Field Feature Bill of Material

PN 08J5494

Installation of the Service Processor Rack Mount Kit (FC 5029)
on IBM 3745 Models X1A and 3746 Models 9X0
with Controller Expansion (FC 5023)

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Reviewed by: B. Kelly

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Before Installation (Steps 1-8)

1.0 Machines Affected

3745 Models 17A, 21A, 31A, 41A, 61A or 3746 Model 950 with Controller Expansion (FC 5023).

This feature should only be applied on the machine serial for which it is specified.

2.0 Related BMs and ECs

None.

3.0 BMs to be Installed

FFB/M **Title**
08J5494 Service Processor Rack Mount Kit (FC 5029).

4.0 Preparation

- Familiarize yourself with the purpose and details of the installation instruction before negotiating machine time with the customer.
- Check all items listed on the BM(s) to determine that all parts have been received.
- The following figures Figure 1 on page 4 to Figure 6 on page 7 show where to install the Service Processor according to his type.
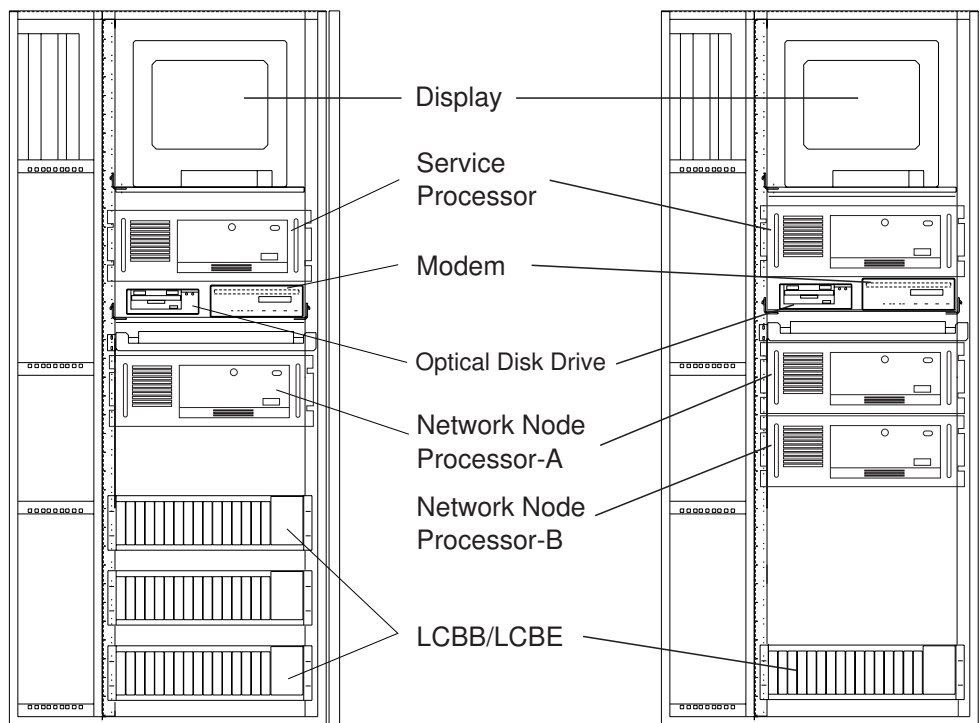
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Display

Service
Processor

Modem

Optical Disk Drive

Network Node
Processor-A

Network Node
Processor-B

LCBB/LCBE

Figure 1. Units Installation in the Controller Expansion (SP Type 7585)

Docs

Display

Docs

Service
Processor

RSF
Modem

Optical Disk Drive
or CDD

Network Node
Processor-A

Network Node
Processor-B

LCBB/LCBE
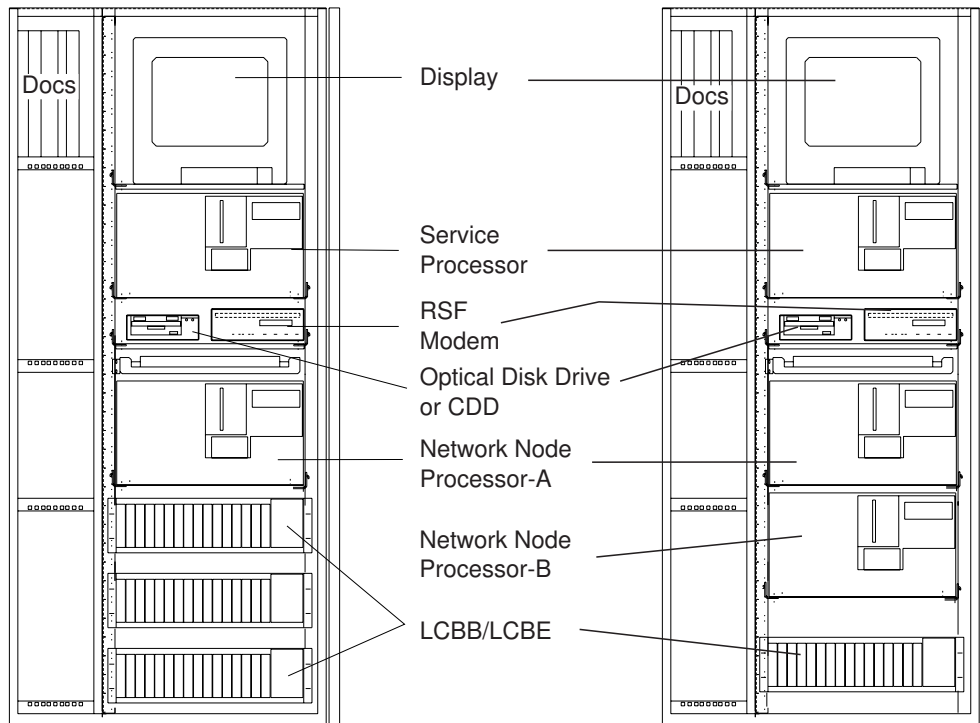
Figure 2. Units Installation in the Controller Expansion (SP Type 3172)

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IBM Installation Instructions

Docs — Display — Docs

Network Node Processor-B

Modem

CDD

Network Node Processor-A

Service Processor
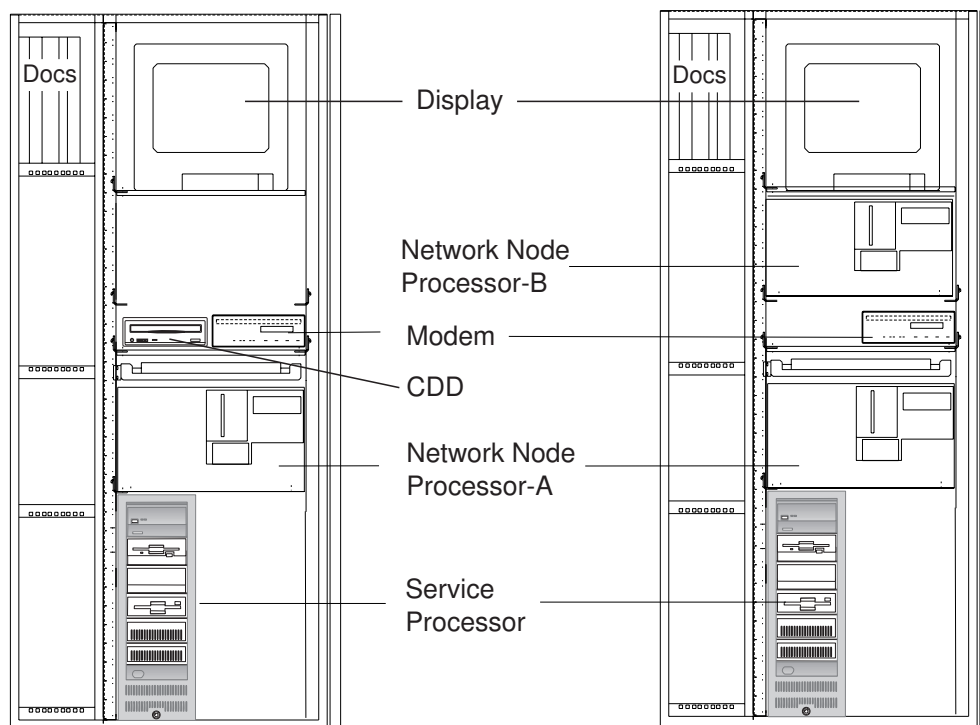
Figure 3. Units Installation in the Controller Expansion (SP Type 9585)

FREE AREA FOR OPTIONS

Display

Service Processor

Modem

Network Node Processor-A

Network Node Processor-B

LCBB/LCBE

FREE AREA FOR AC OUTLET DISTRIBUTION
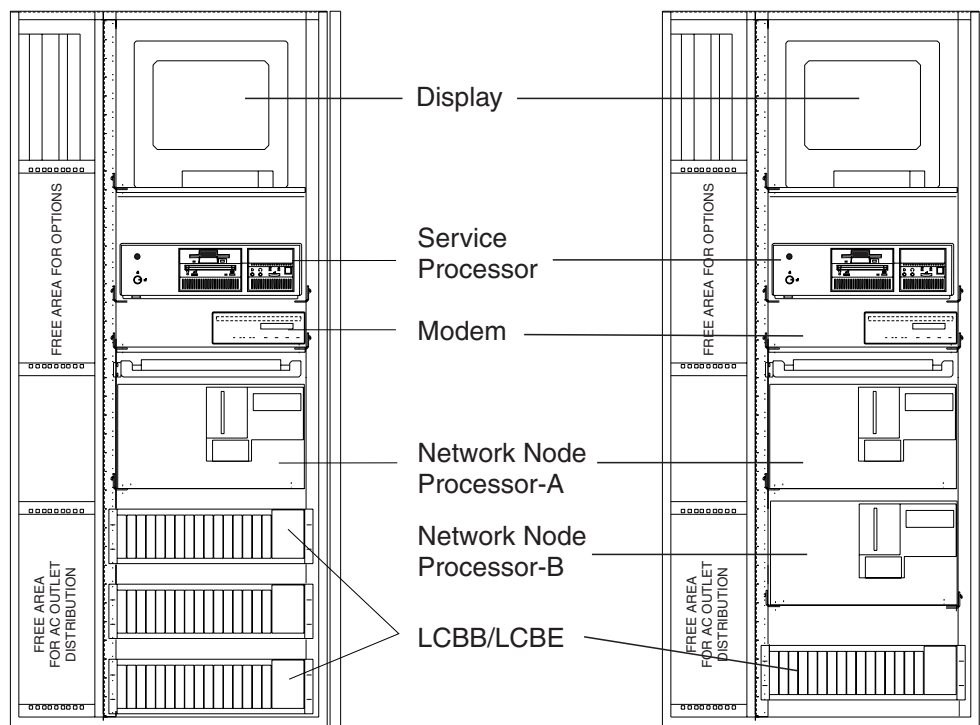
Figure 4. Units Installation in the Controller Expansion (SP Type 9577)

36
35 5
34 4
33
32 Display
31
30
29
28
27
26 Service
25 Processor
24
23
22 Modem
21
20
19
18
17 Network Node
16 Processor - A
15
14
13 Network Node
12 Processor - B
11
10
9
8
7
6
5
4
3 LCB
2
1

View A

View A

Front View
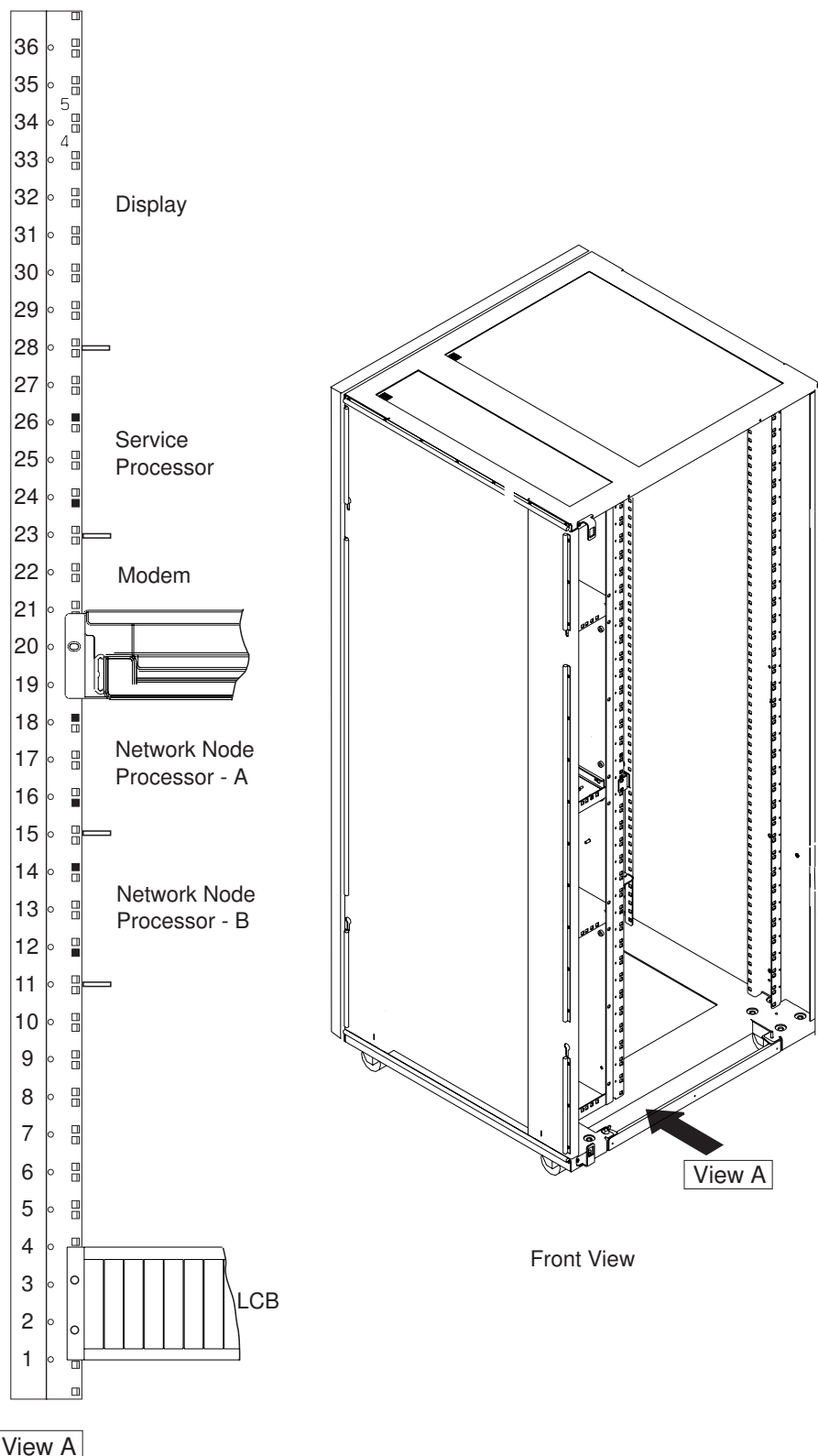
Figure 5. Installing Brackets for Processor Type 7585

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36
35
  5
34
  4
33
32   Display
31
30
29   **1**
28
27
26   Service
25   Processor
24
23   **1** **2**
22
21   Modem
20
19
18
17
16   Network Node
15   Processor - A
14
13   **1** **2**
12
11
10
9   Network Node
8   Processor - B
7   **1** **2**
6
5
4
3   LCB
2
1

View A

Front View

View A
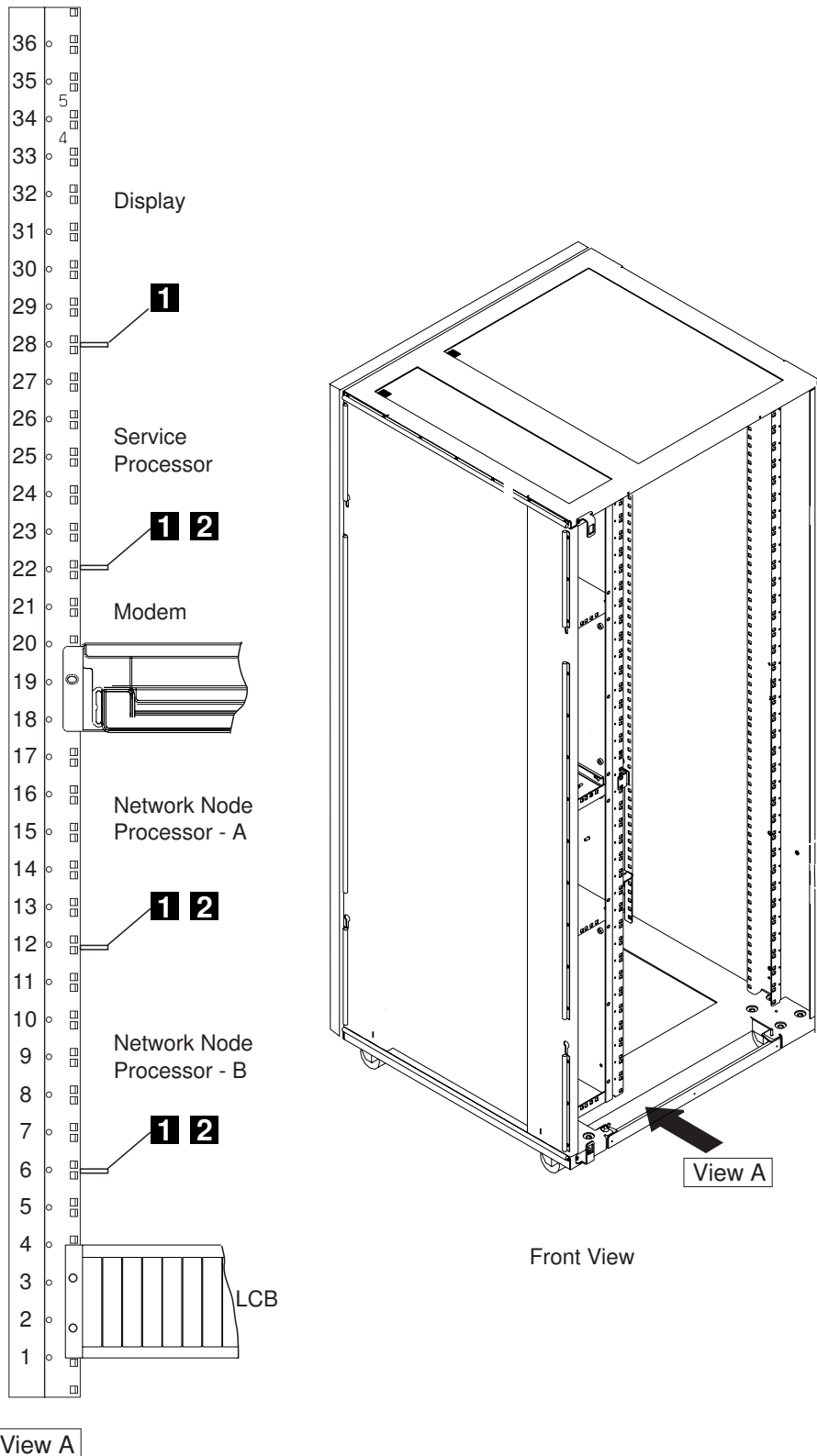
Figure 6. Installing Brackets for Processor Type 3172
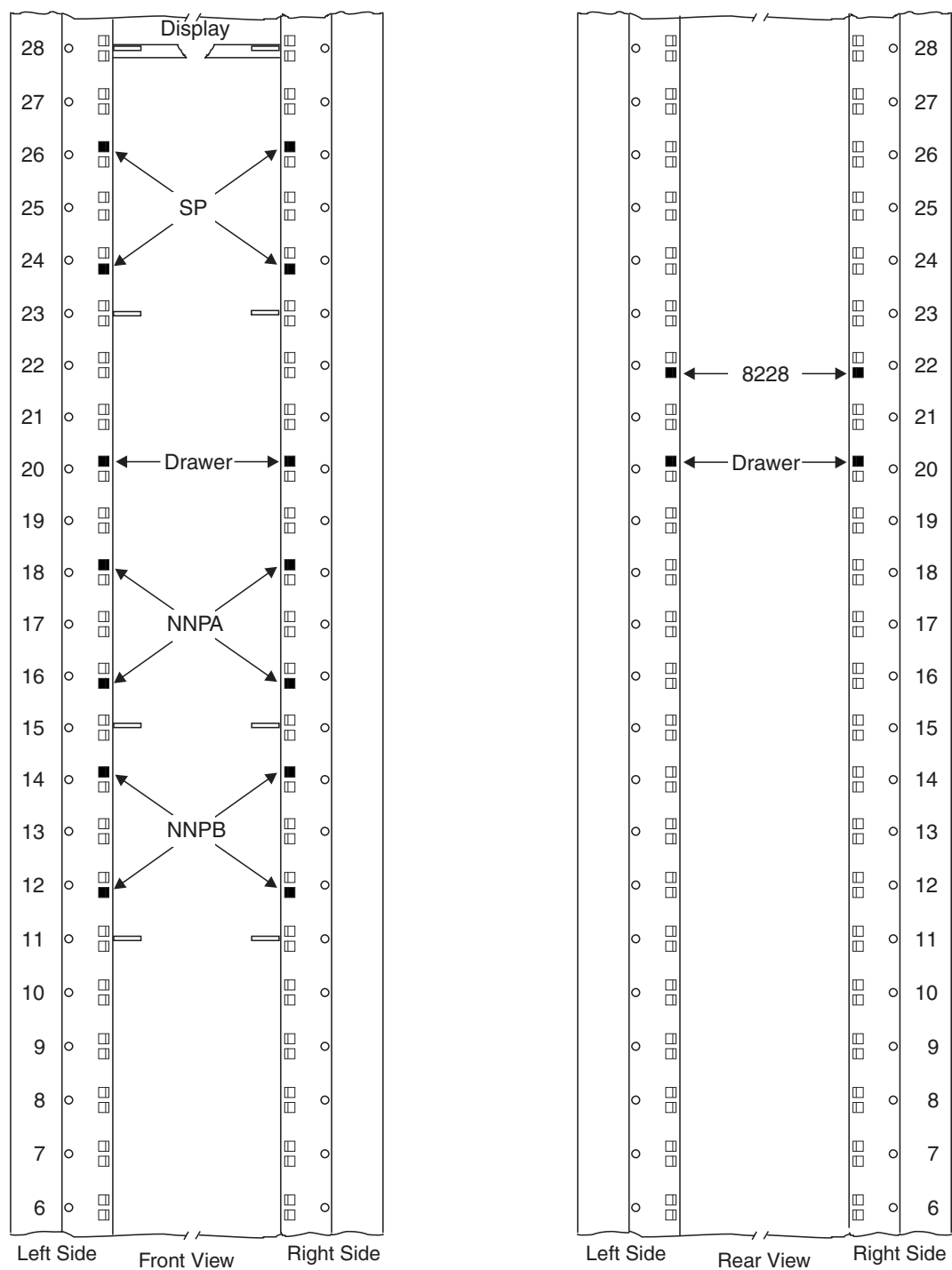
Figure 7. Installing Captive Nuts and Brackets for SP Type 7585

Front View

Left Side — Right Side

(Positions 6 through 28)

Display (top)

Drawer (position 19)

Rear View

Left Side — Right Side

8228 (position 21)

Drawer (position 19)
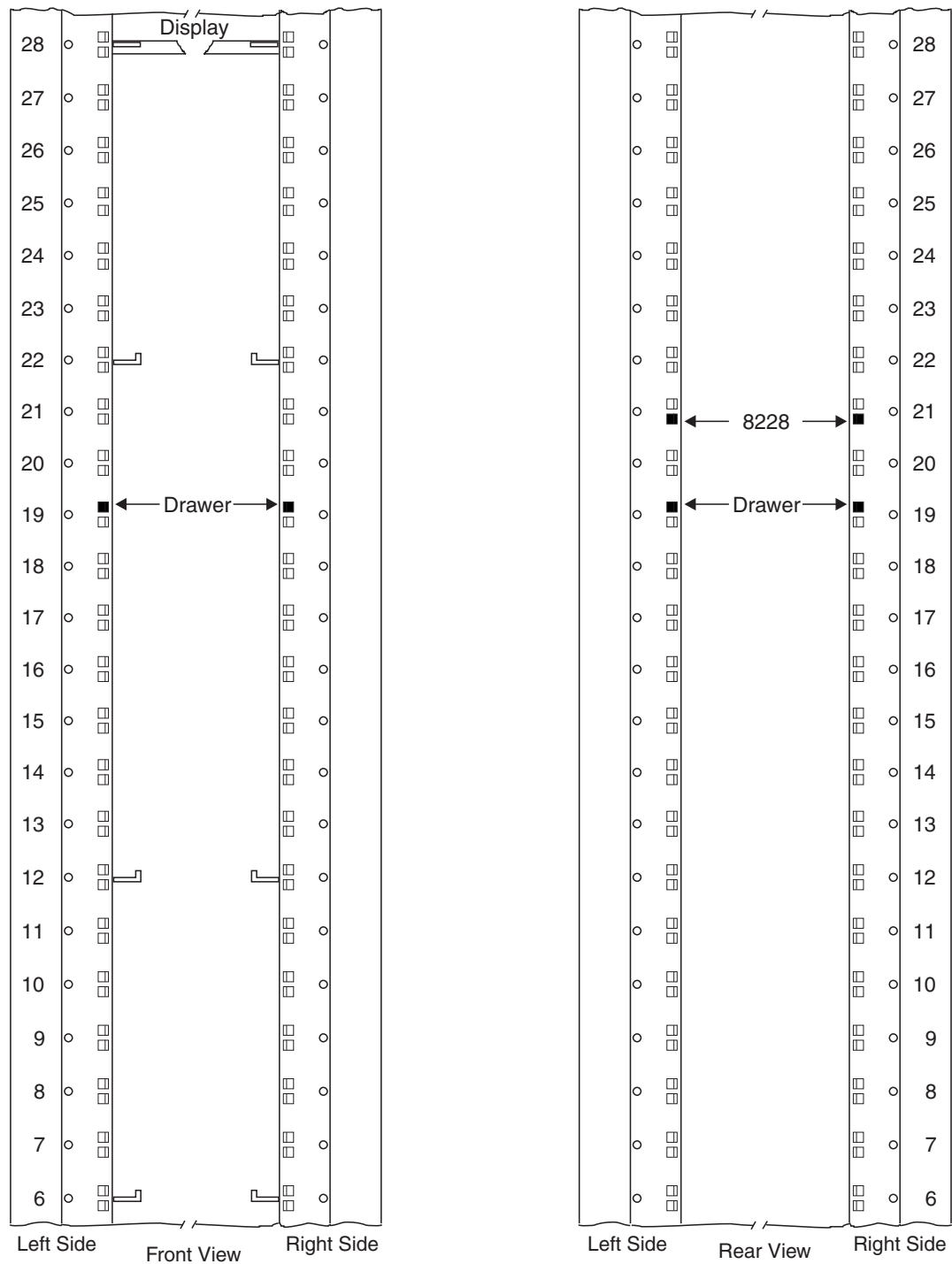
SP Type 3172, 9577 or 9585.

Figure 8. Installing Captive Nuts and Brackets for

5.0 Programming

None.

6.0 Purpose and Description

6.1 Purpose

To allow the installation of the Service Processor in the Controller Expansion

6.2 Description

Installation of the Service Processor Rack Mount kit in the Controller Expansion

7.0 Installation Time

FFBM	Machine Hrs.	System Hrs.	Nbr of CE
08J5494	05.0	00.0	1

No impact on 3745 / 3746 customer operations.

8.0 Tools/Material Required

ESD kit (PN 6428316).

Installation (Steps 9-12)

9.0 Safety

Review the **Safety Notices** and the **Safety Inspection Procedures** located at the beginning of the *IBM 3745 Communication Controller All Models*, *IBM 3746 Expansion Unit Model 900*, *IBM 3746 Nways Multiprotocol Controller Model 950 Safety Information*, GA33-0400.

10.0 Details of Installation

__ 1. Open the front and rear doors of the controller expansion.

__ 2. Locate the positions to install the Service Processor according to his type, the display and the service drawer. Refer to Figure 1 on page 4 to Figure 4 on page 5

__ 3. Locate the positions to install the brackets for the display, the service processor and the service drawer. Refer to Figure 5 on page 6 to Figure 6 on page 7

Note: This symbol '▪' identify the locations to install the captive nuts.

10.1 Installing the Display in the Controller Expansion.

┌─ **Are the display brackets/support already installed?** ─────────┐

• **YES**, go to 3 on page 12.

• **NO**, go to 10.1, "Installing the Display in the Controller Expansion.."

└──┘

__ 1. Install 2 brackets (PN 58G5752) and secure using 4 screws (PN 2665527).

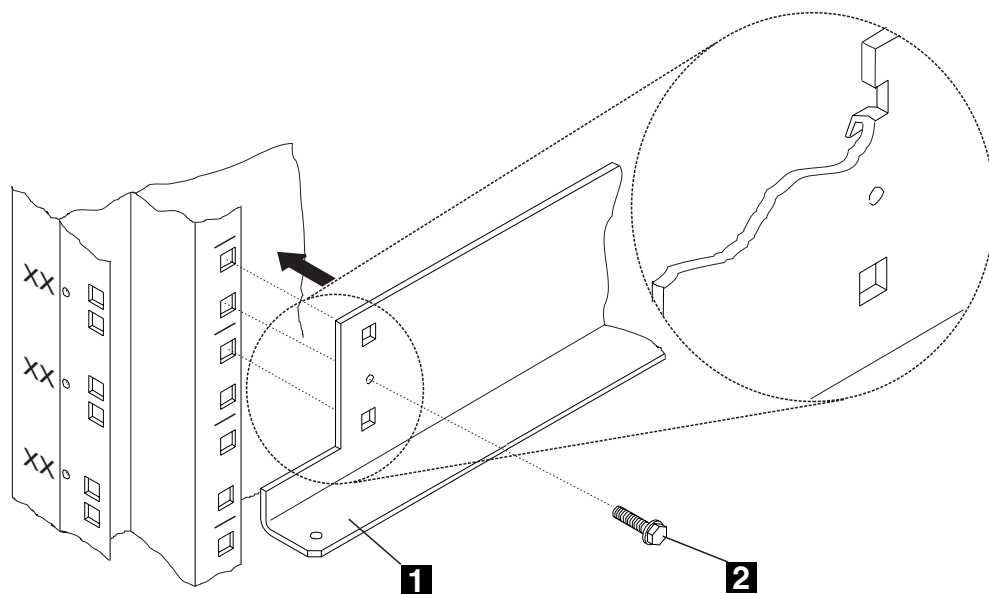| 3745	PN 08J5494	EC F00965A				
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Figure 9. Installing Brackets PN 58G5752

__ 2. Install the plate **2** (PN 58G5755), on the brackets previously installed, then, fasten it using four screws **1** (PN 1621230).
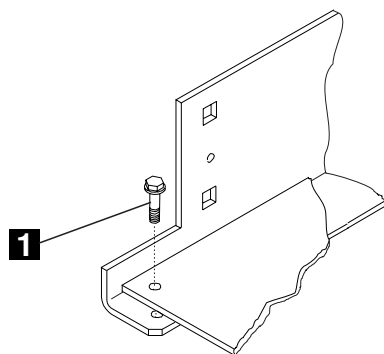

Figure 10. Installing Plate PN 58G5755

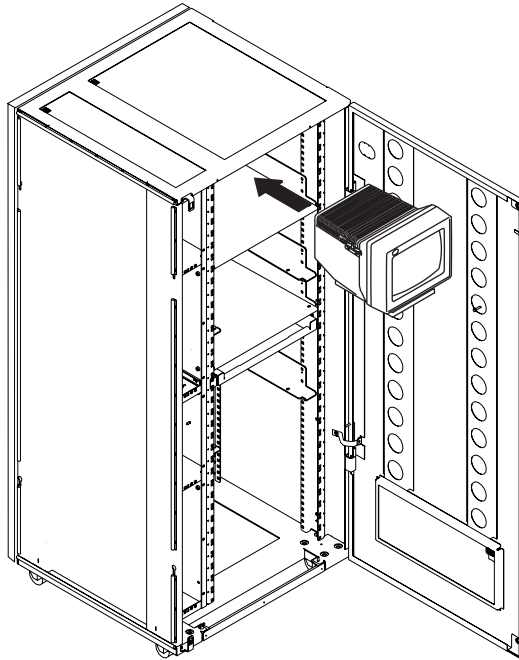__ 3. Slide the display screen on the top of the controller expansion (refer to Figure 11 on page 13).

Figure 11. Installing the Display Screen in the Controller Expansion (Front Side)

10.2 Installing the Service Drawer in the Controller Expansion.

Is a drawer already installed?

- **YES**, go to 1.

- **NO**, go to 2.

___ 1. Remove the drawer and slides installed.

___ 2. Refer to Figure 12 on page 14, and if needed install four captive nuts **A** (PN 58G5766) on the front and on the rear side of the controller expansion (See figure Figure 13 on page 14).

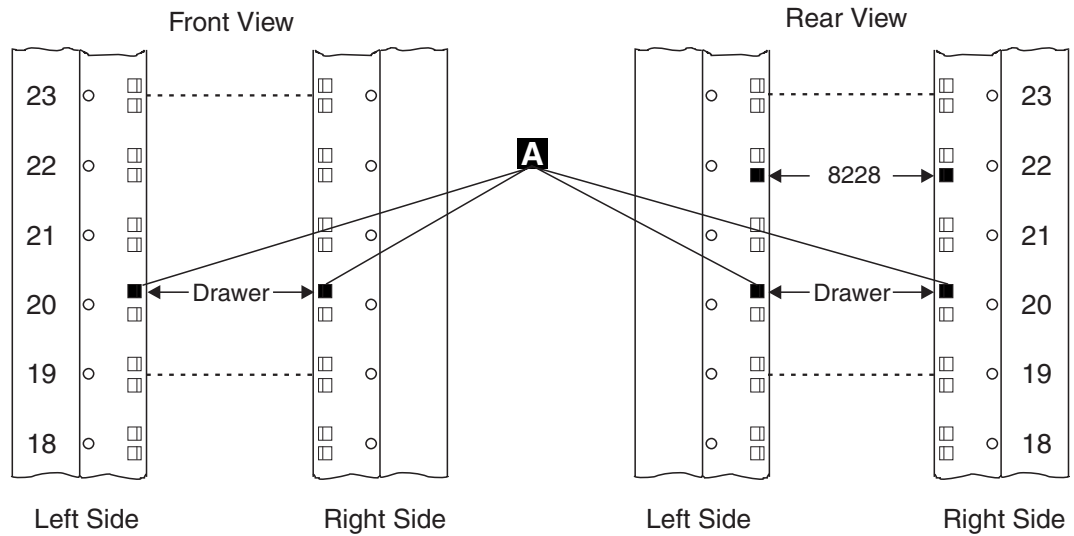   **Note:** If SP type 3172, Install the four captive nuts in position 19.

Front View   Rear View

```
        23  o  ▯▯----------▯▯  o        o  ▯▯----------▯▯  o  23
        22  o  ▯▯     [A]    ▯▯  o      o  ■▯◄─ 8228 ─►▯■  o  22
        21  o  ▯▯           ▯▯  o       o  ▯▯           ▯▯  o  21
        20  o  ■◄─Drawer─►■  o          o  ■◄─Drawer─►■  o  20
        19  o  ▯▯----------▯▯  o        o  ▯▯----------▯▯  o  19
        18  o  ▯▯           ▯▯  o        o  ▯▯           ▯▯  o  18
```

Left Side   Right Side   Left Side   Right Side

Figure 12. Installing Captive Nuts for the Service Drawer.
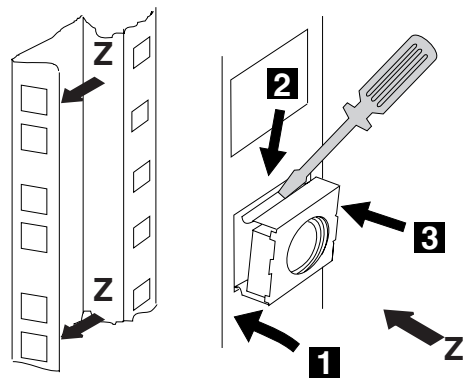
Figure 13. Installing the Captive Nuts for the 7585

__ 3. Refer to Figure 14 on page 15, on the rear side of the controller expansion, install bracket **A** using two screws **C** (PN 1621232).

__ 4. On the front side of the controller expansion, slide the drawer **B** on the bracket **A** and secure using two screws **C** (PN 1621232).
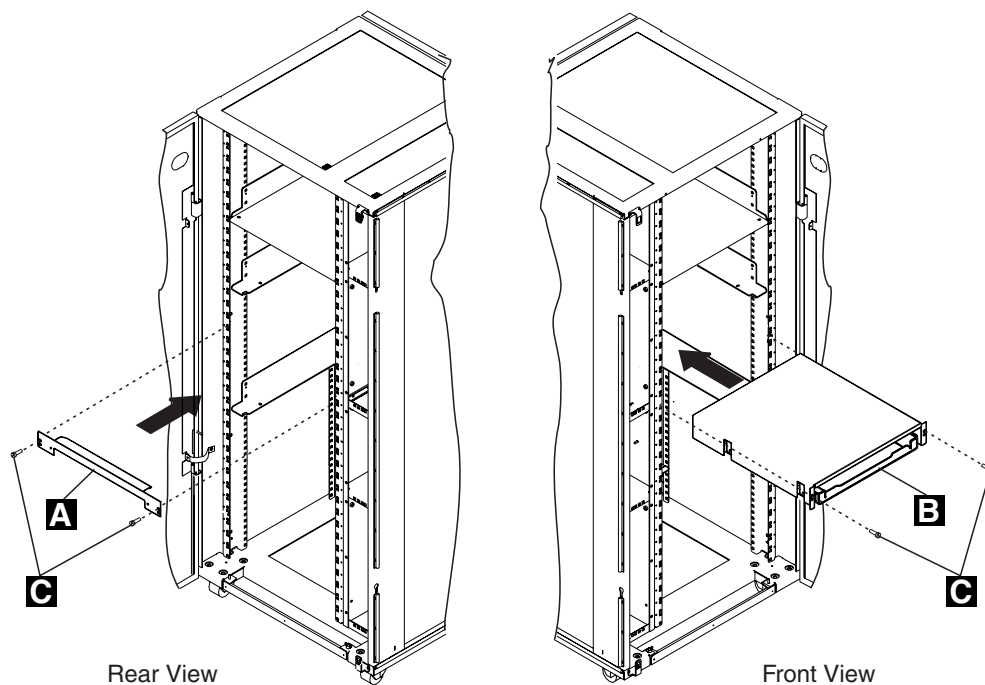
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Figure 14. Installing the Service Drawer

__ 5. Open the drawer and install the keyboard as shown in Figure 15.

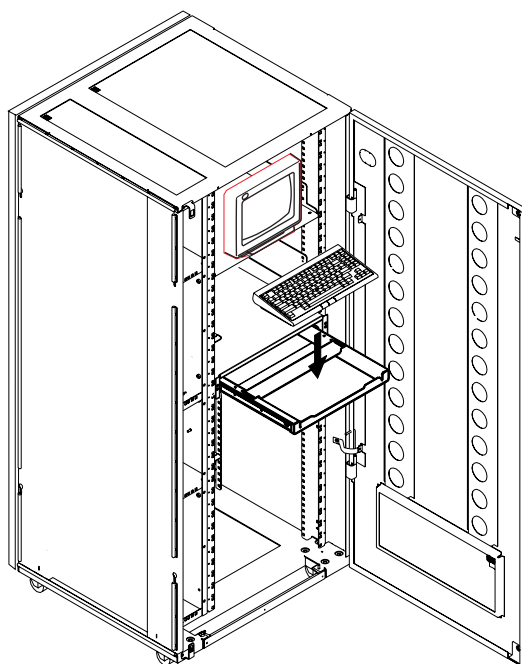> **Note:** Route the keyboard cable thru the back of the drawer.

Figure 15. Installing the Keyboard

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10.3 Installing the Service Processor in the Controller Expansion.

Service Processor Type?

- **3172**, go to 5 on page 17.
- **7585**, go to 1.
- **9577**, go to 5 on page 17.
- **9585**, go to 7 on page 18.

SP type 7585 Installation:

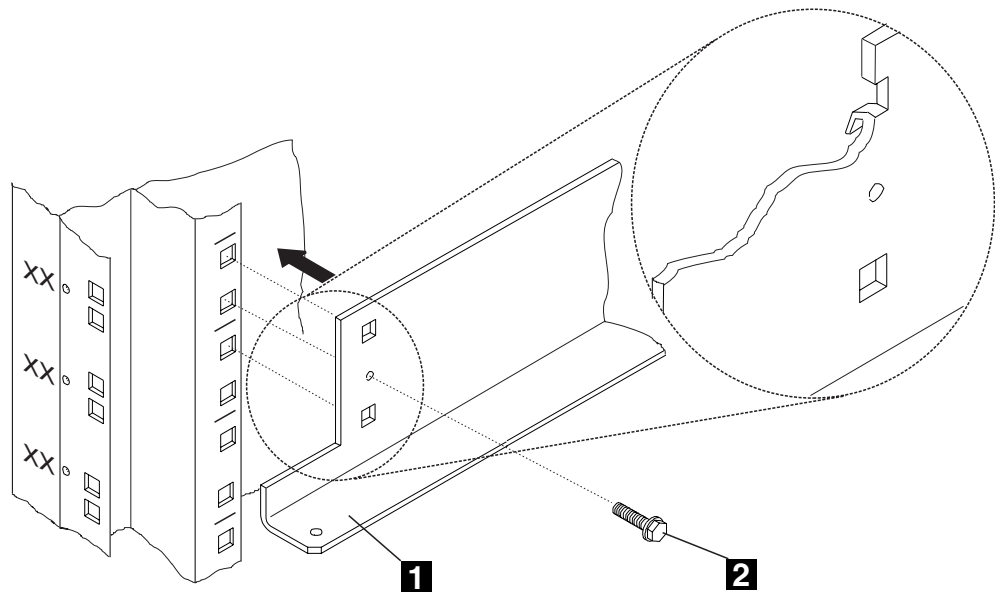__ 1. Install 2 brackets (PN 58G5752) and secure using 4 screws (PN 2665527).

Figure 16. Installing Brackets PN 58G5752

__ 2. Locate the captive nuts used to secure the service processor in the controller expansion. If already installed, go to step 4, otherwise go to step 3.

__ 3. Refer to Figure 13 on page 14, install four captive nuts (PN 58G5766) on the left and right side of the controller expansion.

__ 4. Slide the service processor unit on the brackets as shown in Figure 17 on page 17, then secure the unit using four screws (PN 1621230).

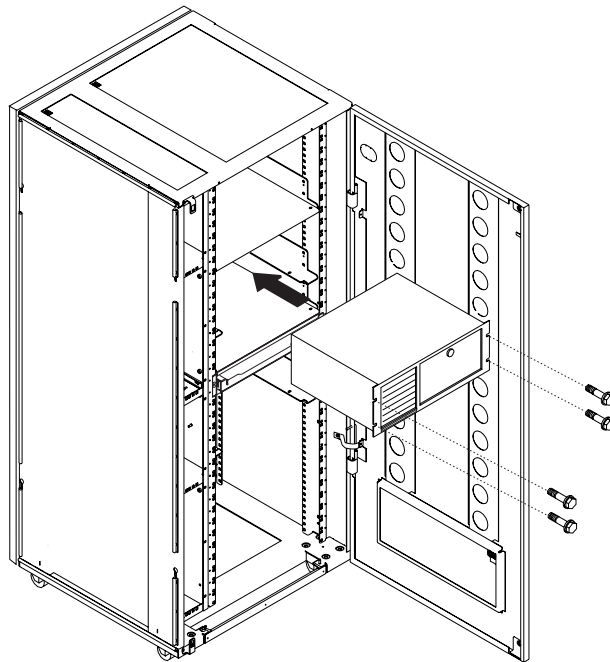| 3745	PN 08J5494	EC F00965A				
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Figure 17. Installing the SP Unit type 7585 in the Controller Expansion (Front Side)

Go to 8 on page 19 .

SP type 3172 or 9577 Installation:

__ 5. Install 2 brackets **1** (PN 58G5752) and secure using 4 screws **2** (PN 2665527).
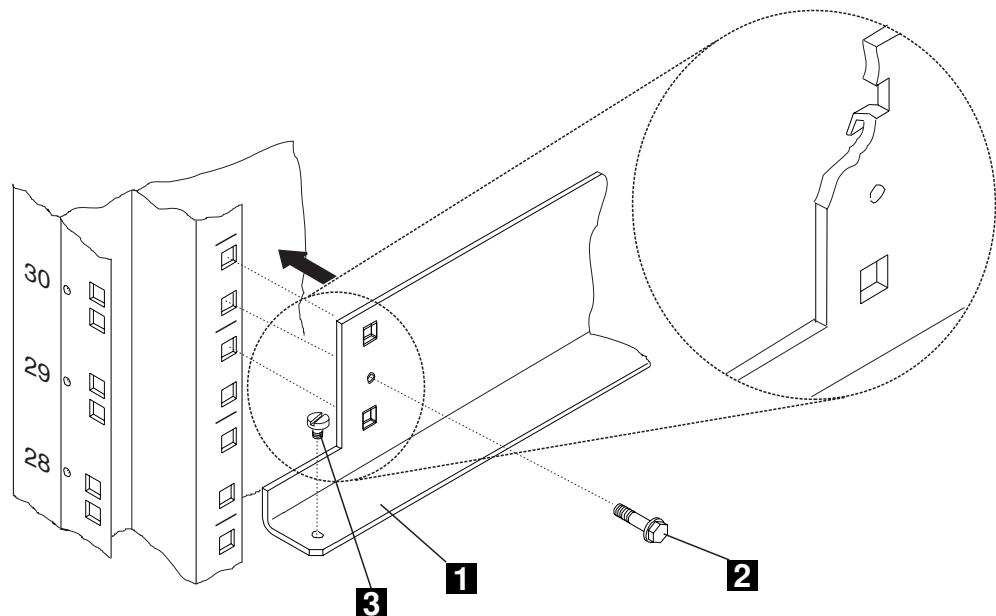

Figure 18. Installing Brackets PN 58G5752.

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__ 6. Slide the Service Processor on the brackets as shown in Figure 19 or Figure 20 Then, secure it using 4 screws **3** (PN 0782986), see Figure 18 on page 17.
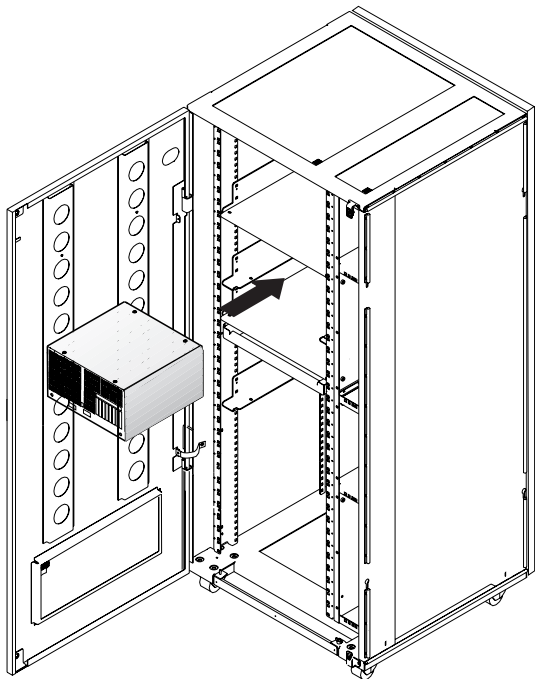

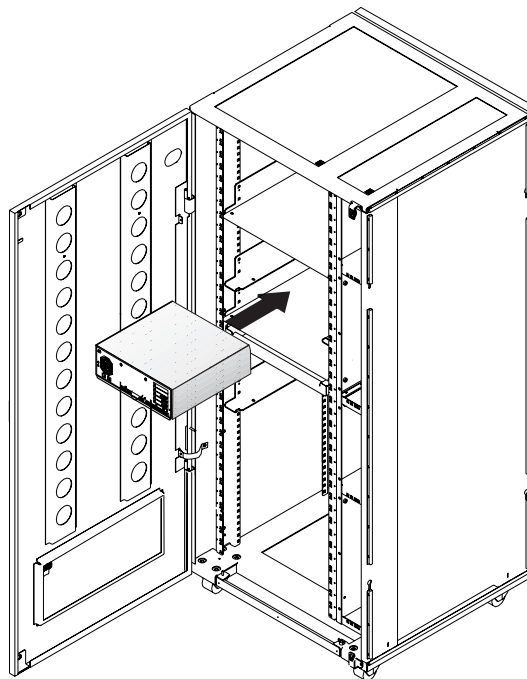Figure 19. Installing the SP Unit type 3172 (Rear Side).

Figure 20. Installing the SP Unit type 9577 (Rear Side)

Go to 8 on page 19.

SP type 9585 Installation:

__ 7. Slide the Service Processor unit as shown in Figure 21 on page 19.

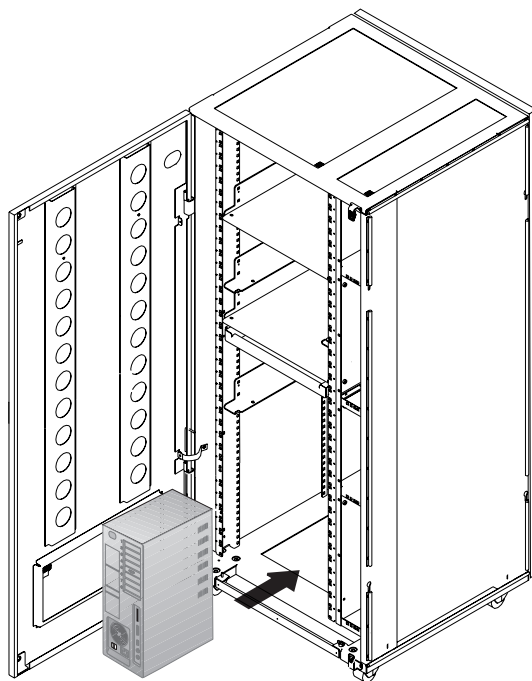| 3745	PN 08J5494	EC F00965A				
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Figure 21. Installing the SP Unit type in the Controller Expansion (Rear Side)

Go to 8 .

Optical Disk Drive Installation:

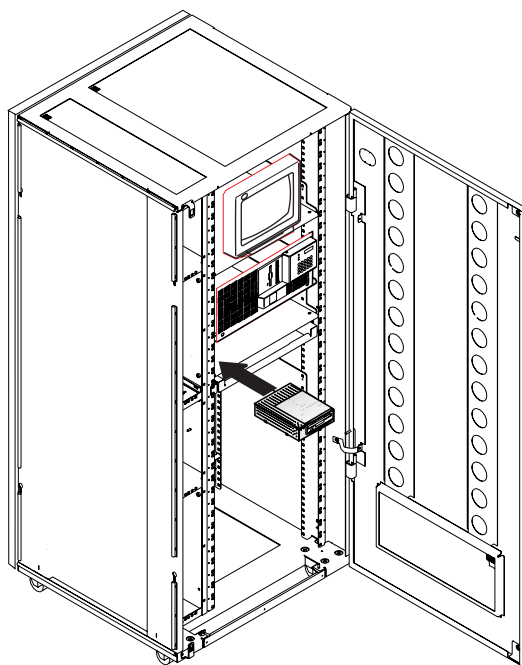__ 8. Install the optical disk drive close to the Service Processor as shown in Figure 22.

Figure 22. Installing the Optical Drive

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10.3.1 Installing the Service Processor Access Unit (8228)

___ 1. Locate the positions to install the 8228 unit and the positions to install the captive nuts for the 8228. according to the type of Service Processor used. Refer to Figure 7 on page 8 and Figure 8 on page 9.

  Note: This symbol '▪' identify the locations to install the captive nuts.

___ 2. Install the two captive nuts (PN 58G5766) see Figure 13 on page 14.

___ 3. Install the 8228. secure it using two screws (PN 1621232).

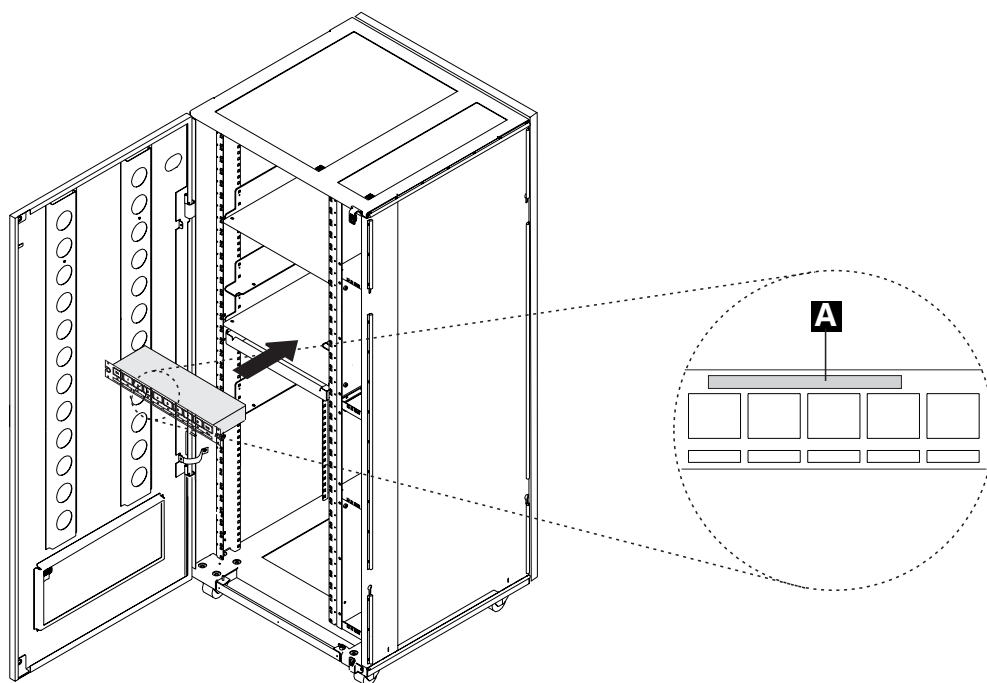___ 4. Identify the 8228 as Service Processor Access Unit, Using label **A** (PN 0782966). See Figure 23.

Figure 23. Installing the 8228 (Controller Expansion Rear side)

Connect the 8228 to the Service Processor as follows:

___ 5. Plug connector **1** of cable **A** to to the service processor

___ 6. Using a sticker, identify the connector **2** as the "service processor cable".

___ 7. Plug connector **2** to **any plug** of the 8228 from **1 to 8**

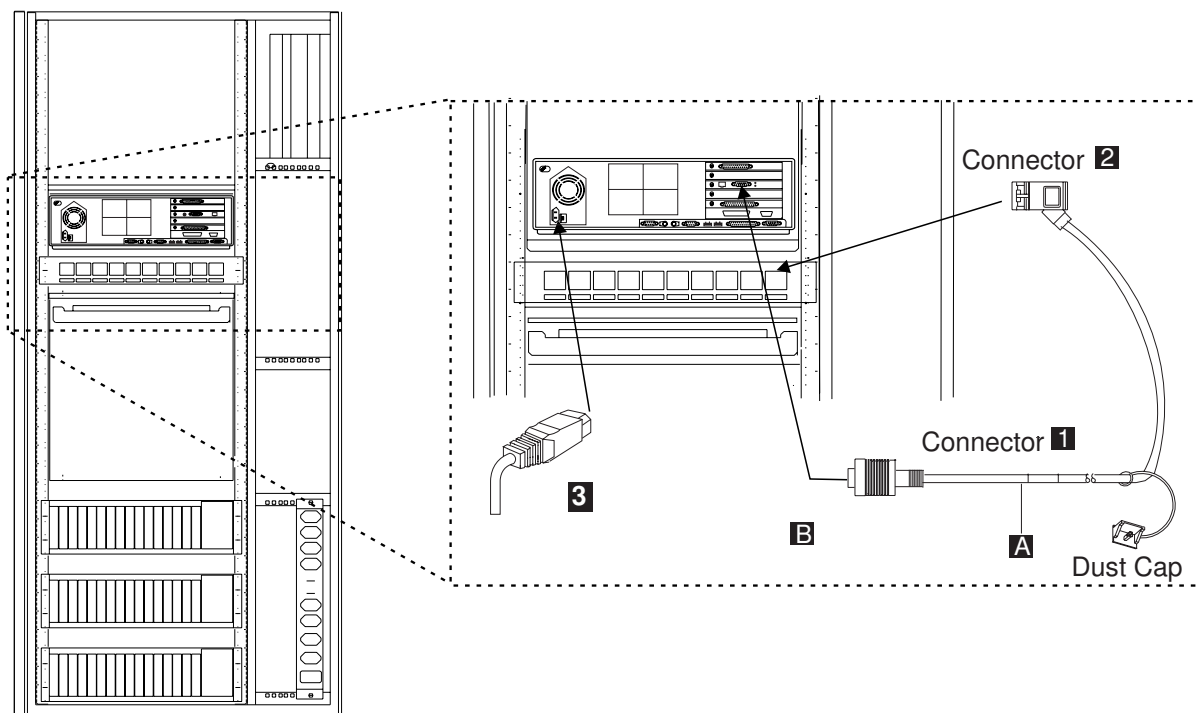| 3745	PN 08J5494	EC F00965A				
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Figure 24. Connecting the 8228 to the Service Processor type 7585.

10.3.2 Connecting the Service Processor

> **Service Processor Type?**
>
> • **3172**, go to 1.
>
> • **7585**, go to 8 on page 22.
>
> • **9577**, go to 15 on page 24.
>
> • **9585**, go to 18 on page 25.

Connecting the SP Type 3172 (see Figure 25 on page 22):

___ 1. Connect cable (PN 49G2224) keyboard plug **A** to connector K, and mouse plug **B** to connector M.

   Note: If you are installing the keyboard outside of the controller expansion, use cable PN 59G1271.

___ 2. Connect the service processor power cord **C** .

___ 3. Connect the optical drive signal cable **D** (PN 33F4606) to the service processor connector in slot 8.

___ 4. Connect the token ring cable **E** (PN 60G1066) from cable **H** (PN 6339098) to the service processor connector in slot 7.

___ 5. Connect the display signal cable **F** (PN 92F0329) to the service processor connector in slot 5.

Note: If you are installing the display outside of the controller expansion, use cable PN 59G1270.

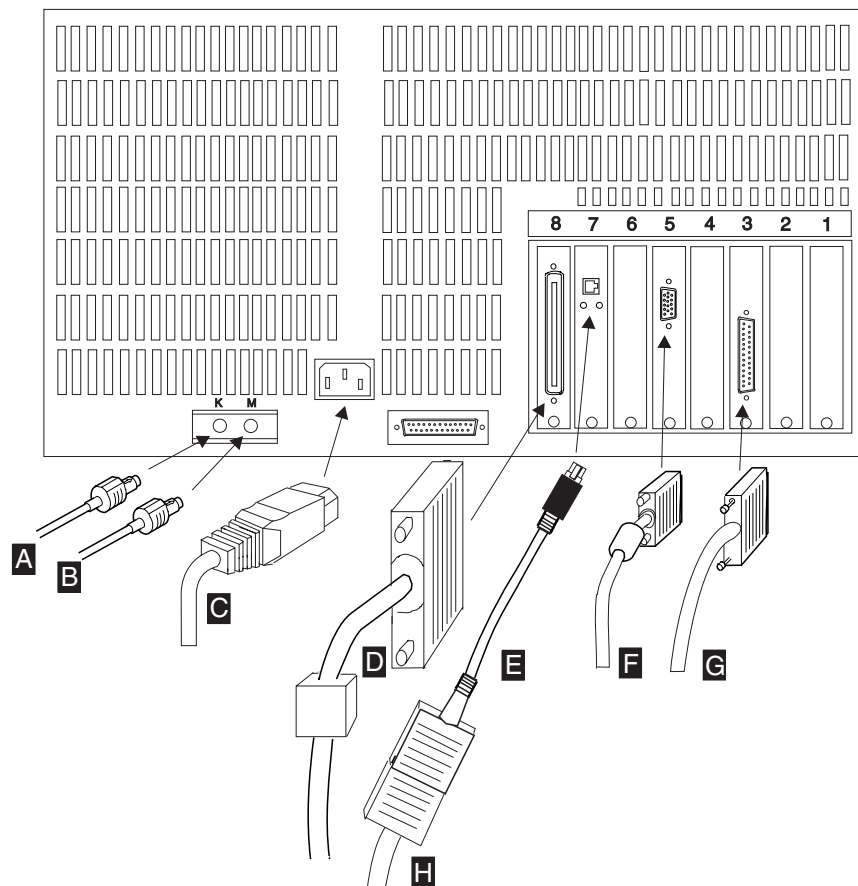__ 6. Connect the cable **G** coming to the modem to the Service Processor connector in slot 3.

Figure 25. Cable Locations

__ 7. *After you secure all these connections,* plug the power cords into properly grounded electrical outlets:
If you have installed **all the units** in the controller expansion, go to **step 24 on page 26**
If the **keyboard** and **display** are installed **on a table**, go to **step 25 on page 27** .

Go to 11.0, "Test Procedures" on page 28.

Connecting the SP Type 7585 (see Figure 26 on page 23):

__ 8. Connect cable (PN 49G2224) keyboard plug **A** to connector K, and mouse plug **B** to connector M.

Note: If you are installing the keyboard outside of the controller expansion, use cable PN 59G1271.

__ 9. Connect the service processor power cord **C** .

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__ 10. Connect the optical drive signal cable **D** (PN 06H6036) to the service processor connector in slot 8.

__ 11. Connect the token ring cable **H** (PN 6339098) to the service processor connector.

__ 12. Connect the Cable **G** coming from the modem to the service processor connector COM 1.

__ 13. Connect the display signal cable **F** (PN 92F0329) to the service processor connector.

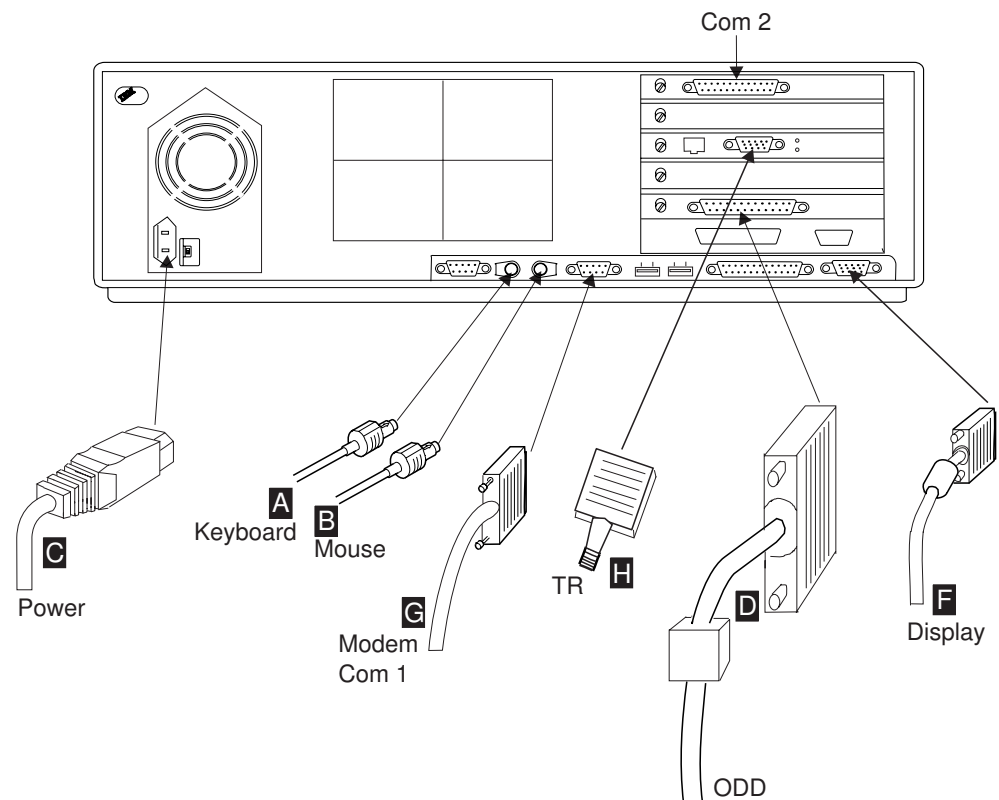**Note:** If you are installing the display outside of the controller expansion, use cable PN 59G1270.

Figure 26. Cable Locations

__ 14. *After you secure all these connections,* plug the power cords into properly grounded electrical outlets:
If you have installed **all the units** in the controller expansion, go to **step 24 on page 26**
If the **keyboard** and **display** are installed **on a table**, go to **step 25 on page 27** .

Go to 11.0, "Test Procedures" on page 28.

Connecting the SP Type 9577 (see Figure 27 on page 24 and Figure 28 on page 24).

   15. Connect the keyboard cable, the mouse cable, and the display signal cable (1 through 4).

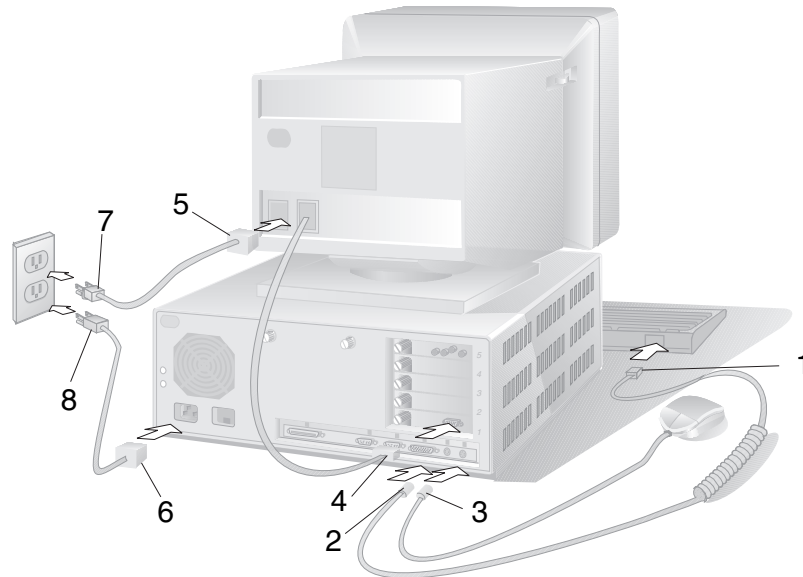   16. Connect the power cords to the display and the Service Processor (5 and 6).
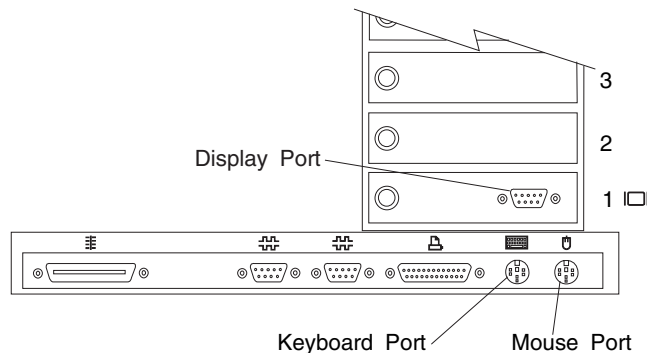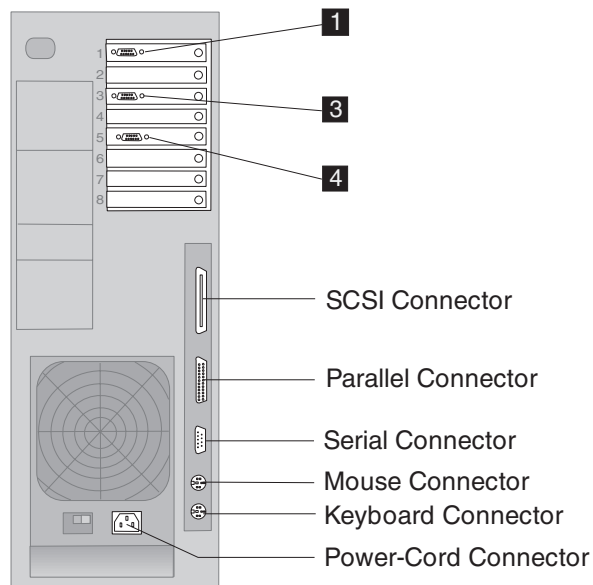

Figure 27. Cable Locations

Figure 28. Cable Locations

   17. *After you secure all these connections,* plug the power cords into properly grounded electrical outlets:
If you have installed **all the units** in the controller expansion, go to **step 24 on page 26**
If the **keyboard** and **display** are installed **on a table**, go to **step 25 on page 27** .

Go to 11.0, "Test Procedures" on page 28.

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Connecting the SP Type 9585

___ 18. Connect the keyboard and the mouse
cables,

___ 19. The display cable **4** ,

___ 20. the Modem cable **3** ,

___ 21. the LAN cable **1** , and

___ 22. The Power cord.

SCSI Connector

Parallel Connector

Serial Connector

Mouse Connector

Keyboard Connector

Power-Cord Connector

___ 23. *After you secure all these connections,* plug the power cords into properly grounded electrical
outlets:
If you have installed **all the units** in the controller expansion, go to **step 24 on page 26**
If the **keyboard** and **display** are installed **on a table**, go to **step 25 on page 27**.

Go to 11.0, "Test Procedures" on page 28.

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__ 24. Route and connect the power cords (PN 58G5783) from the display, optical disk drive, and service processor unit to the ac outlet distribution box as shown in Figure 29. Secure these cables using tie clamps along the frame, then go to step 26 on page 27.

> **Warning**
>
> The ac outlet distribution box is connected to a **220V** power source, all the units must be set to support this voltage.
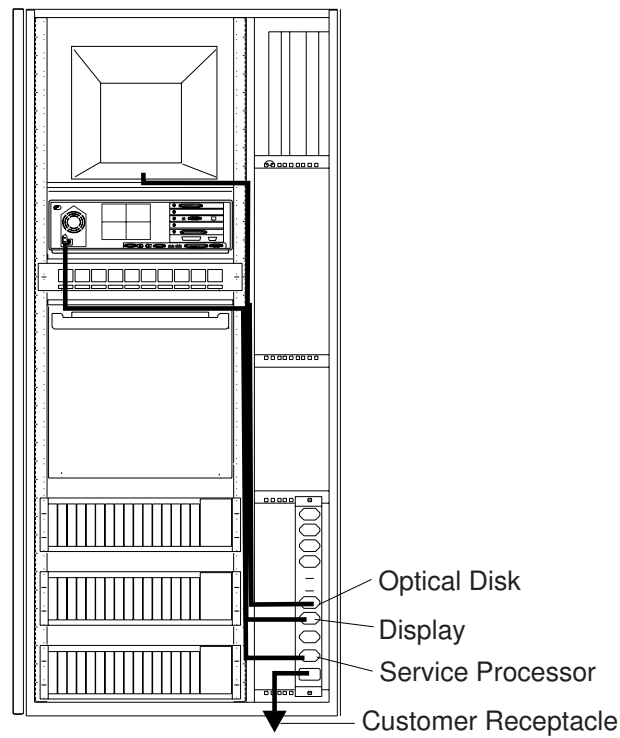
.

Figure 29. Power Cords Connection

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__ 25. Connect the display cable **5** to connector **6** of cable **7** (PN 59G1270), then connect the keyboard cable **9** (PN 59G1271) to connectors K and M.
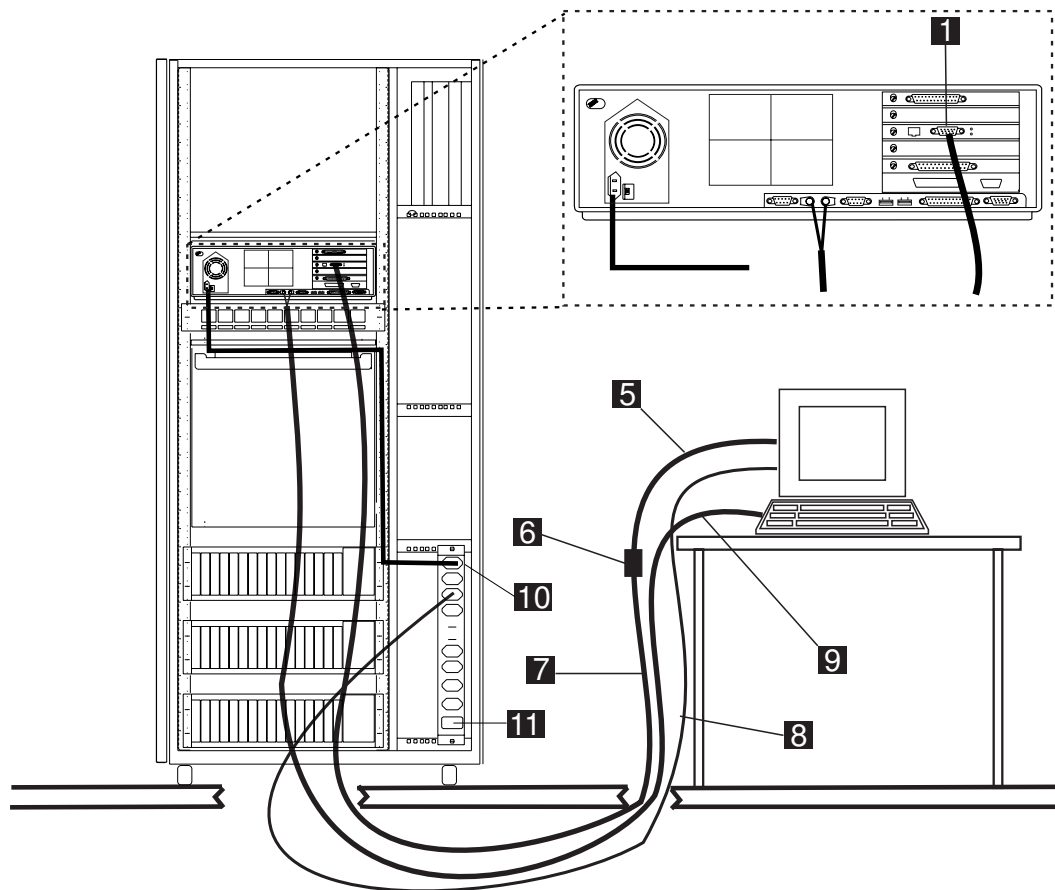
Figure 30. Installing the Display and Keyboard on a Table

__ 26. If it is not already plugged, connect the main power cord **A** coming from the ac outlet distribution box to the customer receptacle (refer to Figure 31).
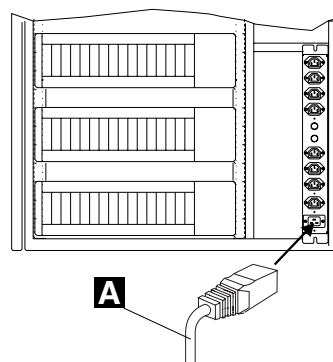
Figure 31. Power Cord for Power Strip

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11.0 Test Procedures

No test required.

12.0 Field Updating

None.

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After Installation (steps 13-15)

13.0 Field Updating

None.

14.0 Publications Update

None.

15.0 Parts Disposition

15.1 Purchased Machines

Refer to the parts ownership matrix to determine the correct owner of removed/unused parts.

- For EMEA/APG/AG Areas, refer to *Hardware and General Service Code Description*.
- For Domestic Areas, return parts to the customer.

16.0 Machine Records

- Install the new **MACHINE HISTORY** supplied.
- Report installation and quality to existing procedures.

End of instructions.

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