# MSU9617/9618/9619/9620 DISK INSTALLATION PROCEDURES ADDENDUM A

## **SUBJECT**

Additions and Changes to the Manual

## SPECIAL INSTRUCTIONS

This is the first addendum to VH22-01, dated June 1985. Insert the attached pages into the manual according to the collating instructions on the back of this sheet. Change bars in the margin indicate new or changed information; asterisks indicate deletions.

#### Note:

Insert this cover sheet behind the front cover to indicate the updating of the document with Addendum A.

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## **COLLATING INSTRUCTIONS**

To update this manual, remove old pages and insert new pages as follows:

Remove	Insert
Flowchart, blank	Flowchart, blank
iii through v, blank	iii through v, blank
2-7, 2-8	2-7, 2-8
2-13 through 2-16	2-13 through 2-16
2-21, 2-22	2-21, 2-22
2-25 through 2-28	2-25 through 2-28
2-31 through 2-34	2-31 through 2-34
3-1 through 3-4	3-1 through 3-4
4-3 through 4-8	4-3 through 4-8

USER COMMENTS FORMS are included at the back of this manual. These forms are to be used to record any corrections, changes, or additions that will make this manual more useful.

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This document was revised June 1986 as VH22-01 by Change Order No. BLCOF0154, BLCOF0327, and BLCOF0417, and MPNECJ565; and updated December 21986 to VH22-01A by Change Order No. F0168, F0659, G0732; and F0894.

File No.: 4R)3 VH22-01A

IS THIS AN INITIAL INSTALLATION?

YES NO

1. UNPACK the DISK DRIVE (refer to subsection 2.1.1).

# CAUTION

Observe the temperature stabilization period (refer to Table 2-1).

- 2. CHECK for DAMAGED OR MISSING items.
  Report any damaged or missing equipment to
  the District Manager and the Installation
  Control Center.
- 3. REMOVE the SHIPPING BRACES.

NOTE

Steps 4 through 9 relate to subsection 2.1.2.

- 4. INSTALL the ANTI-TIP OUTRIGGER.
- 5. REMOVE the REAR ACCESS COVER.
- 6. REMOVE the SLIDE LOCKING PLATE.
- 7. EXTEND THE MOUNTING PAN from the cabinet.
- 8. INSTALL the DISK DRIVE to the MOUNTING PAN.
- 9. CHECK the 115/220 Vac SWITCH (refer to subsection 2.3.1).
- 10. SLIDE the DISK DRIVE into the cabinet.
- 11. REINSTALL the slide locking bar.
- 12. INSTALL DUMMY PANELS over unused slots.

NOTE

Steps 13 through 16 relate to subsection 2.1.3.1.

13. INSTALL the POWER CABLE to the DISK DRIVE.

- 14. INSTALL the CABLE CLAMPS.
- 15. INSTALL the cables from the CABLE TROUGH to the DISK DRIVE (see Figure 2-19).
- 16. INSTALL the TERMINATOR to the LAST drive in the daisy chain.
- 17. INSTALL the cables from the DISK DRIVE BULKHEAD to the SYSTEM BULKHEAD (refer to subsection 2.1.3.2).
- 18. INSTALL the cables to each DISK DRIVE in the DAISY CHAIN (refer to subsection 2.1.3.2).
- 19. INSTALL the EXTERNAL GROUND CABLE (refer to subsection 2.1.3.3).

NOTE

The following steps apply to both the initial and modification installation procedures: |

- 1. CHECK the MAINTENANCE SWITCH on the 413-MB drive ONLY. |
- 2. INSTALL the LOGIC ADDRESS PLUG(S) (refer to subsection 2.4.1).

NOTE

Steps 3 through 6 relate to subsection 2.4.2:

3. REPLACE the SIDE PANEL, if necessary.

WARNING

Ensure that the PDU circuit breaker is OFF, and that the disk drive circuit breaker is ON.

- 4. INSTALL POWER CABLE to ac power source.
- 5. REPLACE the REAR ACCESS COVER.
- 6. RETURN to the System Level Installation Flowchart in the appropriate system installation manual.

NOTE

To power up and operate the disk drive, refer to the MSU9617/9618/9619/9620 Fixed-Disk Unit Operator's Manual (Order No. GS10).

1. UNPACK the MOUNTING PAN and SLIDES (refer to subsection 2.2.1).

## CAUTION

Observe the TEMPERATURE STABILIZATION PERIOD (refer to Table 2-1).

- 2. UNPACK the DISK DRIVE (refer to subsection 2.2.1).
- 3. CHECK for DAMAGED OR MISSING items.
  Report any damaged or missing equipment to the
  District Manager and the Installation Control
  Center.
- 4. REMOVE the SHIPPING BRACES.

NOTE

Steps 5 through 15 relate to subsection 2.2.2.

- 5. ENSURE the ANTI-TIP OUTRIGGER is installed.
- 6. REMOVE the REAR ACCESS COVER.
- 7. REMOVE the RIGHT SIDE PANEL.
- 8. REMOVE the DUMMY PANEL.
- 9. REMOVE the SLIDE LOCKING BAR.
- 10. REMOVE the MOUNTING PAN from the OUTER/INTERMEDIATE SLIDES and INSTALL SLIDES into the CABINET.
- 11. INSTALL the CABLE TROUGH.
- 12. INSTALL MOUNTING PAN into the cabinet.
- 13. INSTALL the DISK DRIVE to the MOUNTING PAN.
- 14. CHECK the 115/220 Vac SWITCH (refer to subsection 2.3.1).
- 15. SLIDE the DISK DRIVE into the cabinet.
- 16. REPLACE the SLIDE LOCKING BAR(S).

NOTE

Steps 17 through 23 relate to subsection 2.2.3.1.

17. INSTALL the POWER CABLE to the PDU and the DISK DRIVE.

- 18. INSTALL the CABLE CLAMPS.
- INSTALL the cables from the CABLE TROUGH to the DISK DRIVE (see Figure 2-19).
- 20. If installing a disk drive to a daisy chain, REMOVE the TERMINATOR from the previous disk drive and INSTALL the TERMINATOR to the LAST drive in the daisy chain.
- 21. INSTALL the cables from the CABLE TROUGH to the BULKHEAD.
- 22. INSTALL the cables from the DISK DRIVE BULKHEAD to a DPS 6 SYSTEM (refer to subsection 2.2.3.3) or to a LEVEL 6 SYSTEM (refer to subsection 2.2.3.4).
- 23. INSTALL the cables to each DISK DRIVE in the DAISY CHAIN.

DEVICE INSTALLATION FLOWCHART

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- 12. Check for damaged or missing items. Report any damaged or missing items to the District Manager and the Installation Control Center.
- 13. At the disk drive, locate the shipping braces on both sides of the drive. Remove the shipping brace on one side by removing the three screws (see Figure 2-7). Repeat for the other side.

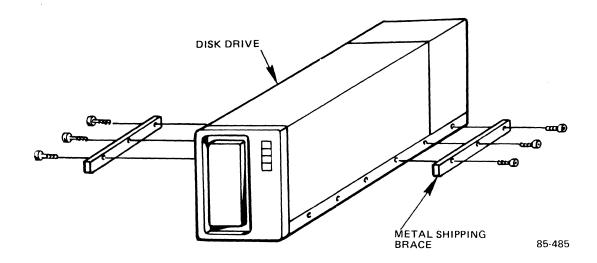


Figure 2-7. Removing the Shipping Braces

All packing material, including the shipping braces and screws, must be saved for future reshipment of the drive.

14. Return to the Device Installation Flowchart.

## 2.1.2 Device Installation

This subsection provides the following procedures:

- Installing the anti-tip outrigger
- Installing the disk drive to the mounting pan
- Installing the disk drive into the cabinet
- Installing the dummy panel.
- 1. Remove the shipping straps, the plastic cover, and the cardboard top from the cabinet.

- 2. Place the 30-inch cabinet within 20 feet of the cabinet which contains the disk controller. The second device cabinet must be placed within 5 feet of the first device cabinet.
- 3. Open the cabinet front door.
- 4. Locate the anti-tip outrigger kit (60134360-004). Install the two hex screw caps to the anti-tip outrigger, then install the anti-tip outrigger to the cabinet as shown in Figure 2-8. Tighten the screws into the cabinet so that the front of the cabinet rests on the anti-tip outrigger and not on the casters.

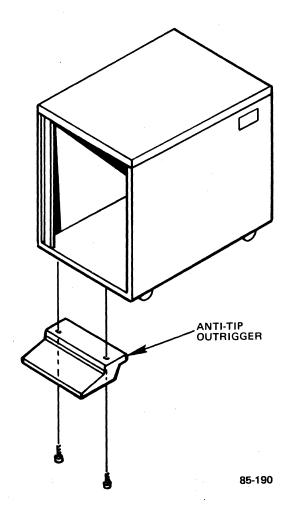


Figure 2-8. Anti-Tip Outrigger

11. Secure the disk drive to the mounting pan with the nine special Phillips screws supplied with the drive (extras may be included). Note that five screws are mounted in the left side and four screws are mounted in the right side.

## **WARNING**

To avoid bodily injury, the disk drive must be secured to the mounting pan.

- 12. Check the 115/220 Vac switch for the correct setting (refer to subsection 2.3.1).
- 13. Slide the disk drive into the cabinet by lifting the slide lock release (see Figure 2-13) on each side and pushing the disk drive fully into the cabinet.

## **WARNING**

To avoid the possibility of tipping the cabinet over, only one disk drive can be extended from the cabinet at a time.

- 14. To install Drive 1 (see Figure 1-3), repeat steps 8 through 13.
- 15. To install Drive 2 (see Figure 1-3), remove the bottom slide locking bar (see Figure 2-11) and repeat steps 8 through 13.
- 16. To install Drive 3 (see Figure 1-3), go to the second cabinet and repeat steps 1 through 13.
- 17. Reinstall the slide locking bar(s) with screws (see Figure 2-11).
- 18. Install a dummy panel over any unused disk drive positions with the two screws provided as shown in Figure 2-14.
- 19. Visually check to see that the maintenance switch is in the down (off) position. Refer to subsection 2.3.2.
- 20. Return to the Device Installation Flowchart.

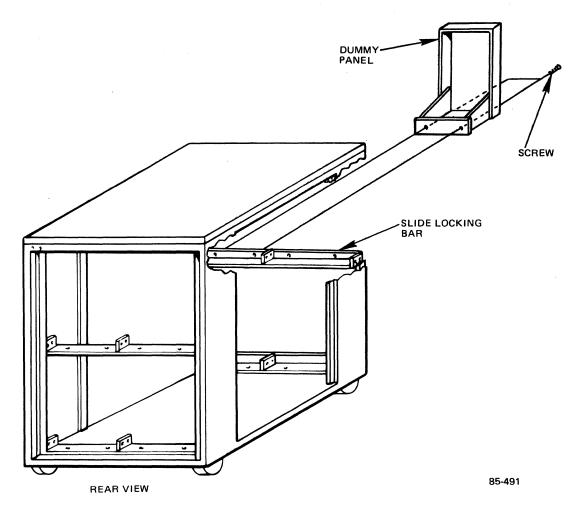


Figure 2-14. Installing the Dummy Panel

## 2.1.3 Device Cabling

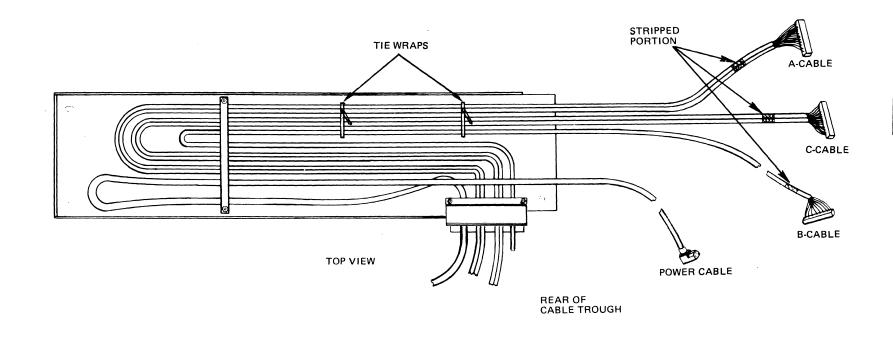
This subsection provides the following cabling procedures for the initial installation of the disk drive:

- Cable trough to disk drive
- Device to device
- Device to system.

## 2.1.3.1 CABLE TROUGH TO DISK DRIVE

To cable the cable trough to the disk drive, perform the following:

- At the rear of the cabinet, locate Drive 0 (see Figure 1-3).
- 2. Locate the female end of the power cord extended from the rear of the cable trough (see Figure 2-15). Plug it into the ac power connector (see Figure 2-16).



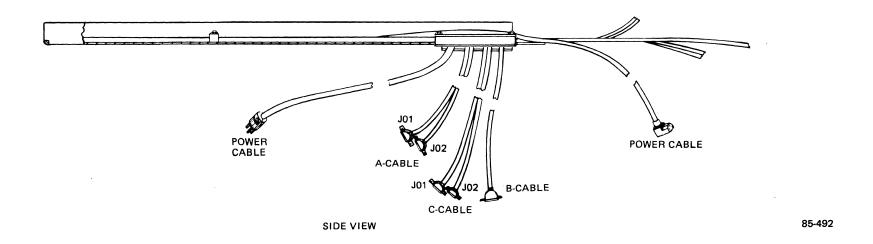


Figure 2-15. Cable Trough Assembly

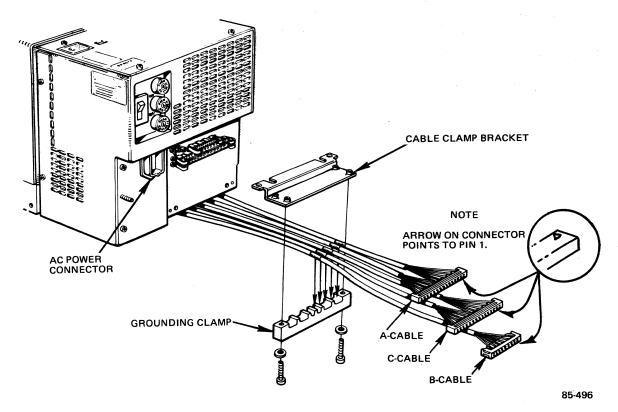


Figure 2-16. Grounding Clamp Installation

Add two tie wraps as shown in Figure 2-15, to avoid cable fan-out. See Figure 2-16 for steps 3 through 7.

- 3. Locate the three cables marked A, C, and B, and arrange them as shown in Figure 2-16. Ensure that the imprinted arrow indicating pin 1 on each connector is on the bottom right side.
- 4. Locate the two clamps supplied with the drive accessories. Hold the two clamps together. The grounding clamp has smaller slots than the strain relief clamp.
- 5. Locate the cable clamp bracket and screws supplied with the drive accessories.
- 6. Align the stripped portions of the A, B, and C cables into the slots of the grounding clamp as shown in Figure 2-16. Ensure that the stripped portions of the three cables are seated correctly in the slots.
- 7. While holding the cables in place with one hand, place the cable clamp bracket over the grounding clamp, and finger-tighten the two screws and washers into place.

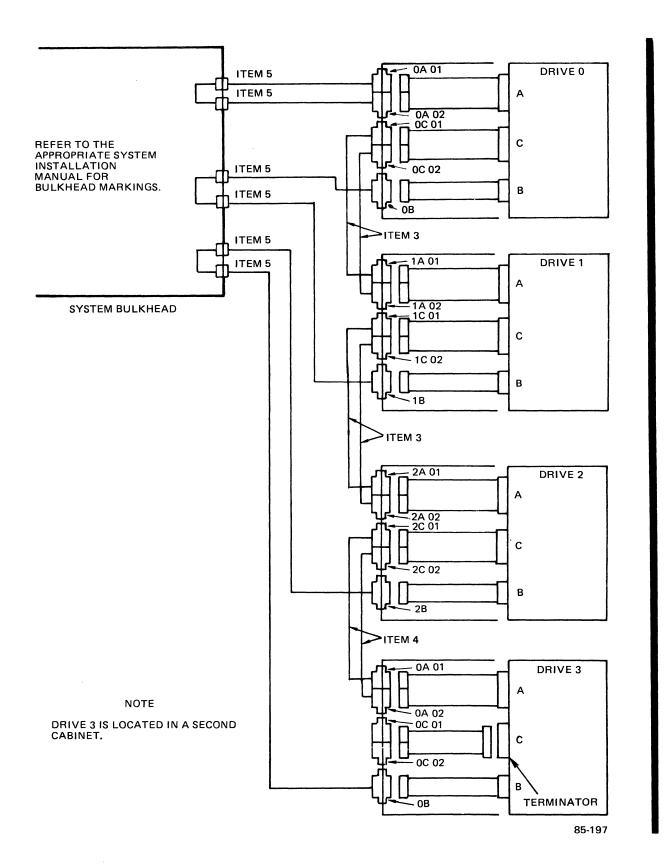
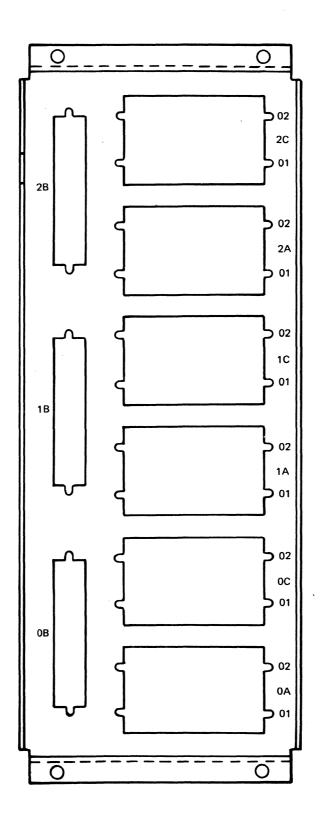


Figure 2-20. Cabling Diagram

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Figure 2-21. Rear View of Disk Drive Bulkhead

Table 2-2. Cable Part Numbers

Item	Part Number	Description
1	60157266-001	Internal A- or C-cable from the disk drive to the cabinet bulkhead.
2	60157268-001	Internal B-cable from the disk drive to the cabinet bulkhead.
3	04910133-001	3-foot cable, disk drive bulkhead to disk drive bulkhead (intracabinet).
4	04910133-003	10-foot cable, disk drive bulkhead to disk drive bulkhead (intercabinet).
5	04910133-004	25-foot cable, system bulkhead to disk drive bulkhead.
6	60157266-002	A-cable from the disk drive controller to the system bulkhead.
7	60157268-002	B-cable from the disk drive controller to the system bulkhead.

- 13. Locate third item 3. Connect one end to the 1C, 01 position. Connect the other end to the 2A, 01 position. Secure each end of the cable with the captive screws.
- 14. Locate fourth item 3. Connect one end to the 1C, 02 position. Connect the other end to the 2A, 02 position. Secure each end of the cable with the captive screws.
- 15. Locate fifth item 5. Connect one end to the 2B position. Secure the cable with the captive screws.
- 16. Connect the other end to the system bulkhead (refer to the CCS for the correct location). Secure the cable with the captive screws.
- 17. If there is a Drive 3, continue with the procedure; otherwise, return to the Device Installation Flow Chart.

Drive 3 will be in a second cabinet at the Drive 0 position.

- 18. Locate first item 4. Connect one end to the 2C, 01 position in the first cabinet. Secure the cable with the captive screws.
- 19. Connect the other end to the second disk drive cabinet bulkhead 0A, 01 position. Secure the cable with the captive screws.
- 20. Locate second item 4. Connect one end to the 2C, 02 position in the first cabinet. Secure the cable with the captive screws.
- 21. Connect the other end to the second disk drive cabinet bulkhead 0A, 02 position. Secure the cable with the captive screws.
- 22. Locate item 5 in second disk drive cabinet. Connect one end to the second disk drive cabinet bulkhead 0B position. Secure the cable with the captive screws.
- 23. Connect the other end to the system bulkhead (refer to the CCS for the correct location). Secure the cable with the captive screws.
- 24. To install any additional drives to the system, refer to the procedure in subsection 2.2.3.3.

## 2.1.3.3 EXTERNAL GROUND CABLE

To install the external ground cable, perform the following:

- 1. Locate the 25-foot ground cable (04910131-001) that was shipped in the bottom of the device cabinet.
- 2. At the bottom of the cabinet, determine which ground stud (E01 or E02) is the closest to the system cabinet.
- 3. Remove the mounting hardware from the ground stud and install the cable to the ground stud. Reinstall the mounting hardware.
- 4. Route the cable out the back of the device cabinet and to the system cabinet.
- 5. Install the cable to a convenient ground stud in the system cabinet.

## 2.1.3.4 SWITCH CONFIGURATIONS

There are two switches to be configured before powering on the system. Refer to subsection 2.3.

#### 2.2 SYSTEM MODIFICATION

This subsection provides the procedures for installing one or more additional disk drives to an existing system.

Determine if the add-on disk drive is to be installed into a cabinet that contains previously installed disk drives, or into a new cabinet that was shipped with the disk drive. If the disk drive is to be installed in a new cabinet, perform the procedures in subsection 2.1; otherwise continue with this procedure.

## 2.2.1 Unpacking

Unpack the mounting pan and slides, the cable trough (see Figure 2-15), and the associated hardware.

To unpack the disk drive, perform the procedure in subsection 2.1.1.

## 2.2.2 Add-On Device Installation

This subsection provides the procedures for removing the cabinet right side panel and the dummy panel. It also provides the procedures for installing the mounting pan and slides into the cabinet and the disk drive to the mounting pan.

- 1. Open the cabinet front door.
- 2. Ensure that the anti-tip outrigger (see Figure 2-8) is in place. If the anti-tip outrigger is not in place, install it as described in subsection 2.1.2, step 4.
- 3. At the rear of the cabinet, lift up and remove the rear access cover (see Figure 2-23).
- 4. Ensure that the leveling feet are in place (see Figure 2-10).
- 5. Remove the cabinet right side panel by removing the two bottom screws (see Figure 2-23). Pull the bottom of the panel out from the cabinet, then down.
- 6. Remove the appropriate dummy panel from the cabinet by removing the two screws (see Figure 2-14).
- 7. Remove the appropriate slide locking bar (see Figure 2-11).
- 8. Locate the mounting pan with attached slides. Fully extend the slides with the mounting pan to the locked position.
- 9. Lift up the lock release on both inner slides (see Figure 2-24) and remove the inner slides and mounting pan from the outer slides.

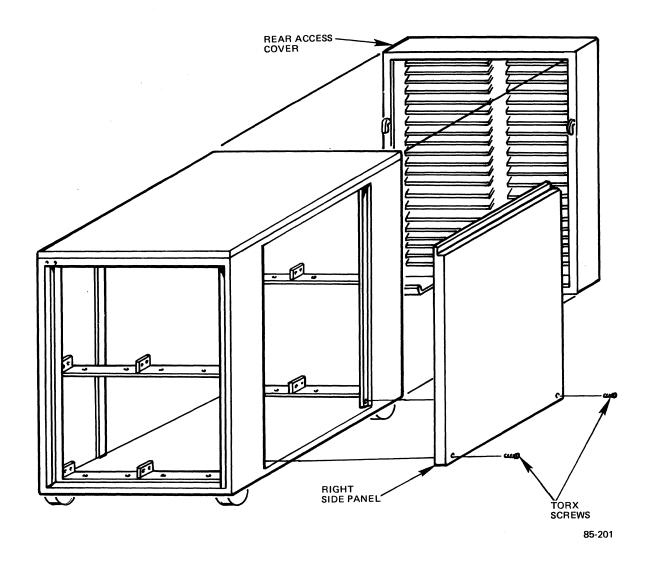


Figure 2-23. Cabinet Side Panel

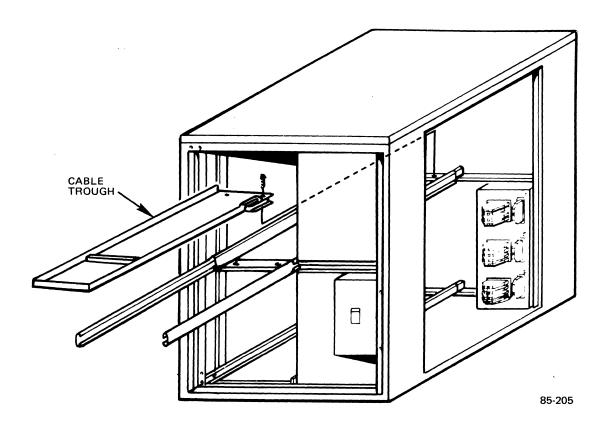


Figure 2-26. Cable Trough Installation

- 16. If the cable trough was installed in the bottom of the cabinet, perform the following:
  - a. Remove the rear screw from the slide closest to the bulkhead.
  - b. Lift the slide and feed the cables from the side of the cable trough under the slide.
  - c. Replace the slide and reinstall the screw.
- 17. Ensure that all of the cable connectors at the side and the rear are outside of the trough.
- 18. Lift the mounting pan and install the inner slides into the outer/intermediate slides.

The intermediate slide lock release (see Figure 2-24B) must be pushed in the first time that the mounting pan is installed into the cabinet.

- 19. Slide the mounting pan into the cabinet until the slides are in the locked position. Lift the lock release on both sides and slide the mounting pan into the cabinet.
- 20. Extend the mounting pan out of the cabinet until both slides click into the locked position.

Ensure that the mounting pan slides easily in and out of the cabinet prior to continuing with the next step.

## **WARNING**

- 1. To avoid bodily injury and equipment damage, all steps that require the disk drive to be lifted must be performed by at least two people.
- 2. To avoid bodily injury and equipment damage, only one drive can be in the extended position at one time.
- 21. Lift the disk drive and place it in the mounting pan. Ensure that the holes are lined up as shown in Figure 2-13.

## CAUTION

Do not substitute the screws in the next step with longer screws or damage will result to the internal connectors of the disk drive.

22. Secure the disk drive to the mounting pan with the nine special Phillips screws supplied with the drive (extras may be included). Note that five screws are mounted in the left side and four screws are mounted in the right side.

## WARNING

To avoid bodily injury, the disk drive must be secured to the mounting pan.

23. Check the 115/220 Vac switch for the correct setting (refer to subsection 2.3.1).

- 24. Slide the disk drive into the cabinet by lifting the slide lock release on each side and pushing the disk drive fully into the cabinet.
- 25. Reinstall the slide locking bar (see Figure 2-11).
- 26. Perform the cabling procedures listed in subsection 2.2.3.

## 2.2.3 Device Cabling

This subsection provides the following cabling procedures for the installation of the add-on disk drive:

- Cable trough to disk drive
- Cable trough to device bulkhead
- Device to device
- Device to bulkheaded system
- Device to nonbulkheaded system.

## 2.2.3.1 CABLE TROUGH TO DISK DRIVE

To cable the cable trough to the disk drive, perform the following:

- 1. At the rear of the cabinet, locate the add-on disk drive.
- 2. Locate the female end of the power cord extended from the rear of the cable trough (see Figure 2-15). Plug it into the ac power connector (see Figure 2-16).

## NOTE

See Figure 2-16 for steps 3 through 7.

- 3. Locate the three cables marked A, C, and B, and arrange them as shown in Figure 2-16. Ensure that the imprinted arrow indicating pin 1 on each connector is on the bottom right side.
- 4. Locate the two clamps supplied with the drive accessories. Hold the two clamps together. The grounding clamp has smaller slots than the strain relief clamp.
- 5. Locate the cable clamp bracket and screws supplied with the drive accessories.
- 6. Align the stripped portions of the A, B, and C cables into the slots of the grounding clamp as shown in Figure 2-16. Ensure that the stripped portions of the three cables are seated correctly in the slots.

7. While holding the cables in place with one hand, place the cable clamp bracket over the grounding clamp, and finger-tighten the two screws and washers into place.

# CAUTION

The grounding clamp provides the ground for the cables. To prevent system errors, ensure that the grounding clamp is properly seated.

- Tighten the screws while ensuring that the cables are not pinched.
- 9. Loosen the two screws and washers installed in the rear of the disk drive, and insert the cutouts in the cable clamp bracket between the screws and the drive as shown in Figure 2-17. Tighten the screws.

#### NOTE

Early shipments of the disk drive shipped the two screws and washers with the cable clamp, which had holes instead of cutouts.

10. Locate the strain relief clamp, and install it to the bottom of the cable clamp bracket with the two screws and washers provided as shown in Figure 2-18. Ensure that the cables are seated correctly in the slots.

## **CAUTION**

The cables can be plugged in backwards. Ensure that pin 1 (designated by an arrow on the connector) of each cable corresponds to pin 1 of the connector (also designated by an arrow on the connector).

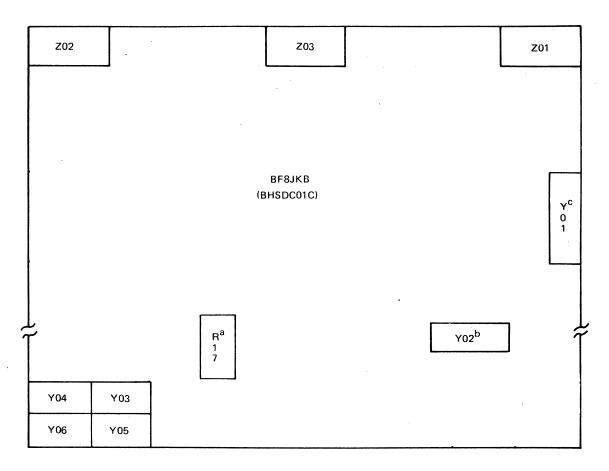
#### NOTE

See Figure 2-19 for steps 11 through 15.

- 11. Locate the cable labeled A, and connect it to the disk drive at J3 (bottom connector). Ensure that the metal tabs snap into place to hold the cable connector in place.
- 12. Determine if this disk drive is to be the last drive in the daisy chain (i.e., the last drive in the daisy chain will either be drive 3 or it will be the last drive to be cabled to the disk controller board).

# Section 3 DEVICE CONTROLLER CONFIGURATION

This section contains the High Speed Disk Controller (HSDC) and High Performance Disk Controller (HPDC) board layouts and switch settings. Figure 3-1 illustrates the HSDC board layout, and Table 3-1 contains the switch settings. Figure 3-2 shows the HPDC board layout.



# <sup>a</sup>THE ADDRESS BIT WEIGHTS FOR EACH SWITCH ON POSITION ARE GIVEN BELOW

SWITCH POSITION	CHANNEL WEIGHT	
1	8000	
2	4000	
3	2000	
4	1000	
5	800	
6	400	
7		MUST BE OFF
8		WIOST BE OFF

NOTE

SWITCH 1 IS AT THE TOP OF THE BOARD. REFER TO TABLE 3-1 FOR SWITCH SETTINGS. INSTALL RADIAL CABLE (60157268-002):

FROM DEVICE	TO CONNECTOR
0	Y05
1	Y06
2	Y03
3	Y04

NOTE

THE FIRST FOUR CHANNEL NUMBERS OF THE SELECTED ADDRESS ARE DEDICATED TO FIXED STORAGE DISKS WHETHER OR NOT THEY ARE IN THE SYSTEM. THE REMAINING TWO CHANNEL NUMBERS ARE USED BY DEVICE ADAPTERS (i.e., IF ADDRESS 400 IS SELECTED, CHANNELS 400, 480, 500, AND 580 ARE RESERVED FOR FIXED STORAGE DISKS AND CHANNELS 600 AND 680 ARE USED BY THE DEVICE ADAPTERS).

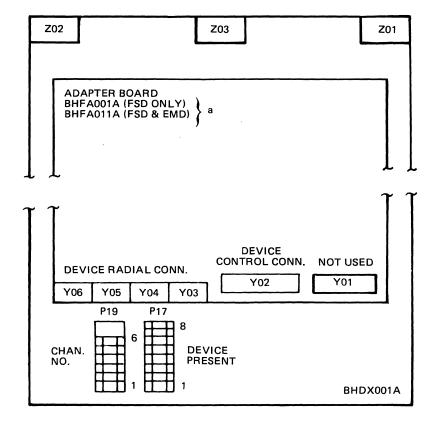
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Figure 3-1. HSDC Board Layout

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bINSTALL DAISY CHAIN CABLE (60157266-002) AT Y02.

<sup>&</sup>lt;sup>c</sup>FOR TEST PURPOSES ONLY.



<sup>a</sup>BHFA001A CORRESPONDS TO BXHFA02A BHFA011A CORRESPONDS TO BXHFA12A



	SWITCH POSITION								
	1	2	3	4	5	6	7	8	
HEX BITS	8	4	2	1	8	4	Х	Х	

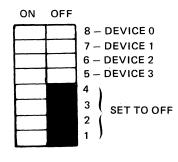
## EXAMPLE:



ADDRESS = HEX 0800 — SET TWO MOST SIGNIFICANT ADDRESS DIGITS (0/8) INTO CHANNEL NUMBER SWITCH (P19) AS FOLLOWS:

- SET SWITCH POSITION 5 TO ON, LEAVE OTHER POSITIONS OFF.
- TWO LEAST SIGNIFICANT DIGITS (0/0) ARE PART OF SOFTWARE WORD.

#### **DEVICE PRESENT SWITCH (P17)**



#### NOTES

- 1. TO INDICATE PRESENCE OF DEVICE(S) ON SYSTEM, SET APPROPRIATE SWITCH TO ON.
- 2. SHADED AREA OF SWITCH DEPICTS SELECTED SWITCH POSITION.

86-1056

Figure 3-2. HPDC Board Layout

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Table 3-1. HSDC and HPDC Switch Settings

	S	wit	ch	Pos	iti	on		S	wit	ch	Pos	iti	on
Channel	1	2	3	4	5	6	Channel	1	2	3	4	5	6
0400 0800 0C00 1000 1400 1800 1C00 2000 2400 2800 2C00 3000 3400 3800 3C00 4000 4400 4800 4C00		X X X	X X X X X X	X X X X	X X X X X	x x x x x x x x x x	8000 8400 8800 8C00 9000 9400 9800 9C00 A000 A400 A800 B400 B400 B600 C000 C400 C800	X X X X X X X X X X X X X X X X X X X	x x x	X X X X X X	X X X X	X X X X X	x x x x x x
5000 5400 5800 5C00 6000 6400 6800 6C00 7000 7400 7800		X X X X X X X X	X X X X X	X X X X	X X X	x x x x x x	CC00 CC00 D000 D400 D800 DC00 E000 E400 E800 EC00 F000 F400	X X X X X X X	X X X X X X X X	X X X X	X X X X	X X X X	x x x x x
7000		X	X	X	X	х	F800 FC00	X X	X X	X X	X X	X X	х

An X denotes a switch in the ON position.

## WARNING

The 413-megabyte disk drive weighs approximately 82 pounds, and the 132-megabyte disk drive weighs approximately 66 pounds. To avoid bodily injury, the disk drive must be lifted by two people.

8. Lift the drive out of the mounting pan and onto the center of the cardboard wraparound.

## NOTE

If a replacement drive is to be installed in the cabinet, do not perform steps 9 through 13.

- Lift the slide lock release on each slide (see Figure 2-13) and slide the mounting pan back into the cabinet.
- 10. Reinstall the slide locking bar.
- 11. Install a dummy panel, or the next drive unit.
- 12. If the drive was in a daisy chain, then recable the other drives as neccessary (refer to subsection 2.2.3). Ensure that the last drive in the daisy chain has a terminator.
- 13. Reinstall the rear access cover.
- 14. Place the PDU circuit breaker in the ON position, and close the front door.

## 4.3 REPACKAGING THE DISK DRIVE

To repackage the disk drive, perform the following:

- 1. Install a shipping brace to each side of the disk drive as shown in Figure 4-2.
- 2. Remove the logic address plug from the disk drive front panel (see Figure 2-30) and store it in the accessory pocket in the shipping carton (see Figure 4-1).

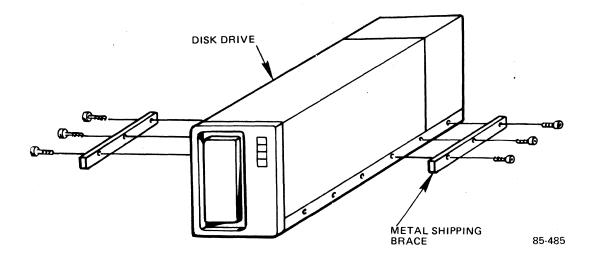


Figure 4-2. Installing the Shipping Braces

For steps 3 through 7, see Figure 4-3.

- 3. Place the plastic dust cover over the disk drive.
- 4. Place the rear foam insert at the rear of the disk drive. Ensure that the insert is positioned properly so that the notches lie over the power supply circuit breaker knobs.
- 5. Place the front foam insert in front of the drive.
- 6. Place the cardboard sleeve over the drive. Ensure the cutouts on the sides are in the up position.
- 7. Position the drive and the sleeve so that the front and rear edges of the sleeve are flush with the edges of the wraparound.

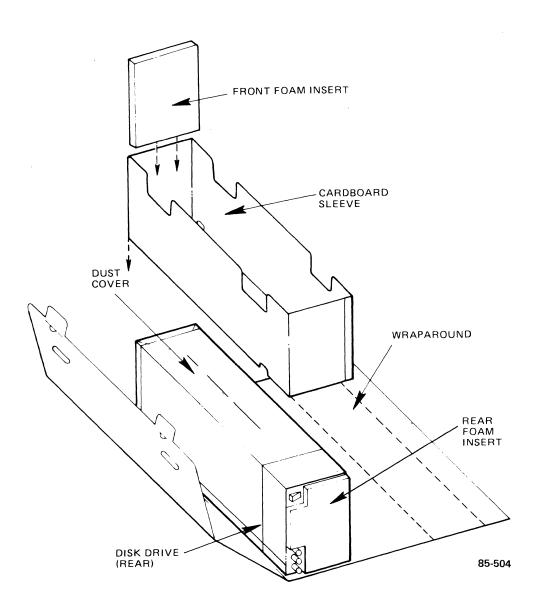


Figure 4-3. Placing the Disk Drive in the Wraparound

8. Fold up the edges of the wraparound and lock the top by inserting the locking tabs into the slots on the edge of the opposite flap (see Figure 4-4).

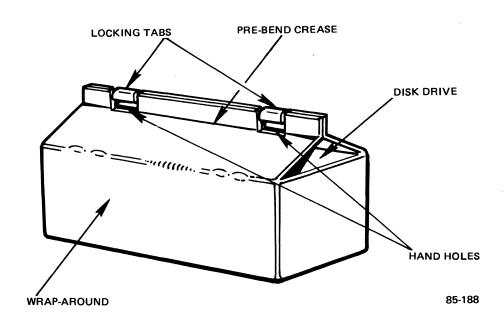


Figure 4-4. Closing the Wraparound

#### NOTE

For steps 9 through 12, see Figure 4-5.

- 9. Locate the metalized bag, and place two of the molded foam cushions into it. Push the cushions to the bag ends and square up the bag.
- 10. Place the bag into the carton, and tuck the flaps under as shown in Figure 4-5. Ensure that the bag and the cushions line up with the perforations in the carton.
- 11. Place at least three bags of new or reactivated desiccant in the bottom of the shipping carton.
- 12. Using the handles on the wraparound, lift the drive up and place it in the bag. Ensure that the wraparound is seated correctly on the cushions.
- 13. While holding the top of the bag up, place the other two molded foam end caps at the ends of the wraparound. Ensure that they are seated correctly.
- 14. Pull up on the bag to its full height within the carton and fold the excess material over the cut in the bag.
  - 15. Seal the bag using masking tape. Ensure that all openings in the bag are covered with tape.

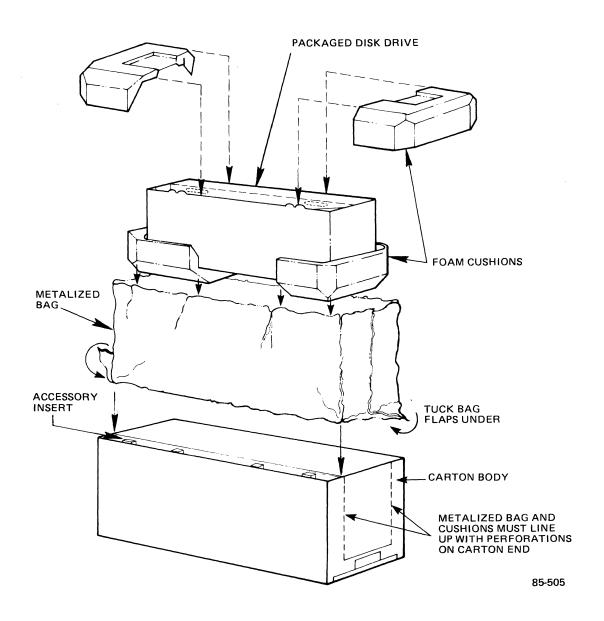


Figure 4-5. Placing the Disk Drive in the Carton

With the masking tape, the sealed bag should protect the disk drive from condensation for approximately 6 weeks.

- 16. If present, slide the printed cardboard insert down between the bag and the carton (see Figure 4-6). Fold it at the crease so that the printed side is lying face up on the bag.
- 17. Place the top cover on the shipping carton (see Figure 4-6).
- 18. With two people, lift the carton onto a skid, and tie the carton to the skid with shipping straps.

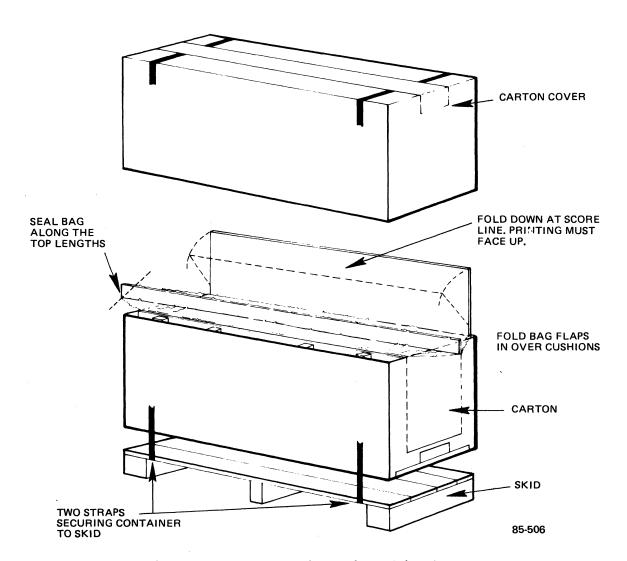


Figure 4-6. Closing the Shipping Carton

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