



Apple Color Printer





Basics

Apple Color Printer

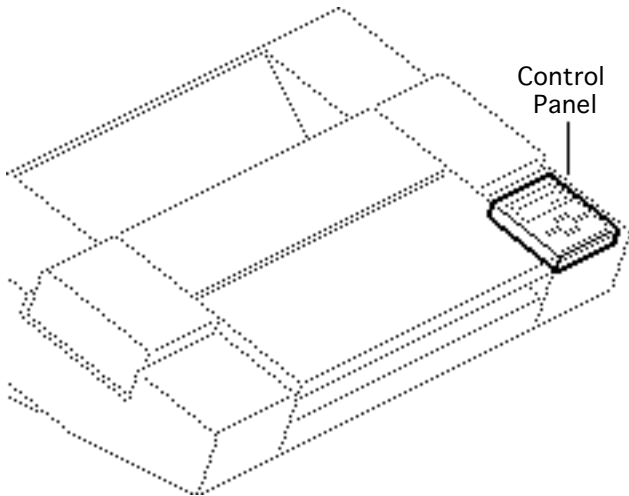


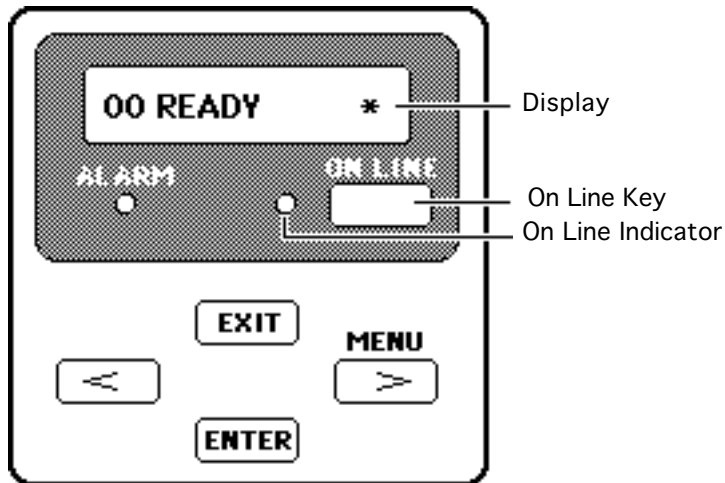


Overview

The Apple Color Printer control panel signals printer errors by means of status messages, an alarm indicator light, and a beep tone.

Using a set of control keys, you can perform various service functions from the control panel. There are two modes of operation from the panel: user and service. Different levels and types of menus are accessible in each mode.





To access either the user or service menus, you must turn the printer off-line. You can toggle the printer on- and off-line by pressing the On Line key.

The printer is off-line when the on line indicator is off and the display reads

"00 READY."

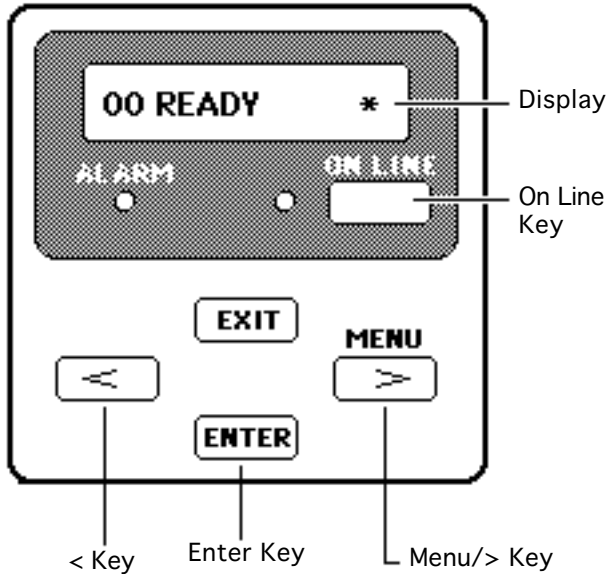
Note: The * indicates that the print heads are capped and the printer may be turned off.

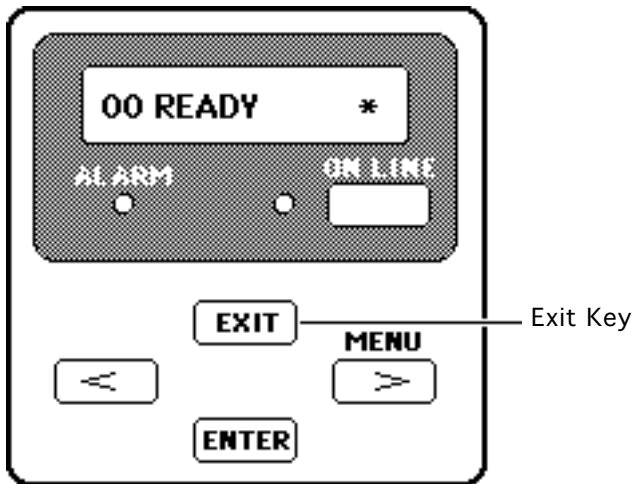




Control Panel Keys

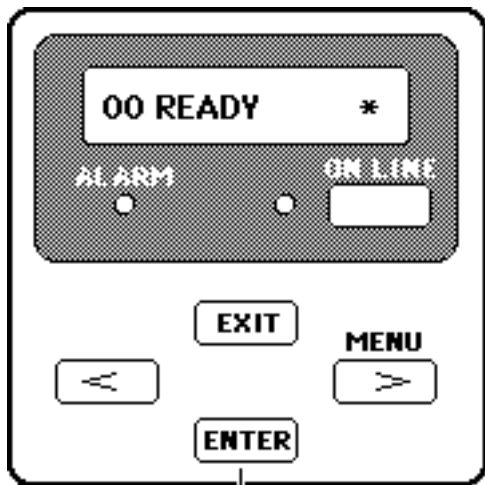
Four control keys allow you to operate the user and service menus.





- Pressing the Exit key moves you from the current menu level to the next higher level.

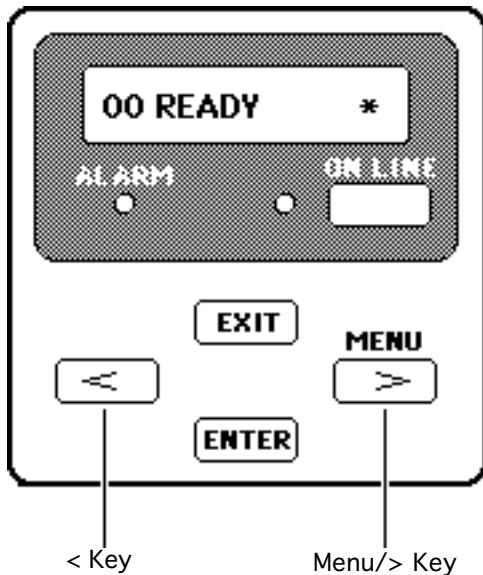




Enter Key

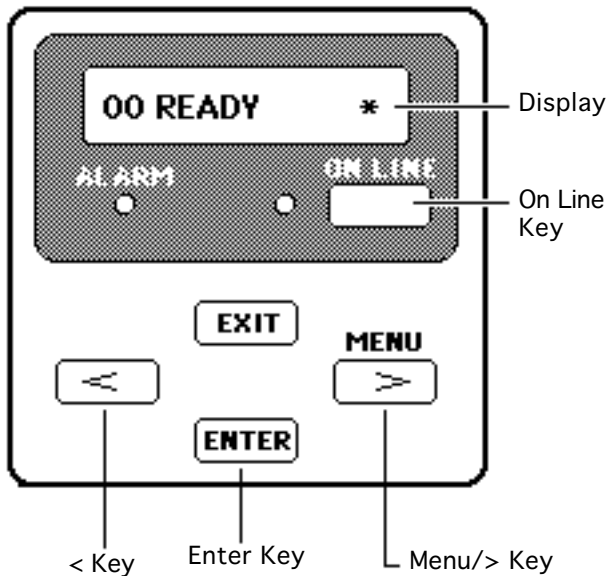
- Pressing the Enter key moves you from the current menu level to the next lower level. If you are at the lowest menu level, pressing the Enter key executes the menu item that is currently displayed.





- Pressing the > or < key changes the menu to the next choice at the same level and changes the value of any parameter displayed.





User Menu

To enter the user mode and access the user menus, switch on the printer and set it to off-line (press the On Line key so that the on line indicator turns off).

Press the Menu key once to see the first menu displayed. Then use the > or < key to move between the menus and choices.

Press the Enter key to execute a selection.





The following selections are available in the user menus:

PRINTING MODE

- **MODE-A**
Prints plain paper, envelopes, or coated paper
- **MODE-B**
Prints transparencies
- **MODE-C**
Prints blacks twice as dark
- **MODE-D**
Reduces bleeding on graphics with plain paper; increases printing time considerably
- **MODE-E**
Prints high-speed drafts





CLEANING

- **CLEANING-A**

Cleaning A clears print head of clogged ink nozzles.

- **CLEANING-B**

If Cleaning A does not work after 2-3 times, use Cleaning B. Cleaning B uses more time and ink (1.5 min. and 2 g of ink).

SET PARAMETER

The Set Parameter menu controls settings for parallel interface. Do not change any of these settings.





TEST PRINT

- TEST PRINT-A
Gives current status of printer (ROM version, interface, etc.) as well as a color grid
- NOZZLE CHECK
Gives test pattern to check print head

DUMP MODE

- DUMP OFF (default mode)
- DUMP ON

INTERFACE SELECT

- SCSI (default mode)
Use Enter key to set SCSI ID number.
- PARALLEL



**COUNTRY CODE**

- ENGLISH (default)
- FINNISH
- FRENCH
- GERMAN
- ITALIAN
- JAPANESE
- NORWEGIAN
- PORTUGUESE
- SPANISH
- SWEDISH
- DANISH
- DUTCH

NVRAM INITIALIZE

- INIT. NO (default)
- INIT. YES

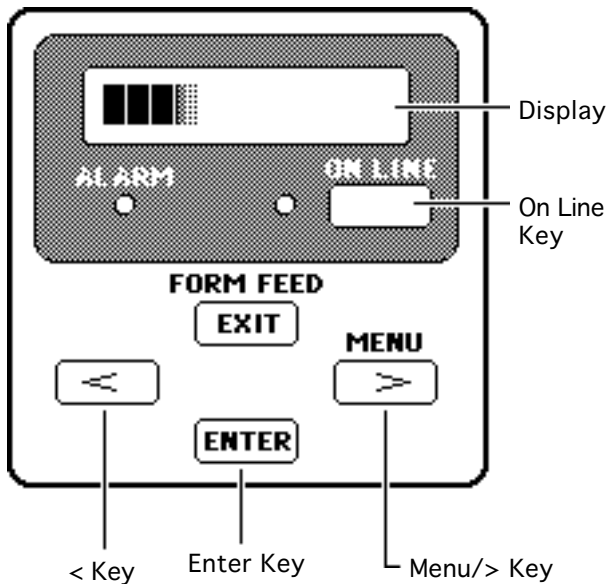




MEDIA SELECT

- NORMAL PAPER (default)
- ENVELOPE/THICK



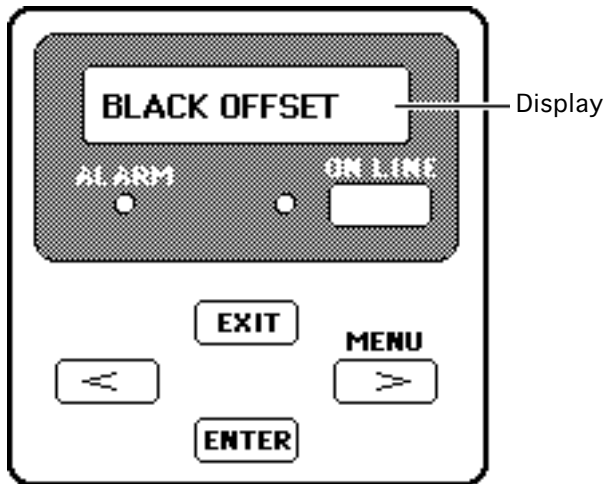


Service Menu

To enter the service mode and access the service menus, switch off the printer, hold down the Menu key and the < key at the same time, and switch the printer back on.

Hold down the Menu and < keys until a series of squares appears on the display. Then release the keys, hold down the On Line key, and press the Enter key twice.





Note: The first menu displayed should be "BLACK OFFSET." If the first menu is "CLEANING," you are not in the service mode. Repeat the entering service mode procedure.





The following selections are available in the service menus:

BLACK OFFSET

Sets value for Black registration

CYAN OFFSET

Sets value for Cyan registration

MAGENTA OFFSET

Sets value for Magenta registration

YELLOW OFFSET

Sets value for Yellow registration





DIRECTION OFFSET

Sets the printing position for printing in both directions

TEST PRINT

- TEST PRINT-A
Bubble-jet head jet check pattern
- TEST PRINT-B
Bubble-jet head/main unit precision check pattern 1
- TEST PRINT-C
Printing position setting pattern
- TEST PRINT-D
Bubble-jet head/main unit precision check pattern 2
- HEAT RUN
Printer mechanism drive function for factory inspection





CLEANING

- **CLEANING-A**
Clears print head of clogged ink nozzles
- **CLEANING-B**
Checks the ink passage pressure
- **CLEANING-C**
Fills ink passage in the ink supply system
- **CLEANING-D**
Flushes ink supply system



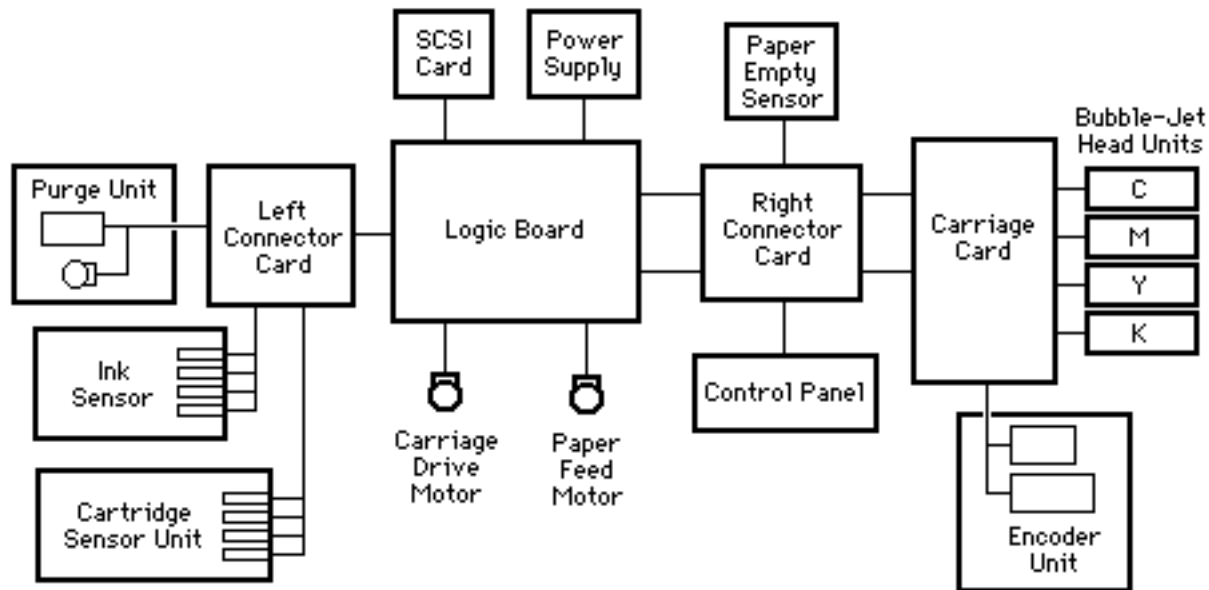


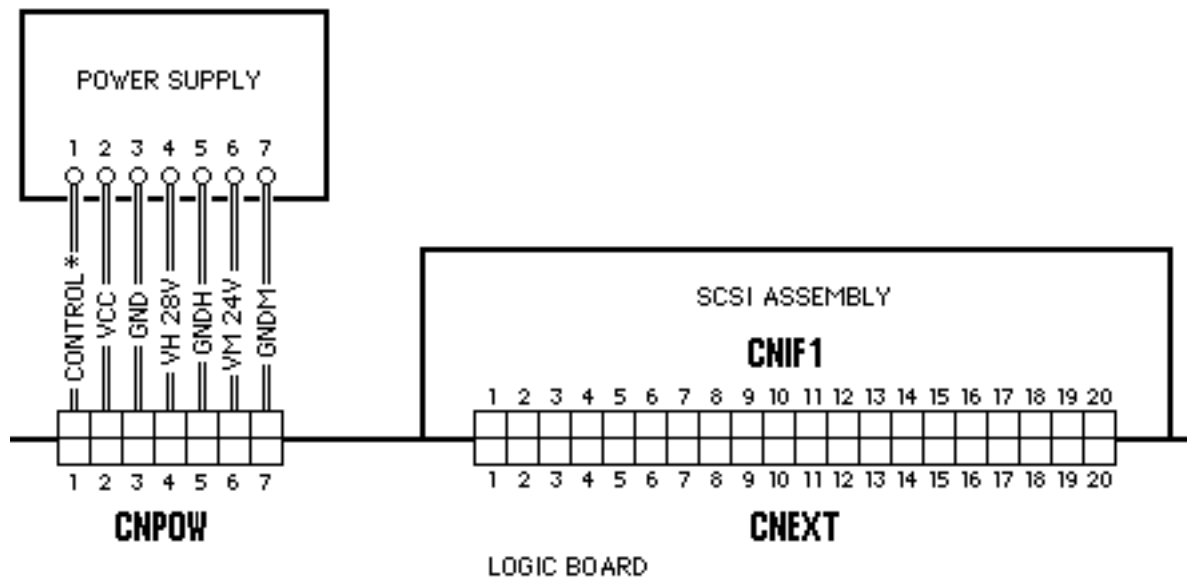
CENTER HEAD

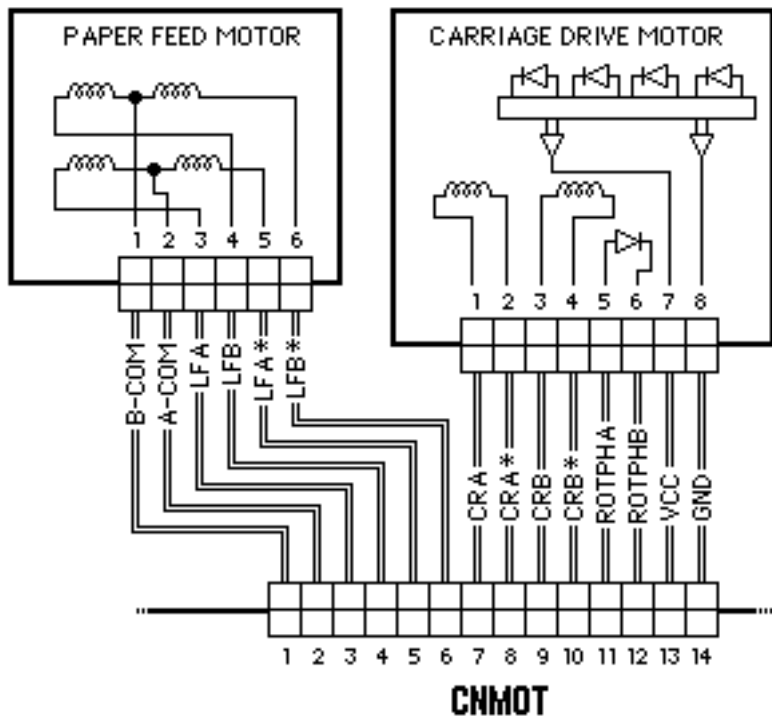
Moves the carriage to the center of the printer to allow replacement of the bubble-jet head unit

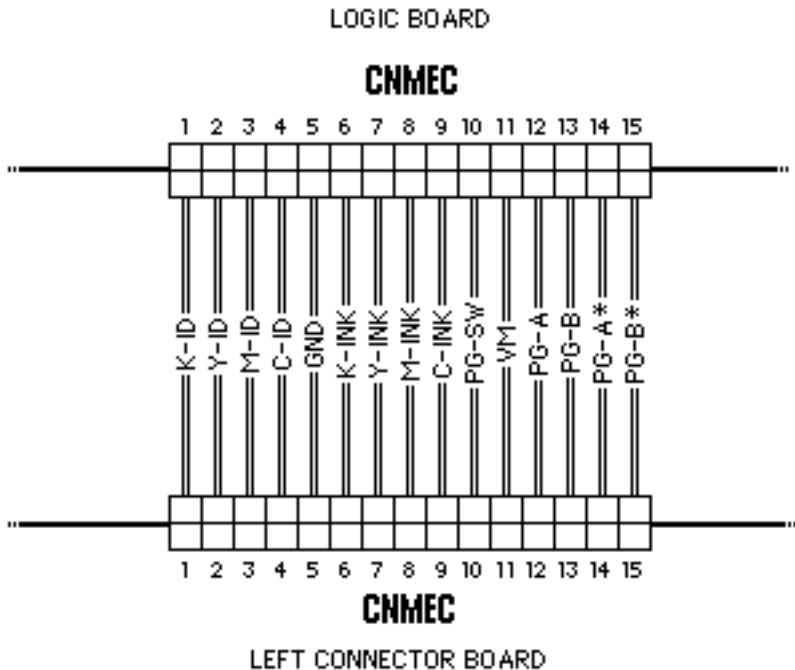
When you press the Enter key, the carriage moves (while the beeper sounds) and stays at the center of the printer for 5 seconds. The carriage then returns to its home position. To exit this mode, switch the power off.

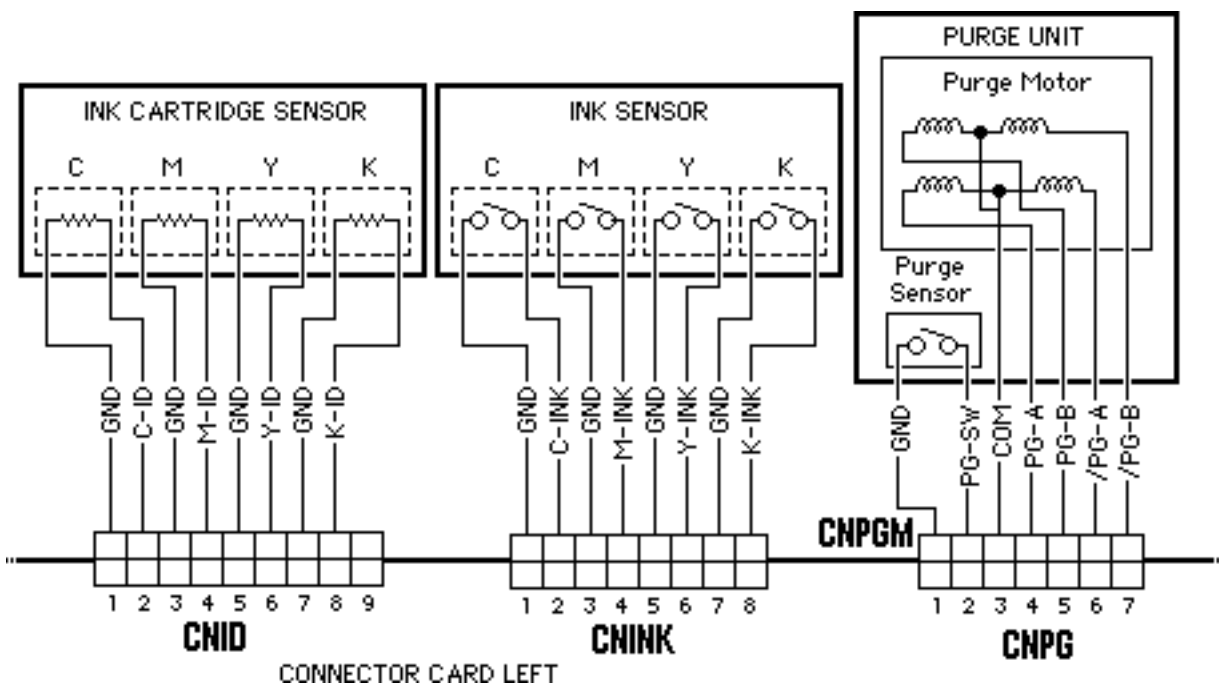


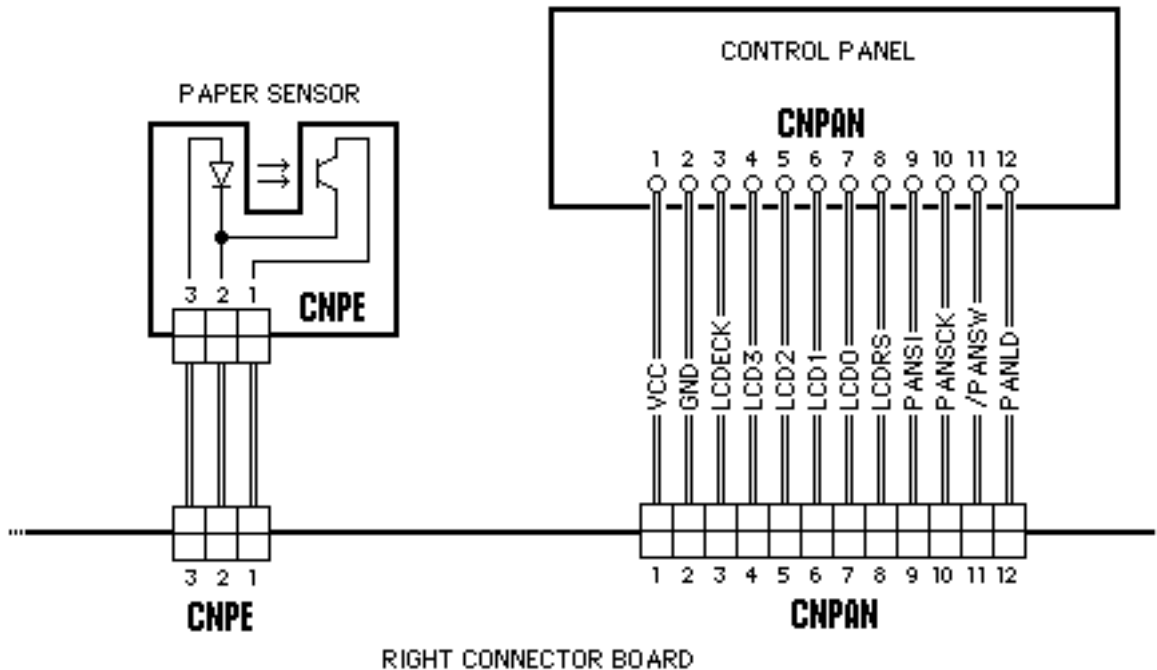






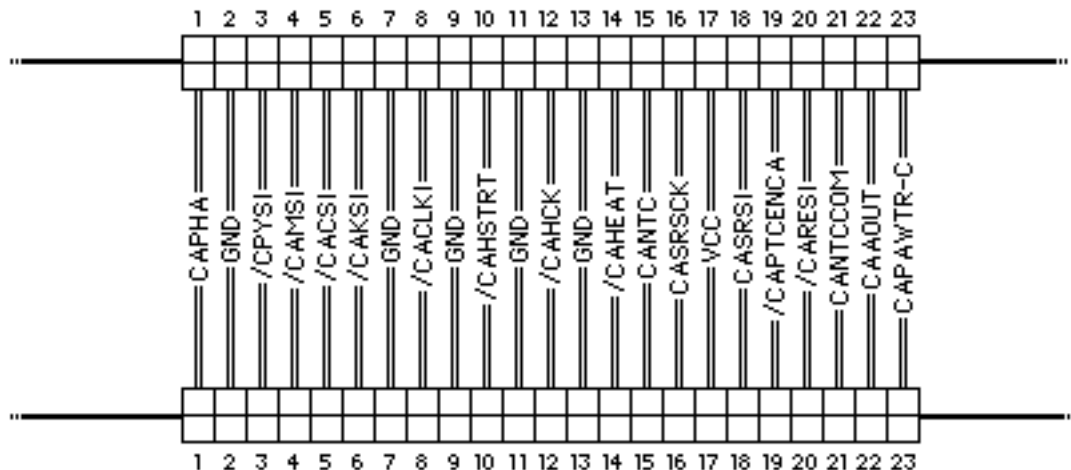








LOGIC BOARD

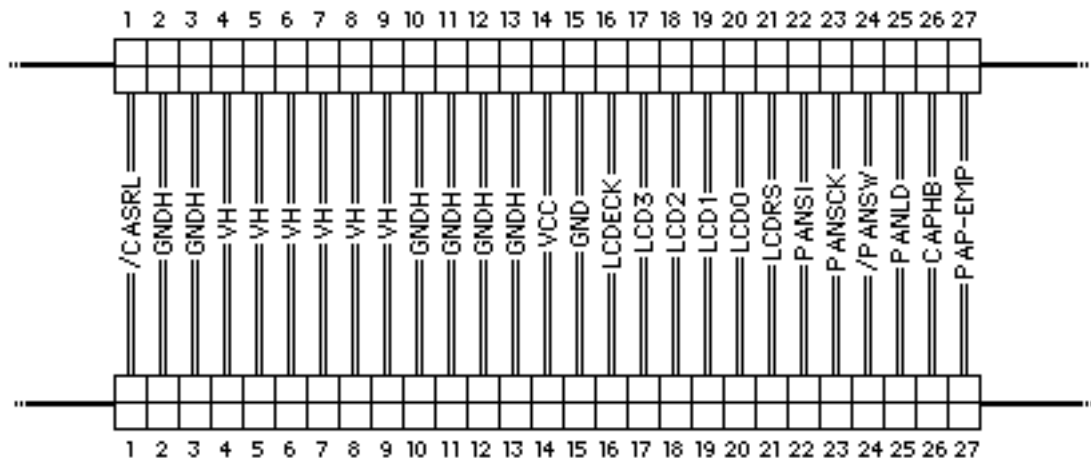
CNCAR1**CNCAR1**

RIGHT CONNECTOR BOARD





LOGIC BOARD

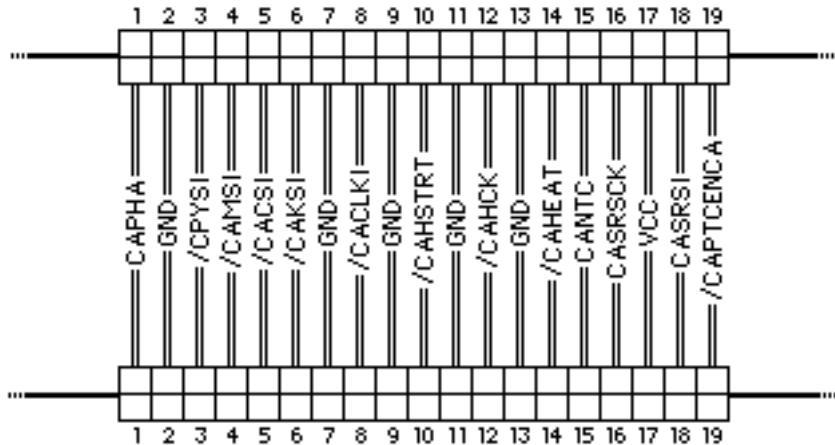
CNCAR2**CNCAR2**

RIGHT CONNECTOR BOARD





RIGHT CONNECTOR BOARD

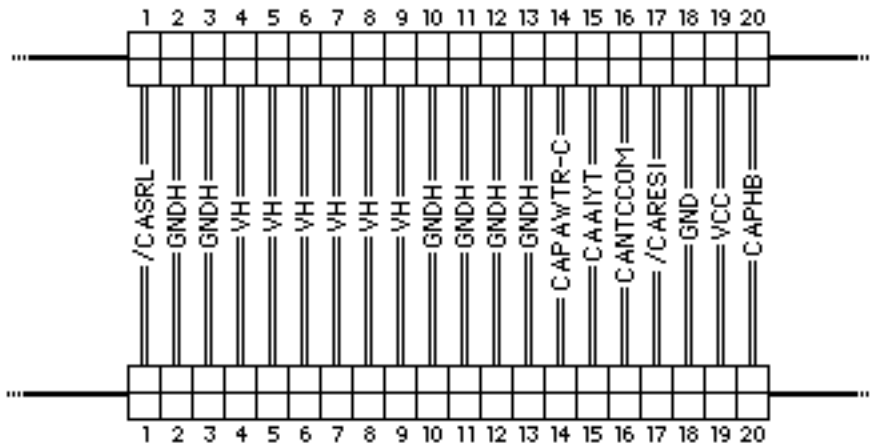
CNCA1**CNCA1**

CARRIAGE BOARD



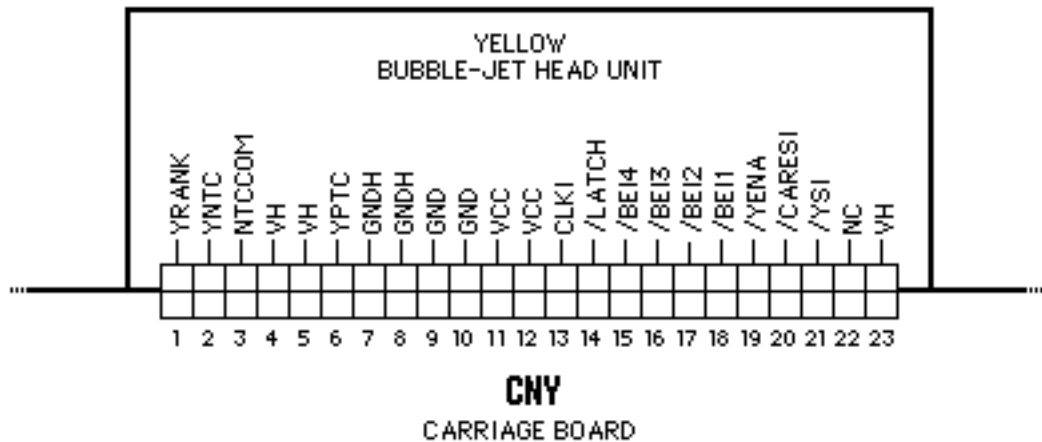


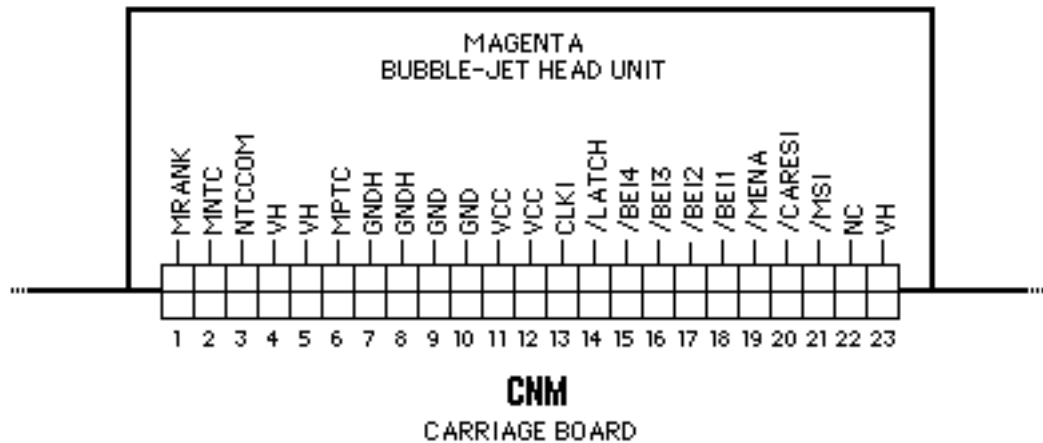
RIGHT CONNECTOR BOARD

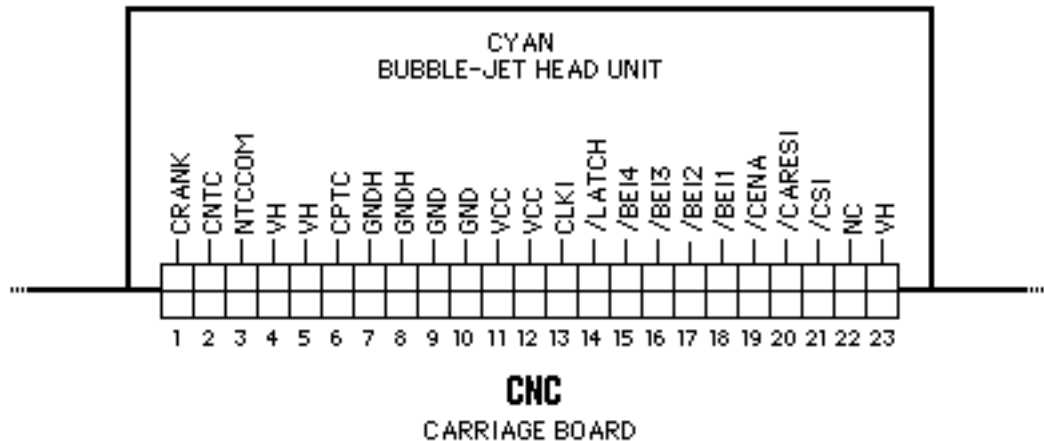
CNCA2**CNCA2**

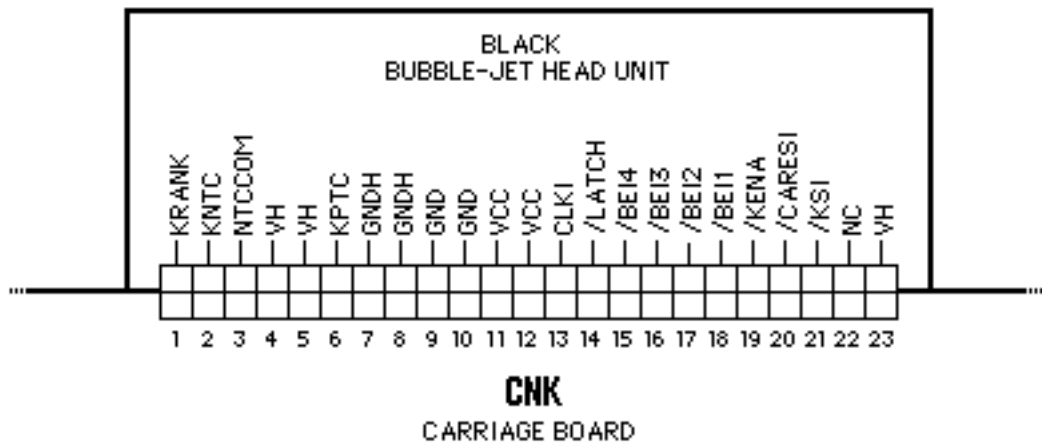
CARRIAGE BOARD

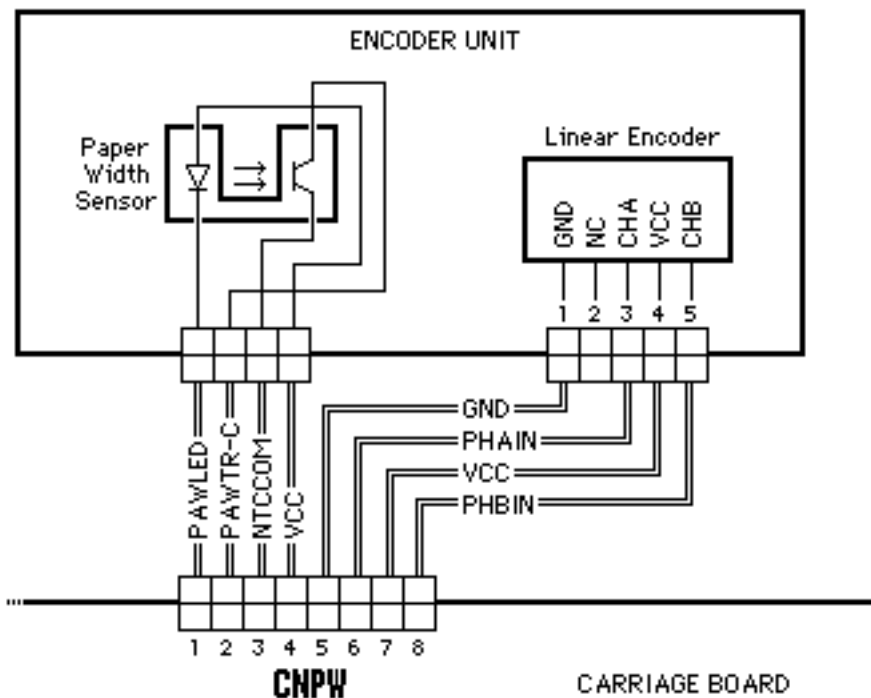














Specifications

Apple Color Printer





Characteristics

Print Methods	Serial bubble jet ink-on-demand
Throughput	170 cps (10 cpi) text/standard speed mode 300 cps (10 cpi) text/high-speed mode 6.120 dots/sec. bit image
Print Head	1 x 64 nozzles for each color
Print Head Life	Approximately 100 million characters (MODE-A)
Input Buffer	7 KB





Graphics

Resolution

360 dpi (best mode)





Paper Handling

Paper	Coated (recommended)
Cut Sheets	LDG, LTR, LGL, A3, B4, A4 Width: 7.9 in. to 11.7 in. (210 to 297 mm) Length: 7.9 in. to 17.0 in. (210 to 432 mm) Weight: 16 to 24 lbs. Capacity: 100 sheets (A4, LTR) 50 sheets (B4, A3, LGL, LDG)
Envelopes	Commercial Number 10 size only (4.1 in. x 9.5 in) Capacity: 5 envelopes
Transparencies	Coated transparencies, most inkjet transparencies





Ink Cartridges

Type	Color ink cartridges (four available)
Ink Color	Black, Cyan, Magenta, Yellow
Ink Amount	Approx. 30 g (per cartridge)
Life	Text: Approx. 700 pages (A4/LTR)





Environmental

Acoustic Noise Level Approx. 45 dB (reference level)

Temperature 59°F to 86°F (15°C to 30°C)

Humidity 10% to 80% (no condensation)





Electrical

Power Source

AC 120V 60Hz 0.36A (U.S./Canada)

Power Consumption

48 W maximum





Physical

Dimensions

Height: 6.7 inches (169 mm)

Width: 20.5 inches (520 mm)

Depth: 16.0 inches (407 mm)

Weight

Approx. 22 lbs (10 kg)





Troubleshooting

Apple Color Printer





General

The Symptom Charts included in this chapter will help you diagnose specific symptoms related to your product. Because cures are listed on the charts in the order of most likely solution, try the first cure first. Verify whether or not the product continues to exhibit the symptom. If the symptom persists, try the next cure. (Note: If you have replaced a module, reinstall the original module before you proceed to the next cure.)

If you are not sure what the problem is, or if the Symptom Charts do not resolve the problem, refer to the Flowchart for the product family.

For additional assistance, contact Apple Technical Support.





Symptom Charts

Operation

No power

- 1 Check power cable connections.
- 2 Replace power cord.
- 3 Replace fuse.
- 4 Replace power supply (international repairers only) or return printer to Apple for service.





Does not print

- 1 Turn on printer and restart computer. Make sure ON LINE is displayed.
- 2 Press On Line key.
- 3 Check interface cable connections.
- 4 If error message is displayed, see “Error Messages” in this chapter.
- 5 Check SCSI setting.
- 6 Use Apple-approved SCSI cable.
- 7 Check that SCSI connections are terminated properly.
- 8 Replace printer driver.
- 9 Replace SCSI card assembly or return printer to Apple for service.





Paper

- | | |
|---|--|
| Paper sticks together | <ol style="list-style-type: none">1 Remove excess sheets from paper tray.2 Use specified media only.3 Check that settings in Page Setup menu are correct. |
| Paper skews | <ol style="list-style-type: none">1 Remove excess sheets from paper tray.2 Use specified media only.3 Stack paper flush against left side of paper tray and adjust paper guide.4 Check rollers. Clean or replace if necessary (international repairers only). |
| Paper jams and printer displays "13 CHECK PAPER" error code | Remove paper from tray and press On Line key. If jammed paper does not eject, carefully remove it by hand. |





Paper jams during loading, before printing

Carefully remove paper by hand.

Paper jams inside printer

Remove top cover. Pull out paper in direction of paper output. (Do not pull paper back toward you. Doing so could bend stainless steel bar that holds paper down.)

Paper jams during output, after printing

Pull out paper in direction of paper output.





Blurring and/or smudging

- 1 Adjust print head position lever all the way down.
- 2 Use specified media only.
- 3 Set printer to proper printing mode. See “User Menus” in Basics chapter.
- 4 Make sure print head is in correct position. If necessary, perform the adjustments described in “Print Head Gap” in the Adjustments chapter (international repairers only).
- 5 Perform the “Print Head Cleaning” procedure; see the Additional Procedures chapter (international repairers only).
- 6 Check print head gap; see “Print Head Gap” in Adjustments chapter (international repairers only).





Print Quality

Missing dots and/or
white streaks

- 1 Perform “Print Head Cleaning” and “Nozzle Check.”
See Additional Procedures chapter.
- 2 Make sure ink cartridges are set firmly.
- 3 Use specified media only.
- 4 Replace bubble-jet head unit.
- 5 Replace carriage board (international repairers only).
- 6 Replace logic board (international repairers only).





Error Messages

00 READY		In on-line state, message indicates that printer is ready to accept data. In off-line state, message indicates that printer is not experiencing any errors.
00 READY	*	Print head has been properly capped and printer can be turned off.
00 IGNORE DATA		Message indicates that data has been ignored and discarded. Press Menu and < keys at same time. Printer will then return to standard operating mode and message will change to "00 READY."
01 TEST PRINT		Printer is executing self-test print. After test print is finished, press On Line key.
02 WARMING UP		Printer is warming up. Allow approximately 30 seconds before printing.





03 RESET	Printer is restoring its setting to power-up status.
08 CLEANING	Printer is cleaning print head.
10 CHECK PAPER	Paper has run out or is inserted improperly. Load paper into paper feed.
40 SERVICE	<ol style="list-style-type: none">1 Check SCSI cable.2 Check SCSI terminator.3 Replace SCSI card assembly.4 Replace logic board (international repairers only) or return printer to Apple for service.





50 SERVICE

- 1 Check carriage motor.
- 2 Remove any obstructions in carriage drive path.
- 3 Replace print timing slit (international repairers only).
- 4 Replace encoder unit (international repairers only).
- 5 Replace carriage board (international repairers only).
- 6 Replace logic board (international repairers only) or return printer to Apple for service.

51 SERVICE

- 1 Check carriage motor.
- 2 Remove any obstructions in carriage drive path.
- 3 Replace print timing slit (international repairers only).
- 4 Replace encoder unit (international repairers only).
- 5 Replace carriage board (international repairers only).
- 6 Replace logic board (international repairers only).
- 7 Replace purge unit (international repairers only) or return printer to Apple for service.





52-55 SERVICE

- 1 Check bubble-jet head unit connection.
- 2 Replace bubble-jet head unit.
 - Error 52 Black bubble-jet head unit
 - Error 53 Cyan bubble-jet head unit
 - Error 54 Magenta bubble-jet head unit
 - Error 55 Yellow bubble-jet head unit
- 3 Return printer to Apple for service.

56-59 SERVICE

- 1 Check bubble-jet head unit connection.
- 2 Replace bubble-jet head unit.
 - Error 56 Black bubble-jet head unit
 - Error 57 Cyan bubble-jet head unit
 - Error 58 Magenta bubble-jet head unit
 - Error 59 Yellow bubble-jet head unit
- 3 Return printer to Apple for service.





5A-5D SERVICE

- 1 Replace bubble-jet head unit.
Error 5A Black bubble-jet head unit
Error 5B Cyan bubble-jet head unit
Error 5C Magenta bubble-jet head unit
Error 5D Yellow bubble-jet head unit
- 2 Return printer to Apple for service.

5E SERVICE

- 1 Unlock carriage lock lever located under printer cover.
- 2 Check carriage for binding. Perform “Print Head Gap” in the Adjustments chapter (international repairers only).
- 3 Replace carriage drive motor (international repairers only).
- 4 Replace logic board (international repairers only) or return printer to Apple for service.





5F SERVICE

- 1 Unlock carriage lock lever located under printer cover.
- 2 Check carriage for binding. If necessary, perform “Print Head Gap” in the Adjustments chapter (international repairers only).
- 3 Replace carriage drive motor (international repairers only).
- 4 Replace logic board (international repairers only) or return printer to Apple for service.

61 SERVICE

Replace logic board (international repairers only) or return printer to Apple for service.

61 SERVICE

Replace logic board (international repairers only) or return printer to Apple for service.

63 SERVICE

Replace logic board (international repairers only) or return printer to Apple for service.





65 SERVICE

- 1 Replace logic board (international repairers only).
- 2 Replace control panel (international repairers only).
- 3 Replace ribbon cables (international repairers only) or return printer to Apple for service.

Note: Printer beeps a number of times while displaying this error code.

66 SERVICE

Replace logic board (international repairers only) or return printer to Apple for service.

68 SERVICE

Replace logic board (international repairers only) or return printer to Apple for service.

72 SERVICE

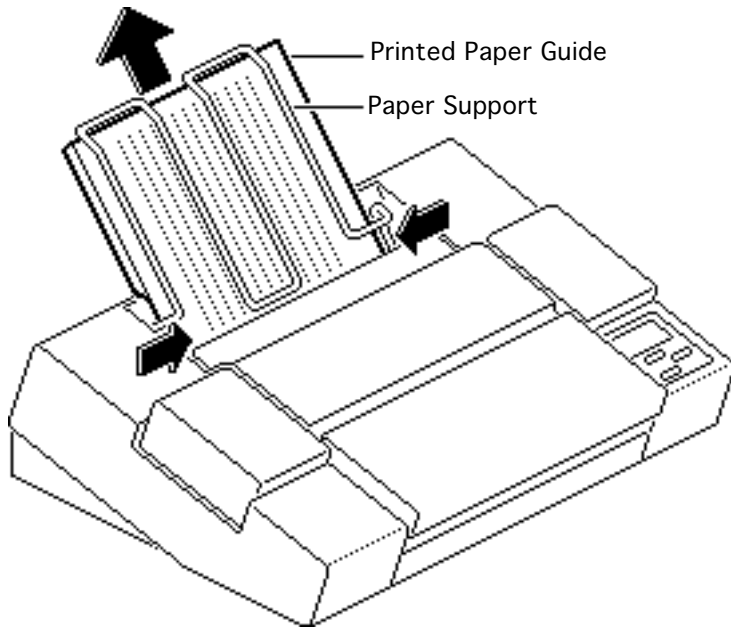
Replace logic board (international repairers only) or return printer to Apple for service.





Take Apart
Apple Color Printer





Covers

No preliminary steps are required before you begin this procedure.

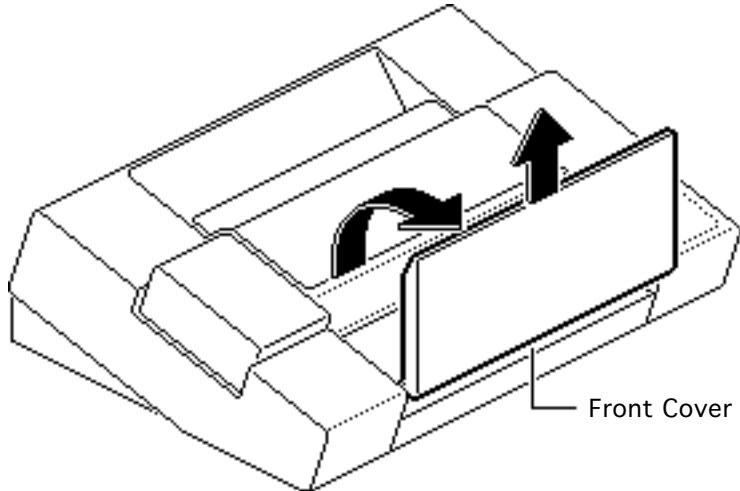
Note: This procedure covers the removal of all covers on the printer.

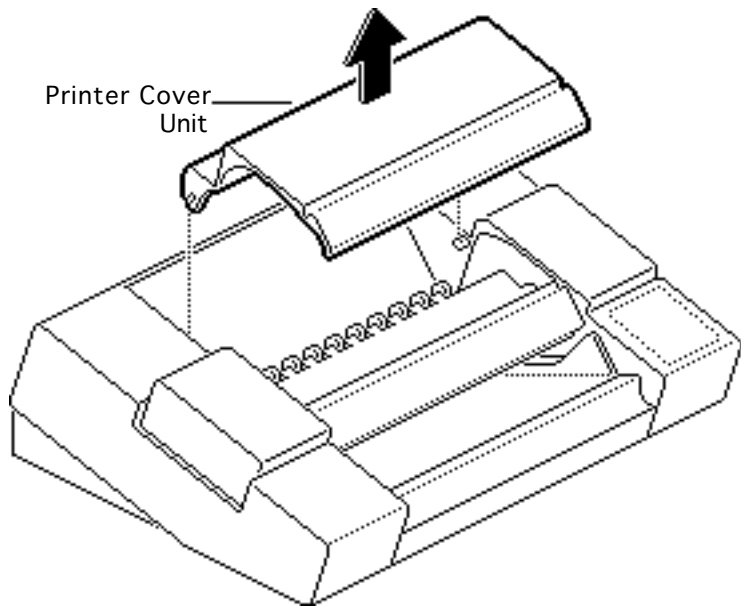
- 1 Remove the paper support.
- 2 Pull up the printed paper guide.





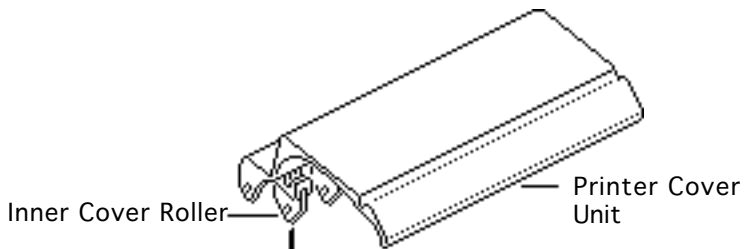
- 3 Pull the front cover toward you and lift off the cover.



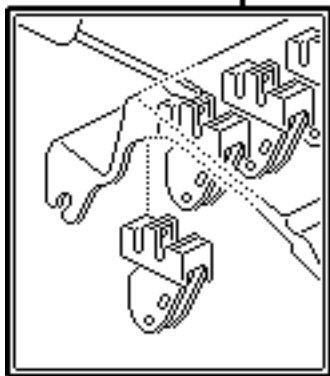


- 4 Lift off the printer cover unit.
- 5 Carefully place the printer cover unit with the inner cover rollers facing up.



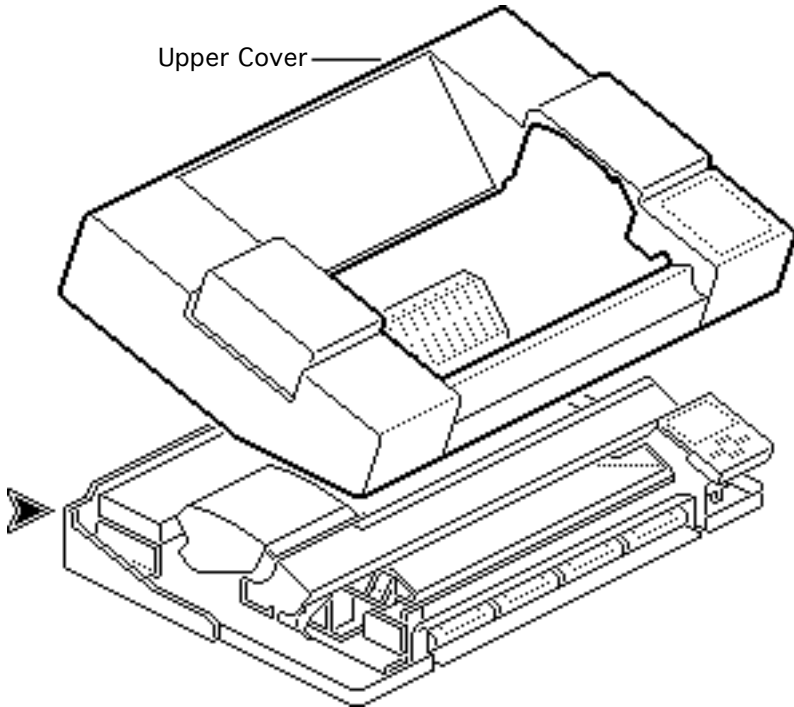


- 6 Using a small screwdriver, push out the two latches.
- 7 Pull up and remove the inner cover roller.





Upper Cover

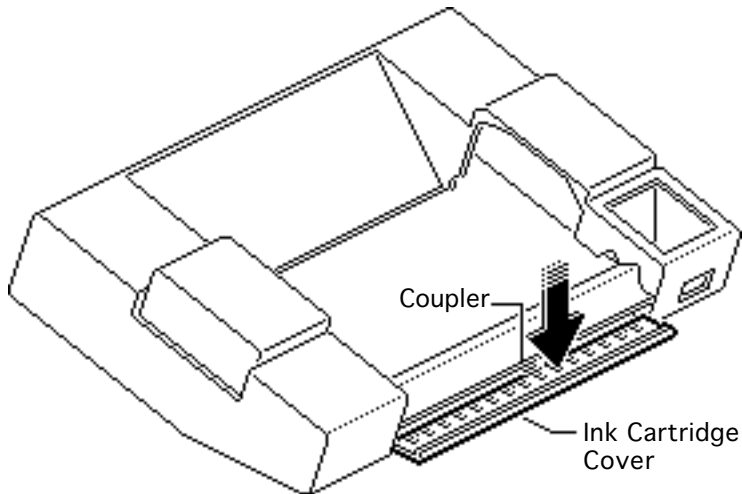


- 8 Loosen the two screws and lift off the upper cover.



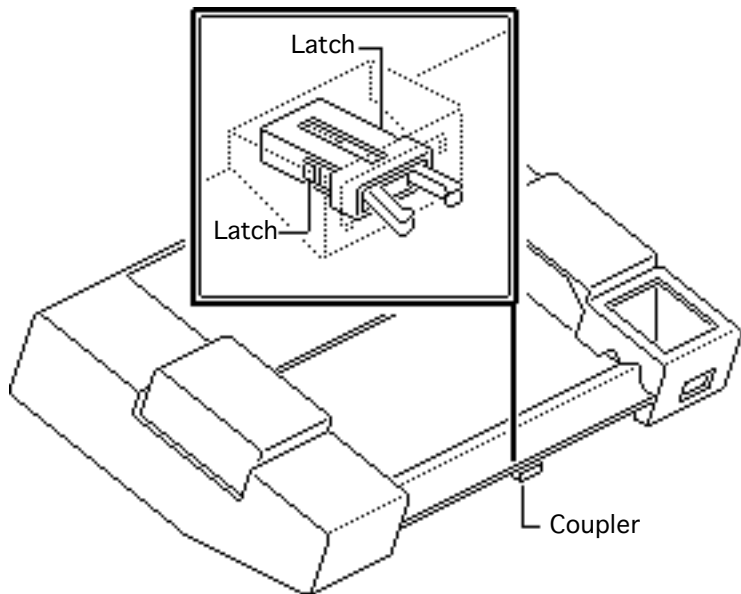


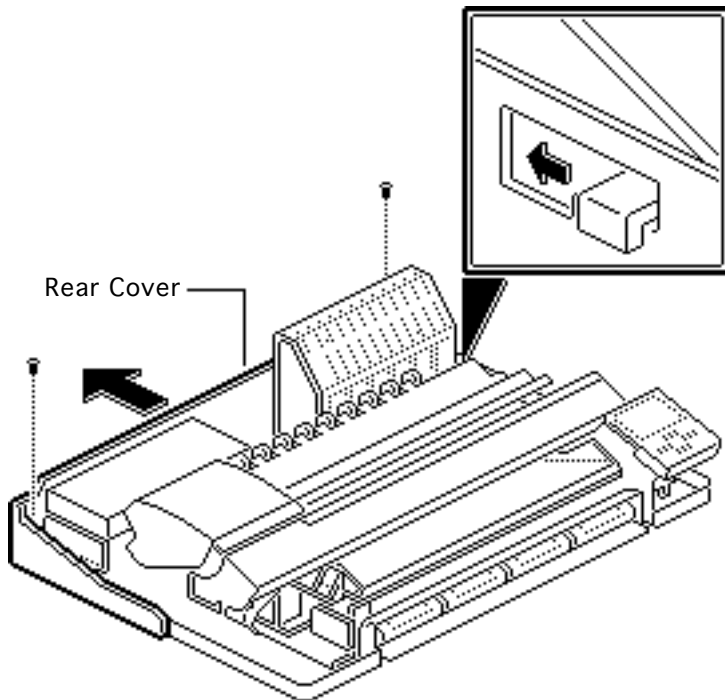
- 9 Press the center of the ink cartridge cover and release the coupler.
- 10 Push down and remove the ink cartridge cover.





- 11 Using a small screwdriver, push in the two small latches and press up the coupler.





- 12 Remove the two rear cover mounting screws.
- 13 Lift up the front of the rear cover.
- 14 Pull back the rear cover and remove the cover.

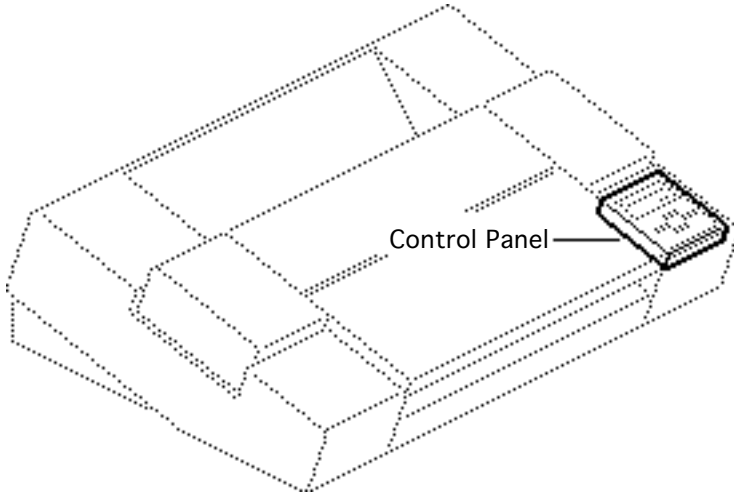


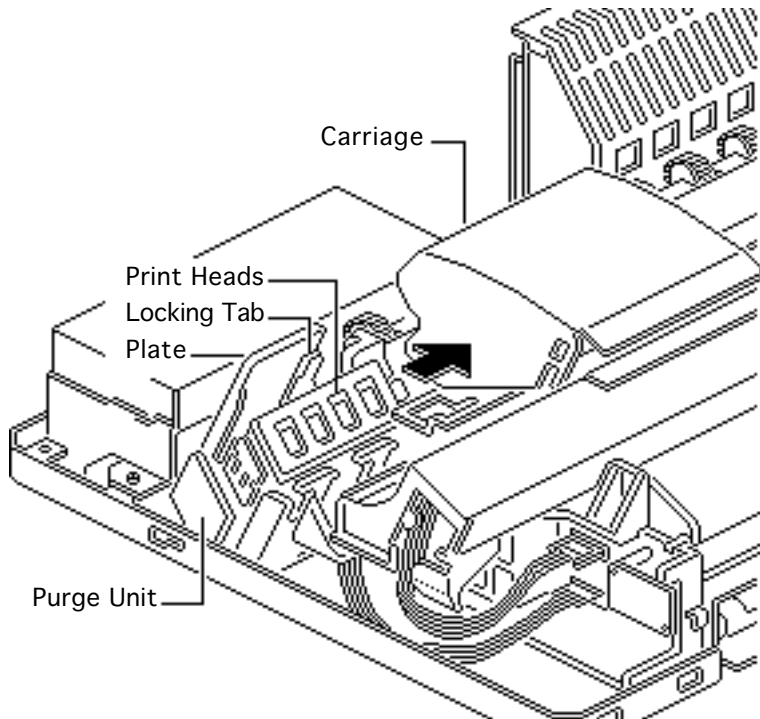


Control Panel (Intl. Only)

Before you begin, remove the covers.

Caution: Review the ESD precautions in Bulletins/ Safety.

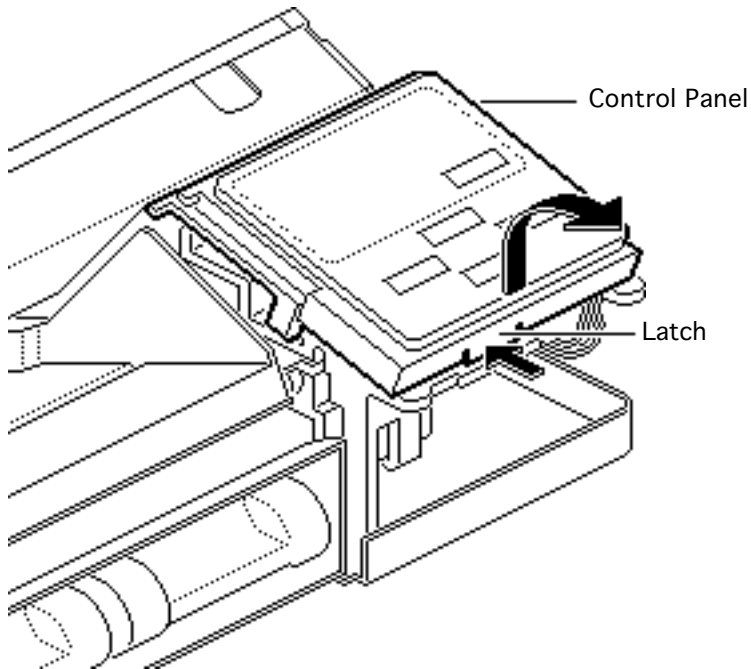




- 1 Lift the plate on the purge unit.
- 2 Push down the locking tab and move the carriage out of home position.

Caution: The print heads are now uncapped. Do not leave them uncapped for more than 12 hours or they will dry out.



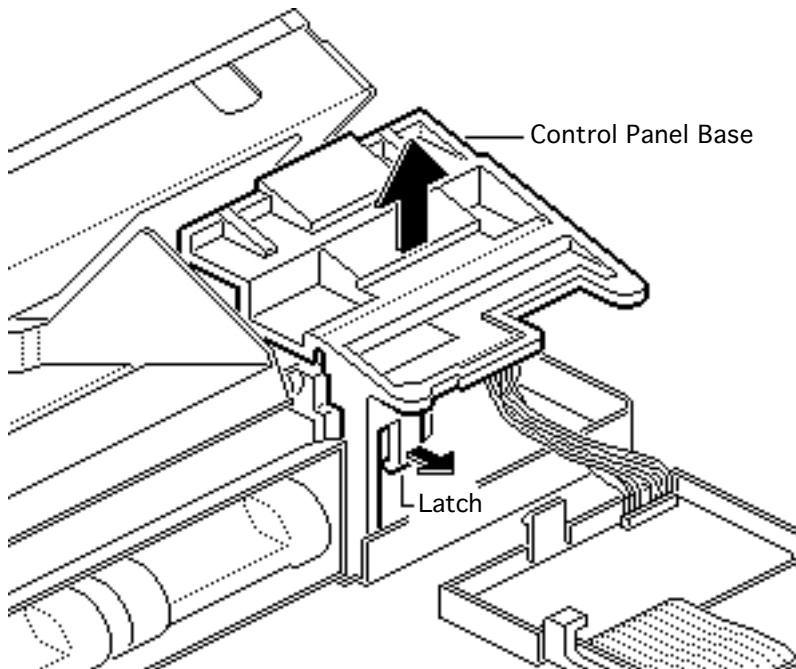


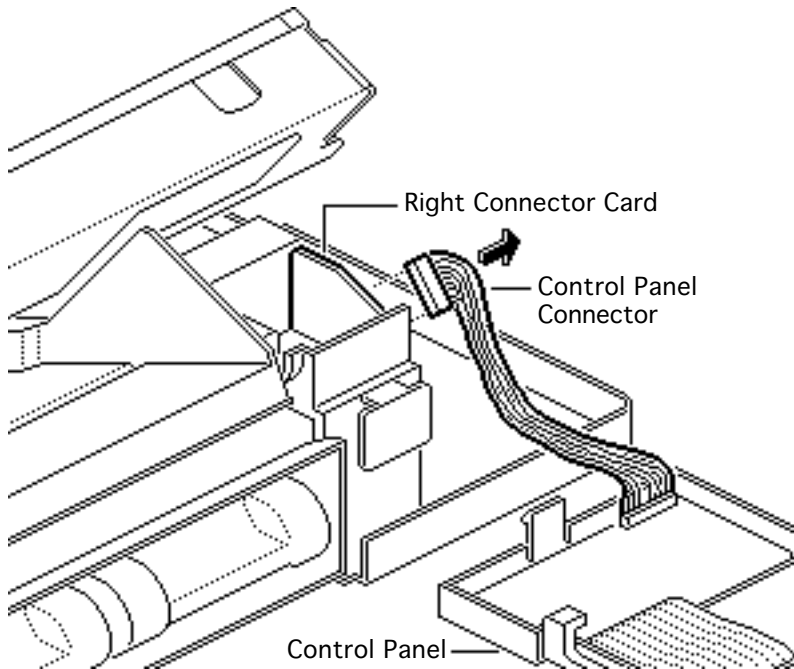
- 3 Push in the latch, lift the front of the control panel, and pull it toward you.
- 4 Lay the control panel in front of the printer.





- 5 Pull the latch and lift up the control panel base.





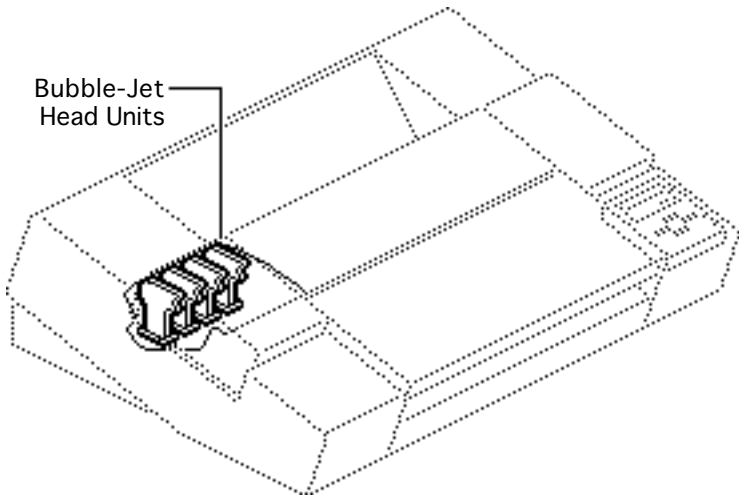
- 6 Disconnect the control panel connector from the right connector card.
- 7 Remove the control panel.





Bubble-Jet Head Units

Bubble-Jet
Head Units

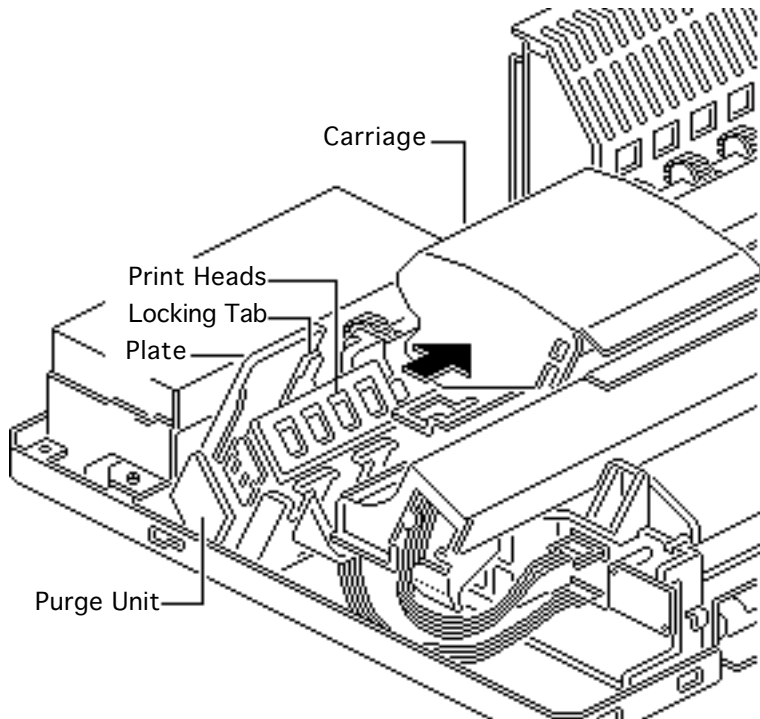


Before you begin, remove the covers.

Caution: Review the ESD precautions in Bulletins/ Safety.

Caution: Do not get the ink on your hands or clothes. Although the ink is water soluble, it contains dyes that will stain.





Caution: To prevent the print nozzles from clogging, do not touch or wipe them.

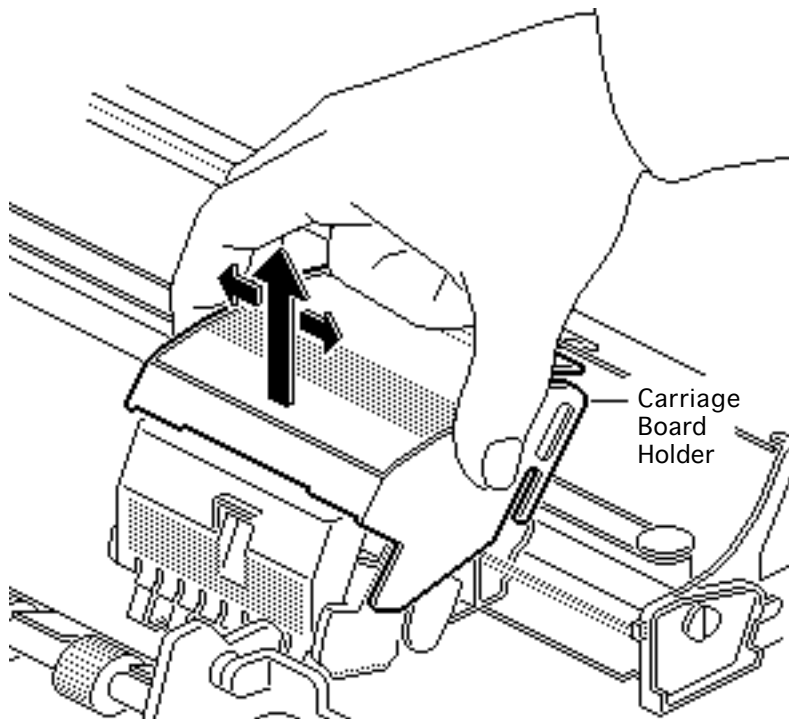
- 1 Lift the plate on the purge unit.
- 2 Push down the locking tab and move the carriage out of home position.

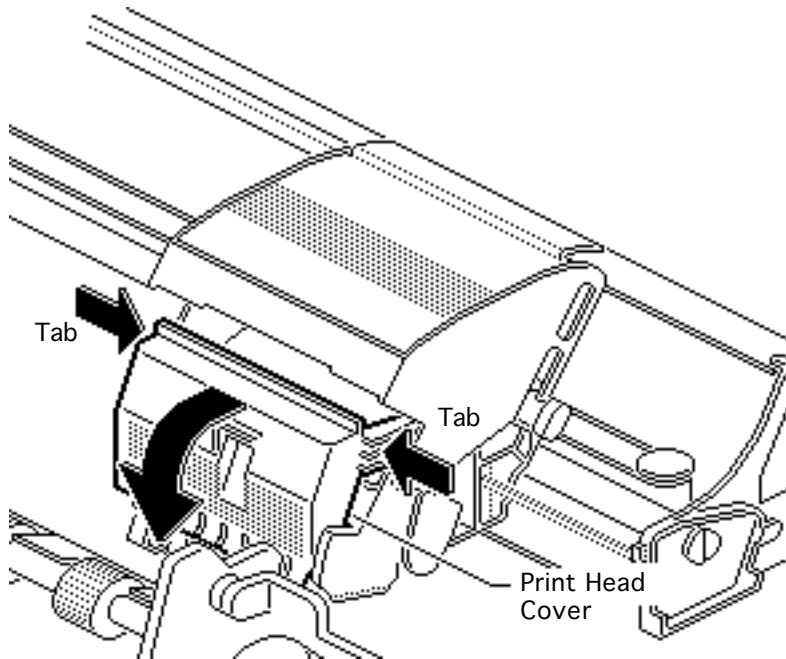
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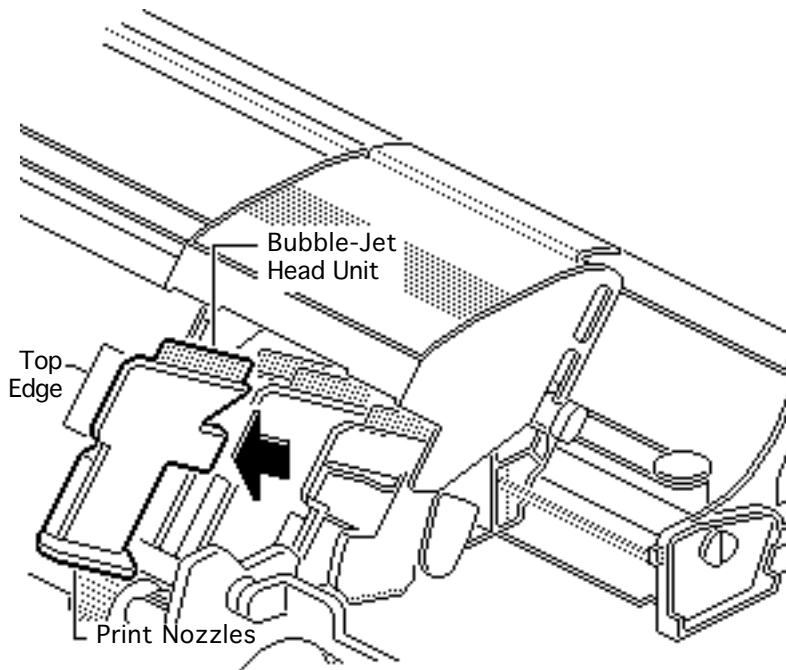
- 3 Using a side-to-side motion, lift up the carriage board holder.





- 4 Release the tabs on both sides of the print head cover.
- 5 Pull the cover downward and remove it.



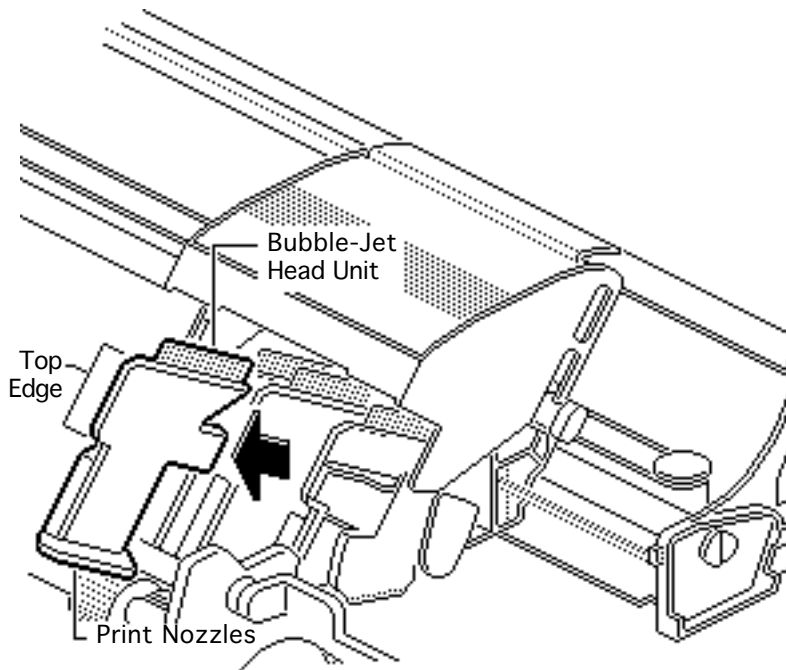


- 6 **Caution:** Handle each bubble-jet head unit by the top edge only. To prevent the print nozzles from clogging, do not touch or wipe them.

Note: Before removing any of the bubble-jet head units, label a sheet of paper with each color. Then place each unit on the appropriate label.

Grasp the top edge of one of the bubble-jet head units and gently pull out the unit.





- 7 Repeat for each of the three remaining units.

Replacement Note:

Before installing a new bubble-jet head unit, remove the orange tape and grey rubber cap that cover the print nozzles. Do not shake the new bubble-jet head or the ink may leak.



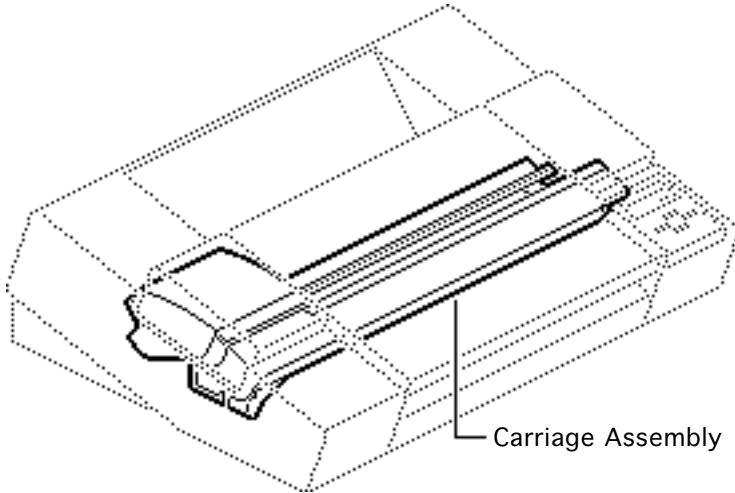


Carriage Assembly (Intl. Only)

Before you begin, remove the following:

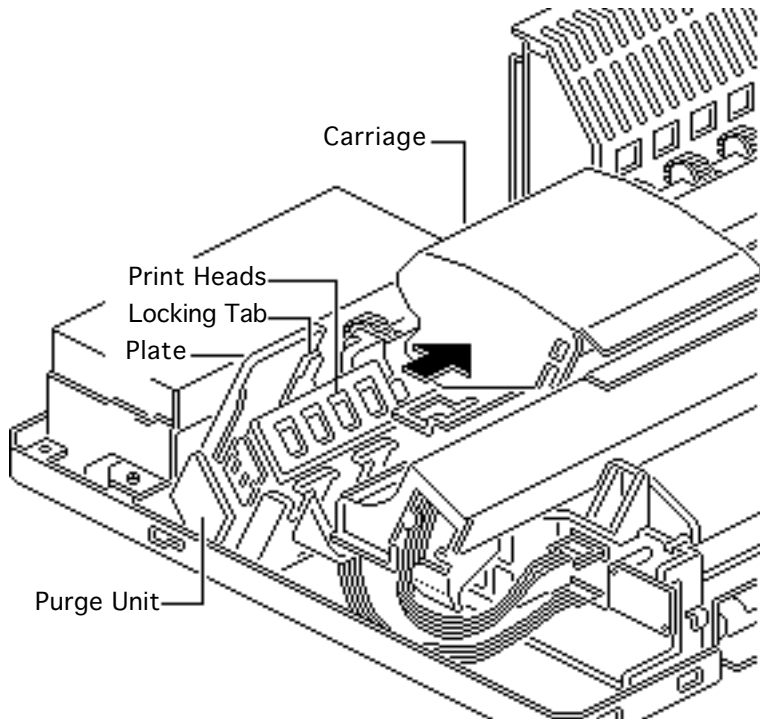
- Covers
- Control panel

Caution: Review the ESD precautions in Bulletins/ Safety.



Carriage Assembly





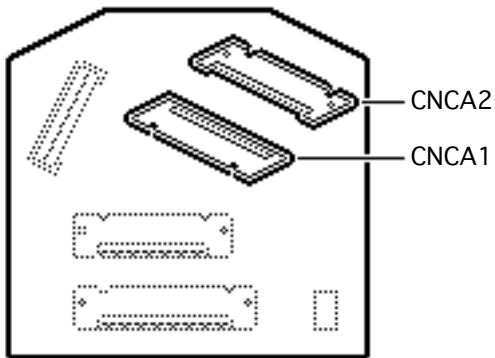
- 1 Lift the plate on the purge unit.
- 2 Push down the locking tab and move the carriage out of home position.

Caution: The print heads are now uncapped. Do not leave them uncapped for more than 12 hours or they will dry out.



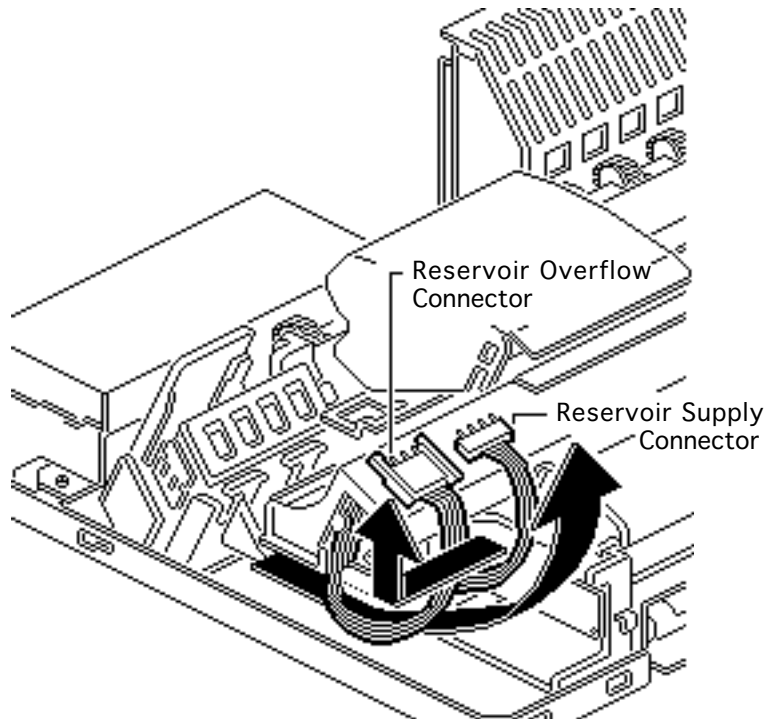


- 3 Disconnect the two cable connectors CNCA2 and CNCA1 from the right connector card.



Right Connector Card

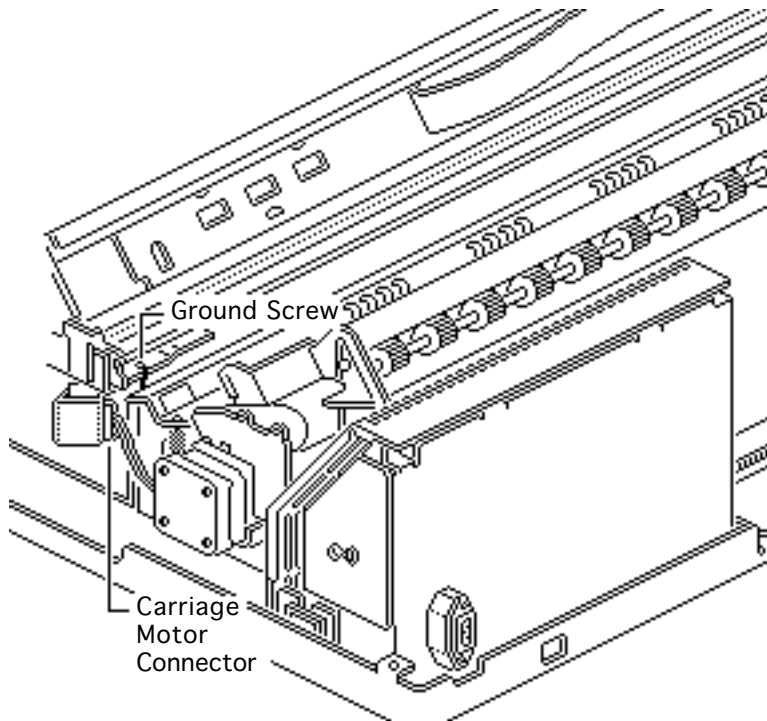




Caution: Make sure the reservoir connectors are secured. If they are not, ink could spill into the printer.

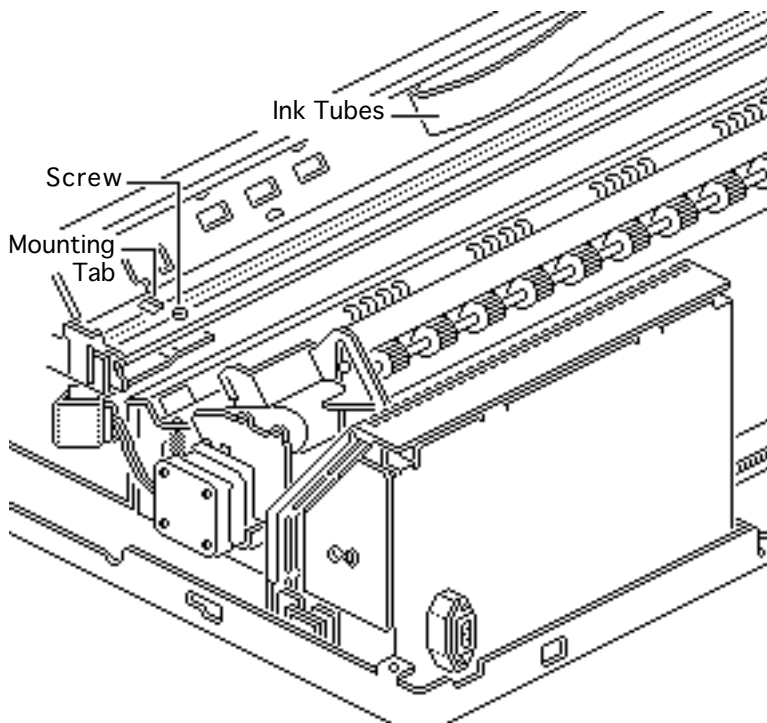
- 4 Remove the reservoir supply and reservoir overflow connectors and hook them onto the carriage assembly.





- 5 Remove the ground screw.
- 6 Disconnect the carriage motor connector.





- 7 Remove the screw and push in the mounting tab on one side of the carriage assembly. Repeat for other side.
- 8 Lift out the carriage assembly.

Replacement Note: Make sure the ink tubes are not caught under the carriage assembly.

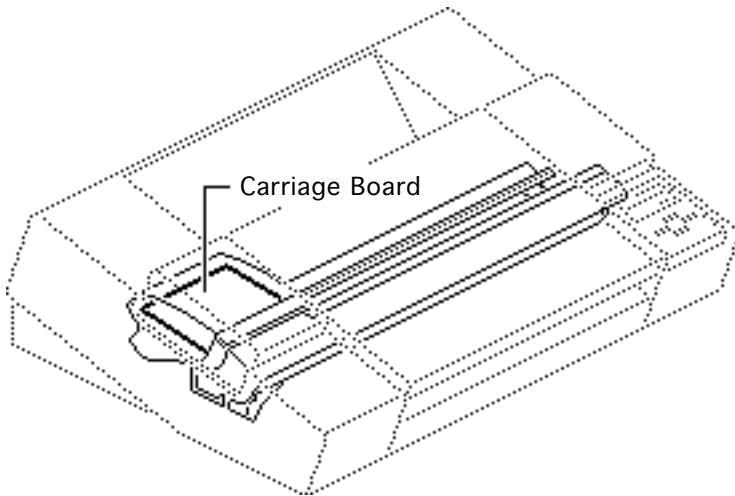


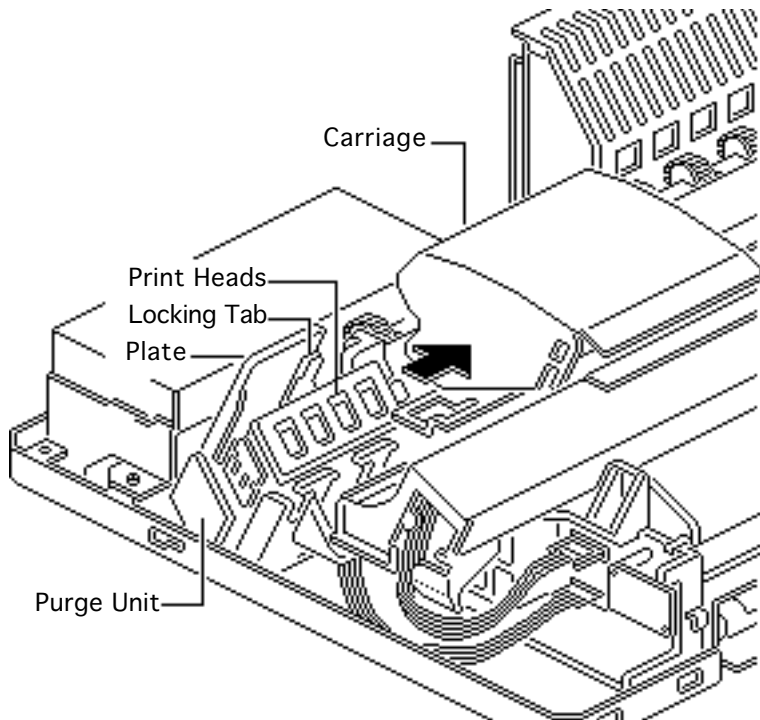


Carriage Board (Intl. Only)

Before you begin, remove the covers.

Caution: Review the ESD precautions in Bulletins/Safety.

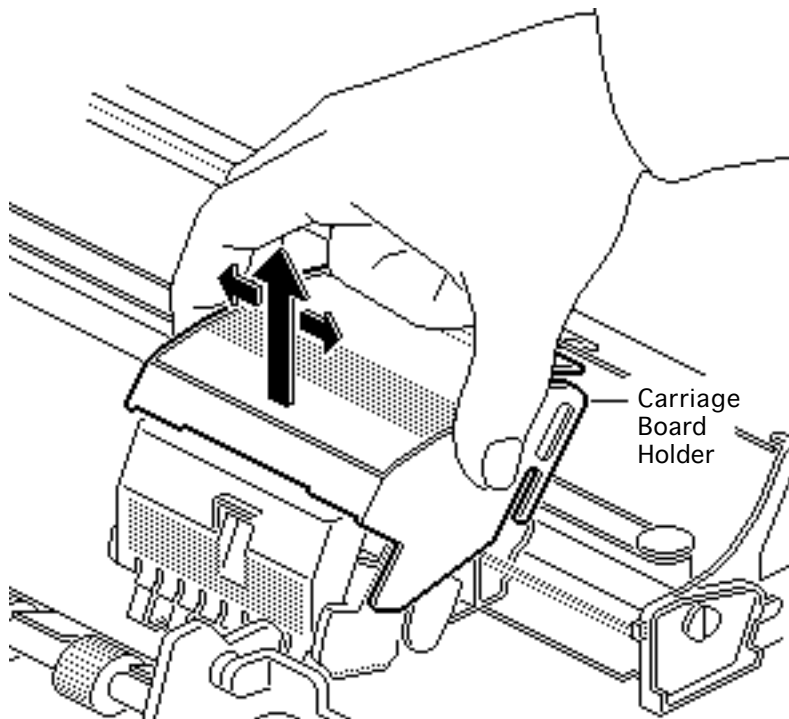




- 1 Lift the plate on the purge unit.
- 2 Push down the locking tab and move the carriage out of home position.

Caution: The print heads are now uncapped. Do not leave the heads uncapped for more than 12 hours or they will dry out.



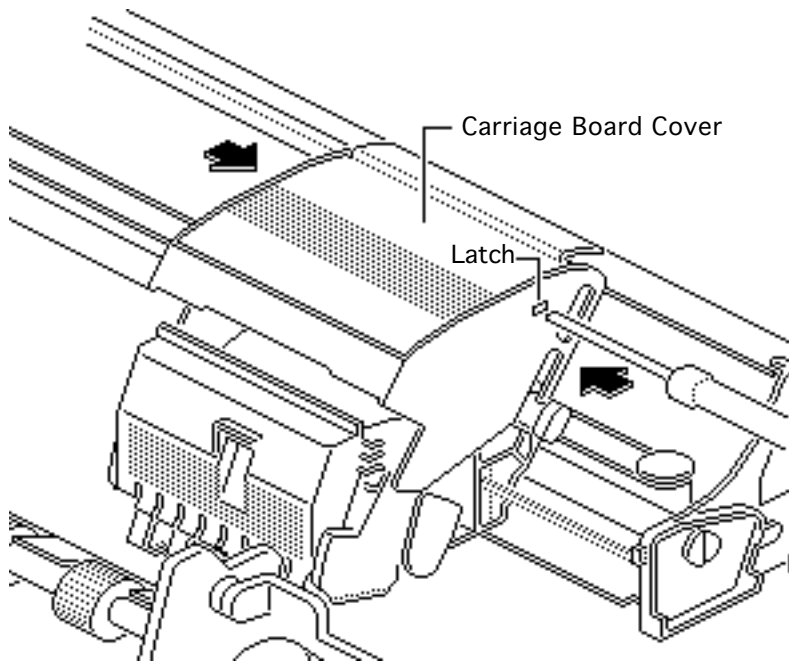


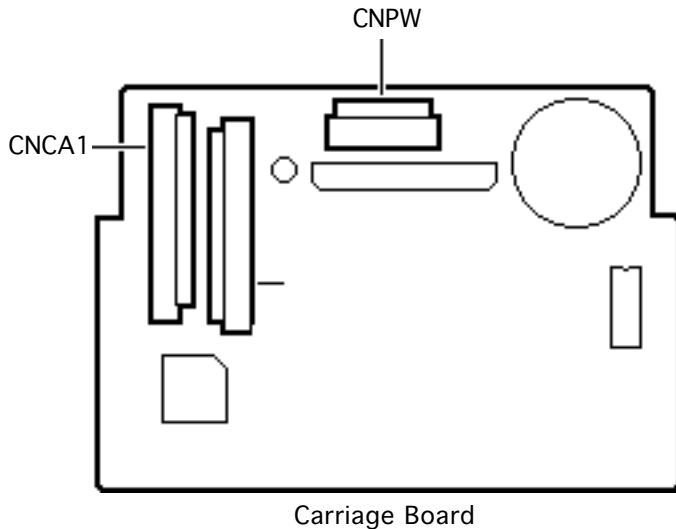
- 3 Using a side-to-side motion, lift up the carriage board holder.





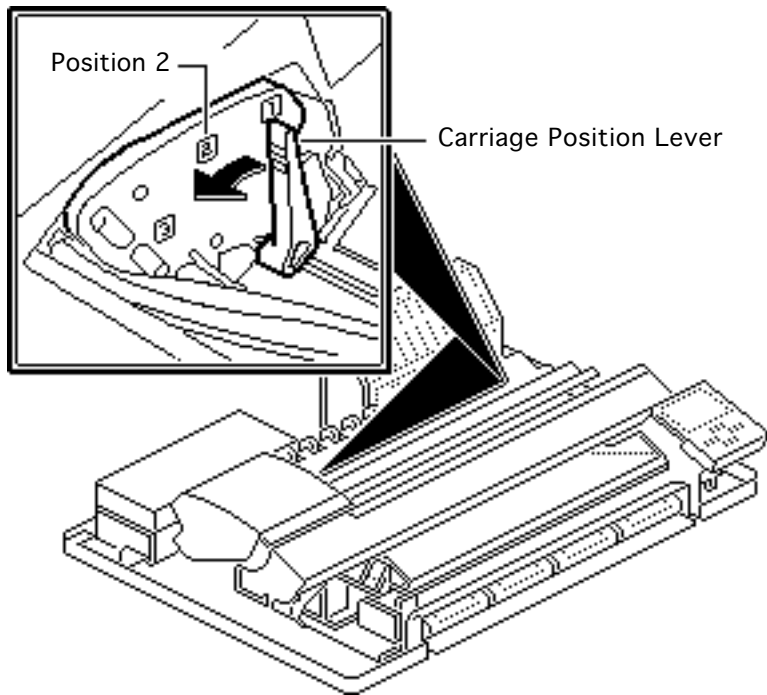
- 4 Push in the two latches and remove the carriage board cover.





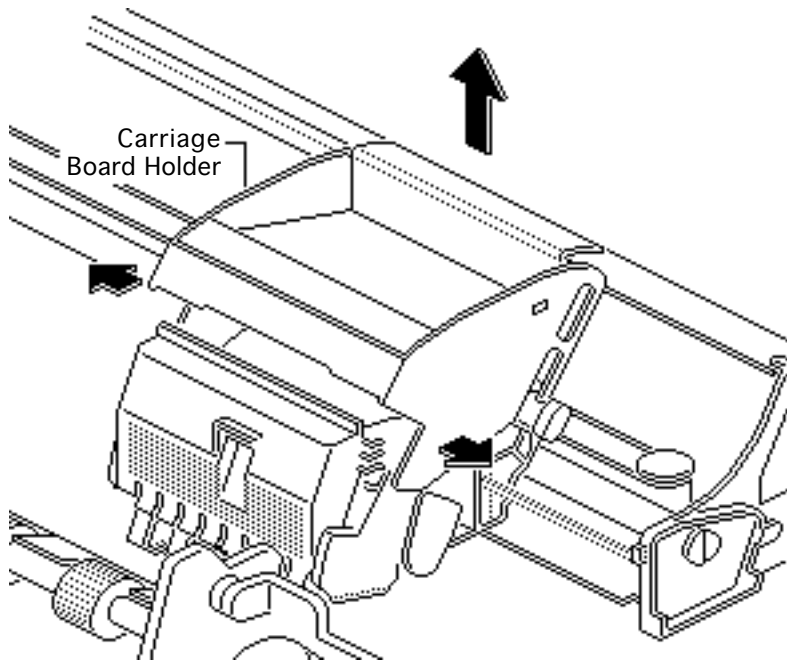
- 5 Disconnect the following connectors from the carriage board:
- CNCA1
 - CNCA2
 - CNPW





- 6 Set the carriage position lever to position 2.

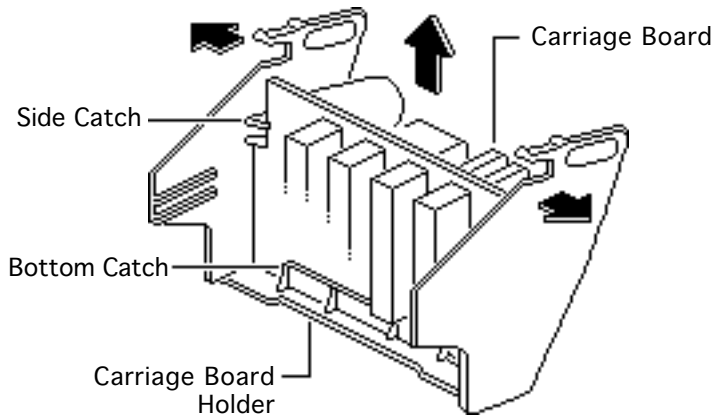




Caution: To avoid damaging the carriage position lever, make sure you do not use excessive force when removing the carriage board holder.

- 7 Carefully pull out the sides of the carriage board holder.
- 8 Lift up and remove the holder from the carriage.





- Carefully push apart the carriage board holder and slide out the carriage board.

Replacement Note: Make sure the board seats in the bottom and side catches.

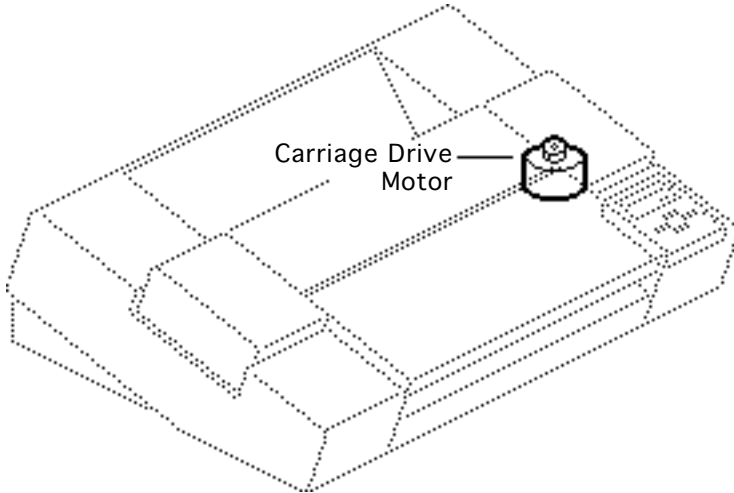


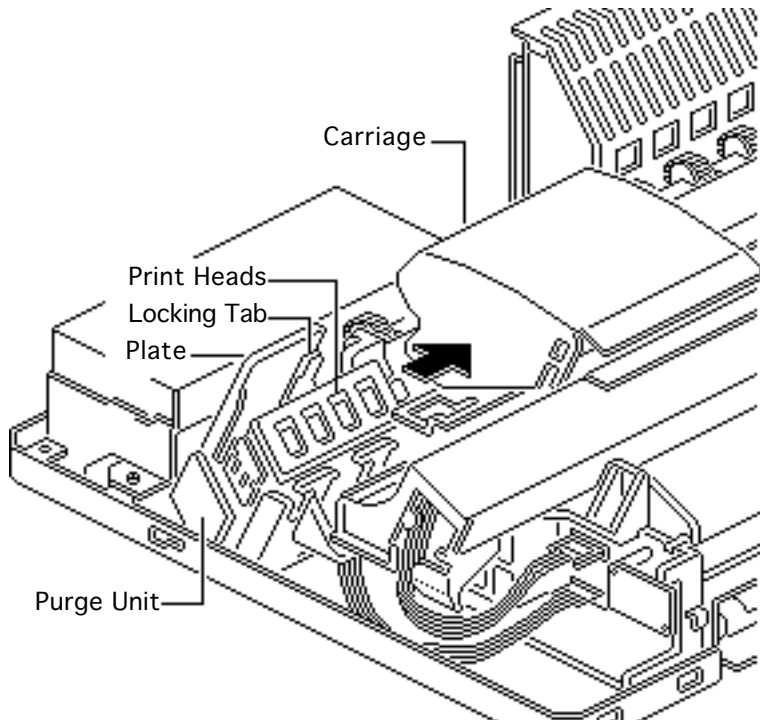


Carriage Drive Motor (Intl. Only)

Before you begin, remove the covers.

Caution: Review the ESD precautions in Bulletins/ Safety.





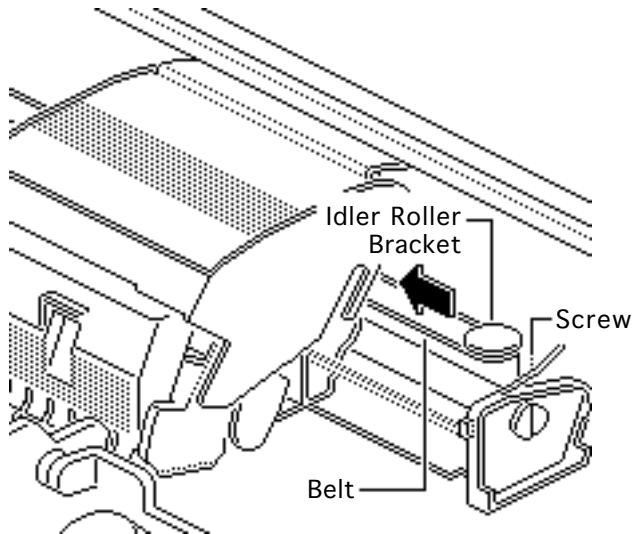
- 1 Lift the plate on the purge unit.
- 2 Push down the locking tab and move the carriage out of home position.

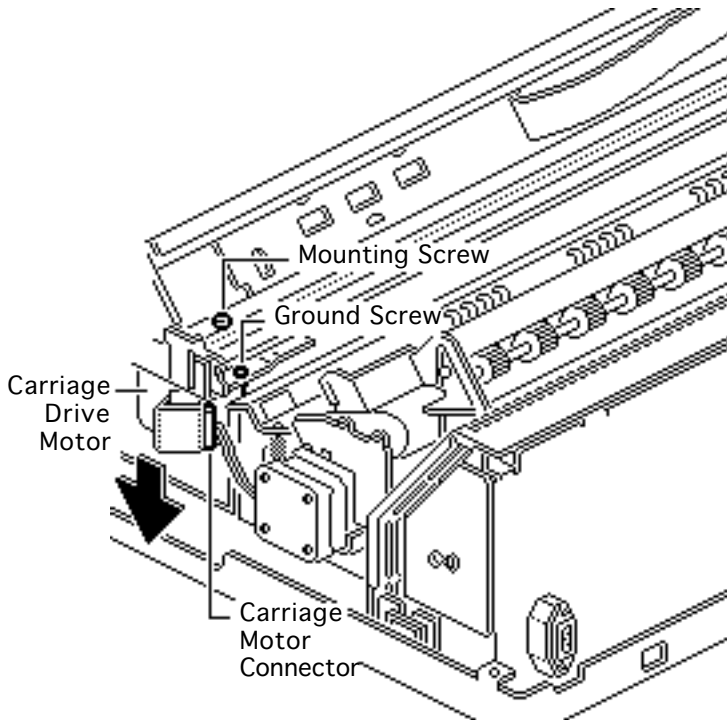
Caution: The print heads are now uncapped. Do not leave the heads uncapped for more than 12 hours or they will dry out.





- 3 Loosen the screw.
- 4 Push in the idler roller bracket and remove the belt from the carriage drive motor.





- 5 Disconnect the carriage motor connector.
- 6 Remove the mounting and ground screws.
- 7 Remove the carriage drive motor.

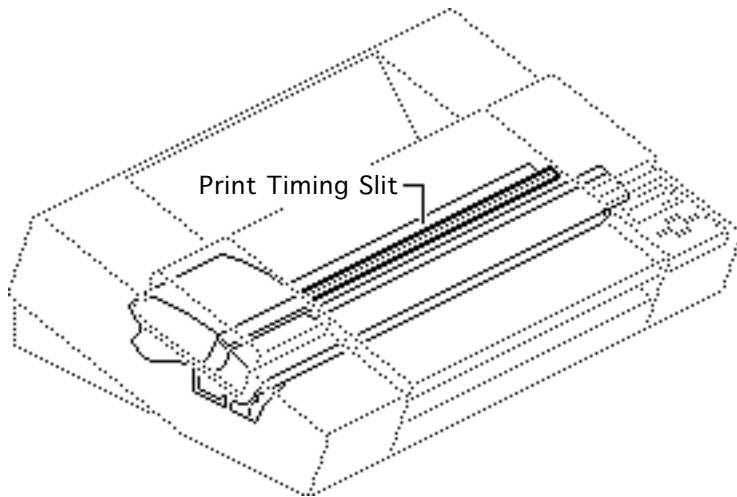


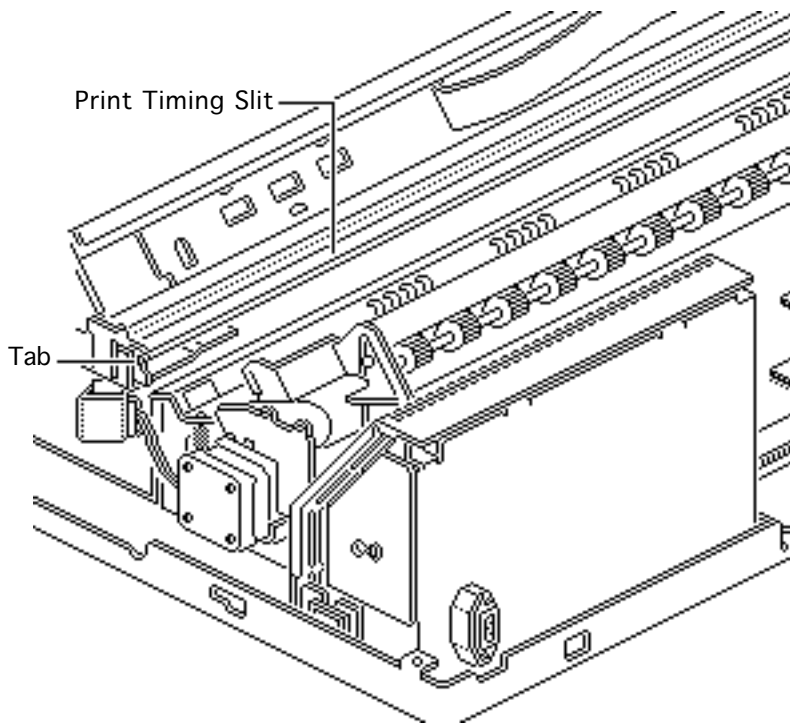


Print Timing Slit (Intl. Only)

Before you begin, remove the covers.

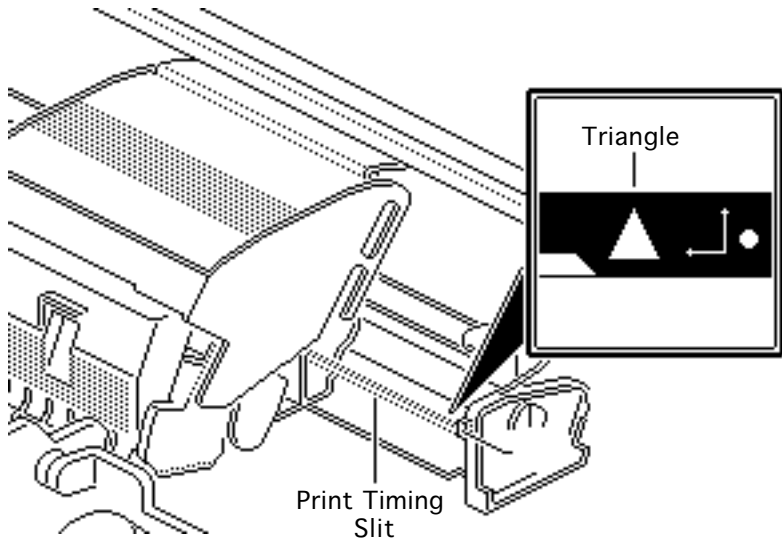
Caution: Review the ESD precautions in Bulletins/Safety.





- 1 Carefully remove the print timing slit from the tab on one side of the carriage assembly.





- 2 Carefully remove the print timing slit from the tab on the other side of the carriage assembly.
- 3 Remove the print timing slit from the carriage assembly.

Replacement Note: Make sure the triangle on the print timing slit is facing up.

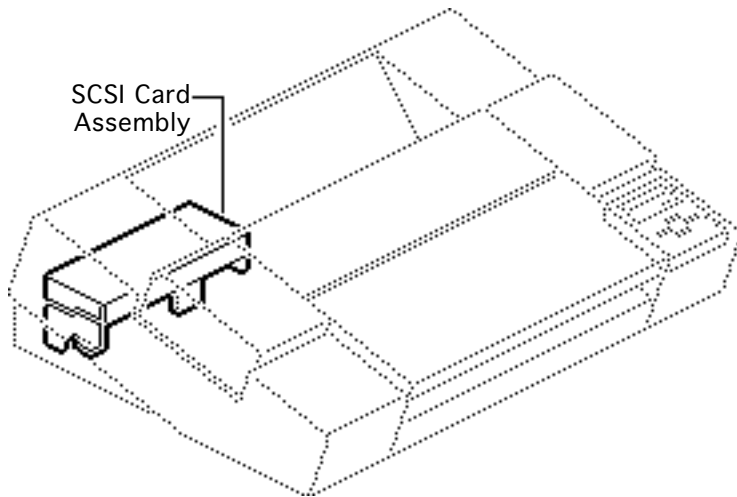




SCSI Card Assembly

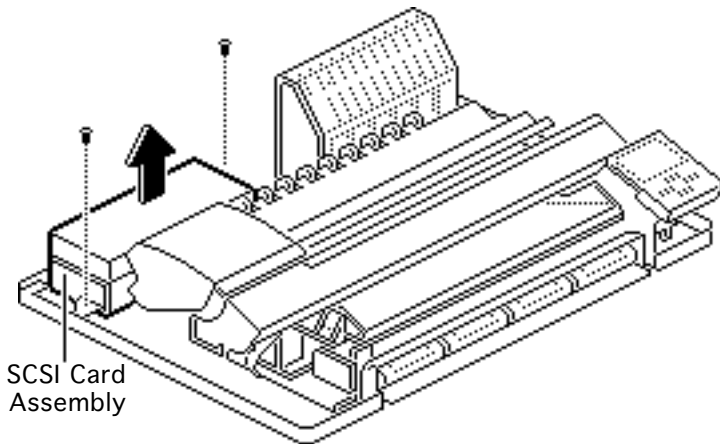
Before you begin, remove the covers.

Caution: Review the ESD precautions in Bulletins/ Safety.



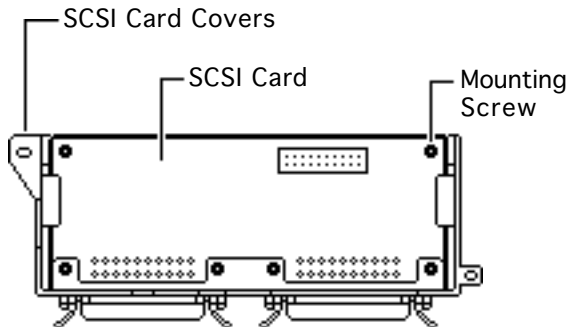


- 1 Remove the two mounting screws and lift off the SCSI card assembly.





- 2 Turn over the SCSI card assembly.
- 3 Remove the six mounting screws and remove the SCSI card covers.

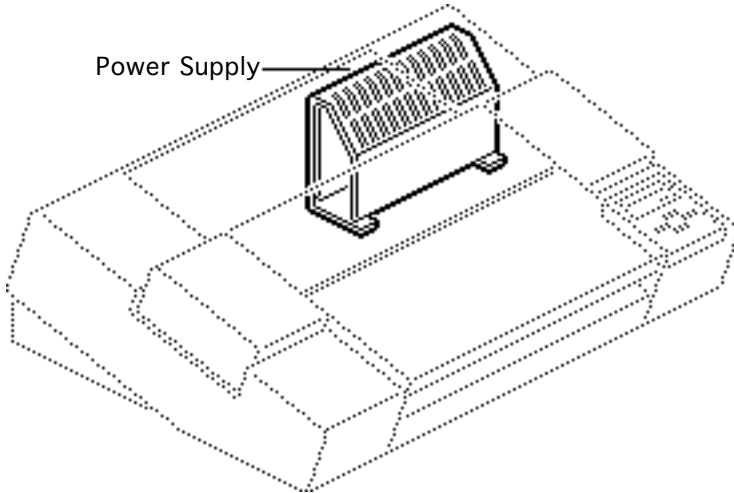


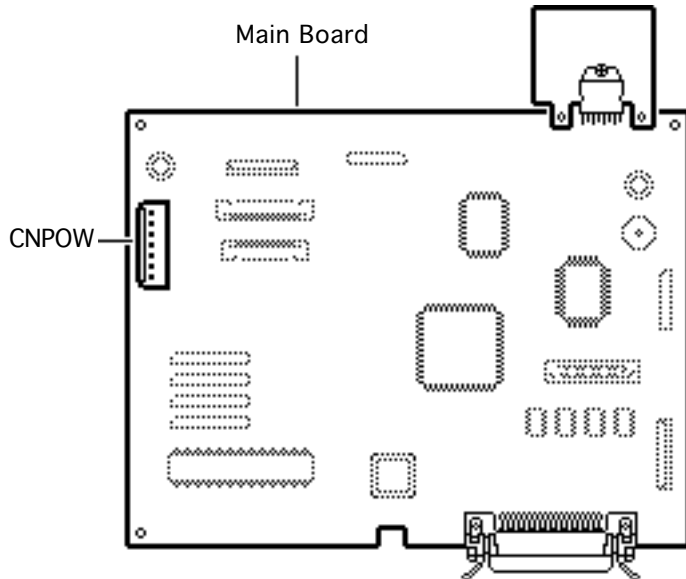


Power Supply (Intl. Only)

Before you begin, remove the covers.

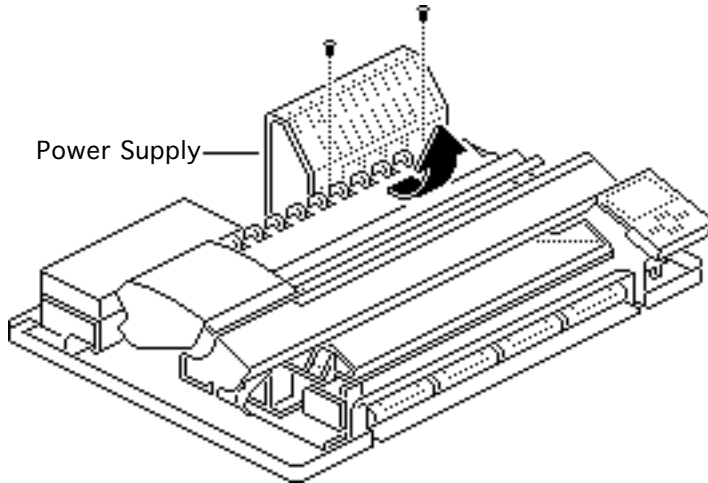
Caution: Review the ESD precautions in Bulletins/Safety.





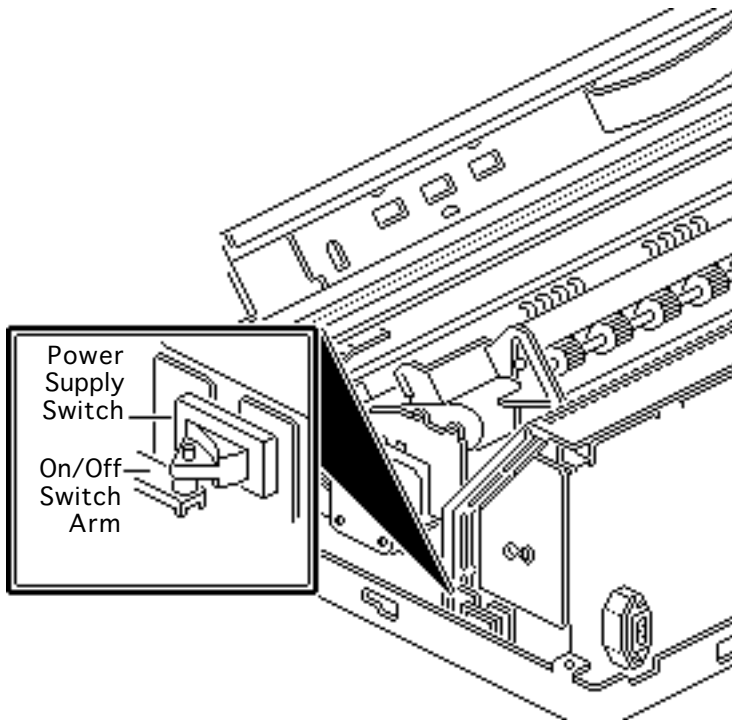
- 1 Disconnect connector CNPOW on the main board.





- 2 Remove the two mounting screws.
- 3 Slide the power supply forward and lift it out of the base.





Replacement Note: Make sure the tab on the power supply switch is correctly seated in the on/off switch arm.

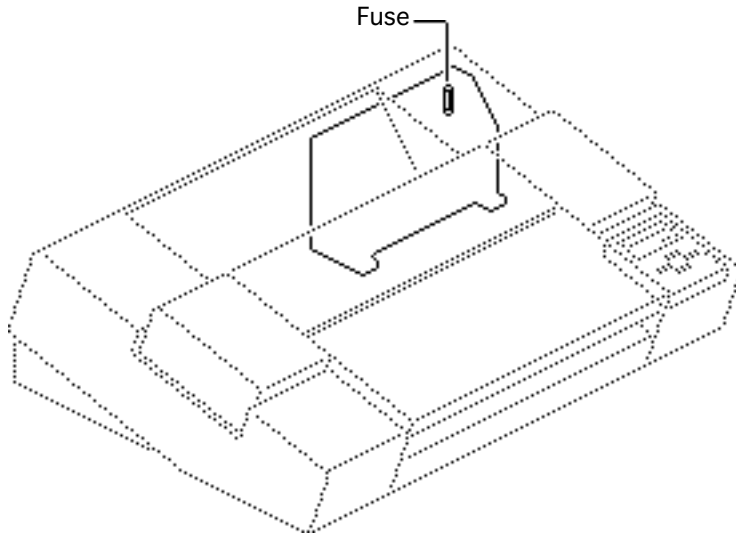


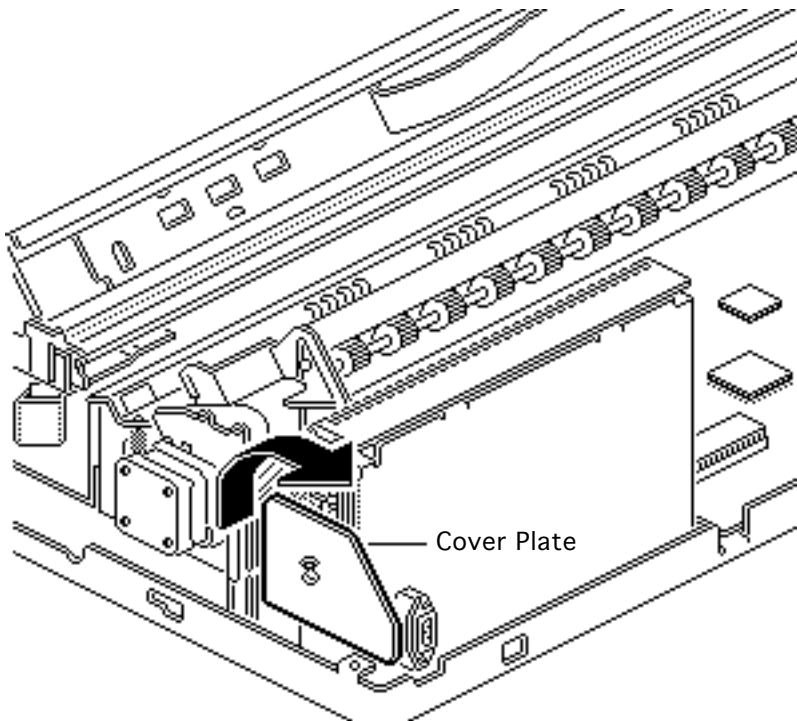


Fuse

Before you begin, remove the covers.

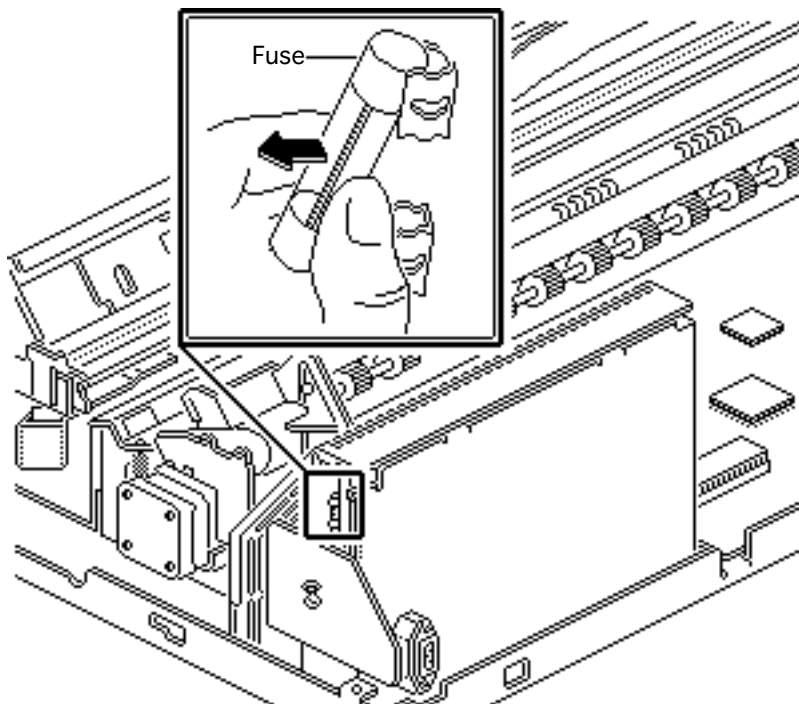
Caution: Review the ESD precautions in Bulletins/Safety.





- 1 Loosen the screw and move aside the cover plate.





- 2 Using a small screwdriver or fuse puller, remove the fuse.



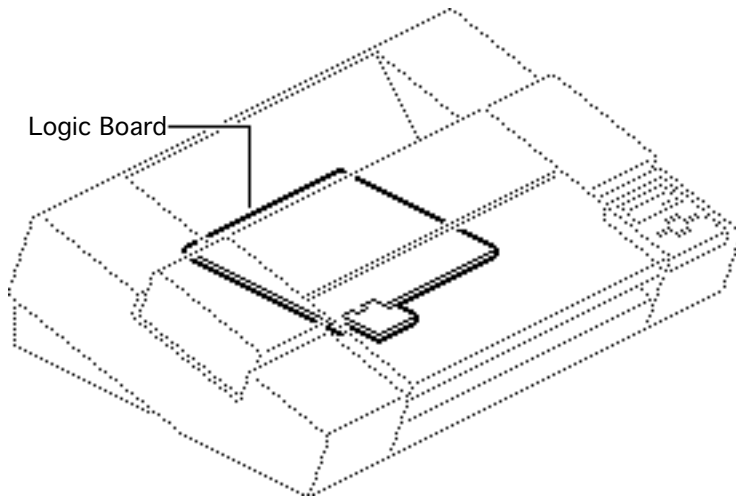


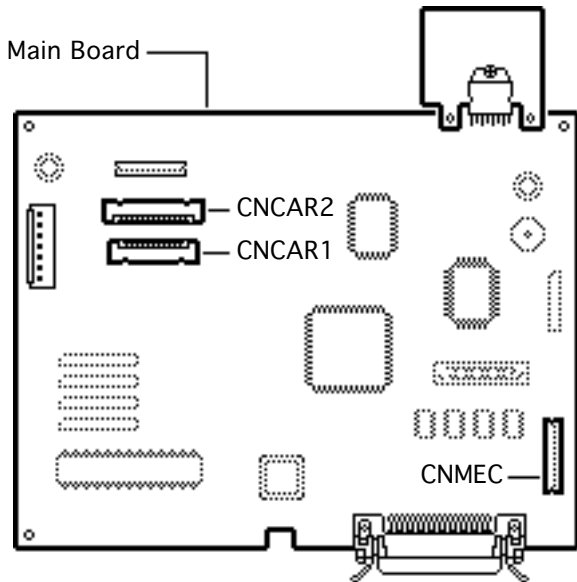
Logic Board (Intl. Only)

Before you begin, remove the following:

- Covers
- SCSI card assembly

Caution: Review the ESD precautions in Bulletins/Safety.

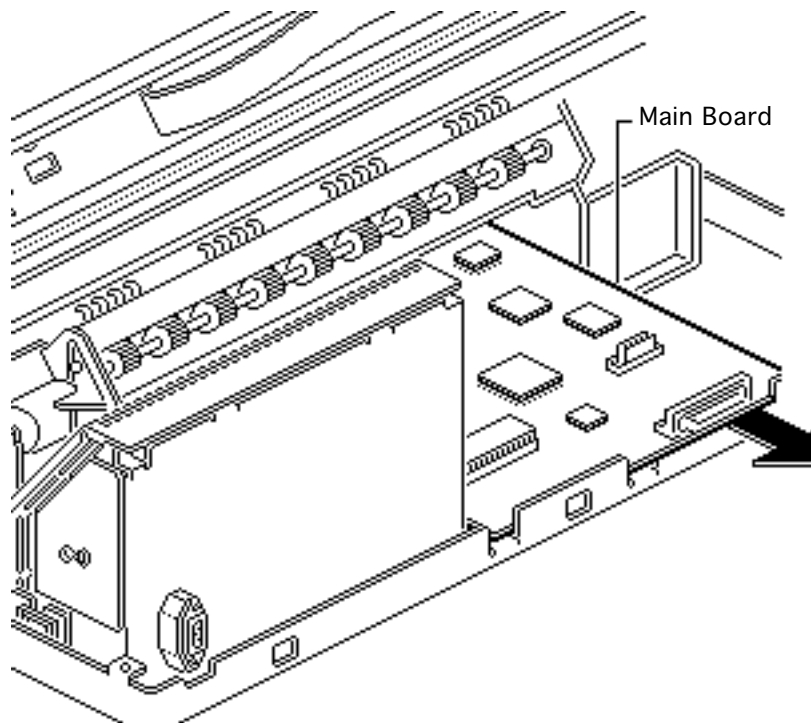




1 Disconnect the following connectors from the main board:

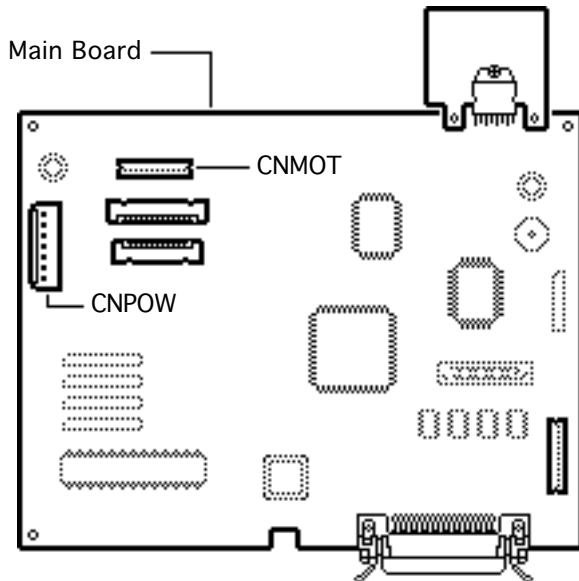
- CNCAR2
- CNCAR1
- CNMEC





- 2 Slightly lift up the front of the main board and pull the board out about 1 inch.





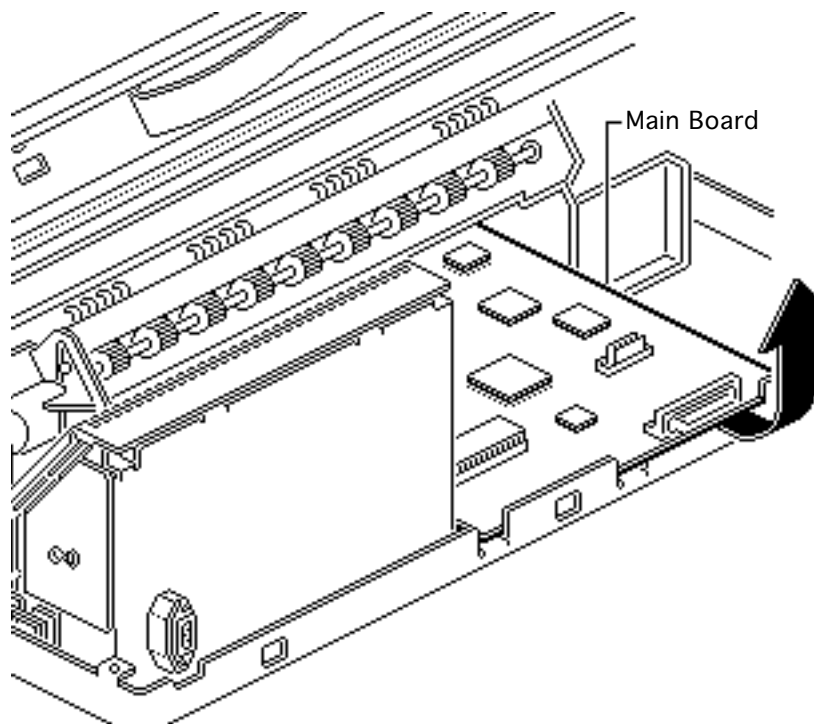
3 Disconnect the following connectors from the main board:

- CNPOW
- CNMOT





- 4 Pull out the main board.

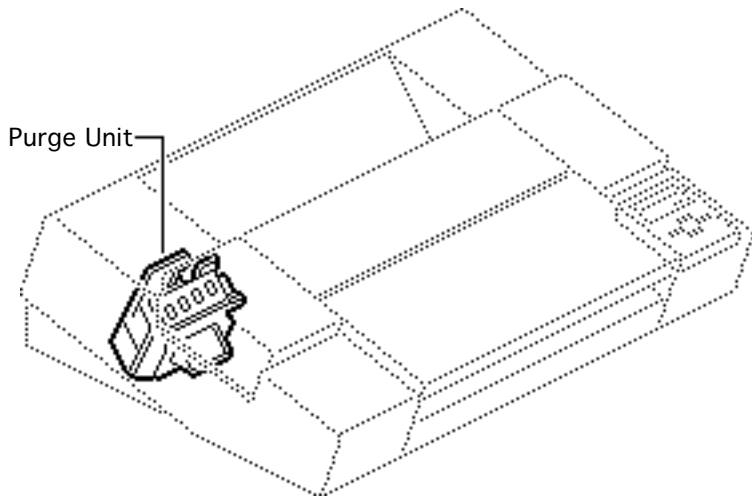


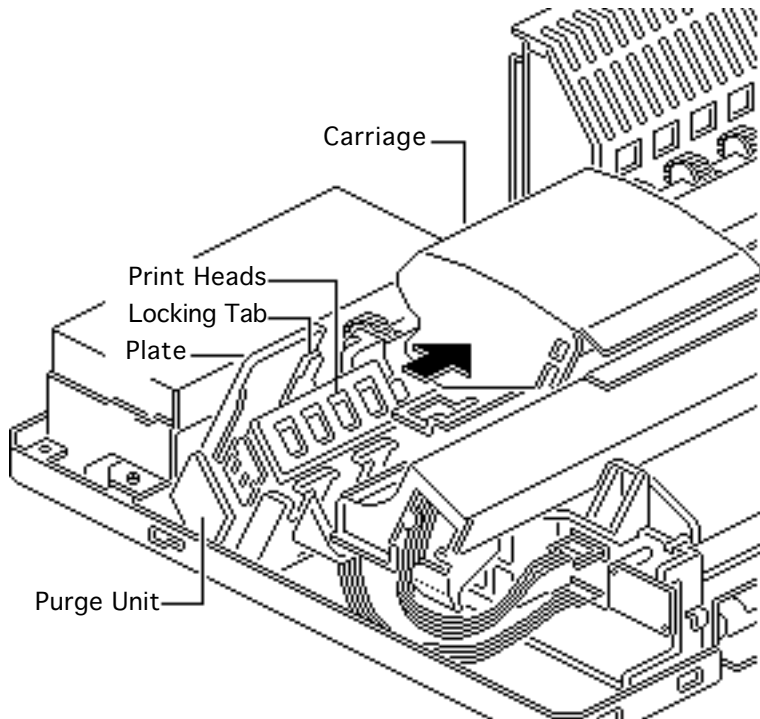


Purge Unit (Intl. Only)

Before you begin, remove the covers.

Caution: Review the ESD precautions in Bulletins/ Safety.





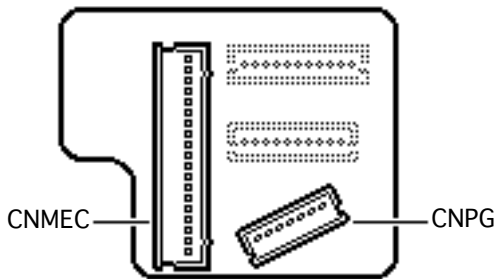
- 1 Lift the plate on the purge unit.
- 2 Push down the locking tab and move the carriage assembly out of home position.

Caution: The print heads are now uncapped. Do not leave them uncapped for more than 12 hours or they will dry out.



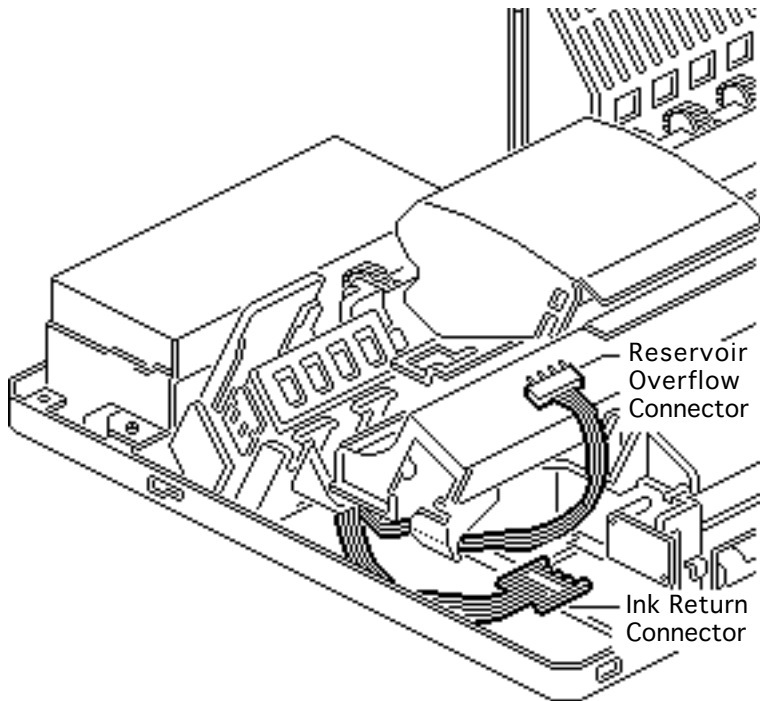


- 3 Disconnect connectors CNMEC and CNPG from the left connector card.



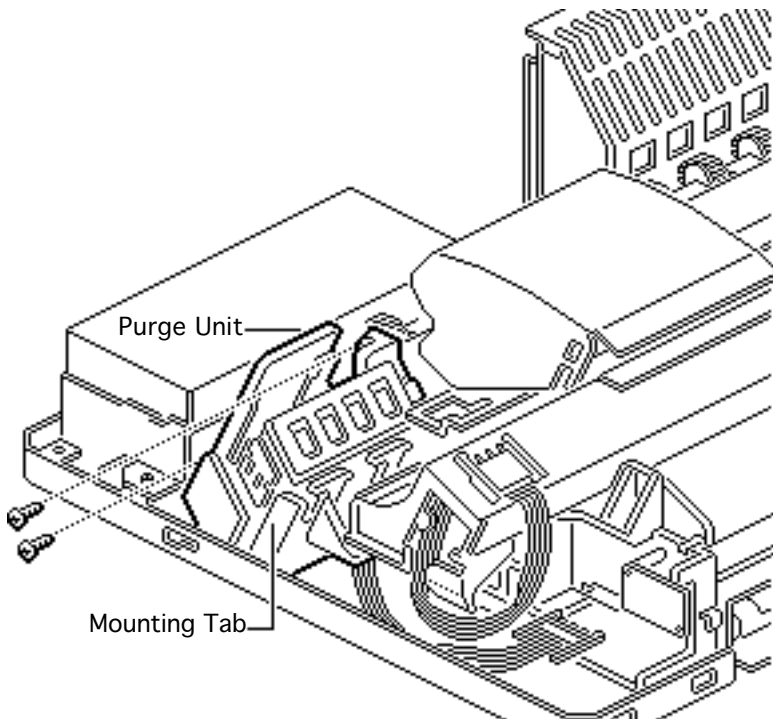
Left Connector Card





- 4 Unhook all the wires from the clamps.
- 5 Disconnect the reservoir overflow connector and hook it onto the carriage assembly.
- 6 Disconnect the ink return connector.





- 7 Unhook all the wires from the mounting tab.
- 8 Remove the two screws.
- 9 Remove the purge unit from the printer.



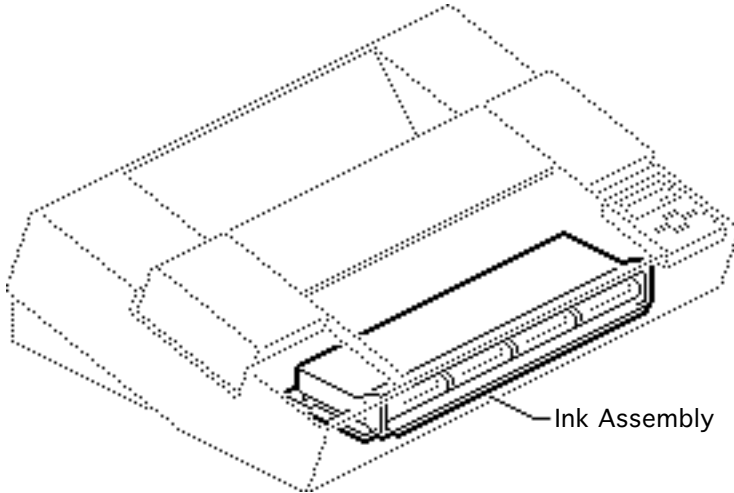


Ink Assembly (Intl. Only)

Before you begin, remove the covers.

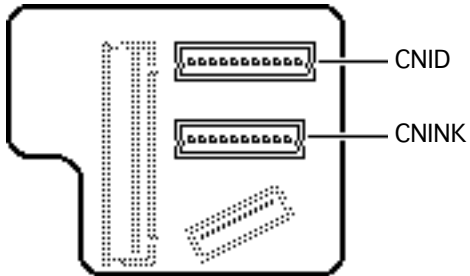
Caution: Review the ESD precautions in Bulletins/ Safety.

Caution: To prevent leakage when you are removing the ink assembly, leave the ink cartridges in place in the assembly.



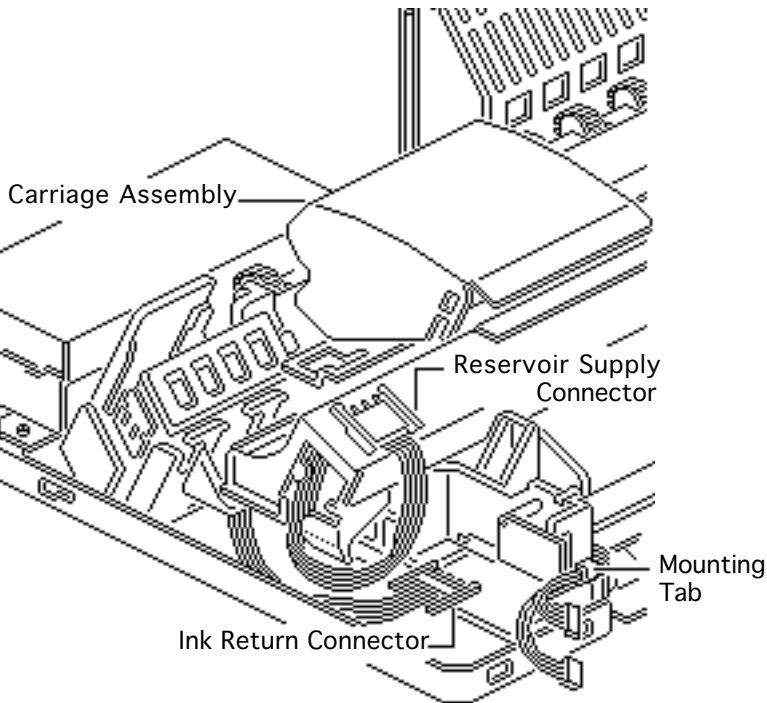


- 1 Disconnect connectors CNINK and CNID from the left connector board.



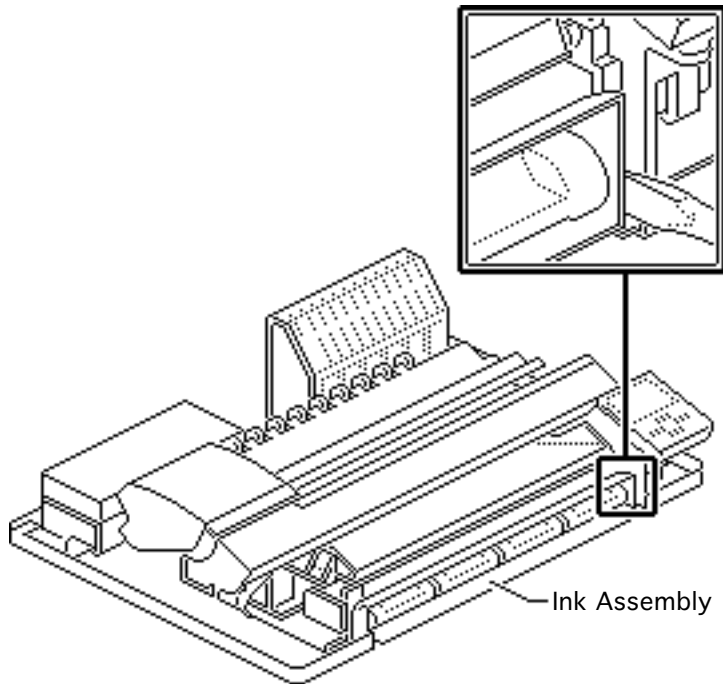
Left Connector Card





- 2 Remove all the wires from the mounting tab.
- 3 Disconnect the reservoir supply connector and hook it onto the carriage assembly.
- 4 Disconnect the ink return connector.





- 5 Using a flat-blade screwdriver, push out the two latches between the ink assembly and the chassis.
- 6 Lift up the ink assembly slightly and slide it out of the printer.

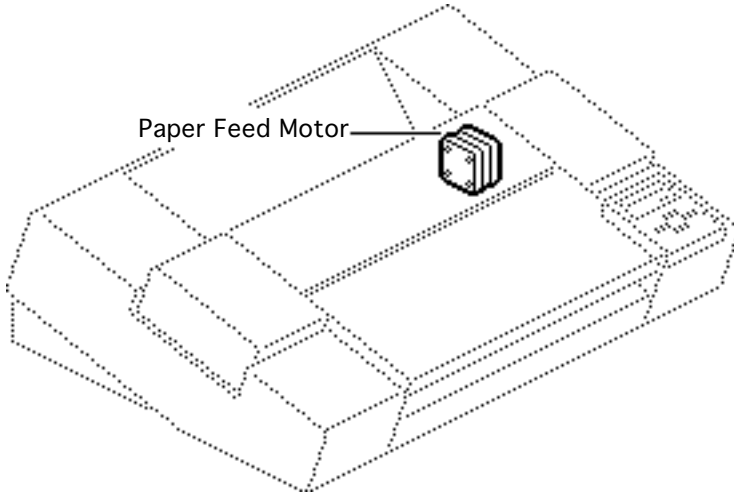




Paper Feed Motor (Intl. Only)

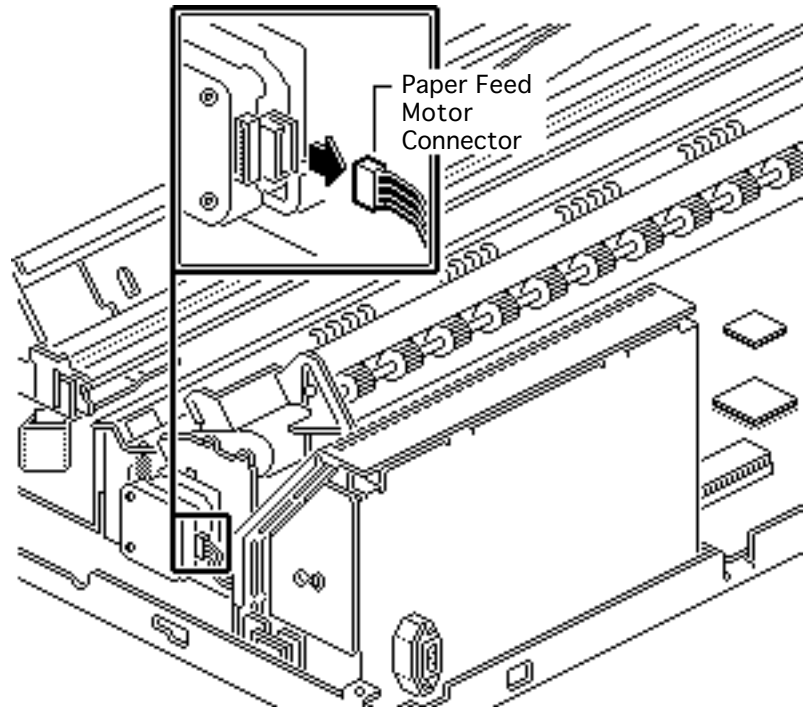
Before you begin, remove the covers.

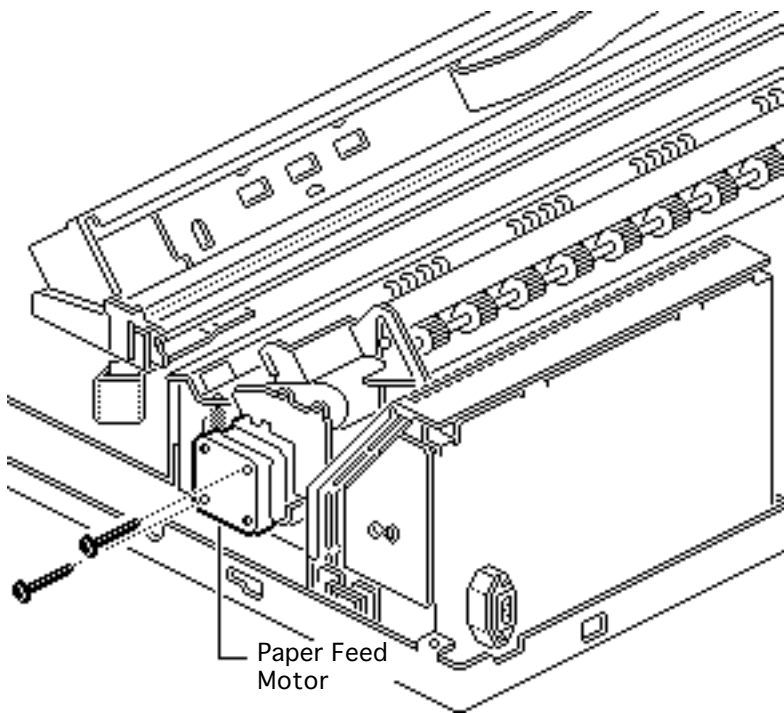
Caution: Review the ESD precautions in Bulletins/Safety.





- 1 Disconnect the paper feed motor connector.





- 2 Remove the two black screws and lift out the paper feed motor.





Additional Procedures

Apple Color Printer



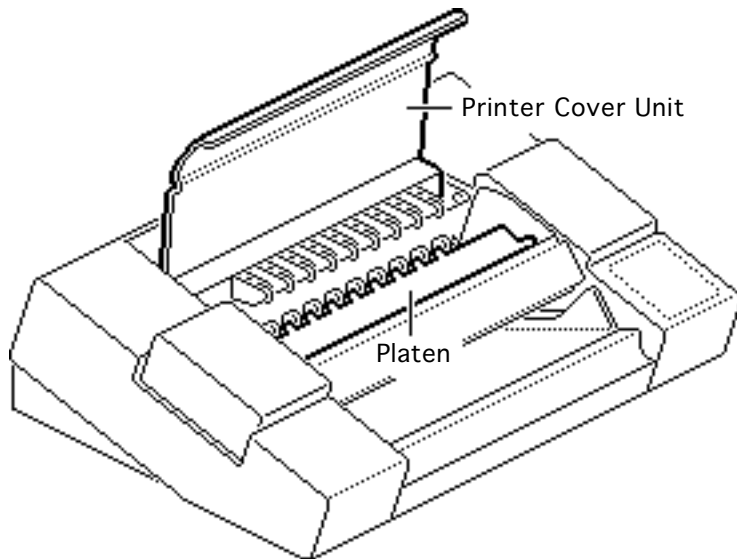


Printer Cleaning

No preliminary steps are required before you begin this procedure.

Caution: Do not get the ink on your hands or clothes. Although the ink is water soluble, it contains dyes that will stain.

Using a damp cloth, wipe the ink mist off the printer cover unit and platen.

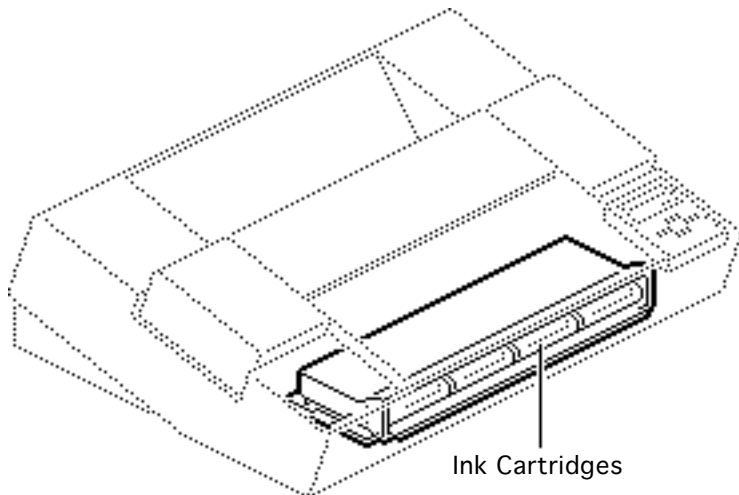




Ink Cartridge Replacement

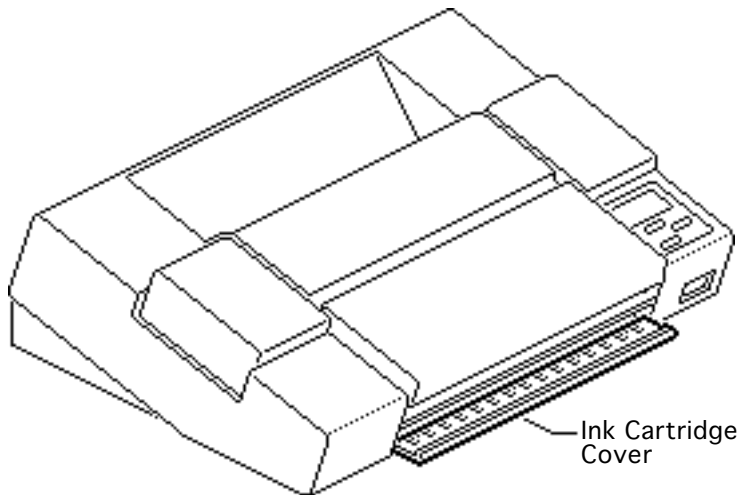
No preliminary steps are required before you begin this procedure.

Caution: Do not get the ink on your hands or clothes. Although the ink is water soluble, it contains dyes that will stain.





- 1 Open the ink cartridge cover.

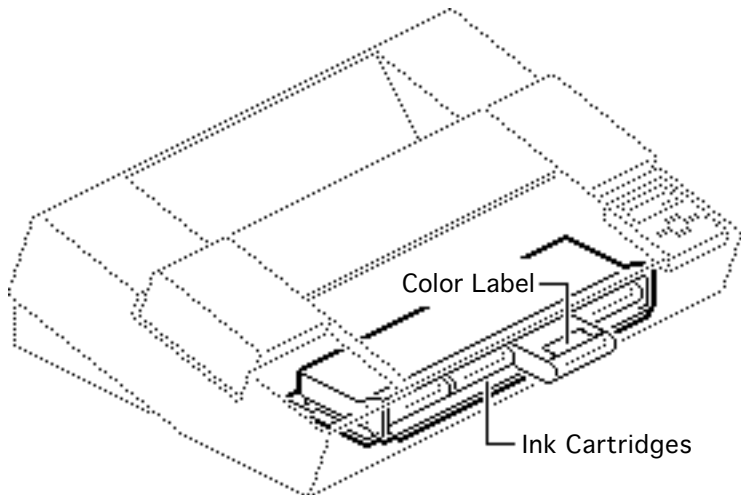


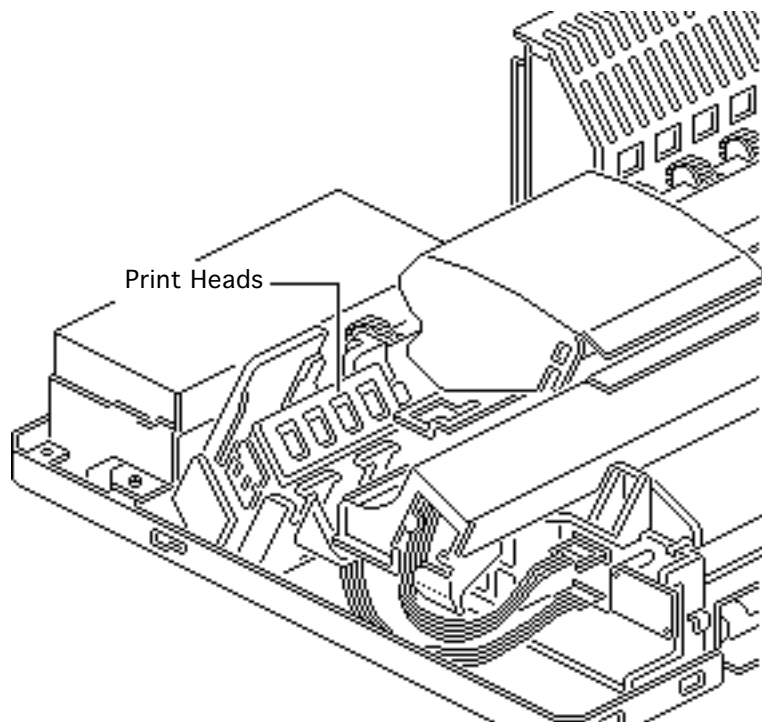


- 2 Grasp the used cartridge and pull it straight out of the slot.

Replacement Note:

Insert the new cartridge gently into the appropriate slot and keep the color label face up.





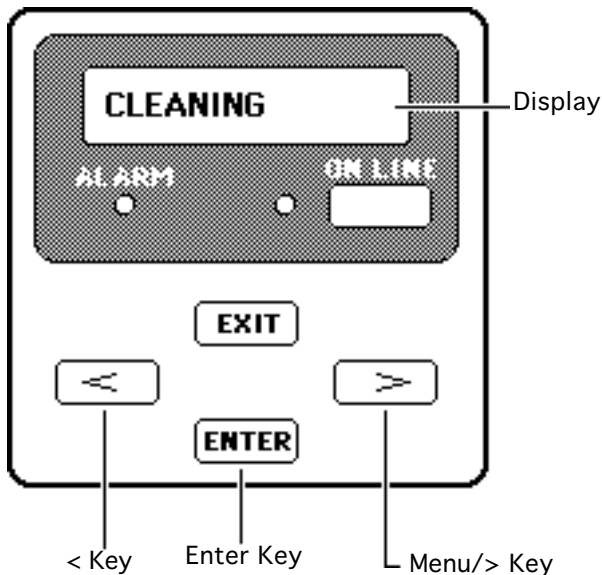
Print Head Cleaning

No preliminary steps are required before you begin this procedure.

Caution: Do not get the ink on your hands or clothes. Although the ink is water soluble, it contains dyes that will stain.

Caution: To prevent the print nozzles from clogging, do not touch or wipe them.

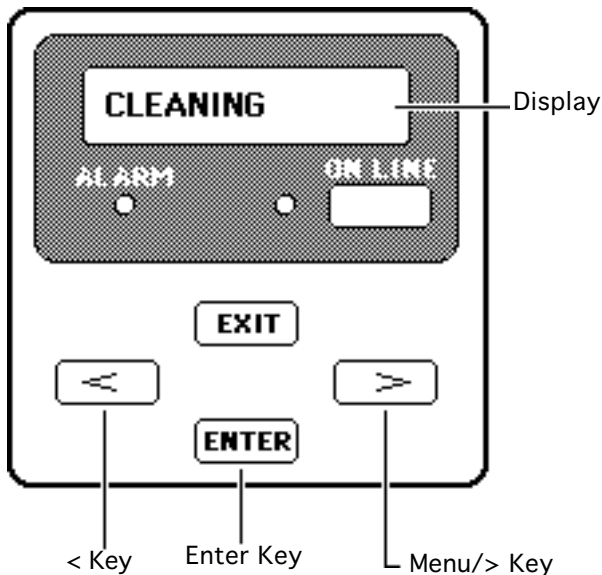




Note: Use Cleaning A to correct blurred characters, horizontal white streaks, and missing dots caused by clogged ink nozzles. Use Cleaning B when print quality does not improve after you have performed the Cleaning A option two or three times.

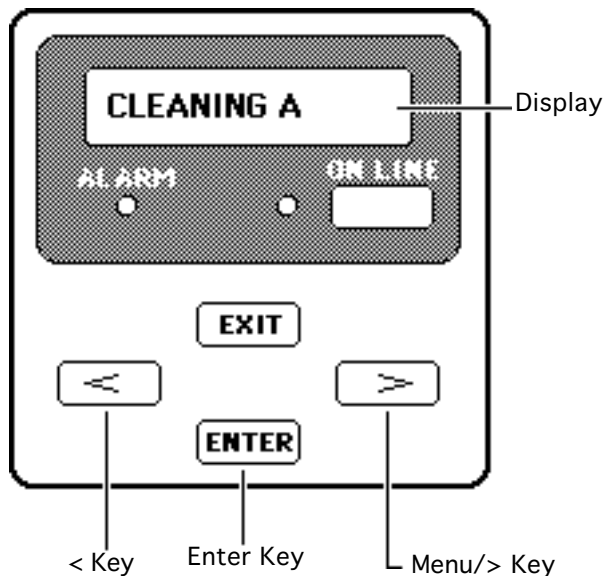
Important: Do not use Cleaning B except when absolutely necessary, since the procedure uses great amounts of ink.





- 1 Make sure the printer is off-line. Press the Menu key to see the first user menu option.
- 2 Press the > or < key several times until you see the CLEANING option in the display. Press the Enter key.

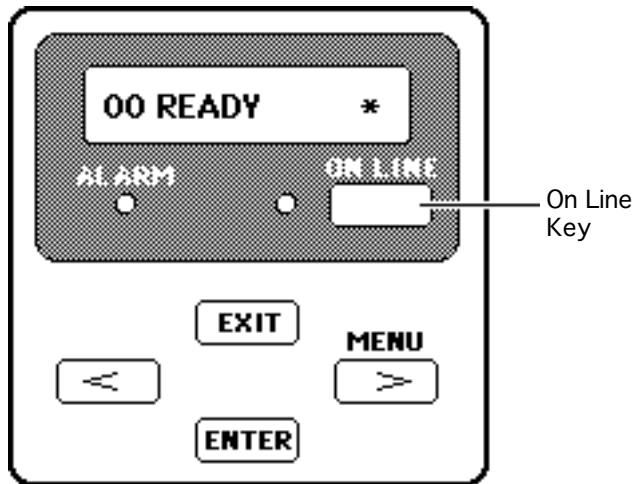




- 3 Press the > or < key to display CLEANING A or CLEANING B. Select CLEANING A first.
- 4 Press the Enter key to start cleaning the print head.

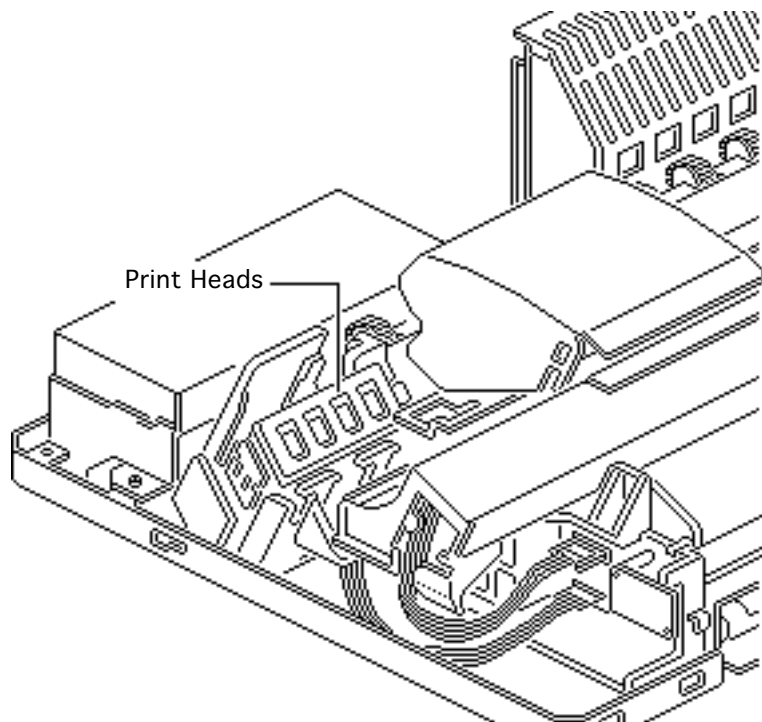
Note: After performing Cleaning A or Cleaning B, perform the Nozzle Check procedure described in this chapter and verify that the print heads are clean.





Note: After the Nozzle Check test page prints, the printer is still off-line. Press the On Line key to return to the on-line state.





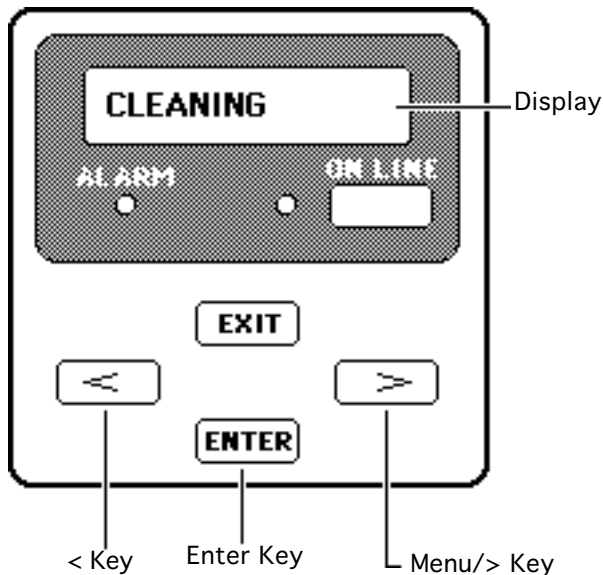
Nozzle Check

No preliminary steps are required before you begin this procedure.

Caution: Do not get the ink on your hands or clothes. Although the ink is water soluble, it contains dyes that will stain.

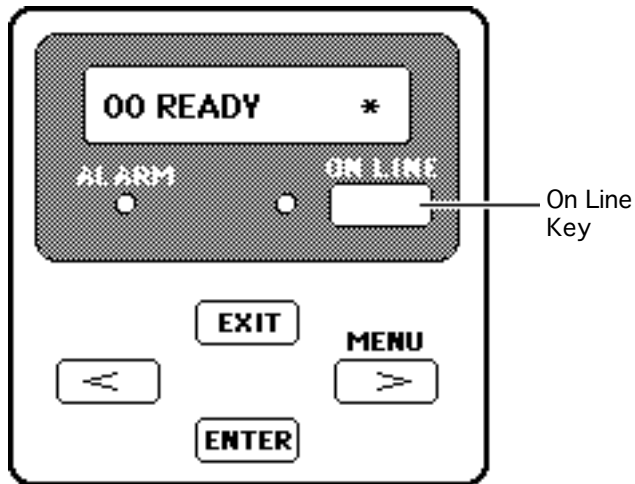
Note: This procedure explains how to run the Nozzle Check test page, which indicates if the print heads need to be cleaned.





- 1 Load paper into the paper tray and make sure the printer is off-line.
- 2 Press the Menu key to see the first user menu option.
- 3 Press the > or < key several times until you see the TEST PRINT option in the display. Press the Enter key.
- 4 Press the > or < key to display the NOZZLE CHECK test pattern. Press the Enter key to start the test page.





Note: After the test page prints, the printer is still off-line. Press the On Line key to return to the on-line state.





Nozzle Status OK



Black



Cyan



Magenta



Yellow

Clean Nozzles



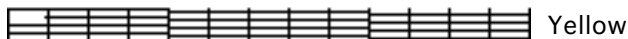
Black



Cyan



Magenta



Yellow

- 5 After completing a Nozzle Check test page, examine the printed page to determine print head status.

Note: If the horizontal lines in the test pattern are missing, one or more ink nozzles are clogged. To clear the nozzles, perform one of the print head cleaning procedures described in this chapter.



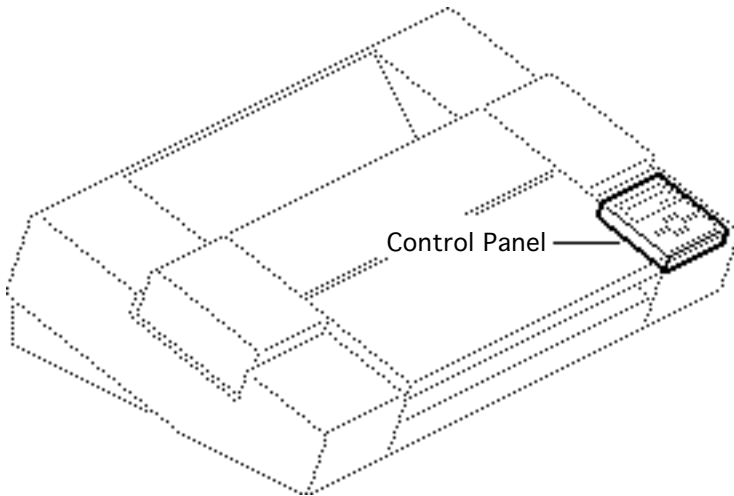


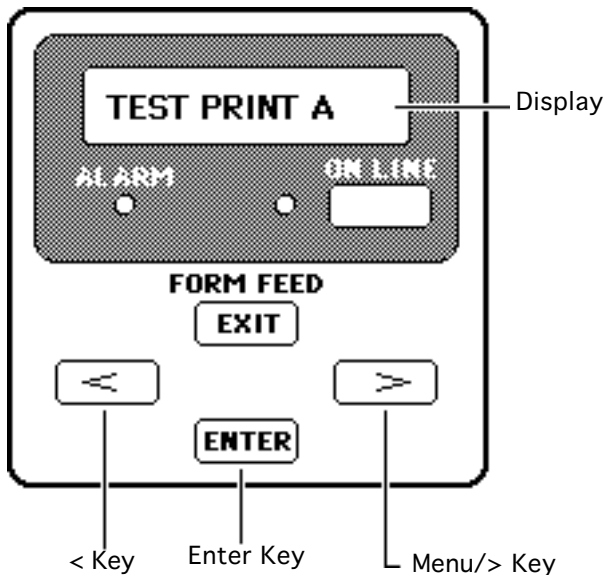
User Test Print A

No preliminary steps are required before you begin this procedure.

Caution: Do not get the ink on your hands or clothes. Although the ink is water soluble, it contains dyes that will stain.

Caution: To prevent the print nozzles from clogging, do not touch or wipe them.



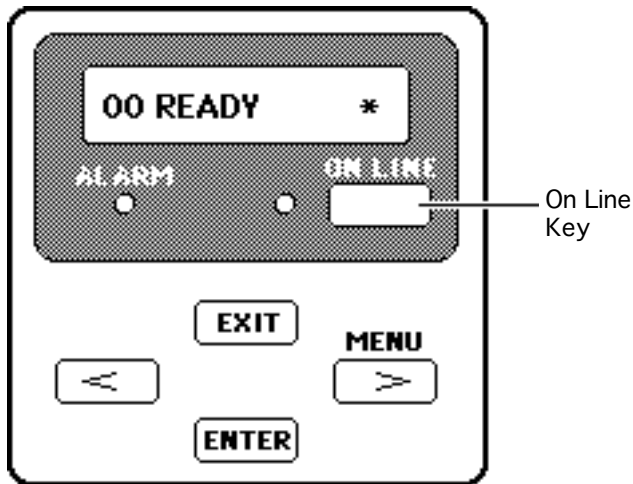


- 1 Make sure the printer is off-line. Press the Menu key to see the first user menu option.
- 2 Press the > or < key several times until you see the TEST PRINT option in the display. Press the Enter key.
- 3 You should see the TEST PRINT A option in the display. Press the Enter key to start the test page.





Note: After the test page prints, the printer is still off-line. Press the On Line key to return to the on-line state.



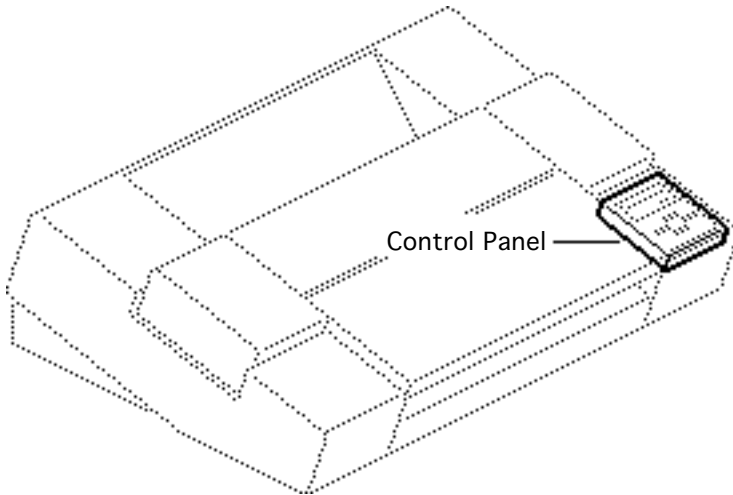


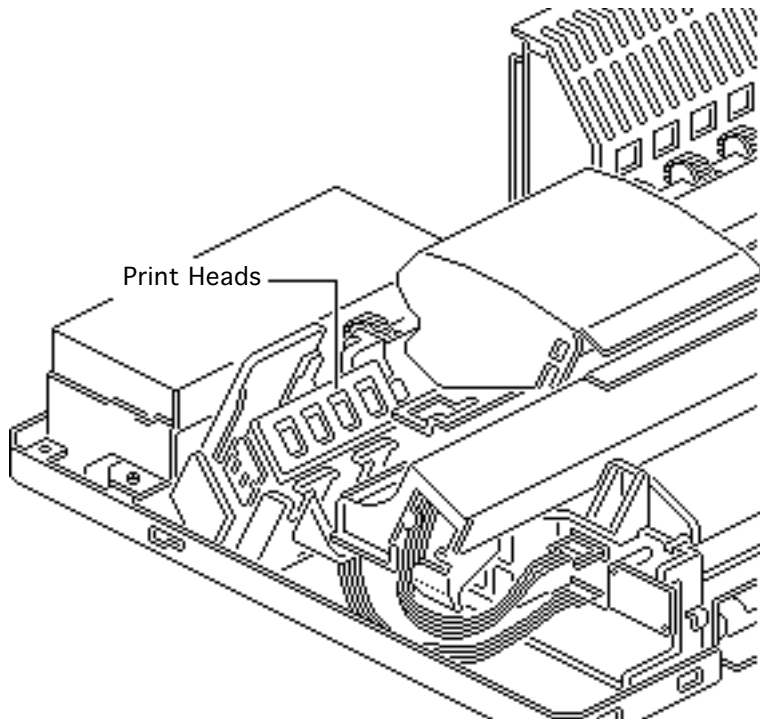
Service Test Prints

No preliminary steps are required before you begin this procedure.

Caution: Do not get the ink on your hands or clothes. Although the ink is water soluble, it contains dyes that will stain.

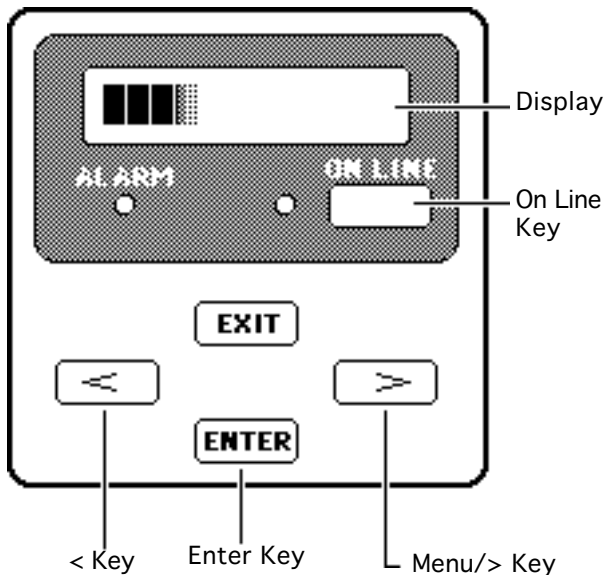
Caution: To prevent the print nozzles from clogging, do not touch or wipe them.





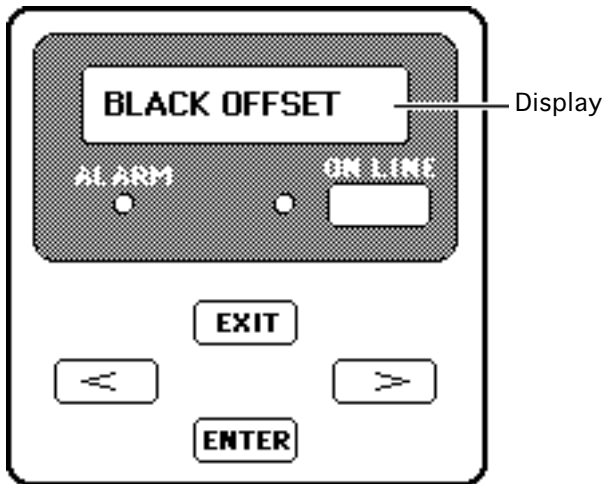
Note: When the printer is restarted it will automatically clean the print heads, which uses ink. Use the service mode sparingly to avoid wasting ink.





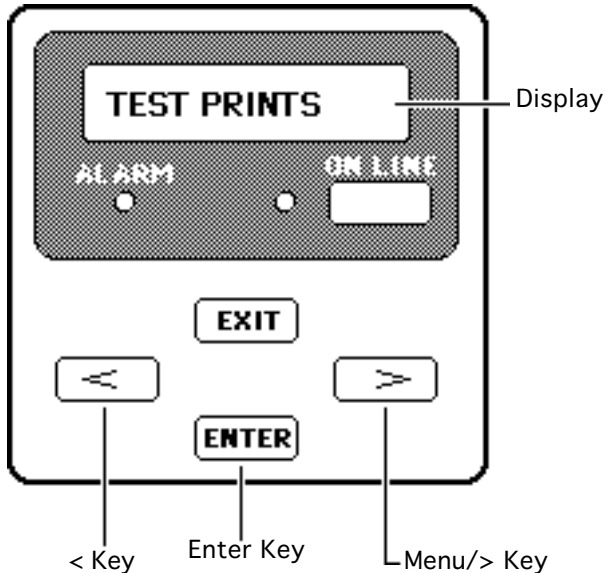
- 1 Switch off the printer, hold down the Menu key and the < key at the same time, and switch the printer back on.
- 2 Hold down the Menu and < keys until a series of squares appears on the display. Then release the keys, hold down the On Line key, and press the Enter key twice.





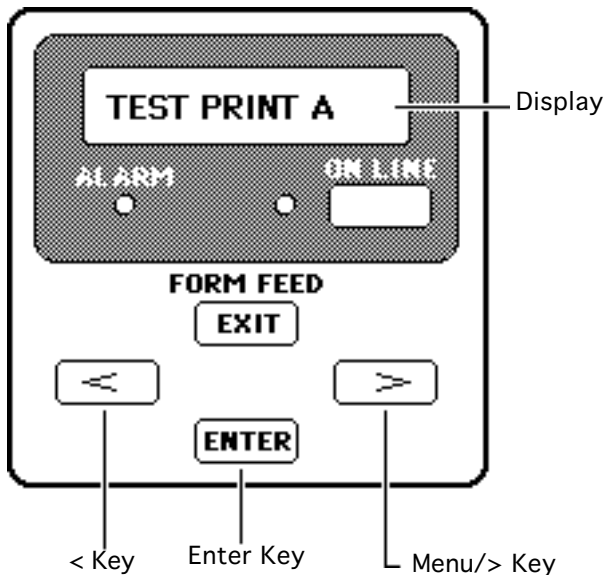
Note: The first menu displayed should be "BLACK OFFSET." If the first menu displayed is "CLEANING," you are not in the service mode. Repeat the above procedure.





- 3 Press the > or < key several times until you see the TEST PRINT option in the display. Press the Enter key.
- 4 Use the > or < key to display the test print you want to run. Press the Enter key to start the test print.





- 5 Switch off the printer to exit the service mode.

Note: If you simultaneously press the Exit and Enter keys while you are in the service mode, you can enter user mode temporarily and perform user menu options such as the user test prints and nozzle check.





Adjustments

Apple Color Printer



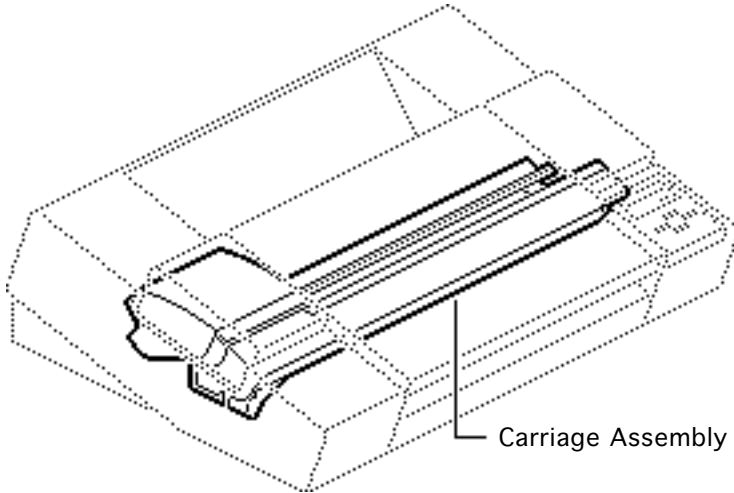


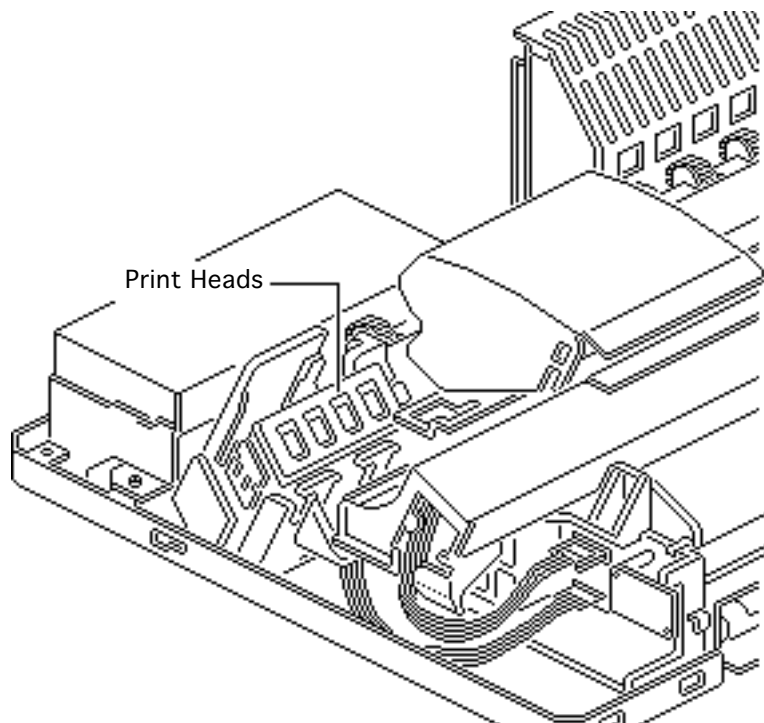
Print Head Gap (Intl. Only)

Before you begin, remove the covers.

Caution: Review the ESD precautions in Bulletins/ Safety.

Caution: Do not get the ink on your hands or clothes. Although the ink is water soluble, it contains dyes that will stain.

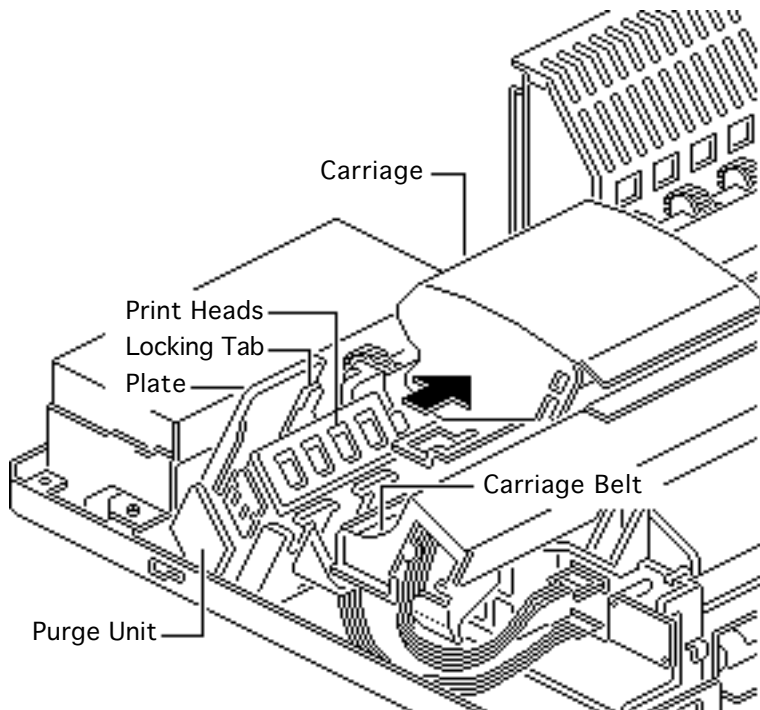




Caution: To prevent the print nozzles from clogging, do not touch or wipe them.

Note: This procedure covers the adjustment of the gap between print heads and the platen on the carriage assembly. It is for international repairers only.



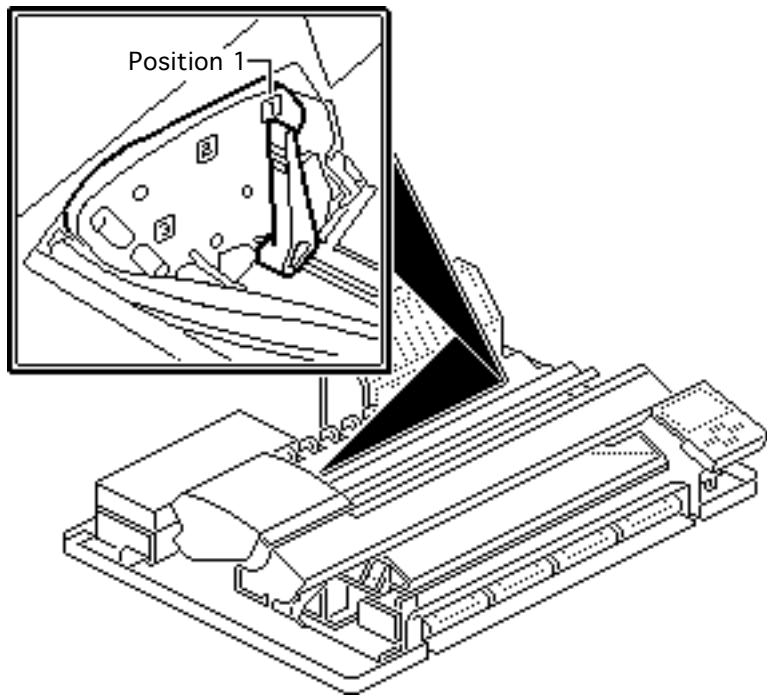


- 1 Pull back the plate on the purge unit.
- 2 Push down the locking tab.

Caution: To keep from pushing down on the carriage and damaging the bubble-jet heads, move the carriage by pulling on the carriage belt.

- 3 Move the carriage out of home position.

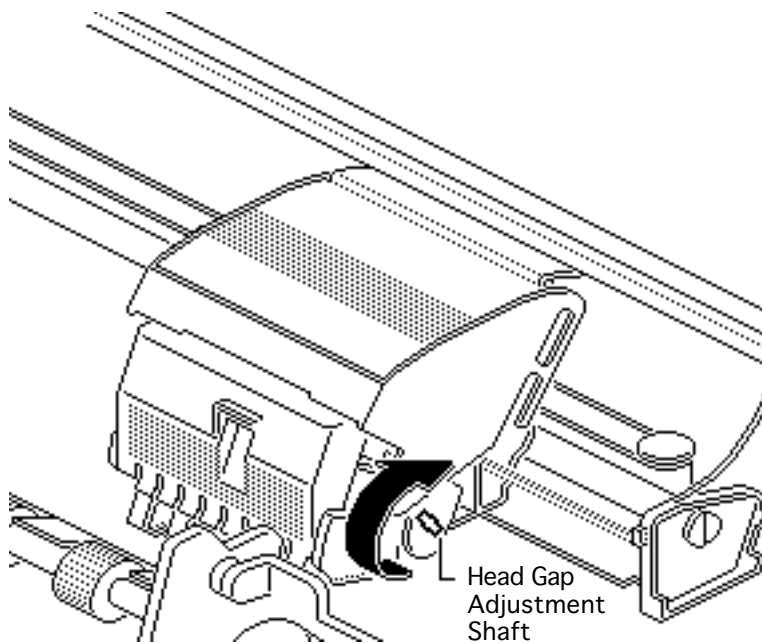




Caution: The print heads are now uncapped. Do not leave them uncapped for more than 12 hours or they will dry out.

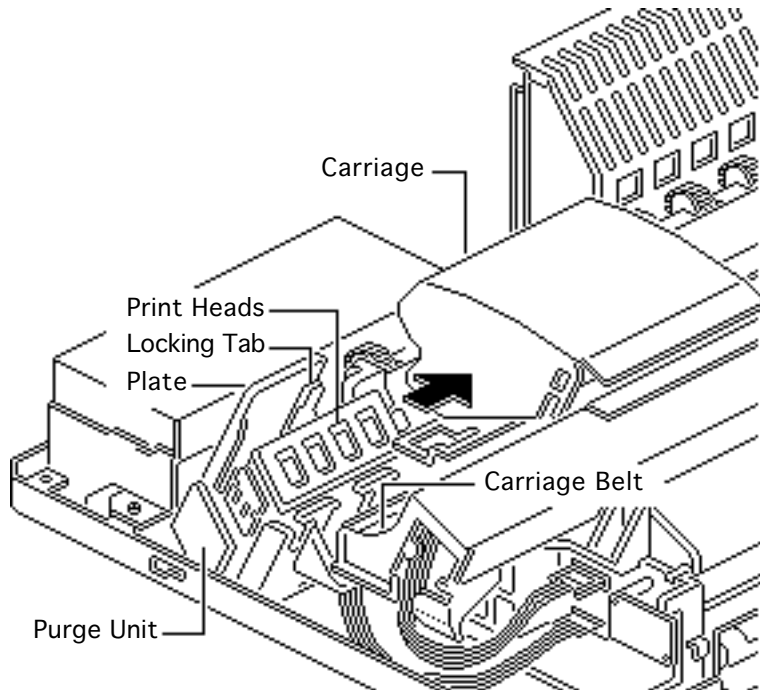
- 4 Set the carriage position lever to normal (position 1).





- 5 Using a flat-blade screwdriver, turn the head gap adjustment shaft clockwise all the way to the minimum position.

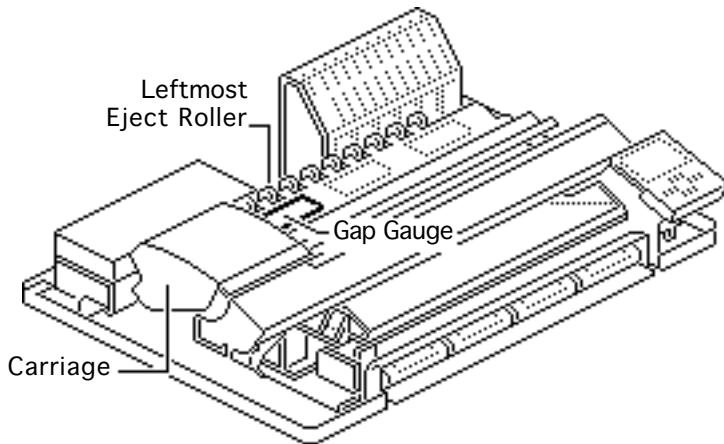




- 6 Caution:** To keep from pushing down on the carriage and damaging the bubble-jet heads, move the carriage by pulling on the carriage belt.

Move the carriage to its home position in front of the purge unit.





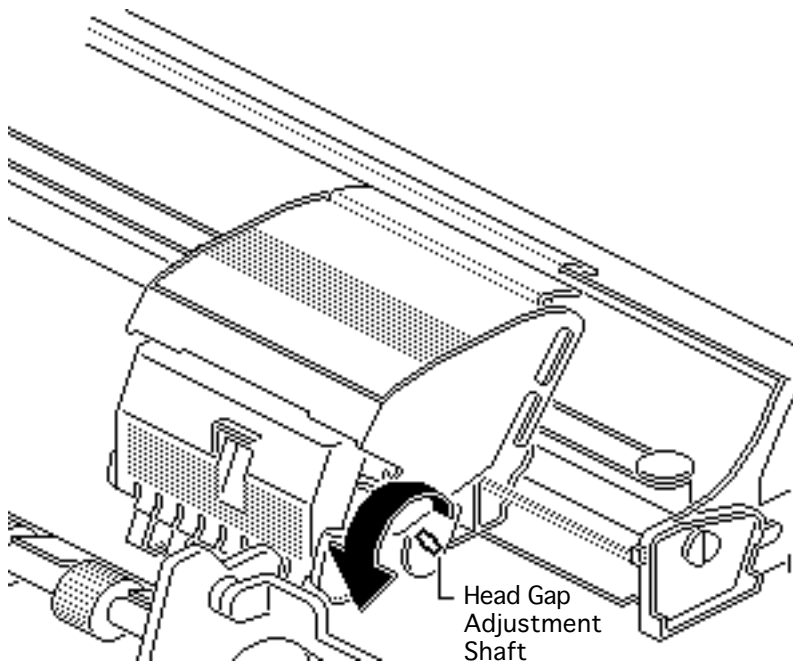
- 7 Put the gap gauge on the platen in front of the leftmost eject roller.
- 8 **Caution:** To keep from pushing down on the carriage and damaging the bubble-jet heads, move the carriage by pulling on the carriage belt.

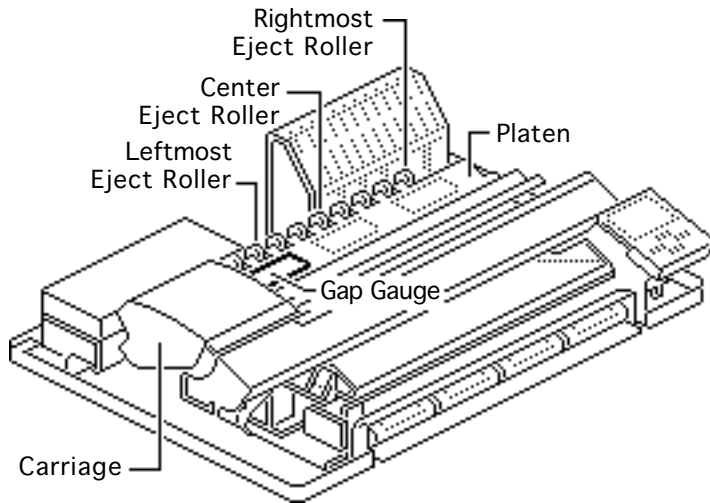
Move the carriage over the gap gauge in front of the leftmost eject roller.





- 9 Using a flat-blade screwdriver, turn the head gap adjustment shaft counterclockwise one click at a time (0.1 mm) until the carriage does not touch the gauge.





10 **Caution:** To keep from pushing down on the carriage and damaging the bubble-jet heads, move the carriage by pulling on the carriage belt.

Move the carriage over the gauge two or three times to make sure the carriage does not touch the gauge.

11 Repeat this procedure with the gap gauge in front of the center and the rightmost eject roller.



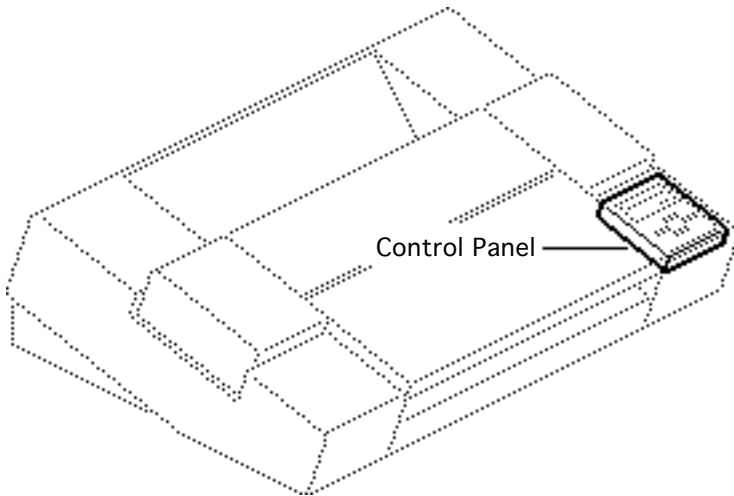


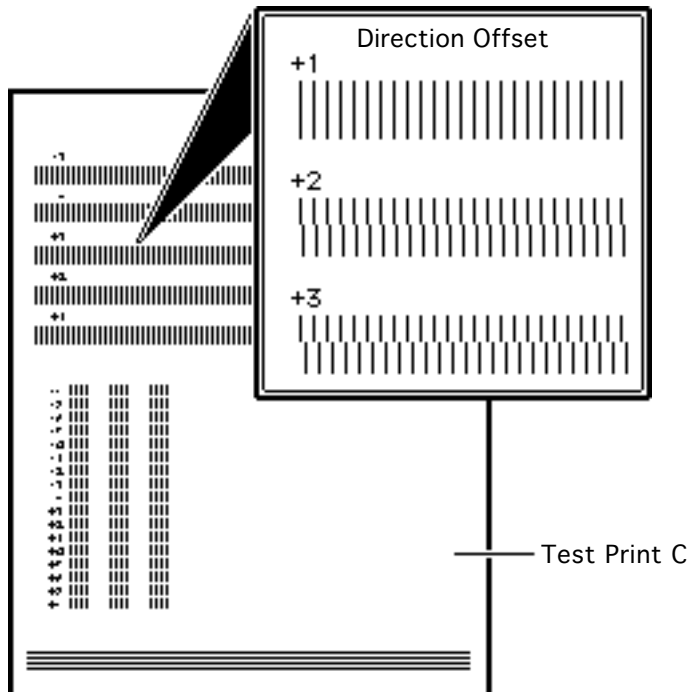
Color Registration

No preliminary steps are required before you begin this procedure.

Caution: Do not get the ink on your hands or clothes. Although the ink is water soluble, it contains dyes that will stain.

Caution: To prevent the print nozzles from clogging, do not touch or wipe them.





Note: This procedure covers color registration of the cyan, magenta, and yellow inks.

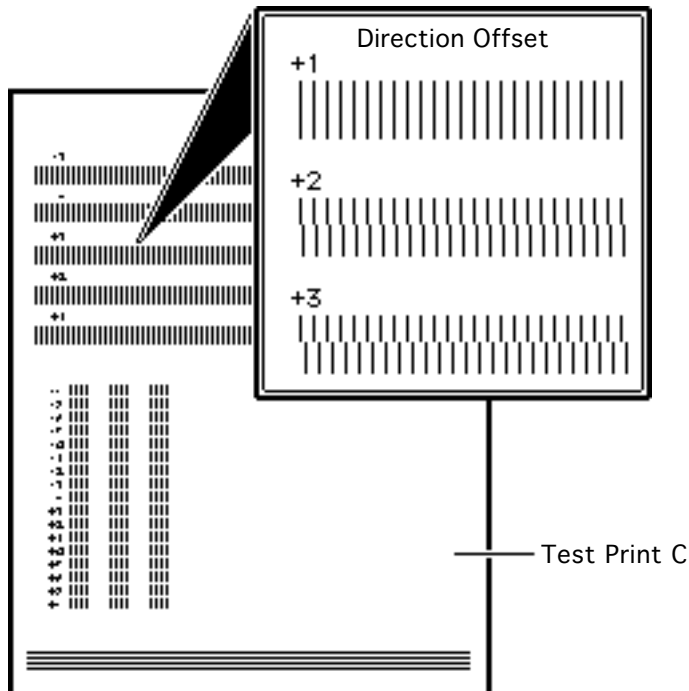
- 1 Perform Test Print C in the service menus. See “Service Test Prints” in the Additional Procedures chapter.

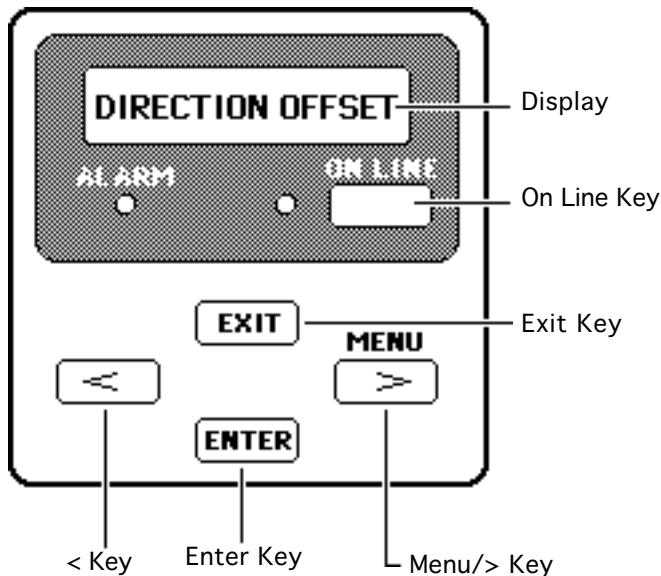




Direction Offset

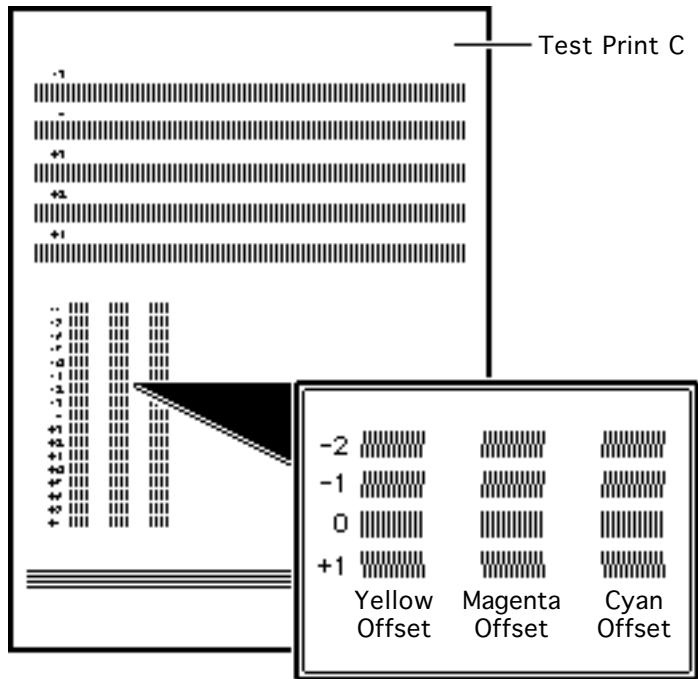
- 1 Using a magnifier, examine the patterns of lines on the top half of the printed test page. Select the number of the pattern that shows the least shift in vertical lines.





- 2 Make sure the printer is off-line.
- 3 Press the Menu key a few times until you see the DIRECTION OFFSET option in the display.
- 4 Press the Enter key.
- 5 Press the < or > key until the number you selected from the test page appears. Press the Enter key.
- 6 Press the Exit key.





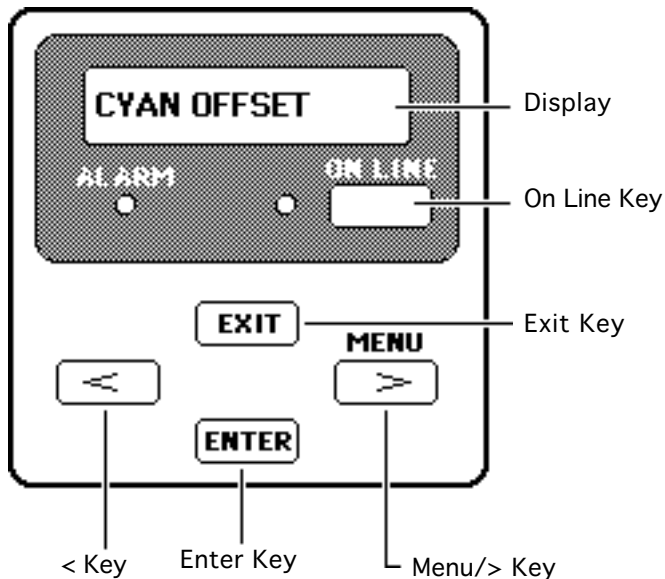
Color Offset

- 1 Using a magnifier, examine the patterns of overlapping colored lines on the bottom half of the printed test page.

Note: Do not adjust the black offset. It is set to the default level of 0 (zero).

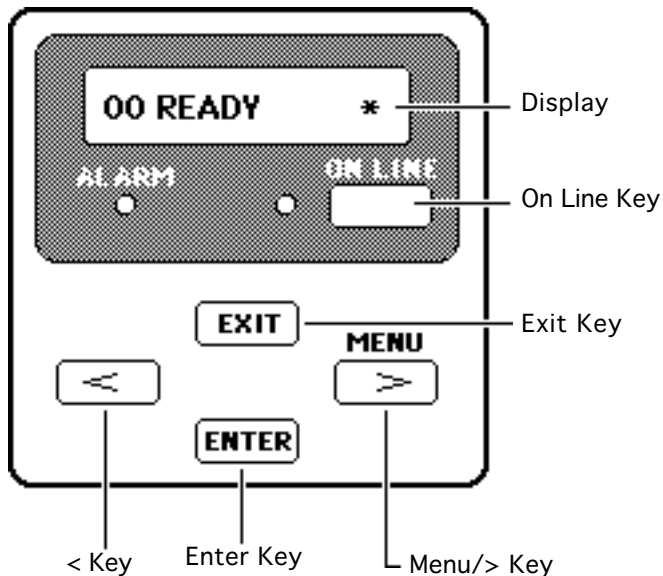
- 2 Select the number of the patterns that show the least amount of color for the yellow offset, magenta offset, and cyan offset.





- 3 Press the < until you see the CYAN OFFSET option in the display.
- 4 Press the Enter key.
- 5 Press the < or > key until the number you selected from the test page appears. Press the Enter key.
- 6 Press the Exit key.
- 7 Repeat the above procedure for the MAGENTA OFFSET and YELLOW OFFSET options.





- 8 Press the Exit key.
- 9 Press the On Line key to return the printer to on line status.

Note: When the printer is restarted, it will automatically clean the print heads, which uses ink. Use the service mode sparingly to avoid wasting ink.

