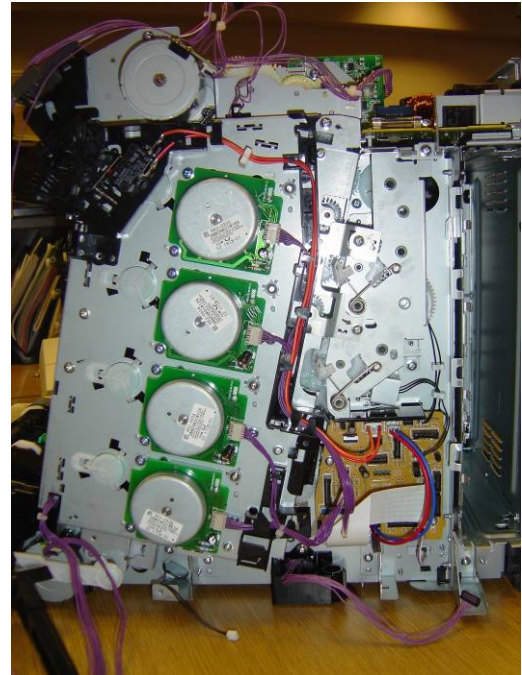
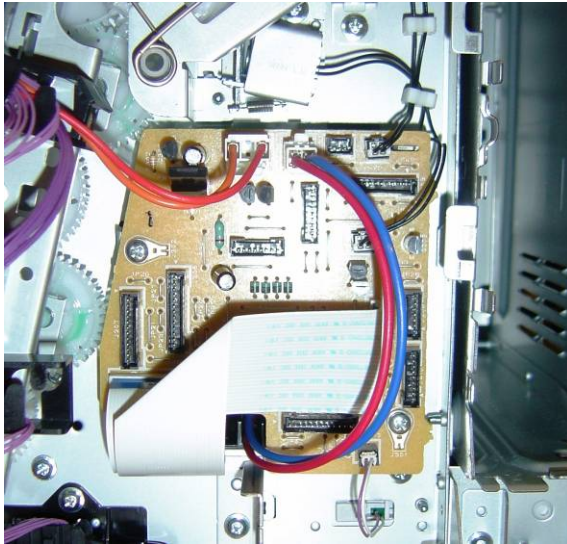




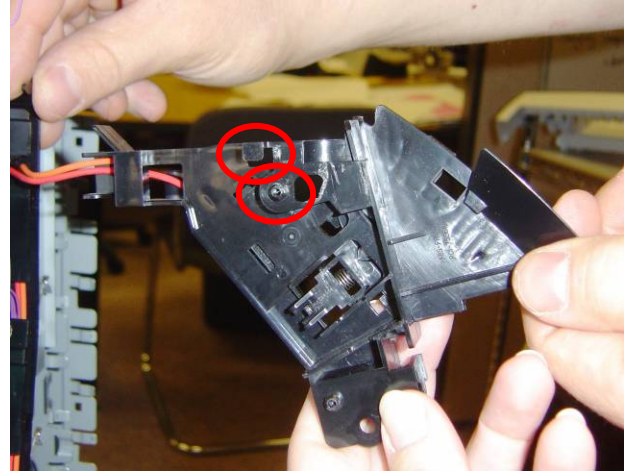
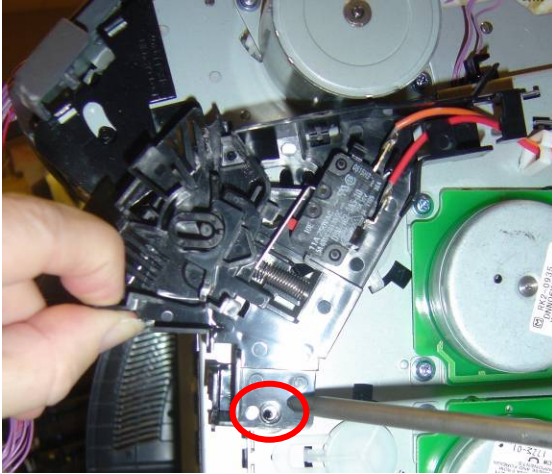
## Part Number RM1-2751-000CN - Main Drive Assembly Replacement and Timing Procedure HP CLJ CP3505/3800/3600/3000

### Removal

1. Remove the print cartridges and the ETB.
2. Remove the Upper Cover (see page 80 in the service manual).
3. Remove the Right Cover (see page 87 in the service manual).
4. Note: For duplex models, you might need to remove the wires to the duplex fan in the front cover. Simply follow instruction 5 on page 77 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

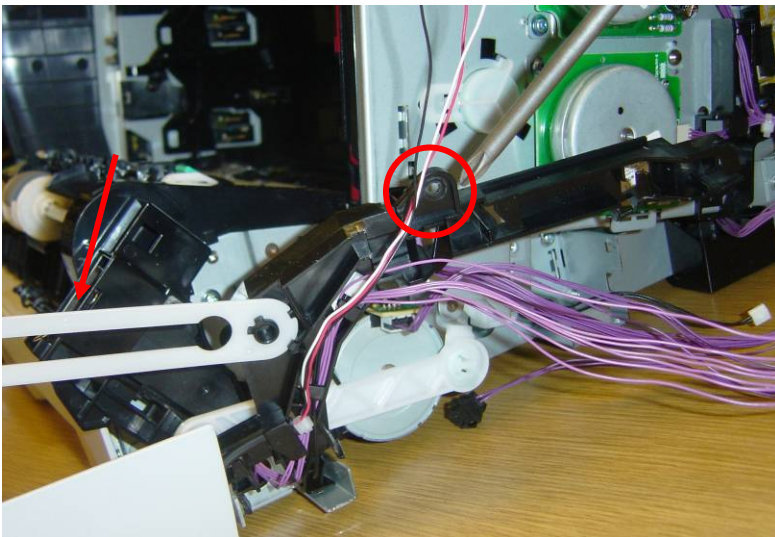


6. Remove the Interlock switch assembly by removing the 1 screw. When removing the assembly, be aware of the clip at the top and the alignment knob.



7. Remove the bottom cable harness. There is one screw at the top to remove.

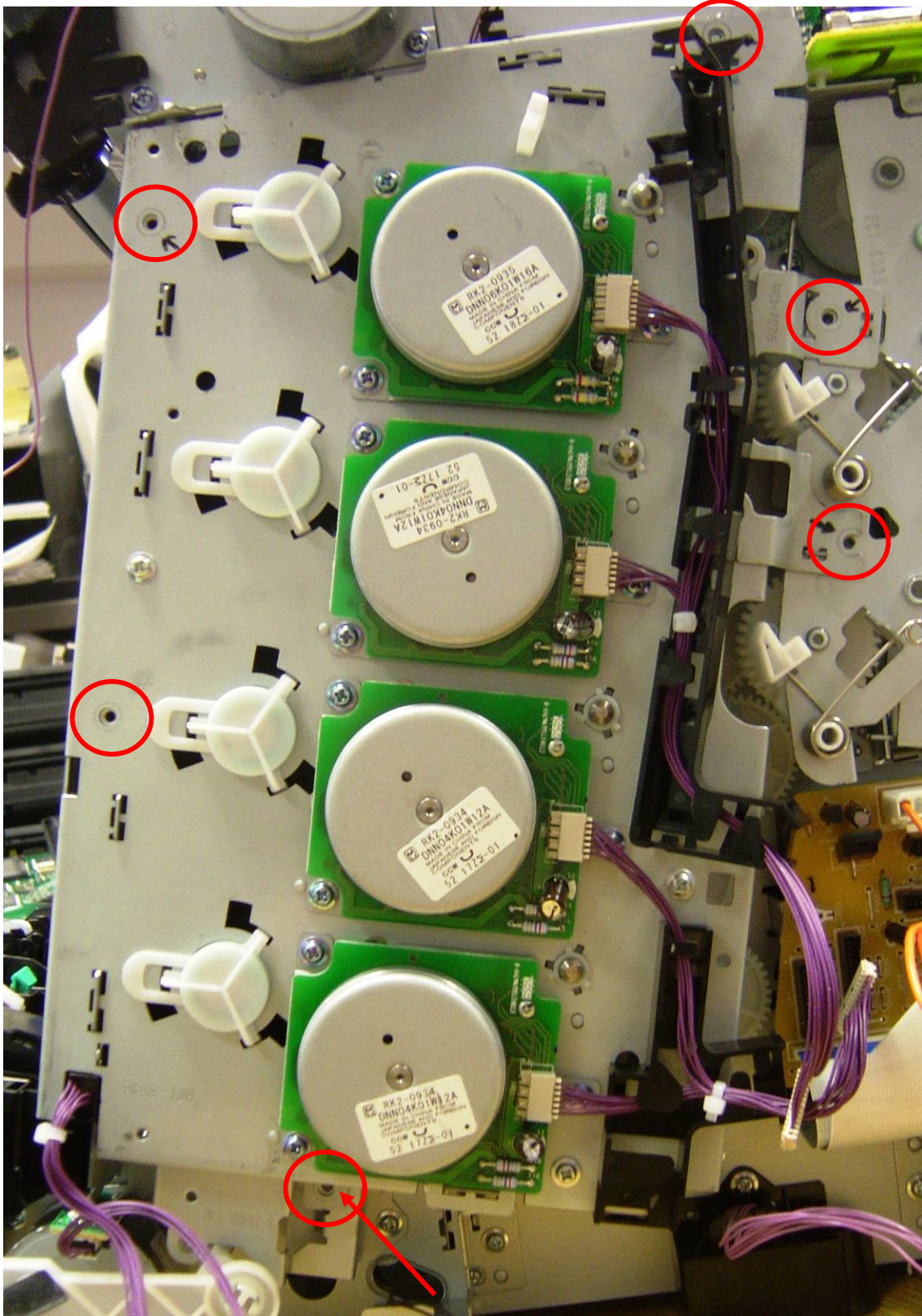
Hint: When you reinstall the guide, make sure that the rear locking tab is seated in the sheet-metal chassis. (See page 121 in the service manual.) You might need to disconnect the white door latch from the front door. (Notice the red arrow callout.)



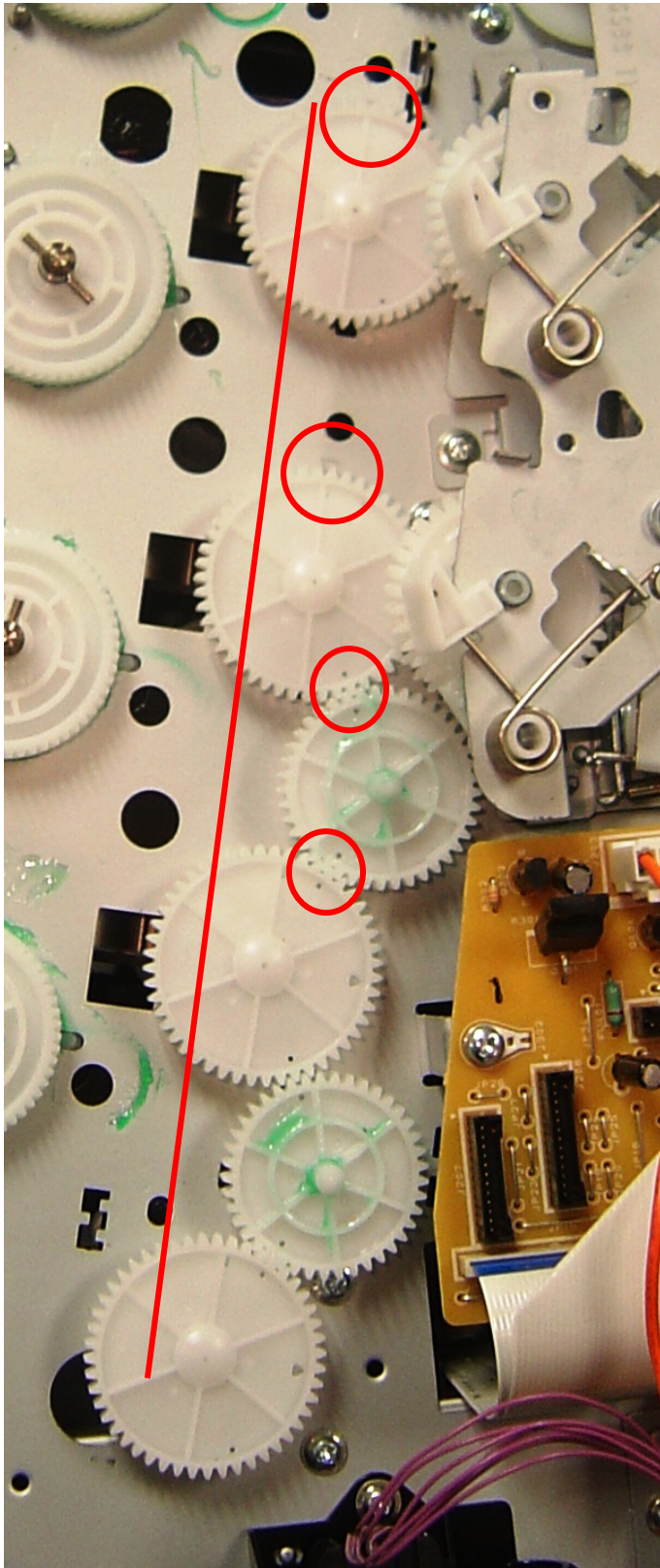
8. Remove the Main Drive Assembly (MDA). Carefully note the locations of the six screws to remove.

**CAUTION: Removing the incorrect screws could lead to opening up the MDA, which could require a unit replacement!**

Note: Two gears might fall off; see step 9 for instructions to align them during the re-installation process.

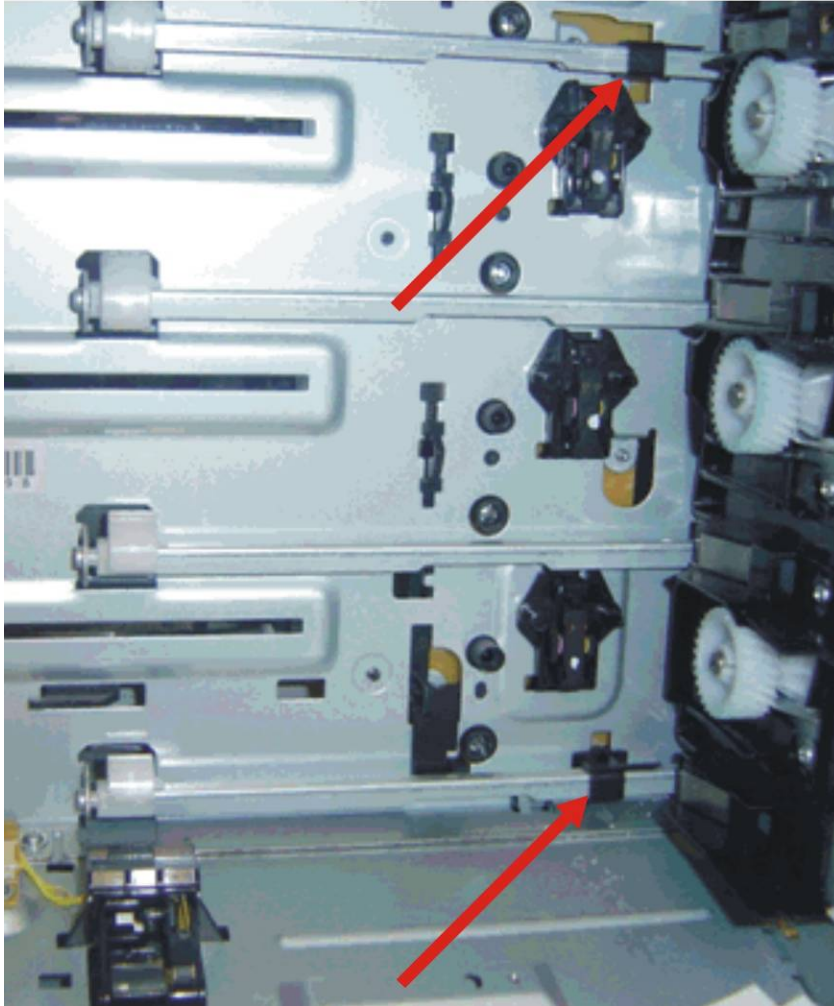


## Installation and Timing



9. Make sure the gears are aligned correctly before installing the Main Drive Assembly. The four large gears should be in an approximate line (see the picture to the left). 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. You can see the two holes on each of the small gears align with the small holes of the large gears.

Note: To make sure the gears are aligned correctly, look inside the printer. You will see the four white cams that control the movement of the developers. (See the figure below.) These white cams should all be at different degrees of rotation. This reduces the force required to drive the motors when turning the cams. On the top and bottom shafts, you can see a black plastic part that has a flag associated with it. (See red arrows below.) The top flag is for the black cartridge, the bottom flag is for all the color cartridges. The flags should be rotated so they point straight back into the sensor. Metal shafts should be oriented with the empty space downwards

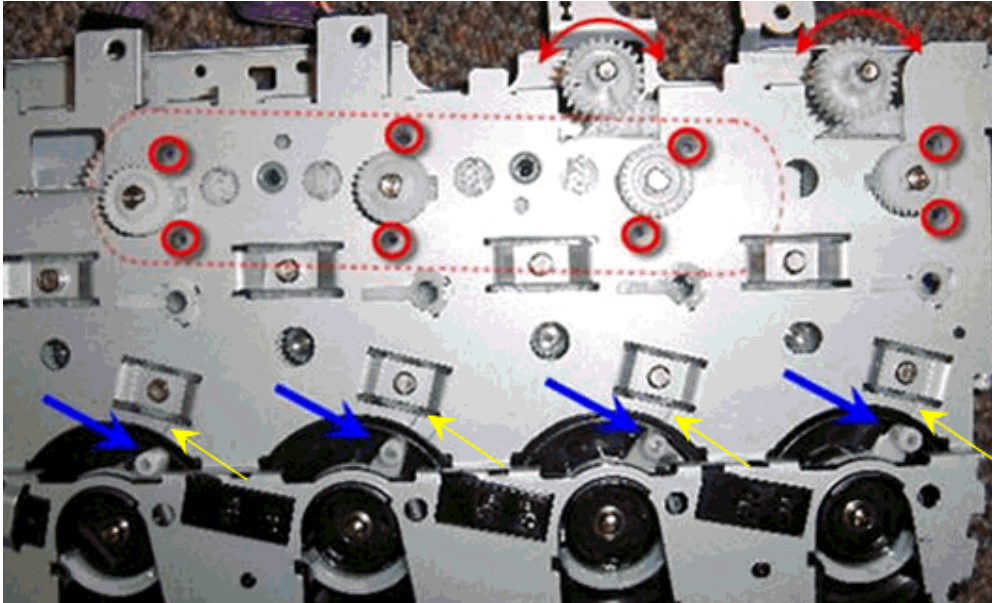


10. To prepare the MDA for installation, check the following two items:

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

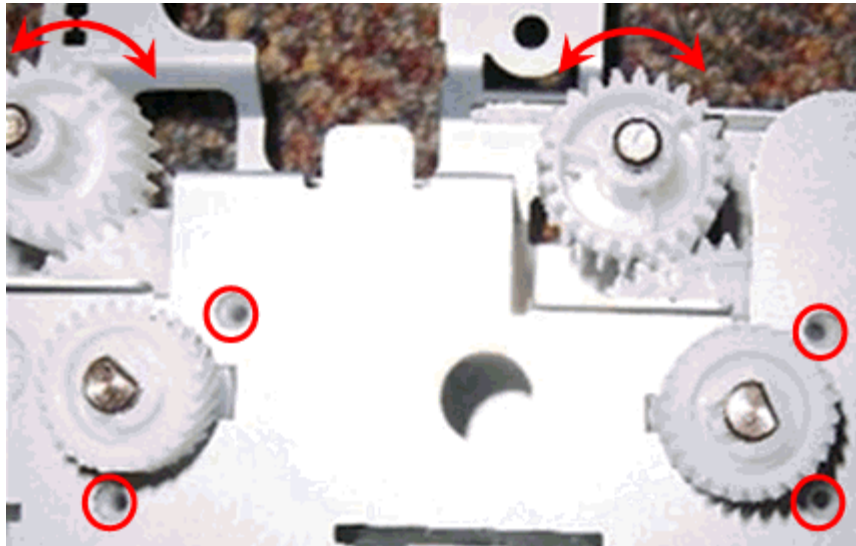
- a. Make sure that all the white shafts are pushed as far to the right (clock-wise) when the MDA is oriented as below. (See the blue arrows in the image below.) The shafts are aligned correctly in the picture.

**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 line 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.

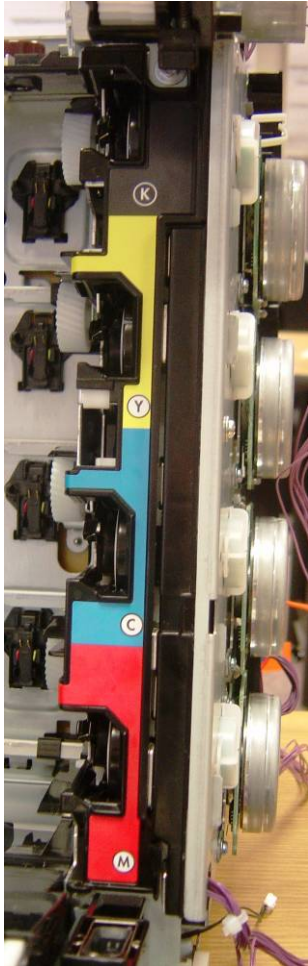
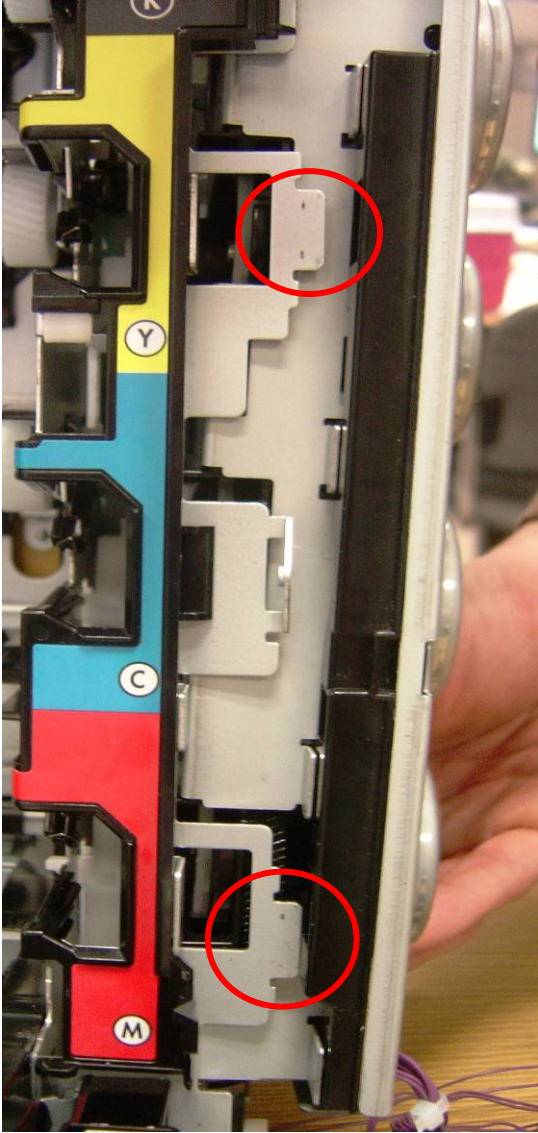
- The gear on the right controls the black cartridge; it drives the larger gears to right below it to the right.
- The gear on the left controls all three of the color cartridges; it drives all the remaining three larger gears, the one directly below it and the two to the left. (Indicated by the dotted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



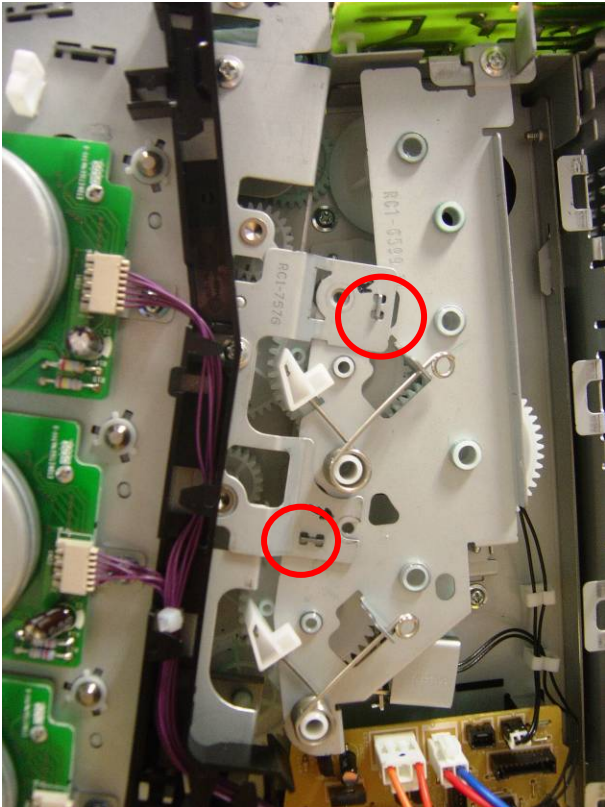
Check if they are properly aligned as follows:

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.)

11. With the above items aligned, install the Main Drive Assembly. Start at the left side, inserting the MDA into the metal slots and rotate it into position. You might need to 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 you access with both hands to 'jiggle' it into place.



12. Make sure the clips are pushed in and the MDA is seated correctly:



13. At this point, reassemble the printer by reversing steps 7 through 1. Remember to correctly thread the cables through the wire harnesses.

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

# **Troubleshooting**

Following are troubleshooting steps to follow if you encounter any of the following issues after installing the new main drive assembly.

<b>Main Drive Assembly (MDA) rework possible side-effects</b>	
<b>Possible Failures After Rework</b>	<b>Troubleshooting</b>
13.01.00/13.02.00	Check connection 1 (see #1 in Figure 1 below)
"Close Top Cover/ Close Front Door"	<ul style="list-style-type: none"> <li>• Check connection 4 (see #4 in Figure 1 below)</li> <li>• Check connection 3 (see #3 in Figure 1 below)</li> </ul>
"Insert or Close Tray 2"	Check connection 2 (see #2 in Figure 1 below)
<ul style="list-style-type: none"> <li>• 10.92.XX</li> <li>• Noise From Main Drive Assembly</li> <li>• PQ-defect (i.e.: wrong color, Missing color pane, process CPR)</li> <li>• 54.XX Error</li> </ul>	<p>Check the cartridge bottom lock (see #5 in Figure 2 below)</p> <p>Remove the MDA and check alignment of all the gears. Correct as instructed. (For details, see steps 9 and 10 above and re-check the MDA alignment as shown in Figure 3 below)</p> <p>For noise specifically, check to see that the Cartridge Drum Sensors are correctly seated on the MDA (see Figure 4 below) There are 4 of these (one per drum) on the MDA.</p>
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 steps 9 and 10 above)

Figure 1: Troubleshooting connection checkpoints

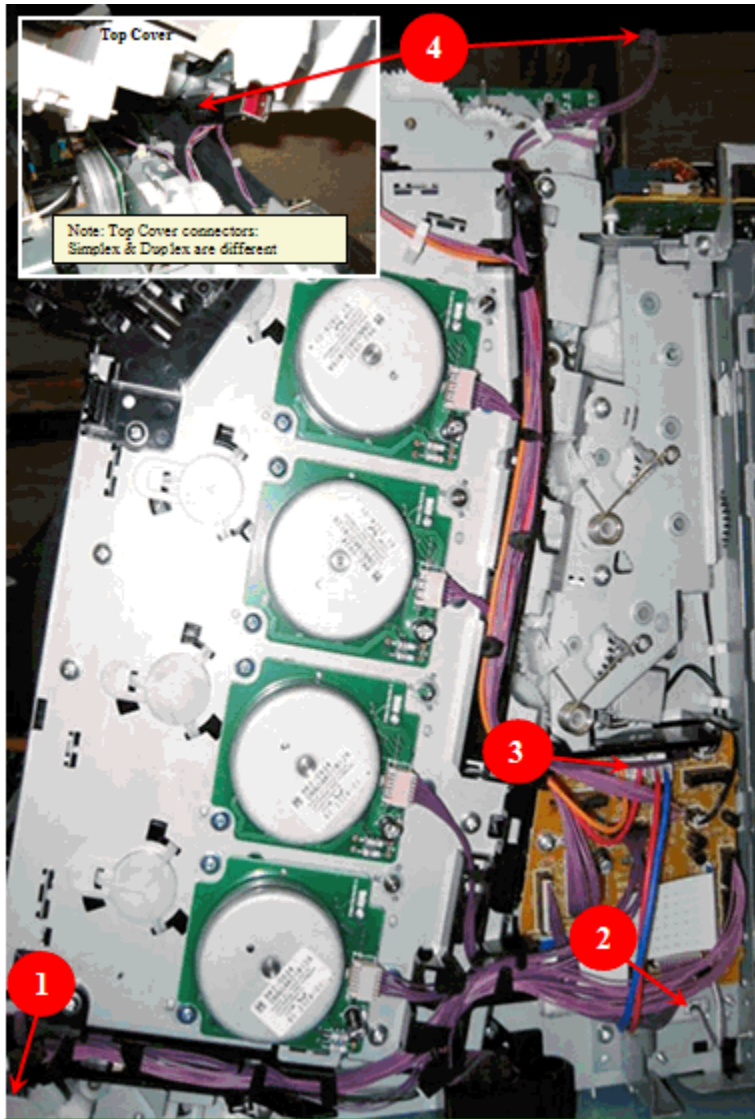


Figure 2: Troubleshooting lock position

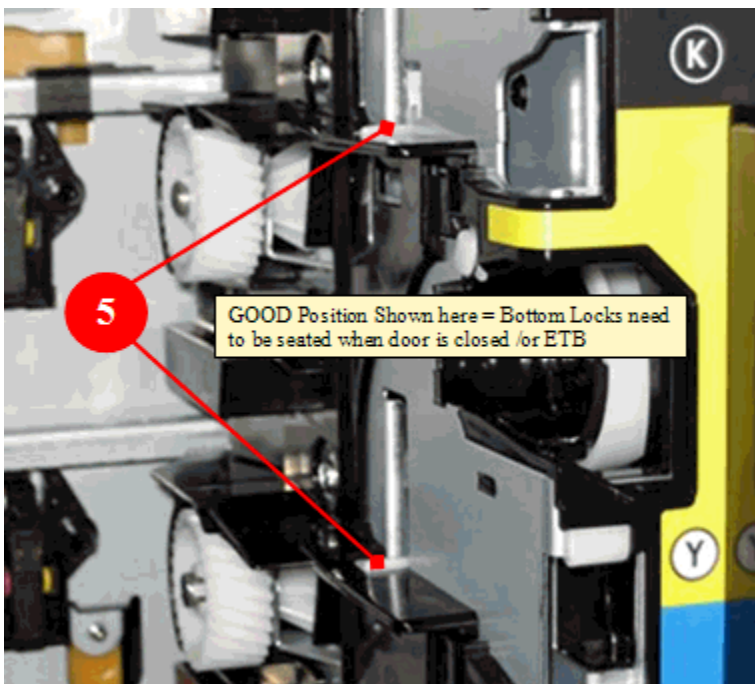


Figure 3: Troubleshooting gear alignment

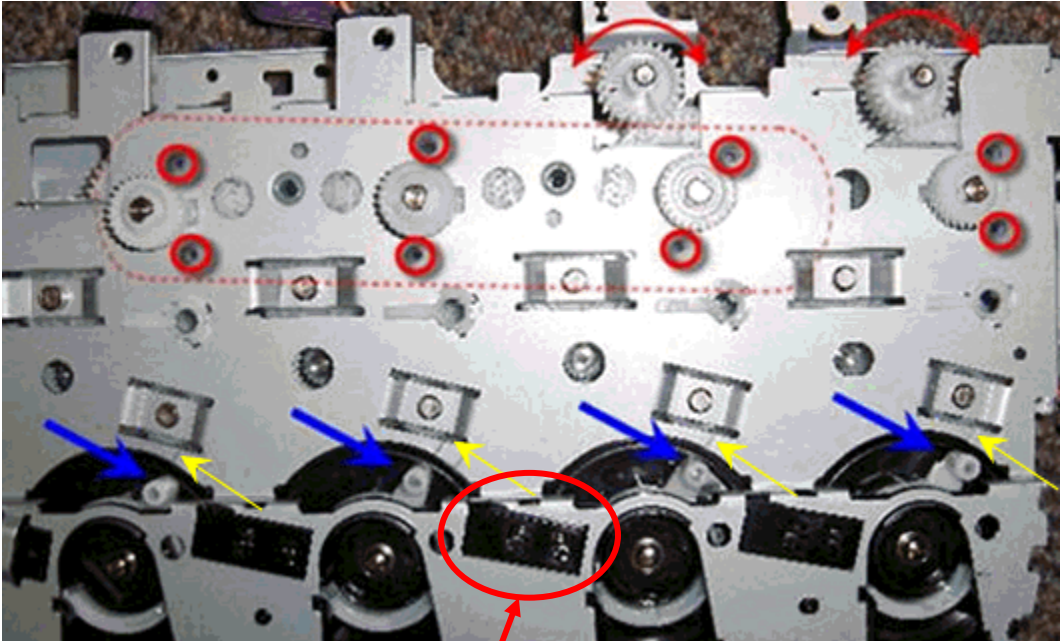


Figure 4: Troubleshooting cartridge / drum sensor





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