

FS-C2026MFP(+)-C2126MFP(+), FS-C2526MFP-C2626MFP, FS-C5150DN, FS-C5250DN

TROUBLESHOOTING GUIDE



KDE PRODUCT ENGINEERING

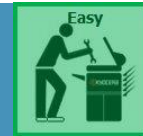
This document was developed as a support document and in no way replaces any service manuals or bulletins we may otherwise produce. Information contained in this document is believed to be accurate at the date of publication but it is not guaranteed that such information is accurate at the date of receipt or will remain so in the future. Please note the [legal instructions on the last page!](#)

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Classification:



The references **easy**, **moderate** or **complex**, are an average estimate and are dependant on the training and experience level of the technician.



Phenomenon:

During colour scan (to USB, SMB, or E-Mail) via the DP, colored vertical stripes can occur anywhere in the scan direction (picture 1).

Also a foggy background can occur if the scanner position is not properly adjusted until the DP is used.

Counter measure:

First try to configure the DP with the parameter U411 before you start to adjust the DP manually.

A sample of how to change the values against stripes or background manually you can find on page 5.

Method: DP (Service Manual page 1-3-36)

1. Select [DP] using the cursor up/down keys.
2. Set a specified original (P/N: 303LJ57010) in the DP.
3. Press the start key. Auto adjustment starts.
4. When automatic adjustment has normally completed, [OK] is displayed. If a problem occurs during auto adjustment, [NG XX] (XX is replaced by an error code) is displayed and operation stops. Should this happen, determine the details of the problem and repeat the procedure from the beginning.
5. To return to the screen for selecting an item, press the stop key.

Note:

A4 MFP systems with an older firmware do not have all U-Parameters to adjust the DP. Nevertheless you can set these parameters by using several KCFG commands. Therefore see the description on the next page.

Picture 1

Clutch				
Solenoid				
Paper Timing				
LSU OUT TOP			530	0
LSU OUT LEFT			250	0
Binding Amt.				
DELAY TIME			0	
CASS 1 2 3 DUP			0	-
Paper Speed			0	
Paper Adjust.			0	
Paper Adjust.			0	2
Paper Timing			-12	0
Paper Center			-3	0
Paper Start Pos			18	0
Paper Adjust.			2	
Paper Timing			5	0
Paper Center			5	0
Paper Motor Check			100	1
Paper Pos. Act			125	1
MIP-PG				
Paper V. Output			0	
Paper Output			0	
Paper Drum Drv Time			0	
Paper Drum Refresh			OFF	0
Paper Reeloper			0	
Paper Paper Mode			ON	
			3	8



Counter measure:

Description

[Command parameters]

Command	KCFG"SCAN",#1[#2,#3];		
Parameter	Adjusting the DP scanning timing		
#1	Set item	2	DP scanning timing
#2	Set target	value	Refer to set target below
#3	Input value		
Parameter	Adjusting the DP center line		
#1	Set item	3	DP center line
#2	Set target	value	Refer to set target below
#3	Input value		
Parameter	Adjusting the DP magnification		
#1	Set item	4	DP magnification
#2	Set target	value	Refer to set target below
#3	Input value		
Parameter	Adjusting the scanner leading edge		
#1	Set item	5	Scanner leading edge
#2	Set target	value	Refer to set target below
#3	Input value		
Parameter	Adjusting the scanner center line		
#1	Set item	6	Scanner center line
#2	Set target	value	Refer to set target below
#3	Input value		
Parameter	Adjusting the scanner magnification		
#1	Set item	8	Scanner magnification
#2	Set target	value	Refer to set target below
#3	Input value		
Parameter	Adjusting the scanning position for originals from the DP		
#1	Set item	9	DP scanning position
#2	Set target	value	Refer to set target below
#3	Input value		

Corresponding maintenance mode No. and setting target

#1	No.	Item	#2	name	Min	Max
2	U071	Adjusting the DP scanning timing	1	FROT HEAD	-32	32
			2	FROT TAIL	-32	32
			3	BACK HEAD	-45	45
			4	BACK TAIL	-45	45
			5	180 DEGREE ROTATED	-128	127
3	U072	Adjusting the DP center line	1	DP CENTER LINE(DATA1)	-39	39
			2	DP CENTER LINE(DATA2)	-39	39
			3	DP CENTER LINE(DATA3)	-39	39
4	U070	Adjusting the DP magnification	2	DP MAGNIFICATION	-25	25
5	U068	Adjusting the DP scanner leading edge registration	1	TABLE LEADING EDGE(DATA1)	-45	45
			2	TABLE LEADING EDGE(DATA2)	-45	45
6	U067	Adjusting the scanner center line	1	TABLE CENTER LINE(DATA1)	-70	70
			2	TABLE CENTER LINE(DATA2)	-40	40
8	U065	Adjusting the scanner center line	1	X SCAN ZOOM(MAIN)	-32	127
			2	X SCAN ZOOM(SUB)	-25	25
9	U068	Adjusting the scanning position originals from the DP	1	DP READ(DAT1)	-33	33
			2	DP BACK LINE(TEST POS)	0	3



Counter measure:

Sample:

During colour scan (to USB, SMB, or E-Mail) via the DP, colored vertical stripes can occur anywhere in the scan direction.

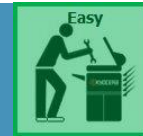
Normally it can be solved by activating the black line correction (MFP models only) or / and changing the values in U411, U425 and U068.

Here a sample how the value change of U068 can be done:

Format	!R! KCFG "SCAN",9, #1,#2;EXIT;	
Parameter	#1	1: DP READ Starting position adjustment for scanning originals 2: BLACK LINE Scanning position for the test copy originals
	#2	#1=1: Adjustable range: -33 to 33 (in 0.086mm increment) (0: default) #1=2: Adjustable range: 0 to 3 (in 0.22mm increment) (0: default)

!R! KCFG"SCAN",9,1,20;EXIT; (change to value "20")

Used when the image fogging occurs because the scanning position is not properly adjusted when the DP is used. Execute KCFG "EESS",4, 107, 1, "#1"; command to adjust the timing of DP leading edge when the scanning position is changed.



Counter measure:

New Firmware:

The following maintenance mode items were implemented since FW version below (MFP models only!):

U001, U019, U034, U065, U066, U067, U068, U070, U071, U072, U402, U403, U404

Affected models:

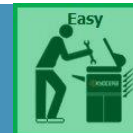
- FS-C2026MFP / FS-C2126MFP [Version 08.00.0020](#)
- FS-C2026MFP+ / FS-C2126MFP+ [Version 06.00.0020](#)
- FS-C2526MFP / FS-C2626MFP [Version 07.00.0020](#)

By frequent repeated opening / closing of the top cover the hinge left / right might be broken.
 From October 2010 on the material of these hinges have been changed from ABS to more stable POLYCARBONATE.
 In the event of such cases, please replace the hinges with the modified parts **302KV02532, HINGE LID L** and **302KV02542, HINGE LID R**.



FS-C2026MFP Affected S/Ns:	KDA 1102KW2US0	KDAU 1102KW3AS0	KDKR 1102KW3KR0	OLIVETTI 1102KW3LV0	KDE 1102KW3NL0
	Q591102138	From the next production (No affected until Q5B0Y00479)	N241400051	N731100251	Q5A0Z03379
	KDSG 1102KW3SG0	KDTH 1102KW3TH0	UTAX 1102KW3UT0	KDA 220V 1102KW4US0	KDTW 1102KWTTW0
	N6D1100004	N1S1400085	Q880Z01277	N1Q1100321	N7E1100001
FS-C2126MFP Affected S/Ns:	KDA 1102KX2US0	KDAU 1102KX3AS0	KDKR 1102KX3KR0	KDCN 1102KX3KS0	OLIVETTI 1102KX3LV0
	Q5D0Z04129	From the next production (No affected until Q5F0Y01813)	N251100056	N8G0Z00001	N741100261
	KDID 1102KX3ND0	KDE 1102KX3NL0	KDSG 1102KX3SG0	KDTH 1102KX3TH0	UTAX 1102KX3UT0
	N8V1300001	Q5E0Z06122	N6E1100009	N1T1400061	Q890Z04603
	KDA 220V 1102KX4US0	KDTW 1102KXTTW0			
	N1R1200091	N881100001			

We also recommend to change the RATCHET SHUTTER (302KV02501)
 These measures are described in SB-2KT-0007-B380, SB-2KT-0020-D014 and are a part of the modification kit [\(2KT-0019-D012\)](#)



The engine firmware was upgraded as the measures against the color image with low density.

Firmware Upgrade (Engine: Ver. 2KT_1000.007.004,2KV_1000.007.004,2KW_1000.012.004)

In order to prevent the developer powder deterioration, the developer drive time during warm-up after recovery from sleep mode or the cover was closed was changed.

<FS-C5150DN, FS-C5250DN>

ENGINE	2KT_1000007004	0C51	007.004	-	006.002	FS-C5150DN
ENGINE	2KV_1000007004	6546	007.004	-	006.002	FS-C5250DN

<FS-C2026MFP, FS-C2126MFP>

ENGINE	2KW_1000012004	AEF1	012.004	-	011.002	
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<FS-C2026MFP+, FS-C2126MFP+>

ENGINE	2KW_1000012004	AEF1	012.004	-	011.002	
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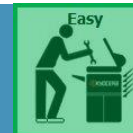
<FS-C2526MFP, FS-C2626MFP>

ENGINE	2KW_1000012004	AEF1	012.004	-	011.002	
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Note:

Please upgrade the firmware when the phenomenon described above arises and run the refresh mode. If the color density is still decreased, please replace the developer unit.

A S/N list of the affected machines you will find in the Service Bulletin [2KT-0012 \(C132\)](#)



Phenomenon:

In some cases the jam code JAM0501 can occur in the mentioned models. In this case the STOPPER HOOK might not work correctly. Therefore the STOPPER HOOK was changed and a SPRING was added.

Counter measure:

A detailed description how to attach the new parts you can find in the SB [2KT-0022 \(D027\)](#).

Part information:

No.	Old Part No.	New Part No.	Description	Q'ty.		Compatibility	
				Old	New	Old	New
1	302KT93040 2KT93040	302KT93041 2KT93041	CT-591	1	1	X	O
2	-----	302KT09111 2KT09111	+STOPPER HOOK	-	1	-	X
3	-----	302KT09170 2KT09170	+SPRING STOPPER HOOK	1	1	-	X

Serial Nos. of the Affected Machines

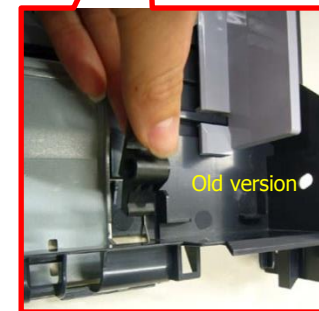
FS-C5150DN	FS-C2526MFP	FS-C2626MFP	FS-C2126MFP+	FS-C2026MFP+
KDE	KDE	KDE	KDE	KDE
1102KT3NL0	1102M83NL0	1102M93NL0	1102MB3NL0	1102MA3NL0
Q523248161	NML3401864	NN11500106	NN93220475	NN53207960

These measures are also a part of the modification kit [\(2KT-0019-D012\)](#)

CT-591



Location of the STOPPER HOOK



New STOPPER HOOK + SPRING





Phenomenon:

If the error C2740 occurs, the service manual recommends to change the developing release motor.

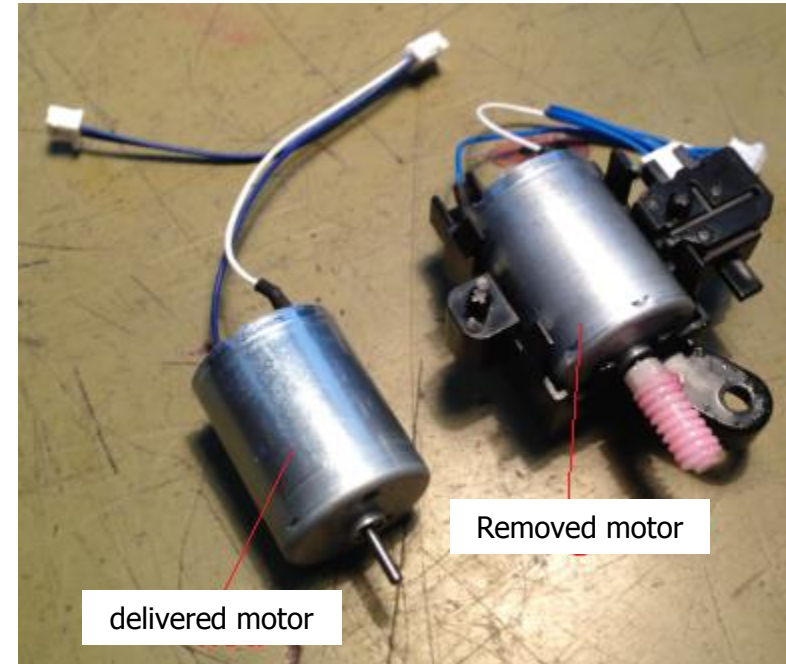
Counter measure:

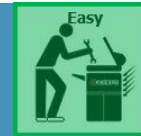
In most cases the motor is not the cause of the error. Usually it is caused by a mechanical failure or a contact problem. Furthermore, the motor will be delivered without any bracket and worm gear.

Therefore we recommend to exchange the hold drive unit

Part information:

Developing release motor (MOTOR-DC ASSY DLP 302KV00070)
Drive unit (DR-590B 302KV93101)





Phenomenon:

Dots appear on the output image caused by the micropinhole in the layer of the Drum. The phenomenon is occurring in high humidity environment, but occurs even in normal temperatures.

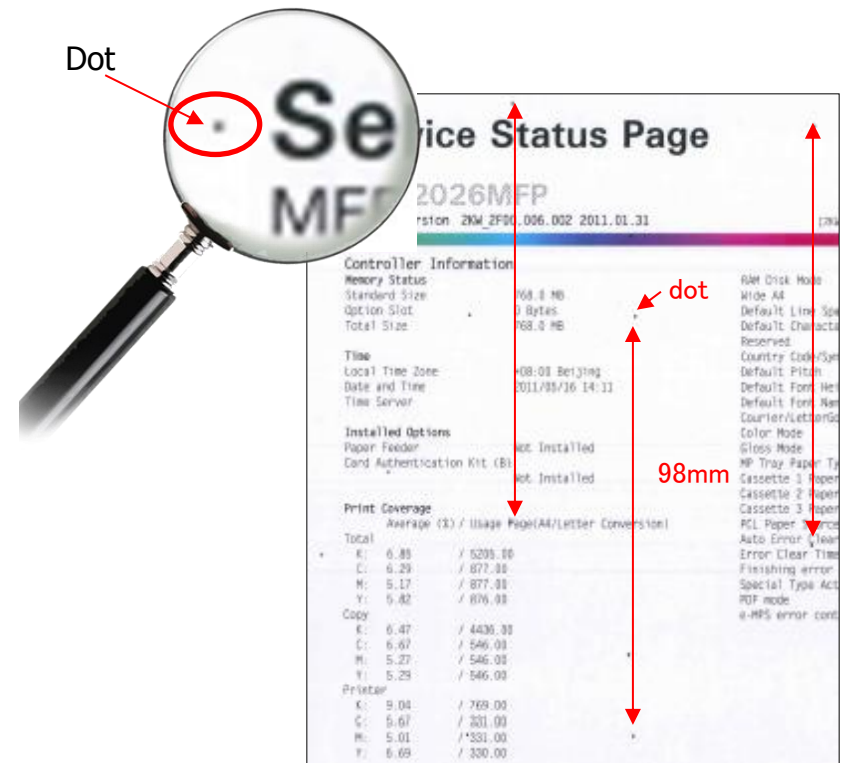


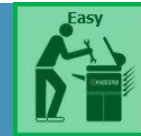
Counter measure:

Since firmware version 2KT_1000.004.003 for printers and 2KW_1000.009.003 for MFP's some control mechanism were changed. If an update doesn't solve this issue, please change the drum unit.

Part information:

DK-591 - 302KT93014 or newer (FS-5150DN)
 DK-590 - 302KV93014 or newer (FS-C5250DN, FS-C2026MFP,
 FS-C2126MFP, FS-C2526MFP, FS-C2626MFP, FS-C2026MFP+, FS-
 C2126MFP+)





Phenomenon:

A ghost image (picture1) might appear during full page color printing because the primary transfer bias is not erased completely before one complete rotation.

Counter measure:

Since firmware version 2KT/2KV_1000.005.002 for printers and 2KW_1000.010.003 for MFP's the primary transfer current is adjusted in conjunction with the MC setting of 1 to 5 in the service menu. If an update doesn't solve this issue, please change the drum unit.

Part information:

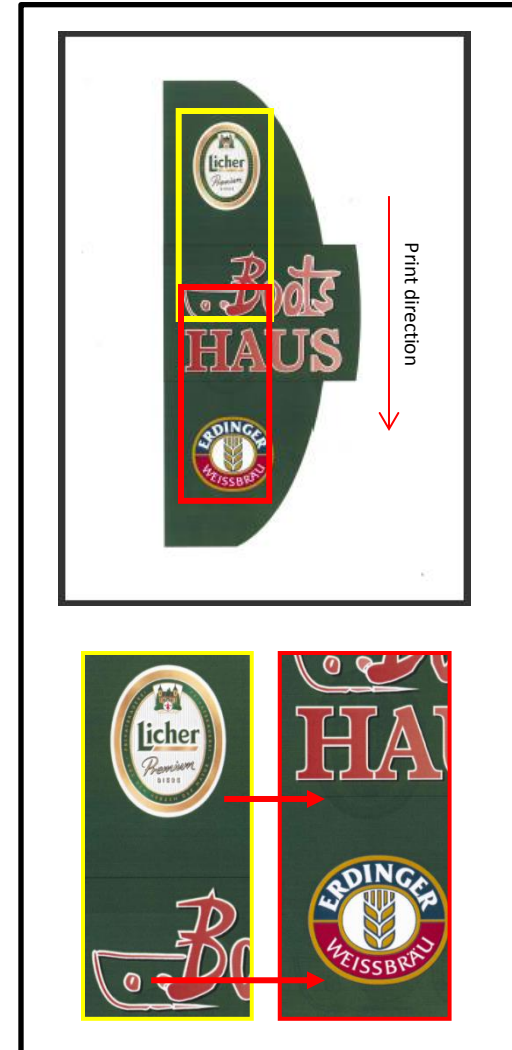
- DK-591 - 302KT93011 or newer (FS-5150DN)
- DK-590 - 302KV93011 or newer (FS-C5250DN, FS-C2026MFP, FS-C2126MFP, FS-C2526MFP, FS-C2626MFP, FS-C2026MFP+, FS-C2126MFP+)

Serial number of the affected machines

Model	Destination	Serial Number
FS-C2026MFP	KME	From Q5A1103687
	UTAX	From Q881201364
	Olivetti	From N731100251
FS-C2126MFP	KME	From Q5E1107436
	UTAX	From Q891204953
	Olivetti	From N741100261
Maintenance kit		
MK-590	KME	From Q5R0Z00149

Model	Destination	Serial Number
FS-C5150DN	KME	From Q521107673
	UTAX	From Q861100446
	Olivetti	From NHT1100043
FS-C5250DN	KME	From Q561103602
	UTAX	From Q871100946
	Olivetti	From NHU1300055

Picture1





Phenomenon:

Inside the LSU a sensor might be dislocated, which causes the error SC420x.

The error code SC4600 occurs if the motion of the cleaning holder tilts during the LSU cleaner moves.

Counter measure:

Please replace the LK unit with a new one when the phenomenon described above arises.

Part information:

FS-C5150DN

302KT93020 2KT93020	302KT93022 2KT93022	LK-591A
302KT93030 2KT93030	302KT93032 2KT93032	LK-591B

FS-C5250DN, FS-C2026MFP, FS-C2126MFP, FS-C2526MFP, FS-C2626MFP, FS-C2026MFP+ and FS-C2126MFP+

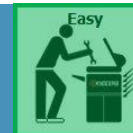
302KV93020 2KV93020	302KV93022 2KV93022	LK-590A
302KV93030 2KV93030	302KV93032 2KV93032	LK-590B

Serial number of the affected machine

Model	Destination	C420x Measure	C4600 Measure
FS-C5150DN	KME	Q521924196	Q521924196
	Olivetti	NHT1900473	NHT1900473
FS-C5250DN	KME	Q561914363	Q561914118
	UTAX	From next production	Q871902556
	Olivetti	From next production	NHU1900229
FS-C2026MFP+	KME	NN51902002	NN51901798
	UTAX	NNW1900585	NNW1900585
FS-C2126MFP+	KME	NN91905175	NN91904698
	UTAX	NNX1901853	NNX1901591
FS-C2526MFP	KME	NML1901328	NML1901328
	UTAX	NNU1900243	NNU1900243
FS-C2626MFP	KME	From next production	NN11903762
	UTAX	From next production	NNV1900537

Item	Destination	C420x Measure	C4600 Measure
LK-591A	FS-C5150DN	From next production	
LK-591B	FS-C5150DN	From next production	
LK-590A	*2	K7G1984518	K7G1984518
LK-590B	*2	K7H1985804	K7H1985804

*2 FS-C5250DN, FS-C2026MFP, FS-C2126MFP, FS-C2526MFP, FS-C2626MFP, FS-C2026MFP+ and FS-C2126MFP+



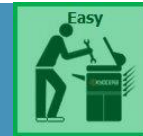
Phenomenon:

The DP non-feed jam (JAM9000) might occur in the case that the timing switch, which detects the original, was delayed due to its slippage.

Counter measure:

Since the FW version 008.001 (Scanner) the retry counter was changed for every DP paper feed. For counter measure please upgrade the FW to the latest version.

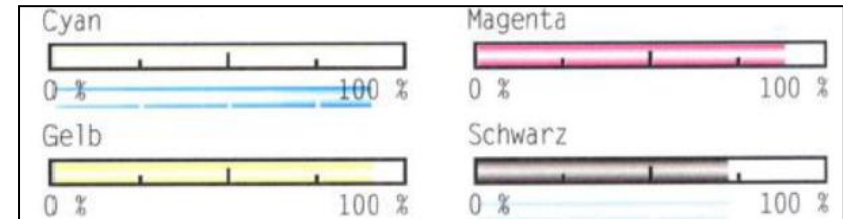
	Program No.	Check SUM	Ver.	Status Date	Current Ver.	Remark
ENGINE	(-->) 2KW_1000009003	018F	(-->) 009.003	2011/6/10	007.004	FS-C2026MFP FS-C2126MFP
MAIN	2KW_2F00006002	-	006.002	-	005.003	FS-C2026MFP
MAIN	2KX_2F00006002	-	006.002	-	005.003	FS-C2126MFP
SCANNER	2KW_1200008001	41AB	008.001	2011/5/25	007.001	FS-C2026MFP FS-C2126MFP



Phenomenon:

Reoccurrence of misalignment in the color registration (picture 1). Different reasons have to be considered. Therefore, perform the following steps.

Picture 1



Counter measures:

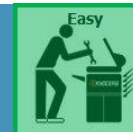
Step 1: Check the Service Statuspage (printer) or the Maintenance Report (MFP)

- Check, if Auto Calibration Errors occurred, e.g. at closed ID-Sensors or defects in cover mechanism.
- Digits should be „0001“.

Step 2: Check belt drift or misalignment of the transfer belt and the ID-Sensor (see description below)

Step 3: Firmware Update (referring to [SB C132](#)) (see description below)

Step 4: Exchange Engine PWB, as last technical measure.



Counter measures:

Step 1:
Check the Maintenance Report

- Check, if Auto Calibration Errors occurred, e.g. at closed ID-Sensors or defects in cover mechanism.
- Check the first 4 digits in row 15, column 3 – should be „0001“.

If the first 2 digits are other than „00“, the ID-Sensors have to be checked. In particular, the cover and cover mechanism itself should be checked also (next Page).

Maintenance Report

MFP
FS-C2526MFP

Firmware Version 2M8_2F00.007.008 2013.02.02 24/06/2013 12:42
[2KW_1000.015.001] [2KW_1100.002.002] [2M8_7000.007.004]

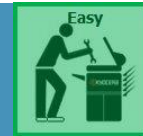
Machine No.:NML1300001 Life Count:1985

928	Life Cnt	1985
977	Set Data Capture	
995	Mem Data Indi	

Print Engine

```
0201000000000000 00000000000000 00000000000000
0000000000000000 00000000000000 00000000000000
0000000000000089 8989890000000000 7878000000000000
0000000000000000 0000000000000000 0000000000000000
0000000000000000 0000000000000000 0000000000000000
0000000000000000 0000000000000000 0000000000000000
0000000000000000 0000000000000000 0000000000000000
0000000000000000 0000000000000000 0000000000000000
0000000000000000 0000000000000000 0000000000000000
0000000000000000 0000000000000000 0000000000000000
0000000000000000 0000000000000000 0000000000000000
0000000000000000 0000000000000000 000050fc00005d36
0000000000000000 0000000000000000 0000000000000000
0000000000000000 0000000000000000 0000000000000000
ffff 0071007c0250d7 0077007a00000000
ffff 19230000000000 0000000000000000
038c 3a55fa4aaf0500 0001000000000000
0a8 24242424000000 00ae00a600a700ab
0000 00000000000000 0000000000000000
0000 00000000000000 0000000000000000
0c00 0100010106060606 01a00285044e0164
0000 00002f70000591d 00005ced00006832
0000 00000000000000 000000001000000
0000
FFFFFFFFFFFFFFFFFFFFFFFF
.111712331FFFFFFFFFFFFFFFFFFFFFFFF
2140844FFFFFFFFFFFFFFFFFFFFFFFF
FFFFFFF
032110391FFFFFFFFF
```

```
00000 0000000000000000
500d7 0077007a00000000
00000 0000000000000000
05000 0001000000000000
000d0 00ae00a600a700ab
00000 0000000000000000
00000 0000000000000000
```



Counter measures:

Step 2:

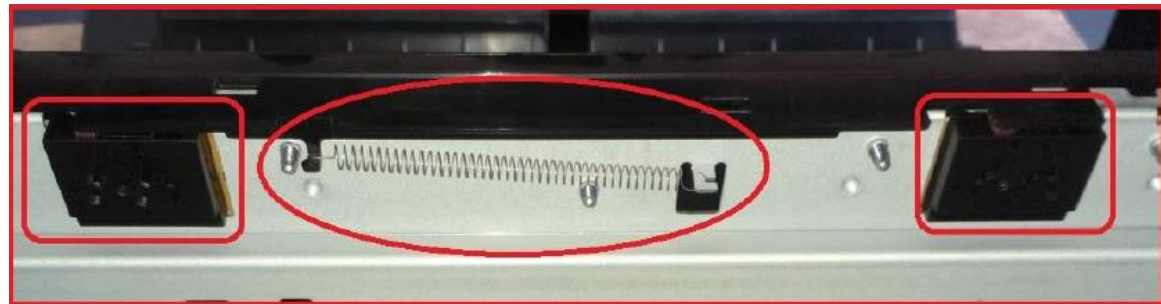
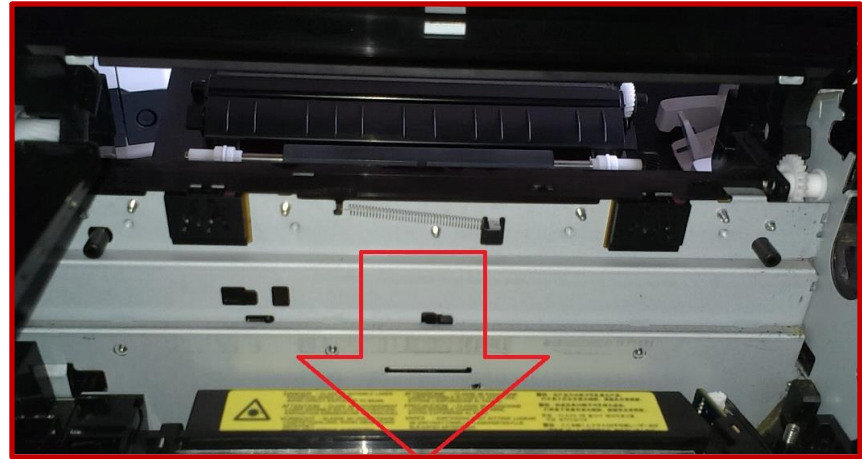
Check belt drift or misalignment of the transfer belt and the ID-Sensor

If the first 2 digits are other than „00“, the ID-Sensors have to be checked.

In particular, the cover and cover mechanism itself should be checked also.

Check the inner frame as seen on the pictures.

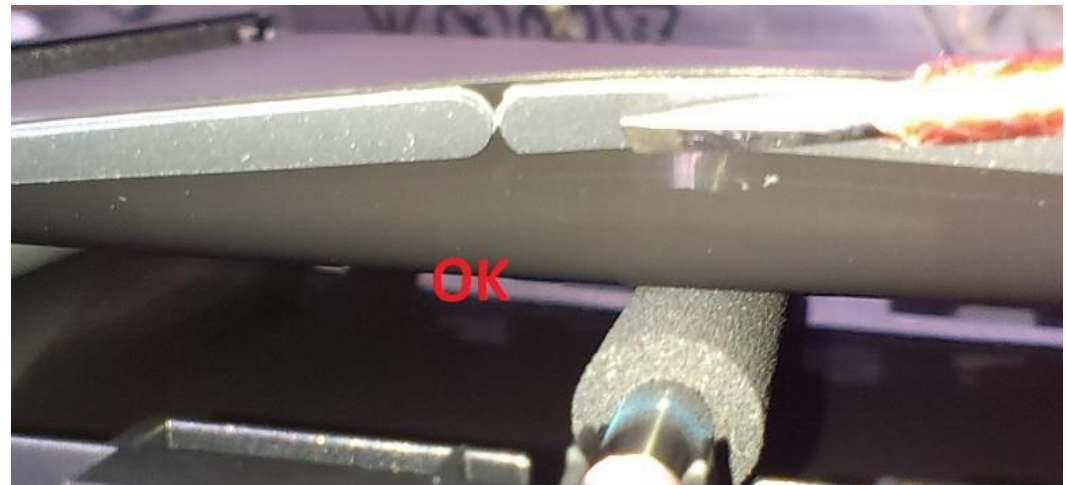
Please ensure, that with opening/closing the top cover, these covers slide in left/right direction.

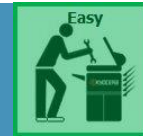




Counter measures:

Step 2:
Drift or misalignment of the transfer belt.



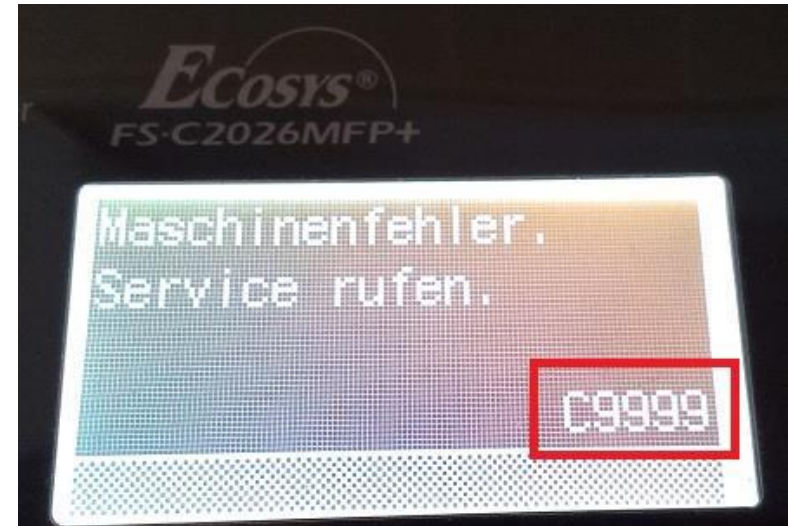


Counter measures:

Step 3:
Firmware Update (referring to [SB C132](#))

In any case, a firmware update has to be done. It's important to power on the machine normally, after the update. Then wait for the C9999 showing on display. After that, follow the description from SB-C132.

In future, normal firmware-updates can be taken, which will not affect the changes, already done.



[Firmware-Download for FS-C2026MFP / FS-C2126MFP \(v. 07.00.0050\)](#)

[Firmware-Download for FS-C2526MFP / FS-C2626MFP \(v. 04.00.0050\)](#)

[Firmware-Download for FS-C2026MFP+ / FS-C2126MFP+ \(v. 04.00.0030\)](#)

[Firmware-Download for FS-C5150DN / FS-C5250DN \(v. 03.00.0040\)](#)



Counter measures:

Resetting the Color registration values

Even though all the other causes of color registration shift have been checked and the shift still occurs, you need to reset the registration values.

Here an overview about the resetting steps:

1. Download the reset firmware for resetting color registration values

Model	Reset firmware version
FS-C2526MFP/ FS-C2626MFP	07.15.0003 (2013-02-02)
FS-C2026MFP+/ FS-C2126MFP+	07.15.0002 (2013-03-04)
FS-C2026MFP/ FS-C2126MFP	08.15.0012 (2012-06-25)
FS-C5150DN/ FS-C5250DN	04.09.0002 (2012-08-24)

(These downloads are including the firmware history, a description how to reset the values, a disclaimer with the password you need and the reset firmware)

2. Serial number check

For KDE

Model	Serial Number
FS-C2526MFP	NML2801548
FS-C2626MFP	NN12604243
FS-C2026MFP+	NN52504341
FS-C2126MFP+	NN92511026
FS-C5150DN	Q522431166
FS-C5250DN	Q562425214

For Olivetti

Model	Serial Number
FS-C2526MFP	The Next production
FS-C2626MFP	NQA2500163
FS-C2026MFP+	NQB2500243
FS-C2126MFP+	NQC2500591
FS-C5150DN	NHT2500656
FS-C5250DN	NHU2500479



Counter measures:

3. Download an old firmware

Model	Old firmware version
FS-C2526MFP/ FS-C2626MFP	04.00.0030_(2011-11-16)
FS-C2026MFP+/ FS-C2126MFP+	04.00.0010_(2011-11-15)
FS-C2026MFP/ FS-C2126MFP	07.00.0030_(2011-08-23)
FS-C5150DN/ FS-C5250DN	03.00.0020_(2011-11-04)

(all these versions you can find in the firmware archiv at the download center)

4. Perform the auto color registration

5. Download the latest firmware

6. Perform the auto color registration and check firmware version

7. Perform the manual color registration

A detailed description of all step you find in each reset firmware packege.

If none of above mentioned measures lead to succes, the ENGINE PWB itself can be the reason, and has to be exchanged.

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