

Machines/Models: UL25, UL32, SB97.4

**UL40 Serial Nos.:** 17049-17116

#### THIS BULLETIN IS MANDATORY.

**DATE:** June 18, 1997

PURPOSE: To replace lift cylinder assembly on above models.

OPERATION REQUIRED: Replace lift cylinder assembly per instructions below. This

operation is to be completed IMMEDIATELY!

#### **PARTS REQUIRED:**

1 ea. 068074-001, 002, or 003 Lift Cylinder assembly

2 ea. 062738-000 Tie Rod Tensioner

2 ea. 062739-000 Tension Bracket

**REIMBURSEMENT:** Replacement of lift cylinder assembly will take less than three hours. UpRight will reimburse the owner of record for up to 3 hours of labor at your regular shop rate, and for reasonable travel at \$0.25 per mile. Reimbursement will be made upon receipt by UpRight of your completed warranty claim form and the cylinder assembly you removed from service.

PROCEDURE: Read all instructions thoroughly and refer to figures 1-5 before starting.

#### Removal

Using a suitable lifting device, lower the work platform into a horizontal position (Figure 1). If possible, place the machine onto a sturdy work table using a forklift. Before beginning step 1, insure that the mast is completely retracted. If necessary, open the emergency lowering valve and push on the top of the mast to fully retract it.

### A WARNING A

Never attempt to lower lift into a horizontal position without the use of a suitable lifting device; bodily injury or damage to the machine may result.

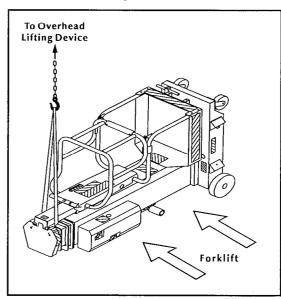


Figure 1

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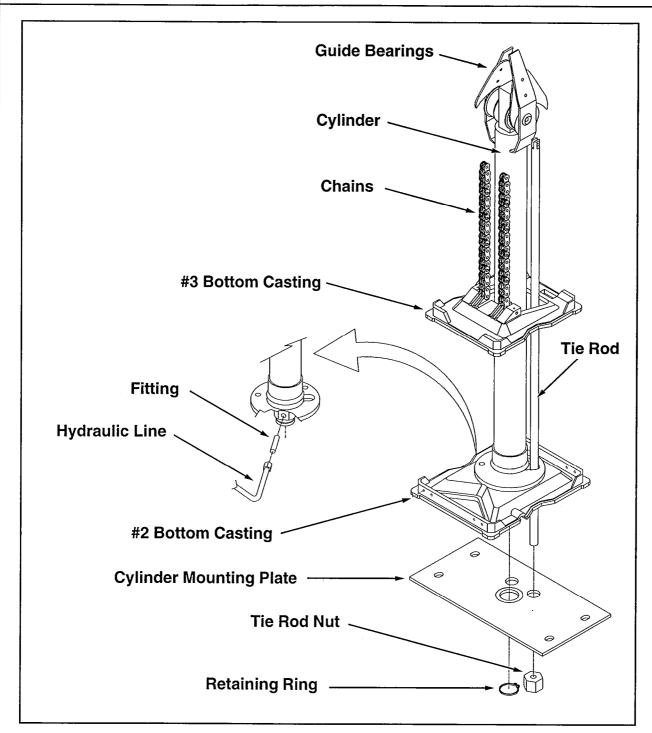


Figure 2

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### Removal (cont'd)

1. Remove cylinder mounting plate fasteners and retaining ring.

2. Remove tie rod nuts.

- 3. Remove the cylinder mounting plate. Be careful not to allow the tie rods to suck back inside of the mast assembly, replace the nuts on the tie rod ends temporarily to prevent this.
- 4. Remove hydraulic line and cylinder fitting from the cylinder rod port. Retain the fitting for reassembly. Remove the other end of the hydraulic line from the power unit. Cap the ports on the cylinder rod and the power unit to prevent contaminants from entering the system. Rotate the hydraulic line away from the cylinder base.
- 5. Remove sequence strap retainers on the top of #3 and #2 masts.
- 6. Remove front and rear mast access plates from the bottom of the #1 mast.
- 7. Remove the screws and washers, attaching the #2 and #3 bottom castings to the #2 and #3 mast assemblies.
- 8. While keeping tension on the tie rods, slide the cylinder and #2 and #3 bottom castings out the bottom of the UL Lift far enough to expose both castings.
- 9. Install cylinder tension brackets on #2 and #3 bottom castings per figure 3. Remove tie rod nuts and install the tie rod tensioners per figure 3. Remove all slack from the chains by tightening the tie rod tensioners.
- 10. Remove cylinder assembly from mast assembly.

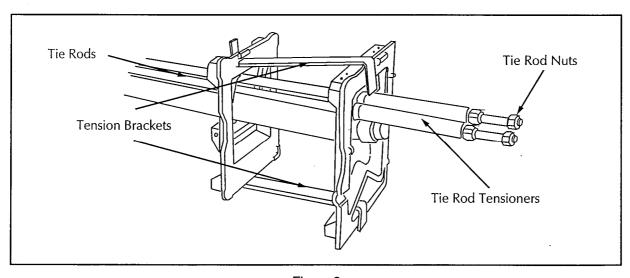


Figure 3

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#### **INSTALLATION**

NOTE: Cylinder assembly must have Tension Brackets, and Tie Rod Tensioners installed per figure 3 prior to installation.

- 1. Slide cylinder assembly into mast assembly until #3 bottom casting is near the bottom of the mast assembly.
- 2. Slide #4 strap through the slot in #3 casting and lay aside.
- 3. Remove the tension brackets and push the #3 casting the rest of the way into the #3 mast.
- 4. Install the screws and washers attaching the #3 bottom casting to the #3 mast assembly. Use Loctite® #242 or equivalent screw lock compound.
- 5. Fish #4 strap up between #3 and #2 mast with fish tape.
- 6. Remove tie rod tensioners from tie rods. Install tie rod nuts finger tight.
- 7. Slide #3 strap through the slot in #2 casting and lay aside.
- 8. While maintaining tension on the tie rods to keep slack out of the chains, slide the cylinder assembly the rest of the way into the mast assembly until #2 bottom casting is fully inside of #2 mast.
- 9. Install the screws and washers attaching the #2 bottom casting to the #2 mast assembly. Use Loctite® #242 or equivalent screw lock compound.
- 10. Fish #3 strap up between #2 and #1 mast with fish tape.
- 11. Install front and rear mast cover plates on the bottom of #1 mast.
- 12. While maintaining tension on the sequencing straps, install strap retainers to the top of #1, and #2 mast. Use Loctite® 242 or equivalent on the threads of the retainer screws.

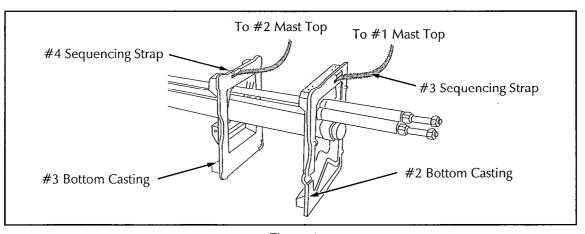


Figure 4

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### Installation (cont'd)

13. Reconnect the hydraulic line to the power unit. Install fitting to cylinder rod end port. Rotate the cylinder rod end until the port on the cylinder is aligned with the hydraulic line. Reconnect the hydraulic line to the fitting.

- 14. Remove nuts from tie rod ends and set the cylinder mounting plate into place. Secure mounting plate with fasteners.
- 15. Install tie rod nuts, tightening them until they are snug against the cylinder mounting plate. When they are snug, the mast sections will *just* begin to extend, **stop tightening**.
- 16. Reinstall retaining ring.
- 17. Using a suitable lifting device, raise the lift to its normal vertical position. (See figure 1.)

### A WARNING A

Keep hands clear of the mast assembly when the pinch shield is removed for inspection purposes; pinching injury to hands may result.

Never operate a machine with the pinch shield removed, except for inspection.

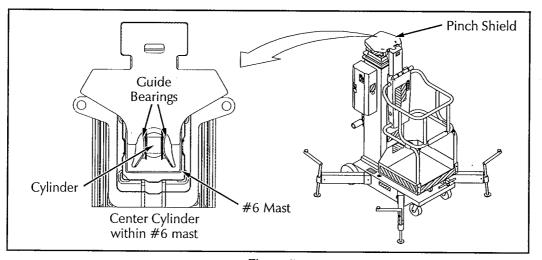


Figure 5

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### Installation (cont'd)

- 18. Remove pinch shield (figure 5) from the top of the mast assembly and check alignment of the cylinder within the mast assembly by looking down the inside of the mast with a flashlight. The cylinder guide bearings must not be touching the inside surface of #6 mast. Center the cylinder within the mast assembly by tightening the left or right tie rod nuts to move the cylinder left or right respectively. Fore / aft alignment may be achieved by shimming between #3 bottom casting and the cylinder base. If fore / aft alignment is necessary, contact UpRight product support department to obtain shims and instructions.
- 19. Replace the pinch shield to the top of the mast assembly.
- 20. Bleed air from cylinder by cycling the mast to full extension several times. The cylinder is self bleeding, and air will be forced out during the lowering cycle.
- 21. Using a suitable lifting device, lower the machine back to horizontal position. (See figure 1.)
- 22. Using a hacksaw, cut off the excess length of tie rods leaving at least two threads exposed outside of the tie rod nuts.
- 23. Using a suitable lifting device, return the machine to its normal vertical position. (See figure 1.)
- 24. Install outriggers and level the machine base.
- 25. Remove cover from power unit assembly
- 26. Remove the four screws holding the control box assembly to the mounting bracket.
- 27. Open the control box by removing the four cover screws.
- 28. Place 300 lbs. on the platform. Use only dead weight for this test.
- 29. Connect a jumper wire from terminal 9 to terminal 10 on the terminal strip. This will start the motor and the machine will begin to rise.
- 30. Observe the mast assembly while raising the platform. Inspect for deformation or abnormal operation. Check hoses for leaks. If the machine does not perform as expected, call UpRight product support department for further instructions.
- 31. Close and secure the control box cover. Replace the control box onto the mounting bracket. Replace the cover over the power unit assembly.

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