

RAR-240 HANGER MOUNT TRAILER SUSPENSION – SOLID BUSHING WITH METAL SLEEVE REPLACEMENT PROCEDURE

Bushing Replacement Kit – Suspension Model	Item Description	Size	Torque Values (foot-pound Newton-meter)	
6040029 – 15K U/S (2400080); 25K U/S; O/S	Pivot Bolt (Eccentric Bolt/Locknut*) *Requires 1-7/8" socket	1 1/4"-7NC	1000 ft-lb	1350 N-m
6040028 – 30K U/S; O/S				
6040071 – 25K O/S - Tanker Special				
6040091 – 30K O/S - Tanker Special				
6047680B060 – 25K/30K U/S; O/S Manufactured Pre-1995				
Bushing Clamp – Traditional Hardware	HHCS; Flat Washer; Locknut	3/4"-10NC	280 ft-lb	380 N-m
Fasteners	Bolt (Air Spring, Lower)	1/2"-13NC	25 ft-lb	35 N-m
	Nut (Air Spring, Upper)	3/4"-16NF	50 ft-lb	70 N-m
	Locknut (Shock Absorber)	3/4"-10NC	200 ft-lb	270 N-m

Torque values reflect a lubricated thread condition (Nuts are pre-lubed). Do not overtorque.

CAUTION Suspension is shipped with minimal torque applied to fasteners. All fasteners must be re-torqued after first 6,000 miles of operation. Failure to install and maintain fasteners at torque specifications could result in suspension failure and void the warranty.

Vehicle Preparation

Park the vehicle on a level surface.
Chock wheels.

Raise vehicle to height that removes load from suspension. Support with jack stands.

Disconnect linkage from the height control valve(s), if necessary, and exhaust all air from the air springs.

CAUTION Failure to properly chock the wheels, exhaust air system and raise and safely support the vehicle could allow vehicle movement that could result in serious injury.

Disassemble Suspension

1. Remove pivot nut. Remove anti-turn washer from bolt by grinding away welds.
2. Locate the indicator arrow on the eccentric bolt head. Turn the bolt-head until the arrow points straight up. Remove the bolt.

Notes and Cautions

This instruction uses two types of service notes:
"NOTE": Provides additional instruction/procedures to complete tasks and ensure the suspension and components function properly.

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



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3. Rotate the beam out of hanger. Inspect the pivot-bolt hole and frame hanger surfaces for excessive wear/damage. Repair/replace components as needed.

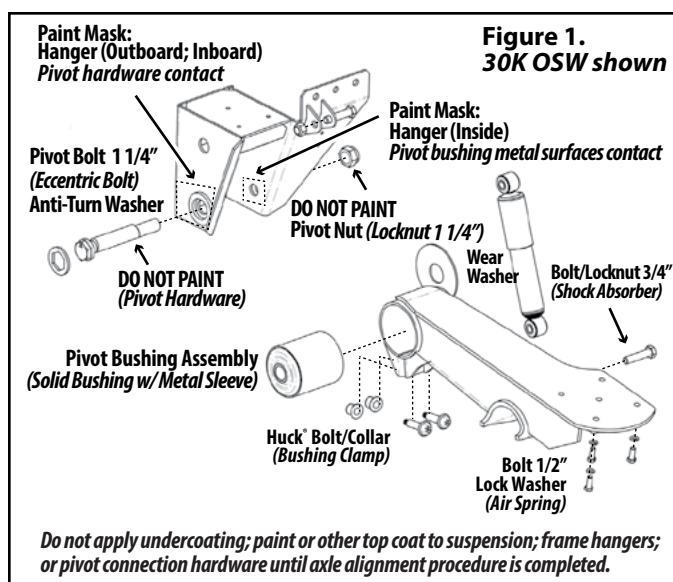
Bushing Removal and Installation

1. Remove Huck® fasteners from bushing clamp (Fig 1). Separate clamp and remove bushing assembly.
2. Insert bushing assembly into clamp. Install replacement bolt, washer; locknut.
3. Center bushing assembly. Torque nuts to 190 ft-lb.
4. Verify bushing clamp surfaces are closed "metal-to-metal". Torque nuts to 280 ft-lb (380 N-m).

Reassemble Suspension

1. Rotate beam into hangers. Install new wear washer on inboard side of beam.
CAUTION 25/30K Tanker Special Suspensions require one wear washer on the inboard and outboard side of the beam.
2. Coat the large diameter shank of the eccentric bolt with an anti-seize compound. Locate the indicator arrow on the bolt-head. Install the eccentric bolt with the arrow pointing straight up.
3. Align axle if necessary (Page 3). Weld the anti-turn washers over eccentric-bolt head with 1/4" fillet welds at bolt-head top and bottom.
4. Verify suspension ride height. Torque pivot nut to 1,000 ft-lb (1,350 N-m).
5. Install shock absorbers. Install wheels and tires (if removed).
6. Raise vehicle and remove support stands. Lower the vehicle to the ground.
7. Connect height control valve linkage, if necessary. Use HCK to adjust to the desired (installed) ride height.

CAUTION Failure to properly torque pivot hardware could result in suspension failure or void the warranty.



Do not apply undercoating; paint or other top coat to suspension; frame hangers; or pivot connection hardware until axle alignment procedure is completed.

RAR-240 YOKE-MOUNT TRAILER SUSPENSION — SOLID BUSHING WITH METAL SLEEVE REPLACEMENT PROCEDURE

Bushing Replacement Kit	Item Description	Size	Torque Values	
			foot-pound	Newton-meter
6040011 (Yoke Mount)	Pivot Hardware (Eccentric Bolt/Locknut*) *Requires 1-7/8" socket	1 1/4"-7NC	1000 ft-lb	1350 N-m
Fasteners	Bolt (Air Spring, Lower)	1/2"-13NC	25 ft-lb	35 N-m
	Locknut (Air Spring, Upper)	3/4"-16NF	50 ft-lb	70 N-m
	Bolt/Locknut (Shock Absorber)	3/4"-10NC	200 ft-lb	270 N-m

Torque values reflect a lubricated thread condition (Nuts are pre-lubed). Do not overtorque.

CAUTION Suspension is shipped with minimal torque applied to fasteners. All fasteners must be re-torqued after first 6,000 miles of operation. Failure to install and maintain fasteners at torque specifications could result in suspension failure and void the warranty.

Vehicle Preparation

Park the vehicle on a level surface. Chock wheels to keep vehicle from moving.

Raise vehicle to height that removes load from suspension and support with jack stands.

Disconnect linkage from height control valve(s), if necessary. Exhaust all air from the system.

Remove the wheels and tires if necessary. Remove shock absorber.

CAUTION Failure to properly chock wheels, exhaust the air system and support the vehicle could allow vehicle movement that could result in serious injury.

Disassemble Suspension

1. Remove pivot nut. Remove anti-turn washer from bolt by grinding away welds.
2. Locate the indicator arrow on the eccentric bolt head. Turn the bolt-head until the arrow points straight up. Remove the bolt.
3. Rotate beams down and away from frame. Inspect the trailing arm pivot bolt-holes and wear washers for unusual wear or damage. Repair or replace components as needed.

Bushing Removal and Installation

1. Remove the pivot bushing assembly from the metal sleeve welded to the frame by grinding away the four (4) welds on each side of the sleeve.
2. Position (center) replacement bushing assembly into the outer bushing sleeve (Figure 2).

3. Attach bushing assembly with four one-inch welds on each side.
 - 3.1. Stagger the welds and allow the steel to cool between welds.
 - 3.2. Weld the top of bushing sleeve at outboard side of frame, then the bottom of the sleeve at the inboard side of frame and move the welds around the sleeve in 90° increments.

CAUTION Excessive heat/distortion can damage the bond between the rubber bushing and steel sleeve of the bushing assembly.

Reassemble suspension

Rotate trailing arm beam onto the frame. Install wear washer on both inboard/outboard side of the beam.

Coat the large diameter shank of the eccentric bolt with an anti-seize compound. Locate the indicator arrow on the bolt-head. Install the eccentric bolt with the arrow pointing straight up.

Align the axle if necessary (Page 3).

Weld the anti-turn washers over eccentric bolt-head with 1/4" fillet welds at bolt-head top and bottom.

Verify suspension ride height. Torque pivot nut to 1,000 ft-lb (1,350 N-m).

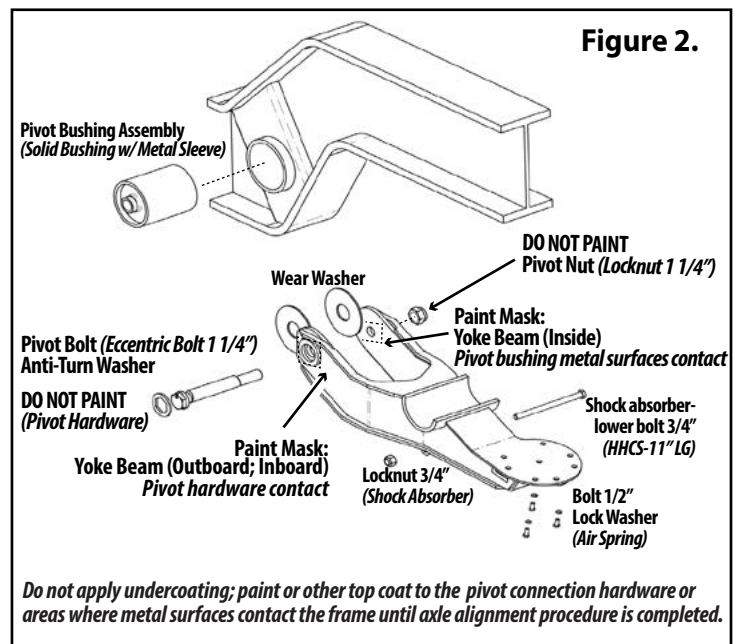
Install shock absorbers.

Install the wheels and tires (if removed).

Raise the vehicle and remove support stands. Lower vehicle to the ground.

Connect the height control valve linkage, if necessary. Use HCK to adjust to the desired (installed) ride height.

CAUTION Failure to properly torque pivot hardware/suspension fasteners could result in suspension failure and void the warranty.



Axle Alignment

Alignment should be performed on a level surface with the suspension at the desired ride height. Refer to the engineering drawing for the designed ride heights of the suspension model.

Align the suspension per TMC or SAE recommended standards. On a multiple-axle vehicle, the forward axle is moved into the proper alignment, then the remaining axles are positioned so that they are parallel to the forward axle.

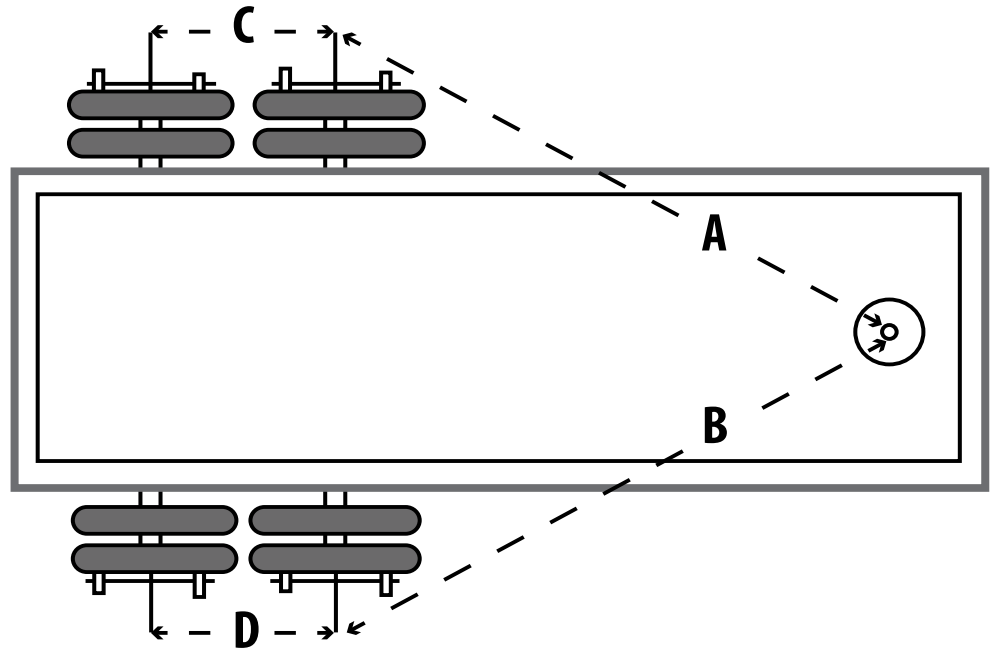
A maximum tolerance of 1/8-inch difference from side-to-side of the forward axle and 1/16-inch difference from side-to-side for the aft axles is acceptable (Figure 3).

Figure 3. Kingpin measurement for axle alignment

Check forward axle alignment by measuring from kingpin to both ends of the axle centers.

If the difference between the "A" measurement and the "B" measurement is greater than 1/8-inch, the forward axle needs to be aligned.

Adjust the aft axle if difference between the "C" and the "D" measurement is greater than 1/16-inch.



Axle Alignment Procedure

Loosen the pivot nut enough for the beam to move.
NOTE: If installed, remove the anti-turn washer by grinding away the welds.

Turn bolt head until arrow on bolt head points straight up (12 o'clock position).

Turn eccentric bolt to move beam forward or backward until axle reaches alignment.

CAUTION Do not turn arrow past the 9 o'clock or 3 o'clock position (horizontal).

Weld anti-turn washer over bolt head with 1/4" fillet welds at top and bottom (Figure 4).

Torque pivot nut to 1,000 ft-lb (1,350 N-m).

CAUTION Failure to properly torque pivot hardware could result in suspension failure/void the warranty.

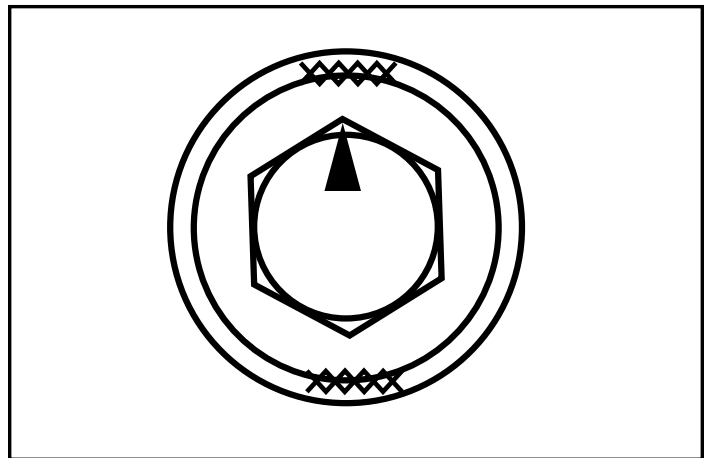


Figure 4.
Secure anti-turn washer with 1/4" fillet welds before applying final torque to pivot nut.