FLA COE
FLB COE
FLD Conventional
Business Class
FLC 112 Conventional
> Century Class Conventional
Argosy COE
Cargo
> Columbia
> Coronado
Business Class M2
> Cascadia

Freightliner Service Bulletin

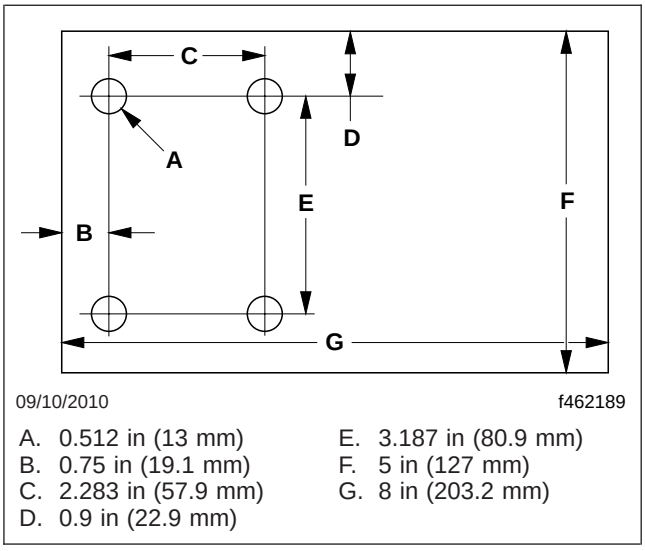
Description of Revisions: *This bulletin replaces the version published earlier this month. Figure 1 has been revised to include additional dimensions.*

General Information

Use the procedure below to replace a failed nylon thrust bearing in a TRW global steering column. This procedure is warrantable only when the thrust bearing has failed.

Parts

A fabricated holding fixture and TRW Service Kit SK000323 are required to complete this procedure. The service kit can be ordered from TRW. The holding fixture should be fabricated out of 1/4-inch mild steel. See **Fig. 1** for a template of the holding fixture.



A. 0.512 in (13 mm)
B. 0.75 in (19.1 mm)
C. 2.283 in (57.9 mm)
D. 0.9 in (22.9 mm)
E. 3.187 in (80.9 mm)
F. 5 in (127 mm)
G. 8 in (203.2 mm)

Fig. 1, Holding Fixture Template

TRW Service Kit SK000323 includes:

- Grease
- Cotter pin
- Nylon thrust bearing

Procedure

1. Fabricate the holding fixture using the template shown in **Fig. 1**.
2. Position the front tires straight ahead. If possible, drive the vehicle in a straight line for a short distance, stopping on a level surface where the service is to be completed.
3. Shut down the engine, apply the parking brake, and chock the tires.

Freightliner Service Bulletin

FLA COE
FLB COE
FLD Conventional
Business Class
FLC 112 Conventional
> Century Class Conventional
Argosy COE
Cargo
> Columbia
> Coronado
Business Class M2
> Cascadia

⚠ CAUTION

When depressing and releasing the adjustment pedal, keep hands and fingers clear of the locking mechanism. Failure to do so could result in personal injury.

4. Depress the adjustment pedal and place the column in the middle of its telescoping range. Release the pedal.
5. Remove the fasteners that hold the dash knee bolster to the dash, then remove the bolster.
6. Remove the four column cover fasteners on the back and the two on the front of the column, then remove the covers.

NOTICE

Do not allow the steering wheel to rotate while the column is removed from the vehicle. Rotation of the steering wheel after column removal could cause the ribbon wire connecting the steering wheel switches to break.

7. Clamp vice grips to one side of the steering I-shaft yoke to prevent the steering wheel from rotating. See **Fig. 2**.
8. Mark the end of the I-shaft yoke and the steering column shaft splines for installation later.
9. Remove and discard the pinch bolt and nut from the end yoke of the steering I-shaft, and disconnect the yoke from the steering column shaft. See **Fig. 3**.
10. Remove the turn signal wiring harness bracket from the column.
11. Disconnect the plastic retaining tabs on the connector body and disconnect the turn signal harness from the stalk switch.
12. Disconnect the SmartShift lever and trailer brake assembly, if equipped.
13. Remove the nuts that secure the frontwall bearing housing to the frontwall.
14. Support the column and remove the nuts that secure the column to the column mounting bracket, see **Fig. 4**. Remove the column.
15. Using 7/16-inch hardware, mount the holding fixture on the steering column.

NOTICE

Do not clamp the column directly in any vice. Failure to use the fabricated holding fixture to secure the column could result in damage to column components.

16. Once securely mounted to the steering column, clamp the holding fixture in a vice so that the column is mounted horizontally with the spring side down and the castellated nut facing up. See **Fig. 5**.

NOTICE

Do not use excessive force when clamping the inner locking plate. Excessive force could cause damage to the locking plates.

17. Using vice grips or a C-clamp, clamp the inner locking plate in place on the column assembly. The vice grips should prevent the inner locking plate and spring from falling when the through bolt is removed.
18. Remove and discard the cotter pin. See **Fig. 6**.

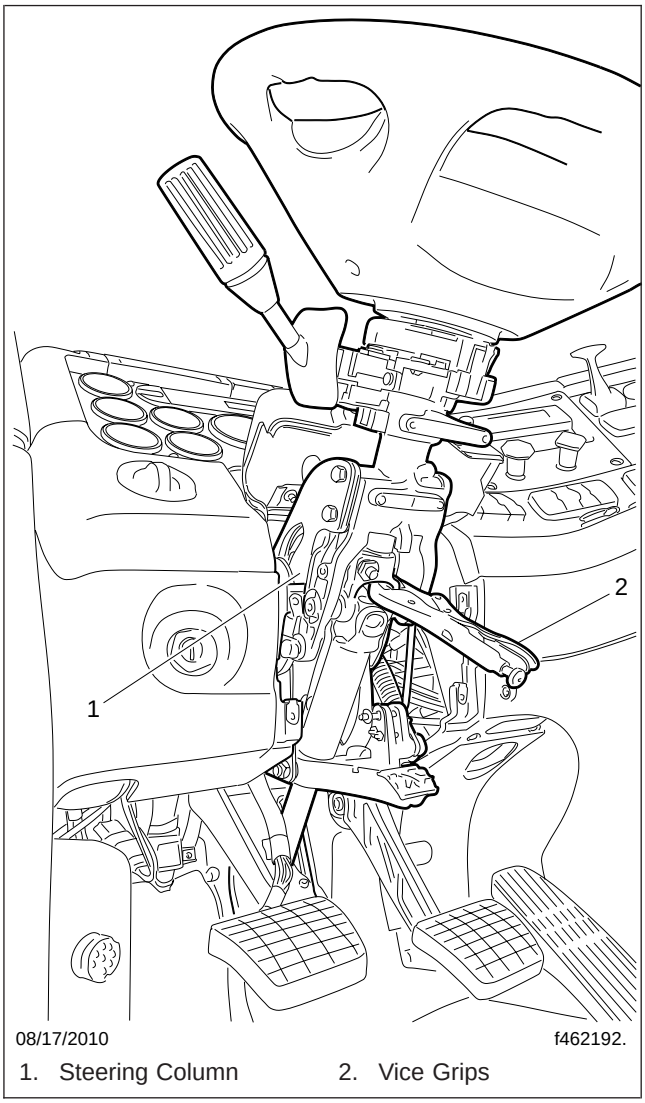
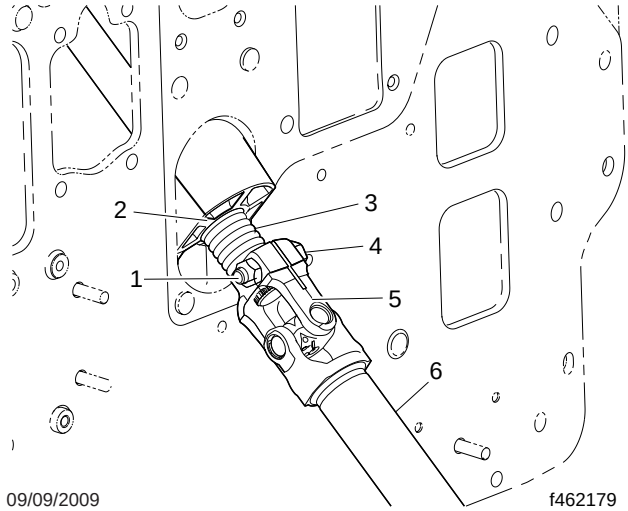


Fig. 2, I-Shaft Yoke Clamp

19. Remove the castellated nut, washers, and bearing from the through bolt. If necessary, hold the through bolt in place with a backup wrench on the bolt head to loosen the castellated nut.
20. Gently depress the adjustment pedal to loosen the through bolt, the remove the through bolt.
21. Remove the outer locking plate, then remove and discard the failed nylon thrust bearing.
22. Apply grease to both plate surfaces.
23. Install the new nylon thrust bearing, then install the outer locking plate.
24. Without depressing the adjustment pedal, install the through bolt on the assembly. Ensure that the outer locking plate and thrust bearing contact the inner locking plate.
25. Install the steel washers, thrust bearing, and castellated nut, then hand-tighten the castellated nut on the through bolt.



1. Nut
2. Steering Column Stub Shaft
3. Conduit
4. Pinch Bolt
5. I-Shaft End Yoke
6. I-Shaft

Fig. 3, Steering Column Installation

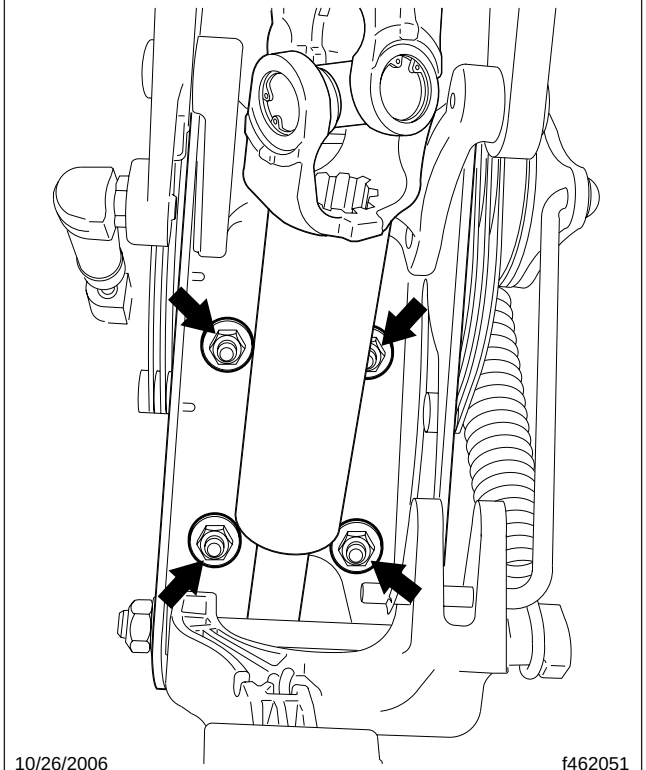


Fig. 4, Column Mounting Bracket Fastener Locations

26. Slowly depress the adjustment pedal to allow column components to pop into place. Continue to hand-tighten the castellated nut and ensure that the locking plates and thrust bearing are aligned.
27. Hold the through bolt in place with a backup wrench on the head of the bolt. Tighten the castellated nut 85 lbf·in (960 N·cm).
28. Insert the new cotter pin.
29. Remove the vice clamp from the inner locking plate.
30. Complete a column lock test.

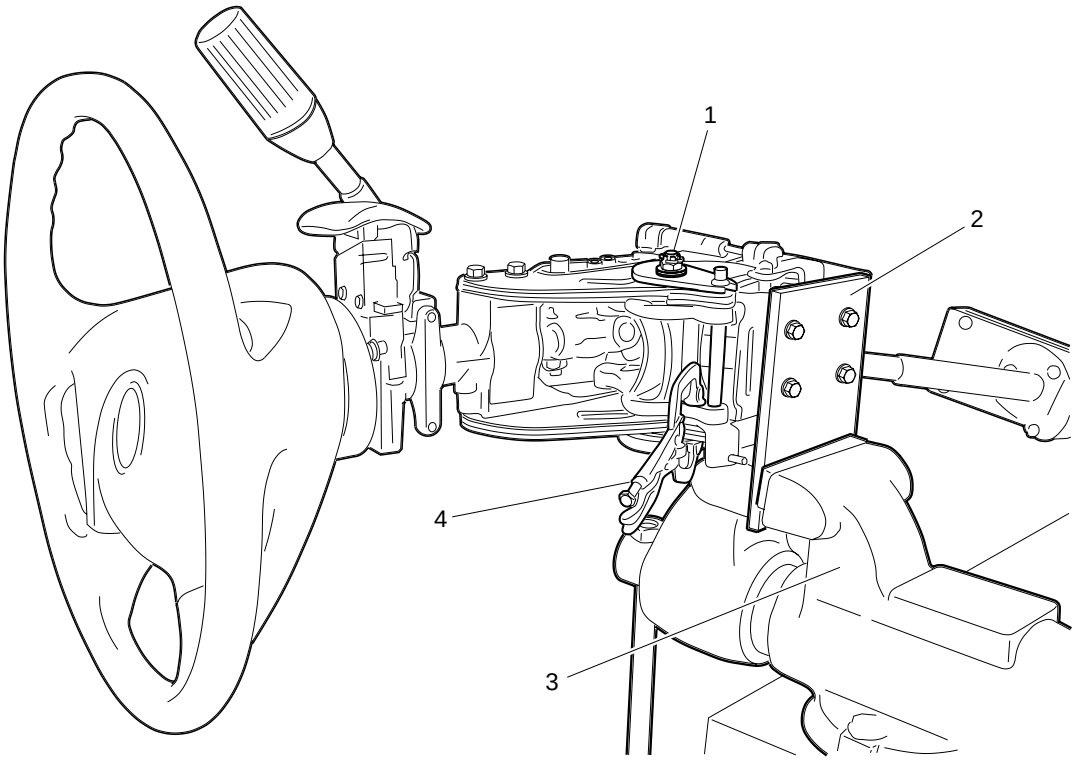
    IMPORTANT: Do not depress the adjustment pedal during the following tests.

    30.1 To test the tilting function, gradually apply approximately 120 lbf (534 N) of force to pull the wheel towards you.

    30.2 To test the telescoping function, gradually apply approximately 120 lbf (534 N) of force to pull the wheel up.

    30.3 If the column does not remain in the locked position, tighten the castellated nut one slot, then perform the previous substeps again.

    If the column remains locked in position, no further adjustments are necessary.
31. Remove the column and holding fixture assembly from the vice, then remove the holding fixture from the column.



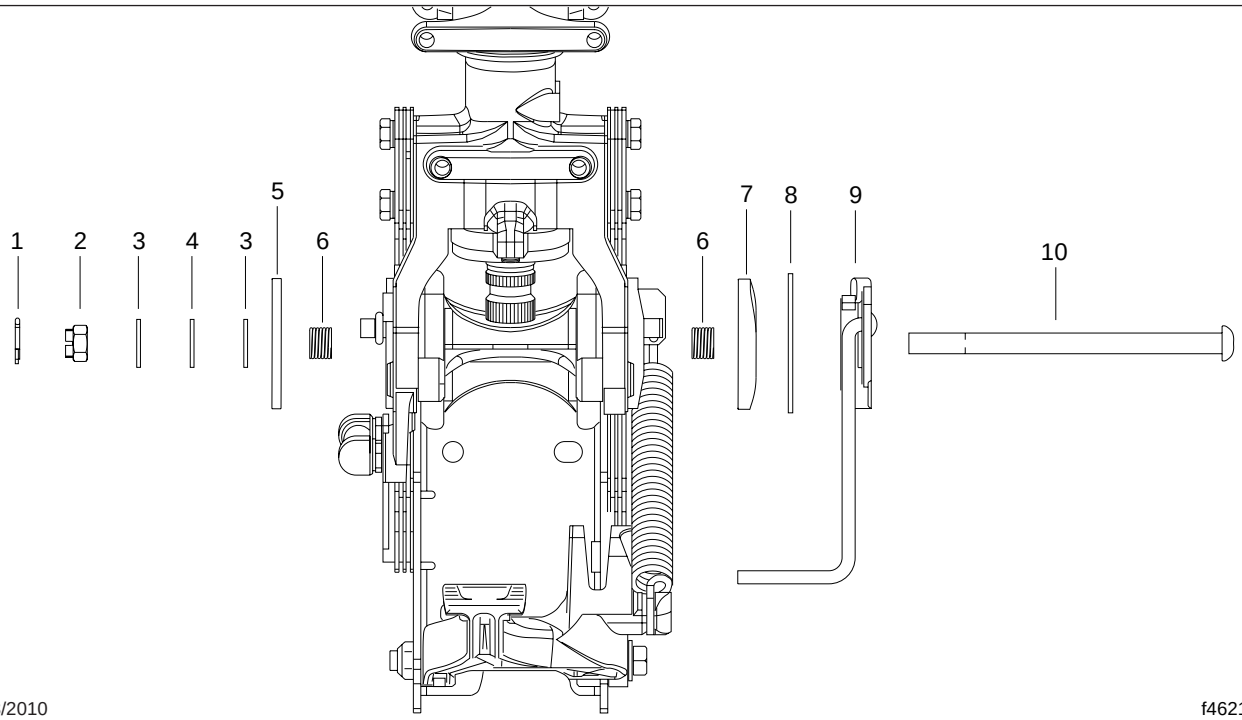
08/16/2010 f462191

1. Castellated Nut
2. Fabricated Holding Fixture
3. Vice
4. Vice Grips

Fig. 5, Column and Steel Fixture Mounting in Vice

32. Position the column on the frontwall mounting studs and column mounting bracket studs, then install the mounting fasteners and tighten them hand-tight. See **Fig. 4**.
33. Ensure the column is mounted flush with the column mounting bracket and the frontwall, then tighten the column mounting bracket nuts 23 to 34 lbf·ft (31 to 46 N·m) and the frontwall bearing nuts 8 to 12 lbf·ft (11 to 16 N·m).
34. Ensure that the marks on the I-shaft yoke and the steering column shaft splines are aligned exactly as they were before the column removal. Using a new pinch bolt and nut, connect the I-shaft yoke to the steering column shaft. See **Fig. 3**.

    Apply torque seal, OGP F900WHITE, to the exposed pinch bolt threads and nut.
35. Install and connect the SmartShift lever and trailer brake assembly, if equipped.
36. Install the turn signal harness bracket and connect the turn signal wiring harness to the turn signal.
37. Install the column covers and dash knee bolster.



1. Cotter Pin
2. Castellated Nut
3. Steel Washer (qty 2)
4. Steel Thrust Bearing
5. Locking Plate
6. Spring (qty 2)
7. Inner Locking Plate
8 Nylon Thrust Bearing
9. Outer Locking Plate
10. Through Bolt

Fig. 6, Steering Column Assembly

Warranty

This procedure is warrantable only if the thrust bearing has failed. If a failed thrust bearing is not found, this procedure is considered preventive, and warranty does not apply. Primary failed part number is A14-17418-XXX, TRW global steering column. See **Table 1** or **Table 2** for damage code and labor allowance information, and refer to this bulletin by number in the story of the claim.

QuickClaim Damage Code and Labor Allowance			
Damage Code	**SRT Code**	**Description**	**Time: Hours**
532-001050130	532-5016A	Bearing, Tilt Adjust, Steering Column, R/R	1.2

Table 1, QuickClaim Damage Code and Labor Allowance

OWL VMRS Codes and Labor Allowance				
Component Code	**Cause Code**	**SRT Code**	**Description**	**Time: Hours**
015-002-004	12	532-5016A	Bearing, Tilt Adjust, Steering Column, R/R	1.2

Table 2, OWL VMRS Codes and Labor Allowance