Apple Color OneScanner/B

Specifications

Color OneScanner/B

Characteristics

Scanner Type   Flatbed

Maximum   8.5 by 14 in.
Document Size

Speed   13 ms/line at 300 dpi

Grayscale   256 levels (8 bits per pixel)

Dropout Color   White

Interface   SCSI

Electrical

Line Voltage   120 VAC ±10% (US and Canada)
                        100/120/200/220/240 VAC ± 10% (Universal)

Frequency   58–62 Hz (US and Canada)
                        48–62 Hz (Universal)

Physical

Size   Height: 4.3 in. (110 mm)
                      Width: 13.4 in. (340 mm)
                      Depth: 21.5 in. (545 mm)

Weight   23 lb. (10.45 kg)

Environmental

Operating Temperature   50–104°F (10–40°C)

Storage Temperature   –40 to 117°F (–40 to 47°C)

Relative Humidity   20–95% noncondensing

Troubleshooting

Color OneScanner/B

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

LED Error Messages

LED blinks once   Replace logic board.

LED blinks twice   1   Clean glass cover assembly.
                         2   Check lamp holder connector.
                         3   Check that label of fluorescent lamp faces down into lamp
                             holder.
                         4   Replace lamp.
                         5   Replace optical assembly.

LED blinks three times	1 Check motor carrier assembly.
	2 Check drive belt assembly.
	3 Check gears and pulleys.
	4 Check limit switch assembly.
	5 Check home position switch assembly.
	6 Check carrier shaft; it should not be bent.
Power-on self test does not find error (LED does not blink); scanner is not capturing image correctly	Replace optical assembly.

Miscellaneous

Power lamp not on;
machine dead

1 Plug in power cord.
2 Close lamp cover and turn button clockwise.
3 Check interlock switch with multimeter. Replace switch if it
   is not opening and closing.
4 Check fuse FU1 on power supply board.
5 Replace logic board.
6 Replace power supply.

Optical assembly does
not move

1 Check SCSI connection.
2 Check SCSI ID.
3 Check and clean or replace belt.
4 Check belt tension. Belt should be tight with no slack.
5 Check for damage to gears or buildup of foreign material.
   Clean or replace gears.

Optical assembly moves
once and then does not
move

1 Check limit switch for continuity.
2 Check drive belt.
3 Check drive belt pulleys.
4 Check carrier motor.

Scanning program
crashes during middle of
scanning operation, or
computer hangs

1 Verify version of scanner application software.
2 Verify that scanner driver is present.
3 Verify version of scanner driver.
4 Check SCSI connection.
5 Verify that host computer has enough memory.
6 Verify that system software is version 7.0 or above.
7 Verify SCSI ID of scanner.
8 Verify scanner SCSI termination.
9 Turn on scanner and reboot computer.
10 Replace logic board.

Fluorescent lamp won't light or is dim	1	Check lamp holder connector.
	2	Check that label of fluorescent lamp faces down into lamp holder.
	3	Replace lamp.
	4	Replace optical assembly.
	5	Replace logic board.

Scan command does not execute	1	Check external cable connections.
	2	Reset SCSI select switch on scanner to unused device number. Scanner is factory-preset at 2. Do not use 7, 8, 9, or 0.
	3	Check that SCSI cable terminates correctly.
	4	Replace logic board.

Image not clean; dark
or light spots

1   Clean glass with water and soft, lint-free cloth.
2   Adjust contrast or threshold settings on application.
3   Replace lamp.
4   Replace optical assembly.
5   Replace logic board.

Scanning performed,
but image doesn't
reach host computer

1   Check interface connector.
2   Replace optical assembly.
3   Check fuse FU1 on logic board.
4   Replace logic board.

Incorrect image on
host screen

1   Clean glass with water and soft, lint-free cloth.
2   Replace optical assembly.

Take Apart

Color OneScanner/B

Top Cover

No preliminary steps are required before you begin this procedure.
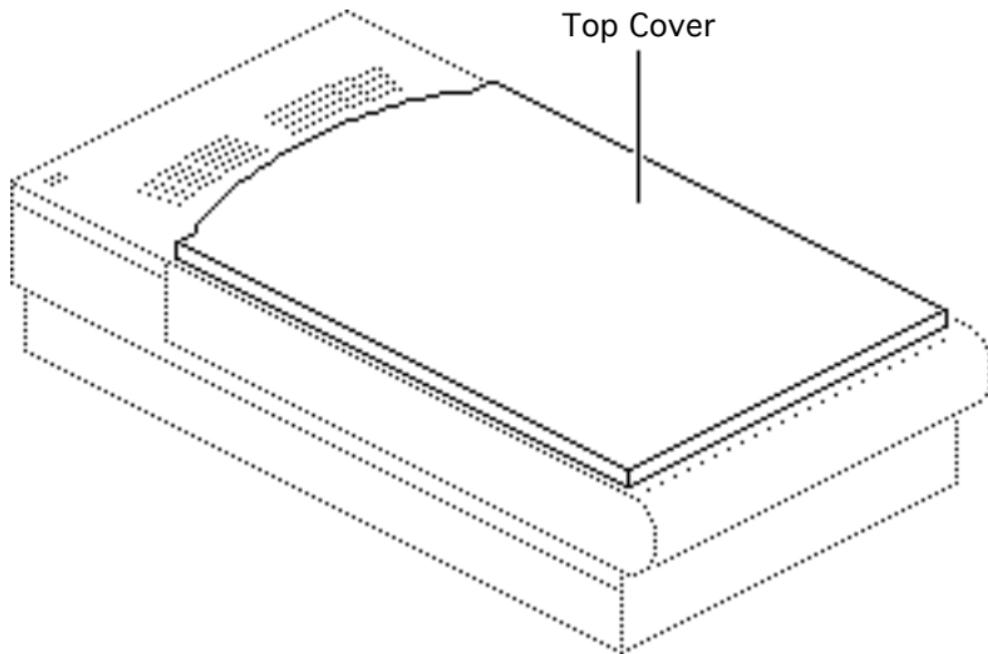
Top Cover

Press the clips and lift the top cover.

Top Cover

Glass Cover
Assembly
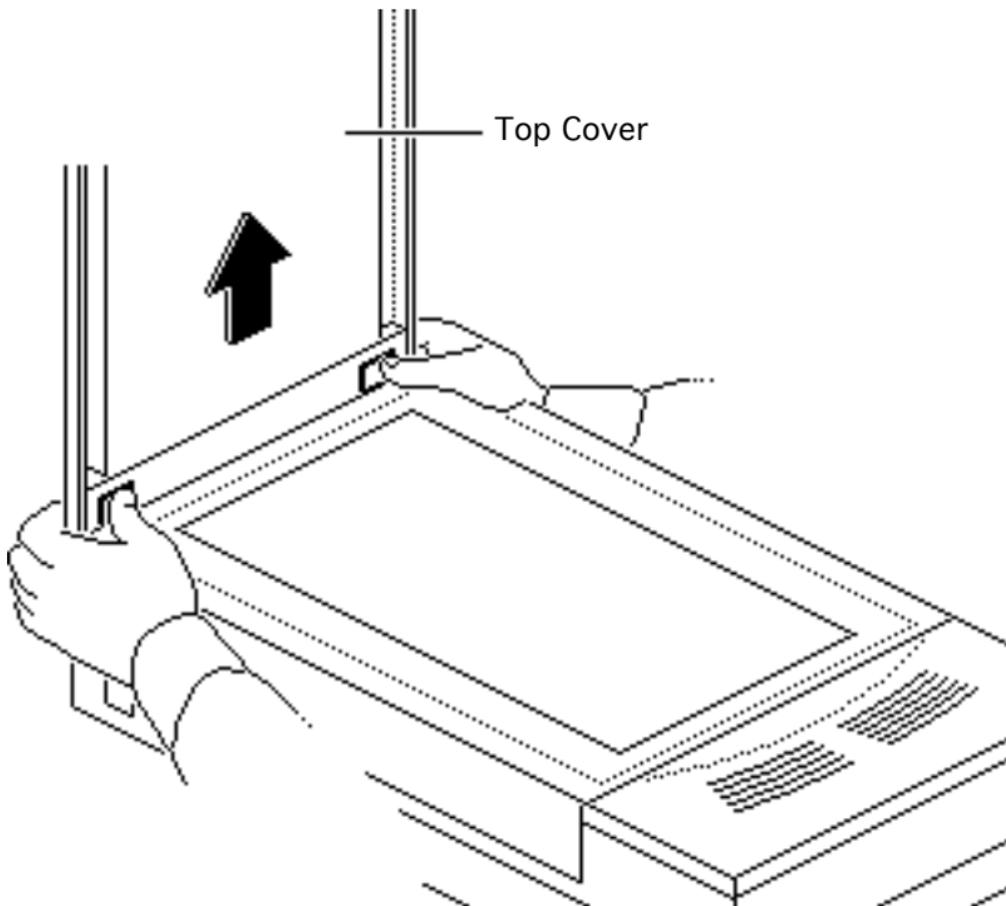
Glass Cover Assembly

Before you begin, remove the top cover.

Caution: Review the ESD precautions in Bulletins/ Safety.

1 Loosen the three captive screws.

Glass Cover
Assembly
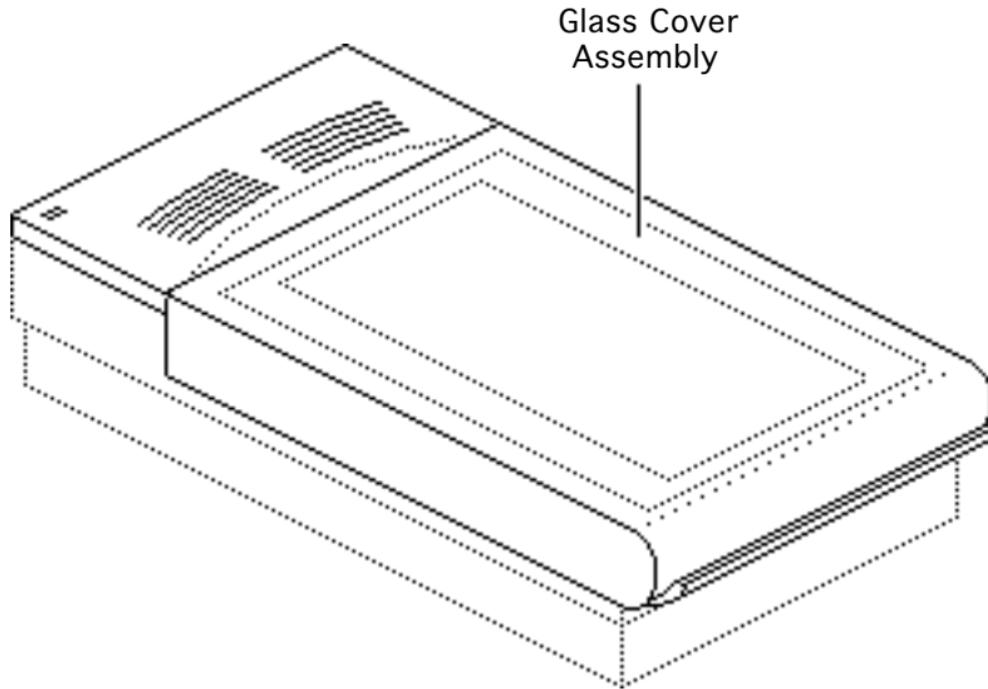
Glass Cover
Assembly

Retaining Clips
(both sides)
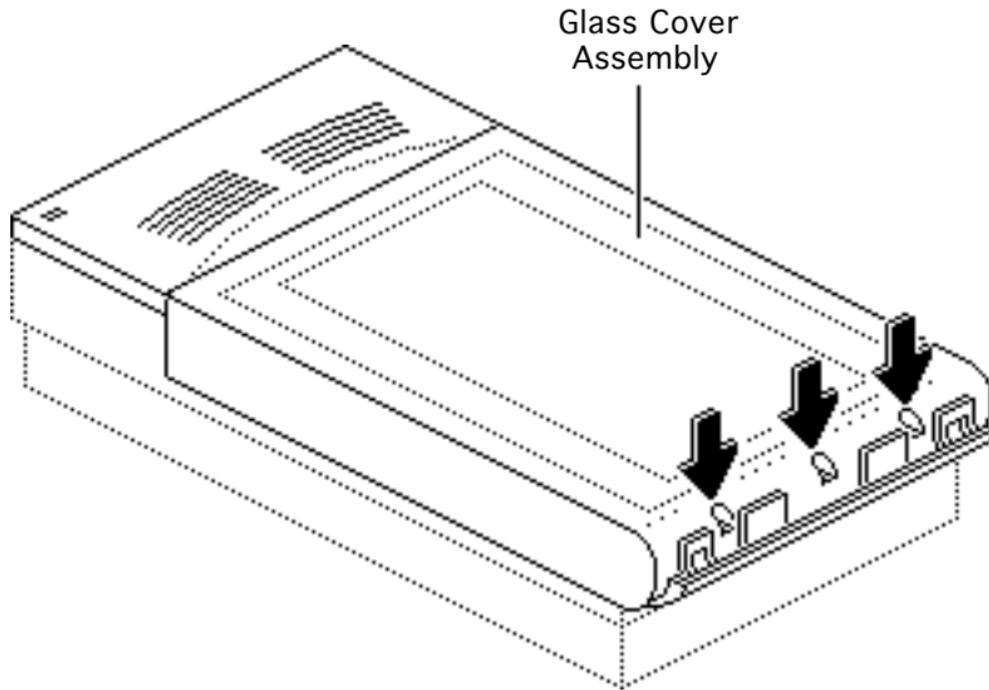
2 Lift the glass cover
assembly from the rear,
and at the same time
press in and release the
two retaining clips.

Glass Cover
Assembly

Start Scan
Board
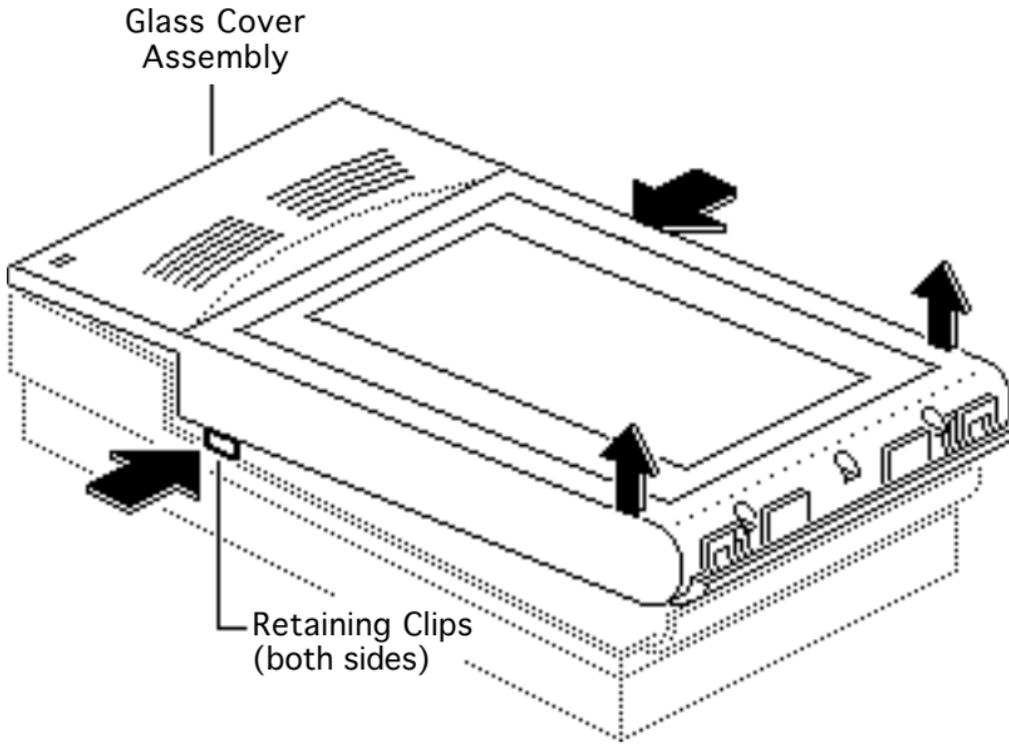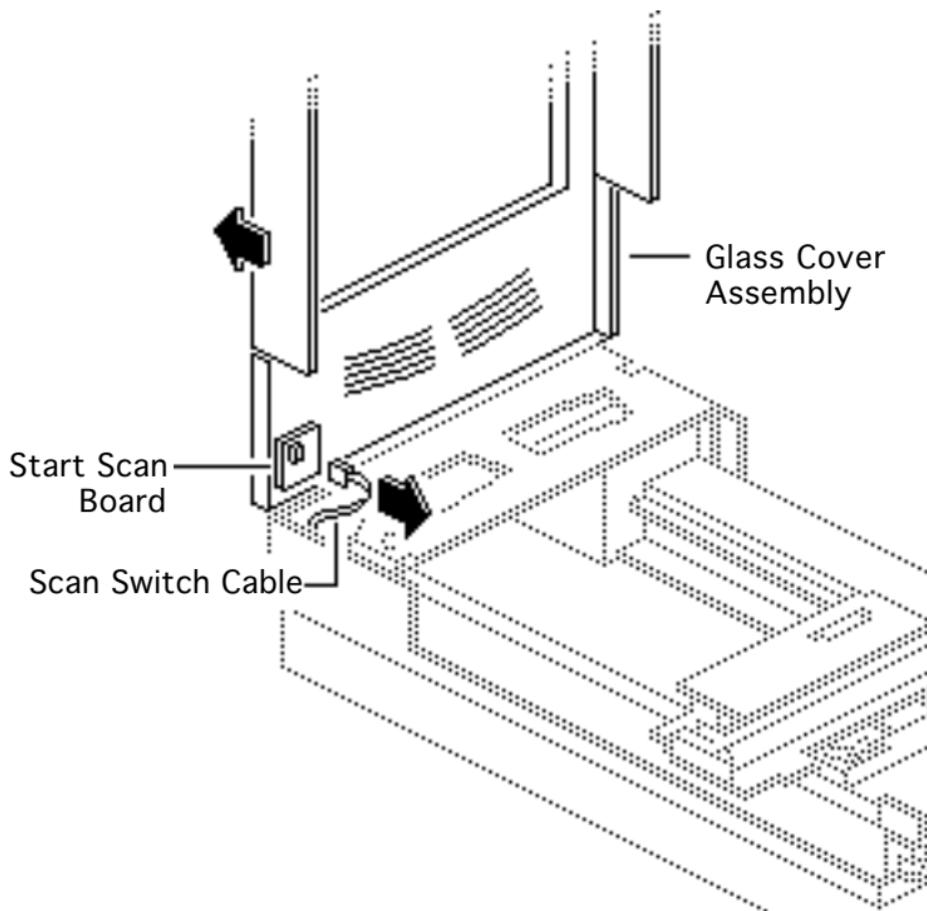
Scan Switch Cable

Caution: When removing the glass cover assembly, make sure you don't damage the start scan board.

3 Raise the glass cover assembly to 90° and disconnect the scan switch cable from the start scan board.

4 Remove the glass cover assembly.
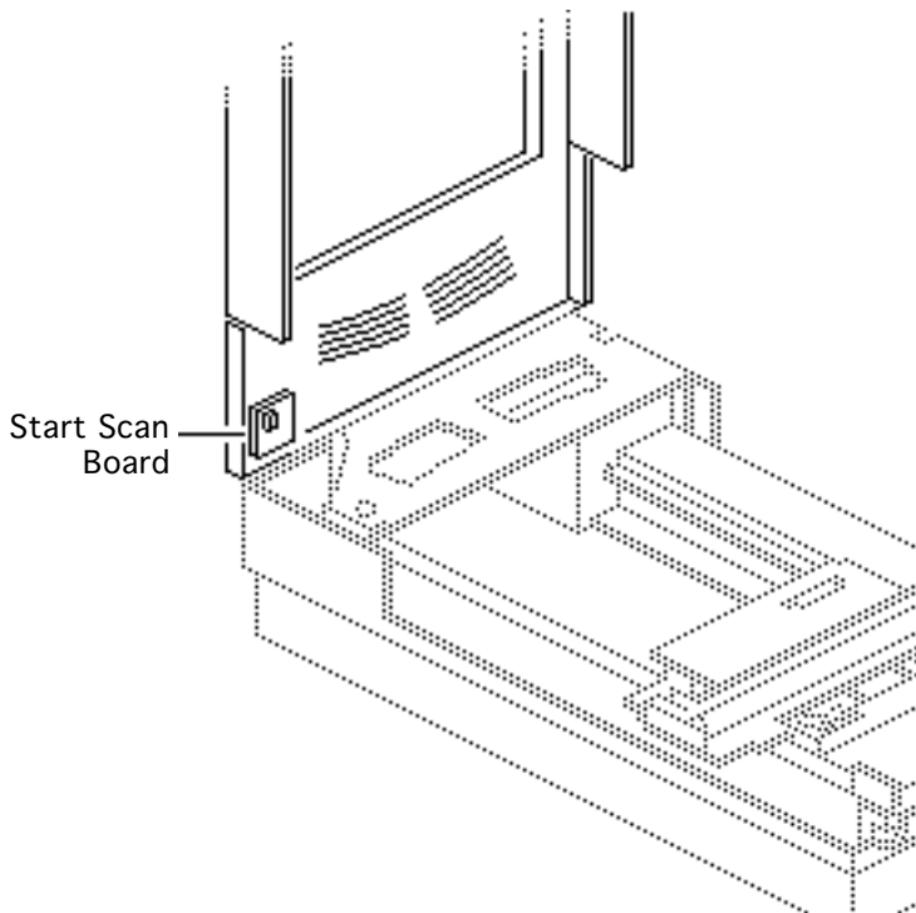
Start Scan
Board

5 **Replacement Note:**
Before returning a
damaged glass cover
assembly, remove the
start scan board. Install
the start scan board on
the new glass cover
assembly.

Scan Start Board

Scan Start Board

Before you begin, remove the following:

- Top cover
- Glass cover assembly

Caution: Review the ESD precautions in Bulletins/Safety.

Scan Start
Board
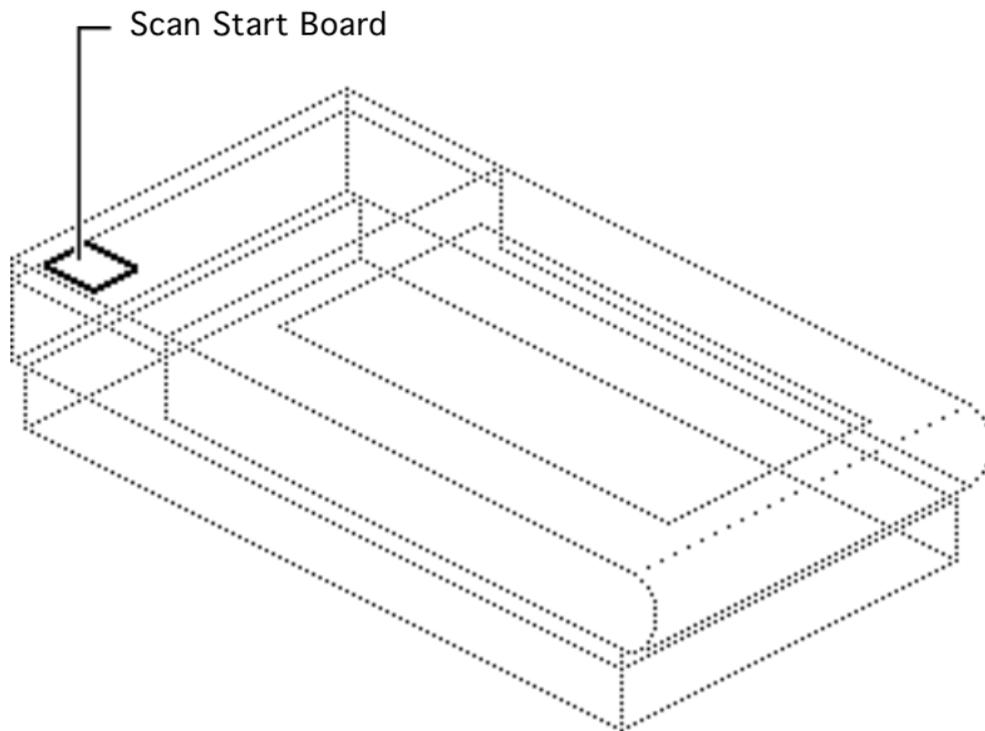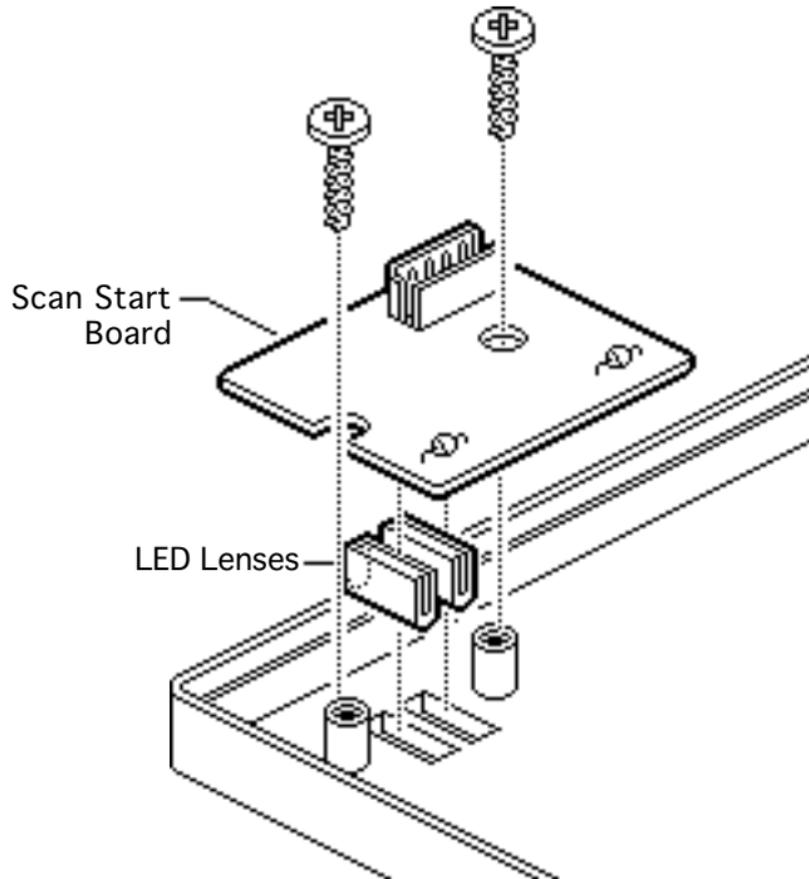
LED Lenses

1 Remove the two screws
  and remove the scan
  start board.

2 Remove the LED lenses.

Lid Hinge
Assembly

Lid Hinge Assembly

Before you begin, remove the following:

- Top cover
- Glass cover assembly

Caution: Review the ESD precautions in Bulletins/Safety.

Glass Cover Assembly

Lid Fastener
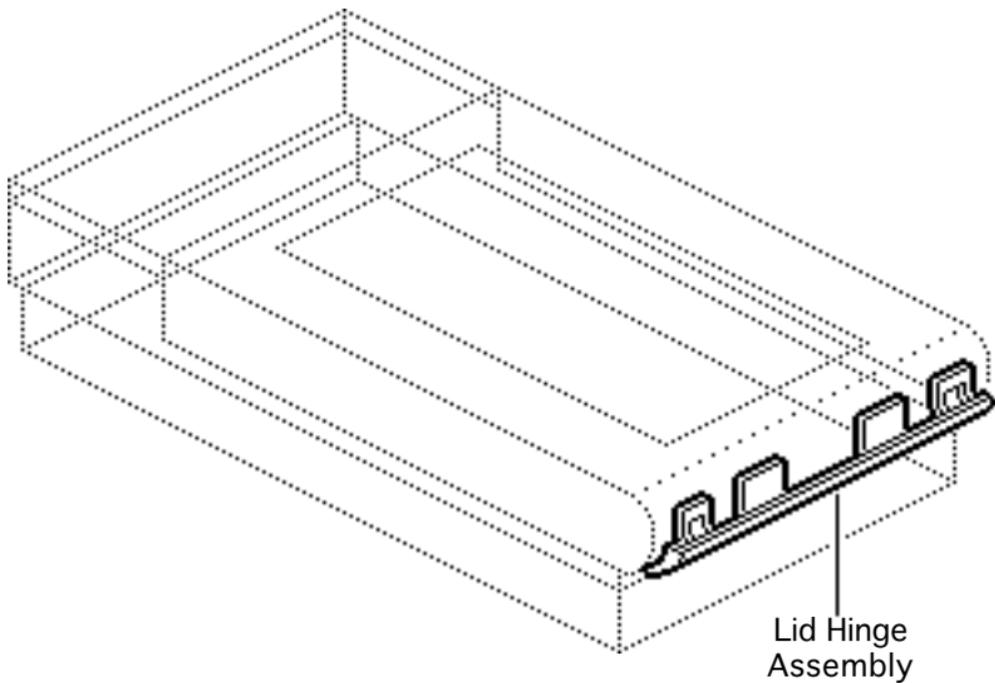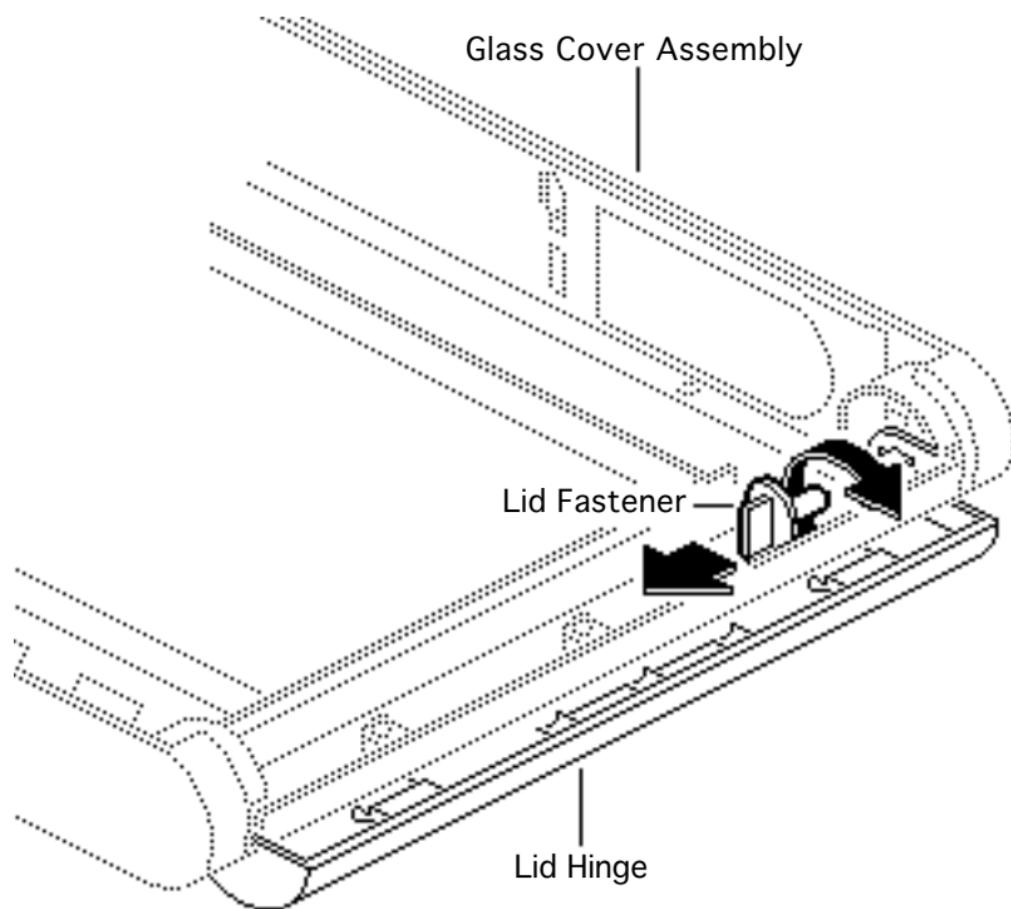
Lid Hinge

1   Turn over the glass
    cover assembly.

2   Twist and remove the lid
    fastener.

3   Repeat for the fastener
    on the other side.

Lid Hinge

Lid Hinge Ring
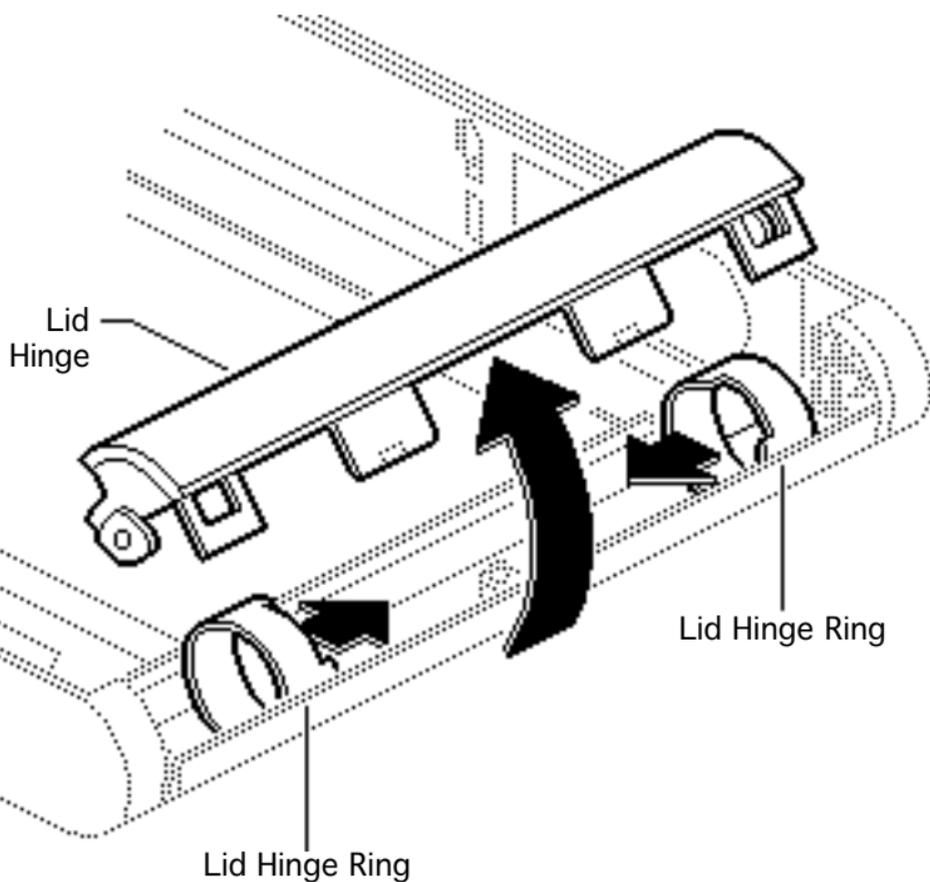
Lid Hinge Ring

4 Lift up and remove the lid hinge.

5 Remove the lid hinge rings.

Optical Assembly

Optical Assembly

Before you begin, remove the following:

- Top cover
- Glass cover assembly

Caution: Review the ESD precautions in Bulletins/ Safety.
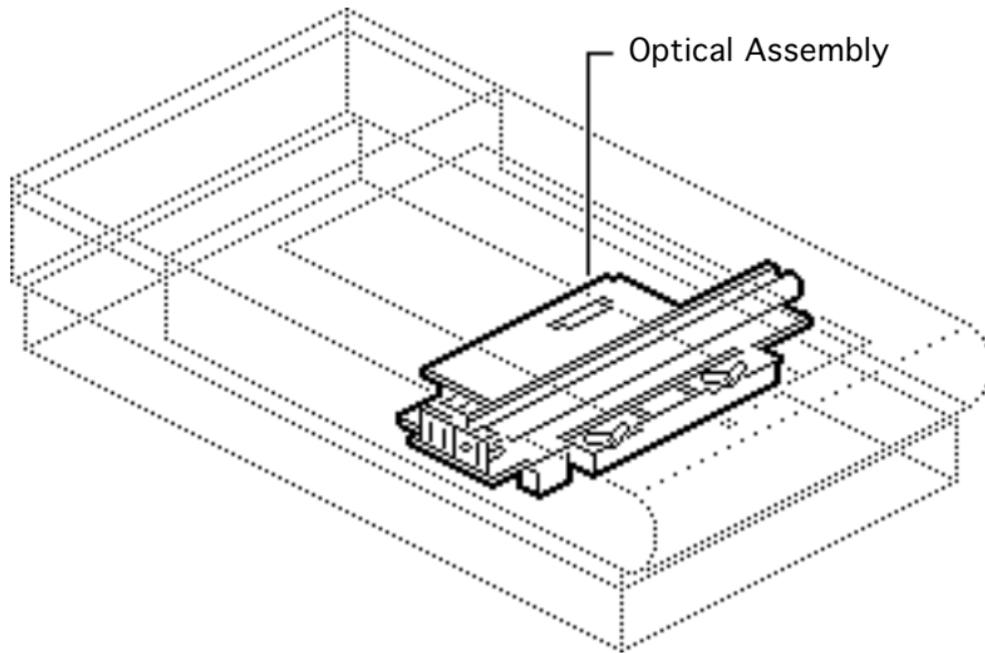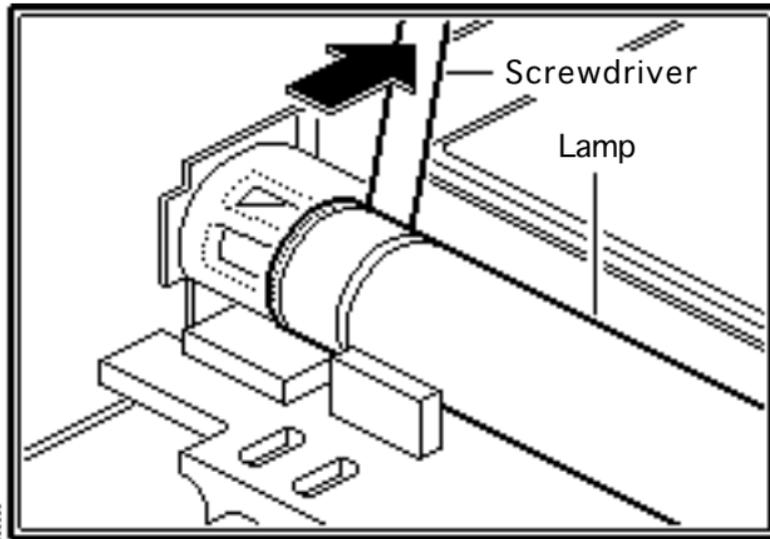
Screwdriver

Lamp

1 Using a small flat-blade screwdriver, remove the lamp assembly
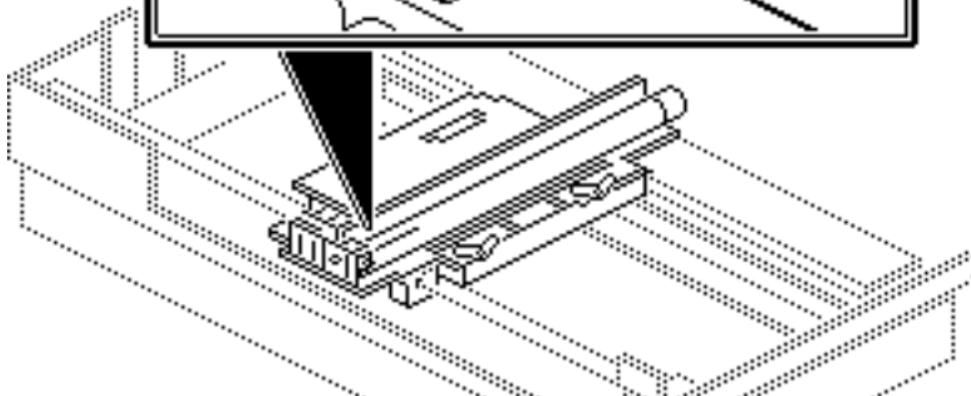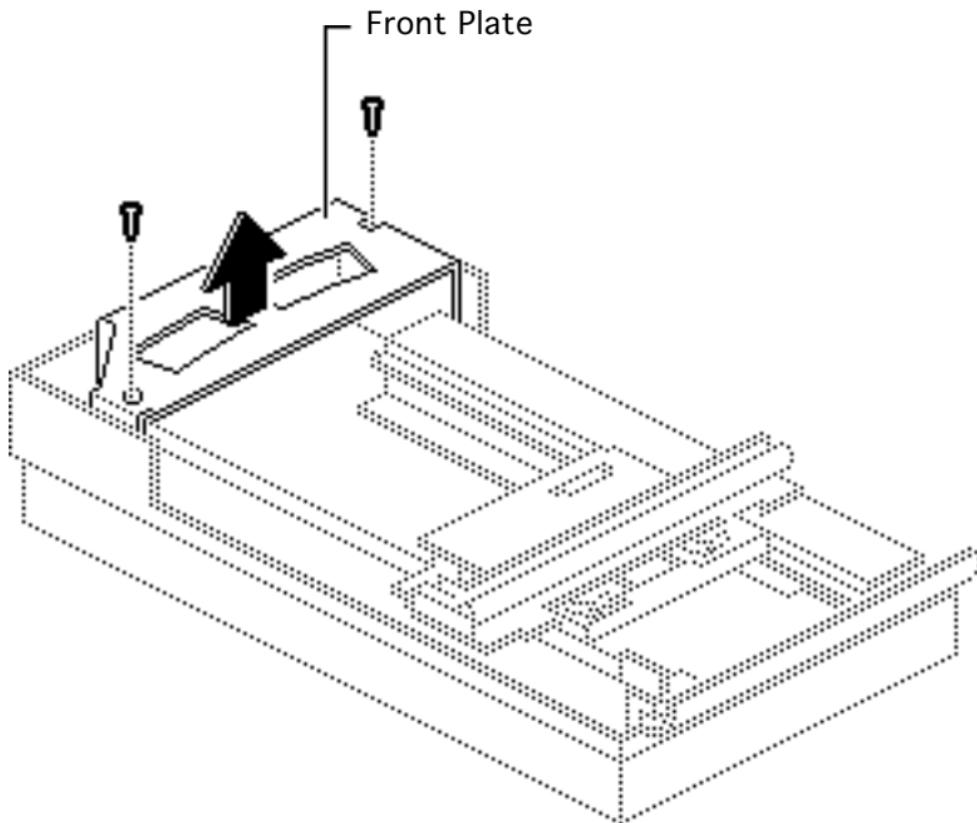
Front Plate

2 Remove the two retaining screws and lift out the front plate.

Replacement Note: Place the screws in the front plate before reinstalling the plate in the scanner. Carefully lower the plate down and tighten the screws.

Optical Assembly
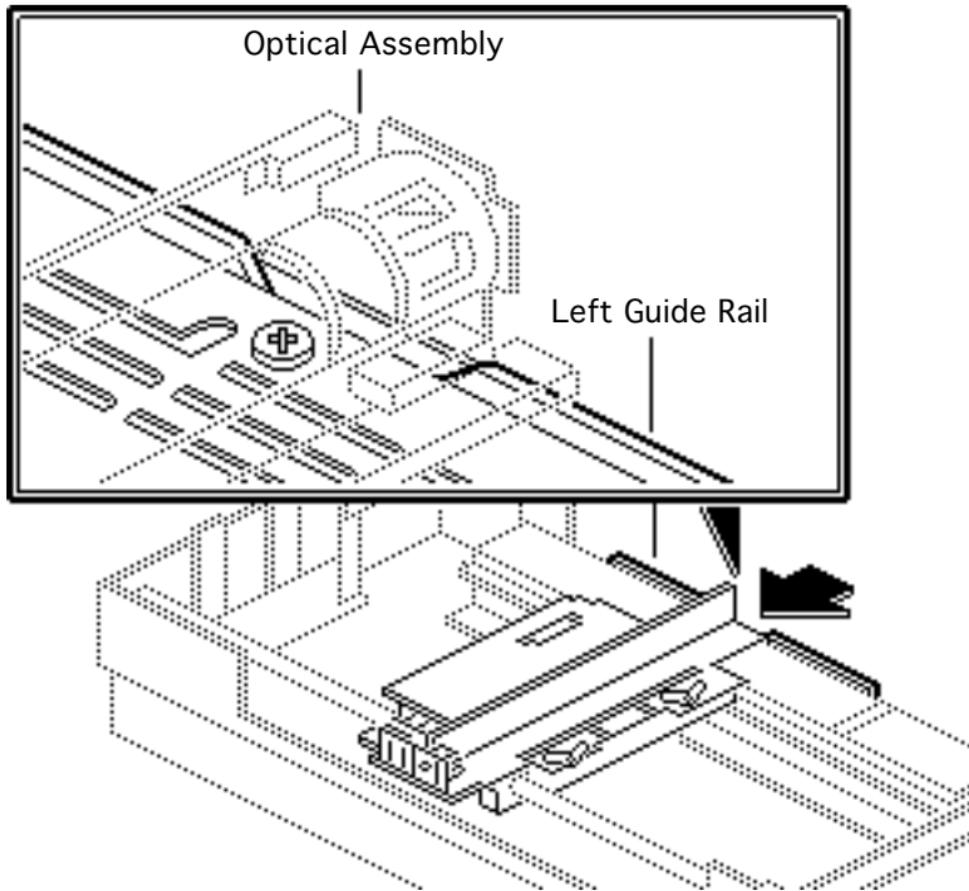
Left Guide Rail

3 Push the optical assembly to the center over the cutout in the left guide rail.

Limit Switch Assembly
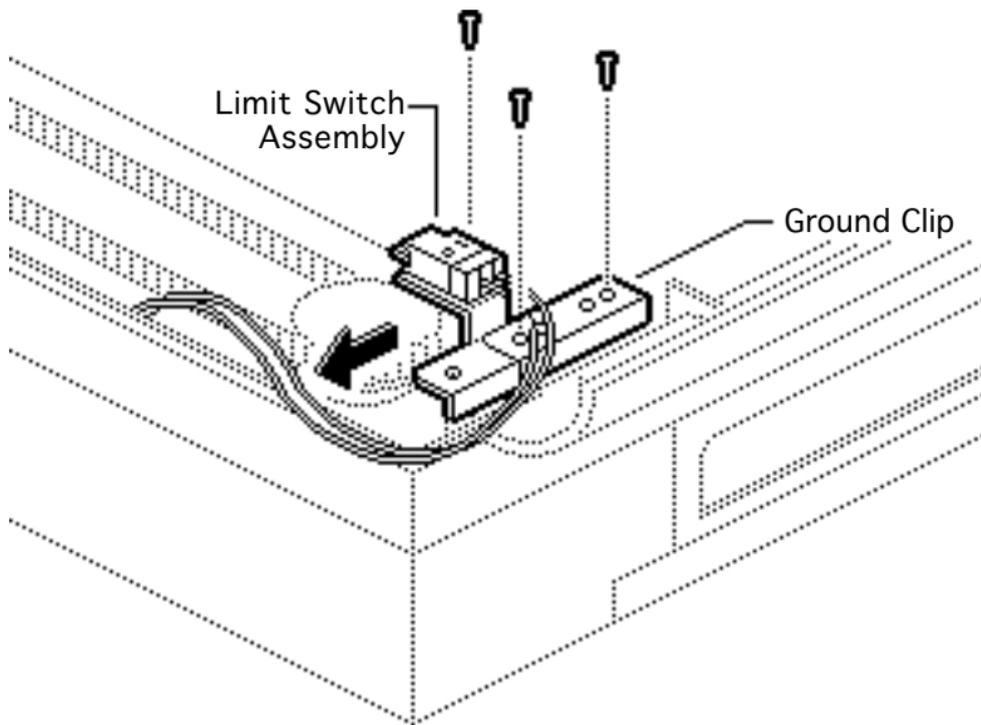
Ground Clip

4　Remove the three retaining screws, and the ground clip.

5　Slide the limit switch assembly to the side.

Pulley Lever
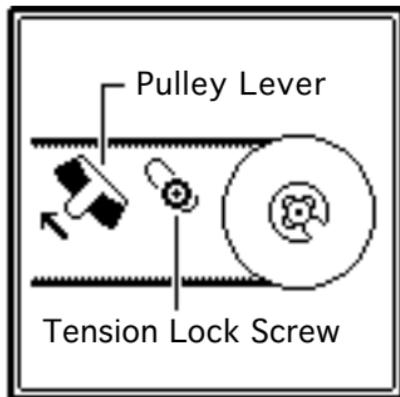
Tension Lock Screw

6 Loosen the tension lock screw.

7 Slide the pulley lever forward to relieve belt tension and remove the belt from the rear pulley gear.

8 Remove the belt from the front pulley gear.

Front Retaining Bracket
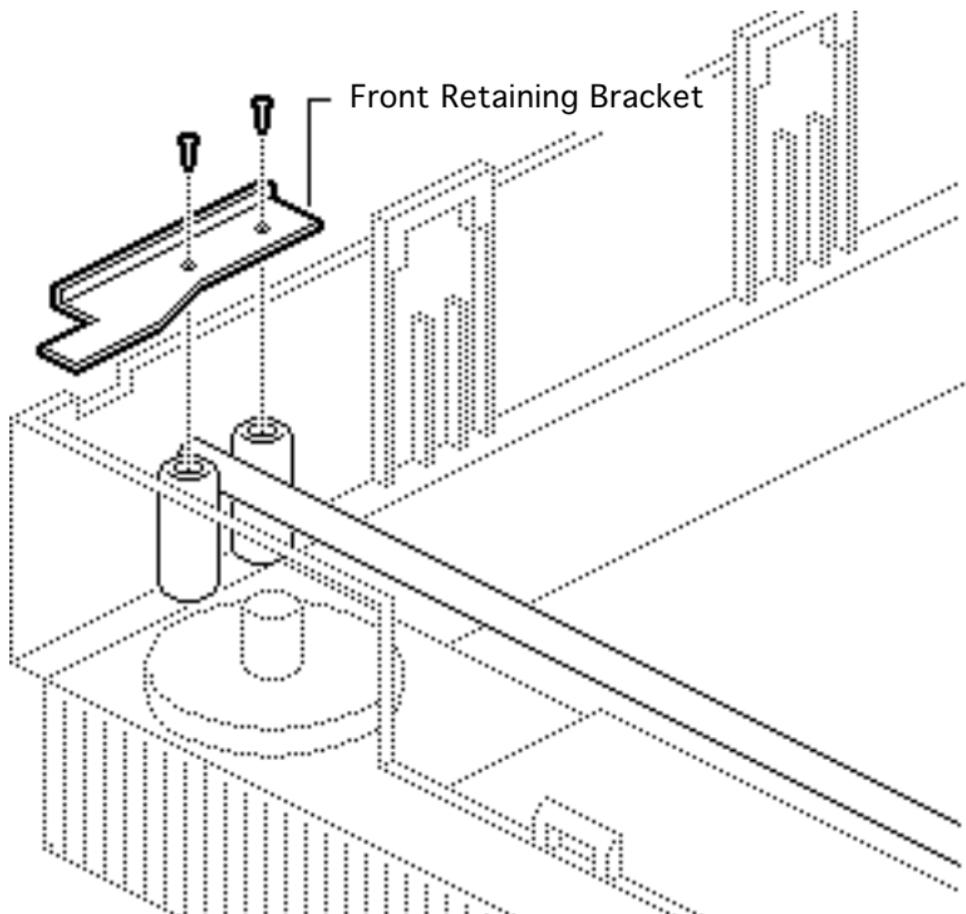
9 Remove the two retaining screws and the carrier shaft front retaining bracket.

Flex Cable

Optical Assembly

Left Guide Rail

Carrier Shaft
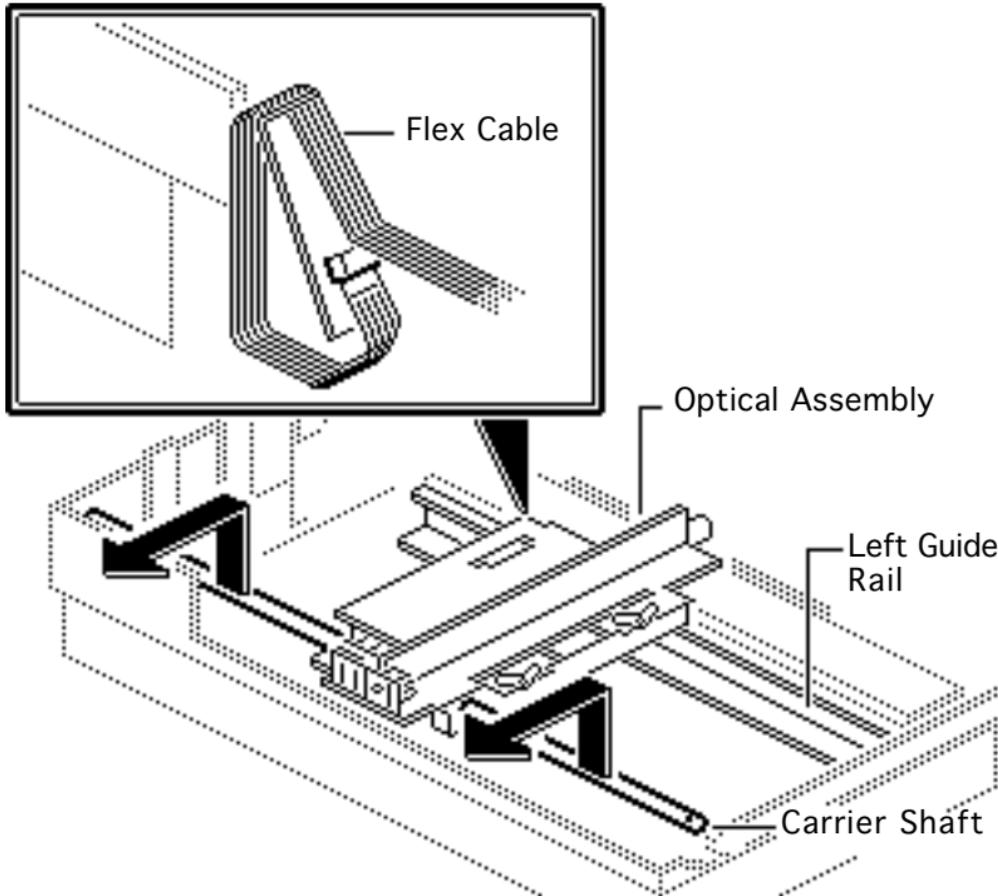
Caution: Do not lift the optical assembly too high, or you may damage the flex cable.

10 Lift the shaft until it clears both support brackets and pull the shaft slightly to the right.

11 Free the left side of the optical assembly from the left guide rail.

Screwdriver

Optical Board Cover
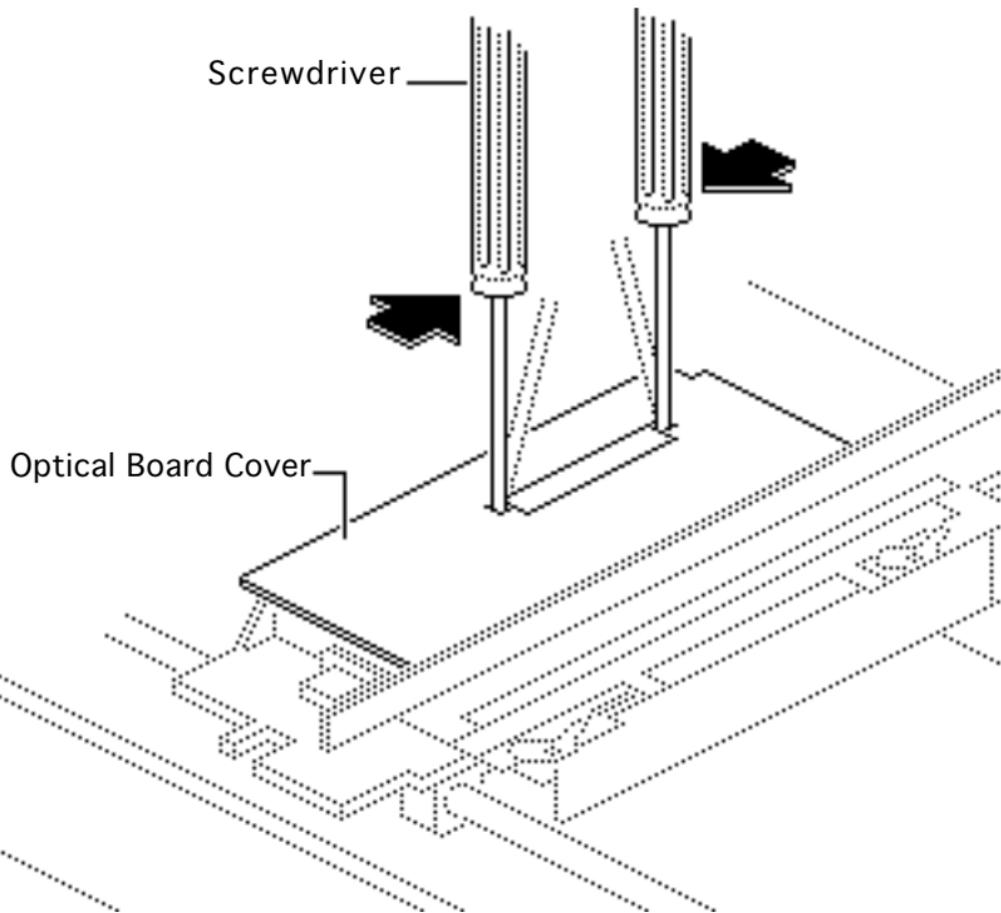
12 Using a small flat-blade screwdriver, unlatch the optical board cover.

13 Repeat for other side and remove the optical board cover.

Flex Cable
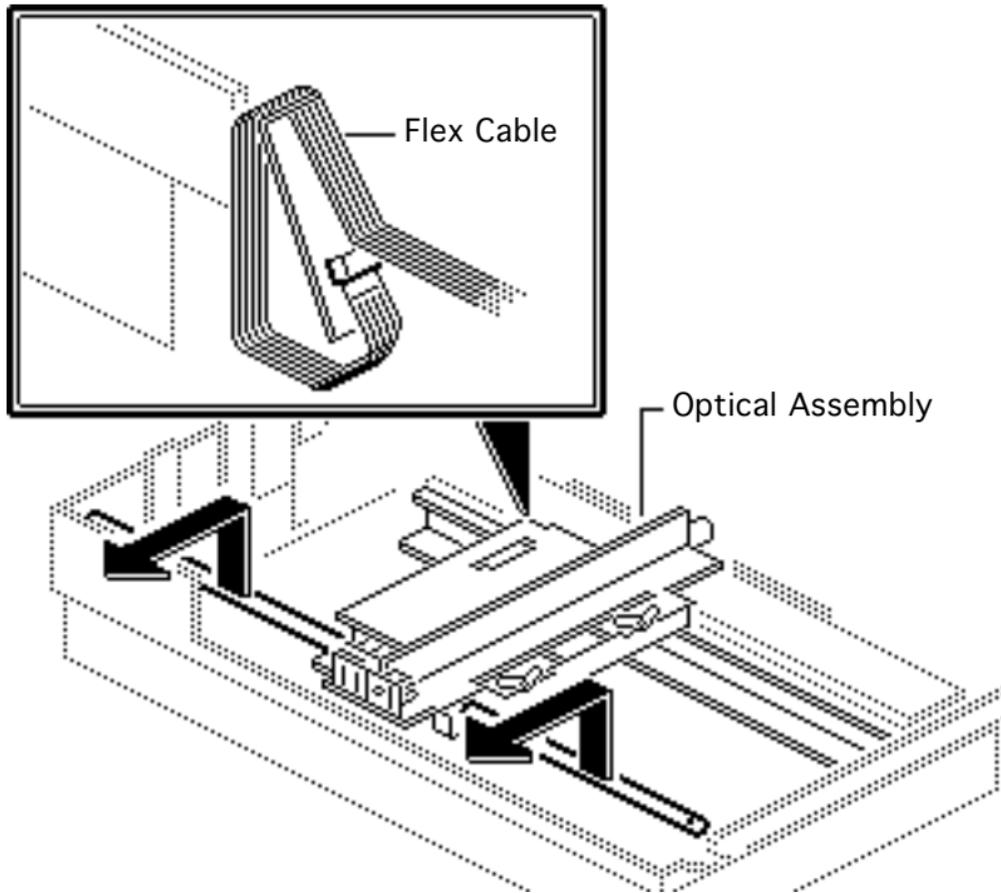
Optical Assembly

14 Using a small flat-blade screwdriver, disconnect the flex cable and remove the cable from the optical assembly.

Replacement Note: Make sure the blue stripe on the flex cable is facing up.

Carrier Stopper Sleeve

Carrier Shaft
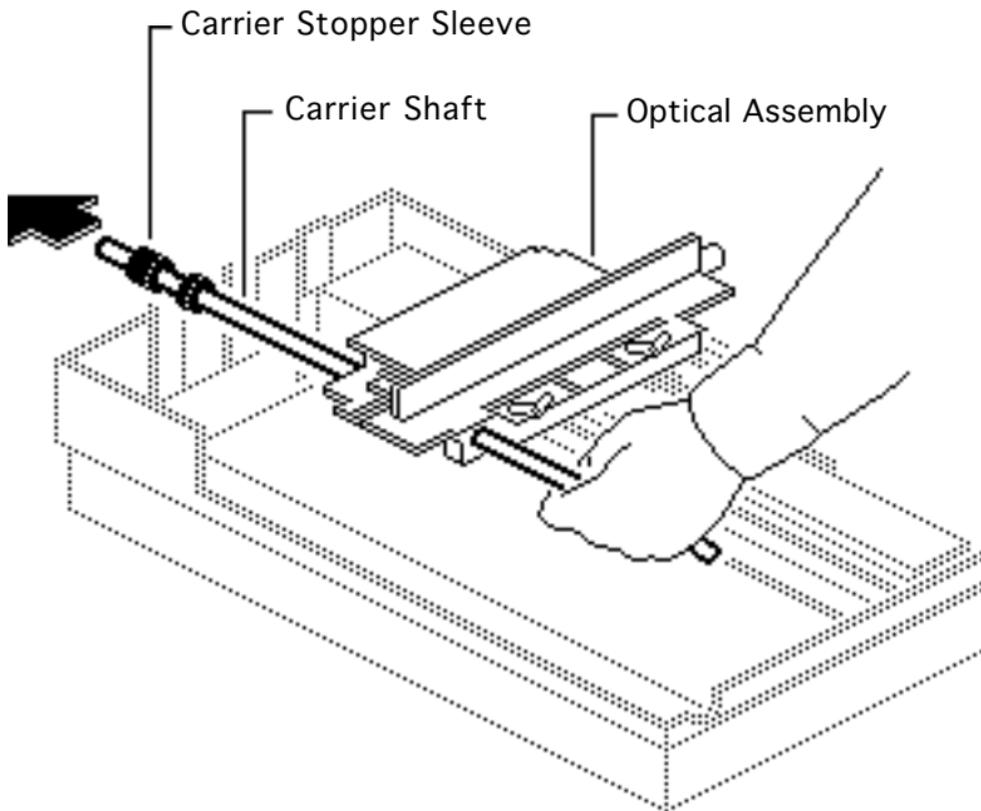
Optical Assembly

15 Lift the optical assembly from the scanner.

16 Slide the carrier shaft out of the optical assembly.

Note: Keep the carrier stopper sleeve with the shaft.
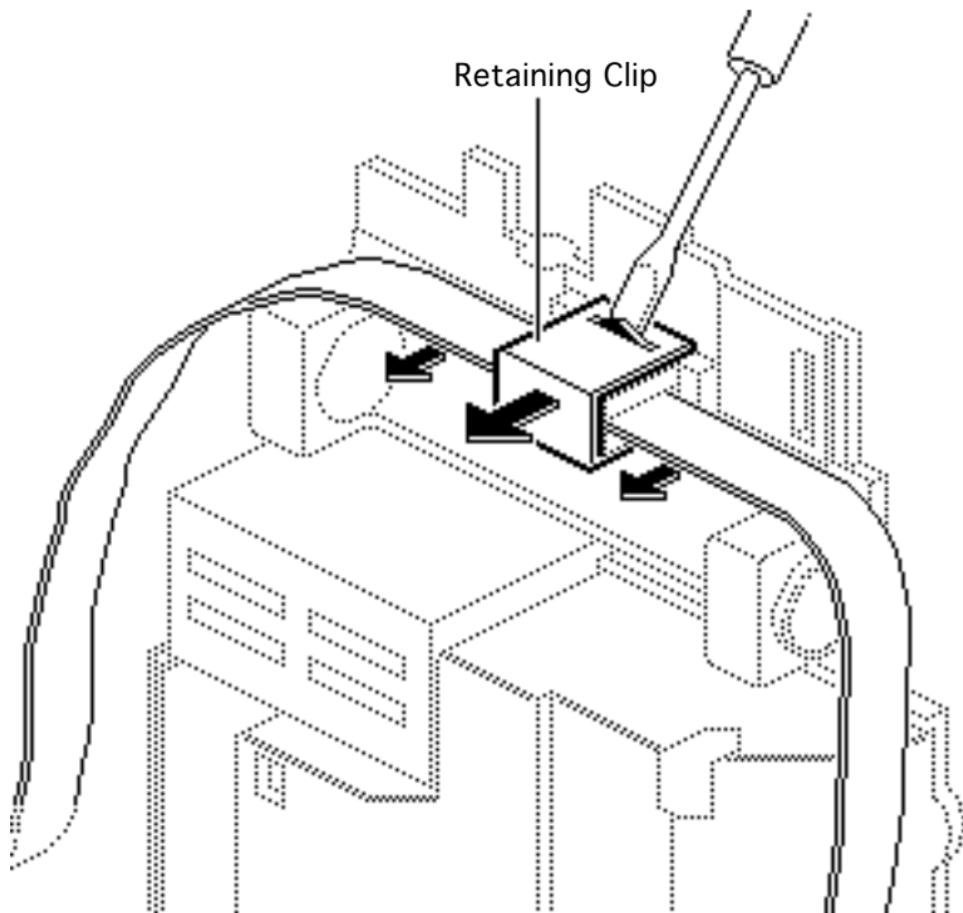
Retaining Clip

17 Using a small screwdriver, pry off the retaining clip and remove the belt from the optical assembly.

Carrier Motor

Before you begin, remove the following:

- Top cover
- Glass cover assembly
- Optical assembly

Caution: Review the ESD precautions in Bulletins/Safety.

.
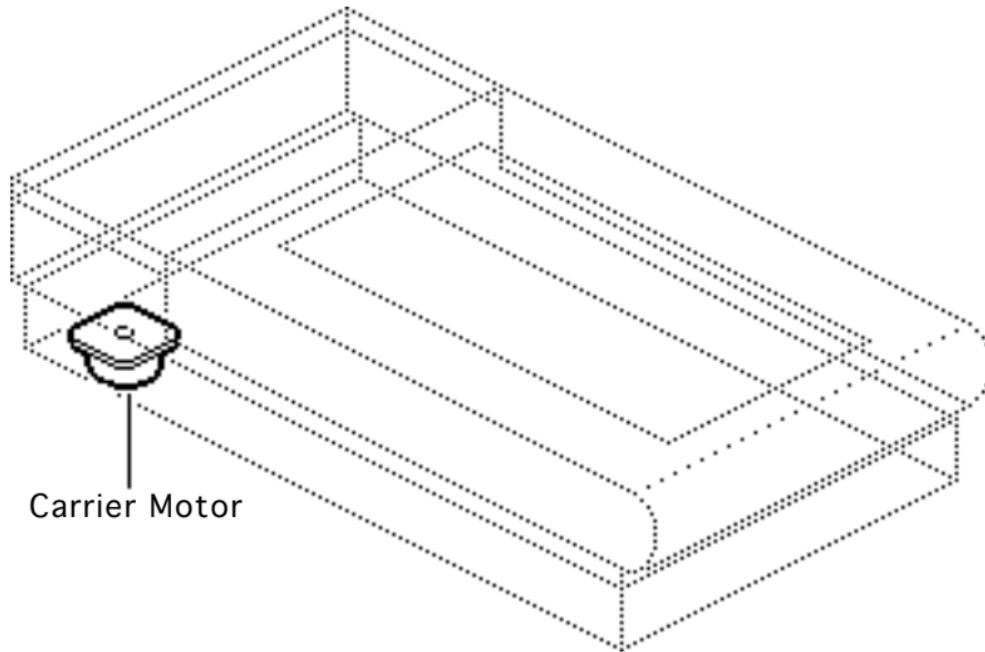
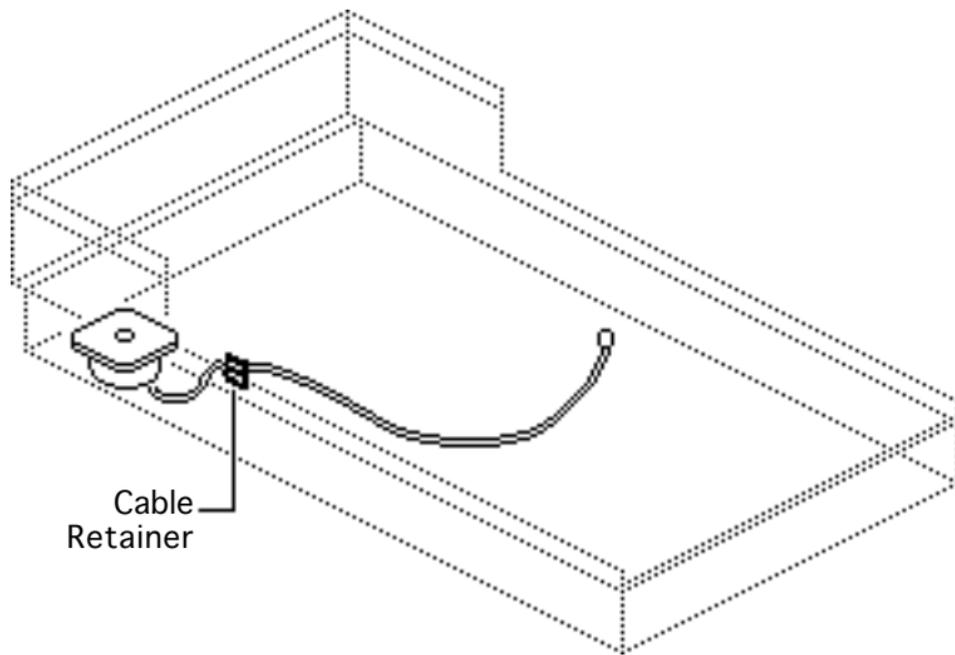Carrier Motor

1 Remove the logic board cover.

Logic Board Cover
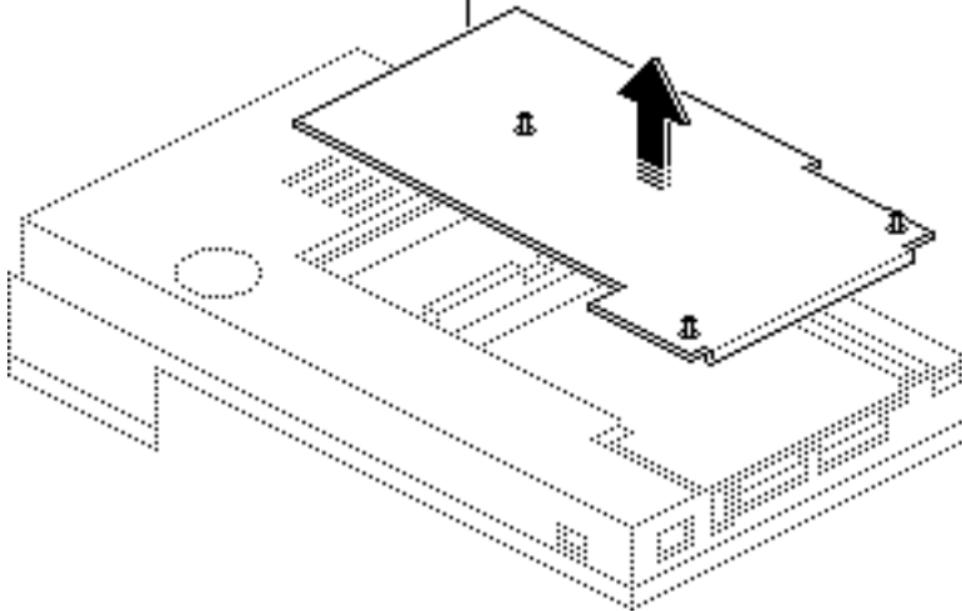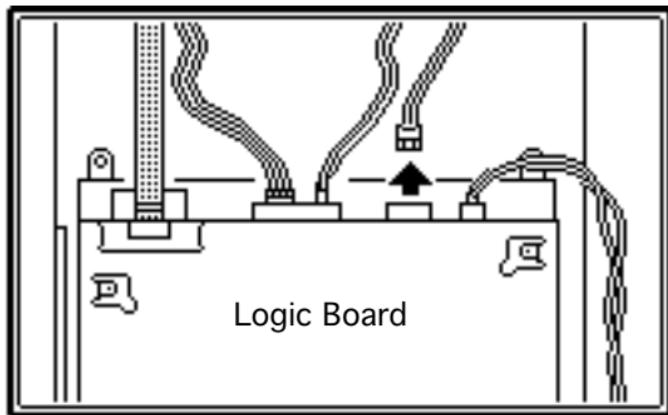
2 Disconnect the cable connector from the logic board.

Logic Board
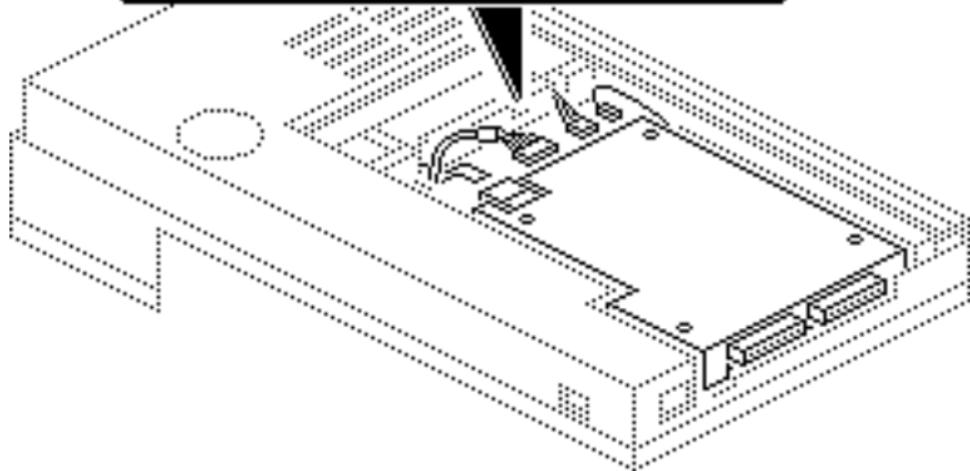
3 Unhook the cables from
the cable retainer.

Cable
Retainer

4 Remove the five
mounting screws and
lift out the motor plate.

Motor Plate

E-Clip

Front Gear Pulley
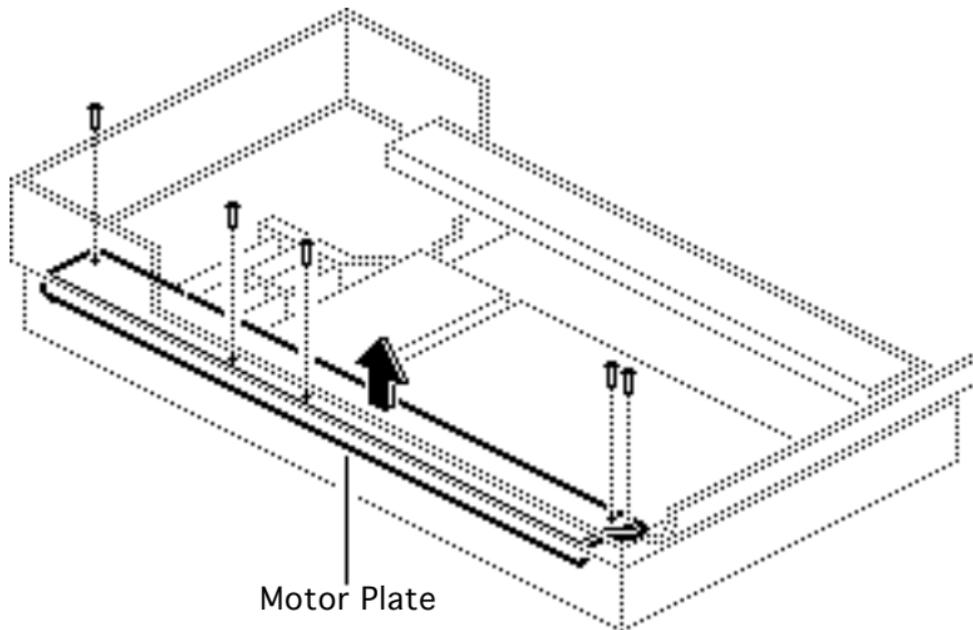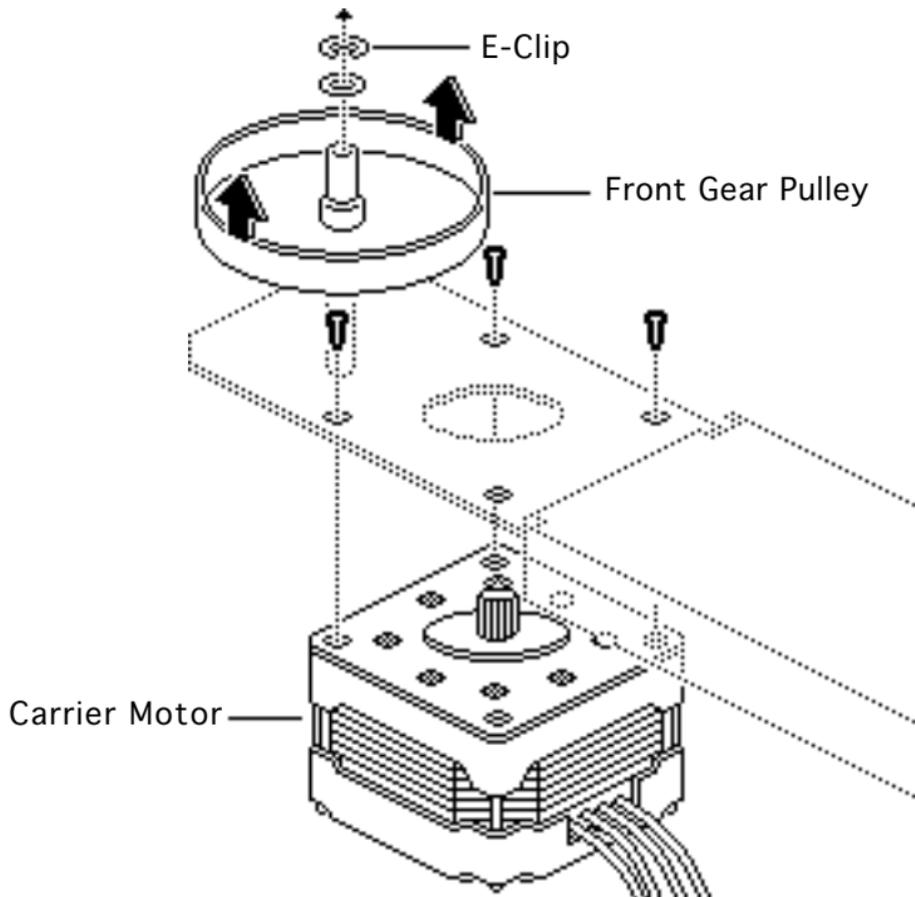
Carrier Motor

5 Remove the E-clip and washer.

6 Slide the front gear pulley up and off the pulley spindle.

7 Remove the three motor mounting screws and the carrier motor.

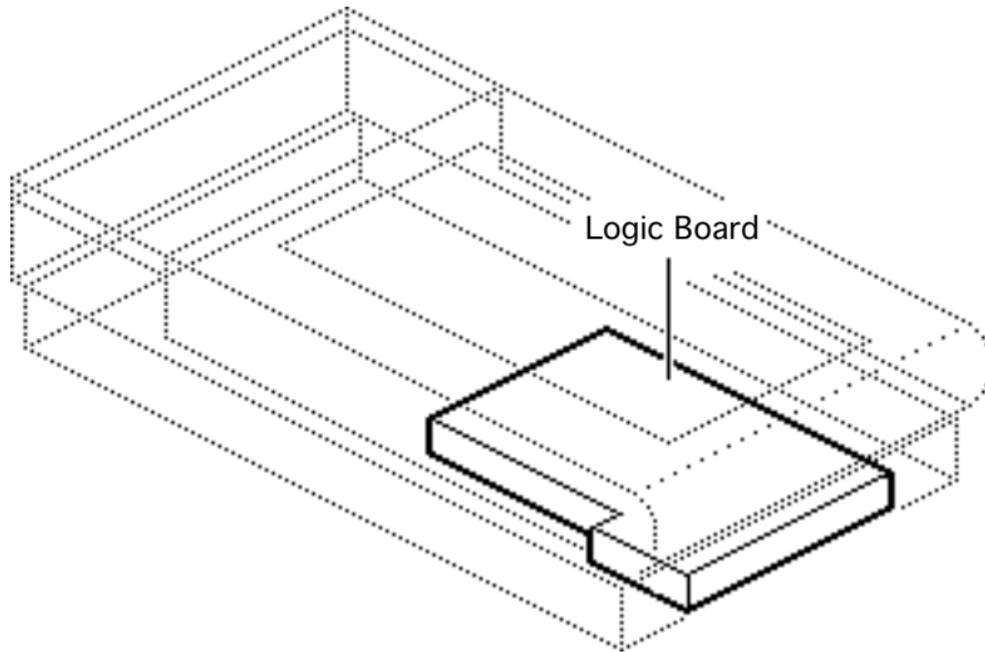   **Replacement Note:** Install the motor onto the carrier assembly as shown.

Logic Board

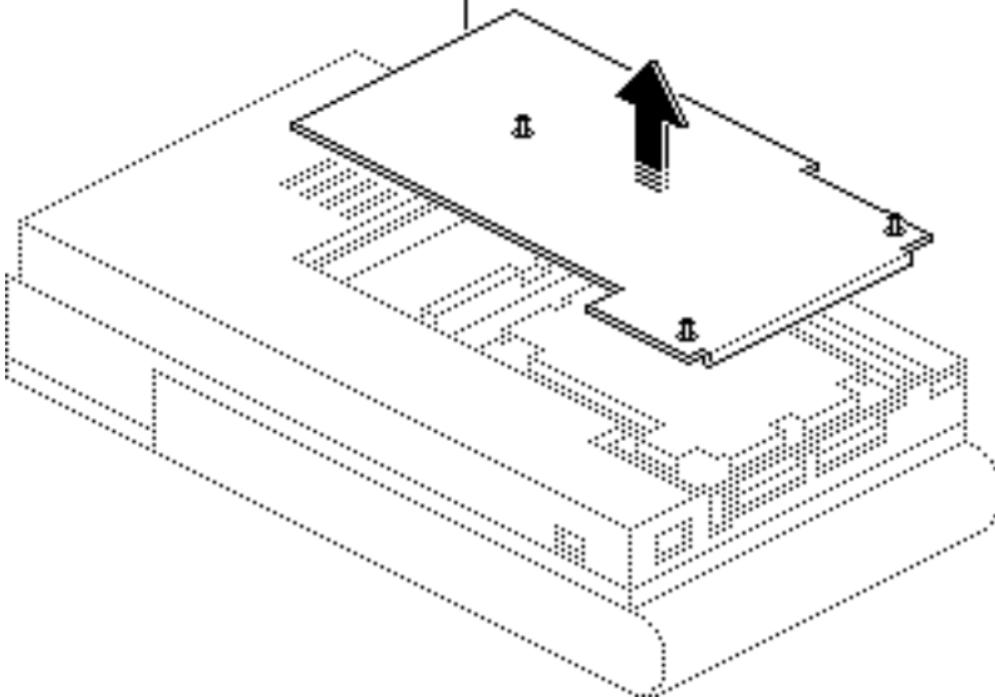No preliminary steps are required before you begin this procedure.

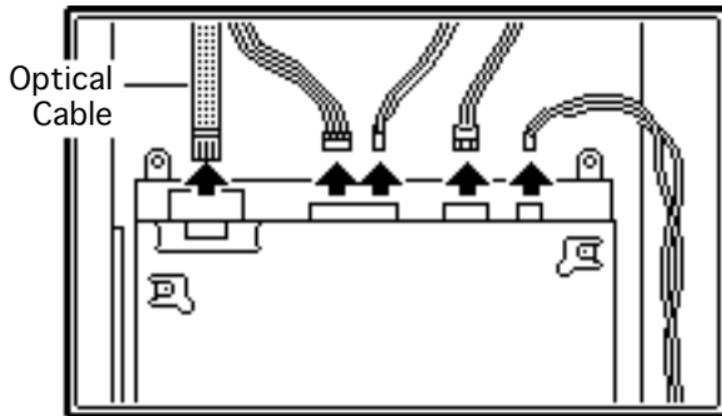**Caution:** Review the ESD precautions in Bulletins/Safety.

Logic Board

Bottom Cover

1 Loosen the three captive
  screws and remove the
  bottom cover.

Optical Cable
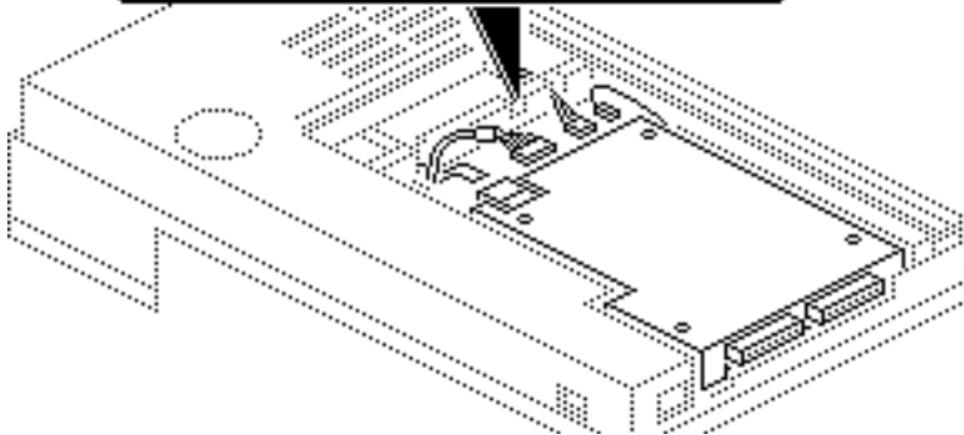
Caution: Do not let the optical cable slide back into the scanner. Tape it to the chassis until you can reinstall the logic board.
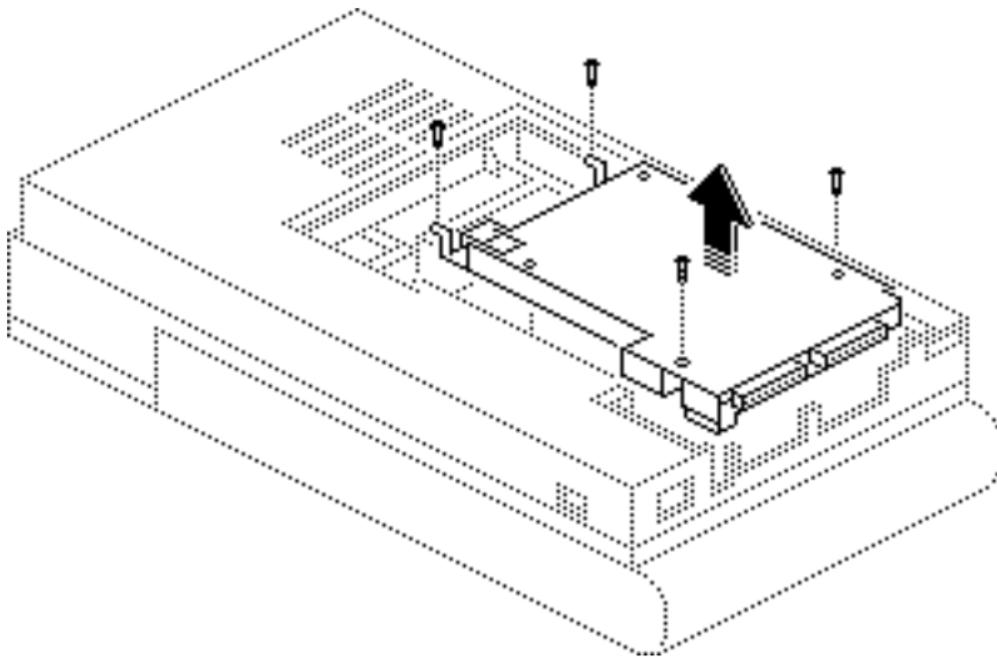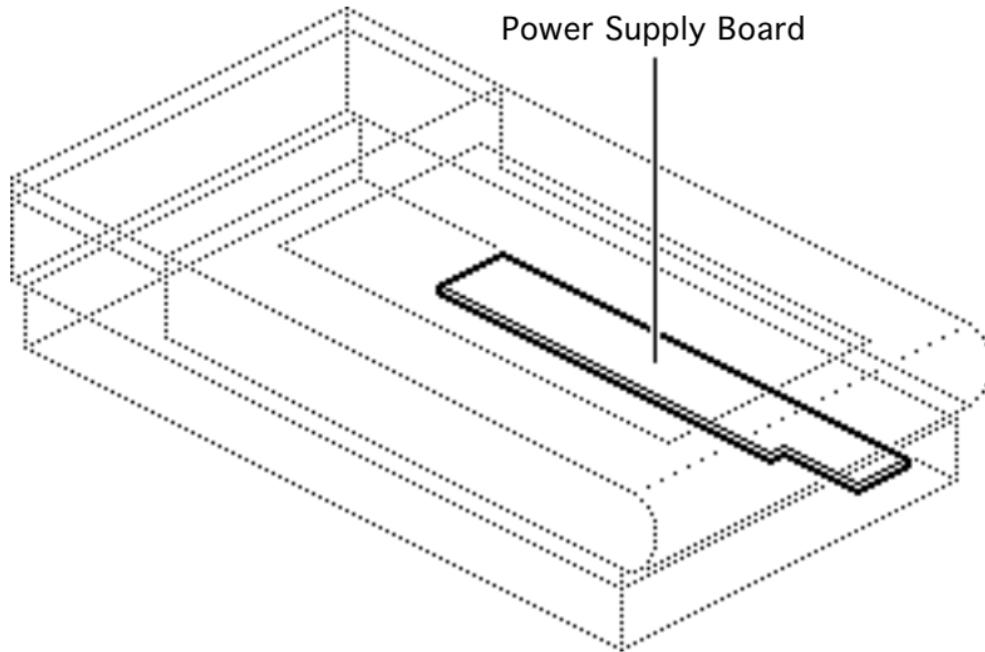
2 Disconnect the five cables from the logic board.

3 Remove the four
mounting screws, and
remove the logic board.

Caution: Do not remove
the metal case from the
logic board. You could
cause electrostatic
damage to the circuitry.

Power Supply Board
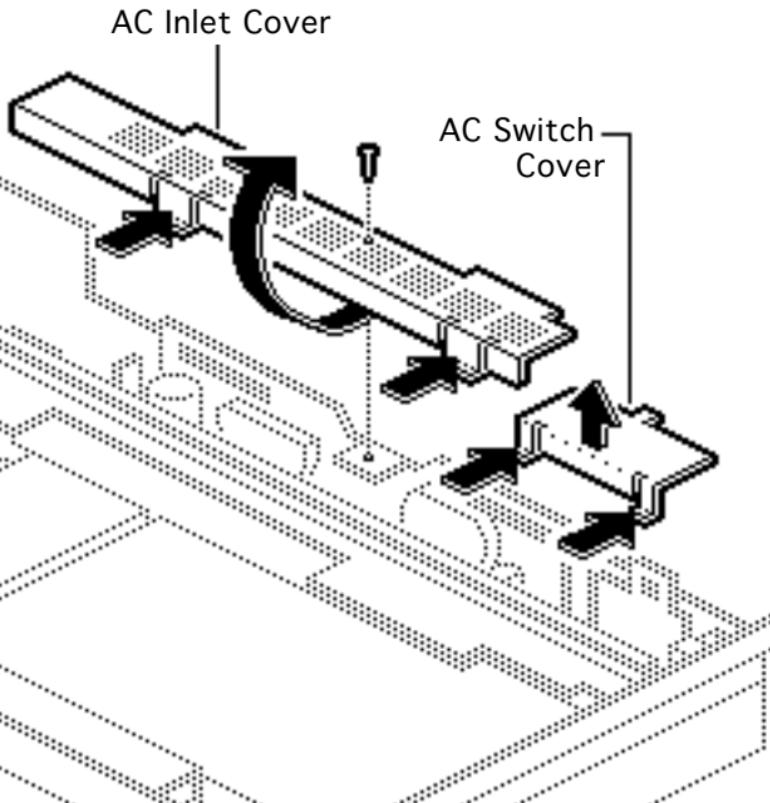
Power Supply Board

Before you begin, remove the following:

- Top cover
- Glass cover assembly
- Optical assembly
- Logic board

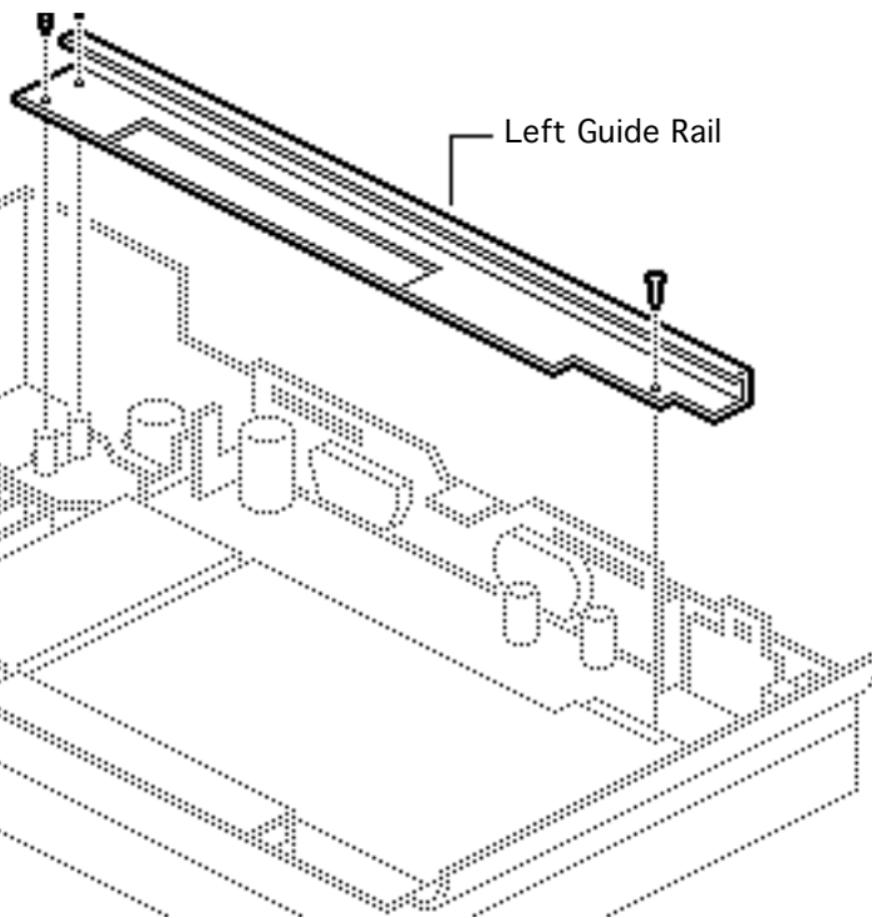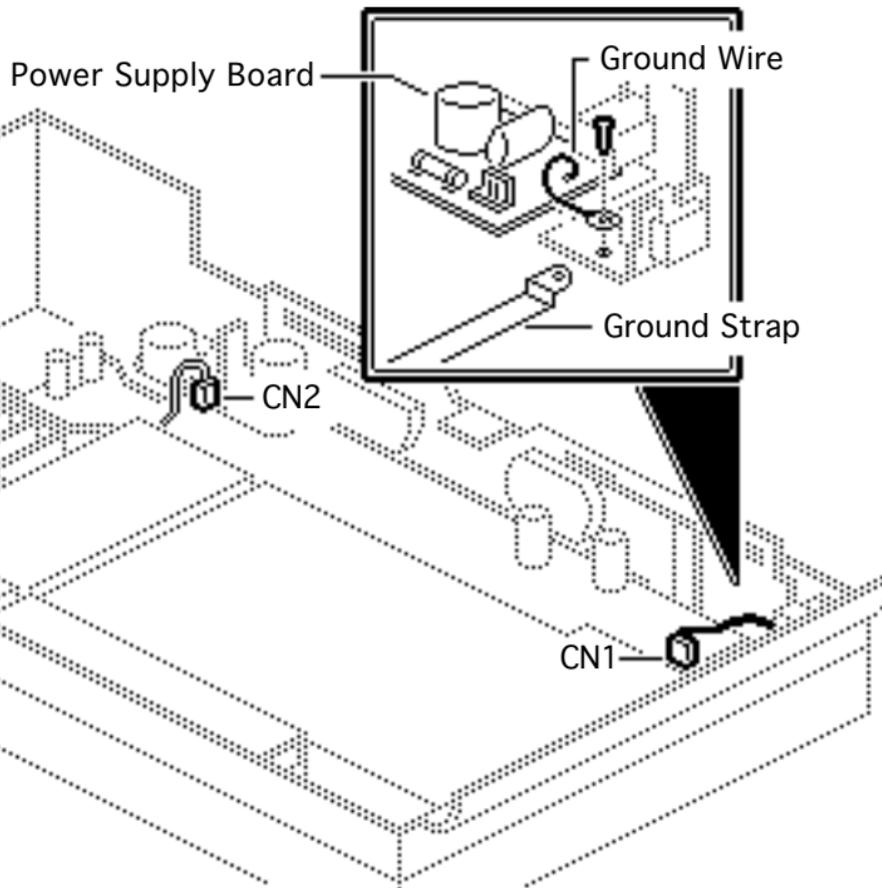**Caution**: Review the ESD precautions in Bulletins/ Safety.

AC Inlet Cover

AC Switch Cover

1 Remove the retaining screw and slide the AC inlet cover to the right and out of the scanner.

2 Remove the AC switch cover.

Left Guide Rail

3 Remove the three mounting screws and the left guide rail.
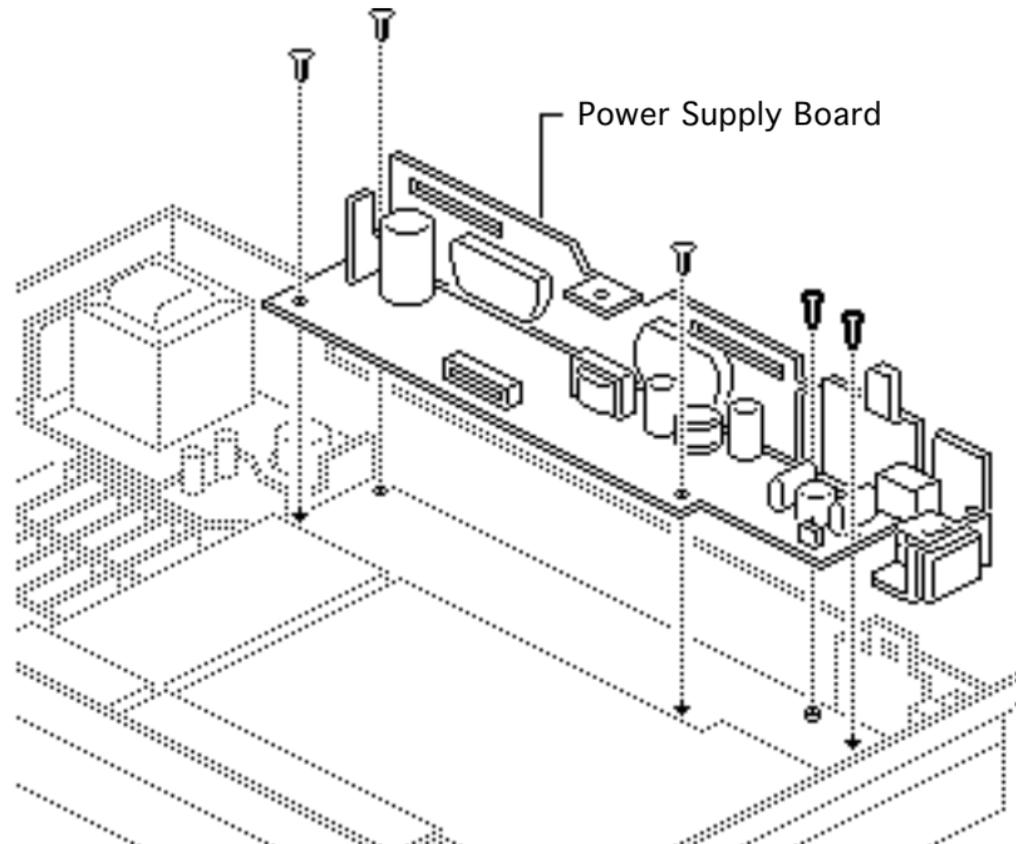
Power Supply Board
Ground Wire
Ground Strap
CN2
CN1

4 Disconnect cables from the following power supply connectors:
- CN1
- CN2

5 Remove the retaining screw and detach the power supply board ground wire and strap.

Replacement Note: Make sure the ground strap from the logic board is seated properly under the power supply.

6 Remove the screws.

7 Push in and lift out the power supply board.

Power Supply Board

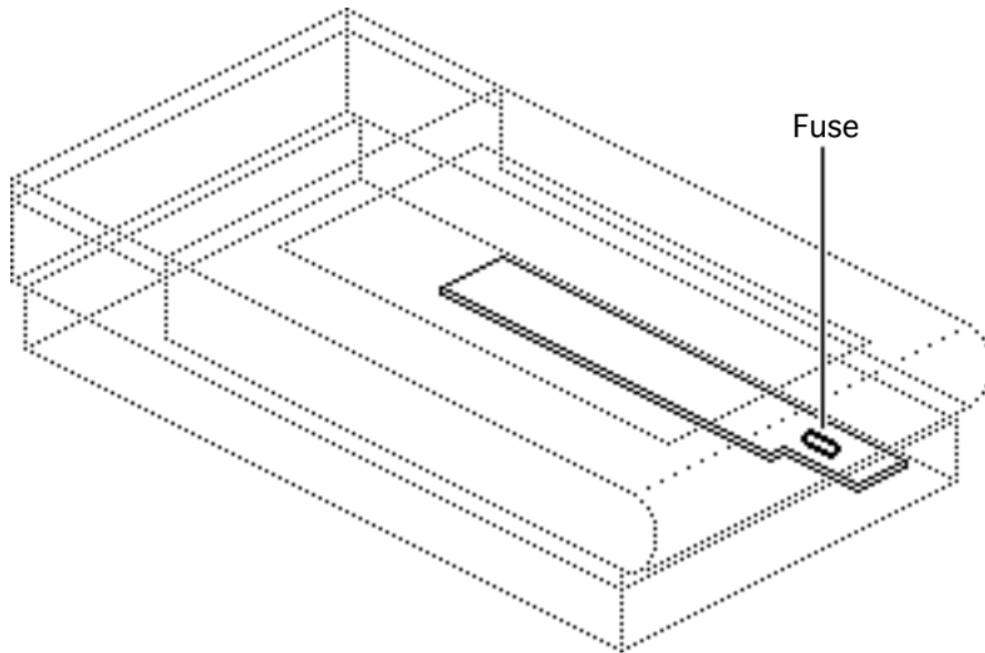Additional Procedures

Color OneScanner/B

Fuse

Power Supply Fuse

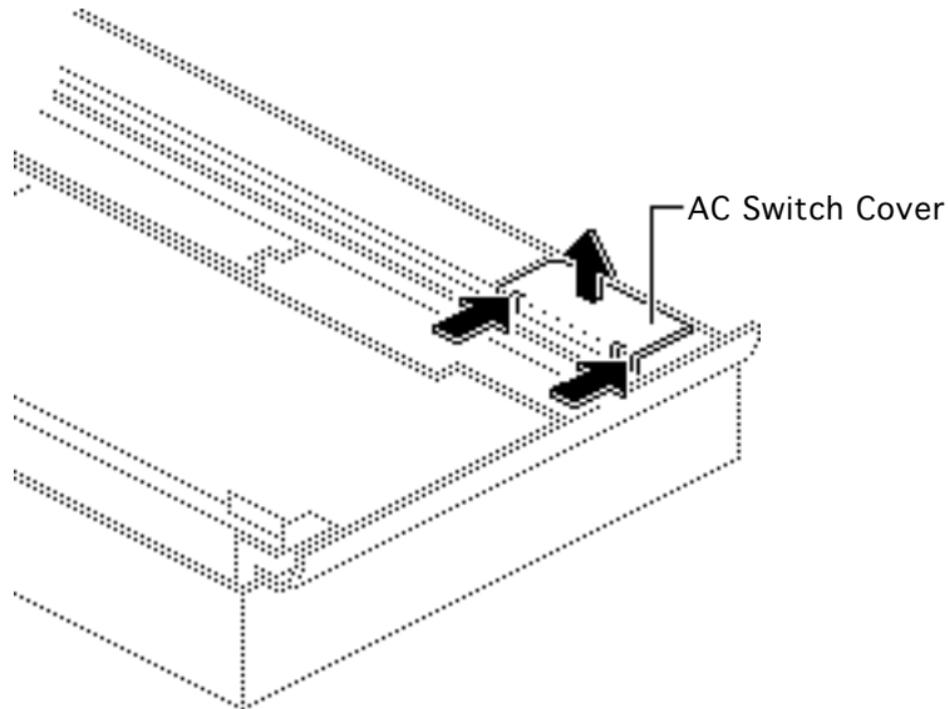Before you begin, remove the following:

- Top cover
- Glass cover assembly

Caution: Review the ESD precautions in Bulletins/Safety.
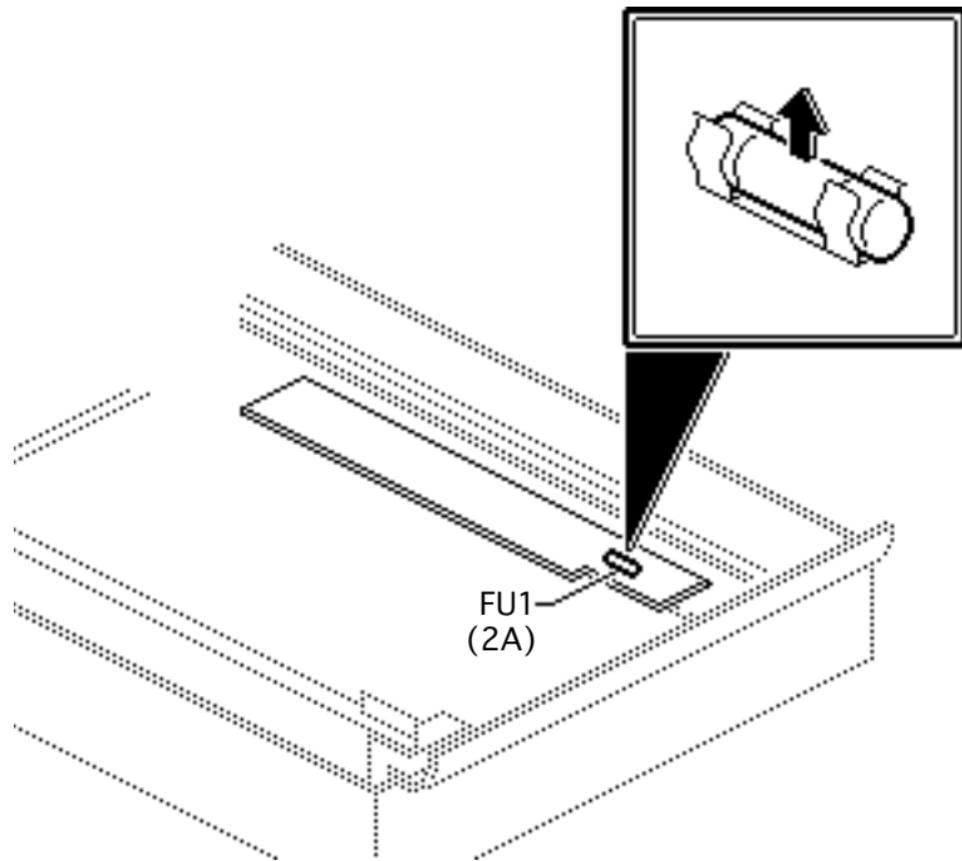
1 To access fuse FU1, push in the tabs and remove the AC switch cover.

AC Switch Cover

2 Remove fuse FU1.

Replacement Caution:
Use a replacement fuse
with the correct rating.
FU1 is a fire-rated
ceramic fuse.
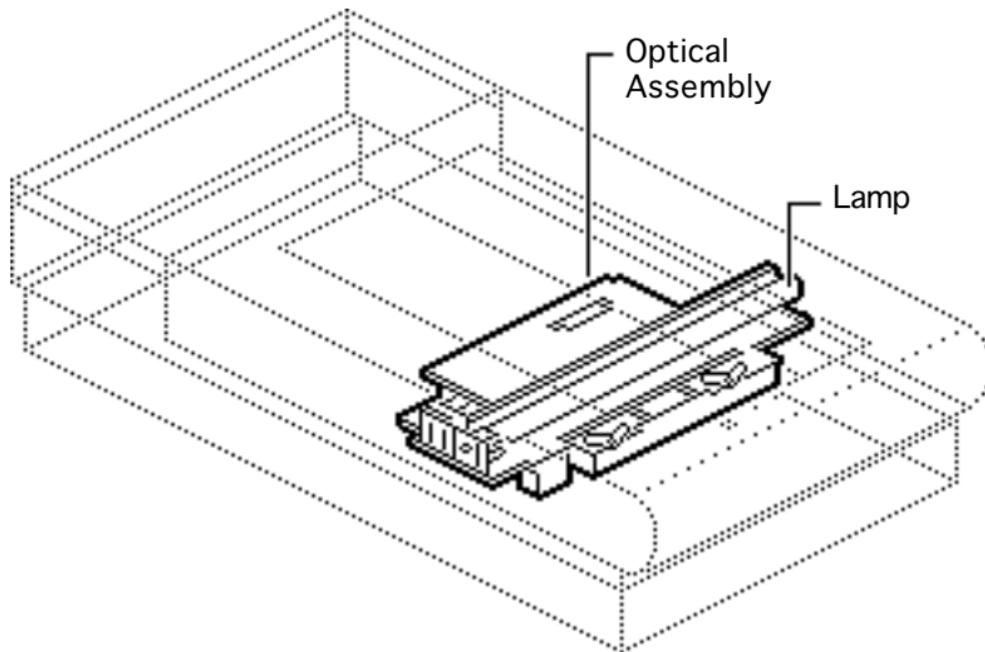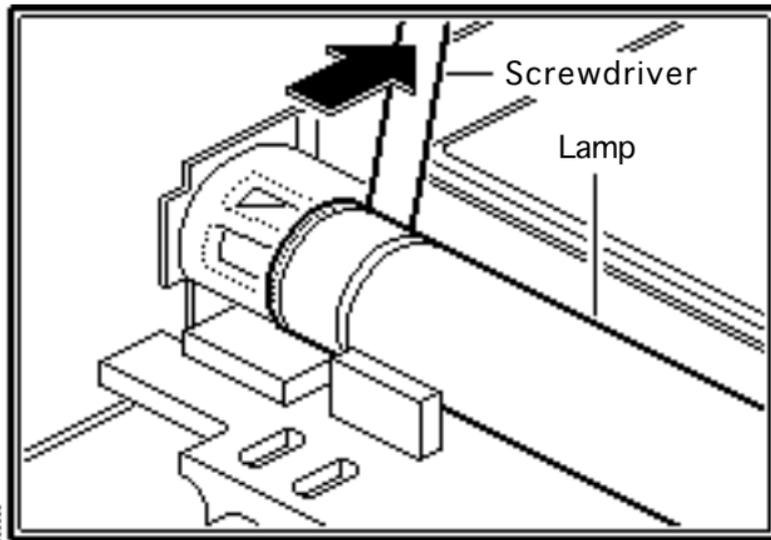

FU1
(2A)

Lamp Replacement
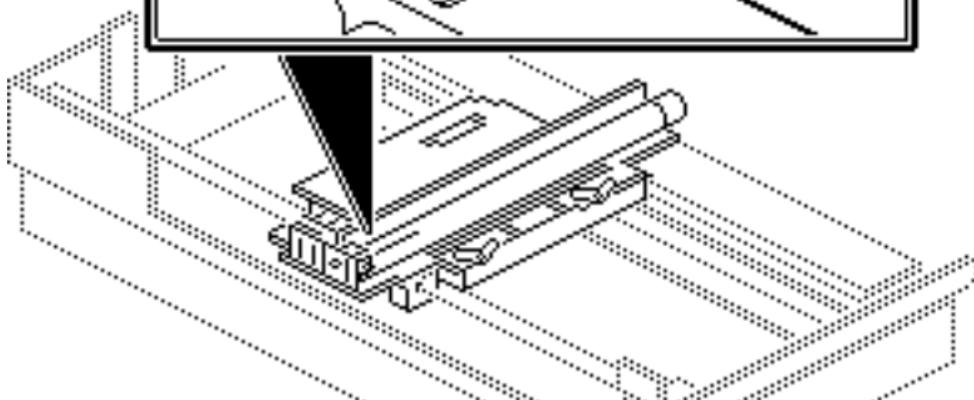
Before you begin, remove the following:

- Top cover
- Glass cover assembly

Caution: Review the ESD precautions in Bulletins/Safety.

Carefully push the lamp out of the optical assembly.

Screwdriver

Lamp

Retaining Flange
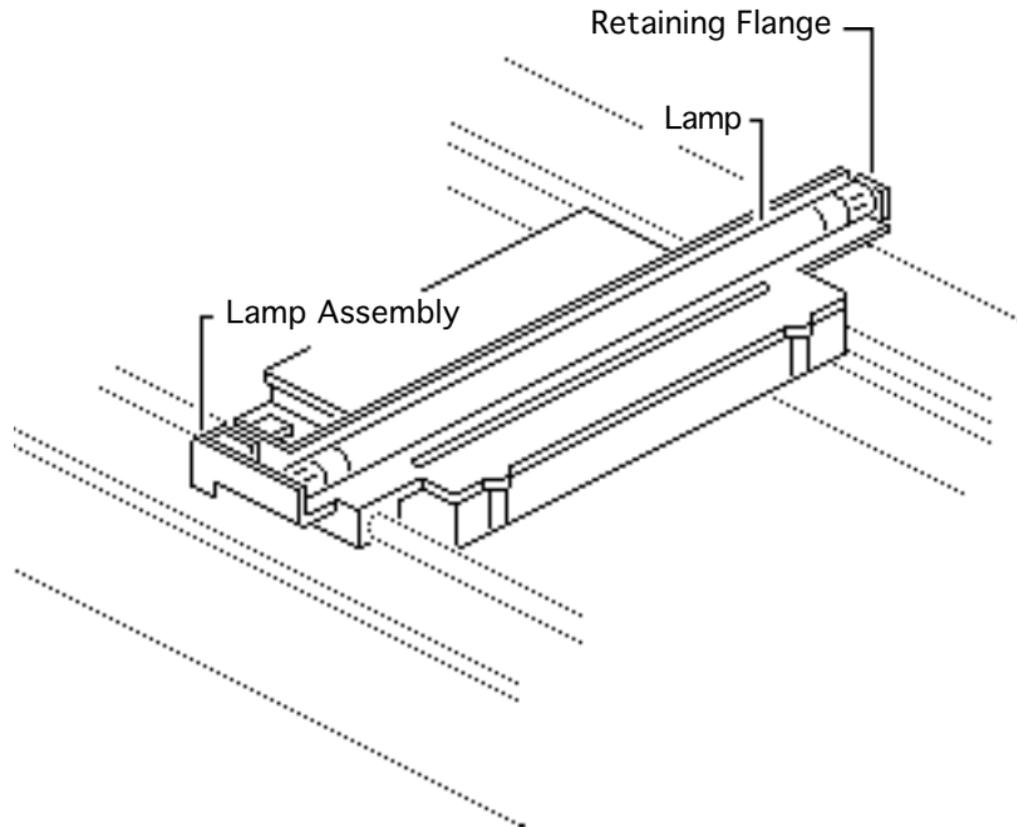
Lamp

Lamp Assembly

Replacement Note:
When replacing the lamp and lamp assembly, make sure

- The lamp is free of fingerprints. Use a soft cloth to wipe the lamp prior to inserting it into the lamp assembly.
- The printing on the lamp faces the lamp assembly.
- The lamp assembly seats securely in the left retaining flanges.

Exploded View

Color OneScanner/B

Top Coverw/ Glass
922-1187

Scan Start Board
076-0592

Lid Hinge
Assembly
922-1191

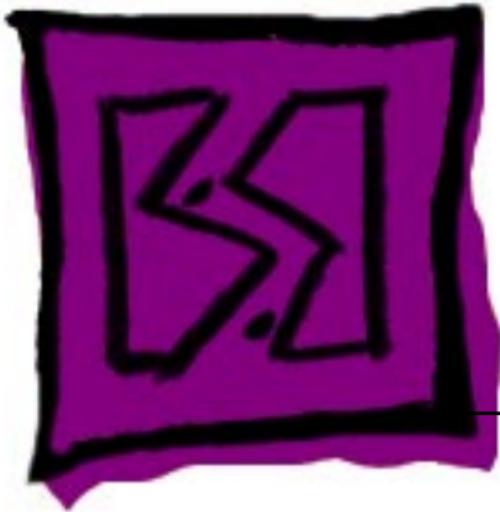Cable Optical
922-0021

Optical Assy
661-0187

Top Cover
922-1189

Shaft, Carrier
699-0514

Lamp Holder
922-1198

Front Plate
Assembly
922-0331

AC Inlet Cover
949-0214

Transformer
Assembly
915-0038 110V
915-0039 100/240V

Shield Plate (L)
922-1196

*Fuses
See Parts List

Interior Cover
949-0226

Power Supply
661-0186

Drive Belt
Assembly
076-0323

Bottom Cover
Assembly
922-1188

Carrier
Motor
922-1193

Plate
Assembly,
Carrier Motor
922-0017

Logic Board 24Bit
661-0185 (B)

Logic Board Cover
922-1199 (B)

Cover, Voltage Select
922-0402