

Service Bulletin #COL-132

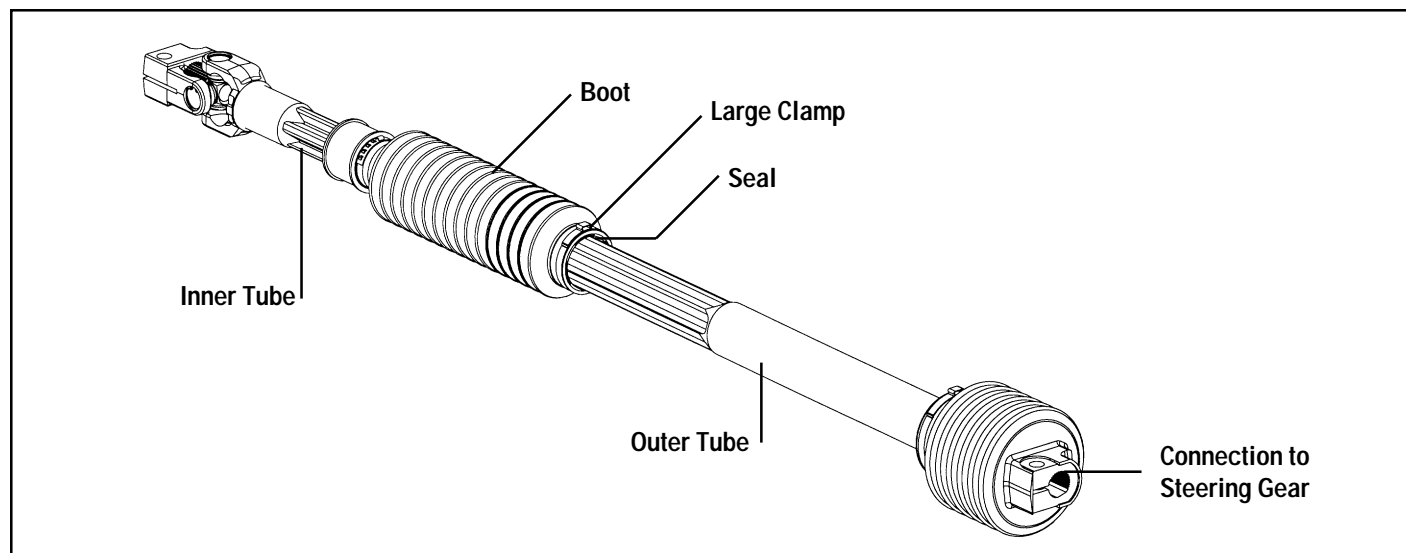
Intermediate Shaft Greasing

Kit #SK000199

Released December, 1996

This bulletin is designed to fix a specific and limited issue on some Freightliner trucks. Vehicles with intermediate shafts which should be regreased will produce a "thumping" noise during a turn.

This TRW Commercial Steering Division service bulletin has been written to help you repair commercial vehicles more efficiently. This bulletin should not replace your manuals; you should use them together. These materials are intended for use by properly trained, professional mechanics, NOT "Do-it-yourselfers". You should not try to diagnose or repair steering problems unless you have been trained, and have the right equipment, tools and know-how to perform the work correctly and safely.



WARNING Wear eye protection while removing the clamp to protect from possible flying debris.

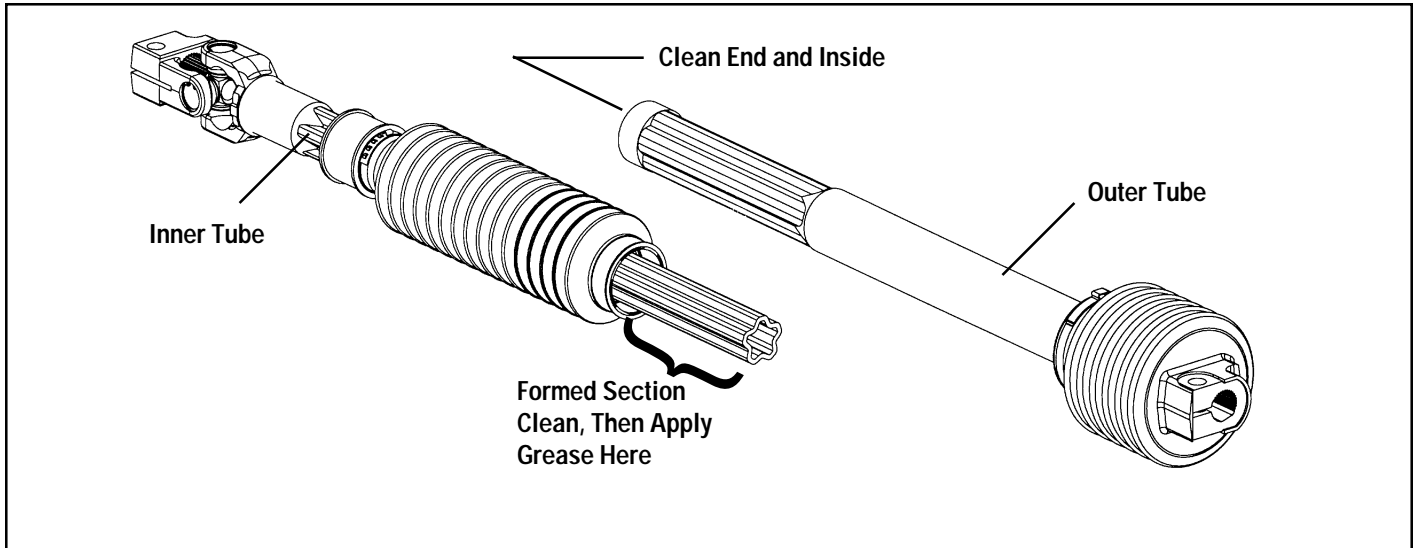
1. Remove the large clamp using pliers or another suitable tool.
2. Mark the boot and the lower (outer) tube for orientation at reassembly.
3. Remove the pinch bolt from the lower end of the shaft--at the steering gear, and slide the u-joint off the gear's input shaft.
4. Grasp the lower end of the boot, in the seal area. Separate the two ends of the shaft assembly by

sliding the outer tube away from the inner tube. The seal should remain on the inner tube, leaving 5" of the inner tube exposed.

CAUTION Wipe the tubes with a clean cloth only, do not use abrasive cleansers. Abrasive cleansers could damage the shaft assembly.

5. Wipe the grease off the formed section of the inner tube with a clean, lint-free cloth. Make sure all the grease is removed.

WARNING Because they are flammable, be extremely careful when using any solvents. Even a small explosion or fire could cause injury or death.



- Clean the outer tube with a mineral spirits-based solvent. Run solvent into the outer tube and use a soft-bristle brush soaked in solvent to scrub the grease out of the inside of the tube. Also clean off any grease on the outside of the tube.

WARNING Wear eye protection and be sure to comply with OSHA or other maximum air pressure requirements.

- Dry the tube with a clean, lint-free cloth, and then continue drying with clean, dry compressed air.

CAUTION The tube must be dry of all solvent before reassembly. Damage to steering components could result from solvent remaining on this component during reassembly.

NOTE Do not substitute another grease. The grease provided is a special Teflon-based grease engineered for this application.

CAUTION Do not smoke while using this grease. Avoid contamination of cigarettes and other tobacco products.

Do not heat this grease; toxic fumes can be produced at temperatures over 500°F.

Contact with eyes, and prolonged or repeated contact with skin may cause irritation. Safety glasses and gloves are recommended when applying the grease.

Wash hands thoroughly after applying the grease, and before smoking.

- Open the packet of grease (TRW part number 406039) and apply ALL of its contents to the lower five inches of the formed section of the inner tube. Apply the grease with your finger or a clean brush. Make sure no bristles are left on the tube if you use a brush.

- Slide a new worm-drive hose clamp onto the inner tube. The hose clamp must be able to clamp the 1 7/8" dia. boot.

- Align the marks you made earlier for orientation, and slide the outer tube onto the inner tube so that it seats into the seal.

CAUTION Failure to align the shaft assembly properly could result in damage to steering system components.

- Align the end of the boot with the end of the seal.
- Align the lower edge of the hose clamp with the end of the boot and seal.
- Torque the hose clamp to 25-30 inch pounds.
- Stroke the shaft an inch in each direction to verify proper operation.
- Reattach the shaft to the steering gear and torque the pinch bolt to 45-55 foot pounds using Freightliner hardware.

NOTE TRW strongly recommends the use of a new pinch bolt.

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