5719 and be equal to each other ± 1 .

The EN1 value is reported from the Image Processing PCA (A6) and the EN2 value is reported from the Motion PCA (A2). Equal values mean that both PCAs are detecting the same number of encoder counts.

If the EN1 and EN2 encoder counts are not equal ± 1 , check the EN1 latched value that was written down to see if it has changed. If the EN1 latched value has changed, a problem exists in the encoder signal path to the Image Processing PCA (A6). If the value never changed then this points to a problem with the encoder signal path to the Motion PCA (A2).

8. Check the drum encoder disk for contamination or damage in the encoder band and the index band. Note that most encoder disks will show some wear marks in the three black positioning bands that circle the disk. There may be some white dust accumulation on the disk and around the sensors. Some amount of white dust is normal. Clean the sensors and encoder disk as needed.

9. Visually check for wire damage on the wire harness to EN2 . Reseat the wire connectors on EN2 .
10. The drum can also be rotated manually to confirm encoder counts:
 - Open the front door.
 - Press the **Reset** button if needed to make EN1 and EN2 equal values.
 - Turn the drum clockwise manually and verify that both EN1 and EN2 counts change from 0 to 5719 and that they remain equal values ± 1 .

Links

- Diagnostic page: Click **Subsystems**, and then click **Drum**.
- Component locator: [Drum component locator on page 2318](#)
- Wiring diagram: [Drum wiring diagram on page 2225](#)

C1.05A2

Description

- Drum Encoder PCA (EN2) signal amplitude is low

Primary root causes

- EN2
- Drum encoder disk
- EN2 wire harness

Recommended actions

1. Open the Drum diagnostic page, and then turn the drum one revolution by hand and verify that the drum encoder counts change by 22,880.
2. Check the drum encoder disk for contamination. Clean with a dry, lint-free cloth as needed.
3. Reseat the EN2 wire connectors.

Links

- Diagnostic page: Click **Subsystems**, and then click **Drum**.
- Component locator: [Drum component locator on page 2318](#)
- Wiring diagram: [Drum wiring diagram on page 2225](#)

C1.1301

Description

- Clear paper jam at Top-of-form sensor (SN22)

The Top-of-form sensor (SN22) is used to detect the leading and trailing edges of media loaded on the drum. The MFP expected to find the leading edge of media loaded on the drum at a certain drum encoder position, measured at SN22, however, the media was detected outside the tolerance allowed.

This error can also be reported in some cases when there is a media thickness related problem.

Primary root causes

- Media damage on leading edge
- Dirty drum screen
- IDO Media Thickness encoder (EN14)
- Curler drive assembly
- Media eject system issues
- Wire harness between SN22 and the Motion PCA (A2)
- SN22
- Image Processing PCA (A6)

Recommended actions

1. Verify that the paper meets product specifications.
2. Check the input trays for damaged paper.
3. Check that the drum screen is clean where SN22 shines. Make sure there is nothing reflective on the drum screen, such as ink or paper dust.
4. In CDFT check the event log for B2.1303 entries. This code, plus C1.1301, can indicate an EN14media thickness problem.
5. Open the **IDO Sensors, Solenoids, LEDs** tool page (**Subsystems > Paper Path > IDO Sensors, Solenoids, LEDs**). Test EN14. With the IDO door closed, the value should be approximately 0-10. With the IDO door open, the value should be approximately 30-40.
6. Open the Drum diagnostic page, and then test SN22.
7. Run Drum motor (M3) for 1-2 minutes. When the motor has stopped, check that Drum Encoder Averager PCA (EN1) and Drum Encoder PCA (EN2) display equal values ± 1 count. The value range should be 0-5719.
8. Open the IDO Motors diagnostic page, and then check the Curler drive operation.
9. Open the IDO Motors diagnostic page, and then check the media eject motor operation.

Links

- Diagnostic page: Click **Subsystems**, and then click **Drum**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)

C1.1302

Description

- Clear paper jam at Drum 1 sensor (SN33)

Primary root causes

- SN33
- Wire harness between SN33 and the Motion PCA (A2)

Recommended actions

1. Check the input trays for damaged paper.
2. Verify that the paper meets product specifications.
3. Open the Dryer diagnostic page, and then open and close the dryer lever and verify that the sensor state changes.
4. Test the voltage at SN33: 5 Vdc at pins 2 to 1 and 3 to 1 on W85P1-W34J1 or 5 Vdc at pins 11A to 10A and 12A to 10A on W32P9-W34J9.
5. Test the voltage to SN33 on A2: 5 Vdc at J8 pins 7A and 9A.

Links

- Diagnostic page: Click **Subsystems**, and then click **Dryer**.
- Component locator: [Dryer component locator on page 2319](#)
- Wiring diagram: [Drum sensors wiring diagram on page 2226](#)

C1.1303

Description

- Clear paper jam at Drum 2 sensor (SN34)

Primary root causes

- SN34
- Wire harness between SN34 and the Motion PCA (A2)

Recommended actions

1. Check the input trays for damaged paper.
2. Verify that the paper meets product specifications.
3. Open the Dryer diagnostic page, and then open and close the dryer lever and verify that the sensor state changes.
4. Test the voltage at SN34: 5 Vdc at pins 5 to 4 and 6 to 4 on W85P1-W34J1 or 5 Vdc at pins 5A to 6A and 4A to 6A on W32P9-W34J9.
5. Test the voltage to SN34 on A2: 5 Vdc at J8 pins 4A and 6A.

Links

- Diagnostic page: Click **Subsystems**, and then click **Dryer**.
- Component locator: [Dryer component locator on page 2319](#)
- Wiring diagram: [Drum sensors wiring diagram on page 2226](#)

C1.131A

Description

- Clear paper jam at Carriage 1 Pen Protection sensor (SN56)

The pen protection sensors are only enabled when there is paper loaded on the drum and the carriages are not moving. There is, however, one type of carriage stall that can cause this error. This error can occur when the carriages are moving to the capped position after printing and a carriage hits an obstruction, preventing it from capping.

Primary root causes

- Damaged media on drum jamming into SN56
- Drum screen dirty
- Carriage stall
- Pen Pocket 1 PCA (A16)

Recommended actions

- **Paper jam on drum:**
 - Remove any paper on the drum at the Carriage 1 Pen Protection sensor (SN56).
 - Check the input trays for damaged paper.
 - Verify that the paper meets product specifications.
 - Check the sensor plastic actuator for damage and contamination.
 - Open CDFT and the carriage diagnostic page, and then push the sensor actuator in the direction of drum rotation and verify that the sensor state changes.
 - Clean the drum screen. Also clean the drum vacuum channels under the drum screen. Weak vacuum pressure where the leading edge of media loads can allow the media edge to lift during printing.
- **Carriage stall:**
 - Check for carriage binding at the location of the carriage stall. Look for any obstructions that might interfere with carriage movement.
 - Check that the aerosol hose and snorkel are seated properly in the carriage.

Links

- Fault tree: [Carriage component locator on page 2316](#)
- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)

C1.132A

Description

- Clear paper jam at Carriage 2 Pen Protection sensor (SN57)

The pen protection sensors are only enabled when there is paper loaded on the drum and the carriages are not moving. There is, however, one type of carriage stall that can cause this error. This error can occur when the carriages are moving to the capped position after printing and a carriage hits an obstruction, preventing it from capping.

Primary root causes

- Damaged media on drum jamming into SN57
- Drum screen dirty
- Carriage stall
- Pen Pocket 4 PCA (A19)

Recommended actions

- **Paper jam on drum:**
 - Remove any paper on the drum at the Carriage 2 Pen Protection sensor (SN57).
 - Check the input trays for damaged paper.
 - Verify that the paper meets product specifications.
 - Check the sensor plastic actuator for damage and contamination.
 - Open CDFT and the carriage diagnostic page, and then push the sensor actuator in the direction of drum rotation and verify that the sensor state changes.
 - Clean the drum screen. Also clean the drum vacuum channels under the drum screen. Weak vacuum pressure where the leading edge of media loads can allow the media edge to lift during printing.
- **Carriage stall:**
 - Check for carriage binding at the location of the carriage stall. Look for any obstructions that might interfere with carriage movement.
 - Check that the aerosol hose and snorkel are seated properly in the carriage.

Links

- Fault tree: [Carriage component locator on page 2316](#)
- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Pen Pocket 4 PCA (A19): [D2.0704 on page 2021](#)

C2.0201

Description

- Dryer Temperature sensor (SN36) problem
During printing, the dryer temperature should be 30-degrees above the ambient temperature.

Primary root causes

- SN36
- Wire harness between the SN36, Ink Assist PCA (A3), and Power Distribution PCA (A1)
- Ink Assist PCA (A3)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Open the Dryer diagnostic page, and then check the temperature reading of Dryer Temperature sensor (SN36). The temperature value of SN36 should be equal to or greater than the ambient temperature SN41 sensor.
3. Check the resistance at SN36: 3,000 to 18,000 ohms at J36 pins 1 and 2.
4. Test the voltage at SN36: 1.8 to 2.5 Vdc at J36 pins 1 to 2.
5. Test the voltage to SN36 on A3: 1.8 to 2.5 Vdc at J4 pins 6 to 8.

Links

- Fault tree: [C2.0201: Dryer Temperature sensor \(SN36\) problem on page 1382](#)
- Diagnostic page: Click **Subsystems**, and then click **Dryer**.
- Component locator: [Dryer component locator on page 2319](#)
- Wiring diagram: [Dryer wiring diagram on page 2227](#)
- Replace SN36: [Dryer sensors on page 642](#)

C2.0901

Description

- Dryer fan (FAN5) problem

Primary root causes

- FAN5
- Wire harness between FAN5 and the Ink Assist PCA (A3)
- Ink Assist PCA (A3)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Open the Dryer diagnostic page. Note that the dryer cannot operate in Protective Service mode (PSM).
3. Test the voltage at FAN5: 24 to 32 Vdc at J14 pins 1 to 2 (GND) and approximately 3.3 Vdc at J14 pins 3 to 2 (GND).
4. Test the voltage to FAN5 on A3: 24 to 32 Vdc at J5 pins 11 to 10 (GND) and approximately 3.3 Vdc at pins 22 to 10 (GND).

Links

- Fault tree: [C2.0901: Dryer fan \(FAN5\) problem on page 1387](#)
- Diagnostic page: Click **Subsystems**, and then click **Dryer**.
- Component locator: [Dryer component locator on page 2319](#)
- Wiring diagram: [Dryer wiring diagram on page 2227](#)
- Replace FAN5: [Dryer fan \(FAN5\) on page 639](#)

C2.09A1

Description

- Dryer fan (FAN5) speed too low

When the dryer fan RPM was measured, it was operating below its expected value. The RPM was later measured and was in the correct operating range.

Primary root causes

- FAN5
- Firmware

Recommended actions

1. Open the Dryer diagnostic page, and then check the FAN5 RPM.
The operating speed should be approximately 4500-5000 RPM.
2. Listen to the fan when it is running. A noisy fan can indicate a bad fan bearing.
3. The fan is replaced as part of the right half of the dryer assembly.

Additional root causes

- A3

Links

- Fault tree: [C2.09A1: Dryer fan \(FAN5\) RPM too low on page 1389](#)
- Diagnostic page: Click **Subsystems**, and then click **Dryer**.
- Component locator: [Dryer component locator on page 2319](#)
- Wiring diagram: [Dryer wiring diagram on page 2227](#)
- Replace FAN5: [Dryer fan \(FAN5\) on page 639](#)
- A3: [D4.0703 on page 2058](#)

C2.0C01

Description

- Dryer heater problem

Primary root causes

- Low incoming power from the wall socket
- Dryer coil assembly
- Wire harness between the dryer assembly, Power Distribution PCA (A1), and the Power supply (PS1)
- PS1

Recommended actions

1. Verify that the incoming power line voltage is correct. The dryer is tested during a normal power up. If the dryer fails during normal power up, then power cycle into PSM for various tests and to check power line voltage. If the dryer passes during normal power up (no error), then you can run the heater checks as listed and check the power line voltage.
2. Open the Dryer diagnostic page, and then check the power line consumption wattage reading. The wattage is the sum of the normal power line consumption, the Dryer fan (FAN5) power, and HTR1 power (400 watts). The total should vary between 550 and 650 watts.
3. Measure the resistance of the four dryer coils: 28 (+/- .5) ohms at pins 1 to 2, 2 to 3, 4 to 5, and 5 to 6 on W22P1-PS1.
4. Measure the two dryer signals on the Main Engine PCA (A5).

Additional root causes

- A1

Links

- Fault tree: [C2.0C01: Dryer heater \(HTR1\) problem on page 1391](#)
- Diagnostic page: Click **Subsystems**, and then click **Dryer**.
- Component locator: [Dryer component locator on page 2319](#)
- Wiring diagram: [Dryer wiring diagram on page 2227](#)
- Replace HTR1: [Dryer heater assembly on page 638](#)
- A1: [D4.0702 on page 2057](#)

C3.22A0

Description

- Density out of range during an Automatic Pen Alignment (APA)

Primary root causes

- Poor contrast between K and K + BA on page 1 of APA
- Many nozzles out
- Colored paper, incorrect media type
- Out of paper, out of ink, media mismatch, or jam conditions
- Bad Carriage 1 Encoder PCA (A9)

Recommended actions

1. Do not use ColorLok media for the first printed page of APA. Print a nozzle health plot. If the checkerboard is not visible, it is ColorLok media.
2. Check the paper for high humidity content. Media with high moisture content can create poor contrast, similar to ColorLok media.
3. Verify that the paper in the source tray is not colored. Use only 20 lb multipurpose non-ColorLok paper.
4. Run a Drop Detect calibration from the Engine Calibrations 1 page. Verify that the pen health gauge reading for each pen is green. Service the pens if there is a yellow or red pen. Print a nozzle health plot and confirm there are not missing nozzles.
5. Check for out of paper, out of ink, media mismatch, or jam conditions, and then repeat APA.
6. To confirm that Carriage 1 Encoder PCA (A9) is causing this code, check the number of pages printed during APA. If only P-1 is printed and the page is missing some marks from the left side of the page, replace A9.
7. There might be cases when APA prints 3 or 4 pages, and then reports the calibration failed. This is also caused by a bad Carriage 1 Encoder PCA (A9). Repeat APA and if the number of pages printed is not 12, replace A9.

Links

- Calibration page: Click **Settings/Procedures**, click **Calibrations**, and then click **Engine Calibrations 1**.

C3.22A1

Description

- Carriage 1 to Carriage 2 alignment out-of-range during an Automatic Pen Alignment (APA)

Primary root causes

- Alignment values are out-of-range
- Carriage stopping accuracy is bad

Recommended actions

1. Clean each carriage encoder strip.
2. Open the Engine Calibrations 2 page, run Carriage encoder reset, and then try APA one more time. If you get the same error again, run the Carriage Stopping Accuracy calibration.
3. Run the APA.

Links

- Calibration page: Click **Settings/Procedures**, click **Calibrations**, and then click **Engine Calibrations 2**.

C3.22A2

Description

- Pen-to-pen alignment out-of-range during an Automatic Pen Alignment (APA)

Primary root causes

- Many nozzles out
- Alignment values are out-of-range
- Carriage stopping accuracy is bad
- Pens not properly seated on the datums
- Out of paper, out of ink, media mismatch, or jam conditions

Recommended actions

1. Run a Drop Detect calibration from the Engine Calibrations 1 page . Verify that the pen health gauge reading for each pen is green. Service the pens if there is a yellow or red pen. Print a nozzle health plot and confirm there are not missing nozzles.
2. Print the pen alignment plot, identify the misaligned pens, and then reseal the pens. Repeat the APA.
3. Open the Engine Calibrations 2 page, run Carriage encoder reset, and then try APA one more time. If you get the same error again, run the Carriage Stopping Accuracy calibration.
4. Check for out of paper, out of ink, media mismatch, or jam conditions then repeat APA.

Links

- Calibration page: Click **Settings/Procedures**, click **Calibrations**, and then click **Engine Calibrations 1**.

C3.22A3

Description

- Acumen alignment values out-of-range

Primary root causes

- Alignment values in acumen are out of expected range
- Defective pen

Recommended actions

- Open the Engine Calibrations 1 page, and then repeat the APA. The APA will be non-acumen based.

Links

- Calibration page: Click **Settings/Procedures**, click **Calibrations**, and then click **Engine Calibrations 2**.

C3.22A4

Description

- Media thickness out-of-range during an Automatic Pen Alignment (APA)

Primary root causes

- Paper is the wrong type, size, or weight for the APA

Recommended actions

1. Verify that the paper in the source tray is Letter or A4, 20 lb non-ColorLok multipurpose paper. Do not use glossy media.
2. Verify that the media setting in the control panel is set for plain paper.
3. Verify that the paper guides in the source tray are touching the edge of the paper.
4. Confirm that the control panel reports the correct media size in the tray.

Additional root causes

- IDO Media Thickness encoder (EN14)
- Top-of-form sensor (SN22)

Links

- Calibration page: Click **Settings/Procedures**, click **Calibrations**, and then click **Engine Calibrations 2**.
- EN14: [B2.0201 on page 1832](#)
- SN22: [C1.0203 on page 1872](#)

C3.22A5

Description

- Engine calibration failed. This warning is used to capture calibration failures associated with the following calibrations: Top-of-Form, Media Side Edge, First Nozzle, and Drum Position.

Primary root causes

- Colored paper, incorrect media type, out of paper, out of ink, media mismatch, or jam conditions
- Contaminated drum calibration holes
- Carriage 1 encoder strip dirty
- Top-of-form sensor (SN22)
- Tetris sensor (SN58)

Recommended actions

1. Verify that Letter or A4 plain paper is loaded in the source tray. Verify that the paper meets product specifications. Check for out of paper, out of ink, media mismatch, or jam conditions, and then repeat the calibration.
2. Check the Event Log for Top-of-form sensor (SN22), Tetris sensor (SN58) error codes, and Carriage 1 motor (M1) stalls.
3. Clean the drum edge where the drum calibration holes are located. Clean out any debris in the holes. The holes in the drum edge are used by Tetris sensor (SN58) during the Drum Position calibration.
4. Open the Carriage diagnostic page, and then test SN58.
5. Test the Carriage 1 motor (M1). Check that Carriage 1 encoder (EN18) displays approximately 15100 ± 100 . The value is not critical but should be close to 15100.
6. Open the Drum diagnostic page, and then test the SN22 LEDs and the gloss measurement capabilities.
7. Clean SN22 and SN58.
8. Check the position of SN22 or replace SN22 as needed. If SN22 is moved or replaced, run the following calibrations:
 - [Top-of-form Position calibration on page 163](#)
 - [First Nozzle Position calibration on page 164](#)

Links

- Diagnostic page: Click **Subsystems**, and then click **Drum**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- SN22: [Top-of-form sensor \(SN22\) on page 586](#)
- SN58: [Tetris sensor \(SN58\) on page 581](#)

C3.22A6

Description

- Pen Density Compensation calibration black point reference failure

Primary root causes

- Something reflective in the view of the Tetris sensor (SN58) off the front edge of the drum
- Out of paper, out of ink, media mismatch, or jam conditions
- Carriage stopping accuracy is bad
- Tetris sensor (SN58)

Recommended actions

1. Verify that there is nothing obstructing the Tetris sensor (SN58) view off the edge of the drum.
2. Check for out of paper, out of ink, media mismatch, or jam conditions, and then repeat the Pen Density Compensation calibration.
3. Verify that SN58 is correctly aligned.
4. Clean SN58.
5. Open the Engine Calibrations 2 page, run Carriage encoder reset, and then repeat the Pen Density Compensation calibration. If you get the same error again, run the Carriage Stopping Accuracy calibration.
6. Calibrate SN58.
7. Replace SN58.

Links

- Calibration page: Click **Settings/Procedures**, click **Calibrations**, and then click **Engine Calibrations 2**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace SN58: [Tetris sensor \(SN58\) on page 581](#)

C3.22A7

Description

- Pen Density Compensation calibration scan failure

Primary root causes

- Out of paper, out of ink, media mismatch, or jam conditions
- Many nozzles out
- Colored paper, incorrect media type
- Readings are out-of-range
- Tetris sensor (SN58)
- Obsolete color table values

Recommended actions

1. Check for out of paper, out of ink, media mismatch, or jam conditions, and then repeat Pen Density Compensation.
2. Run a Drop Detect calibration from the Engine Calibrations 1 page . Verify that the pen health gauge reading for each pen is green. Service the pens if there is a yellow or red pen. Print a nozzle health plot and confirm there are not missing nozzles.
3. Verify that the paper in the source tray is not damaged, mixed, or colored. Use only 20 lb multipurpose paper.
4. Check the Event Log for Tetris sensor (SN58) error codes. Open the Carriage Mechanism diagnostic page, and then test SN58.
5. Adjust the position of, or clean, SN58, as needed. If SN58 is moved or replaced, run the SN58 calibration procedure and the following calibrations:
 - [Top-of-form Position calibration on page 163](#)
 - [Media Side Edge calibration on page 139](#)
 - [First Nozzle Position calibration on page 164](#)
 - [Drum Position calibration on page 140](#)Repeat the Pen Density Compensation calibration.
6. Calibrate the Tetris sensor (SN58).

Links

- Calibration page: Click **Settings/Procedures**, click **Calibrations**, and then click **Engine Calibrations 1**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)

C3.22A8

Description

- Pen Density Compensation calibration bow-compensation overflow

Primary root causes

- Pen Density Compensation calibration data processing error

Recommended actions

- Open the Engine Calibrations 1 page, and then run the Pen Density Compensation calibration.

Links

- Calibration page: Click **Settings/Procedures**, click **Calibrations**, and then click **Engine Calibrations 2**.

C3.22A9

Description

- Die-to-die scan out of range during an automatic pen alignment (APA)

Primary root causes

- Acumen Die2Die alignment values out of range

Recommended actions

- Repeat the APA. A non-acumen-based APA will be performed.

Links

- Calibration page: Click **Settings/Procedures**, click **Calibrations**, and then click **Engine Calibrations 1**.

C3.22AA

Description

- Wrong media size detected during Pen Density Compensation calibration

Primary root causes

- Selected source tray contains media other than 8.5 x 11 or A4
- Paper guides in the selected source tray are not set correctly
- Selected source tray is not reporting size correctly

Recommended actions

1. Load 8.5 x 11 or A4 plain paper in the source a tray.
2. Make sure the tray paper guides are set correctly.
3. Confirm the selected tray reports the correct media size.

Links

- Calibration page: Click **Settings/Procedures**, click **Calibrations**, and then click **Engine Calibrations 2**.

C3.22AB

Description

- Poor pen health triggered two-pass printing

Primary root causes

- One or more of the pens in the Pen Health Gauge are Yellow or Red

Recommended actions

1. Run Pen Cleaning
2. If pens are still Yellow or Red, refer to the pen installation flow chart ("Reference diagrams" appendix in the Service Manual) and follow the steps beginning with Reset NHDB.

Additional root causes

- Corrupted NHBD

C3.22AC

Description

- Roller tracking prevention has activated additional dry spins

Primary root causes

- The pages been printed contain wide lines of solid color areas in the same position relative to page margins that may cause roller tracking and ink smearing. This may impact print speed performance.

Recommended actions

- No action required. This featured is designed to prevent roller tracking and ink smearing. It will be turned off automatically when the image content changes.

C3.22AD

Description

- Roller tracking prevention is turned off

Primary root causes

- Printing is back to normal; no additional dry spins will be used

Recommended actions

- No action required.

C3.22AE

Description

- Pen health is okay; two-pass printing is off

Primary root causes

- All pens in the Pen Health Gauge are green

Recommended actions

- No action required.

C4.0101

Description

- Web Drive motor (M5) stall
The MFP is not detecting any web advancement.

Primary root causes

- Web wipe cartridge
- M5
- Web Advance encoder (EN11)
- Web Drive Motor encoder (EN10)
- Wire harness between M5, EN10, and the Motion PCA (A2)
- A2

Recommended actions

1. If you have not done so already, reboot the MFP in Protected Service mode (PSM).
2. Check the Web wipe cartridge installation.
3. Open the Web Wipe diagnostic page. Manually turn M5 and verify that the EN10 count changes.
4. Test the voltage at M5 in the forward direction: 12 Vdc at pins 1 to 2 (GND) on W41P5-M5.
5. Test the voltage at EN10: 5 Vdc at pins 3 to 1 (GND) on W33P12-W47J12.
6. Test the voltage to M5 on A2 in the forward direction: 12 Vdc at J15 pins 5 to 10 (GND).
7. Test the voltage to EN10 on A2: 5 Vdc at J7 pins 3B to 1B (GND).

Links

- Fault tree: [C4.0101: Web Drive motor \(M5\) stall on page 1393](#)
- Diagnostic page: Click **Subsystems**, and then click **Web Wipe**.
- Component locator: [Web wipe component locator on page 2333](#)
- Wiring diagram: [Web wipe wiring diagram on page 2262](#)
- Replace M5: [Web Drive motor \(M5\) on page 654](#)
- A2: [D4.0705 on page 2060](#)

C4.0102

Description

- Web Wipe Material Lift motor (M4) stall

Primary root causes

- Web wipe cartridge
- M4
- Web Backer Motor encoder (EN13)
- Wire harness between M4, EN13, and the Motion PCA (A2)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Check the Web wipe cartridge installation.
3. Open the Web Wipe diagnostic page, and then run M4.
4. Turn M4 and verify that the EN13 count changes.
5. Test the voltage at M4 in the up direction: 5 Vdc at pins 1 to 2 (GND) on W41P2-W10J2.
6. Test the voltage at EN13: 5 Vdc at pins 13 to 14 (GND) and 15 to 14 (GND) on W33P12-W47J12.
7. Test the voltage to M4 on A2 in the up direction: 5 Vdc at J15 pins 4 to 9 (GND).
8. Test the voltage to EN13 on A2: 5 Vdc at J7 pins 13B to 14B (GND) and 13B to 15B (GND).

Additional root causes

- A2

Links

- Fault tree: [C4.0102: Web Wipe Material Lift motor \(M4\) stall on page 1397](#)
- Diagnostic page: Click **Subsystems**, and then click **Web Wipe**.
- Component locator: [Web wipe component locator on page 2333](#)
- Wiring diagram: [Web wipe wiring diagram on page 2262](#)
- Replace M4: [Web Wipe Material Lift motor \(M4\) on page 657](#)
- A2: [D4.0705 on page 2060](#)

C4.0201

Description

- Spit web not detected during boot-up.

When the MFP is rebooted after changing the web wipe and reinitializing the new web in CDFT, the carriage 1 black/yellow printhead prints a solid black/yellow line across the spit web side of the web cartridge. The web is then slowly advanced while the Tetris sensor tries to detect the black line. If the black line is not detected, this error will occur.

Primary root causes

- Web wipe cartridge
- Black/yellow printhead in carriage 1
- Tetris sensor (SN58)

Recommended actions

1. Check the web wipe cartridge for correct installation.
2. Check the installation of the web material. Remove the web cartridge from the MFP and turn the take-up spool gear clockwise a small amount by hand. Confirm that the web material from both spools advance into the take-up spool side of the web cartridge.
3. Check that the web material advances during the MFP boot-up immediately following the new web initialization. With the web wipe cartridge installed in the MFP and the web cartridge access panel removed, put a pencil mark across both exposed web materials where they are just about to enter the take-up side of the web cartridge. The web material with the pencil line should later advance into the take-up spools until there is only the white, unused web material exposed.
4. Check that a black/yellow line is printed on the spit web during the MFP boot-up process. The line is printed by the black/yellow printhead in carriage 1. The Tetris sensor will then be positioned over the Spit web and will shine a green LED on the web to detect the black line as the spit web advances slowly underneath the Tetris sensor. A missing line or poor quality line may indicate a carriage 1 black/yellow printhead problem. The black/yellow mark will advance all the way into the take-up spool after the Tetris sensor scan has finished.
5. If the above steps don't help resolve the problem, reboot the MFP in Protected Service mode (PSM).
6. Open the Event Log and look for other error codes that might have occurred near the time of this failure.
7. Open the Web Wipe tool page then test that EN10, EN11, and SN21 are functional.
8. Open the Carriage tool page and test that the Tetris green LED is functional.

Links

- Fault tree: [C4.0201: Spit web not detected on page 1400](#)
- Diagnostic page: Click **Subsystems**, and then click **Web Wipe**.
- Component locator: [Web wipe component locator on page 2333](#)
- Wiring diagram: [Web wipe wiring diagram on page 2262](#)

C4.0202

Description

- Change Web Wipe supply. The MFP has detected that the Web Wipe material has run out and needs to be replaced.

Primary root causes

- Web wipe cartridge
- Web Low sensor (SN21)
- Motion PCA (A2)
- Wire harness between SN21 and the Motion PCA (A2)

Recommended actions

1. Replace the web wipe material and reinstall the web wipe cartridge.
2. Power cycle the MFP and boot into Protected Service Mode (PSM).
3. Enter CDFT, and then reinitialize the new web wipe.
4. Power cycle the MFP and boot normally to complete the initialization process.
5. If the error remains, reboot into PSM, enter CDFT and open the **Web Wipe** tool page. Test SN21.
6. Test the voltage at SN21: 0.18 Vdc blocked, 2.91 Vdc unblocked at pins 5 to 6 and 1.21 Vdc blocked and unblocked at pins 7 to 6 on W33P12-W47J12.
7. Test the voltage to SN21 on A2: 1.22 Vdc blocked and unblocked on J7 at pins 7B to 6B and 0.18 Vdc blocked, 3.19 Vdc unblocked at pins 5B to 6B.

Links

- Fault tree: [C4.0202: Change web wipe supply on page 1401](#)
- Diagnostic page: Click **Subsystems**, and then click **Web Wipe**.
- Component locator: [Web wipe component locator on page 2333](#)
- Wiring diagram: [Web wipe wiring diagram on page 2262](#)

C4.0203

Description

- Service station latch open

Primary root causes

- Service station latch
- Service Station Latch sensor (SN60)

Recommended actions

1. Verify that the service station latch is closed.
2. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
3. Open the Web Wipe diagnostic page, and then test SN60. If the sensor does not work, replace the sensor.

Links

- Diagnostic page: Click **Subsystems**, and then click **Web Wipe**.
- Component locator: [Service Station component locator on page 2329](#)
- Wiring diagram: [Service station wiring diagram on page 2254](#)
- Replace SN60: [Service station sensors on page 660](#)

C4.0204

Description

- Low web wipe supply

The web wipe supply is nearing replacement time. **Device due for maintenance** message will appear on the control panel. Email alerts for this PM notification can be set up using the embedded web server (EWS) or WebJet administrator.

Primary root causes

- Web wipe cartridge is almost empty

Recommended actions

1. Replace the web wipe material.
2. Enter CDFT.
3. Reset the PM counter for the web wipe.
4. Power cycle the MFP.

Links

- Diagnostic page: Click **Subsystems**, and then click **Web Wipe**.
- Component locator: [Service Station component locator on page 2329](#)
- Wiring diagram: [Service station wiring diagram on page 2254](#)
- Replace web wipe: [Web wipe on page 666](#)

C4.02A1

Description

- Low web wipe supply
Device due for maintenance message will appear on the control panel.

Primary root causes

- Web wipe cartridge is almost empty

Recommended actions

1. Replace the web wipe material.
2. Enter CDFT.
3. Reset the PM counter for the web wipe.

Links

- Diagnostic page: Click **Subsystems**, and then click **Web Wipe**.
- Component locator: [Service Station component locator on page 2329](#)
- Wiring diagram: [Service station wiring diagram on page 2254](#)
- Replace web wipe: [Web wipe on page 666](#)

C4.0501

Description

- Web advance stall

Primary root causes

- Web wipe cartridge
- Web Advance encoder (EN11)
- Wire harness between EN11 and the Motion PCA (A2)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Check the Web wipe cartridge installation.
3. Open the Web Wipe diagnostic page, and then test EN11.
4. Test the voltage at EN11: 3.24 Vdc at pins 9 to 11 on W33P12-W47J12.
5. Test the voltage to EN11 on A2: 3.26 Vdc on J7 at pins 9B to 11B (GND).

Additional root causes

- A2

Links

- Fault tree: [C4.0501: Web Advance encoder \(EN11\) stall on page 1406](#)
- Diagnostic page: Click **Subsystems**, and then click **Web Wipe**.
- Component locator: [Web wipe component locator on page 2333](#)
- Wiring diagram: [Web wipe wiring diagram on page 2262](#)
- Replace EN11: [Web Advance encoder \(EN11\) on page 657](#)
- A2: [D4.0705 on page 2060](#)

C6.0B01

Description

- Change the drum spittoon
The MFP has detected that the drum spittoon has filled and needs to be replaced.

Primary root causes

- Drum spittoon is full of ink based on the CDFT drum spittoon counter setting

Recommended actions

1. Replace the drum spittoon.
2. Boot the MFP into Protected Service mode (PSM).
3. Enter CDFT.
4. Reset the PM counter for the drum spittoon.
5. Reboot the MFP normally.

Links

- Replace the drum spittoon: [Drum spittoon and lower drum spittoon on page 97](#)

C6.0B02

Description

- Drum spittoon capacity low


The drum spittoon has reached the 90% full level and is nearing replacement time. **Device due for maintenance** message will appear on the control panel. Email alerts for this PM notification can be set up using the embedded web server (EWS) or WebJet administrator.

Primary root causes

- Drum spittoon is almost full of ink based on the CDFT drum spittoon PM counter setting

Recommended actions

1. Replace the drum spittoon.
2. Enter CDFT.
3. Reset the PM counter for the drum spittoon.

 **NOTE:** After resetting, the item usage counter might display "invalid" until the PM recalculation is performed after one of the following events: power cycle, sleep mode cycle, or date change at midnight.

Links

- Replace the drum spittoon: [Drum spittoon and lower drum spittoon on page 97](#)

C6.0B04

Description

- Drum spittoon high ink fill rate shutdown

The MFP has detected that the drum spittoon is unable to keep up with the ink fill rate even though the drum spittoon capacity has not been reached. This high fill rate is determined by the type of print job and the job frequency.

Primary root causes

- Drum spittoon is full of ink based on the CDFT drum spittoon counter setting
- Drum spittoon is not able to absorb the high rate of ink fill due to unusually high print volume

Recommended actions

1. Replace the drum spittoon.
2. Boot the MFP into Protected Service mode (PSM).
3. Enter CDFT.
4. Reset the PM counter for the drum spittoon.
5. Reboot the MFP normally.

Links

- Replace the drum spittoon: [Drum spittoon and lower drum spittoon on page 97](#)

C7.0701

Description

- ISS internal diagnostic failure

Primary root causes

- ISS PCA (A8)

Recommended actions

- Replace A8.

Links

- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [ISS PCA \(A8\) diagram on page 2250](#)
- Replace A8: [ISS PCA \(A8\) on page 613](#)

C7.0B06

Description

- IDS system will not pressurize

Primary root causes

- Lower-left door
- ink supply
- Relief valve
- Air pressure system (APS)
- ISS air pumps
- IDS Pressure sensor (SN39)
- ISS PCA (A8)

Recommended actions

1. Look for a **Close lower-left door** message on the control panel. If the message is displayed, verify that the door is closed. Follow the troubleshooting steps for a 00.02E2 message.
2. Open the Ink Status diagnostic page, and then verify that none of the ink supplies have a broken bag.
3. Open the Ink Delivery diagnostic page, and then test the air pumps and the relief valve.
4. Check the wire harnesses to the air pumps and the relief valve.
5. Check the hoses to the air pumps.
6. Check the air hoses to the relief valve.
7. Test SN39.
8. Replace A8.

Links

- Fault tree: [C7.0B06: IDS system will not pressurize on page 1409](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)
- Replace A8: [ISS PCA \(A8\) on page 613](#)
- 00.02E2: [Close lower-left door on page 1115](#)

C7.0B07

Description

- IDS system will not depressurize

Primary root causes

- Relief valve
- Wire harness between the relief valve and the ISS PCA (A8)
- A8
- Air hoses and connectors
- Air pump

Recommended actions

1. Look for a **Close lower-left door** message on the control panel. If the message is displayed, verify that the door is closed. Follow the troubleshooting steps for a 00.02E2 message.
2. Open the Ink Status diagnostic page, and then verify that none of the ink supplies have a broken bag.
3. Open the Ink Delivery diagnostic page, and test the relief valve.
4. Check the air hoses to the relief valve for kinks and damage.
5. Check the wire harness between the relief valve and A8.
6. Replace A8.

Links

- Fault tree: [C7.0B07: IDS system will not depressurize on page 1412](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)
- Replace A8: [ISS PCA \(A8\) on page 613](#)
- 00.02E2: [Close lower-left door on page 1115](#)

C7.0B08

Description

- ISS pressure leak detected

Primary root causes

- Ink cartridges
- Relief valve
- IDS hoses
- ISS air pumps

Recommended actions

1. Check the IDS and surrounding area for ink leaks.
2. Open the Ink Status diagnostic page, and then verify that none of the ink cartridges have a broken bag.
3. Open the Ink Delivery diagnostic page. One-by-one, replace each ink supply with a new ink supply, pressurize the system, and note how much time it takes for the pressure to drop. If after replacing an ink supply, the pressure drops dramatically more slowly, the ink supply that you replaced was the problem.
4. Replace the relief valve.
5. Replace the air pressure system (APS).
6. Check the IDS back plate assembly for leaks. If it is leaking, replace the IDS.

Links

- Fault tree: [C7.0B08: IDS leak detected on page 1414](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)
- Replace the relief valve: [IDS relief valve on page 610](#)
- Replace the IDS: [IDS assembly on page 596](#)

C7.0B10

Description

- Black ink supply is empty

Primary root causes

- Ink supply
- Administrator settings

Recommended actions

1. Replace the ink supply.
2. If the ink supply is a non-HP brand, verify that the administrator settings allow non-HP ink.
3. Clean the ink supply and the cartridge connector.
4. Check the ink supply connector for bent pins.

Links

- Fault tree: [C7.0B10: Black ink supply is empty on page 1417](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

C7.0B11

Description

- Black ink supply has failed

Primary root causes

- Ink supply

Recommended actions

1. Replace the ink supply.
2. Check the power LEDs on the ISS PCA (A8).
3. Clean the ink supply connections. The center connection should have some ink. The others should not.
4. Check for bent pins on the ink supply connector.
5. Check the resistance on the bottom of the ink supply and verify that it is greater than 500 MEG ohms.

Additional root causes

- A8

Links

- Fault tree: [C7.0B11: Black ink supply has failed on page 1418](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)
- A8: [D4.0707 on page 2063](#)

C7.0B12

Description

- Black ink supply is missing

Primary root causes

- Ink supply

Recommended actions

1. Reinstall the ink supply.
2. Replace the ink supply.
3. Clean the ink supply connections.
4. Check the ink supply connections for bent pins.

Links

- Fault tree: [C7.0B12: Black ink supply is missing on page 1419](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

C7.0B13

Description

- Black ink supply is non-HP

Primary root causes

- Ink supply
- Administrator settings

Recommended actions

- If the ink supply is a non-HP brand, verify that the administrator settings allow non-HP ink.

Links

- Fault tree: [C7.0B13: Black ink supply is non-HP on page 1420](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

C7.0B20

Description

- Cyan ink supply is empty

Primary root causes

- Ink supply
- Administrator settings

Recommended actions

1. Replace the ink supply.
2. If the ink supply is a non-HP brand, verify that the administrator settings allow non-HP ink.
3. Clean the ink supply and the cartridge connector.
4. Check the ink supply connector for bent pins.

Links

- Fault tree: [C7.0B20: Cyan ink supply is empty on page 1421](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

C7.0B21

Description

- Cyan ink supply has failed

Primary root causes

- Ink supply

Recommended actions

1. Replace the ink supply.
2. Check the power LEDs on the ISS PCA (A8).
3. Clean the ink supply connections. The center connection should have some ink. The others should not.
4. Check for bent pins on the ink supply connector.
5. Check the resistance on the bottom of the ink supply and verify that it is greater than 500 MEG ohms.

Additional root causes

- A8

Links

- Fault tree: [C7.0B21: Cyan ink supply has failed on page 1422](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)
- A8: [D4.0707 on page 2063](#)

C7.0B22

Description

- Cyan ink supply is missing

Primary root causes

- Ink supply

Recommended actions

1. Reinstall the ink supply.
2. Replace the ink supply.
3. Clean the ink supply connections.
4. Check the ink supply connections for bent pins.

Links

- Fault tree: [C7.0B22: Cyan ink supply is missing on page 1423](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

C7.0B23

Description

- Cyan ink supply is non-HP

Primary root causes

- Ink supply
- Administrator settings

Recommended actions

- If the ink supply is a non-HP brand, verify that the administrator settings allow non-HP ink.

Links

- Fault tree: [C7.0B23: Cyan ink supply is non-HP on page 1424](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

C7.0B30

Description

- Magenta ink supply is empty

Primary root causes

- Ink supply
- Administrator settings

Recommended actions

1. Replace the ink supply.
2. If the ink supply is a non-HP brand, verify that the administrator settings allow non-HP ink.
3. Clean the ink supply and the cartridge connector.
4. Check the ink supply connector for bent pins.

Links

- Fault tree: [C7.0B30: Magenta ink supply is empty on page 1425](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

C7.0B31

Description

- Magenta ink supply has failed

Primary root causes

- ink supply

Recommended actions

1. Replace the ink supply.
2. Check the power LEDs on the ISS PCA (A8).
3. Clean the ink supply connections. The center connection should have some ink. The others should not.
4. Check for bent pins on the ink supply connector.
5. Check the resistance on the bottom of the ink supply and verify that it is greater than 500 MEG ohms.

Additional root causes

- A8

Links

- Fault tree: [C7.0B31: Magenta ink supply has failed on page 1426](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)
- A8: [D4.0707 on page 2063](#)

C7.0B32

Description

- Magenta ink supply is missing

Primary root causes

- Ink supply

Recommended actions

1. Reinstall the ink supply.
2. Replace the ink supply.
3. Clean the ink supply connections.
4. Check the ink supply connections for bent pins.

Links

- Fault tree: [C7.0B32: Magenta ink supply is missing on page 1427](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

C7.0B33

Description

- Magenta ink supply is non-HP

Primary root causes

- Ink supply
- Administrator settings

Recommended actions

- If the ink supply is a non-HP brand, verify that the administrator settings allow non-HP ink.

Links

- Fault tree: [C7.0B33: Magenta ink supply is non-HP on page 1428](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

C7.0B40

Description

- Yellow ink supply is empty

Primary root causes

- Ink supply
- Administrator settings

Recommended actions

1. Replace the ink supply.
2. If the ink supply is a non-HP brand, verify that the administrator settings allow non-HP ink.
3. Clean the ink supply and the cartridge connector.
4. Check the ink supply connector for bent pins.

Links

- Fault tree: [C7.0B40: Yellow ink supply is empty on page 1429](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

C7.0B41

Description

- Yellow ink supply has failed

Primary root causes

- Ink supply

Recommended actions

1. Replace the ink supply.
2. Check the power LEDs on the ISS PCA (A8).
3. Clean the ink supply connections. The center connection should have some ink. The others should not.
4. Check for bent pins on the ink supply connector.
5. Check the resistance on the bottom of the ink supply and verify that it is greater than 500 MEG ohms.

Additional root causes

- A8

Links

- Fault tree: [C7.0B41: Yellow ink supply has failed on page 1430](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)
- A8: [D4.0707 on page 2063](#)

C7.0B42

Description

- Yellow ink supply is missing

Primary root causes

- Ink supply

Recommended actions

1. Reinstall the ink supply.
2. Replace the ink supply.
3. Clean the ink supply connections.
4. Check the ink supply connections for bent pins.

Links

- Fault tree: [C7.0B42: Yellow ink supply is missing on page 1431](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

C7.0B43

Description

- Yellow ink supply is non-HP

Primary root causes

- Ink supply
- Administrator settings

Recommended actions

- If the ink supply is a non-HP brand, verify that the administrator settings allow non-HP ink.

Links

- Fault tree: [C7.0B43: Yellow ink supply is non-HP on page 1432](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

C7.0B50

Description

- Bonding Agent supply is empty

Primary root causes

- Bonding Agent supply
- Administrator settings

Recommended actions

1. Replace the Bonding Agent supply.
2. If the Bonding Agent supply is a non-HP brand, verify that the administrator settings allow non-HP ink.
3. Clean the Bonding Agent supply and the cartridge connector.
4. Check the Bonding Agent supply connector for bent pins.

Links

- Fault tree: [C7.0B50: Bonding Agent supply is empty on page 1433](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

C7.0B51

Description

- Bonding Agent supply has failed

Primary root causes

- Bonding Agent supply

Recommended actions

1. Replace the Bonding Agent supply.
2. Check the power LEDs on the ISS PCA (A8).
3. Clean the Bonding Agent supply connections. The center connection should have some ink. The others should not.
4. Check for bent pins on the Bonding Agent supply connector.
5. Check the resistance on the bottom of the Bonding Agent supply and verify that it is greater than 500 MEG ohms.

Additional root causes

- A8

Links

- Fault tree: [C7.0B51: Bonding Agent supply has failed on page 1434](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)
- A8: [D4.0707 on page 2063](#)

C7.0B52

Description

- Bonding Agent supply is missing

Primary root causes

- Bonding Agent supply

Recommended actions

1. Reinstall the Bonding Agent supply.
2. Replace the Bonding Agent supply.
3. Clean the Bonding Agent supply connections.
4. Check the Bonding Agent supply connections for bent pins.

Links

- Fault tree: [C7.0B52: Bonding Agent supply is missing on page 1435](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

C7.0B53

Description

- Bonding Agent supply is non-HP

Primary root causes

- Bonding Agent supply
- Administrator settings

Recommended actions

- If the Bonding Agent supply is a non-HP brand, verify that the administrator settings allow non-HP supplies.

Links

- Fault tree: [C7.0B53: Bonding Agent supply is non-HP on page 1436](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

C7.0BA0

Description

- Magenta ink supply has expired

Primary root causes

- Incorrect system date
- Expired ink supply

Recommended actions

1. Validate that the system date is correct.
2. Check the ink supply expiration date.

Links

- Fault tree: [C7.0BA0: Magenta ink supply has expired on page 1437](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

C7.0BA1

Description

- Black ink supply is low

Primary root causes

- Ink supply
- Administrator settings

Recommended actions

1. Replace the ink supply and verify that the low ink message is not displayed.
2. Verify that the administrator settings are not set to stop printing when an ink supply is low.

Links

- Fault tree: [C7.0BA1: Black ink supply is low on page 1438](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

C7.0BA2

Description

- Black ink supply has expired

Primary root causes

- Incorrect system date
- Expired ink supply

Recommended actions

1. Validate that the system date is correct.
2. Check the ink supply expiration date.

Links

- Fault tree: [C7.0BA2: Black ink supply has expired on page 1439](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

C7.0BA3

Description

- Bonding Agent supply has expired

Primary root causes

- Incorrect system date
- Expired Bonding Agent supply

Recommended actions

1. Validate that the system date is correct.
2. Check the expiration date for the Bonding Agent supply.

Links

- Fault tree: [C7.0BA3: Bonding Agent supply has expired on page 1440](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

C7.0BA4

Description

- Bonding Agent supply is low

Primary root causes

- Bonding Agent supply
- Administrator settings

Recommended actions

1. Replace the Bonding Agent supply and verify that the low ink message is not displayed.
2. Verify that the administrator settings are not set to stop printing when an ink supply is low.

Links

- Fault tree: [C7.0BA4: Bonding Agent supply is low on page 1441](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

C7.0BA5

Description

- Yellow ink supply is low

Primary root causes

- Ink supply
- Administrator settings

Recommended actions

1. Replace the ink supply and verify that the low ink message is not displayed.
2. Verify that the administrator settings are not set to stop printing when an ink supply is low.

Links

- Fault tree: [C7.0BA5: Yellow cartridge low warning on page 1442](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

C7.0BA6

Description

- Yellow ink supply has expired

Primary root causes

- Incorrect system date
- Expired ink supply

Recommended actions

1. Validate that the system date is correct.
2. Check the ink supply expiration date.

Links

- Fault tree: [C7.0BA6: Yellow ink supply has expired on page 1443](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

C7.0BA7

Description

- Cyan ink supply is low

Primary root causes

- Ink supply
- Administrator settings

Recommended actions

1. Replace the ink supply and verify that the low ink message is not displayed.
2. Verify that the administrator settings are not set to stop printing when an ink supply is low.

Links

- Fault tree: [C7.0BA7: Cyan ink supply is low on page 1444](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

C7.0BA8

Description

- Cyan ink supply has expired

Primary root causes

- Incorrect system date
- Expired ink supply

Recommended actions

1. Validate that the system date is correct.
2. Check the ink supply expiration date.

Links

- Fault tree: [C7.0BA8: Cyan ink supply has expired on page 1445](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

C7.0BA9

Description

- Magenta ink supply is low

Primary root causes

- Ink supply
- Administrator settings

Recommended actions

1. Replace the ink supply and verify that the low ink message is not displayed.
2. Verify that the administrator settings are not set to stop printing when an ink supply is low.

Links

- Fault tree: [C7.0BA9: Magenta ink supply is low on page 1446](#)
- Diagnostic page: Click **Subsystems**, and then click **IDS**.
- Component locator: [IDS component locator on page 2326](#)
- Wiring diagram: [IDS wiring diagram on page 2249](#)

D0.0801

Description

- No communication between the Main Engine PCA (A5) and the Power supply (PS1)

Primary root causes

- A5
- PS1
- Wire harness between A5, the Power Distribution PCA (A1), the Main Engine Backplane PCA (A4), and PS1

Recommended actions

1. Reseat A5.
2. Check the power LEDs on A5.
3. Check the wire harness between A5, A1, A4, and PS1.
4. Check power LEDs on A1.
5. Replace PS1.
6. Replace A1.
7. Replace A4.

Links

- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Main Engine PCA \(A5\) diagram on page 2266](#)
- Replace PS1: [Power supply assembly on page 697](#)
- Replace A1: [Power Distribution PCA \(A1\) on page 702](#)
- Replace A4: [Main Engine Backplane PCA \(A4\) on page 708](#)

D0.0802

Description

- Power supply (PS1) EEPROM failure

Primary root causes

- PS1

Recommended actions

- Replace PS1.

Links

- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Power Distribution PCA \(A1\) diagram on page 2271](#)
- Replace PS1: [Power supply assembly on page 697](#)

D0.08A1

Description

- Power supply (PS1) temperature too high

Primary root causes

- PS1

Recommended actions

1. Clear any debris from the PS1 fan airflow.
2. Check the Event Log for PS1 over-temperature warnings.
3. Verify that the PS1 fan functions. If the fan does not function, replace PS1.

Links

- Diagnostic page: Click **Subsystems**, and then click **Power Supply**.
- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Power Distribution PCA \(A1\) diagram on page 2271](#)
- Replace PS1: [Power supply assembly on page 697](#)

D0.08A2

Description

- Power line voltage sag was detected. This occurs when operating in the 120 Vac range and the voltage drops to 90 Vac +/- 2 Vac or when operating in the 230 Vac range and the voltage drops to 160 Vac +/- 2 Vac.

Primary root causes

- Power line

Recommended actions

1. Verify that the power line voltage is correct.
2. Verify that the MFP is connected to a dedicated power line and that no other devices are connected to the power line.

Links

- Diagnostic page: Click **Subsystems**, and then click **Power Supply**.
- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Power Distribution PCA \(A1\) diagram on page 2271](#)

D0.08A3

Description

- Power line voltage surge was detected. This occurs when operating in the 120 Vac range and the voltage rises to 145 Vac +/- 2 Vac or when operating in the 230 Vac range and the voltage rises to 288 Vac +/- 2 Vac.

Primary root causes

- Power line

Recommended actions

1. Verify that the power line voltage is correct.
2. Verify that the MFP is connected to a dedicated power line and that no other devices are connected to the power line.

Links

- Diagnostic page: Click **Subsystems**, and then click **Power Supply**.
- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Power Distribution PCA \(A1\) diagram on page 2271](#)

D1.0101

Description

- Carriage 1 motor (M1) stall

Carriage movement is being restricted or is not being detected by the carriage encoder and index sensors.

Primary root causes

- Carriage obstruction
- Carriage shipping bracket
- Aerosol hose and snorkel
- Carriage 1 encoder strip
- Carriage 1 Encoder PCA (A9)
- Pen Pocket 1 PCA (A16)
- Carriage index sensors
- A2
- M1
- Wire harness between M1 and the Motion PCA (A2)

Recommended actions

1. Verify that the carriage shipping bracket is correctly secured and not obstructing the movement of the carriage.
2. Check that the aerosol hose and snorkel are seated properly in the carriage.
3. Check for carriage binding. Look for any obstructions that might interfere with carriage movement.
4. Enter CDFT and open the carriage tool page. Move the carriage by hand. The carriage encoder should count from approximately 10-30 (with the carriage in the cap position) to approximately 15333 ± 10 (with the carriage positioned at the front of the structure).
5. Check the wire harness between M1 and A2.
6. Repair or replace the wire harness between M1 and A2.
7. Check electrical connections on A2 at J15. If you measure the voltage between the two motor connectors, the measurement will be 0 Vdc. If you measure the voltage between one motor connector and the MFP frame, the voltage will be 32 Vdc.
8. Replace M1.
9. Replace A2.
10. Replace A16/A9.

11. Check that the carriage 1 encoder strip is mounted correctly.
12. Replace the Carriage 1 encoder strip.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace M1: [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\) on page 552](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)
- Replace A16/A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 1 encoder strip: [Carriage encoder strip on page 535](#)

D1.0102

Description

- Carriage 2 motor (M2) stall

Carriage movement is being restricted or is not being detected by the carriage encoder and index sensors.

Primary root causes

- Carriage obstruction
- Carriage shipping bracket
- Aerosol hose and snorkel
- Carriage 2 encoder strip
- Carriage 2 Encoder PCA (A24)
- Pen Pocket 4 PCA (A19)
- Carriage index sensors
- A2
- M2
- Wire harness between M2 and the Motion PCA (A2)

Recommended actions

1. Verify that the carriage shipping bracket is correctly secured and not obstructing the movement of the carriage.
2. Check that the aerosol hose and snorkel are seated properly in the carriage.
3. Check for carriage binding. Look for any obstructions that might interfere with carriage movement.
4. Enter CDFT and open the carriage tool page. Move the carriage by hand. The carriage encoder should count from approximately 10-30 (with the carriage in the cap position) to approximately 15333 ± 10 (with the carriage positioned at the front of the structure).
5. Check the wire harness between M2 and A2.
6. Repair or replace the wire harness between M2 and A2.
7. Check electrical connections on A2 at J15. If you measure the voltage between the two motor connectors, the measurement will be 0 Vdc. If you measure the voltage between one motor connector and the MFP frame, the voltage will be 32 Vdc.
8. Replace M2.
9. Replace A2.
10. Replace A19/A24.

11. Check that the carriage 2 encoder strip is mounted correctly.
12. Replace the Carriage 2 encoder strip.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace M2: [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\) on page 552](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)
- Replace A19/A24: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 2 encoder strip: [Carriage encoder strip on page 535](#)

D1.0201

Description

- Carriage latch bar is down when using a front door switch interlock bypass

Primary root causes

- SN19
- Wire harness between the Carriage Open sensor (SN19) and the Motion PCA (A2)

Recommended actions

1. Open the Carriage diagnostic page, and test SN19.
2. Check the wire harness between SN19 and A2.
3. Test the voltage to SN19 on A2: 5 Vdc at J8 pins 12A to 11A and 10A to 11A.
4. Replace SN19.

Additional root causes

- A2

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Drum wiring diagram on page 2225](#)

D1.02A1

Description

- Tetris sensor (SN58) failure

Primary root causes

- SN58
- Wire harness between SN58 and the Pen Pocket 1 PCA (A16)
- A16

Recommended actions

1. Open the Carriage diagnostic page, and then verify that all four SN58 LEDs work.
2. Check the wire harness between SN58 and A16.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)

D1.02A2

Description

- Tetris sensor (SN58) calibration failed

Primary root causes

- SN58
- Wire harness between SN58 and the Pen Pocket 1 PCA (A16)
- A16

Recommended actions

1. Open the Carriage diagnostic page, and then verify that all four SN58 LEDs work.
2. Check the wire harness between SN58 and the A16.
3. Clean the SN58 LEDs, and then verify that they work.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)

D1.0700

Description

- Carriage Power Supply Unit (CPSU) clock failed

Primary root causes

- Carriage PSU PCA (A7)

Recommended actions

- Replace A7.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Carriage PSU PCA \(A7\) diagram on page 2222](#)
- Replace A7: [Carriage PSU PCA \(A7\) on page 573](#)

D1.0701

Description

- Carriage Power Supply Unit (CPSU) parity bit failed

Primary root causes

- Carriage PSU PCA (A7)
- All of the pen pocket PCAs: A16 , A17, A18, A19, A20, and A21
- Carriage 1 e-chain and the Carriage 2 e-chain

Recommended actions

1. Replace A7.
2. Replace all of the pen pocket PCAs: A16 , A17, A18, A19, A20, and A21.
3. Replace the Carriage 1 e-chain and the Carriage 2 e-chain.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Carriage PSU PCA \(A7\) diagram on page 2222](#)
- Replace A7: [Carriage PSU PCA \(A7\) on page 573](#)
- Replace the pen pocket PCAs: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace the e-chains: [E-chain on page 541](#)

D1.0702

Description

- Carriage Power Supply Unit (CPSU) is in reset

Primary root causes

- Wire harness between the Carriage PSU PCA (A7) and the Image Processing PCA (A6)
- A7
- A6

Recommended actions

1. Check the wire harness between A7 and A6.
2. Replace A7.
3. Replace A6.

Links

- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Carriage PSU PCA \(A7\) diagram on page 2222](#)
- Replace A7: [Carriage PSU PCA \(A7\) on page 573](#)
- Replace A6: [Image Processing PCA assembly on page 577](#)

D1.071A

Description

- Communication test between the Image Processing PCA (A6) and Pen Pocket 1 PCA (A16) failed

Primary root causes

- A16
- A6
- Carriage 1 e-chain wire harness

Recommended actions

1. Replace A16.
2. Replace A6.
3. Replace the Carriage 1 e-chain wire harness.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Image Processing PCA \(A6\) diagram on page 2264](#)
- Replace A16: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace A6: [Image Processing PCA assembly on page 577](#)
- Replace the Carriage 1 e-chain: [E-chain on page 541](#)

D1.071B

Description

- Communication test between the Pen Pocket 1 PCA (A16) and Pen 1 failed

Primary root causes

- Pen 1 is not seated, poor contact
- Wire harness between Image Processing PCA (A6) and Pen Pocket 1 PCA (A16)
- Pen 1
- A16

Recommended actions

1. Keep the front door open and power cycle the unit. Hide the “Close door” message and enter CDFT.
2. Remove and reseal pen 1 (bonding agent).

Remove the pen and reseal it a second time to ensure that any foreign material on the interconnect is cleared. Make sure that you push the pen straight down into the pocket until the pen is sitting properly on the datum. Ensure the pen is seated; the latch may not seat the pen in the vertical direction.

3. Click **Subsystems**, click **Communication Test**, and then run the test. If Pen 1 fails the communication test continue in next step.
4. With the power on, swap pen 1 and pen 4, and then run the communication test again to see if error follows the pen.
5. If the communication failure follows the pen, replace the pen in slot 4.
6. If communication failed stays with the pocket position check wiring from Image Processing PCA (A6) to Pen Pocket 1 PCA (A16).
7. Replace A16.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace A16: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace Pen 1: [Pens on page 530](#)

D1.071C

Description

- The Carriage PSU PCA (A7) detected a high current leak on Pen 1

Primary root causes

- Pen 1
- A16
- Carriage 1 e-chain wire harness
- A7

Recommended actions

1. Replace Pen 1.
2. Replace A16.
3. Replace the Carriage 1 e-chain wire harness.
4. Replace A7.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace Pen 1: [Pens on page 530](#)
- Replace A16: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace the Carriage 1 e-chain: [E-chain on page 541](#)
- Replace A7: [Carriage PSU PCA \(A7\) on page 573](#)

D1.071D

Description

- Pen Pocket 1 PCA (A16) failure

Primary root causes


- A16
- Carriage 1 e-chain wire harness

Recommended actions

1. Replace the A16.
2. Replace the Carriage 1 e-chain wire harness.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace A16: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace the Carriage 1 e-chain: [E-chain on page 541](#)

 **NOTE:** Pen Pocket 1 PCA (A16), and Pen Pocket 4 PCA (A19) cannot be swapped between carriages for troubleshooting purposes because there is a potential risk to create PQ defects.

The Pen Pocket 1 PCA (A16) and Pen Pocket 4 PCA (A19) have the carriage encoder attached to them. There is a potential carriage-to-carriage banding issue that can result from swapping a bonding agent pocket PCA into another bonding agent pocket. This is due to the press-fit nature of the feature that locates the pocket PCA to the carriage base. The IQ defect might not show itself immediately, but can appear after several carriage homing events performed during power up.

D1.072A

Description

- Communication test between the Image Processing PCA (A6) and Pen Pocket 2 PCA (A17) failed

Primary root causes

- A17
- A6
- Carriage 1 e-chain wire harness

Recommended actions

1. Replace A17.
2. Replace the A6.
3. Replace the Carriage 1 e-chain wire harness.

Links

- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Image Processing PCA \(A6\) diagram on page 2264](#)
- Replace A17: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace A6: [Image Processing PCA assembly on page 577](#)
- Replace the Carriage 1 e-chain: [E-chain on page 541](#)

D1.072B

Description

- Communication test between the Pen Pocket 2 PCA (A17) and Pen 2 failed

Primary root causes

- Pen 2 is not seated, poor contact
- Wire harness between Image Processing PCA (A6) and Pen Pocket 2 PCA (A17)
- Pen 2
- A17

Recommended actions

1. Keep the front door open and power cycle the unit. Hide the “Close door” message and enter CDFT.
2. Remove and reseal pen 2 (Black/Yellow).

Remove the pen and reseal it a second time to ensure that any foreign material on the interconnect is cleared. Make sure that you push the pen straight down into the pocket until the pen is sitting properly on the datum. Ensure the pen is seated; the latch may not seat the pen in the vertical direction.
3. Click **Subsystems**, click **Communication Test**, and then run the test. If Pen 2 fails the communication test, continue to the next step.
4. With the power on, swap pen 2 and pen 5, and then run the communication test again to see if the error follows the pen.
5. If the communication failure follows the pen, replace the pen in slot 5.
6. If communication failed stays with the pocket position check wiring from Image Processing PCA (A6) to Pen Pocket 2 PCA (A17).
7. Replace A17.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace A17: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace Pen 2: [Pens on page 530](#)

D1.072C

Description

- The Carriage PSU PCA (A7) detected a high current leak on Pen 2

Primary root causes

- Pen 2
- A17
- Carriage 1 e-chain wire harness
- A7

Recommended actions

1. Replace Pen 2.
2. Replace A17.
3. Replace the Carriage 1 e-chain wire harness.
4. Replace A7.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace Pen 2: [Pens on page 530](#)
- Replace A17: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace the Carriage 1 e-chain: [E-chain on page 541](#)
- Replace A7: [Carriage PSU PCA \(A7\) on page 573](#)

D1.072D

Description

- Pen Pocket 2 PCA (A17) failure

Primary root causes

- A17
- Carriage 1 e-chain wire harness

Recommended actions

1. Replace A17.
2. Replace the Carriage 1 e-chain wire harness.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace A17: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace the Carriage 1 e-chain: [E-chain on page 541](#)

D1.073A

Description

- Communication test between the Image Processing PCA (A6) and Pen Pocket 3 PCA (A18) failed

Primary root causes

- A18
- A6
- Carriage 1 e-chain wire harness

Recommended actions

1. Replace A18.
2. Replace A6.
3. Replace the Carriage 1 e-chain wire harness.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Image Processing PCA \(A6\) diagram on page 2264](#)
- Replace A18: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace A6: [Image Processing PCA assembly on page 577](#)
- Replace the Carriage 1 e-chain: [E-chain on page 541](#)

D1.073B

Description

- Communication test between the Pen Pocket 3 PCA (A18) and Pen 3 failed

Primary root causes

- Pen 3 is not seated correctly, poor contact
- Wire harness between Image Processing PCA (A6) and Pen Pocket 3 PCA (A18)
- Pen 3
- A18

Recommended actions

1. Keep the front door open and power cycle the unit. Hide the “Close door” message and enter CDFT.
2. Remove and reseal pen 3 (Cyan/Magenta).

Remove the pen and reseal it a second time to ensure that any foreign material on the interconnect is cleared. Make sure that you push the pen straight down into the pocket until the pen is sitting properly on the datum. Ensure the pen is seated; the latch may not seat the pen in the vertical direction.
3. Click **Subsystems**, click **Communication Test**, and then run the test. If Pen 3 fails the communication test, continue to the next step.
4. With the power on, swap pen 3 and pen 6, and then run the communication test again to see if the error follows the pen.
5. If the communication failure follows the pen, replace the pen in slot 6.
6. If communication failed stays with the pocket position check wiring from Image Processing PCA (A6) to Pen Pocket 3 PCA (A18).
7. Replace A18.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace A18: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace Pen 3: [Pens on page 530](#)

D1.073C

Description

- The Carriage PSU PCA (A7) detected a high current leak on Pen 3

Primary root causes

- Pen 3
- A18
- Carriage 1 e-chain wire harness
- A7

Recommended actions

1. Replace Pen 3.
2. Replace A18.
3. Replace the Carriage 1 e-chain wire harness.
4. Replace A7.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace Pen 3: [Pens on page 530](#)
- Replace A18: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace the Carriage 1 e-chain: [E-chain on page 541](#)
- Replace A7: [Carriage PSU PCA \(A7\) on page 573](#)

D1.073D

Description

- Pen Pocket 3 PCA (A18) failure

Primary root causes

- A18
- Carriage 1 e-chain wire harness

Recommended actions

1. Replace A18.
2. Replace the Carriage 1 e-chain wire harness.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace A18: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace the Carriage 1 e-chain: [E-chain on page 541](#)

D1.074A

Description

- Communication test between the Image Processing PCA (A6) and Pen Pocket 4 PCA (A19) failed

Primary root causes

- A19
- A6
- Carriage 2 e-chain wire harness

Recommended actions

1. Replace A19.
2. Replace A6.
3. Replace the Carriage 2 e-chain wire harness.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Image Processing PCA \(A6\) diagram on page 2264](#)
- Replace A19: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace A6: [Image Processing PCA assembly on page 577](#)
- Replace the Carriage 2 e-chain: [E-chain on page 541](#)

D1.074B

Description

- Communication test between the Pen Pocket 4 PCA (A19) and Pen 4 failed

Primary root causes

- Pen 4 is not seated correctly, poor contact
- Wire harness between Image Processing PCA (A6) and Pen Pocket 4 PCA (A19)
- Pen 4
- A19

Recommended actions

1. Keep the front door open and power cycle the unit. Hide the “Close door” message and enter CDFT.
2. Remove and reseal pen 4 (bonding agent).

Remove the pen and reseal it a second time to ensure that any foreign material on the interconnect is cleared. Make sure that you push the pen straight down into the pocket until the pen is sitting properly on the datum. Ensure the pen is seated; the latch may not seat the pen in the vertical direction.
3. Click **Subsystems**, click **Communication Test**, and then run the test. If Pen 4 fails the communication test, continue to the next step.
4. With the power on, swap pen 4 and pen 1, and then run the communication test again to see if the error follows the pen.
5. If the communication failure follows the pen, replace the pen in slot 1.
6. If communication failed stays with the pocket position check wiring from Image Processing PCA (A6) to Pen Pocket 4 PCA (A19).
7. Replace A19.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace A19: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace Pen 4: [Pens on page 530](#)

D1.074C

Description

- The Carriage PSU PCA (A7) detected a high current leak on Pen 4

Primary root causes

- Pen 4
- A19
- Carriage 2 e-chain wire harness
- A7

Recommended actions

1. Replace Pen 4.
2. Replace A19.
3. Replace the Carriage 2 e-chain wire harness.
4. Replace A7.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace Pen 4: [Pens on page 530](#)
- Replace A19: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace the Carriage 2 e-chain: [E-chain on page 541](#)
- Replace A7: [Carriage PSU PCA \(A7\) on page 573](#)

D1.074D

Description

- Pen Pocket 4 PCA (A19) failure

Primary root causes


- A19
- Carriage 2 e-chain wire harness

Recommended actions

1. Replace A19.
2. Replace the Carriage 2 e-chain wire harness.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace A19: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace the Carriage 2 e-chain: [E-chain on page 541](#)

 **NOTE:** Pen Pocket 1 PCA (A16), and Pen Pocket 4 PCA (A19) cannot be swapped between carriages for troubleshooting purposes because there is a potential risk to create PQ defects.

The Pen Pocket 1 PCA (A16) and Pen Pocket 4 PCA (A19) have the carriage encoder attached to them. There is a potential carriage-to-carriage banding issue that can result from swapping a bonding agent pocket PCA into another bonding agent pocket. This is due to the press-fit nature of the feature that locates the pocket PCA to the carriage base. The IQ defect might not show itself immediately, but can appear after several carriage homing events performed during power up.

D1.075A

Description

- Communication test between the Image Processing PCA (A6) and Pen Pocket 5 PCA (A20) failed

Primary root causes

- A20
- A6
- Carriage 2 e-chain wire harness

Recommended actions

1. Replace A20.
2. Replace A6.
3. Replace the Carriage 2 e-chain wire harness.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Image Processing PCA \(A6\) diagram on page 2264](#)
- Replace A20: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace A6: [Image Processing PCA assembly on page 577](#)
- Replace the Carriage 2 e-chain: [E-chain on page 541](#)

D1.075B

Description

- Communication test between the Pen Pocket 5 PCA (A20) and Pen 5 failed

Primary root causes

- Pen 5 is not seated correctly, poor contact
- Wire harness between Image Processing PCA (A6) and Pen Pocket 5 PCA (A20)
- Pen 5
- A20

Recommended actions

1. Keep the front door open and power cycle the unit. Hide the “Close door” message and enter CDFT.
2. Remove and reseal pen 5 (Black/Yellow).

Remove the pen and reseal it a second time to ensure that any foreign material on the interconnect is cleared. Make sure that you push the pen straight down into the pocket until the pen is sitting properly on the datum. Ensure the pen is seated; the latch may not seat the pen in the vertical direction.

3. Click **Subsystems**, click **Communication Test**, and then run the test. If Pen 5 fails the communication test, continue to the next step.
4. With the power on, swap pen 5 and pen 2, and then run the communication test again to see if the error follows the pen.
5. If the communication failure follows the pen, replace the pen in slot 2.
6. If communication failed stays with the pocket position check wiring from Image Processing PCA (A6) to Pen Pocket 5 PCA (A20).
7. Replace A20.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace A20: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace Pen 5: [Pens on page 530](#)

D1.075C

Description

- The Carriage PSU PCA (A7) detected a high current leak on Pen 5

Primary root causes

- Pen 5
- A20
- Carriage 2 e-chain wire harness
- A7

Recommended actions

1. Replace Pen 5.
2. Replace A20.
3. Replace the Carriage 2 e-chain wire harness.
4. Replace A7.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace Pen 5: [Pens on page 530](#)
- Replace A20: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace the Carriage 2 e-chain: [E-chain on page 541](#)
- Replace A7: [Carriage PSU PCA \(A7\) on page 573](#)

D1.075D

Description

- Pen Pocket 5 PCA (A20) failure

Primary root causes

- A20
- Carriage 2 e-chain wire harness

Recommended actions

1. Replace A20.
2. Replace the Carriage 2 e-chain wire harness.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace A20: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace the Carriage 2 e-chain: [E-chain on page 541](#)

D1.076A

Description

- Communication test between the Image Processing PCA (A6) and Pen Pocket 6 PCA (A21) failed

Primary root causes

- A21
- A6
- Carriage 2 e-chain wire harness

Recommended actions

1. Replace A21.
2. Replace A6.
3. Replace the Carriage 2 e-chain wire harness.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Image Processing PCA \(A6\) diagram on page 2264](#)
- Replace A21: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace A6: [Image Processing PCA assembly on page 577](#)
- Replace the Carriage 2 e-chain: [E-chain on page 541](#)

D1.076B

Description

- Communication test between the Pen Pocket 6 PCA (A21) and Pen 6 failed

Primary root causes

- Pen 6 is not seated correctly, poor contact
- Wire harness between Image Processing PCA (A6) and Pen Pocket 6 PCA (A21)
- Pen 6
- A21

Recommended actions

1. Keep the front door open and power cycle the unit. Hide the “Close door” message and enter CDFT.
2. Remove and reseal pen 6 (Cyan/Magenta).

Remove the pen and reseal it a second time to ensure that any foreign material on the interconnect is cleared. Make sure that you push the pen straight down into the pocket until the pen is sitting properly on the datum. Ensure the pen is seated; the latch may not seat the pen in the vertical direction.
3. Click **Subsystems**, click **Communication Test**, and then run the test. If Pen 6 fails the communication test, continue to the next step.
4. With the power on, swap pen 6 and pen 3, and then run the communication test again to see if the error follows the pen.
5. If the communication failure follows the pen, replace the pen in slot 3.
6. If communication failed stays with the pocket position check wiring from Image Processing PCA (A6) to Pen Pocket 6 PCA (A21).
7. Replace A21.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace A21: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace Pen 6: [Pens on page 530](#)

D1.076C

Description

- The Carriage PSU PCA (A7) detected a high current leak on Pen 6

Primary root causes

- Pen 6
- A21
- Carriage 2 e-chain wire harness
- A7

Recommended actions

1. Replace Pen 6.
2. Replace A21.
3. Replace the Carriage 2 e-chain wire harness.
4. Replace A7.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace Pen 6: [Pens on page 530](#)
- Replace A21: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace the Carriage 2 e-chain: [E-chain on page 541](#)
- Replace A7: [Carriage PSU PCA \(A7\) on page 573](#)

D1.076D

Description

- Pen Pocket 6 PCA (A21) failure

Primary root causes

- A21
- Carriage 2 e-chain wire harness

Recommended actions

1. Replace A21.
2. Replace the Carriage 2 e-chain wire harness.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace A21: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace the Carriage 2 e-chain: [E-chain on page 541](#)

D1.0900

Description

- CPSU Cooling fan (FAN3) failed

Primary root causes

- FAN3
- Wire harness between FAN3 and the Carriage PSU PCA (A7)
- A7

Recommended actions

1. Check the wire harness between FAN3 and A7.
2. Replace FAN3.
3. Replace A7.

Links

- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Carriage PSU PCA \(A7\) diagram on page 2222](#)

D1.0A07

Description

- Carriage 1 PPS 1 functionality

Primary root causes

- Carriage 1 PPS assembly
- Pen Pocket 1 PCA (A16)
- PPS wire harness
- Carriage 1 bearings

Recommended actions

1. Replace the PPS assembly.
2. Replace A16.
3. Replace the PPS wire harness.
4. Replace the Carriage 1 bearings.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace the PPS: [PPS assembly on page 559](#)
- Replace A16: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

D1.0A08

Description

- Carriage 2 PPS 2 functionality

Primary root causes

- Carriage 2 PPS assembly
- Pen Pocket 4 PCA (A19)
- PPS wire harness
- Carriage 2 bearings

Recommended actions

1. Replace the PPS assembly.
2. Replace A19.
3. Replace the PPS wire harness.
4. Replace the Carriage 2 bearings.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace the PPS: [PPS assembly on page 559](#)
- Replace A19: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

D1.0A1A

Description

- Pen 1 (Bonding Agent) failure (missing, shorted, too many nozzles out, or bad acumen)

Primary root causes

- Pen 1 is not seated correctly, poor contact
- Pen 1
- Pen Pocket 1 PCA (A16)
- Incorrectly connected trailing cables on the Image Processing PCA (A6)

Recommended actions

1. Remove and reseal pen 1 (bonding agent).
2. If error code is displayed again, swap pen 1 and pen 4 to see if the error follows the pen.
3. If the error follows the pen in step 2, replace the pen.
4. If the error code stays with the pocket position, replace A16.
5. Verify that the trailing cables are securely connected to the correct location on A6.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace Pen 1: [Pens on page 530](#)
- Replace A16: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

D1.0A1B

Description

- Pen 1 (Bonding Agent) thermal failure

Primary root causes

- Pen 1
- Pen Pocket 1 PCA (A16)
- Ink flow to pen is restricted

Recommended actions

1. Replace Pen 1.
2. Replace A16.
3. Ink flow to the pens can be tested using the IDS air purge procedure. All other pens can be left installed while a single air purge pen is used to test a single pen position.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace Pen 1: [Pens on page 530](#)
- Replace A16: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

D1.0A2A

Description

- Pen 2 (Black/Yellow) failure (missing, shorted, too many nozzles out, or bad acumen)

Primary root causes

- Pen 2 is not seated correctly, poor contact
- Pen 2
- Pen Pocket 2 PCA (A17)
- Incorrectly connected trailing cables on the Image Processing PCA (A6)

Recommended actions

1. Remove and reseal Pen 2 (Black/Yellow).
2. If the error code is displayed again, swap pen 2 and pen 5 to see if the error follows the pen.
3. If the error follows the pen in step 2, replace the pen.
4. If the error code stays with the pocket position, replace A17.
5. Verify that the trailing cables are securely connected to the correct location on A6.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace Pen 2: [Pens on page 530](#)
- Replace A17: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

D1.0A2B

Description

- Pen 2 (Black/Yellow) thermal failure

Primary root causes

- Pen 2
- Pen Pocket 2 PCA (A17)
- Ink flow to pen is restricted

Recommended actions

1. Replace Pen 2.
2. Replace A17.
3. Ink flow to the pens can be tested using the IDS air purge procedure. All other pens can be left installed while a single air purge pen is used to test a single pen position.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace Pen 2: [Pens on page 530](#)
- Replace A17: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

D1.0A3A

Description

- Pen 3 (Cyan/Magenta) failure (missing, shorted, too many nozzles out, or bad acumen)

Primary root causes

- Pen 3 is not seated correctly, poor contact
- Pen 3
- Pen Pocket 3 PCA (A18)
- Incorrectly connected trailing cables on the Image Processing PCA (A6)

Recommended actions

1. Remove and reseal pen 3 (Cyan/Magenta).
2. If the error code is displayed again, swap pen 3 and pen 6 to see if the error follows the pen.
3. If the error follows the pen in step 2, replace the pen.
4. If the error code stays with the pocket position, replace A18.
5. Verify that the trailing cables are securely connected to the correct location on A6.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace Pen 3: [Pens on page 530](#)
- Replace A18: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

D1.0A3B

Description

- Pen 3 (Cyan/Magenta) thermal failure

Primary root causes

- Pen 3
- Pen Pocket 3 PCA (A18)
- Ink flow to pen is restricted

Recommended actions

1. Replace Pen 3.
2. Replace A18.
3. Ink flow to the pens can be tested using the IDS air purge procedure. All other pens can be left installed while a single air purge pen is used to test a single pen position.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace Pen 3: [Pens on page 530](#)
- Replace A18: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

D1.0A4A

Description

- Pen 4 (Bonding Agent) failure (missing, shorted, too many nozzles out, or bad acumen)

Primary root causes

- Pen 4 is not seated correctly, poor contact
- Pen 4
- Pen Pocket 4 PCA (A19)
- Incorrectly connected trailing cables on the Image Processing PCA (A6)

Recommended actions

1. Remove and reseal pen 4 (bonding agent).
2. If the error code is displayed again, swap pen 4 and pen 1 to see if the error follows the pen.
3. If the error follows the pen in step 2, replace the pen.
4. If the error code stays with the pocket position, replace A19.
5. Verify that the trailing cables are securely connected to the correct location on A6.

Links

- Diagnostic page: Click **Subsystems**, click **Carriage**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace Pen 4: [Pens on page 530](#)
- Replace A19: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

D1.0A4B

Description

- Pen 4 (Bonding Agent) thermal failure

Primary root causes

- Pen 4
- Pen Pocket 4 PCA (A19)
- Ink flow to pen is restricted

Recommended actions

1. Replace Pen 4.
2. Replace A19.
3. Ink flow to the pens can be tested using the IDS air purge procedure. All other pens can be left installed while a single air purge pen is used to test a single pen position.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace Pen 4: [Pens on page 530](#)
- Replace A19: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

D1.0A5A

Description

- Pen 5 (Black/Yellow) failure (missing, shorted, too many nozzles out, or bad acumen)

Primary root causes

- Pen 5 is not seated correctly, poor contact
- Pen 5
- Pen Pocket 5 PCA (A20)
- Incorrectly connected trailing cables on the Image Processing PCA (A6)

Recommended actions

1. Remove and reseal pen 5 (Black/Yellow).
2. If the error code is displayed again, swap pen 5 and pen 2 to see if the error follows the pen.
3. If the error follows the pen in step 2, replace the pen.
4. If the error code stays with the pocket position, replace A20.
5. Verify that the trailing cables are securely connected to the correct location on A6.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace Pen 5: [Pens on page 530](#)
- Replace A20: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

D1.0A5B

Description

- Pen 5 (Black/Yellow) thermal failure

Primary root causes

- Pen 5
- Pen Pocket 5 PCA (A20)
- Ink flow to pen is restricted

Recommended actions

1. Replace Pen 5.
2. Replace A20.
3. Ink flow to the pens can be tested using the IDS air purge procedure. All other pens can be left installed while a single air purge pen is used to test a single pen position.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace Pen 5: [Pens on page 530](#)
- Replace A20: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

D1.0A6A

Description

- Pen 6 (Cyan/Magenta) failure (missing, shorted, too many nozzles out, or bad acumen)

Primary root causes

- Pen 6 is not seated correctly, poor contact
- Pen 6
- Pen Pocket 6 PCA (A21)
- Incorrectly connected trailing cables on the Image Processing PCA (A6)

Recommended actions

1. Remove and reseal pen 6 (Cyan/Magenta).
2. If the error code is displayed again, swap pen 6 and pen 3 to see if the error follows the pen.
3. If the error follows the pen in step 2, replace the pen.
4. If the error code stays with the pocket position, replace A21.
5. Verify that the trailing cables are securely connected to the correct location on A6.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace Pen 6: [Pens on page 530](#)
- Replace A21: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

D1.0A6B

Description

- Pen 6 (Cyan/Magenta) thermal failure

Primary root causes

- Pen 6
- Pen Pocket 6 PCA (A21)
- Ink flow to pen is restricted

Recommended actions

1. Replace Pen 6.
2. Replace A21.
3. Ink flow to the pens can be tested using the IDS air purge procedure. All other pens can be left installed while a single air purge pen is used to test a single pen position.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace Pen 6: [Pens on page 530](#)
- Replace A21: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

D2.01A0

Description

- Carriage 1 accuracy monitor alert

The MFP continuously monitors the carriage motor for stopping accuracy. When the accuracy exceeds a threshold value this event will be recorded.

Primary root causes

- Carriage Stopping Accuracy calibration required

Recommended actions

1. Enter CDFT and examine the warning log. Look for multiple entries of this event code. A single entry does not require any action.
2. If needed, open the Engine Calibrations 2 page, and then run the Carriage Stopping Accuracy calibration.

Links

- Calibration page: Click **Settings/Procedures**, click **Calibrations**, and then click **Engine Calibrations 2**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)

D2.01A1

Description

- Carriage 2 accuracy monitor alert

The MFP continuously monitors the carriage motor for stopping accuracy. When the accuracy exceeds a threshold value this event will be recorded.

Primary root causes

- Carriage Stopping Accuracy calibration required

Recommended actions

1. Enter CDFT and examine the warning log. Look for multiple entries of this event code. A single entry does not require any action.
2. Open the Engine Calibrations 2 page, and then run the Carriage Stopping Accuracy calibration.

Links

- Calibration page: Click **Settings/Procedures**, click **Calibrations**, and then click **Engine Calibrations 2**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)

D2.01A2

Description

- Passed carriage accuracy diagnostic

Primary root causes

- None

Recommended actions

- No action required. The carriage passed the accuracy diagnostics.

D2.01A3

Description

- Failed Carriage 1 accuracy diagnostic

The diagnostic is a test of the carriage motor stopping accuracy. The carriage is tested in 3 different carriage positions (zones) and a series of short carriage moves is used for the diagnostic.

Primary root causes

- Carriage 1 rod
- Carriage 1 bearings
- Wire harness between the Carriage 1 motor (M1) and the Motion PCA (A2)
- A2
- Carriage 1 encoder strip
- Carriage 1 drive belts
- Carriage 1 e-chain and the Carriage 2 e-chain

Recommended actions

1. Use a lint-free cloth to clean the Carriage 1 rod.
2. Lubricate the Carriage 1 rod.
3. Open the Engine Calibrations 2 page, and then run the Carriage Stopping Accuracy calibration.
4. Check the wire harness between M1 and A2.
5. Check and reseal the Carriage 1 e-chain and the Carriage 2 e-chain.
6. Replace the Carriage 1 bearing and felt.
7. Clean the Carriage 1 encoder strip.
8. Check the Carriage 1 drive belts.
9. Test M1.
10. Replace A2.

Links

- Calibration page: Click **Settings/Procedures**, click **Calibrations**, and then click **Engine Calibrations 2**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)

D2.01A4

Description

- Failed Carriage 2 accuracy diagnostic

The diagnostic is a test of the carriage motor stopping accuracy. The carriage is tested in 3 different carriage positions (zones) and a series of short carriage moves is used for the diagnostic.

Primary root causes

- Carriage 2 rod
- Carriage 2 bearings
- Wire harness between the Carriage 2 motor (M2) and the Motion PCA (A2)
- A2
- Carriage 2 encoder strip
- Carriage 2 drive belts
- Carriage 1 e-chain and the Carriage 2 e-chain

Recommended actions

1. Use a lint-free cloth to clean the Carriage 2 rod.
2. Lubricate the Carriage 2 rod.
3. Open the Engine Calibrations 2 page, and then run the Carriage Stopping Accuracy calibration.
4. Check the wire harness between M2 and A2.
5. Check and reseal the Carriage 1 e-chain and the Carriage 2 e-chain.
6. Replace the Carriage 2 bearing and felt.
7. Clean the Carriage 2 encoder strip.
8. Check the Carriage 2 drive belts.
9. Test M2.
10. Replace A2.

Links

- Calibration page: Click **Settings/Procedures**, click **Calibrations**, and then click **Engine Calibrations 2**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)

D2.01A5

Description

- Passed carriage accuracy calibration

Primary root causes

- None

Recommended actions

- No action required. The carriage passed the accuracy calibration.

D2.01A6

Description

- Failed carriage 1 accuracy calibration

This is a calibration of the carriage motor stopping ability. During the calibration, the carriage is tested in 3 different carriage positions (zones) and a series of short carriage moves is used to calibrate the carriage motor.

Primary root causes

- Carriage 1 motor (M1)
- Carriage 1 encoder (EN18)
- Wire harness between M1 and the Motion PCA (A2)
- A2

Recommended actions

1. Check the wire harness between M1 and A2.
2. Open the Engine Calibrations 2 page, and then run the Carriage Stopping Accuracy calibration.
3. Replace M1. Run the Carriage Stopping Accuracy calibration.
4. Replace the Carriage 1 encoder strip. Run the Carriage Stopping Accuracy calibration.
5. Replace A2. Run the Carriage Stopping Accuracy calibration.

Links

- Calibration page: Click **Settings/Procedures**, click **Calibrations**, and then click **Engine Calibrations 2**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace M1: [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\) on page 552](#)
- Replace the Carriage 1 encoder strip: [Carriage encoder strip on page 535](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)

D2.01A7

Description

- Failed Carriage 2 accuracy calibration

This is a calibration of the carriage motor stopping ability. During the calibration, the carriage is tested in 3 different carriage positions (zones) and a series of short carriage moves is used to calibrate the carriage motor.

Primary root causes

- Carriage 2 motor (M2)
- Carriage 2 encoder (EN19)
- Wire harness between M2 and the Motion PCA (A2)
- A2

Recommended actions

1. Open the Engine Calibrations 2 page, and then run the Carriage Stopping Accuracy calibration.
2. Check the wire harness between M2 and A2. Open the Engine Calibrations 2 page, and then run the Carriage Stopping Accuracy calibration.
3. Replace M2. Run the Carriage Stopping Accuracy calibration.
4. Replace the Carriage 2 encoder strip. Run the Carriage Stopping Accuracy calibration.
5. Replace A2. Run the Carriage Stopping Accuracy calibration.

Links

- Calibration page: Click **Settings/Procedures**, click **Calibrations**, and then click **Engine Calibrations 2**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace M1: [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\) on page 552](#)
- Replace the Carriage 1 encoder strip: [Carriage encoder strip on page 535](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)

D2.0200

Description

- Carriage thermistor reading difference

Primary root causes

- Carriage Front thermistor (SN61)
- Carriage Back thermistor (SN62)
- Wire harness between carriage thermistors and the Ink Assist PCA (A3)
- A3

Recommended actions

1. Check SN61 and SN62 for damage.
2. Open the Carriage diagnostic page, and then verify that the SN61 temperature reading is within +/- 5 degrees C (9 degrees F) of the SN62 temperature reading.
3. Test the resistance at SN61 and SN62: approximately 10 ohms at ambient temperature.
4. Test both SN61 and SN62. Replace any thermistor with a temperature reading above 65 degrees C (149 degrees F) or below 8 degrees C (46.4 degrees F). The temperature reading should not spike but show a gradual change. Replace any thermistor with a reading that fluctuates widely (more than 20 degrees) or that shows no temperature difference between idle (at least 15 minutes of no use) and printing.
5. Check the wire harness between carriage thermistors and A3.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)

D2.02A1

Description

- Carriage thermistor reading difference

Primary root causes

- Carriage Front thermistor (SN61)
- Carriage Back thermistor (SN62)
- Wire harness between carriage thermistors and the Ink Assist PCA (A3)
- A3

Recommended actions

1. Check SN61 and SN62 for damage.
2. Open the Carriage diagnostic page, and then verify that the SN61 temperature reading is within +/- 5 degrees C (9 degrees F) of the SN62 temperature reading.
3. Test the resistance at SN61 and SN62: approximately 10 ohms at ambient temperature.
4. Test both SN61 and SN62. Replace any thermistor with a temperature reading above 65 degrees C (149 degrees F) or below 8 degrees C (46.4 degrees F). The temperature reading should not spike but show a gradual change. Replace any thermistor with a reading that fluctuates widely (more than 20 degrees) or that shows no temperature difference between idle (at least 15 minutes of no use) and printing.
5. Check the wire harness between carriage thermistors and A3.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)

D2.0701

Description

- Carriage PSU PCA (A7) reported power bad

Primary root causes

- Fuses on A7
- Wire harness between A7 and the Image Processing PCA (A6)
- Wire harness between A7 and the Power Distribution PCA (A1)
- Power supply (PS1)

Recommended actions

1. Check the power LEDs on A7.
2. Check or replace the fuses on A7.
3. Replace A7.
4. Check or reseal the wire harness between A7 and A6.
5. Check or reseal the wire harness between A7 and A1.
6. Check the input power supply LEDs on the carriage power supply unit (CPSU).

Links

- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Carriage PSU PCA \(A7\) diagram on page 2222](#)
- Replace A7: [Carriage PSU PCA \(A7\) on page 573](#)

D2.0702

Description

- Serial interface communications error between the Main Engine PCA (A5) and the Image Processing PCA (A6)

Primary root causes

- Fuses on A6
- Wire harness between A6 and Main Engine PCA (A5)
- Wire harness between A6 and Power Distribution PCA (A1)
- Main Engine PCA (A5)
- Main Engine Backplane PCA (A4)
- A6
- Power supply (PS1)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Check the power LEDs on A6.
3. Check or replace the fuses on A6.
4. Check or reseat the wire harness between A6 and A5.
5. Check or reseat the wire harness between A6 and A1.
6. Open the Communication diagnostic page, and then run the A6 communication test.
7. Replace A6.
8. Replace A5.
9. Replace A4.

D2.0703

Description

- Synchronization error between the Main Engine PCA (A5) and the Image Processing PCA (A6)

Primary root causes

- Gigablaze data cable between A6 and A5
- Wire harness between A6 and Main Engine Backplane PCA (A4)
- A4
- A6
- A5

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Check or reseal the Gigablaze data cable between A6 and A5.
3. Check or reseal the wire harness between A6 and A4.
4. Open the Communication diagnostic page, and then run the A6 communication test.
5. Replace A4.
6. Replace A6.
7. Replace A5.

Links

- Diagnostic page: Click **Subsystems**, and then click **Communication**.
- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Image Processing PCA \(A6\) diagram on page 2264](#)
- Replace A6: [Image Processing PCA assembly on page 577](#)
- Replace A4: [Main Engine Backplane PCA \(A4\) on page 708](#)
- Replace A5: [Main Engine PCA \(A5\) on page 703](#)

D2.0704

Description

- Gigablaze lost link between the Image Processing PCA (A6) and the Main Engine PCA (A5)

Primary root causes

- Gigablaze data cable between A6 and A5
- Wire harness between A6 and Main Engine Backplane PCA (A4)
- A4
- A6
- A5

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Check or reseal the Gigablaze data cable between A6 and A5.
3. Check or reseal the wire harness between A6 and A4.
4. Open the Communication diagnostic page, and then run the A6 communication test.
5. Replace A4.
6. Replace A6.
7. Replace A5.

Links

- Diagnostic page: Click **Subsystems**, and then click **Communication**.
- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Image Processing PCA \(A6\) diagram on page 2264](#)
- Replace A6: [Image Processing PCA assembly on page 577](#)
- Replace A4: [Main Engine Backplane PCA \(A4\) on page 708](#)
- Replace A5: [Main Engine PCA \(A5\) on page 703](#)

D2.0705

Description

- Serial interface communications error between the Main Engine PCA (A5) and the Image Processing PCA (A6)

Primary root causes

- Fuses on A6
- Wire harness between A6 and Main Engine PCA (A5)
- Wire harness between the A6 and the Power Distribution PCA (A1)
- Main Engine Backplane PCA (A4)
- A6
- Power supply (PS1)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Check the power LEDs on A6.
3. Check or replace the fuses on A6.
4. Check or reseat the wire harness between A6 and A5.
5. Check or reseat the wire harness between A6 and A1.
6. Open the Communication diagnostic page, and then run the A6 communication test.
7. Replace A6.
8. Replace A4.

Links

- Diagnostic page: Click **Subsystems**, and then click **Communication**.
- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Image Processing PCA \(A6\) diagram on page 2264](#)
- Replace A6: [Image Processing PCA assembly on page 577](#)
- Replace A4: [Main Engine Backplane PCA \(A4\) on page 708](#)

D2.0707

Description

- Pen Pocket 1 PCA (A16) to pen voltage regulator (PVR) on the Carriage PSU PCA (A7) drive signal failed

Primary root causes

- A16
- A7
- A6
- Carriage 1 e-chain

Recommended actions

1. Reseat or replace A16.
2. Replace A7.
3. Replace A6.
4. Reseat or replace the Carriage 1 e-chain.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace A7: [Carriage PSU PCA \(A7\) on page 573](#)
- Replace A16: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace the e-chain: [E-chain on page 541](#)

D2.0708

Description

- Pen Pocket 2 PCA (A17) to pen voltage regulator (PVR) on the Carriage PSU PCA (A7) drive signal failed

Primary root causes

- A17
- A7
- A6
- Carriage 1 e-chain

Recommended actions

1. Reseat or replace A17.
2. Replace A7.
3. Replace A6.
4. Reseat or replace the Carriage 1 e-chain.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace A7: [Carriage PSU PCA \(A7\) on page 573](#)
- Replace A17: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace the e-chain: [E-chain on page 541](#)

D2.0709

Description

- Pen Pocket 3 PCA (A18) to pen voltage regulator (PVR) on the Carriage PSU PCA (A7) drive signal failed

Primary root causes

- A18
- A7
- A6
- Carriage 1 e-chain

Recommended actions

1. Reseat or replace A18.
2. Replace A7.
3. Replace A6.
4. Reseat or replace the Carriage 1 e-chain.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace A7: [Carriage PSU PCA \(A7\) on page 573](#)
- Replace A18: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace the e-chain: [E-chain on page 541](#)

D2.0710

Description

- Pen Pocket 4 PCA (A19) to pen voltage regulator (PVR) on the Carriage PSU PCA (A7) drive signal failed

Primary root causes

- A19
- A7
- A6
- Carriage 2 e-chain

Recommended actions

1. Reseat or replace A19.
2. Replace A7.
3. Replace A6.
4. Reseat or replace the Carriage 2 e-chain.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace A7: [Carriage PSU PCA \(A7\) on page 573](#)
- Replace A19: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace the e-chain: [E-chain on page 541](#)

D2.0711

Description

- Pen Pocket 5 PCA (A20) to pen voltage regulator (PVR) on the Carriage PSU PCA (A7) drive signal failed

Primary root causes

- A20
- A7
- A6
- Carriage 2 e-chain

Recommended actions

1. Reseat or replace A20.
2. Replace A7.
3. Replace A6.
4. Reseat or replace the Carriage 2 e-chain.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace A7: [Carriage PSU PCA \(A7\) on page 573](#)
- Replace A20: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace A6: [Image Processing PCA assembly on page 577](#)
- Replace the e-chain: [E-chain on page 541](#)

D2.0712

Description

- Pen Pocket 6 PCA (A21) to pen voltage regulator (PVR) on the Carriage PSU PCA (A7) drive signal failed

Primary root causes

- A21
- A7
- A6
- Carriage 2 e-chain

Recommended actions

1. Reseat or replace A21.
2. Replace A7.
3. Replace A6.
4. Reseat or replace the Carriage 2 e-chain.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace A7: [Carriage PSU PCA \(A7\) on page 573](#)
- Replace A21: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace the e-chain: [E-chain on page 541](#)

D2.0713

Description

- The Image Processing PCA (A6) power failed

Primary root causes

- Fuses on A6
- Wire harness between A6 and the Main Engine Backplane PCA (A4)
- Wire harness between the A6 and the Power Distribution PCA (A1)
- A4
- A6
- Power supply (PS1)

Recommended actions

1. Check the power LEDs on A6.
2. Check or replace the fuses on A6. If the fuses are blown, replace A6 and both e-chains.
3. Replace A6.
4. Reseat or replace both e-chains.

Links

- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Image Processing PCA \(A6\) diagram on page 2264](#)
- Replace : [Image Processing PCA assembly on page 577](#)
- Replace the e-chain: [E-chain on page 541](#)

D2.0714

Description

- Carriage 1 Encoder PCA (A9) failed

Primary root causes

- Carriage 1 e-chain
- Pen Pocket 1 PCA (A16)
- A9
- Carriage 1 PPS PCA (A25)
- A25 wire harness
- Image Processing PCA (A6)

Recommended actions

1. Reseat or replace the Carriage 1 e-chain.
2. Reseat or replace A16.
3. Replace A9.
4. Replace A25.
5. Check or reseat A25 wire harness.
6. Replace A6.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage encoder diagram on page 2221](#)
- Replace A16: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace A25: [Carriage PPS PCAs \(A25 and A34\) on page 572](#)
- Replace A6: [Image Processing PCA assembly on page 577](#)
- Replace the e-chain: [E-chain on page 541](#)

D2.0715

Description

- Carriage 2 Encoder PCA (A24) failed

Primary root causes

- Carriage 2 e-chain
- Pen Pocket 4 PCA (A19)
- Carriage 2 Encoder PCA (A24)
- Carriage 2 PPS PCA (A34)
- A34 wire harness
- Image Processing PCA (A6)

Recommended actions

1. Reseat or replace the Carriage 2 e-chain.
2. Reseat or replace A19.
3. Replace A24.
4. Replace A34.
5. Check or reseat the A34 wire harness.
6. Replace A6.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage encoder diagram on page 2221](#)
- Replace A19: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace A24: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace A34: [Carriage PPS PCAs \(A25 and A34\) on page 572](#)
- Replace A6: [Image Processing PCA assembly on page 577](#)
- Replace the e-chain: [E-chain on page 541](#)

D2.0716

Description

- Carriage 1 Encoder PCA (A9) and Carriage 2 Encoder PCA (A24) failed

Primary root causes

- Fuses on the Image Processing PCA (A6)
- A6
- Carriage 1 e-chain and the Carriage 2 e-chain
- Power supply (PS1)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Check the power LEDs on A6.
3. Check or replace the fuses on A6.
4. Check or reseal the wire harness between A6 and the Main Engine Backplane PCA (A4).
5. Check or reseal the wire harness between A6 and the Power Distribution PCA (A1).
6. Open the Communication diagnostic page, and then run the A6 communication test.
7. Replace A6.
8. Replace A4.

Links

- Diagnostic page: Click **Subsystems**, and then click **Communication**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage encoder diagram on page 2221](#)
- Replace A6: [Image Processing PCA assembly on page 577](#)
- Replace A4: [Main Engine Backplane PCA \(A4\) on page 708](#)

D2.0723

Description

- Multiple Pen Pocket PCAs have failed

Primary root causes

- All pen pocket PCAs
- Carriage PSU PCA (A7)
- Carriage 1 e-chain and the Carriage 2 e-chain
- Image Processing PCA (A6)
- Wire harness between A6 and the Power Distribution PCA (A1)
- Wire harness between A7 and A1

Recommended actions

1. Check or reseat the wire harness between A6, A7, and A1.
2. Replace all of the pen pocket PCAs.
3. Replace A7.
4. Reseat or replace the Carriage 1 e-chain and the Carriage 2 e-chain.
5. Replace A6.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace the pen pocket PCAs: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace A7: [Carriage PSU PCA \(A7\) on page 573](#)
- Replace A6: [Image Processing PCA assembly on page 577](#)
- Replace the e-chain: [E-chain on page 541](#)

D2.0724

Description

- Carriage 1 encoder (EN18) or Carriage 2 encoder (EN19) failed in addition to one or more Pen Pocket PCA failures

Primary root causes

- Fuses on the Image Processing PCA (A6)
- A6
- Carriage 1 e-chain and the Carriage 2 e-chain
- Power supply (PS1)

Recommended actions

1. Check the power LEDs on A6.
2. Check or replace the fuses on A6. If the fuses are blown, replace A6 and both e-chains.
3. Replace A6.
4. Replace the Carriage 1 e-chain and the Carriage 2 e-chain.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Image Processing PCA \(A6\) diagram on page 2264](#)
- Replace A6: [Image Processing PCA assembly on page 577](#)
- Replace the e-chain: [E-chain on page 541](#)

D2.0901

Description

- Image Processing PCA Cooling fan (FAN9) failed

Primary root causes

- FAN9
- Image Processing PCA (A6)

Recommended actions

1. Replace FAN9.
2. Replace A6.

Links

- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Image Processing PCA \(A6\) diagram on page 2264](#)
- Replace A6: [Image Processing PCA assembly on page 577](#)

D2.09A1

Description

- Carriage 1 Cooling fan (FAN7) stall

Primary root causes

- Wire harness between the Ink Assist PCA (A3) and FAN7
- FAN7
- A3

Recommended actions

1. Check the wire harness between A3 and FAN7.
2. Open the Carriage diagnostic page, and then test the voltage to FAN7.
3. Replace A3.

Links

- Diagnostic page: Click **Subsystems**, click **Carriage**, and then click **Carriage**.
- Component locator: [Service Station component locator on page 2329](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)

D2.09A2

Description

- Carriage 2 Cooling fan (FAN8) stall

Primary root causes

- Wire harness between the Ink Assist PCA (A3) and FAN8
- FAN8
- A3

Recommended actions

1. Check the wire harness between A3 and FAN8.
2. Open the Carriage diagnostic page, and then test the voltage to FAN8.
3. Replace A3.

Links

- Diagnostic page: Click **Subsystems**, click **Carriage**, and then click **Carriage**.
- Component locator: [Service Station component locator on page 2329](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)

D2.0AA1

Description

- Pen 1 (Bonding Agent) ink drop speed out-of-range

Primary root causes

- Pen 1
- Pen Pocket 1 PCA (A16)

Recommended actions

1. Use non-ColorLok paper to print the Nozzle Health plot with error hiding OFF.
2. Inspect the checkerboard blocks marked as C1, P1, and D1 to D5 on the page.
 - If there are many black squares missing (groups of BA missing nozzles), run the Pen Cleaning routine.
 - If there are no BA missing nozzles, no action is required and this code can be ignored.
3. If pen cleaning did not recover the BA missing nozzles, swap BA pens between carriages, and then print the Nozzle Health plot with error hiding OFF again. Replace the pen if the group of missing nozzles moved with the pen; otherwise, troubleshoot A16.
4. Replace Pen 1.
5. Replace A16.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace Pen 1: [Pens on page 530](#)
- Replace A16: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

D2.0AA2

Description

- Pen 2 (Black/Yellow) ink drop speed out-of-range

Primary root causes

- Pen 2
- Pen Pocket 2 PCA (A17)

Recommended actions

1. Use non-ColorLok paper to print the Nozzle Health plot with error hiding OFF. Print the All Colors test page with error hiding turned OFF.
2. In the Nozzle Health plot, inspect the black/yellow blocks marked as C1, P2, and D1 to D5. To check for yellow missing nozzles, inspect the red and green areas of the All Colors test page and look for magenta or cyan streaks, respectively.
 - If there are many black nozzles out, or streaks on the black, red, or green areas of the All Colors test page, run the Pen Cleaning routine.
 - If there are no KY missing nozzles, no action is required and this code can be ignored.
3. If pen cleaning did not recover the missing nozzles, swap the KY pens between carriages, and then print the Nozzle Health plot with error hiding OFF again. Replace the pen if the group of missing nozzles moved with the pen; otherwise, troubleshoot A17.
4. Replace Pen 2.
5. Replace A17.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace Pen 2: [Pens on page 530](#)
- Replace A17: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

D2.0AA3

Description

- Pen 3 (Cyan/Magenta) ink drop speed out-of-range

Primary root causes

- Pen 3
- Pen Pocket 3 PCA (A18)

Recommended actions

1. Use non-ColorLok paper to print the Nozzle Health plot with error hiding OFF. Print the All Colors test page with error hiding turned OFF.
2. In the Nozzle Health plot, inspect the cyan and magenta blocks marked as C1, P3, and D1 to D5. Check for cyan and magenta missing nozzles.
 - If there are many cyan or magenta nozzles out, run the Pen Cleaning routine.
 - If there are no cyan or magenta missing nozzles, no action is required and this code can be ignored.
3. If pen cleaning did not recover the missing nozzles, swap the CM pens between carriages, and then print the Nozzle Health plot with error hiding OFF again. Replace the pen if the group of missing nozzles moved with the pen; otherwise, troubleshoot A18.
4. Replace Pen 3.
5. Replace A18.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace Pen 3: [Pens on page 530](#)
- Replace A18: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

D2.0AA4

Description

- Pen 4 (Bonding Agent) ink drop speed out-of-range

Primary root causes

- Pen 4
- Pen Pocket 4 PCA (A19)

Recommended actions

1. Use non-ColorLok paper to print the Nozzle Health plot with error hiding OFF. Print the All Colors test page with error hiding turned OFF.
2. Inspect the checkerboard blocks marked as C2, P1, and D1 to D5 on the page.
 - If there are many black squares missing (groups of BA missing nozzles), run the Pen Cleaning routine.
 - If there are no BA missing nozzles, no action is required and this code can be ignored.
3. If pen cleaning did not recover the BA missing nozzles, swap BA pens between carriages, and then print the Nozzle Health plot with error hiding OFF again. Replace the pen if the group of missing nozzles moved with the pen; otherwise, troubleshoot A19.
4. Replace Pen 4.
5. Replace A19.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace Pen 4: [Pens on page 530](#)
- Replace A19: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

D2.0AA5

Description

- Pen 5 (Black/Yellow) ink drop speed out-of-range

Primary root causes

- Pen 5
- Pen Pocket 5 PCA (A20)

Recommended actions

1. Use non-ColorLok paper to print the Nozzle Health plot with error hiding OFF. Print the All Colors test page with error hiding turned OFF.
2. In the Nozzle Health plot, inspect the black/yellow blocks marked as C2, P2, and D1 to D5. To check for yellow missing nozzles, inspect the red and green areas of the All Colors test page and look for magenta or cyan streaks, respectively.
 - If there are many black nozzles out or streaks on the black, red, or green areas of the All Colors test page, run the Pen Cleaning routine.
 - If there are no KY missing nozzles, no action is required and this code can be ignored.
3. If pen cleaning did not recover the missing nozzles, swap the KY pens between carriages, and then print the Nozzle Health plot with error hiding OFF again. Replace the pen if the group of missing nozzles moved with the pen; otherwise, troubleshoot A20.
4. Replace Pen 5.
5. Replace A20.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace Pen 5: [Pens on page 530](#)
- Replace A20: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

D2.0AA6

Description

- Pen 6 (Cyan/Magenta) ink drop speed out-of-range

Primary root causes

- Pen 6
- Pen Pocket 6 PCA (A21)

Recommended actions

1. Use non-ColorLok paper to print the Nozzle Health plot with error hiding OFF.
2. In the Nozzle Health plot, inspect the cyan and magenta blocks marked as C2, P3, and D1 to D5. Check for cyan and magenta missing nozzles.
 - If there are many cyan or magenta nozzles out, run the Pen Cleaning routine.
 - If there are no cyan or magenta missing nozzles, no action is required and this code can be ignored.
3. If pen cleaning did not recover the missing nozzles, swap the CM pens between carriages, and then print the Nozzle Health plot with error hiding OFF again. Replace the pen if the group of missing nozzles moved with the pen; otherwise, troubleshoot A21.
4. Replace Pen 6.
5. Replace A21.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace Pen 6: [Pens on page 530](#)
- Replace A21: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

D2.2001

Description

- Image Processing PCA (A6) DRAM 1 problem

Primary root causes

- A6 DIMM 1

Recommended actions

- Reseat or replace A6 DIMM 1.

Links

- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Image Processing PCA \(A6\) diagram on page 2264](#)
- Replace A6 DIMM 1: [Image Processing PCA DIMMs on page 579](#)

D2.2002

Description

- Image Processing PCA (A6) DRAM 1 wrong size

Primary root causes

- A6 DIMM 1 not installed correctly

Recommended actions

- Verify that the A6 DIMM 1 is installed in the correct location.

Links

- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Image Processing PCA \(A6\) diagram on page 2264](#)
- Replace A6 DIMM 1: [Image Processing PCA DIMMs on page 579](#)

D2.2003

Description

- Image Processing PCA (A6) DRAM 2 problem

Primary root causes

- A6 DIMM 2

Recommended actions

- Reseat or replace the A6 DIMM 2.

Links

- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Image Processing PCA \(A6\) diagram on page 2264](#)
- Replace A6 DIMM 2: [Image Processing PCA DIMMs on page 579](#)

D2.2004

Description

- Image Processing PCA (A6) DRAM 2 wrong size

Primary root causes

- A6 DIMM 2 not installed correctly

Recommended actions

- Verify that the A6 DIMM 2 is installed in the correct location.

Links

- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Image Processing PCA \(A6\) diagram on page 2264](#)
- Replace A6 DIMM 2: [Image Processing PCA DIMMs on page 579](#)

D2.2005

Description

- Image Processing PCA (A6) internal SRAM problem

Primary root causes

- A6

Recommended actions

- Replace A6.

Links

- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Image Processing PCA \(A6\) diagram on page 2264](#)
- Replace A6: [Image Processing PCA assembly on page 577](#)

D3.0701

Description

- Control Panel failure

Primary root causes

- NVRAM part on the Control Panel PCA is missing or defective

Recommended actions

- Replace Control Panel PCA (SVC-PRISM PCA)

Links

- Replace PCA: [Control panel PCA on page 310](#)

D3.1101

Description

- Formatter internal clock battery is dead

Primary root causes

- Formatter battery
- Formatter Main PCA (A26)

Recommended actions

1. Power cycle the MFP. Look for a BIOS POST code. If a BIOS POST code appears, follow the BIOS POST code troubleshooting information in the service manual.
2. Replace the formatter battery.
3. Replace A26.

Links

- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A26: [Formatter Main PCA \(A26\) on page 693](#)

D3.1102

Description

- Formatter internal clock is dead

Primary root causes

- Formatter battery
- Formatter Main PCA (A26)

Recommended actions

1. Power cycle the MFP. Look for a BIOS POST code. If a BIOS POST code appears, follow the BIOS POST code troubleshooting information in the service manual.
2. Replace the formatter battery.
3. Replace A26.

Links

- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- ReplaceA26: [Formatter Main PCA \(A26\) on page 693](#)

D3.2301

Description

- ENGCOM (engine communication) unable to store configuration

Primary root causes

- A write error occurred from EFI NVRAM
- Formatter Main PCA (A26)

Recommended actions

- Replace A26.

Links

- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A26: [Finisher Main PCA \(A200\) on page 958](#)

D3.3700

Description

- Internal hard disk not functional

Primary root causes

- Hard drive data and power wiring
- Hard drive
- Formatter Main PCA (A26)

Recommended actions

1. Check the hard drive activity LED.
2. Power cycle the MFP. Look for a BIOS POST code. If a BIOS POST code appears, follow the BIOS POST code deductive information in the service manual.
3. Check the hard drive data and power wiring for a loose connection or damage.
4. Replace the hard drive.
5. Replace A26.

Links

- Component locator: [Formatter component locator on page 2322](#)
- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace the hard drive: [Formatter hard drive on page 685](#)
- Replace A26: [Formatter Main PCA \(A26\) on page 693](#)

D3.4400

Description

- USB accessory over current. Power requirements for the USB accessory attached to the MFP are beyond supported limits.

Primary root causes

- External USB device malfunction

Recommended actions

1. Disconnect the external USB device from the MFP, and then power cycle the MFP.
2. Connect another USB device to the MFP to see if the error recurs.

D4.0701

Description

- Communication could not be established between the Formatter Main PCA (A26) and the Main Engine PCA (A5) during MFP power up

There are many reasons the engine can fail to boot successfully. Failures such as short circuits on power lines, communications errors (MICCI bus failures), or KWSI faults can prevent the engine from successfully booting. These failures can occur on any power line, E-chain, or I/O cable. Since the engine fails to boot under these conditions, CDFT cannot be used to find the problem. If this error is reported, the recommended action is to check the power good LEDs on the Image Processing PCA (A6), as well as the three heartbeat LEDs. Carefully inspect the E-chain and all other harnesses for pinched wires. If possible, have one person move the carriages back and forth while watching the LEDs on A6, in cases where the problem is intermittent.

Primary root causes

- Improper power cycle at the master power switch
- Firmware communications
- A5
- Wire harness between A26 and A5
- A26
- Image Processing PCA (A6)
- Short circuit on any of the power lines in the carriages
- Pen pocket, carriage encoder, and PPS PCAs
- Wire harness between the Main Engine Backplane PCA (A4) and A6
- E-chain cable damage
- A4
- Motion PCA (A2)
- Ink Assist PCA (A3)

Recommended actions

1. Use both the control panel power switch and the main power supply power switch to turn off the MFP. Power cycle the MFP and see if the problem clears.
2. Check the wire harness between A26 and A5.
3. Check the power good LED and three heartbeat LEDs on A6. Manually move the carriages in and out while watching the LEDs in order to find intermittent shorts in the e-chains.

Links

- Diagnostic page: Click **Subsystems**, and then click **Communication**.
- Component locator: [Electronics component locator on page 2327](#)

- Wiring diagram: [Formatter wiring diagram on page 2240](#)
- Replace A26: [Formatter Main PCA \(A26\) on page 693](#)
- Replace A4: [Main Engine Backplane PCA \(A4\) on page 708](#)
- Replace A5: [Main Engine PCA \(A5\) on page 703](#)

D4.0702

Description

- Main Engine PCA (A5) power not good (logic and analog supply)

Primary root causes

- A5
- Power Distribution PCA (A1)
- Power supply (PS1)
- Main Engine Backplane PCA (A4)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Check the power LEDs on A5.
3. Check power LEDs on A1.
4. Check the wire harness between A4 (J8) and A1 (J3).

Links

- Diagnostic page: Click **Subsystems**, and then click **Communication**.
- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Main Engine PCA \(A5\) diagram on page 2266](#)
- Replace A5: [Main Engine PCA \(A5\) on page 703](#)

D4.0703

Description

- Ink Assist PCA (A3) power not good

Primary root causes

- A3
- Power Distribution PCA (A1)
- Power supply (PS1)
- Wire harness between the Aerosol fan (AERO), Dryer fan (FAN5), and the vacuum motor assembly and A3
- Wire harness between A3, A1, and PS1

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Check the power LEDs on A1.
3. Check the power LEDs on A3.
4. Verify that the voltage is 32 Vdc to A3 at the A1 test points.
5. Verify that the voltage is 32 Vdc from the A1 at the A3 test points.
6. Check the wire harness between AERO, FAN5, the vacuum motor assembly, and A3.
7. Check the wire harness between A3, A1, and PS1.

Links

- Diagnostic page: Click **Subsystems**, and then click **Communication**.
- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Ink Assist PCA \(A3\) diagram on page 2264](#)
- Replace A3: [Ink Assist PCA \(A3\) on page 611](#)

D4.0704

Description

- Communication problem between the Main Engine PCA (A5) and the Ink Assist PCA (A3)

Primary root causes

- Wire harness between A3 and A5
- A3
- A5
- Main Engine Backplane PCA (A4)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. On A3, check the firmware heartbeat LED (Yellow) to A5.
3. Open the Communication diagnostic page, and then run the A3 communication test.
4. Reseat A5.
5. Check the wire harness between A3 and A5.

Links

- Diagnostic page: Click **Subsystems**, and then click **Communication**.
- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Main Engine PCA \(A5\) diagram on page 2266](#)
- Replace A3: [Ink Assist PCA \(A3\) on page 611](#)

D4.0705

Description

- Motion PCA (A2) power not good

Primary root causes

- Possible pinched wiring on the output voltage from the Motion PCA (A2) to a subsystem
- Wire harness between A2 and the Main Engine Backplane PCA (A4)
- Wire harness between A4 (J16) and A2 (J11)
- Wire harness between the Power Distribution PCA (A1) and A2
- A2
- A1
- Power supply (PS1)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Check and reseat the wire harness between A4 (J16) and A2 (J11).
3. Check the power good and 32 Vdc LED on A2.
4. Check the 3.3, 5, and 32 Vdc test points on A2.

The 32 Vdc is supplied to the Motion PCA (A2), and then A2 generates the 3.3 Vdc and the 5 Vdc. Any cable harness connecting to A2 that has a pinched or shorted wire can bring down these DC supplies. The easiest way to troubleshoot this problem is to disconnect the cables leading from A2 one at a time. Start with J2, continue through J10, and then J13, J14, and J15. Recycle the power as you remove each connector and look at the LEDs to determine which harness is shorted and bringing down the DC supply.

5. Check the 32 Vdc test point on A1.
6. Check the 24, 32, and 52 Vdc LEDs on A1.
7. Check for 32 Vdc at J3 on A1.
8. Check for pinched or broken wires using the Motion PCA (A2) wiring connector diagram ([Motion PCA \(A2\) diagram on page 2268](#)). To isolate and test each wire:
 - a. Turn off the MFP
 - b. Disconnect the wire at the Motion PCA (A2) connector
 - c. Turn on the MFP and see if the same error code is still displayed
 - d. Repeat steps 1-3 for each wire until the faulty wire is identified

Links

- Fault tree: [D4.0705: Motion PCA \(A2\) power not good on page 1449](#)
- Diagnostic page: Click **Subsystems**, and then click **Communication**.
- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Motion PCA \(A2\) diagram on page 2268](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)

D4.0706

Description

- Communication failure between the Main Engine PCA (A5) and Motion PCA (A2)

Primary root causes

- Wire harness between A2 and the main engine PCA
- A2
- A5
- A4

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. On A2, check the firmware heartbeat LED (Yellow) to A5.
3. Open the Communication diagnostic page, and then run the A2 communication test.
4. Reseat A5.
5. Check the wire harness between A2 and A5.

Links

- Diagnostic page: Click **Subsystems**, and then click **Communication**.
- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Motion PCA \(A2\) diagram on page 2268](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)

D4.0707

Description

- ISS PCA (A8) power not good

Primary root causes

- Wire harness between A8, the Power Distribution PCA (A1), and the Power supply (PS1)
- A8
- A1
- PS1

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Check the power LEDs on A8.
3. Check power LEDs on A1.
4. Verify that the voltage is 24 Vdc at the A1 test points on A8.
5. Verify that the voltage is 24 Vdc at A8 test points on A1.
6. Check the wire harness between A8, A1, and PS1.

Links

- Diagnostic page: Click **Subsystems**, and then click **Communication**.
- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [ISS PCA \(A8\) diagram on page 2250](#)
- Replace A8: [ISS PCA \(A8\) on page 613](#)

D4.0708

Description

- Communication failure between the Main Engine PCA (A5) and the ISS PCA (A8)

Primary root causes

- Wire harness between A8 and A5
- A8
- A5
- Main Engine Backplane PCA (A4)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. On the A8, check the firmware heartbeat LED (Yellow) to A5.
3. Open the Communication diagnostic page, and then run the A8 communication test.
4. Reseat A5.
5. Check the wire harness between A8 and A5.

Links

- Diagnostic page: Click **Subsystems**, and then click **Communication**.
- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [ISS PCA \(A8\) diagram on page 2250](#)
- Replace A5: [Main Engine PCA \(A5\) on page 703](#)
- Replace A8: [ISS PCA \(A8\) on page 613](#)

D4.0711

Description

- EEPROM failure on the Main Engine PCA (A5)

Primary root causes

- A5

Recommended actions

- Replace A5.

Links

- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Main Engine PCA \(A5\) diagram on page 2266](#)
- Replace A5: [Main Engine PCA \(A5\) on page 703](#)

D4.0712

Description

- Generic communications bus failure

Primary root causes

- Any combination of communication bus errors between the Main Engine PCA (A5), Image Processing PCA (A6), the carriage PCAs, Motion PCA (A2), or the Ink Assist PCA (A3)

Recommended actions

- Power cycle the MFP and a more specific event code should be declared. Follow the troubleshooting information for the displayed event code.

D4.0713

Description

- Communication bus failure between the Main Engine PCA (A5), the Image Processing PCA (A6), and the Pen Pocket 1 PCA (A16) or the Carriage 1 Encoder PCA (A9)

Primary root causes

- Wire harness between the A5, the A6, and A16 or A9
- Carriage 1 e-chain
- A5
- A6
- A16
- A9
- Main Engine Backplane PCA (A4)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. On A6, check the firmware heartbeat LED (Yellow) to main engine PCA.
3. Open the Communication diagnostic page, and then run the A6 communication test.
4. Reseat A5.
5. Check the wire harness between A5, A6, A16 and A9.
6. Check the Pen Pocket 1 wire connectors.

Links

- Diagnostic page: Click **Subsystems**, and then click **Communication**.
- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Image Processing PCA \(A6\) diagram on page 2264](#)
- Replace A6: [Image Processing PCA assembly on page 577](#)
- Replace A16: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)

D4.0714

Description

- Communication bus problem between the Pen Pocket 1 PCA (A16) or the Carriage 1 Encoder PCA (A9) to the Carriage 1 PPS PCA (A25)

Primary root causes

- Wire harness between the A16, A9, and A25
- A16
- A9
- A25

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Open the Communication diagnostic page, and then run the Pen to Pocket communication test.
3. Check the wire harness between A16 or A9 and A25.
4. Replace A16.
5. Replace or swap A9.
6. Replace or swap A25.

Links

- Diagnostic page: Click **Subsystems**, and then click **Communication**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace A16: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)
- Replace A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace A25: [Carriage PPS PCAs \(A25 and A34\) on page 572](#)

D4.0715

Description

- Communication bus problem between the Main Engine PCA (A5), the Image Processing PCA (A6), and the Pen Pocket 4 PCA (A19) or the Carriage 2 Encoder PCA (A24)

Primary root causes

- Wire harness between A5, A6, A19 or A24
- Carriage 2 e-chain
- A5
- A6
- A19
- A24
- Main Engine Backplane PCA (A4)

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. On the A6, check the firmware heartbeat LED (Yellow) to A5.
3. Open the Communication diagnostic page, and then run the A6 communication test.
4. Reseat A5.
5. Check the wire harness between A5, A6, A19, and A24.
6. Check the Pen Pocket 4 wire connectors.

Links

- Diagnostic page: Click **Subsystems**, and then click **Communication**.
- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Image Processing PCA \(A6\) diagram on page 2264](#)
- Replace A6: [Image Processing PCA assembly on page 577](#)

D4.0716

Description

- Communication bus problem between the Pen Pocket 4 PCA (A19) or the Carriage 2 Encoder PCA (A24) to the Carriage 2 PPS assembly

Primary root causes

- Wire harness between A19 or A24 and the Carriage 2 PPS assembly
- A19
- A24
- Carriage 2 PPS assembly

Recommended actions

1. If you have not done so already, power cycle the MFP in Protected Service mode (PSM).
2. Open the Communication diagnostic page, and then run the Pen to Pocket communication test.
3. Check the wire harness between A19, A24, and the Carriage 2 PPS assembly.
4. Replace A19.
5. Replace or swap A24.
6. Replace or swap the Carriage 2 PPS PCA (A34).

Links

- Diagnostic page: Click **Subsystems**, and then click **Communication**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace A19: [Carriage PCAs on page 568](#)
- Replace A24: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace A34: [Carriage PPS PCAs \(A25 and A34\) on page 572](#)

D4.0717

Description

- AC power loss detected

Primary root causes

- Power cord
- AC voltage low or missing at the wall outlet

Recommended actions

1. Verify that the power cord is plugged in.
2. Replace the power cord.
3. Contact an electrician.

D4.07C1

Description

- Main Engine PCA (A5) local RAM memory integrity failure

Primary root causes

- A5

Recommended actions

1. Verify that the power LEDs on the Power Distribution PCA (A1) are lit.
2. Verify that the power LEDs on A5 are lit.
3. Check A5 LED and refer to the LED sequencer table.
4. Reseat A5.
5. Check the wire harness between A1, the Power supply (PS1), and the Main Engine Backplane PCA (A4).
6. Replace A5.

Links

- Diagnostic page: Click **Subsystems**, and then click **Communication**.
- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Main Engine PCA \(A5\) diagram on page 2266](#)
- Replace A5: [Main Engine PCA \(A5\) on page 703](#)

D4.07C2

Description

- Main Engine PCA (A5) ASIC communication failure

Primary root causes

- A5

Recommended actions

1. Verify that the power LEDs on the Power Distribution PCA (A1) are lit.
2. Verify that the power LEDs on A5 are lit.
3. Check A5 LED and refer to the LED sequencer table.
4. Reseat A5.
5. Replace A5.

Links

- Diagnostic page: Click **Subsystems**, and then click **Communication**.
- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Main Engine PCA \(A5\) diagram on page 2266](#)
- Replace A5: [Main Engine PCA \(A5\) on page 703](#)

D4.09A1

Description

- Electronics Bay Cooling fan (FAN4) stall

Primary root causes

- FAN4
- Ink Assist PCA (A3)
- Power Distribution PCA (A1)
- Power supply (PS1)

Recommended actions

1. Check the power LED on A1.
2. Check the power LED on A3.
3. Check the wire harness between A3 and A1.

Links

- Diagnostic page: Click **Subsystems**, and then click **Communication**.
- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Power Distribution PCA \(A1\) diagram on page 2271](#)
- Replace FAN4: [Electronics Bay Cooling fan \(FAN4\) on page 707](#)

D4.09A2

Description

- Main Engine PCA Cooling fan (FAN2) stall

Primary root causes

- Wire harness between FAN2 and the Main Engine Backplane PCA (A4)
- FAN2
- A4

Recommended actions

1. Verify that the power LEDs on the Power Distribution PCA (A1) are lit.
2. Check the wire harness between FAN2 and A4.
3. Replace FAN2.
4. Replace A4.

Links

- Component locator: [Electronics component locator on page 2327](#)
- Wiring diagram: [Main Engine PCA \(A5\) diagram on page 2266](#)
- Replace FAN2: [Main Engine PCA Cooling fan \(FAN2\) on page 713](#)
- Replace A4: [Main Engine Backplane PCA \(A4\) on page 708](#)

D5.1000

Description

- Database corruption error

Primary root causes

- All data in the database was lost due to corruption

Recommended actions

- The database is automatically deleted and regenerated to an empty state. All previous data is lost. Database backups are created after each power cycle. You can use the embedded Web server (EWS) to restore the database with this data. Any settings configured since the last power cycle will have to be redone. Have the system administrator restore the database. Refer to the system administrator guide for help.

D5.1001

Description

- Database schema version mismatch error

Primary root causes

- All data in the database was lost due to a schema version mismatch

Recommended actions

- The database is automatically deleted and regenerated to an empty state. All previous data is lost. Database backups are created after each power cycle. You can use the embedded Web server (EWS) to restore the database with this data. Any settings configured since the last power cycle will have to be redone. Have the system administrator restore the database. Refer to the system administrator guide for help.

D5.1002

Description

- General send-to e-mail error

Primary root causes

- A general error occurred while trying to deliver an e-mail

Recommended actions

1. Resend the e-mail.
2. Power cycle the MFP.
3. Switch to another SMTP server.
4. If the error persists, turn on e-mail job notification so that detailed error logging information will be included in the body of the error notification e-mail. Resend the e-mail, and then use the error logging information to diagnose the problem.

D5.1003

Description

- SMTP server unavailable

Primary root causes

- The SMTP server used for e-mail jobs is currently unavailable

Recommended actions

1. Power cycle the MFP.
2. Open the EWS, select the **Send to Email** page, and then click **Test SMTP**. Verify that the SMTP server responds.
3. Check the MFP network connection.
4. Try using another SMTP server.

D5.1004

Description

- SMTP protocol error

This error is often preceded by error D5.1003 - **SMTP server unavailable** in the event log which can be the true root cause.

Primary root causes

- An SMTP protocol error was encountered while trying to deliver an e-mail

Recommended actions

1. Resend the e-mail.
2. Power cycle the MFP.
3. Switch to another SMTP server.
4. If the error persists, turn on e-mail job notification so that detailed error logging information will be included in the body of the error notification e-mail. Resend the e-mail, and then use the error logging information to diagnose the problem.

D5.1005

Description

- SMTP communication error

Primary root causes

- An SMTP communication error was encountered while trying to deliver an e-mail

Recommended actions

1. Resend the e-mail.
2. Power cycle the MFP.
3. Switch to another SMTP server.
4. If the error persists, turn on e-mail job notification so that detailed error logging information will be included in the body of the error notification e-mail. Resend the e-mail, and then use the error logging information to diagnose the problem.

D5.1006

Description

- SMTP authentication error

Primary root causes

- An error occurred authenticating a user to the configured SMTP server. This error only occurs on the back end.

Recommended actions

1. Open the EWS, select the **Send to Email** page, and then click **Test SMTP**. Verify that the SMTP server responds.
2. Verify that the user has access rights to the SMTP server that is being used.
3. If the error persists, turn on e-mail job notification so that detailed error logging information will be included in the body of the error notification e-mail. Resend the e-mail, and then use the error logging information to diagnose the problem.

D5.1007

Description

- General send to digital fax error

Primary root causes

- A general error occurred while trying to deliver a digital fax

Recommended actions

1. Resend the e-mail.
2. Power cycle the MFP.
3. If the error persists, turn on e-mail job notification so that detailed error logging information will be included in the body of the error notification e-mail. Resend the e-mail, and then use the error logging information to diagnose the problem.

D5.1008

Description

- Fax server access failure

Primary root causes

- A general error occurred while trying to deliver a digital fax

Recommended actions

1. Verify that the LAN Fax server is functioning correctly.
2. Open the embedded Web server (EWS), select the **Digital Sending - Send To LAN Fax** page, and then click **Verify Folder Access**. Verify that the LAN Fax server folder path, the authentication method, and credentials are set correctly.
3. Verify that the authentication method being used is supported by the LAN Fax server.
4. Check the MFP network connection.
5. Resend the fax.

D5.1009

Description

- LAN Fax configuration error

Primary root causes

- Cannot deliver a LAN Fax job due to a configuration error

Recommended actions

1. Open the embedded Web server (EWS), select the **Digital Sending - Send To LAN Fax** page, and then click **Verify Folder Access**. Verify that the LAN Fax server folder path, the authentication method and credentials are set correctly.
2. Verify that the authentication method being used is supported by the LAN Fax server.
3. Check the MFP network connection.
4. Resend the fax.
5. If the error persists, turn on e-mail job notification so that detailed error logging information will be included in the body of the error notification e-mail. Resend the e-mail, and then use the error logging information to diagnose the problem.

D5.1010

Description

- Internet fax configuration error

Primary root causes

- Cannot deliver an Internet fax due to a configuration error

Recommended actions

1. Verify that the fax provider domain and the default fax account e-mail address are set correctly.
2. Check the MFP network connection.
3. Resend the fax.
4. If the error persists, turn on e-mail job notification so that detailed error logging information will be included in the body of the error notification e-mail. Resend the e-mail, and then use the error logging information to diagnose the problem.

D5.1011

Description

- Searchable PDF file type error

Primary root causes

- An error occurred while trying to generate a searchable PDF file type

Recommended actions

1. Resend the fax.
2. Power cycle the MFP.
3. If the error persists, turn on e-mail job notification so that detailed error logging information will be included in the body of the error notification e-mail. Resend the e-mail, and then use the error logging information to diagnose the problem.

D5.1012

Description

- RTF file type error

Primary root causes

- An error occurred while trying to generate a RTF file type

Recommended actions

1. Resend the fax.
2. Power cycle the MFP.
3. If the error persists, turn on e-mail job notification so that detailed error logging information will be included in the body of the error notification e-mail. Resend the e-mail, and then use the error logging information to diagnose the problem.

D5.1013

Description

- Text file type error

Primary root causes

- An error occurred while trying to generate a text file type

Recommended actions

1. Resend the fax.
2. Power cycle the MFP.
3. If the error persists, turn on e-mail job notification so that detailed error logging information will be included in the body of the error notification e-mail. Resend the e-mail, and then use the error logging information to diagnose the problem.

D5.1014

Description

- CSV file type error

Primary root causes

- An error occurred while trying to generate a CSV file type

Recommended actions

1. Resend the fax.
2. Power cycle the MFP.
3. If the error persists, turn on e-mail job notification so that detailed error logging information will be included in the body of the error notification e-mail. Resend the e-mail, and then use the error logging information to diagnose the problem.

D5.1015

Description

- HTML file type error

Primary root causes

- An error occurred while trying to generate an HTML file type

Recommended actions

1. Resend the fax.
2. Power cycle the MFP.
3. If the error persists, turn on e-mail job notification so that detailed error logging information will be included in the body of the error notification e-mail. Resend the e-mail, and then use the error logging information to diagnose the problem.

D5.1016

Description

- XML file type error

Primary root causes

- An error occurred while trying to generate a XML file type

Recommended actions

1. Resend the fax.
2. Power cycle the MFP.
3. If the error persists, turn on e-mail job notification so that detailed error logging information will be included in the body of the error notification e-mail. Resend the e-mail, and then use the error logging information to diagnose the problem.

D5.1017

Description

- General address book services error

Primary root causes

- A general failure occurred in the address book services component

Recommended actions

- Power cycle the MFP.

D5.1018

Description

- Address book invalid argument error

Primary root causes

- An invalid argument was passed to the address book services component

Recommended actions

- Power cycle the MFP.

D5.1019

Description

- Address book invalid operation error

Primary root causes

- An invalid operation occurred during execution of an address book services command

Recommended actions

- Power cycle the MFP.

D5.1020

Description

- Address book duplicate entry error

This error is often preceded by error D5.1058 - **LDAP AB timeout-Server Reply Delayed** in the event log which can be the true root cause.

Primary root causes

- An attempt was made to add an entry that already exists in an address book during an address book import

Recommended actions

- Ask the system administrator to review the CSV file for duplicates or to import the address book. Verify that the records being imported contain valid data. See the system administrator guide for help.

D5.1021

Description

- Address book invalid data error

Primary root causes

- An attempt was made to add an entry that contained invalid data during an address book import

Recommended actions

- Ask the system administrator to review the CSV file for duplicates or to import the address book. Verify that the records being imported contain valid data. See the system administrator guide for help.

D5.1022

Description

- Database out of memory error

Primary root causes

- The database detected an out of memory condition during execution of an address book command

Recommended actions

- Power cycle the MFP.

D5.1023

Description

- Database disk full error

Primary root causes

- The database detected a disk full condition during execution of an address book command

Recommended actions

- Power cycle the MFP.

D5.1024

Description

- Database insufficient resources error

Primary root causes

- The database has insufficient resources to complete the execution of an address book command

Recommended actions

- Power cycle the MFP.

D5.1025

Description

- Successful address book import

Primary root causes

- This indicates a successful import of all the records

Recommended actions

- N/A

D5.1026

Description

- Failed or partial address book import

Primary root causes

- At least one record entry failed during the address book import process

Recommended actions

1. Verify that the records being imported contain valid data. See the system administrator guide for help.
2. Power cycle the MFP.

D5.1029

Description

- Local address book cleared successfully

Primary root causes

- The entire local address book was successfully cleared

Recommended actions

- N/A

D5.1030

Description

- Clear local address book not completed

Primary root causes

- An error was encountered while clearing the local address book. The address book might not be cleared.

Recommended actions

- Power cycle the MFP.

D5.1031

Description

- Successful speed dial import

Primary root causes

- This code indicates a successful import of all the records

Recommended actions

- N/A

D5.1032

Description

- Failed or partial speed dial import

Primary root causes

- At least one record entry failed during the address book import process

Recommended actions

1. Verify that the records being imported contain valid data. See the system administrator guide for help.
2. Power cycle the MFP.

D5.1035

Description

- Speed dials cleared successfully

Primary root causes

- This code indicates the entire speed dial address book was successfully cleared

Recommended actions

- N/A

D5.1036

Description

- Clear speed dials not completed

Primary root causes

- An error was encountered while clearing the speed dial address book. The address book might not be cleared at this point.

Recommended actions

- Power cycle the MFP.

D5.1037

Description

- Digital Send component is unavailable

Primary root causes

- A Digital Send job could not be delivered because the Digital Send Service component was unavailable

Recommended actions

- Power cycle the MFP.

D5.1038

Description

- Job ticket file operation error

Primary root causes

- A Digital Send job could not be delivered due to a job ticket file operation error

Recommended actions

- Power cycle the MFP.

D5.1039

Description

- Digital Send image processing error

Primary root causes

- A Digital Send job could not be delivered due to an image processing error

Recommended actions

1. Check the Event Log for an imaging-electronics error or warning code. Follow the troubleshooting procedures for the code.
2. Resend the job.
3. Power cycle the MFP.

D5.1040

Description

- Digital Send scanner error

Primary root causes

- A Digital Send job could not be delivered due to a scanner failure

Recommended actions

1. Check the Event Log for a scanner-related error or warning code. Follow the troubleshooting procedures for the code.
2. Power cycle the MFP.

D5.1045

Description

- Unexpected LDAP/Address Book error

This error is often preceded by error D5.1058 - **LDAP AB timeout-Server Reply Delayed** in the event log which can be the true root cause.

Primary root causes

- Unexpected LDAP for Address Book error; no resolution recommendation available

Recommended actions

- Check the configuration of the LDAP Address Book.

D5.1046

Description

- LDAP server not found/invalid address (AB)

Primary root causes

- The LDAP server DNS name or IP address is unreachable. The server is possibly down or off the network.
- The passed DNS name or IP address was invalid.
- The passed port is not enabled for LDAP or a SecureChannel was requested with a port that is not enabled for SSL or TLS.

Recommended actions

1. Check that the configured LDAP server's DNS name or IP address is, respectively, resolveable or reachable.
2. Check to see if the server is down or off the network.
3. Check to see if the configured port is enabled for LDAP or a SecureChannel was requested against a port that is not configured to host a SecureChannel connection.

D5.1047

Description

- Invalid sign-in attempt - LDAP server (Address Book)

Primary root causes

- The credentials passed to correspond with the passed non-anonymous authentication (bind) method were invalid (bad user name and/or password)

Recommended actions

- Check to see that the credentials entered are valid for the configured bind (authentication) method.

This error often occurs after a password change for the credentials being used to access the share folder. If the password has changed, use EWS or Web Jetadmin to enter the new password.

D5.1048

Description

- Invalid LDAP search root-null return

Primary root causes

- The LDAP search root is empty or invalid.

Recommended actions

- Check to see that a correct search root was configured.

D5.1049

Description

- Invalid sign-in method for LDAP server

Primary root causes

- The passed authentication (bind) method is not supported by the LDAP server. Select an authentication mechanism supported by the LDAP server.

Recommended actions

- Check to see if the configured bind (authentication) method is supported by the configured LDAP server.

D5.1050

Description

- LDAP/Address Book client timeout

Primary root causes

- The lookup response from the passed LDAP server is detected as slow. This can be the result of a passed search root that is not qualified causing the searches to be conducted over an unnecessarily large portion of the directory.
- There are latencies in the network, the LDAP server is slow, or the server may be over utilized.

Recommended actions

1. Check to see if the search root is fully qualified.
2. Check for network congestion issues and whether the LDAP server is over utilized.

D5.1051

Description

- LDAP server refused operation

Primary root causes

- The LDAP server is refusing to service the request for reasons unknown and usually specific to the LDAP servers' implementer (make)

Recommended actions

- Check to see if the LDAP server is overly utilized.

D5.1058

Description

- LDAP Address Book timed out; server reply is taking too long

Primary root causes

- An unqualified, short, search root is resulting in resource intensive internal LDAP server searches, the LDAP server attribute configured by the LDAP AB client for pattern match is not optimized for “begins with” or “contains in” type searching, the capacity of network or LDAP server is compromised, LDAP server is unavailable or servers' response time is seriously degraded.

Recommended actions

- Better qualify a more specific search root, configure on LDAP server attribute used for pattern match to be indexed and therefore optimized for “begins with” or “contains in” type of searching, or increase the capacity of the network or LDAP server.

D5.1059

Description

- LDAP AB unable to connect with external LDAP server

Primary root causes

- The network configuration of the MFP is invalid or the network is down.
- The MFP is disconnected from the network
- The LDAP server is unavailable or the server response time is degraded

Recommended actions

- Check the MFP network configuration, and the network or LDAP availability and response time.

D5.1060

Description

- Primary DNS server not responding

Primary root causes

- The network configuration of the MFP is invalid or the network is down.
- The MFP is disconnected from the network

Recommended actions

- Have network service technician check the configuration, the status of the network, and the MFP network connection.

D5.3801

Description

- Service or application failure

Primary root causes

- Conflict with a third-party device

Recommended actions

- Power cycle the MFP.

D5.3802

Description

- Out of memory exception. MFP does not power up.

Primary root causes

- Windows does not allocate enough memory

Recommended actions

- Power cycle the MFP.

D5.3803

Description

- Null reference exception

Primary root causes

- Possible conflict with a third-party device

Recommended actions

- Power cycle the MFP.

D5.3804

Description

- Stack overflow exception

Primary root causes

- Conflict with a third-party device

Recommended actions

- Back up the customer and service data, delete the database directory, and then power cycle the MFP.

D5.3805

Description

- SW bus exception

Primary root causes

- Firmware issue

Recommended actions

- Power cycle the MFP.

D5.3806

Description

- Fatal error when loading dll files

Primary root causes

- Firmware issue

Recommended actions

- Power cycle the MFP.

D5.3807

Description

- An unhandled exception other than a thread abort

Primary root causes

- Conflict with a third-party device

Recommended actions

- Power cycle the MFP.

D5.3808

Description

- Windows OS exception (lost communication)

Primary root causes

- Hardware issue
- Internal networking issues between PCAs
- Firmware connectivity issue

Recommended actions

1. Power cycle the MFP.
2. Refer to the Coprocessor LED troubleshooting in the service manual.

D5.3809

Description

- Cannot get or set up a particular type

Primary root causes

- Control panel firmware and MFP firmware are mismatched

Recommended actions

- Reinstall the MFP firmware.

D5.380A

Description

- Fatal error when loading security component

Primary root causes

- MFP firmware issue

Recommended actions

1. Power cycle the MFP.
2. Back up the customer and service data, delete the database directory, and then power cycle the MFP.

D5.380B

Description

- Application hard disk full

Primary root causes

- Firmware

Recommended actions

- Power cycle the MFP.

D5.380C

Description

- Application failed to create a job

Primary root causes

- System was in power save mode or was backing up data
- Product is out of resources

Recommended actions

- Wait for any jobs to complete, and then power cycle the MFP.

D5.380D

Description

- Job setting database is full

Primary root causes

- The database is full

Recommended actions

- Delete the local address book. See the administrator guide for help.

D5.380E

Description

- Failed to store a settings job because of a database error

Primary root causes

- Firmware

Recommended actions

- Power cycle the MFP.

D5.380F

Description

- Failed to load third-party component

Primary root causes

- Unknown

Recommended actions

- Power cycle the MFP.

D5.3810

Description

- Parking Window crash

Primary root causes

- Operating system race condition

Recommended actions

- Power-cycle the MFP.

DD.0215

Description

- Trays 2, 3, and 4 Controller PCA (A23) failure. (Equivalent to A1.0701)

Primary root causes

- See the information in the Service Manual for A1.0701

Recommended actions

- See the information in the Service Manual for A1.0701.

DD.0237

Description

- Tray 2, 3, and 4 temperature/humidity sensor error. (Equivalent to A1.0201.)

Primary root causes

- SN41/42 trays 2, 3, and 4 controller PCA (A23)
- Wire harness between SN41/42 and A23
- Wire harness between A23 and Power distribution PCA (A1) PCA A1

Recommended actions

1. Open the Trays 2, 3, 4 diagnostic page, and check the SN41 and SN42 reading.
2. Check the resistance at SN41/42.
3. Check the wire harness between A23 and A1.
4. Verify that the input voltage LEDs on A23 are lit.
5. Test the input voltage to A23: 5 Vdc at J1 pins 3 to 2 (GND).
6. Test the voltage to A23 on A1: 32 Vdc at J8 pins 8 to 5.

DD.0432

Description

- Wrong drum encoder averager count. (Equivalent to C1.0503)

Primary root causes

- See the information in the Service Manual for error code C1.0503

Recommended actions

- See the information in the Service Manual for error code C1.0503

DD.051D

Description

- Eject finger mechanism failed to home minimum distance. (Equivalent to B2.01A3)

Primary root causes

- Assembly d-shaft nudge media eject assembly in the eject motor is slipping on its shaft

Recommended actions

1. Replace the assy-d-shaft nudge media eject assembly.
2. Retighten screws on the media eject mechanism, particularly the screw on the media eject drive arm. Check that the threads are not stripped.
3. Inspect alignment of the draglink pivot link and draglink follower arms.
4. Check for excessive wear or dirt on the three bronze bushing in the eject mechanism. Clean and lubricate as needed.
5. Use CDFT to verify media eject motor and encoder operation.

Additional root causes

- Loose screws on the media eject mechanism, particularly the screw on the media eject drive arm
- Misalignment or excessive friction between draglink pivotlink and draglink follower arm
- Mechanical interference of the eject mechanism and other parts in the IDO
- Media eject motor

DD.0710

Description

- Tray 5 pick clutch (CL101) failed. (Equivalent to A2.04A1)

Primary root causes

- See the information in the Service Manual for A2.04A1

Recommended actions

- See the information in the Service Manual for A2.04A1

DD.0802

Description

- Dryer heater problem. (Equivalent to C2.0C01)

Primary root causes

- See the information in the Service Manual for C2.0C01

Recommended actions

- See the information in the Service Manual for C2.0C01

DD.0804

Description

- Dryer temperature sensor (SN36) problem. (Equivalent to C2.0201)

Primary root causes

- See the information in the Service Manual for C2.0201

Recommended actions

- See the information in the Service Manual for C2.0201

DD.0926

Description

- Vacuum motors were shut down for protection because a watchdog timer on the Ink Assist PCA, A3, tripped after a 15-second signal loss. (Equivalent to C0.0108)

Primary root causes

- See the information in the Service Manual for C0.0108

Recommended actions

- See the information in the Service Manual for C0.0108

DD.4D07

Description

- Carriage 1 motor (M1) stall

Primary root causes

- Carriage 1 encoder strip
- Wire harness between M1 and the Motion PCA (A2)
- M1
- A2
- Carriage 1 Encoder PCA (A9)
- Pen Pocket 1 PCA (A16)
- Carriage shipping bracket
- Carriage index sensors

Recommended actions

1. Verify that the carriage shipping bracket is correctly secured and not obstructing the movement of the carriage.
2. Check the wire harness between M1 and A2.
3. Repair or replace the wire harness between M1 and A2.
4. Check electrical connections on A2 at J15. If you measure the voltage between the two motor connectors, the measurement will be 0 Vdc. If you measure the voltage between one motor connector and the MFP frame, the voltage will be 32 Vdc.
5. Replace M1.
6. Replace A2.
7. Replace A16/A9.
8. Replace the Carriage 1 encoder strip.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage Mechanism**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace M1: [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\) on page 552](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)

- Replace A16/A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 1 encoder strip: [Carriage encoder strip on page 535](#)

DD.4D08

Description

- Carriage 2 motor (M2) stall

Primary root causes

- Carriage 2 encoder strip
- Wire harness between M2 and the Motion PCA (A2)
- M2
- A2
- Carriage 2 Encoder PCA (A24)
- Pen Pocket 4 PCA (A19)
- Carriage shipping bracket
- Carriage index sensors

Recommended actions

1. Verify that the carriage shipping bracket is correctly secured and not obstructing the movement of the carriage.
2. Check the wire harness between M2 and A2.
3. Repair or replace the wire harness between M2 and A2.
4. Check electrical connections on A2 at J15. If you measure the voltage between the two motor connectors, the measurement will be 0 Vdc. If you measure the voltage between one motor connector and the MFP frame, the voltage will be 32 Vdc.
5. Replace M2.
6. Replace A2.
7. Replace A19/A24.
8. Replace the Carriage 2 encoder strip.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage Mechanism**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace M2: [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\) on page 552](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)

- Replace A19/A24: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 2 encoder strip: [Carriage encoder strip on page 535](#)

DD.FFFF

Description

- The formatter does not see the engine memory through the PCI bridge

Primary root causes

- Gigablaze data cable between A6 and A5
- Wire harness between A6 and main engine backplane PCA (A4)
- Bad image processing PCA (A6)
- Bad main engine PCA (A5)
- Engine backplane PCA (A4)

Recommended actions

1. Check and reseal connection of gigablaze data cable between A6 and A5.
2. Check and reseal connection of wire harness between A6 and main engine backplane PCA (A4).

DD.YYZZ

Description

- Unmapped error code

Primary root causes

- This could be a firmware- or a hardware-related issue

Recommended actions

1. If you have not already done so, power cycle the MFP.
2. Check the support site for service bulletins.
3. Escalate the issue through your normal escalation processes.

E2.5094

Description

- The engine firmware error E2.5094 may be reported when an ink cartridge problem prevents the cartridge from pressurizing or depressurizing within a predetermined time period. This has been recognized as defective behavior because a firmware error is generated instead of a specific error code indicating which ink cartridge is malfunctioning.

Primary root causes

- Currently unknown

Recommended actions

1. If the error is persistent, such as being present after a reboot, follow these steps to attempt to isolate the faulty ink cartridge:
 - a. Remove all ink cartridges.
 - b. Reboot the system.
 - c. On the control panel, access the **Supply Status** page.
 - d. Insert the black ink cartridge and close the IDS door. If the status of the cartridge appears on the **Supply Status** page, the cartridge is good.
 - e. Open the IDS door and repeat step **d** for the remaining ink cartridges until the defective cartridge is identified. Any good cartridges can remain in the unit while inserting the next cartridge. If an error occurs, the cartridge is defective.
 - f. Remove the defective cartridge, and then return it using the normal warranty replacement process.
 - g. Install a new cartridge.
 - h. Repeat step **d** until all ink cartridges are verified.
2. If the error is intermittent, such as after a reboot the error disappears for some time but then reappears later, or a defective cartridge could not be identified, replace the entire set of ink cartridges. Return all ink cartridges by using the normal warranty process.
3. If the error is still present after following steps 1 and 2, escalate the problem using the normal escalation process.

E3.0BF2

Description

- Defective printhead

This error is the result of a defective printhead, detected during boot-up, but reported as an engine firmware fault.

Primary root causes

- Printheads

Recommended actions

1. Order a set of 3 printheads and use them to isolate the faulty printhead.
2. Change out the printheads one at a time, rebooting between exchanges until the MFP can be rebooted without resulting in this error code. Note that there could be more than one defective printhead.
3. When the defective printhead has been identified, return the printhead using the part return process.

E3.7459

Description

- The engine firmware error E3.7459 may be reported when an ink cartridge problem prevents the cartridge from pressurizing or depressurizing within a predetermined time period. This has been recognized as defective behavior because a firmware error is generated instead of a specific error code indicating which ink cartridge is malfunctioning.

Primary root causes

- Currently unknown

Recommended actions

1. If the error is persistent, such as being present after a reboot, follow these steps to attempt to isolate the faulty ink cartridge:
 - a. Remove all ink cartridges.
 - b. Reboot the system.
 - c. On the control panel, access the **Supply Status** page.
 - d. Insert the black ink cartridge and close the IDS door. If the status of the cartridge appears on the **Supply Status** page, the cartridge is good.
 - e. Open the IDS door and repeat step **d** for the remaining ink cartridges until the defective cartridge is identified. Any good cartridges can remain in the unit while inserting the next cartridge. If an error occurs, the cartridge is defective.
 - f. Remove the defective cartridge, and then return it using the normal warranty replacement process.
 - g. Install a new cartridge.
 - h. Repeat step **d** until all ink cartridges are verified.
2. If the error is intermittent, such as after a reboot the error disappears for some time but then reappears later, or a defective cartridge could not be identified, replace the entire set of ink cartridges. Return all ink cartridges by using the normal warranty process.
3. If the error is still present after following steps 1 and 2, escalate the problem using the normal escalation process.

E3.7481

Description

- Dryer heater problem. (Equivalent to C2.0C01)

Primary root causes

- See the information in the Service Manual for C2.0C01

Recommended actions

- See the information in the Service Manual for C2.0C01

Ex.yyzz

Description

- Firmware fault

Primary root causes

- This is a problem in the system firmware
- This is not a hardware related issue, do not attempt to replace parts to resolve this problem

Recommended actions

1. If you have not already done so, power cycle the MFP.
2. Check the support site for service bulletins.
3. If you can recreate the problem, put the details in your call closure comments.

F1.0101

Description

- Carriage 1 stall servo error (type1). It indicates that the carriage was in the process of moving but was stopped before it could reach the final target encoder position.

Primary root causes

- Carriage obstruction
- Carriage shipping bracket
- Aerosol hose and snorkel
- Carriage 1 encoder strip
- Carriage 1 motor (M1)
- Motion PCA (A2)
- Wire harness between M1 and A2
- Carriage 1 Encoder PCA (A9)
- Pen Pocket 1 PCA (A16)

Recommended actions

1. Open the MFP front doors and look for any obstructions that might interfere with carriage 1 movement. The position of the carriage when the stalled occurred is the location of the problem area.
2. Verify that the carriage shipping bracket is correctly secured and not obstructing the movement of the carriage.
3. Reboot the MFP and look for other carriage stall errors. The reboot process (activation) will test all the carriage position movements and can report more specific errors if any problems occur.
4. Reboot into Protected Service mode (PSM) for troubleshooting. Carriage stalls that occur in PSM will not require a reboot.
5. Enter CDFT and open the carriage tool page. Close the front doors and test the carriage motor using the M1 Carriage 1 button. In PSM mode, the carriages will first try to perform a carriage activation before moving the carriage to the front wall. Any carriage stalls that occur can be tested repeatedly without an MFP reboot.
6. Open the front doors and move the carriage by hand to the front wall of the carriage structure. The carriage encoder should read approximately 15333 ± 10 at the front wall. This reading can only be made after the carriages complete activation. Run the "Reset carriage encoder" calibration process if needed.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)

- Replace M1: [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\) on page 552](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)
- Replace A16/A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 1 encoder strip: [Carriage encoder strip on page 535](#)

F1.0102

Description

- Carriage 1 stall high PWM (type2). It indicates that the carriage could not get up to the target speed or could not even start moving.

Primary root causes

- Carriage obstruction
- Carriage shipping bracket
- Aerosol hose and snorkel
- Carriage 1 encoder strip
- Carriage 1 motor (M1)
- Motion PCA (A2)
- Wire harness between M1 and A2
- Carriage 1 Encoder PCA (A9)
- Pen Pocket 1 PCA (A16)

Recommended actions

1. Open the MFP front doors and look for any obstructions that might interfere with carriage 1 movement. The position of the carriage when the stalled occurred is the location of the problem area.
2. Verify that the carriage shipping bracket is correctly secured and not obstructing the movement of the carriage.
3. Reboot the MFP and look for other carriage stall errors. The reboot process (activation) will test all the carriage position movements and can report more specific errors if any problems occur.
4. Enter CDFT and open the carriage tool page. Close the front door and test the carriage motor using the M1 Carriage 1 button.
5. Open the front door and move the carriage by hand to the front wall of the carriage structure. The carriage encoder should read approximately 15333 +/- 10 at the front wall. Run the "Reset carriage encoder" calibration process if needed.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace M1: [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\) on page 552](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)

- Replace A16/A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 1 encoder strip: [Carriage encoder strip on page 535](#)

F1.0103

Description

- Carriage 1 stall motor time out (type3). It indicates a servo error that occurred when attempting to stop the carriage. The move could not be completed before the time out occurred.

Primary root causes

- High carriage friction
- Carriage magnets
- Carriage felts
- Carriage 1 motor (M1)

Recommended actions

1. Run the Carriage stopping accuracy calibration.
2. Replace the carriage magnets.
3. Replace the carriage felts.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace M1: [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\) on page 552](#)

F1.01A1

Description

- Carriage 1 stall servo error (type1). It indicates that the carriage was in the process of moving but was stopped before it could reach the final target encoder position.

Primary root causes

- Carriage obstruction
- Carriage shipping bracket
- Aerosol hose and snorkel
- Carriage 1 encoder strip
- Carriage 1 motor (M1)
- Motion PCA (A2)
- Wire harness between M1 and A2
- Carriage 1 Encoder PCA (A9)
- Pen Pocket 1 PCA (A16)

Recommended actions

1. Open the MFP front doors and look for any obstructions that might interfere with carriage 1 movement. The position of the carriage when the stalled occurred is the location of the problem area.
2. Verify that the carriage shipping bracket is correctly secured and not obstructing the movement of the carriage.
3. Reboot the MFP and look for other carriage stall errors. The reboot process (activation) will test all the carriage position movements and can report more specific errors if any problems occur.
4. Reboot into Protected Service mode (PSM) for troubleshooting. Carriage stalls that occur in PSM will not require a reboot.
5. Enter CDFT and open the carriage tool page. Close the front doors and test the carriage motor using the M1 Carriage 1 button. In PSM mode, the carriages will first try to perform a carriage activation before moving the carriage to the front wall. Any carriage stalls that occur can be tested repeatedly without an MFP reboot.
6. Open the front doors and move the carriage by hand to the front wall of the carriage structure. The carriage encoder should read approximately 15333 ± 10 at the front wall. This reading can only be made after the carriages complete activation. Run the "Reset carriage encoder" calibration process if needed.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)

- Replace M1: [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\) on page 552](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)
- Replace A16/A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 1 encoder strip: [Carriage encoder strip on page 535](#)

F1.01A2

Description

- Carriage 1 stall high PWM (type2). It indicates that the carriage could not get up to the target speed or could not even start moving.

Primary root causes

- Carriage obstruction
- Carriage shipping bracket
- Aerosol hose and snorkel
- Carriage 1 encoder strip
- Carriage 1 motor (M1)
- Motion PCA (A2)
- Wire harness between M1 and A2
- Carriage 1 Encoder PCA (A9)
- Pen Pocket 1 PCA (A16)

Recommended actions

1. Open the MFP front doors and look for any obstructions that might interfere with carriage 1 movement. The position of the carriage when the stalled occurred is the location of the problem area.
2. Verify that the carriage shipping bracket is correctly secured and not obstructing the movement of the carriage.
3. Reboot the MFP and look for other carriage stall errors. The reboot process (activation) will test all the carriage position movements and can report more specific errors if any problems occur.
4. Enter CDFT and open the carriage tool page. Close the front door and test the carriage motor using the M1 Carriage 1 button.
5. Open the front door and move the carriage by hand to the front wall of the carriage structure. The carriage encoder should read approximately 15333 +/- 10 at the front wall. Run the "Reset carriage encoder" calibration process if needed.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace M1: [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\) on page 552](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)

- Replace A16/A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 1 encoder strip: [Carriage encoder strip on page 535](#)

F1.01A3

Description

- Carriage 1 stall motor time out (type3). It indicates a servo error that occurred when attempting to stop the carriage. The move could not be completed before the time out occurred.

Primary root causes

- High carriage friction
- Carriage magnets
- Carriage felts
- Carriage 1 motor (M1)

Recommended actions

1. Run the Carriage stopping accuracy calibration.
2. Replace the carriage magnets.
3. Replace the carriage felts.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace M1: [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\) on page 552](#)

F1.01A4

Description

- Carriage 1 PPS 1 motor homing failure

Primary root causes

- Carriage 1 PPS assembly
- Pen Pocket 1 PCA (A16)
- PPS wire harness

Recommended actions

1. Replace the PPS assembly.
2. Replace A16.
3. Replace the PPS wire harness.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace the PPS: [PPS assembly on page 559](#)
- Replace A16: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

F1.01A5

Description

- Carriage 1 PPS 1 motor homing failure

Primary root causes

- Carriage 1 PPS assembly
- Pen Pocket 1 PCA (A16)
- PPS wire harness

Recommended actions

1. Replace the PPS assembly.
2. Replace A16.
3. Replace the PPS wire harness.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace the PPS: [PPS assembly on page 559](#)
- Replace A16: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

F1.0501

Description

- Carriage 1 stall during Activation diagnostic. This error should only occur during the MFP activation process (during reboot, after jam clearance, or when coming out of sleep mode). This is the first carriage move coming out of the pen cap position and is checking for a change in the carriage encoder count.

Primary root causes

- Carriage obstruction
- Carriage shipping bracket
- Carriage 1 encoder strip
- Carriage 1 Encoder PCA (A9)
- Pen Pocket 1 PCA (A16)
- A2
- M1
- Wire harness between M1 and A2

Recommended actions

1. Open the front door and verify that the carriage is not locked in the front shipping position.
2. Look for any obstructions that might interfere with carriage movement.
3. Look for a loose or missing carriage encoder strip.
4. Reboot into PSM mode for troubleshooting.
5. Enter CDFT and open the carriage tool page. Close the front doors and test the carriage motor using the M1 Carriage 1 button. In PSM mode, the carriages will first try to perform a carriage activation before moving the carriage to the front wall. Any carriage stalls that occur can be tested repeatedly without an MFP reboot.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace M1: [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\) on page 552](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)
- Replace A16/A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 1 encoder strip: [Carriage encoder strip on page 535](#)

F1.0502

Description

- Carriage 1 stall encoder signal diagnostic. This error should only occur during the MFP activation process (during reboot, after jam clearance, or when coming out of sleep mode). This is a check of the analog encoder signal quality, looking for weak or missing encoder strip areas.

Primary root causes

- Carriage obstruction
- Carriage 1 encoder strip
- Carriage 1 Encoder PCA (A9)
- Pen Pocket 1 PCA (A16)

Recommended actions

1. Inspect the encoder strip for dirty or worn areas. Clean if needed using a dry lint free cloth.
2. Clean the Encoder PCA encoder sensor. If the encoder strip or Encoder PCA is removed, the "Reset Carriage encoder" calibration must be run.
3. Reboot the MFP and look for other carriage stall errors. The reboot process (activation) will test all the carriage position movements.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A16/A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 1 encoder strip: [Carriage encoder strip on page 535](#)

F1.0503

Description

- Carriage 1 stall no index 1 signal. This error should only occur during the MFP activation process (during reboot, after jam clearance, or coming out of sleep mode). This is a check of the index 1 sensor staging position. The index sensor should be positioned over a blacked out area of the index strip but is not being detected.

Primary root causes

- Carriage obstruction
- Carriage 1 encoder strip
- Carriage 1 Encoder PCA (A9)
- Pen Pocket 1 PCA (A16)
- A2

Recommended actions

1. Check for obstructions near the front wall of the carriage structure. The position of the carriage when the stalled occurred is the location of the problem area.
2. Reboot into Protected Service mode (PSM) for troubleshooting. Carriage stalls that occur in PSM will not require a reboot.
3. Enter CDFT and open the Carriage tool page. Run the carriage 1 motor using the M1 Carriage 1 button. Look for carriage 1 index 1 count changes. In PSM mode, the carriages will first try to perform a carriage activation before moving the carriage to the front wall. Any carriage stalls that occur can be tested repeatedly without an MFP reboot.
4. Check that the encoder/index strip is positioned and aligned correctly. Run the Reset carriage encoder calibration **only** if the encoder strip or Encoder PCA were removed or repositioned.
5. Replace the Carriage 1 Encoder PCA that contains the Index sensors.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)
- Replace A16/A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 1 encoder strip: [Carriage encoder strip on page 535](#)

F1.0504

Description

- Carriage 1 stall digital encoder signal. This warning should only occur during the MFP carriage activation process (during reboot, after jam clearance, or coming out of sleep mode). This indicates the digital encoder signal quality going from the Carriage 1 encoder PCA to the Image Processing PCA is weak or poor. This condition may affect MFP calibrations such as APA, Carriage to Carriage alignment, First Nozzle and Media Side Edge.

Primary root causes

- Carriage 1 encoder strip
- Carriage 1 Encoder PCA (A9)
- Pen Pocket 1 PCA (A16)

Recommended actions

1. Look for a dirty Carriage 1 encoder strip. Replace the encoder strip or wipe it clean with a dry lint-free cloth. Do not use liquids to clean the encoder strip.
2. If needed, clean the encoder sensor on the Carriage 1 Encoder PCA (A9).
3. If either the encoder strip or Pen Pocket 1 PCA (A16) with Encoder PCA was removed or repositioned, run the Reset Carriage encoder calibration process.
4. To test if this problem is resolved: Simulate a paper jam clearance by 1) opening the two front doors 2) lower then raise the carriage latch bar 3) close the front doors. This will automatically trigger the carriage activation process after a few seconds. Check the CDFT warning log for new entries.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A16/A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 1 encoder strip: [Carriage encoder strip on page 535](#)

F1.0505

Description

- Carriage 1 stall wrong index 1 detected. This error should only occur during the MFP activation process (during reboot, after jam clearance, or coming out of sleep mode). This is a check for an index 1 signal transition.

Primary root causes

- Carriage 1 Encoder PCA (A9)
- Pen Pocket 1 PCA (A16)
- Motion PCA (A2)

Recommended actions

1. Reboot into Protected Service mode (PSM) for troubleshooting. Carriage stalls that occur in PSM will not require a reboot.
2. Enter CDFT and open the carriage tool page. Run the carriage motor using the M1 Carriage 1 button. Look for Carriage 1 index 1 count changes. In PSM mode, the carriages will first try to perform a carriage activation before moving the carriage to the front wall. Any carriage stalls that occur can be tested repeatedly without an MFP reboot.
3. Replace the Carriage Encoder PCA if no Index transitions are detected.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)
- Replace A16/A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)

F1.0506

Description

- Carriage 1 stall wrong index 2 detected. This error should only occur during the MFP activation process (during reboot, after jam clearance, or coming out of sleep mode). This is a check for an index 2 signal transition.

Primary root causes

- Carriage 1 encoder strip
- Carriage 1 Encoder PCA (A9)
- Pen Pocket 1 PCA (A16)
- A2
- M1
- Wire harness between M1 and the A2

Recommended actions

1. Reboot into Protected Service mode (PSM) for troubleshooting. Carriage stalls that occur in PSM will not require a reboot.
2. Enter CDFT and open the carriage tool page. Run the carriage motor using the M1 Carriage 1 button. Look for Carriage 1 index 2 count changes. In PSM mode, the carriages will first try to perform a carriage activation before moving the carriage to the front wall. Any carriage stalls that occur can be tested repeatedly without an MFP reboot.
3. Replace the Carriage 1 Encoder PCA if no Index transitions are detected.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace M1: [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\) on page 552](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)
- Replace A16/A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 1 encoder strip: [Carriage encoder strip on page 535](#)

F1.0507

Description

- Carriage 1 stall wrong index 1 position. This error should only occur during the MFP activation process (during reboot, after jam clearance, or coming out of sleep mode). This is a check of the index 1 position and indicates the index marking was found to be too close to the front wall structure.

Primary root causes

- Carriage 1 encoder strip
- Carriage 1 Encoder PCA (A9)
- Pen Pocket 1 PCA (A16)

Recommended actions

1. Examine the carriage 1 encoder strip and look for a loose encoder strip.
2. Check the Pen Pocket 1 PCA is installed correctly.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A16/A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 1 encoder strip: [Carriage encoder strip on page 535](#)

F1.0508

Description

- Carriage 1 stall failed all clear test. This error should only occur during the MFP activation process (during reboot, after jam clearance, or coming out of sleep mode). This is a check see if the full carriage travel range is available.

Primary root causes

- Carriage obstruction
- Carriage shipping bracket
- Aerosol hose and snorkel
- Carriage 1 encoder strip
- Carriage 1 Encoder PCA (A9)
- Pen Pocket 1 PCA (A16)
- Pen caps

Recommended actions

1. Open the MFP front doors and look for any obstructions that might interfere with carriage 1 movement. The position of the carriage when the stalled occurred is the location of the problem area.
2. Reboot into Protected Service mode (PSM) for troubleshooting. Carriage stalls that occur in PSM will not require a reboot.
3. Enter CDFT and open the carriage tool page. Test the carriage motor using the M1 Carriage 1 button. In PSM mode, the carriages will first try to perform a carriage activation before moving the carriage to the front wall. Any carriage stalls that occur can be tested repeatedly without an MFP reboot.
4. Check that the pen caps and aerosol hose and snorkel are in place and not interfering with the carriage travel.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A16/A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 1 encoder strip: [Carriage encoder strip on page 535](#)

F1.05A1

Description

- Carriage 1 stall during Activation diagnostic. This error should only occur during the MFP activation process (during reboot, after jam clearance, or when coming out of sleep mode). This is the first carriage move coming out of the pen cap position and is checking for a change in the carriage encoder count.

Primary root causes

- Carriage obstruction
- Carriage shipping bracket
- Carriage 1 encoder strip
- Carriage 1 Encoder PCA (A9)
- Pen Pocket 1 PCA (A16)
- A2
- Carriage 1 motor (M1)
- Wire harness between M1 and A2

Recommended actions

1. Open the front door and verify that the carriage is not locked in the front shipping position.
2. Look for any obstructions that might interfere with carriage movement.
3. Look for a loose or missing carriage encoder strip.
4. Reboot into PSM mode for troubleshooting.
5. Enter CDFT and open the carriage tool page. Close the front doors and test the carriage motor using the M1 Carriage 1 button. In PSM mode, the carriages will first try to perform a carriage activation before moving the carriage to the front wall. Any carriage stalls that occur can be tested repeatedly without an MFP reboot.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace M1: [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\) on page 552](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)
- Replace A16/A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 1 encoder strip: [Carriage encoder strip on page 535](#)

F1.05A2

Description

- Carriage 1 stall encoder signal diagnostic. This error should only occur during the MFP activation process (during reboot, after jam clearance, or when coming out of sleep mode). This is a check of the analog encoder signal quality, looking for weak or missing encoder strip areas.

Primary root causes

- Carriage obstruction
- Carriage 1 encoder strip
- Carriage 1 Encoder PCA (A9)
- Pen Pocket 1 PCA (A16)

Recommended actions

1. Inspect the encoder strip for dirty or worn areas. Clean if needed using a dry lint free cloth.
2. Clean the Encoder PCA encoder sensor. If the encoder strip or Encoder PCA is removed, the "Reset Carriage encoder" calibration must be run.
3. Reboot the MFP and look for other carriage stall errors. The reboot process (activation) will test all the carriage position movements.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A16/A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 1 encoder strip: [Carriage encoder strip on page 535](#)

F1.05A3

Description

- Carriage 1 stall no index 1 signal. This error should only occur during the MFP activation process (during reboot, after jam clearance, or coming out of sleep mode). This is a check of the index 1 sensor staging position. The index sensor should be positioned over a blacked out area of the index strip but is not being detected.

Primary root causes

- Carriage obstruction
- Carriage 1 encoder strip
- Carriage 1 Encoder PCA (A9)
- Pen Pocket 1 PCA (A16)
- A2

Recommended actions

1. Check for obstructions near the front wall of the carriage structure. The position of the carriage when the stalled occurred is the location of the problem area.
2. Reboot into Protected Service mode (PSM) for troubleshooting. Carriage stalls that occur in PSM will not require a reboot.
3. Enter CDFT and open the Carriage tool page. Run the carriage 1 motor using the M1 Carriage 1 button. Look for carriage 1 index 1 count changes. In PSM mode, the carriages will first try to perform a carriage activation before moving the carriage to the front wall. Any carriage stalls that occur can be tested repeatedly without an MFP reboot.
4. Check that the encoder/index strip is positioned and aligned correctly. Run the Reset carriage encoder calibration **only** if the encoder strip or Encoder PCA were removed or repositioned.
5. Replace the Carriage 1 Encoder PCA that contains the Index sensors.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)
- Replace A16/A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 1 encoder strip: [Carriage encoder strip on page 535](#)

F1.05A4

Description

- Carriage 1 stall digital encoder signal. This warning should only occur during the MFP carriage activation process (during reboot, after jam clearance, or coming out of sleep mode). This indicates the digital encoder signal quality going from the Carriage 1 encoder PCA to the Image Processing PCA is weak or poor. This condition may affect MFP calibrations such as APA, Carriage to Carriage alignment, First Nozzle and Media Side Edge.

Primary root causes

- Carriage 1 encoder strip
- Carriage 1 Encoder PCA (A9)
- Pen Pocket 1 PCA (A16)

Recommended actions

1. Look for a dirty Carriage 1 encoder strip. Replace the encoder strip or wipe it clean with a dry lint-free cloth. Do not use liquids to clean the encoder strip.
2. If needed, clean the encoder sensor on the Carriage 1 Encoder PCA (A9).
3. If either the encoder strip or Pen Pocket 1 PCA (A16) with Encoder PCA was removed or repositioned, run the Reset Carriage encoder calibration process.
4. To test if this problem is resolved: Simulate a paper jam clearance by 1) opening the two front doors 2) lower then raise the carriage latch bar 3) close the front doors. This will automatically trigger the carriage activation process after a few seconds. Check the CDFT warning log for new entries.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A16/A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 1 encoder strip: [Carriage encoder strip on page 535](#)

F1.05A5

Description

- Carriage 1 stall wrong index 1 detected. This error should only occur during the MFP activation process (during reboot, after jam clearance, or coming out of sleep mode). This is a check for an index 1 signal transition.

Primary root causes

- Carriage 1 Encoder PCA (A9)
- Pen Pocket 1 PCA (A16)
- Motion PCA (A2)

Recommended actions

1. Reboot into Protected Service mode (PSM) for troubleshooting. Carriage stalls that occur in PSM will not require a reboot.
2. Enter CDFT and open the carriage tool page. Run the carriage motor using the M1 Carriage 1 button. Look for Carriage 1 index 1 count changes. In PSM mode, the carriages will first try to perform a carriage activation before moving the carriage to the front wall. Any carriage stalls that occur can be tested repeatedly without an MFP reboot.
3. Replace the Carriage Encoder PCA if no Index transitions are detected.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)
- Replace A16/A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)

F1.05A6

Description

- Carriage 1 stall wrong index 2 detected. This error should only occur during the MFP activation process (during reboot, after jam clearance, or coming out of sleep mode). This is a check for an index 2 signal transition.

Primary root causes

- Carriage 1 encoder strip
- Carriage 1 Encoder PCA (A9)
- Pen Pocket 1 PCA (A16)
- A2
- M1
- Wire harness between M1 and the A2

Recommended actions

1. Reboot into Protected Service mode (PSM) for troubleshooting. Carriage stalls that occur in PSM will not require a reboot.
2. Enter CDFT and open the carriage tool page. Run the carriage motor using the M1 Carriage 1 button. Look for Carriage 1 index 2 count changes. In PSM mode, the carriages will first try to perform a carriage activation before moving the carriage to the front wall. Any carriage stalls that occur can be tested repeatedly without an MFP reboot.
3. Replace the Carriage 1 Encoder PCA if no Index transitions are detected.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace M1: [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\) on page 552](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)
- Replace A16/A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 1 encoder strip: [Carriage encoder strip on page 535](#)

F1.05A7

Description

- Carriage 1 stall wrong index 1 position. This error should only occur during the MFP activation process (during reboot, after jam clearance, or coming out of sleep mode). This is a check of the index 1 position and indicates the index marking was found to be too close to the front wall structure.

Primary root causes

- Carriage 1 encoder strip
- Carriage 1 Encoder PCA (A9)
- Pen Pocket 1 PCA (A16)

Recommended actions

1. Examine the carriage 1 encoder strip and look for a loose encoder strip.
2. Check the Pen Pocket 1 PCA is installed correctly.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A16/A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 1 encoder strip: [Carriage encoder strip on page 535](#)

F1.05A8

Description

- Carriage 1 stall failed all clear test. This error should only occur during the MFP activation process (during reboot, after jam clearance, or coming out of sleep mode). This is a check see if the full carriage travel range is available.

Primary root causes

- Carriage obstruction
- Carriage shipping bracket
- Aerosol hose and snorkel
- Carriage 1 encoder strip
- Carriage 1 Encoder PCA (A9)
- Pen Pocket 1 PCA (A16)
- Pen caps

Recommended actions

1. Open the MFP front doors and look for any obstructions that might interfere with carriage 1 movement. The position of the carriage when the stalled occurred is the location of the problem area.
2. Reboot into Protected Service mode (PSM) for troubleshooting. Carriage stalls that occur in PSM will not require a reboot.
3. Enter CDFT and open the carriage tool page. Test the carriage motor using the M1 Carriage 1 button. In PSM mode, the carriages will first try to perform a carriage activation before moving the carriage to the front wall. Any carriage stalls that occur can be tested repeatedly without an MFP reboot.
4. Check that the pen caps and aerosol hose and snorkel are in place and not interfering with the carriage travel.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A16/A9: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 1 encoder strip: [Carriage encoder strip on page 535](#)

F2.0101

Description

- Carriage 2 stall servo error (type1). It indicates that the carriage was in the process of moving but was stopped before it could reach the final target encoder position.

Primary root causes

- Carriage obstruction
- Carriage shipping bracket
- Aerosol hose and snorkel
- Carriage 2 encoder strip
- Carriage 2 motor (M2)
- Motion PCA (A2)
- Wire harness between M2 and A2
- Carriage 2 Encoder PCA (A24)
- Pen Pocket 4 PCA (A19)

Recommended actions

1. Open the MFP front doors and look for any obstructions that might interfere with carriage 2 movement. The position of the carriage when the stalled occurred is the location of the problem area.
2. Verify that the carriage shipping bracket is correctly secured and not obstructing the movement of the carriage.
3. Reboot the MFP and look for other carriage stall errors. The reboot process (activation) will test all the carriage position movements and can report more specific errors if any problems occur.
4. Reboot into Protected Service mode (PSM) for troubleshooting. Carriage stalls that occur in PSM will not require a reboot.
5. Enter CDFT and open the carriage tool page. Close the front doors and test the carriage motor using the M2 Carriage 2 button. In PSM mode, the carriages will first try to perform a carriage activation before moving the carriage to the front wall. Any carriage stalls that occur can be tested repeatedly without an MFP reboot.
6. Open the front doors and move the carriage by hand to the front wall of the carriage structure. The carriage encoder should read approximately 15333 ± 10 at the front wall. This reading can only be made after the carriages complete activation. Run the "Reset carriage encoder" calibration process if needed.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)

- Replace M2: [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\) on page 552](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)
- Replace A19/A24: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 2 encoder strip: [Carriage encoder strip on page 535](#)

F2.0102

Description

- Carriage 2 stall high PWM (type2). It indicates that the carriage could not get up to the target speed or could not even start moving.

Primary root causes

- Carriage obstruction
- Carriage shipping bracket
- Aerosol hose and snorkel
- Carriage 2 encoder strip
- Carriage 2 motor (M2)
- Motion PCA (A2)
- Wire harness between M2 and A2
- Carriage 2 Encoder PCA (A24)
- Pen Pocket 4 PCA (A19)

Recommended actions

1. Open the MFP front doors and look for any obstructions that might interfere with carriage 2 movement. The position of the carriage when the stalled occurred is the location of the problem area.
2. Verify that the carriage shipping bracket is correctly secured and not obstructing the movement of the carriage.
3. Reboot the MFP and look for other carriage stall errors. The reboot process (activation) will test all the carriage position movements and can report more specific errors if any problems occur.
4. Enter CDFT and open the carriage tool page. Close the front door and test the carriage motor using the M2 Carriage 2 button.
5. Open the front door and move the carriage by hand to the front wall of the carriage structure. The carriage encoder should read approximately 15333 +/- 10 at the front wall. Run the "Reset carriage encoder" calibration process if needed.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace M2: [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\) on page 552](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)

- Replace A19/A24: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 2 encoder strip: [Carriage encoder strip on page 535](#)

F2.0103

Description

- Carriage 2 stall motor time out (type3). It indicates a servo error that occurred when attempting to stop the carriage. The move could not be completed before the time out occurred.

Primary root causes

- High carriage friction
- Carriage magnets
- Carriage felts
- Carriage 2 motor (M2)

Recommended actions

1. Run the Carriage stopping accuracy calibration.
2. Replace the carriage magnets.
3. Replace the carriage felts.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace M2: [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\) on page 552](#)

F2.01A1

Description

- Carriage 2 stall servo error (type1). It indicates that the carriage was in the process of moving but was stopped before it could reach the final target encoder position.

Primary root causes

- Carriage obstruction
- Carriage shipping bracket
- Aerosol hose and snorkel
- Carriage 2 encoder strip
- Carriage 2 motor (M2)
- Motion PCA (A2)
- Wire harness between M2 and A2
- Carriage 2 Encoder PCA (A24)
- Pen Pocket 4 PCA (A19)

Recommended actions

1. Open the MFP front doors and look for any obstructions that might interfere with carriage 2 movement. The position of the carriage when the stalled occurred is the location of the problem area.
2. Verify that the carriage shipping bracket is correctly secured and not obstructing the movement of the carriage.
3. Reboot the MFP and look for other carriage stall errors. The reboot process (activation) will test all the carriage position movements and can report more specific errors if any problems occur.
4. Reboot into Protected Service mode (PSM) for troubleshooting. Carriage stalls that occur in PSM will not require a reboot.
5. Enter CDFT and open the carriage tool page. Close the front doors and test the carriage motor using the M2 Carriage 2 button. In PSM mode, the carriages will first try to perform a carriage activation before moving the carriage to the front wall. Any carriage stalls that occur can be tested repeatedly without an MFP reboot.
6. Open the front doors and move the carriage by hand to the front wall of the carriage structure. The carriage encoder should read approximately 15333 ± 10 at the front wall. This reading can only be made after the carriages complete activation. Run the "Reset carriage encoder" calibration process if needed.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)

- Replace M2: [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\) on page 552](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)
- Replace A19/A24: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 2 encoder strip: [Carriage encoder strip on page 535](#)

F2.01A2

Description

- Carriage 2 stall high PWM (type2). It indicates that the carriage could not get up to the target speed or could not even start moving.

Primary root causes

- Carriage obstruction
- Carriage shipping bracket
- Aerosol hose and snorkel
- Carriage 2 encoder strip
- Carriage 2 motor (M2)
- Motion PCA (A2)
- Wire harness between M2 and A2
- Carriage 2 Encoder PCA (A24)
- Pen Pocket 4 PCA (A19)

Recommended actions

1. Open the MFP front doors and look for any obstructions that might interfere with carriage 2 movement. The position of the carriage when the stalled occurred is the location of the problem area.
2. Verify that the carriage shipping bracket is correctly secured and not obstructing the movement of the carriage.
3. Reboot the MFP and look for other carriage stall errors. The reboot process (activation) will test all the carriage position movements and can report more specific errors if any problems occur.
4. Enter CDFT and open the carriage tool page. Close the front door and test the carriage motor using the M2 Carriage 2 button.
5. Open the front door and move the carriage by hand to the front wall of the carriage structure. The carriage encoder should read approximately 15333 +/- 10 at the front wall. Run the "Reset carriage encoder" calibration process if needed.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace M2: [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\) on page 552](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)

- Replace A19/A24: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 2 encoder strip: [Carriage encoder strip on page 535](#)

F2.01A3

Description

- Carriage 2 stall motor time out (type3). It indicates a servo error that occurred when attempting to stop the carriage. The move could not be completed before the time out occurred.

Primary root causes

- High carriage friction
- Carriage magnets
- Carriage felts
- Carriage 2 motor (M2)

Recommended actions

1. Run the Carriage stopping accuracy calibration.
2. Replace the carriage magnets.
3. Replace the carriage felts.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace M2: [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\) on page 552](#)

F2.01A4

Description

- Carriage 2 PPS 2 motor homing failure

Primary root causes

- Carriage 2 PPS assembly
- Pen Pocket 4 PCA (A19)
- PPS wire harness

Recommended actions

1. Replace the PPS assembly.
2. Replace A19.
3. Replace the PPS wire harness.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace the PPS: [PPS assembly on page 559](#)
- Replace A19: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

F2.01A5

Description

- Carriage 2 PPS 2 motor homing failure

Primary root causes

- Carriage 2 PPS assembly
- Pen Pocket 4 PCA (A19)
- PPS wire harness

Recommended actions

1. Replace the PPS assembly.
2. Replace A19.
3. Replace the PPS wire harness.

Links

- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage pocket PCA diagram on page 2221](#)
- Replace the PPS: [PPS assembly on page 559](#)
- Replace A19: [Carriage pen pocket PCAs \(A17, A18, A20, and A21\) on page 568](#)

F2.0501

Description

- Carriage 2 stall during Activation diagnostic. This error should only occur during the MFP activation process (during reboot, after jam clearance, or when coming out of sleep mode). This is the first carriage move coming out of the pen cap position and is checking for a change in the carriage encoder count.

Primary root causes

- Carriage obstruction
- Carriage shipping bracket
- Carriage 2 encoder strip
- Carriage 2 Encoder PCA (A24)
- Pen Pocket 4 PCA (A19)
- A2
- M2
- Wire harness between M2 and A2

Recommended actions

1. Open the front door and verify that the carriage is not locked in the front shipping position.
2. Look for any obstructions that might interfere with carriage movement.
3. Look for a loose or missing carriage encoder strip.
4. Reboot into PSM mode for troubleshooting.
5. Enter CDFT and open the carriage tool page. Close the front doors and test the carriage motor using the M2 Carriage 2 button. In PSM mode, the carriages will first try to perform a carriage activation before moving the carriage to the front wall. Any carriage stalls that occur can be tested repeatedly without an MFP reboot.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace M2: [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\) on page 552](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)
- Replace A19/A24: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 2 encoder strip: [Carriage encoder strip on page 535](#)

F2.0502

Description

- Carriage 2 stall encoder signal diagnostic. This error should only occur during the MFP activation process (during reboot, after jam clearance, or when coming out of sleep mode). This is a check of the analog encoder signal quality, looking for weak or missing encoder strip areas.

Primary root causes

- Carriage obstruction
- Carriage 2 encoder strip
- Carriage 2 Encoder PCA (A24)
- Pen Pocket 4 PCA (A19)

Recommended actions

1. Inspect the encoder strip for dirty or worn areas. Clean if needed using a dry lint free cloth.
2. Clean the Encoder PCA encoder sensor. If the encoder strip or Encoder PCA is removed, the "Reset Carriage encoder" calibration must be run.
3. Reboot the MFP and look for other carriage stall errors. The reboot process (activation) will test all the carriage position movements.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A19/A24: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 2 encoder strip: [Carriage encoder strip on page 535](#)

F2.0503

Description

- Carriage 2 stall no index 1 signal. This error should only occur during the MFP activation process (during reboot, after jam clearance, or coming out of sleep mode). This is a check of the index 1 sensor staging position. The index sensor should be positioned over a blacked out area of the index strip but is not being detected.

Primary root causes

- Carriage obstruction
- Carriage 2 encoder strip
- Carriage 2 Encoder PCA (A24)
- Pen Pocket 4 PCA (A19)
- A2

Recommended actions

1. Check for obstructions near the front wall of the carriage structure. The position of the carriage when the stalled occurred is the location of the problem area.
2. Reboot into Protected Service mode (PSM) for troubleshooting. Carriage stalls that occur in PSM will not require a reboot.
3. Enter CDFT and open the Carriage tool page. Run the carriage 2 motor using the M2 Carriage 2 button. Look for carriage 2 index 1 count changes. In PSM mode, the carriages will first try to perform a carriage activation before moving the carriage to the front wall. Any carriage stalls that occur can be tested repeatedly without an MFP reboot.
4. Check that the encoder/index strip is positioned and aligned correctly. Run the Reset carriage encoder calibration **only** if the encoder strip or Encoder PCA were removed or repositioned.
5. Replace the Carriage 2 Encoder PCA that contains the Index sensors.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)
- Replace A19/A24: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 2 encoder strip: [Carriage encoder strip on page 535](#)

F2.0504

Description

- Carriage 2 stall digital encoder signal. This error should only occur during the MFP activation process (during reboot or jam clearance). This indicates the digital encoder signal quality going to the Image Processing PCA is weak or poor. This condition may affect MFP calibrations such as APA.

Primary root causes

- Carriage 2 encoder strip
- Carriage 2 Encoder PCA (A24)
- Pen Pocket 4 PCA (A19)

Recommended actions

1. Look for a dirty encoder strip. Clean with a dry lint-free cloth if needed. The encoder sensor on the Encoder PCA may also need to be cleaned. If either the encoder strip or Encoder PCA is removed or repositioned, run the **Reset Carriage encoder** calibration process.
2. Reboot to test.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A19/A24: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 2 encoder strip: [Carriage encoder strip on page 535](#)

F2.0505

Description

- Carriage 2 stall wrong index 1 detected. This error should only occur during the MFP activation process (during reboot, after jam clearance, or coming out of sleep mode). This is a check for an index 1 signal transition.

Primary root causes

- Carriage 2 Encoder PCA (A24)
- Pen Pocket 4 PCA (A19)
- Motion PCA (A2)

Recommended actions

1. Reboot into Protected Service mode (PSM) for troubleshooting. Carriage stalls that occur in PSM will not require a reboot.
2. Enter CDFT and open the carriage tool page. Run the carriage motor using the M2 Carriage 2 button. Look for Carriage 2 index 1 count changes. In PSM mode, the carriages will first try to perform a carriage activation before moving the carriage to the front wall. Any carriage stalls that occur can be tested repeatedly without an MFP reboot.
3. Replace the Carriage 2 Encoder PCA if no index transitions are detected.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)
- Replace A19/A24: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)

F2.0506

Description

- Carriage 2 stall wrong index 2 detected. This error should only occur during the MFP activation process (during reboot, after jam clearance, or coming out of sleep mode). This is a check for an index 2 signal transition.

Primary root causes

- Carriage 2 encoder strip
- Carriage 2 Encoder PCA (A24)
- Pen Pocket 4 PCA (A19)
- A2
- M2
- Wire harness between M2 and the A2

Recommended actions

1. Reboot into Protected Service mode (PSM) for troubleshooting. Carriage stalls that occur in PSM will not require a reboot.
2. Enter CDFT and open the carriage tool page. Run the carriage motor using the M2 Carriage 2 button. Look for Carriage 2 index 2 count changes. In PSM mode, the carriages will first try to perform a carriage activation before moving the carriage to the front wall. Any carriage stalls that occur can be tested repeatedly without an MFP reboot.
3. Replace the Carriage 2 Encoder PCA if no index transitions are detected.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)
- Replace A19/A24: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 2 encoder strip: [Carriage encoder strip on page 535](#)

F2.0507

Description

- Carriage 2 stall wrong index 1 position. This error should only occur during the MFP activation process (during reboot, after jam clearance, or coming out of sleep mode). This is a check of the index 1 position and indicates the index marking was found to be too close to the front wall structure.

Primary root causes

- Carriage 2 encoder strip
- Carriage 2 Encoder PCA (A24)
- Pen Pocket 4 PCA (A19)

Recommended actions

1. Examine the carriage 2 encoder strip and look for a loose encoder strip.
2. Check the Pen Pocket 4 PCA (A19) is installed correctly.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A19/A24: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 2 encoder strip: [Carriage encoder strip on page 535](#)

F2.0508

Description

- Carriage 2 stall failed all clear test. This error should only occur during the MFP activation process (during reboot, after jam clearance, or coming out of sleep mode). This is a check see if the full carriage travel range is available.

Primary root causes

- Carriage obstruction
- Carriage shipping bracket
- Aerosol hose and snorkel
- Carriage 2 encoder strip
- Carriage 2 Encoder PCA (A24)
- Pen Pocket 4 PCA (A19)
- Pen caps

Recommended actions

1. Open the MFP front doors and look for any obstructions that might interfere with carriage 2 movement. The position of the carriage when the stalled occurred is the location of the problem area.
2. Reboot into Protected Service mode (PSM) for troubleshooting. Carriage stalls that occur in PSM will not require a reboot.
3. Enter CDFT and open the carriage tool page. Test the carriage motor using the M2 Carriage 2 button. In PSM mode, the carriages will first try to perform a carriage activation before moving the carriage to the front wall. Any carriage stalls that occur can be tested repeatedly without an MFP reboot.
4. Check that the pen caps and aerosol hose and snorkel are in place and not interfering with the carriage travel.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A19/A24: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 2 encoder strip: [Carriage encoder strip on page 535](#)

F2.05A1

Description

- Carriage 2 stall during Activation diagnostic. This error should only occur during the MFP activation process (during reboot, after jam clearance, or when coming out of sleep mode). This is the first carriage move coming out of the pen cap position and is checking for a change in the carriage encoder count.

Primary root causes

- Carriage obstruction
- Carriage shipping bracket
- Carriage 2 encoder strip
- Carriage 2 Encoder PCA (A24)
- Pen Pocket 4 PCA (A19)
- A2
- M2
- Wire harness between M2 and A2

Recommended actions

1. Open the front door and verify that the carriage is not locked in the front shipping position.
2. Look for any obstructions that might interfere with carriage movement.
3. Look for a loose or missing carriage encoder strip.
4. Reboot into PSM mode for troubleshooting.
5. Enter CDFT and open the carriage tool page. Close the front doors and test the carriage motor using the M2 Carriage 2 button. In PSM mode, the carriages will first try to perform a carriage activation before moving the carriage to the front wall. Any carriage stalls that occur can be tested repeatedly without an MFP reboot.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace M2: [Carriage 1 motor \(M1\) and Carriage 2 motor \(M2\) on page 552](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)
- Replace A19/A24: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 2 encoder strip: [Carriage encoder strip on page 535](#)

F2.05A2

Description

- Carriage 2 stall encoder signal diagnostic. This error should only occur during the MFP activation process (during reboot, after jam clearance, or when coming out of sleep mode). This is a check of the analog encoder signal quality, looking for weak or missing encoder strip areas.

Primary root causes

- Carriage obstruction
- Carriage 2 encoder strip
- Carriage 2 Encoder PCA (A24)
- Pen Pocket 4 PCA (A19)

Recommended actions

1. Inspect the encoder strip for dirty or worn areas. Clean if needed using a dry lint free cloth.
2. Clean the Encoder PCA encoder sensor. If the encoder strip or Encoder PCA is removed, the "Reset Carriage encoder" calibration must be run.
3. Reboot the MFP and look for other carriage stall errors. The reboot process (activation) will test all the carriage position movements.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A19/A24: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 2 encoder strip: [Carriage encoder strip on page 535](#)

F2.05A3

Description

- Carriage 2 stall no index 1 signal. This error should only occur during the MFP activation process (during reboot, after jam clearance, or coming out of sleep mode). This is a check of the index 1 sensor staging position. The index sensor should be positioned over a blacked out area of the index strip but is not being detected.

Primary root causes

- Carriage obstruction
- Carriage 2 encoder strip
- Carriage 2 Encoder PCA (A24)
- Pen Pocket 4 PCA (A19)
- A2

Recommended actions

1. Check for obstructions near the front wall of the carriage structure. The position of the carriage when the stalled occurred is the location of the problem area.
2. Reboot into Protected Service mode (PSM) for troubleshooting. Carriage stalls that occur in PSM will not require a reboot.
3. Enter CDFT and open the Carriage tool page. Run the carriage 2 motor using the M2 Carriage 2 button. Look for carriage 2 index 1 count changes. In PSM mode, the carriages will first try to perform a carriage activation before moving the carriage to the front wall. Any carriage stalls that occur can be tested repeatedly without an MFP reboot.
4. Check that the encoder/index strip is positioned and aligned correctly. Run the Reset carriage encoder calibration **only** if the encoder strip or Encoder PCA were removed or repositioned.
5. Replace the Carriage 2 Encoder PCA that contains the Index sensors.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)
- Replace A19/A24: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 2 encoder strip: [Carriage encoder strip on page 535](#)

F2.05A4

Description

- Carriage 2 stall digital encoder signal. This error should only occur during the MFP activation process (during reboot or jam clearance). This indicates the digital encoder signal quality going to the Image Processing PCA is weak or poor. This condition may affect MFP calibrations such as APA.

Primary root causes

- Carriage 2 encoder strip
- Carriage 2 Encoder PCA (A24)
- Pen Pocket 4 PCA (A19)

Recommended actions

1. Look for a dirty encoder strip. Clean with a dry lint-free cloth if needed. The encoder sensor on the Encoder PCA may also need to be cleaned. If either the encoder strip or Encoder PCA is removed or repositioned, run the **Reset Carriage encoder** calibration process.
2. Reboot to test.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A19/A24: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 2 encoder strip: [Carriage encoder strip on page 535](#)

F2.05A5

Description

- Carriage 2 stall wrong index 1 detected. This error should only occur during the MFP activation process (during reboot, after jam clearance, or coming out of sleep mode). This is a check for an index 1 signal transition.

Primary root causes

- Carriage 2 Encoder PCA (A24)
- Pen Pocket 4 PCA (A19)
- Motion PCA (A2)

Recommended actions

1. Reboot into Protected Service mode (PSM) for troubleshooting. Carriage stalls that occur in PSM will not require a reboot.
2. Enter CDFT and open the carriage tool page. Run the carriage motor using the M2 Carriage 2 button. Look for Carriage 2 index 1 count changes. In PSM mode, the carriages will first try to perform a carriage activation before moving the carriage to the front wall. Any carriage stalls that occur can be tested repeatedly without an MFP reboot.
3. Replace the Carriage 2 Encoder PCA if no index transitions are detected.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)
- Replace A19/A24: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)

F2.05A6

Description

- Carriage 2 stall wrong index 2 detected. This error should only occur during the MFP activation process (during reboot, after jam clearance, or coming out of sleep mode). This is a check for an index 2 signal transition.

Primary root causes

- Carriage 2 encoder strip
- Carriage 2 Encoder PCA (A24)
- Pen Pocket 4 PCA (A19)
- A2
- M2
- Wire harness between M2 and the A2

Recommended actions

1. Reboot into Protected Service mode (PSM) for troubleshooting. Carriage stalls that occur in PSM will not require a reboot.
2. Enter CDFT and open the carriage tool page. Run the carriage motor using the M2 Carriage 2 button. Look for Carriage 2 index 2 count changes. In PSM mode, the carriages will first try to perform a carriage activation before moving the carriage to the front wall. Any carriage stalls that occur can be tested repeatedly without an MFP reboot.
3. Replace the Carriage 2 Encoder PCA if no index transitions are detected.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A2: [Motion PCA \(A2\) on page 700](#)
- Replace A19/A24: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 2 encoder strip: [Carriage encoder strip on page 535](#)

F2.05A7

Description

- Carriage 2 stall wrong index 1 position. This error should only occur during the MFP activation process (during reboot, after jam clearance, or coming out of sleep mode). This is a check of the index 1 position and indicates the index marking was found to be too close to the front wall structure.

Primary root causes

- Carriage 2 encoder strip
- Carriage 2 Encoder PCA (A24)
- Pen Pocket 4 PCA (A19)

Recommended actions

1. Examine the carriage 2 encoder strip and look for a loose encoder strip.
2. Check the Pen Pocket 4 PCA (A19) is installed correctly.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A19/A24: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 2 encoder strip: [Carriage encoder strip on page 535](#)

F2.05A8

Description

- Carriage 2 stall failed all clear test. This error should only occur during the MFP activation process (during reboot, after jam clearance, or coming out of sleep mode). This is a check see if the full carriage travel range is available.

Primary root causes

- Carriage obstruction
- Carriage shipping bracket
- Aerosol hose and snorkel
- Carriage 2 encoder strip
- Carriage 2 Encoder PCA (A24)
- Pen Pocket 4 PCA (A19)
- Pen caps

Recommended actions

1. Open the MFP front doors and look for any obstructions that might interfere with carriage 2 movement. The position of the carriage when the stalled occurred is the location of the problem area.
2. Reboot into Protected Service mode (PSM) for troubleshooting. Carriage stalls that occur in PSM will not require a reboot.
3. Enter CDFT and open the carriage tool page. Test the carriage motor using the M2 Carriage 2 button. In PSM mode, the carriages will first try to perform a carriage activation before moving the carriage to the front wall. Any carriage stalls that occur can be tested repeatedly without an MFP reboot.
4. Check that the pen caps and aerosol hose and snorkel are in place and not interfering with the carriage travel.

Links

- Diagnostic page: Click **Subsystems**, and then click **Carriage**.
- Component locator: [Carriage component locator on page 2316](#)
- Wiring diagram: [Carriage wiring diagram on page 2220](#)
- Replace A19/A24: [Carriage 1 Encoder PCA \(A9\), Carriage 2 Encoder PCA \(A24\), Pen Pocket 1 PCA \(A16\), and Pen Pocket 4 PCA \(A19\) on page 569](#)
- Replace the Carriage 2 encoder strip: [Carriage encoder strip on page 535](#)

B Wiring diagrams

- [MFP wiring overview](#)
- [ADF wiring diagram](#)
- [Tray 1 wiring diagram](#)
- [Carriage](#)
- [Covers wiring diagram](#)
- [Control panel wiring diagram](#)
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- [HP Multi-function Finisher](#)
- [HP 4-Bin Job Separator wiring diagrams](#)
- [Formatter wiring diagram](#)
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- [Horizontal wiring diagram](#)
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- [IDS](#)
- [Scanner](#)
- [Service station wiring diagram](#)
- [Trays 2, 3, and 4](#)
- [Vacuum and aerosol wiring diagram](#)
- [Vertical wiring diagram](#)
- [Web wipe wiring diagram](#)
- [PCA diagrams](#)

MFP wiring overview

- [MFP wiring overview diagram 1](#)
- [MFP wiring overview diagram 2](#)

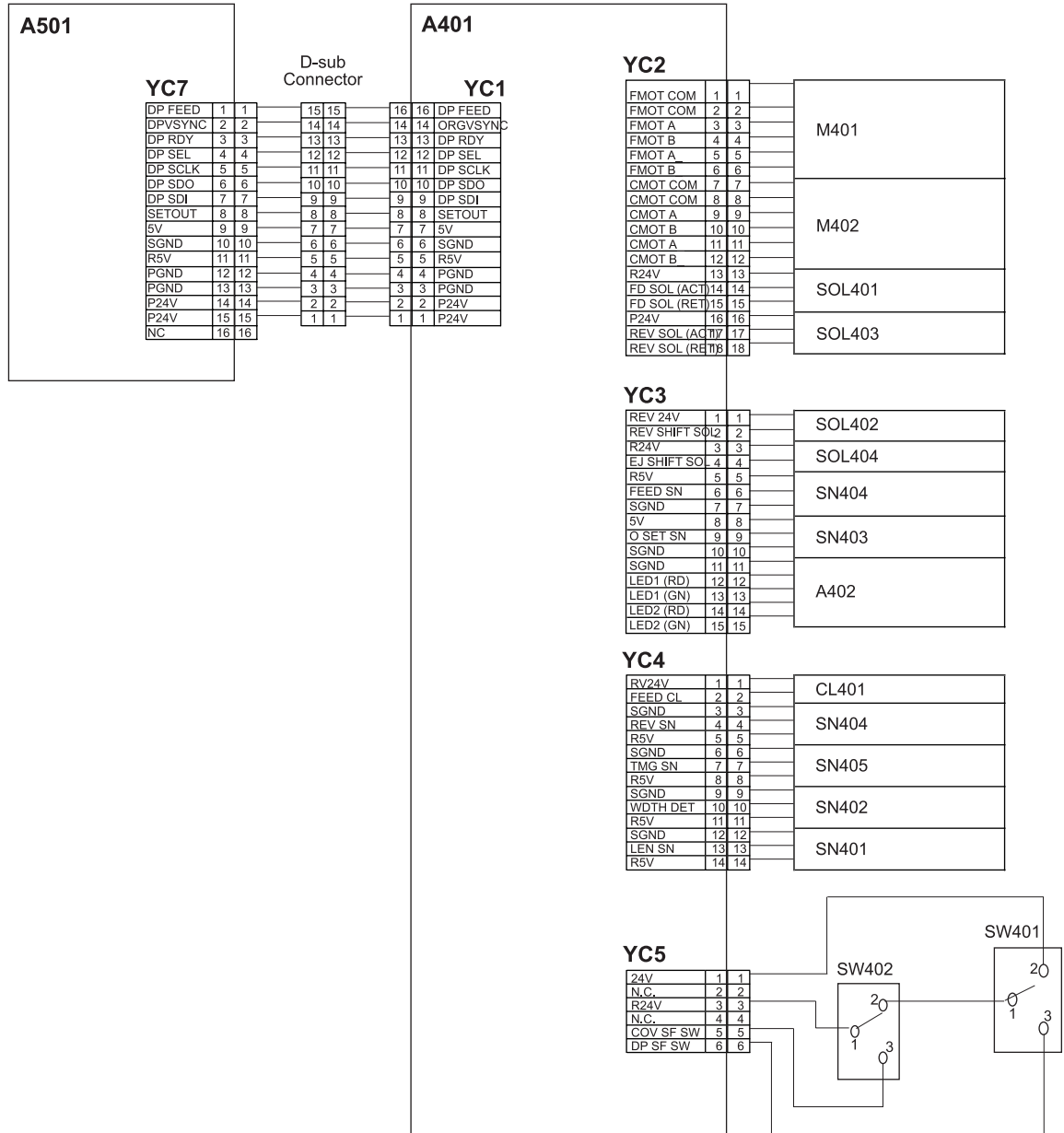
MFP wiring overview diagram 1

Figure B-1 MFP wiring overview diagram 1

Asy	Header	Label 1	Primary Cable Label 2	Label 3/Header	Secondary Cable/Device	Label 4	Label 5	Tertiary Cable/Device	Label 6	Label 7/Device	Quaternary Label 8	Device
Power Supply Unit (PSU)		W22P1-PSU	60147	W22J2-4TR	42	Dryer (Pwr)						
		PS Analog		Control In	43	Power Dist. PCA (A1)						
		PS Digital		Control In	44	Power Dist. PCA (A1)						
		PS Analog		Control In	45	Power Dist. PCA (A1)						
		PS Control In		Control In	46	Power Dist. PCA (A1)						
Power Dist. PCA (A1)	J1	W5SP1-A1J1	60389	W5SP4-CONY04		Scanner ZDF						
	J2					Scanner ZDF						
	J3					Scanner ZDF						
	J4					Scanner ZDF						
	J5					Scanner ZDF						
	J6					Scanner ZDF						
	J7					Scanner ZDF						
	J8	W11PB-A1J8	60126	W11PB-A2J1J3	J13	W11PB-A2J1J3						
	J9	W11PB-A1J9	60555	W11PB-A2J1J3	J13	W11PB-A2J1J3						
	J10	W11PB-A1J10	60119	W11PB-A2J1J3	J13	W11PB-A2J1J3						
Backplane PCA (A4)	J11	W11PB-A1J11	60119	W11PB-A2J1J3	J13	W11PB-A2J1J3						
	J12	W11PB-A1J12	60123	W11PB-A2J1J3	J13	W11PB-A2J1J3						
	J13	W11PB-A1J13	60351	W11PB-A2J1J3	J13	W11PB-A2J1J3						
	J14	W11PB-A1J14	60351	W11PB-A2J1J3	J13	W11PB-A2J1J3						
	J15	W11PB-A1J15	60351	W11PB-A2J1J3	J13	W11PB-A2J1J3						
	J16	W11PB-A1J16	60351	W11PB-A2J1J3	J13	W11PB-A2J1J3						
	J17	W11PB-A1J17	60351	W11PB-A2J1J3	J13	W11PB-A2J1J3						
	J18	W11PB-A1J18	60351	W11PB-A2J1J3	J13	W11PB-A2J1J3						
	J19	W11PB-A1J19	60351	W11PB-A2J1J3	J13	W11PB-A2J1J3						
	J20	W11PB-A1J20	60351	W11PB-A2J1J3	J13	W11PB-A2J1J3						
Carriage PSU PCA (A7)	J21	W22P2-A7J1	60769	W22P2-A7J2	J22	W22P2-A7J2						
	J22	W22P2-A7J2	60769	W22P2-A7J2	J22	W22P2-A7J2						
	J23	W22P2-A7J3	60769	W22P2-A7J2	J22	W22P2-A7J2						
	J24	W22P2-A7J4	60769	W22P2-A7J2	J22	W22P2-A7J2						
	J25	W22P2-A7J5	60769	W22P2-A7J2	J22	W22P2-A7J2						
	J26	W22P2-A7J6	60769	W22P2-A7J2	J22	W22P2-A7J2						
	J27	W22P2-A7J7	60769	W22P2-A7J2	J22	W22P2-A7J2						
	J28	W22P2-A7J8	60769	W22P2-A7J2	J22	W22P2-A7J2						
	J29	W22P2-A7J9	60769	W22P2-A7J2	J22	W22P2-A7J2						
	J30	W22P2-A7J10	60769	W22P2-A7J2	J22	W22P2-A7J2						
Image Processing PCA (A6)	J31	W33P3-A6J1	60769	W33P3-A6J2	J32	W33P3-A6J2						
	J32	W33P3-A6J2	60769	W33P3-A6J2	J32	W33P3-A6J2						
	J33	W33P3-A6J3	60769	W33P3-A6J2	J32	W33P3-A6J2						
	J34	W33P3-A6J4	60769	W33P3-A6J2	J32	W33P3-A6J2						
	J35	W33P3-A6J5	60769	W33P3-A6J2	J32	W33P3-A6J2						
	J36	W33P3-A6J6	60769	W33P3-A6J2	J32	W33P3-A6J2						
	J37	W33P3-A6J7	60769	W33P3-A6J2	J32	W33P3-A6J2						
	J38	W33P3-A6J8	60769	W33P3-A6J2	J32	W33P3-A6J2						
	J39	W33P3-A6J9	60769	W33P3-A6J2	J32	W33P3-A6J2						
	J40	W33P3-A6J10	60769	W33P3-A6J2	J32	W33P3-A6J2						
Ink Assist PCA (A3)	J41	W44P4-A3J1	60864	W44P4-A3J2	J42	W44P4-A3J2						
	J42	W44P4-A3J2	60864	W44P4-A3J2	J42	W44P4-A3J2						
	J43	W44P4-A3J3	60864	W44P4-A3J2	J42	W44P4-A3J2						
	J44	W44P4-A3J4	60864	W44P4-A3J2	J42	W44P4-A3J2						
	J45	W44P4-A3J5	60864	W44P4-A3J2	J42	W44P4-A3J2						
	J46	W44P4-A3J6	60864	W44P4-A3J2	J42	W44P4-A3J2						
	J47	W44P4-A3J7	60864	W44P4-A3J2	J42	W44P4-A3J2						
	J48	W44P4-A3J8	60864	W44P4-A3J2	J42	W44P4-A3J2						
	J49	W44P4-A3J9	60864	W44P4-A3J2	J42	W44P4-A3J2						
	J50	W44P4-A3J10	60864	W44P4-A3J2	J42	W44P4-A3J2						
Ink Supply Station PCA (ISS) (A5)	J51	W55P5-A5J1	60963	W55P5-A5J2	J52	W55P5-A5J2						
	J52	W55P5-A5J2	60963	W55P5-A5J2	J52	W55P5-A5J2						
	J53	W55P5-A5J3	60963	W55P5-A5J2	J52	W55P5-A5J2						
	J54	W55P5-A5J4	60963	W55P5-A5J2	J52	W55P5-A5J2						
	J55	W55P5-A5J5	60963	W55P5-A5J2	J52	W55P5-A5J2						
	J56	W55P5-A5J6	60963	W55P5-A5J2	J52	W55P5-A5J2						
	J57	W55P5-A5J7	60963	W55P5-A5J2	J52	W55P5-A5J2						
	J58	W55P5-A5J8	60963	W55P5-A5J2	J52	W55P5-A5J2						
	J59	W55P5-A5J9	60963	W55P5-A5J2	J52	W55P5-A5J2						
	J60	W55P5-A5J10	60963	W55P5-A5J2	J52	W55P5-A5J2						
Main Board PCA (A5)	J61	W66P6-A5J1	60556	W66P6-A5J2	J62	W66P6-A5J2						
	J62	W66P6-A5J2	60556	W66P6-A5J2	J62	W66P6-A5J2						
	J63	W66P6-A5J3	60556	W66P6-A5J2	J62	W66P6-A5J2						
	J64	W66P6-A5J4	60556	W66P6-A5J2	J62	W66P6-A5J2						
	J65	W66P6-A5J5	60556	W66P6-A5J2	J62	W66P6-A5J2						
	J66	W66P6-A5J6	60556	W66P6-A5J2	J62	W66P6-A5J2						
	J67	W66P6-A5J7	60556	W66P6-A5J2	J62	W66P6-A5J2						
	J68	W66P6-A5J8	60556	W66P6-A5J2	J62	W66P6-A5J2						
	J69	W66P6-A5J9	60556	W66P6-A5J2	J62	W66P6-A5J2						
	J70	W66P6-A5J10	60556	W66P6-A5J2	J62	W66P6-A5J2						

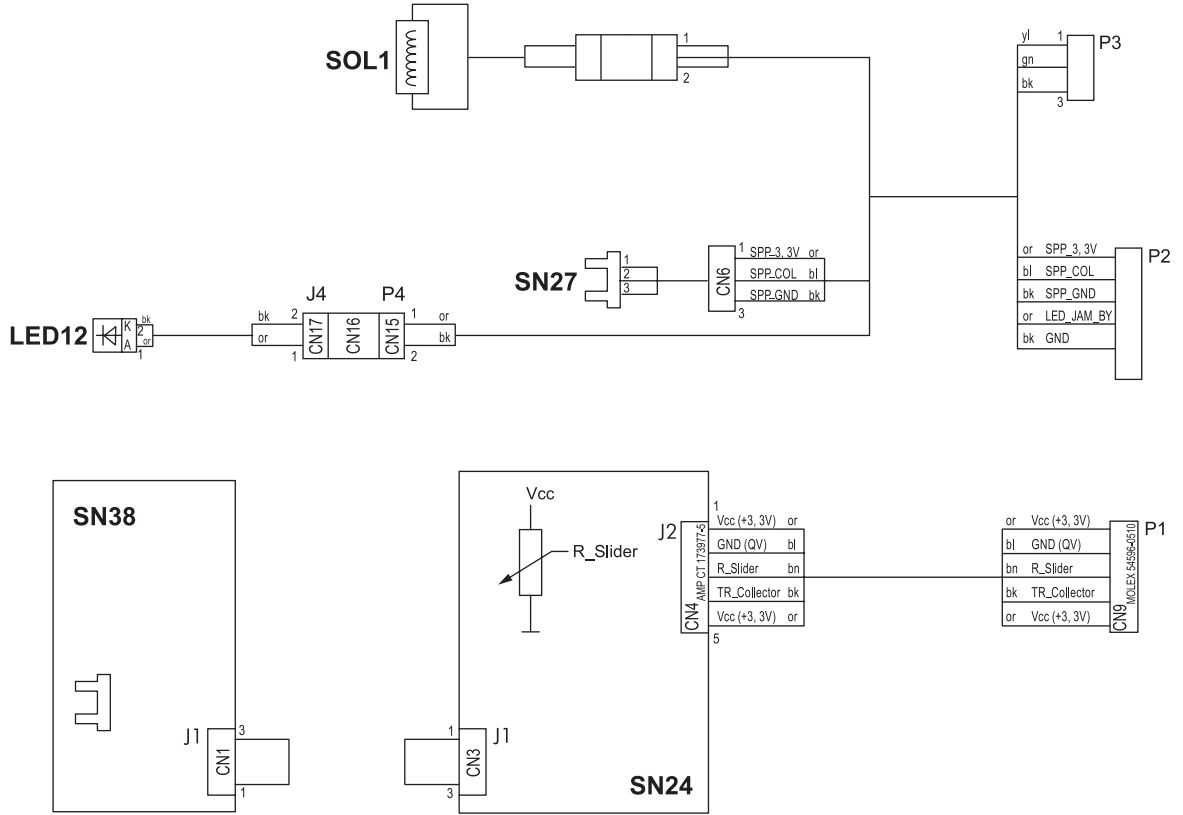
ADF wiring diagram

Figure B-3 ADF wiring diagram



Tray 1 wiring diagram

Figure B-4 Tray 1 wiring diagram

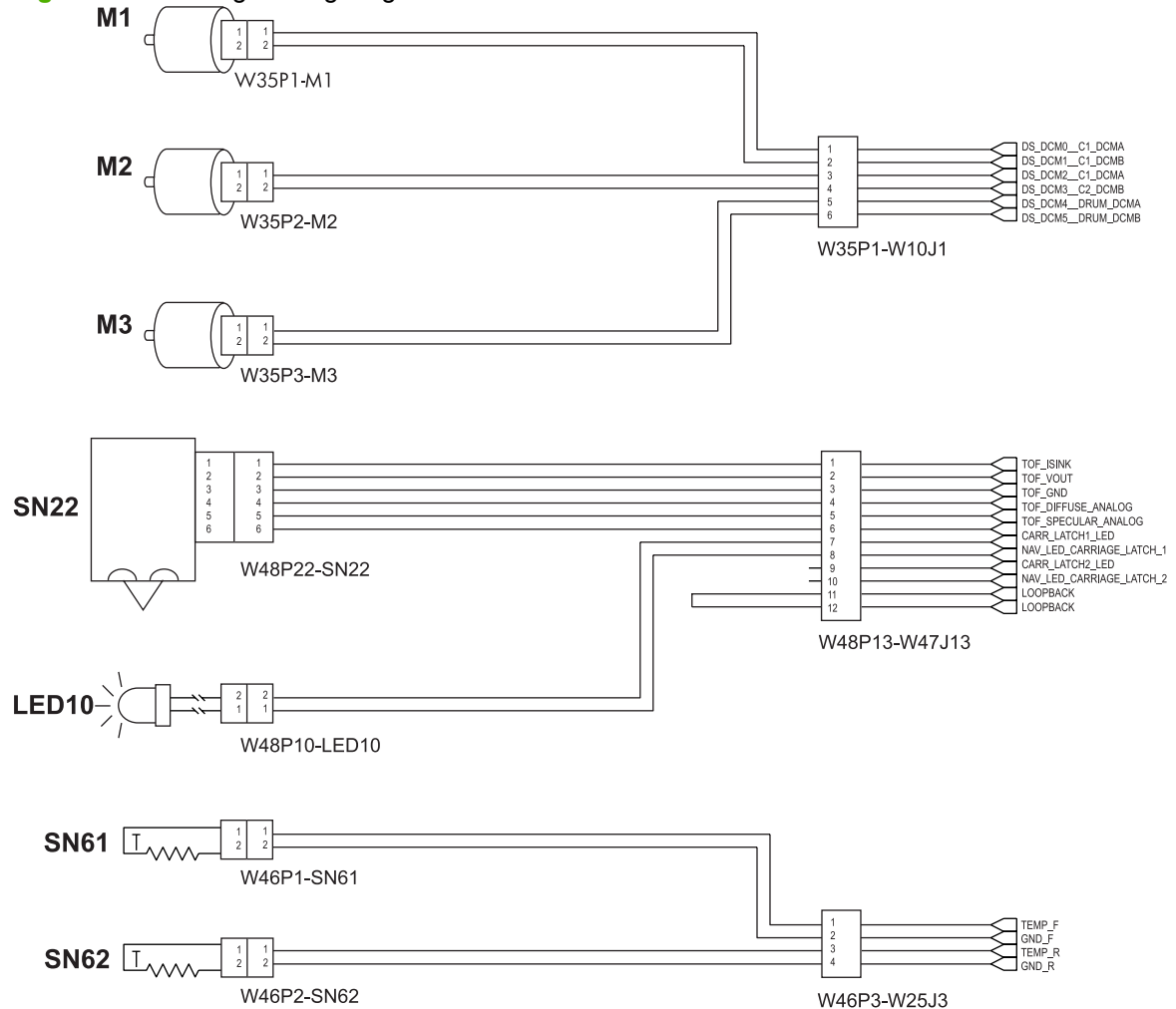


Carriage

- [Carriage wiring diagram](#)
- [Carriage encoder diagram](#)
- [Carriage pocket PCA diagram](#)
- [Carriage PSU PCA \(A7\) diagram](#)

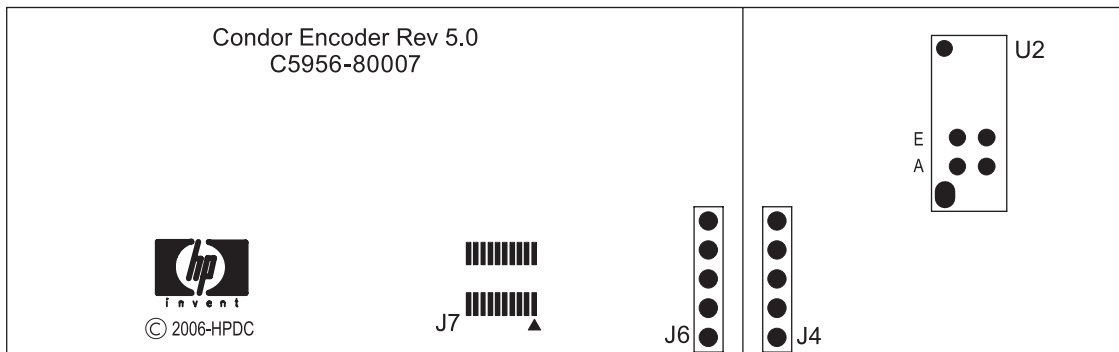
Carriage wiring diagram

Figure B-5 Carriage wiring diagram



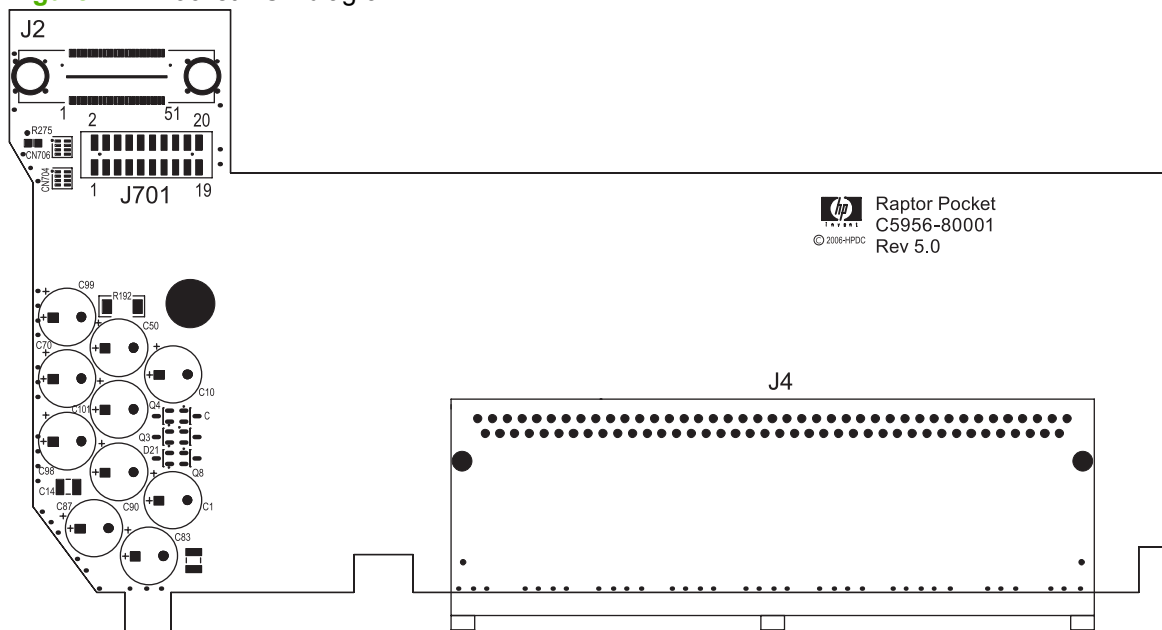
Carriage encoder diagram

Figure B-6 Carriage encoder diagram



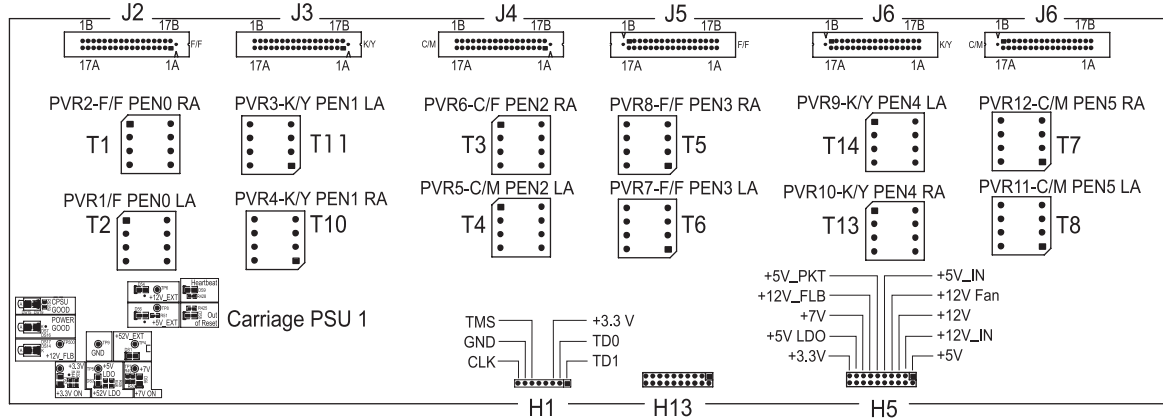
Carriage pocket PCA diagram

Figure B-7 Pocket PCA diagram



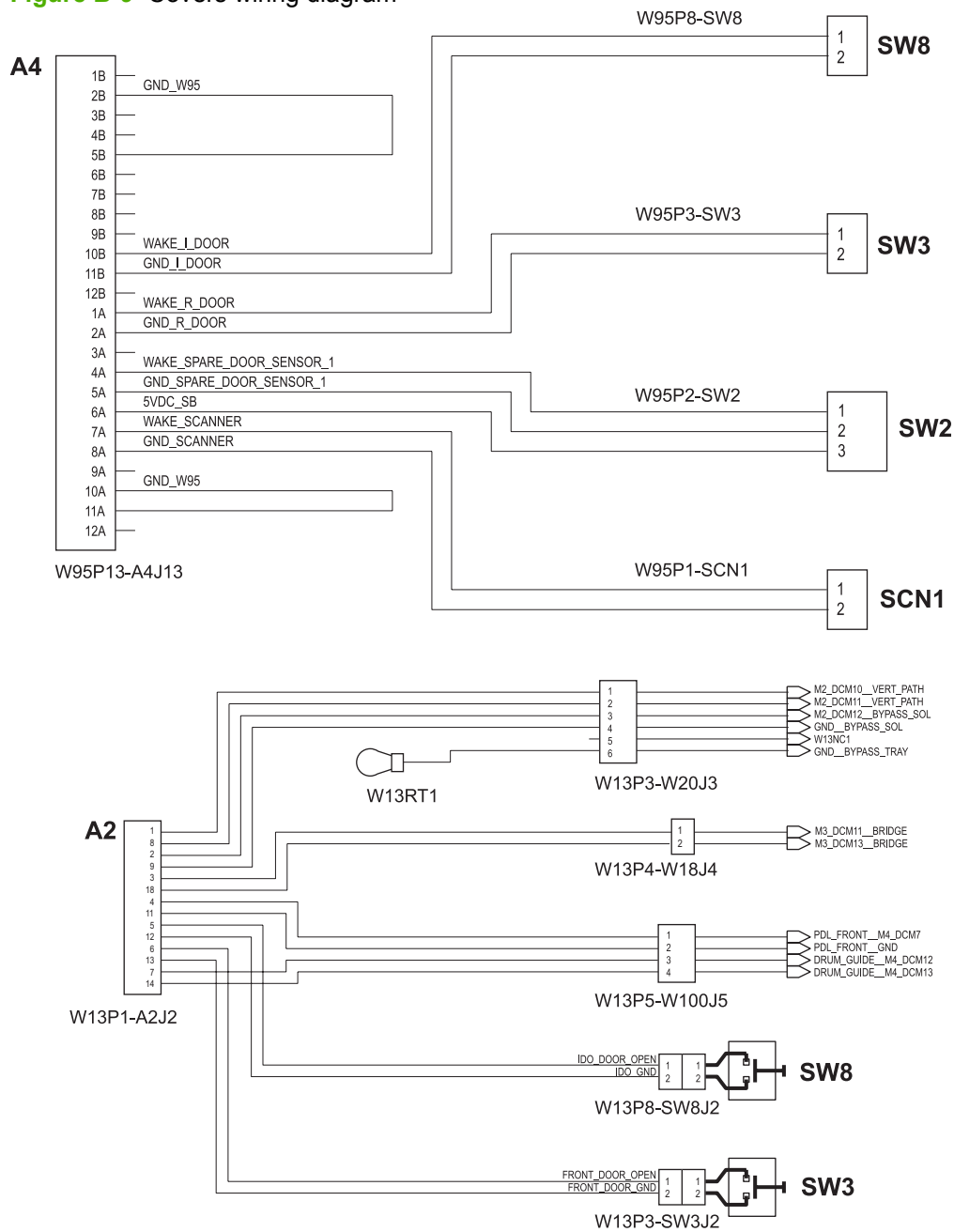
Carriage PSU PCA (A7) diagram

Figure B-8 Carriage PSU PCA (A7) diagram



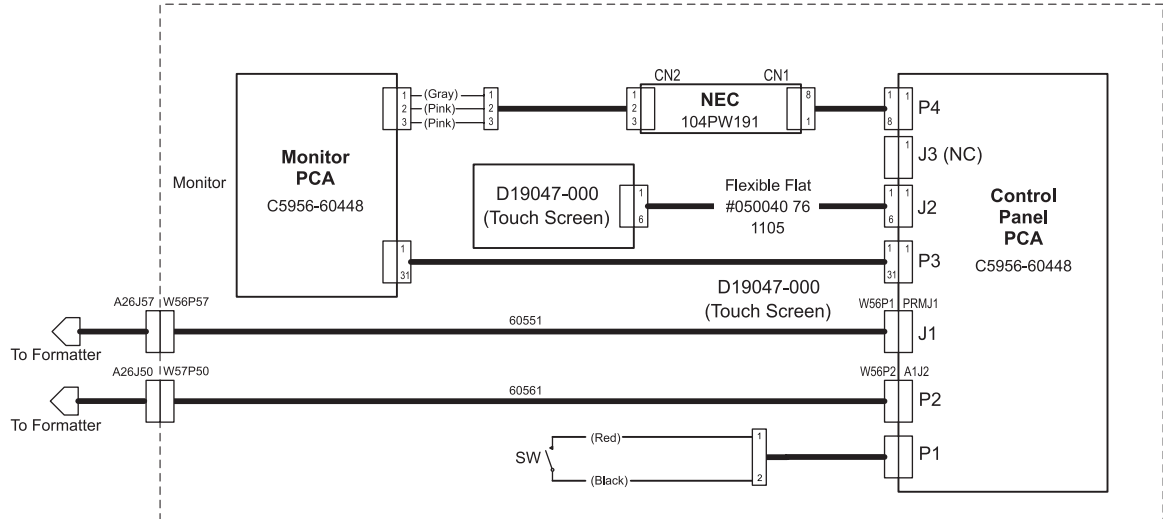
Covers wiring diagram

Figure B-9 Covers wiring diagram



Control panel wiring diagram

Figure B-10 Control panel wiring diagram

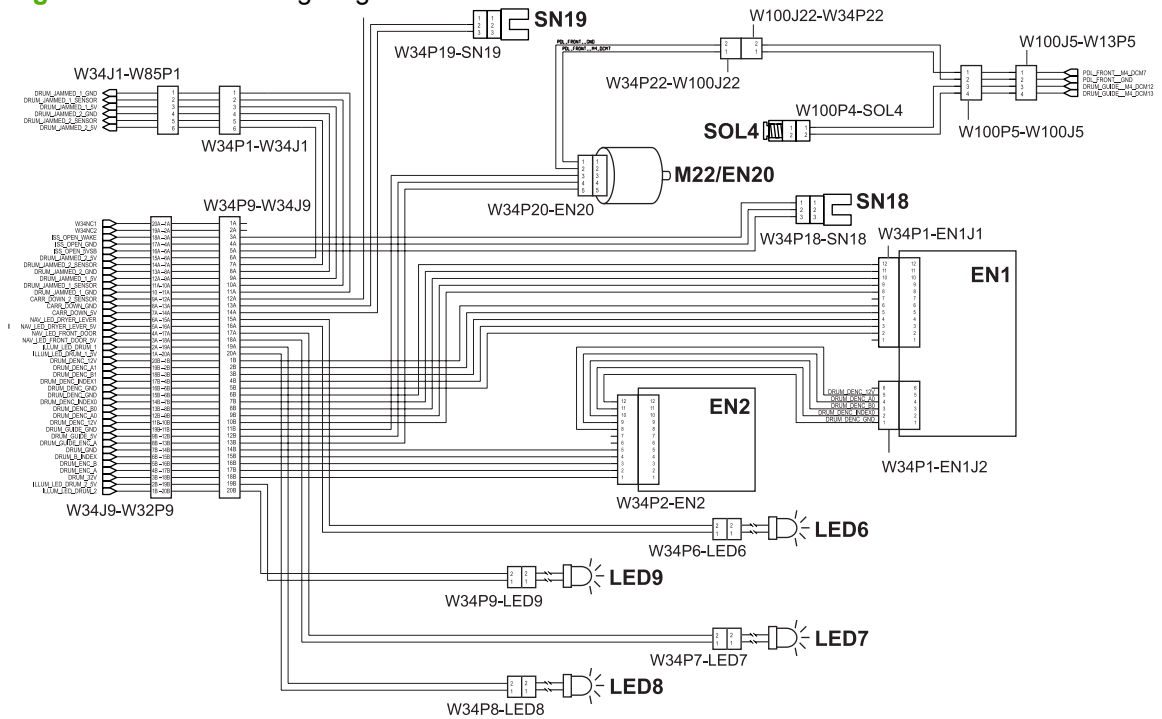


Drum

- [Drum wiring diagram](#)
- [Drum sensors wiring diagram](#)
- [Drum encoder PCA diagram](#)

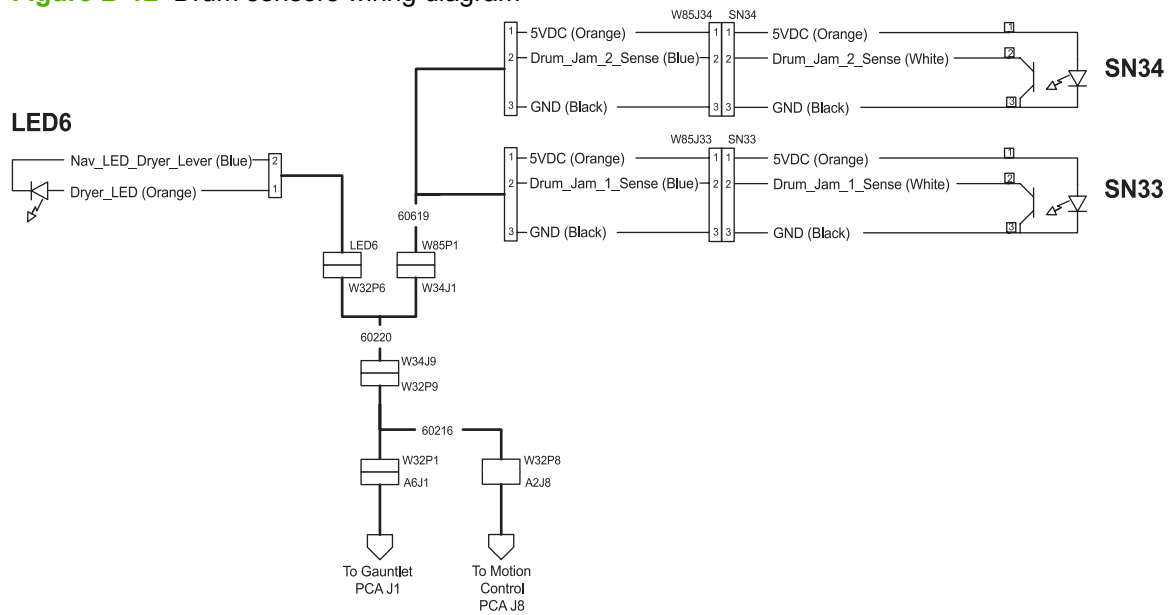
Drum wiring diagram

Figure B-11 Drum wiring diagram



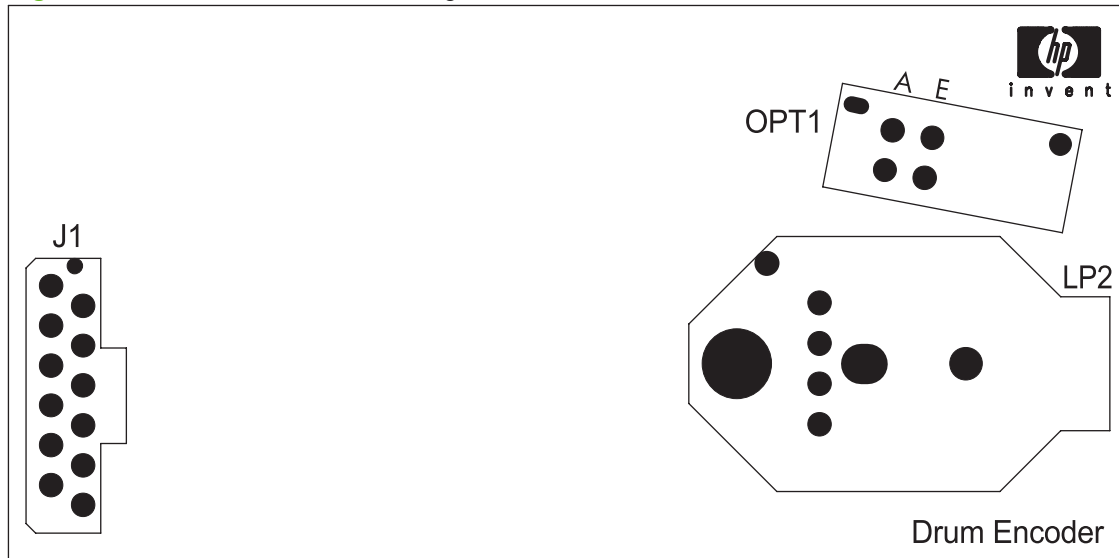
Drum sensors wiring diagram

Figure B-12 Drum sensors wiring diagram



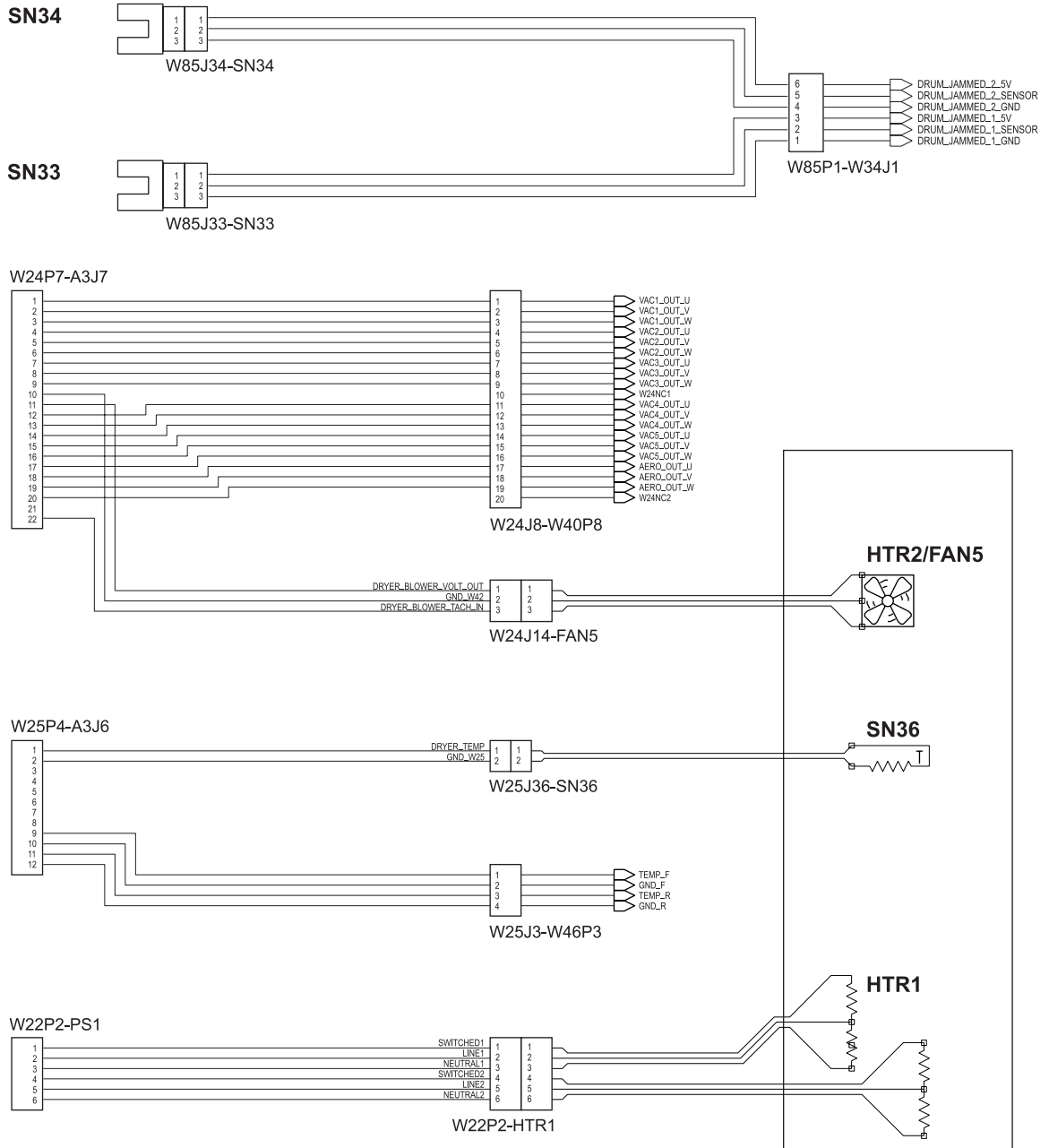
Drum encoder PCA diagram

Figure B-13 Drum encoder PCA diagram



Dryer wiring diagram

Figure B-14 Dryer wiring diagram

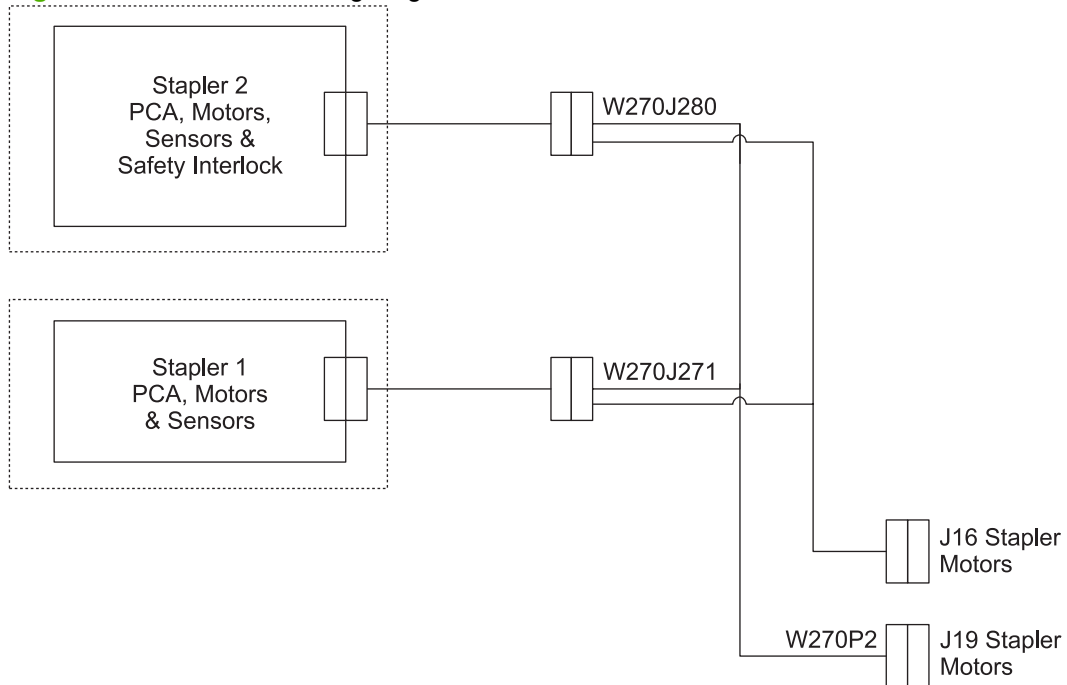


HP Multi-function Finisher

- [Finisher 1 wiring diagram](#)
- [Finisher 2 wiring diagram](#)
- [Finisher 3 wiring diagram](#)
- [Finisher 4 wiring diagram](#)
- [Finisher 5 wiring diagram](#)
- [Finisher 6 wiring diagram](#)
- [Finisher 7 wiring diagram](#)
- [Finisher 8 wiring diagram](#)
- [Finisher 9 wiring diagram](#)
- [Finisher 10 wiring diagram](#)
- [Finisher Main PCA \(A200\) diagram](#)

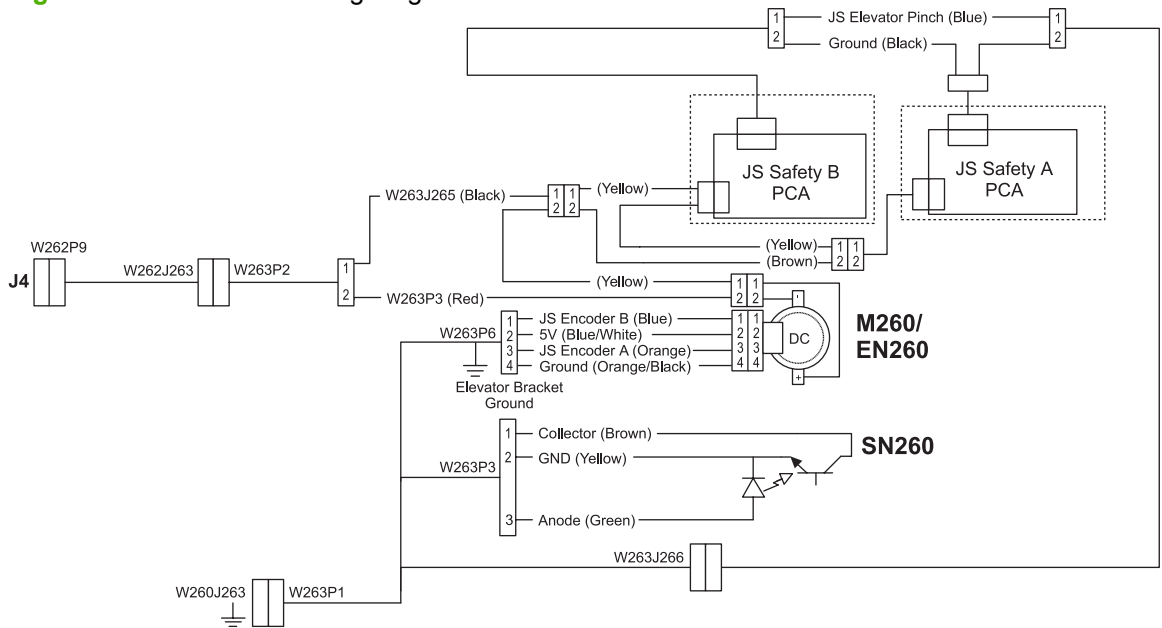
Finisher 1 wiring diagram

Figure B-15 Finisher 1 wiring diagram



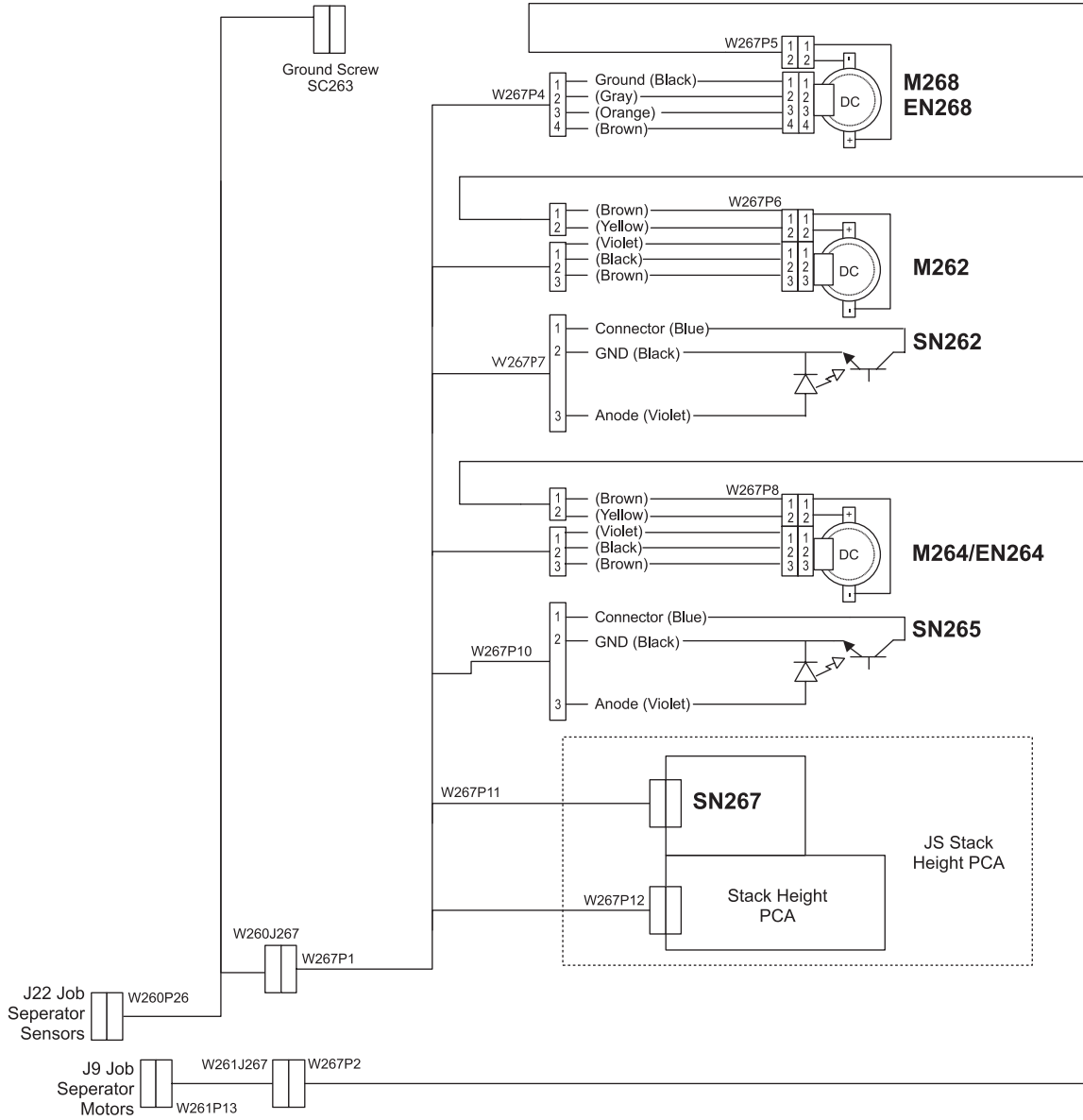
Finisher 2 wiring diagram

Figure B-16 Finisher 2 wiring diagram



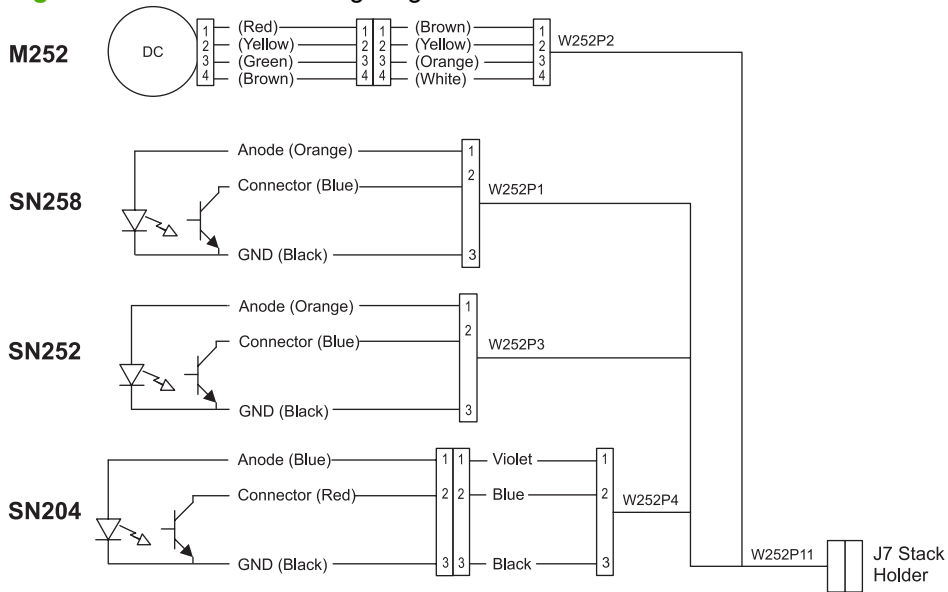
Finisher 3 wiring diagram

Figure B-17 Finisher 3 wiring diagram



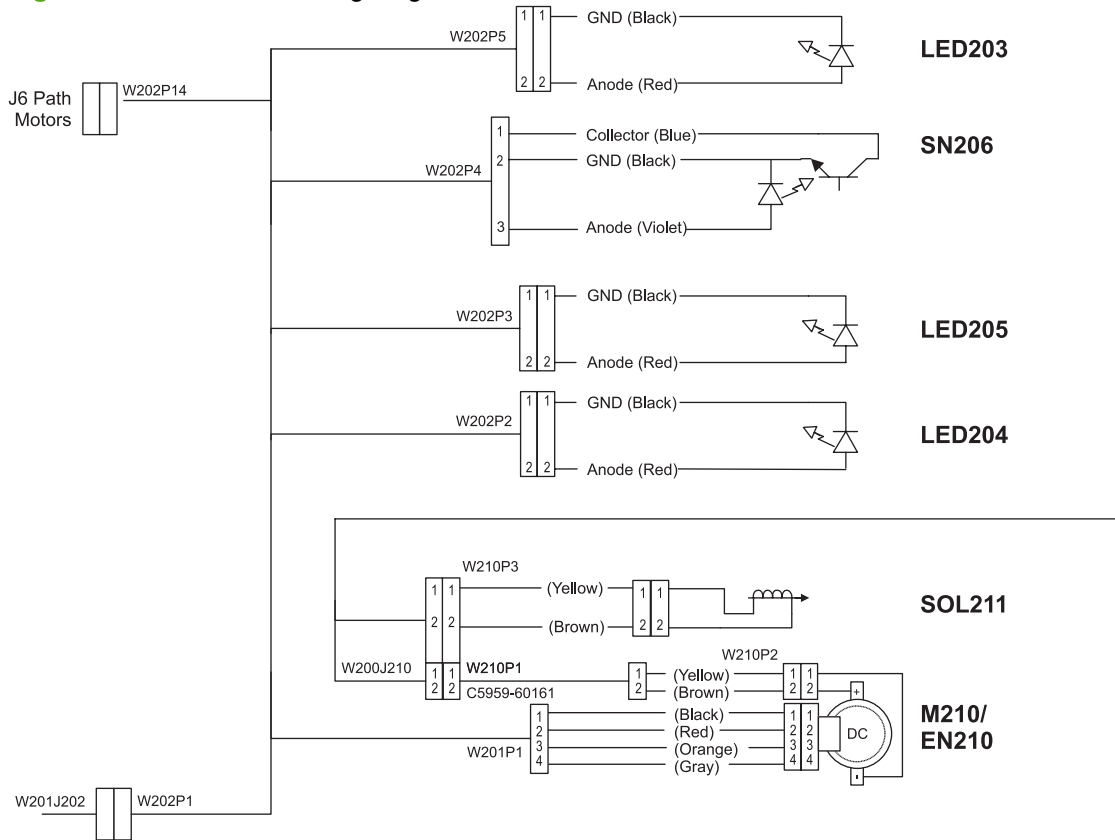
Finisher 4 wiring diagram

Figure B-18 Finisher 4 wiring diagram



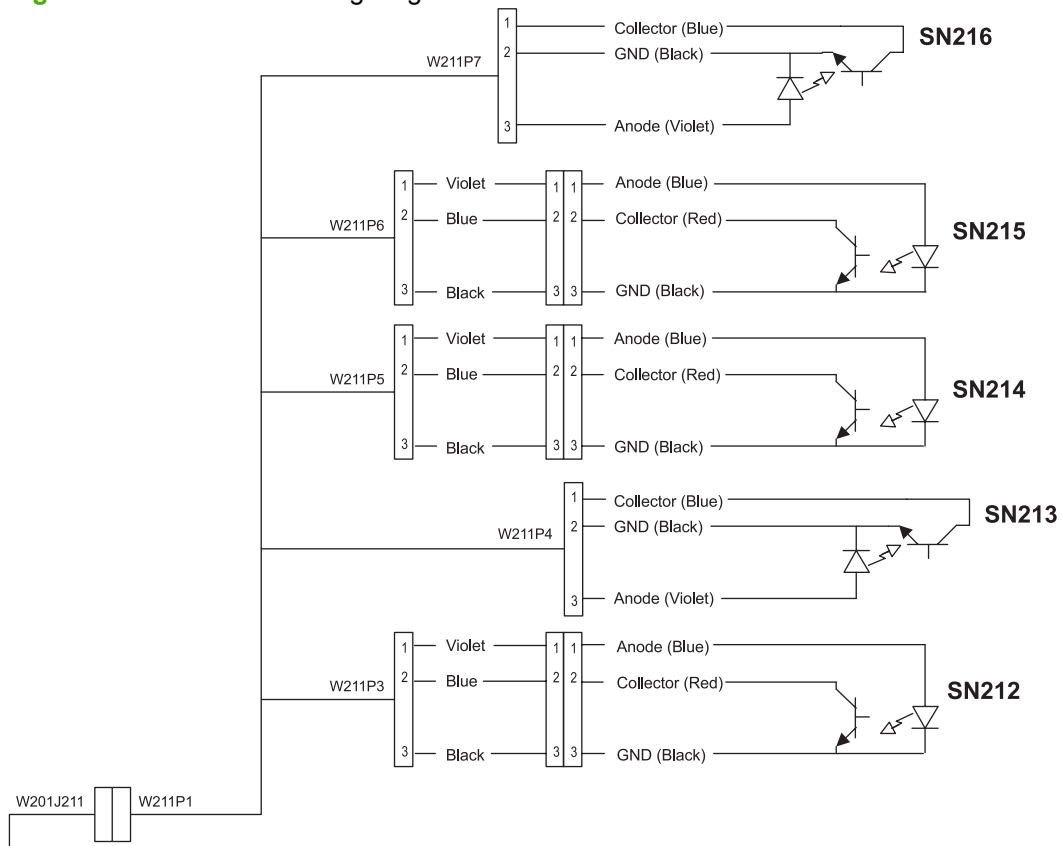
Finisher 5 wiring diagram

Figure B-19 Finisher 5 wiring diagram



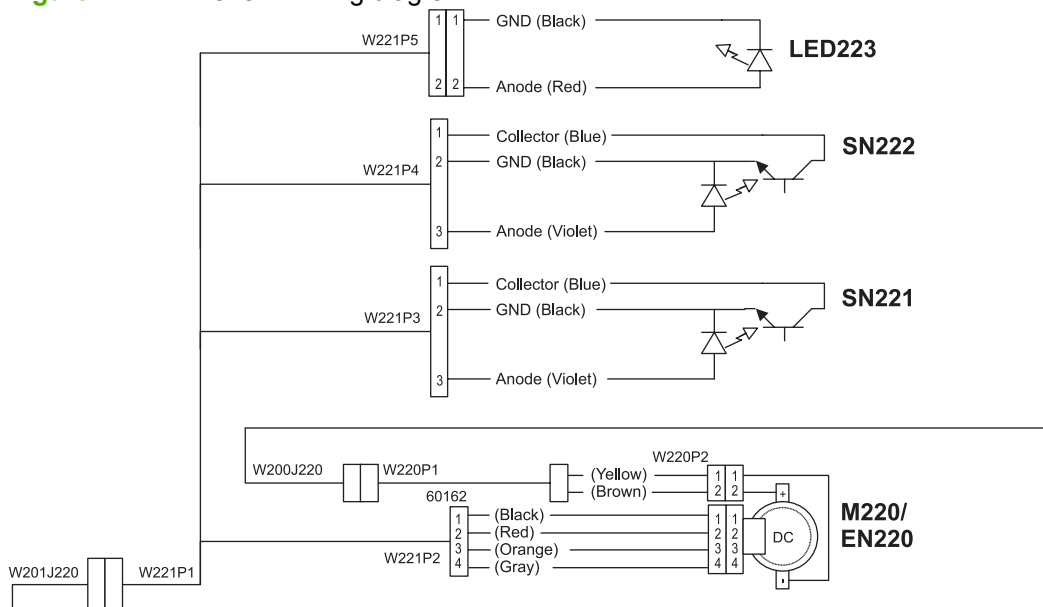
Finisher 6 wiring diagram

Figure B-20 Finisher 6 wiring diagram



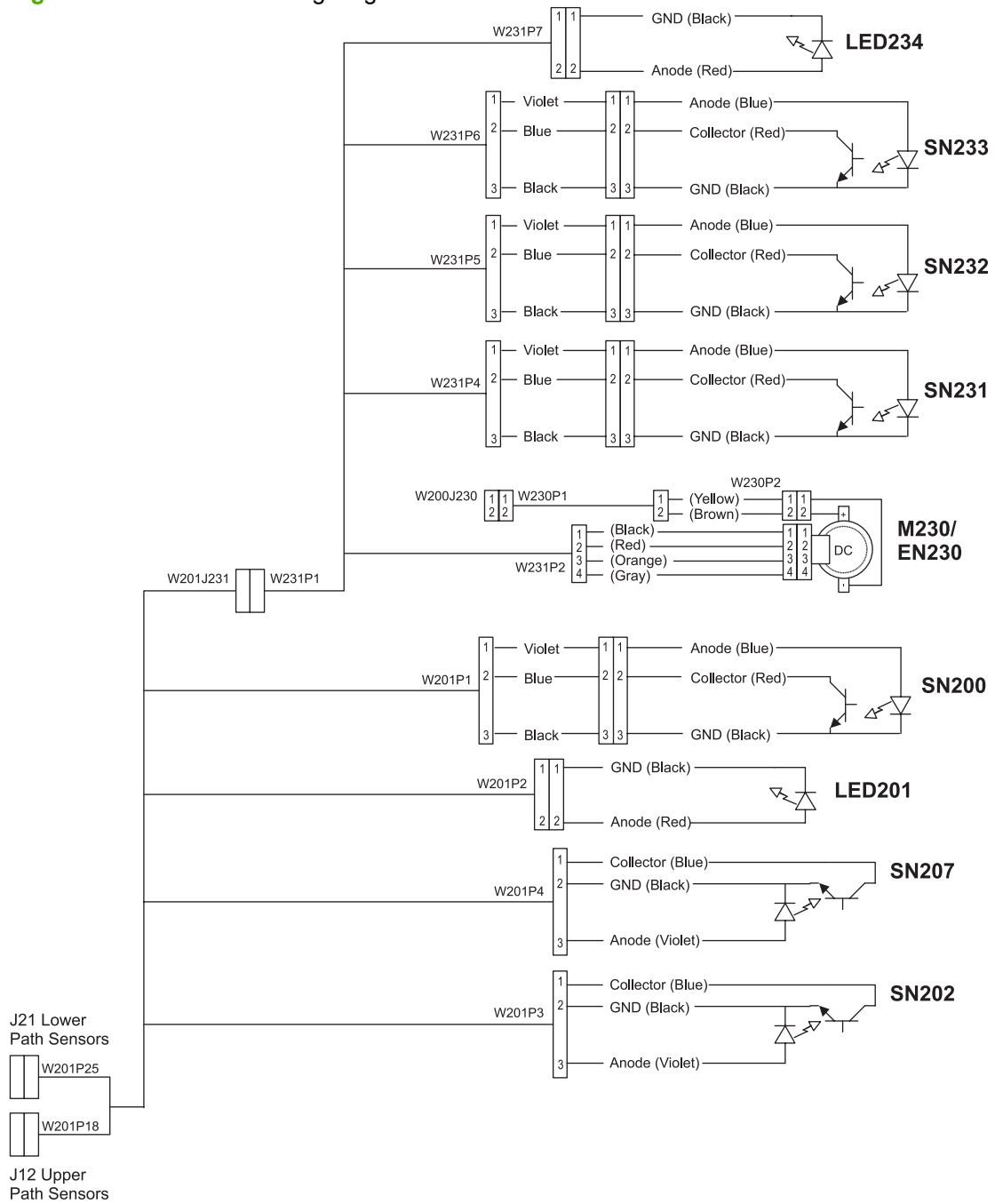
Finisher 7 wiring diagram

Figure B-21 Finisher 7 wiring diagram



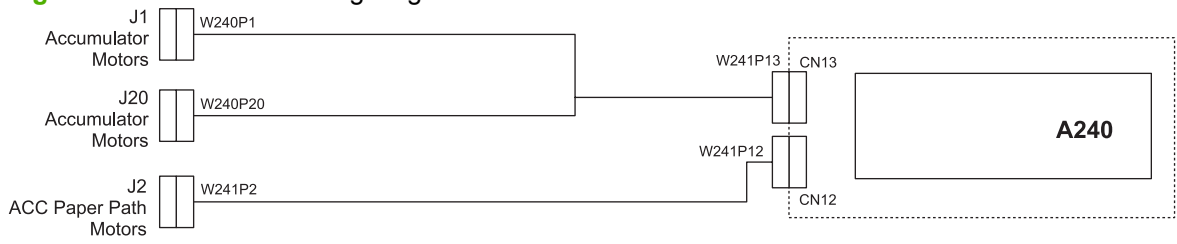
Finisher 8 wiring diagram

Figure B-22 Finisher 8 wiring diagram



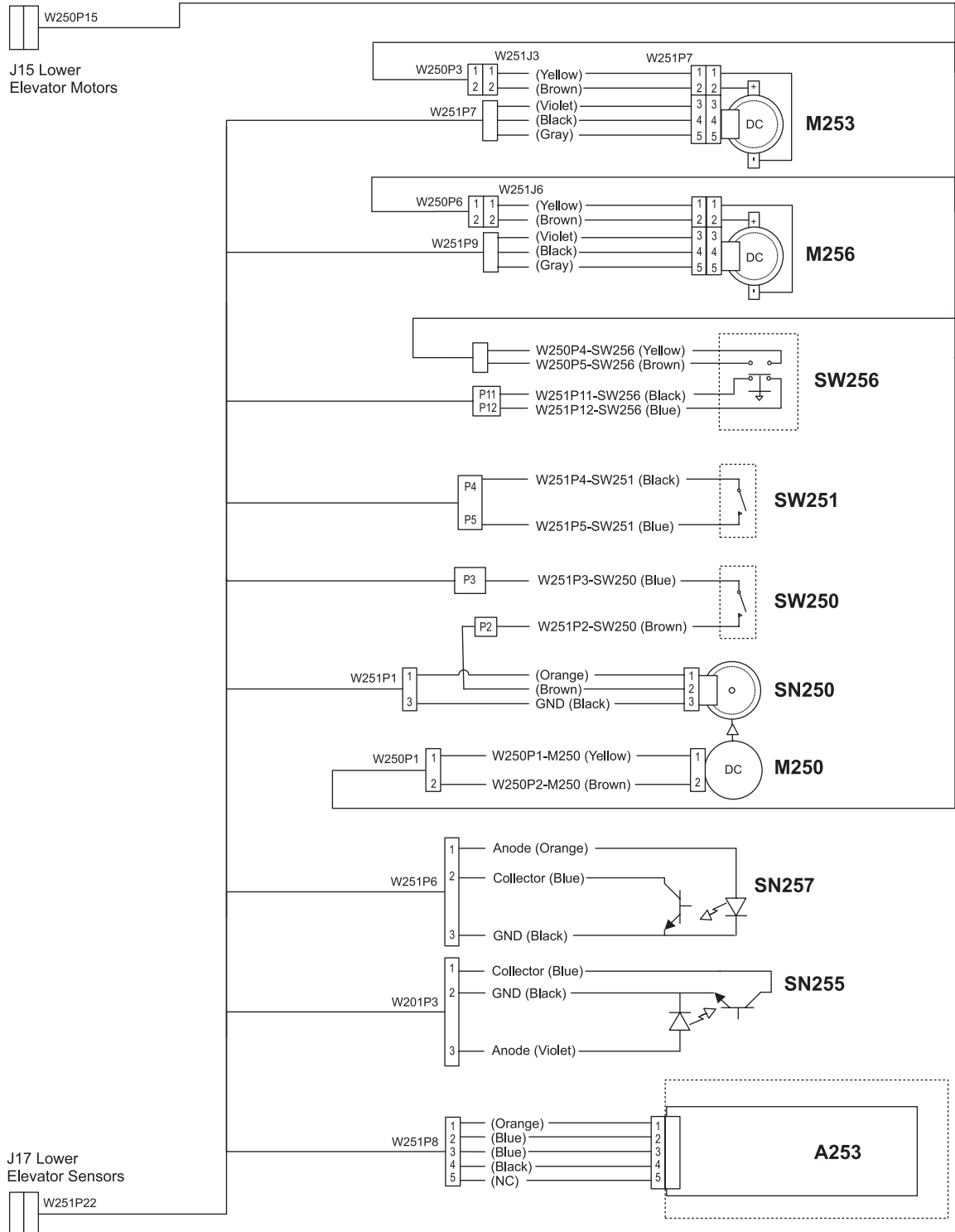
Finisher 9 wiring diagram

Figure B-23 Finisher 9 wiring diagram



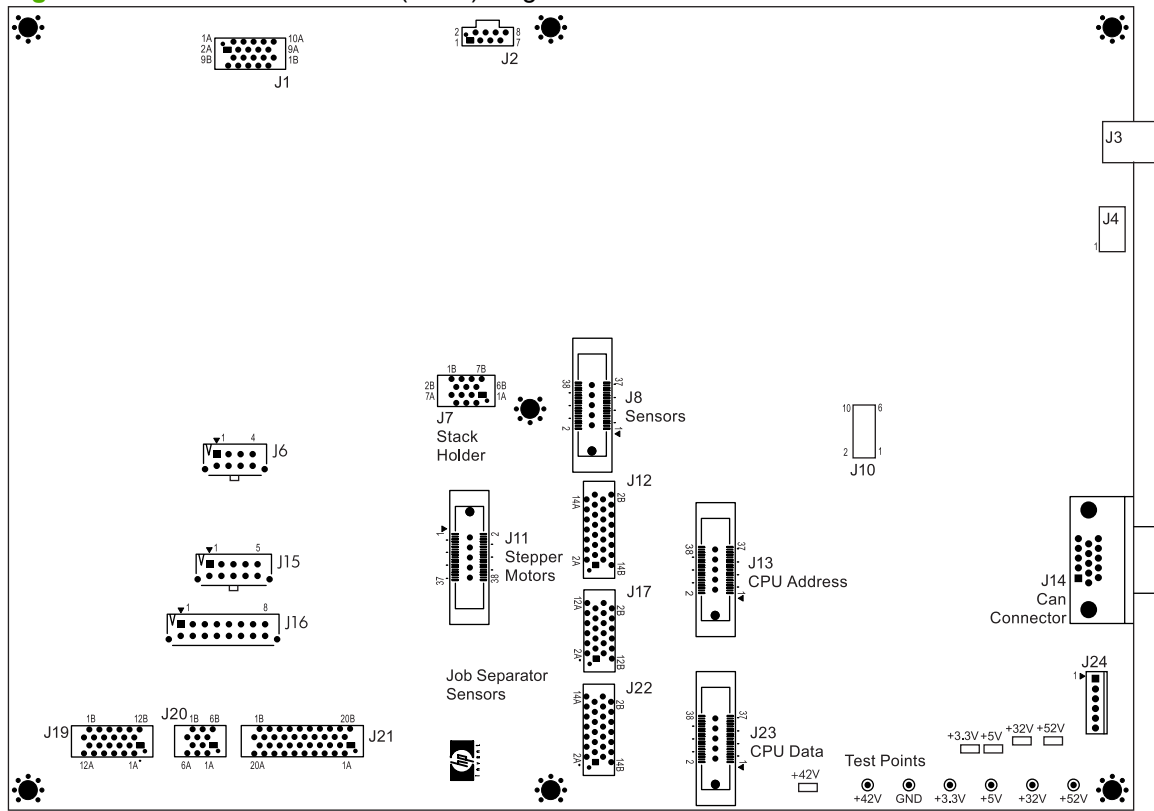
Finisher 10 wiring diagram

Figure B-24 Finisher 10 wiring diagram



Finisher Main PCA (A200) diagram

Figure B-25 Finisher Main PCA (A200) diagram

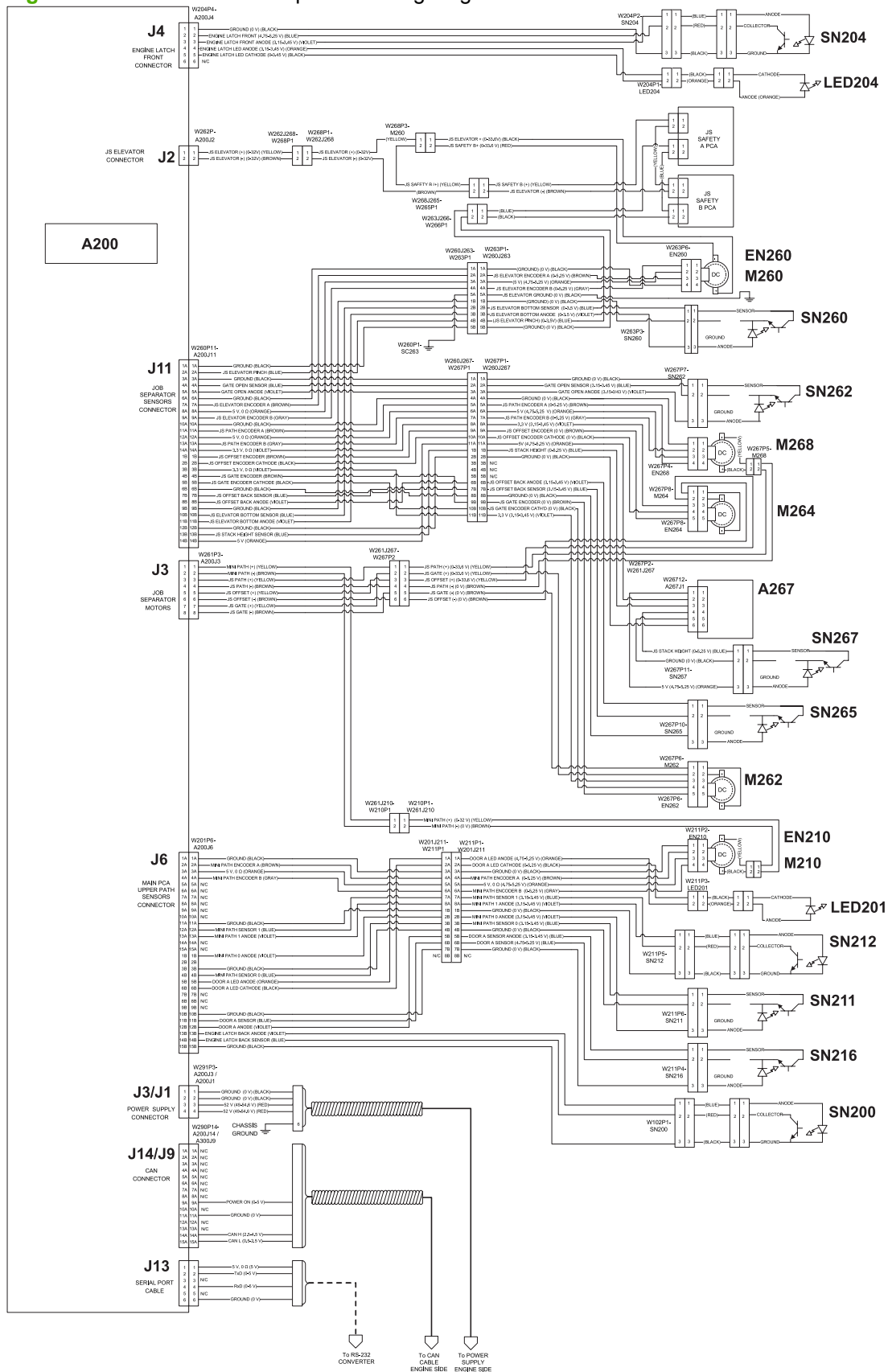


HP 4-Bin Job Separator wiring diagrams

- [HP 4-Bin Job Separator wiring diagram](#)
- [HP 4-Bin Job Separator Main PCA \(A200\)](#)

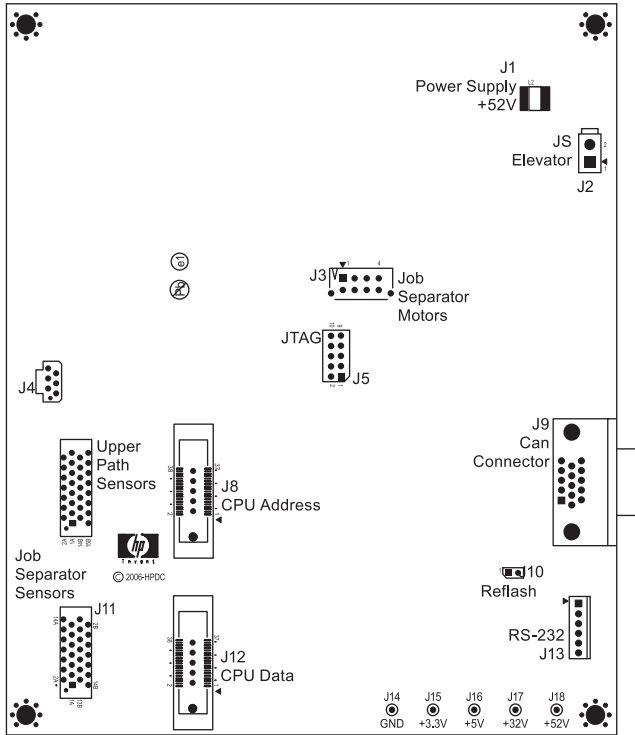
HP 4-Bin Job Separator wiring diagram

Figure B-26 HP 4-Bin Job Separator wiring diagram



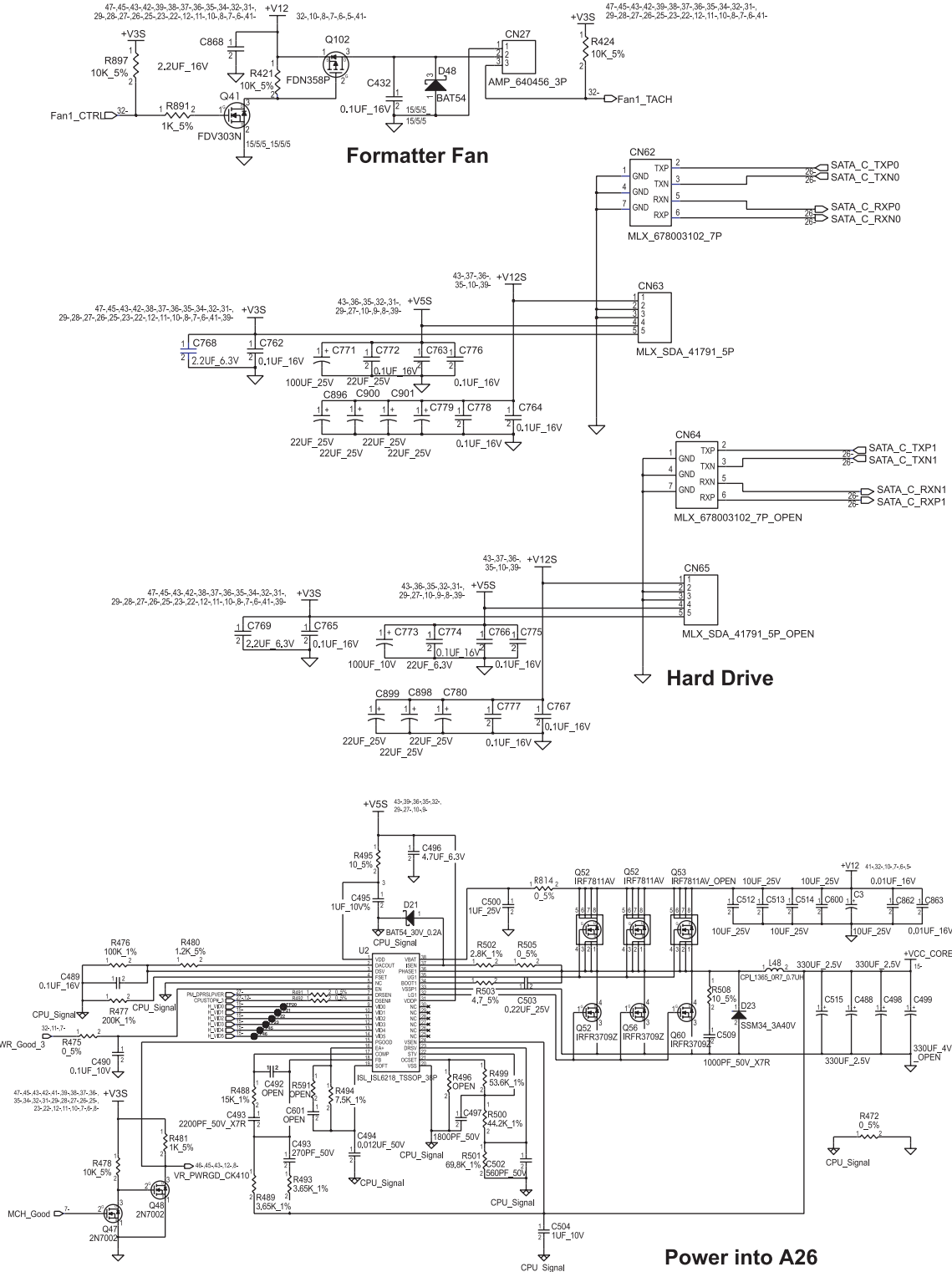
HP 4-Bin Job Separator Main PCA (A200)

Figure B-27 HP 4-Bin Job Separator Main PCA (A200)



Formatter wiring diagram

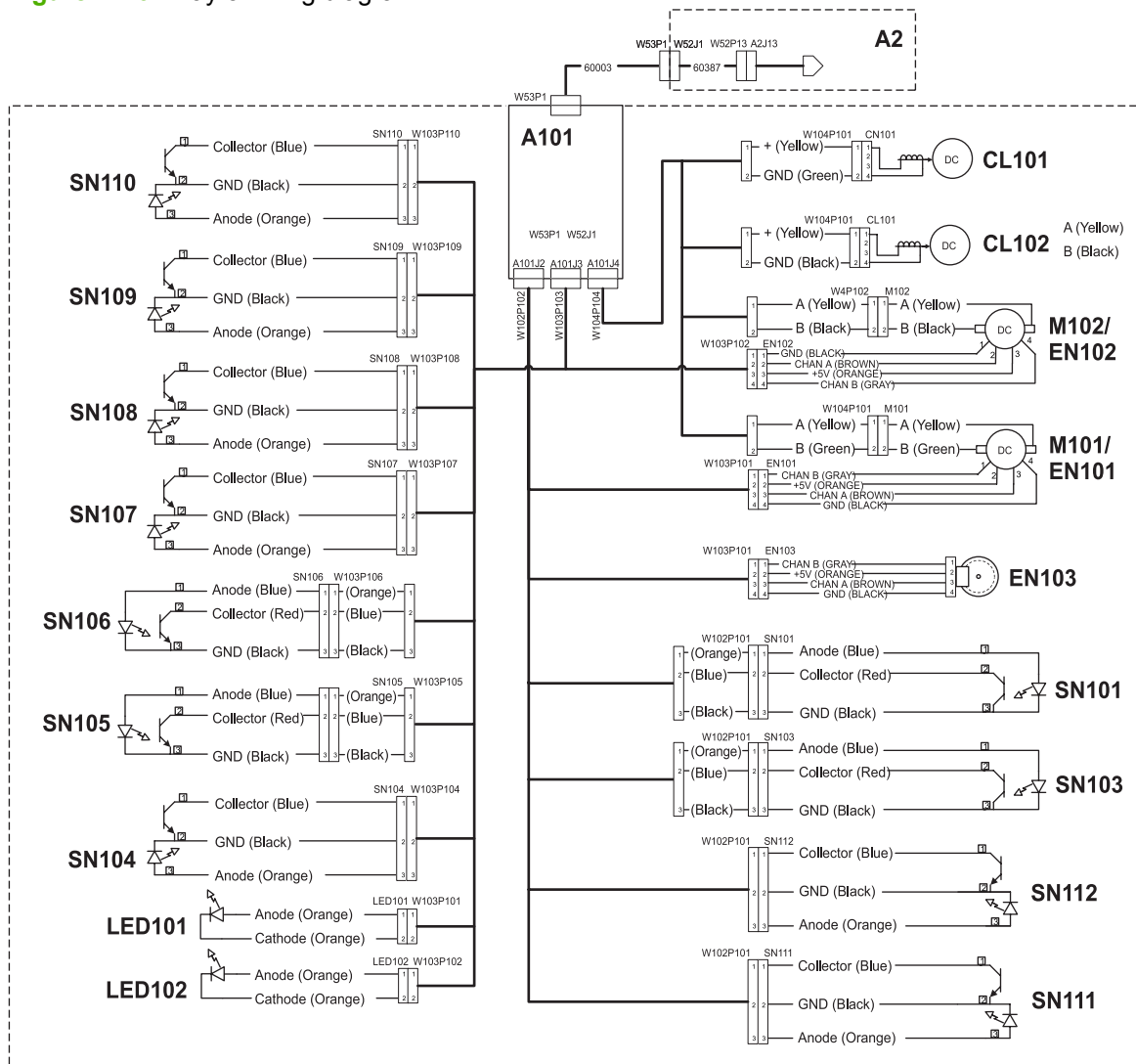
Figure B-28 Formatter wiring diagram



Tray 5

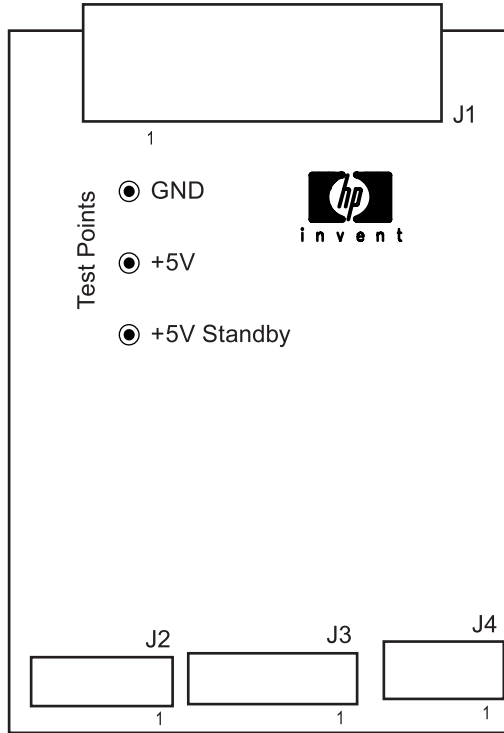
Tray 5 wiring diagram

Figure B-29 Tray 5 wiring diagram



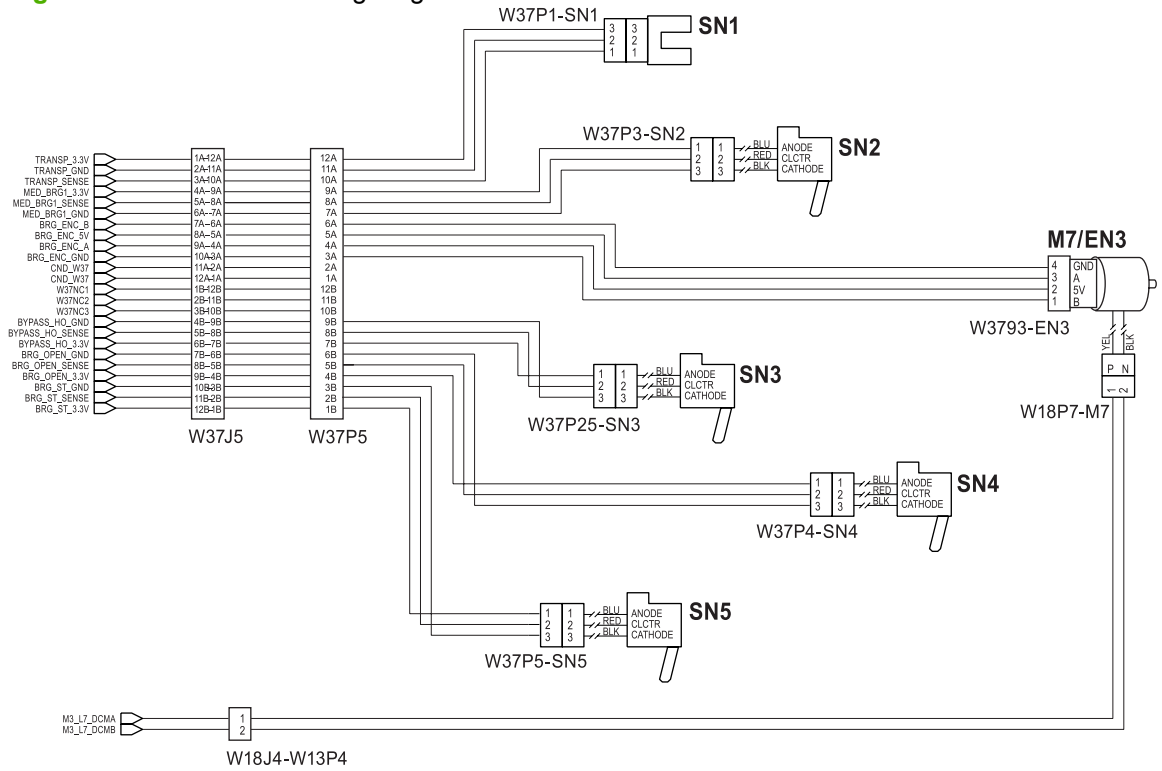
Tray 5 distribution PCA diagram

Figure B-30 Tray 5 Distribution PCA diagram



Horizontal wiring diagram

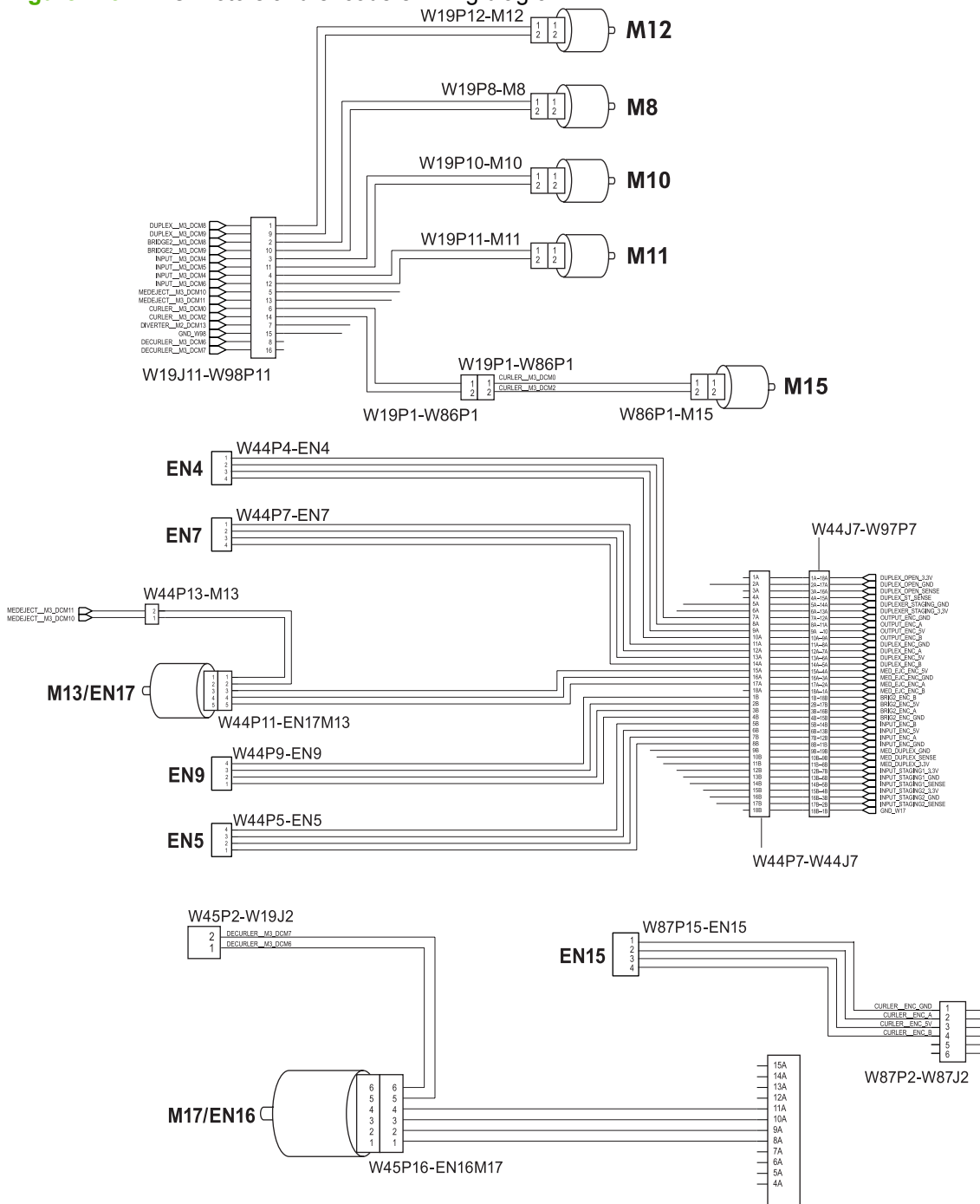
Figure B-31 Horizontal wiring diagram



IDO

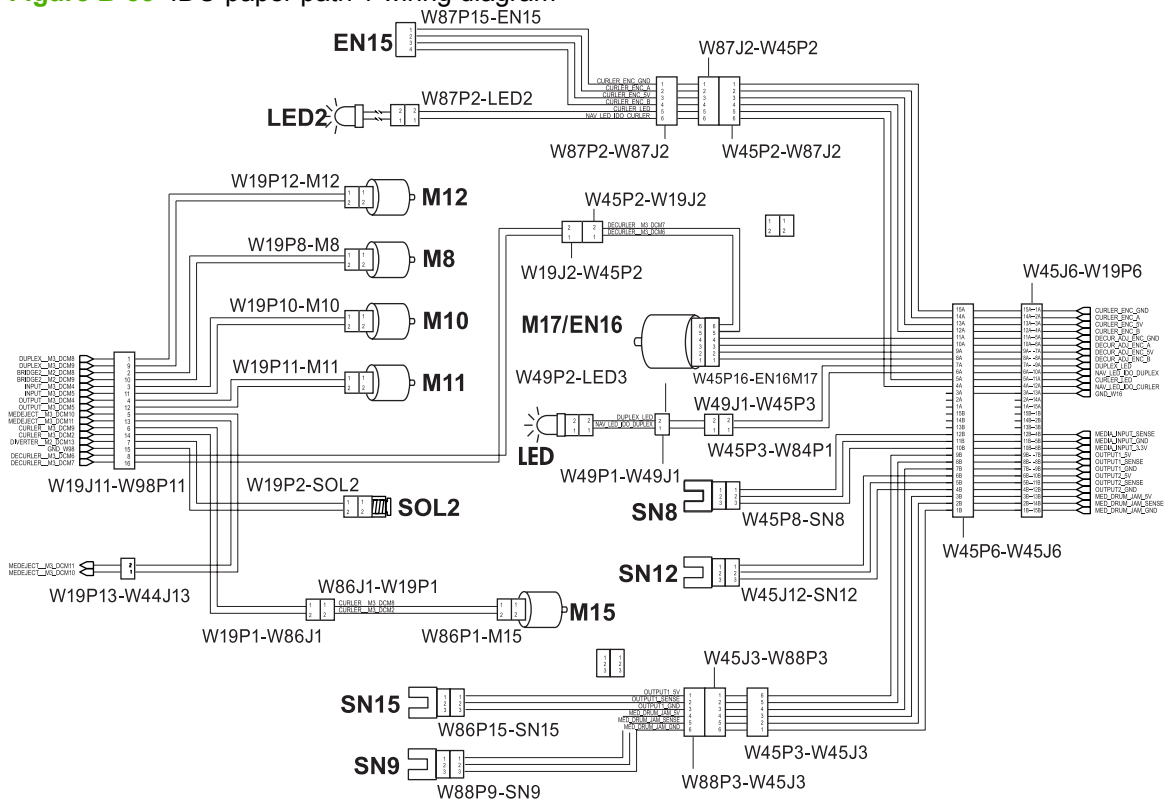
IDO motors and encoders wiring diagram

Figure B-32 IDO motors and encoders wiring diagram



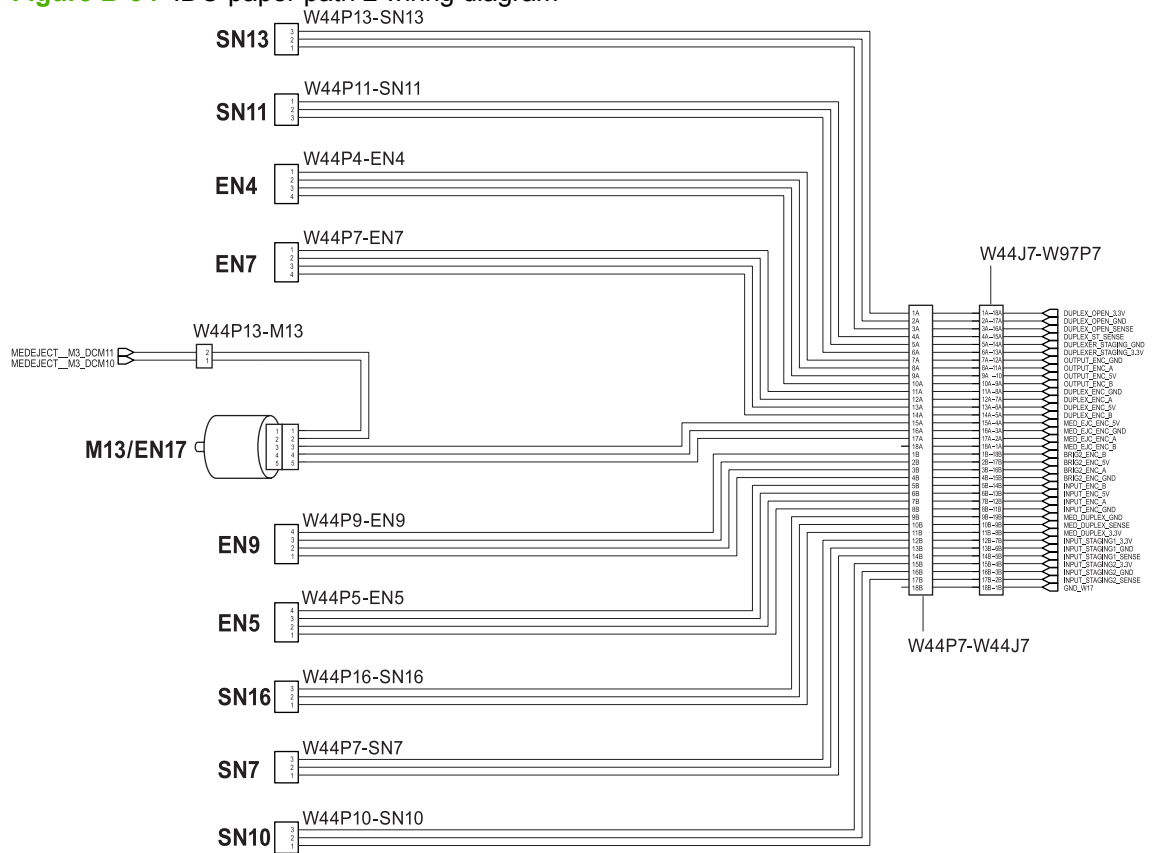
IDO paper path 1 wiring diagram

Figure B-33 IDO paper path 1 wiring diagram



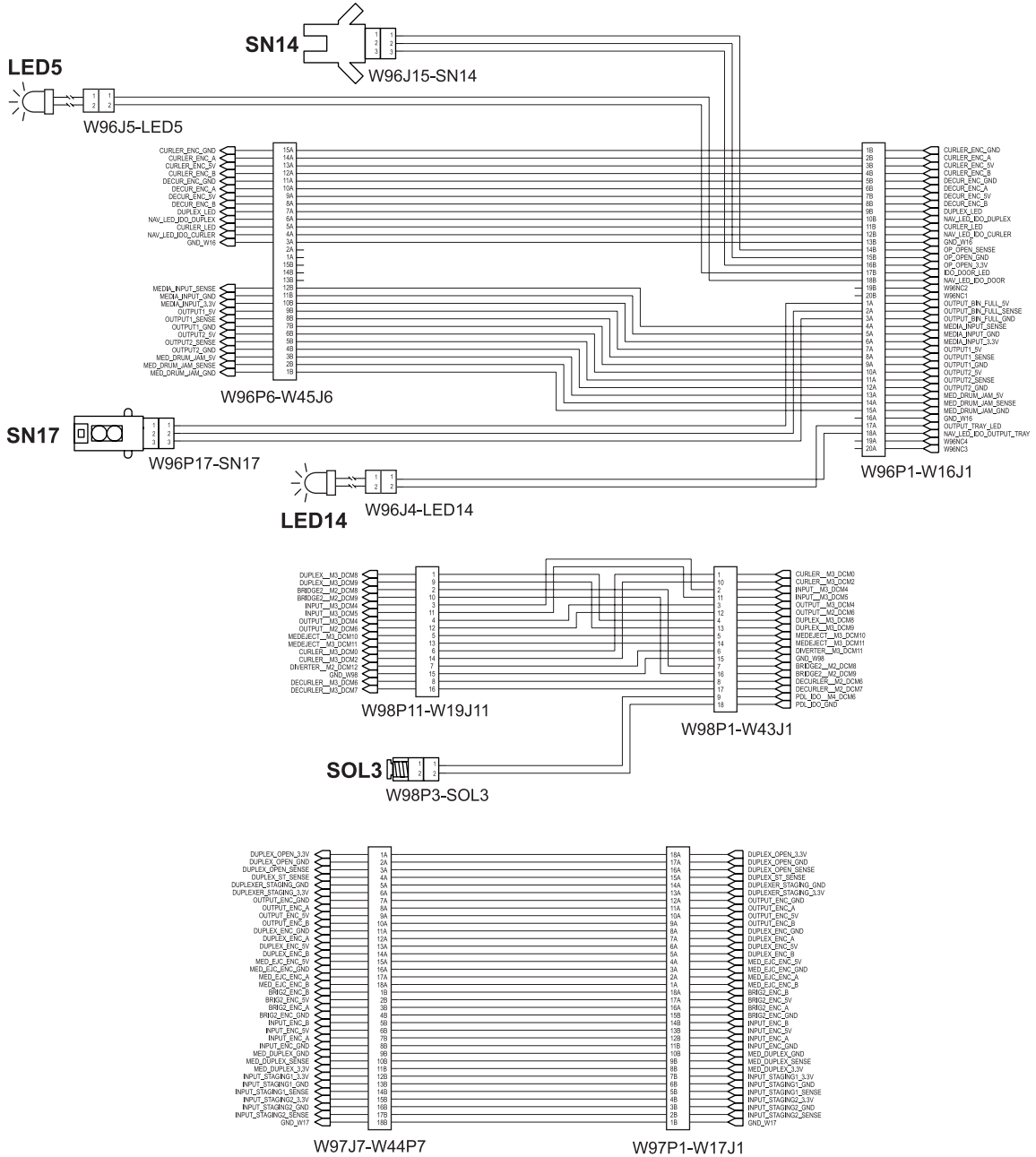
IDO paper path 2 wiring diagram

Figure B-34 IDO paper path 2 wiring diagram



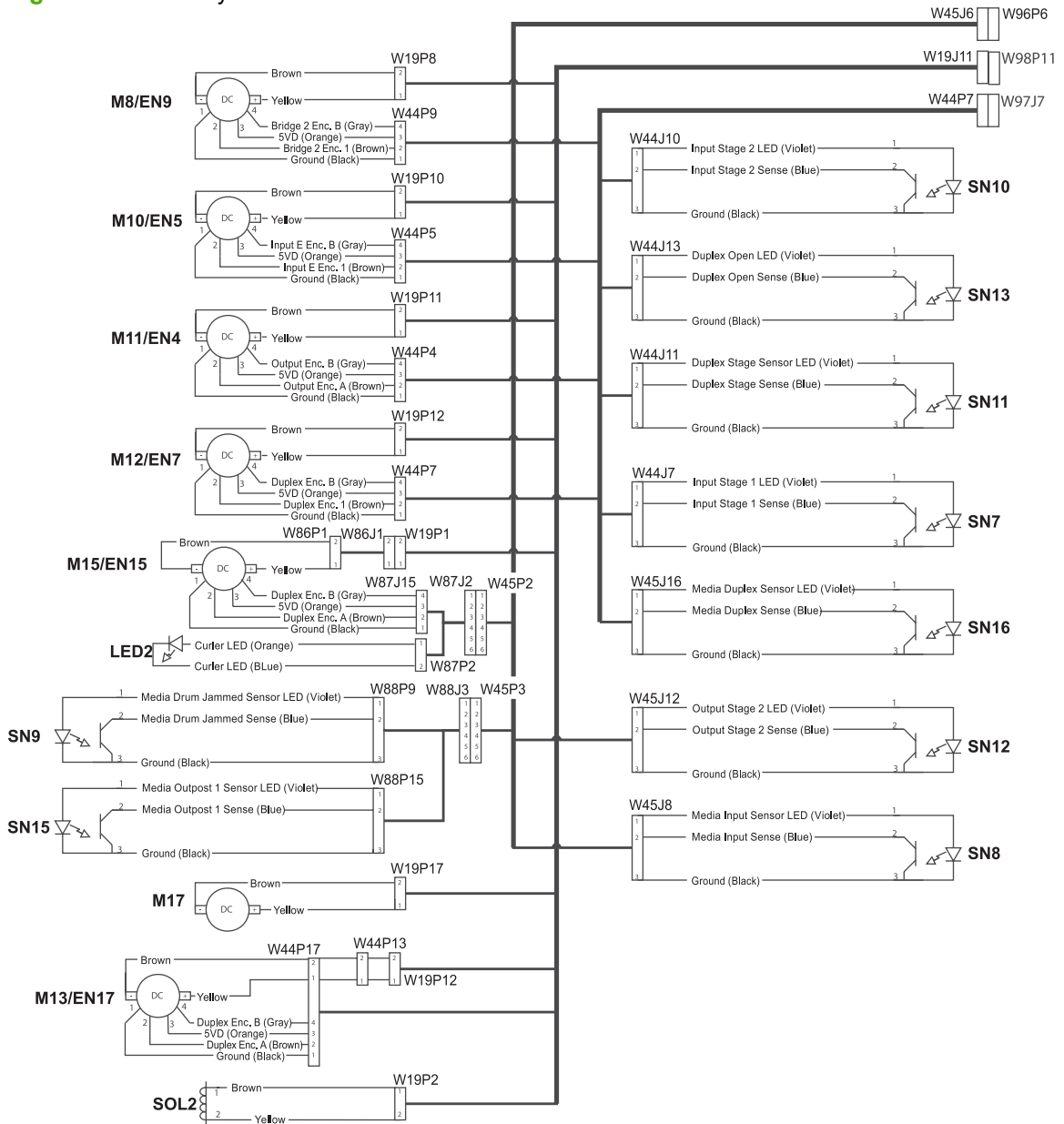
IDO H-bar wiring diagram

Figure B-35 IDO H-bar wiring diagram



IDO system wiring diagram

Figure B-36 IDO system

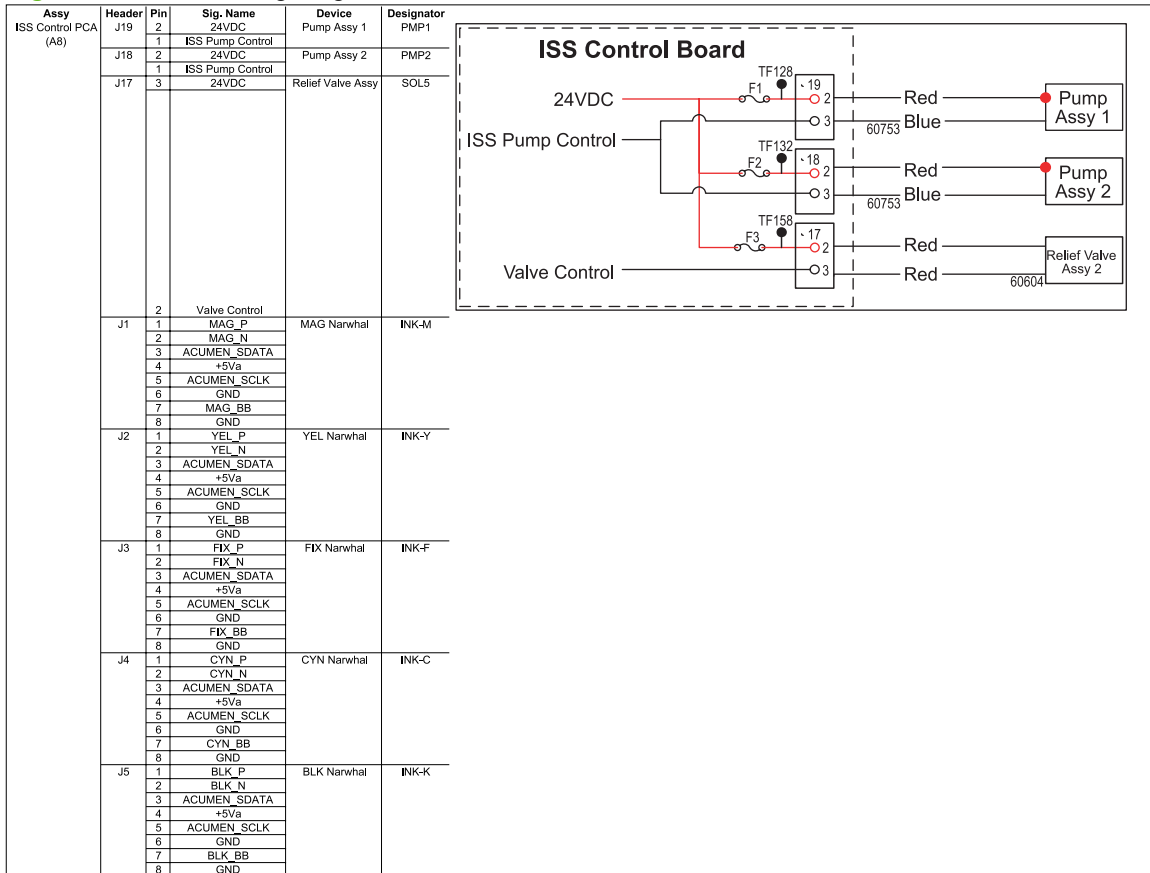


IDS

- [IDS wiring diagram](#)
- [ISS PCA \(A8\) diagram](#)

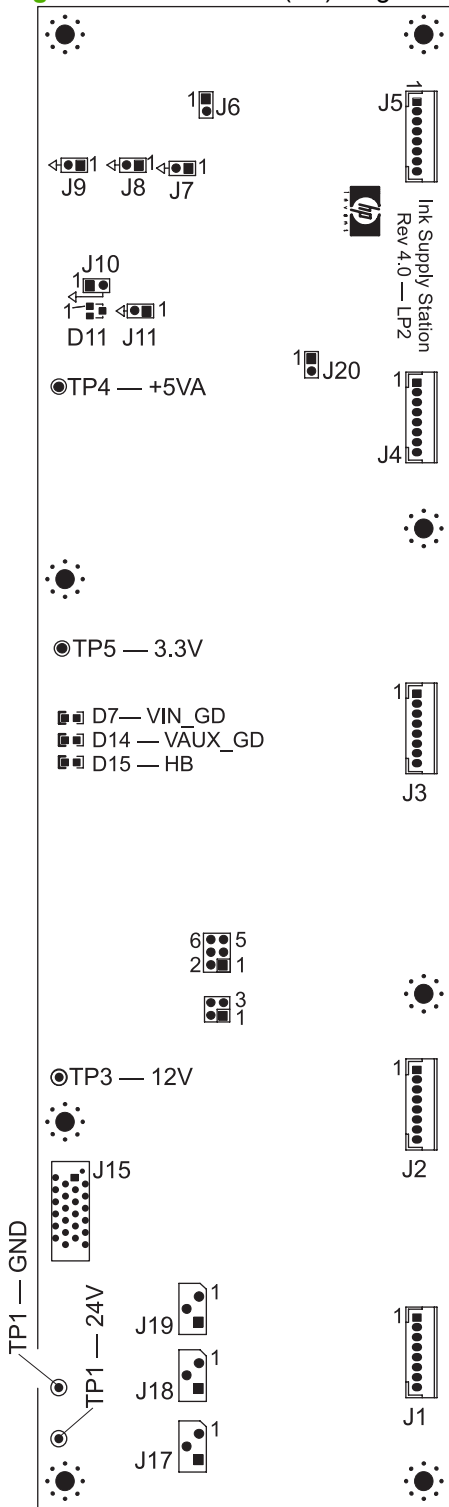
IDS wiring diagram

Figure B-37 IDS wiring diagram



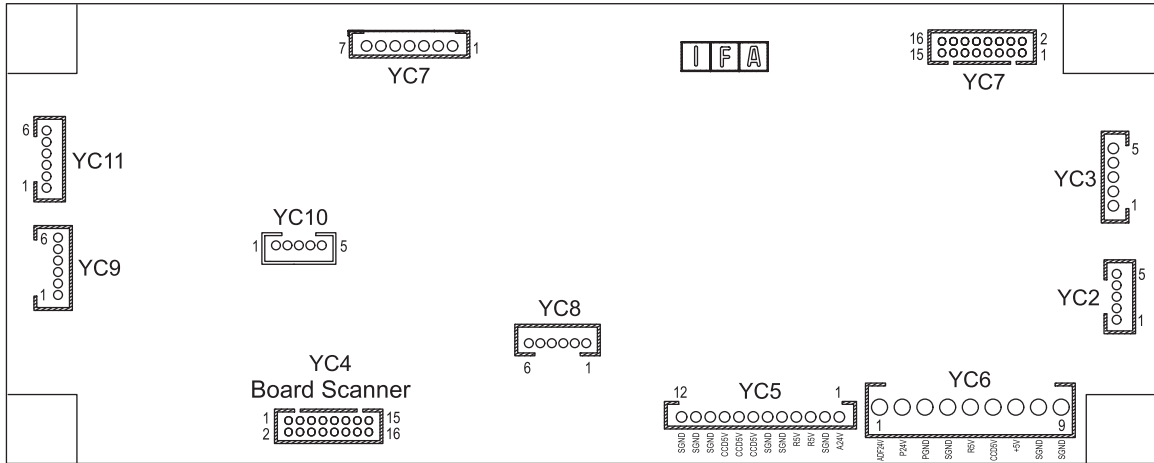
ISS PCA (A8) diagram

Figure B-38 ISS PCA (A8) diagram



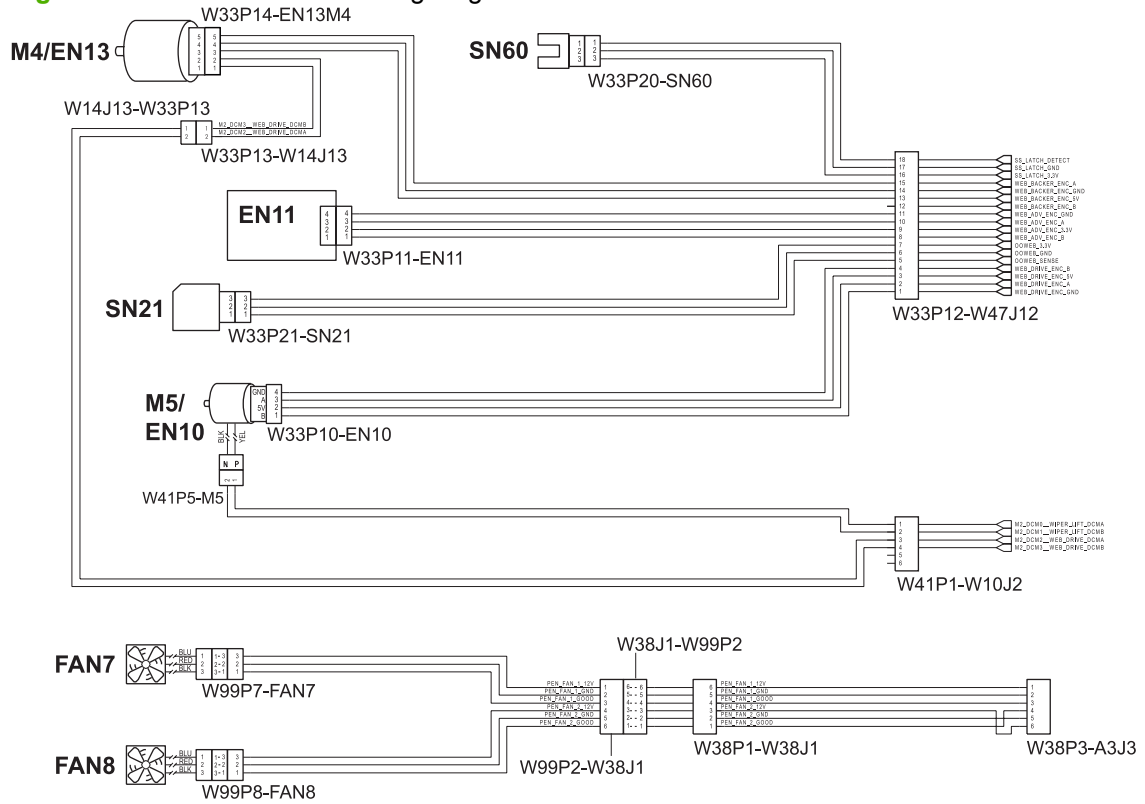
Scanner Control PCA (A501) diagram

Figure B-42 Scanner Control PCA (A501) diagram



Service station wiring diagram

Figure B-43 Service station wiring diagram

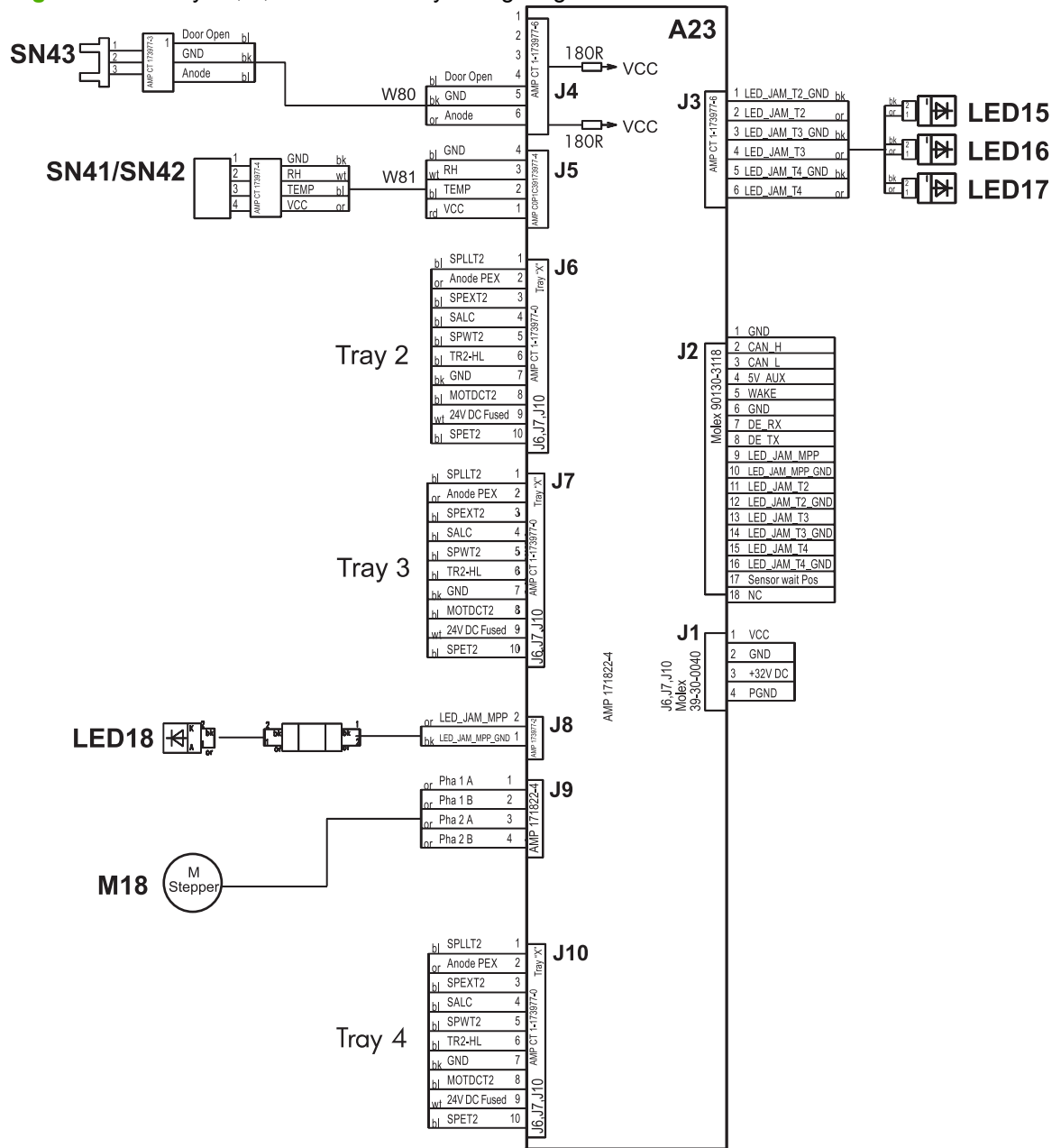


Trays 2, 3, and 4

- [Trays 2, 3, and 4 assembly wiring diagram](#)
- [Tray 2 wiring diagram](#)
- [Tray 3 wiring diagram](#)
- [Tray 4 wiring diagram](#)
- [Trays 2, 3, and 4 controller PCA diagram](#)
- [Trays 2, 3, and 4 distribution PCA \(A33\) diagram](#)

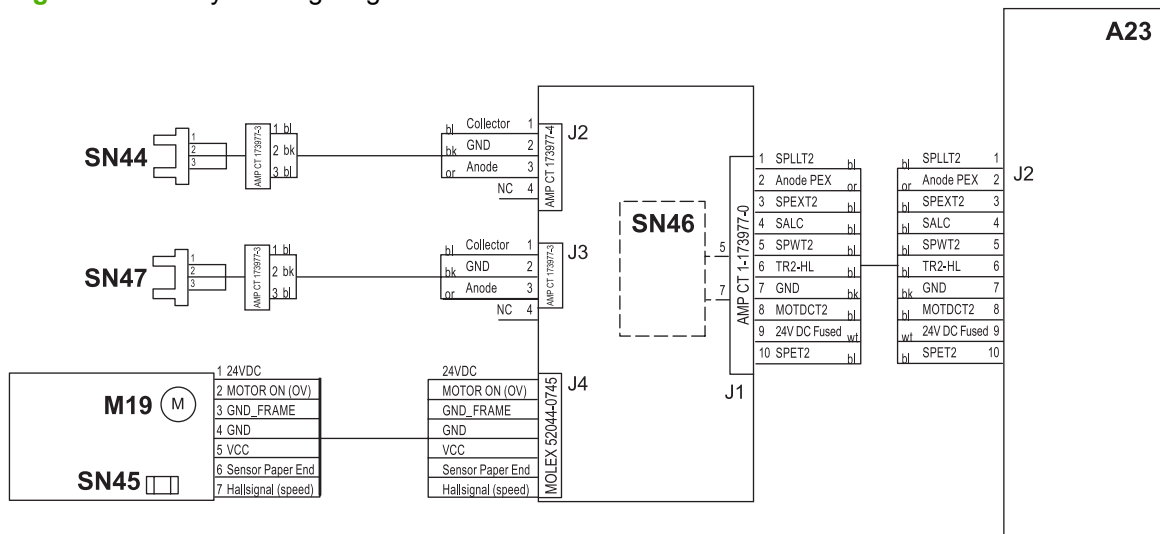
Trays 2, 3, and 4 assembly wiring diagram

Figure B-44 Trays 2, 3, and 4 assembly wiring diagram



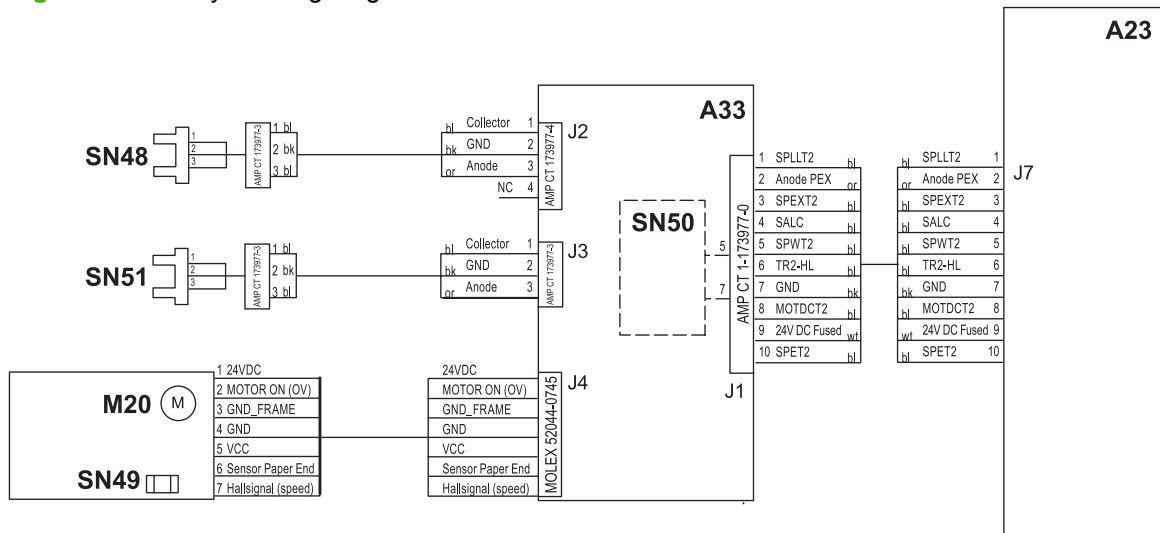
Tray 2 wiring diagram

Figure B-45 Tray 2 wiring diagram



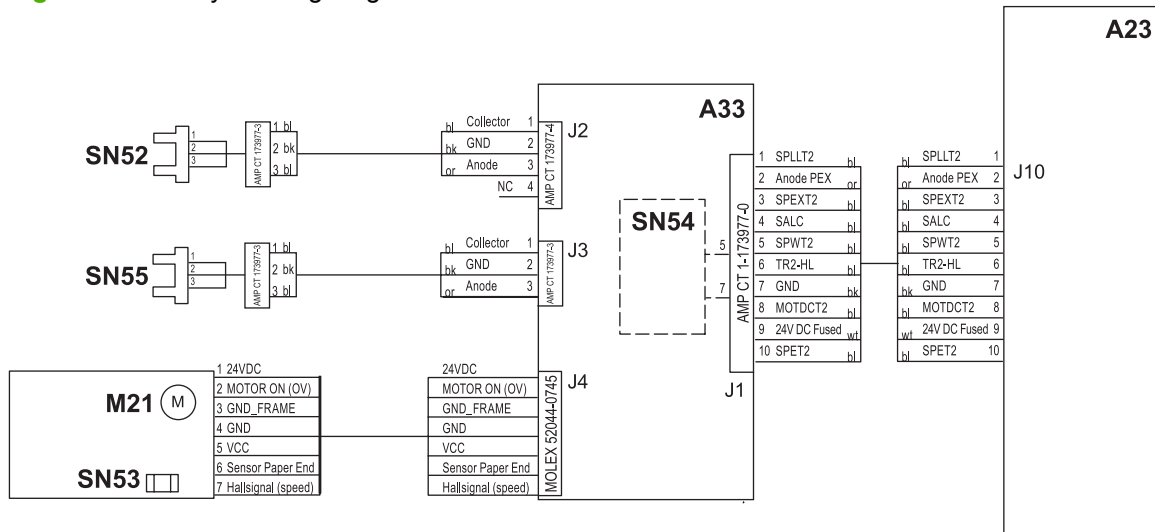
Tray 3 wiring diagram

Figure B-46 Tray 3 wiring diagram



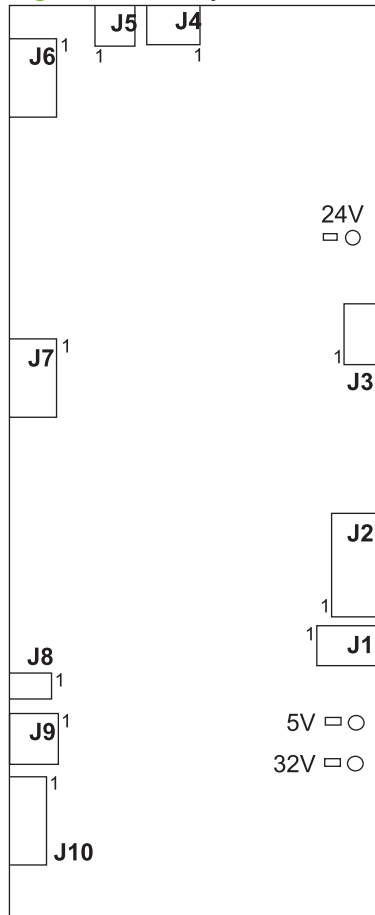
Tray 4 wiring diagram

Figure B-47 Tray 4 wiring diagram



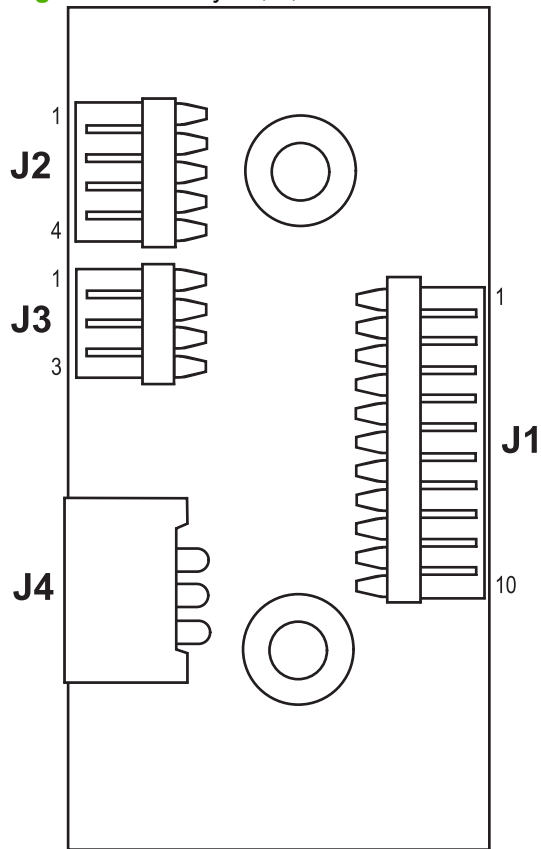
Trays 2, 3, and 4 controller PCA diagram

Figure B-48 Trays 2, 3, and 4 controller PCA diagram



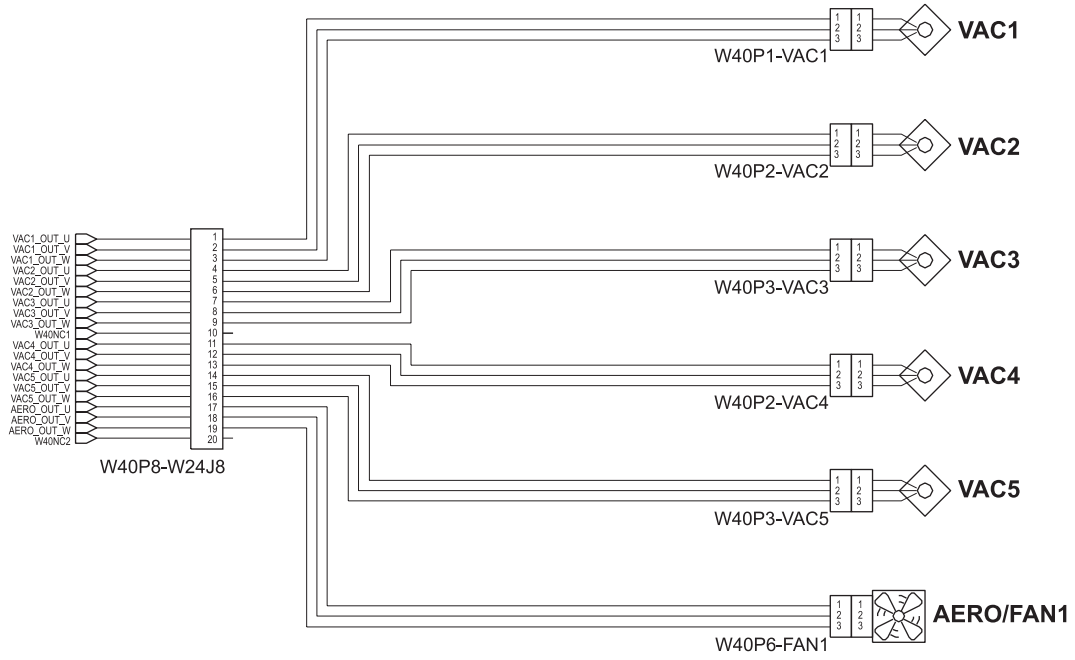
Trays 2, 3, and 4 distribution PCA (A33) diagram

Figure B-49 Trays 2, 3, and 4 distribution PCA (A33) diagram



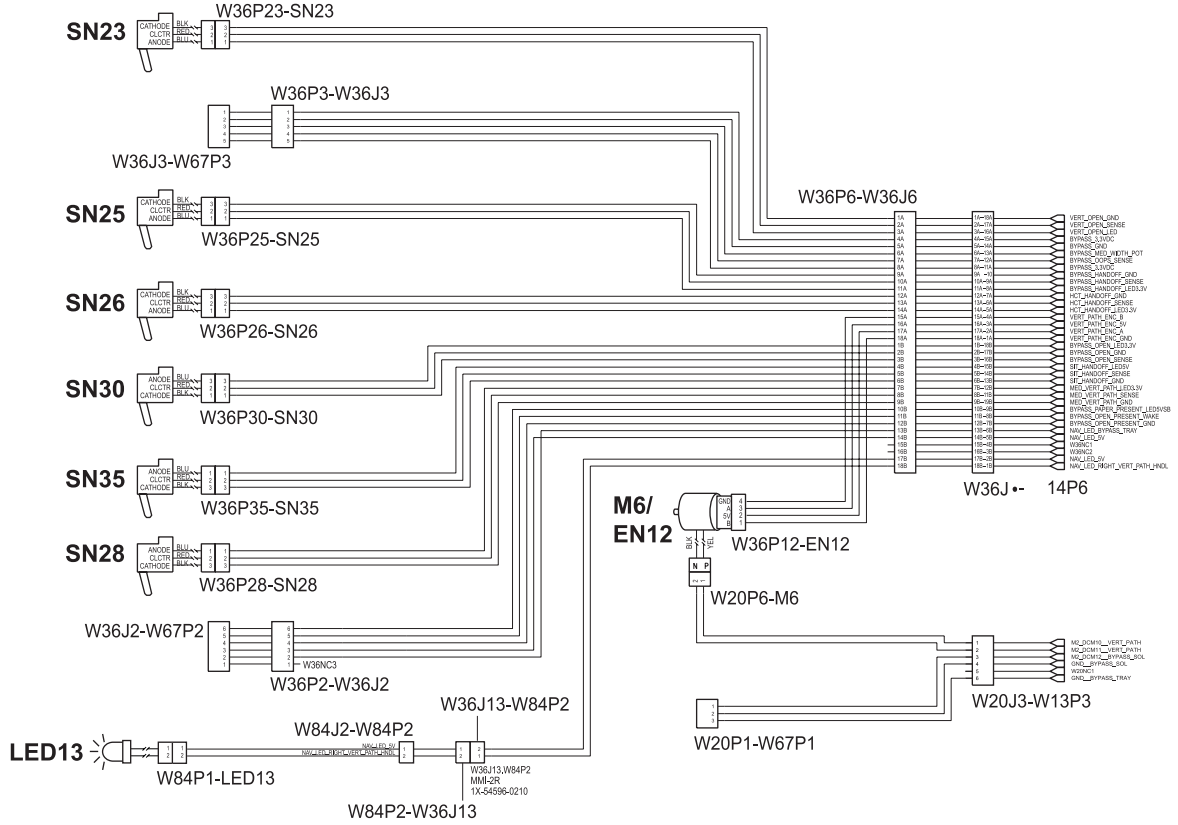
Vacuum and aerosol wiring diagram

Figure B-50 Vacuum and aerosol wiring diagram



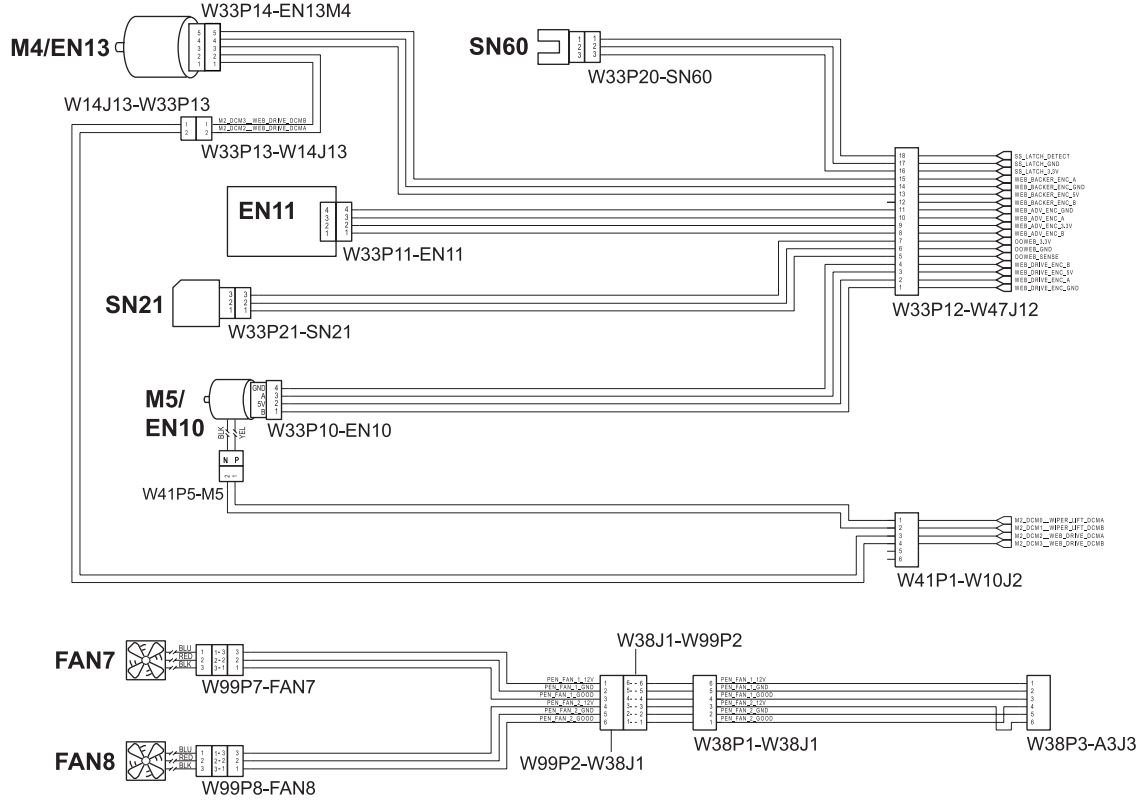
Vertical wiring diagram

Figure B-51 Vertical wiring diagram



Web wipe wiring diagram

Figure B-52 Web wipe wiring diagram



PCA diagrams

- [Drop Detect PCA \(A22\) diagram](#)
- [Image Processing PCA \(A6\) diagram](#)
- [Ink Assist PCA \(A3\) diagram](#)
- [Main Engine Backplane PCA \(A4\) diagram](#)
- [Main Engine PCA \(A5\) diagram](#)
- [Motion PCA \(A2\)](#)
- [Power Distribution PCA \(A1\) diagram](#)

Drop Detect PCA (A22) diagram

Figure B-53 Drop Detect PCA (A22) diagram

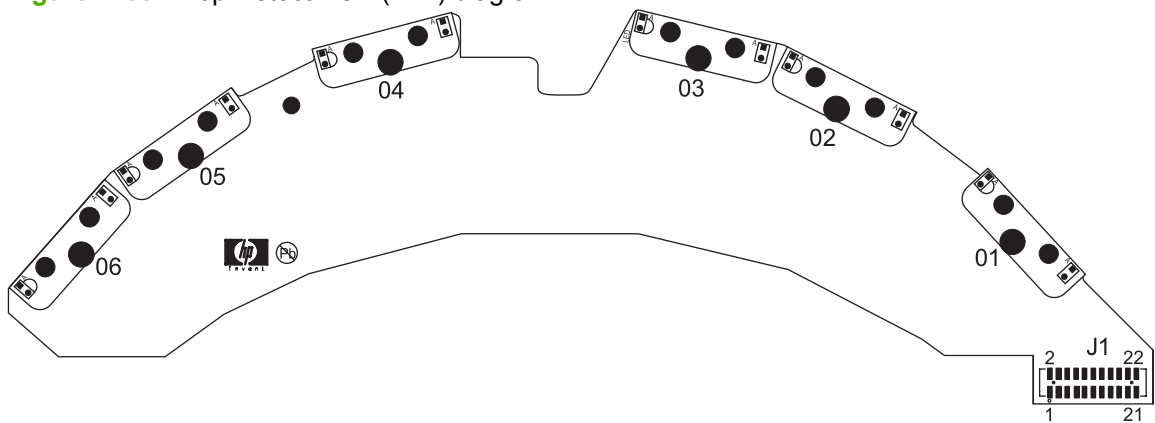
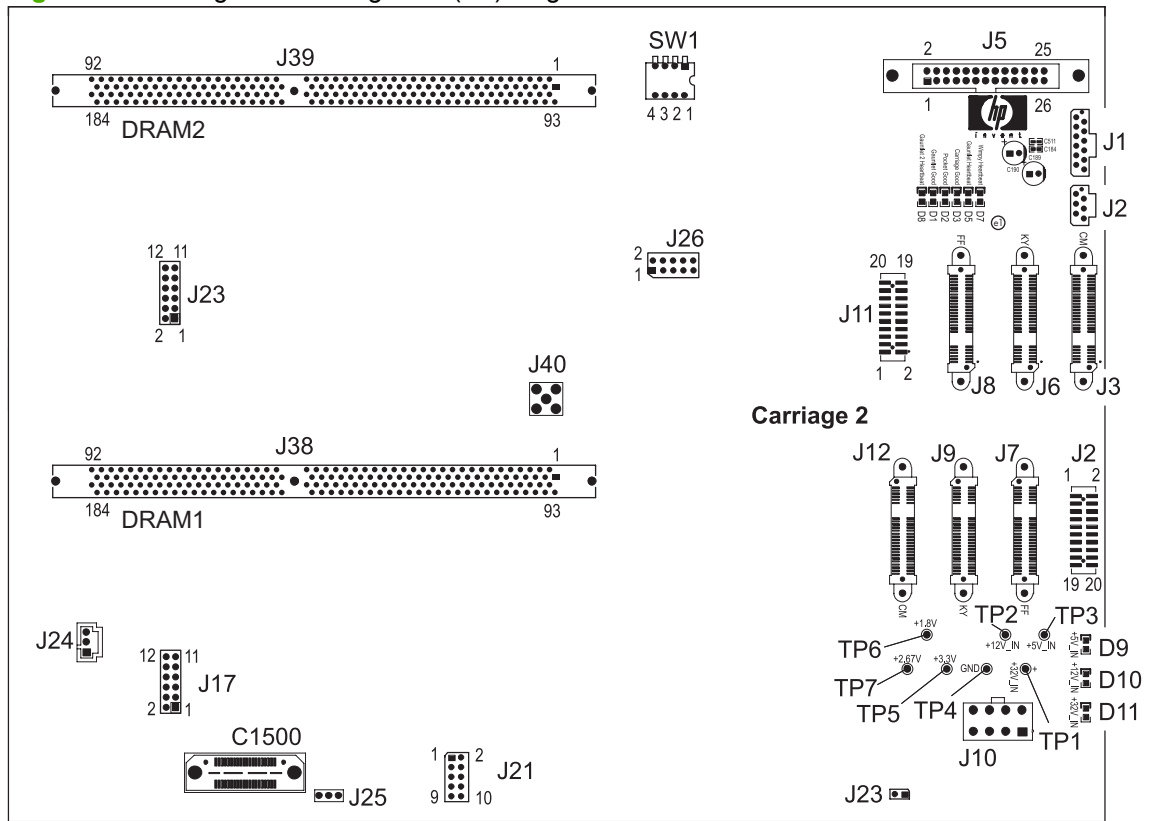


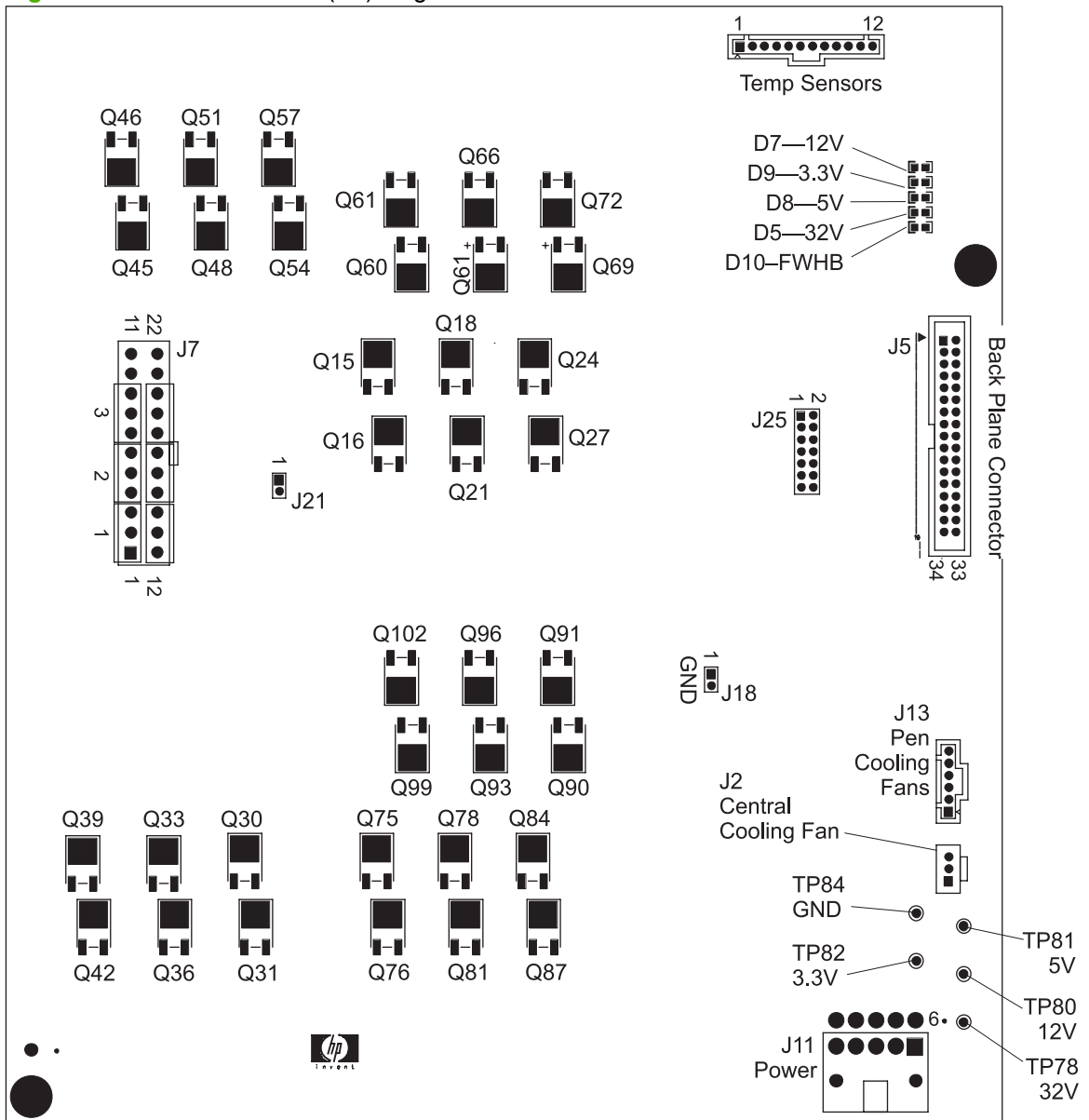
Image Processing PCA (A6) diagram

Figure B-54 Image Processing PCA (A6) diagram



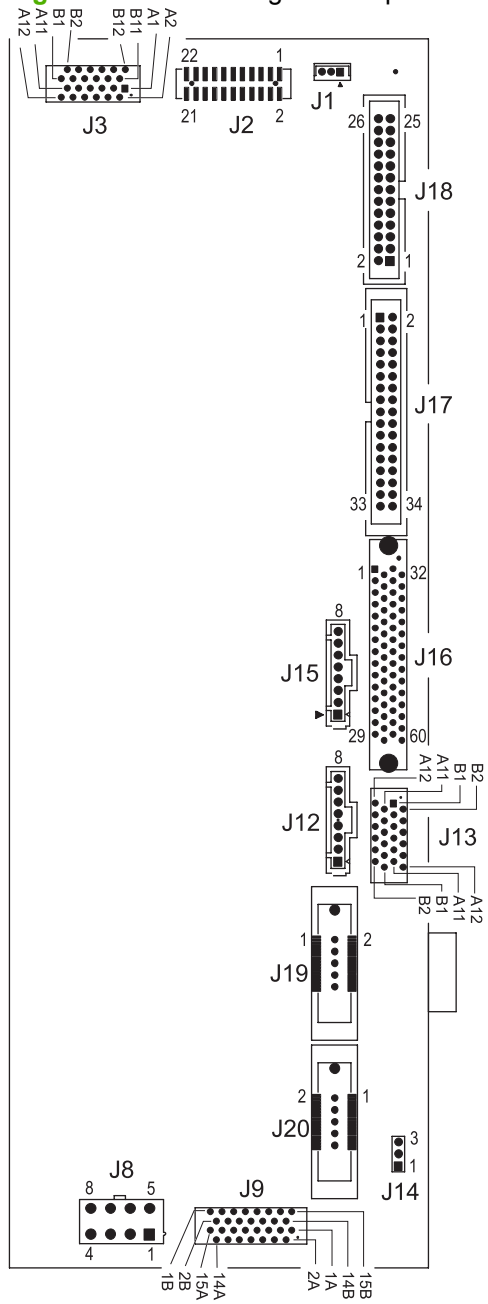
Ink Assist PCA (A3) diagram

Figure B-55 Ink Assist PCA (A3) diagram



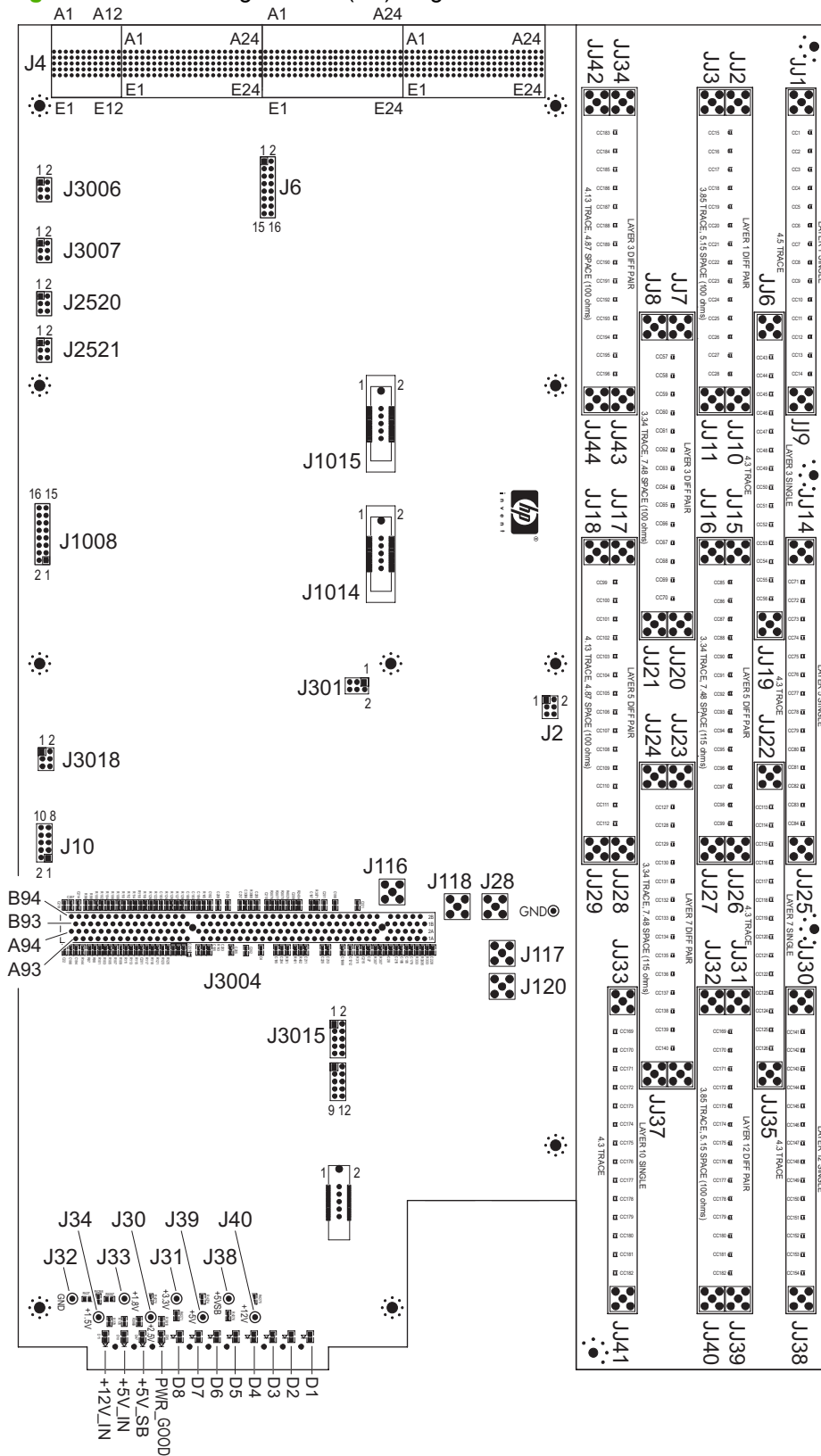
Main Engine Backplane PCA (A4) diagram

Figure B-56 Main Engine Backplane PCA (A4) diagram



Main Engine PCA (A5) diagram

Figure B-57 Main Engine PCA (A5) diagram

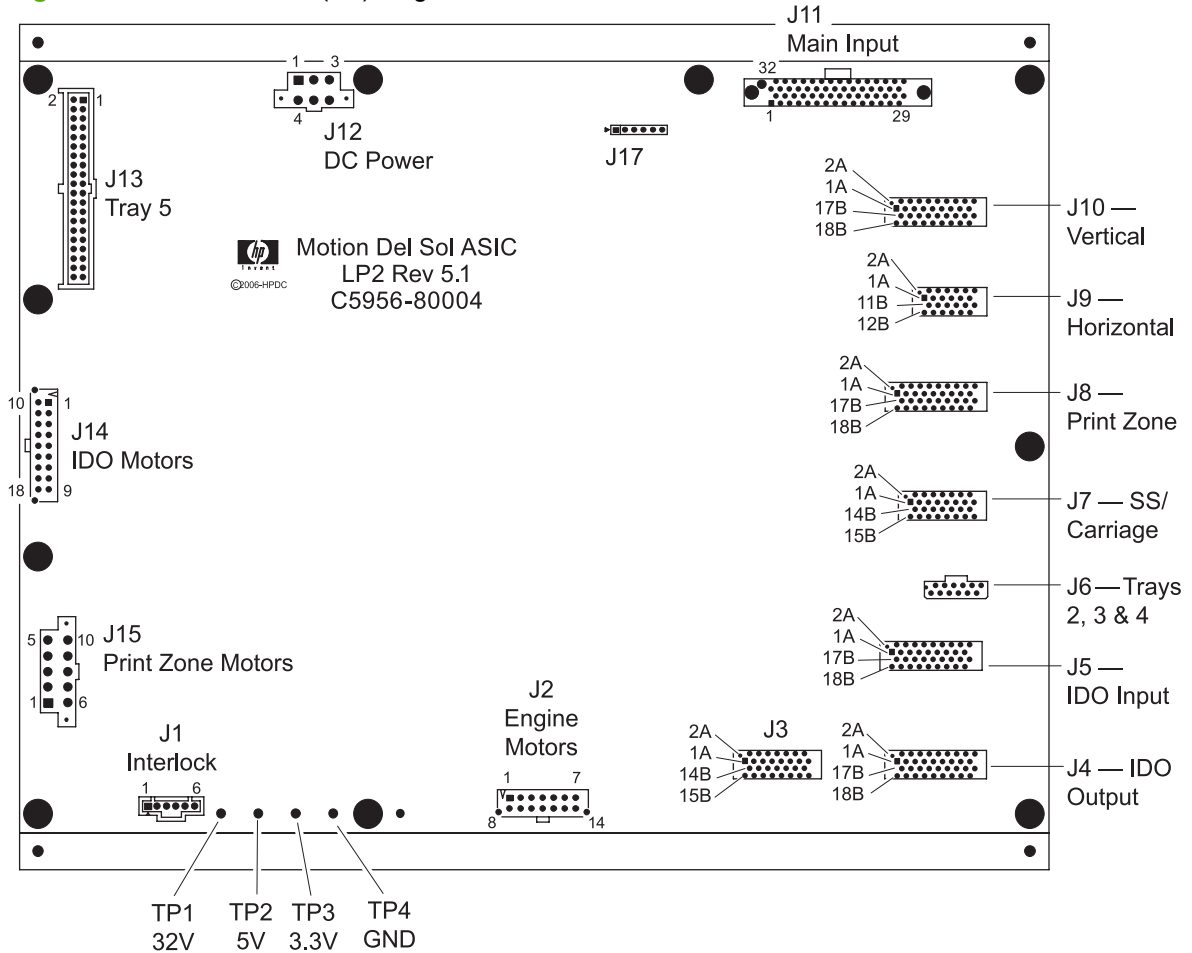


Motion PCA (A2)

- [Motion PCA \(A2\) diagram](#)
- [Motor distribution wiring diagram](#)
- [Left sensor distribution wiring diagram](#)
- [Right sensor distribution wiring diagram](#)

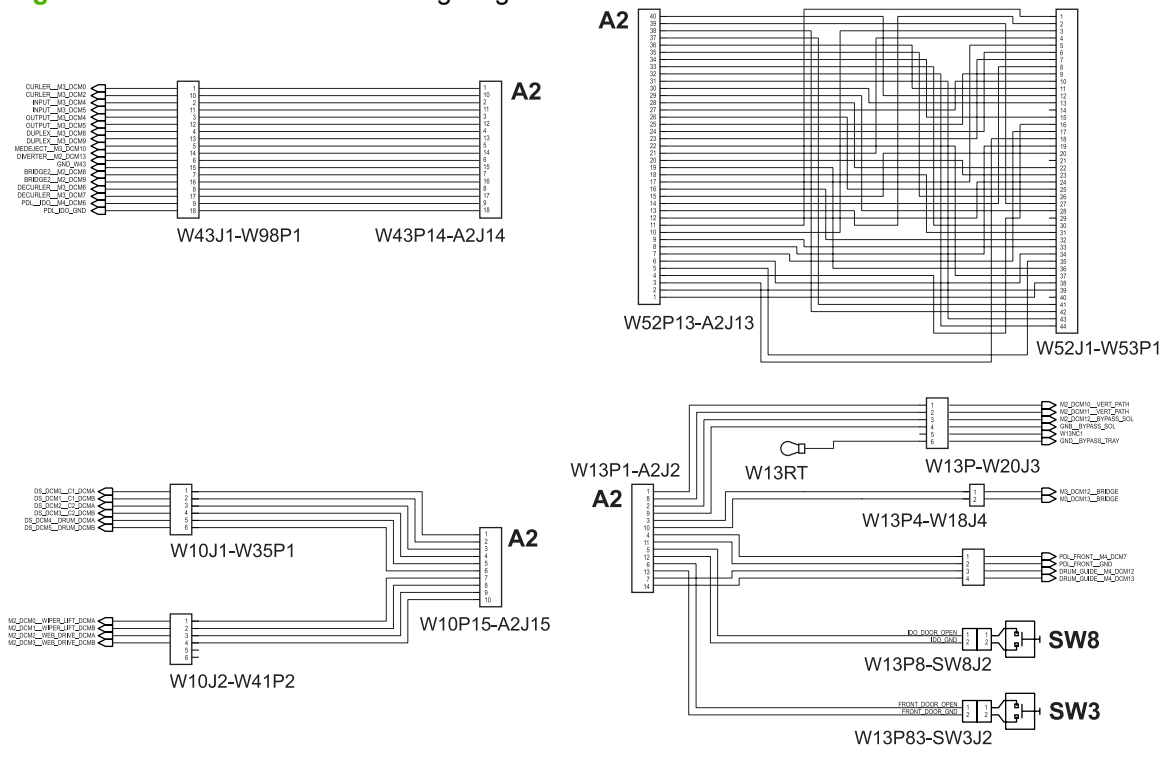
Motion PCA (A2) diagram

Figure B-58 Motion PCA (A2) diagram



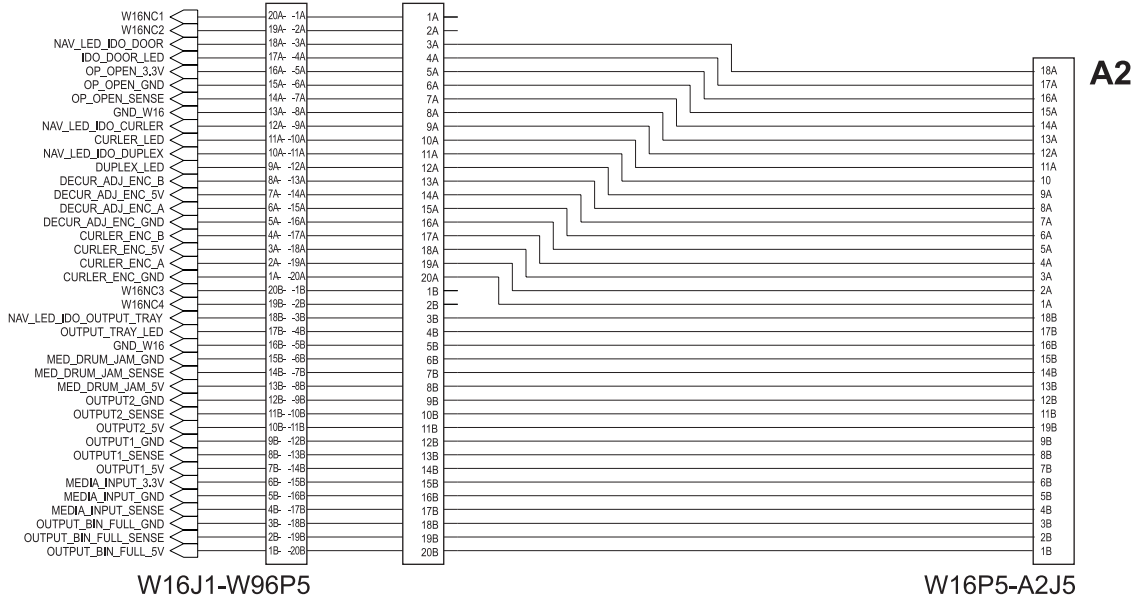
Motor distribution wiring diagram

Figure B-59 Motor distribution wiring diagram

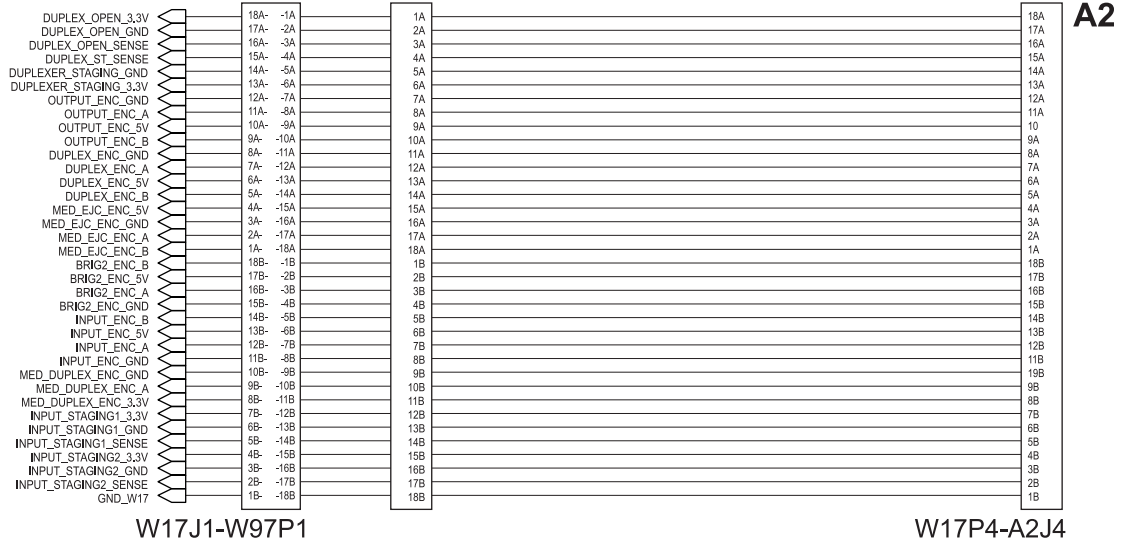


Left sensor distribution wiring diagram

Figure B-60 Left sensor distribution wiring diagram
W16P1-W16J1

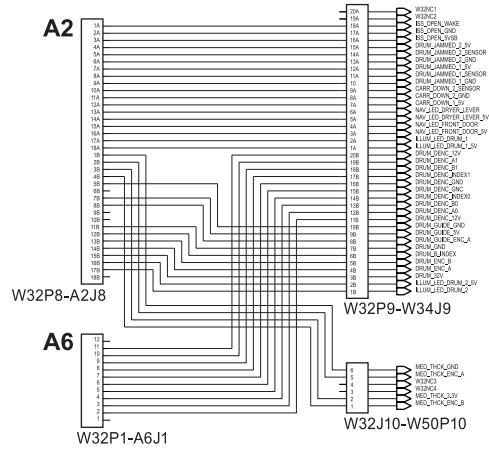
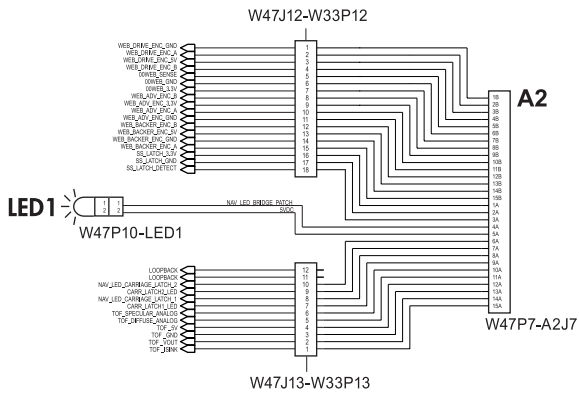
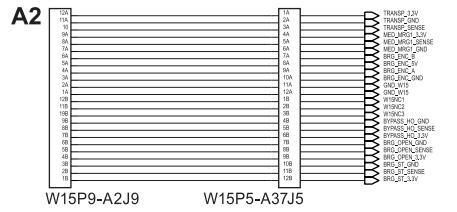
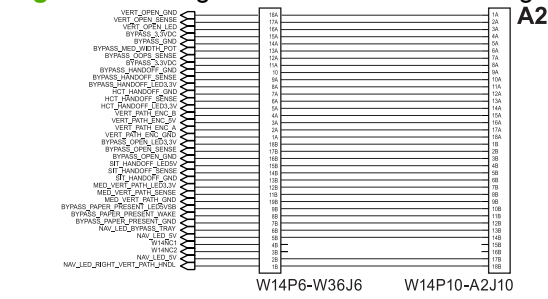


W17P1-W17J1



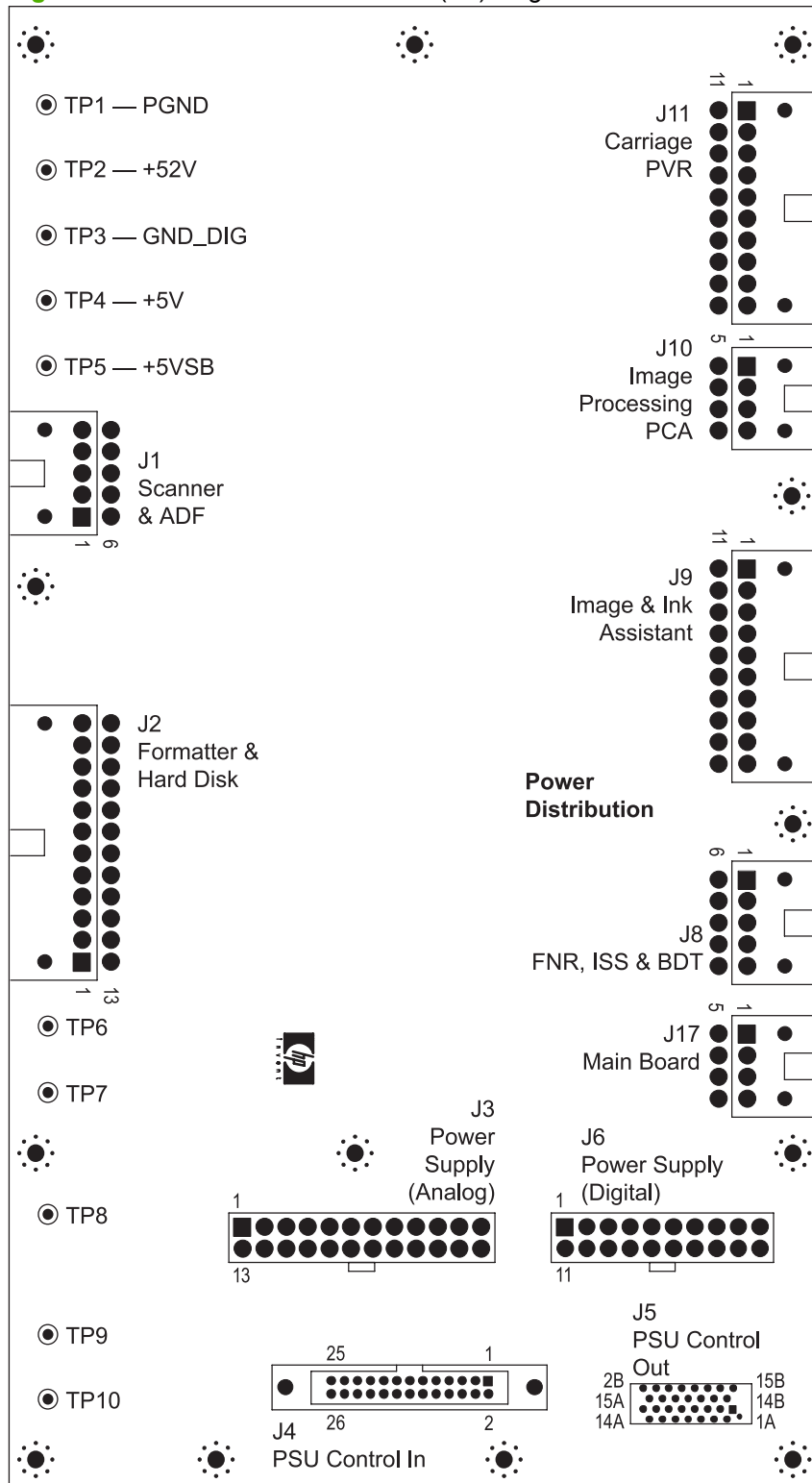
Right sensor distribution wiring diagram

Figure B-61 Right sensor distribution wiring diagram



Power Distribution PCA (A1) diagram

Figure B-62 Power Distribution PCA (A1) diagram



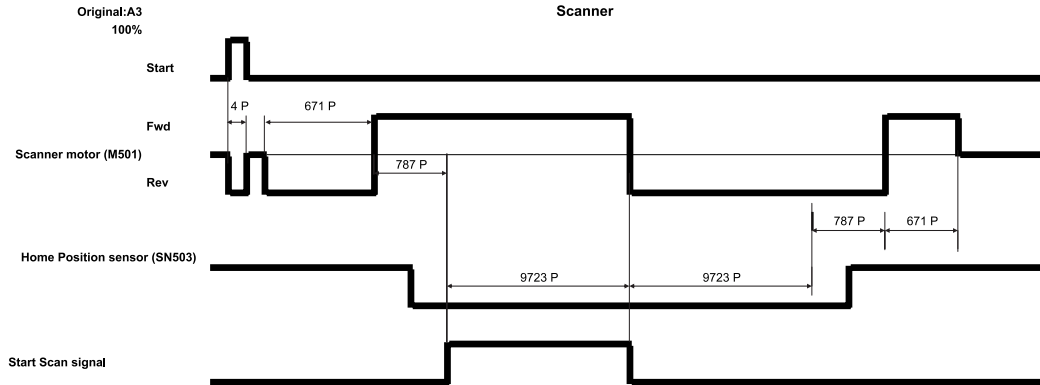
C Timing charts

- [Scanner and ADF timing charts](#)

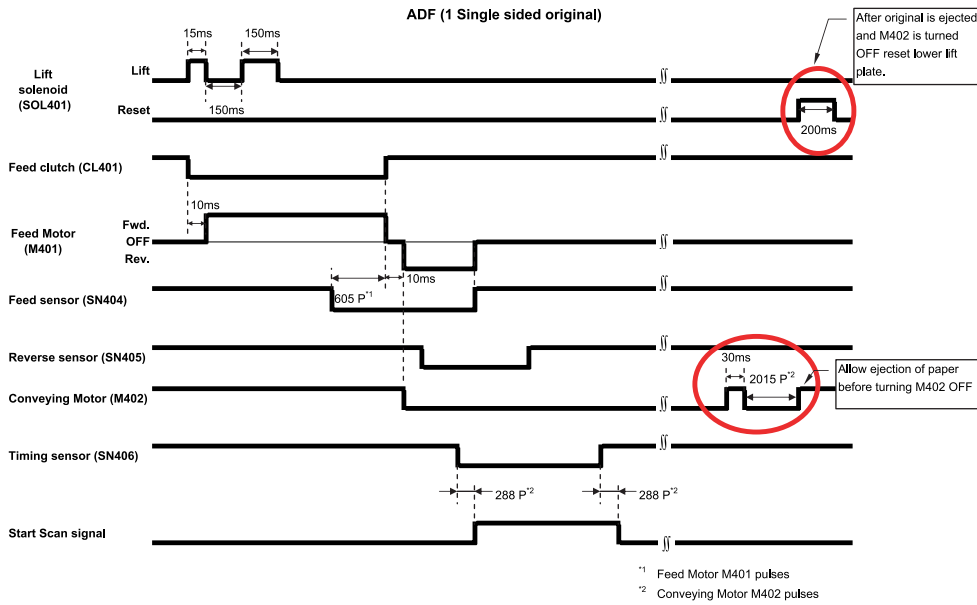
Scanner and ADF timing charts

- [Scanner timing](#)
- [ADF \(single\) timing](#)
- [ADF \(duplex\) timing](#)

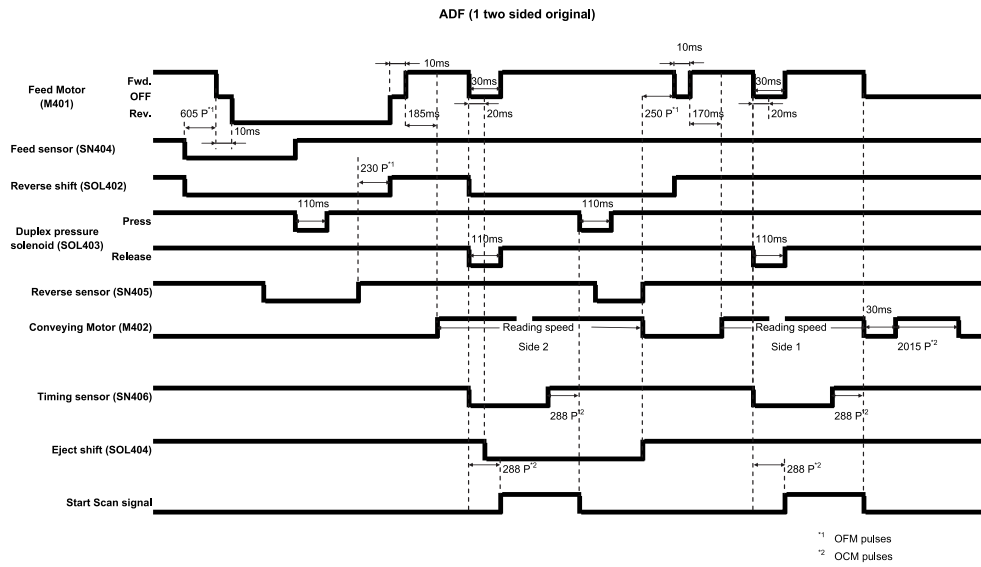
Scanner timing



ADF (single) timing



ADF (duplex) timing



D Internal pages

- [Service information pages](#)
- [Image quality pages](#)

Service information pages

- [Gaining access to service information pages](#)
- [Available service information pages](#)

Gaining access to service information pages

- [MFP diagnostic software](#)
- [Embedded Web server \(EWS\)](#)
- [Administrator menu](#)

MFP diagnostic software

All of the service information pages can be printed from the MFP diagnostic software.

For help printing service information pages from the MFP diagnostic software, see [View, print, and edit service information on page 69](#).

Embedded Web server (EWS)

Follow these steps to view service information in EWS:

1. Click **Information**.
2. Select the page that you want to view
3. Click **Print** to print the page.

Administrator menu

Follow these steps to view service information in the control panel administrator menu:

1. Log in to the control panel as the administrator.
2. Touch **Administration**.
3. Touch **Information**.
4. Select the page that you want to print, and then follow the onscreen instructions.

Available service information pages

The following service information pages are available:

Page	Source			Description
	MFP diagnostic software	EWS	Administrator menu	
Configuration	X	X	X	This page gives describes most of the machine settings and configurations.

Page	Source			Description
	MFP diagnostic software	EWS	Administrator menu	
Event Log	X	X		This page lists all of the errors that the machine has encountered. The errors are listed beginning with the most recent.
Warning Log	X			This page lists all of the warnings that the machine has encountered. The warnings are listed beginning with the most recent.
Jam History	X	X		This page lists any recent paper jam error codes. You can use this page to identify any trends in the printer jam history.
Preventive Maintenance	X			This page provides the following information: <ul style="list-style-type: none"> • PM parts that are due for immediate replacement • Estimates for when a PM part not due for immediate replacement will need to be replaced
Service Summary/ Device Status	X	X		This page gives an overview of the state of the printer. For more detailed information, see another page.
Service Settings	X			This page gives an overview parts and assemblies that require adjustments or calibrations. Some calibrations are performed automatically, while others must be done manually.
Supplies Status		X	X	This page displays the status of each ink supply.
Usage Page		X	X	This page displays counts for pages printed, paper types used, types of print jobs, and scanner usage.
Device information		X		This page displays MFP information such as serial number and model.
Fax Reports			X	The MFP offers several pages that detail fax activity.

Image quality pages

This section contains examples of the test pages that the MFP can print, which are used when troubleshooting image-quality problems.

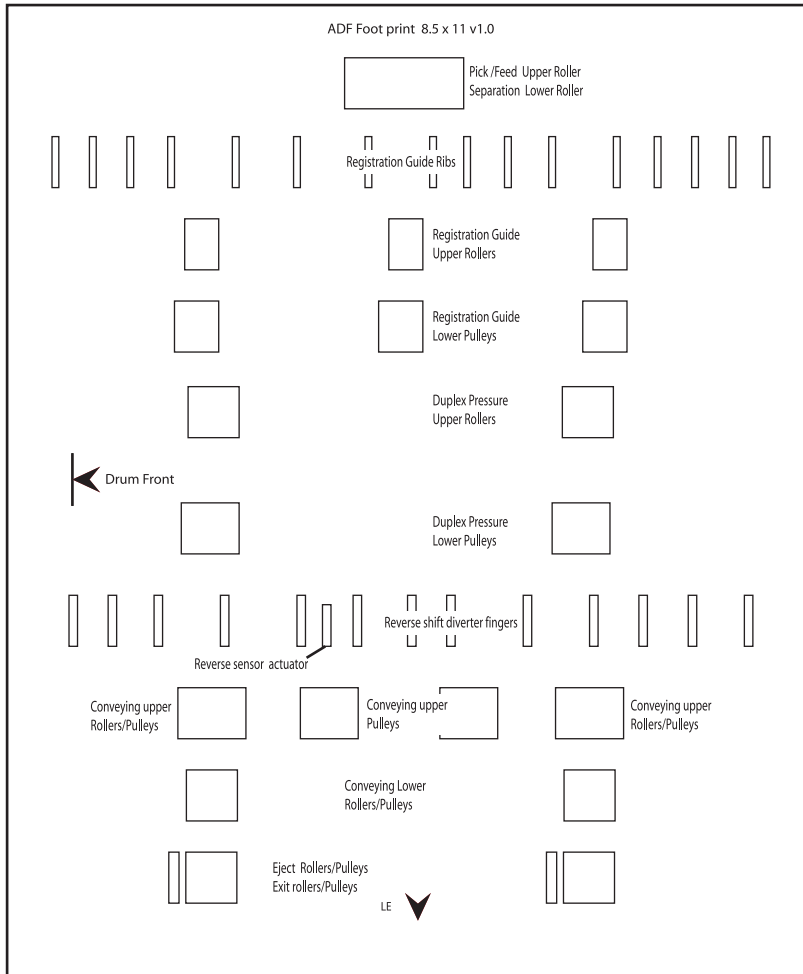
- [Media-path diagnostic pages](#)
- [Color and image-quality diagnostic pages](#)
- [Print engine alignment diagnostic pages](#)
- [Image placement diagnostic pages](#)
- [Direct-drive diagnostic pages](#)

Media-path diagnostic pages

The media-path diagnostic pages include the following:

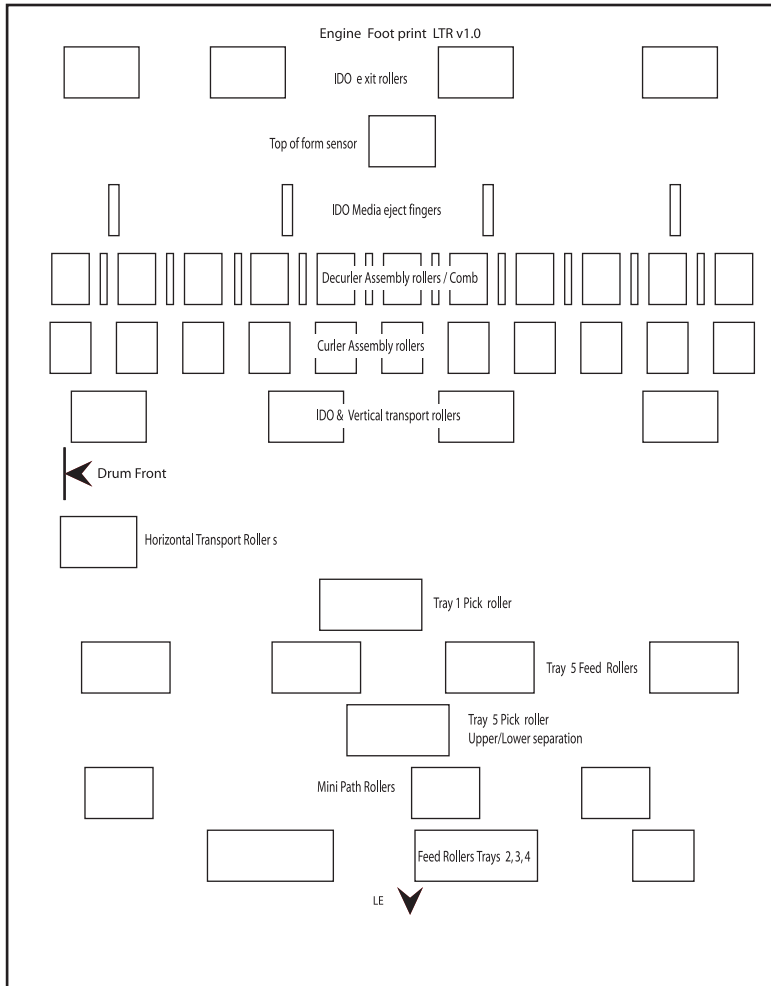
- ADF Footprint test page
- Engine Footprint test page
- Finisher Footprint test page
- Blank Page test page

ADF Footprint test page



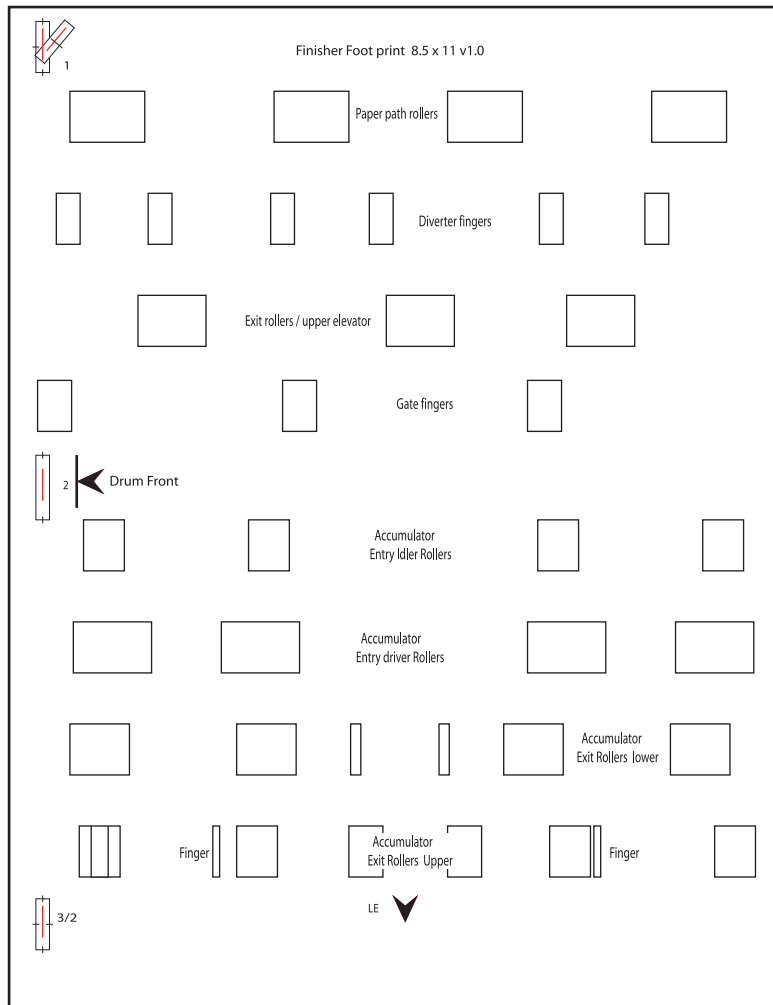
Print this test page when you make a copy, and the ADF damages the original or the ADF rollers contaminate the originals. This test page shows where the rollers make contact with the original. Look for smudges, contamination, or damage that indicate rollers that need to be serviced.

Engine Footprint test page



Use the Engine Footprint test page to determine whether rollers or diverter fingers in the main engine paper path are marking, damaging, or contaminating the prints. This test page shows where the main engine rollers make contact with the paper. Look for smudges, damage, roller tracking marks, nicks, or dents where the diverter fingers contact the page. Remove the finisher before printing this page in order to isolate the main engine.

Finisher Footprint test page



Use the Finisher Footprint test page to determine whether rollers or diverter fingers in the finisher paper path are marking, damaging, or contaminating the prints. This test page shows where the finisher rollers make contact with the paper. Check the roller that corresponds to the area of the test page that was damaged or contaminated. Look for smudges, damage, roller tracking marks, nicks, or dents where the diverter fingers contact the page.

Blank page

A blank page is available to diagnose paper jams, media damage, ink contamination, colored streaks caused by pen electrical failures, and stains and spots from ink or dirt transferred from components in the print zone or media path.

Color and image-quality diagnostic pages

The color and image-quality diagnostic pages include the following:

- All Colors test page
- PQ test page
- Composite Gray test page

- Vertical Banding test page
- DOM test page

All Colors test page



The All Colors test page shows the following color schemes:

- Primary colors (CMYK) and primary composite colors (RGB) at 100 percent and 40 percent
- Composite gray (at the top of the page) at 40 percent

Use this page to diagnose print-quality problems such as vertical banding, streaks, ink contamination, and color transitions.

The Toy Store

Check us out on the web [The Toy Store.com](http://TheToyStore.com)

Popular Toys

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat.

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Ut wisi enim ad minim veniam. Quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat. Duis autem vel cum iriure dolor in hendrerit in vulpate velit esse molestie consequat, vel illum dolore et accumsan. Duis autem vel cum iriure dolor in hendrerit in vulpate velit esse molestie consequat, vel illum dolore et accumsan.

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Toys Sold in the US

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Item 3	30%
Item 4	40%

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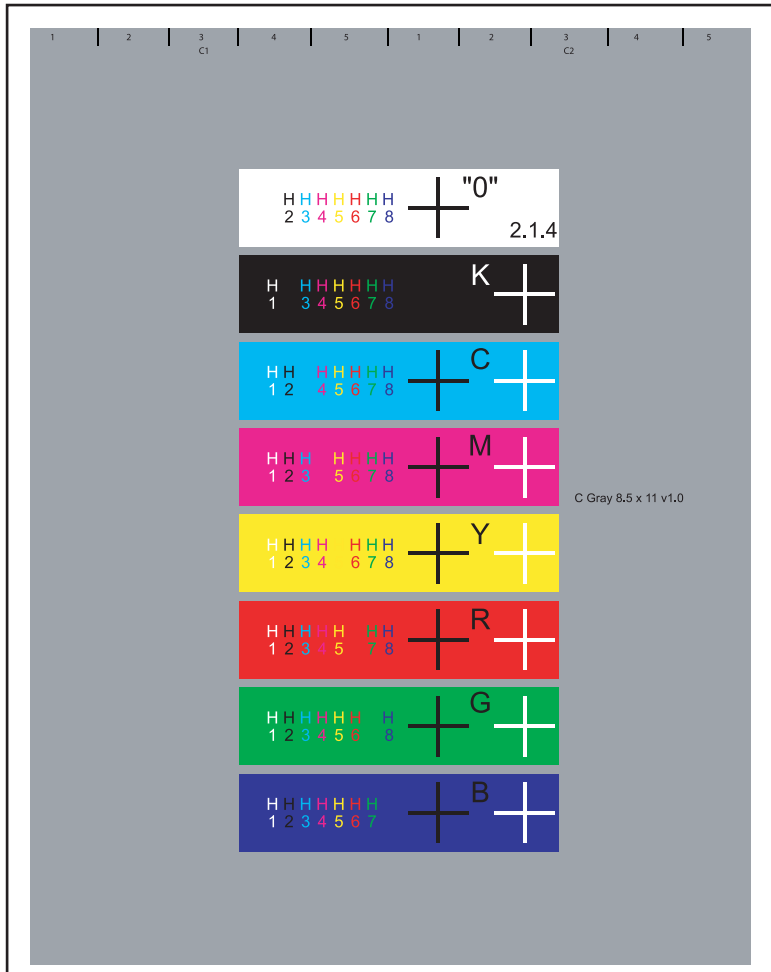
Dolore eu feugiat nulla facilisis at vero eros et accumsan et justo odio dignissim qui

C M Y MY CY CM W K

PQ_Test_LTR_v1.0

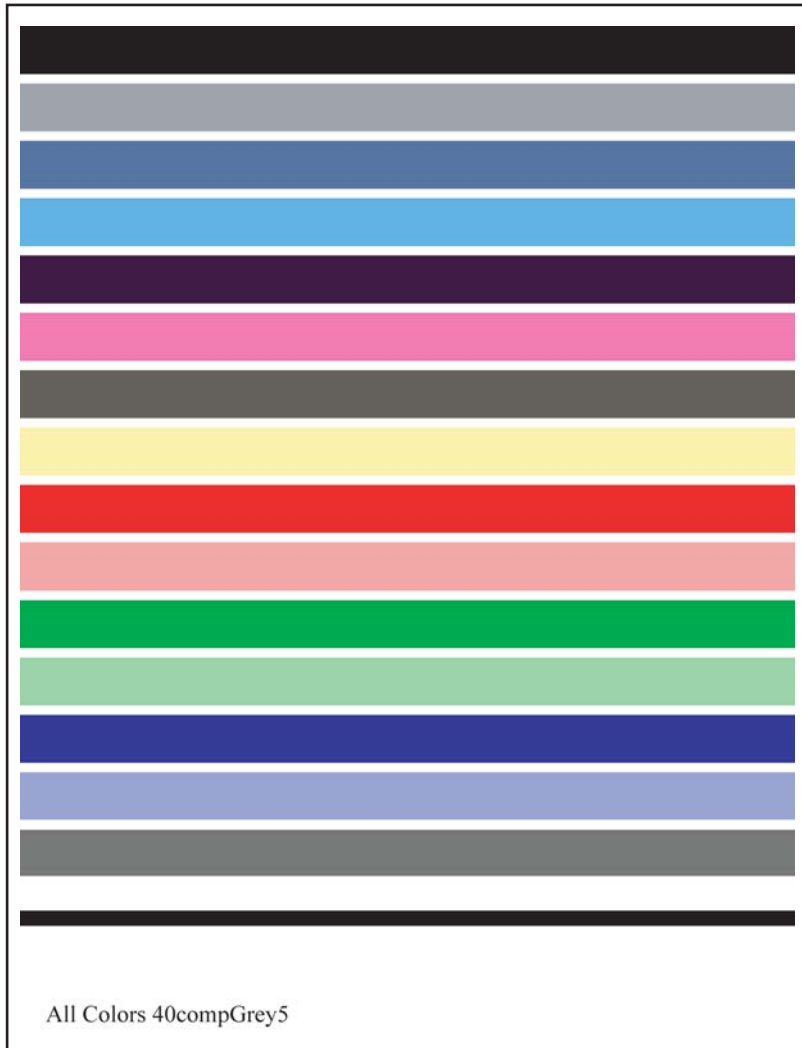
Use the PQ test page to evaluate overall print quality. The page contains composite gray areas, color registration marks, skin tones, black and colored text, and solid color areas. Use this page as a validation page to check for text and graphics quality, color registration, color reproduction, and color balance.

Composite Gray test page



The Composite Gray page has a composite gray area with primary colors blocks at 100 percent density down the middle of the page. Each of the primary color blocks contains color text. Use this page to diagnose print-quality problems such as vertical banding, graininess, bleed, and color misregistration.

Vertical Banding test page



The vertical banding test page shows the following colors:

- Colored bands of primary colors CMYK
- Composite primary colors RGB
- Additional colors

Use the Vertical Banding test page in the scan and analyze process to determine whether die-to-die density difference is within product specification.

DOM test page

Document Object Model (DOM)

Table of contents

- [What's new?](#)
- [What is the Document Object Model?](#)
- [Why the Document Object Model?](#)
- [W3C Activity Statement on the Document Object Model](#)
- [Public Release of Specifications](#)
- [Questions, comments, and suggestions about the DOM](#)
- [DOM Conformance Test Suites](#)
- [Related Resources](#)

What's new?

2004-02-26: [DOM Level 3 XPath](#) has been republished as a Working Group Note.

2004-02-26: [DOM Level 3 Views and Formatting](#) has been republished as a Working Group Note.

2004-02-26: [DOM Level 3 Requirements](#) has been republished as a Working Group Note.

2004-02-05: [DOM Level 3 Core](#) and [DOM Level 3 Load and Save](#) are now Proposed Recommendations. We are looking for implementation feedback until 5 March 2004. Many thanks to the reviewers, implementers, and testers who submitted their comments during the Candidate Recommendation phases.

2004-01-27: [DOM Level 3 Validation](#) is now a Recommendation.

W3C's DOM news are also available as a [RSS feed](#).

What is the Document Object Model?

The Document Object Model is a platform- and language-neutral interface that will allow programs and scripts to dynamically access and update the content, structure and style of documents. The document can be further processed and the results of that processing can be incorporated back into the presented page. This is an overview of DOM-related materials here at W3C and around the web.

Why the Document Object Model?

"Dynamic HTML" is a term used by some vendors to describe the combination of HTML, style sheets and scripts that allows documents to be animated. The W3C has received several submissions from members companies on the way in which the object model of HTML documents should be exposed to scripts. These submissions do not propose any new HTML tags or style sheet technology. The W3C DOM WG is

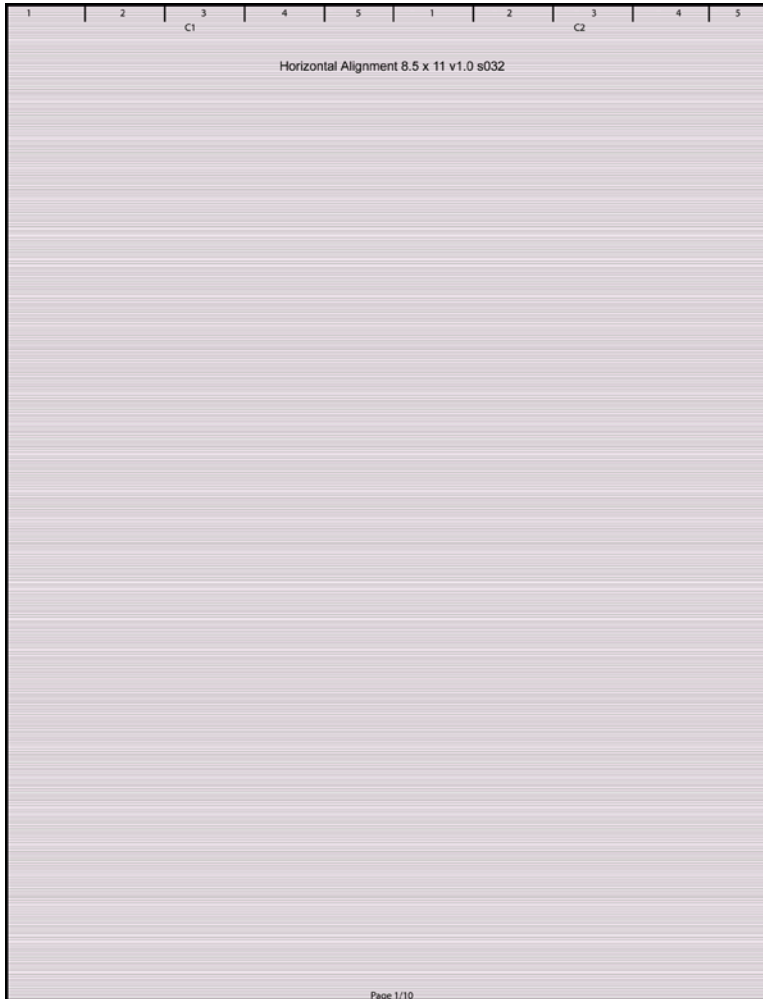
The DOM test page is a two-page document that contains text only in black and color. This page is used to troubleshoot text-quality issues and print-performance issues to validate the pages per minute.

Print engine alignment diagnostic pages

The print-engine alignment test pages include the following:

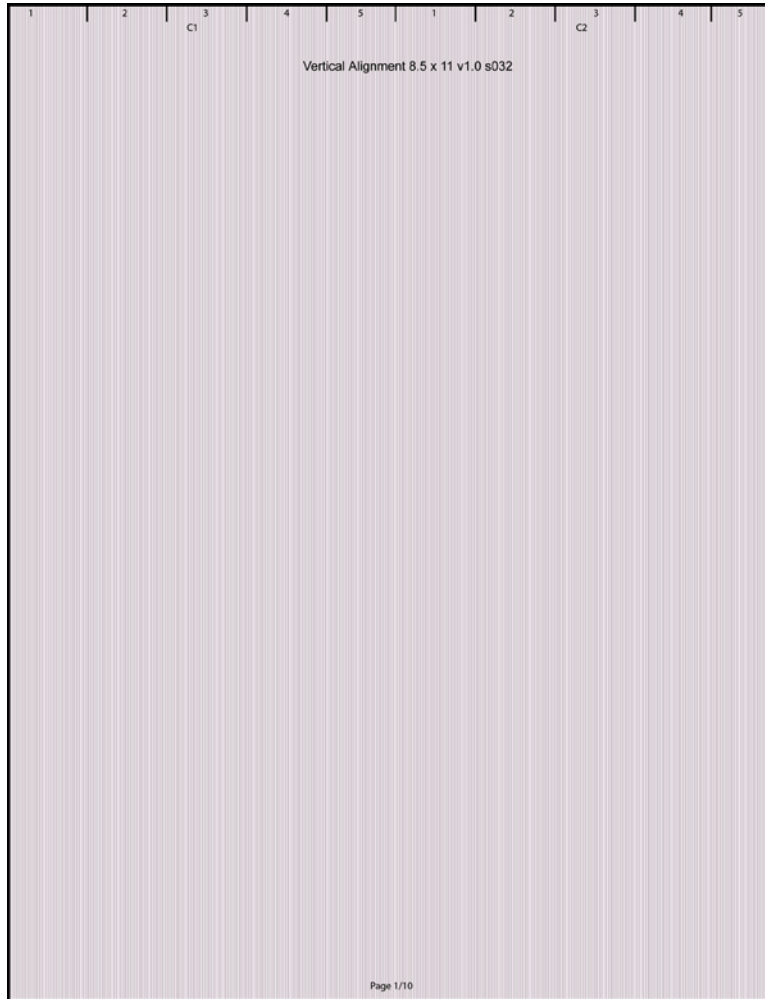
- Horizontal Alignment test page
- Vertical Alignment test page

Horizontal Alignment test page



The Horizontal Alignment test page is used to evaluate horizontal alignment between pens, dies and carriages, media handoff issues between IDO and drum, and carriage-to-carriage vibration patterning. It consists of a print job containing 10 pages (all pages are numbered). The image on the page is a horizontal line screen halftone image at 120 lpi (lines per inch). It is available in the following sizes: 8.5 x 11 inch, A4, 11 x 17 inch, and A3.

Vertical Alignment test page



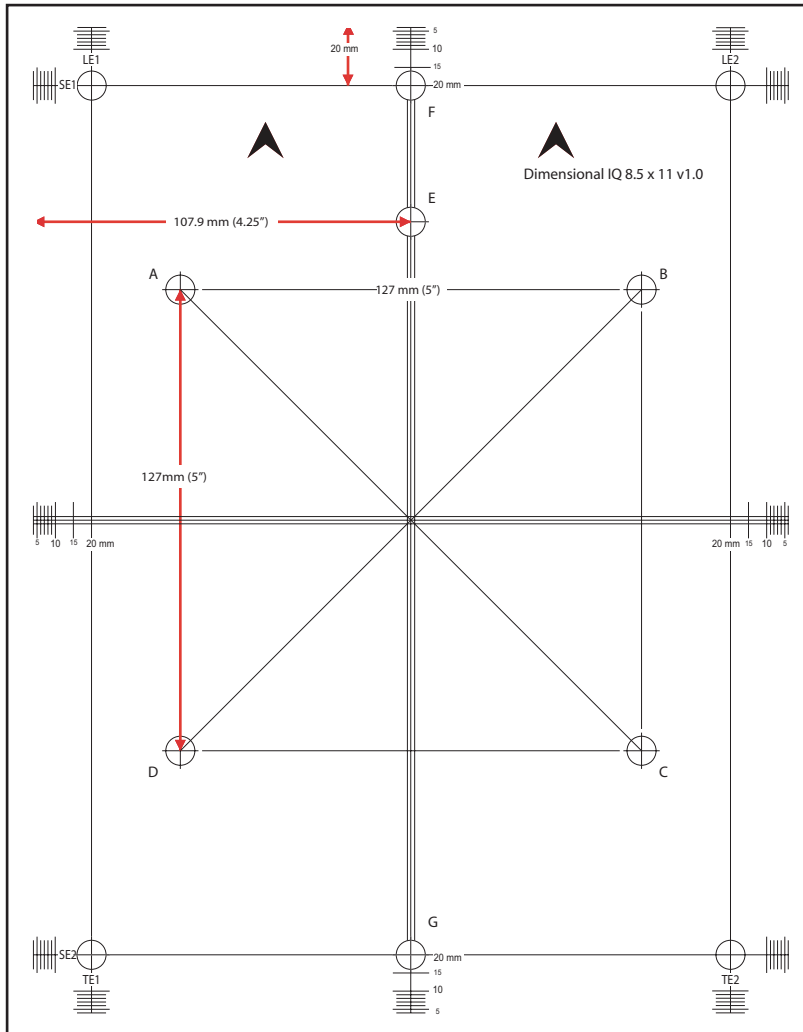
The Vertical Pen Alignment Verification test page is used to evaluate vertical alignment between pens, dies and carriages, media handoff issues between IDO and drum, and carriage-to-carriage vibration patterning. It consists of a print job containing 10 pages (all pages are numbered). The image on the page is a vertical line screen halftone image. It is available in the following sizes: 8.5 x 11 inch, A4, 11 x 17 inch, and A3

Image placement diagnostic pages

The image-placement diagnostic pages include the following:

- Dimensional IQ test page
- Grid test page

Dimensional IQ test page



The Dimensional IQ test page is available in the following paper sizes:

- 8.5 x 11 in
- A4
- 11 x 17 in
- A3

Use this page to evaluate print image placement and as a copy target when making scanner or ADF image adjustments. The image-centering reference varies based on page size, but the rest of the references remain the same for all page sizes.

Terms to know

- SE1, SE2: Side edge 1 and 2
- LE1, LE2: Leading edge 1 and 2
- TE 1, TE2: Trailing edge 1 and 2

Print dimensional IQ parameters

The following parameters apply to printing only.

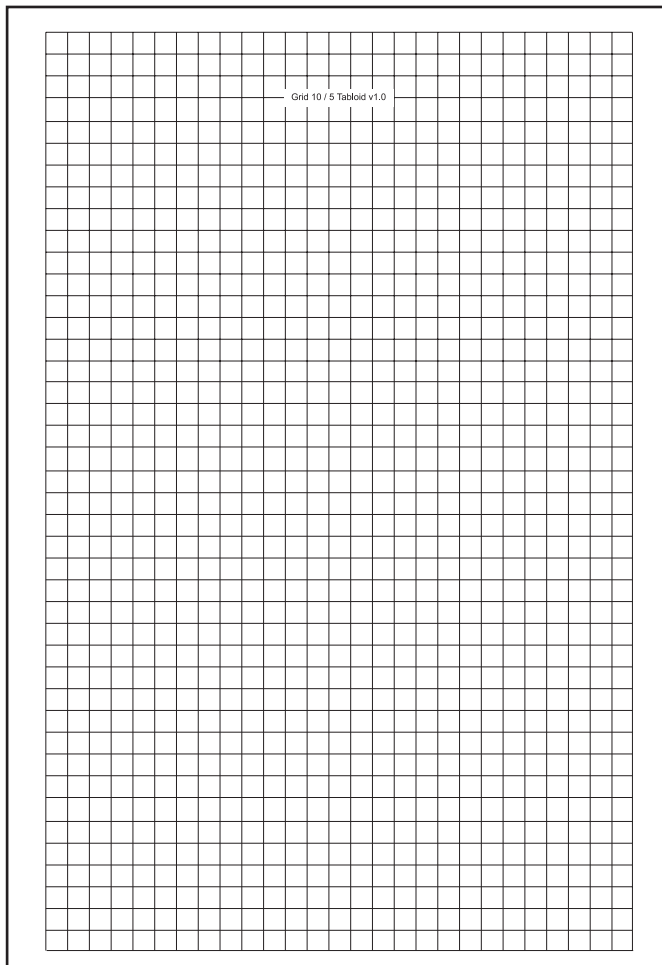
- Image registration: Distance from the top edge of the page to **F**. Specification 20 +/- 1 mm.
- Center line: Distance from the left side edge of the page to **E**.

Table D-1 Specifications

8.5 x 11	107.9 +/- 1 mm
11 x 17	139.7 +/- 1 mm
A4	105 +/- 1 mm
A3	148.5 +/- 1 mm

- Vertical magnification: Distance from **A** to **D**. Specification: 127 +/- 0.5 mm
- Horizontal magnification: Distance from **A** to **B**. Specification: 127 +/- 0.5 mm
- Skew: Absolute difference between distances from the top edge of the page to **LE1** and **LE2** respectively. Specification <1 mm for 11 x 17 / A3 test page.
- Orthogonality: Absolute difference between distances. Distance from **A** to **C** and **B** to **D**. Specification: $|(A \text{ to } C) - (B \text{ to } D)| < 1 \text{ mm}$.

Grid test page



The Grid test page is available in 11 x 17 in and A3 sizes. The page is black only. The page contains a 10 mm grid with a margin of 5 mm around the grid. Use this page to evaluate image distortion, skew, and line quality.

Direct-drive diagnostic pages

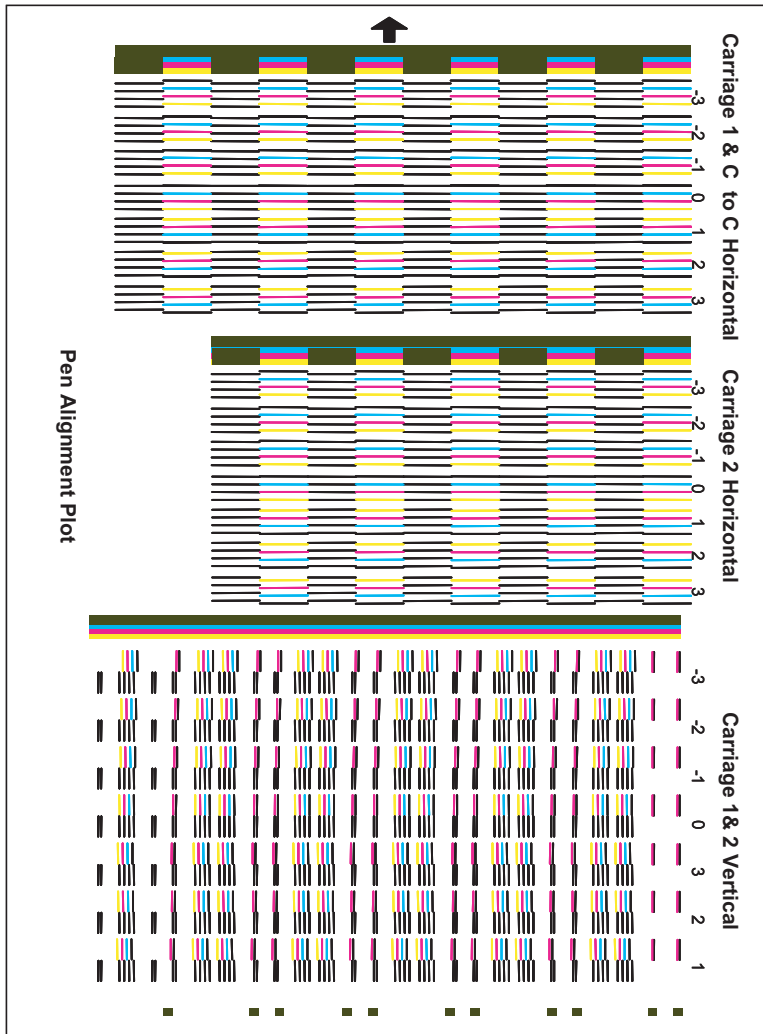
The direct-drive diagnostic pages include the following:

- Automatic Pen Alignment (APA) scanner page
- Streaks test page
- Nozzle Health test page

Automatic Pen Alignment (APA) test page

Use the APA test page to verify whether the pens are aligned. The test page has three sections to verify the following types of alignment:

- [Carriage 1 and carriage-to-carriage horizontal alignment](#)
- [Carriage 2 horizontal alignment](#)
- [Carriages 1 and 2 and carriage-to-carriage vertical alignment](#)

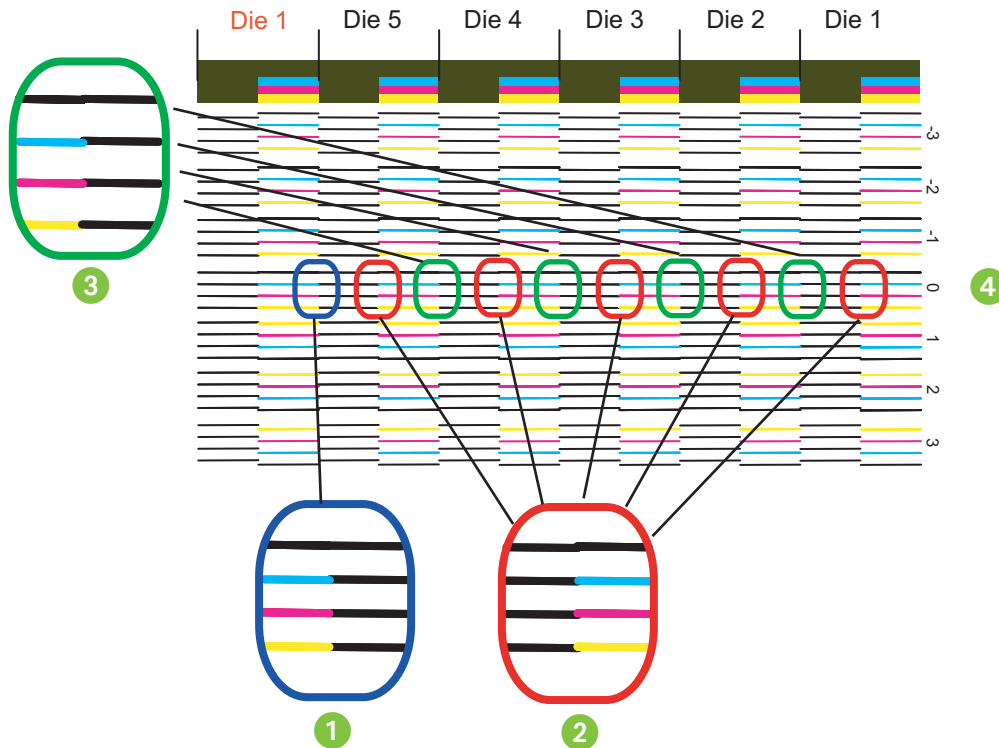


1	Carriage 1 and carriage-to-carriage horizontal alignment section
2	Carriage 2 horizontal alignment section
3	Carriages 1 and 2 and carriage-to-carriage vertical alignment section

Carriage 1 and carriage-to-carriage horizontal alignment

The Carriage 1 and carriage-to-carriage horizontal alignment section of the APA test page verifies the following types of alignment:

- Carriage-to-carriage horizontal alignment: Verify that the CMYK marks are aligned to black on the left-most column.
- Pen-to-pen horizontal alignment: Verify that the CMYK marks in each of the five groupings are aligned to black along the zero zone of the page.
- Die-to-die horizontal alignment: Verify that the CMYK marks in each of the four groupings are aligned to black along the zero zone of the page.

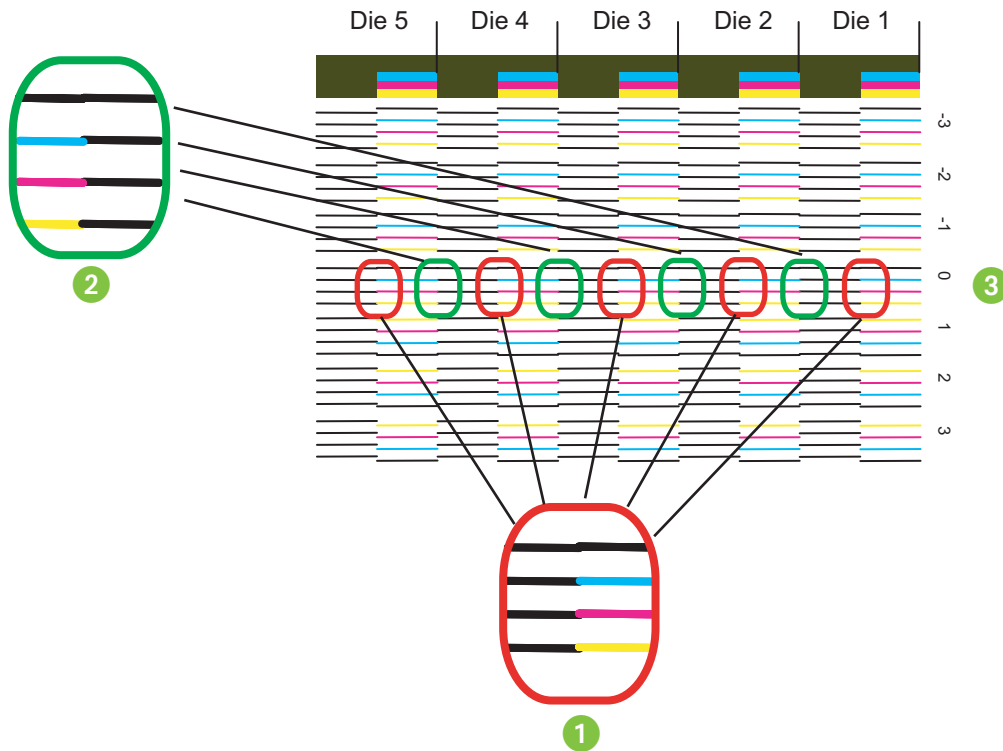


1	Carriage-to-carriage vertical alignment
2	Pen-to-pen horizontal alignment
3	Die-to-die horizontal alignment
4	Zero zone

Carriage 2 horizontal alignment

The Carriage 2 horizontal alignment section of the APA test page verifies the following types of alignment:

- Pen-to-pen horizontal alignment: Verify that the CMYK marks in each of the five groupings are aligned to black along the zero zone of the page.
- Die-to-die horizontal alignment: Verify that the CMYK marks in each of the four groupings are aligned to black along the zero zone of the page.

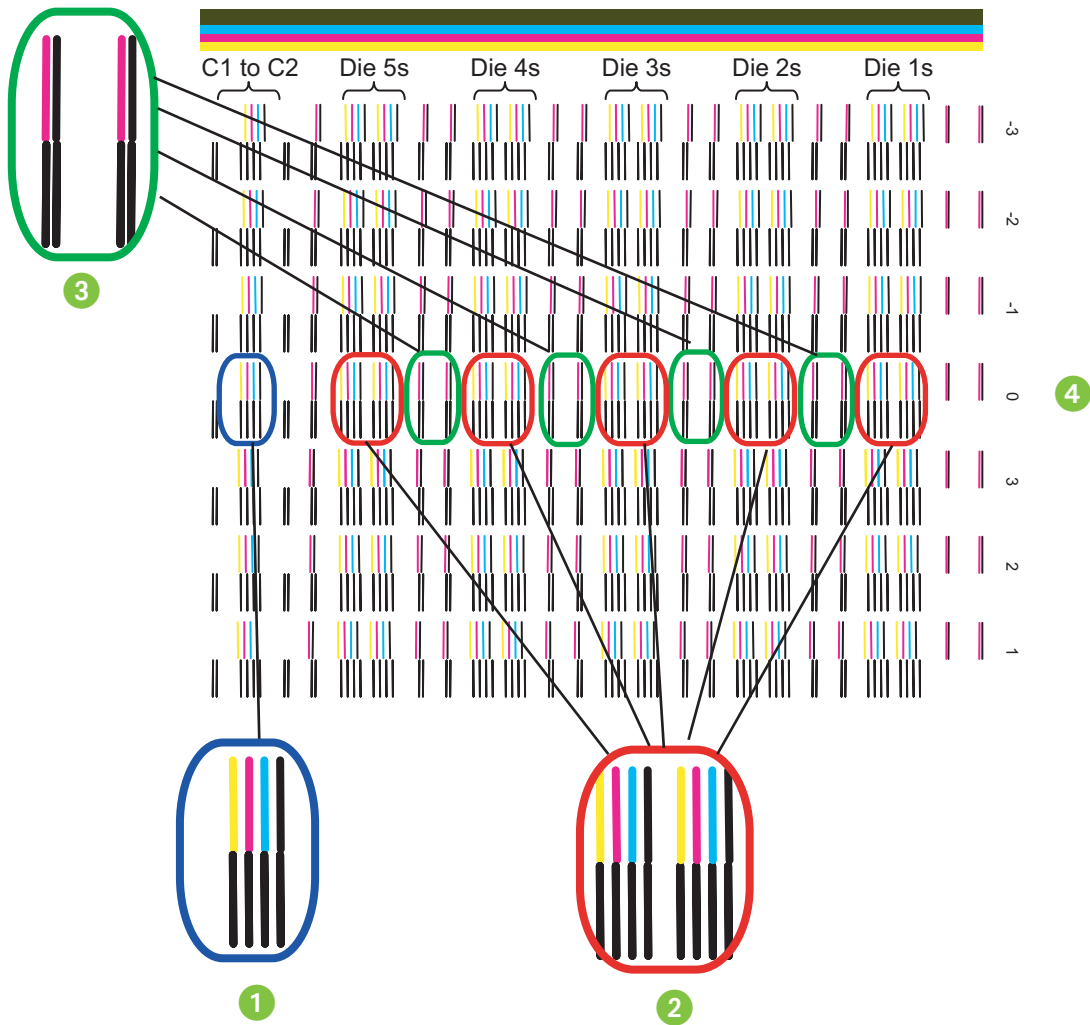


1	Pen-to-pen horizontal alignment
2	Die-to-die horizontal alignment
3	Zero zone

Carriages 1 and 2 and carriage-to-carriage vertical alignment

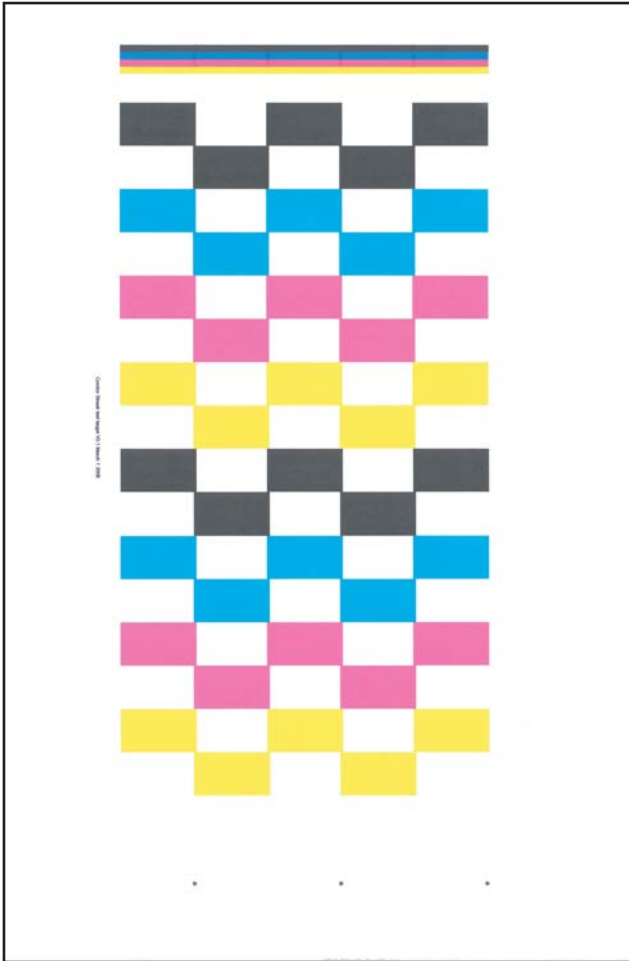
The Carriages 1 and 2 and carriage-to-carriage vertical alignment section of the APA test page verifies the following types of alignment:

- Carriage-to-carriage vertical alignment: Verify that the CMYK marks are aligned to black on the left-most column.
- Pen-to-pen vertical: Verify that the CMYK marks in each of the five groupings are aligned to black along the zero zone of the page. The marks on the left correspond to Carriage 2. The marks on the right correspond to Carriage 1.
- Die-to-die vertical: Verify that the MK marks in each of the four groupings are aligned to black along the zero zone of the page. The marks on the left correspond to Carriage 2. The marks on the right correspond to Carriage 1.



1	Carriage-to-carriage vertical alignment
2	Pen-to-pen vertical alignment
3	Die-to-die vertical alignment
4	Zero zone

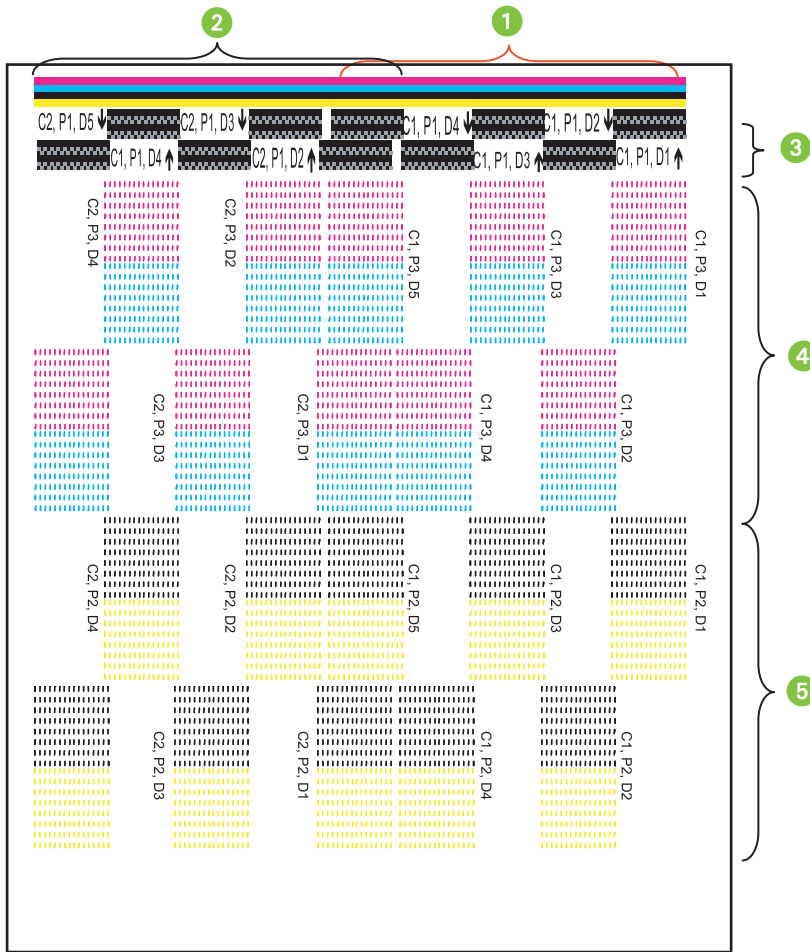
Streaks test page



The Streaks test page is one of the three direct-drive pages, so the source tray, output tray, and quantity is predefined. This page is a single-pass print. Each block is printed with all the nozzles in one die slot. There are 1056 nozzles per die slot. The overlap between the die slots is equivalent to 64 nozzles. Use this page for the streaks test in the Scan and Analyze routine to troubleshoot streaks and vertical banding.

Nozzle Health test page

Use the Nozzle Health test page to diagnose the pen nozzles.

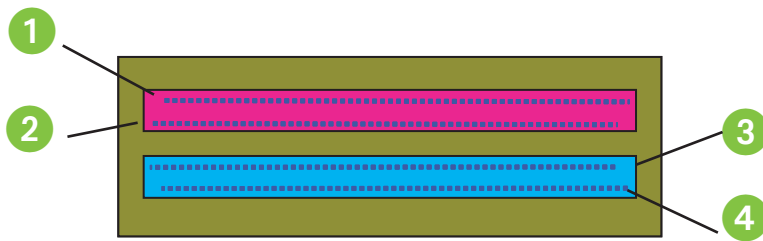


1	Carriage 1 section
2	Carriage 2 section
3	Bonding agent section
4	CM pens section
4	YK pens section

Color pens

Color pen nozzles are arranged in dies. Each pen has five dies. Each die has two die slots, one die slot per color. Each die slot has two columns of nozzles.

Figure D-1 Die

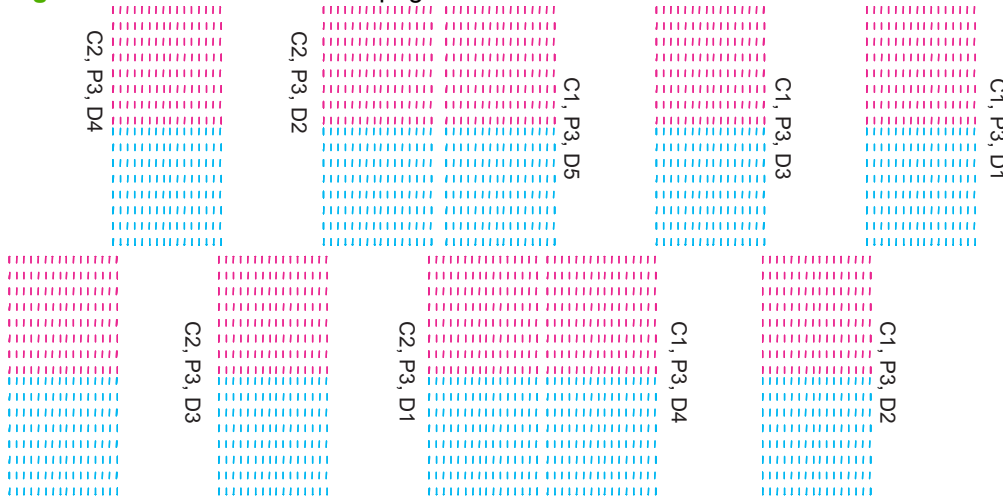


1	Column 1 in magenta die slot
---	------------------------------

2	Column 2 in magenta die slot
3	Column 1 in cyan die slot
4	Column 2 in cyan die slot

On the Nozzle Health test page, each die slot is represented by a block of colored dashes.

Figure D-2 Nozzle Health test page dies



The page indicates the source of each block. For example, **C1, P3, D5** represents Carriage 1 Pen 3 Die 5.

Each bar is made up of 20 spits from a single nozzle (at 18kHz). There are twelve bars in each vertical series. The bars should step down uniformly across the pattern.

When you are using the Nozzle Health test page, look for bars that are missing or out of sequence.

Bonding agent pens

The health of the bonding agent pens is indicated by the black and gray checkered patterns at the top of the Nozzle Health test page. If the checkered pattern is clearly visible, then the bonding agent pens are working.

△ **CAUTION:** The bonding agent health is not indicated correctly if the Nozzle Health test page is printed on ColorLok media.

Figure D-3 Die



1	Checked pattern that indicates healthy bonding agent pens
2	Incomplete checked pattern that indicates unhealthy bonding agent pens

The gray areas are printed with black ink and no bonding agent. The black areas are printed with black ink and bonding agent.

Each box in the checkered pattern is 24 nozzles high. Bonding agent is printed at a rate of one drop per 600 (9kHz).

E Voltage specification

This chapter contains information about the following topics:

- [Introduction](#)
- [Subsystem voltage specifications and ranges](#)
- [Vacuum and aerosol motor voltage specifications](#)
- [Dryer voltage specifications](#)

Introduction

There is no need to use the CDFT diagnostics in order to monitor the voltages for any of the sensors. The voltage is always available between the PCA and device.

In order to monitor any voltage at any location along a wiring harness from the PCA to the device for any motor, solenoid, or clutch, the CDFT diagnostics must be enabled and that device needs to be selected. For example, if you enable the horizontal motor on the CDFT, the voltage between the PCA and the motor is available for measurement.

Subsystem voltage specifications and ranges

The following sections provide DC voltage specifications and ranges for key MFP subsystems.

DC Voltage

- [MFP print engine](#)
- [Trays 2, 3 and 4](#)
- [Finisher](#)
- [Automatic Document Feeder](#)
- [Scanner](#)
- [Tray 1](#)

MFP print engine

Power supply and system voltage outputs	Minimum voltage	Maximum voltage
+5VSB (volt standby)	+4.75	+5.25
+3.3	+3.14	+3.47
+5.1	+4.95	+5.25
+12.0	+11.4	+12.6
+20.0	+18.0	+22.0
+24.0	+22.8	+26.4
+28.0	+27.0	+29.0
+32.0	+28.8	+35.6
+52.0	+50.4	+53.6

Trays 2, 3 and 4

Power supply and system voltage outputs	Minimum voltage	Maximum voltage
+5.0	+4.75	+5.25
+24.0	+21.6	+26.4
+32.0	+28.8	+35.2

Finisher

Power supply and system voltage outputs	Minimum voltage	Maximum voltage
+3.3	+3.15	+3.45

Power supply and system voltage outputs	Minimum voltage	Maximum voltage
+5.0	+4.75	+5.25
+32.0	+28.8	+34.2
+42.0	+39.9	+44.1
+52.0	+49.4	+54.6

Automatic Document Feeder

Power supply and system voltage outputs	Minimum voltage	Maximum voltage
5 VSB (volt stand-by)	+4.75	+5.25
5	+4.75	+5.25
24	+23.5	+25.4

Scanner


Power supply and system voltage outputs	Minimum voltage	Maximum voltage
3.3	+3.14	+3.47
5	+4.75	+5.25
11	+10.9	+11.4
24	+23.5	+25.4

Tray 1

Power supply and system voltage outputs	Minimum voltage	Maximum voltage
TBD	TBD	TBD
TBD	TBD	TBD

Vacuum and aerosol motor voltage specifications

Resistance between lines (Yellow-White/White-Brown/Brown-Yellow) on the motor should measure 1.6~1.7 Ohms when the motor is disconnected.

 **NOTE:** Motors operate with high frequency pulse width modulated (PWM) DC voltages. Use the AC setting on the voltmeter when checking voltages in PSM mode. The high frequency sampling ability of the voltmeter will effect the measured voltage.

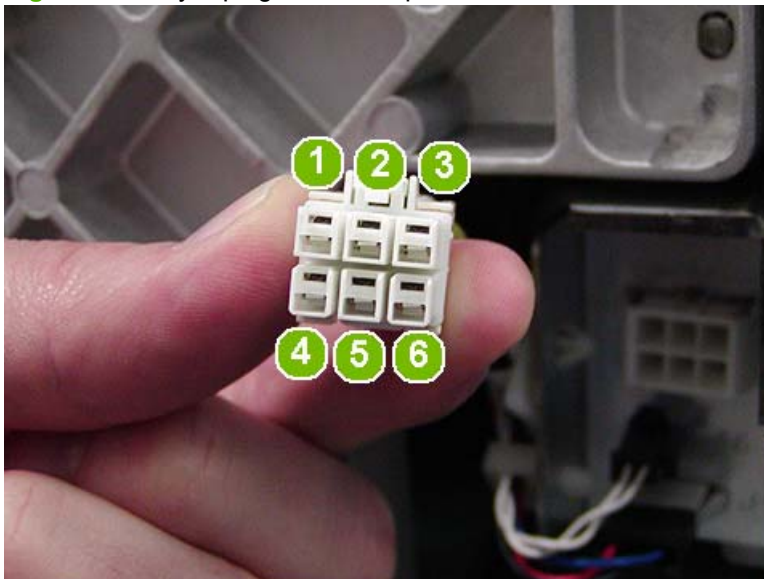
Vacuum and aerosol voltage specifications

Protected Service Mode (PSM) voltage test	Normal operation
Line To Line (Yellow-White/White-Brown/Brown-Yellow)	
AC ~2-12V	~15-25V (This value varies and depends on the operating condition.)
	Measure voltages between motor wires.

Dryer voltage specifications

Protected Service Mode (PSM) voltage test	Normal operation
Heater (FAN5)	
Pin 1-2 DC ~27-32V	~27-32V
Pin 3-2 DC ~3.1-3.3V	~1.6-3.3V (This value depends on RPM of the fan.)
Dryer heating coil (HTR1)	
28 ohms per coil	4 coils per heater assembly. Each coil should be $28\Omega \pm 1.4\Omega$.

Figure E-1 Dryer plug connector pins



Connector	Wire color
1	White
2	Black
3	White
4	Yellow
5	Brown
6	Yellow

Table E-1 Dryer plug pin-to-pin resistance

Pin	1	2	3	4	5	6
1	–	28Ω	56Ω	n/a	n/a	n/a
2	28Ω	–	28Ω	n/a	n/a	n/a
3	56Ω	28Ω	–	n/a	n/a	n/a
4	n/a	n/a	n/a	–	28Ω	56Ω
5	n/a	n/a	n/a	28Ω	–	28Ω
6	n/a	n/a	n/a	56Ω	28Ω	–

¹ 28Ω ± 1.4Ω

² 56Ω ± 2.8Ω

F Reference diagrams

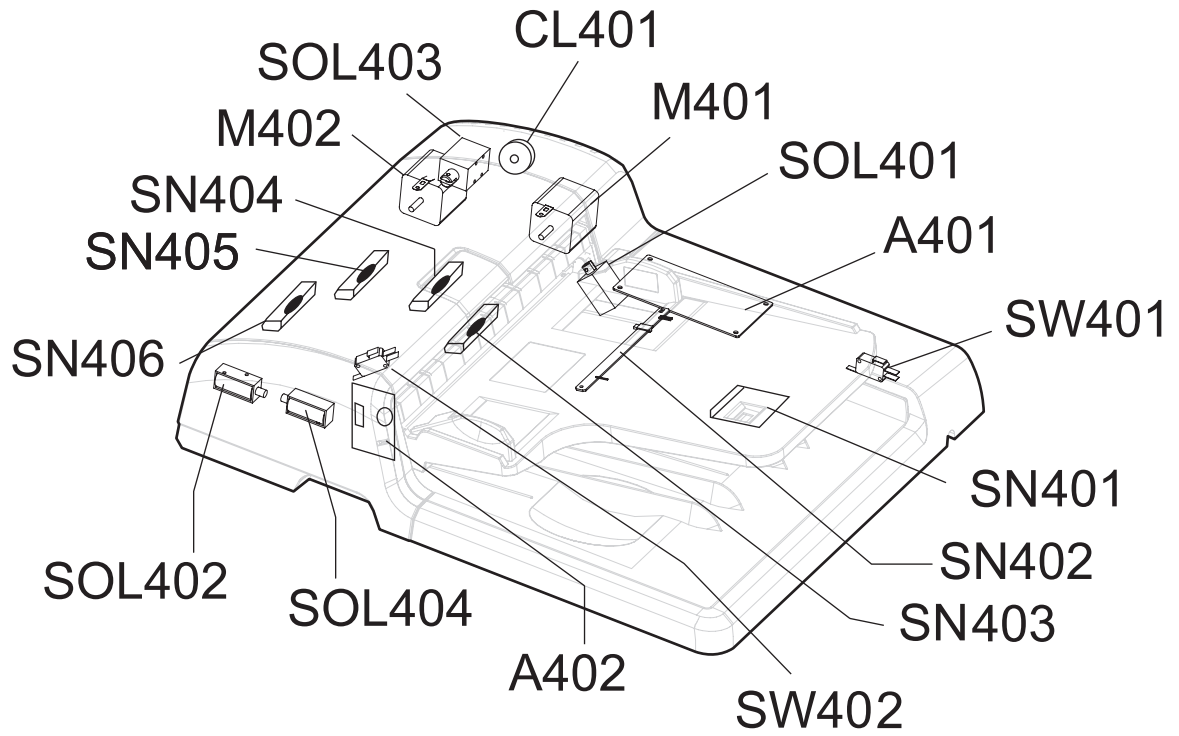
- [Component locators](#)
- [Drum surface](#)
- [Electronics map](#)
- [Image pipeline](#)
- [Paper path sensors](#)
- [Error log table](#)
- [Trays 2, 3, and 4 Controller PCA \(A23\) actuator fingers](#)
- [New pen installation process flowchart](#)

Component locators

- [ADF component locator](#)
- [Aerosol component locator](#)
- [Tray 1 component locator](#)
- [Carriage component locator](#)
- [Covers component locator](#)
- [Drum component locator](#)
- [Dryer component locator](#)
- [HP Multi-function Finisher component locator](#)
- [HP 4-Bin Job Separator component locator](#)
- [Formatter component locator](#)
- [Tray 5 component locator](#)
- [Horizontal component locator](#)
- [IDO component locator](#)
- [IDS component locator](#)
- [Electronics component locator](#)
- [Scanner component locator](#)
- [Service Station component locator](#)
- [Trays 2, 3, and 4 component locator](#)
- [Vacuum component locator](#)
- [Vertical component locator](#)
- [Web wipe component locator](#)

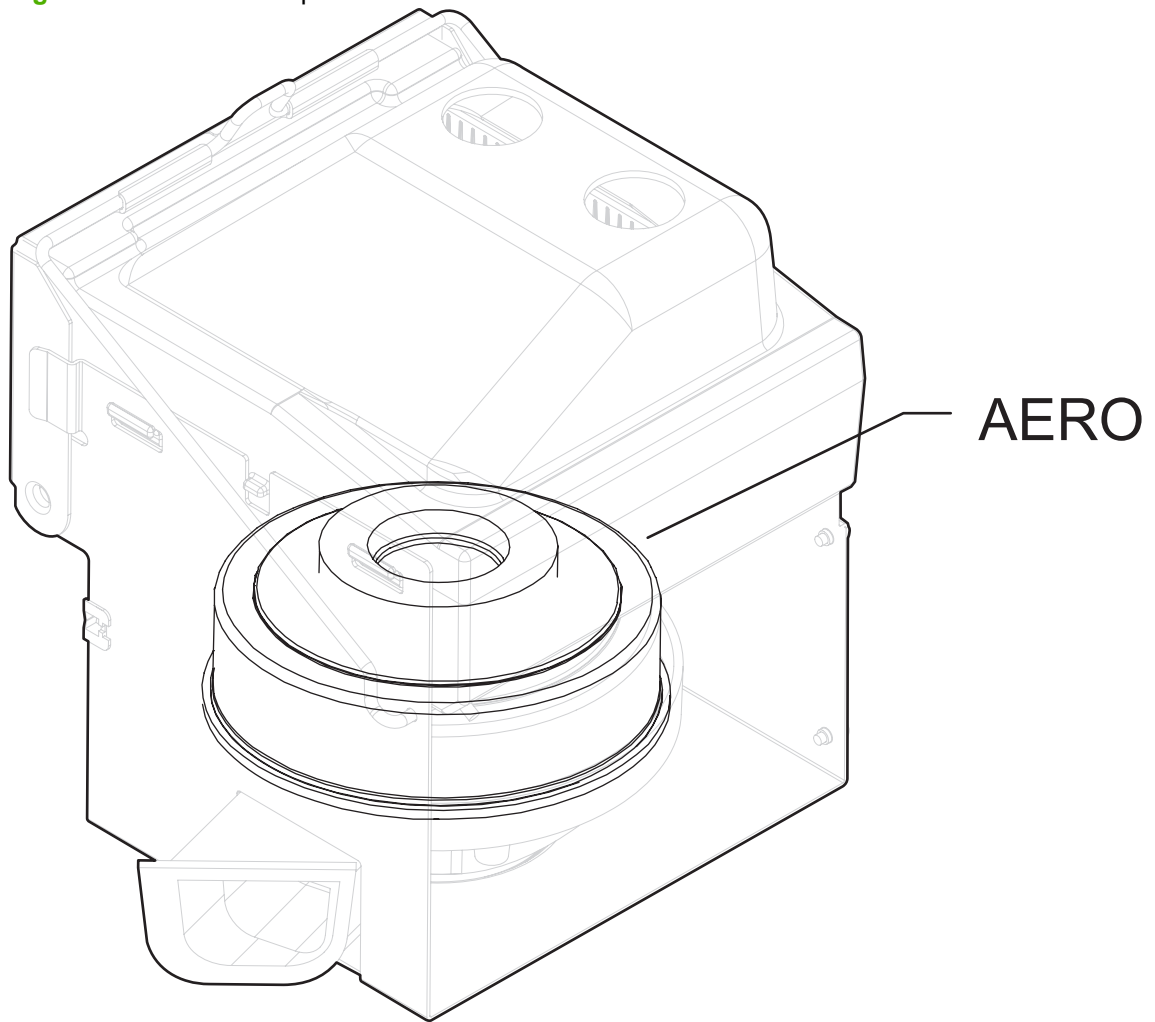
ADF component locator

Figure F-1 ADF component locator



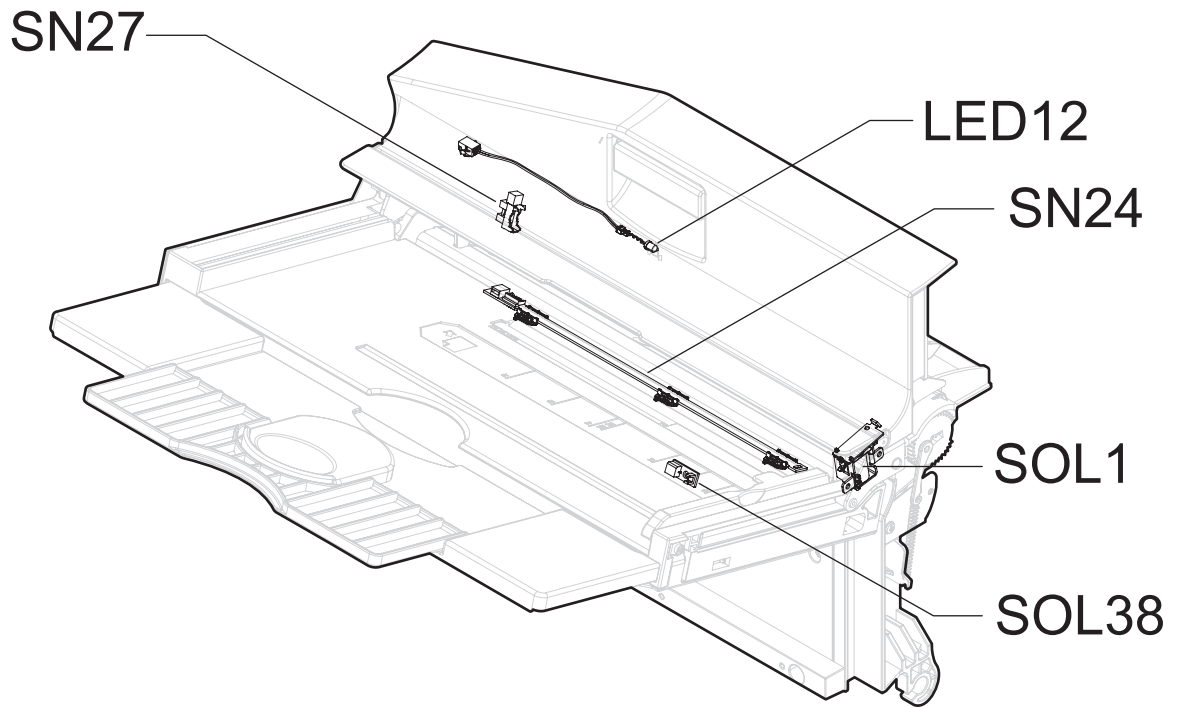
Aerosol component locator

Figure F-2 Aerosol component locator



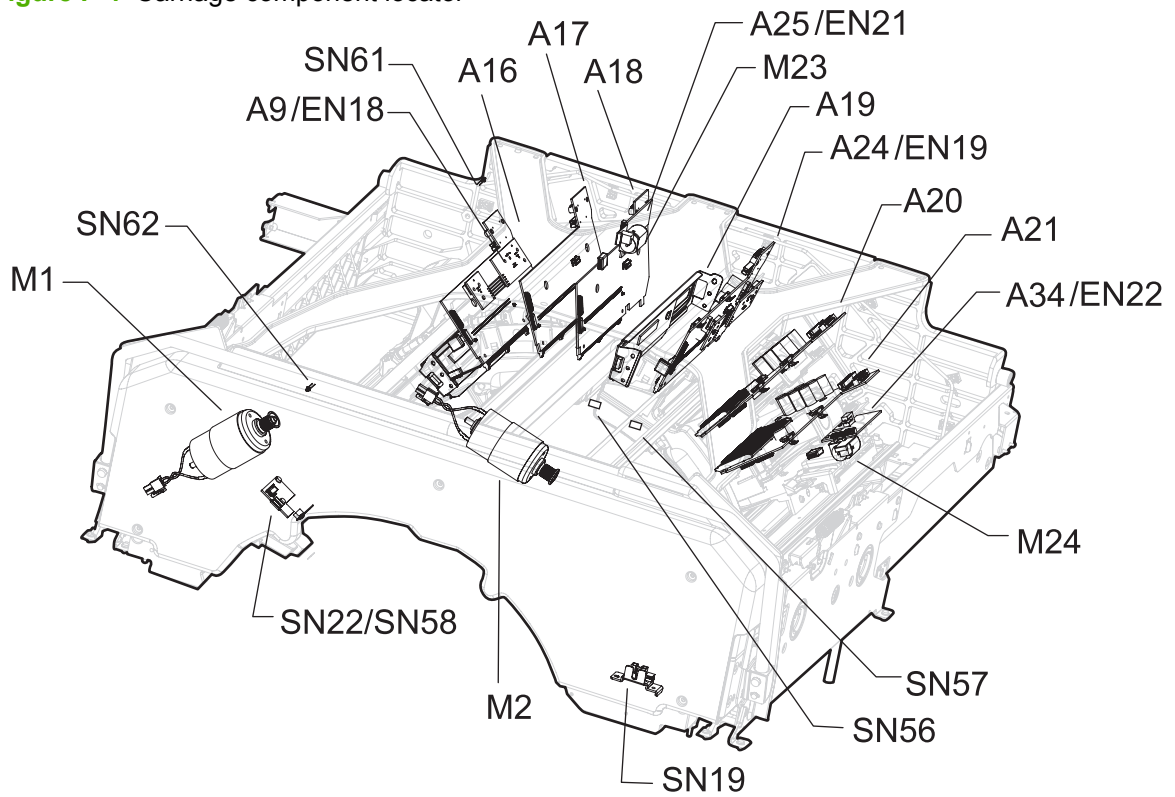
Tray 1 component locator

Figure F-3 Tray 1 component locator



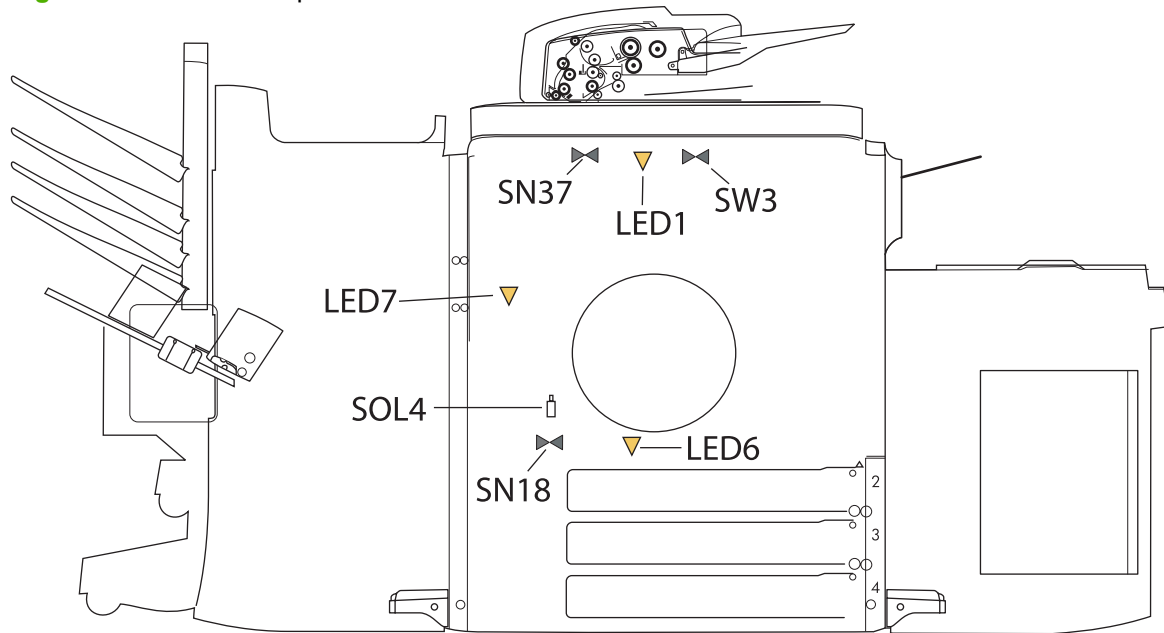
Carriage component locator

Figure F-4 Carriage component locator



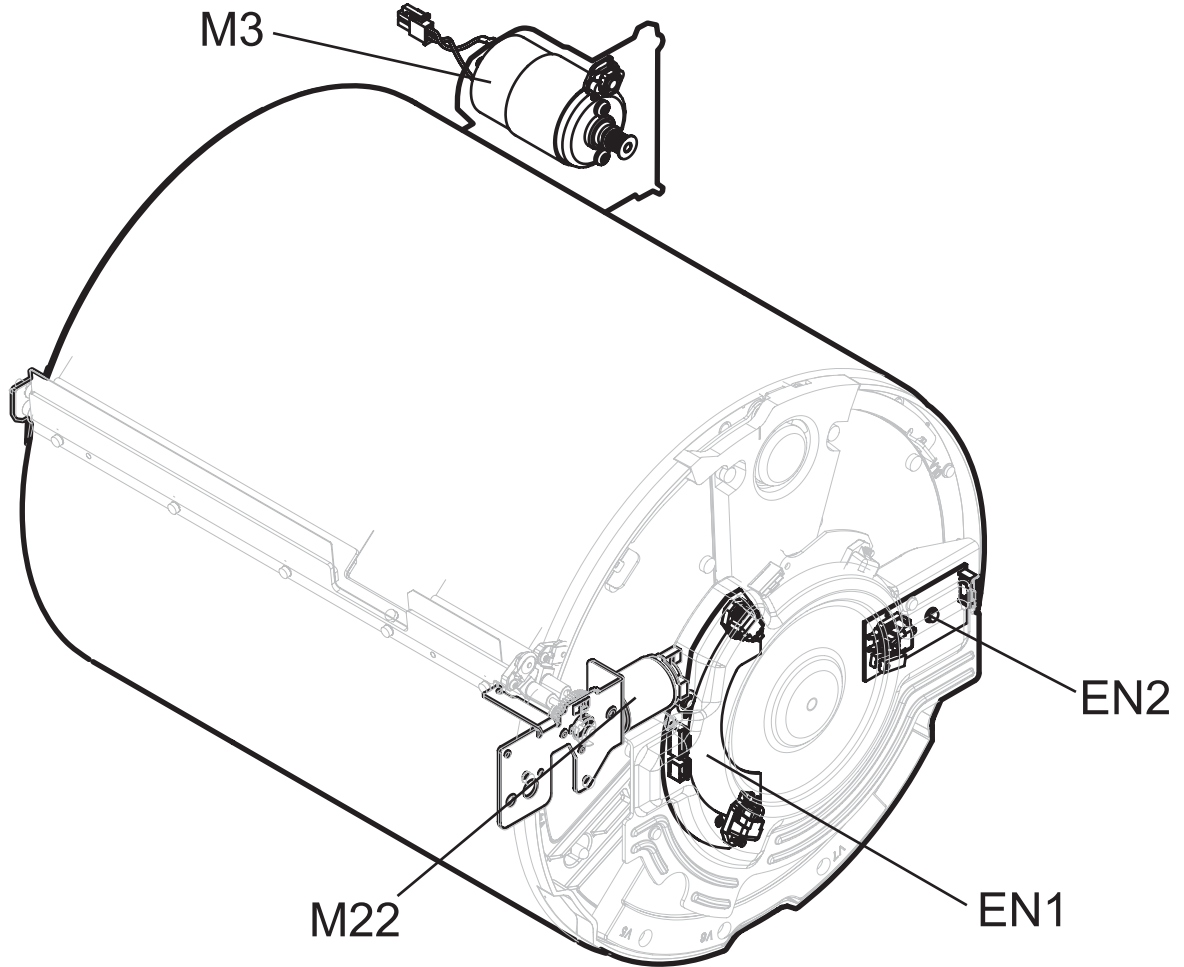
Covers component locator

Figure F-5 Covers component locator



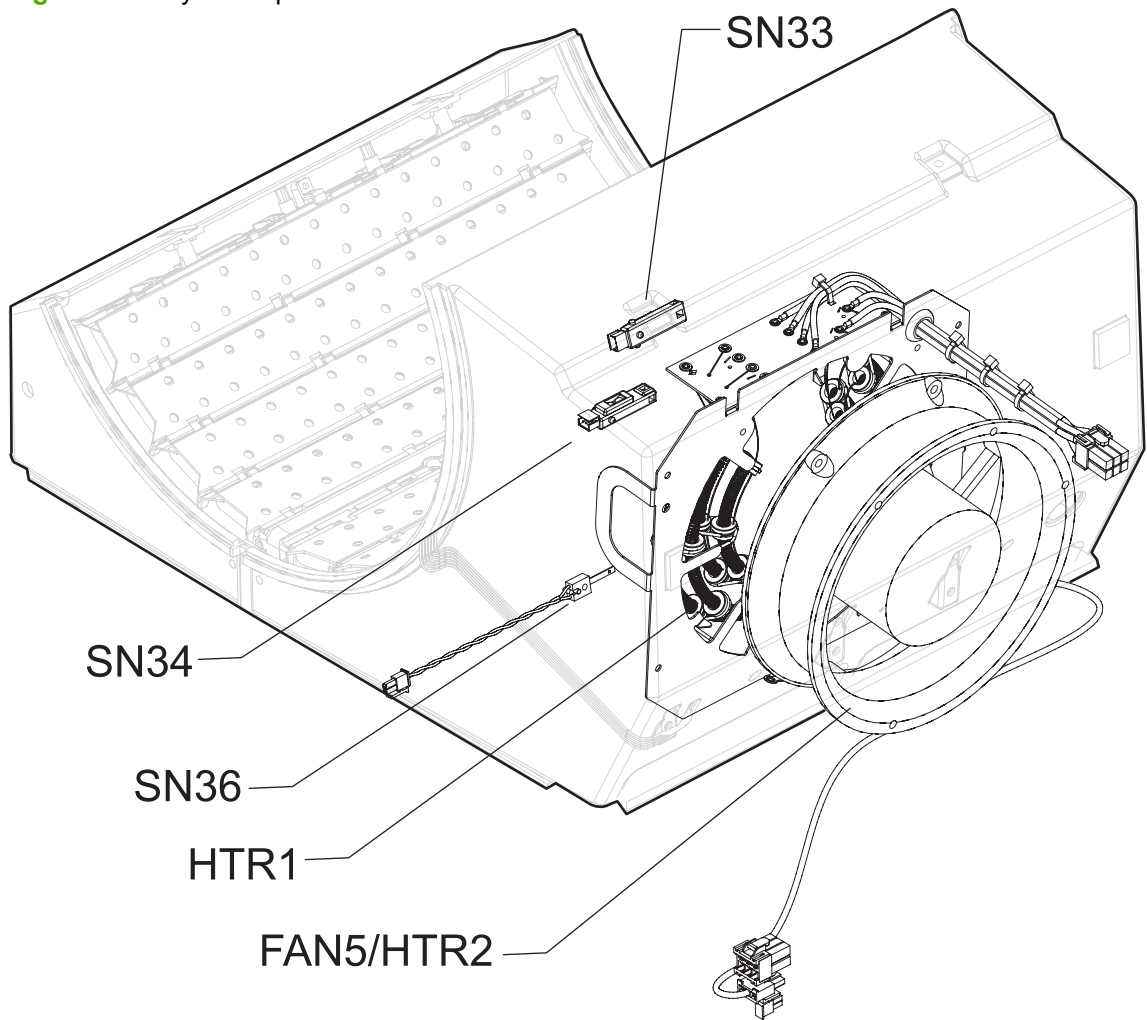
Drum component locator

Figure F-6 Drum component locator



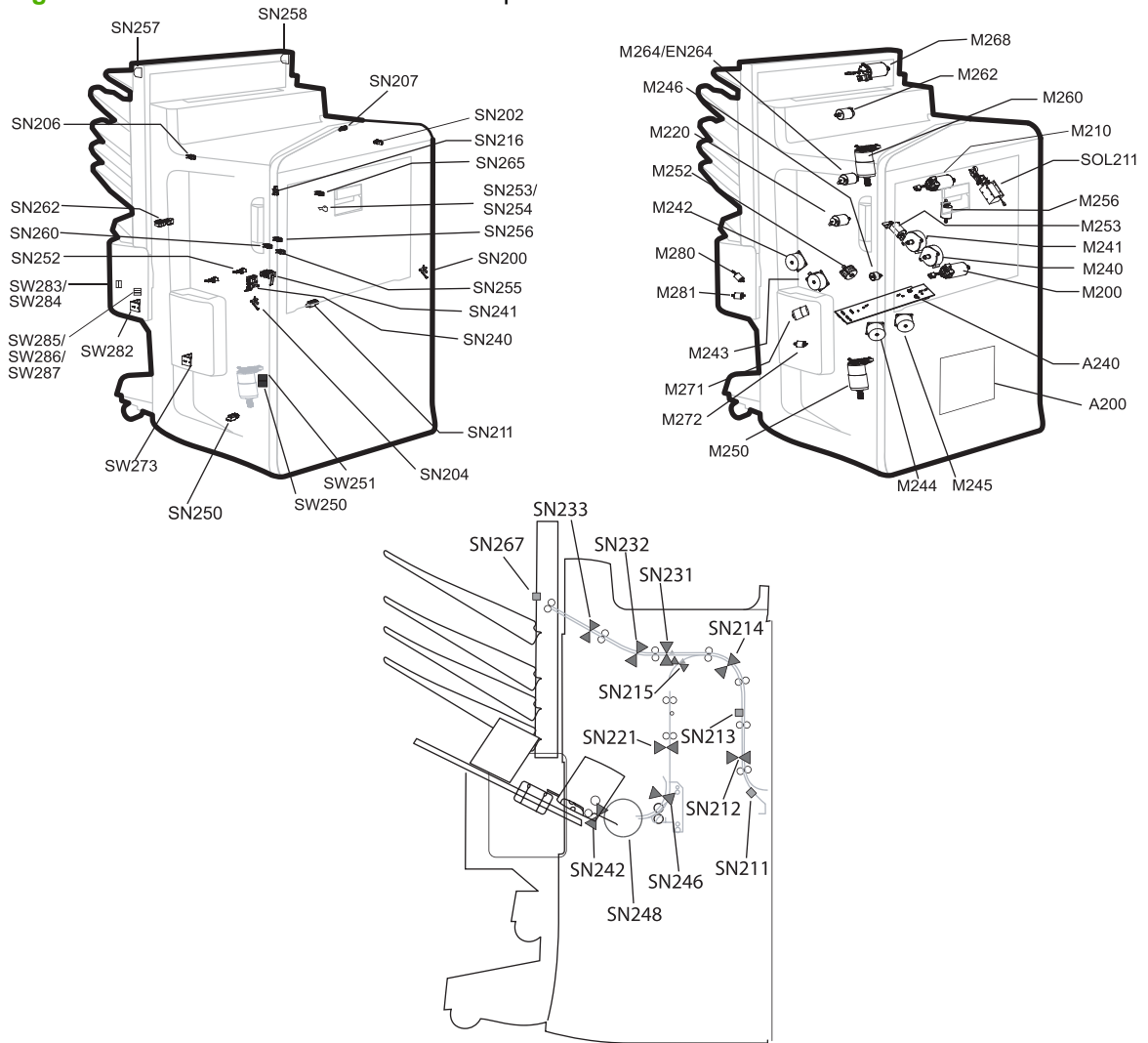
Dryer component locator

Figure F-7 Dryer component locator



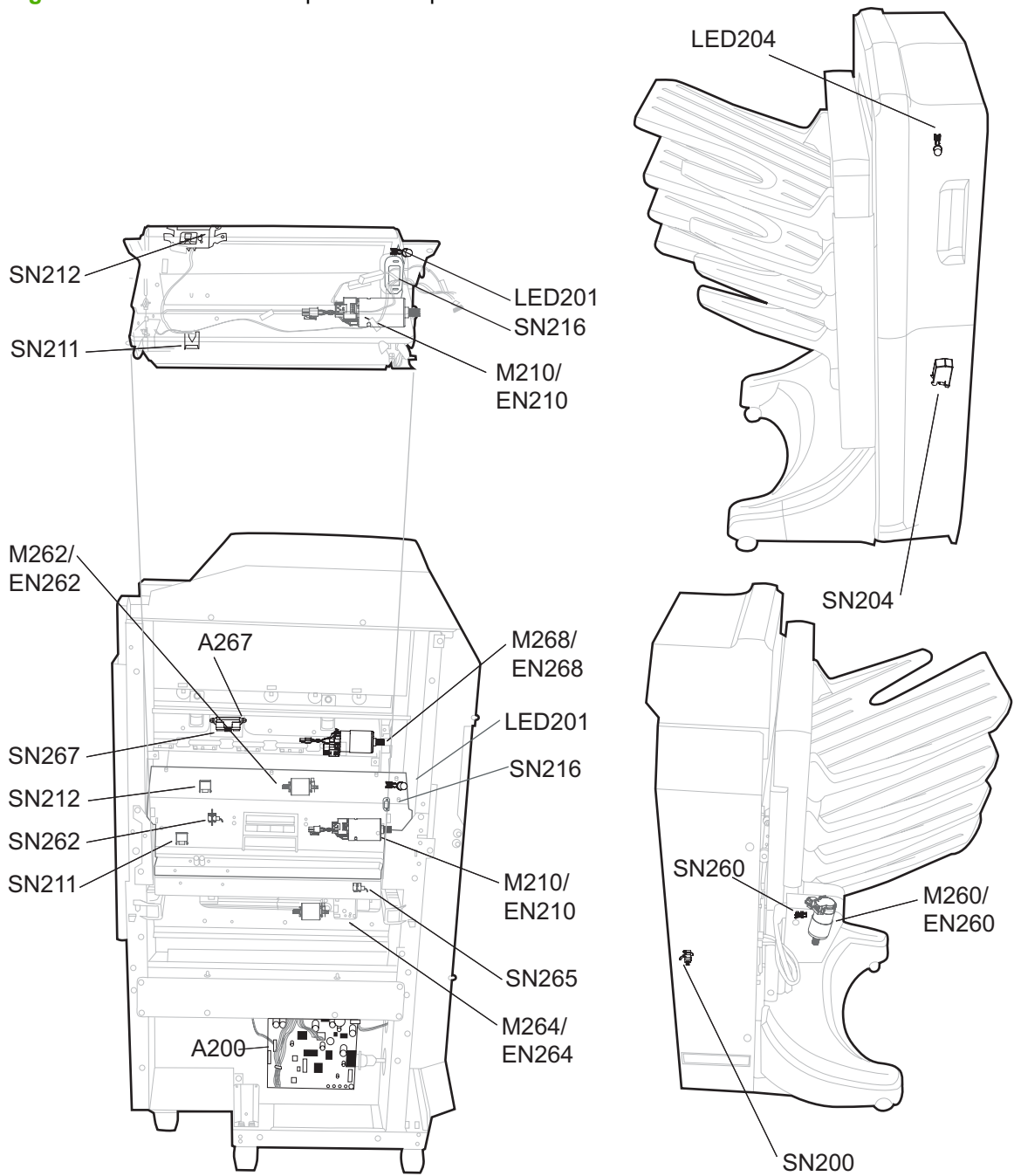
HP Multi-function Finisher component locator

Figure F-8 HP Multi-function Finisher component locator



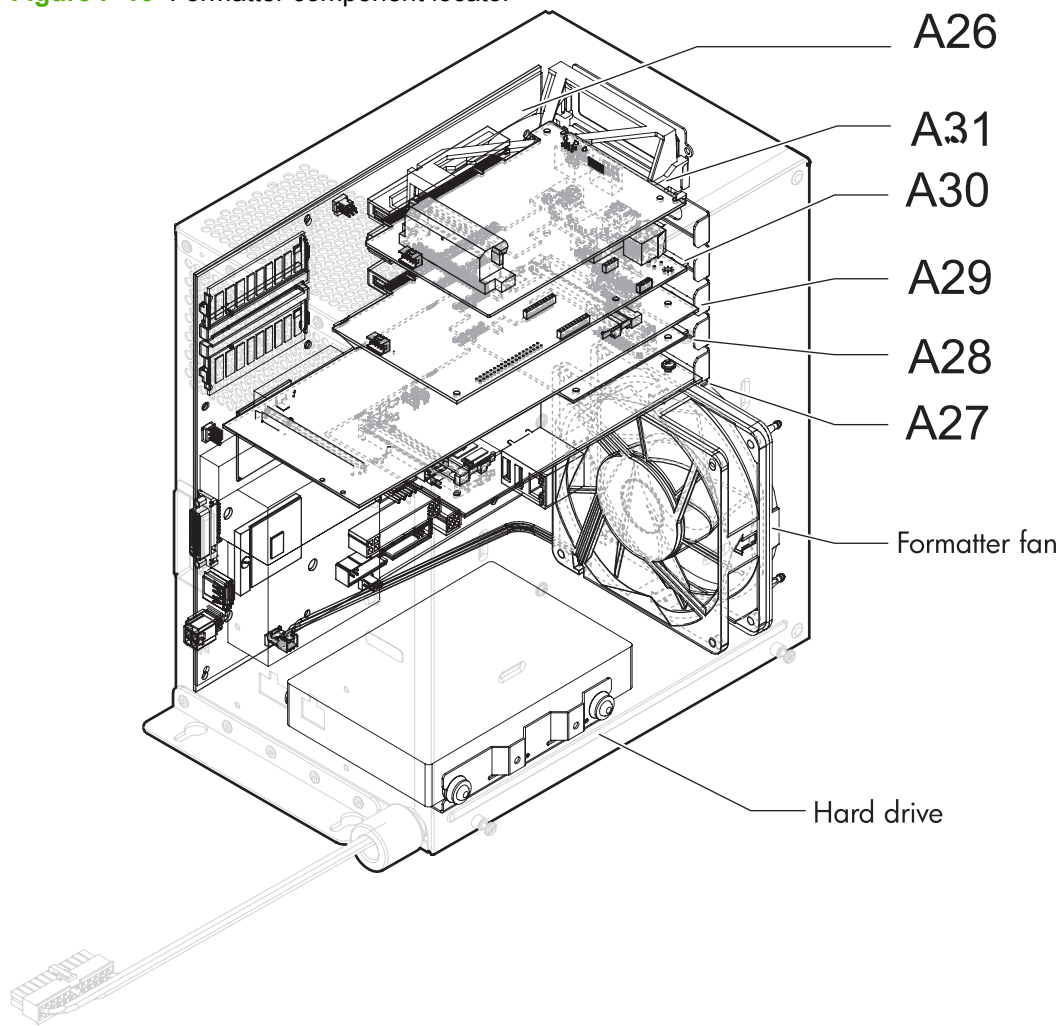
HP 4-Bin Job Separator component locator

Figure F-9 HP 4-Bin Job Separator component locator



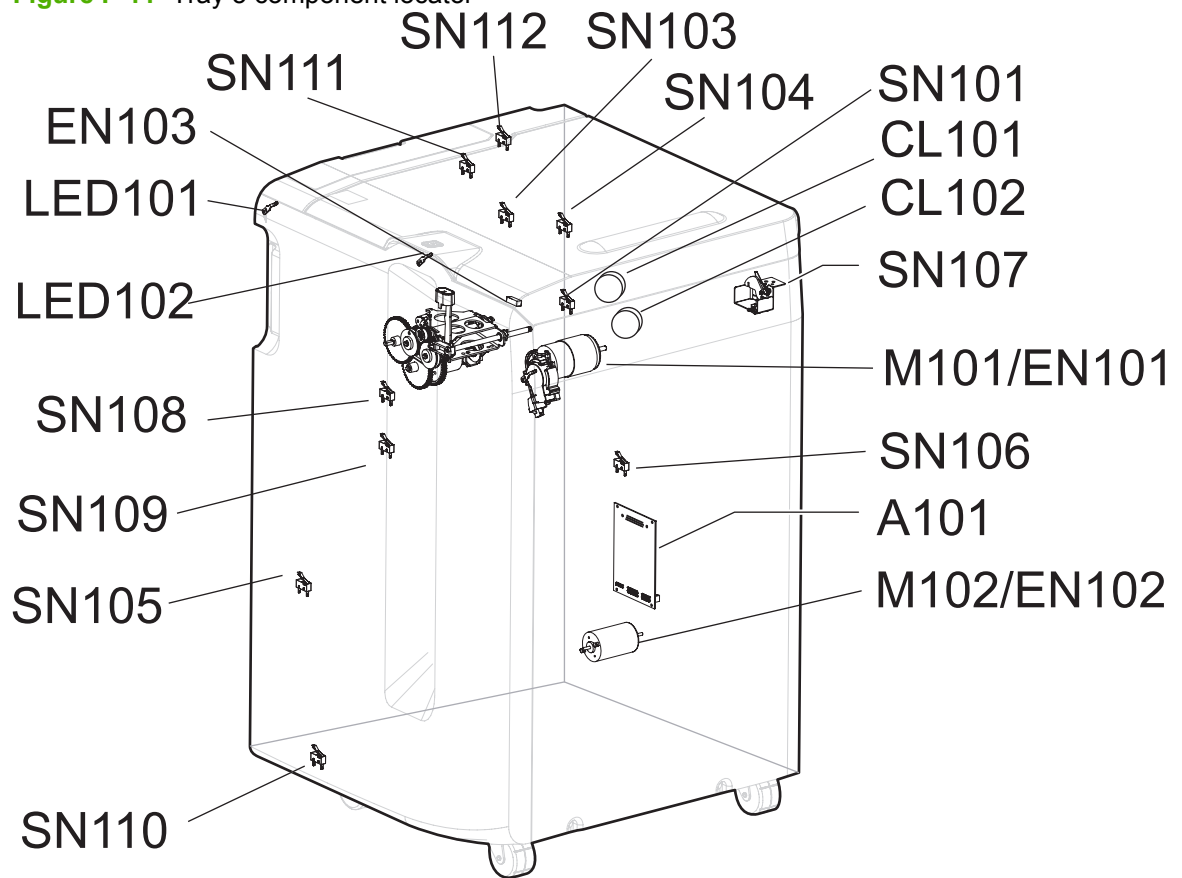
Formatter component locator

Figure F-10 Formatter component locator



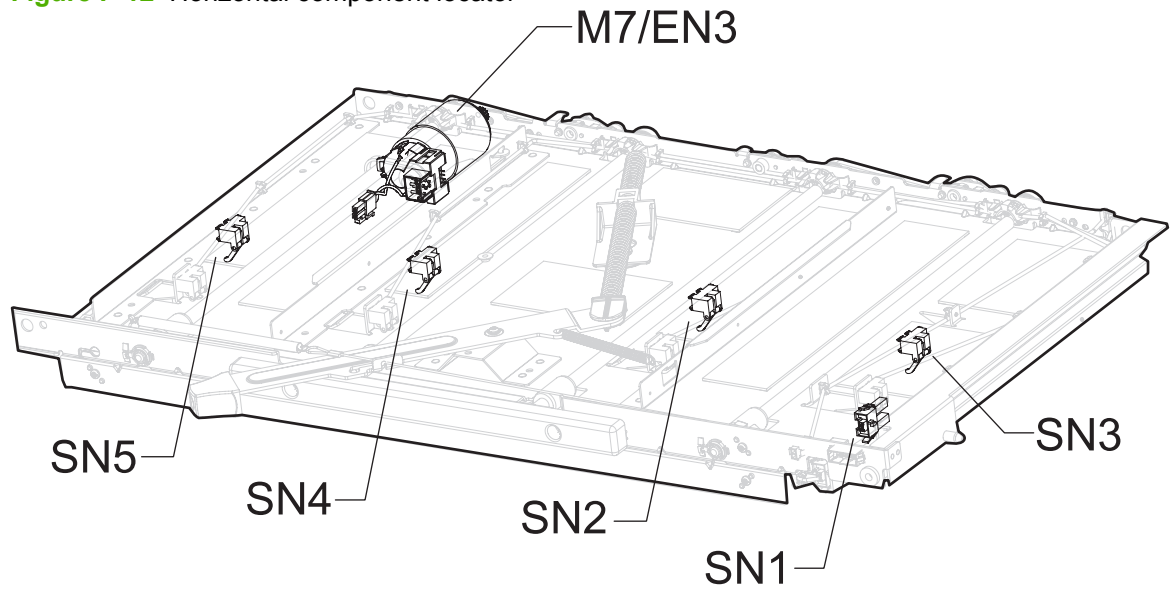
Tray 5 component locator

Figure F-11 Tray 5 component locator



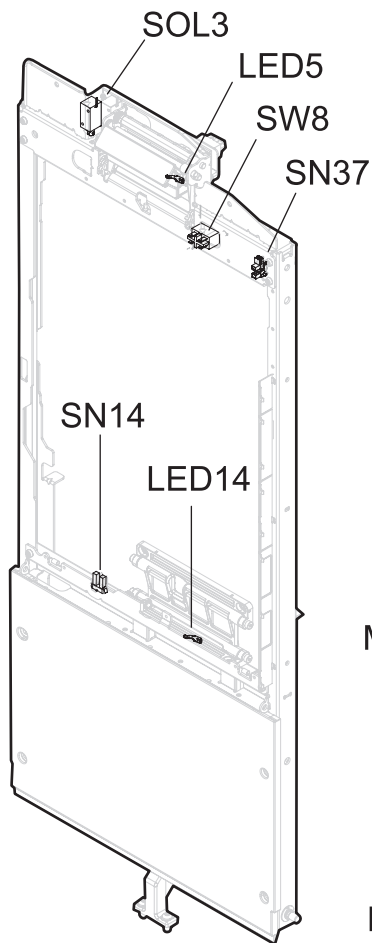
Horizontal component locator

Figure F-12 Horizontal component locator

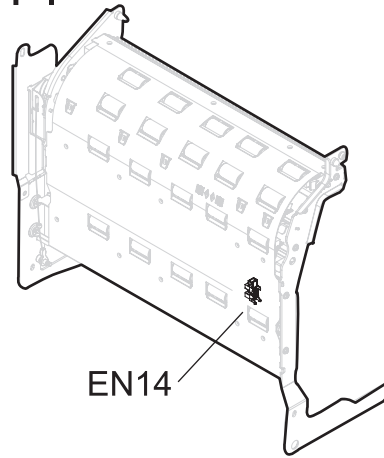


IDO component locator

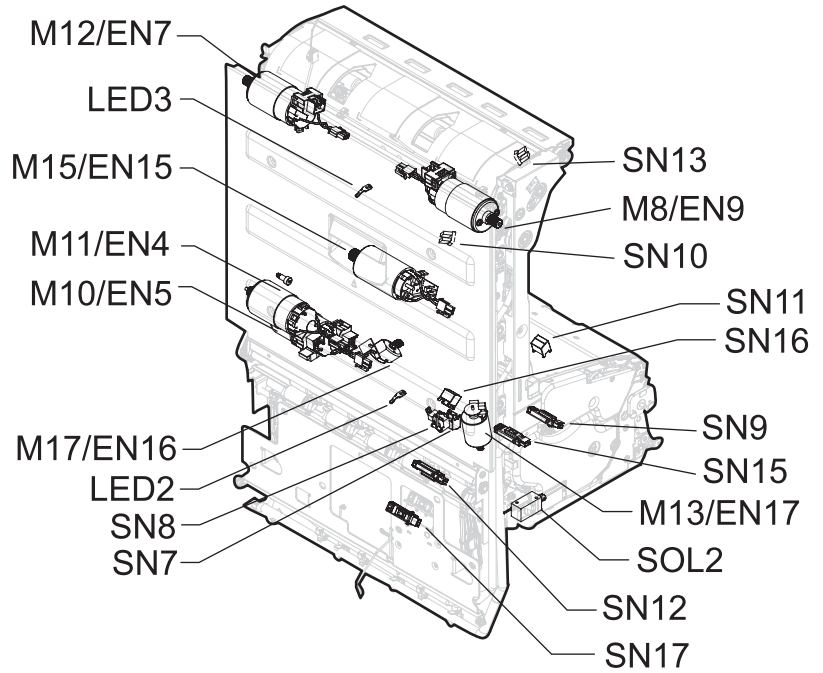
Figure F-13 IDO component locator
H-bar



PI

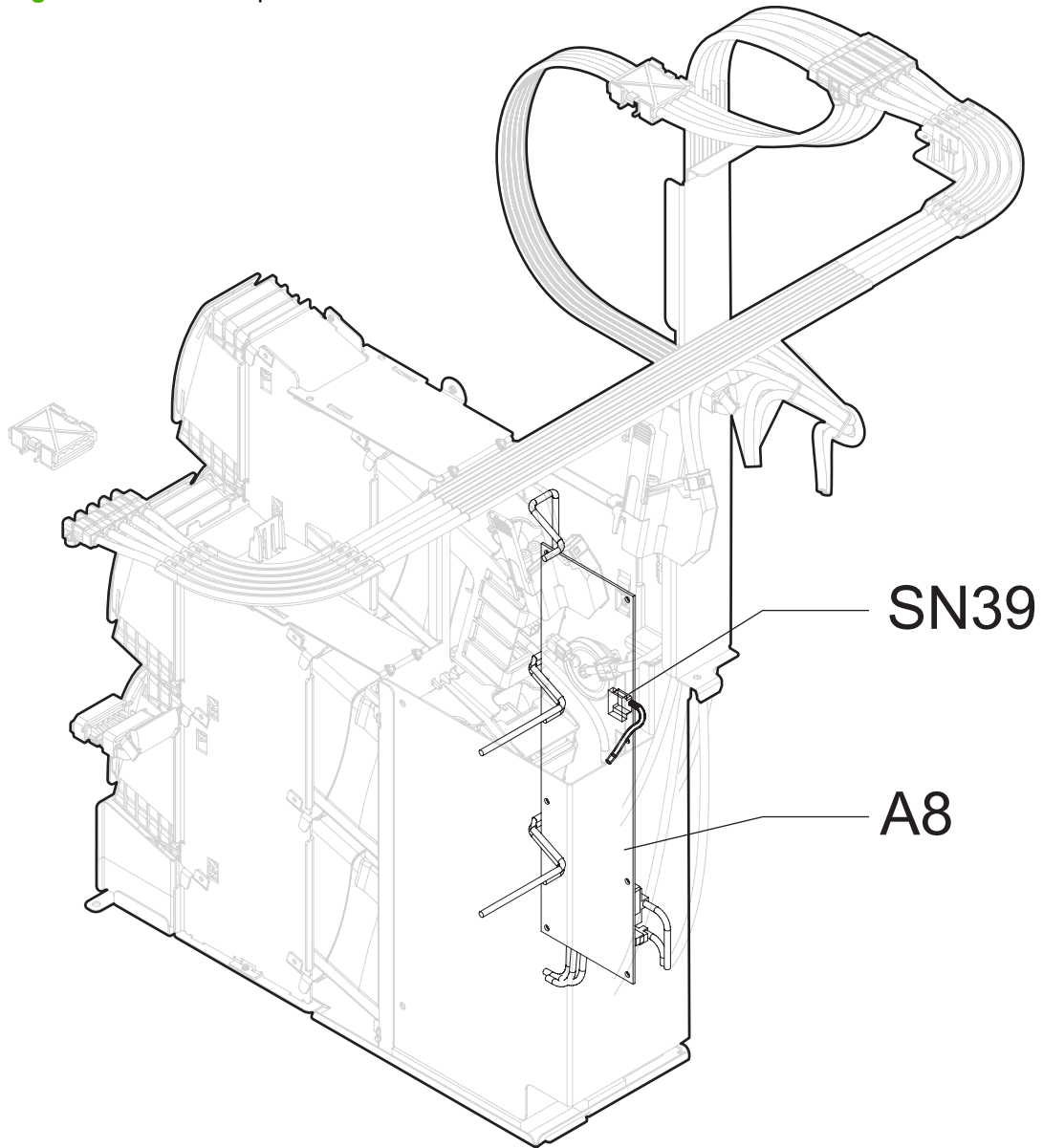


RM



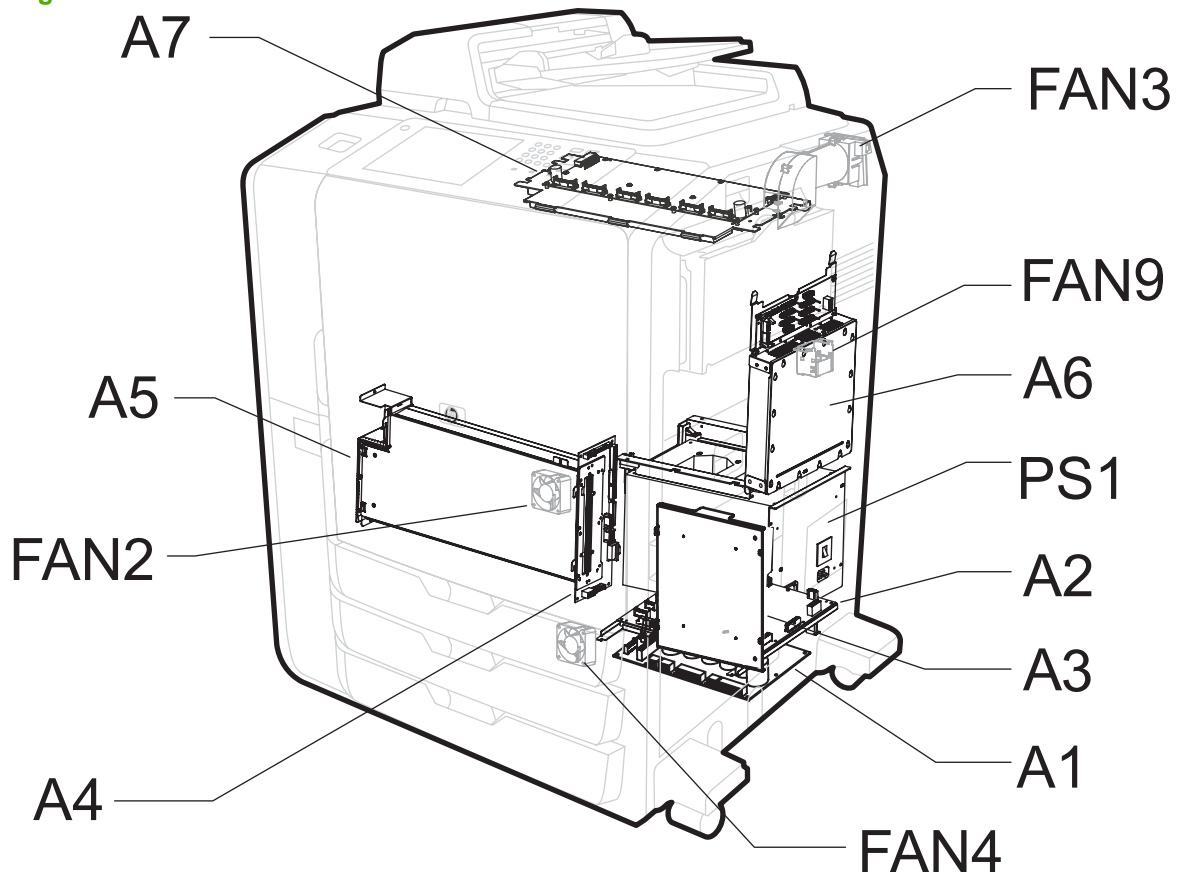
IDS component locator

Figure F-14 IDS component locator



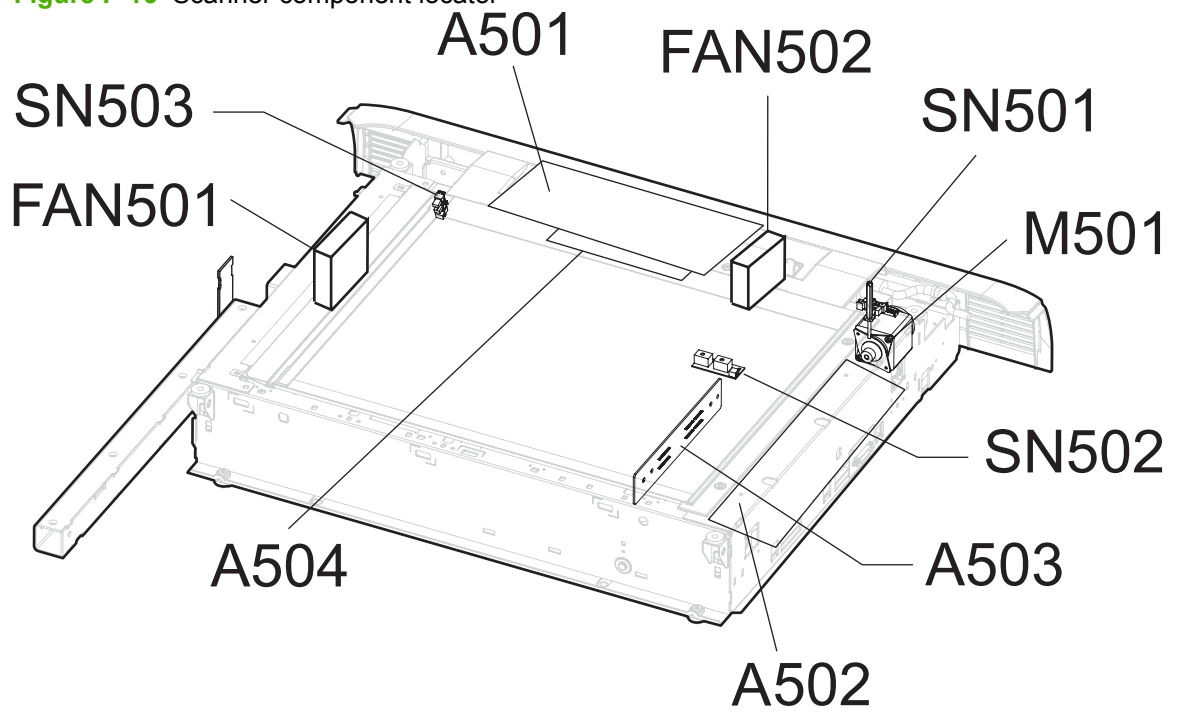
Electronics component locator

Figure F-15 Power electronics locator



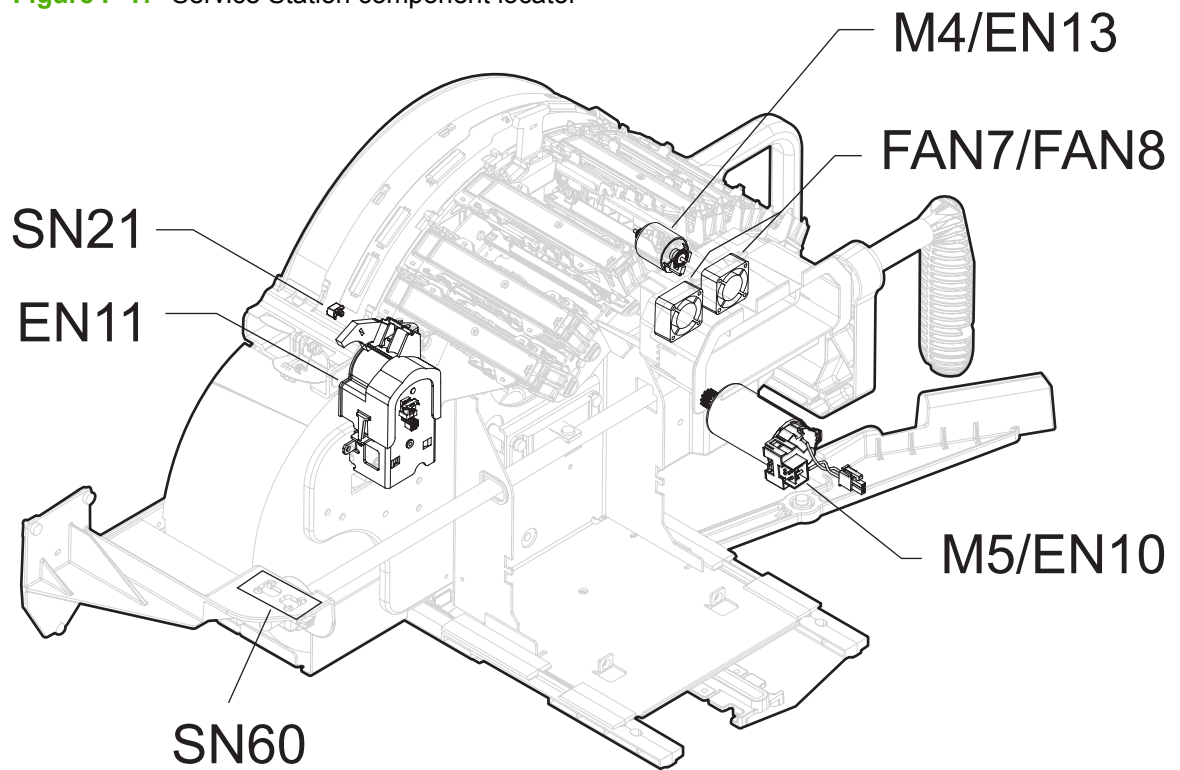
Scanner component locator

Figure F-16 Scanner component locator



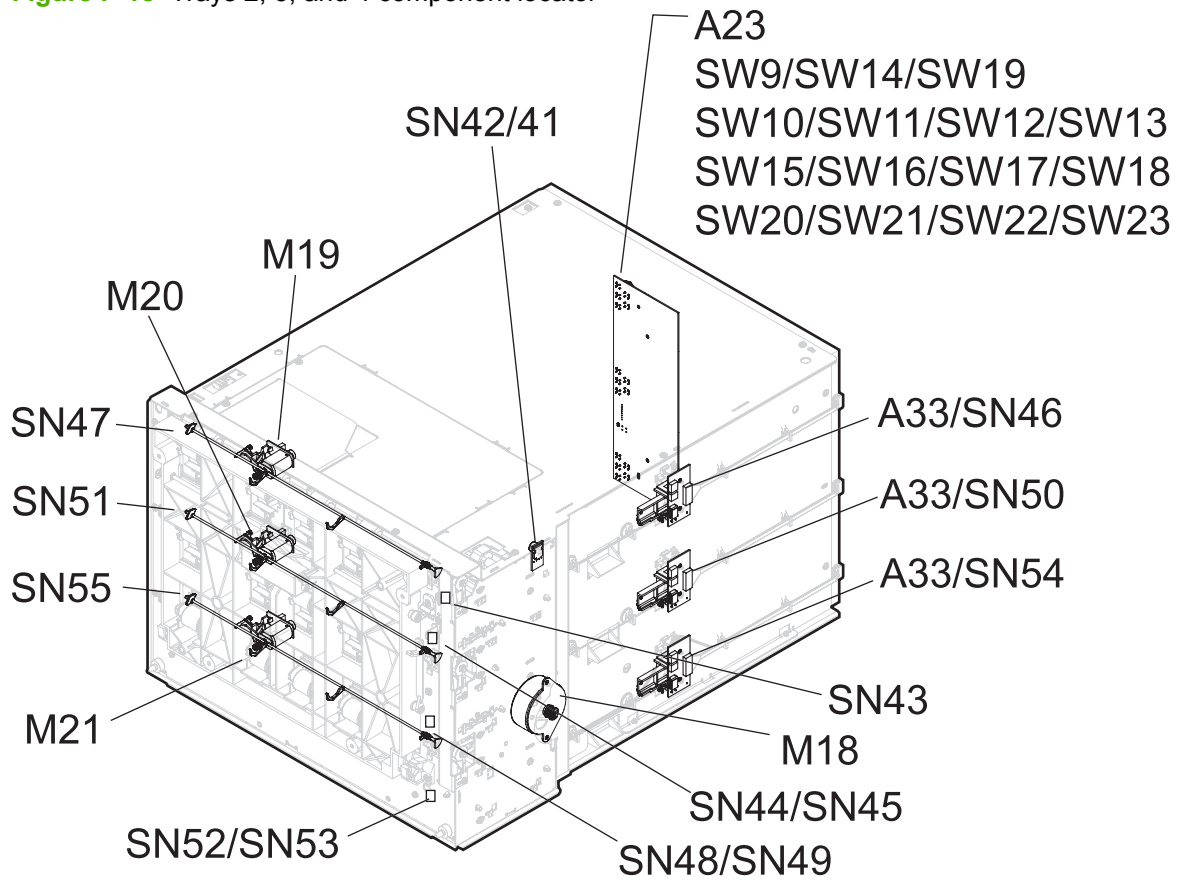
Service Station component locator

Figure F-17 Service Station component locator



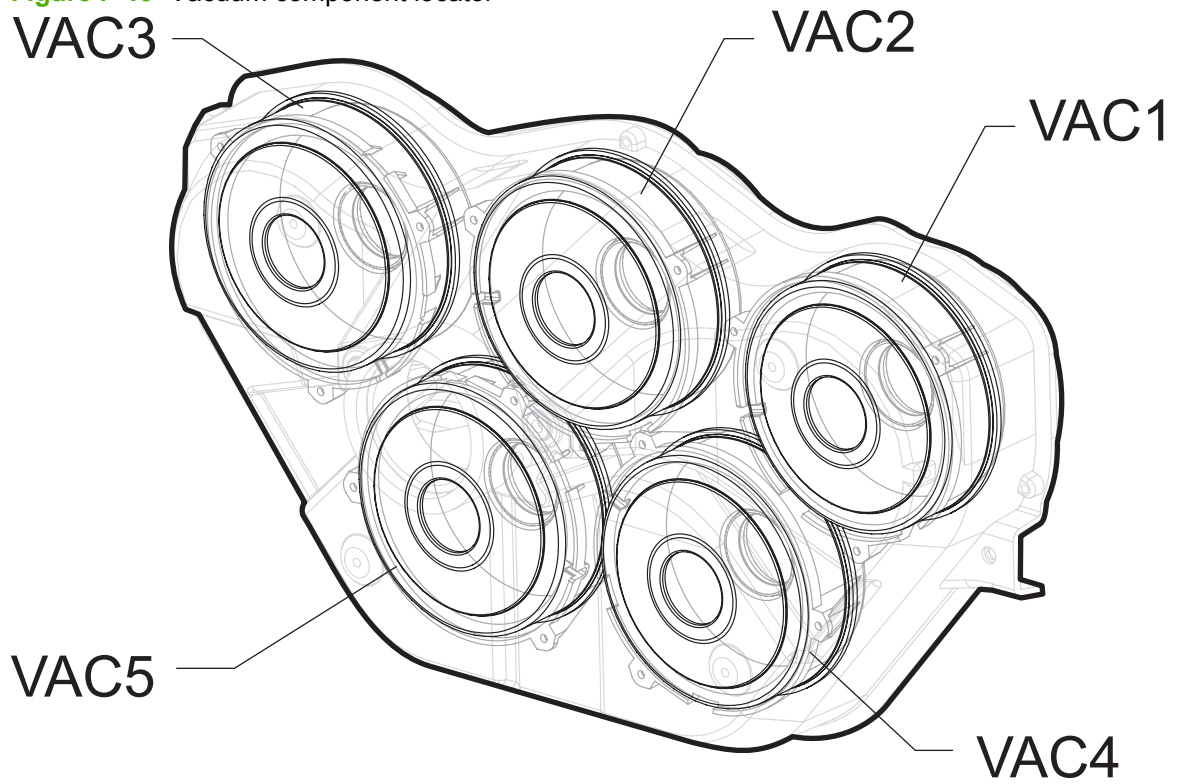
Trays 2, 3, and 4 component locator

Figure F-18 Trays 2, 3, and 4 component locator



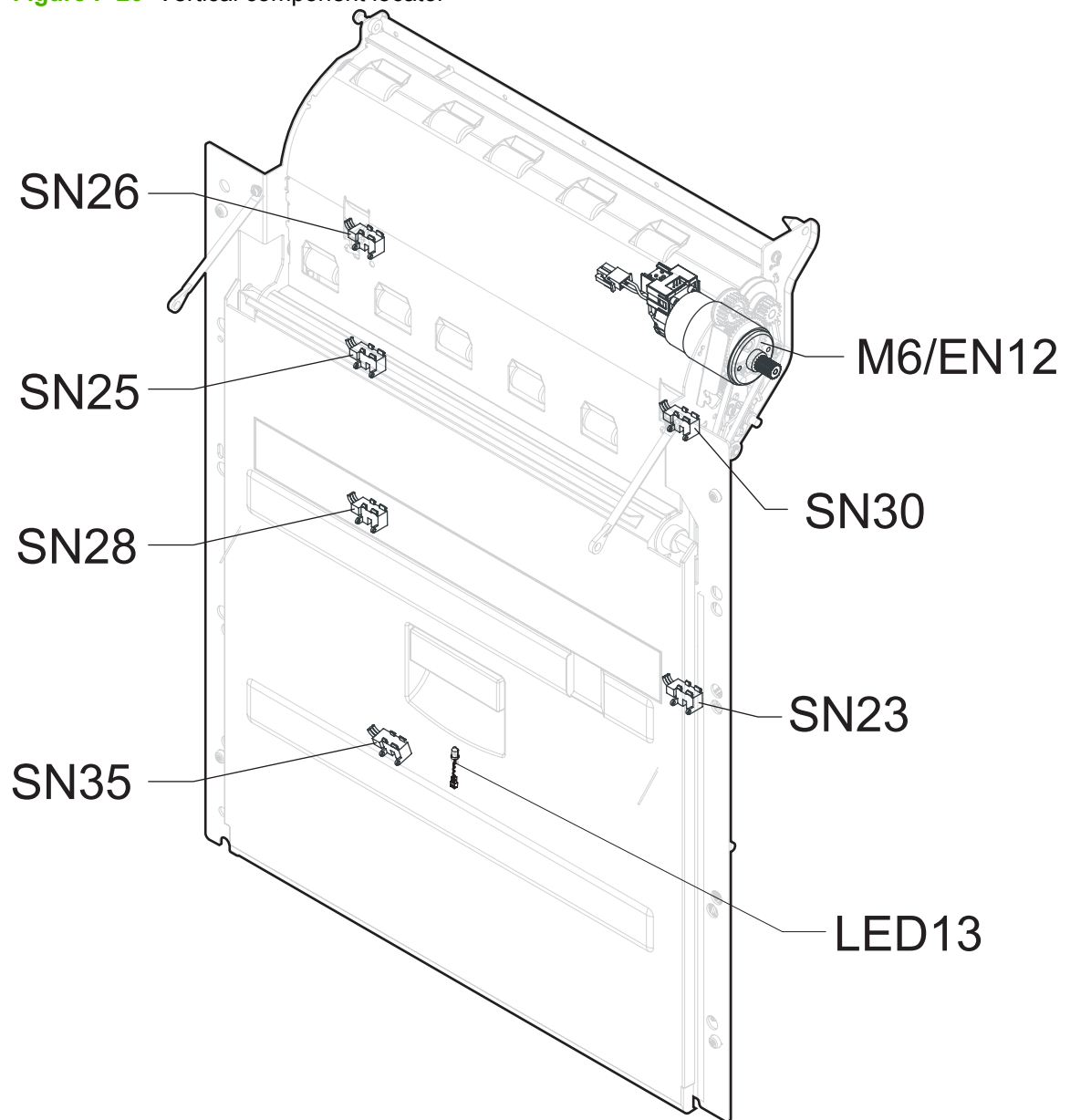
Vacuum component locator

Figure F-19 Vacuum component locator



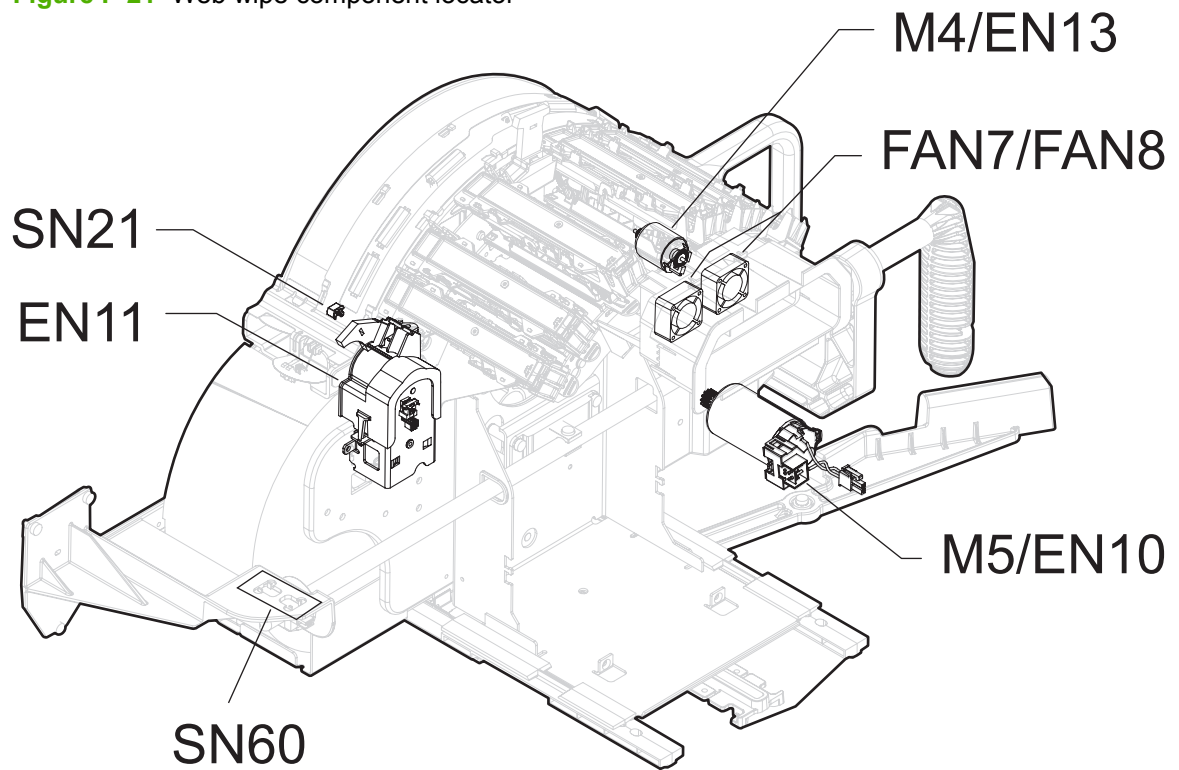
Vertical component locator

Figure F-20 Vertical component locator



Web wipe component locator

Figure F-21 Web wipe component locator



Drum surface

Figure F-22 Drum surface

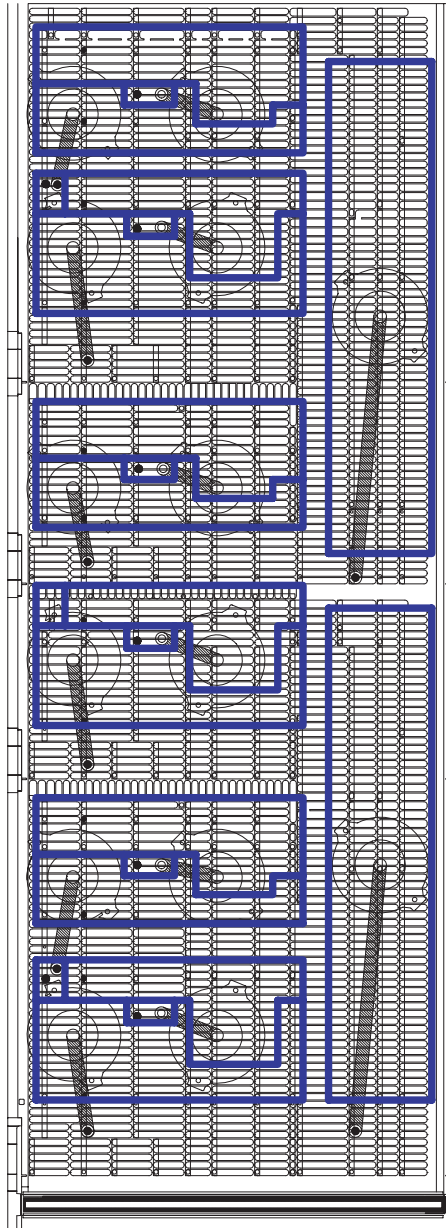
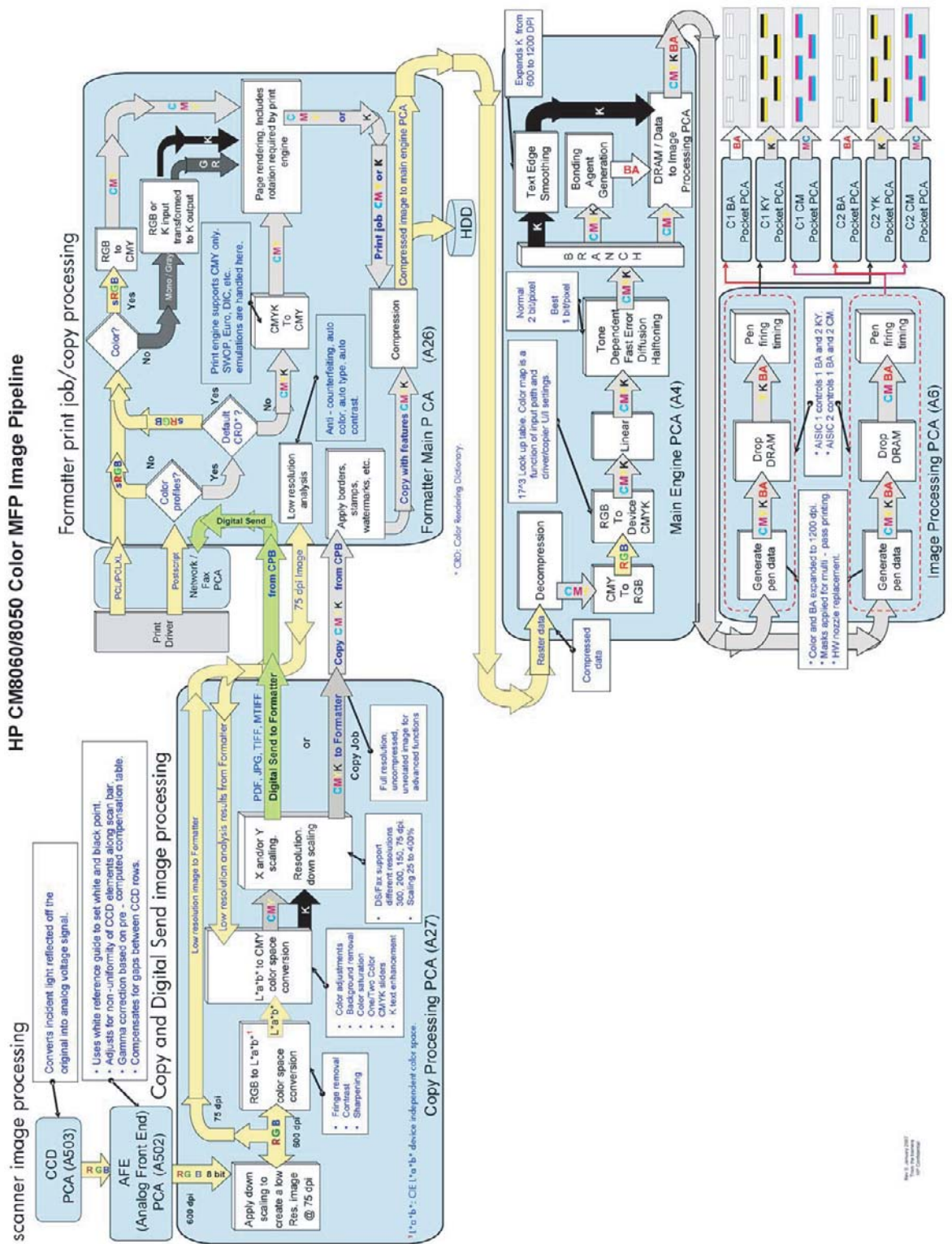


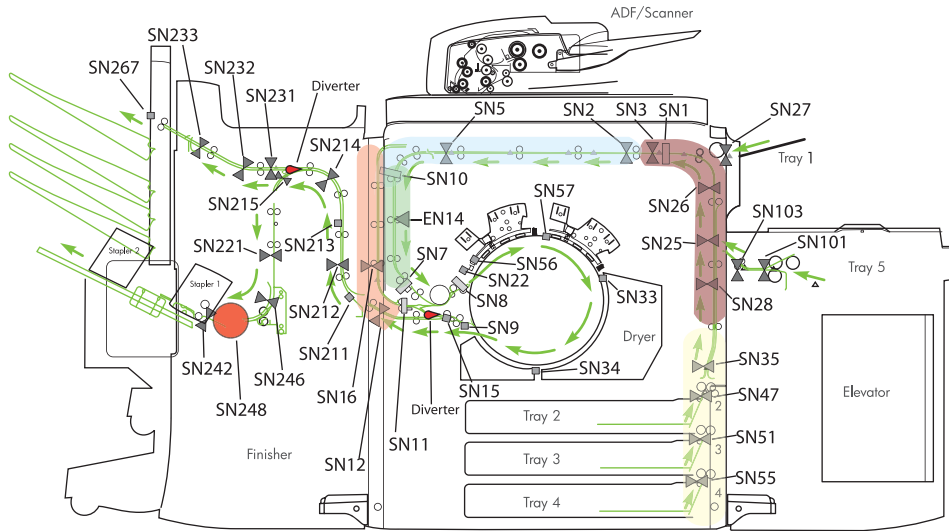
Image pipeline

Figure F-24 Image pipeline



Paper path sensors

Figure F-25 Paper path sensors



Sensor	Event log code
Staging area 1 (green)	
IDO Input Staging 2 sensor (SN10)	B2.1301 on page 1835
IDO Media Thickness encoder (EN14)	B2.1302 on page 1836
Staging area 2 (blue)	
Horizontal Transport 3 sensor (SN2)	B1.1303 on page 1821
Horizontal Transport 4 sensor (SN5)	B1.1304 on page 1822
Staging area 3 (red)	
Vertical Transport 2 sensor (SN28)	B0.1302 on page 1813
Vertical Transport 3 sensor (SN25)	B0.1303 on page 1814
Vertical transport 4 sensor (SN26)	B0.1304 on page 1815
Transparency sensor 1 (SN1)	B1.1301 on page 1818
Horizontal Transport 2 sensor (SN3)	B1.1302 on page 1820 if paper is picked from Trays 2 ,3 or 4 A0.1301 on page 1638 if paper is picked from Tray 1
Staging area 4 (yellow)	
Tray 4 Exit sensor (SN55)	A1.1304 on page 1652
Tray 3 Exit sensor (SN51)	N/A
Tray 2 Exit sensor (SN47)	A1.1302 on page 1651
Vertical Transport 1 sensor (SN35)	B0.1301 on page 1812

Sensor	Event log code
Staging area 5 (orange)	
IDO Duplex Staging sensor (SN11)	B2.1308 on page 1844
IDO Duplex Media sensor (SN16)	B2.1309 on page 1845
Tray 1	
SN27	N/A
Tray 5	
SN101	A2.1301 on page 1667
SN103	A2.1302 on page 1668
Drum area	
IDO Input Staging 1 sensor (SN7)	B2.1303 on page 1837
IDO Input Media sensor (SN8)	B2.1304 on page 1839
Top-of-form sensor (SN22)	C1.1301 on page 1884
SN56	C1.131A on page 1888
SN57	C1.132A on page 1889
Drum 1 sensor (SN33)	C1.1302 on page 1886
Drum 2 sensor (SN34)	C1.1303 on page 1887
IDO output area	
IDO Output Media sensor (SN9)	B2.1305 on page 1840
IDO Output 1 sensor (SN15)	B2.1306 on page 1841
IDO Output 2 sensor (SN12)	B2.1307 on page 1843
Finisher	
Finisher Input 0 sensor (SN211)	A3.1300 on page 1754
Finisher Input 1 sensor (SN212)	A3.1301 on page 1755
Finisher Input 2 sensor (SN213)	A3.1302 on page 1756
Finisher Input 3 sensor (SN214)	A3.1303 on page 1757
Finisher Lower 1 sensor (SN215)	A3.1307 on page 1761
Finisher Lower 2 sensor (SN221)	A3.1308 on page 1762
Accumulator Entry sensor (SN246)	A3.1320 on page 1764
Accumulator Bearing Bracket Home sensor (SN248)	A3.1321 on page 1766
Accumulator Exit sensor (SN242)	A3.1322 on page 1768
Finisher Upper 1 sensor (SN231)	A3.1304 on page 1758
Finisher Upper 2 sensor (SN232)	A3.1305 on page 1759
Finisher Upper 3 sensor (SN233)	A3.1306 on page 1760
Finisher Job Separator Stack Height sensor (SN267)	N/A

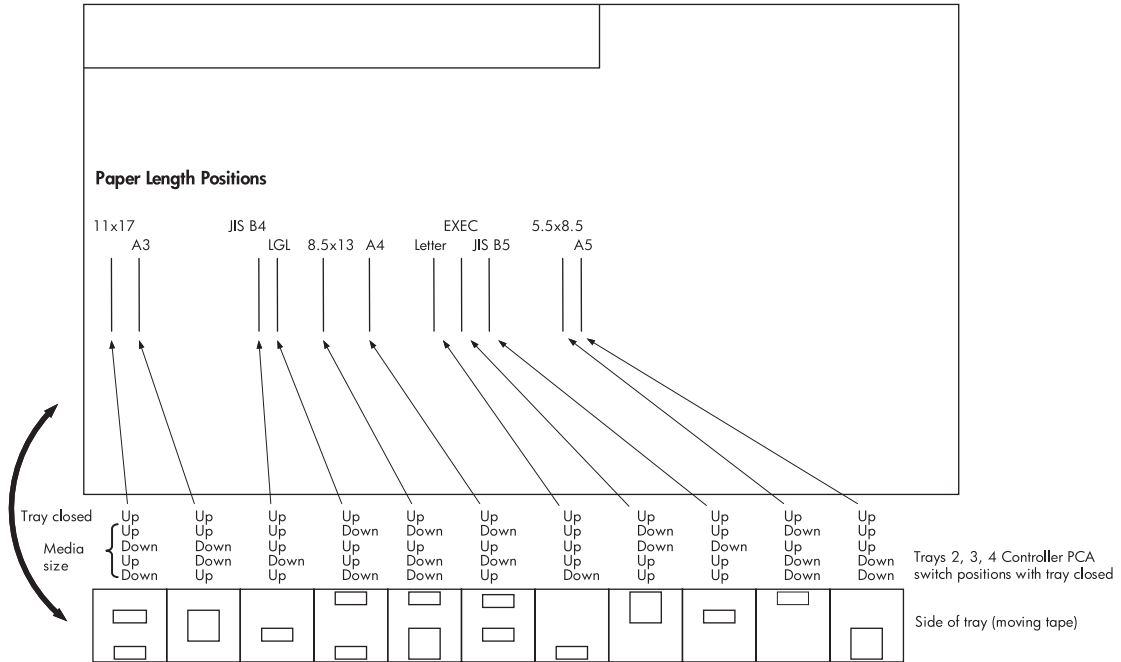
Error log table

Figure F-26 Error log table

Event Log code prefixes (XX)		Event Log code event type abbreviations (YY)		Event Log code event number descriptions (ZZ)	
Code	Subsystem or function	Code	Type of event	Code	Event description
0	Covers and interlocks	0A	Pen	Ax/Bx	Warning
30	Scanner	0B	Ink	0x-9x	Error
31	ADF	0C	Heater	Ex-Fx	System message
32	Memory	0D	Vacuum	Cx-Dx	Condition
49	Firmware	01	Motor		
67	Printer	02	Sensor or switch		
68	NVRAM	03	Solenoid		
79	Printer	04	Clutch		
80	Communications	05	Encoder		
81/85/86	Network	06	LED		
99	RFU	07	Non-formatter PCA		
A0	Tray 1	08	Power supply		
A1	Trays 2, 3, and 4	09	Fan or blower		
A2	Tray 5	10	Digital send		
A3	HP Multifunction Finisher	11	Formatter real-time clock		
A4	HP 4-Bin Job Separator	13	Paper jam		
B0	Vertical transport	20	Memory		
B1	Horizontal transport	21/22	Image-quality		
B2	IDO	38	Firmware		
C0	Vacuum and drum vacuum	00	Other		
C1	Drum drive and drum encoder				
C2	Dryer				
C3	Image quality				
C4	Service Station and Web wipe				
C5	Aerosol				
C6	Drum spittoon				
C7	IDS				
D0	Power electronics				
D1/D2	Imaging electronics				
D3	Formatter electronics				
D4	Run control electronics				
D5	Coprocessor and Digital Send				
Ex	System firmware				

Trays 2, 3, and 4 Controller PCA (A23) actuator fingers

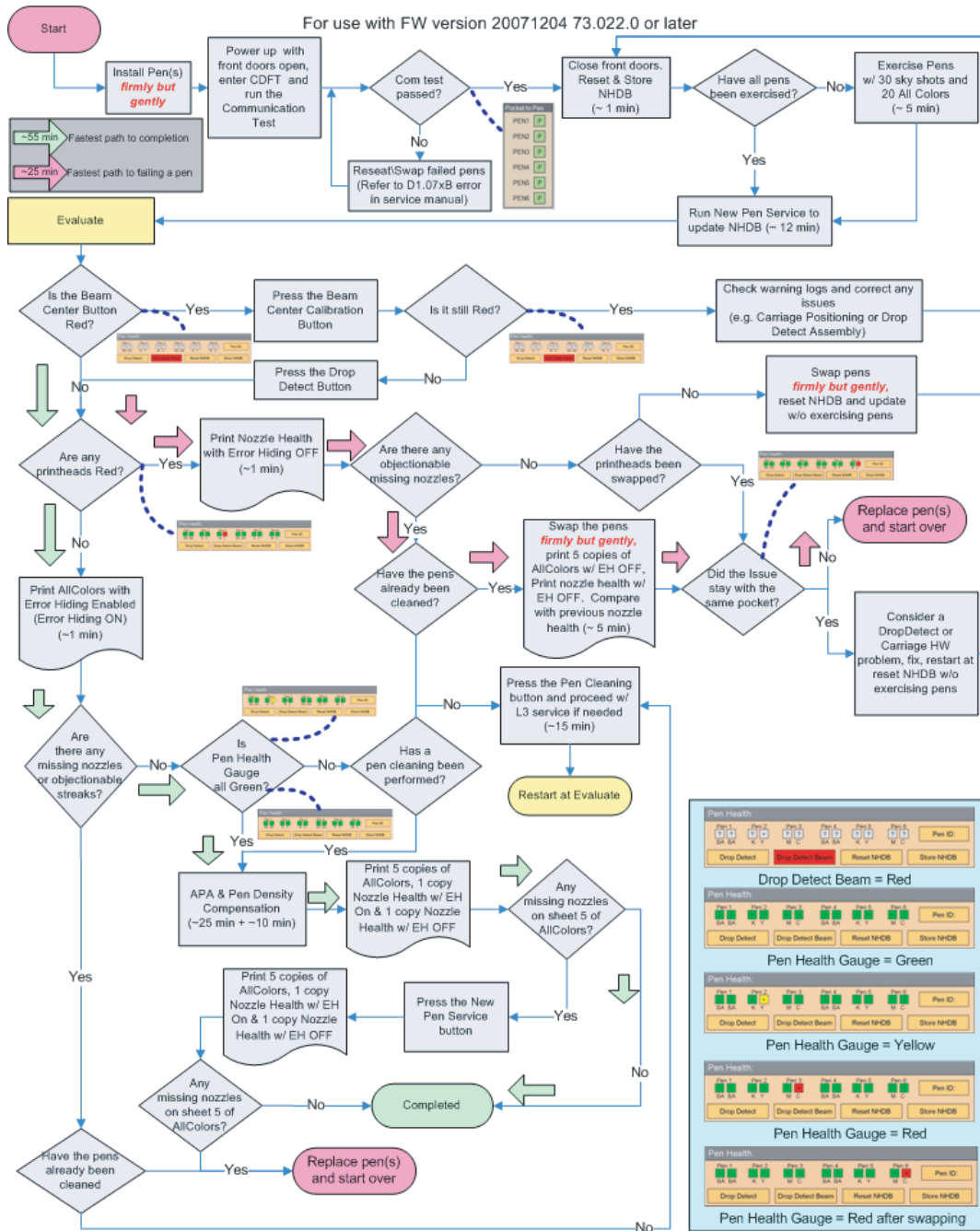
Figure F-27 Trays 2, 3, and 4 Controller PCA (A23) actuator fingers



New pen installation process flowchart

Figure F-28 New pen installation process flowchart

HP CM8060 & CM8050 Color MFPs New Pen Install Process Flow Revision 2.4



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00.0301	1481	31.1308	1517	32.1C12	1544
16–22 AWG power		31.1310	1518	32.1C13	1545
distribution	177	31.1311	1519	32.1C14	1546
20–24 AWG motor drive		31.1312	1520	32.1C15	1547
color coding	177	32.0500	1522	32.1C16	1548
26–28 AWG sensors		32.08A1	1523	32.1C17	1549
color coding	176	32.08A2	1524	32.1C18	1550
30.0701	1482	32.08A3	1525	32.2100	1564
30.0702	1483	32.0B03	1526	32.2301	1565
30.0703	1484	32.0C00	1527	32.2302	1566
30.0704	1485	32.0C01	1528	32.2600	1567
30.0705	1486	32.1800	1551	32.38E1	1568
30.0706	1487	32.1801	1552	32.4400	1569
30.0707	1488	32.1802	1553	32.4401	1570
30.0708	1490	32.1803	1554	32.4402	1571
30.0709	1492	32.1804	1555	32.4403	1572
30.0710	1493	32.1805	1556	32.5C00	1573
30.0711	1494	32.1900	1557	49.0B01	1574
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30.0714	1497	32.1903	1560	49.144D	1577
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30.0716	1499	32.1905	1562	49.2F04	1579
30.0717	1500	32.1906	1563	49.4C02	1580
30.0718	1501	32.1C03	1529	49.4C27	1581
30.0719	1502	32.1C04	1530	49.5001	1582
30.0720	1503	32.1C05	1531	49.60zz	1583
30.0721	1504	32.1C06	1532	49.yyzz	1584
30.0722	1505	32.1C07	1533	67.yyzz	1585
30.0723	1506	32.1C08	1534	68.3801	1586
30.0724	1507	32.1C09	1535	68.8001	1587
30.0725	1508	32.1C0A	1536	68.8002	1588
30.0726	1509	32.1C0B	1537	68.8003	1589
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31.1305	1515	32.1C0F	1541	79.yyzz	1593
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80.0316	1613	A2.04A4	1662	A3.0232	1714
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