



Dell™ PowerVault™ Storage Systems

LOCK BAR REPLACEMENT

Notes, Cautions, and Warnings

Throughout this guide, blocks of text may be accompanied by an icon and printed in bold type or in italic type. These blocks are notes, cautions, and warnings, and they are used as follows:



NOTE: A NOTE indicates important information that helps you make better use of your computer system.



CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.



WARNING: A WARNING indicates the potential for bodily harm and tells you how to avoid the problem.

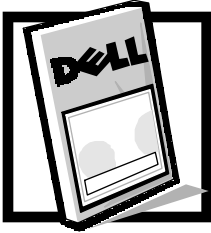
Some warnings may appear in alternate formats and may be unaccompanied by an icon. In such cases, the specific presentation of the warning is mandated by regulatory authority.

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Dell™ PowerVault™ 20xS Storage Systems Lock Bar Replacement

This document explains how to replace the lock bar in your Dell PowerVault 20xS storage system.

Before you perform any of the procedures in this section, read the following warning for your personal safety and to prevent damage to the storage system from electrostatic discharge (ESD).



WARNING: The power supplies in this system produce energy hazards, which can cause bodily harm. Only trained service technicians are authorized to perform the procedures in this document.



WARNING FOR YOUR PERSONAL SAFETY AND PROTECTION OF THE EQUIPMENT WHEN WORKING INSIDE THE STORAGE SYSTEM:

Before you start to work on the storage system, perform the following steps in the sequence listed:

1. Turn off the storage system.
2. Disconnect the storage system from its power source(s).
3. Disconnect any communications cables.
4. Wear a wrist grounding strap, and clip it to an unpainted metal surface, such as a part of the chassis.

If a wrist grounding strap is not available, touch the fan guard or some other unpainted metal surface on the back of the chassis to discharge any static charge from your body.

See the *Dell PowerVault 20xS Storage System Installation and Service Guide* for cabling and power information.

Perform the following steps to replace the lock bar in your Dell PowerVault 20xS storage system:

1. Turn off the system and remove all power and signal cables.
2. If the storage system is installed in a rack, it must be removed from the rack.

Likewise, the storage system must be removed from its enclosure if it is used in a stand-alone configuration. See the *Dell PowerVault 20xS Storage System Installation and Service Guide* for rack and stand-alone information.



NOTE: The storage system weighs about 32 kilograms (70 pounds) when fully loaded. Be careful when sliding the storage system out of the rack or enclosure. The support rails do not hold the last 5 centimeters (2 inches) of the storage system, so make sure that the back of the storage systems does not fall.

3. Using the key, unlock the keylock.
4. With your fingertips, tap up on the lock bar (see Figure 1).
The lock bar swings away and down below the level of the drive bays.
5. If the storage system is in a stand-alone configuration, tap the bar to the left. The lock bar springs out. Swing the lock bar to the right of the drive bays.

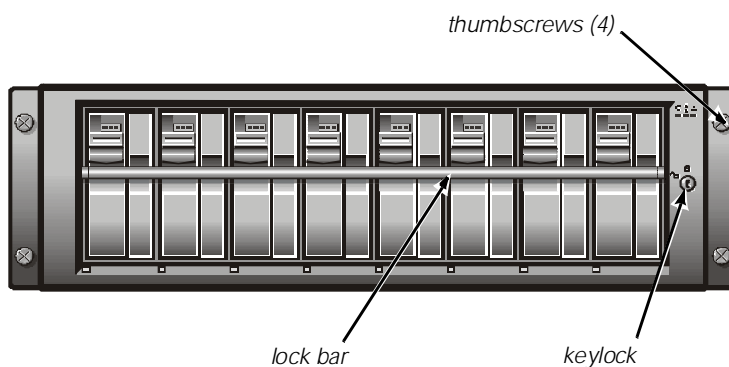


Figure 1. Front Panel

6. Remove the hard-disk drives.



CAUTION: Note the location of the SCSI hard-disk drives as they are removed from the drive bays. During the installation procedure, the SCSI hard-disk drives must be returned to the same drive bays from which they were removed.

Release the hard-disk drive carrier by pressing down on the hard-disk drive carrier lock (see Figure 2) and swing the carrier handle down (see Figure 3). *Slowly* pull the carrier toward you until it slides free of the drive bay.



CAUTION: Extra care must be taken when handling the hard-disk drives. The carriers provide some protection, but the hard-disk drives can be damaged by rough handling. When removing the hard-disk drives from the storage system, place them on a padded surface. Never drop the hard-disk drives.

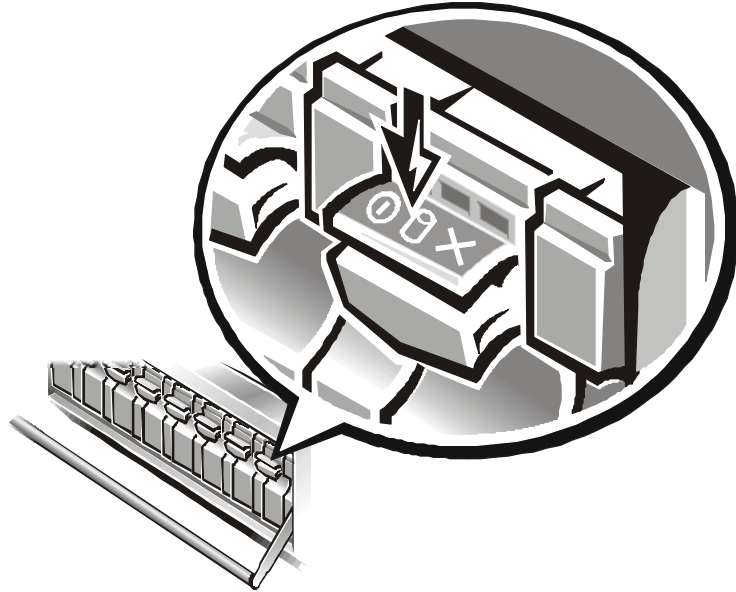


Figure 2. Drive Carrier Lock

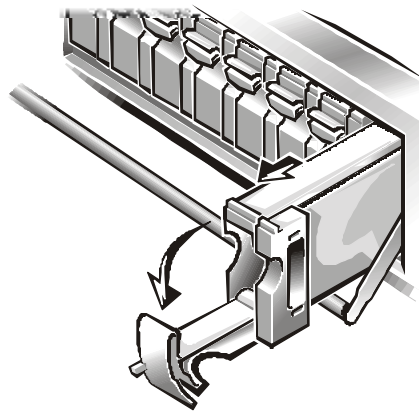


Figure 3. Drive Carrier Handle

7. While facing the storage system, use a 9/64-inch Allen (hex) wrench to remove the screw on the right side of the lock bar tube (see Figure 4).

With the Allen wrench, push into the tube to engage the screw head (the lock bar is spring-loaded on the opposite end).



NOTE: If the entire lock bar tube rotates while you are trying to remove the screw, wrap some fabric or paper over the lock bar. Then grasp the wrapped section of the lock bar with a pair of pliers to hold the tube and prevent it from rotating while you remove the screw.

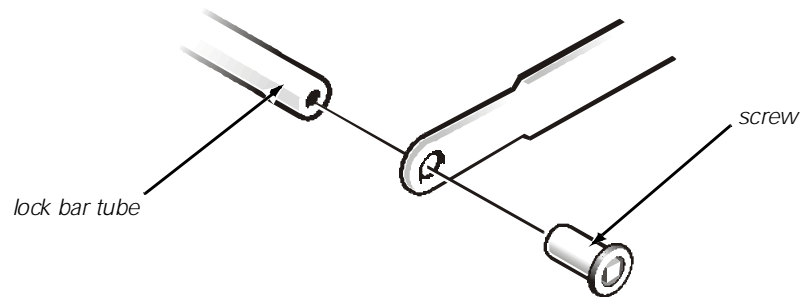


Figure 4. Right Lock Bar Screw

8. Use the Allen wrench to remove the screw on the left end of the lock bar tube (see Figure 5).

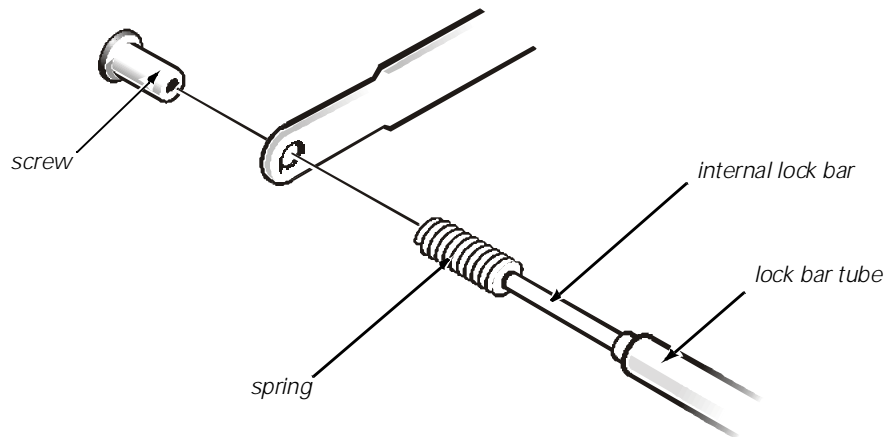


Figure 5. Left Lock Bar Screw

9. Remove the internal lock bar and spring.
10. Remove the four screws on the left lock arm bracket and the four screws on the right lock arm bracket and remove them from the storage system.

11. Attach the new left and right lock arm brackets to the storage system.
12. Replace the lock bar with the new lock bar.
13. Clean off the old Loctite on the left screw, and then place a new drop of Loctite halfway between the thread of the screw and the tip.
14. Use the Allen wrench and the screw with Loctite to attach the lock bar tube to the left lock arm.
15. Insert the spring and internal lock bar into the lock bar tube.

Make sure that the spring is on the left end of the tube.

16. Clean off the old Loctite on the right screw, and then place a new drop of Loctite halfway between the thread of the screw and the tip.
17. Use the Allen wrench and the screw with Loctite to attach the right side of the lock bar tube to the right lock arm.

With the Allen wrench, push into the tube to engage the screw head.



NOTE: If the entire lock bar tube rotates while you are trying to tighten the screw, wrap some fabric or paper over the lock bar. Then grasp the wrapped section of the lock bar with a pair of pliers to hold the tube and prevent it from rotating.

18. Reinstall all hard-disk drives in the same drive bays from which they were removed.
19. Swing the lock bar up to the lock position.

The lock bar slips down into a detent. This holds the lock bar in the lock position.

If the storage system is in a stand-alone configuration, swing the lock bar to the left into the lock position. The lock bar slips to the right into a detent. This holds the lock bar in the lock position.

20. Place the key in the keylock and turn it to the locked position. Remove the key from the keylock.
21. Reinstall the storage system into the rack or enclosure.
22. Reconnect all power and signal cables.



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