

Minolta Tech Tips

General Info.

ALL MODELS WITH SENSOR ARMS

If you're tired of replacing the paper size sensing arms when they blow, there is a simple procedure to negate this function and end your CF problems forever. Disconnect and remove the arm assy from the machine. If you're REALLY sick of CF's, snap it in two with your bare hands! ARGH! The plug to which the arm was connected has 6 wires: Yellow, green, blue1, blue2, blue3, blue4 (in that order) Simply use two staples (or equivalent items) in this plug to short: GREEN-BLUE1- BLUE3 together you could also cut the male plug off the arm and tie those wire together (this will trick the machine into thinking the arm is in the home position at all times and eliminate CF code) Unplug the solenoid. Then, use the User Program mode to set the machine to MANUAL paper select as the default or else it will always think there's an 11x17 original on the glass. All Done!

BROKEN ACTUATORS

Instead of leaving these machines down try using a paper clip to fashion a new arm/lever. The first few times will take a while to do. I kept a machine running for two weeks using this trick until the part arrived. And the customer was happy. It probably would still be working today if I did not replace it with the OEM part.

WHY DO MINOLTA COPIERS ACT SO STRANGE?

Lets take some of the mystery out of these bad boys. One of the major reasons for all the CPU lockups is erratic behavior and strange error codes in the neutral line switching used on almost all Minolta products. All components are energized at all times with a ground applied to turn it on. These machines also have board power at all times, even with power switch off. So what you say? The trouble starts with spikes, line noise, low voltage, and lets not forget lightning (I live in the lightning capitol of the world). When you consider logic levels of 1 to 5 volts are responsible for all operations and CPU decisions, a few stray volts through the neutral line is all it takes to produce a service call. I have also repaired many machines with a DMM connected to neutral and ground at the outlet, finding 2,3,4 or so volts there when there should not be any. Minolta says anything over 5v is a problem but I find the fun starts at about 1.5v or so. Corona blocks are also famous for upsetting CPU's, but don't overlook the customer's outlet.

BLACK BANDS

For black bands running across the copy (front of copier to back) always check the drum ground! Sometimes the problem is internal in the drum itself!

CF Codes

The MAIN reason for CF codes is simply, the user. If the top is left open, the detection arm solenoid stays energized and overheats. This causes 90% of CF codes.

CS PRO'S WON'T MAINTAIN TONER RATIO?

Seen this on mainly CS Pro machines but could happen on any. The ATDC wiper becomes worn as well as the ATDC sensor itself. Use scotch tape to reinforce the mylar until you can replace the agitating shaft and ATDC sensor.

Sorter

SORTER FOR CS PRO SERIES MACHINES BLOWN FUSE ON PWB-A

This occurs more then I care to admit. Staples are removed above the sorter and they drop down through the sensor holes onto PWB-C. To get to this board the easy way. Remove the right hand panel (one towards the copier) and hole punch catcher if applicable. Once removed a long Philips can be used to remove the board and holder together. If you just replace the fuse you will eventually blow PWB-A. To prevent staple from getting in there use some foam rubber to build up the sides around the holes.

20-Bin sorter on CS-Pro series (General)

For good general operation make sure the sorter is properly aligned using the sorter plate and the height adjusters. This will also help prevent the actuator pin from premature breakage.

Duplexer's

AD1/AD2

Strange electrical problems, such as malfunctioning sensors or unusual behavior may be caused because the "end-stop" motor (the motor in the lower section of the duplex holding tray) may be faulty. If you smell a burnt electrical smell (I'm sure we all know the smell) around the AD-1 PCB, it may be already too late to prevent the harm caused by this motor. Remove the top section of the AD-1 and stick your nose near the motor in the bottom section, if it smells funny, replace it. If your duplexer still doesn't work, try another PCB. DO NOT try another PCB before replacing the motor as you may fry the new PCB. Take it from me, I cooked 3 AD-1 PCB's before I zeroed in on the Hoseden motor (big surprise eh?) which was the cause. Fortunately scrap AD-1's are somewhat plentiful.

Problem: CD codes after replacing door hinges

Solution: AD1 and AD2 hinges are NOT interchangeable. If you install AD2 hinges on AD1 you must also replace the door with an AD2 door. Part # for AD2 hinge 1249-4305-12 Part # for AD2 door 1249-4419-25

Problem: Jams at the roller just before entering copier from the duplexer.

Solution: Replace the flip up door. AD2 part # 1281-3401-01 AD1 part # 1249-4413-04

AD-3/AD-5

JAMS

Problem: Jams at feed/separator roller

Cause: Too much pressure on the feed and sep. rollers.

Solution: Put some folded paper between the bolt and tab on the exit ramp of the duplex unit.

Problem: Jams at feed/separator roller

Cause: Incorrect Sep roller. Possible that a 3050/4050 sep. roller was installed by mistake. The roller itself is the same but the clutch spring is wrapped the opposite direction.

Solution: Correct part# is 4425-0151-01

Problem: Intermittent jamming while feeding into duplex unit.

Cause: Pinch rollers on left side lose tension.

Solution: Bend the pinch roller holders closer to the copier. This prevents the paper from dropping down and interfering with the timing.

Problem: Intermittent jamming feeding into duplex unit.

Cause: Missing holder in duplex unit. Part# 4425-3997-02 stopper. This part occasionally falls out during replacement of the duplex mylar. Located just in front of the mylar hold down.

Solution: Folded paper makes a good fix until part can be replaced. Just make sure the actuator stills moves but does not slide.

Problem: Jamming into duplex unit

Cause: Mylar's bent down from paper being pulled backward.

Solution: Remove mylar's

DOC FEEDERS

AFR-1

INTERMITTANT JAMS

Make sure that the paper sensors are adjusted properly. BUT, the sensor adjustment procedure in the Minolta Tech Manuals is misleading. The manuals tell you to put paper under the sensors and adjust for the HIGH (4 VDC). If you do it that way, you will get all kinds of problems because the LOW (Under 1.0 VDC) is too far off. Try adjusting them this way: DO NOT put anything under the sensor, adjust the POT for the LOW. Put your meter on the test points and set the voltage for about .85 VDC. This has worked every time for me.

INTERMITTANT JAMS

The document feed belts on the CS Pro machines and most of the others clean up very easily with just plain 409 and a Scotch Brite pad. This along with Rain-X on the glass will help the paper move easily.

ORIGINALS STICKING TO ORIGINAL GLASS

Use Rain-X

Problem: Paper only exits halfway causing random jams.

Solution: Clean both one-way bearings and shafts on left rear drive section near drive motor.

SKEWED FEED

Clean the primary & secondary feed tire shafts and the one-way bearings inside the feed rollers. If this doesn't cure, replace the secondary and then the primary feed rollers (not just the rubber skins). The new style feed tires have a blue clutch insert which faces the rear of the machine. Old style has a white clutch that faces the front. Also the feed-in clutch goes bad on these.

EXIT JAMS

Paper is not exiting completely. When cleaning or replacing one-way pulley doesn't cure totally, replace the shaft too.

EXIT ROLLER

The exit roller on the AF1, part number 1266-1701-02 has to be replaced every time the little orange "O" rings break because Minolta will not sell the little orange "O" rings separately. Well, I've found a source for the "O" ring so you won't have to charge the customer so much for such a simple thing. Just go to your nearest HOME DEPOT, or any other plumbing supply source and pick up the NUMBER 11 "O" ring. They only cost 24 cents each. They are black, not orange, so you should replace both of them while you are at it, but they are a perfect fit work like a charm. **Try a 13 or 14.**

DOCUMENT RECOGNITION

Symptom: Will not recognize original after feeder has been used. If machine is turned off and back on you will get an open feeder if paper is left in original guide.

Cause: Size reset switch on copier not being energized by magnet on feed unit.

Solution: Shim magnet on doc feeder so magnet protrudes below the edge of the holder.

AFR-3

SKEWED FEED

Replace feed and separator rollers. 1279-3503-01 Sep. Roller, 1280-3501-01 Feed Roller.

AF-3

Problem: Misfeeding at T/U

Cause: Not enough pressure at the T/U roller.

Solution: Remove DF belt & T/U assy. from the feeder frame. There is a metal strip above the roller. Bend this down towards the roller and you will have very few problems with misfeeds here again.

Problem: Misfeeding at exit. Paper not moving after it stops ½ way out when the feeder puts two 8½ X 11 sheets on the glass at the same time.

Cause: Some laser printers leave an oil on the paper that contaminates the exit rollers and causes them to slip.

Solution: Under user choice turn mixed original detect "on." This will only feed one sheet at a time onto the glass. Then it will feed the original all the way out in one shot. The copier will still copy at the proper speed but it will seem slower.

Problem: Lead edge varies from copy to copy

Cause: One way gear on registration roller dirty.

Solution: Remove and clean gear then scour shaft with file before reassy.

AFR-7/AFR-9

Problem: Severe jamming @ feed tire and separator pad area

Solution: The rubber is installed backwards on the feed roller hub. The saw tooth tread repels the paper and also prematurely wears out the separator pads, not to mention customer complaints about that squealing noise.

Problem: Intermittent jamming at take up.

Solution: Replace Lever kit for exit ramp. Part #4408-0901-01

AF-5 & AFR-12

Problem: Double feeds

The problem is the material used on the separator pads. Remove the gray material and get yourself some AFR7/9 pads part # 4408-0751-01. Remove the material from these. You will have to trim just a hair off the edges. Cement them to the AF5-AFR12 pads.

AFR 1000

Problem: Skewing

Solution: Replace the double feed prevention plate with part Number: 4475-3315-03

AFR-1000/AFR-13

Problem: AFR has no power/inop

Reason: IC12A in AFR has shorted causing fuse on PWB-C in copier to blow.

Solution: Replace PWB-A in AFR and fuse on PWB-C, 250v 3A, in copier.

AFR-13 4475-0102-01

AFR-1000 4485-0104-01

Problem: Intermittent misfeeding or copier appears to stop copying with paper still in the feeder. Sometimes it will register a jam other times it will not.

Reason: Lead edge registration sensor or the black patch is dirty or reg. Rollers are dirty.

Solution: Using canned air or a straw blow out the sensors and clean the reg roller with favorite cleaner.

Copier's

General Info

CF10(AE board): on the CS Pro's among other's is usually caused by the user leaving the ADF opened allowing light to enter the sensor, especially if the copier is in line with an open window.

Exposure Settings

On all machines make sure that the optics are clean and that the charge and transfer corona's are clean or new. Then adjust Manual exposure first. Then adjust the Auto Exposure. The reason is that the "Auto Exposure" uses the "Manual Exposure" setting as a reference to start with.

Cleaning Optics

After using your favorite glass cleaner with "*white paper towels*" not "*blue*" if you have streaks on the glass try using rubbing alcohol with "*white paper towels*".

Cleaning the rollers on left vertical transport CS/PRO

Put the copier into duplex mode ie.2/2, open the left vertical transport doors, then open and close exit door and proceed to clean with favorite roller cleaner. Open and close exit door as needed to finish rollers.

Open closure with nothing open on CS Pro machines

Check the waste toner box in paper feed cabinet. Paper gets pushed behind drawer a deactivates sensor. Sometimes box just gets moved away from sensor. Pull the metal actuator slightly towards box so box hits it sooner.

Density not being maintained

Even after an F8 is ran successfully after several hundred copies density drops off. The scraper over the ATDC sensor may be worn. Can be temporally fixed with scotch tape. This will cause the sensor to be cleaned off on every revolution.

CS Pro 1030

Problem: Machine dead. Main fuse in the power supply is blown.

Cause: Upper fuser roller does not have a heat lamp.

Inside the aluminum UFR is an insulative mylar, a conductive coating is applied over this and brass end caps are wedged on. Current flows through the caps across the conductive coating and heats the roller, with the mylar insulating it from the roller. This also has bushings with a graphite core, as the graphite wears and the powder coats the side of the bushing, the current will suddenly arc through the mylar, to the aluminum roller, into the graphite bushing, across the powder residue and to the frame, this becomes the path of less resistance. This also could potentially mean that some ufr's out there may be working fine but already have the potential of 120 VAC across the surface of the upper fuser roller.

Solution: Replace UFR and main fuse (250V 15Amp).

Problem: Main switch does not stay in the on position.

Solution: Replace the HV unit.

1080/1081/1083/2010

Exposure Setting: Use "F3" under tech rep mode to adjust the manual exposure, then use "F5" to adjust auto exposure.

INTERMITTENT BLANK COPIES

The 1080 will sometimes make blank copies, check the connecting springs for the main charger. They will move out of position and cause a poor connection. Also try fresh paper. If there is too much moisture in the paper it can cause the HV to temp short to ground.

BLANK COPIES

Replace the Transfer assy. blocks.

Front: 1139-4051-01

Rear: 1139-4052-01

Problem: Light copies and toner bottle is turning.

Solution: Remove the "flap" inside the hopper assy. NOTE: there is a flap for toner only. The flap gets stuck and will not open to let the toner flow into the DV unit. The larger hole that has no flap over it is for starter.

2050

White streaks

Problem: Void areas in the developer/mag. Roller area.

Reason: Bucket roller moves towards the rear of copier/developer and rubs against the developer.

Solution: Minolta's fix, New shaft 1136-5011-03 and New bucket roller 1044-4604-02. Temp fix, move shaft forward and put something between dev. Body and plastic clip. This sometimes fixes problem as long as the bucket roller can no longer move towards the rear.

Problem: Paper not feeding out of tray.

Reason: Toner in release solenoid for feed rollers

Solution: Remove the feed section and vacuum up toner. Check bushings on dev. And replace appropriate bushing(s).

Problem: Paper not feeding out of tray.

Reason: Solenoid for feed clutch unplugged.

Solution: Remove feed section, reroute plug to other side of connector.

2080

Just a simple DON'T tip

Do not replace the lower cleaning rod with a 1080 cleaning roller. The 2080 has an upper cleaning roller, unlike the 1080/81/83/2010, adding the cleaning roller to the lower roller, even though it fits, will put too much oil on the fuser roller and cause intermittent skewing in the fusing unit.

3050/4050

Noise from fuser

Problem: Bushing on fuser feed shaft worn.

Solution: Replace with 1079-5530-01

Problem: Plastic fuser drive gear worn.

Reason: The metal driven gear wears in the center and oscillates causing the plastic gear to get chewed up.

Solution: Replace both as a set. Metal gear 1134-5774-02 Plastic gear 1136-2517-01

Problem: Gear on UFR wobbles.

Reason: Heat and pressure cause the screws to loosen and hollows out the gear.

Solution: Replace gear, screws and UFR if needed. Gear 1136-5773-02, Screw 1136-5785-02, UFR 1076-5802-01
Katun# 35636869

2050/3050/4050

Problem: Heat from fuser unit turning panels yellow, drying out oil rollers and destroying upper fuser rollers. This is caused by poor ventilation in the fuser area. The fuser fan stays on low and I mean LOW speed until the print key is pressed.

Solution: Go to PWB-A, connector PJ19, pin 4. This is a 4 pin connector. The mark is numbered right to left clip the blue 5VDC wire at PJ19 pin 4. This will keep the fuser exhaust fan on high all the time, as long as the machine is on. BE WARNED, with the fan on all of the time, the ozone filter will get clogged with dust; check it every service call, it's cheaper than an upper roller. Personally, I throw the filters in the trash if the machine is in a well-ventilated area.

Problem: Very light copies and premature drum failure.

History: CS PRO 30/40's have a process called image stabilization. The CPU considers the number of copies on the drum in relation with lamp voltage. Executing F5's on these machines is VERY IMPORTANT. There is a lot more to it than that but I'll keep it brief. After replacing the drum you must go the PORT OPTIONS screen in service mode. Cue the last page and select DRUM COUNT. You must clear this counter and press the EXIT key to exit out of port options. Failure to exit correctly will reactivate your previous drum count. After that select TECH REP MODE and run an F5. Exit tech rep mode and go to LEVEL HISTORY. You will see two Vg levels, these are you initial(after new drum or memory clear) and current drum voltages. CS PRO's should never have a initial Vg above 550. Minolta came out with a bulletin telling us to reset drum counters and run F5's to boost poor copy quality. THIS IS A BOGUS CLAIM!!! Doing this will cause Vg's to jump to 610, 670, 720 and as high as 760. This will cook a new drum, especially Katun drums. If your unit cannot achieve an initial of 550 go to ROM VERSION in service mode. Check the MASTER. It should be a level 21 EPROM that reads like this: MASTER: 1134-50G0-21-0. Most older units are level 8 or 18. EPROM 21 keeps the initial Vg level at 550 when added after a new drum and starter and clearing drum and starter counters in port options menu. The current Vg will increase with drum age. Image stabilization will calibrate the rest. If you need this EPROM the Minolta number is:

3050 1135-01 KIT

4050 1134-01 KIT

The kit contains 1 PWB-A, 2 PWB-B, 1 AFR9 and 1 Sorter EPROM's

CO200

Here are the part numbers for the fixed corona E-PROMS. They should also include the new fixed corona hardware. part #

3050 1135-0099-01

4050 1134-0099-01

Problem: Noise in the fuser section

Cause: Bushing in center of gear worn out then it wears out the nylon drive gear.

Solution: Replace both parts as a pair and use TEFLON GREASE (Radio Shack's high temp. works great).

Part #'s 1136-2517-01 & 1134-5774-02

Problem: After a PM copies go light in about 2k.

Solution: Do NOT run an FF, an F8 MUST be run THEN perform manual adjustment and then F5.

Problem: Dog-earing into duplex unit

Solution: Remove duplex drawer and open left side door. Look into the duplex cavity. On the left side of the duplex entrance plate there are 5 small mylars. If they are not straight but rather pointed down, the paper will be deflected straight down into the duplex tray and dog-ear. These mylars get bent from users pulling the duplex drawer out during jam removal and ripping a partially lodged copy.

INTERMITTANT "OUT OF PAPER" LIGHT

Paper empty sensor prone to collect paper dust. Clean sensor with canned air or blower brush.

STOPS DURING MULTICOPY

During multicopy machine will count down ok but stops after every copy cycle. User must push print button every time to get all of copies. Replace ATDC sensor. Sensor checks for correct toner mix after every cycle. If sensor becomes flaky it will cause the machine to stop after every copy cycle.

The control panel LEDs are out.

There are two rows of black boxes in the LCD display. The copier appears to be ready to copy - heat lamp cycles and all, however the print key, as well as the other keys, are dead. Replace the PWB-B this corrects the problem.

4000/5000

Duplexing

Problem: After first side is done and first copy of second side goes back towards duplexer instead of sorter.

Cause: Diverter plate is light on the right side.

Solution: Adjust solenoid so that the diverter plate is not opened as far yet still allows paper to go towards duplexer.

6000/5050

Problem: CO200

Solution: Add additional drum ground* The part # is: 1075-5521-01.

Problem: Fuser noise, with no severe jamming, intermittent jamming, or copy quality problems.

Solution: Replace the twin metal gears on the fuser drive motor frame. Located between M6, fuser drive motor and actual fuser unit. Part # 1075-2574-02

Problem: Blank or blinking control panel

Solution: There are two PCB's under the panel, each has a couple of small round metal spots that are not linked to the circuit track, scratch off the clear coating and solder ground wires to one of the metal spots on each PCB and ground them to the frame, also ground the frame of the LCD. The panel has a floating ground and freaks-out when there is a high static build up.

Problem: C0210

Cause: Bad transfer assy. Blocks

Solution: Replace the transfer blocks Part# 1075-4151-04 Front & 1075-4152-03 Rear

Problem: Jamming at duplex vertical transport rollers.

Cause: Dirty one-way gears in back of copier.

Part # 1075-2671-01 Gear 27T and 1075-2595-01 Gear 35T

Solution: Clean with belt clnr and syringe or remove to cln (45 min-1hr) or replace. Happens around 1,000,000 copies.

Problem: Jamming at top of vertical transport assy.

Cause: Sensor is bouncing

Solution: Remove sync. Roller assy. And put an extra wrap on the spring of sensor. Not sync sensor but the one before it.

Problem: C0000

Reason: Plastic gears on fuser that has spring on them have separated causing too much pressure for motor to turn.

Solution: Replace gears with the following, 1075-5855-12 & 1075-5766-12.

Problem: Intermittant jamming at the duplex diverter plate.

Reason: The paper guide develops small cracks.

Solution: Replace and adjust so that the guide does not hit the metal guide.

EP 2120/2150/51

NOISE

If you have a noisy image unit in one of these models you can repair it by cleaning and lubing the toner add clutch with moly grease. This can be check by removing the toner hopper and actuating the toner add solenoid the noise should stop.

EP2120/2121 & EP2150/2151

IU reset procedure

- 1) Remove toner bottle from machine.
- 2) Turn OFF machine then: On the 2120/2121 jumper pins 4 and 6 on PJ3A on the A board at the back of the machine. On the 2150/2151 jumper pins 3 and 8 on PJ3A on the A board at the back of the machine.
- 3) (a) Turn the machine ON when warm-up is complete Initialization (F8) will start. (b) After the auto (F8) has started then immediately remove the jumper from PJ3A
- 4) AFTER the completion of (F8) reinstall the toner bottle

EP2130/2130PRO

IU reset procedure

- 1) Remove toner bottle from machine.
- 2) Turn OFF machine then jumper pins 3 and 5 on PJ3A on the Aboard at the back of the machine with a 1/16 amp picofuse. (You may want to bend the ends of the wires on the fuse to help it stay put)
NOTE DO NOT USE ANYTHING OTHER THAN A 1/16 AMP PICO FUSE TO DO THIS. (KATUN PART # 010515)
- 3) Open the Copier Clamshell upwards, Then cheat the front door interlock switch. Replace the Image Unit and pull it out about 2 inches.
- 4) (a) With the clamshell still open turn the machine ON when warm-up is complete Initialization will start. (b) After the auto initialization has started WAIT until the SECOND ZERO has flashed on the display. Then immediately insert the image unit the rest of the way into the machine. While the machine is still cycling close the clamshell.
- 5) Only AFTER the completion of the initialization remove the fuse if it was successful the fuse will be open. If the fuse has not opened repeat the above procedure.

EP 2151

BLANK COPIES

CHECK HIGH VOLTAGE BLOCK ON INSIDE TOP FRAME THIS CONNECTS WITH IMAGING UNIT WHEN SLID IN MACHINE THIS PART CRACKS AND HV ARCS AND BURNS HOLE IN PLASTIC SHORTING OUT HIGH VOLTAGE NEW PART IS CREAM COLOR INSTEAD OF CHARCOAL MINOLTA PART # 1067-4021-01

EP 3170/4210

TRAIL EDGE DELETIONS

Problem: One-inch wide blank area on the trailing edge. Explanation: Loop of paper (between registration the roller, driven by registration clutch (CL2) and transport roller, driven by transport clutch (CL3)) is too big, because of the condition of these clutches. This will cause transport roller sensor PC1 to become de-actuated, which respectively should de-energize source of the charge. This problem will also occur when paper is fed through manual feed or optional universal cassette (which does not involve take-up mechanism driven by take-up clutch (CL1)). Solution: 1) Quick-fix. Spray CL2 and CL3 with Tri-flow or any other light spray lubricant without disassembling. 2) Service clutches properly. 3) Replace clutches.

HIGH VOLTAGE PROBLEMS

When troubleshooting HV problems on 3170 Minolta Ground HV on signal. This will turn HV on and you can meter or observe the coronas. Remove Drum Carriage unit and replace charge corona, stick an ink pen in the interlock, and you'll be able to see all working.

BLANK COPIES

If you have run across a Minolta 3170 Making Blank Copies / No error code short the HV ON lead on the HV board to ground to troubleshoot. In a good working copier the coronas will glow and you will hear the HV units High pitch Squeal. In a bad copier, you will hear the HV energize and de-energize. Be careful not to become one with the ground yourself (could be painful) Most times the corona blocks are bad (leaking voltage to frame)

Problem: Blank copies

Solution: The main charge rear block will arch internally and not give common signs of arching. Replace block.

Problem: Blank Copies

Reason: Dev clutch was reinstalled without the space to keep the gear on the clutch meshed with the developer.

Solution: Flip the bushing over but do not over tighten.

C-9 CODES

There is a small plate on the rear of the paper draw that activates the gear system and paper lift motor. This contact point is of poor design. To fix it you need to raise the height of the actuator and thus make a better contact. Also check the worm gear on the paper lift motor. Can be glued back into place.

COPY QUALITY

PROBLEM: Distortion of image about three inches from top of page.

SOLUTION: Check gear on registration clutch (very carefully) for a crack. 9322-1011-01

EP-4230/4233

DEVELOPER CLUTCHES

The Minolta 4230 uses 3 developer clutches. All are exactly the same if the clutch for the black dev unit goes bad or is making a lot of noise you can use one of the color clutches. They are a pain to get to, but most machines never had color units installed and so they are like brand new. Also if you fail to put the black dev clutch back in place of the color one don't worry, the machine doesn't care if it is there or not.

COPY QUALITY

PROBLEM: Distortion of image about three inches from top of page. Usually on 8 1/2 x 14.

SOLUTION: Check gear on registration clutch (very carefully) for a crack. 9322-1822-12

POWER LOSS

A very unusual problem -- can be caused by spring plate above RY-1 vibration causes it to drop down and hold the plunger in the de-actuated position. Therefore RY-1 cannot energize!

SCANNER CRASH

With age the APS arm (under the glass) sags downward. At a certain stage it will interfere with the scanner carriage movement and cause a violent crash. Damage to the scanner cable may result. The APS arm has a hex-key adjustment at the top near the pivot point. Later model machines have a hole drilled in the top cover to allow easy access. It is worth checking every now and then. You can check the height of the APS arm quite easily every time you take the glass off. If it feels loose and sloppy, take the top cover off and tighten the screw. To save time

JAMMING

If all the usual stuff doesn't work and you still have a pre-registration jamming problem, check that the upper guide just before the reg. roller isn't pinching the paper. Try prying it upward with a screwdriver to enlarge the space underneath so the paper can pass through to the reg. roller freely.

SKIPS AND NOISE

The gear and the reg. roller clutch frequently cracks and spreads apart causing skips, jams and clicking sounds. Replace the entire clutch. 9322-1822-12

ADF BELT

If the ADF belt sticks to the drive rollers and won't turn, remove old rubber from roller and replace it with feed roll tape this cured the problem without replacing the rollers. Feed roll tape can be ordered from Sel Drum or Alternative Technical Services.

Problem: Black line on lead edge.

Solution: Remove the black foam sponge from under the scale plate.

DV DISPENSING TONER

I've done this twice now. If you have to clean any part of the drum unit/DV unit, be very careful. DO NOT vacuum, and DO NOT blow it out with canned air. The ATDC sensor is so fragile that the static electricity caused by these two practices will blow it up. As a result, no toner gets to the DV unit and the copies get lighter and lighter. OR... the thing gets stuck in the OPEN position and the DV unit gets toner at a constant rate. Over toned copies and toner dumping will result.

POWER LOSS

Symptom: When the ON-OFF switch is toggled up to turn on the copier, a "holding path" is engaged through a small circuit board of the switch is soldered to. This holding path does not hold and the power relay will engage when you press the switch, but will drop out (dropping power to the copier) when you let go. Also, with the door open, the machine is powered up normally (for a door open condition) with the control panel lit. But when the door is closed (or interlock cheated) the power relay drops out, dropping power to the copier.

Problem: Ask yourself if you just changed the developer. If so, did you disconnect the ATDC sensors like you should so that you don't pop the sensor as the unit is vacuumed out? If so, you may have reconnected the two little plugs under the toner bottle backwards! (it's easy to do since both plugs are two pin plugs and the wires are totally black from baked

on toner). If this happened, then you probably took out the Paper lift motor driver board. Logical isn't it? That's the board right down under where the key counter goes. The holding path for the power relay goes through that board. Also, there is a mod on that switch and the tiny little relay on the circuit board that the switch is soldered to has been upgraded.

INTERMITTENT LOCK-UP AND C-2 CODES

Cause: Hairs from the static brush on the fuser or duplexer get into the transfer/seperator coronas. These fine hairs will continue to fall if the anti static brushes are not replaced causing chronic problems. You should blow out the machine with compressed air, I have found to be the only way to clear the machine of all the hairs.

GRINDING NOISE

The little white spacers on both ends of the mag roller wear out. The mag roller has springs on it (as anyone knows who has had to use a jig to adjust the doctor blade gap) and when these spacers wear out, the mag roller is pushed TOO CLOSE to the drum. This causes binding which wears out the drive gears on the DV unit and the DV unit drive clutch. Two clues: If the drum has rubbed or worn spots on it and if the white spacers have left black streaks on the drum where they ride on it, then the spacers are bad. Look at the spacers, if they have black worn edges, they have to go. These things are a real pain to change on this model, and they are constantly wearing out, but a quick fix is to pull out the drum and lessen the doctor blade gap, at least this will get you running until the spacers can be replaced.

EP-4300/4320/5320/5400/5420

ERRATIC CONTROL PANEL BEHAVIOR

If you're getting crazy control panel problems, even when the machine is sitting idle, remove the control panel and look on the center PCB. You'll find a socket type EPROM, remove this and spray the terminals with contact cleaner and reinsert. Also clean the connectors. We've encountered this problem twice in 1 week (on a 4301 and 4300) and cleaning these things cured the problem instantly on both machines.

CLUTCH PROBLEMS

If the toner collecting box overflows, toner falls onto the chain, which then drops toner onto clutches throughout the machine. This causes slipping problems.
Clean clutches and drive chain after replacing box.

C-6 CODES

Try blowing off the original size sensors on the sensor arm and the mirrors underneath the top.

COPY QUALITY

The trailing edge end of the copies are wavy. This symptom is most prevalent on the longer papers, i.e. 11 X 17 and legal size, but also on the 8 1/2 X 11R. (The paper itself is wavy-not the copy.) The problem is the exit roller. The little angle shaped tires wear out and they hold up the paper just long enough to let the heat rollers make waves in the paper. Change those exit rollers when this happens. The part number is 1077-0152-01.

CONTROL PANEL BUTTONS/SCREWS

The screws attaching the control panel circuit board (small one w/print button on it) to the panel housing seem to back their way out over time causing the print button & number keys to feel "mushy". Not a big deal. However, in one instance, a screw fell out & lodged itself between the frame and "N.C." terminal of the front cover interlock switch. Result: Machine went haywire any time front cover was closed. Note that there is also a board under the control panel where these screws might fall.

NOISE

A grinding noise on the Minolta 4233 can be attributed to the developer clutch and developer unit. The gears on the developer clutches will be stripped and the developer will be hard to turn. The mag roller will be bound up by the bearing on the rear side by toner/dev. clean and/or replace as needed. Also if not equipped with color dev. units, you may use the gear off the color clutch to get you by until you can get the gear ordered.

EP-5320/5420

If you have to service one of these that you've not worked on before and you have a copy quality problem, namely a slightly blurry copy caused by the optics. Check that the scanner is riding on all 4 of it's nylon feet. You can check this by looking at the scanner through the left side of the machine. The problem here is when the scanner is removed (for replacing exp. lamp) and reinstalled, it is very tricky getting it attached to properly. The screw will go in even if it's not aligned correctly and the scanner will sit cockeyed and rub.

NOISE

If you get noise from the duplexer check the actuator on the stopper solenoid. Some times these come loose and need to be resealed.

Problem: Web won't advance but motor is turning.

Solution: The web motor advances the take-up roller and the orange conveyance roller. Symptom might also include web spewing from fusing unit. Replace the torque limiter, also add a 0.05mm shim under all four screw holes that attach the web box to the fusing unit.

EP-5400

COPY QUALITY

White bands across copies or completely faint image Accompanied by possible C2 code

Cause: Corroded or loose spring contacts mounted in transfer/seperator rear block.

Reason: With age these springs and contacts oxidize.

Solution: Install new springs and clean contacts. Also you may need to replace the end block itself Minolta part # 1052-4501-05

PAPER FEED

A large buckle is formed on the trailing edge of legal paper.

Cause: There is toner in the teeth of the pulley sprocket on the main motor shaft .

Reason: The toner box has overflowed or the cleaning unit valve to the collector bob is broken. The timing belt carries the toner to the pulley The toner in the teeth of the pulley cause it to act as if it where larger causing the sync clutch to speed up.

Solution: Clean the toner out of sprocket teeth.

Maintenance Tip: When there has been a toner spill of any kind you should always check the drive belts and pulleys for toner accumulation.

Web failure or web motor lockup

Dirty or failing thermistor causes excessive heat, causing the web motor to lock and/or drying the web out.

FAILED LIFTING STRUTS

Did ya ever notice how EP-5400's and 4300's never have problems with their lift struts, yet the newer machines like 5420 will always go bad? Sure, they put that nice catch there to hold the machine up but what's the deal? Well, the 5400 struts are cheaper than 5420 struts, and they last forever! I even robbed some used struts off an EP-4300 and put them on a 5420 and they're still holding the clamshell open just fine over a year later. See, 4300's are good for *something!* :) The part # for the 5400 strut is 1053-3310-01

EP-8600/01/02/03

COPY QUALITY

When changing the anti-spill plate on the cleaning unit, Make sure you put the screws back in the proper places if not in the proper place they may cause the drum blade to chatter on the drum causing copy quality problems(such as lines on the drum)

CORONA CLEANER PROBLEMS

If you have problems with the corona cleaner getting stuck, just take out the charge corona, manually move the cleaner to its home position (at one end), replace the corona and leave the motor unplugged. You don't need it anyway.

INTERMITTENT LINES

If you encounter black lines that go away by cleaning the drum blade but end up coming back after a couple thousand copies - Try cleaning and lubing the drum blade shifting gears.

CONSISTANT C0040

When consistent C 0040 codes appear on an EP 8603, and all normal fault finding has been done, the cause can be attributed to excessive noise. Try replacing the front interlock switches. Arcing in these switches can cause numerous problems.

Digital Machines

DI250/350

Turning off the I.U. shutoff counter

First make sure that you have the updated PWB-M. The new one will be ver. 13 or higher. (i.e. 1171-10G2-13-02) This can be found under "ROM Version" of the "Tech Rep" mode. To activate you must first enter "Utility" "Meter Count" "Stop-0-0-stop-2" then "Maintenance Mode" which will be in the bottom right of the LCD. Then touch "Soft Switch Setting" then "Soft Switch" enter "418" then "1", this will change bit "7" from a "0" to a "1", then "Enter" to set the setting. Press "Panel Reset" to get back to main screen and turn the machine off then back on to remove the "Maintenance Mode" button. The machines made after September 2000 are supposed to already have the updated PWB-M installed, you just have to turn the "Auto Shut-off" off. **This only works on the 250/350 not the FAX versions.** Ver. 13 1171-0133-02

LCD does not stay adjusted or is hard to adjust

Symptom: Customer has a difficult time choosing options on the LCD and on some occasions may break the LCD because of pressing too hard.

Reason: Some of the LCD's have a sensitivity problem.

The fix: First try adjusting the panel in the "Maintenance Mode", as stated in the above tip. This may need to be done a couple of times before everything works right. Sometimes this is all that is needed. If it continues to be a problem upgrade the PWB-M to Version 13 or higher. 1171-0133-02

Odd size originals not copying properly

Symptom: Customer puts a sheet in the feeder that is larger than statement but smaller than Ltr, and cuts a portion off.

Temp. fix: Feed letter size paper on top with "Mixed Originals" turned off with the odd paper underneath. The draw back is extra clicks.

The fix: Upgrade to ver 13 PWB-M. 1171-0133-02

Not choosing proper paper drawer

Symptom: This usually occurs on demo machines that had three or more paper sources and one of them was removed. Chances are that drawer that is no longer there was the priority drawer.

Reason: The machine does not know what the paper priority is anymore because the drawer that it is being told is no longer there.

The fix: Reset the paper priority in user settings

How to make the toner last longer

Quick history: Each bottle is rated by Minolta for about 11,000 copies. The field average is about 8-10,000 copies. For the most part the machines that these have replaced go about 24,000 copies per bottle. This translates to 2-2 ½ bottles per what they are used to.

The fix: In the "Tech. Rep" mode there is an "ATDC Gain" setting. This can be lowered a little at a time to reduce the amount of toner being put into the hopper and yet still show 13% T/C ratio. Taking this setting down to 140 a few steps at a time will not hurt the machine. If it is dropped to fast the copier will code (COF32). Raise the gain back up and make a few more copies before lowering it again. You can do partial sky shots to get the toner out faster or just drop the gain a few points on each service call.

Black lines in the feed direction when equipped with AF6/7

Symptom: You have black lines in the feed direction when using the feeder but not off the glass.

Reason: The small scanner glass on the left has a small speck in the wrong/right place to cause the line. Since the paper moves and not the scanner that is all that is needed.

The fix: If the spot is not readily seen remove the glass and hold it up to the light and it should become visible. If glass cleaner does not remove the spot try WD-40.

Feed Problems from LCT

Symptoms: Feeds fine from top two trays but jams in vertical transport when feeding from the LCT.

Reason: The top two doors on the right side are not staying closed properly.

The cure: Make sure the top two doors on the right hand side are fully closed. Sometimes swapping the top two doors will cure the problem.

Symptoms: Will not pull paper out of LCT or pulls crooked.

Reason: The right rear of the main lift tray is sitting lower than the rest of the tray.

The cure: Remove the tray from the machine. Both side covers have to be removed and stopper bolts loosened for tray to come out fully. With out removing the belt from the gear assy. remove the assy. from the shafts. Then remove the gear on the feed side of the tray and allow the tray to level itself. Reinstall in reverse order.

Consistent skewing/jamming from second tray

Symptoms: The paper consistently feeds crooked and unusually high jam count from second tray when paper is set lengthwise.

Reason: The screws that hold the paper guides in place get tight before the guides are held in place. This allows the guides to separate and allow the corners to come out at different rates.

The fix: Make sure the guides are in the proper holes and alignment and fully tighten the screws.

Jamming from second tray after adjusting paper size

Reason: The rollers are not in the right position to pick up the paper.

The fix: Adjust the rollers to the proper settings.

Symptom: Does not jam when tray is full but jams when tray is near empty.

Reason: The springs that lift the tray are just a fraction too weak to hold a near empty tray against the rollers hard enough to be picked up properly.

The fix: Have the customer keep the tray filled most of the time or install the other set of springs that are underneath. The problem with these springs is they are too strong for a full drawer and will not allow the rollers to turn properly. Go with the best trade off according to the customer's use.

Jamming from manual bypass

Reason: Like the MPC cassette the customer has to tell the copier what size paper is being fed.

The fix: Instruct the customer on the proper use of the singles sheet manual bypass.

Jamming from MPC tray after adding paper

Reason: The operator did not choose the right paper size after closing the drawer or did not push the paper to the right edge guide so the paper is under the roller.

The fix: Instruct operator on the proper use of the MPC cassette.

Symptom: Roller does not pick-up paper but the shaft turns.

Reason: The shaft has developed a varnish and allows the one bearings in the roller to slip on the shaft.

The fix: Remove the roller, clean and scour the shaft (do not gouge the shaft), clean the bearings with alcohol to dissipate oil and reinstall. **Do not remove the weight from the shaft.**

11X17 jamming from second tray

Reason: 11X17 paper weighs twice as much as 8½X11 paper. The springs that are under the tray are not strong enough to lift this paper.

The fix: There is a second set of springs under the tray. They are twice as strong and need to be installed when using 11X17 paper.

Paper jams at exit, usually duplexing: The reason: The paper feeds out of the fuser and may or may not reverse. Sometimes it will reverse normally and then reverse again. This will usually occur on two sided copying but can occur on single sided copying as well.

The reason: When a duplexer is added onto the machine the drive for the exit rollers are driven by M1 of the duplexer instead of the copier.

The fix: Replace M1 of the duplexer and if that does not fix the problem replace the control board on the duplexer.

Vertical transport jams

Symptoms: Jams at or near sync. roller but shows up in the counters as a separator jam.

Reason: If an excess amount of toner is present around the syn. clutch chances are it is dirty.

The fix: Replace the sync clutch and keep this area clean. Instruct operator on correct way to replace toner. Vacuum as needed.

COB0F

Reason: The finisher is not properly lined up with the copier.

The fix: Use stabilizing feet to level and stabilize the copier. Then adjust the finisher so that the actuator pin enters the hole in the finisher without bending. If it gets bent it pushes the finisher away from the copier. The entrance guide to the horizontal transport may need adjusted so that the top of the transport is lined up with the top of the fuser cover. The feet are not an absolute necessity but are very useful on concrete or other hard surfaces where the copier can be moved easily. If the machine is on carpet you may get this after the copier has settled, because the copier is heavier than the finisher, the two components will no longer be lined up.

COF32

Reason: This usually happens on the DI250 but can happen on the DI350. For some reason PWB-A tells the hopper motor to keep adding toner. When it reaches 19% the code comes up. Wrong toner can also cause this to happen.

The fix: Initialize the copier. Then increase the ATDC gain in "Tech Rep" then "Printer" until the copier comes to a "Ready State". Make copies until the ATDC is about 13%. Lower the ATDC Gain again then keep doing this until the ATDC level in "Level History" reads 13% and the gain is set to 151 or slightly lower.

Symptom: C0F32 and the toner add motor is still adding toner.

Reason: PWB-A has the motor in a constant on state.

The fix: Replace PWB-A

C0070

Symptom: Toner bottle does not add toner to sub-hopper or go back to home position after being moved from home position.

Reason: The toner bottle is improperly installed and breaks the plastic worm gear. This in turn allows the motor to free spin and eventually blows a 250V1A fuse on PWB-A.

The fix: Replace the fuse and the gears and instruct the operator on the proper way of installing the bottle. When replacing the gears put a light coat of Teflon grease on the gears to prevent them from screeching.

Heavy back ground/spotted copies

Reason: Wrong toner.

The fix: Replace the image unit, clean the sub hopper and transport tubes, and replace with a known good bottle of toner. Do not just replace the image unit thinking this will take care of it. The toner has to be vacuumed because it will not work its way out.

Black copies

Adjust and clean the image unit ground straps. Reinsert the image unit. If this does not work replace the image unit.

Noise from LCT

Symptoms: Loud rumbling noise during warm-up and while feeding from LCT.

Reason: The nylon gears no longer have any lubrication on the shafts.

The fix: Remove the LCT feed section from the right side of the copier. Don't forget to reach inside and unplug three connectors and remove the harness from the holder. Lube the shafts lightly with oil, and on the frame remove the gear and put a light coating of Teflon grease on the shaft. Put it back together and hope for the best.

AFR-14

Skewed feeding

Reason: The registration roller is popped out of place because of improper removal of jam.

The fix: Close the openings on the springs that hold the bushing in place before reinstalling. Instruct operator on proper removal of jams.

Multi-feeding

Reason: The sep. pads are too slick.

The fix: Replace with pads from an AFR7/9 that have been trimmed to fit. On the AFR-14 holders these will cause a noise. If you use AFR-6 holders the noise will be minimized. Minolta also has pre-cut pads for these holders that do not cause any noise. Sep pad 4490-7801-01 New assy: 4490-0755-01

Symptom: Multifeeding with the newest sep. pad assy.'s not the pad replacement.

Reason: The pads on the new assy. are flat and can on occasion cause multi-feeding or for a portion of the lead edge to round over where the pad and roller are.

The fix: Use the replacement pad (4490-7801-01). The end has to be trimmed about 1mm. Since this pad is rounded it allows more contact with the roller and paper. It does cause a slight noise but it is either that or multi-feeding.

AF-6/7

Black lines in the feed direction

Symptom: You have black lines in the feed direction when using the feeder but not off the glass.

Reason: The small scanner glass on the left has a small speck in the wrong/right place to cause the line. Since the paper moves and not the scanner that is all that is needed.

The fix: If the spot is not readily seen remove the glass and hold it up to the light and it should become visible. If glass cleaner does not remove the spot try WD-40.

Skewed feeding

Reason: Improper size bands on the front side of the feeder.

The fix: Feed all paper length wise to minimize skew.

Erratic operation

Reason: The cable that runs from the feeder, to the copier has a broken wire from the bundle being bent too sharply.

The fix: Naturally replace the cable and or sometimes making sure that it is fitted straight down, will take care of the problem. Also check the connection with in the copier to make sure that it is secure.

Jam that won't clear

Check for packaging tape holding the width sensors in the up position. This is of course under the left hand cover of the take up section. It does not take a whole lot for this to happen.

DI520/620**C0210**

The fix: As with the 5050/6000/6001/8015 replace the transfer assembly holders.
1075-4151-06 (front) 1074-4152-03 (rear)

Black lines in the feed direction

Symptom: You have black lines in the feed direction when using the feeder but not off the glass.

Reason: The small scanner glass on the right has a small speck in the wrong/right place to cause the line. Since the paper moves and not the scanner that is all that is needed.

The fix: If the spot is not readily seen remove the glass and hold it up to the light and it should become visible. If glass cleaner does not remove the spot try WD-40

Symptom: You have black lines in the feed direction when using the feeder or off the glass.

Reason: Check for lint on the exposure lamp.

The fix: If the spot is still visible after cleaning the glass, mirrors, lamp, and lens do a test print in the "Tech. Rep" mode. If line is still visible it is either with-in the print head or the drum or the fuser. If the line is not visible then it is back to the scanner or fiber optic lines.

Exit jams

Symptoms: Jams a lot with paper in the lower exit port but shows the jam as being a separator jam.

Reason: The actuator in the lower port is bouncing. This can easily be traced by running paper from the manual bypass in the "Exclusive Mode". This causes the paper to exit only through the top tray. There are no sensors between the separator sensor and the lower exit sensor.

The fix: Put an extra wrap on the actuator.

Jams in left vertical transport

Symptom: The paper stops at the roller just above the lower exit port.

Reason: The lower portion of this transport gets its drive from the duplex. There is a spring that has a gear on it that is not engaging the gears properly.

The fix: It looks as though it is in the correct position but it should be pulled up one notch.

Jams at the diverter plate

Reason: The diverter plate has small fractures.

The fix: Replace the diverter plate and adjust so that it does not hit the guides when actuated.

Add toner message

Symptom: The add toner message stays on even after making sure the subhopper is full.

The fix: Reseat the connectors on the PWB-O. If this does not work replace it. This is the most probable cause but may not be the absolute problem.

Jamming with heavy stock or OHP

Run the paper through the manual bypass and put the machine into the exclusive mode so that the paper will travel the straightest path through the copier.

Simple exit jam troubleshooting tip

Using the exclusive mode to trouble shoot jamming problems on the left side of the copier can help in isolating the problem. Example: In the exclusive mode all paper fed from the bypass comes out of the top exit port instead of going through the turn over section and out the bottom exit port.

M3

Cleaning web replacement

M4

To save time, and to keep the customer's office clean, carry an empty waste toner bottle. Swap the bottles and empty and clean at your convenience. It is the same as 5050/6000/6001/8015. Make sure the "Set Counter" does not get reset to "0" or the warning will never come up.

M5

Reset the drum three counter only.

M6

Goto "Tech Rep" mode, "I.R. & EDH" then "Function IR" and perform "Lamp Check". Save or end when finished.

EDH-1/3

Multifeeding

Install the pre sep pad. Remove the sep roller assy., do this especially on the EDH-3, otherwise the paper and the tray will peel the mylar up and cause EDH original tray lift codes. 4469-7802-01

Wrong size paper printed using feeder

Symptoms: When feeding LTR size paper the LCD may on occasion show 11X17 being picked up and feeding LTR-R with the image in the wrong orientation.

Reason: When using the feeder, the paper length, for 11X17, is detected by two black sensors on the upper left corner of the original tray.

The fix: Clean the dust off the sensors.

Black lines in the feed direction

Symptom: You have black lines in the feed direction when using the feeder but not off the glass.

Reason: The small scanner glass on the right has a small speck in the wrong/right place to cause the line. Since the paper moves and not the scanner that is all that is needed.

The fix: If the spot is not readily seen remove the glass and hold it up to the light and it should become visible. If glass cleaner does not remove the spot try WD-40.

OT-100

Constant jams

Check for paper in the exit rollers.

Check to see if the exit roller is turning backwards. Replace PWB-A if they are.

COB80

Make sure the holder for the tray is not hitting the plastic cover. It must move freely behind the plastic cover.

Feeds out crooked, image straight

Reason: The curl taming belts are not turning properly.

The fix: Replace the lower drive shaft. 4491-4422-01

FN-100/102/502

COBA0

Meaning: Elevator tray has reached it's upper limit.

The reason: The paper present LED in the bottom of the finisher is dirty and allows the tray to reach the upper limit sensor while the copier thinks there is about 3,000 sheets in the finisher.

The fix: Remove the screws from the left rear of finisher. This will allow enough room to reach the elevator motor. Lower the tray until the sensor is undone. Then clean the paper present sensor on the bottom of the finisher.

Not stapling first few sheets

Reason: The paddle wheel that moves the paper into the stapler is worn out.

The fix: Replace the paddle wheel. 4611-5401-01

Reason: The arm that holds the paddle wheel assy. is partially broken. It no longer holds enough pressure on the roller to move the paper.

The fix: TEMP. Wrap the spring the rest of the way around to hold the tail in place. Replace the arm with part# 4611-5408-01

Open closure, can not find (FN100)

Reason: The cover behind the horizontal transport is out of position and not allowing the transport cover to close completely.

Occasional dog earing (FN100)

Reason: The cover behind the horizontal transport is out of position and not allowing the transport cover to close completely. Allowing the curled paper to catch the guides.

Fax Machine's

2300/3700

FEED PROBLEMS

Original Jams: Clean the white roller under the feeder. If it still jams after cleaning remove from machine and clean again.

Multi Feeding: Pull the metal tab under the separator roller upwards a little at a time.

2500/3500

FEED PROBLEMS

Original Jam: The plastic rollers to the sides of the feed roller appear to be stopping the paper.

Solution: Replace with new feed roller Part # 0997-3001-03.

Original Jam: The original document position sensor does not come back to home position.

Solution: Remove cover from top of sensor. This tends to bind it. If this does not work then Krazy Glue two pieces of a paper clip the same length as the actuator itself. Make sure a single sheet of paper still pushes this sensor properly.

Out of paper message from main tray: The sensor that detects the presence of paper is magnetic and gets toner in it. It can be removed from the top of the machine by first removing the cover beneath the drum and toner cartridges. Undo the clips and pull straight up and blow it out.

2600/3600

Black Lines on send and copy: Clean the scanner glass with WD40 or Rain-X. This does not cure the problem but it does prevent it from coming back too soon.

5500

GRINDING

Reason: In the bottom tray, the frame for the gear that transmits power to the roller shaft becomes bent and does not allow the gears to mesh properly.

Solution: Bend frame back into shape.

Reason: The feed clutch can at times become dry and chatter right before paper is fed or during warm-up.

Solution: Put a very little bit of oil or grease on it. Just enough to allow the clutch spring to slip when it is supposed to and still bind when it is time for it to feed.

Counters And Mode Settings

Consumables Counters (8)

AXXX	PC Drum	Count-up
BXXX	Black dev	Count-up
CXXX	Clng Blade	Count-up
DXXX	Fusing Roller	Count-up
EXXX	Web Roller	Count-down

ATDC Choice Mode

Black developing units

1080/1081	CH-90	47-54
3170/4210	CH-7	0-7
4230	CH-10	0-7
4233	CH-90	47-54
4300/4301	CH-10	0-7
4320/4321	CH-10	0-7
5400/5401	CH-10	0-7
5320	CH-90	47-54
5420	CH-90	47-54
8600	CH-10	0-7
8601	CH-10	0-7
8602	CH-90	47-54
8603	CH-90	47-54

Entering the Adjust Modes

To enter into the "A-Mode" the "Service" button and the "Users Choice " button at the same time for the following copiers.

8600 8601 8602 8603 9760

Use the service button until you get to the "A" then ten-key pad for the needed mode.

3170 4210

For "CS Pro Machines" goto "Tech Rep" mode and then "Stop" then "Start" and chose the needed mode.

Adjust Modes

A0	Lens Focus
A1	Lens Full Size Pos (Crosswise direction enlargement)
A2	Mirror Full Size Pos.
A3	Feed Direction Mag. Ratio(Feed direction Enlargement)
A4	Lens Full Size Pos (Lead edge registration)
A5	Lens Pos. Reduction
A6	Book B-Scan Regist.
A11	Lens Pos. Enlargement
A12	Leading Edge Erase
A13	Trailing Edge Erase

I.U. Counter Clear

2120/2121	PJ3A Pins 4 & 6
2130	PJ3A Pins 3 & 5
2150/2151/2152	PJ3A Pins 8 & 3

Paper Sizes

<u>Paper size</u>	<u>Feed Direction</u>	<u>Crosswise Direction</u>
11 X 17	432	279
11 X 14	356	279
10 X 14	356	254
9-1/4 X 14	356	235
8-1/2 X 14(Legal)	356	216
8-1/2 X 13(Gov. Legal)	330	216
8-2/3 X 13	330	220
8-1/4 X 13	330	210
8 X 13	330	203
8-1/4 X 11-3/4	298	210
8-1/2 X 11(Letter)	279	216
8 X 10-1/2(Gov. Letter)	267	203
11 X 8-1/2(Letter Cross.)	216	279
10 X 8	203	254
5-1/2 X 8-1/2	216	140

Tech rep mode for 1030/1031:

Clr/stop, <, Clr/stop, >

<,> these are the exposure left and right keys respectively.

- d0 Warm-up time
- d1 Current IU counter count
- d2 Previous IU counter count
- d3 Display test

- C1 Marketing area
 - 0 Metric areas
 - 1 Inch areas
 - 2 ~~Factory~~
- C2 IU control
 - 0 IU control: by IU life
 - 1 PM control: not by iu life
- C3 Auto pwr off disabling
 - 0=0 minutes
 - 3=30 minutes
 - 12=120 minutes
- C4 ATDC detection level
 - 40=4.0%
 - 45=5.5%
 - 50=5.0%
 - 55=5.5%
 - 60=6.0%
 - 65=6.5%
 - 70=7.0%
- C5 Toner empty stop
 - 0 Inhibits copying
 - 1 Permits copying
- C6 Data clear mode
 - 0 None
 - 1 CP counter
 - 2 CP-related counters
 - 3 Choice
 - 4 Machine settings
 - 5 All counters

Resets to initial settings

- A0 Lens focal length correction
- A1 Lens full size position
- A2 Feed direct. Zoom correction
- A3 Full size reg adj
- A4 Enlargement reg adj
- A5 Red reg adj
- A8 SDH reg adj
- Ab ATDC sensor adj data
- Ac Max exposure lamp voltage adj

Di250F/350F

Service Mode:

- 1 Press <1> after (Under processing) warm-up start.
- 2 Enter >1919...> (total of 20 digits) then <*> then <Panel Reset> on the dial input screen
- 3 Press [ACCESS] key on contro panel. Press the [User Number] key on the lower right hand side of theTouch Panel to highlight it. Enter <****>(4 astrisks) from the control panel, and the [START] button flashes to indicate you are in Service/Maint. Mode

Each method has different maintenance features that can be carried out.

Step 1 gets these options:

- 1 Initialization
 - a) RAM Clear
 - b) All Clear
 - c) Serial Number
 - d) Current Time
 - e) Installation Date
- 2 Maintenance Mode
- 3 Service Mode

Steps 2 and 3:

- 1 Maintenance Mode
- 2 Service Mode

To display the Maintenance Menu:

- (1) Press the <Utility> button
- (2) Touch the [Maint.], and the [Service Mode] and [Maint Mode] choices will appear in the maintenance menu
- (3) The screen for the service mode will be displayed by touching [Service Mode]
- (4) The screen for the Maintenance mode will be displayed by touching [Maint. Mode]

Condition Codes

C0	Drive failure
C000	Main drive motor failure to turn
C0000	Fusing motor M6 failure to turn
C0001	Fusing motor M6 turning at abnormal timing
C001	Main drive motor turning at abnormal timing
C0010	PC drum drive motor M5 failure to turn
C0011	PC drum drive motor M5 turning at abnormal timing
C0020	Paper T/U motor M1 failure to turn
C0021	Paper T/U motor M1 turning at abnormal timing
C0040	Suction fan motor M18 failure to turn
C0042	Toner suction fan motor M20 failure to turn
C0043	Toner suction fan motor M20 turning at abnormal timing
C004A	Optical section cooling fan motor M17 failure to turn
C004B	Optical section cooling mtr M17 turning at abnormal timing
C004C	Ventilation fan motor M8/M19 failure to turn
C004D	Ventilation motor M8/M19 turning at abnormal timing
C004E	Pwr supply cooling fan motor M29 failure to turn
C004F	Pwr supply cooling fan mtr M29 turning at abnormal timing
C0070	Main hopper toner replenishing motor M14 failure to turn
C0071	Main hopper toner replenishing mtr M14 turning abnormally
C0072	Sub-hopper toner replenishing motor M15 failure to turn
C0100	PC drum charge wire cleaning motor M21 failure to turn
C0110	Image trans/paper sep charge wire clning mtr M22 failure
C020	Paper feed cabinet drive motor failure
C0200	PC drum charge corona failure
C021	Paper feed cabinet motor turning at abnormal timing
C0210	Image transfer/paper sep coronas failure
C033**	Master board, harness malfunction
C040	Suction fan motor failure to rotate
C0400	Exposure lamp LA1 failure to turn on
C0410	Exposure lamp LA1 turning on at abnormal timing
C0500	Warming-up failure
C0510	Upper fusing roller abnormally low temp
C0511	Lower fusing roller abnormally low temp
C0520	Upper fusing roller abnormally high temp
C0521	Lower fusing roller abnormally high temp
C0522	Upper fusing roller thermistor TH1 failure
C0523	Lower fusing roller thermistor TH2 failure
C0540	Fusing roller thermistor loading failure
C0600	Scanner motor M11 malfunction
C0601	SCP board PWB-J malfunction
C0610	Lens X-direction motion failure
C0650	Scanner reference position sensor PC1 failure
C0660	Scanner load failure
C06F0 to C06F7	SHOME, BASE, TRON, SCEND signal failure
C0800	Synch motor M4 turning at abnormal timing
C0910	2nd drawer lift-up failure
C0911	2nd drawer lower down failure
C0912	2nd drawer lower/down failure or lock failure
C0913	2nd drawer lock failure
C0914	2nd drawer lift motor M24 failure to turn/lock release failure
C0920	1st drawer lift-up failure
C0921	1st drawer lower-down failure

C0922	1st drawer lower failure or lock failure
C0923	1st drawer lock failure
C0924	1st drawer lift-up motor M23 failure to turn
C0926	1st drawer lock release failure
C0990	Main tray upward motion failure
C0991	Main tray downward motion failure
C0992	Main tray downward motion failure
C0993	Main tray upward motion failure
C0994	3rd drawer elevator motor M27 failure to turn
C0996	3rd drawer lock release failure
C0998	Shifter transfer failure
C0999	Shifter return failure
C099A	Shifter return failure
C099B	Shifter transfer failure
C099C	3rd drawer shift motor M28 failure to turn
C0d00	Duplex unit front/rear edge guide home pos. failure
C0d20	Duplex unit trailing gate unit home pos. det failure
C0d50	Duplex unit drive motor M7 failure to turn
C0d51	Duplex unit drive motor M7 turning at abnormal timing
C0E00	Main erase lamp LA2 failure to turn-on
C0E20	Image erase lamp LA3 connection failure
C0F01	Main erase lamp LA2 turning on at abnormal timing
C0F02	Original size detection board UN2 failure
C0F10	AE board PWB-H failure
C0F20	AIDC sensor UN9 variation corection failure
C0F21	AIDC sensor UN9 contamination corection failure
C0F23	AIDC sensor UN9 exposure correction failure
C0F30	ATDC sensor UN8 failure
C0F31	ATDC sensor UN8 failure
C0F66	Manually fed paper ref. pos. failure
C0F79	Paper empty sensor failure
C0FE1 to C0FFF	Original size detecting sensor failure
C1	Ventilation fan motor failure
C2	Corona failure
C200	Corona failure
C3	Main erase lamp failure
C4	Exposure lamp failure
C400	Exposure lamp failure to turn on
C410	Exposure lamp turning on at abnormal timing
C5	Heater lamp failure
C500	Abnormally low fusing temp. warm-up does not complete
C510	Abnormally low fusing temp. after warm-up
C520	Abnormall high fusing temp
C522	Fusing roller thermistor failure
C6	Optical section failure
C600	Scanner drive motor failure
C6011	Lens Y-direction failure
C610	Lens drive motor failure
C7	Low fusing temperature
C8	High fusing temperature
C9	Paper lift failure
C900	3rd drawer lift-up failure
C910	2nd drawer lift-up failure
C920	1st drawer lift-up failure
C950	4th drawer lift-up failure
CA	C203 Failure

Cb	S101/S201 failure
CC	D101 failure
Cd	AD1/AD2 failure
CE	Unexposed area/edge erase lamp failure
CE00	Main erase lamp failure to turn on
CE01	Main erase lamp turning on at abnormal timing
CE20	Unexposed area/edge erase lamp failure
CF	Original size detect failure
CF00	Original detecting unit failure
CF10	AE sensor unit failure
CF30	ATDC sensor unit failure

Duplex Gear Colors

EP2010	Tan
EP2050	White
EP2080	Cream
EP3000	
EP3050	Black
EP4000	Black
EP4050	Black
EP5000	Blue

Fax Settings

MF 1700/1900

To Clear User Data: Hold down the "Function" key and the "Start" key while turning the machine on.

Total Count Meter: "Function" then "#".

MF 1800

To Enter service mode: Press "ENTER" 3 times

MF 2300/3700

To enter the Serviceman Mode: hold down the F1 key while turning the machine on.

To Clear User Data: Enter the "Serviceman Mode." Choose the "Setting Mode" and scroll until "User Setting Mode" and press the "Yes" key. Again scroll to "User Init. Data Clr" and push the "Yes" key

Country Initialize Mode meanings:

- 1) Clears all communication data and user data entries.
- 2) Clears all communication data but not user data entries.
- 3) Will not clear any data.

All three levels will reset the memory upgrade back to it's default.

After doing a "Country Initialize" be sure to perform "Shading Level"

To set the memory:

1. Enter "Serviceman Mode" as stated above.
2. Select "Yes" for both the "Service Mode" and the "Setting Mode"
3. Press "Call" once and "Soft Switch Setting" appears
4. Press "Yes" enter "003" and press "Yes" again
5. Set in accordance to the chart below:

		SW 003	Total Ram	SW 003
<u>Model</u>	<u>Std Ram</u>	<u>7 6 5</u>	<u>1.25 MB</u>	<u>0 1 0</u>
MF2300	0.25 MB	0 0 0	2.00 MB	0 1 1
MF 3700	1.00 MB	0 0 1	4.00 MB	1 0 0

To check the memory:

- 1) Enter the "Serviceman Mode" as stated above
- 2) Select "Yes" for the "Test Mode" and the "Memory Test Mode"
- 3) P-Ram should equal Std. Ram plus the memory expansion.
- 4) B-Ram should be 1.0MB for the MF 2300 and 2.0MB for MF 3700.

Total Count Meter: Use "Report" until you get to "Machine Status" then hit the "Yes" key.

MF 2500/3500

To enter the Serviceman Mode: hold down the "Function" key while turning the machine on.

To Clear User Data: Enter the "Serviceman Mode". Choose the "Setting Mode" and scroll until "4 User Setting Mode" and press the "Yes" key. Again scroll "2 User Init. Data Clr" and push the "Yes" key.

Country Initialize Mode Meanings:

Same as MF 2300/3700

After doing a "Country Initialize" be sure to perform "Shading Level"

Total Count Meter: Hit "Confirm" then use arrow key for report and hit "Yes". Then "Confirm" until you get to "Machine Status" then the "Yes" key.

MF2600/3600

Tech Rep. Mode: Right cursor key 3 times then, "*" key, then "Start" key.

MF 3000

Total Count Meter: Left side of machine towards the back.

MF 3300

Total Count Meter: Push the "Function" key five times then the "Start" key until "Printer Page" is in the display. Then push the "Set" key.

Initialization: Goto "Print Mode Set", enter #-3-9-*, "Service Setting" appears, press "Start" 3 times, "Initialize" is displayed, press "Set", choose "0", enter "001" then "Set".

Okifax 1000

Total count meter: "Function Select" then "No" then "6" on the keypad and then the "Yes" key.

MF-5500

Total Count meter: Press keys in this order. "Program" "*" "9" "Enter" "C"

Drum Reset: "Program" "J" "2" "1" "Enter" "Enter" (Page 7 of OM)

Clear programmed data/User settings: "Program" "*" "2" "Enter"

All Ram Clear: "Program" "*" "3" "Enter"

Clear Life Counter: "Program" "*" "9" "Program" "Enter"

Set background level: "Program" "*" "9" "Program, 4 times" "Enter"

Life Counters: To enter press "Program" "*" "9" "ENTER" the "A-E" for needed counter as stated below:

A	Software Version
B	Total pages scanned
C	Total pages printed
D	Total pages transmitted
E	Drum replaced count
F	Current drum counter

Initialize Procedures

Non-CS\Pro Machines

- 1) Short the ini. points
- 2) Turn the machine OFF
- 3) Turn the machine ON keeping the shorting wire on for about 10 secs.
- 4) Recheck the manual and auto exposure setting

CS\Pro Machines

Memory Clear Procedure

Make notes of the following:

- A: Adjust Mode Settings
- B: Tech. Rep Settings
- C: User Mode Settings

Initialize Procedure

- 1) Change "Marketing Area" to "MJ" hit menu then change back to "MC"
- 2) Turn the machine OFF
- 3) Short the ini. points
- 4) Turn the machine ON and keep the shorting wire on for about 10 secs.
- 5) Recheck the manual and auto exposure settings
- 6) **Perform F5**

Memory Clear

- 1) Record the settings mentioned above
- 2) Turn the main power switch off
- 3) Short the pins of TP1 & TP2
- 4) Turn the main power switch on
- 5) Maintain the short for 10 secs
- 6) Access the "Marketing Area" and verify it is still "MC"
- 7) Re-enter all necessary adj. and settings from worksheet
- 8) Reset the "Optimum Manual" exposure adjustment
- 9) **Redo the F5 and F7**

Low Image Density

<Level History Display Range>

	Adj range	Ini. setting	Increments
V _G	550V-760(790)V	670V	30V
V _L	47V-74(75)V	60V	1V
Toner replenishing time	-----	-----	-----
ATDC	1-254	170	2

<Criteria for determining correct image stabilization control ops>

(1) Stabilization controls are disabled when V_L reaches 75V

(2) Though stabil. controls are not disabled even when V_G has reached its upper adj. range of 790V, there will be a greater chance of image trouble.

Low ID Troubleshooting

A low image density problem is likely to occur if the image stabilization controls are inactive. Bearing in mind the following checkpoints for enabling image stabilization controls, use the following troubleshooting procedures.

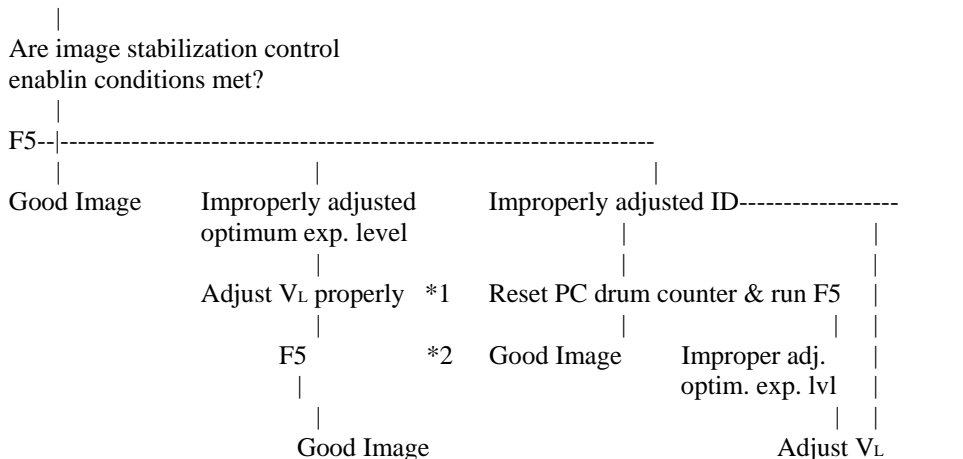
<Checkpoints for enabling Image Stabilization Controls>

Be sure to run an F5 operation when ever any of the following jobs are performed.

- 1) Bypass an isolated malfunction (C0F2*, C0F3*) With the Tech. Rep. mode menu screen on the display, open and close the front door.
- 2) Set V_L below 74V Clean the optical system (lens, mirrors, 6th mirror protective filter, etc.,..).
- 3) Set the sensor input voltage for background correction below 1V. Clean the AIDC sensor
- 4) Set T/C so it falls in the range between the setting -2% and 7%
 (7% or higher) Change T/C choice to 51 and make-solid black copies (Commonly 20 A4 crosswise copies)
 (Setting -2% or lower) Run an auxiliary toner replenishing sequence.

<Troubleshooting>

Low ID



properly		
F5	*2	
Good Image		

		If trouble
		persists
		*3

- *1) Tech. rep Choice SCH-70 "Exp. Lamp Manual Adj."
- *2) This F5 operation is for adl. the "AE Level" image
- *3) Common image trouble(including contamination, mirror out of correct position, pin left out, defective parts, and other mechanical faults).

CF900

Doc. Fdr	AFR-9
Sorter	S-105/ST-103
Duplex	AD-7

CF910

Doc. Fdr	AFR12
Sorter	ST103/S105
Duplex	AD-7
LCC	C101

CF1501/2001

Doc Fdr	AFR16
Sorter	FN107/108
	JS1002
Duplex	AD14
Paper source	PF117/118

CF9001

Doc. Fdr	AFR12
Sorter	ST103/S105
Duplex	AD-7
LCC	C101

Di200

Doc. Fdr.	AFR16
Sorter	FN504/109/110
	OT102
	JS100/102
Duplex	AD15
Paper sources	PF117/118

Di250/350

Doc. Fdr	AFR-14/AF-6/AF-7
Finisher	JS-200/OT-100
	FN-100/FN500
Duplex	AD-10 (350 STD)
Cabinet	PF-106/PF-108
	/PF-110

Di251/351

Doc. Fdr.	AFR16
Sorter	FN504/109/110
	OT102
	JS100/102
Duplex	AD15
Paper sources	PF117/118

Di151

Doc. Fdr	AF8
Paper source	PF116

Di181

Doc. Fdr	AF5
Paper source	PF207/114/8P

Di450/550

Doc. Fdr	EDH-3
Finisher	FN105/106
LCC	C306/306L
Cabinet	PF208/115/7D

DI520/620

Doc. Fdr	EDH-1
Finisher	FN-3
Duplex	STD
LCC	C-304

DI750

Doc Fdr	EDH2
Finisher	FN4/104
LCC	C305

1080

Doc. Fdr	AFR-7/AF-3
Sorter	S-104/ST-101
Duplex	AD3
LCC	
Cabinet	PF=101/PF-1D/PF-1P

1081

Doc. Fdr	AF-3
Sorter	S-104
Duplex	
LCC	
Cabinet	PF-1P

1083

Doc. Fdr	AFR-12/AF-6
Sorter	S-106
Duplex	AD-8
LCC	
Cabinet	PF104/PF-204/PF-4D

1085

Doc. Fdr	AF5
Sorter	S106
Duplex	
LCC	MB4
Cabinet	

2010

Doc. Fdr	AFR-12/AF-5
Sorter	S-106/ST-104
Duplex	AD-8
LCC	
Cabinet	PF104/PF-204/PF-4D

2030

Doc. Fdr	AFR-12/AF-5
Sorter	S-106/ST-104
Duplex	AD-11
LCC	
Cabinet	PF-112/PF-206/PF6D

2050

Doc. Fdr	AFR-7/AF-3
Sorter	S-104/ST-101/S-205/ST-206
Duplex	AD-5
LCC	
Cabinet	PF-102/PF-2D/PF2P

2080

Doc. Fdr	AFR-12/AF5
Sorter	S-104/ST-101/S-205/ST-206
Duplex	AD-5
LCC	
Cabinet	PF-102/PF-2D/PF2P

3000	
Doc. Fdr	AFR-12/AF-5
Sorter	S-207/ST-210
Duplex	AD-11
LCC	
Cabinet	PF-206/PF-112/PF-6D
3050	
Doc. Fdr	AFR-9
Sorter	S-205/ST-101/ST-206
Duplex	AD-5
LCC	C-301
Cabinet	PF-102/PF2D/PF-3P
3170	
Doc.Fdr	AF-1
Sorter	S102
Duplex	
LCC	
Cabinet	
4000	
Doc Fdr	AFR-13/AFR-1000/AF-5
Sorter	S-106/S-208/ST-104/ST-211/ST-214/ST-1200
Duplex	AD-9
LCC	C-301
Cabinet	PF-105/PF-5D/PF-205
4050	
Doc. Fdr	AFR-9
Sorter	S-205/ST-101/ST-206
Duplex	AD-5
LCC	C-301
Cabinet	PF-102/PF2D/PF-3P
4210	
Doc.Fdr	AF-1
Sorter	S102
Duplex	
LCC	
4230	
Doc. Fdr	AFR-1
Sorter	S-101/S-201
Duplex	AD-1
LCC	T-301/C-201
4233	
Doc. Fdr	AFR-3/AF-2
Sorter	S-103/S-203
Duplex	AD-2
LCC	C-204
4300	
Doc. Fdr	AFR-1/AF-1
Sorter	S-101/S-201
Duplex	AD-1
LCC	T-301/C-201
4301	
Doc. Fdr	AF-1/AFR-1
Sorter	S-101/S-201
Duplex	
LCC	T-301/C-201

4320	
Doc. Fdr	AFR-1/AF-1
Sorter	S-101/S-201
Duplex	AD-1
LCC	C-203
5000	
Doc Fdr	AFR-13/AFR-1000/AF-5
Sorter	S-106/S-208/ST-104/ST-211/ST-214/ST-1200
Duplex	AD-9
LCC	C-301
Cabinet	PF-105/PF-5D/PF-205
5050	
Doc. Fdr	AFR-9
Sorter	ST-207
Duplex	STD
LCC	C-203
5320	
Doc. Fdr	AFR-3/AF-2
Sorter	S-103/S-203/ST-202
Duplex	AD-2
LCC	C-204
5400	
Doc. Fdr	AFR-1/AF-1
Sorter	S-101/S-201
Duplex	AD-1
LCC	C-203
5401	
Doc. Fdr	AFR-1/AF-1
Sorter	S-101/S-201
Duplex	AD-1
LCC	C-203
5420	
Doc. Fdr	AFR-3/AF-2
Sorter	S-103/S-203/ST-202
Duplex	AD-2
LCC	C-204
6000	
Doc. Fdr	AFR-9
Sorter	S-206/ST-207
Duplex	STD
LCC	C-302
6001	
Doc. Fdr	AFR-13/AFR-1000
Sorter	S-209/ST-212/ST-213/ST1000
Duplex	STD
LCC	C-302
8010	
Doc. Fdr	AFR-10
Sorter	ST-208/HP-1
Duplex	STD
LCC	T-312/C-402

8015

Doc. Fdr	AFR-1000
Sorter	ST-1100
Duplex	STD
LCC	C-303

8603

Doc. Fdr	AFR-6
Sorter	S-204/ST-201
Duplex	STD
LCC	C-401/C-205

9760

Doc. Fdr	AFR-5
Sorter	ST-203
Duplex	STD
LCC	C-401

PM Supply List

2100

PC Drum	1050-0154-04		50k
CIng Blade	1050-5501-12	35243416	50k
Starter	8916-712		40k
AFR	1050-1701-04	35636787	120k
LFR	1050-1702-02	35636860	120k
Oil Roller	1050-1703-02	35000867	60k
Bushing UFR	1200-3264-08		
Roller T/U &FD	1029-5404-01		
Sep Pad	1050-0757-01		

2120/2121/2130/2150/2151/2152

Image Unit	1276-200		21.5k
UFR	1067-5701-01	35000813	
LFR	1067-5704-01	35009347	
Oil Roller	1067-5729-01		

1030/130F/1031/1031F

PC Drum	1159-0291-01		30k
CIng Blade	1159-5501-03		30k
Starter	8935-812		30k
UFR	1159-5750-02		
LFR	1159-5702-01		
Seperator fingers	1159-5758-01		
Anti-Spill mylar	1159-5504-03		

1080/1081

PC Drum	1139-0291-01	35012170	55k
CIng Blade	1139-5711-17	35012908	55k
Starter	8935-212		50k
Feed tires	1139-3001-01		
UFR	1139-5562-01	35012464	55k
LFR	1139-5522-01		55k
Oil Roller	1139-5525-01	35014054	55k
Bushing LFR	1065-5871-01	35576118	55k
Roller T/U/FD	1139-3001-01		
UFR sep fingers	1054-4753-03		
LFR sep fingers	1054-3773-01		
Anti-spill mylar	1139-5726-01		

1083/2010

PC Drum	1139-0291-01	35012170	60k
Clng Blade	1139-0902-17	35012908	60k
Starter	8935-212		120k
UFR	1151-5521-02		
LFR	1151-5522-02		
Oil Roller	1139-5525-01	35014054	
Bushing LFR	1065-5871-01	35576118	
Roller T/U(MB-4)	1151-3001-01		
Roller feed(MB-4)	1052-5224-01		
Roller sep(MB-4)	1139-0166-02		
Roller T/U	1139-3316-01		
UFR sep fingers	1054-4753-01		
LFR sep fingers	1054-3765-13		
Anti-spill mylar	1139-5726-01		

1085/2030

PC Drum	1139-0291-01	35012170	60k
Clng Blade	1139-5711-17	35012908	60k
Starter	8936-212		180k
UFR	1174-5521-01		
LFR	1174-5522-01		
Oil Roller	1174-5609-01		
Bushing LFR	1065-5871-01	35576118	
Roller T/U(MB-4)	1151-3001-01		
Roller feed(MB-4)	1052-5224-01		
Roller sep(MB-4)	1139-0166-02		
Roller T/U	1139-3316-01		
UFR sep fingers	1054-4753-01		300k
LFR sep fingers	1054-3765-13		
Anti-spill mylar	1139-5726-01		150k

2050

PC Drum	1136-0291-01	35012584	90k
Clng Blade	1136-0901-01	35017020	90k
Starter	8932-312		180k
Feed tires	1139-3001-01		
UFR	1076-5802-01	35636869	200k
LFR	1136-5779-01	35013236	200k
Oil Roller	1136-5782-01	35012581	100k
Bushing LFR	1065-5871-01	35576118	200k
Bushing UFR	1300-4394-22	35576225	200k
UFR sep fingers	1054-4753-01		
LFR sep fingers	1054-3773-01		
Anti-spill mylar	1136-5524-01		
Waste Toner			80k

	<u>2080</u>		
PC Drum	1149-0291-01	35015396	75k
Clng Blade	1139-5711-17	35012908	75k
Starter	8935-212		150k
UFR	1012-5521-01		300k
LFR	1149-5522-01		300k
Oil Roller UFR	1136-5782-02		300k
Clng Roller LFR	1151-5609-01		
Bushing LFR	1065-5871-01	35576118	
Bushing UFR	1012-5531-01		
Roller T/U	4425-3009-01		180k
Roller feed	1052-5224-01		180k
Roller sep	4479-0152-01		180k
UFR sep fingers	1054-4753-01		300k
LFR sep fingers	1054-3765-13		
Anti-spill mylar	1139-5726-01		150k

	<u>3000/3010</u>		
PC Drum	1149-0291-01		75k
Clng Blade	1139-5711-17	35012908	75k
Starter	8936-212		225k
UFR	1012-5521-01		300k
LFR	1174-5522-01		300k
Oil Roller	1174-5709-01		300k
Bushing LFR	1065-5871-01		
Bushing UFR	1012-5531-01		
Roller T/U	4425-3009-01		180k
Roller feed	1052-5224-01		180k
Roller sep	4479-0152-01		180k
UFR sep fingers	1054-4753-01		300k
LFR sep fingers	1054-3765-13		300k
Anti-spill mylar	1139-5726-01		300k

	<u>3050/4050</u>		
PC Drum (3050)	1135-0292-01	35012585	200k
PC Drum (4050)	1134-0296-01	35012586	200k
Clng Blade	1136-0901-01	35017020	90k
Starter	8932-612		400k
UFR	1076-5802-01	35636869	200k
LFR	1052-1710-01	35008907	200k
Oil Roller	1136-5782-02	35012581	100k
Bushing LFR	1300-4394-29	35576221	200k
Bushing UFR	1300-4394-22	35576203	200k
Roller T/U	1052-5224-01		180k
Roller Feed	4425-3009-01		180k
Roller Sep	4425-0152-02		180k
UFR sep fingers	0966-5770-01	35014547	
LFR sep fingers	1134-0756-01		
Anti-spill mylar	1136-5524-01		
Waste Toner			300k

3120/3150

PC Drum	1050-0154-04		50k
Clng Blade	1050-551-12	35243416	50k
Starter	8916-712		40k
UFR	1050-1701-04	35636787	120k
LFR	1050-1702-02	35636860	120k
Oil Roller	1050-1703-02	35000867	60k
Bushing UFR	1200-3264-08		
Roller T/U/FD	1029-5404-01		
Roller Sep	1032-0761-01		

3170/4210

PC Drum	1036-0103-05	35502781	60k
Clng Blade	1053-0149-01	35012882	60k
Starter	8931-412		120k
UFR	1065-5851-01	35000814	120k
LFR	1065-5861-01	35009348	120k
Oil Roller	1054-1702-01	35008781	120k
Bushing UFR	1200-3264-08		120k
Bushing LFR	1065-5871-01	35576118	120k
Roller FD	1065-3061-01		120k
Roller T/U	1065-3061-01		120k
Roller Sep	1065-3094-02		120k
UFR sep fingers	1054-4753-01		120k
Anti-spill mylar	1054-5524-01	35012939	120k

4230/4233

PC Drum (4230)	1053-0142-01	35012029	80k
PC Drum (4233)	1036-0103-05	35502781	80k
Clng Blade	1053-0149-01	35012882	80k
Starter	8931-412		120k
UFR	1079-5506-01	35011778	30k
LFR	1036-1702-13	35001098	30k
Oil Roller	1036-1703-03	35632389	60k
Bushing UFR	1300-4394-26	35576131	120k
Bushing LFR	1300-1461-03	35576205	120k
Roller Feed	1273-3077-01		120k
Roller T/U	1065-3061-01		120k
Roller Sep	1065-3094-02		120k
Roller Feed (4230)	1054-5401-01		120k
Roller T/U (4230)	1054-5401-01		120k
Roller Sep (4230)	1054-0428-02		120k
Lwr FD Tire	1044-5406-02		
Lwr Sep Pad	1036-0769-01		
UFR sep fingers	1054-4753-01		
LFR sep fingers	1054-3773-01		
Anti spill mylar	1054-5524-02	35012939	120k

4300/4301

PC Drum	1053-0142-01	35012029	80k
Cling Blade	1053-0149-01	35012882	80k
Starter	8931-412		120k
UFR	1079-5506-01	35011778	120k
LFR	1036-1702-13	35636322	120k
Oil Roller	1036-1703-03	35632389	60k
Bushing UFR	1300-4394-26	35576131	120k
Bushing LFR	1300-1461-03	35576205	120k
Roller T/U	1053-5401-01	35011092	
Roller Feed	1053-5402-01	35011093	
Roller Sep (lwr&mdl)	1053-0762-01	35636636	
Roller Sep (upper)	1053-0761-01		
UFR sep fingers	1043-4705-01		
LFR sep fingers	1053-4702-01		
Anti-spill mylar	1043-5505-01		

4320/4321

PC Drum	1053-0142-01	35012029	80k
Cling Blade	1053-0149-01	35012882	80k
Starter	8931-212		160k
UFR	1052-1701-03	35636869	160k
LFR	1052-1710-01	35008907	160k
Web Roller	1032-1701-01	35632581	120k
Bushing UFR	1300-4394-30	35576203	80k
Bushing LFR	1300-4394-13	35576221	80k
Roller T/U/FD	1052-5222-01	35009692	
Roller Sep	1052-5223-01		
Sep Roller Kit	1052-5223-01		
UFR sep fingers	1052-4701-01		
LFR sep fingers	1052-4706-01		
Anti-spill mylar	1054-5524-01	35012939	
Waste Toner	1052-5567-05		160k

4000/5000

PC Drum (4000)	1157-0294-01	35016202	180k
PC Drum (5000)	1156-0294-01	35016203	180k
Cling Blade	1136-0901-01	35017020	180k
Starter	8932-612		180k
UFR (4000)	1076-5802-01	35636869	360k
UFR (5000)	1156-5802-01		360k
LFR (4000)	1052-1710-01	35008907	360k
LFR (5000)	1156-5803-01		360k
Oil Roller	1136-5782-02		360k
Bushing LFR (4000)	1300-4394-29		
Bushing LFR (5000)	1156-5819-01		
Bushing UFR	1300-4394-22		
Roller T/U	4425-3009-01		180k
Roller Feed	1052-5224-01		180k
Roller Sep	4479-0152-01		180k
UFR sep fingers	0966-5770-01	35014547	360k
LFR sep fingers	1156-5791-01		
Anti-spill mylar	1013-5524-01		180k
Toner Box	copier 30k	cabinet 180k	

5050/6000/6001/8015

PC Drum (5050/6000)	1075-0291-01	35012583	400k
PC Drum (6001/8015)	1161-0292-01	35016824	400k
Cling Blade	1075-0902-01	35014426	400k
Starter	8932-712		400k
UFR	1075-5768-01	35012626	400k
LFR	1129-2021-01	35011120	400k
Web Roller	1051-1701-01	35632581	200k
Web Roller (6001/8015)	1051-1701-01	35632581	400k
Bushing UFR	1075-5771-01		400k
Bushing LFR	1300-4394-26		400k
Duplex T/U Roller	1075-3051-01		200k
Duplex Feed Roller	1075-3051-01		200k
Duplex Sep Roller	1075-0162-02		200k
LCT T/U Roller	1075-3051-01		200k
LCT Feed Roller	1075-3051-01		200k
LCT Sep Roller	1075-0162-02		200k
UFR sep fingers	1074-5701-01		600k
LFR sep fingers	1075-5757-01		600k
UFR sep fingers (6001/8015)	1074-5701-01		1200k
LFR sep fingers (6001/8015)	1075-5757-01		1200k
Anti-spill mylar	1074-0156-01		200k

5320/5420

PC Drum (5320)	1078-0292-01	35010079	120k
PC Drum (5420)	1076-0292-01	35010084	120k
Cling Blade	1053-0149-01	35012882	120k
Starter	8931-212		160k
UFR	1076-5802-01	35636869	240k
LFR	1052-1710-01	35008907	240k
Web Roller	1051-1701-01	35632581	160k
Bushing UFR	1300-4394-30	35576203	120k
Bushing LFR	1300-4394-13	35576221	80k
Roller T/U	1065-3061-01		120k
Roller Feed	1274-3102-01		120k
Roller Sep	1274-0151-01		120k
UFR sep fingers	1076-5802-01		
LFR sep fingers	1052-1710-01		
Anti-spill mylar	1054-5524-01		
Waste Toner	1052-5567-05		160k

	<u>5400/5401</u>		
PC Drum	1053-0142-01	35012029	80k
Clng Blade	1053-0149-01	35012882	80k
Starter	8931-212		160k
UFR	1076-5802-01	35636869	160k
LFR	1052-1702-01		160k
Web Roller	1051-1701-01	35632581	80k
Bushing UFR	1300-4394-30	35576203	80k
Bushing LFR	1300-4394-29	35576221	80k
Roller T/U/FD	1052-5222-01		120k
Roller Sep	1052-5223-01		120k
Sep Roller Kit	1052-0921-01		
UFR sep fingers	1052-4701-01		
LFR sep fingers	1052-4706-01		
Anti-spill mylar	1054-5524-02		
Waste Toner	1052-5567-05		160k

	<u>8603</u>		
PC Drum	1140-0291-01		300k
Clng Blade	1051-0160-01	35243427	200k
Starter	8932-041		300k
UFR	1031-1708-01	35636319	400k
LFR	1031-1713-01	35636320	400k
UFR Sep Fingers	1074-5701-01		1200k
LFR Sep Fingers	1031-4706-01		1200k
Web Roller	1051-1701-01	35632581	200k
Bushing UFR	1300-4394-28	35576131	400k
Bushing LFR	1300-4394-26	35576225	400k
Paper T/U	1051-5401-01		400k
Paper Feed	1031-5402-02		200k
Paper Sep	1022-4421-02		200k
Duplex Feed Roller	1031-5401-02		200k
Duplex T/U Roller	1051-5241-01		400k
Duplex Sep Roller	1031-5231-01		200k
Anti-Spill Mylar	1033-0156-01		600k

	<u>8010/9760</u>		
PC Drum (9760)	1074-0293-01	35010080	300k
PC Drum (8010)	1145-0291-01		300k
Clng Blade	1074-0155-02	35010547	150k
Starter	8932-012		600k
UFR	1074-5714-02	35011315	600k
LFR	1129-2021-01	35011120	400k
LFR (8010)	1145-5802-01		400k
Web Roller	1074-5787-01	35632581	200k
Bushing UFR	1300-4394-28		600k
Bushing LFR	1300-4394-26		600k
Paper T/U	1051-5401-01		400k
Paper Feed	1031-5402-02		200k
Paper Sep	1022-4421-02		200k
Duplex Feed Roller	1261-5402-02		100k
Duplex T/U Roller	1255-5401-01		100k
Duplex Sep Pads	1074-0751-01		100k

UFR sep fingers	1074-5701-01	1200k
LFR sep fingers	1031-4706-01	
Anti-spill mylar	1074-0156-01	800k
Waste toner		200k

Di250

Imaging Cart	4163-612	67k
Fusing Section(old)	1170-0322-01	268k
Fusing Section(New)	1170-0902-01	268k
Image Transfer Roller	1164-0335-01	134k
RFR	1164-5707-01	268k
LFR	1164-5704-01	268k
Htr Lamp	9352-2711-32	
Paper T/U roller	1164-3001-01	134k

Di181

PC Drum	1177-0291-01	80k
Clng Blade	1139-5711-17	80k
Starter	8936-616	160k
UFR	1177-5521-01	320k
LFR	1174-5522-01	320k
Upper sep fingers	1054-4753-01	320k
Lower sep fingers	1054-3765-13	80k
Roller T/U	1151-3001-01	320k
Anti Spill mylar	1139-5726-01	80k

Di350

Imaging Cart	4163-602	72k
Fusing Section(Old)	1171-0322-01	288k
Fusing Section(New)	1165-0421-01	288k
Image Transfer Roller	1164-0335-01	144k
RFR	1164-5707-01	288k
LFR	1165-5706-01	288k
Htr Lamp	9352-2710-84	
Paper T/U roller	1164-3001-01	144k

Di450/550

PC Drum	4002-0291-01	240k/300k
Starter	8936-912	240k/300k
Clng Blade	1136-0901-01	240k/300k
T/U roller	4002-3216-01	80k/160k
Feed roller	4002-3216-01	80k/160k
Sep roller assy.	1136-0162-01	80k/160k
UFR sep fingers	4002-5783-01	240k/960k
UFR	4002-5701-01	480k/500k
LFR	4002-5702-01	480k/500k
Web Roller	4002-5732-01	480k/500k

Di520/620

PC Drum	1155-0291-01	320k
Starter	8935-912	320k
Clng Blade	1074-0904-01	160k
UFR	1075-5768-01	480k
LFR	1129-2021-01	480k
Web Roller	1145-5801-01	320k

Bushing UFR	1075-5771-01	960k
Bushing LFR	1300-4394-26	960k
Roller T/U	1075-3051-01	300k
Roller feed	1075-3051-01	300k
Roller sep	1075-0162-02	300k
UFR sep finger	1074-5701-01	960k
LFR sep fingers	1075-5757-01	960k
Anti-spill mylar	1074-0156-01	480k
Waste toner		320k

AFR-1

Doc. T/U Roller	1261-5402-01
Doc. Feed Roller	1261-5402-01
Doc. Sep Pad	1261-0221-01
Doc. Feed Belt	1261-5305-02

AFR-2

Doc. T/U Roller	1262-5405-02
Doc. Sep Roller	1259-5402-04
Doc. Sep Roller	1259-5401-03
Doc. Feed Belt	1261-5305-02

AFR-3

Doc. T/U Roller	1279-3501-01	
Doc. Feed Roller	1280-3501-01	
Doc. Sep Roller	1279-3503-01	
Doc. Feed Belt	1279-3507-01	35011916

AFR-5

Doc. T/U Roller	1284-3502-01	400k
Doc. Feed Roller	1280-3501-01	150k
Doc. Sep Roller	1279-3503-01	150k
Doc. Feed Belt	1279-3507-01	35011916 600k

AFR-6

Doc. T/U Roller	4434-3505-01	90k
Doc. Feed Roller	4434-3504-01	90k
Doc. Sep Pads	4434-0751-01	90k
Doc. Feed Belt	1284-3511-01	35011916

AFR-7/AFR-9

Doc. T/U Roller	4426-3128-02	120k
Doc. Feed Roller	4426-3128-02	120k
Doc. Sep. pad	4408-0751-01	120k
Doc. Feed Belt	4426-5501-02	35014361

AFR-10

Doc. T/U Roller	4456-3504-01	120k
Doc. Feed Roller	4456-3501-01	120k
Doc. Sep Roller	4456-0159-01	120k
Doc. Feed Belt	4426-5501-02	

AFR-12

Doc. T/U Roller	4474-3505-01 (4)	120k
Doc. Feed Roller	4474-3506-01 (2)	120k
Doc. Sep Pad	4474-0217-03	120k
Doc. Sep Pad Upgrd	7660-4486-01	
Doc. Feed Belt	4426-5501-02	

AFR-13

Doc. T/U Roller	4426-3128-02	120k
Doc. Feed Roller	4426-3128-02	120k
Doc. Sep Pad	4408-0751-01	120k
Doc. Feed Belt	4426-5501-02	

AFR-14

Doc. T/U Roller	4490-3504-01	144k
Doc. Feed Roller	4490-3505-02	144k
Doc. Sep Pad	4490-3447-01	144k
Doc. Sep Pad Upgrd	4490-7801-01	
Doc. Feed Belt	4490-5501-01	

AFR-1000

Doc. T/U Roller	4426-3128-02	120k
Doc. Feed Roller	4426-3128-02	120k
Doc. Sep Pad	4408-0751-01	120k
Doc. Feed Belt	4426-5501-02	

AF-1

Doc. T/U Roller	1266-5402-01	35012923
Doc. Feed Roller	1259-5402-04	
Doc. Sep Roller	1279-3503-01	
Doc. Feed Belt	1266-5408-01	35000420

AF-2

Doc. T/U Roller	1279-3501-01	
Doc. Feed Roller	1280-3501-01	
Doc. Sep Roller	1279-3503-01	
Doc. Feed Belt	1284-3511-01	35011916

AF-3

Doc. T/U Roller	4433-3023-01	120k
Doc. Sep Pad	4433-0153-01	120k
Doc. Feed Belt	4433-3515-01	

AF-5

Doc. T/U Roller	4474-3505-01	120k
Doc. Sep Roller	4474-3505-01	120k
Doc. Sep Pad	4474-0217-03	120k
Doc. Sep Pad Upgrd	7660-4486-01	
Doc. Feed Belt	4426-5501-02	

<u>AF-6/AF-7(Di250/350)</u>		
Doc. T/U Roller	1166-1004-01	144k
Doc. Sep Roller	1166-1084-01	144k
Doc. Sep Pad	1166-1003-01	144k
<u>EDH-1(Di520/620)</u>		
Doc. T/U Roller	4469-3503-01	120k
Doc. Feed Roller	4469-3504-01	120k
Doc. Sep Roller	4469-0153-01	120k
Pre-sep pad	4469-7802-01	
<u>EDH-3(Di450/550)</u>		
Doc. T/U Roller		
Doc. Feed roller	4469-3504-01	30k/120k
Doc. Sep roller	4641-0153-01	30k/120k
Pre-sep pad	4469-7802-01	
<u>AD-1</u>		
Doc. T/U Roller	1231-5402-02	
Doc. Feed Roller	1249-1405-01	
Doc. Sep pad	1249-0101-14	
<u>AD-2</u>		
Doc. T/U Roller	1281-3503-01	
Doc. Feed Roller	1231-5402-02	
Doc. Sep pad	1249-0101-14	
<u>AD-3/AD-5/AD-8/AD-9/AD-11</u>		
Doc. Feed Roller	1052-5524-01	180k
Doc. T/U Roller	4425-3009-01	180k
Doc. Sep roller	4425-0151-02	180k
<u>C-301</u>		
Paper T/U	4431-3502-02	
Paper FD	4431-3502-02	
Paper Sep	4431-0159-02	
<u>C-302</u>		
Paper T/U	4421-3502-01	
Paper FD	4421-3502-01	
Paper Sep	4431-0159-02	
<u>C-304(Di520/620)</u>		
Paper T/U	1075-3051-01	200k
Paper FD	1075-3051-01	200k
Paper sep assy	4421-0165-01	200k
<u>C-306/C-306L(Di450/550)</u>		
Paper T/U	1075-3051-01	200k
Paper FD	1075-3051-01	200k
Paper sep assy.	4421-0165-01	200k

C-402 (8010)

Paper T/U (Man)	1052-5224-01
Paper FD (Man)	1139-3316-01
Paper Sep (Man)	1075-0163-02
Paper T/U	1231-5406-04
Paper FD	1285-3048-01
Paper Sep	1285-0342-01

PF-1D/PF-2D/PF-4D/PF-5D/PF-101/PF-102/PF-205

Doc. Feed Roller	1052-5524-01	180k
Doc. T/U Roller	4425-3009-01	180k
Doc. Sep roller	4425-0151-02	180k

PF-104/PF-105/PF-204/PF-205/PF-206/PF-112

Doc. Feed Roller	1052-5524-01	180k
Doc. T/U Roller	4425-3009-01	180k
Doc. Sep roller	4479-0152-01	180k

PF-106(Di250/350)

Doc. Feed Roller	4496-3013-02	200k
Doc. T/U Roller	4496-3001-02	200k
Doc. Sep Roller	4496-3045-01	200k
Torque limiter Assy	4496-0151-01	200k

PF-108/110(Di250/350)

Doc. T/U Roller	4498-3479-01	144k
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PF-115/208(Di450/550)

Doc. T/U roller	4002-3201-01	80k/160k
Doc. Feed roller	4002-3216-01	80k/160k
Sep. roller assy.	4002-0152-02	80k/160k

User clearable troubles

Di250/350

Black lines: For machines that do not do automatic two sided copying, clean the scanner glass of dirt and other debris. WD40 works the best or any general purpose cleaner or glass cleaner. An easy way to find out if it is the scanner glass is to make a copy on the original glass. If the line is not there it is on the scanner glass, if you still get a line a technician will have to service the copier.

LCD panel too dim/bright: Move the slider on the right side of the control panel to desired brightness.

Paper jamming: Make sure the paper is loaded properly. Example; tray not loaded above the line, paper is loaded straight, no curled edges, no paper rolled under another.

Paper jams out of top tray: Make sure the paper is set right according to the copier. Example having letter in the drawer and the copier thinks it's legal, it will jam everytime. Each time this drawer is opened and closed you must tell the machine what size paper is loaded. Also make sure it is set for the proper copy stock.

Paper jams out of third drawer: The drawer has a switch on the right hand side and must correspond to the proper paper size in the drawer. Otherwise it is guaranteed to jam.

Paper feeding crooked from top drawer: Make sure the paper guides are snug against side of paper.

Jamming on 2 sided copying: Check for excessive moisture in paper and either turn the stack over or resupply with a fresh unopened ream of paper.

Jamming from second drawer: Add more paper. The drawer has weak springs and loses tension against the take up rollers as the paper is used up.

Manual bypass jams: Like the top drawer the paper size is not set properly.

Paper jams in Offset Tray: Check for small paper in the exit rollers of offset tray. This will be on the exit side of the offset tray.

Jam can't find: Check the exit rollers of the offset tray for a small piece of paper.

Open closure: If offset tray is installed the door on the right hand side is open. Look under the scanner and above the fuser (hot area). If a full sized finisher is installed move the finisher away from the machine and open the horizontal transport cover. Check the rear cover of the horizontal transport and make sure it is fully seated.

Load clicking noises: Usually out of toner. If it is a slow clicking accompanied by a lower whooshing noise it will soon be out of toner. If it is a fast clicking/grinding noise the gears are stripped, the later is usually because the toner was improperly installed.

Out of memory: Use less documents in the feeder and see if technician has memory to install.

Grey background over whole copy: Wrong toner was installed in the copier. The image unit will have to be replaced and toner supply vacuumed out. Depending on how long the machine gets run in this condition the fuser may also have to be replaced.

C0b0f: Move the finisher away from the machine then open and close the main door on the right hand side of the machine then close the finisher. This will generally get the copier back up and running again until a technician can get there to make adjustments.

C0f32: Wrong toner installed or copier overtoned itself. Technician will have to look at it.

C0b80: Push on the metal just behind the front cover of the offset tray then open the right hand door.

C0070: The toner bottle was put into the machine wrong. If the machine is not making any fast clicking noises you can try reinserting the toner or wait for the technician.

If toner bottle cannot be installed/removed: Close the toner bottle access door and allow the copier to finish the toner add sequence, then attempt to change or install the bottle again.

Replace image unit soon: You can make an additional 5,000 copies before the machine shuts down. If you were told you have an updated chip in the machine call when you start getting copy quality problems. If you are not sure call to be on the safe side.

User clearable troubles

Di520/620

Black lines: Clean the scanner glass of dirt and other debris. In the case of the Di520/620 it is the small glass on the right hand side of the machine. WD40 works the best or any general purpose cleaner or glass cleaner.

LCD panel too dim/bright: Turn the contrast knob to the left of the control panel to desired brightness.

Out of memory: Use less documents in the feeder and see if technician has memory to install.

If toner bottle cannot be installed/removed: Close the toner bottle access door and allow the copier to finish the toner add sequence, then attempt to change or install the bottle again.

Excessive jamming on copier: Flip the paper stack over or try paper from a fresh ream.

Manual bypass jams: Make sure to tell the copier the correct size of paper that you are copying. If using overhead transparencies or thick paper, use the exclusive mode so that the paper takes the straightest path through the copier.

Codes: Most codes will clear by opening and closing large main door. If the code does not clear or comes back soon afterwards, a technician will need to service the machine.

C0070/C0072: Open the small door and jiggle the toner bottle and make sure it inserted all the way into the coupler. Then open the large main door to clear the code. Do not force the bottle into the coupler because this can do further damage to the machine.

M2,M3,M5: A technician will have to service the machine. Should be able to run an additional 5,000 copies before the copier shuts itself down for maintenance.