


Title:	TAK-4 Old versus New Style Torsion Bars			
Number:	PB_774	Release Date:	6/2/2026	
Revision Number:	Not Applicable	Revision Date:	Not Applicable	
Chassis Type:	Any chassis with TAK-4			
Component Description:	Threaded Torsion Bars			

This is a Parts Bulletin. The upgrades outlined in this bulletin are optional. Parts and labor associated with these upgrades are not covered under warranty. Parts associated with this product upgrade are available for purchase through the dealer network.

Subject:

The TAK-4 design was updated and older styles of TAK-4 can be upgraded. These updates to the torsion bar and torsion bar mounting are recommended but not required.

Purpose:

TAK-4 is a flagship product of Oshkosh Corporation and not only of Pierce. This bulletin is to communicate what this change is, what models it is applicable to, and what it requires to upgrade.

Some early designs of TAK-4 had adjustable, threaded torsion bars. These were found to have an acceptable service life, but engineering wanted to do better for our customers. The torsion bar and torsion bar mounting were redesigned to use an adjustable clevis, bracket, and bar assembly that are more robust.



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Procedure:

1. Order the appropriate bracket kit for your vehicle by matching it with the “Applicability”.

Bracket Kits		
P/N	Description	Applicability
2834990	0151-TORSION BAR BRKT,TAK4	Arrow XT
2847102	0151-TORSION BAR BRKT,TAK4	Arrow XT with Aerial Scope Ladders
2847289	0151-TORSION BAR BRKT,TAK4	Arrow XT with Pump under Cab and Cummins ISL
2847323	0151-TORSION BAR BRKT,TAK4	Arrow XT with Pump under Cab and Detroit Diesel DD13 or Cummins ISX Engines
3108320	0151-TORSION BAR BRKT,TAK4	Dash CF with 70" Cab
2847485	0151-TORSION BAR BRKT,TAK4	Dash CF with 80" Cab
2846887	0151-TORSION BAR BRKT,TAK4	Quantum with Aerial Scope Ladders
2847367	0151-TORSION BAR BRKT,TAK4	Quantum with 74" Cab and Pump under Cab
2847170	0151-TORSION BAR BRKT,TAK4	Quantum with 67" Cab and Pump under Cab
3108320	0151-TORSION BAR BRKT,TAK4	Saber Cabs with Pump under Cab
2847125	0151-TORSION BAR BRKT,TAK4	Velocity or Impel with Pump under Cab
2834988	0151-TORSION BAR BRKT,TAK4	Velocity, Impel, or Saber Cabs built by entities not PMI (MaxiMetal, Frontline, etc.)
2846246	0151-TORSION BAR BRKT,TAK4	Velocity/Impel with Aerial Scope Ladders

THREADED TORSION BAR REMOVAL

2. Park truck on a smooth, level, solid surface.



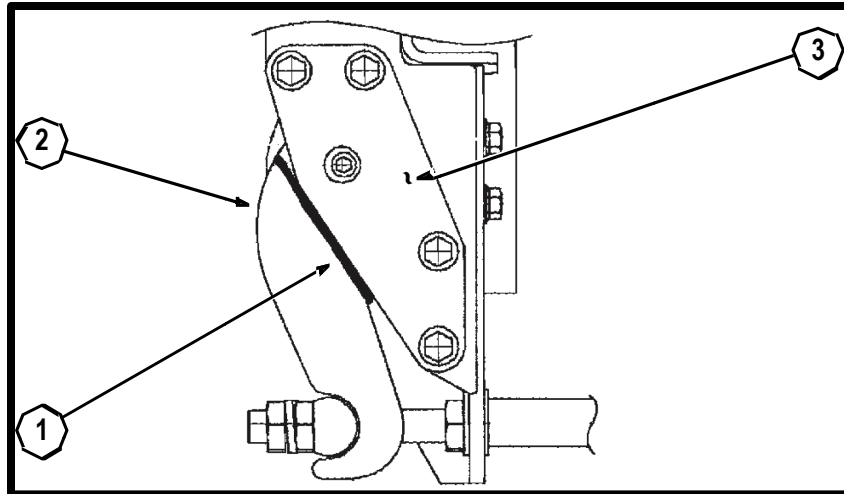
DO NOT get under the truck in any way after it is raised unless the truck is supported with jack stands or blocks. The hydraulic jack is used for lifting the vehicle only, and not for supporting the vehicle in the raised position. Failure to correctly support the truck could let the truck fall, causing serious injury or death.

3. If the upper control arm, torsion bar, and torsion bar anchor are being replaced and not reused, it will be necessary to perform the adjustment procedures found in “Installation” on page 1-3. If the above mentioned parts are to be reused, it is much faster and easier to matchmark the torsion bar plate and torsion bar anchor.
4. The left and right side torsion bars are removed the same way. Identify the left- and right-hand sides by marking the torsion bars with a paint pen.
5. Raise cab. (Refer to “Operation & Maintenance Manual.”)
6. Attach a “DO NOT START” tag to truck ignition switch.
7. Remove wheel/tire assembly. (See “Front Wheel and Tire Service,” Group 0705-P-001.)

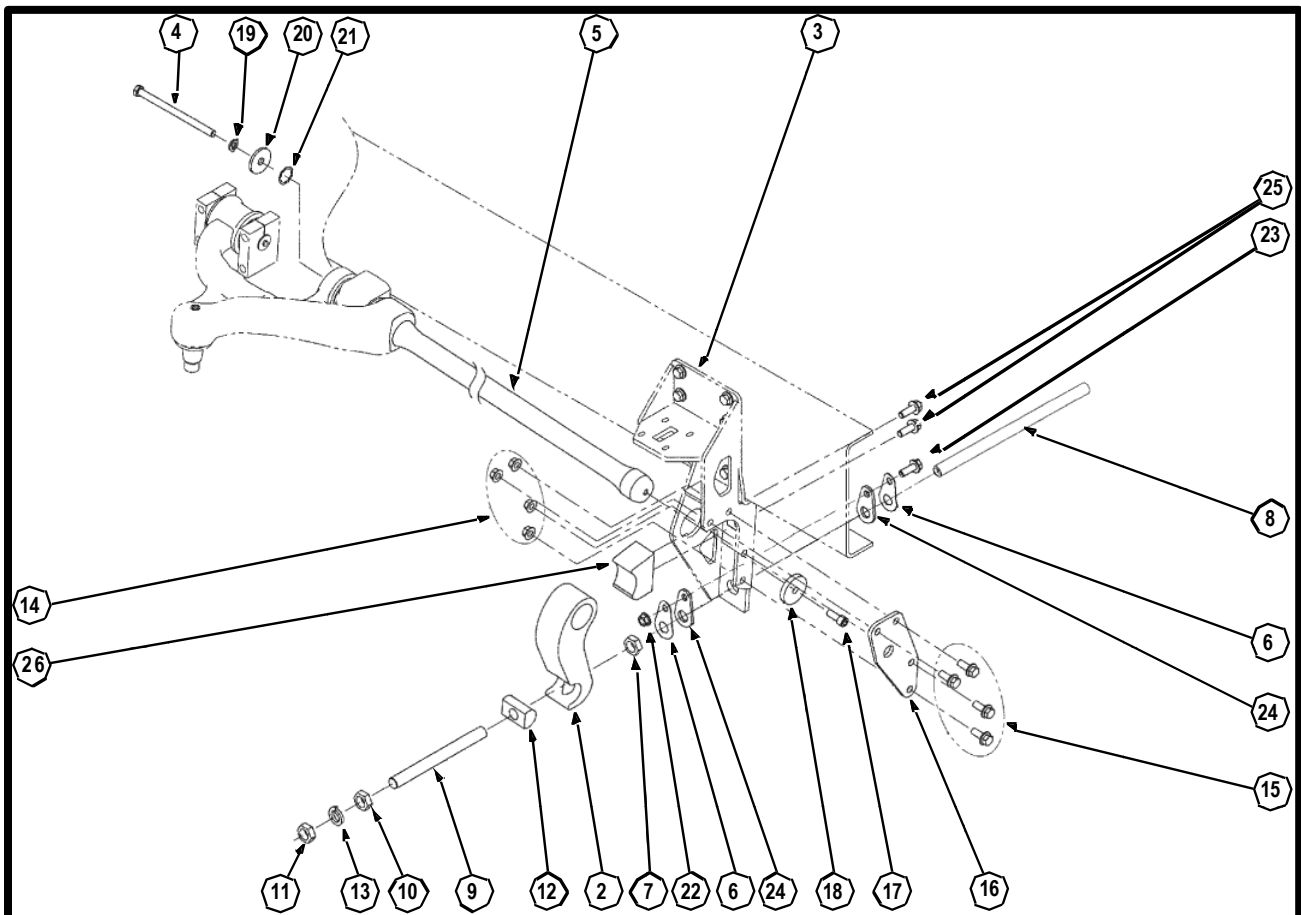


Failure to support the lower control arm when removing the shock absorbers could damage the ball joint boots.

8. Remove shock absorber. (See “TAK-4 Shock Absorber and Jounce Limiter”, Group 0153-P-002).
9. Use a suitable jack to raise the frame on both sides so that the suspension is allowed to hang down under its own weight.



10. If the upper control arm, torsion bar, and torsion bar anchor is being reinstalled, matchmark (1) the torsion bar anchor (2) and torsion bar bracket (3).



11. Loosen, but do not remove the screw (4) on front of the torsion bar (5).
12. Unbend two locking tab washers (6).
13. Loosen inner nut (7).
14. If necessary, apply heat to tube (8) where threaded rod (9) is installed in the tube. This will loosen the thread sealant.
15. Using outer nuts (10 and 11), unscrew the threaded rod (9), and remove it along with the inner nut (7) and pin (12).

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16. Remove two outer nuts (10 and 11) and lockwasher (13) from the threaded rod (9). Discard lockwasher.
17. Remove four locknuts (14), screws (15), and plate (16) from the torsion bar bracket (3). Discard lockwashers.
18. Remove screw (17) and spacer (18) from the torsion bar (5).
19. Remove torsion bar anchor (2) from torsion bar (5).
20. Remove screw (4), lockwasher (19), washer (20), and wave washer (21) from torsion bar (5).

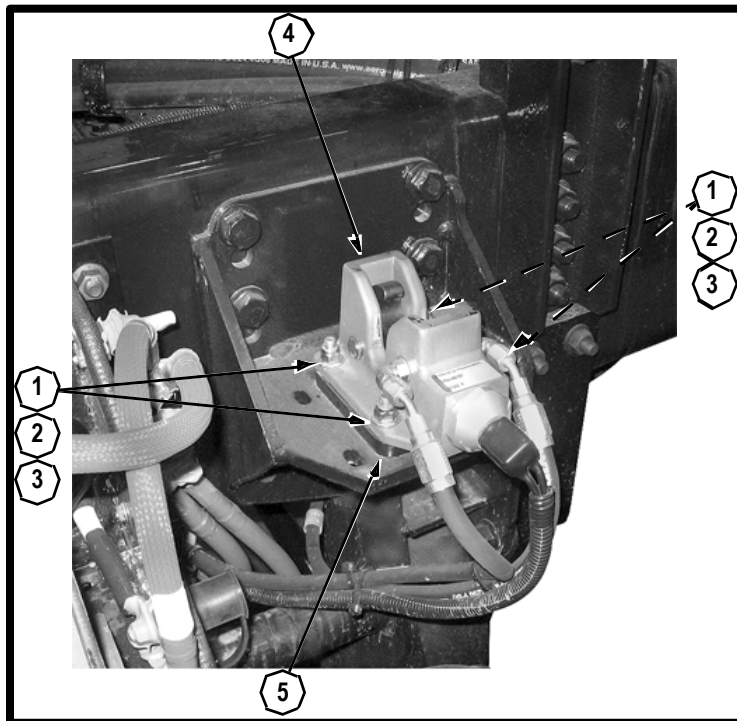
NOTE: Note correct orientation of the anchor pivot block (26).

21. Remove the torsion bar (5) by pulling out through the hole in the torsion bar bracket (3). Discard lockwasher and wave washer.
22. Remove locknut (22), screw (23), two locking tab washers (6), and locking tab plates (24). Discard locknuts and lock tab washers.
23. If required, remove two screws (25) and the anchor pivot block (26) from the torsion bar mounting bracket (3).

TORSION BAR MOUNTING BRACKET REMOVAL

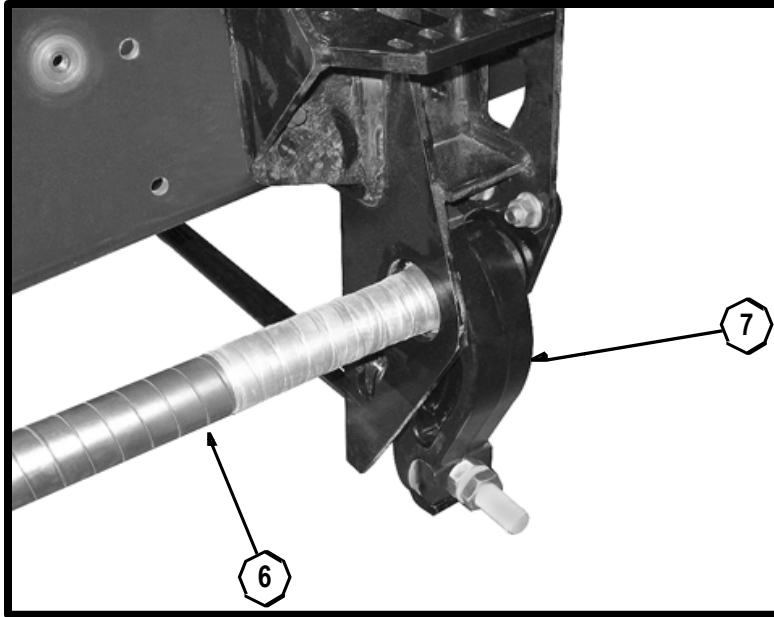
NOTE: Both torsion bar mounting brackets are removed the same way.

1. Attach a "DO NOT START" tag to truck ignition switch.
2. Raise cab. (Refer to "Operation & Maintenance Manual.")

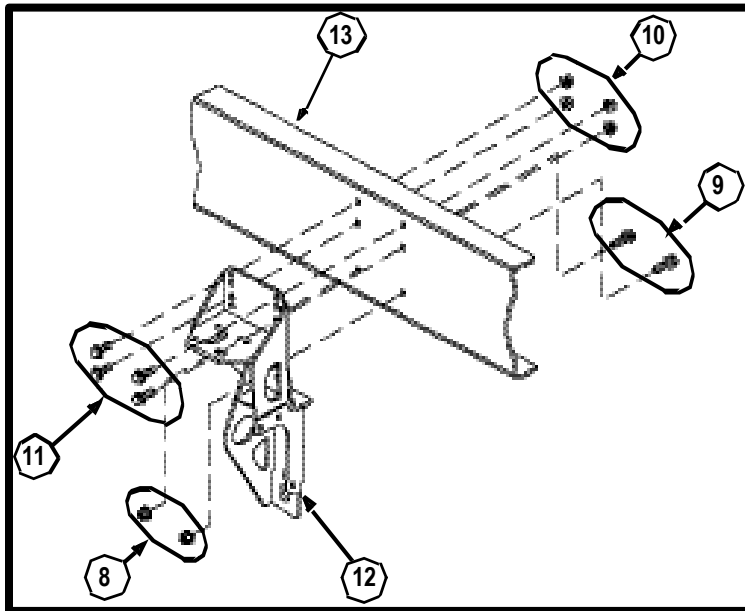


NOTE: Perform step 3 only if the cab latch assembly is mounted directly on the torsion bar mounting bracket. If it is not, then proceed to step 4.

3. Remove four locknuts (1), washers (2), and screws (3) and move the cab latch assembly (4) and spacer (5) aside. Discard locknuts.



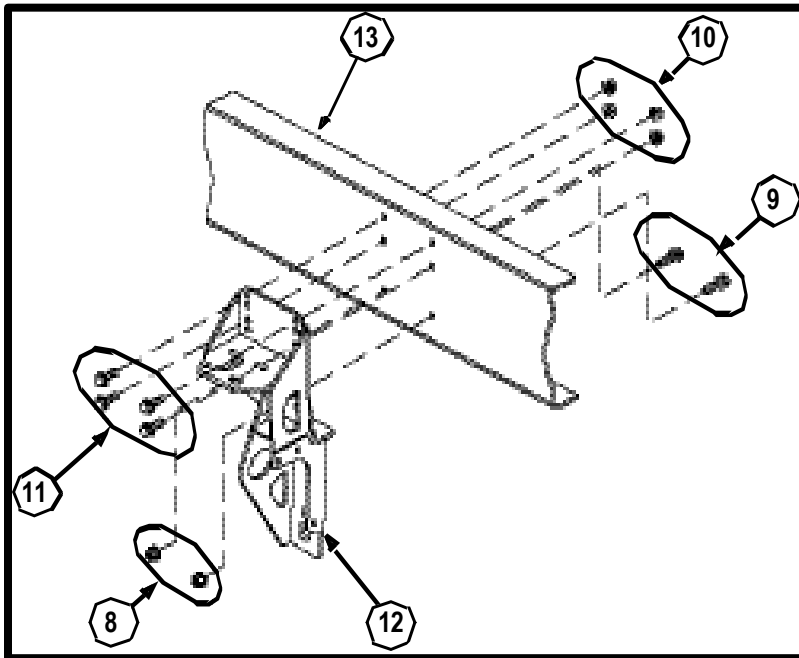
4. Remove the torsion bar (6) and torsion bar anchor (7). (See "Torsion Bar Replacement").



5. Remove two lower locknuts (8) and screws (9). Discard locknuts.
6. Remove the four upper locknuts (10) and screws (11) and remove torsion bar mounting bracket (12) from the frame (13). Discard locknuts.

TORSION BAR MOUNTING BRACKET INSTALLATION

NOTE: Both torsion bar mounting brackets are installed the same way.



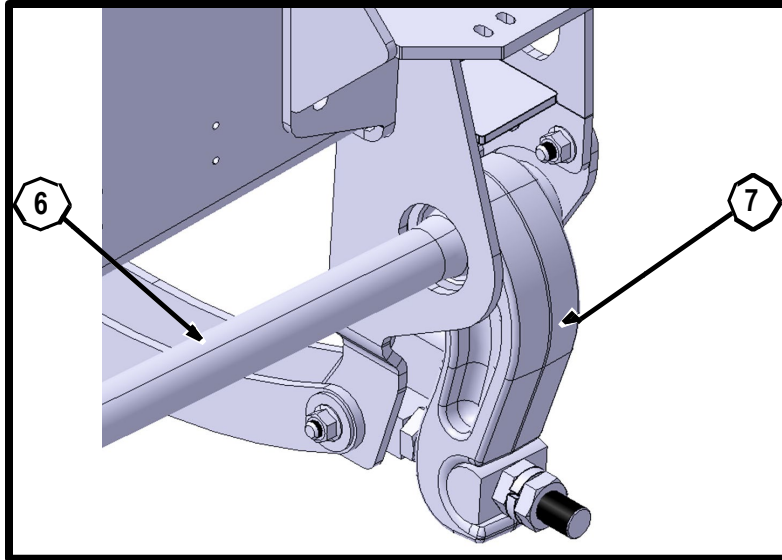
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in well-ventilated area. If adhesives, solvents, or sealing compounds get on skin or clothing, wash immediately with soap and water. Failure to comply could result in serious injury or death to personnel.

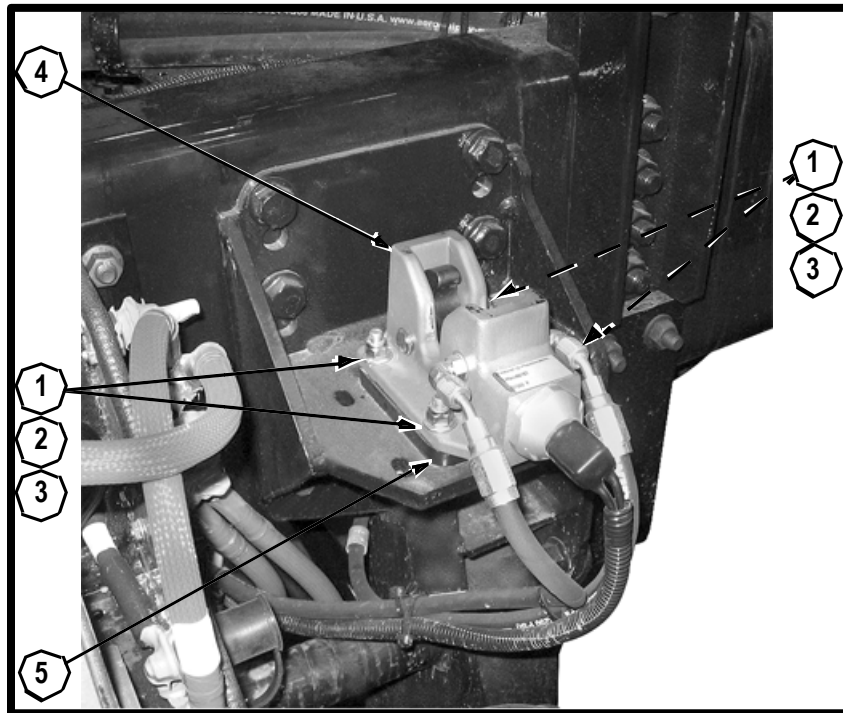
1. Apply Loctite® 242 (P/N 1198896) to all screw threads (9 and 11).

NOTE: Always use new locknuts for installation.

2. Position the torsion bar mounting bracket (12) on the frame (13) and install six screws (9 and 13) and locknuts (8 and 10). Tighten locknuts to 210 lb-ft (285 N·m).
3. Apply Sentry Seal (P/N 95-1356) to screws (9 and 11) and locknuts (8 and 10).



4. Install the torsion bar anchor (7) and torsion bar (6) on torsion bar bracket (3). (See "Torsion Bar Replacement" on page 1-1)



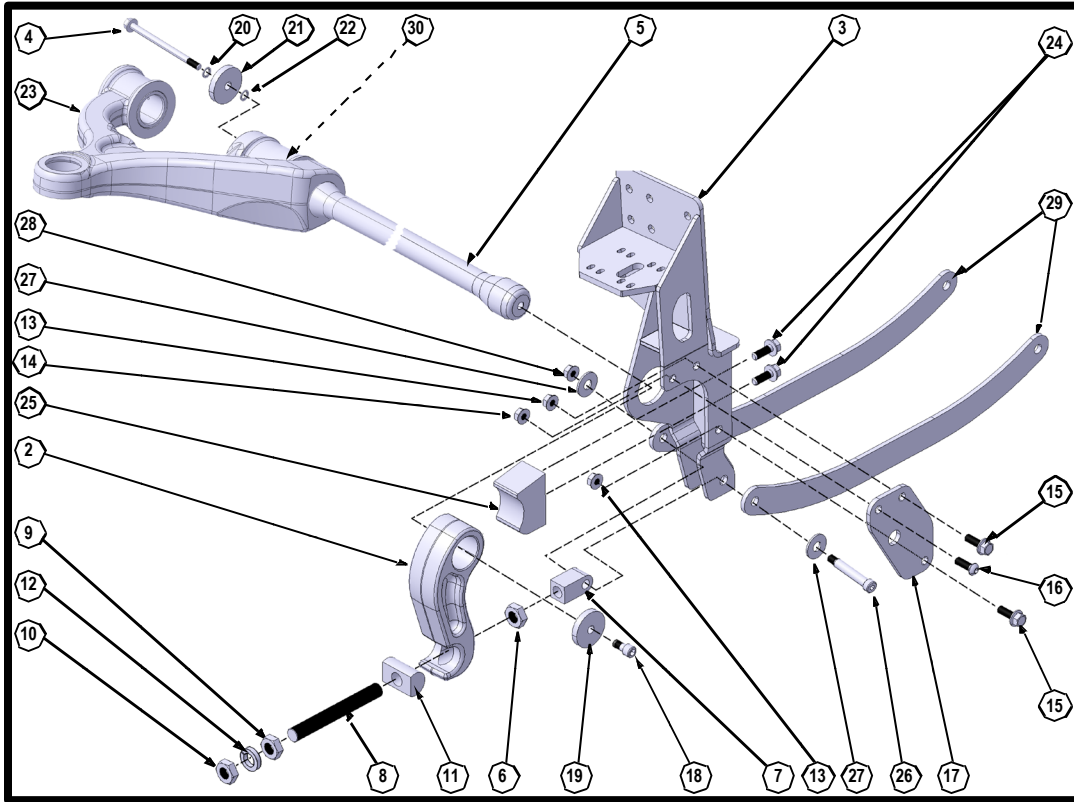
NOTE: Perform step 5 only if the cab latch assembly is mounted directly to the torsion bar mounting bracket.

5. Install cab latch assembly (4) and spacer (5) on torsion bar mounting bracket (12) using four screws (3), washers (2), and locknuts (1).
6. Lower cab. (Refer to "Operation & Maintenance Manual.")
7. Remove "DO NOT START" tag from truck ignition switch.

TORSION BAR MOUNTING INSTALLATION

⚠ WARNING

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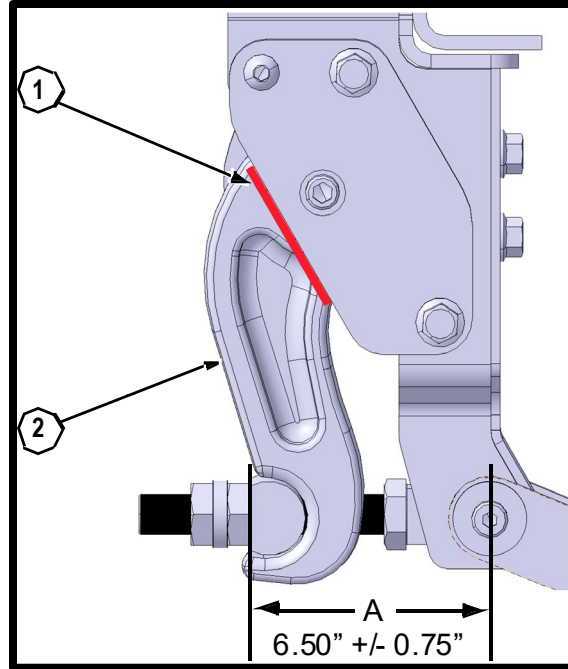


1. Apply Loctite® 242 (P/N 1198896) to screw threads (26).
2. Apply Permatex® Anti-Seize (P/N 95-1299) to the shoulder of the screw (26).
3. Assemble mounting brackets (29) and mounting block (7) to the torsion bar mounting bracket (3) using screw (26), two washers (27), and nut (28).
4. Apply Loctite® 242 (P/N 1198896) to screw threads (24).
5. Position the anchor pivot block (25) on the torsion bar mounting bracket (3) using two screws (24). Do not tighten the screws at this time.
6. Apply Tef-Gel® (P/N 3253324) to curved surface of anchor pivot block (25).

NOTE: The torsion bars are right- and left-handed. Ensure the correct torsion bar is installed on each side of the truck.

7. Apply Tef-Gel® (P/N 3253324) to internal splines (30) of the upper control arm (23).
8. Install the torsion bar (5) through hole in the torsion bar bracket (3) and engage the splined end in the upper control arm (23).

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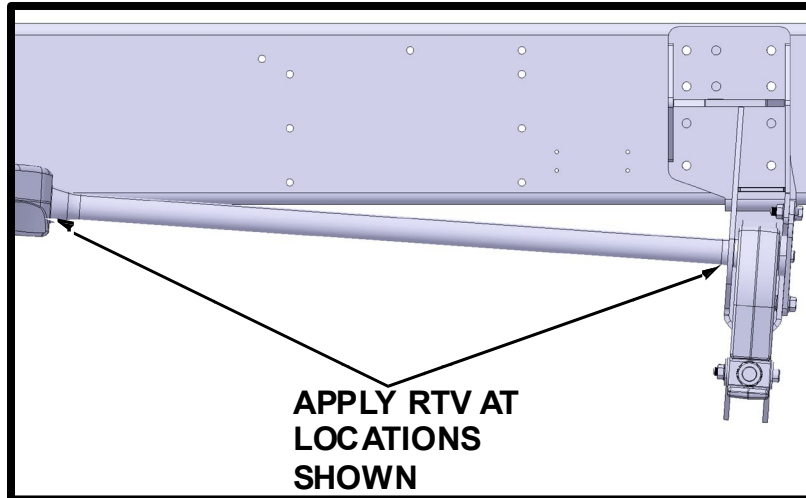


9. Apply Tef-Gel® (P/N 3253324) to internal splines of the torsion bar anchor (2) and install on the torsion bar. The upper control arm must be positioned in rebound (supported by the shock). Index and install anchor (2) on the splines of the torsion rod to achieve dimension "A" (6.50 in. ± 0.75 in.).
10. Apply Loctite® 242 (P/N 1198896) to the screw threads (4).
11. Apply grease to the keyway slot and wave washer seat at the end of the torsion bar (5) to prevent corrosion.
12. Install the wave washer (22), washer (21), lockwasher (20), and screw (4) in the torsion bar (5). Tighten screw to 29 lb-ft (39 N·m).

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in well-ventilated area. If adhesives, solvents, or sealing compounds get on skin or clothing, wash immediately with soap and water. Failure to comply could result in serious injury or death to personnel.

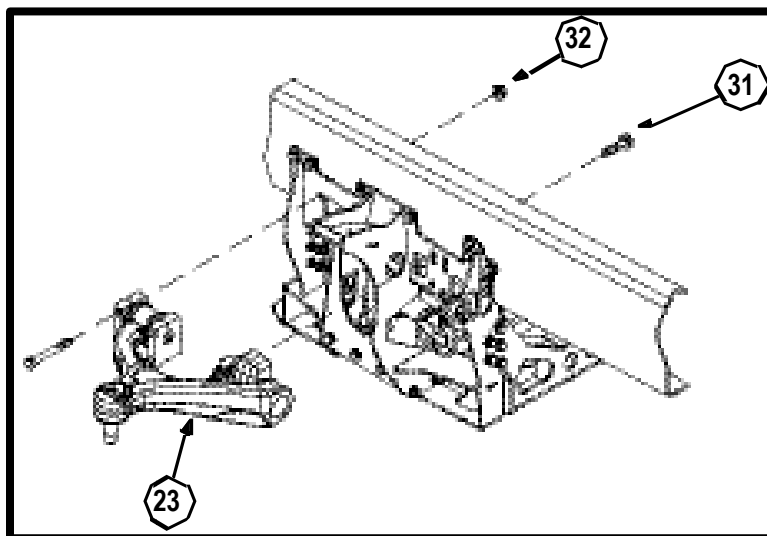
13. Apply Loctite® 272 (P/N 3062748) to the threaded rod (8).
14. Install threaded rod (8) and inner jam nut (6) into mounting block (7). Install threaded rod until it bottoms out in the mounting block.
15. Apply Loctite® 242 (P/N 1198896) to threads of threaded rod (8) between the jam nut (6) and the mounting block (7).
16. Torque the jam nut (6) to 180 lb-ft (244 N·m).
17. Apply Loctite® 242 (P/N 1198896) to screw threads (18). Install the spacer (19) and screw (18) into the torsion bar (5). Tighten the screw to 110 lb-ft (149 N·m).



18. Apply RTV (P/N 95-1317) to area where torsion bar (5) enters the torsion bar anchor (2) and to where the torsion bar enters the upper control arm (23) to seal out contaminants.
19. Tighten the jam nut only enough to remove play between the pin and the torsion bar anchor.
20. Apply Tef-Gel® (P/N 3253324) to the curved surface of pin (11).
21. Install the pin (11) and jam nut (9) on the threaded rod (8).
22. Install the lockwasher (12) and jam nut (10) on the threaded rod (8). Tighten nut to 180 lb-ft (244 N·m).

NOTE: Always use new locknuts for installation.

23. Apply Loctite® 242 (P/N 1198896) to screw threads (15 and 16). Install the end plate (17) using three screws (15 and 16) and locknuts (13 and 14). Torque to 210 lb-ft (285 N·m).



24. Tighten the four-bolt pivot mounting block screws (31) to 280 lb-ft (380 N·m).
25. Tighten the two-bolt pivot block mounting locknuts (32) to 375 lb-ft (508 N·m).
26. Raise the wheel end two to three inches to put the torsion bar under a partial load. This will allow the anchor pivot block (25) and torsion bar anchor (2) to align with each other. Tighten the anchor pivot block mounting screws (24) to 170 lb-ft (231 N·m).
27. Install shock absorber. (See "TAK-4 Shock Absorber and Jounce Limiter", Group 0153-P-002).
28. Install wheel/tire assembly. (See "Front Wheel and Tire Service," Group 0705-P-001.)
29. Lower cab. (Refer to "Operation & Maintenance Manual.")
30. Remove the jackstands and lower the front suspension to the ground.

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31. Perform the ride height adjustment procedure. (See "TAK-4 Torsion Bar Assembly," Group 0152-P-007).

If any additional support is needed, please open a technical support incident on www.pierceparts.com.