XP8100 SHOCKS

2018+ JEEP WRANGLER & GLADIATOR

INSTALLATION GUIDE

AEV30448AA
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PLEASE READ BEFORE YOU START

To guarantee a quality installation, we recommend reading these instructions thoroughly before beginning any work. These instructions assume a certain amount of mechanical ability and are not written nor intended for someone not familiar with auto repair.

NOTE: If retrofitting an existing AEV DualSport RT Suspension, make sure to support axles when removing existing shocks. Shocks can be retrofit with vehicle sitting on the ground, but it will be necessary to compress the shocks for installation at ride height, which is very difficult, especially while aligning bolt holes. Recommend using jack stands or a hoist in order to install at full extension.

If installing along with a new AEV DualSport RT Suspension, following suspension kit instructions and supplement with this shock installation guide.

INCLUDED PARTS	QTY
JL WRANGLER 4-DOOR	
RH Front Shock (25-296693)	1
LH Front Shock (25-311129)	1
RH Rear Shock (25-312515)	1
LH Rear Shock (25-296686)	1
Mounting Kit (12308100)	1
JL WRANGLER 2-DOOR	
RH Front Shock (25-316483)	1
LH Front Shock (25-316490)	1
RH Rear Shock (25-315165)	1
LH Rear Shock (25-315158)	1
Mounting Kit (12308100)	1
GLADIATOR	
RH Front Shock (25-296693)	1
LH Front Shock (25-311129)	1
Rear Shock (25-315141)	2
Mounting Kit (12308100)	1

REQUIRED TOOLS
Common Hand Tools
Torque Wrench

I. INSTALL FRONT SHOCKS AND OUTBOARDING BRACKETS

1. Starting with right front shock, install upper mount using factory hardware. Reservoir fitting should point out and slightly angled toward the rear (fig. 1). Reservoir can hang from the hose, be careful not to hit it on anything and damage the finish. An old sock or rag can be helpful to protect it during shock installation.

   NOTE: Shocks must be installed in the correct locations for proper clearances and fitment. See "Included Part" section above for proper part number at each location.

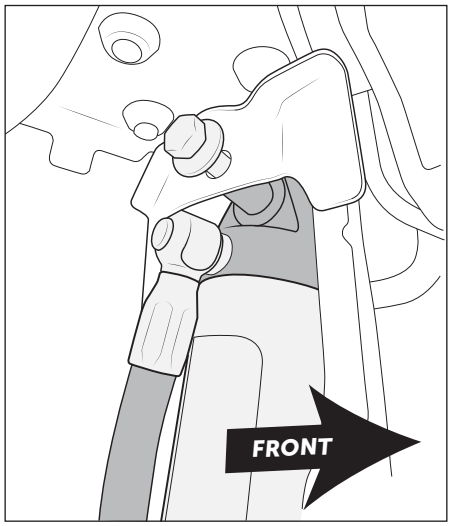

Figure 1

2. Install lower outboarding bracket. Parts are sided and must be installed on the correct side. Small mounting slot should be at the bottom with the open end pointing toward front of vehicle (fig. 2).

   NOTE: With bracket held in position, check fitment of bushing into shock opening. Due to sprung-out shape of factory shock bracket, some AEV outboarding brackets may need to be opened up slightly for easier installation. This can be done with a bench vise and crescent wrench or pry bar.

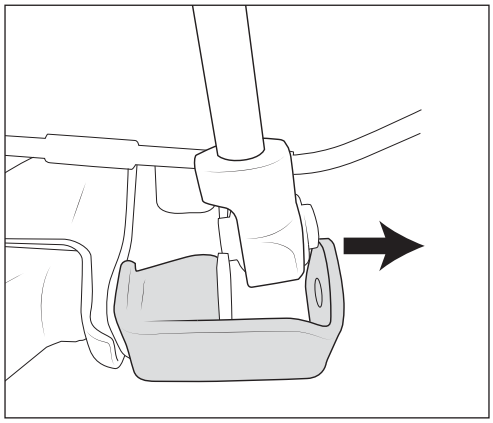

Figure 2: Rear View

3. Once shock bushing can slip between AEV outboarding bracket and factory shock bracket with minimal interference, bolt the outboarding bracket in place by installing the provided M8x25mm bolt and washer through the bottom of the factory bracket and AEV outboarding bracket, then install flange nut onto the top side. Do not fully tighten at this time (fig. 3).

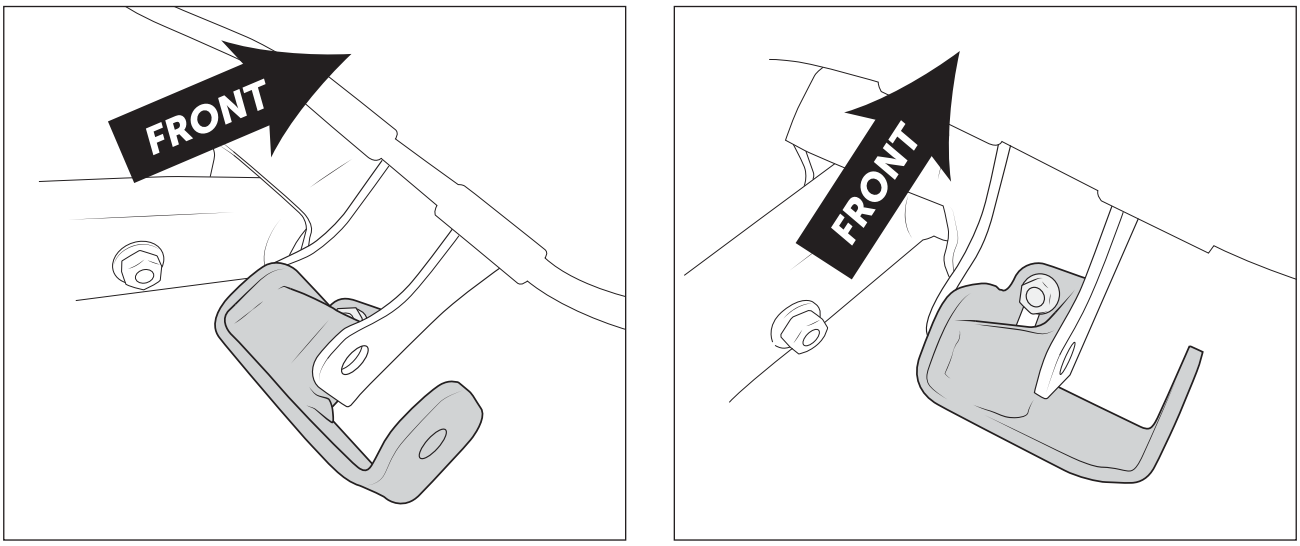

Figure 3

4. Position the lower shock eyelet so that the bushing is offset forward and outboard relative to shock shaft (fig. 4).

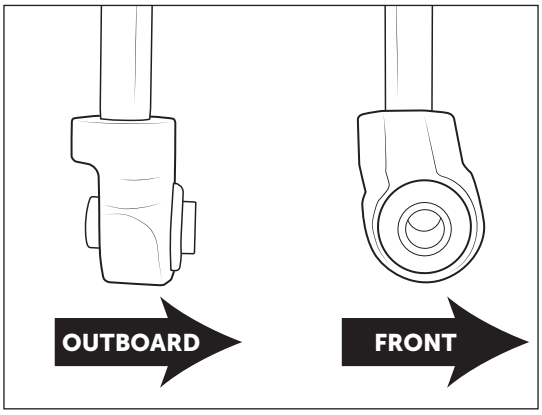

Figure 4

5. Install M12x120mm bolt and washer from outside of bracket, through shock bushing sleeve, and through the rest of the factory shock mount and AEV outboarding bracket. Loosely install nut on inboard side of both brackets (fig. 5).

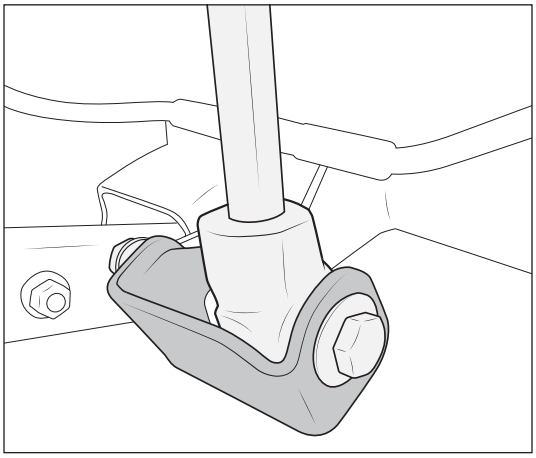

Figure 5

6. Torque lower M8 hardware to 30 ft-lb. Torque upper M12 shock mounting bolts to 80 ft-lb and lower M12 shock mounting bolts to 75 ft-lb.

   NOTE: If installing AEV bumper, do so before mounting reservoirs. Reservoirs will make access difficult to some mounting brackets/hardware.

7. Install hex riv-nut using provided tool to hex shaped upper rear hole on outside surface of compatibility beam (fig. 6). To use riv-nut tool, run provided bolt through the washer and coupler, then thread on riv-nut until snug. Flanged end of riv-nut should sit against the coupler. Place riv-nut into desired hole, hold coupler stationary with a wrench, and tighten the bolt to 31 ft-lb. Remove the bolt and coupler to make sure the riv-nut has full compressed. **NOTE:** Depending on factory bumper configuration, some vehicles may already have riv-nuts in these locations.

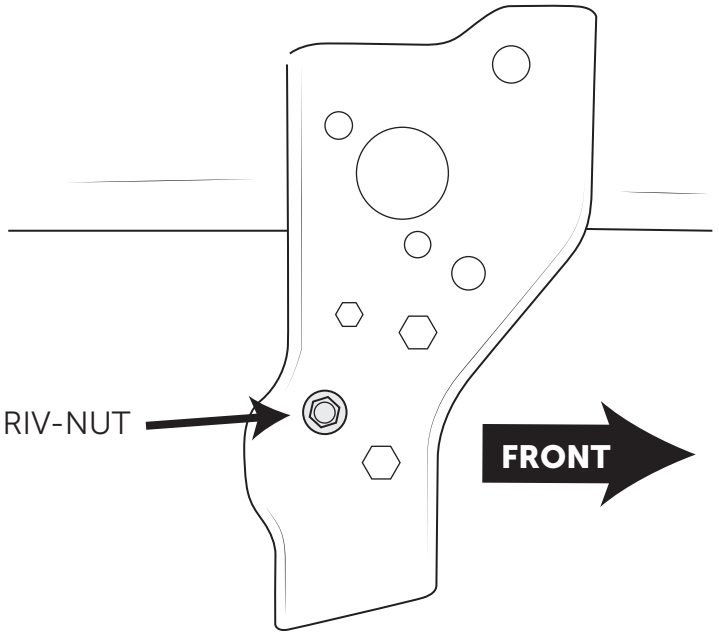

Figure 6

8. Install reservoir bracket to riv-nut in orientation shown (fig. 7). Tighten to 30 ft-lb.
   NOTE: Check bolt clearance through mounting holes on reservoir brackets before installation. Some may require drilling to properly fit through holes due to hardware update.

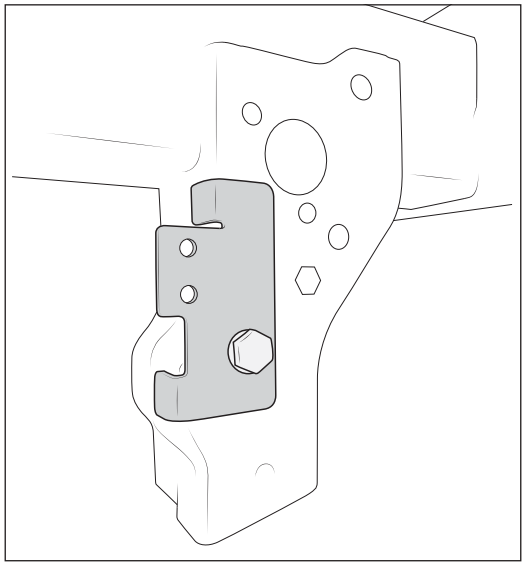

Figure 7

9. Install the reservoir clamp onto the reservoir so that lettering is right-side up with hose fitting at the top. Be careful not to scratch the paint when sliding the clamp on. Hold it in place and route the hose under the edge of the wheel liner, being careful to avoid any sharp edges. Bolt the clamp in place onto the reservoir brackets using the provided M8x16mm bolts and washers. The clamp should mount to the bracket with the rear set of holes so that the front and rear edges of the bracket are flush to the edges of the clamp (fig. 8). Mounting it to the forward set of holes can result in tire rub on the reservoir while turning. Tighten clamp retainer bolts to 20 ft-lb.

10. Install the reservoir clamp bolt from the rear so that the nut is at the front. Do not tighten yet. Position the reservoir so that 1.5-2" of the body sticks below the bottom of the clamp. Rotate it so that the hose and fitting point inboard about 45° toward the body mount, making sure the hose and fitting don't contact the body mount or any other sharp edges. Tighten the clamping bolt until snug, excessive force is not needed to hold the reservoir in place (fig. 9).

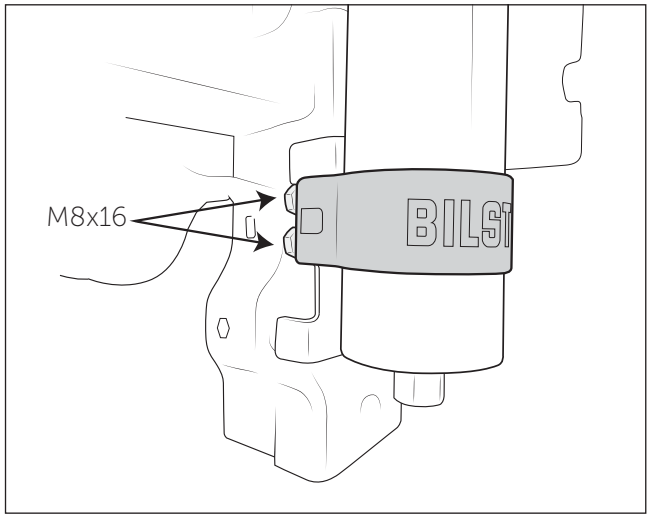

Figure 8

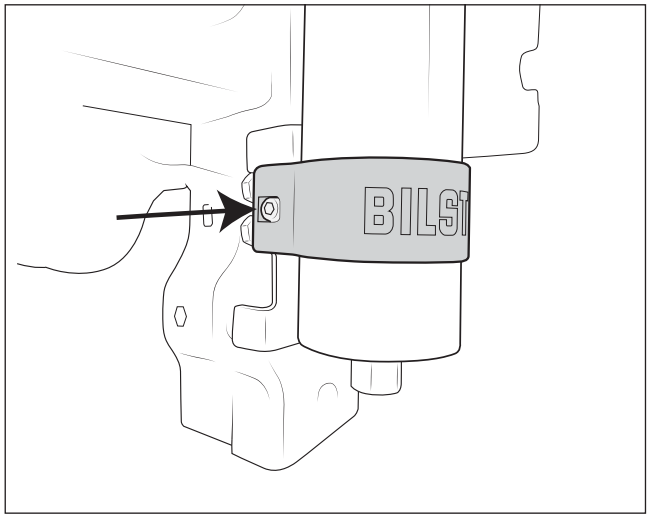

Figure 9

11. Repeat steps 1 thru 11 for the other side.

    NOTE: Due to track bar geometry, especially if being installed on a 2-post hoist, it may be easier to install the lower end of the left front shock after disconnecting the axle end of the track bar to allow the axle to center under the vehicle. The offset from the track bar can make lower bushing/bolt installation difficult at full rebound. Track bar can be reinstalled using the power steering to line up the mount once the wheels are on the ground, or using ratchet straps to pull diagonally between the frame and axle while on the hoist. Torque the track bar bolt to 110 ft-lb with the vehicle sitting at ride height.

II. JL WRANGLER: INSTALL REAR SHOCKS (GLADIATOR SEE SECTION III)

Correct part number must be installed in each location for proper fitment. See "Included Parts" section above for part numbers at each location.

1. Install shock using factory hardware at both ends. Offset upper bushing should be installed with long end toward inside of vehicle so that shock body clears the frame (fig. 10). Reservoir should point toward the rear when installed (fig. 11).

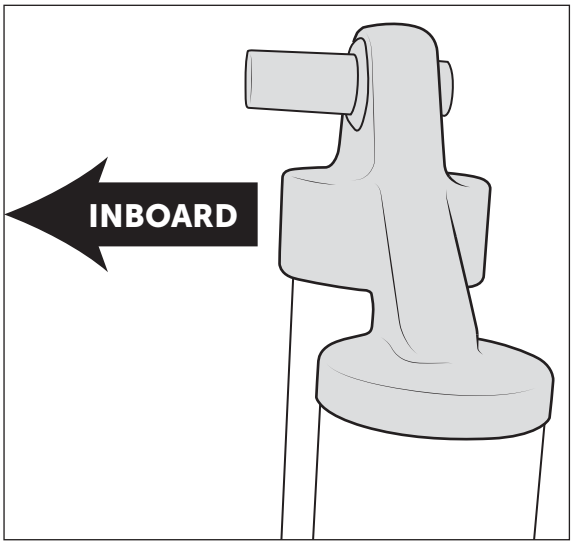

Figure 10

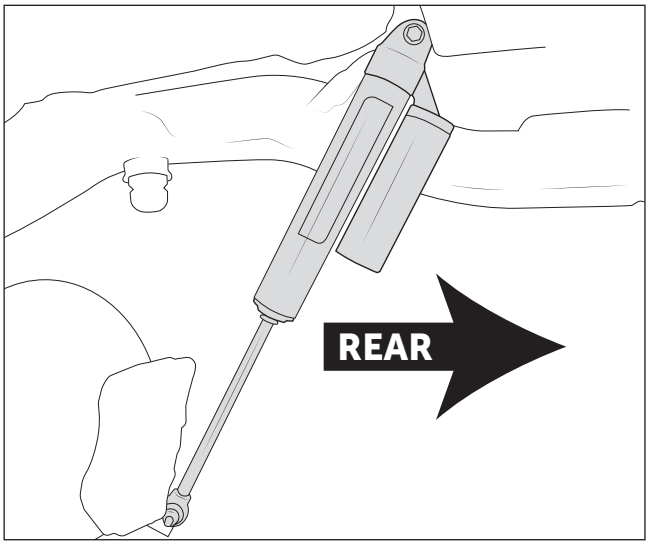

Figure 11

2. Install lower mounting bolt and nut. Lower rod end is not directional like the front. Torque upper shock bolt to 75 ft-lb, lower to 80ft-lb.

3. Repeat procedure for the other side.

NOTE: If installing with AEV rear bumper equipped with flare extensions and/or splash guards, slight trimming of the inner edge of the flare extensions and splash guards will be needed to clear the reservoir (fig. 12)

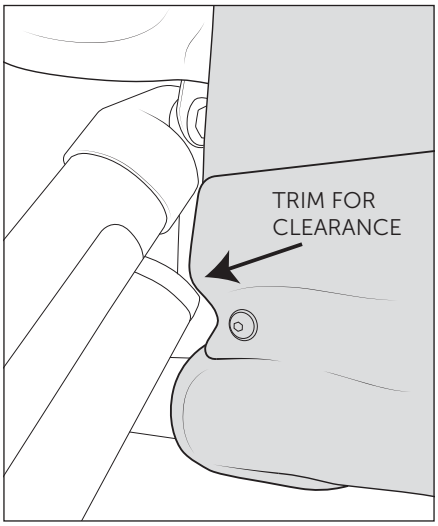

Figure 12

III. GLADIATOR: INSTALL REAR SHOCKS

NOTE: JT rear shocks are non-sided. Either rear shock can be installed on either side of vehicle.

1. Install shock using factory hardware at both ends. Reservoir should point toward front of vehicle when installed (fig. 13).

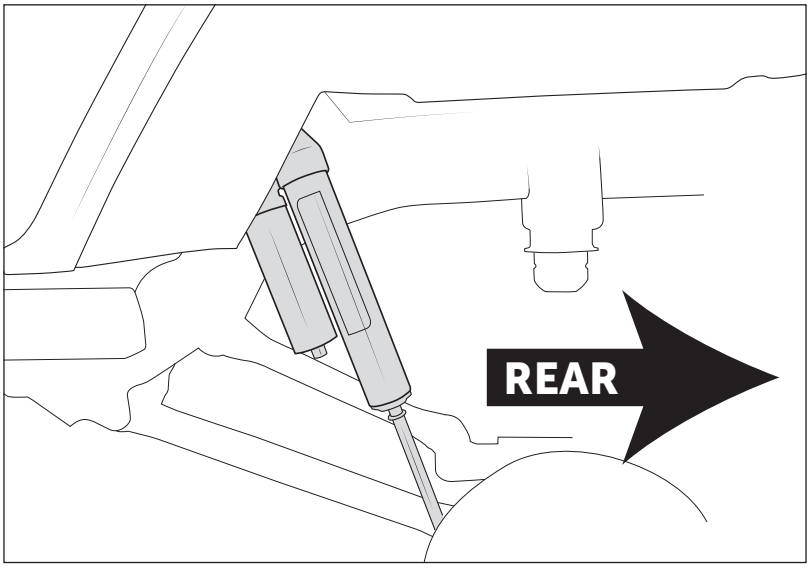

Figure 13

2. Install lower mounting bolt and nut. Lower rod end is not directional like the front. Torque upper and lower shock bolts to 89 ft-lb.

3. Repeat procedure for the other side.