

Addendum

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500 Family of PC Servers (Document Number: 144257-001)

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This addendum only provides specific information for the Compaq ProSignia 500 Family of Servers. Refer to the Maintenance and Service Guide for Compaq ProSignia PC Servers (144257-001) for general procedures not found in this addendum.

- o Illustrated Parts Catalog
 - System Exploded View
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- o Removal and Replacement Procedures
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 - System Board
 - SCSI Devices

- o Physical and Operating Specifications
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Illustrated Parts Catalog

This section provides an illustrated parts breakdown and a spare parts list for the Compaq ProSignia 500 Family of Servers.

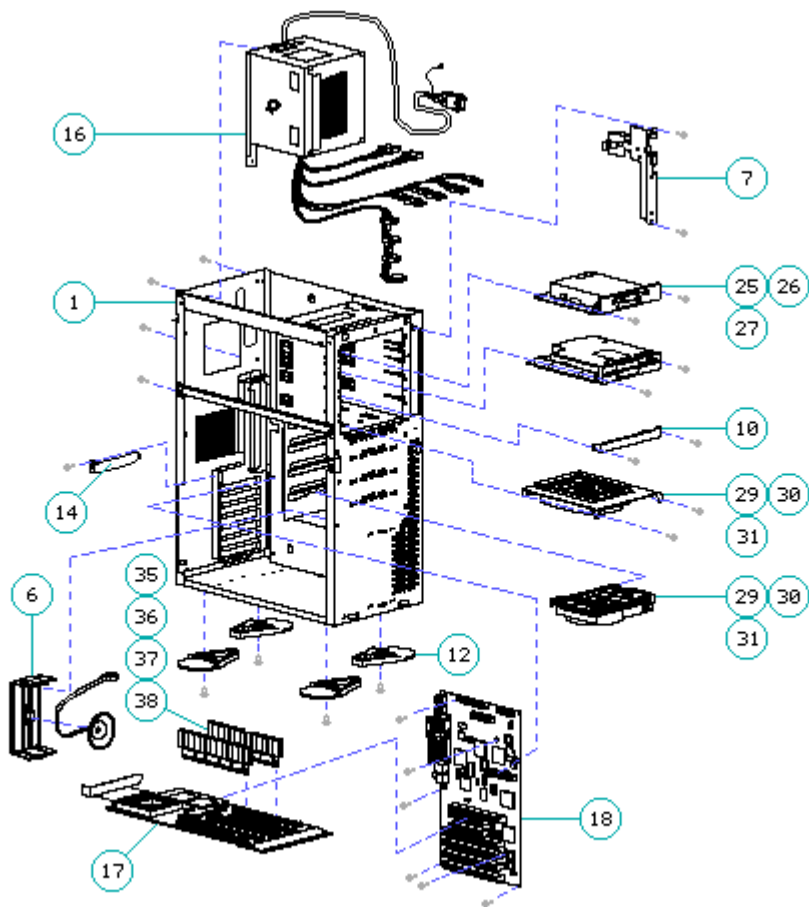


Figure 1. System Exploded View

Table 1. Spares Parts List

Item	Description	Part Number
CHASSIS		
1	CPU Chassis	211412-001
2	System Unit Hood	144208-001 *
3	Access Panel	144210-001 *
4	Front Bezel	211414-001 *
5	Fan Assembly	211410-001 *
6	Speaker Assembly (includes board guide)	211411-001
7	Power/Drive LED Bracket	119853-001
8	Blank Bezel, 1/2 Height	116793-001 *
9	Blank Bezel, 1/3 Height	116792-001 *
10	Blank Bezel, 1/6 Height	116791-001
11	Air Baffle	211413-001 *

12	Foot	149106-001
13	ProSignia 500 Logo	211419-001 *
14	Option Slot Cover	101144-001
15	Power Switch Cover	146799-001 *

SYSTEM COMPONENTS

16	Power Supply	144206-001
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BOARDS

17	System I/O Board	188307-001
18	90 MHz Processor Board, P54C/90, PCI	211420-001
18	120 MHz Processor Board without processor	169174-002 *
18	120 MHz Processor with heatsink	222906-001 *
19	32-Bit Fast-SCSI-2 Controller Board	142040-001 *
20	Compaq SMART SCSI Array Controller Board	142130-001 *
21	32-Bit NetFlex Controller Board	142041-001 *
22	DualSpeed Token Ring Module	142042-001 *
23	NetFlex-2 Token Ring Controller	199521-001 *
24	NetFlex-2 DualPort Token Ring Controller	142195-001 *

Item	Description	Part Number
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MASS STORAGE

25	1.2-MB Diskette Drive	112566-001
26	1.44-MB Diskette Drive with Bracket	144207-001
27	3.5 Inch Diskette Drive without Bracket (3 Mode)	160788-201
28	Tray Load CD-ROM Drive	142223-201 *
29	2.1-GB Fast-SCSI-2 Hard Drive	142272-001
30	1.05-GB Fast-SCSI-2 Hard Drive	142039-001
31	535-MB Fast-SCSI-2 Hard Drive	137730-001
32	5.0-GB DAT Drive	142074-001 *
33	525-MB ACA Tape Drive	142073-001 *
34	1.2-GB ACA Tape Drive	199574-001 *

MEMORY

35	4-MB Memory Module (70 ns)	141754-001
	4-MB Memory Module (60 ns)	139139-001
36	8-MB Memory Module (70 ns)	141755-001
	8-MB Memory Module (60 ns)	139140-001
37	16-MB Memory Module (70 ns)	149947-001
	16-MB Memory Module (60 ns)	139141-001
38	32-MB Memory Module (70 ns)	149948-001
	32-MB Memory Module (60 ns)	139142-001
39	256-KB Secondary Write-Back Cache	190166-001 *

Item	Description	Part Number
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CABLE KITS

40	Diskette Drive Signal Cable	143706-001 *
41	SCSI 2-Device Signal Cable with Terminator	211408-001 *
42	SCSI 7-Device Signal Cable with Terminator	211409-001 **
43	NetFlex-2 Token Ring Controller Cable	199539-001 *

KEYBOARDS/MOUSE

44	Spacesaver Keyboard, U.S. English	160648-201 *
45	Spacesaver Keyboard, U.K. English	160648-203 *
46	Spacesaver Keyboard, German	160648-204 *
47	Spacesaver Keyboard, French	160648-205 *
48	Spacesaver Keyboard, Italian	160648-206 *
49	Spacesaver Keyboard, Spanish	160648-207 *
50	Spacesaver Keyboard, Danish	160648-208 *
51	Spacesaver Keyboard, Norwegian	160648-209 *
52	Spacesaver Keyboard, Swedish/Finnish	160648-210 *
53	Spacesaver Keyboard, Swiss	160648-211 *
54	Spacesaver Keyboard, French Canadian	160648-212 *
55	Spacesaver Keyboard, Portuguese	160648-213 *
56	Spacesaver Keyboard, Turkish	160648-214 *
57	Spacesaver Keyboard, Greek	160648-215 *
58	Spacesaver Keyboard, Latin American	160648-216 *

Item	Description	Part Number
59	Spacesaver Keyboard, Arabic	160648-236 *
60	Spacesaver Keyboard, Belgian	160648-218 *
61	Spacesaver Keyboard, Japanese	160648-219 *
62	Spacesaver Keyboard, BHCSY **	160648-220 *
63	Spacesaver Keyboard, Hungarian	160648-221 *
64	Spacesaver Keyboard, Polish	160648-222 *
65	Spacesaver Keyboard, Slovakian	160648-223 *
66	Spacesaver Keyboard, Russian	160648-224 *
67	Spacesaver Keyboard, Czech	160648-229 *
68	Spacesaver Keyboard, Thai	160648-230 *
69	Spacesaver Keyboard, Chinese	160648-232 *
70	Spacesaver Keyboard, Korean	160648-233 *
71	Spacesaver Keyboard, Taiwanese	160648-234 *
72	Spacesaver Keyboard, Brazilian Portuguese	160648-235 *
73	Mouse	141189-201 *

MISCELLANEOUS

74	Battery (System Board)	149344-001 *
75	2.0-GB DAT Cartridge	131148-001 *
76	1.3-GB DAT Cartridge	131167-001 *
77	525-MB Tape Cartridge	119504-001 *
78	Shipping Box with Buns	211406-001 *
79	Shipping Box	211407-001 *

* Not Shown

** Bosnia-Herzegovina, Croatia, Slovenia, and Yugoslavia

Removal And Replacement Procedures

The following section provides removal and replacement procedures.

Preparation Procedures

Before beginning any of the removal and replacement procedures, complete the following steps:

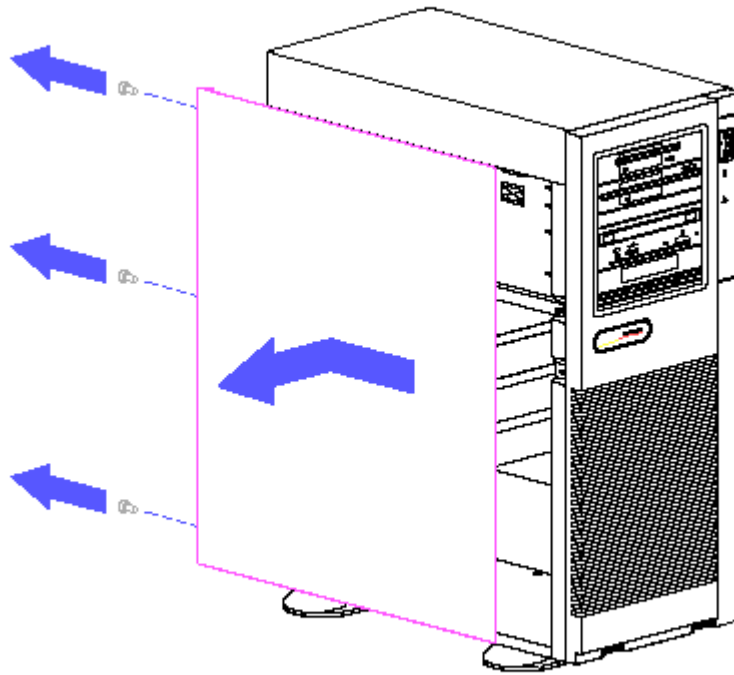


Figure 2. Removing the Side Access Panel

Removing the Air Baffle

To remove the Air Baffle:

1. Remove the Side Access Panel.
2. Push in locking tab [A] and swing the right side of the Air Baffle out and away from the chassis [B].
3. Using a flat-head screwdriver pry and lift the bottom hinge off.
4. Reverse step for replacing the Air Baffle.

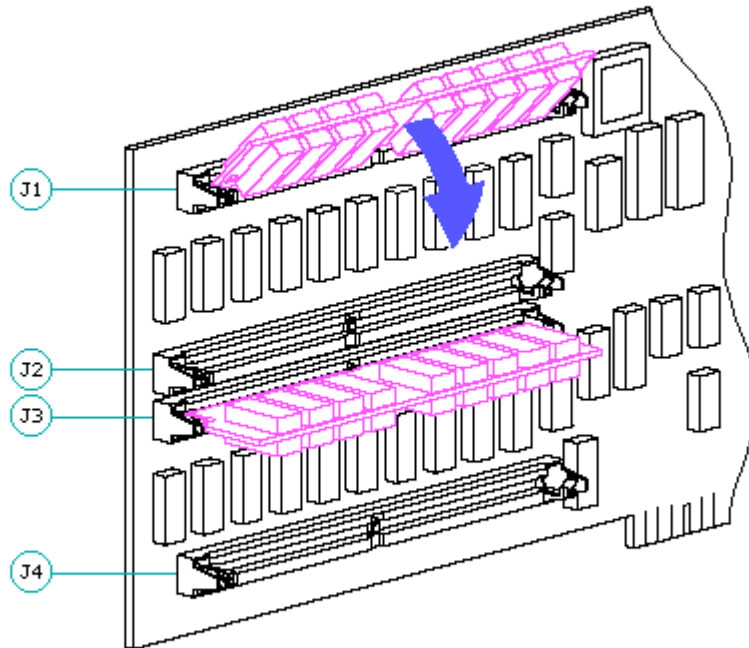


Figure 4. Removing a Memory Module

Option Boards

The ProSignia 500 Server contains five expansion slots:

- o Three EISA expansion slots (slots 1, 2, and 3)
- o One shared EISA/PCI expansion slot (slot 4).
- o One dedicated PCI local bus expansion slot (slot 5)

NOTE: Although there are two physical connectors (one EISA and one PCI), they are placed so that only one of the slots can have a board installed at a time.

Option boards can be installed in the following locations:

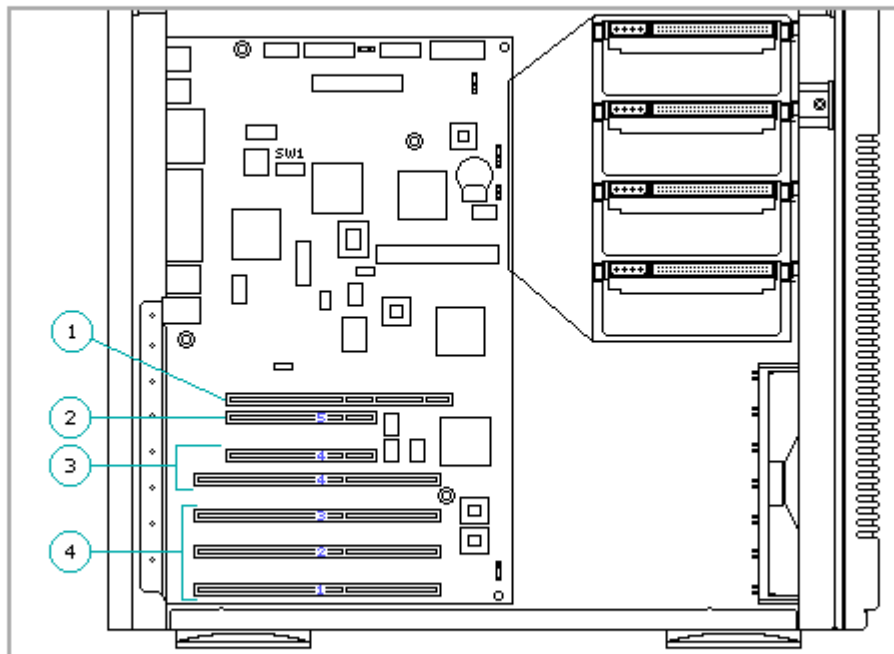


Figure 5. Option Locations

Reference	Component
1	Processor board slot
2	PCI slot
3	EISA / PCI shared slot
4	EISA slots

The following illustration shows the differences between EISA, PCI, and ISA connectors:

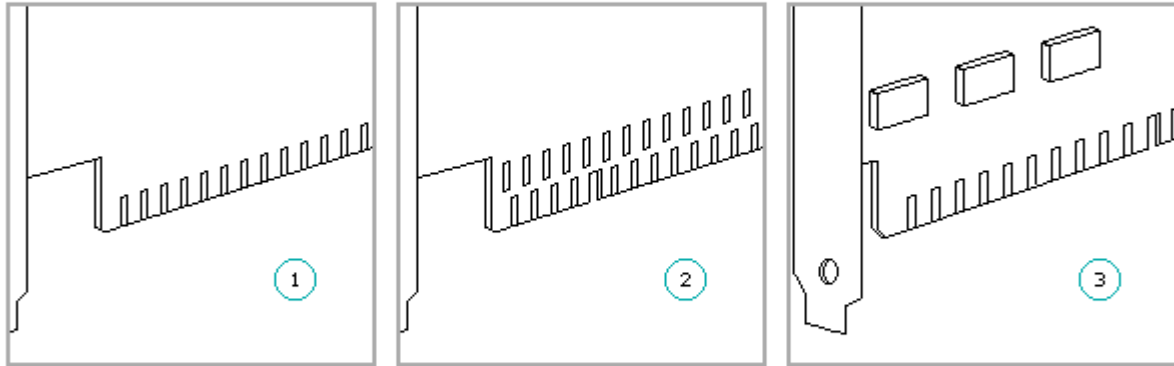


Figure 6. Expansion Board Differences

Reference	Component
1	ISA board
2	EISA board
3	PCI board

Removing an Option Board

Follow these instructions to remove an option board:

1. Remove any cables connected to the option board.
2. Remove retaining screw from the option board.
3. Pull board straight out.

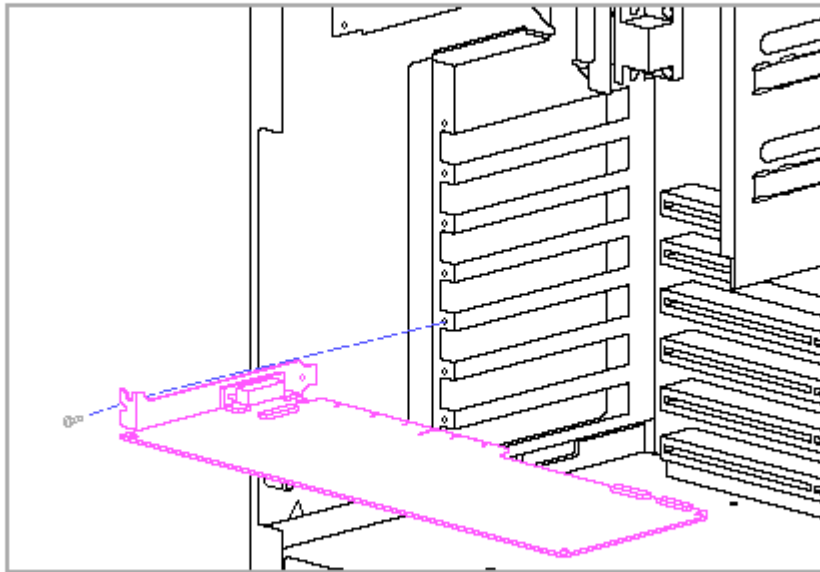


Figure 7. Removing an Option Board

Mass Storage Devices

There are a total of eight drive bays for internal mass storage devices. SCSI devices can be installed in the removable media drive bays (4, 5, or 6) [Item 1], in the side access drive bays (0, 1, 2, or 3) [Item 2], or attached to the External 32-Bit Fast-SCSI-2 port.

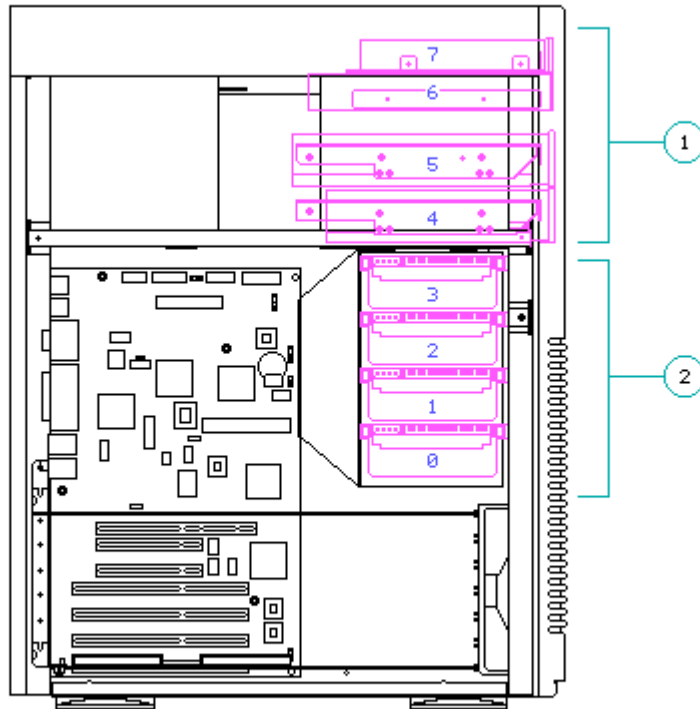


Figure 8. Optional Mass Storage Device Placement

Removable Media Storage

A 1.44-MB diskette drive comes standard in removable media drive bay 7 and a CD-ROM Drive is installed in bay 5. Two half-height removable storage devices such as diskette, tape, or hard drives can be installed in bays 4, and 6.

Drive Installation Guidelines

The following guidelines should be noted when adding or replacing SCSI hard drives:

- o A maximum of seven SCSI-2 devices may be added per controller.
- o The SCSI ID for each device should be the same as the bay number (Bay 0 = SCSI ID 0).
- o If only one SCSI hard drive is used it should be installed in bay 0.
- o Compaq SCSI cables for the Compaq ProSignia 500 are terminated, be sure to remove all terminating jumpers from 3rd party SCSI devices.

NOTE: Supported Compaq SCSI options are not terminated.

The following guidelines apply when adding a SMART Controller and SCSI arrayed hard drives:

- o Bays 0, 1, 2, and 3 are recommended for hard drives configured as an array.
- o A maximum of seven SCSI-2 devices may be added.
- o The SCSI ID for each device should be the same as the bay number (Bay 0 = SCSI ID 0).

Mass Storage Devices in the Removable Media Area

To remove a mass storage device in the Removable Media Area:

1. Remove the Side Access Door.
2. Swing the Air Baffle open.
3. Remove power and signal cables.
4. Remove the retaining screws (2).
5. Slide the storage device out of the drive bay.
6. Secure with retaining screws (2).
7. Reverse steps for installation.
8. Replace Side Access door.
9. Run the EISA Configuration Utility if replaced drive is a different size than the drive it is replacing.

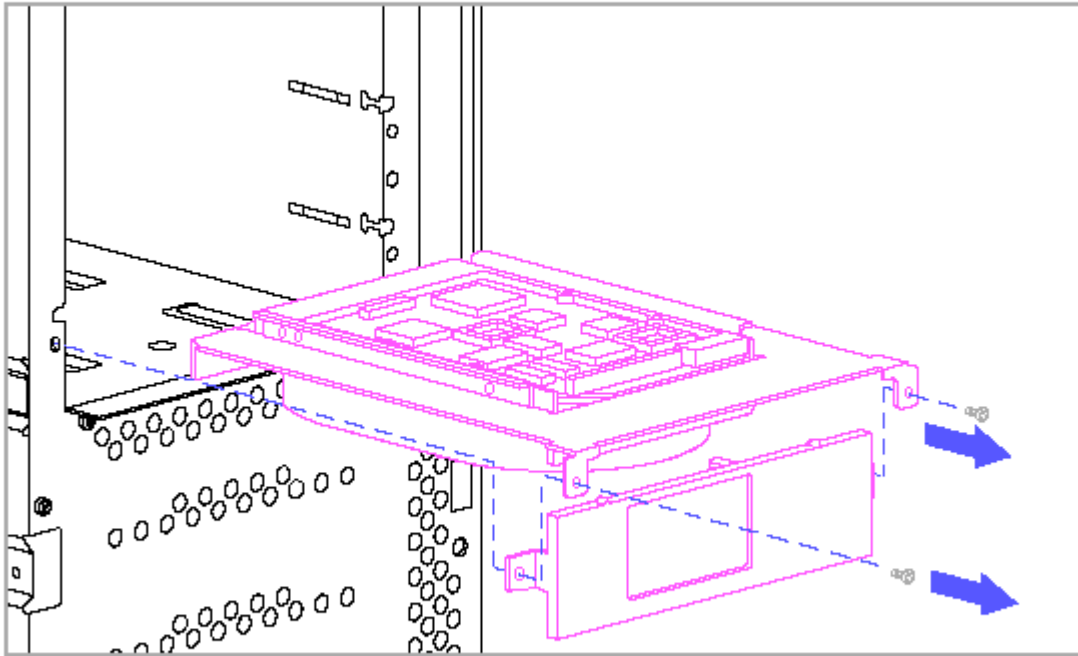


Figure 9. Removing a Storage Device in Bays 4, 5, 6, and 7

Hard Drives in the Side Access Drive Bays

The side access drive bays provide room for four half-height 3.5 inch Fast SCSI-2 hard drives. To remove a hard drive:

1. Remove the Side Access Door.
2. Remove power and signal cables.
3. Squeeze the two retaining clips on each side.
4. Slide the storage device out of the drive bay.
5. Reverse steps for installation.
6. Replace Side Access door.
7. Run the EISA Configuration Utility if replaced drive is a different size than the drive it is replacing.

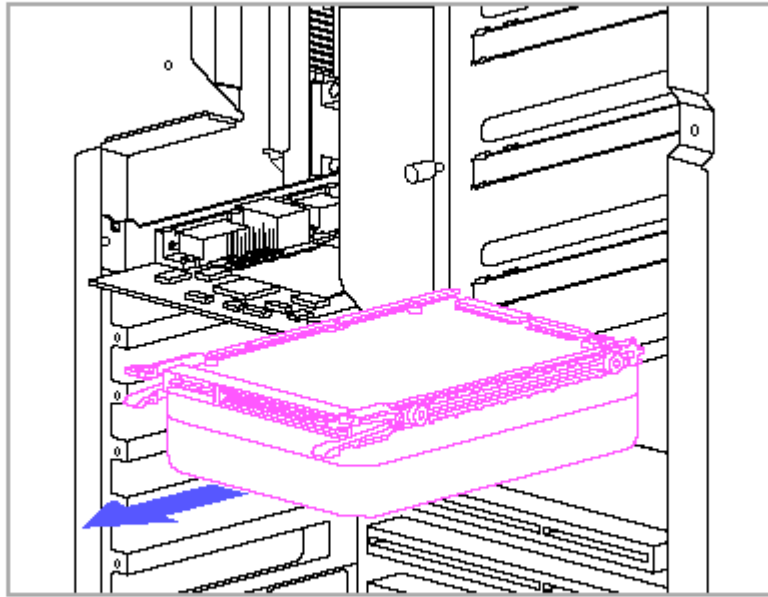


Figure 10. Removing a Hard Drive in Bays 0, 1, 2, and 3

External Storage

Optional mass storage devices can be connected to the Compaq ProSignia 500 by using the External Fast-SCSI-2 Port on the back of the unit, or the Fast-SCSI-2 Port on the optional Fast-SCSI-2 Controllers Cable Routing for SCSI Devices

Cabling

The ProSignia 500 server uses a terminated cable. When installing a SCSI devices make sure that it is not terminated. The figure below shows how the cable is folded and routed.

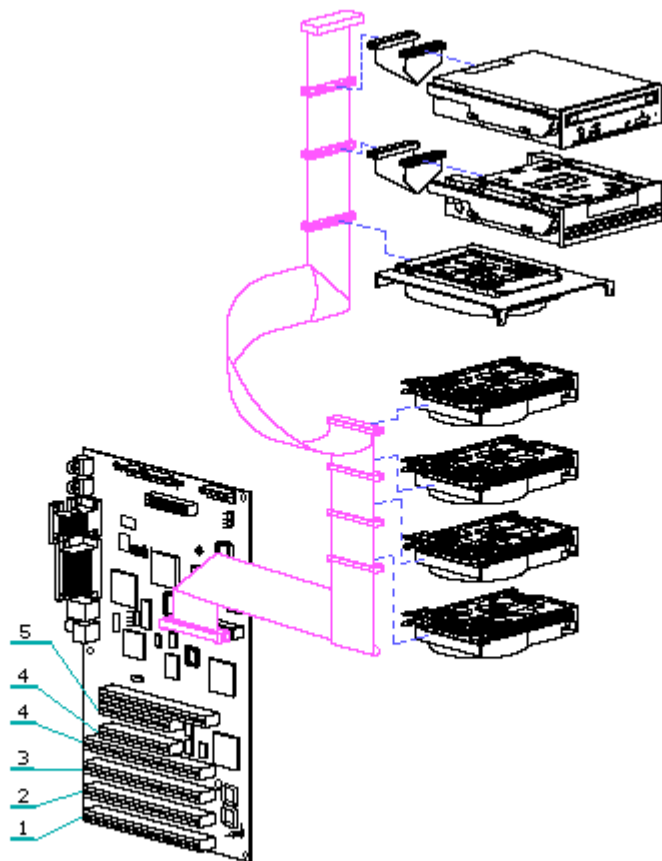


Figure 11. Internal SCSI Cable (7 Device) Spares Part No. 211409-001

Miscellaneous Parts

Battery/Clock Module

Sw	Function	Position	Status
S1	VIDEO DISABLE This switch is ignored and the integrated video is disabled if ROM detects an optional video board installed.	OFF * ON	ENABLED DISABLED
S2	CONFIGURATION LOCK System configuration cannot be changed when this switch is on (enabled).	OFF * ON	DISABLED ENABLED
S3	RESERVED	OFF *	
S4	DISKETTE BOOT ENABLE System can be booted from diskette drive no matter what Configuration reads when this switch is on (enabled).	OFF * ON	DISABLED ENABLED
S5	POWER-ON PASSWORD DEFEAT Password is set in configuration.	OFF * ON	DISABLED ENABLED
S6	NV RAM Invalidates nonvolatile RAM and configuration is cleared when this switch is on (enabled).	OFF * ON	DISABLED ENABLED
*	Default		

SCSI Devices

The 32-Bit Fast-SCSI-2 Controller requires that a SCSI ID be set for each SCSI device. The SCSI ID is set by jumpers ID2, ID1, and ID0 located on each SCSI device. Table 3 shows the jumper settings for each SCSI ID and its recommended drive bay.

Table 3. Jumper Settings For SCSI ID

SCSI ID	Device in Drive Bay	Pin 3 ID2	Pin 2 ID1	Pin 1 ID0
N/A	7	N/A	N/A	N/A
6	6	ON	ON	OFF
5	5	ON	OFF	ON
4	4	ON	OFF	OFF
3	3	OFF	ON	ON
2	2	OFF	ON	OFF
1	1	OFF	OFF	ON
0	0	OFF	OFF	OFF

IMPORTANT: No two drives can have the same SCSI ID.

Below are the physical locations of jumpers ID2, ID1, and ID0 on supported SCSI options.

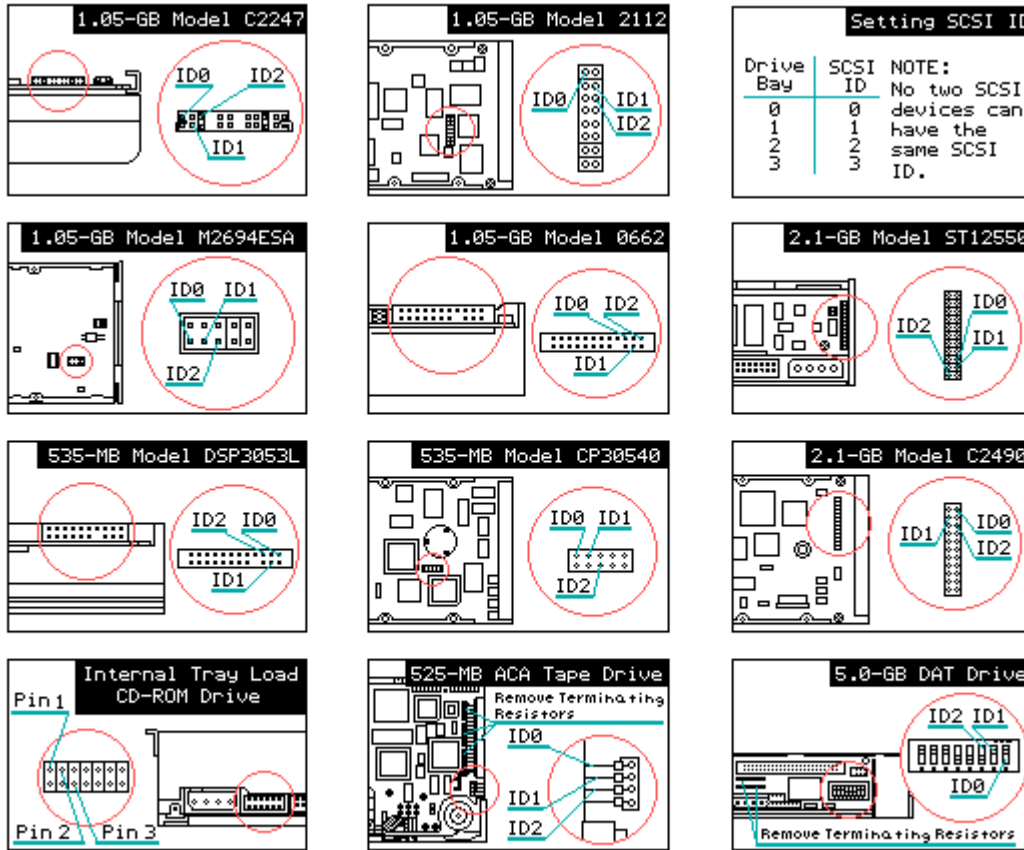


Figure 14. Supported SCSI Options Jumper Locations

Physical and Operating Specifications

Table 4. Internal CD-ROM Specifications

Capacity	680 MB or greater, dependent on disc format
Data Transfer Rate:	
Sustained	300 or 150 KB/sec
Asynchronous	2.5 MB/sec
Synchronous	4.0 MB/sec
Access Times:	
Full Stroke	520 ms
One-Third Stroke	290 ms
Cache/Buffer	256 KB (minimum)
Audio Output Level:	
Line Out	0.7 VRMS at 47 Kohms
Headphone	0.55 VRMS at 32 ohms (at maximum volume)
Weight	1 lb 2 oz (1.25 kg)

Dimensions
(w x h x d excluding
projections)

5.9 x 1.7 x 0.8 in
(14.9 x 4.3 x 2.1 cm)

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