PREVOST

# *Instruction Sheet* IS-18091

## Tie Rod 610052 First Installation Instructions

Prevost vehicles with Dana S82, S84 / S84U I-beam axles 1994- today

Replaces: 611024; 611025; 611292; 611026.

First Release 08-15-2019

## MATERIAL

Kit #IS18091 includes the following parts:

| Part No. | Description | Qty |
|---|---|---|
| 610052 | TIE ROD ASSY | 1 |
| 610051 | NUT HEX SELF LOCKING M24-1.5 (Single use) | 2 |
| IS-18091 | INSTRUCTION SHEET | 1 |
| FI-18091 | FEUILLE D'INSTRUCTION | 1 |

| *NOTE* |
|---|
| *Material can be obtained through regular channels.* |

## DESCRIPTION

Use these instructions when replacing the drop joint tie rod on S82, S84 / S84U I-beam axles. The new tie rod will be adjusted to the length of the original; however, a steering alignment needs to be performed after replacement.

**FIGURE 1: OLD BELOW VS NEW ABOVE**

## TOOLS

- 36mm crowfoot adapter
- Torque wrench
- 1 1/8" socket
- 22mm socket
- 22mm wrench
- 8mm hex bit socket

## PROCEDURE

**DANGER**

Park vehicle safely, apply parking brake, stop engine. Prior to working on the vehicle, set the ignition switch to the OFF position and trip the main circuit breakers equipped with a trip button. On Commuter type vehicles, set the battery master switch (master cut-out) to the OFF position.

Lock out & Tag out (LOTO) must be performed during set-up, maintenance or repair activities. Refer to your local procedure for detailed information regarding the control of hazardous energy.

1. Lift vehicle.
2. Place jack stands under front axle.

   Use 10 US ton (20 000 lb; 9072 kg) safe working load (SWL) jack stands. Refer to MI18-18 for additional information.
3. Remove wheels.

FIGURE 2: JACK STAND PLACEMENT

4. Measure tie rod ball joint center to center distance. Note Value for reference.

   _____

FIGURE 3: TIE ROD BALL JOINT CENTER TO CENTER MEASUREMENT

5. Disassemble former tie rod by removing the cotter pin and castle nut. (1 1/8” socket)
6. Disengage the ball joint pin from the levers.

   Assuming axle alignment was good; keep the original tie rod intact for reference.

FIGURE 4: BALL JOINT DISSASSEMBLY

7. Clean all mating surfaces thoroughly, removing grease and corrosion.
8. Finish cleaning with brake cleaner fluid.

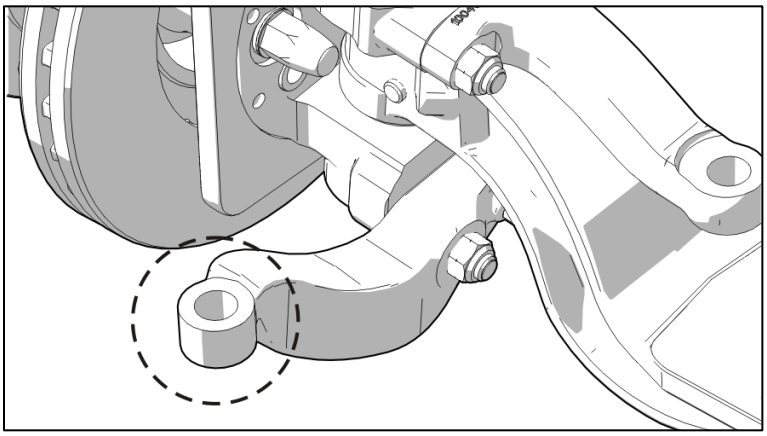

**FIGURE 5: CLEANING**

9. Perform coarse length adjustment of the new tie rod to get close to the measured length by screwing / unscrewing the ball joint by one turn increments.

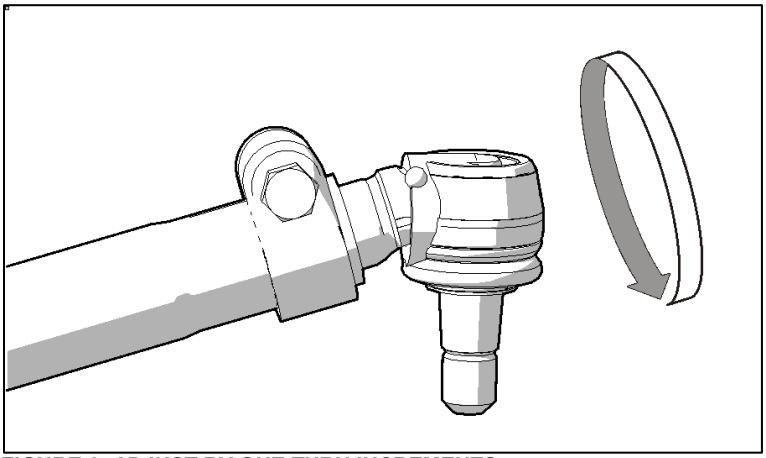

**FIGURE 6: ADJUST BY ONE TURN INCREMENTS**

10. Next, perform fine adjustment using the adjuster sleeve to reach the same length. (See Figure 7). If possible, confirm with the original.

    *The only part turning should be the sleeve* (Figure 7). Do not adjust by turning the tube or the joint.

**FIGURE 7: NEW TIE ROD LENGTH ADJUSTEMENT**

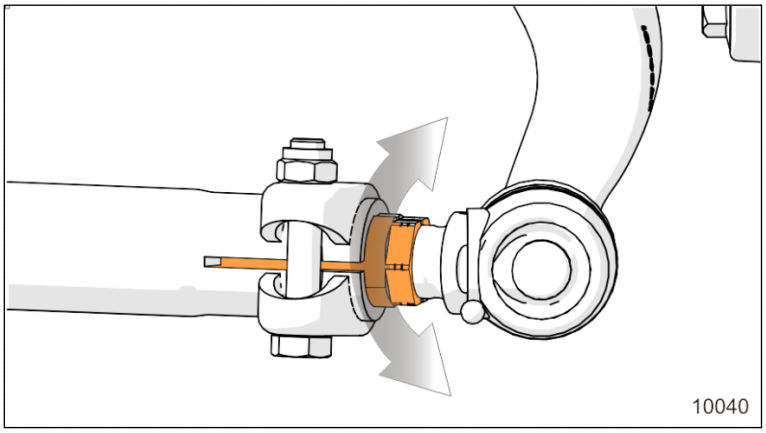


**FIGURE 8: FINE ADJUSTMENT USING THE SLEEVE.**

11. Install new tie rod on axle. Orient tube bend so it is pointing down *and* parallel to the axle beam.

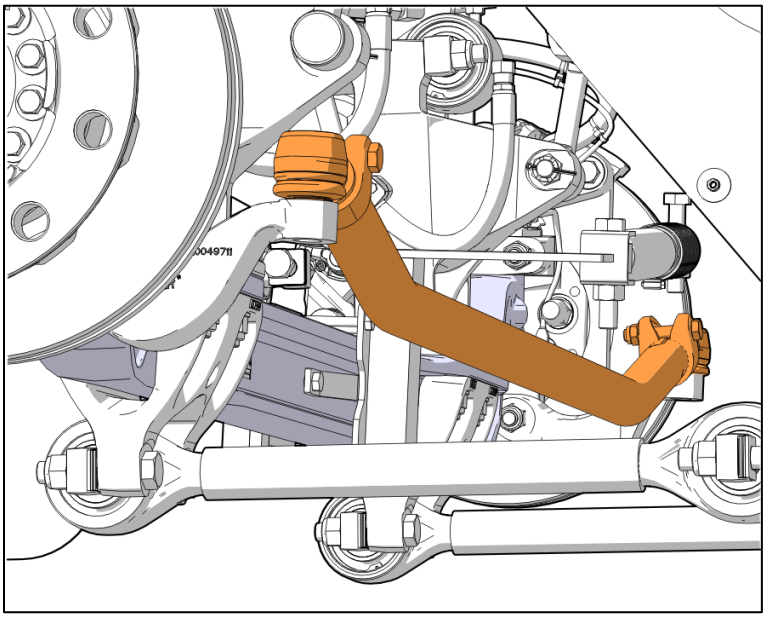

**FIGURE 9: TIE ROD ORIENTATION**

12. Use a torque wrench with a 36mm crowfoot adapter and 8mm hex bit to prevent ball joint rotation.
13. Tighten ball joint top-locking nut to **155-170 lb-ft (210-230 Nm)** Apply torque seal mark.

    Note: These nuts are *single use* and should be *replaced every time they are unscrewed*.

**FIGURE 10: BALL JOINT TIGHTENING**

14. Use 22mm socket and wrench. Tighten clamp bolts to **107-129 lb-ft (145-175 Nm)** Apply torque seal mark..

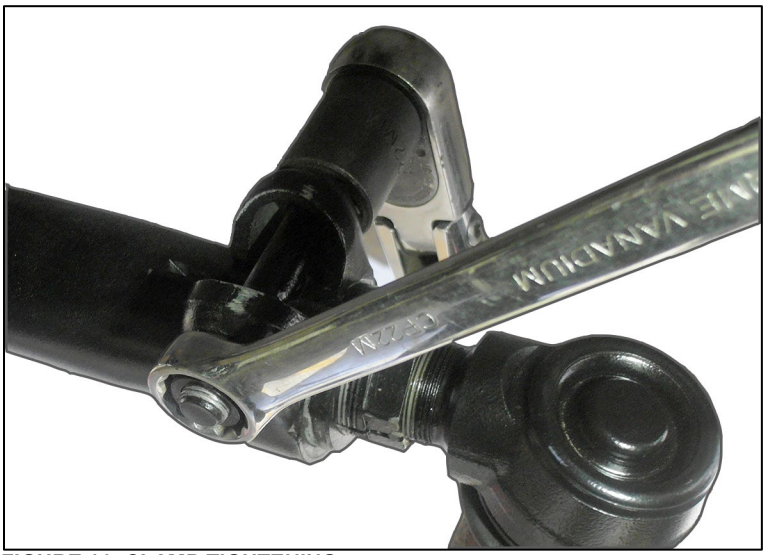

**FIGURE 11: CLAMP TIGHTENING**

15. Re-install wheels. Tighten to **450-500 lb-ft (610-678 Nm)** in proper sequence.
16. Lower vehicle.


**FIGURE 12: WHEEL INSTALLATION.**

17. Perform vehicle steering alignment. To adjust toe-in, use the adjuster sleeve. (Figure 7)
18. Refer to your vehicle's Maintenance Manual in *Section 14-Steering* under "Front Wheel Toe-in.

### Maintenance information

The new tie rod requires regular inspection. Refer to maintenance information MI18-45, available on the Prevost technical publications web site.

## PARTS / WASTE DISPOSAL

Discard waste according to applicable environmental regulations (Municipal/State[Prov.]/ Federal)