AppleCD 150/300

Apple CD 150
Apple CD 300

Specifications

AppleCD 150/300

Characteristics 150

Access Time   Average: 380 ms (typical)
(Including Latency) Maximum (first to last block): 650 ms (typical)

Data-Streaming   Mode 1: 150K/sec.
Rate   Mode 2: 171K/sec.

Block Rate   75 blocks/sec.

SCSI Transfer Rate   Approximately 1.5 MB/sec.

Rotational Speed   Approximately 230–530 rpm

Interfaces   One headphone jack; two SCSI 50-pin connectors; two audio output jacks

Playback Medium   12-cm optical disc installed in a CD caddy (any CD-ROM or audio compact disc is compatible)

Characteristics 300

Access Time
(Including Latency)
Normal speed: 360 ms (typical)
Double speed: 295 ms (typical)

Data-Streaming
Rate
Normal speed:
Mode 1: 150K/sec.
Mode 2: 171K/sec.

Block Rate
Double speed:
Mode 1: 300K/sec.
Mode 2: 342K/sec.
Normal speed: 75 blocks/sec.
Double speed: 150 blocks/sec.

SCSI Transfer Rate   Approximately 2.5 MB/sec.

Rotational Speed   Normal speed: Approximately 230–530 rpm
                          Double speed: Approximately 460–1,060 rpm

Interfaces   One headphone jack; two SCSI 50-pin connectors; two audio output jacks

Playback Medium   12-cm optical disc installed in a CD caddy (any CD-ROM or audio compact disc is compatible)

Formats   Multi-session Kodak Photo CD (QuickTime required); ISO 9660/ High Sierra; Macintosh HFS; CD-ROM XA (requires additional ADPCM hardware to read compressed audio); CD+G; CD+MIDI; standard audio CDs; CD digital audio data via SCSI bus

Capacity

Data Capacity   Mode 1: 656 MB
                           Mode 2: 748 MB

Recording Surfaces   1

Data/Block   Mode 1: 2,048 bytes
(Available to User)   Mode 2: 2,336 bytes

Blocks per Disc   More than 270,000

Audio Playback

Playing Time   More than 1 hr.

Frequency Response   20–20,000 Hz

Environmental

**Operating
Temperature**   41–104°F (5–40°C)

Relative Humidity   AppleCD 150: 10–90% noncondensing
                        AppleCD 300: 5–90% noncondensing

**Storage
Temperature**   –22 to 122°F (–30 to 50°C)

Electrical

Line Voltage   100–240 VAC

Frequency   50–60 Hz

Power Consumption   AppleCD 150: 0.25 A
                          AppleCD 300: 0.28 A

Physical

Dimensions

AppleCD 150	Height: 1.95 in. (4.9 cm)
	Width: 7 in. (17.75 cm)
	Depth: 12.9 in. (32.5 cm)
AppleCD 300	Height: 1.96 in. (5.0 cm)
	Width: 7 in. (17.75 cm)
	Depth: 13.1 in. (33.4 cm)

Weight

AppleCD 150:	6.5 lb. (2.9 kg)
AppleCD 300:	6.29 lb. (2.85 kg)

 Service Source

Troubleshooting

AppleCD 150/300

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

Green power light is not on	1	Replace power supply.
	2	Replace drive mechanism.
CD-ROM drive does not accept disc	1	Replace disc (if dirty or damaged).
	2	Replace drive mechanism.
Headphone jack does not operate correctly	1	Replace drive mechanism.
	2	Replace power supply.
Volume control does not operate correctly		Replace drive mechanism.

Speaker jacks do not operate

1 Replace drive mechanism.
2 Replace audio-out assembly.
3 Replace power supply.

Macintosh cannot mount CD-ROM drive

1 Replace drive mechanism.
2 Replace power supply.
3 Replace SCSI-device-to-case cable.
4 Replace SCSI select switch.

Take Apart

AppleCD 150/300

The CD-ROM drive is a mechanical device with moving parts. Rough handling can cause mechanical failures. Follow these guidelines when you handle or repair the CD-ROM drive:

• Switch off the power and make sure no SCSI devices are attached to the drive.
• Place the drive on a soft, grounded surface before starting repairs.
• Never transport the drive with a CD-ROM disc or caddy inside.

- Use the original shipping containers when you transport the drive.
- Never place an AppleCD 300 drive mechanism in an AppleCD 150 case. The SCSI-device-to-case cable will not connect correctly.
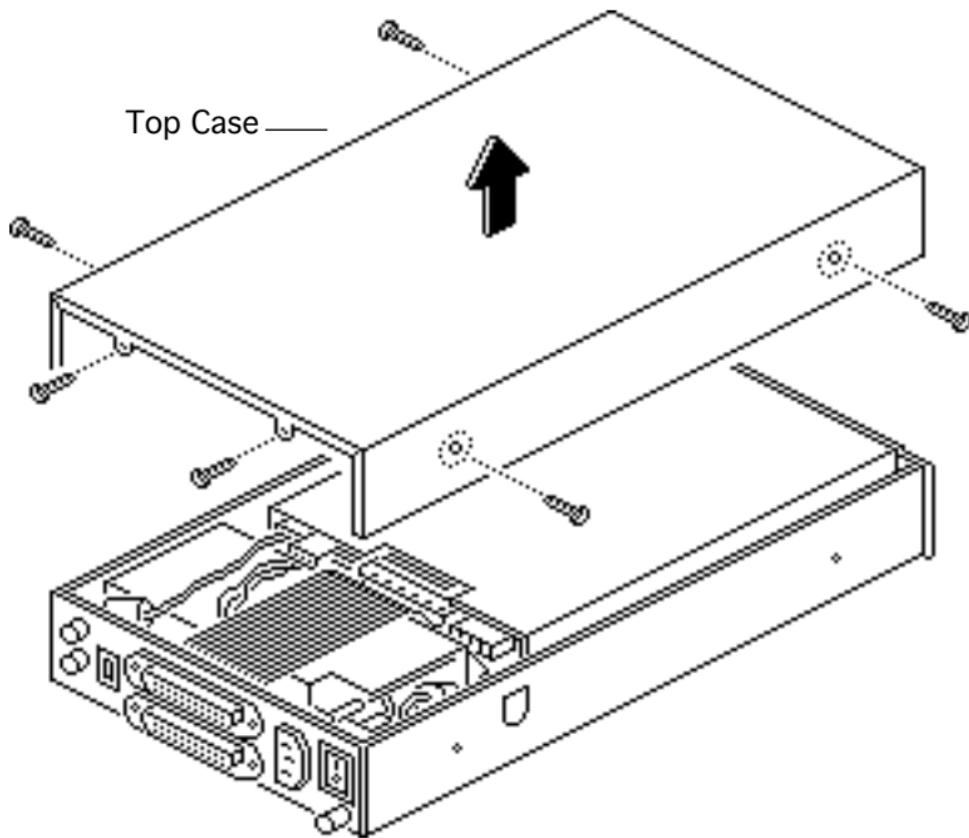
Top Case Guidelines

No preliminary steps are required before you begin this procedure.

1 Remove the six case screws.

2 Lift off the top case.

Top Case

CD-ROM Drive

Before you begin, remove the top case:

Caution: Review the ESD precautions in Bulletins/ Safety.

CD-ROM Drive

1   Remove the four drive
    mounting screws from
    the bottom of the case.

SCSI Select Switch Cable

SCSI-Device-to-Case Cable

Audio-Out Cable

Power Cable

Ridged Edge
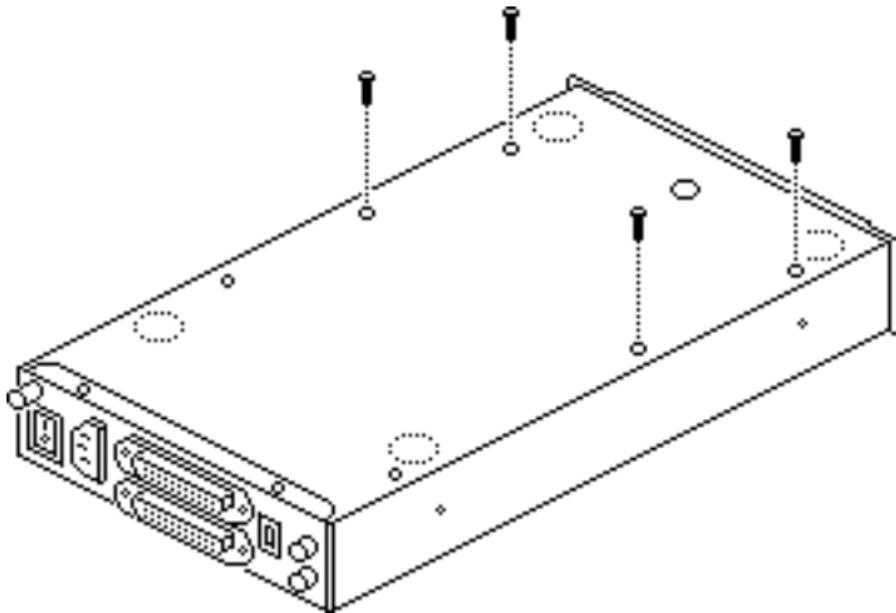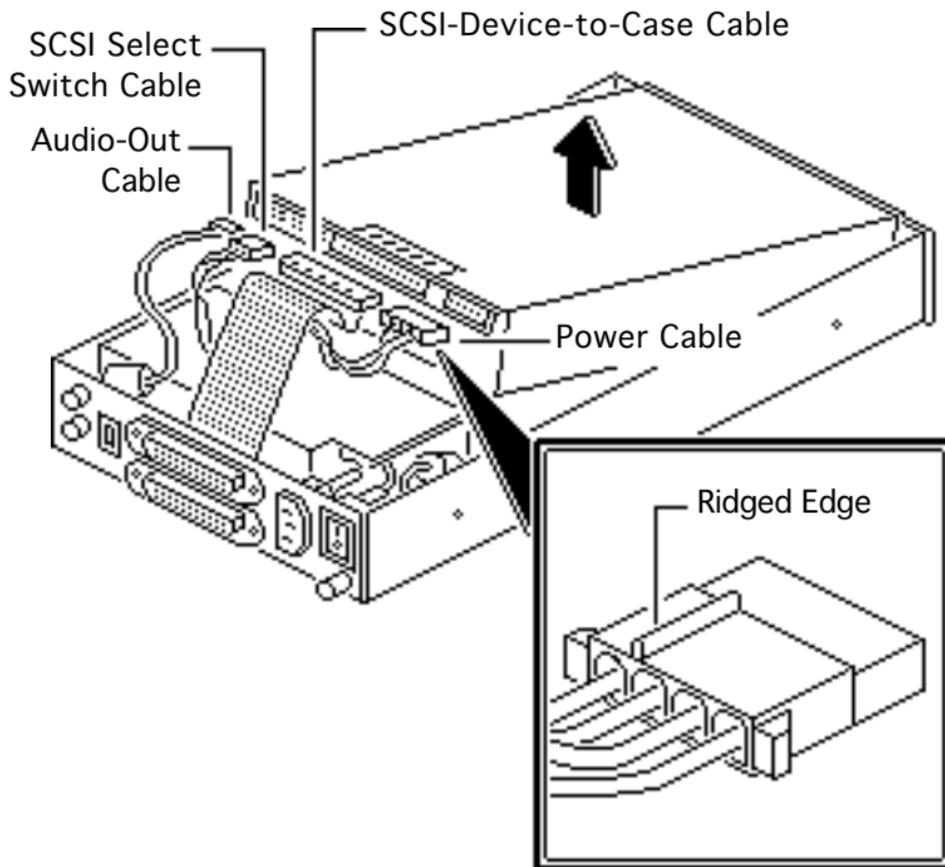
2 Hold the drive and turn over the case.

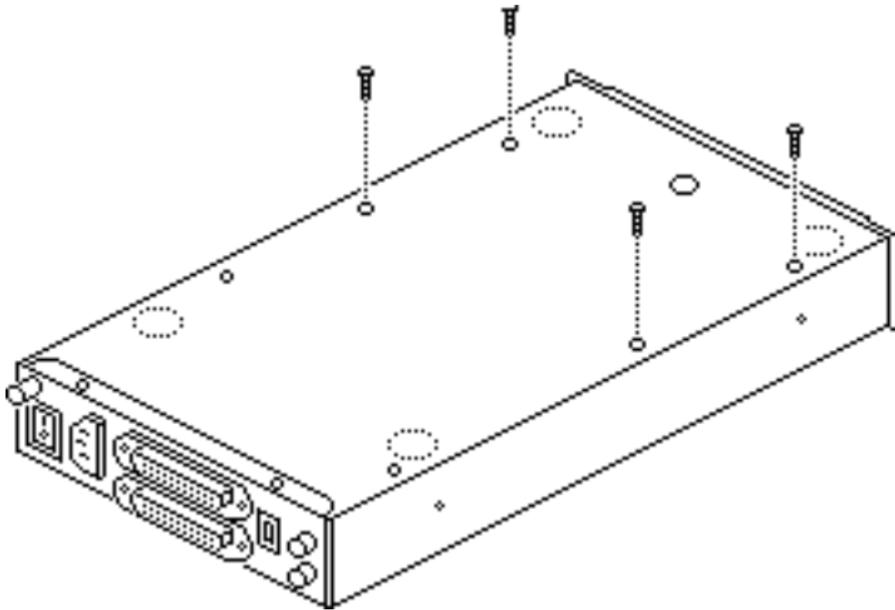3 Lift the back of the drive and disconnect the following cables:
   • Audio-out cable
   • SCSI select switch cable
   • SCSI-device-to-case cable
   • Power cable

4 Remove the drive from the case.

Replacement Caution:
Replace the power cable connector ridged edge up.

Audio-Out Cable

Jumpers

ID Select

Parity

SCSI Select Switch Cable
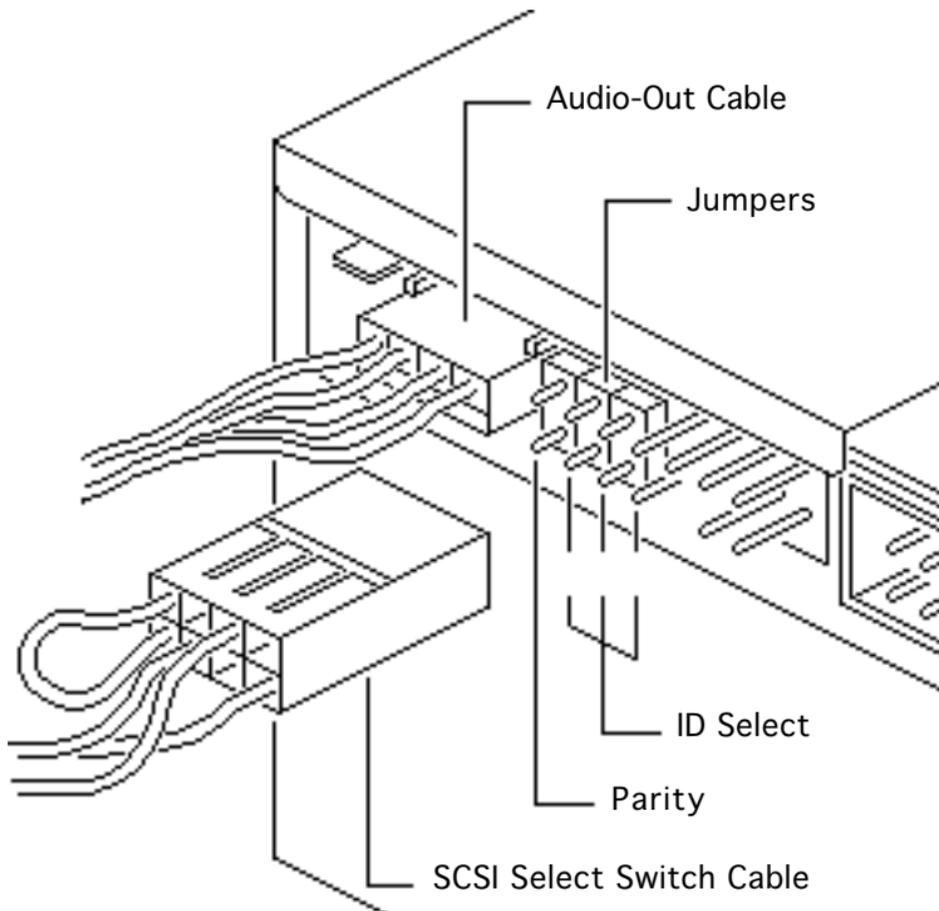
Replacement Note: Route the power cable beneath the SCSI-device-to-case cable.

Replacement Note: If you are replacing a defective drive with a new drive, remove the jumpers over the left three pairs of pins in the new drive's SCSI select switch connector.

Replacement Note: To reconnect the SCSI select switch cable, insert the cable connector on the left four pairs of pins in the drive connector. Make sure

the looped wire attached to
the connector faces the
audio-out cable.

Power Supply

Before you begin, remove the following:

- Top case
- CD-ROM drive
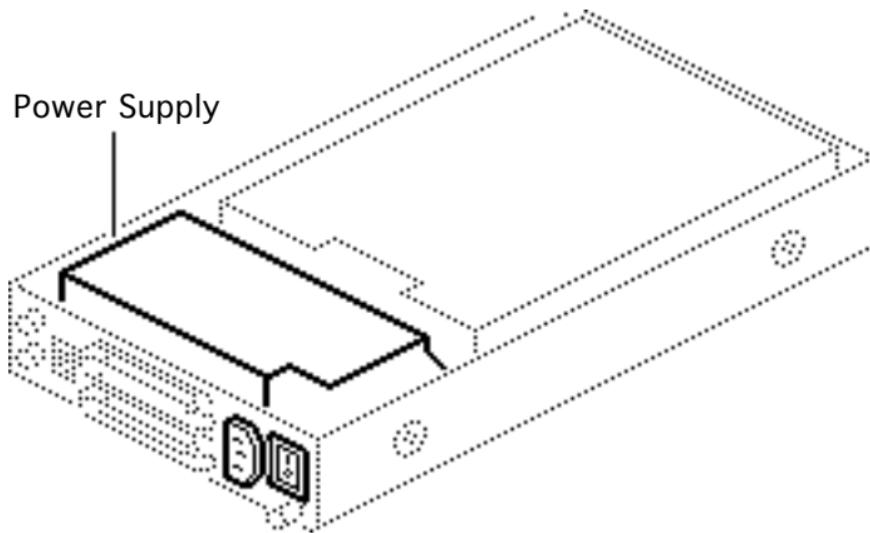
Power Supply

1 Remove the two power supply mounting screws from the bottom of the case.

Power Cable
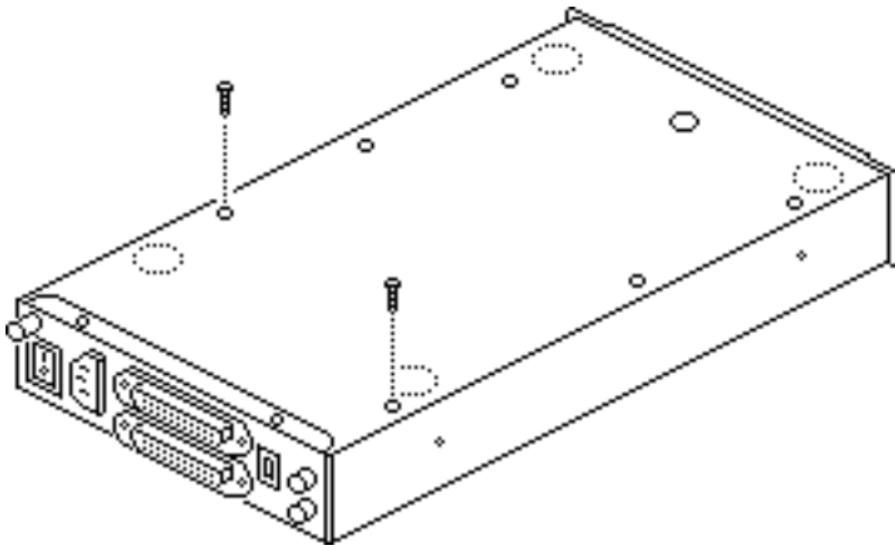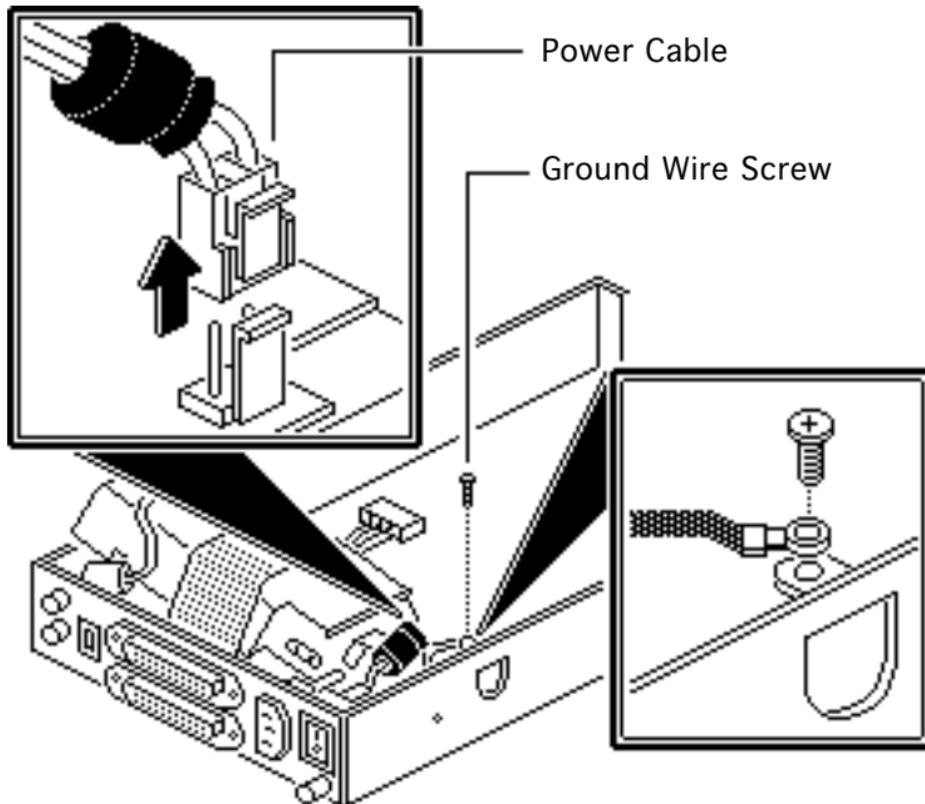
Ground Wire Screw

2 Hold the power supply and turn over the case.

3 Untape the cables from the top of the power supply.

4 Remove the ground wire screw.

5 Lift the end of the power supply farthest from the power cable, release the locking tab, and disconnect the power cable.

6 Remove the power supply.

Replacement Note: Replace the ground wire screw before reconnecting the power cable.

SCSI-Device-to-Case Cable
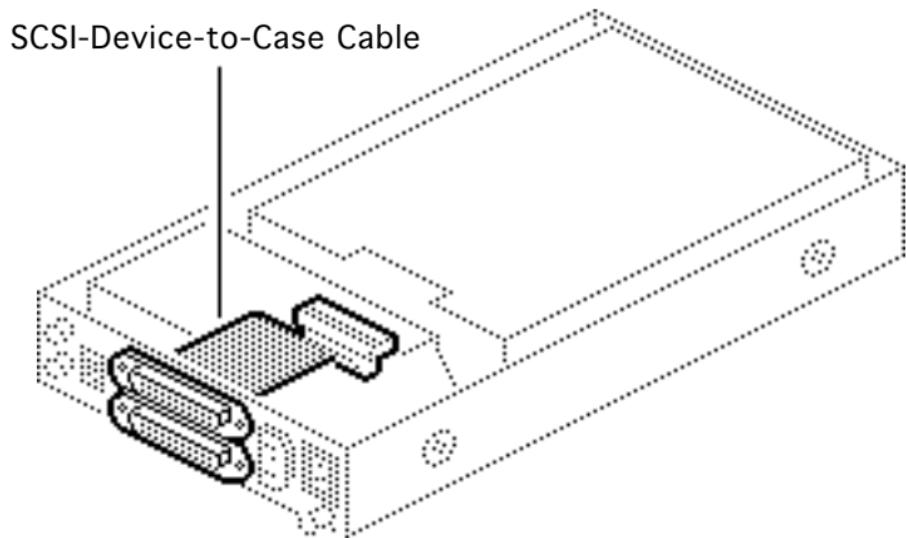
SCSI-Device-to-Case Cable

Before you begin, remove the:

• Top case

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

1 Remove the four drive
   mounting screws from
   the bottom of the case.
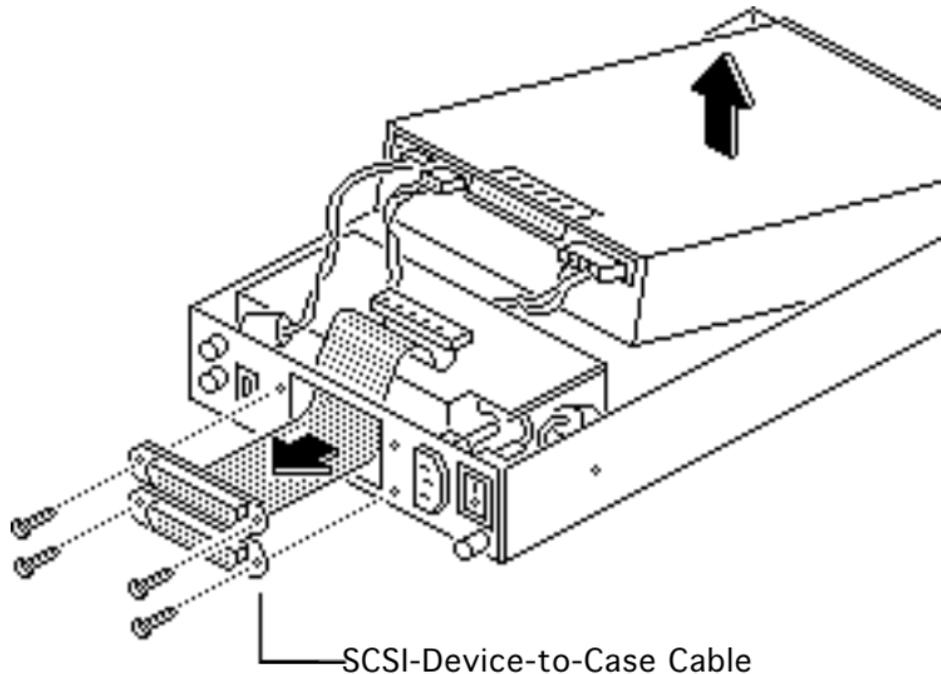
2 Hold the drive and turn over the case.

3 Lift the back of the drive and disconnect the SCSI-device-to-case cable.

4 Remove the four cable mounting screws.

5 Pull the cable through the rear panel and out of the case.

SCSI-Device-to-Case Cable

Rear Panel

Rear Panel

Before you begin, remove the top case.

Caution: Review the ESD precautions in Bulletins/ Safety.

1 Remove the four drive
   mounting screws from
   the bottom of the case.

SCSI Select Switch Cable

Audio-Out Cable

SCSI-Device-to-Case Cable
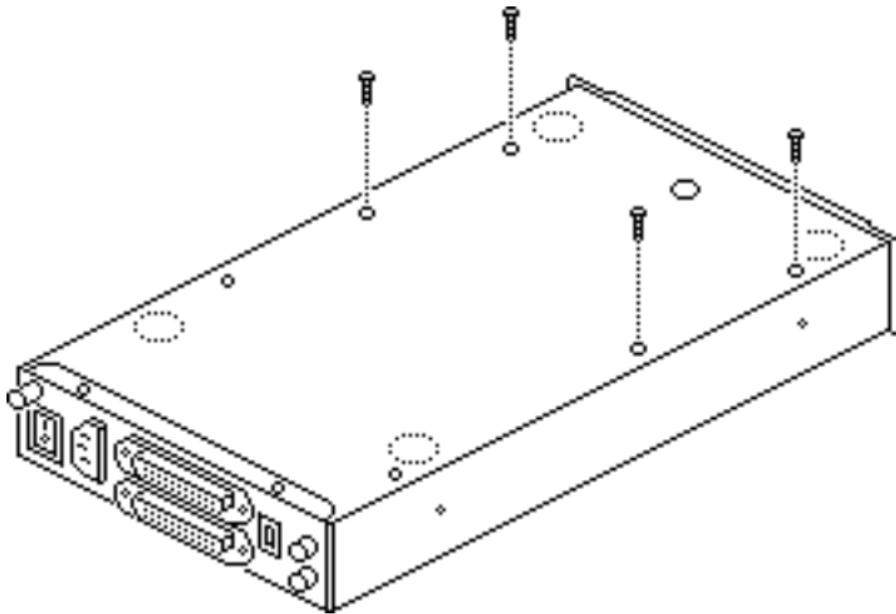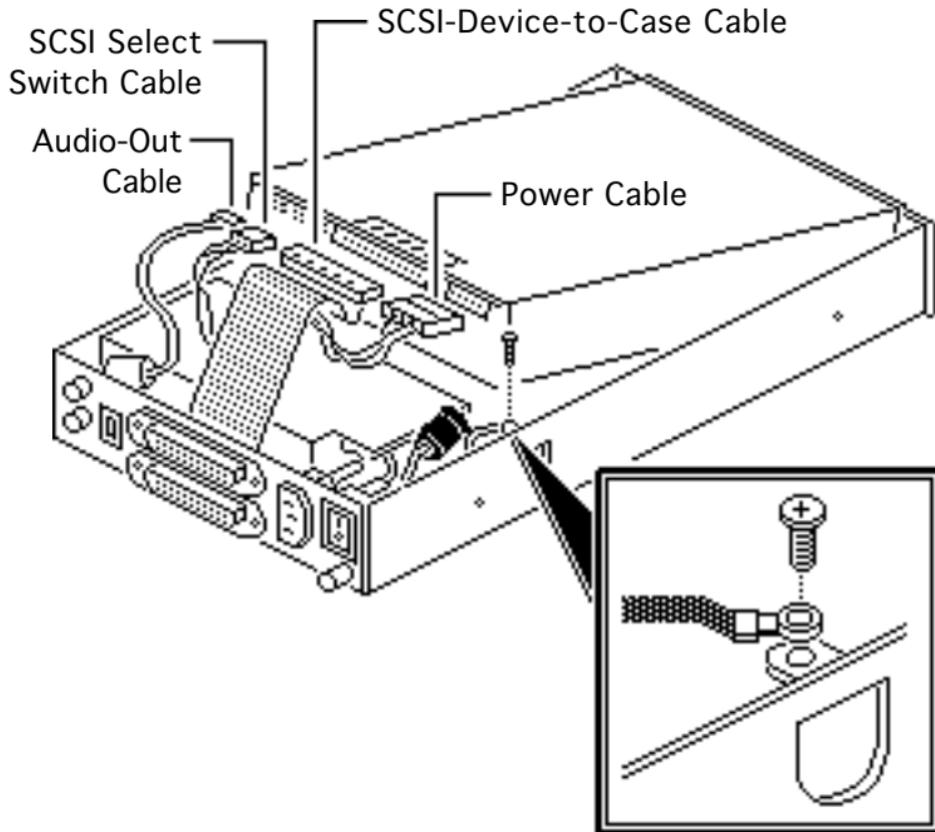
Power Cable

2   Hold the drive and turn over the case.

3   Lift the back of the CD-ROM drive and disconnect the following cables:

    • Audio-out cable
    • SCSI select switch cable
    • SCSI-device-to-case cable
    • Power cable

4   Remove the ground wire screw.
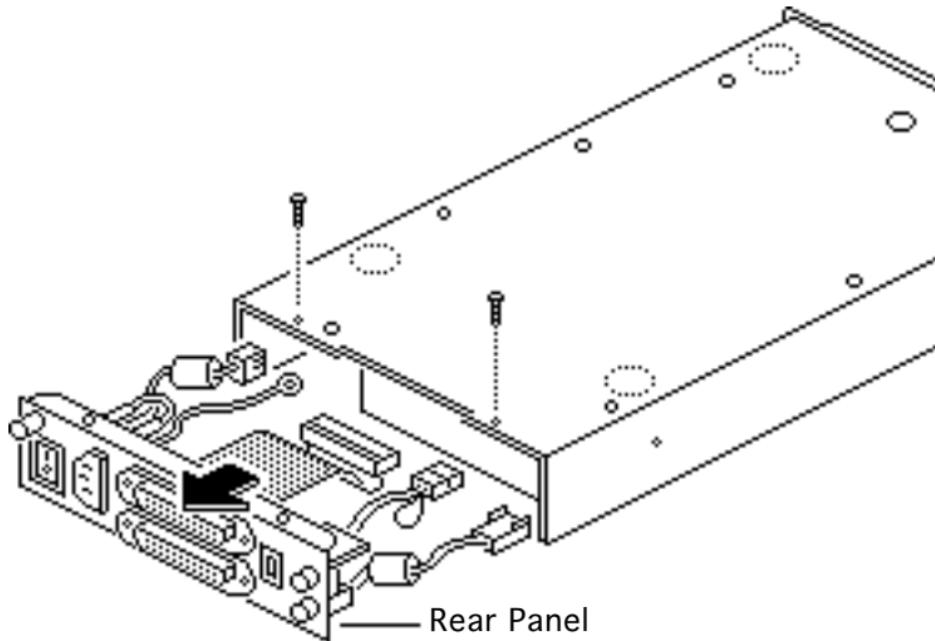
Replacement Note:
Replace the ground wire screw before reconnecting the power cable.

5   Remove the two rear panel mounting screws.

6   Remove the rear panel.
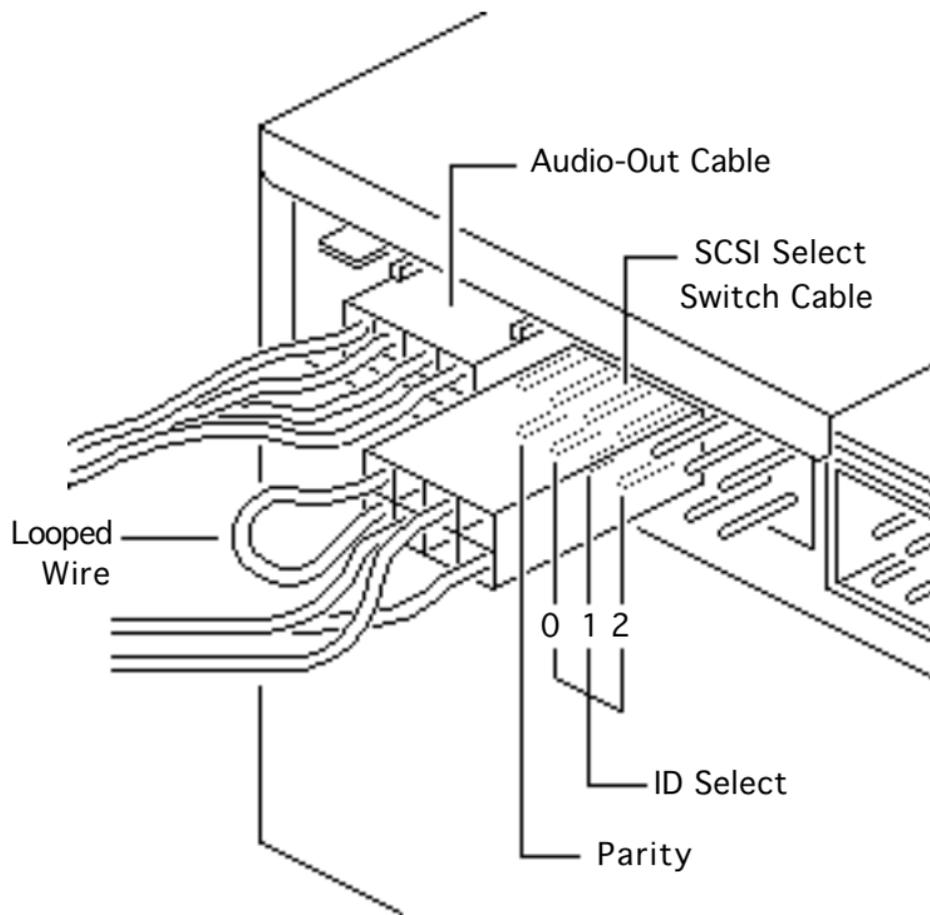
Rear Panel

Replacement Note: To reconnect the SCSI select switch cable, insert the cable connector on the left four pairs of pins in the drive connector. Make sure the looped wire attached to the connector faces the audio-out cable.
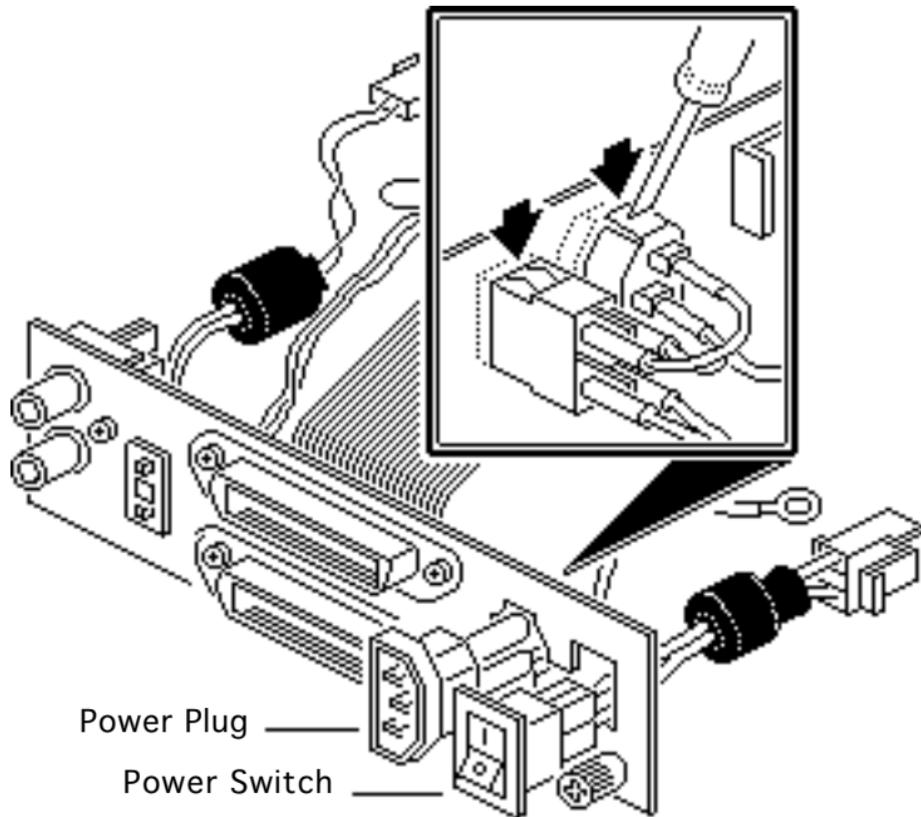
Audio-Out Cable

SCSI Select Switch Cable

Looped Wire

0 1 2

ID Select

Parity

Power Switch/ Plug Assembly

Before you begin, remove the following:

- Top case
- Rear panel

Power Switch/Plug Assembly
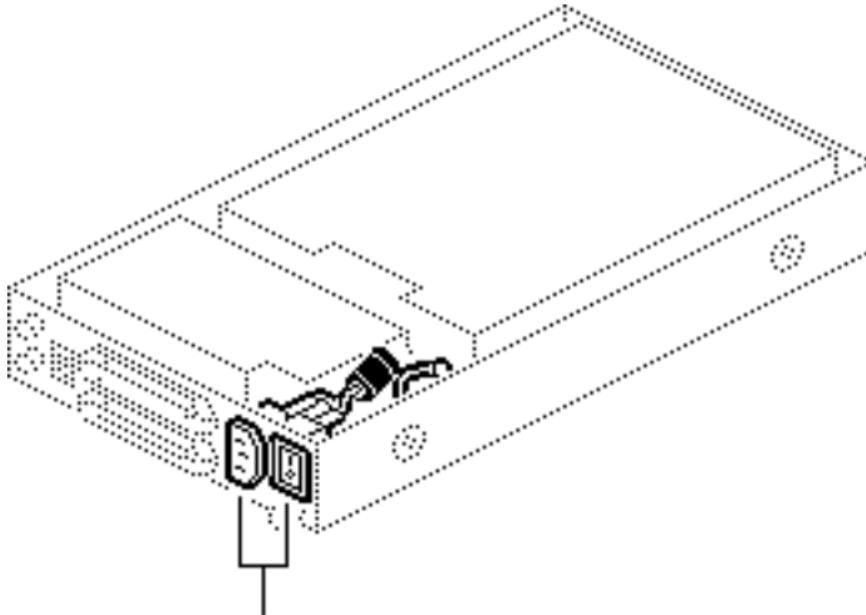
Power Plug

Power Switch

1 Using a small flat-blade screwdriver, depress the bottom latch on the power plug and push the plug through the opening as far as it will go.

2 Depress the top latch on the power plug and push out the plug.

3 Repeat the procedure for the power switch.
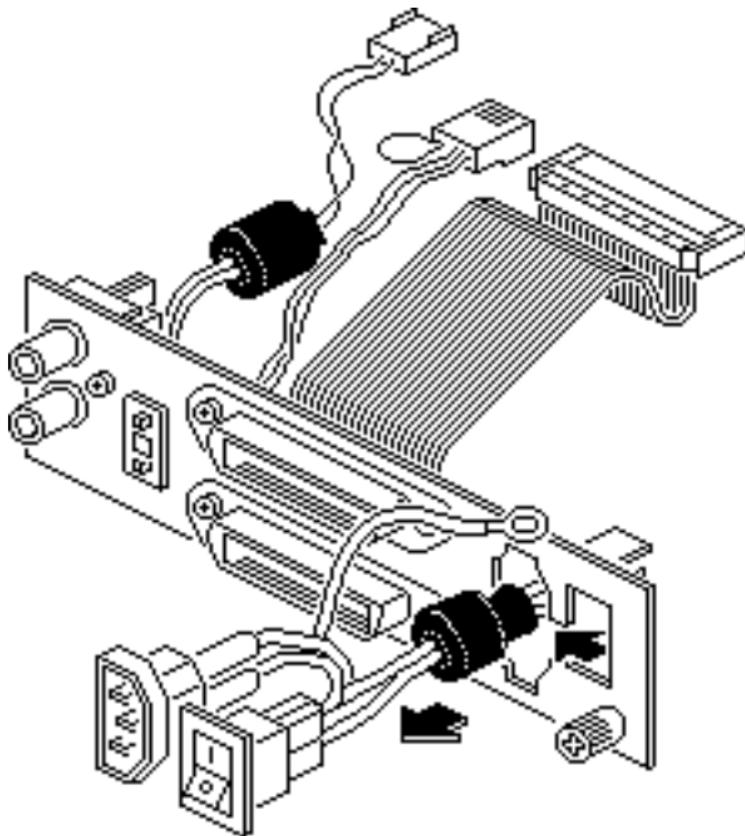
4   Transfer the wires of the power switch cable across the small channel to the power plug opening.

5   Remove the power switch/power plug assembly through the power plug opening.

Audio-Out Assembly

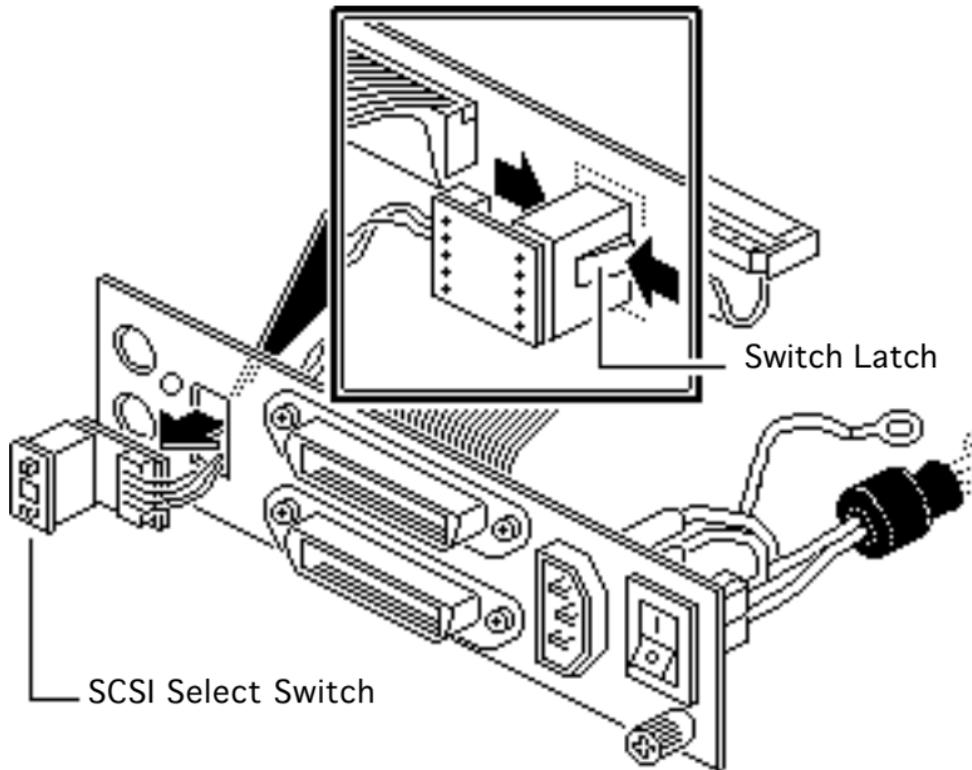Before you begin, remove the following:

- Top case
- Rear panel

Audio-Out Assembly

Audio-Out Assembly

1. Remove the mounting screw.

2. Remove the audio-out assembly from the rear panel.
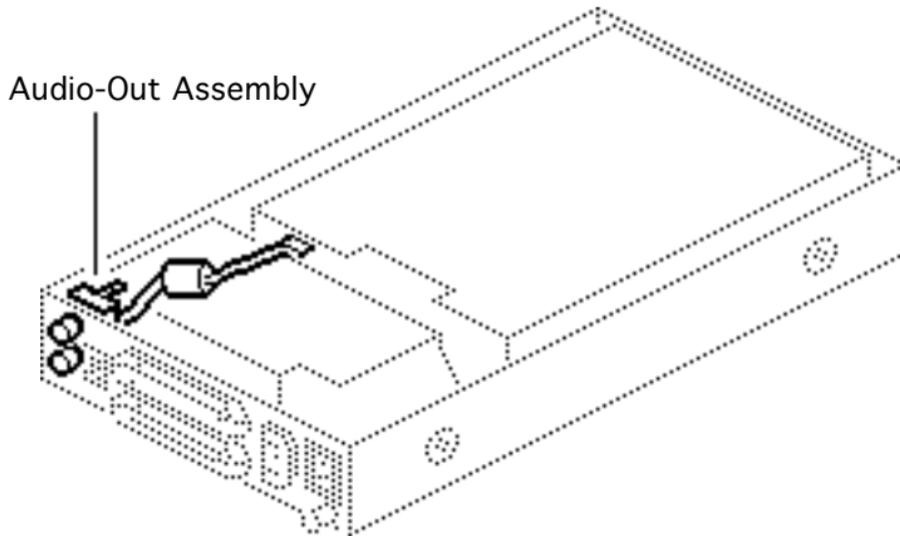
SCSI Select Switch

SCSI Select Switch

Before you begin, remove the following:

- Top case
- Rear panel
- Audio-out assembly

Switch Latch

SCSI Select Switch
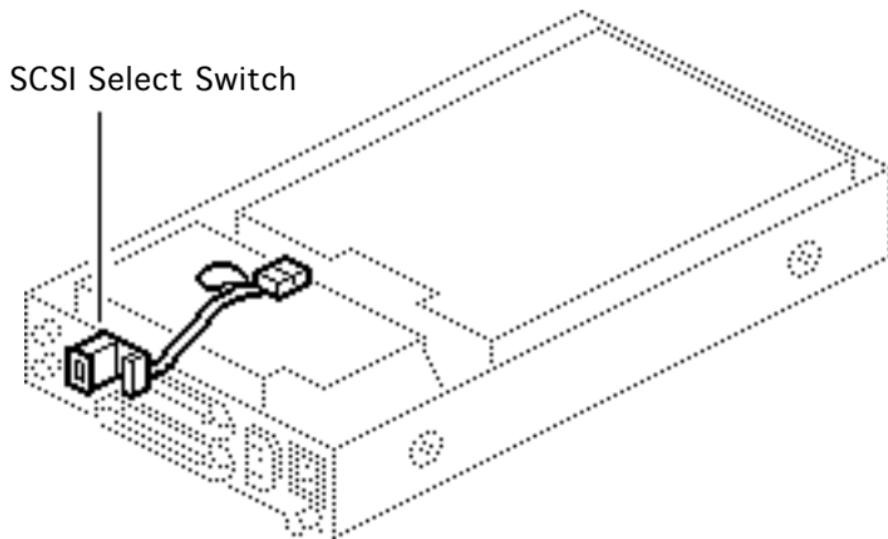
Note: Use a rocking motion to work the switch out of the opening in the rear panel.

1 Using a small flat-blade screwdriver, depress one of the two switch latches and push the switch through the opening as far as it will go.

2 Depress the other latch and push out the switch as far as it will go.

3 Repeat the procedure until the switch works free.

4 Remove the switch
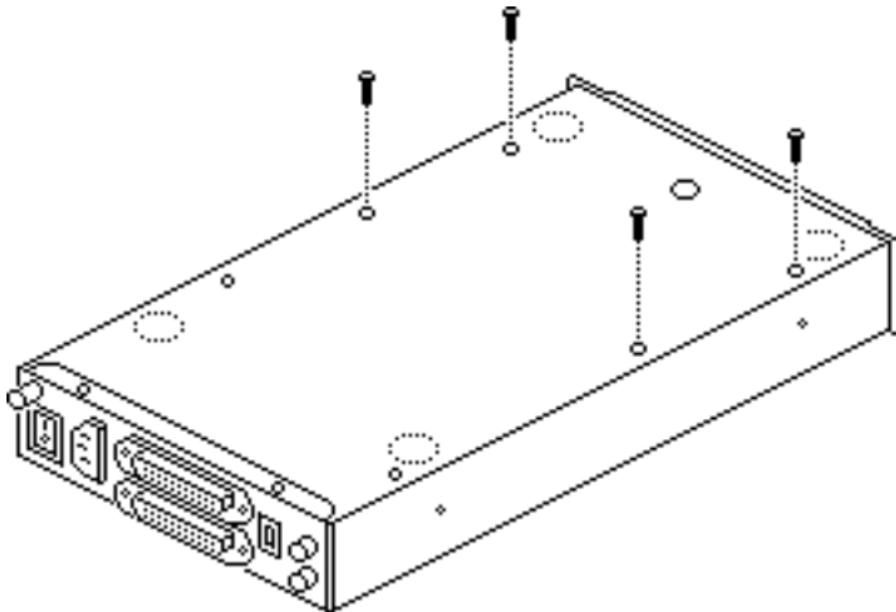   assembly from the rear
   panel.

Front Panels

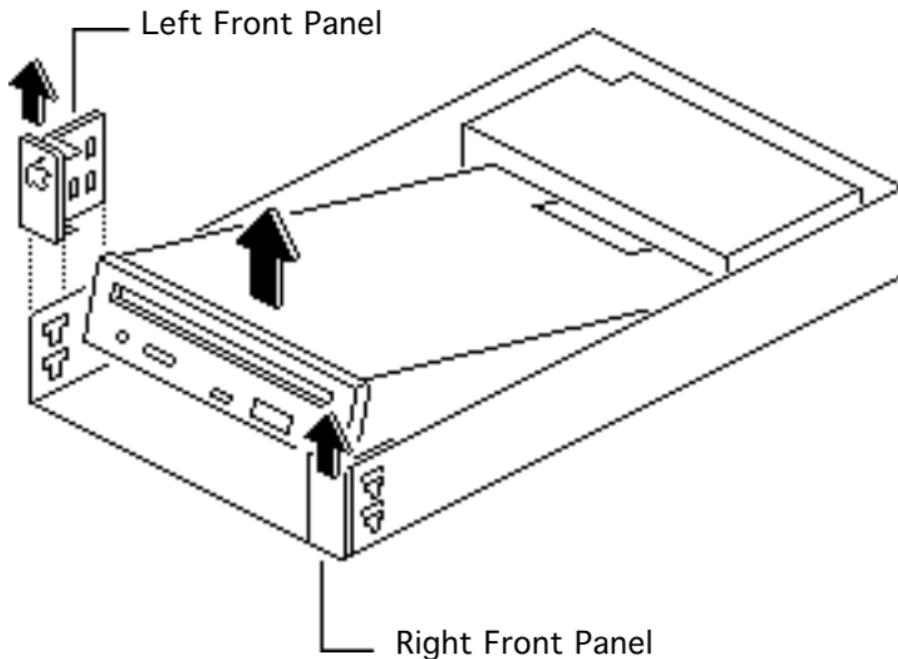Before you begin, remove the top case.

Caution: Review the ESD precautions in Bulletins/Safety.

Front Panel

Front Panel

1 Remove the four drive
mounting screws from
the bottom of the case.
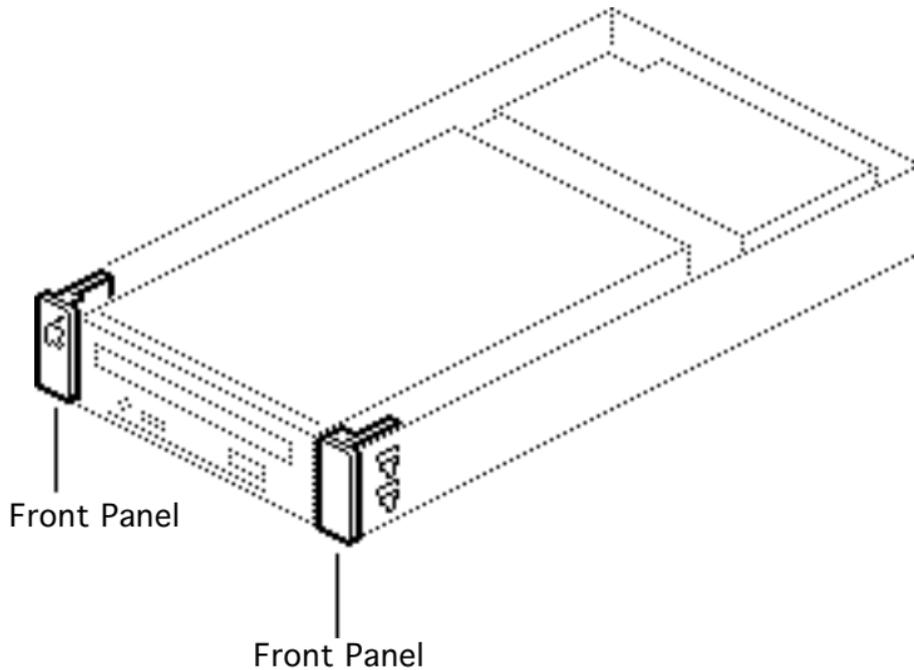
Left Front Panel

Right Front Panel

2 Hold the drive and turn over the case.

3 Lift the front of the drive.

4 Pull the left front panel straight up as far as it will go and remove it from the case.
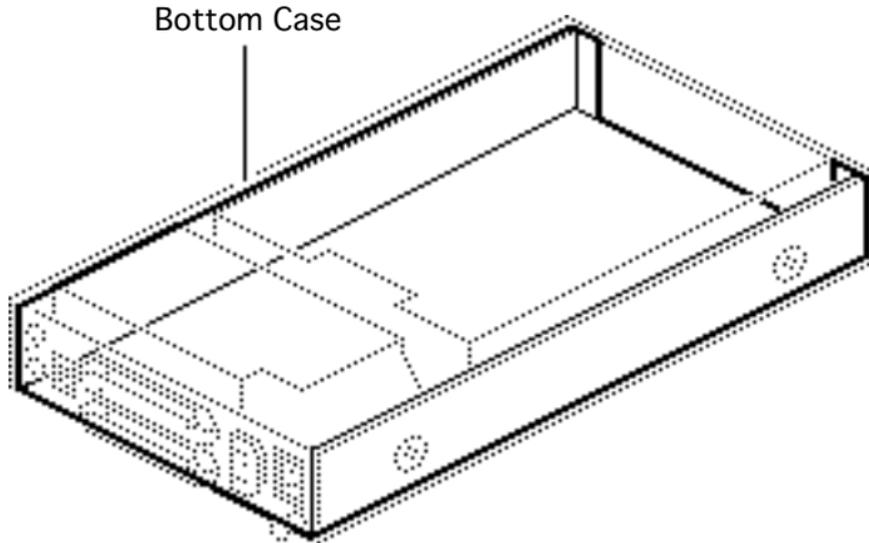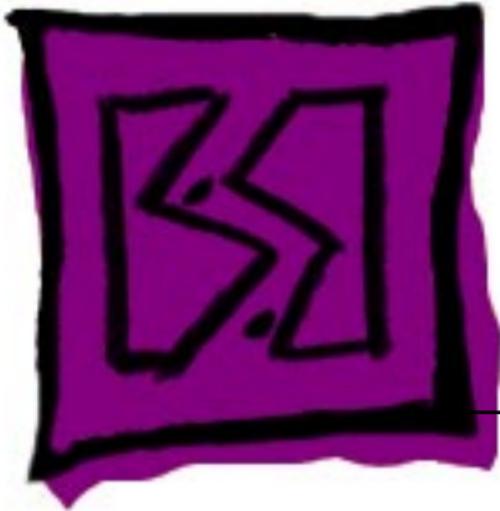
5 Repeat for the right front panel.

Bottom Case

Before you begin, remove the following:

- Top case
- CD-ROM drive
- Power supply
- Rear panel

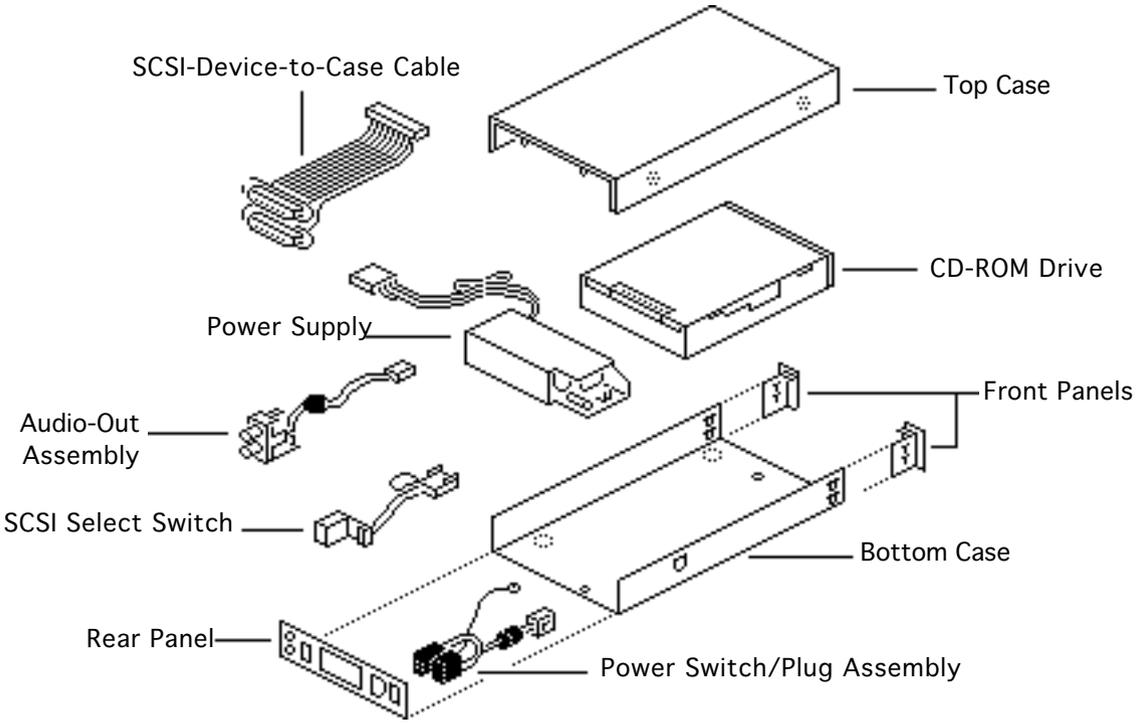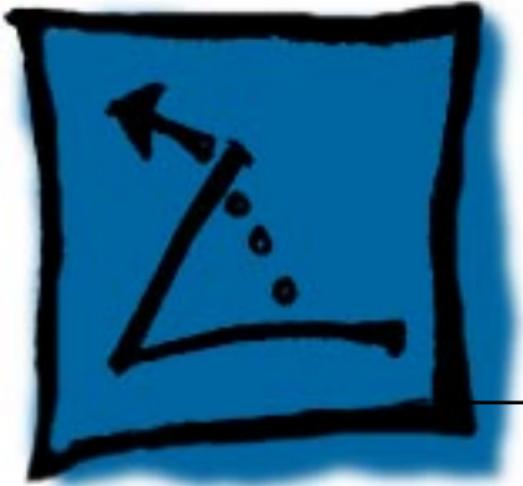To replace the bottom case, perform the steps referenced above.

Bottom Case

Exploded View

AppleCD 150/300

SCSI-Device-to-Case Cable

Top Case

CD-ROM Drive

Power Supply

Front Panels

Audio-Out
Assembly

SCSI Select Switch

Bottom Case

Rear Panel

Power Switch/Plug Assembly
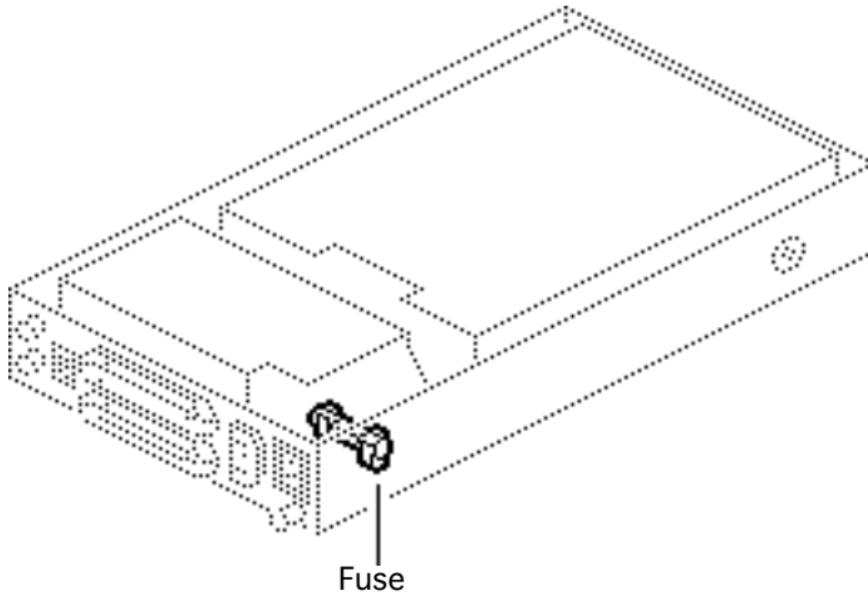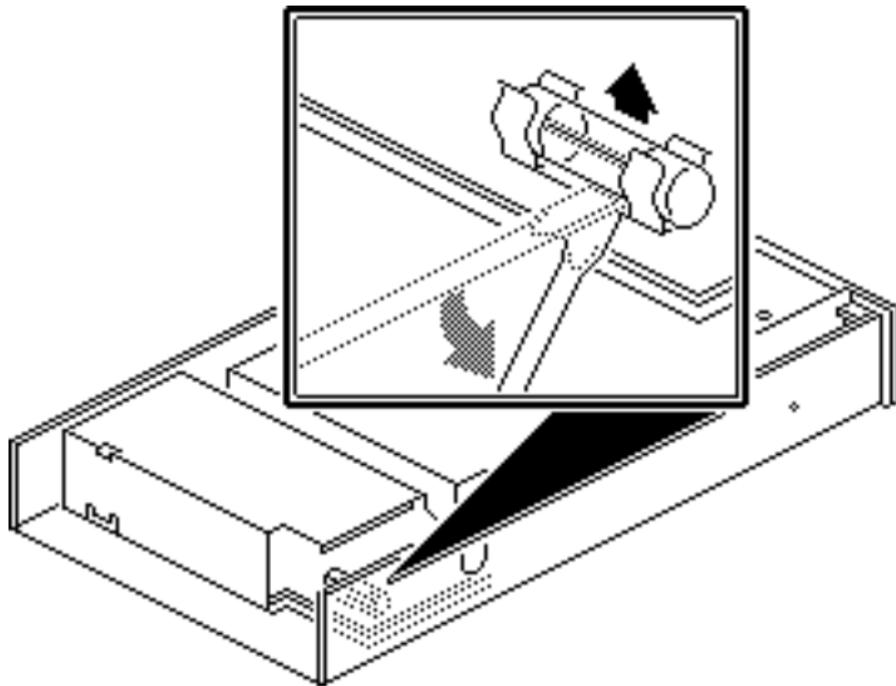
Additional Procedures

AppleCD 150/300

Fuse

Before you begin, remove the following:

- Top case
- Rear panel

Fuse

Using a small flat-blade screwdriver, pry the fuse from the holder.

Replacement Note: The fuse is not a service part. Replace the fuse with type MT4 250V2A, available at most electronic stores.