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BendPak Technical Service Bulletin
MDS-6LP/LPF Cylinder Limit Collar Installation

BendPak TSB 199-032026 Rev. A

Overview

This Technical Service Bulletin describes the field service procedure to install limit collars on all four lift cylinders required to bring the maximum lifting height within ALI limits. This bulletin applies to all MDS-6LP/LPF Mid-Rise Scissor Lifts identified within the serial number ranges listed below:

MDS-6LP (5175226)
S/N: 26219-001-001 to 41575-002-004-C

MDS-6LPF (5175227)
S/N: 26227-001-001 to 41575-003-004-C

Tools and Supplies Required:

- Drift Pin ≈ Ø1 to 1.375 in. (Ø25 to 35mm)
- Face Pin Spanner Wrench (68 mm)
- Loctite® 263 or equal
- Clean hydraulic fluid <2 oz. (60mL)
- MDS-6 Series Split Collar Kit (5505992)
- Clean, lint-free shop towels
- Hammer (dead blow or small sledge)
- Hex Keys
  - 4 mm
  - 1/4 in.

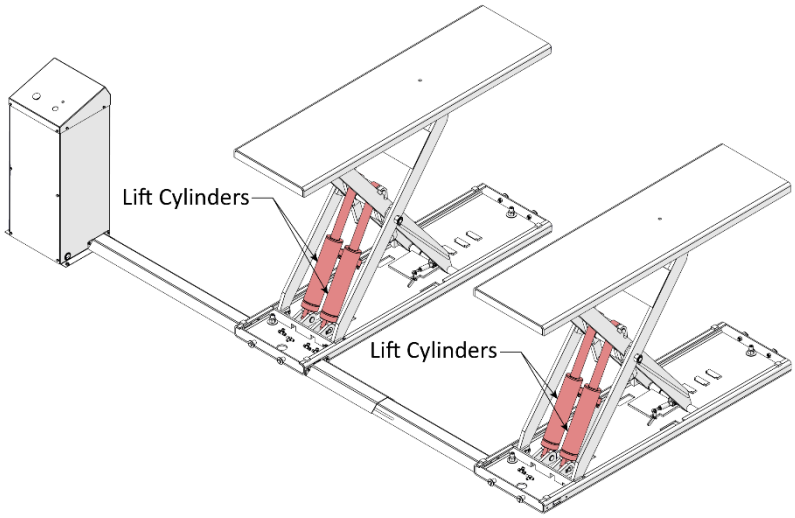
PPE Required:

Always wear the proper Personal Protective Equipment (PPE) when working on this Lift. Leather gloves, nytril or neoprene gloves for handling hydraulic fluid, safety glasses, and steel toed boots.

⚠ **WARNING** **California Proposition 65**. This product can expose you to chemicals including styrene and vinyl chloride which are on the list of over 900 chemicals identified by the State of California to cause cancer, birth defects, or reproductive harm. **ALWAYS** use this product in accordance with BendPak's instructions. For more information go to **www.P65Warnings.ca.gov**.

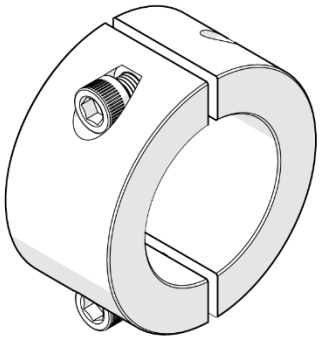
⚠ **WARNING** Always refer to the manufacturer's Safety Data Sheet (SDS) for safe handling of chemicals and disposal information. SDS are available from the hydraulic fluid or lubricant's supplier or manufacturer.

⚠ **WARNING** It is critical that no debris be allowed to enter the hydraulic system. Ensure the Lift and lift cylinders are clean, before opening the cylinder tube.



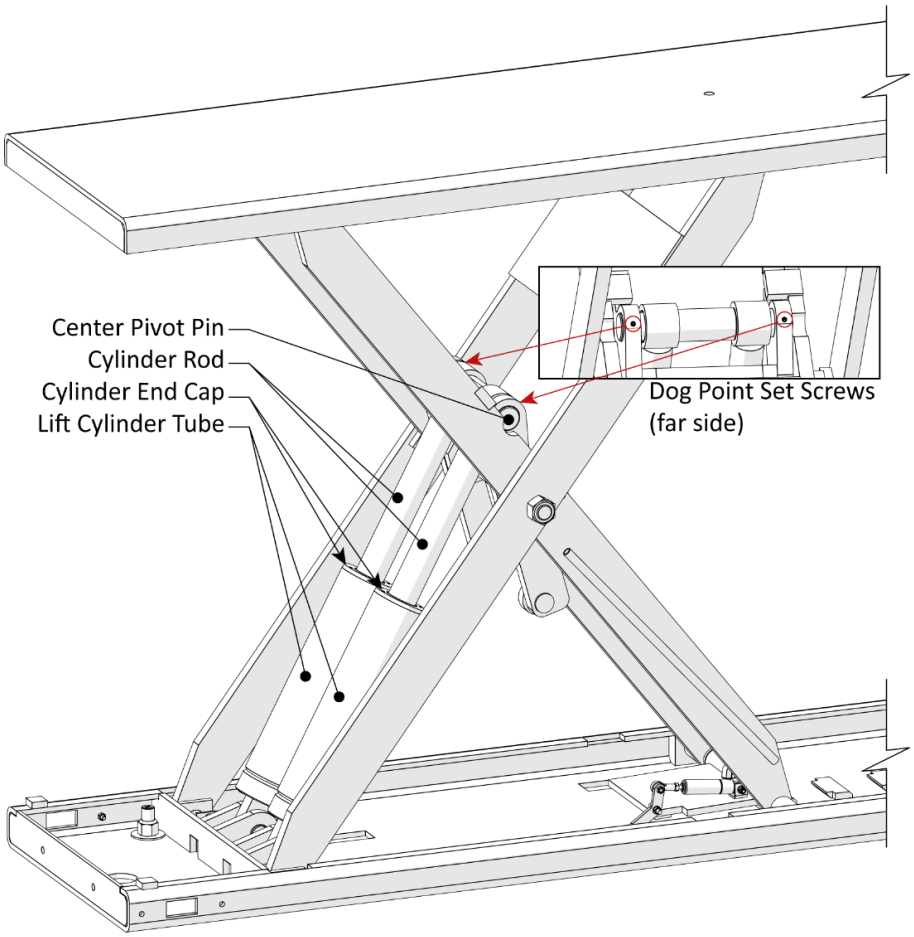
Limit Collars Installation

1. Read the entire procedure before beginning.
2. Gather the required tools and supplies. An assistant is strongly recommended.
3. If a vehicle is currently on the Lift, remove it.
4. Apply power to the Lift and raise it to its maximum height then lower it onto its top safety lock.
5. Hold the down button for at least 5 seconds after engaging the safety lock to release pressure from the hydraulic system.
6. Confirm both ramps are fully seated on the top safety locks.



⚠ **WARNING** Support the Lift platform with safety stands (or equivalent) during all maintenance activities.

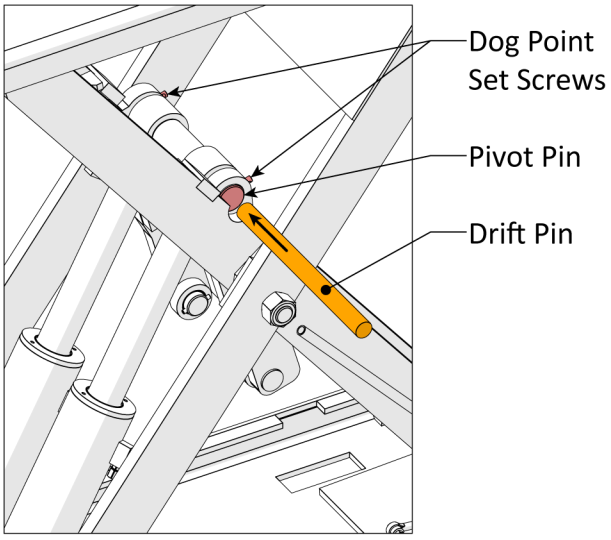
7. Remove power from the Lift and lockout so that power cannot be applied to the Lift unintentionally. If your organization has lockout/tag out procedures follow them before beginning work.
8. Clean the exterior of the cylinders and the Lift to remove debris that may be pushed into or accidentally fall into the cylinder tube while open.
9. Included with this bulletin are four (4) Split Collars (5505991). Each collar will include two socket head cap screws. Verify the quantity received before beginning.
10. Use a 4mm hex key to loosen but not remove the **two** dog point set screws retaining the center pivot pin on the Lift. Refer to the figure below.

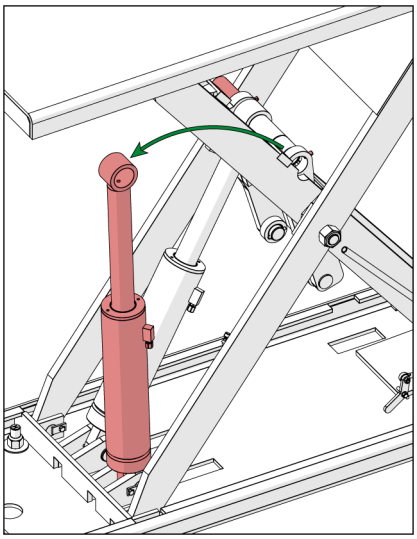


11. Use a hammer and drift pin to tap out the center pivot pin until the first cylinder is free to rotate.
12. Grasp the cylinder rod and use it to carefully rotate the cylinder away from the pivot pin.

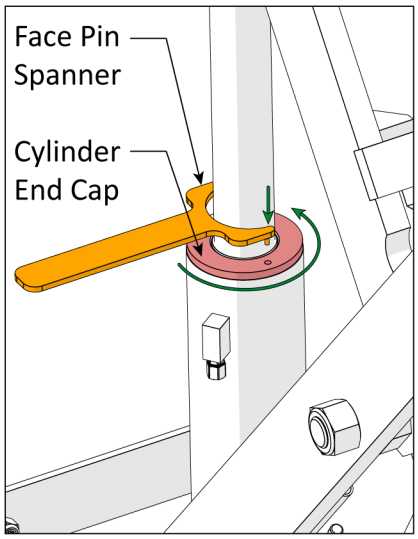
⚠ WARNING While rotating the cylinder, observe the hydraulic hose at the bottom of the cylinder tube. Avoid damage to the hydraulic hose by over rotating the cylinder. Pinching or crimping the hose can cause structural damage, leading to premature failure, burst lines, and potential system damage. Remove the hose from the cylinder if required to prevent damage.

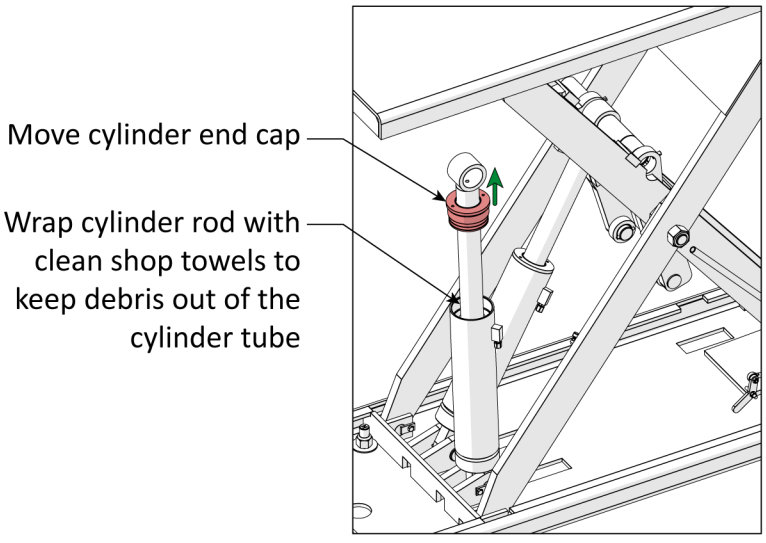
13. Have an assistant hold the cylinder rod in place.





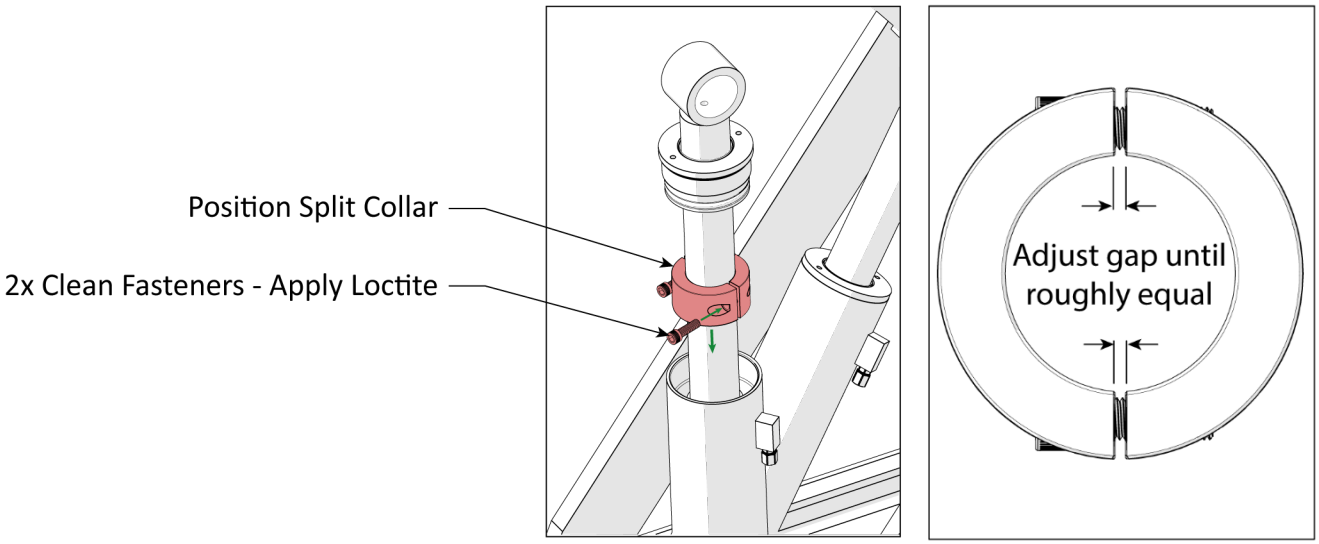
14. Use the face pin spanner wrench to loosen the cylinder end cap.
15. Once free of the cylinder tube threads, push the end cap up and have an assistant hold it in place.



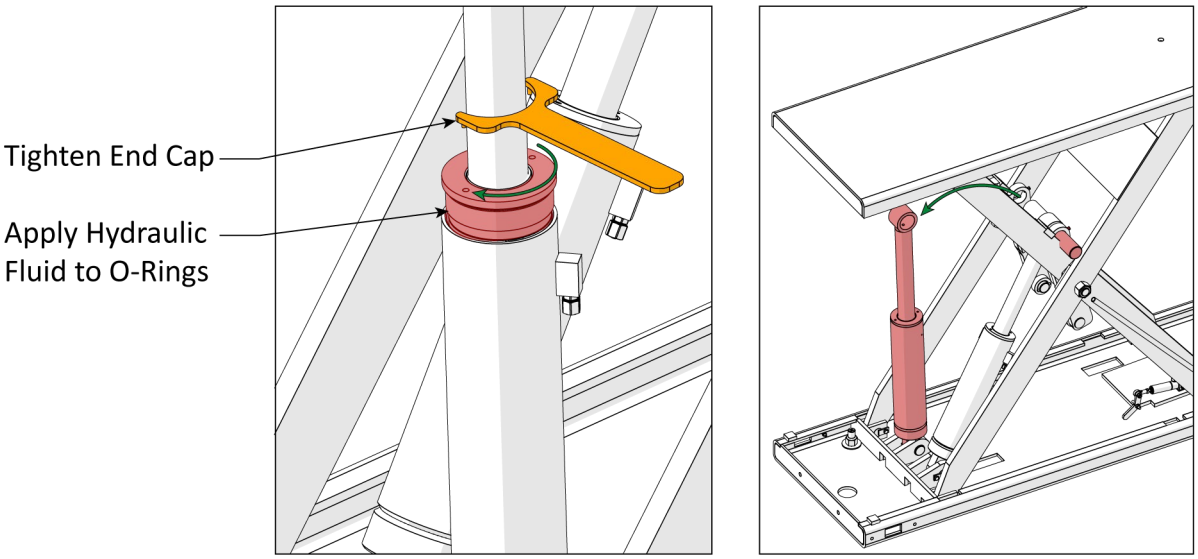


16. Wrap clean lint-free shop towels loosely around the cylinder rod to keep debris and small components out of the cylinder tube.
17. Retrieve all the collars and fasteners from the split collar kit (5505992). Clean the collars and fasteners to remove dirt and oil.

18. Apply a few drops of Loctite to the threads of two fasteners. **Do not** allow Loctite onto the inner collar surface where it would adhere to the cylinder rod.
19. Spread a few drops of hydraulic fluid evenly on the collar's inside surface where it contacts the cylinder rod.
20. Position the split collar around the cylinder rod.
21. Use a ¼ in. hex key and two fasteners with Loctite to secure them loosely in place. They should be tight enough to remain in place, but not so tight that they cannot slide up and down the rod.
    a. Tighten the fasteners equally on both sides of each collar. The gap between each half of the collar should be roughly equal.



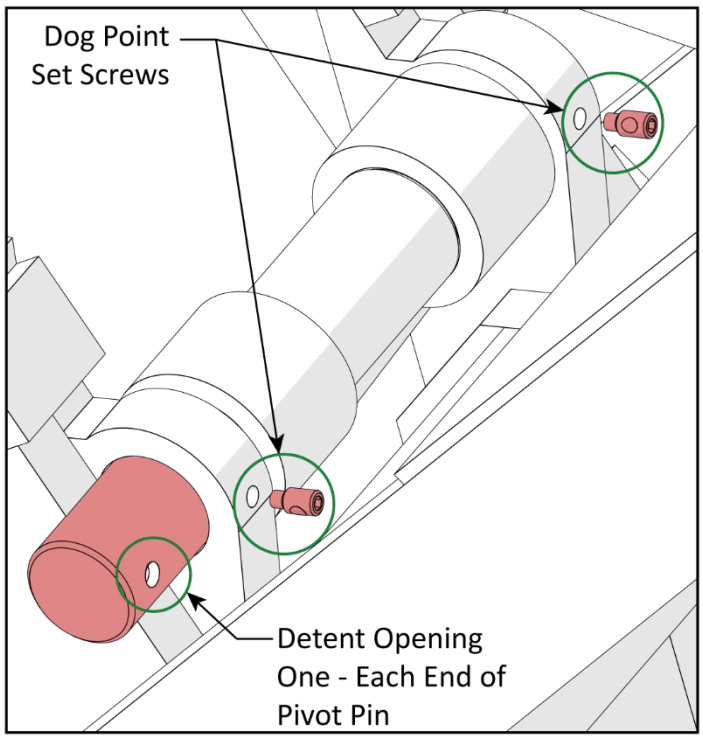
22. Remove the shop towels and allow the split collar to drop down into the cylinder tube. If the collar does not drop down freely, push it but take care ***not to*** damage the cylinder tube or rod while pushing. The collar is required to extend into the tube far enough to allow the cylinder end cap to be secured.
23. Apply hydraulic fluid evenly to the cylinder end cap O-rings and seals.
24. Reinstall the end cap into the cylinder tube and tighten using the face pin spanner wrench.



25. Rotate the cylinder back into position to receive the pivot pin.
26. Push the pivot pin back into position and continue to push the pivot pin through until the remaining cylinder rod can be rotated to allow steps 8 through 26 to be completed.
27. Perform steps 8 through 26 installing a split collar on the second cylinder rod.
28. Ensure the pivot pin is returned to its position in each cylinder rod.
29. Verify both dog point set screws mate with their detents in the pivot pin and are tightened to secure the pivot pin in position.

    IMPORTANT! Both dog point set screws must mate into the detent holes at each end of the pivot pin.

30. Repeat steps 8 through 29 on the remaining two cylinders.
31. Before proceeding, verify all four dog point set screws are tightened to retain the pivot pins on both lift platforms.
32. Test the Lift.
    a. Apply power to the Lift.
    b. Press the up button to raise the Lift off the top safety lock.
    c. Press the safety lock release and the down button simultaneously to lower the Lift to the ground.
    d. Raise the Lift to its maximum unlocked height. Observe the Lift for twisting, straining or scraping sounds. The Lift should function normally, but the unlocked maximum height should be reduced by approximately 1.3 in. (33 mm).
    e. Lower the Lift to the ground. Wait 2 to 5 minutes with the lift on the ground to allow trapped air to escape the reservoir.
    f. Raise the Lift to its maximum unlocked height again. If the Lift is operating normally, lower it to the ground. The Lift is ready to be put back into service.
    g. If the Lift is not operating normally, contact BendPak support.



If you are experience difficulties with the MDS-6LP/LPF, technical support and service is available from your dealer, on the Web at **bendpak.com/support**, by email at **support@bendpak.com**, or by phone at **(800) 253-2363**, follow the prompts to reach service. Online chat is also available at **www.bendpak.com**