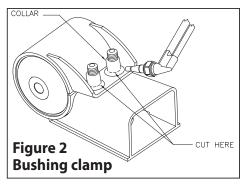
# **Bushing Replacement Procedure - RAR-200 Suspension**

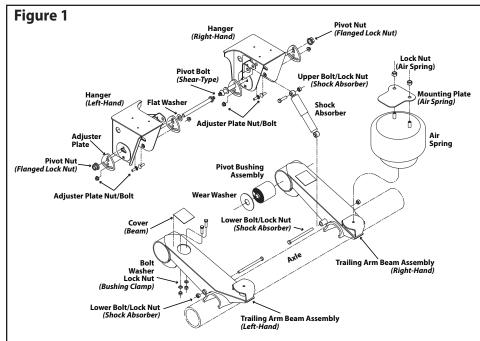
Raise and safely block up trailer and axle. Disconnect the linkage from the height control valve(s), if equipped. Exhaust all air from the air system.

ACAUTION Failure to safely support the vehicle and exhaust the air system could allow vehicle/suspension movement that could result in serious injury.

### **Disassemble Suspension**

Remove pivot hardware (Figure 1). Rotate arm beams down and out of hanger. Inspect pivot bolt hole and hanger surfaces for wear or damage. Repair or replace components, if needed.





### **Bushing Removal**

Remove Huck® fasteners from bushing clamp (Figure 2). Separate bushing clamp and remove pivot bushing assembly.

NOTE: Bushing replacement kit includes traditional bolts, washers and nuts to replace the Huck® fasteners used on bushing clamp.

## New Bushing Installation

- 1. Insert new bushing assembly into bushing clamp. Install replacement bolts, washers and nuts.
- 2. Center bushing assembly on bushing clamp. Torque nuts on clamp to 190 ft-lb. Make sure bushing clamp surfaces are closed "metal-to-metal" and torque nuts to 280 ft-lb (380 N-m).

### **Reassemble Suspension**

- 1. Rotate arm beams into hangers. Install new wear washer on inboard side of the beam.
- 2. Install pivot hardware shear-type pivot bolt, flat washer, adjuster plate, adjuster plate nut/bolt and flanged lock nut.
- NOTE: Do not lubricate pivot bolt/nut. Tighten flanged lock nut until pivot hardware is snug against hanger. Do not apply final torque until axle alignment has been checked (page 2).
- 3. Use a 1" drive impact wrench with an E-20 Torx® socket to tighten the pivot bolt until the Torx head is sheared off.
- 4. Install shock absorber.
- 5. Install wheels and tires (if removed). Raise the vehicle and remove support stands. Lower vehicle to the ground.

If necessary, re-connect height control valve linkage and adjust ride height per the Extreme Air<sup>TM</sup> HCV Installation Guide.

<u>CAUTION</u> Failure to torque pivot hardware to specifications can result in suspension failure and void the warranty.



#### SPEED SET™ ALIGNMENT FEATURE

NOTE: Alignment plate must be at 6 o'clock position prior to alignment. After alignment, torque adjustment plate nut to 55-60 ft-lb.

Adjustment plates must be moved equally on both sides of hanger. Tighten shear-type pivot bolt with a 1"drive impact wrench until the Torx" head shears off from the bolt.



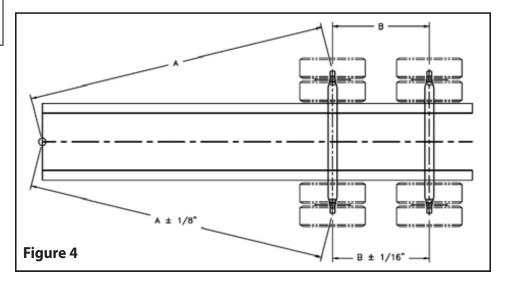
RIDEWELL CORPORATION SPRINGFIELD, MO USA

### Figure 3

## **Axle Alignment**

The RAR-200 suspension is equipped with the Speed-SetTM alignment feature for simple, manual alignment of the axles. There is 1.0" of available adjustment at each hanger.

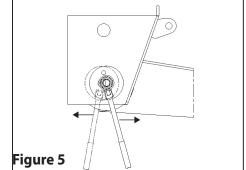
- 1. Prior to alignment, ensure all the alignment pointers are at 6 o'clock position (Figure 3).
- 2. Align the forward axle to the center of the kingpin within  $\pm 1/8$ " (Figure 4).



- 3. Axle Alignment Procedure:
  - 3.1 Loosen the pivot nut and adjuster plate nuts.
  - 3.2 To move the axle, insert a ½" square shank breaker bar into the square hole on the adjuster plate and push or pull (Figure 5). The adjustment should be made in equal amounts on both sides of the hanger to ensure the bushing is seated squarely between the hanger sidewalls.
  - 3.3 Snug the adjuster plate nuts and re-check alignment measurements. Adjust if necessary.
  - 3.4 Torque the pivot bolt using a 1" drive impact wrench and #6100054 E-20 Torx socket (or equivalent) until the Torx head shears off from the bolt. NOTE: Torque the pivot bolts with the suspension at ride height to prevent pre-stressing the rubber pivot bushing.
  - 3.5 Torque the adjuster plate nuts to 55 60 ft-lbs.
- 4. Align the aft axle(s) to the forward axle to within  $\pm 1/16$ " using the same procedure (Figure 4).
- 5. In general, small alignment changes can be made on one side (left hanger or right hanger). It is preferable that large alignment changes be made by split-

ting the difference from one side to the other (i.e. one-half the difference forward at one hanger, one-half the difference aft at the other hanger).

ACAUTION Failure to torque pivot hardware to specifications can result in failure of the suspension and void the warranty.



#### **Notes and Cautions**

This instruction uses two types of service notes:

"NOTE": Provides additional instructions or procedures to complete tasks and make sure that the suspension functions properly.

ACAUTION Indicates a hazardous situation or unsafe practice that, if not avoided, could result in equipment damage and serious injury.