

Subject: TRW Ball Stud and Socket Assemblies — Expanded (Tie Rod Ends)

MODELS AFFECTED: Specific Freightliner Century Class, FLD, FLN, and Argosy vehicles; Sterling A-Line, L-Line, and Acterra vehicles; and Freightliner Custom Chassis MT-45, MT-55, FS-65, and RV chassis manufactured from the second week of June 1999 through the third week of November 1999 and from the third week of April 2000 through the first week of June 2000.

GENERAL INFORMATION

Freightliner LLC has been informed by TRW Automotive that additional shipments of ball stud and socket assemblies have the defect addressed by Recall FL268A-U. Vehicles that have not had the earlier recall performed, will have the defect addressed under FL383A-D.

FL268A, B, F, and G are superseded by this recall. All work will be done under FL383A-D from this point forward.

The ball stud and socket assemblies on certain tie rods may contain bearing surfaces that have a less than specified case depth and/or hardness. These ball stud and socket assemblies may wear out prematurely, resulting in a separation of the ball stud from the socket. This may cause a full or partial loss of steering control and possible vehicle crash without prior warning.

The modification consists of replacing the affected ball stud and socket assemblies with assemblies of a different design.

WORK INSTRUCTIONS

Please refer to the attached work instructions.

REPLACEMENT PARTS

Replacement kits are now available and can be obtained by ordering the kit number(s) listed below from your facing Parts Distribution Center.

If our records show your dealership has ordered any vehicle(s) involved in campaign number FL383A-D, a list of the customers and vehicle identification numbers is enclosed. Please refer to this list when ordering parts for this recall.

NOTE: If you receive a kit marked for FL268, it is correct and should be used.

Refer to **Table 1** for replacement kits for FL383A-D

25-FL383-000 through 25-FL383-003

Campaign Number	Kit Number	Part Description	Part Number	Qty. per Kit	Suggested Wholesale. *
FL383 A	25-FL383-000	TRW Tie Rod Kit	TRW L20KP0006	1 kit	\$37.32 U.S. \$60.82 CAN
FL383 B	25-FL383-001	TRW Tie Rod Kit	TRW L24KP0018	1 kit	\$37.32 U.S. \$60.82 CAN
FL383 C	25-FL383-002	TRW Tie Rod Kit	TRW L20KP0011	1 kit	\$37.32 U.S. \$60.82 CAN
FL383 D	25-FL383-003	TRW Tie Rod Kit	TRW L20KP0009	1 kit	\$37.32 U.S. \$60.82 CAN

* Please charge all Direct Warranty Customers the above-listed price for the kit, as they are authorized to perform their own Recalls.

Table 1

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REMOVED PARTS

Please follow Warranty Failed Parts Tracking shipping instructions for the disposition of all removed parts.

LABOR ALLOWANCE

Refer to Table 2 for labor allowance.

Campaign Number	Procedure	Time Allowed (hours)	SRT Code	Damage Code
FL383 A, B, C, D	Remove/replace tie rod ends (incl. toe-in adjustment)	1.8	996-0372B	000-Modifiedx

Table 2

IMPORTANT: When the recall has been completed, write the recall number on the completion sticker provided in the recall kit (Form WAR260) and place it on the base campaign sticker on the vehicle. If the vehicle does not have a base sticker (Form WAR259), clean a spot on the appropriate location of the vehicle and first attach a base sticker.

CLAIMS FOR CREDIT

You will be reimbursed for your parts, labor, and handling by submitting your claim through the Warranty system within 30 days of completing the recall. Please reference the following information in QuickClaim[®]:

- Claim type is **Recall**.
- In the FSDOC field, enter the campaign number and the appropriate condition code (e.g. **FL383A, FL383B, FL383C, etc.**).
- In the Primary Failed Part Number field, enter **25-FL383-000**.
- In the Parts field, enter the appropriate kit number(s) as shown in the Replacement Parts Tables.
- If a vehicle experiences premature tire wear within 30 days of performance of the recall, the dealer will be responsible for replacement of tires. Incorrect toe-in settings can damage tires very quickly. The Work Instructions and SRT reflect the toe-in adjustment step of the recall.
- **IMPORTANT: FL268A, B, F, and G are superseded by this recall and should no longer be performed. All work and claims must be for FL383A-D.**

NOTE: ServicePro[®]/Service Advisor[®] must be viewed prior to performing the recall to ensure the vehicle is involved and the campaign has not been previously completed. Also, check for a completion sticker prior to beginning work.

Contact the Warranty Campaigns Department at (800) 547-0712, from 7:30 a.m. to 4:30 p.m. Pacific Time, Monday through Friday, e-mail address WarrantyCampaigns@Freightliner.com, or the Customer Assistance Center at (800) 385-4357, outside normal business hours, if you have any questions or need additional information.

To return excess kit inventory related to this campaign, U.S. dealers must submit a Parts Authorization Return (PAR) to the Memphis PDC and Canadian dealers must submit a PAR to their facing PDC. All kits must be in resalable condition. PAR requests must include the original purchase invoice number.

The letter notifying vehicle owners is included for your reference.

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Please note that the National Traffic and Motor Vehicle Safety Act, as amended (49 USC), requires the owner's vehicle(s) be corrected within a reasonable time after parts are available to you. The Act states that failure to repair a vehicle within 60 days after tender for repair shall be prima facie evidence of an unreasonable time. However, circumstances of a particular situation may reduce the 60 day period. Failure to repair a vehicle within a reasonable time can result in either the obligation to (a) replace the vehicle with an identical or reasonably equivalent vehicle, without charge, or (b) refund the purchase price in full, less a reasonable allowance for depreciation. The Act further prohibits dealers from selling a vehicle unless all outstanding recalls are performed. Also, any lessor is required to send a copy of the recall notification to the lessee.

Finally, the Act states that a remedy need not be provided without charge if the vehicle was bought by the first purchaser more than ten (10) calendar years before notice is given.

WARRANTY CAMPAIGNS DEPARTMENT

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Copy of Letter to Owner

Subject: TRW Ball Stud and Socket Assemblies — Expanded (Tie Rod Ends)

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act and the Canadian Motor Vehicles Safety Act.

Freightliner LLC, on behalf of its Freightliner Trucks Division and its wholly-owned subsidiaries, Sterling Truck Corporation and Freightliner Custom Chassis Corporation, has determined that a defect which relates to motor vehicle safety exists on specific Freightliner Century Class, FLD, FLN, and Argosy vehicles; Sterling A-Line, L-Line, and Acterra vehicles; and Freightliner Custom Chassis MT-45, MT-55, FS-65, and RV chassis manufactured from the second week of June 1999 through the third week of November 1999 and from the third week of April 2000 through the first week of June 2000.

TRW Automotive has informed Freightliner LLC of additional shipments of suspect ball stud and socket assemblies used in some tie rods. For safety reasons, this new information requires Freightliner to recall certain vehicles included in recall FL268A-U and to expand the number of vehicles involved.

The ball stud and socket assemblies on certain tie rods may contain bearing surfaces that have a less than specified case depth and/or hardness. These ball stud and socket assemblies may wear out prematurely, resulting in a separation of the ball stud from the socket. This may cause a full or partial loss of steering control and possible vehicle crash without prior warning.

The modification consists of replacing the affected ball stud and socket assemblies with assemblies of a different design.

Repair kits are now available for authorized dealers to order. Contact your authorized dealer to arrange to have your vehicle(s) modified and to assure that parts are available at the dealer.

When you contact your dealer, refer to campaign number **FL383A-D**. Once kit(s) are received at the dealership, the recall will take approximately two hours and will be performed at no charge to you.

IMPORTANT: When the recall has been completed, please ensure that a sticker has been affixed to your vehicle referencing FL383A-D.

If you do not own the vehicle(s) that corresponds to the identification number(s) which appears on the Recall Notification, please return the notification to the Warranty Campaigns Department with any information you can furnish that will assist us in locating the present owner. If you have leased this vehicle, please make sure this notification is immediately forwarded to the lessee.

If you are not able to have the defect remedied without charge and within a reasonable time, which is not longer than 60 days after you tender the vehicle for repair, please contact the Warranty Campaigns Department at (800) 547-0712, 7:30 a.m. to 4:30 p.m. Pacific Time, Monday through Friday, e-mail address WarrantyCampaigns@Freightliner.com, or the Customer Assistance Center at (800) FTL-HELP, after normal business hours. You may also wish to notify the Administrator, National Highway Traffic Safety Administration, 400 7th Street S.W., Washington, D.C. 20590, or phone (888) 327-4236. If your vehicle is involved in the Canadian portion, you may notify the Manager, Recall and Public Compliance, Road and Motor Vehicle Traffic Safety Branch, Transport Canada, Ottawa, Ontario, or phone (613) 993-9851.

We regret any inconvenience this action may cause, but feel certain you understand our interest in motor vehicle safety.

WARRANTY CAMPAIGNS DEPARTMENT

Enclosure

Work Instructions

Subject: TRW Ball Stud and Socket Assemblies — Expanded

MODELS AFFECTED: Specific Freightliner Century Class, FLD, FLN, and Argosy vehicles; Sterling A-Line, L-Line, and Acterra vehicles; and Freightliner Custom Chassis MT-45, MT-55, FS-65, and RV chassis manufactured from the second week of June 1999 through the third week of November 1999 and from the third week of April 2000 through the first week of June 2000.

Before performing the recall:

- **FL268A, B, F, and G are superseded by this recall. All work will be done under FL383A-D from this point forward.**
- If you receive a kit marked for FL268, it is correct and should be used.
- If a vehicle experiences premature tire wear within 30 days of performance of the recall, the dealer will be responsible for replacement of tires. Incorrect toe-in settings can damage tires very quickly. These Work Instructions and the SRT reflect the toe-in adjustment step of the recall.
- Park the vehicle on a level surface, shut down the engine, set the parking brakes, and chock the tires.
- Check the "base" completion label (Form WAR259) on the passenger-side door jamb. If it has a sticker for Recall FL383 (Form WAR260), nothing more needs to be done. Remove the chocks from the tires.
- If no sticker is present, continue with the replacement procedure.

Tie Rod End Replacement Procedure

Use the following instructions and the appropriate tie rod end kit to replace the tie rod ends.

REMOVING THE TIE ROD ASSEMBLY (TIE ROD ENDS AND CROSS TUBE)

WARNING

Do not work under a vehicle supported only by jacks. Jacks can slip, causing the vehicle to fall, which could result in serious personal injury. Always support the vehicle with safety stands.

1. Use a jack to raise the vehicle so that the front tires are off the ground. Support the front axle with safety stands.
2. Remove and discard the cotter pins and the nuts that fasten the tie rod ends to the tie rod arms on both sides of the axle.

WARNING

Always support the tie rod assembly so that it does not fall and cause personal injury or become damaged when separated from the tie rod arms.

3. Disconnect the tie rod assembly from the tie rod arms. The use of a tie rod end puller is recommended.

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WARNING

Do not heat the arm to remove the tie rod assembly. Doing so may damage the parts. Loss of steering control may result, possibly causing personal injury or property damage.

4. If necessary, tap on the tie rod end to loosen it from the tie rod arm. See **Fig. 1**.

REMOVING THE TIE ROD END FROM THE CROSS TUBE

1. Loosen the bolts and the nuts on the cross-tube clamps. See **Fig. 2**.
2. Mark the installed position of each tie rod end and count and record the number of threads that appear outside of the cross tube. See **Fig. 3**.

WARNING

Do not remove clamps that are welded to the cross tube. Removing welded clamps may damage the cross tube. Loss of steering control may result, possibly causing personal injury or property damage. If welds are broken, replace the cross tube.

3. Remove the threaded tie rod ends from the cross tube. See **Fig. 4**.
4. Inspect the cross tube for damage and replace if necessary.

INSTALLING THE TIE ROD ENDS IN THE CROSS TUBE

CAUTION

Do not bend, weld, or heat front axle components. Doing so will damage the parts.

NOTE: The cross tube has right-hand threads on the right side of the vehicle and left-hand threads on the left side of the vehicle.

1. Use the thread count as a guide and install the tie rod ends in the threaded cross tube ends to the approximate depth marked during the tie rod assembly removal. Both tie rod ends must be installed in the cross tube deeper than the end of the cross tube slot. See **Fig. 5**.

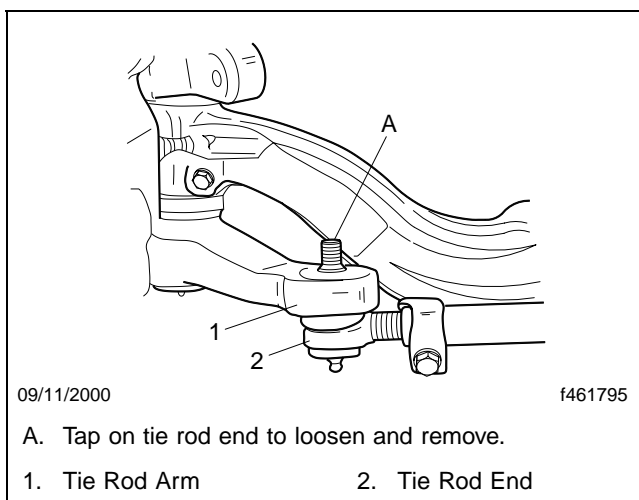


Fig. 1, Tie Rod End and Tie Rod Arm

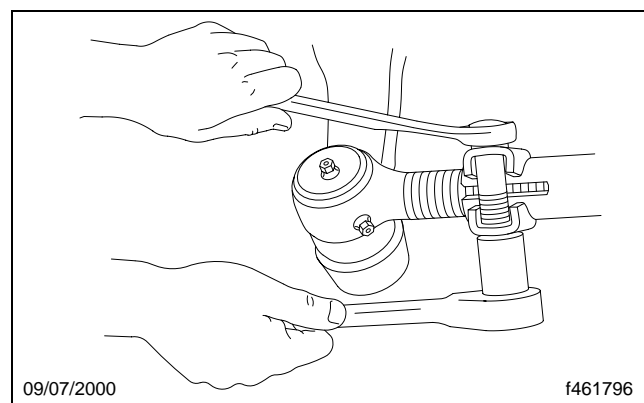


Fig. 2, Loosen the Bolts and Nuts on the Cross-Tube Clamp

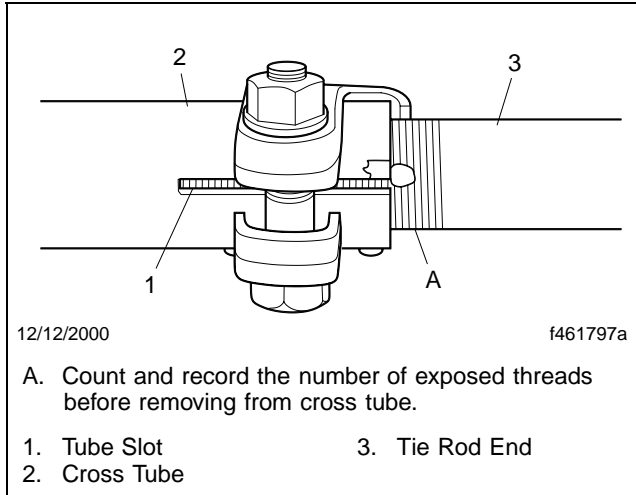


Fig. 3, Bottom View of Tie Rod End and Cross Tube

- A. Count and record the number of exposed threads before removing from cross tube.
- | | |
|---------------|----------------|
| 1. Tube Slot | 3. Tie Rod End |
| 2. Cross Tube | |

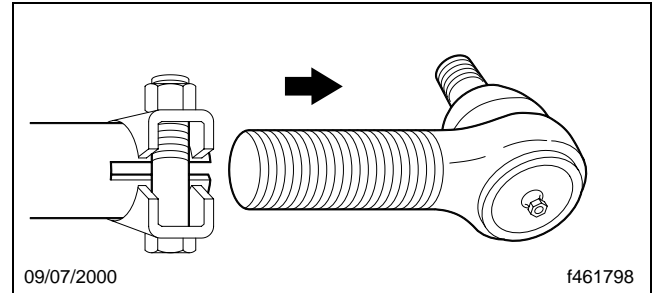


Fig. 4, Remove the Threaded Tie Rod End from the Cross Tube

2. Check that the tab on the clamp is firmly seated against the end of the cross tube. See **Fig. 6**.

INSTALLING THE TIE ROD ASSEMBLY ON THE AXLE

1. Clean the tie rod arm taper hole. Connect the tie rod ends to the tie rod arms.
2. Push the threaded tie rod end through the tie rod arm hole. See **Fig. 7**.
3. Install new nuts on the tie rod ends and tighten the nuts to one of the following torque specifications based on the size of the nut.
 - 7/8–14: 160 to 300 lbf·ft (217 to 406 N·m)
 - 1–14: 250 to 450 lbf·ft (339 to 610 N·m)
 - 1-1/8–12: 350 to 650 lbf·ft (475 to 881 N·m)
 - 1-1/4–12: 500 to 675 lbf·ft (678 to 915 N·m)
4. Install new cotter pins. If necessary, tighten the locknut until the holes are aligned. Do not loosen the nut to install the cotter pin.
5. Apply torque seal, OGP F900WHITE, to the threads, nut, and cotter pin where they intersect.
6. Lubricate the sockets through the zerk fitting until you can see grease coming out of the seal.

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ADJUSTING THE TOE-IN

1. Adjust the toe-in. For instructions, see the applicable service/workshop manual in **Table 3**.

Toe-In Adjustment Procedures			
Vehicle	Service/Workshop Manual	Section	Subject
Acterra	<i>Acterra Workshop Manual</i>	33.00	140
Argosy	<i>Century Class Trucks Workshop Manual</i>	33.00	150
Business Class	<i>Business Class Trucks Service Manual</i>	33.00	140
Century Class	<i>Century Class Trucks Workshop Manual</i>	33.00	150
FLD Conventional	<i>Heavy-Duty Trucks Service Manual</i>	33.03	150
L-Line A-Line	<i>L-Line A-Line Workshop Manual</i>	33.00	180
Recreational Vehicle	<i>Recreational Vehicle Chassis Workshop Manual</i>	33.00	140
School Bus	<i>School Bus Chassis Workshop Manual</i>	33.00	140
Walk-In Van	<i>Walk-In Van Chassis Workshop Manual</i>	33.00	120

Table 3, Toe-In Adjustment Procedures

2. Apply torque seal, OGP F900WHITE, to the cross-tube clamp bolt and nut.
3. Clean a spot on the "base" completion label (Form WAR259). The "base" label is usually located on passenger-side door jamb about 18 inches (46 cm) above the handle of the vehicle. Write in the recall number and attach the completion sticker (Form WAR260) provided in the recall kit.

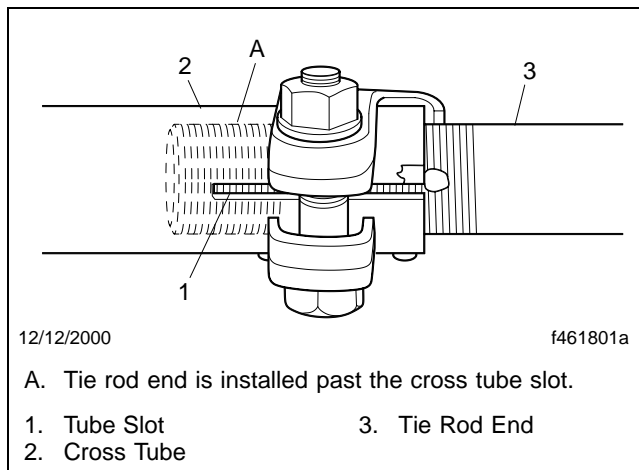


Fig. 5, Bottom View of Tie Rod End and Cross Tube

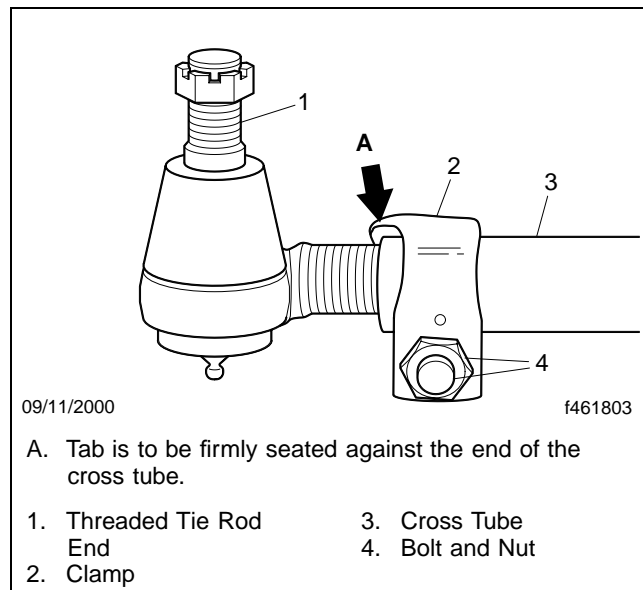


Fig. 6, Cross Tube Clamp

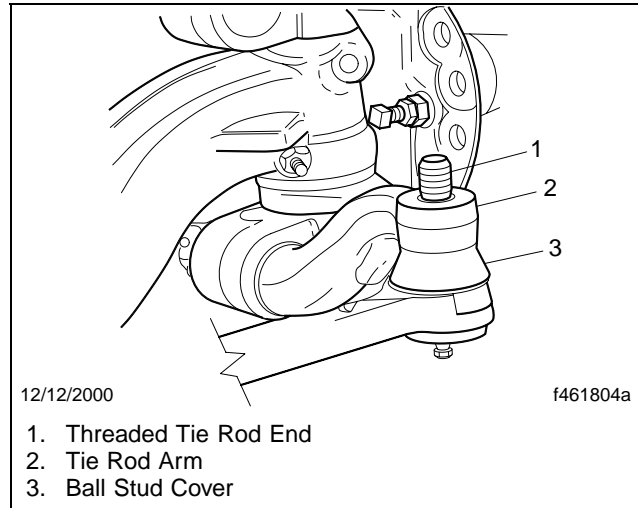


Fig. 7, Tie Rod Arm