Section 5. Base System Unit

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About This Section

This section contains the description, specifications, locations, and parts list for the base system unit components.

The floating-point board is an optional feature. It is included in this section because it improves the numerical processing ability of the 32-bit processor during floating point operations.

The floating-point board is an optional feature and may not be present on your system.

Some pages in this section contain a 3-digit product code in the page number to make future updating easier.

Base System Unit

The Base System Unit of the IBM 6151 System Unit consists of the system board, processor board, floating-point board, power supply, operator panel, covers, and hardware.

Specifications

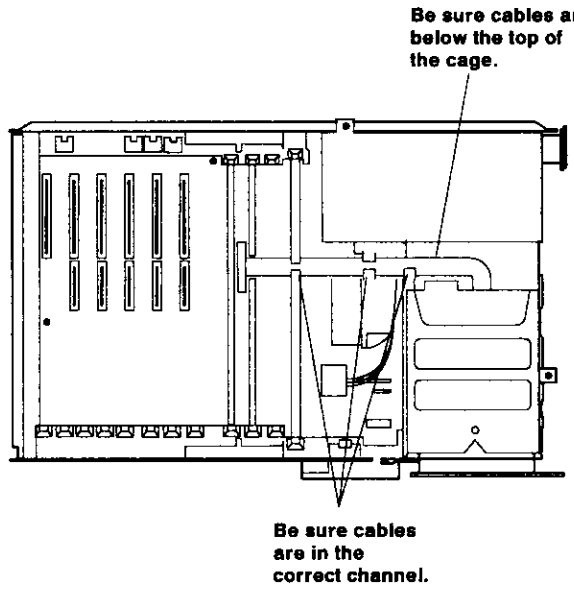
Height	160 mm (6 1/4 inches)
Width	540 mm (21 1/4 inches)
Depth	465 mm (18 1/4 inches)
Weight	25 kg (60 pounds)
Temperature	15.6 to 32.2°C (60 to 90°F)
Humidity	8 - 80 percent, noncondensing
Input voltages	U.S., 90 - 137 V ac
	WT low, 90 - 137 V ac
	WT high, 180 - 259 V ac
Power (includes	U.S., 0.8 kVA
attached display)	WT low voltage, 0.8 kVA
	WT high voltage, 0.9 kVA
Hertz	48 to 62
Heat output	620 W (2150 BTU/hr)
Altitude	0 to 2135 m (0 to 7000 feet)

Removal and Replacement Procedures

See Section 4 for your type unit or device.

Internal Signal Cable Routing Diagram

Use this Internal Signal Cable Routing Diagram to correctly route the internal cables. Route the signal cables as shown to prevent interference with top cover.



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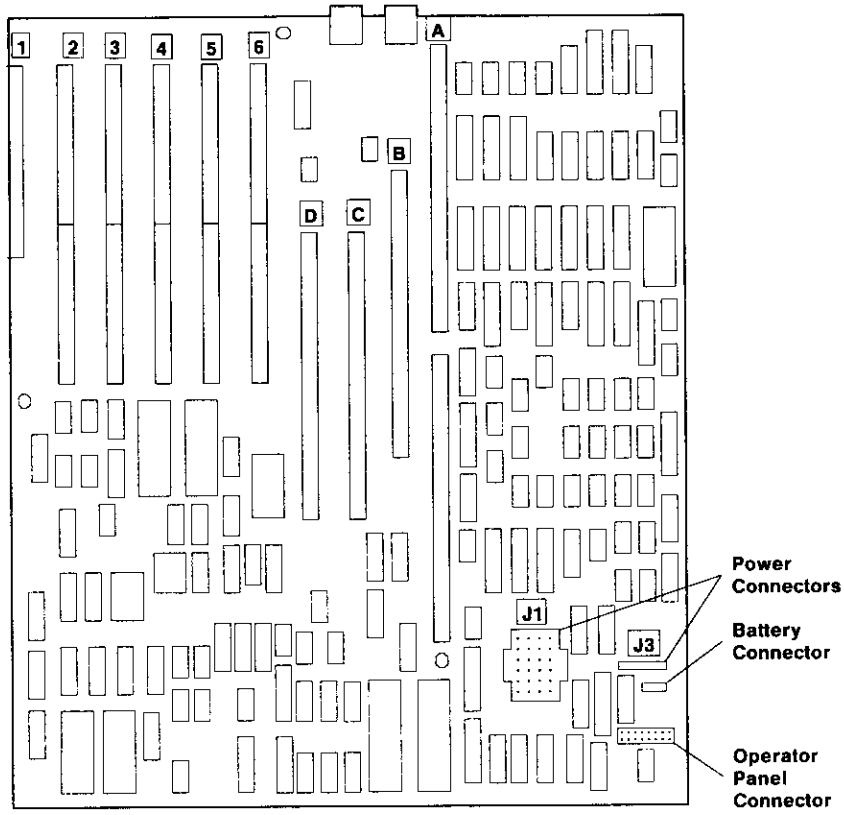
System Board

The System Board contains the keyboard adapter, mouse adapter, and slots for the processor board, floating-point board, system memory boards, and I/O adapters.



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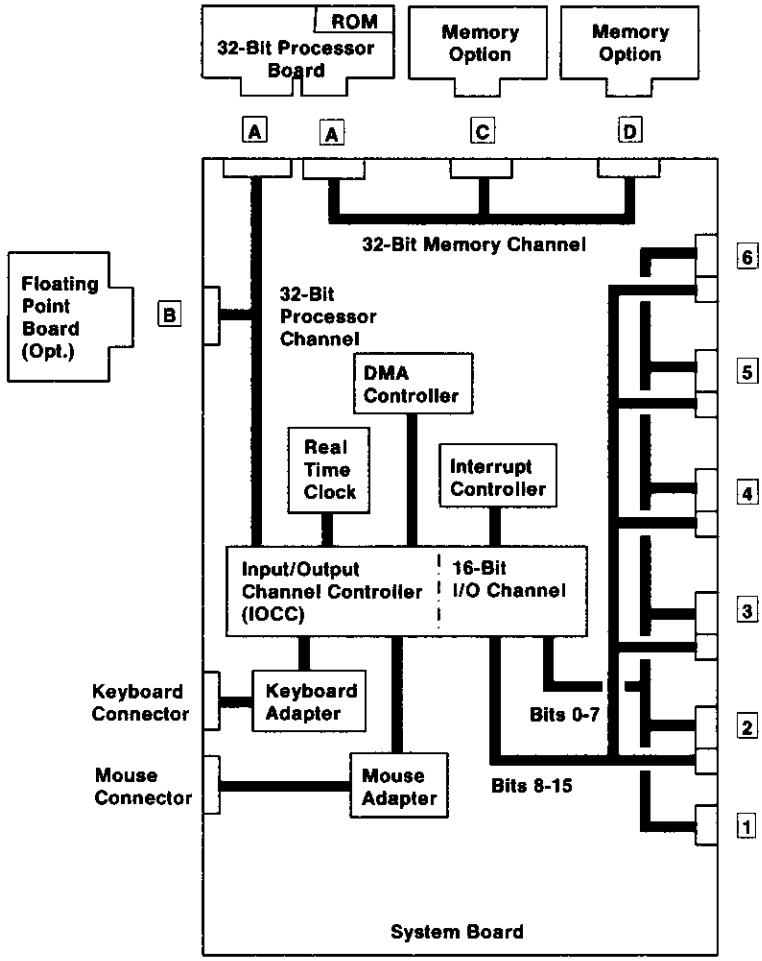
Data Flow Diagram

Use the Data Flow Diagram to identify data flow paths between the system devices.



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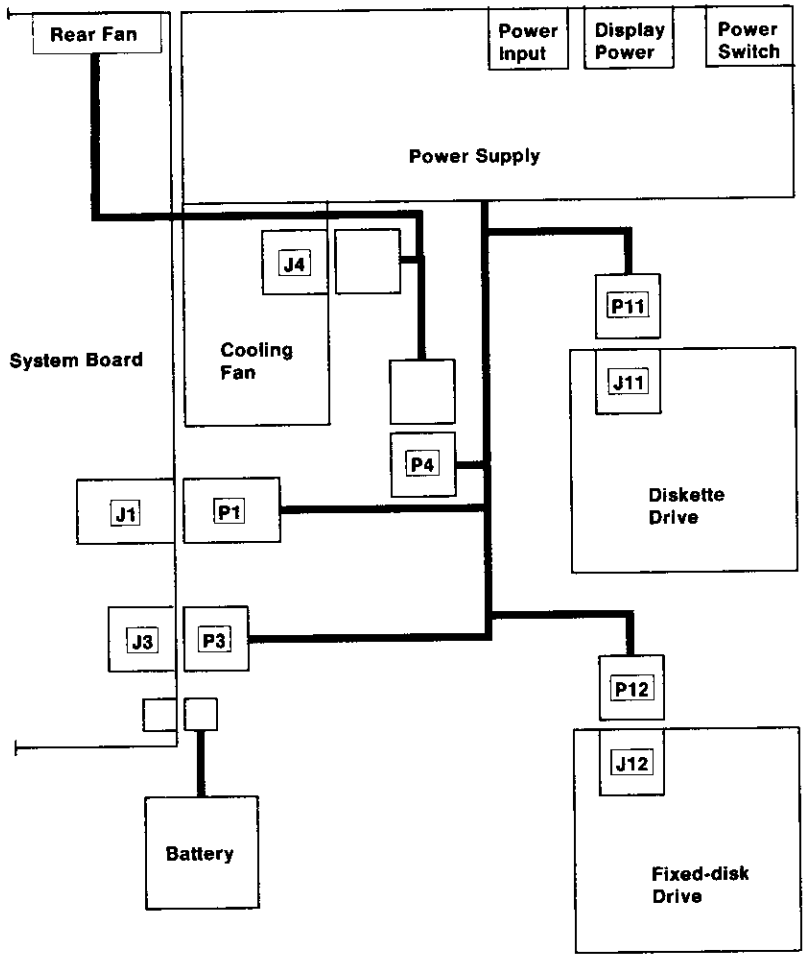
Power Distribution Diagram

Use the Power Distribution Diagram to identify the power connectors.



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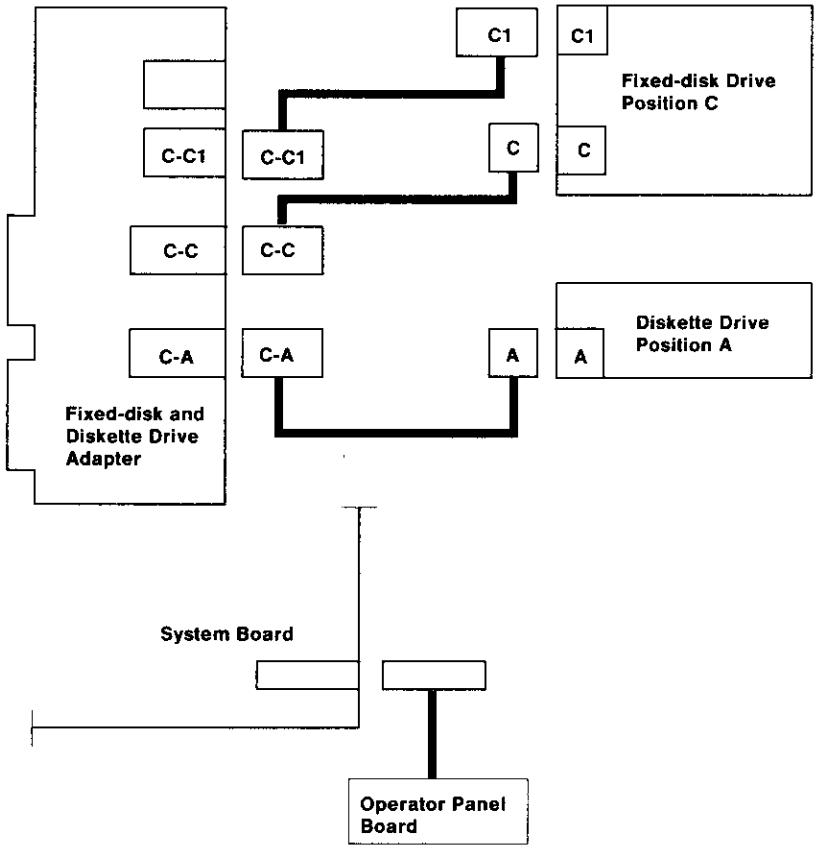
Internal Signal Cabling Diagram

Use the Internal Signal Cabling diagram to identify the signal connectors.



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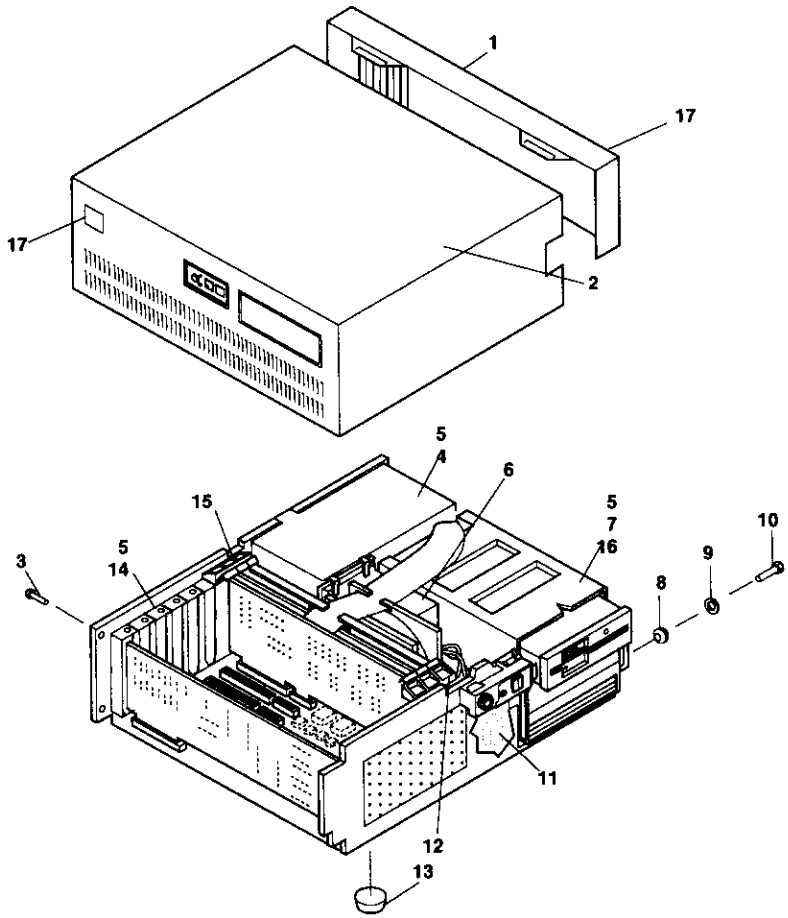
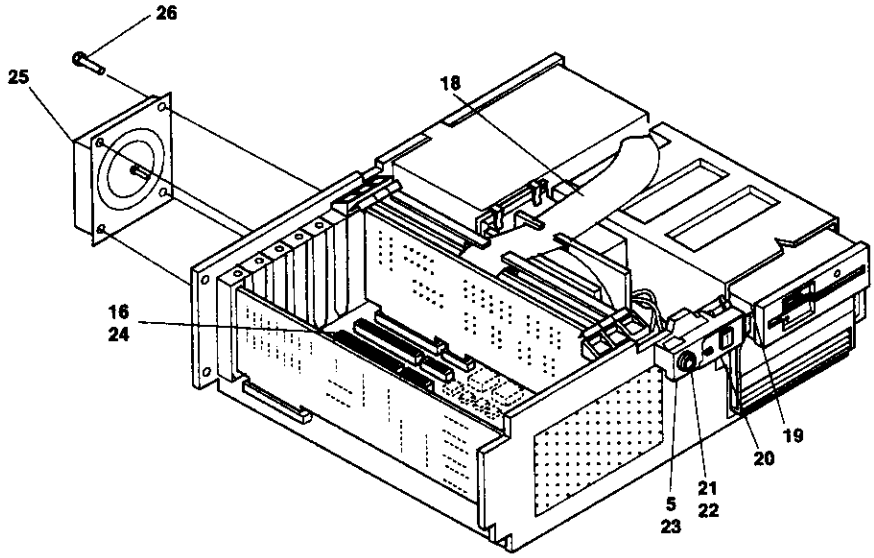


AJZB012

Index Number	Part Number	Description
1	6298356	Rear cover
2	6298378	Top cover
3	6080460	Screw
4	6298452	Power supply, U.S.
4	6298454	Power supply, WT low voltage
4	6298453	Power supply, WT high voltage
5	6080443	Screw
6	6298355	Cooling fan assembly
7	6298997	Shock mount retainer
8	6294696	Rubber bushing, rack mounting
9	6294819	Washer, rack mounting
10	6298395	Stud, rack mounting
11	6299201	Battery
12	6080458	Front guide assembly
13	6360965	Pad, foot
14	1501437	Blank bracket
15	6080459	Rear guide assembly
16	6299014	Screw
17	6080401	Rear logo (6151 straight)
17	92X1572	Rear logo (6151 slanted)
17	59X1168	Front logo (RT Personal Computer)
17	92X1570	Front logo (RT PC Model 115)
17	00F2548	Front logo (6151-115)
17	22F9741	Front logo (RT PC Model 130)
17	22F9750	Front logo (6151-130)



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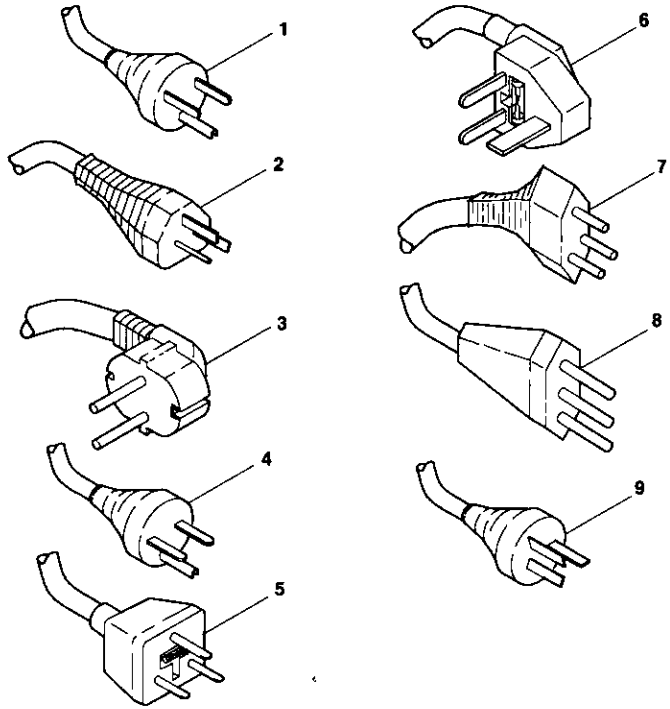
Index Number	Part Number	Description
18	61X6800	Cable, fixed-disk and diskette
19	6298410	Rack
20	6453886	Operator panel board
21	6299485	Keylock assembly
22	6299523	Spacer, keylock
23	6298181	Operator panel bracket
24	6299231	System board
25	08F3068	Fan, rear
26	1621180	Screw, fan mounting (4)



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Index Number	Part Number	Description
1	6952300	Power cable, U.S., Venezuela, Canada, Japan, Saudi Arabia
1	6952301	Power cable, Cook County, Illinois
2	6952311	Power cable, Australia, New Zealand, Argentina
2	6952291	Power cable, Paraguay, Uruguay
3	6952320	Power cable, Northern Europe, Greece, Turkey
4	1838574	Power cable, Thailand
5	6952347	Power cable, South Africa
5	6952329	Power cable, Denmark
6	6952356	Power cable, U.K., Ireland, Hong Kong, Singapore
7	6952365	Power cable, Switzerland
8	6952374	Power cable, Italy, Chile
9	6952383	Power cable, Israel

RT PC Processor Board

The RT PC Processor Board contains the 32-bit processor, the system memory controller, and the ROM modules. Only certain memory options can be used with this processor board. If needed, see Section 6.

Processor Board Identification Number

Each processor board contains an identification number used by the software to control access. This identification number is unique to that processor board.

After the processor board is exchanged, the identification number is a different number. Therefore, any program that uses the identification number for access needs the authorization updated.

Reminder to Service Representative: After you exchange the Processor Board, notify the customer that the unique identification number of the system unit has changed. The customer needs to update the authorization for any program that uses the identification number for access.

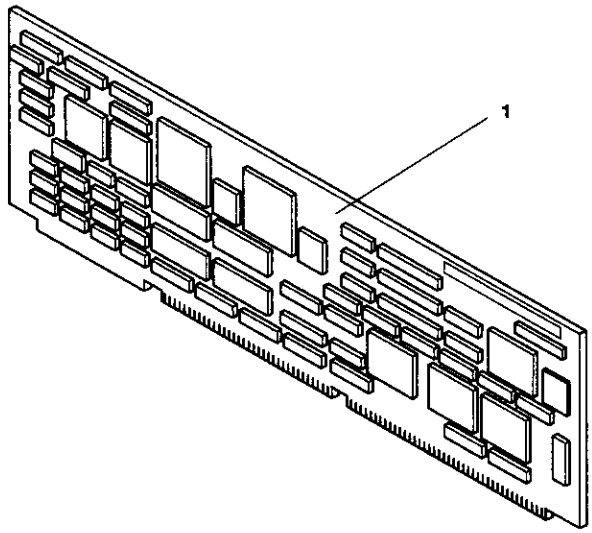
Removal Procedure

See Processor, Floating-Point, or System Memory Removal in Section 4.

Replacement Procedure

See Processor, Floating-Point, or System Memory Replacement in Section 4.

Parts Information



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Index Number	Part Number	Description
1	79X3766 6298223	RT PC Processor Board Processor board holder

RT PC Advanced Processor Board

The RT PC Advanced Processor Board contains the 32-bit processor, a floating-point unit, the system memory controller, and the ROM modules. This processor board has a faster internal speed than the RT PC Processor Board. Only certain memory options can be used with this processor board. If needed, see Section 6.

Processor Board Identification Number

Each processor board contains an identification number used by the software to control access. This identification number is unique to that processor board.

After the processor board is exchanged, the identification number is a different number. Therefore, any program that uses the identification number for access needs the authorization updated.

Reminder to Service Representative: After you exchange the Processor Board, notify the customer that the unique identification number of the system unit has changed. The customer needs to update the authorization for any program that uses the identification number for access.

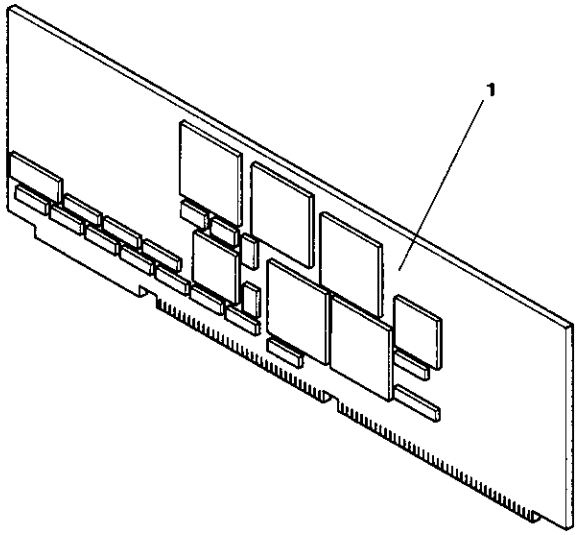
Removal Procedure

See Processor, Floating-Point, or System Memory Removal in Section 4.

Replacement Procedure

See Processor, Floating-Point, or System Memory Replacement in Section 4.

Parts Information



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Index Number	Part Number	Description
1	08F3639 6298223	RT PC Advanced Processor Board Processor board holder

RT PC Enhanced Advanced Processor Board

The RT PC Enhanced Advanced Processor Board contains the 32-bit processor, the system memory, and the ROM modules. This processor board has 16M bytes of built-in system memory. No memory expansion options can be used with this processor board.

Processor Board Identification Number

Each processor board contains an identification number used by the software to control access. This identification number is unique to that processor board.

After the processor board is exchanged, the identification number is a different number. Therefore, any program that uses the identification number for access needs the authorization updated.

Reminder to Service Representative: After you exchange the Processor Board, notify the customer that the unique identification number of the system unit has changed. The customer needs to update the authorization for any program that uses the identification number for access.

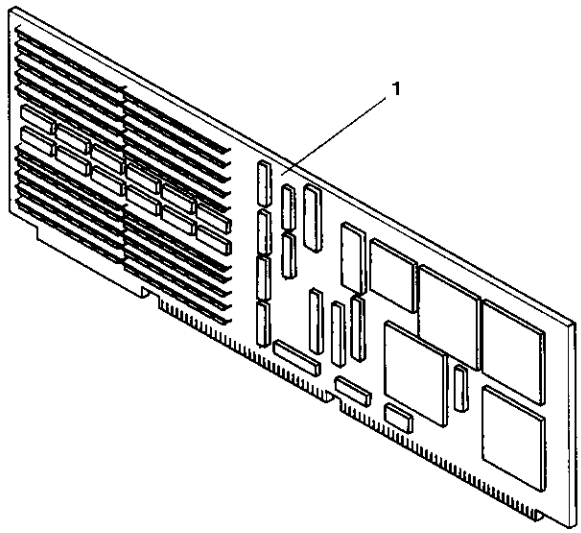
Removal Procedure

See Processor, Floating-Point, or System Memory Removal in Section 4.

Replacement Procedure

See Processor, Floating-Point, or System Memory Replacement in Section 4.

Parts Information



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Index Number	Part Number	Description
1	08F3587 6298223	RT PC Enhanced Advanced Processor Board Processor board holder

RT PC Floating-Point Board

The RT PC Floating-Point Board improves the numerical processing ability of the 32-bit processor. The RT PC Floating-Point Board is used only with the RT PC Processor Board.

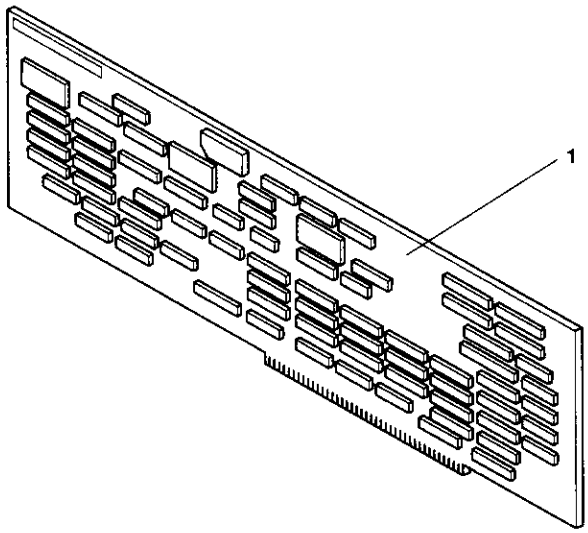
Removal Procedure

See Processor, Floating-Point, or System Memory Removal in Section 4.

Replacement Procedure

See Processor, Floating-Point, or System Memory Replacement in Section 4.

Parts Information



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Index Number	Part Number	Description
1	6299220	RT PC Floating-Point Board

RT PC Advanced Floating-Point Board

The RT PC Advanced Floating-Point Board improves the numerical processing ability of the 32-bit processor. The RT PC Advanced Floating-Point Board includes a second smaller board that plugs onto the first board. Both boards are included when ordering the replacement FRU.

There are two levels of the RT PC Advanced Floating-Point Board.

Level 1 (Bar Code A117Kxxxxxx) can be used with the RT PC Processor Board and the RT PC Advanced Processor Board.

Level 2 (Bar Code A1206xxxxxx) can be used with the RT PC Processor Board, the RT PC Advanced Processor Board, and the RT PC Enhanced Advanced Processor Board.

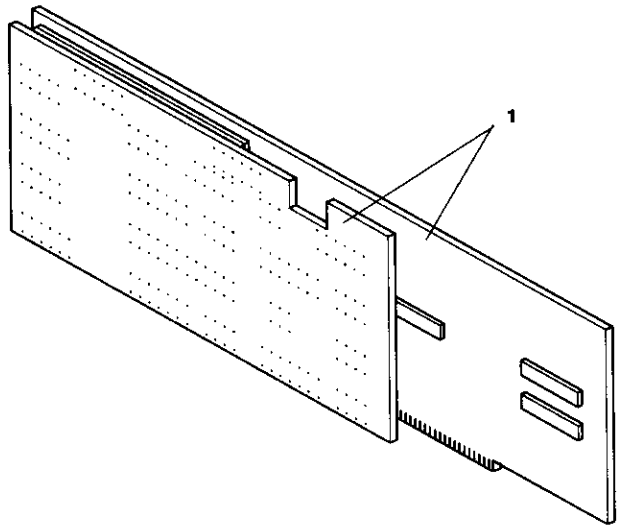
Removal Procedure

See Processor, Floating-Point, or System Memory Removal in Section 4.

Replacement Procedure

See Processor, Floating-Point, or System Memory Replacement in Section 4.

Parts Information



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Index Number	Part Number	Description
1	61X6814	Advanced Floating-Point Board (Level 1)
1	08F3589	Advanced Floating-Point Board (Level 2)
		Note:
		See the previous page for a description of each board.
		Do not replace a Level 2 board with a Level 1 board.