TRW Automotive
Commercial Steering Systems

Service Procedure # COL-201

IGEN 3 Intermediate Shaft Weld Location Inspection Procedure

June 2010

NOTE Park the vehicle on a level surface. Shut down the engine, set the parking brake, and chock the tires before beginning procedure. Take any additional personal safety measures that may be required while performing this procedure.

NOTE This service procedure applies to TRW IGEN 3 Intermediate Columns

Tools Required

- Weld Position Gauge (IF-35029 DET.3 REV.D) for all intermediate column part numbers listed in the "Identifying Columns to Be Inspected" section, below.
- Weld Position Gauge (IF-35029 DET.5) for intermediate column part number 418035 ONLY.

Definition of Procedure

This procedure is designed for inspecting the joining weld of the IGEN 3 Intermediate Column to ensure that the weld position is to the correct specification.

Inspection Process Overview

1. Confirm the part number of the intermediate shaft to ensure that the shaft on your vehicle is in fact an IGEN 3 intermediate shaft.
   - If the shaft is NOT an IGEN 3 intermediate shaft -STOP- No further inspection is required.

2. Confirm that the date code of the IGEN 3 intermediate shaft is within the range specified in this campaign.
   - If the date code is NOT within the range specified in this campaign -STOP- No further inspection is required.

3. Inspect the tube weld location using the TRW gauge specified for use with your intermediate shaft.
   - If the the weld on the intermediate shaft passes the gauge test - STOP - No further inspection is required.

4. If weld position fails the weld location gauge test - Replace the IGEN 3 intermediate shaft.

- Please use the inspection instructions on page 2 of this procedure to ensure that a thorough and proper inspection is conducted Per these instructions.

This TRW Commercial Steering Systems' service procedure has been written to help you repair commercial vehicles more efficiently. This procedure 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.

Identifying Columns to Be Inspected

The intermediate columns to be inspected are numbered in one of the following ways.
- Indicates Numeral
X - Indicates Alpha Character
4180##
4180##-#
4180##-# X
4180##-##
4180##-## X

All are followed by a space and then a date code. The intermediate columns to be inspected fall between and include the following date codes.

7130 - 9110

First digit indicates the year and the last three digits indicate the day of that year. **Figure 1**

NOTE If the Intermediate column is stamped with a second date code that starts with P (P####) it is not included as part of this procedure.

If the intermediate column on the vehicle looks like the intermediate column displayed in **Figure 2** it is **NOT** an IGEN 3 intermediate column and **DOES NOT** require inspection. Record the part number and vehicle vin number to verify that the part was not covered in this service procedure.

I GEN 3

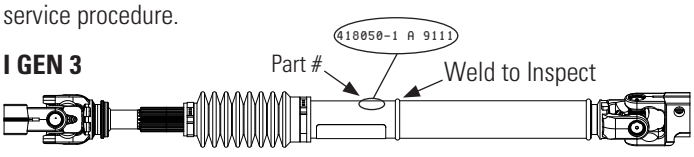

Figure 1

SF

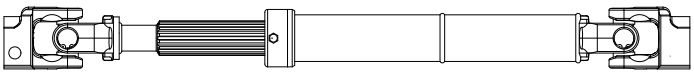

Figure 2

Weld position Inspection Procedure

1. Check the weld position using the TRW gauge (SEE Tools Required Page 1). Place the template end of the gauge against the base of the boot seal as shown in **Figure 3** with the gauge placed over the top of the part number stamp location.

NOTE Clean the base of the boot clearing any debris to ensure that the gauge makes good radial contact with the boot.

NOTE Clean the weld so that it is free of any dirt, oil or debris so it may be clearly inspected through the gauge window.

2. Visually inspect the position of the weld bead in reference to the small gauge window (3/16" width). The full circumference of weld seam must be inspected in the gauge window. **Figure 4**
   Look for the following criteria:
   - The weld bead must completely fill the gauge window.
   - No joint line between the 2 tubes should be visible, the edges where the tubes join should be covered by the weld.
   - The parent tube should not be visible in the narrow section of the gauge window.

NOTE The larger window in the gauge is for visual reference only and is not intended for gauging purposes.

2a. **Part Passes** if the weld bead completely fills the narrow gauge window **Figure 4.** Mark the parts that pass inspection with yellow or white paint mark adjacent to the part number stamp. **Figure 1**

- This completes the inspection
Submit a warranty claim for inspection only including:
- Vehicle Identification Number (VIN)
- Intermediate column part number and date code

If the part did not pass proceed to step 2b.

2b. **Part Fails** if any of the following are seen in the inspection. **Figure 5**
- The weld bead does not completely fill the narrow gauge window.
- The parent tube is partially visible in narrow gauge window.
- The joint line between the 2 tubes is visible at any point around the circumference of the shaft. **Figure 5**

If part did not pass
Remove intermediate shaft and replace.
- Submit warranty claim for inspection and part replacement including:
  - Vehicle Identification Number (VIN)
  - Intermediate column part number and date code

3. **All failed parts must be returned** through normal warranty procedures. TRW will inspect all returned parts to verify that they fail the inspection. TRW will only pay warranty claims for IGEN 3 intermediate shafts that are verified to fail the inspection.

Figure 3

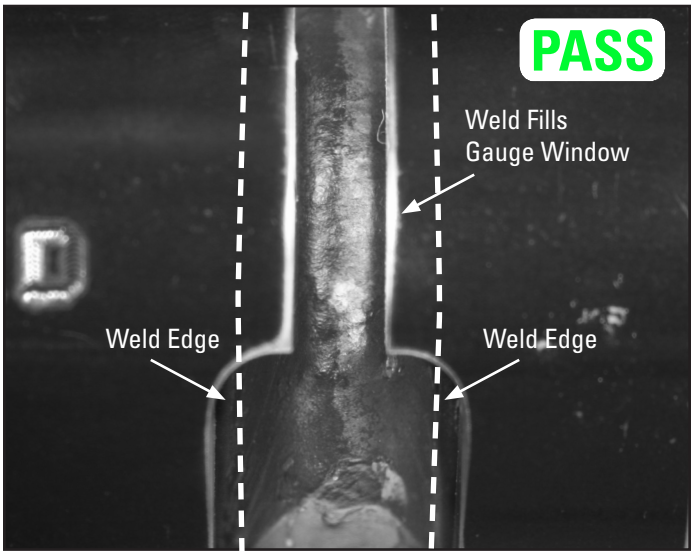

Figure 4

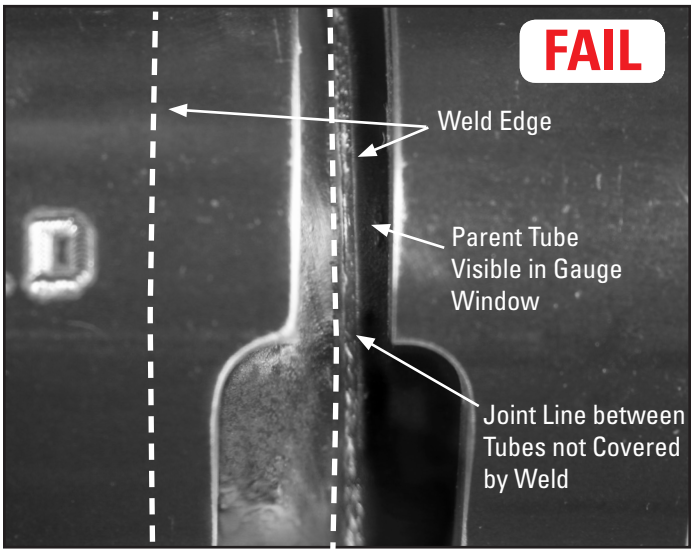

Figure 5

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