

PREVOST

Instruction Sheet

IS-18091A

TIE ROD 610052 FIRST INSTALLATION INSTRUCTIONS

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

Replaces: 611024; 611025; 611292; 611026.

Revision: A

03-04-2021

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 TIE ROD ASSY VS NEW ABOVE

TOOLS

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

PROCEDURE



DANGER

Park vehicle safely, apply parking brake, stop the 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 the front axle.

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



FIGURE 2: JACK STANDS PLACEMENT

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

Value: _____



FIGURE 3: TIE ROD BALL JOINT CENTER TO CENTER MEASUREMENT

4. Disassemble former tie rod by removing the cotter pin and castle nut. (1 1/8" socket)
5. 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 DISASSEMBLY

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

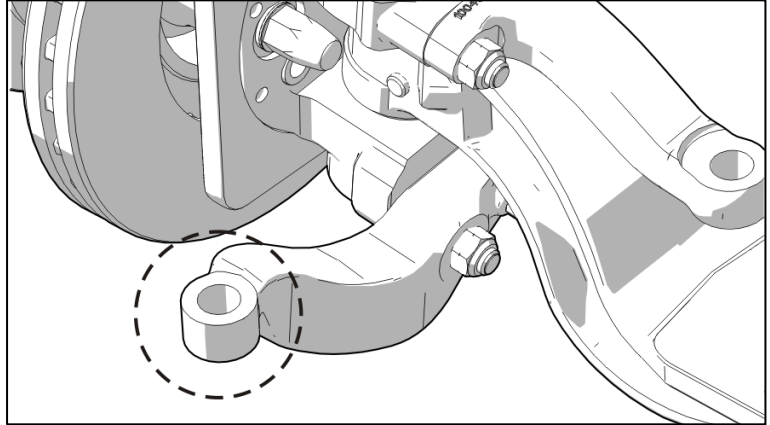


FIGURE 5: CLEANING



FIGURE 6: TIE ROD ASSEMBLY - 2 DIFFERENT BALL JOINT ADJUSTMENT TYPES

8. Refer to Figure 6. At the **ball joint only** side, loosen the clamp bolt. Perform coarse length adjustment of the new tie rod to get close to the measured length by screwing / unscrewing the **ball joint only** side by one turn increments.

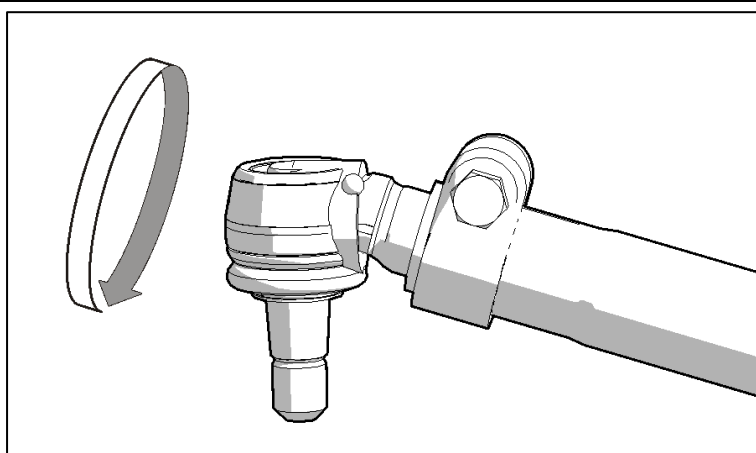


FIGURE 7: ADJUST BY ONE TURN INCREMENTS THE "BALL JOINT ONLY" SIDE

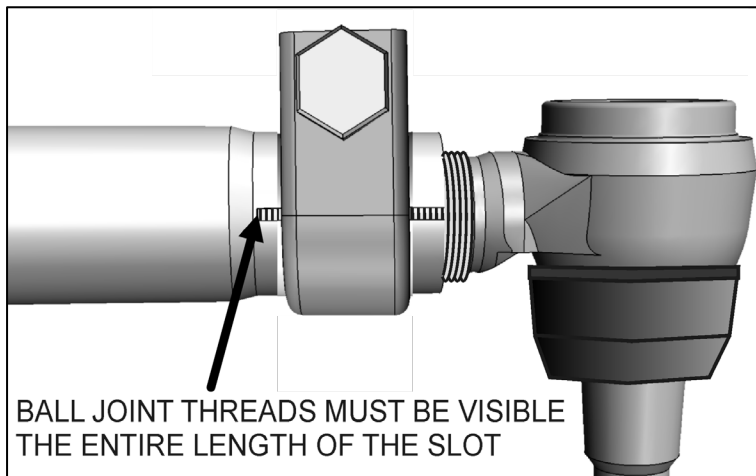


FIGURE 8

9. Next, on the other side of the tie rod, perform fine adjustment using the **fine adjuster** to reach the same length. (See Figure 9). If possible, confirm with the original.

The only part turning should be the sleeve (Figure 9). Do not adjust by turning the tube or the ball joint.

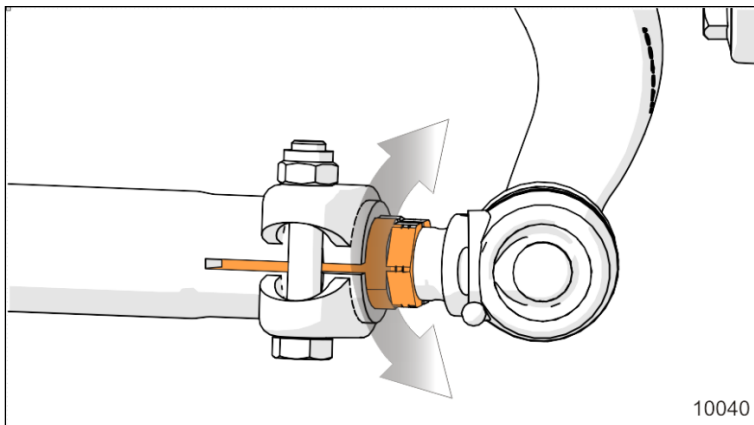


FIGURE 9: FINE ADJUSTER SLEEVE

10. Install new tie rod on the axle with the **fine adjuster sleeve** on the **driver side**. Orient tube bend so it is pointing down *and* parallel to the axle beam.

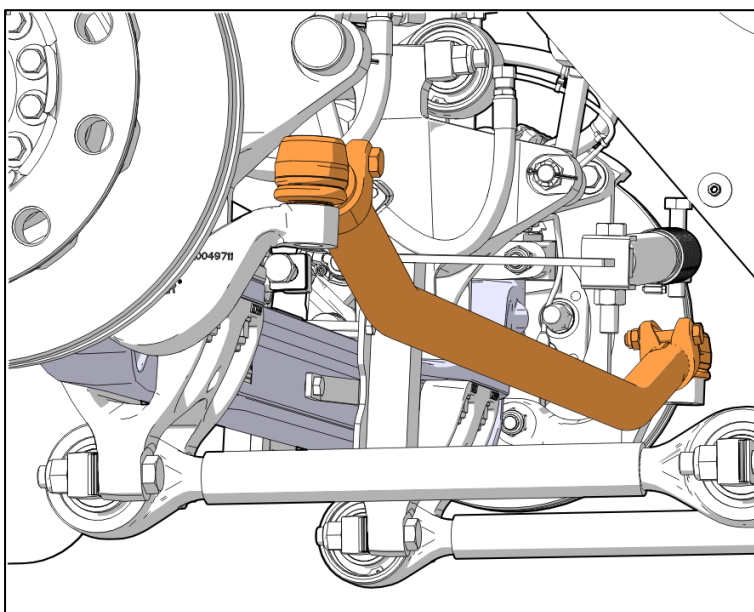


FIGURE 10: TIE ROD ORIENTATION

11. Use a torque wrench with a 36 mm crowfoot adapter and 8 mm hex bit to prevent ball joint rotation.
12. Tighten the two (2x) ball joints 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 11: BALL JOINT TIGHTENING

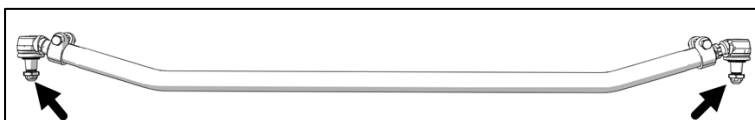


FIGURE 12

13. On both ends of the tie rod, use a 22 mm socket and wrench. Tighten the clamp bolts to **107-129 lb-ft (145-175 Nm)** Apply torque seal mark.



FIGURE 13: CLAMP TIGHTENING

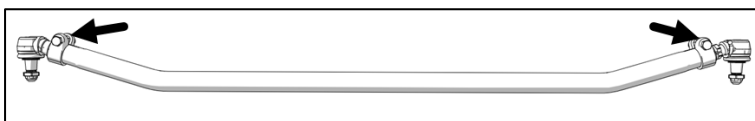


Figure 14

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



FIGURE 15: WHEEL INSTALLATION.

16. Perform vehicle steering alignment. To adjust toe-in, use the adjuster sleeve. (Figure 9)
17. 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)