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Coding Information

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Title: Tips for Diagnosing or Repairing Steering Issues with a Sheppard (Bendix) Steering Gear that has Auto Relief Plungers

Applies To: Vehicles with RH Sheppard (Bendix) Steering Gears w/ Auto Relief Plungers

CHANGE LOG

Please refer to the change log text box below for recent changes to this article:

4/5/2018 - Author updated for feedback purposes
8/22/2015- Fixed typo
11/07/2014 - Updated link to S02001K and s05002y
11/04/2014 - Author updated for feedback purposes

DESCRIPTION

The following should be observe when diagnosing or repairing a truck equipped with a Sheppard steering gear with **AUTO** Relief Plungers.

- First all steering related concern should be diagnose with a power steering analyzer ZTSE2780 use the Trouble shooting checklist ([TSI 02-05-01](#)). **DO NOT REMOVE THE STEERING GEAR FROM THE FRAME FOR DIAGNOSIS!**
- Never turn the steering wheel to its maximum turn ratios with any of the steering components disconnected from the main steering gear.
- Anytime Tire size, Steering Gears or Axle Stops are adjusted, or changed, **Relief Plunger(s) Adjustment will be necessary**. A relief plunger is located in each end cap of the steering gear. One for right turn; one for left turn. The Relief Plungers are designed to relief hydraulic pressure in the steering gear before the wheel reaches it maximum turn radius. Refer to the setting Relief Plunger in the Service Manual (s05002y) or Sheppard Web-site ([www.rhsheppard.com](#)).
- When bleeding the steering gear follow Service Manual ([s05002y](#)) or Sheppard Web-site ([www.rhsheppard.com](#)). **Never bleed the steering system with steering components disconnected from the main steering gear. This will cause the relief plunger(s) in the main steering gear to be out of adjustment.**
- Axle stop have to be adjusted as per the factory specification (refer to Group 2 Front Axle - [S02001K: STEERING GENERAL SERVICE INFORMATION AND FRONT WHEEL ALIGNMENT](#))
Caution: If the stop bolts contacts the axle under pressure, release the wheel immediately! Damage to the steering components will result. Properly set relief plungers will go into relief before the axle stop bolt contacts the axle (1/8" to 1/4" before the axle stop contacts the axle).

The Sheppard steering gear automatic relief plunger(s) only set when the turn angles are increased. The main steering gear reliefs are designed to relieve the pressure in the steering gear before the power steering pump reaches its maximum set relief limit.

Procedure to reset the relief plunger can be found under Service Manual [S05002y](#) or on the Sheppard Web-site (www.rhsheppard.com) under the service manual section.

Only use Approved Seal kits for Sheppard M series Power Steering Gears.

If a failure does occur requiring the replacement of a RH Sheppard Main steering gear due to damaged mounting bolts or gear mounting. Then install new bolts and inspect the frame for flatness at the mounting location. (Sheppard steering gears use only Metric bolts – M100 gears use 16mm bolts torque to 220ft.lb or 294Nm. M110 gears use 18mm bolts torque to 415ft.lb or 560Nm. M80 gears use 16mm bolts torque to 220ft.lbs or 294 Nm.)

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