



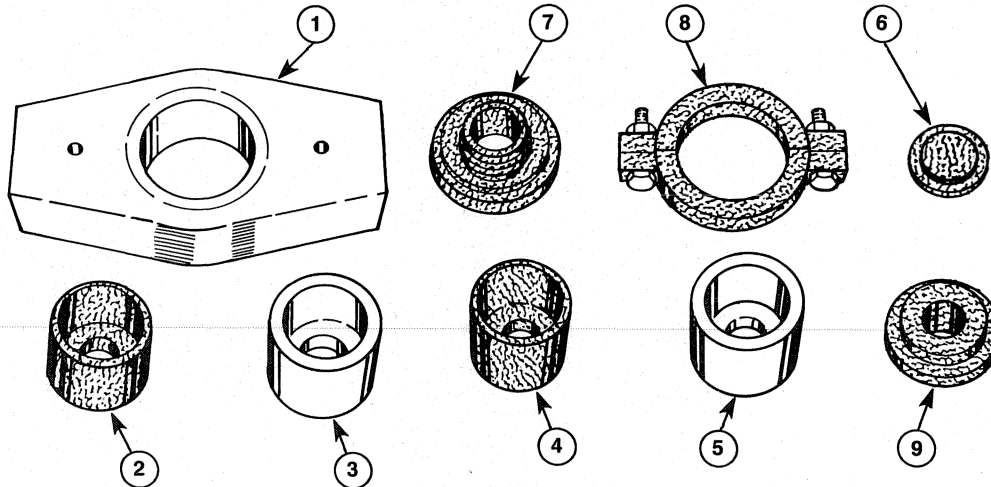
655 Eisenhower Drive  
 Owatonna, MN 55060  
 Phone: (507) 455-7000  
 Tech. Serv.: (800) 533-6127 Order  
 Entry: (507) 455-1480  
 International Sales: (507) 455-7223

Form No. 102502

Parts List &  
 Operating Instructions for:

1764  
 Y-849-A

## Hendrickson Press Tooling Set



### PARTS LIST

Item No.	Part No.	No. Req'd	Description
1	51100 (Y848)	1	Press Plate
2	302032	1	Removing Adapter (34,000 Lb. Center Bushing)
3	302031	1	Installing Adapter (34,000 Lb. Center Bushing)
4	302027	1	Removing Adapter (38,000 and 44,000 Lb. Center Bushing)
5	302026	1	Installing Adapter (38,000 and 44,000 Lb. Center Bushing)
6	206457	1	Press Adapter
7	302030	1	Removing Adapter (End Bushing)
8	42052 (Y856)	1	Clamp (End Bushing)
9	206459	1	Clamp Plate (End Bushing)

This tooling set is designed for removing and installing the R and RU series center and end replacement bushings used on the Hendrickson 34,000, 38,000 and 44,000 lb. axles.

**NOTE: A shop forcing press with at least a 50-ton capacity will be needed.**

### WARNING

- Safety glasses must be worn at all times by the shop forcing press operator and anyone within sight of the press.
- This operation must be done in an isolated area or the press must be shielded to minimize danger to others.
- Support all components carefully and make certain the parts being "pressed" are carefully aligned with the force line of the hydraulic ram.
- Keep hands and fingers out of the work area.
- Keep feet, legs, hands, etc. out from under the press support area.

## OPERATING INSTRUCTIONS

### CENTER BUSHING REMOVAL

1. To remove and install the center bushings, the equalizing beam **must be removed** from the vehicle.

- With the equalizing beam removed, carefully inspect the outer steel shell of the bushing before attempting to remove it. If the outer shell of the bushing has been worn excessively, the edge may be "mushroomed" over the bushing bore face of the beam. The excess material that has "mushroomed" over must be removed with, for example, a chisel, disc sander or file before tooling can be used for the bushing removal.
- Place the equalizing beam in a shop press as shown in Figure 1. Position the proper Removing Adapter (Item 2 for the 34,000 lb. axle or Item 4 for the 38,000 and 44,000 lb. axle) over the bushing to be removed. Place the Press Adapter (Item 6) on top of the removing adapter (See Figure 1).

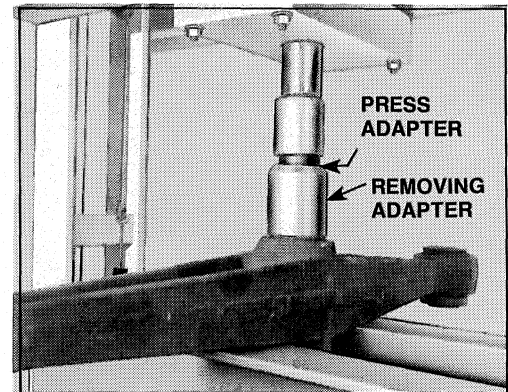


FIGURE 1

**WARNING**

- Check to be sure the removing adapter is correctly aligned on the bushing shell before applying hydraulic pressure. Also check to be sure there is clearance below for the old bushing to drop through.
  - If the bushing does not move with 10,000 psi of hydraulic force, release pressure and recheck the tooling alignment. An improperly aligned adapter will put force on the equalizing beam instead of the steel shell of the bushing.
- Press out the old bushing. Then carefully inspect the beam bushing bore. Use a cylinder hone or an emery cloth to clean out the bushing bore.

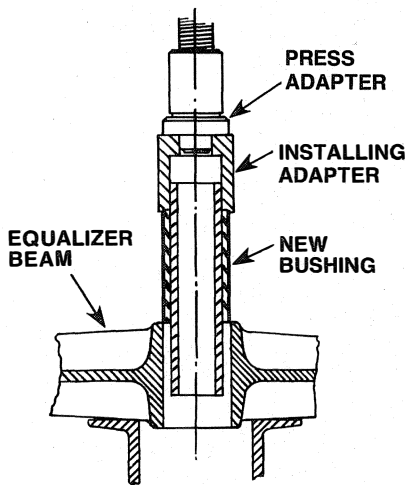


FIGURE 2

**CENTER BUSHING INSTALLATION**

- Apply a high grade of molybdenum based grease to the inside of the beam bushing bore and to the outside of the new bushing. Position the equalizer beam in the press.
- Position the proper Installing Adapter (Item 3 for the 34,000 lb. axle or Item 5 for the 38,000 and 44,000 lb. axle) over the new bushing as shown in Figure 2. Place the Press Adapter (Item 6) on top of the installing adapter.



**WARNING:** Check to be sure the bushing, installing adapter and the equalizer beam bushing bore are in correct alignment before applying hydraulic pressure with the press.

- Press the bushing into the beam until the installing adapter bottoms against the equalizing beam face.

**END BUSHING REMOVAL**

- Place the Press Plate (Item 1) on the press bolster. Position the equalizing beam on the press plate. Position the Removing Adapter (Item 7) and the Press Adapter (Item 6) onto the end bushing to be removed as shown in Figure 3.



**WARNING:**

- Check to be sure the removing adapter is correctly aligned on the bushing shell before applying hydraulic pressure. Also check to be sure there is clearance below for the old bushing to drop through.
  - If the bushing does not move with 10,000 psi of hydraulic force, release pressure and recheck the tooling alignment. An improperly aligned adapter will put force on the equalizing beam instead of the steel shell of the bushing.
- Press out the old bushing. Then carefully inspect the beam bushing bore. Use a cylinder hone or an emery cloth to clean out the bushing bore.

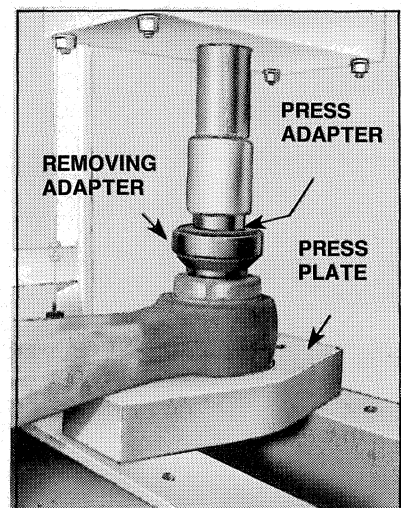


FIGURE 3



655 Eisenhower Drive  
 Owatonna, MN 55060-1171 USA  
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## END BUSHING INSTALLATION

**IMPORTANT:** Measure the length of the new end bushing steel shell before installation. The bushing must be set so that the shell is centered inside the length of the bore in the equalizer beam. (See Figure 4).

**Note:** Spacer Shims ( $\frac{1}{8}$ " thick [Part No. 302401]) can be ordered separately and used as shown in Figure 5. The shims are stacked as required to correctly space the bushing for correct centering.

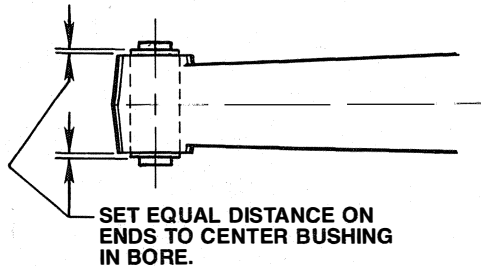


FIGURE 4

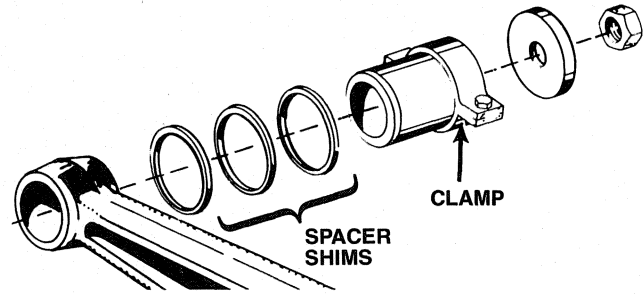


FIGURE 5

1. Attach and wrench tighten the Clamp (Item 8) onto the bushing as shown in Figures 5, 6 and 7. This clamp compresses the rubber between the inner and the outer sleeve to allow proper positioning of the tooling.
2. Place the Press Plate (Item 1) on the press bolster. Apply a high grade molybdenum based grease to the inside of the beam bushing bore and to the outside of the new bushing. Position the equalizer beam in the press.
3. If spacers are needed to center the bushing, place them over the bushing and align the bushing with the equalizing beam bore.

**IMPORTANT:** Make sure the Clamp (Item 8) is securely tightened.

- Position the Clamp Plate (Item 9) and the Press Adapter (Item 6) on top of the Clamp (Item 8) as shown in Figure 7.
  - Check to be sure the bushing, clamp, clamp plate and press adapter are in correct alignment with the equalizer beam bushing bore before applying hydraulic pressure with the press.
4. Apply pressure until the new bushing is correctly centered within the equalizer beam bushing bore.

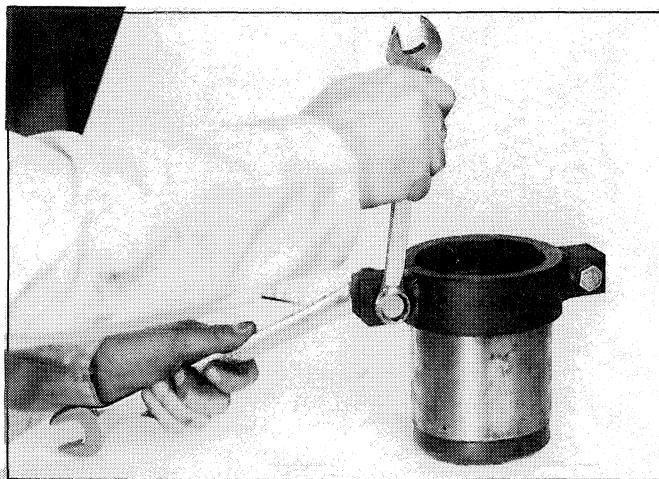


FIGURE 6

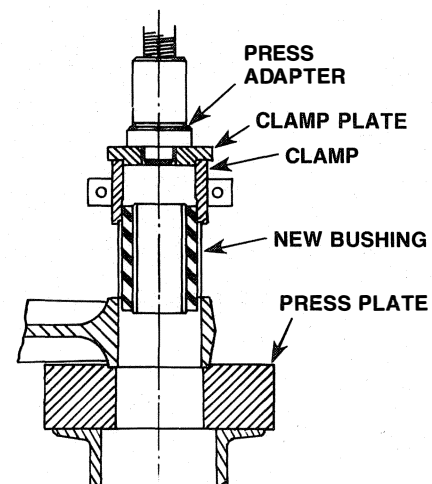


FIGURE 7