

FRONT

PICTURE 1

October 17, 1991

This supplement contains service procedures, a Symptom-to-FRU Index, and a parts listing for the IBM Personal System/2 Cached Processor Option.

Insert this supplement into the IBM Personal System/2 *Hardware Maintenance Service manual* (part number 15F2200, form number S15F-2200-00).

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*Part Number 04G5106*

*Form Number S04G-5106-00*

1.0 *Cached Processor Option Service Procedure*

**Important:** *This pamphlet provides a supplemental service procedure to be used when you service a system with a Cached Processor Option installed. When the diagnostic information for the system instructs you to replace the system board, use this procedure before you replace any FRUs. If you are unable to load the diagnostic programs from the System Partition, make sure that the version of the system programs you use is 1.2 or higher.*

*Systems with a Cached Processor Option installed can be identified by the "P1" label attached to the system serial number.*

**Note:** *If a 000169XX (configuration) or a 0129XXXX (cache) error code is displayed, go directly to "Cached Processor Option Symptom-to-FRU Index" in topic 2.0.*

Subtopics

1.1 FRU Isolation Procedure

1.1 FRU Isolation Procedure

+----+  
|001|  
+----+

- Power-off the computer and all attached devices.
- Disconnect the computer power cord from the electrical outlet.
- If you have not already done so, remove the floor stand and the system cover.
- If the speaker is located above the Cached Processor Option, move the speaker bracket assembly out of the way.

**Is a math coprocessor installed?**

Yes No

| |  
| |  
| +----+  
| |002|  
| +----+  
| Go to Step 006.  
|

+----+  
|003|  
+----+

- Remove the math coprocessor.
- Connect the computer power cord and power-on the computer.

**Did the problem remain? (Disregard a configuration error caused by removing the math coprocessor.)**

Yes No

| |  
| +----+  
| |004|  
| +----+  
| Replace the math coprocessor. If that does not fix the problem,  
| replace FRUs in the following order:  
|  
|  Cached Processor Option  
|  System board.  
|

+----+  
|005|  
+----+

- Power-off the computer.
- Disconnect the computer power cord from the electrical outlet, then continue with Step 006.

+----+  
|006|  
+----+

- Remove the Cached Processor Option. (See the Cached Processor Option Hardware Maintenance Reference supplement, if necessary, for Cached Processor Option removal and replacement procedures.)
- Connect the computer power cord and power-on the computer.

**Did the problem remain? (Disregard the 169 configuration error code caused by removing the Cached Processor Option.)**

Yes No

| |  
| +----+  
| |007|  
| +----+  
| Replace the Cached Processor Option. If the problem remains, replace  
| the system board. If you still have a problem, see the undetermined  
| problem section in the Hardware Maintenance Service pamphlet for the  
| system you are servicing.  
|

+----+  
|008|  
+----+

The Cached Processor Option is not the cause of the problem. Test the system without the option to determine the problem. (If you are instructed to replace the system board, do so.)

2.0 Cached Processor Option Symptom-to-FRU Index

Error symptoms and the FRUs that might be responsible for the failure are listed below.

Error/Symptom	FRU/Action
Sudden system-performance reduction	<b>Cached Processor Option</b> System Board
<b>000169XX</b> (Processor configuration error) Verify that the processor configuration information is correct before replacing any FRUs.	<b>Cached Processor Option</b> System Board
<b>0129XXXX</b> (Processor cache error)	<b>Cached Processor Option</b> System Board

3.0 *Cached Processor Option Parts*

PICTURE 2

1 *Cached Processor Option (includes standoffs).* 92F0078

Subtopics

3.1 Processor Option Identification

3.1 Processor Option Identification

Label	Description
P1(*)	Cached Processor Option (IBM 386SLC processor)

\* Label attached near the system unit serial number

10G2934

**IBM PS/2 Cached Processor Option HML**  
IBM Personal System/2 Cached Processor Option

*4.0 IBM Personal System/2 Cached Processor Option*

*The IBM (\*) Personal System/2(\*) Cached Processor Option can be added to some IBM Personal System/2 computers to significantly increase the performance of the computer. The option is attached to the system through an 11x11-pin connector located under the math coprocessor socket (the math coprocessor socket is removed).*

*The option features the IBM 386SLC processor, an 80386SX-compatible processor with an internal cache controller and 8KB of cache memory. A math coprocessor socket is provided on the option.*

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Subtopics

4.1 Specifications

*4.1 Specifications*

*Refer to the Hardware Maintenance Reference for the system into which the  
Cached Processor Option is installed.*

*5.0 Hardware Maintenance Reference Information*

Subtopics

5.1 Removals and Replacements

5.2 Locations

5.1 Removals and Replacements

Use the removal procedures in the Hardware Maintenance Reference pamphlet for the system you are servicing to remove the following:

- Floor stand (if attached)
- Cover
- Speaker bracket assembly (if the assembly is located above Cached Processor Option).

Use the following procedure to remove the Cached Processor Option from the system board. The numbers indicate the sequence of activities and the arrows indicate the direction of movement. To replace the Cached Processor Option, reverse this procedure.

PICTURE 3

5.2 Locations

5.2.1 *Cached Processor Option*

- 1 *Cached Processor Option*
- 2 *Coprocessor connector*
- 3 *Standoffs*

PICTURE 4

**Notes:**