



HYDRAULIC STEERING ASSIST FOR RAM TRUCK



Last Updated: 02/03/17

INSTALLATION GUIDE



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.

INCLUDED PARTS	QTY	REQUIRED TOOLS
Zip Ties	3	Metric and Standard Wrenches
Hydraulic Lines	2	Metric Socket Set
Brackets	2	Drill and Drill Bits
Hardware Pack	1	Pitman Arm Puller 46mm Socket

ATTENTION:

This steering assist kit is designed to work in conjunction with products from Performance Steering Components (PSC). Additional parts are required to be purchased through PSC:

SC2200K Hydraulic Ram

SG856R Steering Gear

For more information and pricing visit www.pscmotorsports.com



A. REMOVE FACTORY STEERING BOX

1. Make sure steering is centered.
2. Unscrew the bolt holding the steering shaft to the steering box (fig. 1). NOTE: Bolt must come all the way out for the shaft to be removed.

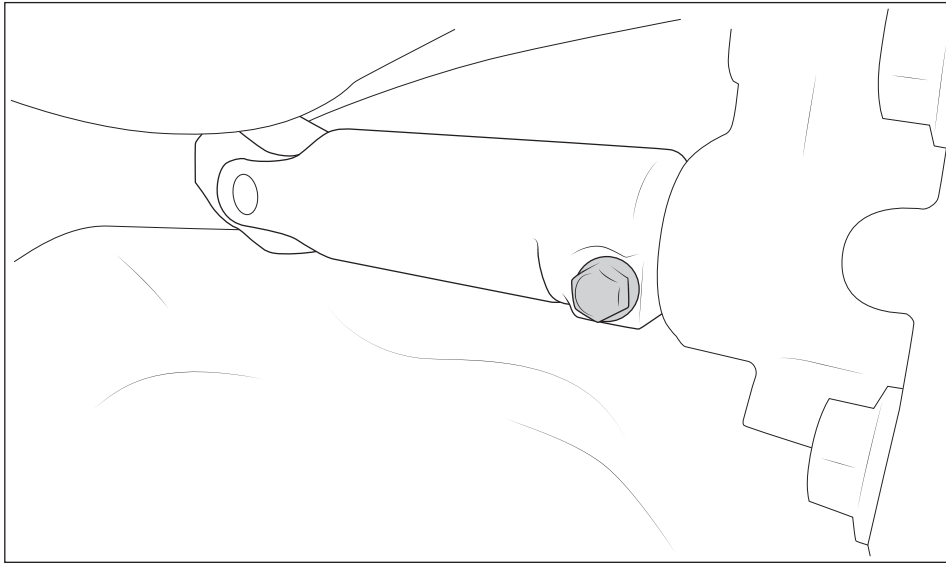


Figure 1

3. Unscrew both lines going to the top of the gear box (fig. 2). Fluid from reservoir will drain out so have a drain pan handy.

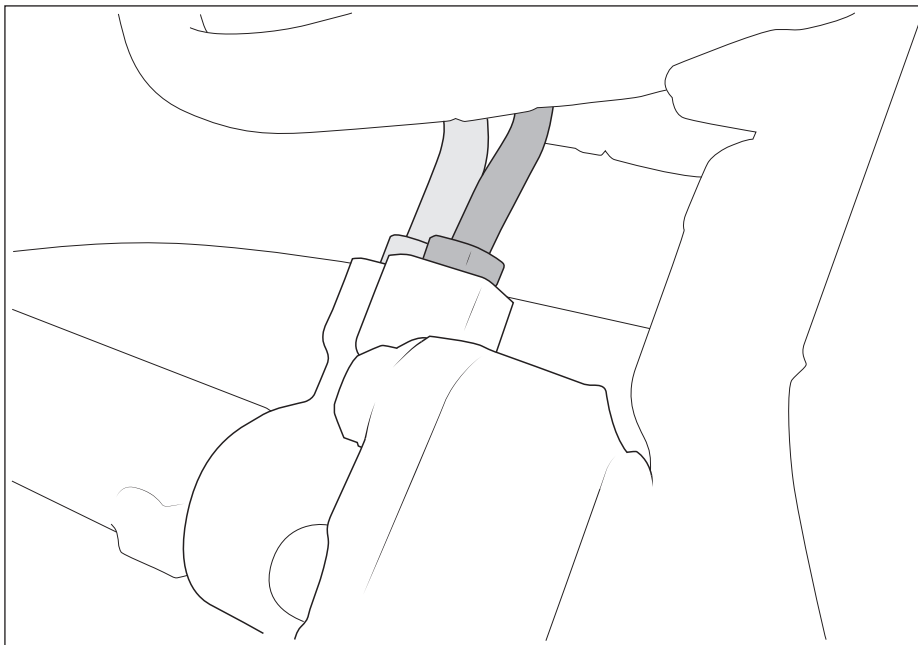


Figure 2



4. Remove the large nut on splined shaft so the pitman arm can be removed (fig. 3).

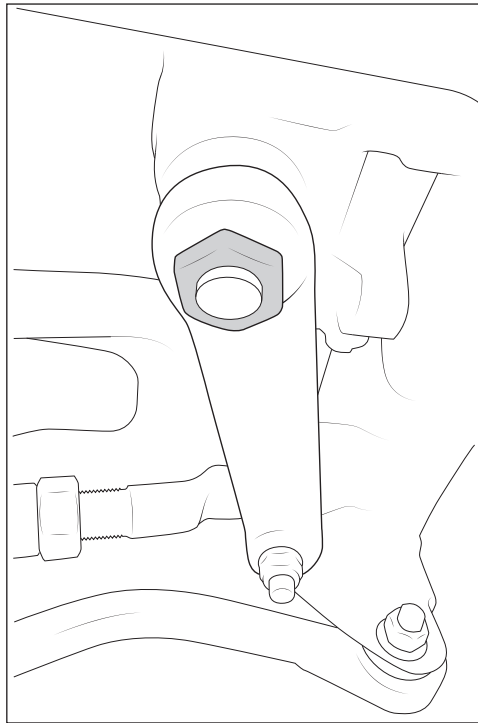


Figure 3

5. Use a pitman arm puller to remove the arm. Note the position of the arm so when it is installed on the new steering box the steering wheel will be centered.
6. Remove the three bolts on the outside of the frame that hold the steering box in place (fig. 4).
7. Remove the steering box.

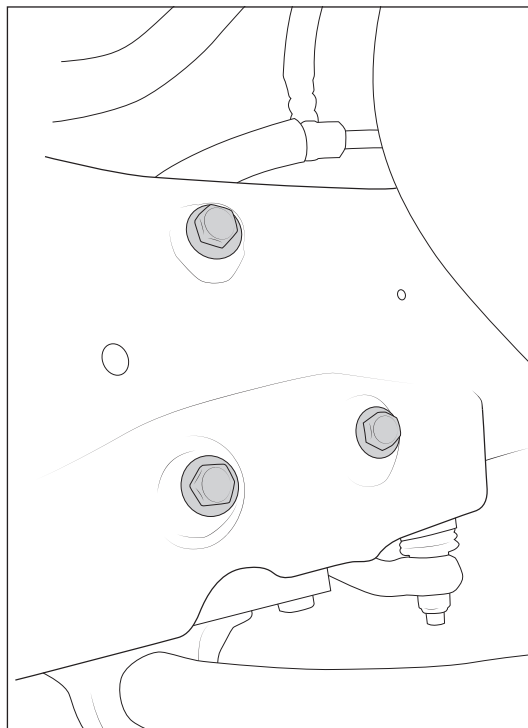


Figure 4



B. INSTALL HYRO-ASSIST STEERING BOX

1. Install new steering box with three bolts through the frame. Torque to 115 ft-lbs.
2. Reinstall pitman arm with large lock washer and nut. Torque to 177 ft-lbs.
3. Install hydraulic hoses for ram. The longer line will go to the top port on the steering box (fig. 5).
NOTE: Both hoses need to be angled towards the front of the vehicle to keep them away from any sharp edges on the cross member.

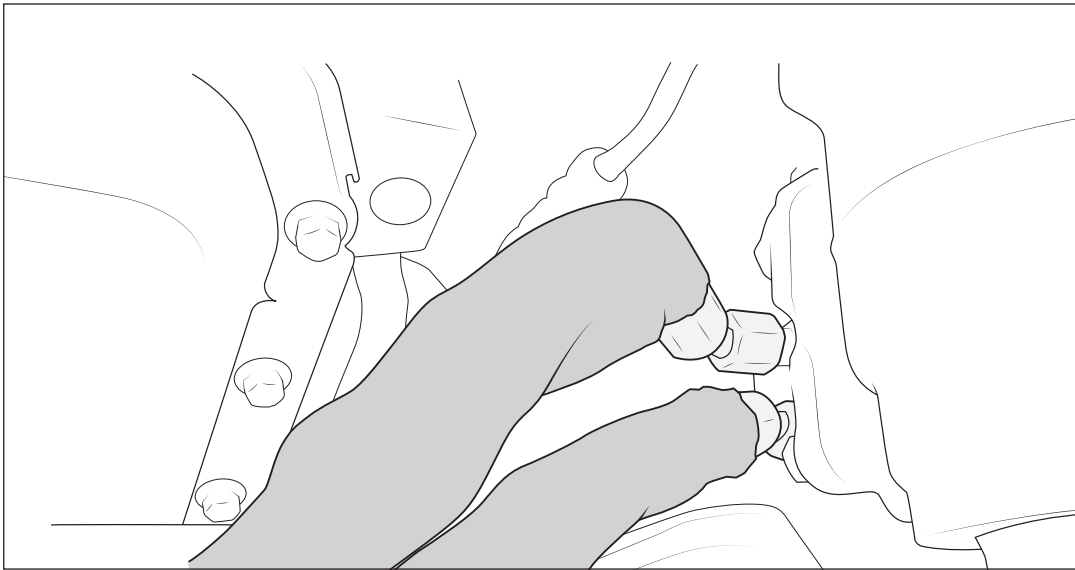


Figure 5

4. Reinstall the factory power steering lines to the top of the steering box.
5. Reinstall the steering shaft and bolt. Torque to 40 ft-lbs.

C. INSTALL HYDRAULIC RAM

1. Drill out the hole in the factory steering dampener bracket and AEV bracket to 11/16".
2. The Heim that goes into the threaded fixed end of the ram will need to be shortened. The Heim should be threaded all the way in and bottomed out on jamb nut (fig. 6).

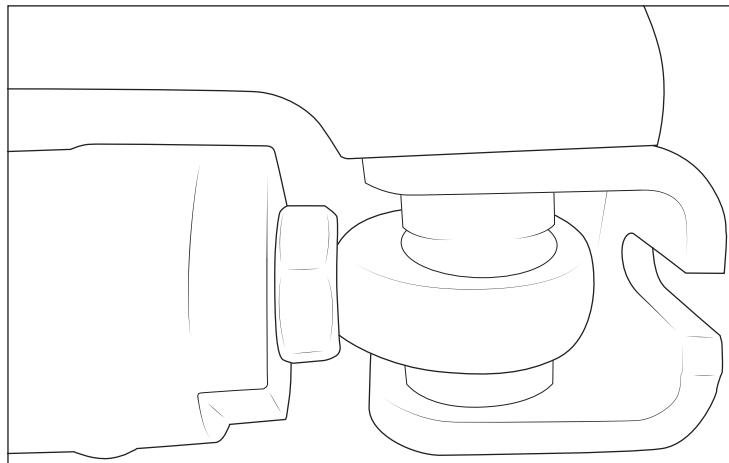


Figure 6



3. The fixed end of the ram should be installed on the axle with the smaller spacers on either side of the heim joint. Fasten with 5/8" bolt, nut, and washers. Install the bolt from the bottom up. Torque to 110 ft-lbs.
4. The shaft end of the ram will be installed at the factory location on the tie rod link with new brackets and larger spacers. Heim joint should be threaded completely onto the shaft along with jamb nut.
5. Bolt new plates onto the tie rod link using factory hardware. Torque to 50 ft-lbs. NOTE: Plate orientation is important, install as shown (fig. 7).

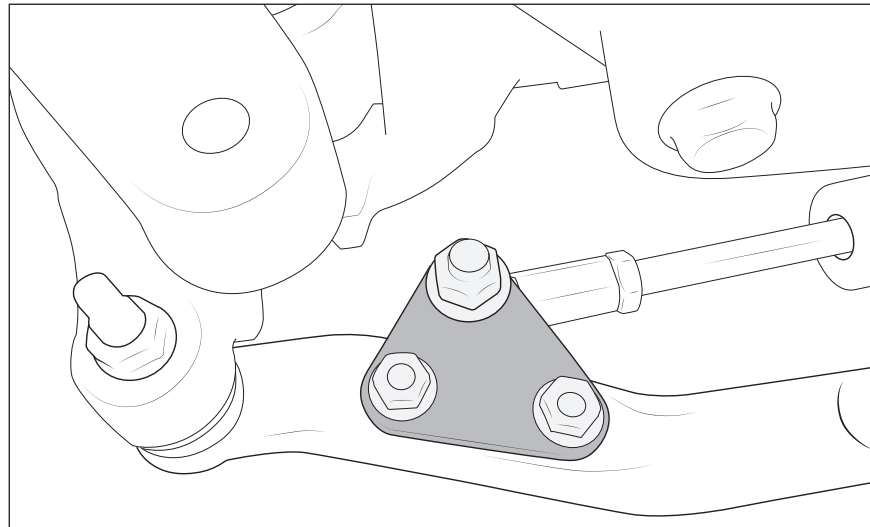


Figure 7

6. Bolt into position with 5/8" bolt, nut, and washers. Bolt should be inserted from the bottom up.



D. HYDRAULIC LINE ROUTING

1. Install hoses onto the ram. Fittings should be angled toward each other (fig. 8).

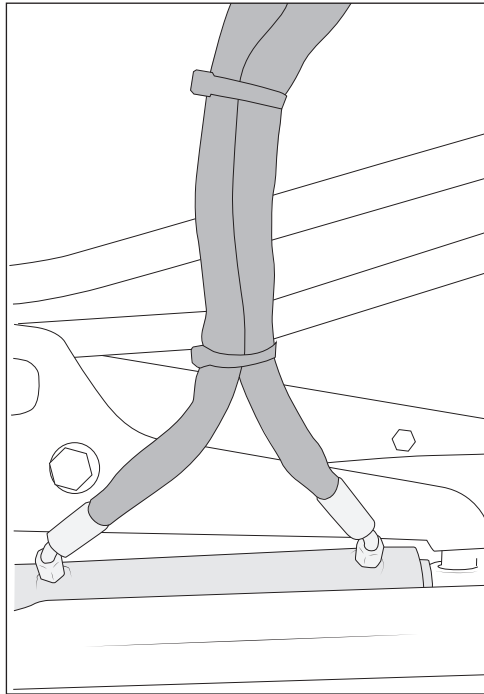


Figure 8

2. Drill two 1/4" holes in the cross member (fig. 9)
3. Hoses will be routed along the cross member and secured with p-clips (fig. 9). Use 1/4" bolts, washers, and nuts to fasten the p-clips to the cross member. The top hose should be attached to the top of the cross member and the bottom hose attached to the bottom of the cross member. NOTE: When mounting p-clips the axle should be at full droop. The ram should be rotated into position by taking up slack in the hoses. The fittings should be pulled slightly upward, but when the vehicle is on the ground the fittings should never contact the tie rod link.

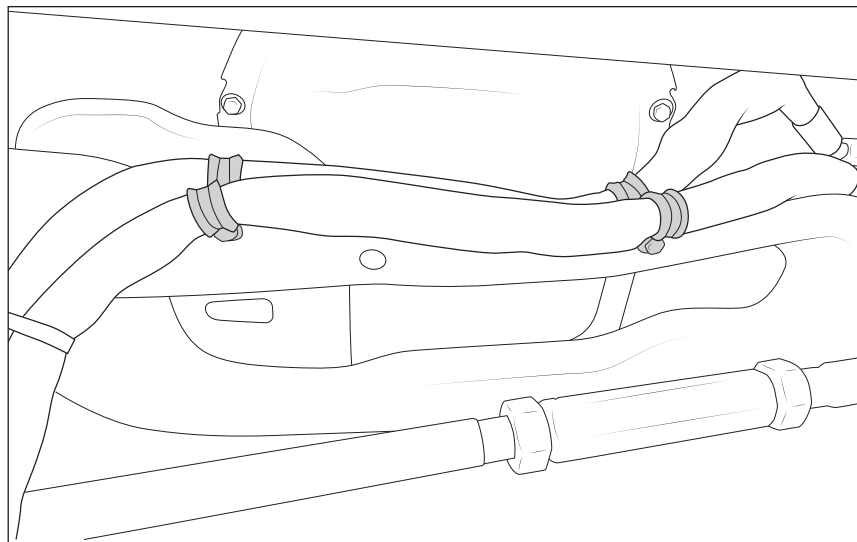


Figure 9



E. BLEED THE SYSTEM

1. Make sure all fittings in the power steering system are tight.
2. Raise all steering tires off the ground.
3. Leave the cap off the reservoir.
4. Cycle the steering from lock to lock three or four times.
5. Check fluid level in reservoir and refill as needed.
6. Repeat the process until a consistent level of fluid in the reservoir is reached.
7. Replace the cap on the reservoir.
8. Start the vehicle and let it run without any steering input for 30 seconds.
9. Turn off the vehicle and check the reservoir. Refill as needed and replace cap.
10. Start the engine and cycle the steering from lock to lock 10–15 times.
11. Turn off the engine and let stand for 10 minutes to allow air bubbles to work out of the system.
12. Repeat the process until no air bubbles are visible in the reservoir.
13. While looking in the reservoir, start the engine to observe any fluid change.
 - A. If the fluid level DOES NOT change, check the system for leaks. If no leaks are present you may test drive the vehicle.
 - B. If the fluid level DOES change, start the process over at step 4.