HP LaserJet 3000, 3600 and 3800 Series Printers - Part Numbers Not Found in the Service Manual

Introduction

The following part numbers are not in the Service Manual.

Part Numbers

Part Description	Part Number
Duplex ETB	RM1-2752-000CN
Electronic transfer belt (ETB) simplex models	RM1-2759-000CN
Plate Lock Release/Tray 2 Lift Tab	RC1-6833-020CN
Relay PCB NOTE: This part for CLJ 3600 and 3800 models only.	RM1-2632-000CN NOTE: This part for CLJ 3600 and 3800 models only.
Tray 2 cassette pickup roller	RM1-2702-000CN
Toner cartridge lock kit	Q5982-67925 NOTE: Please see Service Advisory c00775200
Tension spring (Figure 7-5, item 4 in Service Manual)	RC1-6634-000CN
Main drive assembly	RM1-2751-000CN

SUPPORT COMMUNICATION - SERVICE ACTION ADVISORY
Document ID: c00775200
Version: 5
HP Color LaserJet 3000, 3600 and 3800 Printers - Cartridge Lock Replacement Procedure
Service Coverage Notice:

Unless otherwise specified, HP is responsible for part and/or labor costs associated with products that are under HP warranty at the time of service.
Release Date: 2006-12-11
Last Updated: 2006-12-11

DESCRIPTION
The *HP Color LaserJet 3800 Service Manual* currently does not have instructions for replacing the main drive assembly or the cartridge locks. The cartridge locks are currently breaking and, until June 2006, the only solution was to replace the unit.

NOTE: This Service Action Advisory supercedes Service Advisory c00673707. Please use this Service Action Advisory for repairs after 04-Dec-2006.
A video of the replacement procedure is available: ftp://ftp.hp.com/pub/softlib/software8/COL17123/lj-45472-1/tonerlock3.wmv
SCOPE
The products indicated in the table below are affected by this advisory.

Product #	Product Name	Service Note Number for Reimbursement

Product #	Product Name	Service Note Number for Reimbursement
Q7533A	HP Color LaserJet 3000	Q7533A - C00775200
Q7534A	HP Color LaserJet 3000n	Q7534A - C00775200
Q7535A	HP Color LaserJet 3000dn	Q7535A - C00775200
Q7536A	HP Color LaserJet 3000dtn	Q7536A - C00775200
Q5986A	HP Color LaserJet 3600	Q5986A - C00775200
Q5987A	HP Color LaserJet 3600n	Q5987A - C00775200
Q5988A	HP Color LaserJet 3600dn	Q5988A - C00775200
Q5981A	HP Color LaserJet 3800	Q5981A - C00775200
Q5982A	HP Color LaserJet 3800n	Q5982A - C00775200
Q5983A	HP Color LaserJet 3800dn	Q5983A - C00775200
Q5984A	HP Color LaserJet 3800dtn	Q5984A - C00775200

Products and Serial Number Cross Reference

Product Number	Starting Serial Number	Ending Serial Number
Q5981A	CNABA00000	CNWBB72188
Q5982A	CNABA00000	CNWBB54048
Q5982A	CNABA00000	CNXBB30515
Q5983A	CNACA00000	CNWCH30820
Q5983A	JPACA00000	JPWCX01837
Q5983A	JPACA00000	JPXCX00470
Q5984A	CNACA00000	CNWCH31219
Q5984A	JPACA00000	JPWCX01529
Q5987A	CNABA00000	CNTBB53271
Q5988A	CNACA00000	CNTCH31125
Q5988A	JPACA00000	JPVCX00750
Q7534A	CNABA00000	CNWBL05518
Q7534A	CNABA00000	CNXBN03219
Q7535A	JPACA00000	JPWCY00043
Q7535A	JPACA00000	JPXCY00081
Q5981A	CNAFA00000	CNXFB24233
Q5982A	CNAFA00000	CNXFB24245
Q5983A	CNAGA00000	CNXGH45539
Q5984A	CNAGA00000	CNXGH45583
Q5986A	CNAFA00000	CNVFB24244
Q5987A	CNAFA00000	CNVFB24282
Q5988A	CNAGA00000	CNVGH45972
Q7533A	CNAFA00000	CNXFN04042

Product Number	Starting Serial Number	Ending Serial Number
Q7534A	CNAFA00000	CNXFN03331
Q7535A	CNAGA00000	CNXGR00812
Q7536A	CNAGA00000	CNXGS02350
Q5981A	CNAA00000	CNWKF09263
Q5981A	CNKAA00000	CNXKF03388
Q5982A	CNKAA00000	CNXKB24756
Q5983A	CNALA00000	CNWLH31062
Q5983A	CNALA00000	CNXLH45244
Q5986A	CNAKA00000	CNTKF01991
Q5986A	CNAKA00000	CNVKB24542
Q5987A	CNAKA00000	CNVKB24761
Q5988A	CNALA00000	CNVLH46862
Q7534A	CNAKA00000	CNXKL09425
Q7535A	CNALA00000	CNXLS05851

RESOLUTION

Steps have been created to help replace the cartridge locks, along with timing tips for the main drive assembly. The service kit contains four new locks and four new springs. Replace all the locks, even if they are not broken.

NOTE: Determining if the printer has countermeasured or non-countermeasured cartridge locks can be accomplished by visually inspecting the locks. The countermeasured locks are white in color, the non-countermeasured locks are black.

Parts Required

| Replacement Part Number	Quantity	Description
Q5982-67922	1	Cartridge Lock Kit (to replace all 4 locks at one time)

SERVICE ACTION

**To Be Performed By:** Service Technicians

1. Remove the toner cartridges and ETB.

2. Remove the upper cover (Page 80 in the Service Manual).

3. Remove the right cover (Page 87 in the service Manual).

4. **For duplex models:** Remove the wires to the duplex fan in the front cover. Simply follow instructions 5 and 6 on page 77 ? 78 in the service manual. This allows for easier removal of the cable harnesses.

5. Unplug the following connectors from the driver PCA and remove the wires from the cable harnesses: a. J209, b. J406, c. J404, d. J213, e. J207, f. J203, g. J402, h. J206, I. J410, j. J208.
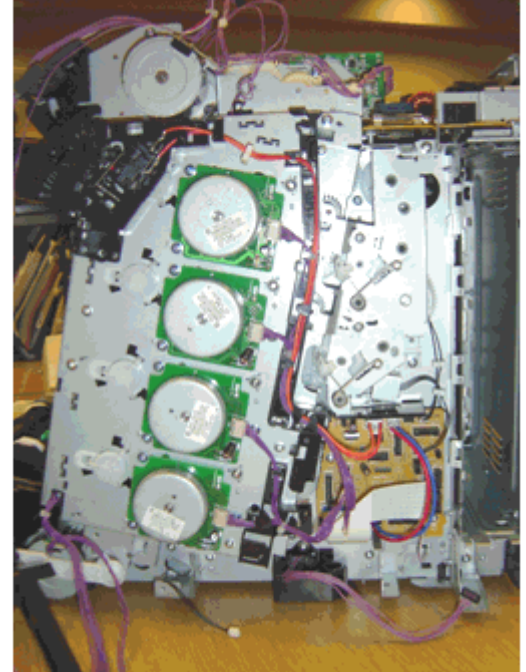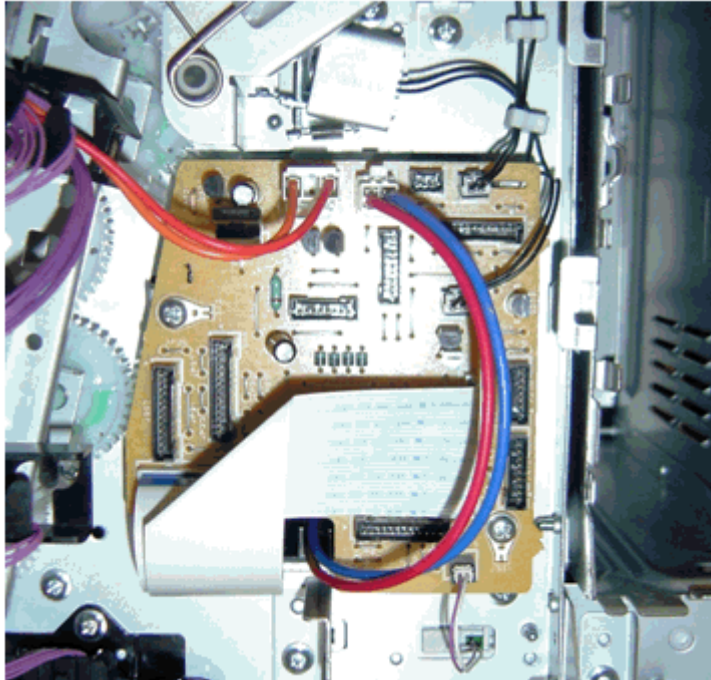
6. Remove the interlock switch assembly by removing the one screw attaching it to the chassis. Be aware of the clip at the top and the alignment knob when removing the assembly.
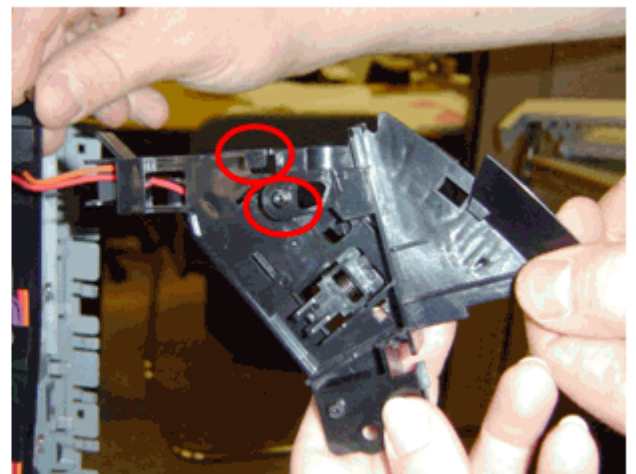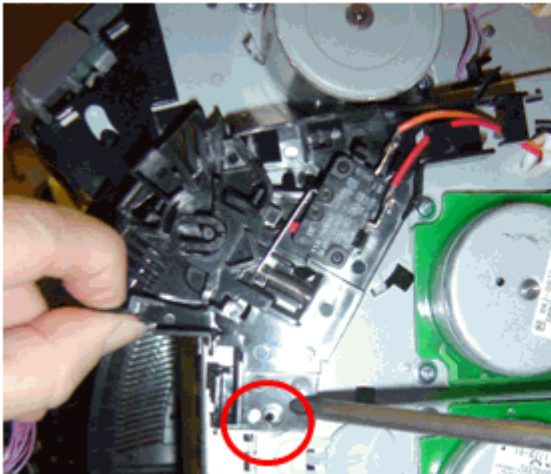

7. Remove the bottom cable harness. There is one screw at the top to remove. Hint: when you reinstall the guide, make sure that the rear locking tab is seated in the sheet-metal chassis. (See page 120 - 121 in the service manual). It may be necessary to disconnect the white door latch from the front door. (Notice the red arrow call-out).
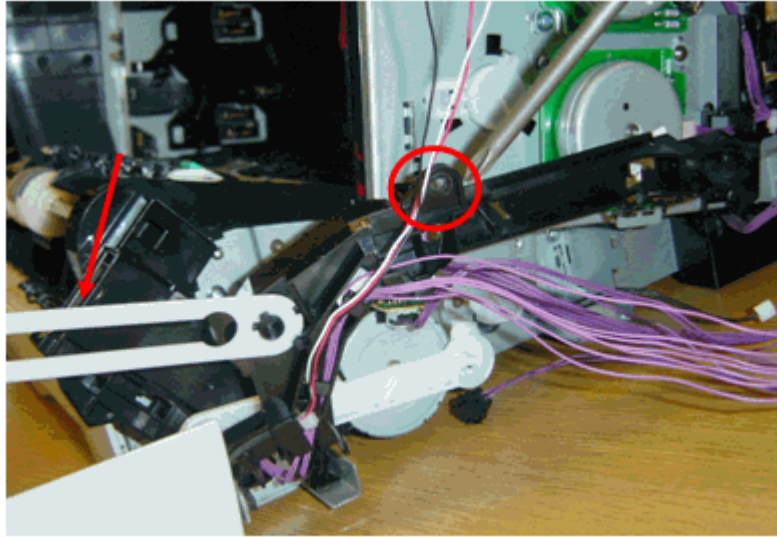
8. Remove the main drive assembly (MDA). There are six screws attaching the MDA to the chassis. Carefully note the locations of the screws to be removed.

> **CAUTION: Removing the incorrect screws could lead to opening up the MDA, requiring a unit replacement!**
>
> **NOTE: Two gears may fall off, there are instructions in step 16 on how to align them during the re-installation process.**
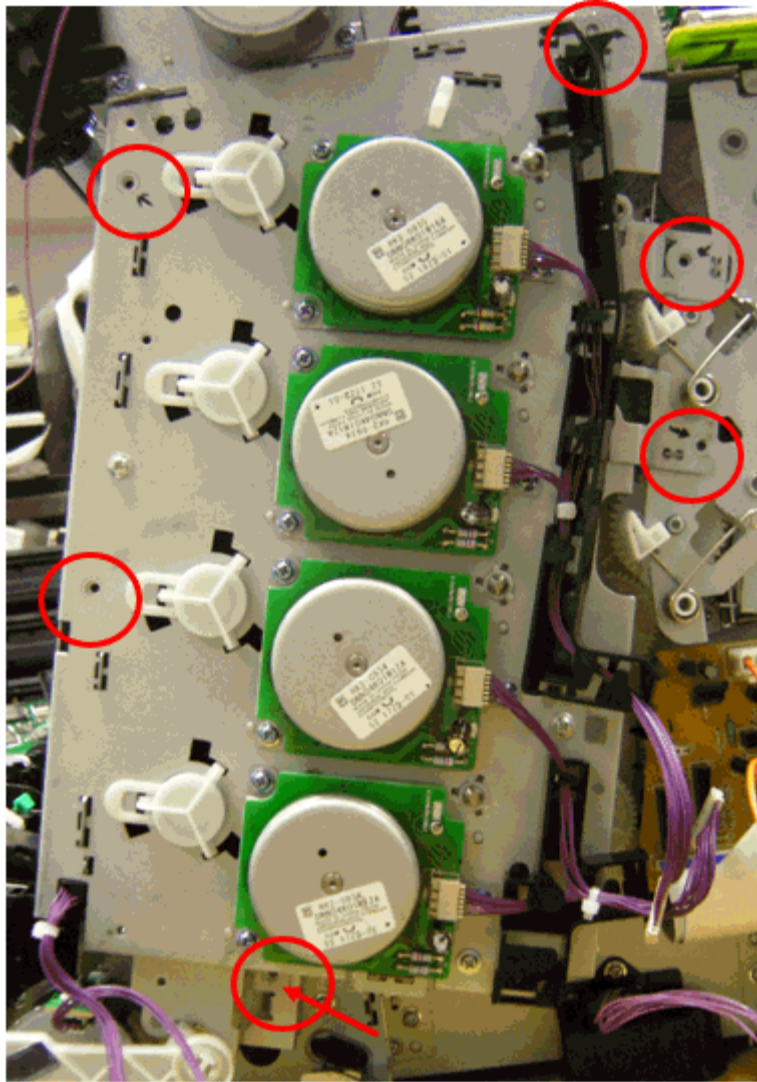
Remove the metal case by removing two screws. Remove the White Link Arm (see arrow in figure below)
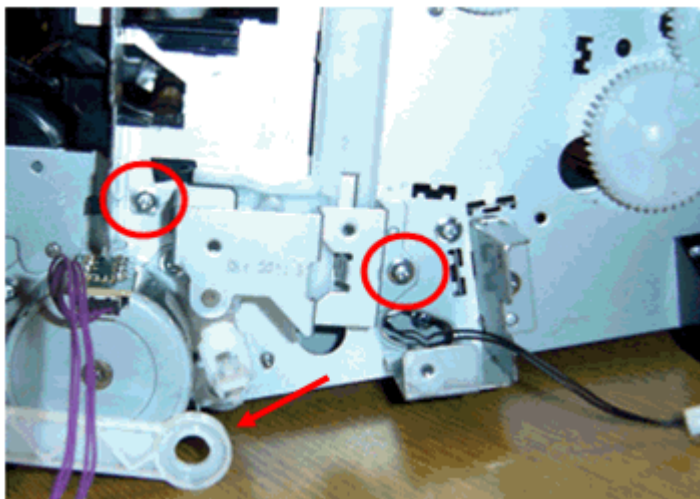
9. Remove the white slide lever by pushing down from the top to release it from the two tabs. Carefully remove the lever by pulling out, be aware that four springs are attached to this lever and the individual cartridge locks.
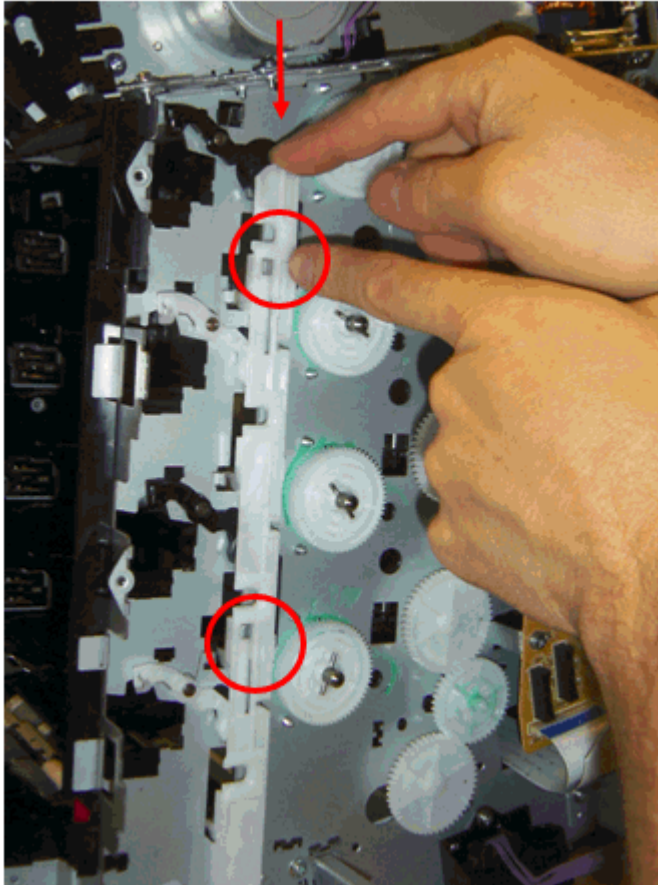
10. Once the sliding lever is removed, the cartridge locks can be accessed. The new grounding springs are not on the new cartridge locks and will need to be attached. Look at the current springs on the machine for guidance, and at the instructions below. Make sure to feed the hooked end through the hole at the end of the lock to begin with (See figure below.).

NOTE: The service kit has four new locks and four new springs in it, replace all the locks and springs, even if they are not currently broken. The new kit has white colored countermeasured locks. The picture below shows an old black non-countermeasured lock.

11. To attach the cartridge lock, hook the square part of the grounding spring to the metal chassis, then pull down and attach the lock on the metal shaft.

> **NOTE: Replace all four cartridge locks, even though the others may not be broken. If one lock experienced failure, the others are more prone for failure later.**
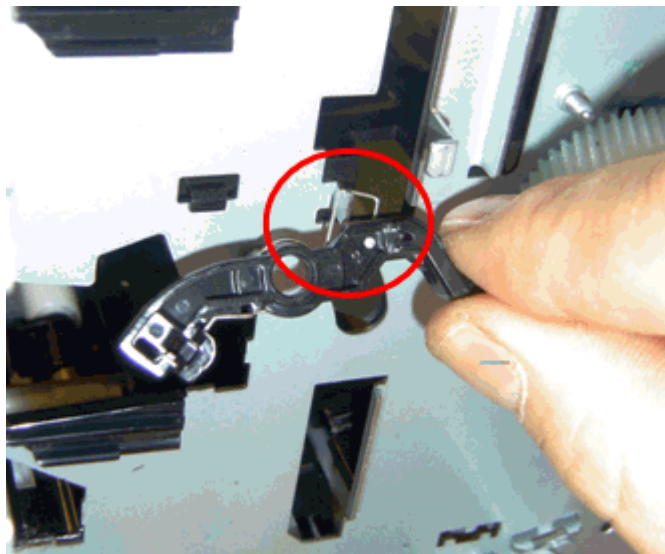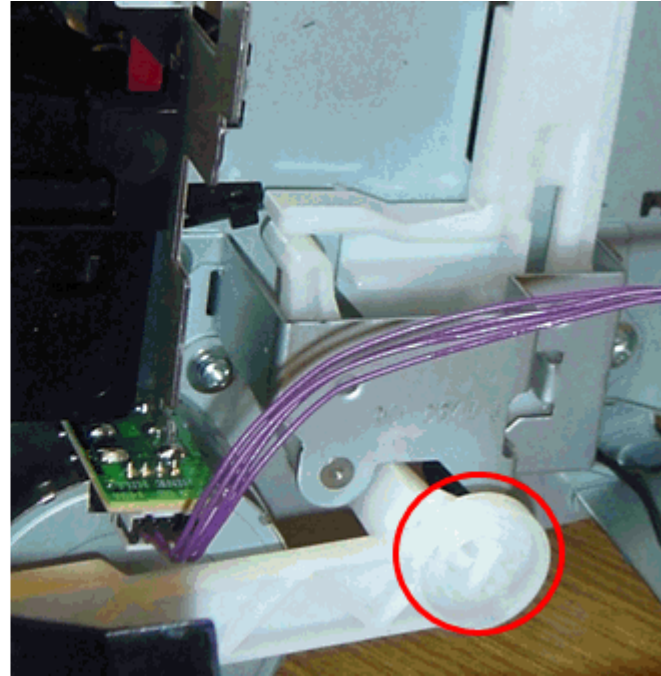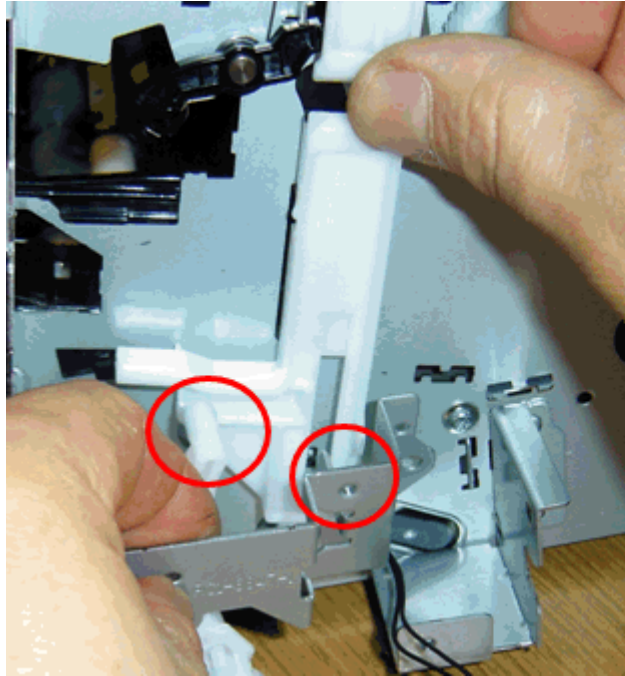

12. Attach one end the four springs to the white slide lever and install the lever back into the machine. (** Attach the other end of the spring in step 15.) Place the white slide lever so the two metal tabs are in place (circled below), then adjust all the black cartridge locks to be ?under? the tabs on the white slide lever. Bend the top of the white slide lever out to put the top black cartridge lock in place. Slide the white slide lever up when all the black cartridge locks are in place.
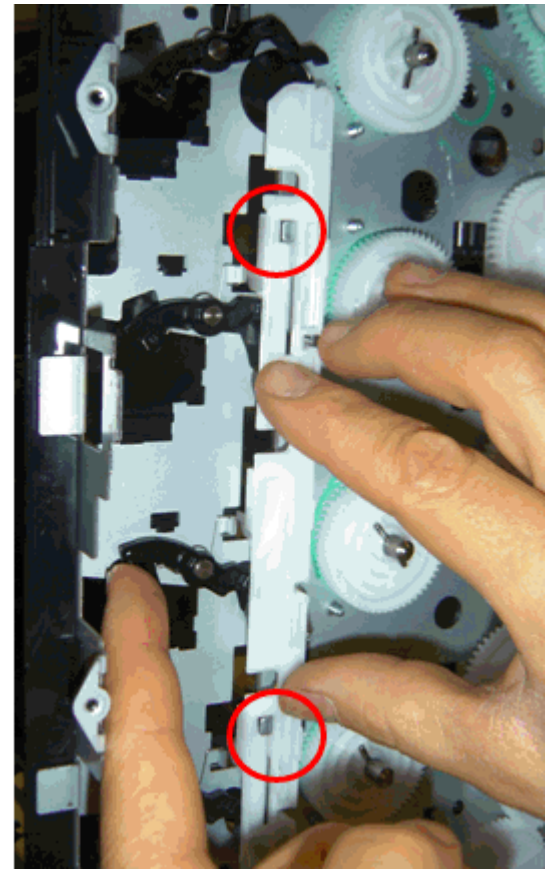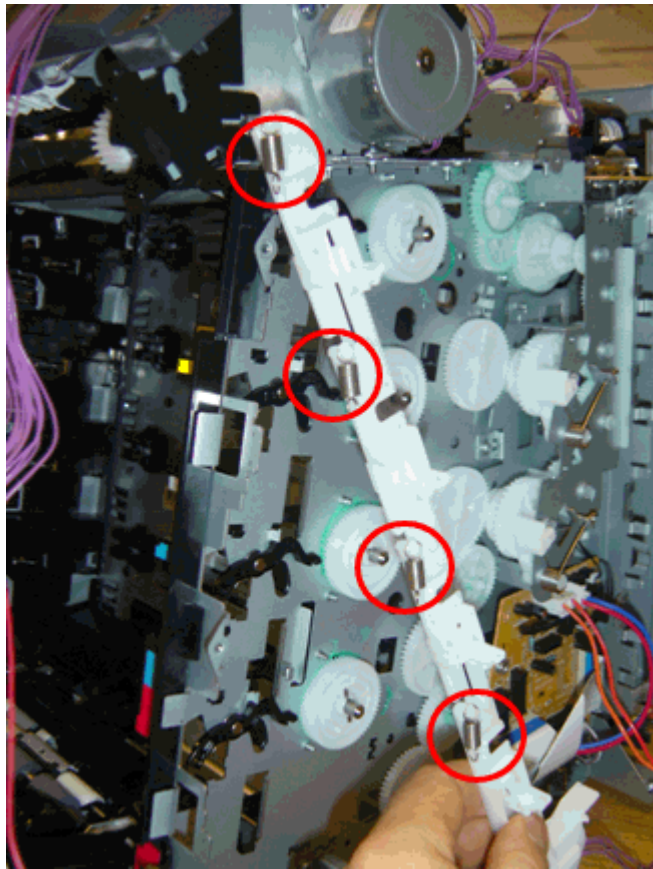
13. The slide lever and cartridge locks should look like the picture below when all is in place.
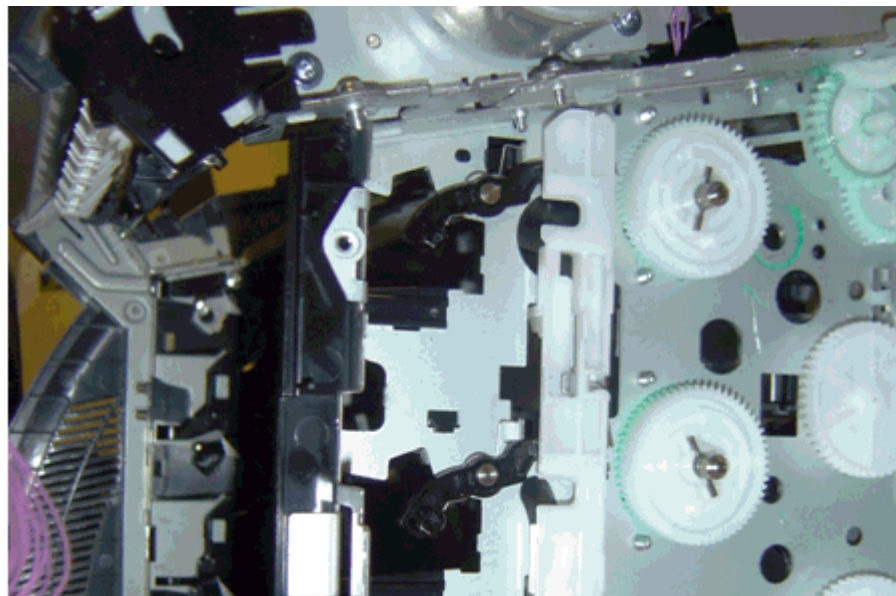

14. Lock the white slide lever in place by installing the metal case and white plastic piece. Make sure to insert the flange of the sheet metal in the slot on the sheet metal, and place the white shaft in the while slide lever. Reconnect the white arm to put tension on the white slide lever.

15. Connect the four springs on the white slide lever to each of the individual cartridge locks (start from the middle ones, it is easier that way). You will need needle-nosed pliers with pointed tips. The spring on the top is attached; the one on the bottom is not attached. Move the ETB guide to the up (vertical) position to help with removing and re-installing the Main Drive Assembly.
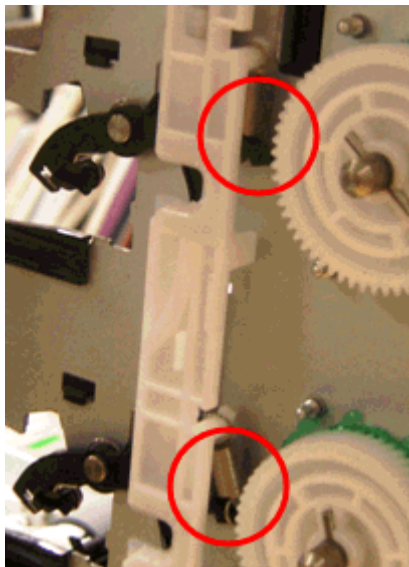
16. Make sure the gears are aligned properly before installing the main drive assembly. The four large gears should be in a approximate line (see picture). The top two large gears have an oval hole that aligns with a triangle stamped into the sheet metal. The two small gears to the right (they may fall off when removing the MDA), align with the three large bottom gears. Notice the two holes on each of the small gears align with the small holes of the large gears.
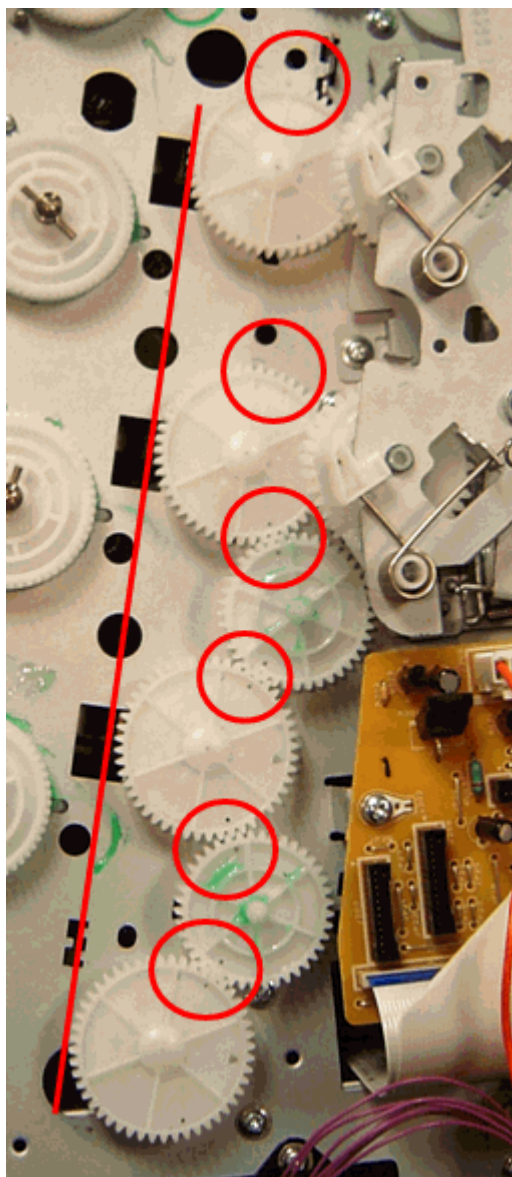
NOTE: If this procedure has been properly followed, in the back of the printer, you will see the 4 white cams that control the movement of developers (see figure below). On the top and bottom shafts, you can see a black plastic part that has a flag associated with it. The top flag is for the black cartridge, the bottom flag is for all the color cartridges. Also, note that the white cams are all at different degrees of rotation. This reduces the force required to drive the motors when turning the cams. Metal shafts should be oriented with the empty space downwards.
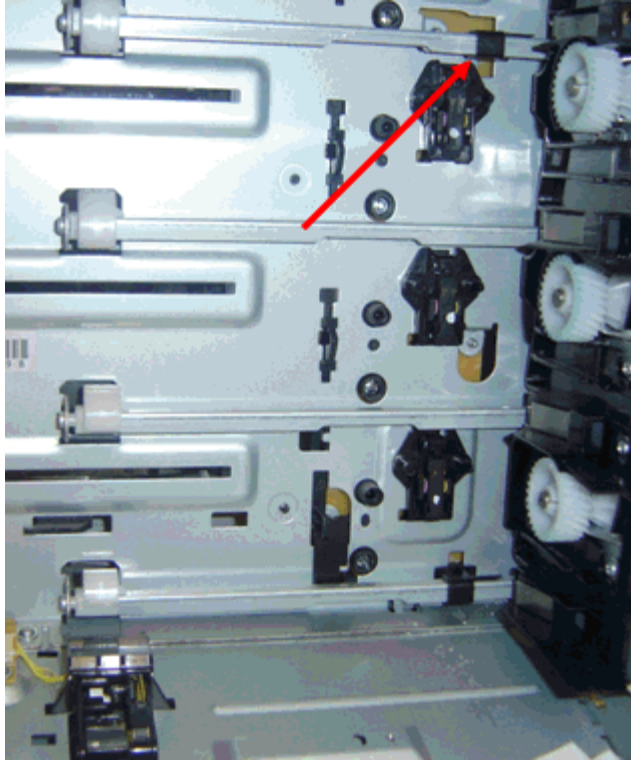
17. Prepare the MDA for installation. Two areas must be checked:

    a. Make sure that all the white shafts are pushed to the right (clockwise) when the MDA is oriented as shown below (See the blue arrows in the image below.). The shafts are aligned correctly in the picture.

        NOTE: It is important that the ETB guides are in the up position to make installation of the MDA smooth.

        Hint: Rotate the shaft all the way to the right side first (as far as possible) then push them back a little to the left they will come to a hard stop. *Leave them there. Look at the lines marks on the metal frame of the MDA (yellow arrows).*
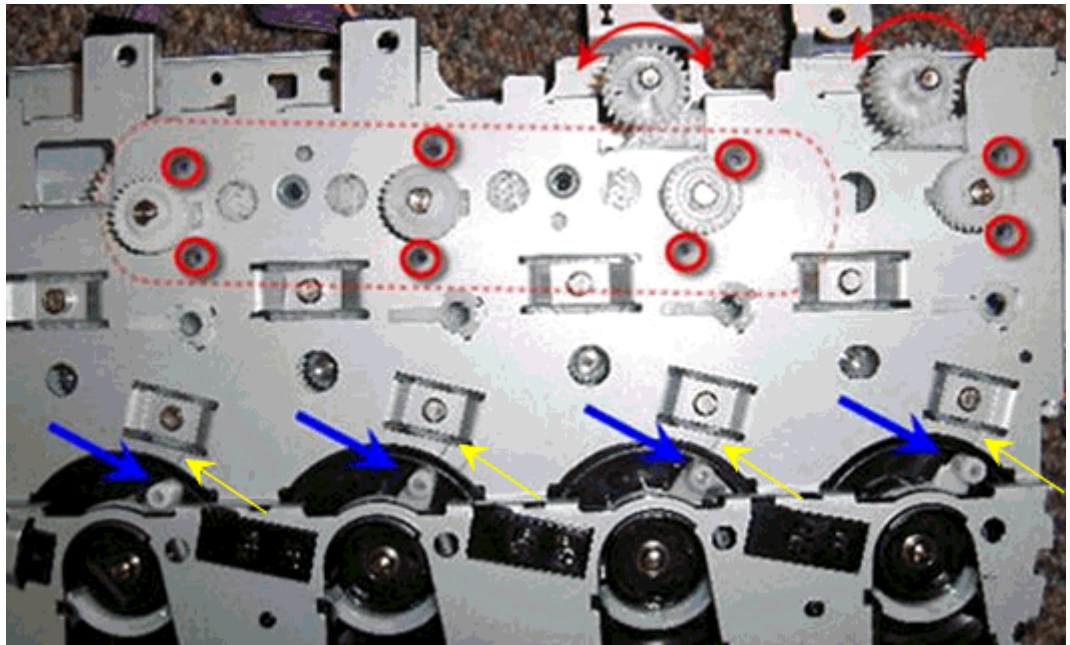
b. Next, pay attention to the area marked with the two red arrows, enlarged in the picture below. It is possible that during the handling of the MDA one or both of these two gears can be mis-positioned by accident. If this happens, one or more of the color planes could be missed during printing.

- The gear on the right controls the black cartridge; it drives the larger gears to right below it to the right.
- The gear on the left controls all three of the color cartridges; it drives al the remaining three larger gears, the one directly below it and the two to the left. (Indicated by the dotted oval in the picture above).
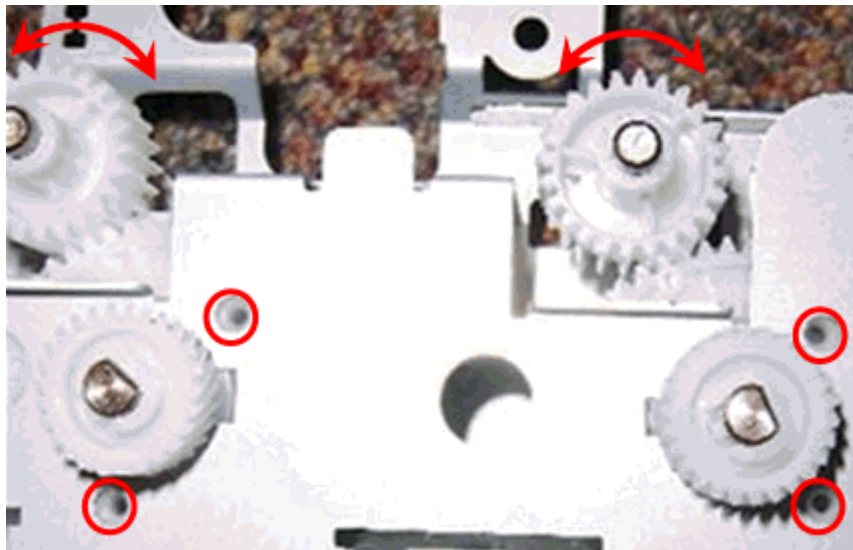

Check if they are properly aligned as follows:

Both gears can be rotated either way to properly correct the MDA gears alignment. The images above show how to verify if the gears are correctly aligned. The two

holes from larger gears should both be showing *as illustrated by the red circles* . (The large gears are under the frame and driven by the smaller gears.)

18. With the above in alignment, install the main drive assembly. Start at the left side, inserting the MDA into the metal slots and rotate it into position. Place a screw in the upper right corner of the MDA to help keep it in place if the MDA doesn?t fit flush when first installing it. This gives access with both hands to "jiggle" it into place.
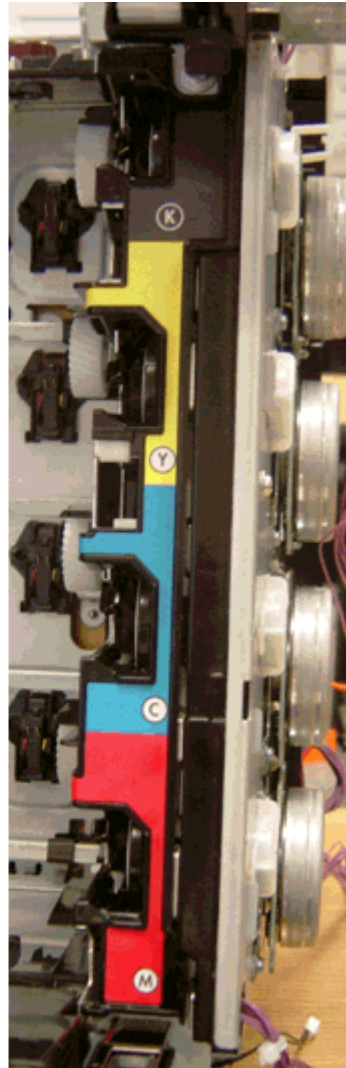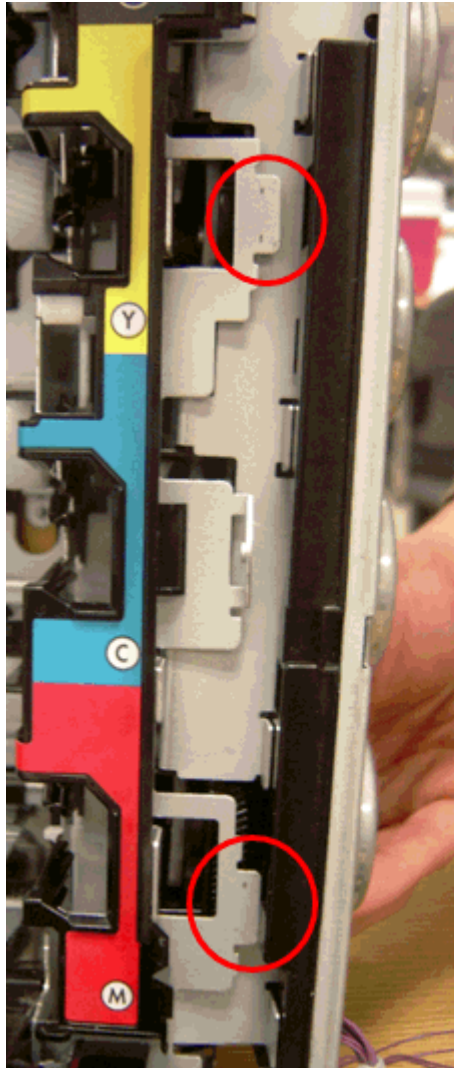
19. Make sure the clips are pushed in and the MDA is seated properly.
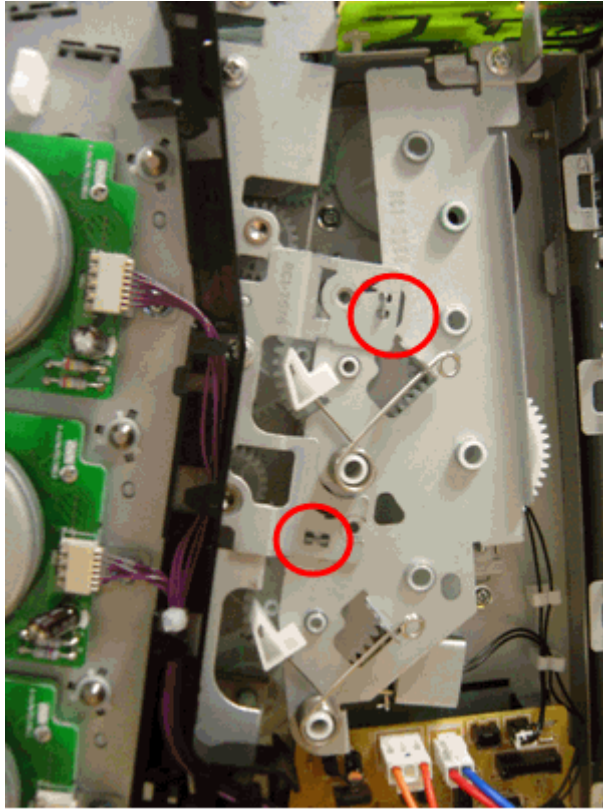
20. At this point, reverse steps 7 on down. This will have the printer back up and running. Remember to correctly thread the cables through the wire harnesses properly!

NOTE: The connector to the top cover is different between the simplex and duplex models. The duplex has a larger connector, while the Simplex is much smaller.

If you experience the following issue after installing the new cartridge locks, here?s how to troubleshoot:

AISS Main Drive Ass'y (MDA) rework possible side-effects	
Possible Failures After Rework	**Troubleshooting**
13.01.00/13.02.00	Check connection 1 (see #1 in Figure 1)
Close Top Cover/ Close Front Door	• Check connection 4 (see #4 in Figure 1) • Check connection 3 (see #3 in Figure 1)
Insert or Close Tray 2	Check connection 2 (see #2 in Figure 1)
• 10.92.XX • Noise From Main Drive Assembly • PQ-defect (i.e.: wrong color, Missing color pane, process CPR)	Check the cartridge bottom lock (see #5 in Figure 2) Remove the MDA and check all the Gears Alignment and correct as instructed. (for details, see steps 16 and 17 above and re-check the MDA alignment as shown in Figure 3 below) For noise specifically, check the Cartridge Drum Sensors on the MDA (see Figure 4)

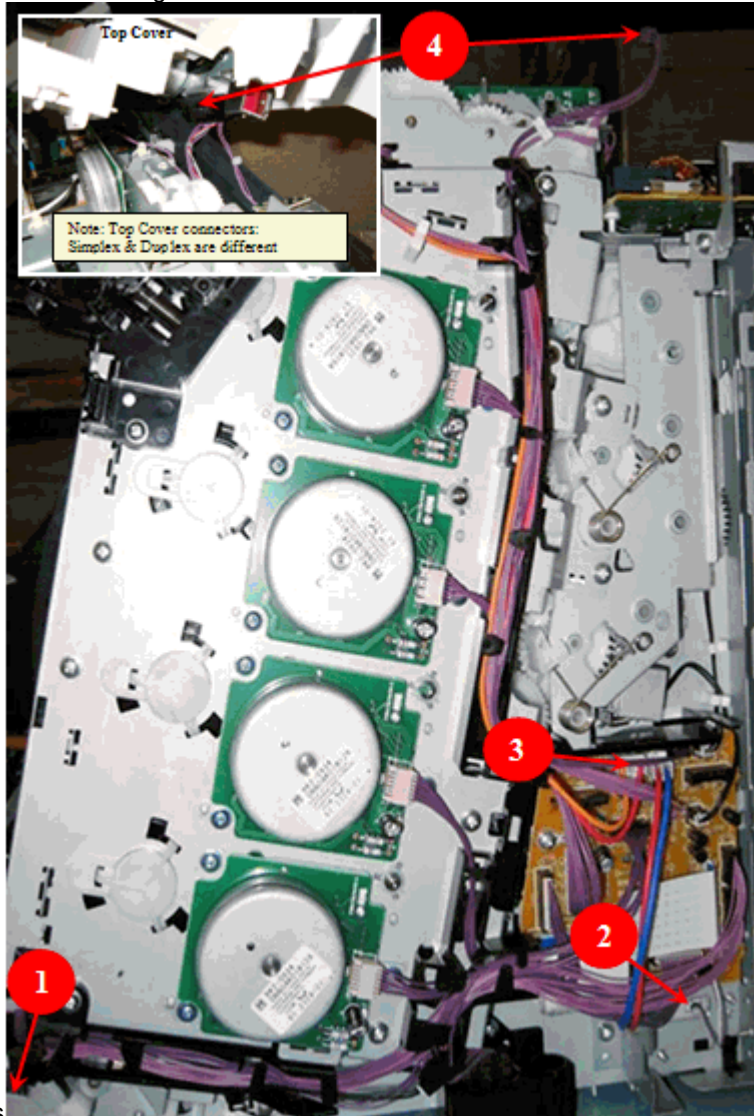| AISS Main Drive Ass'y (MDA) rework possible side-effects	
Possible Failures After Rework	**Troubleshooting**
• 54.XX Error	
59.C0 Error	One of the two drive gears on the engine is NOT correctly inserted. Remove MDA and re-align gears as instructed (see step 16 above)

Figure 1: Troubleshooting connection

checkpoints

Figure 2: Troubleshooting lock
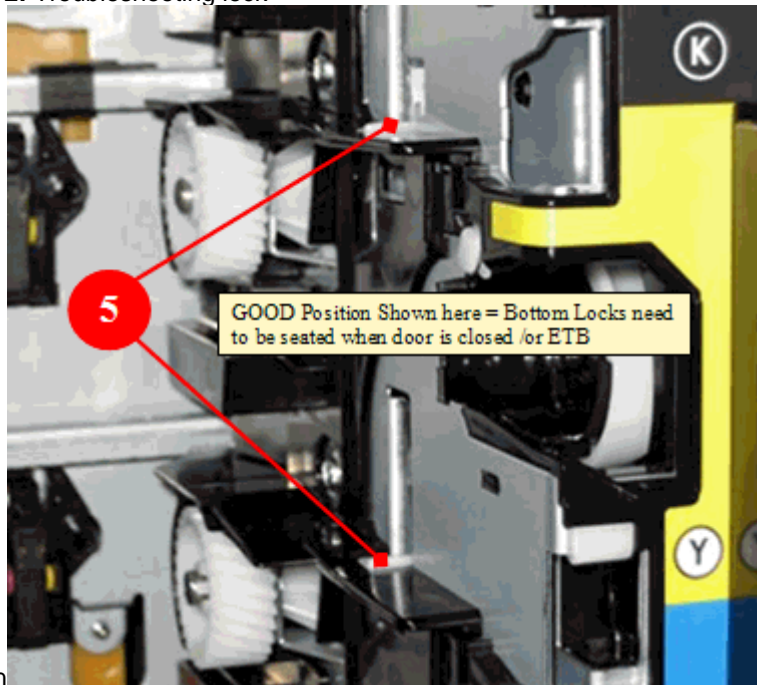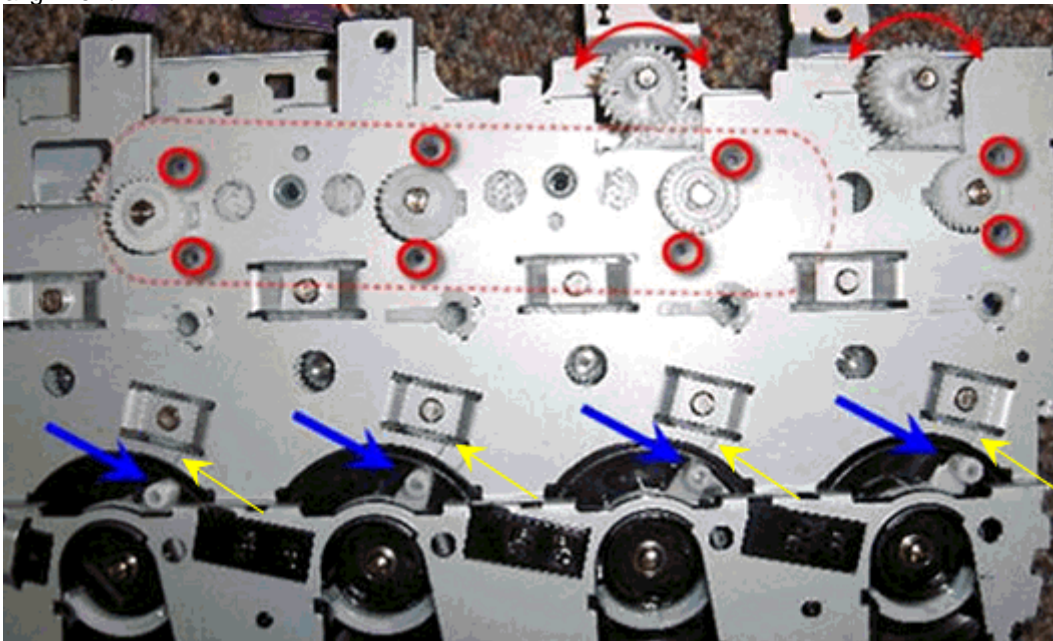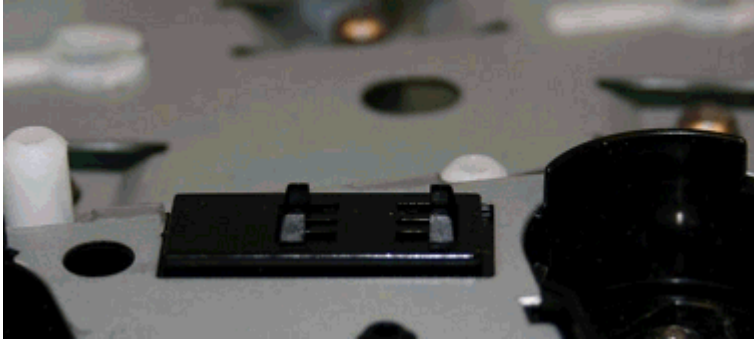

position

Figure 3: Troubleshooting gear alignment

Noise - Check the Main Drive Assembly to see that the cartridge drum sensor is correctly seated. See the picture below for the proper orientation of the sensor. There are 4 of these (one per drum) on the MDA.

Figure 4: Troubleshooting cartridge drum sensor

Recommended Action: Fix on Specified Failure
Objective: Recommended Modification
LABOR ALLOWED
Hours: 1
Minutes: 0
Service Delivery Type: Customer Site
EFFECTIVE DATES
Start: 2006-10-01
Expiration: 2008-10-01
WARRANTY COVERAGE
Labor Covered: By Division
Parts Covered: By Division
Travel Covered: By Division
Order Type Code (OTC): na
PARTS LOGISTICS
Parts Strategy: Standard Support Process
Service Inventory: Scrap
Used Parts: Scrap
Used Parts: Scrap

Hardware Platforms Affected: HP Color LaserJet 3000 Printer, HP Color LaserJet 3000n Printer, HP Color LaserJet 3000dn Printer, HP Color LaserJet 3000dtn Printer, HP Color LaserJet 3800 Printer, HP Color LaserJet 3800n Printer, HP Color LaserJet 3800dn Printer, HP Color LaserJet 3800dtn Printer, HP Color LaserJet 3600 Printer, HP Color LaserJet 3600n Printer, HP Color LaserJet 3600dn Printer
Components Affected: na
Operating Systems Affected: Not Applicable
Software Affected: Not Applicable
Third Party Products Affected: na
Support Communication Cross Reference ID: IA00775200
REVISION HISTORY
v.1.0 15-May-2006 original advisory
v.2.0 21-Jun-2006 update to step 17 plus a few other minor edits
v.3.0 18-Aug-2006 update multiple steps and add troubleshooting table
v.4.0 18-Sep-2006 replaced SA c00673707 with this SAA (c00775200) to accommodate reimbursement after warranty period
v.5.0 11-Dec-2006 added video link and serial number range
Copyright 2006 Hewlett-Packard Development Company, L.P.

HP Color LaserJet 3000, 3600, and 3800 Series Printers - Broken Cartridge Lock Emerging Issue

Issue Description

Troubleshooting

Issue Description

Customers may experience a 10.92.XX error or cannot seat their cartridges properly. If the part circled below is broken, the printer must be replaced. The main drive assembly is not a service part.

top

Troubleshooting

The following diagram identifies the area where the broken part may be located on the main drive assembly.
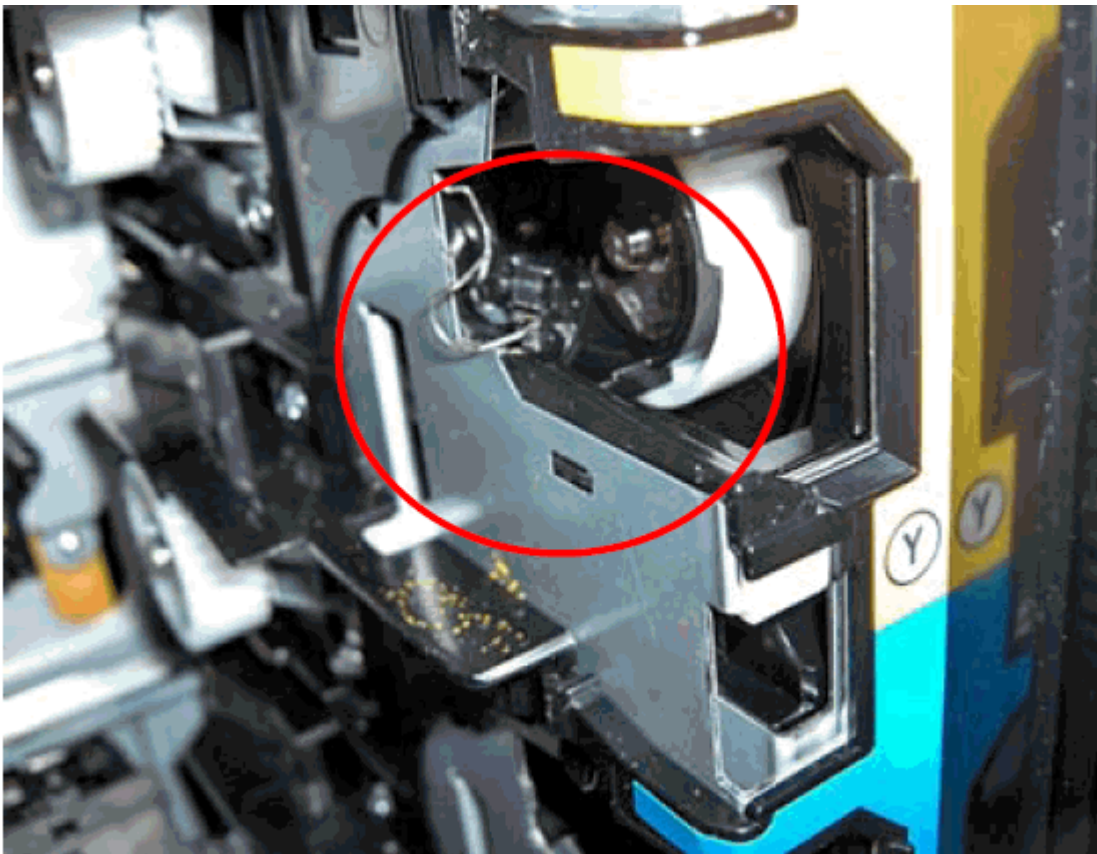

This is how it should look then when the cartridges are out, the ETB is removed, but the guides to the ETB are up instead of down, and the front cover is all the way open: (you can get to this mode by opening the door, remove the ETB, remove the cartridges, close the front door, and open it again. Note that you can NOT put in the cartridges as the guides to the ETB are in the "up" position. Pull the

guides down and the levers will go be in the correct position to insert cartridges. The white piece will be down and black locking levers will be up to allow easy insertion of the cartridge.
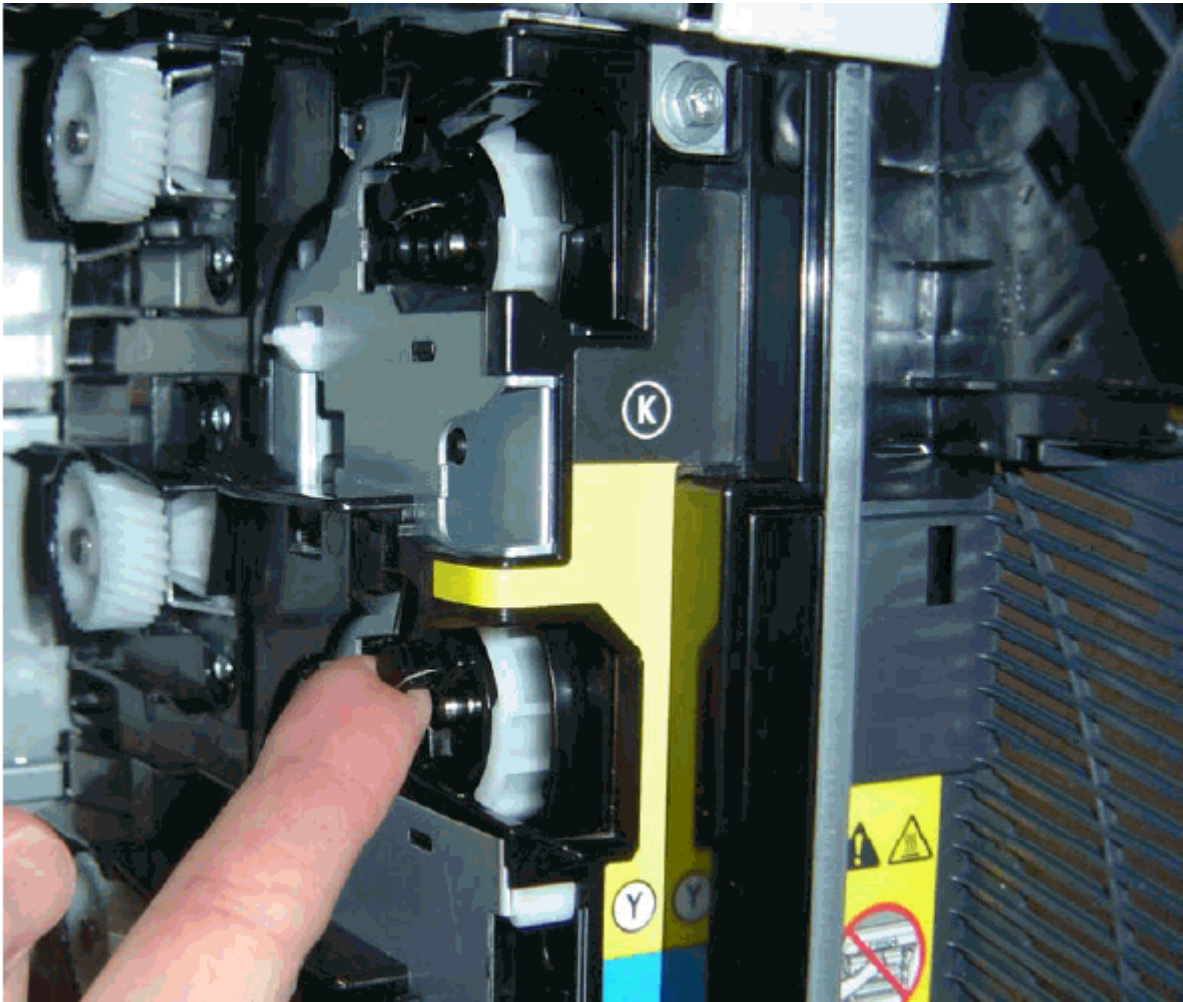
Also check if the contact spring is being caught by the side frame sheet metal when the front door is being opened. There shouldn?t be an error associated with this, and you do not have to do anything if you see this.

Contact spring getting caught by sheet metal
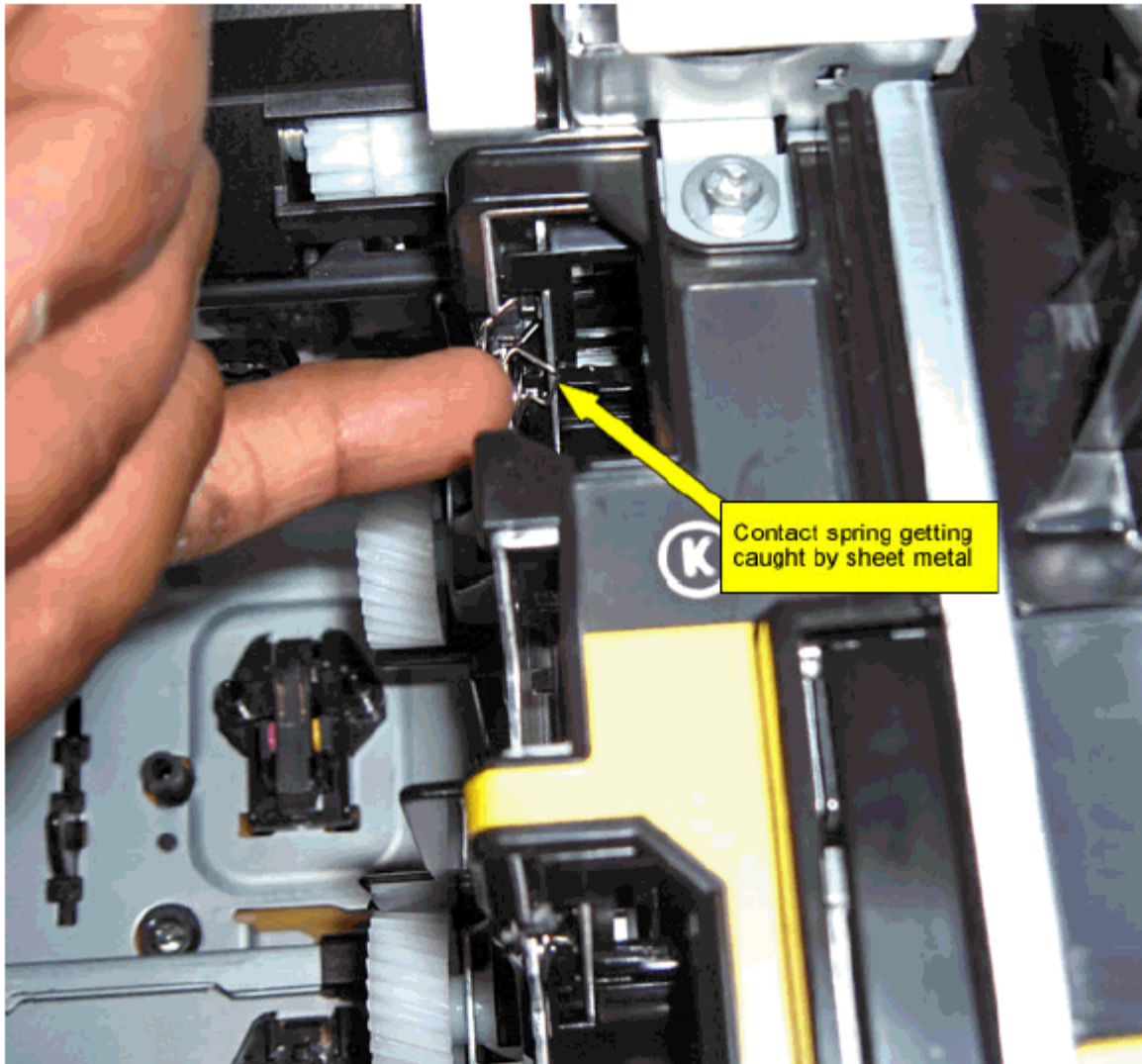
To help Division understand the issue better, when you have such a case, please gather this information:

- Model number and serial number
- Which Cartridge lock is broken (Black, Yellow, Cyan or Magenta?)
- Advise how the fault manifest's itself (Control Panel message, noises, can?t insert the cartridges, etc?)
- Describe the customer?s use of the discovery tape:
  - Did the customer pull on the tape or just follow it to the toner cartridges?
  - If the customer did pull on the tape, did the front door open quickly for them?
    - Was the ETB attached to the front cover (see picture) when the door opened?

■ Was the ETB in the ?up? position (see picture) when the door opened?

■ Please capture any other customer comments with respect to the discovery tape.

- When did this occur? (Select 1)
    o Right out of box? (the first time the customer removed the toner cartridge, could they get it out, or put it in?) Describe the customer?s comments.
    o Did the customer see an error on the control panel? Right out of box, or after printing XX pages? Document the number of pages, the error, and customer comments.
    o After inserting a toner cartridge after printing XX pages? (did customer feel anything odd compared to the insertion of the other toner cartridges?) Document the number of pages and the customers comments.
    o After removing a toner cartridge after printing XX pages?(did customer feel anything odd compared to the insertion of the other toner cartridges?)
    o Other??? (Please describe)
- Were there other signs of damage to the printer?
- Was the contact spring caught on the sheet metal (see picture above)? (Yes/No)
- Is there damage to the right hand side of the toner cartridge? Please describe/ take a picture of the damage.
- Check to see if there is any damage to the white plastic part for the cartridge that has the lock broken (see picture).
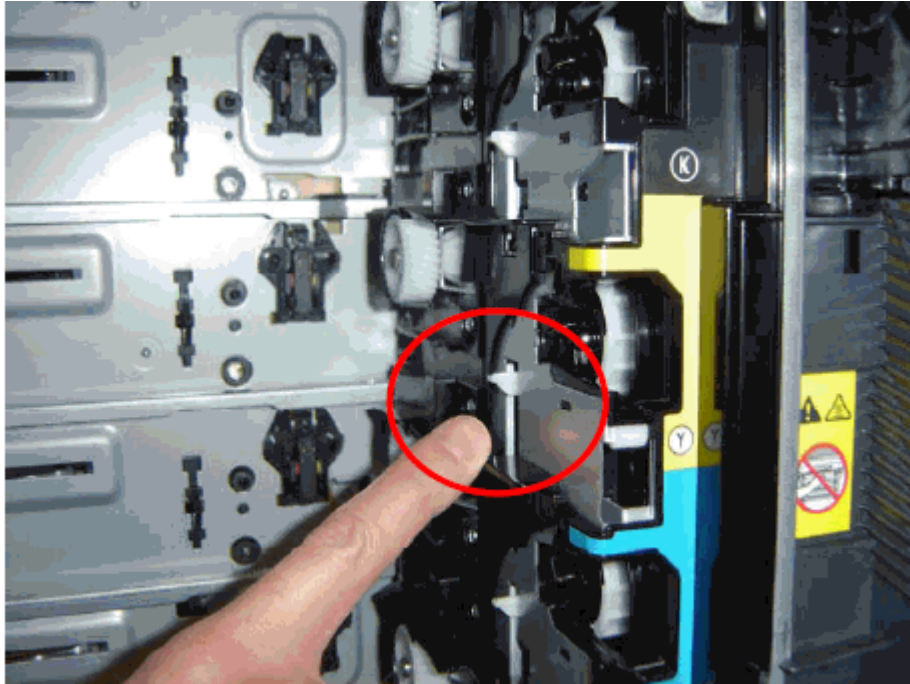
- Is the printer sitting on a level surface?
- See the Service Action Advisory (Service Note) titled "HP Color LaserJet 3000, 3600 and 3800 Printers - Cartridge Lock Replacement Procedure", knowledgebase document number c00775200 .