



## **DRAG LINK**



## **TIE ROD**



**PRODUCT: JK F-Ton Tie Rod and Drag Link**

- FUS-FTJK-DTC
- FUS-FTJK-TR
- FUS-FTJK-DL

Version 1.1, 7/25/2023

**READ INSTRUCTIONS IN FULL BEFORE BEGINNING INSTALLATION AND INVENTORY ALL PARTS TO ENSURE NOTHING IS MISSING.**

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**NOTE: BE SURE TO CHECK ALL FASTENERS FOR PROPER TORQUE BEFORE TEST DRIVE. RECHECK AFTER 500 MILES AND BE SURE TO CHECK PERIODICALLY.**

**Read before install:**

- Ensure ALL tie rod and drag link ends are coated with ANTI-SEIZE before installing into aluminum
- Use blue thread locker on all jam nuts making sure that surface of the rod end where it is applied does NOT have anti-seize on it
- Minor trimming of brake dust shield may be required for Tie Rod end clearance (generally only required for aftermarket high steer knuckles)

## TOOLS AND ACCESSORIES NEEDED:

Tape Measure

Torque Wrench

Large Adjustable Wrench

1-1/2" Wrench (or another large adjustable wrench)

Anti-seize (we recommend Marine Grade Anti-Seize)

Blue Thread Locker

Hammer

Ratcheting Wrench

Socket/wrench sizes: 21mm, 7/8", 5/16"

Torque Marking Compound or Permanent Marker (recommended, but not required)

Mobilux EP 1 Grease

Metal cutters, Dremel with cut-off wheel, or other cutting tools (if needed)

## TORQUE SPECIFICATIONS:

Tie Rod End Nylon-Insert Locknuts: 63 ft-lbs

Drag Link (Knuckle End) Nylon-Insert Locknut: 63 ft-lbs

Drag Link (Pitman Arm End) Nylon-Insert Locknut: 77 ft-lbs

Jam Nuts: 250-350 ft-lbs

Zerk Fittings: 37 in-lbs

1. Remove stock tie rod and/or drag link. Use a 21mm socket to remove the nuts on the tie rod and/or drag link. Remove the tapered studs from the knuckles and pitman arm. You may need a hammer to help unseat the tapered fit.
2. Measure lengths (center of stud to center of stud) of existing drag link and/or tie rod assembly. Write these numbers down, you will be using them to set initial lengths of your new Fusion steering.

3. Your new Fusion F-Ton drag link has one straight forging at the pitman arm end and one forging with a single bend at the knuckle end, as shown in Fig. 1. Both of the F-ton tie rod forgings have an S-bend curve, as shown in Fig. 2.

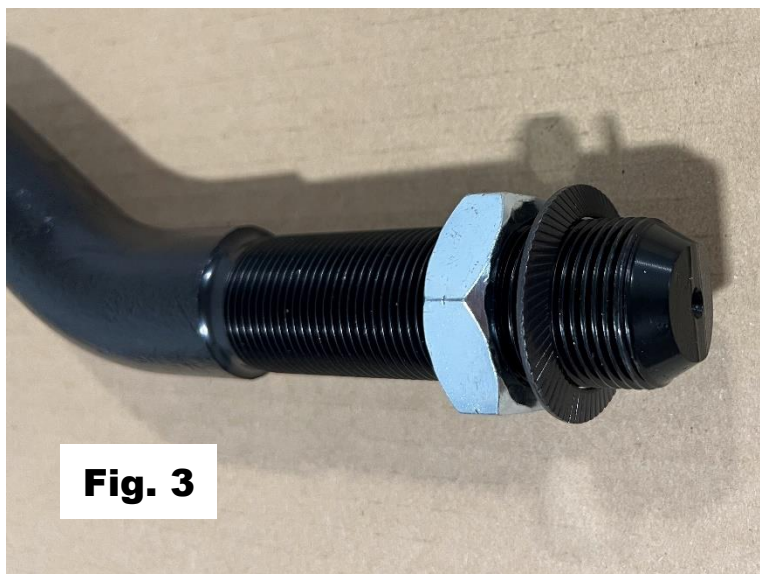
**Fig. 1: DRAG LINK**



**Fig. 2: TIE ROD**



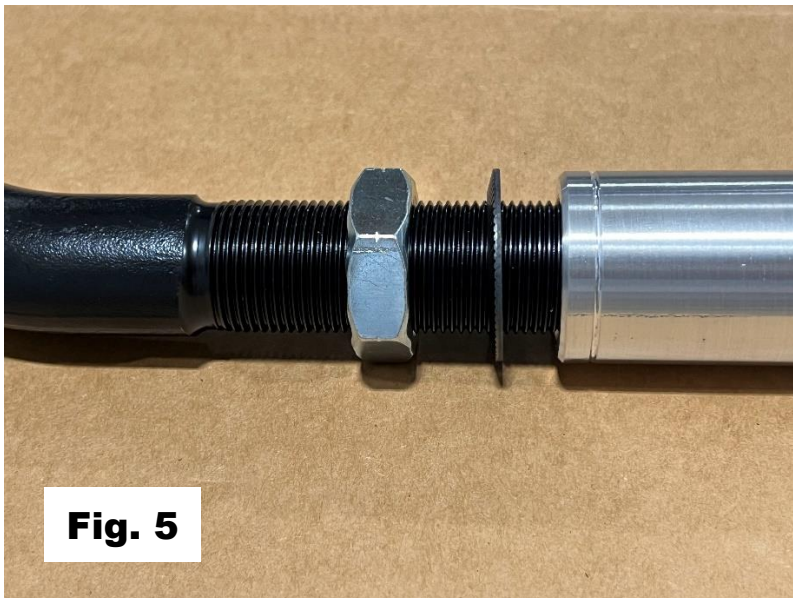
4. Install zerk fittings into the tie rod and/or drag link ends. Apply a small amount of blue thread locker and tighten with a 5/16" socket and torque to **37 in-lbs** (that is **INCH-LBS**, not ft-lbs, so do not over tighten).
5. Thread jam nuts onto forged ends of the new F-Ton steering, followed by the serrated washers (washers will be sandwiched between the jam nut and the aluminum sleeve) as shown in Fig. 3. The direction of the lock washer does not matter. The left-hand thread jam nut has score marks on the corners, as shown in Fig. 4.



**Fig. 3**



6. Liberally apply anti-seize to the forging threads and thread forgings into the aluminum sleeve. We recommend **Marine Grade** Anti-seize. Both the tie rod and the drag link have forgings that are right-hand thread (RHT) and left-hand thread (LHT) so that the lengths of the assemblies can be adjusted on vehicle. The LHT forging will thread into the end of the aluminum with score mark (see Fig. 5 below) in a counter-clockwise direction. The RHT forging will thread into the other end of the aluminum that does NOT have a score mark in a clockwise direction.



7. Adjust assemblies to match measurements taken in Step 1. When adjusting lengths, try to have an equal number of threads showing on each forged end.
8. You may need to clearance your brake dust shield for the tie rod forgings. Install tie rod on the vehicle, ensuring that the tapered stud fully seats into the knuckle. If trimming is

not required, you may proceed to step 9. Use a marker to trace the area on the brake dust shield that needs to be trimmed. Remove the tie rod. Using a cutting implement of your choice, trim the dust shield. Once ample clearance is achieved, you are ready to complete the final installation of the steering.

9. Install assemblies on the vehicle, and tighten nylon locknuts. Torque nuts to **63 ft-lbs** at knuckles with a 7/8" socket (both tie rod ends, and drag link at the knuckle end) and **77 ft-lbs** at the pitman arm with a 7/8" socket.
10. Perform a front-end alignment. Rotate the aluminum sleeve of the drag link to center the steering wheel and rotate the aluminum sleeve of the tie rod to adjust toe. WE HIGHLY RECOMMEND THAT YOU HAVE YOUR ALIGNMENT CHECKED BY A PROFESSIONAL.
11. Clean away excess anti-seize, if needed, and apply blue thread locker onto forging under the jam nuts. Tighten jam nuts to **250-350 ft-lbs** by turning the jam nut with a wrench and holding the aluminum at the wrench flat with the 1-1/2" wrench (or an adjustable wrench). We recognize that many customers will not have the specialized tools to accurately set jam nut torque, so just make sure it is really F-ton tight.
12. Be sure to check all fasteners for proper torque before test driving. Recheck torque after 500 miles, and check periodically thereafter. We highly recommend the use of a torque marking compound (or a permanent marker) to create torque stripes on locknuts and jam nuts that you can visually check on a regular basis.
13. The tie rod and drag link joints come pre-greased - DO NOT add additional grease. Grease the joints with Mobilux EP 1 after 2,500 miles and then every 5-10k miles thereafter (approximately when you would do an oil change on your vehicle). If you frequently submerge the joints in water and/or mud, more frequent greasing is recommended. ONLY grease with a hand pump grease gun. 3-4 pumps are sufficient. Do NOT force the grease in. While the joints have relief pathways for grease to move out of the top side of the joint, forcing grease into the joint can cause damage.