AS/400e 170 or 250

30xx Main Storage Card Instruction

Version 4

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IBM

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> **Note**
>
> Before using this information and the product it supports, be sure to read the "Safety and Environmental Notices" on page iii and the "Notices" on page 13.

Safety and Environmental Notices

Danger Notices

A danger notice calls attention to a situation that is potentially lethal or extremely hazardous to people.

DANGER

> **An electrical outlet that is not correctly wired could place hazardous voltage on metal parts of the system or the products that attach to the system. It is the customer's responsibility to ensure that the outlet is correctly wired and grounded to prevent an electrical shock. (RSFTD201)**

DANGER

> **To prevent a possible electrical shock when installing the system, ensure that the power cords for all devices are unplugged before installing signal cables. (RSFTD202)**

DANGER

> **To prevent a possible electrical shock when adding or removing any devices to or from the system, ensure that the power cords for those devices are unplugged before the signal cables are connected or disconnected. If possible, disconnect all power cords from the existing system before you add or remove a device. (RSFTD203)**

DANGER

> **To prevent a possible electrical shock during an electrical storm, do not connect or disconnect cables or station protectors for communications lines, display stations, printers, or telephones. (RSFTD003)**

DANGER

> **To prevent a possible electrical shock from touching two surfaces with different electrical grounds, use one hand, when possible, to connect or disconnect signal cables. (RSFTD004)**

Caution Notices

A caution notice calls attention to a situation that is potentially hazardous to people because of some existing condition.

CAUTION:
Telecommunications Statement: This unit contains over-voltage circuits between the ac power outlet and the unit. These circuits meet the standard limits described in International Electrical Commission (IEC) 664, installation category II. It is the customer's responsibility to ensure that the power outlet meets the standards of IEC 664, installation category II. (RSFTC214)

Laser Safety Information

CAUTION:
**This product may contain a CD-ROM which is a class 1 laser product.
(RSFTC240)**

Product Recycling and Disposal

Components of the system, such as structural parts and circuit cards, can be recycled where recycling facilities exist. IBM does not currently collect and recycle used IBM products from customers in the United States other than those products that are involved in trade-in programs. Companies are available to disassemble, reutilize, recycle, or dispose of electronic products. Contact an IBM account representative for more information.

The system unit contains batteries and circuit boards with lead solder. Before you dispose of this unit, these batteries and circuit boards must be removed and discarded according to local regulations or recycled where facilities exist. This book contains specific information on each battery type where applicable.

Battery Return Program

In the United States, IBM has established a collection process for reuse, recycling, or proper disposal of used IBM batteries and battery packs. For information on proper disposal of the batteries in this unit, please contact IBM at 1-800-426-4333. Please have the IBM part number that is listed on the battery available when you make your call. For information on battery disposal outside the United States, contact your local waste disposal facility.

Environmental Design

The environmental efforts that have gone into the design of the system signify IBM's commitment to improve the quality of its products and processes. Some of these accomplishments include the elimination of the use of Class I ozone-depleting chemicals in the manufacturing process, reductions in manufacturing wastes, and increased product energy efficiency. For more information, contact an IBM account representative.

Installation Instructions

This feature is customer installed. It will take approximately 1 hour to install the hardware. However, you may elect not to perform this feature installation yourself. You may contact IBM or an Authorized Dealer to make arrangements for them to perform the feature installation for a fee.

You need to allow additional time to complete your jobs, back up your system, IPL your system, and verify your hardware configuration.

When you use these instructions, you will do the following:
- Remove the system unit covers.
- Install your new hardware.
- Install covers.
- IPL your operating system.
- Verify your new hardware configuration.

Some of the steps in these instructions may require a tool to remove the screws. Use a medium-sized standard screwdriver or a 5.5 mm socket wrench.

Before you begin:
- Ensure that you have a current backup of your operating system and licensed programs. If you have backed up the operating system and licensed programs since the last time you applied PTFs, that backup is acceptable.
- Ensure that you take a few minutes to become familiar with these instructions.
- If there are incorrect, missing or visibly damaged parts, contact one of the following:
  - Your authorized dealer
  - Point of purchase (For example, IBM Direct)
  - IBM Rochester Manufacturing Automated Information Line (R-MAIL)
    - 1-800-300-8751 (United States)
    - 1-507-253-5242 (worldwide)
- Determine if there are any existing prerequisites before you install your new feature. Go to this Web site and locate your feature number and OS/400 release and check the prerequisites.
  `http://as400service.ibm.com/s_dir/slkbase.NSF/`

  Then do the following to get to the Customer Install Features Prerequisites:
  1. Select **All Documents**
  2. Select **Collapse**
  3. Select **General Information**
  4. Select **Offerings**
  5. Select **Feature Prerequisites**
  6. Select **Customer Install Features Prerequisites**

The pictures in these instructions may not look exactly like the system unit that you have. However, the steps to perform the task are the same.

Getting Ready

__ 1. Ensure that the *System performance adjustment* is set to a value **other** than option **0**.

   a. On an AS/400 command line, type

   `WRKSYSVAL (QPFRADJ)`

   b. Select option **2** (Change)

   c. Press the Enter key.

   d. If the Performance adjustment value is **0** (No adjustment), it is necessary to change the value to **2**. When the upgrade is completed, you will be directed to return the value to **0**.

   If you have a Performance adjustment value of option **1** or option **3**, you do not need to change the value.
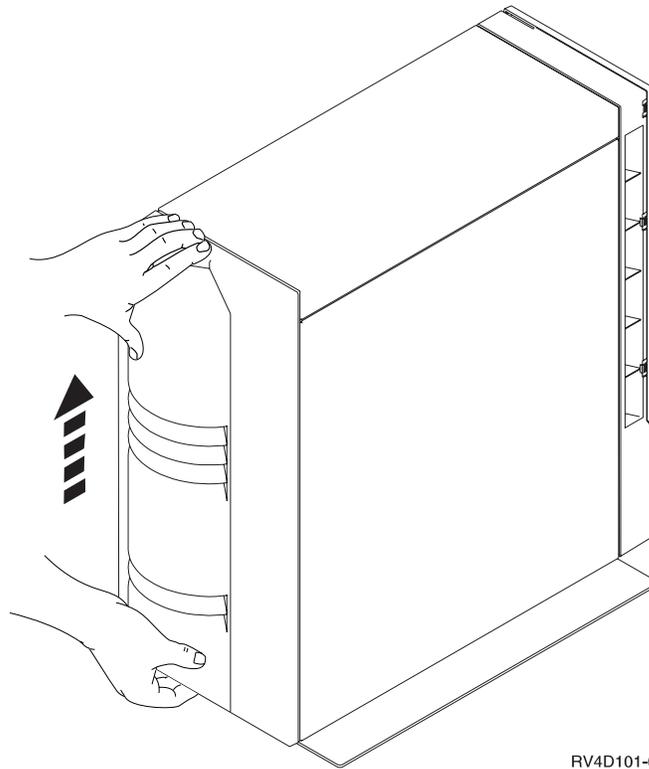
__ 2. Ensure that all jobs are complete.

__ 3. When all jobs are complete, type

   `pwrdwnsys *immed`

   on an AS/400 command line and press the Enter key.

   Note: Should you encounter difficulties during the installation, contact your authorized dealer or service provider.

__ 4. When the AS/400 is completely powered down, power off all PCs and devices, such as printers and displays, that are connected to the system unit.

__ 5. Unplug any power cords, such as printers and displays, from electrical outlets.

__ 6. Unplug the system unit power cord from the electrical outlet.

__ 7. Remove the system unit back cover by placing your hand near the bottom of the cover and lifting up and outFigure 1 on page 3.

RV4D101-0

Figure 1. Remove System Unit Back Cover

__ 8. Remove the system unit right side cover (looking at the back of the system
unit). Remove the screws and slide the cover from front to back until it
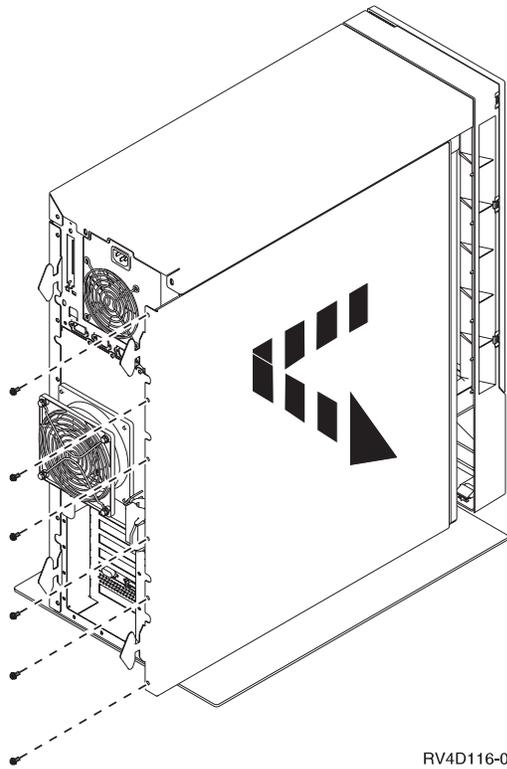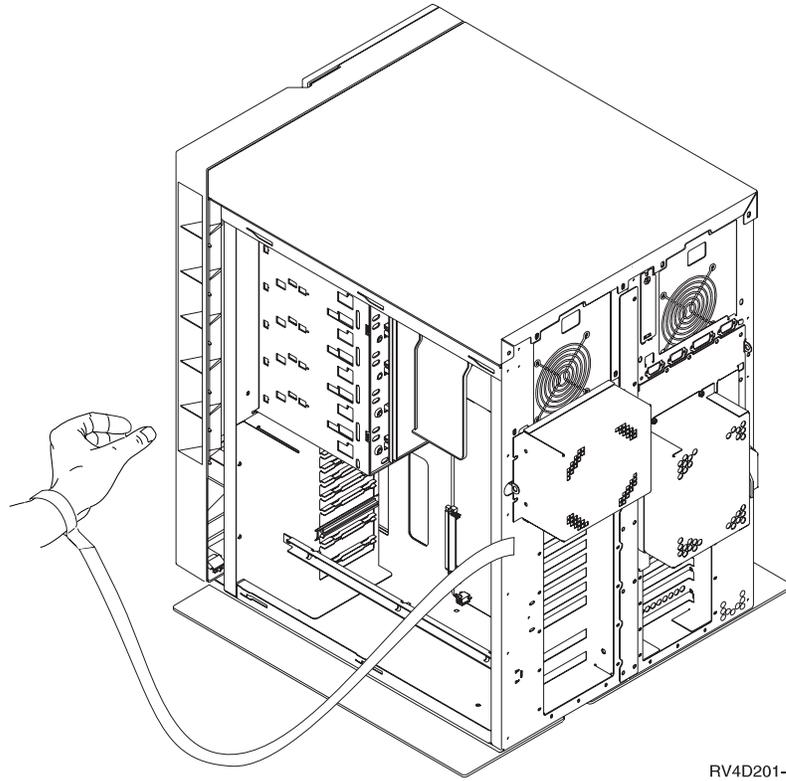stops. Pull the cover out. (Figure 2 on page 4).

RV4D116-0

Figure 2. Remove System Unit Side Cover

> **Your system unit contains a battery that only trained personnel can replace.**

__ 9. **CAUTION:**
The battery is a lithium battery. Only trained service personnel may replace this battery using the instructions in the Problem Analysis, Repair, and Parts service manual. To avoid possible explosion, do not burn or charge the battery. Exchange only with the IBM-approved part. Discard the battery as instructed by local regulations. (RSFTC241)

__ 10. Attach the disposable wrist strap to prevent electrostatic discharge from damaging a device. Figure 3 on page 5 shows an example of where to attach the adhesive part of the foil to an unpainted surface.

Notes:

a. Follow the same precautions you would use without the wrist strap. The 2209 Disposable Wrist Strap is for static control. It will not increase nor decrease your risk of receiving electric shock when using or working on electrical equipment.

b. Discard the wrist strap immediately and contact your dealer for a replacement, if the disposable wrist strap appears damaged or cut off. Do not continue until a new wrist strap is available.

c. Remove the liner from the copper foil at the end, when you unroll the wrist strap.

d. Attach the copper foil to an **exposed, unpainted** metal surface on the frame of the system unit (electrical ground).

RV4D201-0

Figure 3. Attach Wrist Strap

Installing the Main Storage Cards

__ 1. Do you have a 284A or a 2839 **A** card assembly (Figure 4 on page 6) in your system?

    Yes   **No**
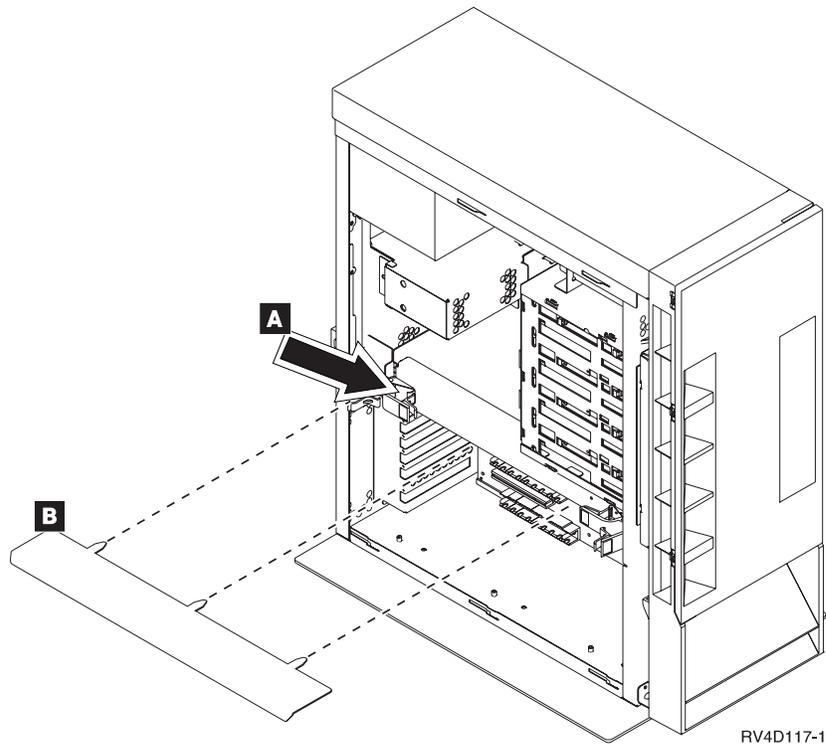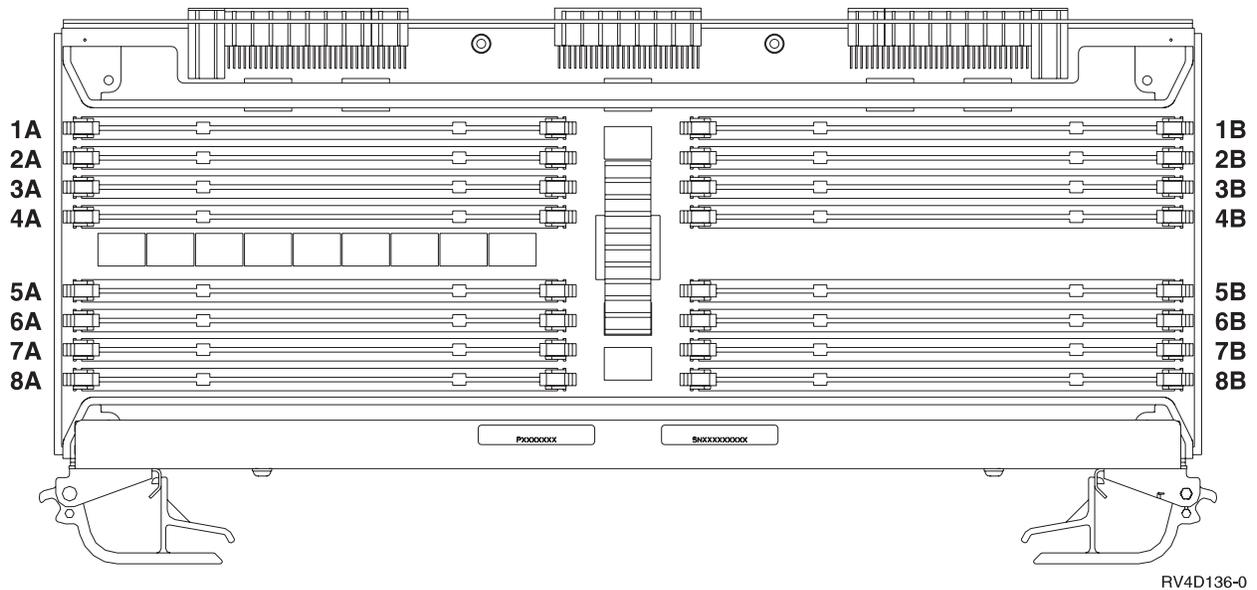
    ↓   Go to step 12 on page 8.

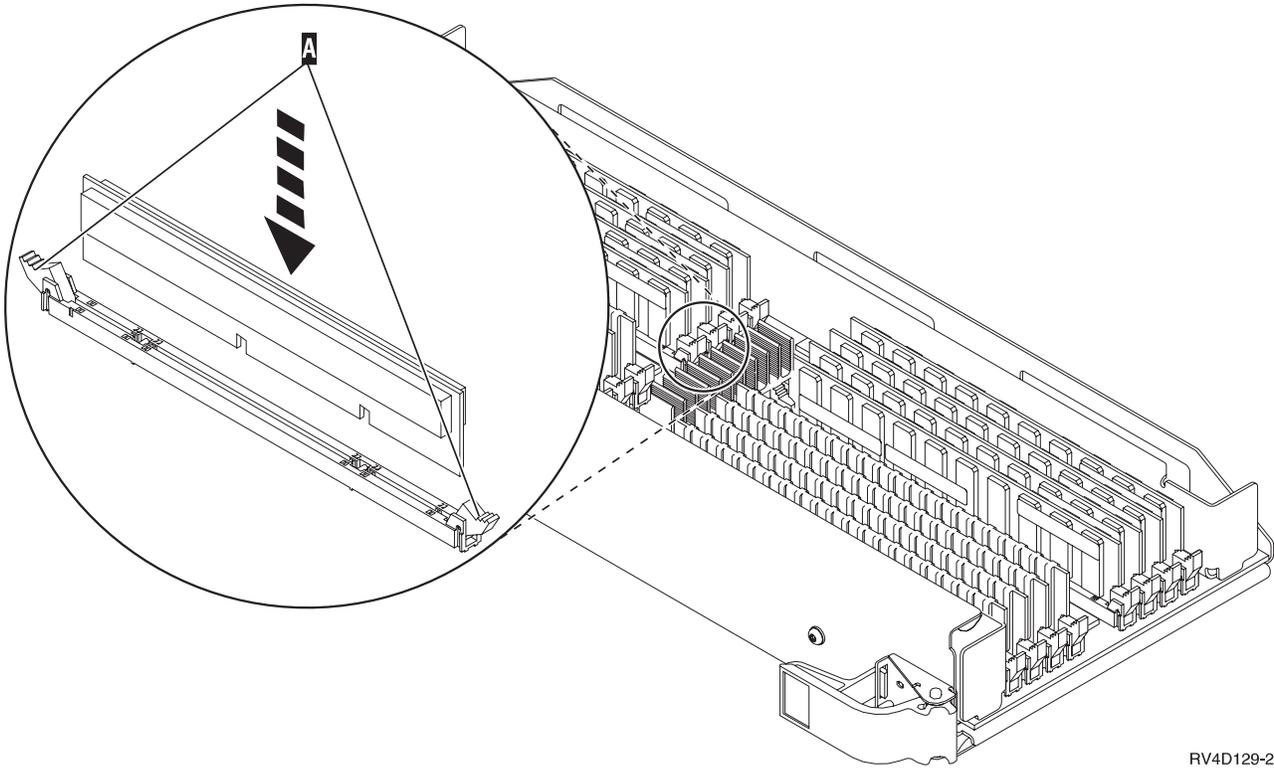RV4D117-1

Figure 4. Location of Card Assembly 284A or 2839

__ 2. Remove the 284A or 2839 card assembly from the system unit by doing the following:

   a. Remove the plastic airflow baffle **B** that is located under the card assembly (Figure 4).

   b. Press the two latch surfaces together to release each latch until the card assembly slightly "pops" out.

   c. Pull on both latches at the same time to remove the card assembly from the system unit.

   d. Lay the card assembly on the static protective bag provided.

__ 3. On the card assembly, storage cards must be placed as follows:

   • In pairs, beginning with positions **1A** and **1B**, then **2A** and **2B**, and so on, Figure 5 on page 7.

   • Each pair of storage cards must be either 32MB, 128MB or 256MB for the 170 or 128MB or 256MB for the 250.

   • Pairs installed in top slot pairs, **1A/1B** through **4A/4B**, must match pairs installed in the bottom slot pairs **5A/8A** through **5B/8B**. For example, the pair in **1A** and **1B**, must match the pair that is installed in **5A** and **5B**.

   • The corresponding pair locations in the top slot must not be empty.

   • If the next pair to install matches a pair in the top slots, then install the new pair in the bottom slot pair. If the next pair to install does not match a pair in the top slots, then install them in **2A** and **2B** and so on.

   •

Figure 5. Main Storage Card Locations on Card Assembly

__ 4. Remove the blank filler cards from the next available positions by doing the following:

    a. Push outward on the latches **A** that are located at each end of the filler card, Figure 6 on page 8.

    b. Remove the filler card from the card socket and discard it.

__ 5. Find the package that contains the new main storage cards.

__ 6. **Attention:** Main storage cards are fragile. Handle with care.
Remove a main storage card, **one at a time**, from the static protective package.

__ 7. Install the main storage card by doing the following:

    a. Look carefully at the notches on the main storage card. The distance between the end notches is slightly different.

    b. Align the card as shown in Figure 6 on page 8.

    c. Match the keyed notches and push down on the card until the latches close.

Figure 6. Install Main Storage Cards

RV4D129-2

  __ 8. Install the second main storage card.

  __ 9. When you finish installing all the main storage cards, slide the card assembly into the system unit by pushing on both card latches at the same time. Close the latches when you cannot push the card assembly any further into the system unit.

  __ 10. Reinstall the plastic airflow baffle.

     Note: The airflow baffle must be in place for proper disk unit operation and cooling.

  __ 11. You have completed the installation of the main storage memory in your system. **Go to step "Completing the Installation" on page 10.**

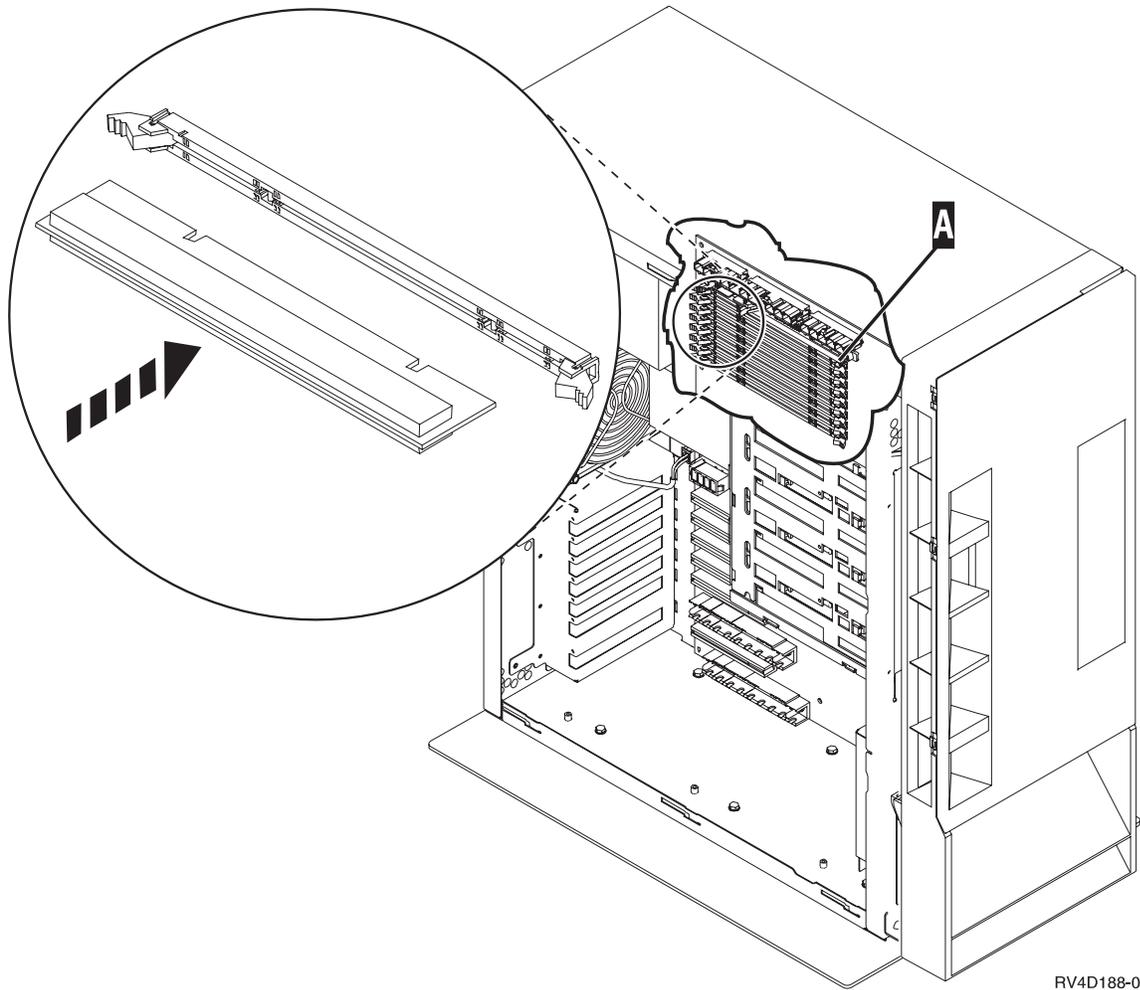 __ 12. Locate the main storage card connectors on the processor **A** inside your system unit.

RV4D188-0

Figure 7. Main Storage Connectors Inside the System Unit

__ 13. Main storage cards are placed as follows on the processor:
- In pairs beginning with **A and B**, then **C and D**, and so on.
- Each pair of storage cards must be either 32MB, 128MB, or 256MB for the 170 or 128MB or 256MB for the 250.
- In the next available position

__ 14. Remove the blank filler cards from the next available positions by doing the following:
   a. Push outward on the latches that are located at each end of the filler card, Figure 7.
   b. Remove the filler card from the card socket and discard it.

__ 15. Find the package that contains the new main storage cards.

__ 16. **Attention:** Main storage cards are fragile. Handle with care.
   Remove a main storage card, **one at a time**, from the static protective package.

__ 17. Install the main storage card in the next available position (Figure 7) beginning with **A and B** by doing the following:
   a. Look carefully at the notches on the main storage card. The distance between the end notches is slightly different.
   b. Align the card as shown in Figure 7.

Installation Instructions **9**

c. Match the keyed notches and push forward on the card until the latches close.

__ 18. Install the second main storage card.

__ 19. Do you have any other adapter cards or devices to install?

   No   **Yes**

   ↓

         If you have another device such as an adapter card, a tape unit, or a memory card to install, go to the instructions that came with that device.

__ 20. Install the system unit side cover by aligning the tabs on the top and bottom edge and press forward to make sure that all tabs enter the slots. Slide the cover toward the front of the system unit until it stops and install the screws, Figure 8.
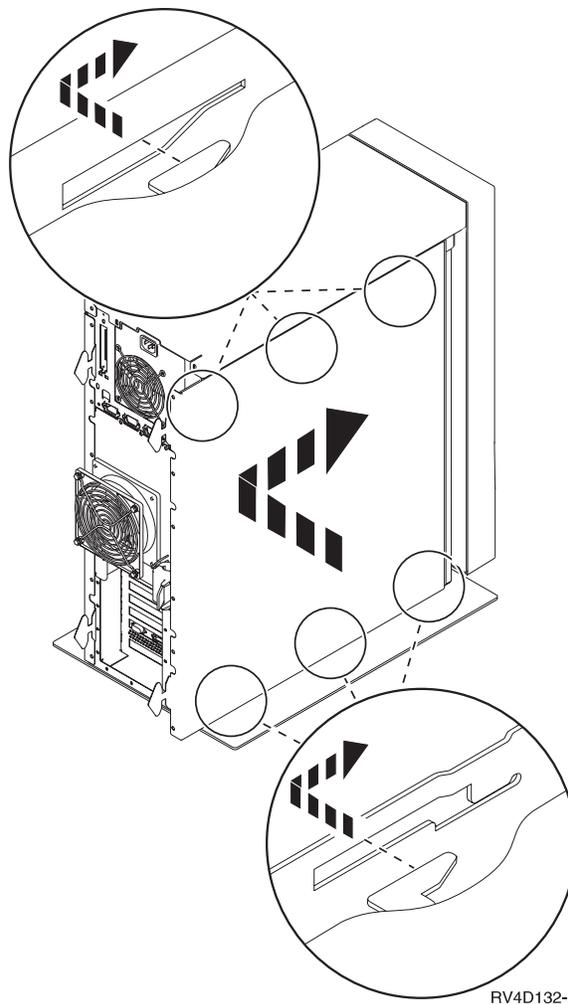

RV4D132-1

Figure 8. Install Side Cover

Completing the Installation

__ 1. Install the system unit front cover, if removed.

__ 2. Install the system unit back cover.
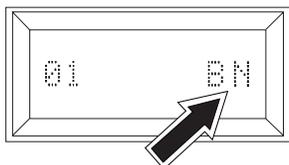
__ 3. **DANGER**

> **An electrical outlet that is not correctly wired could place hazardous voltage on metal parts of the system or the products that attach to the system. It is the customer's responsibility to ensure that the outlet is correctly wired and grounded to prevent an electrical shock. (RSFTD201)**

Plug the following power cords into an electrical outlet.

- System unit
- System unit console

__ 4. Plug in and power on all attached devices, such as printers and displays.

__ 5. Look at the Function/Data display on the control panel. Does a **B N** appear in the Function/Data display?

RV4D109-0

Yes   No

↓   Do the following:

a. Press the Up or Down select push button until **02** appears in the Function/Data display.

b. Press the Enter push button on the control panel.

c. Press the Up or Down select push button until **B N** appears in the Function/Data display.

d. Press the Enter push button on the control panel.

e. Press the Up or Down select push button until **01** appears in the Function/Data display.

f. Press the Enter push button on the control panel.

g. Go to step 6.

__ 6. Power on the workstation or PC that is your console.

__ 7. Press the system unit power-on button. The power-on light will appear.

Note: The system takes approximately 3 to 5 minutes to power on and complete an IPL.

__ 8. Sign on the system unit. Ensure that you have service tools authority.

__ 9. Do the following to verify your main storage card configuration:

a. On an AS/400 command line, type:

STRSST

Press the Enter key.

b. When the Start a Service Tools menu appears, select the *Start a service tool* option.

Press the Enter key.

c. When the Start a Service Tool menu appears, select the *Hardware service manager* option.

Press the Enter key.

d. When the Hardware Service Manger menu appears, select the *Logical hardware resources (Buses, IOPs, Controllers...)* option.

e. When the Logical Hardware Resources menu appears, select the *Main Storage Resources* option.

Press the Enter key.

The following screen is an example of what you should see.

```
              Display Main Storage Information

  Opt   Location      Type   Size   Resource Name      Status

    -       1                  32            MS0x     Operational
    -       2                  32            MS0x     Operational
    -       3                  32            MS0x     Operational
```

Verify that the status is *Operational* for all locations.

Note: If the status is not Operational, ensure that the main storage cards are properly installed.

f. If you have a printer, print the configuration list. Place the configuration list in the *Basic System Operation, Administration, and Problem Handling*, SC41-5206-04 book.

Note: To print the hardware resources list, press **F12** one time. When the logical Hardware Resources System Bus menu appears, press **F6**.

g. To return to the AS/400 Main menu, press **F3** three times and then press the Enter key.

__ 10. If you changed the *System perfomance adjustment* option value in step 1 on page 2, do the following to return to what you had prior to your upgrade:

a. On an AS/400 command line, type

```
WRKSYSVAL (QPFRADJ)
```

b. Select option 2 (Change).

c. Press the Enter key.

d. Change the Performance adjustment value to what it was before you did the upgrade.

__ 11. For information on how to make your main storage card operational, go to the *AS/400 Information Center*. You can access the Information Center from the *AS/400 Information Center*, SK3T-2027-03 or from the following Web site:

```
http://www.as400.ibm.com/infocenter
```

__ 12. Your feature upgrade is complete. Keep all miscellaneous parts, such as wrap connectors, with the Service Materials box or in a safe place.

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30xx Main Storage
Card Instruction

Publication No. SENG-3001-04

Overall, how satisfied are you with the information in this book?

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Overall satisfaction	☐	☐	☐	☐	☐

How satisfied are you that the information in this book is:

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Accurate	☐	☐	☐	☐	☐
Complete	☐	☐	☐	☐	☐
Easy to find	☐	☐	☐	☐	☐
Easy to understand	☐	☐	☐	☐	☐
Well organized	☐	☐	☐	☐	☐
Applicable to your tasks	☐	☐	☐	☐	☐

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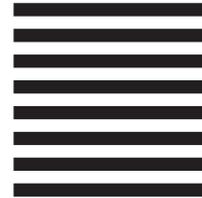Company or Organization

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