

## How to Rebuild Aluminum or Ductile Iron Global Ball Vibrators

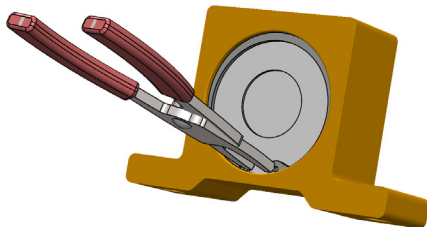
Please note the special instructions in #4 and #6 for the aluminum vibrators.

### Tools

1. Bench Vice
2. Correct internal retaining ring pliers
3. Medium grit emery paper
4. Large steel punch
5. Medium hammer
6. Heat source capable of heating housing to 400° F. Minimum (aluminum housing only)
7. Pick for removing O-rings
8. Arbor or hydraulic press rated at 2000 pounds force or better
9. Correctly sized press disk slightly smaller than Raceway ring O.D.
10. Light lubricant such as WD-40
11. Clean shop towel

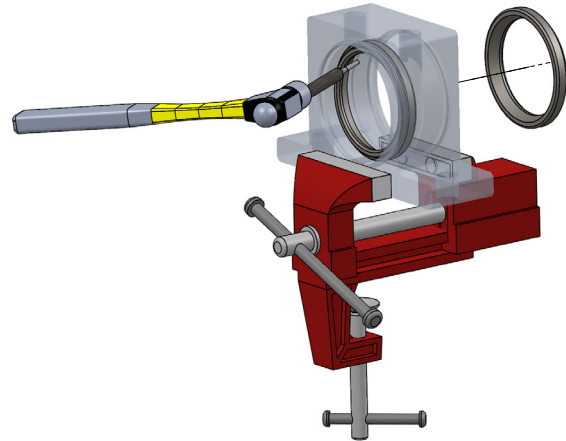
### Follow the steps below to rebuild your Global Ball Vibrator

1. Using retaining ring pliers, remove both retaining rings from housing.

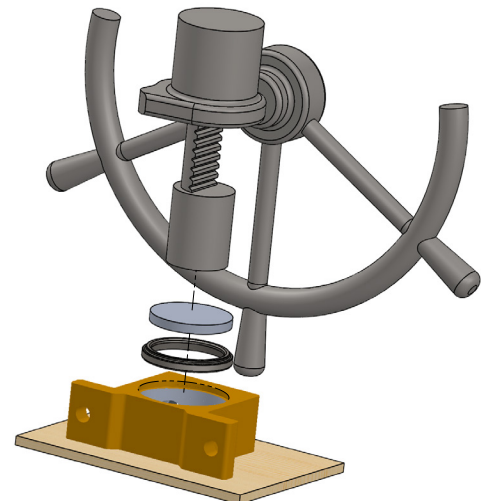


2. Remove both side covers and the ball. This will require some manipulation as the covers are a close fit to the housing
3. Using the pick, remove both O-rings from exposed raceway rim groove
4. **If the vibrator housing is aluminum, heat by some means, such as, an oven or torch, to 400-500°F.** Check temperature using either a temperature sticker, temperature crayon, or laser thermometer. You can also skip checking the temperature by simply tapping on the raceway ring to see if it loosens up enough to extract it.

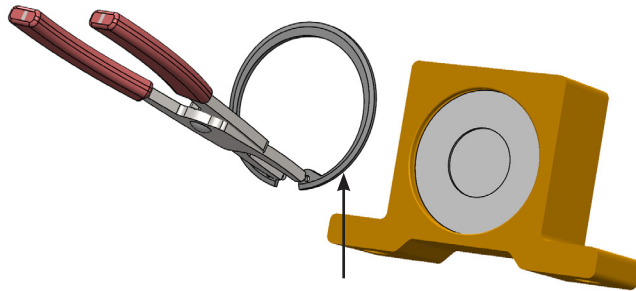
5. Quickly clamp the feet of the housing into the bench vice in a position that will allow the rings to clear as they are driven out of the housing.



6. Using punch and hammer, drive a raceway out of the housing bore via the inner edge of the ring exposed above the divider rim in the housing. Strike the ring alternately at 10, 2, and 6 O'clock position to prevent cocking in the housing bore. **With the aluminum housing this must be done while the housing is hot.** Repeat for remaining ring. NOTE: Any damage to housing bore or divider ring must be dressed down with emery prior to reassembly. Small scratches are acceptable, gouges and raised dings are not.
7. Clean housing with light lubricant and shop towel.
8. Place housing flat on press and lay the new ring bevel side down on the housing bore. Using press and press disk press ring into bore without cocking until it seats solidly on the dividing shoulder in the housing.



9. Turn the housing over and repeat the installation of the second ring.
10. Install an O-ring into the outer groove of the raceway ring.
11. Install the side cover into the same bore and lightly seat against the raceway ring.
12. Install the retaining ring (beveled side out) into the bore groove. Check that it is seated and the cap is against the raceway ring. Lightly press on the cover with the press to assure it is seated and the retaining ring is seated.
13. Turn the housing over.
14. Install the ball, O-ring, side cover, and retaining ring.
15. Check that ball rotates freely within the completed assembly.



**Note: Retaining ring's beveled side is out.**

