



# Specialty Enterprises

MANUFACTURER OF MILLENNIUM ALUMINUM SPRAY BOOMS

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## Breakaway Damper Replacement Instructions

**Note:** Call service line at 920.240.5218 with questions or for assistance. We are always happy to help.

**Warning:** Gas springs used in damper assembly are under compression. Always wear eye protections and other appropriate PPE.

### Tools needed

- Forklift/loader or 5 ½' – 6' length 2x4 for a breakaway wedge
- ¾" wrench (ratchet style best but not required) (castle nut removal)
- 5/32" Allen wrench (poly block removal)
- 7/16" wrench or socket (poly block removal)
- Screwdriver
- Pliers
- Needle nose pliers
- Hammer

### Procedure

1. Inside breakaway, remove cotter pin from castle nut with a pliers, both sides.



2. Remove castle nut, both sides.



3. With boom height at approx. 3' from ground, prop breakaway up at about a 30-40-degree angle. Use a forklift/loader.



- Alternative method: Use a 5-6' length 2x4. Push breakaway back to expose hardware and prop securely. Work one side at a time.



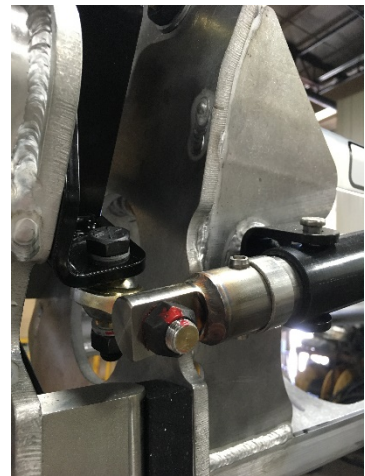
4. Using 7/16" wrench and 5/32" allen wrench remove poly blocks, both sides. Place poly bushings on bolts for reinstallation.



5. Lower breakaway back down after Poly blocks are removed. This is necessary as the dampers have an 1/8" of preload and will not be able to be removed without removing the tension.



- Using  $\frac{3}{4}$ " wrenches, remove  $\frac{3}{8}$ " bolt that connects spherical joint to secondary end plate bracket. It may be helpful to have a second person lift up on the end of the breakaway slightly until tension is removed from  $\frac{3}{8}$ " bolt and it slides out easily.



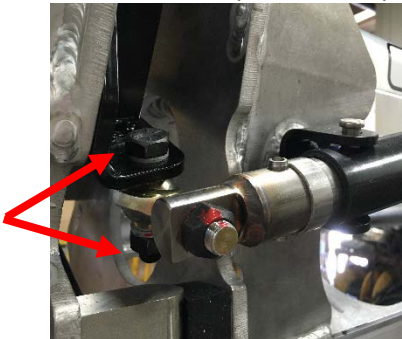
- Remove old damper assembly.



- Replace new damper assembly, ensure both bronze bushings are in place on yolk shaft. Thread on castle nut until snug.



- Reconnect damper assembly to secondary end plate using  $\frac{3}{8}$ " bolt, Nordlock washers, and nut.

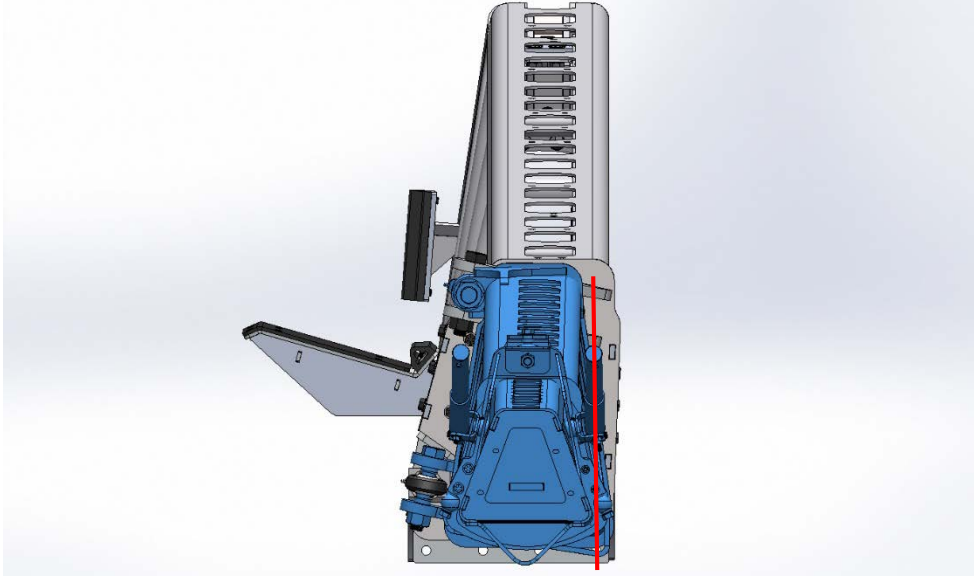


- Lift breakaway up using method done on step 1 and replace poly blocks, both sides. Do not over tighten.

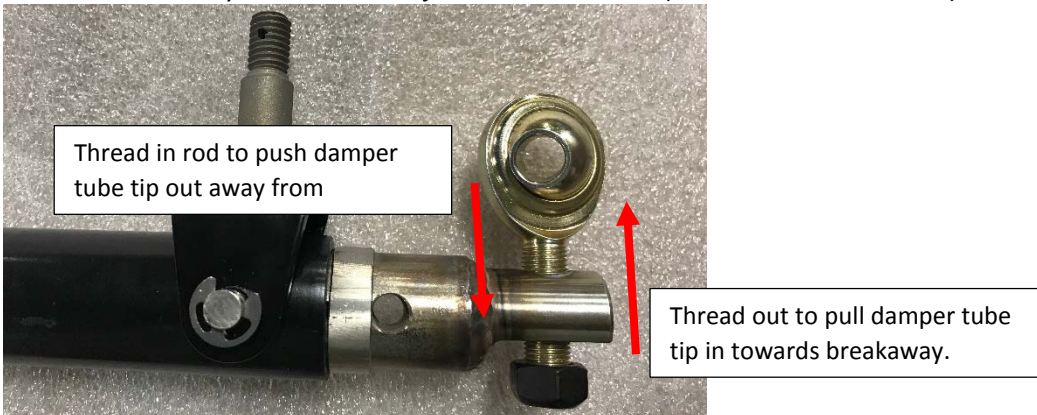




11. Lower the breakaway and check alignment of dampers by looking down the end of the breakaway and verifying they are in line with the secondary bottom rails (see below).



If the damper tube is not aligned, lift breakaway ( step 3), remove poly blocks (step 4), remove the 3/8" bolt from the spherical joint (replaced in step 6). To move tip of damper tube in towards breakaway thread out the joint and vice-versa (start with 2 revolutions).



Replace 3/8" bolt (see step 9) and check alignment, repeat adjustments as necessary. Tighten topleck nut when complete.

12. Cycle breakaway front, back, and up several times to ensure proper functionality.
13. Tighten castle nut and replace cotter pin when satisfied with proper alignment and functionality.



Call service line at 920.240.5218 if there are any questions or concerns.