

## Jeep® Heavy Duty Steering System (TJ, LJ, XJ,ZJ)

**GEN III****Contents:**

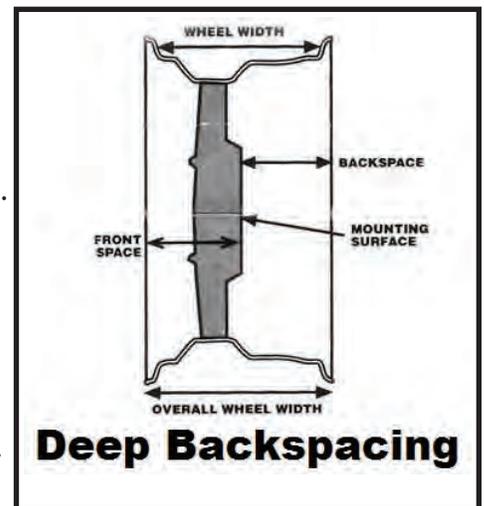
1. 18050.57 - Short H/D 1.25" Tube (1)
2. 18050.58 - Long H/D 1.25" Tube (1)
3. 18040.50 - Dampener Bracket (1)
4. 18043.26 - 7/8" H/D Tie Rod End RH (2)
5. 18043.10 - 7/8" H/D Tie Rod End LH (1)
6. 18043.27 - 7/8" H/D Cross Over Tie Rod End LH (1)



**Warning:** Steering system has been designed to work with most factory and aftermarket wheel-tire combinations. Some aftermarket and factory wheels with deep backspacing could make contact with passenger side cross over tie rod end at full LH steering lock. CHECK FITMENT OF WHEELS-TIRES PRIOR TO INSTALLATION.

All responsibility for inspecting, installing, tightening, and the application of proper OE torque specifications rest solely with the installer - owner. These steps are vital to prevent improper installation of components.

It is the owners responsibility to be aware of changes to vehicle performance and handling characteristics. By adding larger tires, and a lift kit OE handling can be dramatically altered.



**Note:** This kit has been designed for vehicles lifted up to 4". It is recommended that a drop pitman arm be used with any lift over 2". It is recommended for vehicles lifted over 4.5" and used as a daily driver, a steering tie rod flip kit be used instead of this steering system. A tie rod flip kit will allow the drag link tube to remain parallel to the tie rod tube. This is very important in reducing bump steer. Modification to the steering knuckle will be needed for this type of kit.

It is highly recommended that a qualified 4WD shop or alignment expert be consulted for final adjustments after lift and steering systems are installed. Vehicles lifted 4" above factory specifications may experience difficulty with alignments.

Owner/operators are responsible for checking all mounting hardware and jam nuts are tight and to factory specifications. All hardware should be inspected and tightened, if needed, after first 20 miles of road use. Additional inspections should be made every 200 miles.

Owner/operators are responsible for driving modified vehicles in a safe and responsible manner at all times. Seat belts and or harnesses are to be worn when vehicle is in motion.

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Step 1. Properly secure vehicle. Place in gear or park and set emergency brake. For further safety block tires.

Step 2. **(TJ-XJ-ZJ)** Remove old steering linkage. DO NOT alter the position of the front wheels or steering wheel during the removal. By keeping these components in their original position correct front end alignment will be maintained after installation of new steering system. Prior to installing new steering system measure distance between driver's side knuckle and passenger side knuckle and note length. If knuckles are accidentally moved during installation use this measurement to reposition knuckles back to the correct distance. For the steering wheel place a piece of tape on the wheel and a corresponding alignment piece on steering column. If the wheel moves during installation the alignment tape can be used to adjust steering wheel back to center.

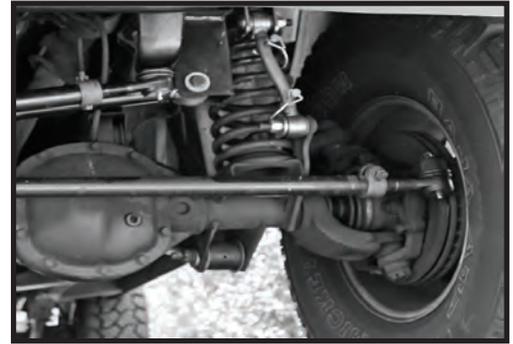
Step 3. **(TJ-XJ-ZJ)** Attach H/D cross over steering as shown. The dual attachment cross over tie rod end 18043.27 should be installed on the passenger side knuckle (pic.1). Loosen all clamps (pic.2) and turn tubes to the correct length needed for new tie rod ends to slide into pitman arm and driver's side knuckle (pic.3).



pic.1



pic.2



Pic.3

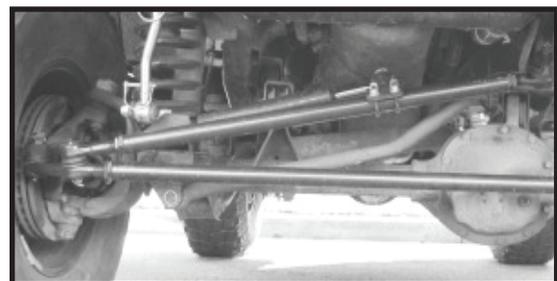
Step 4. **(TJ-XJ-ZJ)** Install castle nuts and torque to 60ft-lbs for all tie ends. During installation and adjustment it is important to keep front wheels and steering wheel in original position. If needed correct length can be adjusted by turning the long tube in or out as needed to match measurement taken in step #1. To adjust the steering wheel turn short tube in or out until alignment tape place on the steering wheel and column are centered.

Step 5. **(TJ-XJ-ZJ)** Insert cotter pins into tie rod and castle nuts. Install all grease fittings and if needed add grease. DO NOT over fill dust boots with grease. Stop adding grease at the first signs of grease escaping past dust boots. Remove grease fitting and install grease plugs to tie rod ends.

Step 6. **(TJ-XJ-ZJ)** Attach H/D steering stabilizer mounting bracket to drag link tube (pic4 &5). Reattach stabilizer and check clearance to oil pan. Bracket placement should allow full movement of stabilizer when in use (left to right as steering is cycled). **NOTE: if factory stabilizer is reused the mounting bolt well need to be cut off of stbalizer. Supplied bolt for stabilizer bracket can then be used.**



pic.4



pic.5

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Step 6. (XJ-TJ-ZJ) With stabilizer mounted and positioned correctly tighten u-bolt nuts. Install stabilizer nut and tighten to 45ft-lbs.

**NOTE: Mounting bracket orientation may not match images supplied. Each vehicle will need to determine correct placement on tube to allow clearance of oil pan and sway bar mounting brackets.**

Step 7. (XJ-TJ-ZJ) With steering wheel and steering knuckles aligned and castle nuts tightened align the tube clamps as shown in pic. 6.

Step 8. (XJ-TJ-ZJ) The clamp must be located as close the the end of the tube as possible. The clamp bolt should be located directly over the tube cutout. Torque clamps to 35 ft/lbs.



pic.6



pic.7

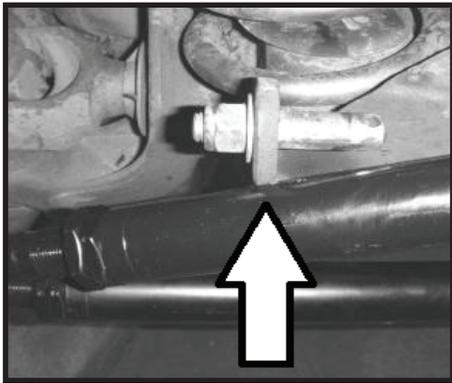
Step 9. (XJ-TJ-ZJ) Check all clamps once assembly is complete to ensure proper torques are achieved. If clamps become loose, tubes can rotate and allow vehicle to come out of alignment.

Step 10. (XJ-TJ-ZJ) Inspect all castle nuts and clamps before test driving vehicle. After completing safety inspection proceed with road test (avoid traffic if possible). If adjustments are needed review steps #3-#4. Tighten all nuts as instructed.

DISCLAIMER: Rugged Ridge - OMIX-ADA has supplied this kit with the understanding that the purchaser is solely responsible for their vehicle and any modifications made beyond original factory standards. Rugged Ridge - OMIX-ADA in not responsible for any injuries to the owner or damage to vehicle from improper installation of components, unsafe driving and or misuse of supplied components.

**Jeep® Heavy Duty Steering System (TJ, LJ, XJ, ZJ)****GEN III****Trouble Shooting:**

(XJ-ZJ) - On vehicles lifted over 4" trimming of sway bar mounting brackets may be required. With kit installed cycle suspension at full drop. Turn steering wheel to the right and check to see if drag link tube makes contact with sway bar mounting bracket (pic.8). If tube contacts bracket trim bracket back about 1/4" (pic.9).

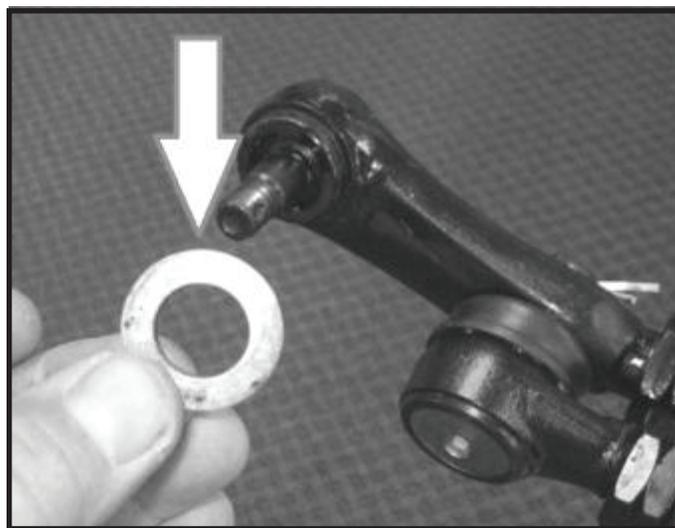


pic.8



pic.9

(XJ-TJ-ZJ) - For dead spot in steering a large flat washer has been supplied with this kit (pic.10). For some vehicles lifted over 4" this washer can be used between the steering knuckle and tie rod end. This washer reduces the movement of the tie rod end to reduce end play during steering direction change. This dead spot is caused by the angle of the drag link and not the steering system. If dead spot remains further modification to vehicle will be needed. All steering linkages and track bars should remain as parallel as possible to maintain a safe vehicle.



pic.10