

ULX40 Axle Suspension Systems with PSI Tire Inflation Systems Installed on GDLP Trailers

January 2017

SAF-HOLLAND® has identified axle assemblies installed on ULX40 axle suspension systems that may have tire inflation spindle plugs that are installed askew relative to the spindle bore.

These were installed on GDLP trailers with the following VIN: list to be provided by GDLP.

Model Identification

The location of the axle serial tag is found near the center of the axle (**Figure 1**), and the suspension serial tag is located on the front crossmember (**Figure 2**). The serial number is on the last line of the sample tag shown (**Figure 3**).

Inspection procedure

In preparation for this inspection, consult XL-TA100060M-en-US for relevant safety instructions. MTIS maintenance manual mm14P was also used for additional MTIS information.

The tools and supplies needed for the inspection and rework are as follow.

Required Tools:

- 7/16" wrench
- 5/8" socket
- Dial depth indicator -supplied by SAF-HOLLAND
- Torque wrench 0-55 in-lbs. and 0-28 ft-lbs.
- PSI plug installation driver –supplied by SAF-HOLLAND
- 3-4 lbs. hammer
- Bore polisher for 2.75" diameter
- Slide hammer tool to remove spindle plug

Required Supplies:

- Alcohol wipes
- Replacement PSI spindle plugs (if needed)
- Sealant (Loctite 620 or PermaBond HH40)
- Replacement hub cap gasket (Replace if damaged)
- Spare hub cap bolts and washers (if any are lost)
- Replacement wheel bearing grease

Figure 1

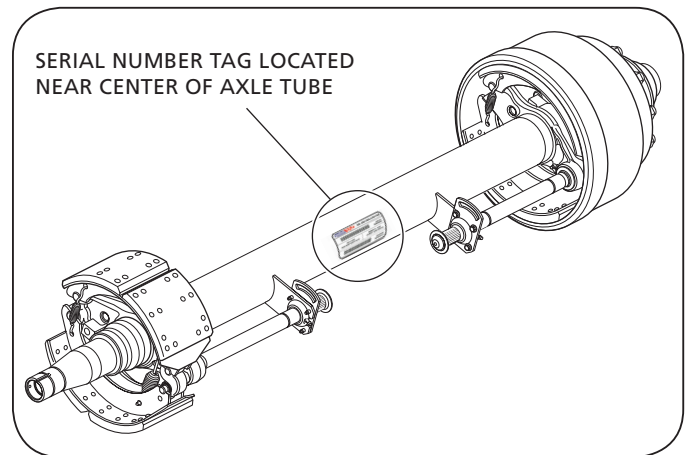


Figure 2

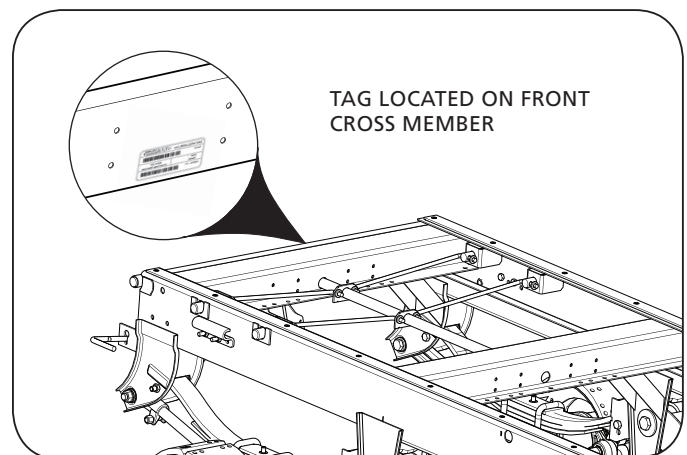
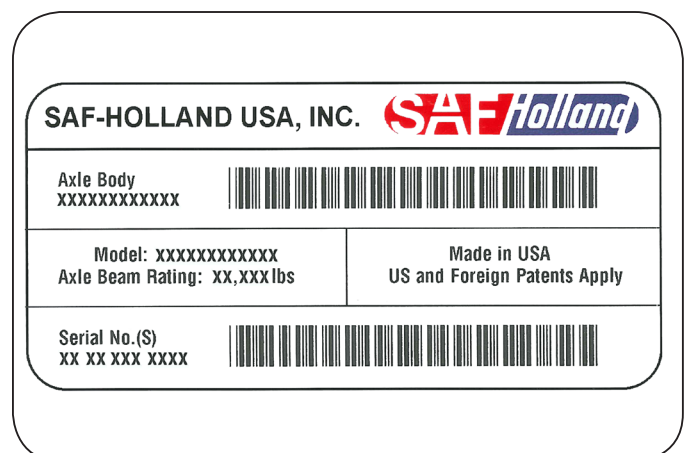


Figure 3



Following the steps below perform the inspection on each wheel end assembly:

1. Record VIN of trailer, suspension serial number, and each axle serial number in the location provide on **Table 1** Page 5.
2. Turn the tire inflation system off using the shut-off valve at the MTIS control box (**Figure 4**), so that the shut off valve is in closed position when yellow handle is 90° with the fittings (**Figure 5**).
3. Open drain valve by turning valve counter clockwise to completely open (**Figure 6**).
4. When air stops coming out the Drain Hole, the system is Depressurized.
5. Remove the hoses from the thru-tee. Then remove the thru-tee and hubcap. Save bolts, washers, and gasket if possible.
6. Cover the wheel end with a clean towel or plastic cover to protect the bearings from contaminants.
7. Wipe any grease from spindle ID including the PSI plug face and end of spindle.
8. Set gage (**Figure 7**) against spindle face:
 - a. "Steps" of gage base are flat to the spindle face.
 - b. Indicator face is easily visible, typically with gage face up at 7 o'clock.
9. Set the dial on indicator to "0" (**Figure 7**).
10. Grasping the edges of gage base, to maintain firm flatness to the spindle face, rotate the gage 360°, reading the indicator needle.
11. The dial indicator reading from each wheel end is to be recorded in the specific location provided on **Table 1**.
12. If the maximum variation detected is 0.030" or less the installed plug is considered acceptable. Go to Step 35
13. If the maximum variation detected is greater than 0.030" the installed plug will need to be removed and replaced.
14. Remove stator pipe from axle press plug.
15. Use a slide hammer fitted with the axle press plug removal tool to remove the axle press plug. Use care not to score the inside diameter of the spindle bore (**Figure 8**).

CAUTION

Use a bore polisher to remove all old adhesive from the spindle bore before you apply retaining compound to install the axle press plug. Retaining compound must contact a bare metal surface or it will not harden. Damage to components can result.

16. Polish the spindle bore to remove all adhesive residue left from the old spindle plug and any metal burrs or sharp edges from the spindle bore surface (**Figure 9**).

Figure 4



Figure 5

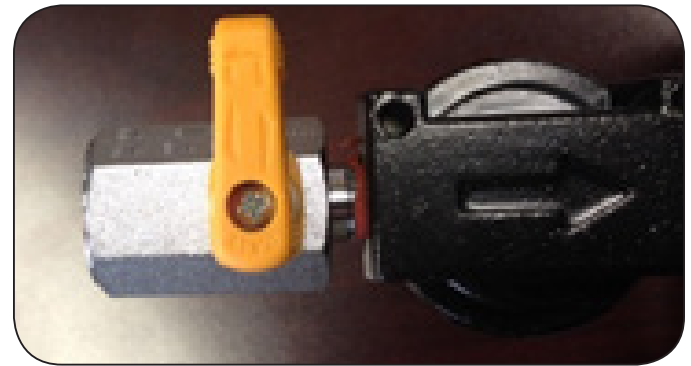


Figure 6

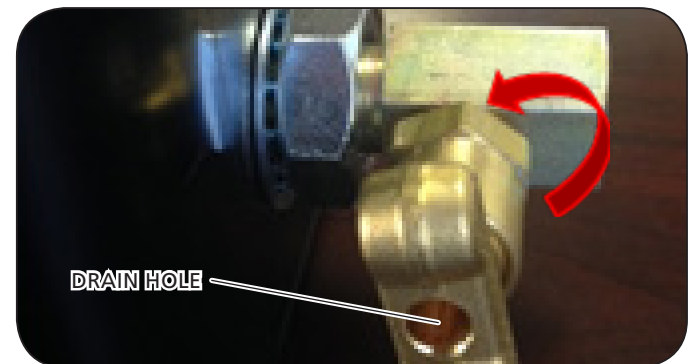
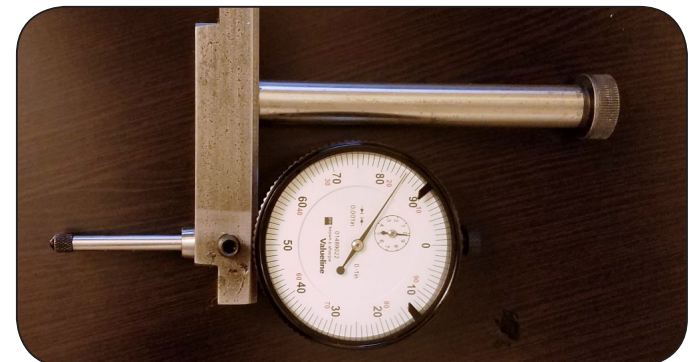


Figure 7



17. If the axle spindle is equipped with cotter pin holes: Use a round abrasive tool to remove all metal burrs and sharp edges from the spindle bore side of the cotter pin holes.
18. Install new press plug onto PSI plug installation driver (**Figure 10**).
19. Clean the exposed O-ring surface and outside diameter of the press plug using a cleaning towelette or other alcohol cleaning agent.
20. Using the same towelette or cleaning agent, clean the spindle bore of contaminants such as dust, grease and oil.
21. Apply the retaining compound (PERMABOND - PERMANENT RETAINER HH040, OR LOCTITE 620) evenly to the outside diameter of the press plug (see below). Press plug must be installed within 10 minutes of applying the retaining compound to ensure compound hardens correctly (**Figure 10**).

CAUTION

Be sure to wear hand protection when handling retaining compound.

22. If installing a press plug with a thermal screw for THERMALERT™ System, install the screw at the 12 O'clock position.
23. Insert the press plug by hand into the spindle bore until the plug stops in the bore.
24. Insert the PSI plug installation driver supplied by SAF-HOLLAND.
25. Using a 4 Lb. brass or synthetic mallet, drive the press plug into the spindle bore until the adapter bottoms out. The installation driver sets the press plug depth.
26. Wipe off all retaining compound residue from the spindle and press plug. Clean any additional compound off the tool.
27. Insert stator into spindle plug hand tight.
28. Using a 5/8" socket tighten stator approximately 2.5 additional turns or 23-28 ft-lbs. [31-38 N•m].
29. Recheck the variation of the press plug face skewness starting at Step 7 above, recording the dial indicator reading just below the original reading on **Table 1**.

CAUTION

Caution must wait minimum 30 minutes before pressurizing tire inflation system.

30. To leak test the new press plug, inset the thru-tee into the stator and hold it in place. Turn the system ON by reversing Steps 2 and 3.
31. Fully pressurize the tire inflation system by connecting the trailer to a pressure source that can deliver 20 psi [137.9 kPa] above the control box setting, typically 120-130 psi [827-896 kPa] to the trailer glad hands. Allow the air pressure source sufficient time to pressurize the system, which may take up to 10 minutes.

Figure 8

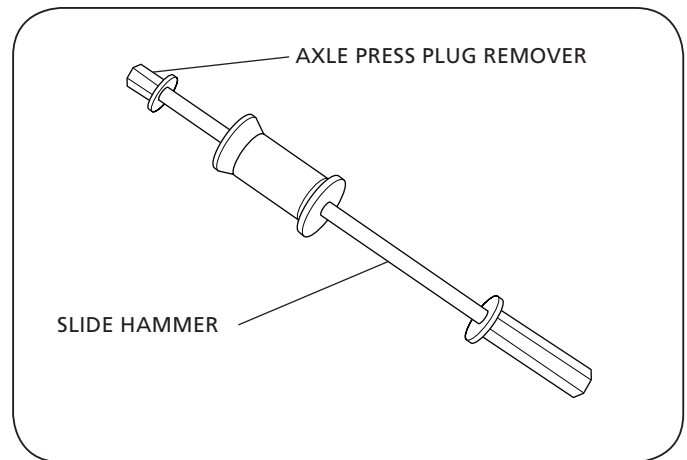


Figure 9

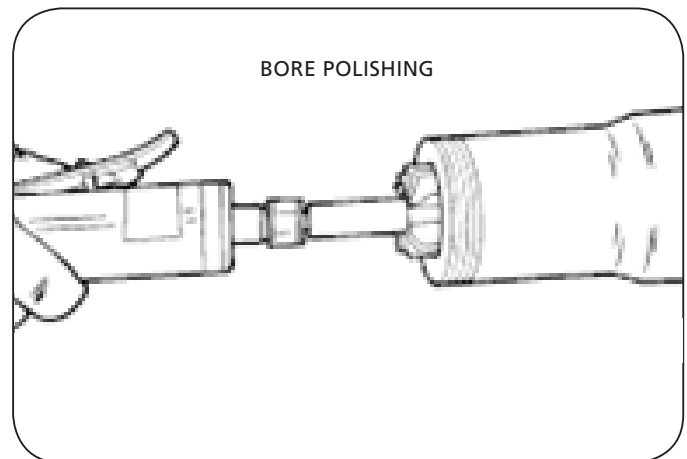


Figure 10



32. Ensure to hold the tee straight into the axle. Spray the axle press plug area with a non-corrosive leak detecting solution to check for leaks.
33. When a complete seal is obtained re assembly of wheel end can be started.
34. Turn OFF Air and drain per Steps 2, 3 and 4.
35. Remove rags or cover protecting bearings.
36. Re-install hub cap, gasket, and 6 bolts and washers. Pay attention to orientation of hose connections. Replace any lost grease (**Figure 11**).
37. Tighten 6 bolts in a criss-cross pattern to 12-16 ft-lbs. [16.3-21.7 N•m].
38. Hand-tighten the thru-tee assembly. Tighten the tee with a torque wrench set at 45 in-lbs. [5 N•m].
39. Check alignment of the tee air fittings to the tire valve stems (**Figure 11**). They should point toward the tire valve stems. If not aligned, retighten the tee with a torque wrench set to 55 in-lbs. [6 N•m] and tighten until aligned. DO NOT exceed 55 in-lbs. [6 N•m].
40. Re-attach the air hose fittings to the Thru-Tee hand tight. Then use a 7/16" wrench to tighten the connections an additional half-turn.

CHECK THE WHEEL END FOR AIR LEAKS

41. Close drain petcock on control box by turning clockwise all the way by reversing Step 3.
42. Turn on supply air at MTIS control box and charge system.
43. The tire inflation system must be fully pressurized before proceeding. This may take up to 10 minutes, since the axles, tires and possibly the brake system will have to be pressurized. A shop air source will charge the system more quickly than a tractor compressor.
44. Fully pressurize the tire inflation system by connecting the trailer to a pressure source that can deliver 20 psi [137.9 kPa] above the control box setting, typically 120-130 psi [827-896 kPa] to the trailer glad hands. Allow the air pressure source sufficient time to pressurize the system, which may take up to 10 minutes.
45. Test the tire inflation system for air leaks. Spray a non-corrosive leak detection solution on the fittings and hose connections to check for leaks (**Figure 12**).
46. Look for bubbling and listen for audible leaks.
47. Tighten or replace fittings that leak.
48. Following completion of the above steps for all four wheel ends, using a highly visible colored marker or paint marker, a check mark needs to be made on or near the white adhesive suspension serial tag, located as shown in **Figure 13** of the bulletin.

Figure 11

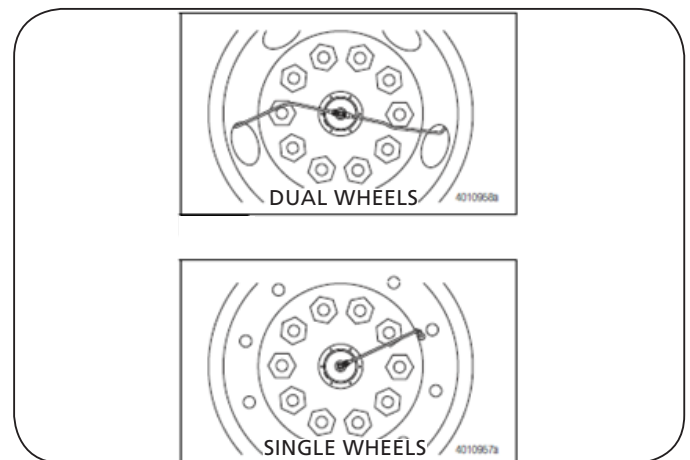


Figure 12

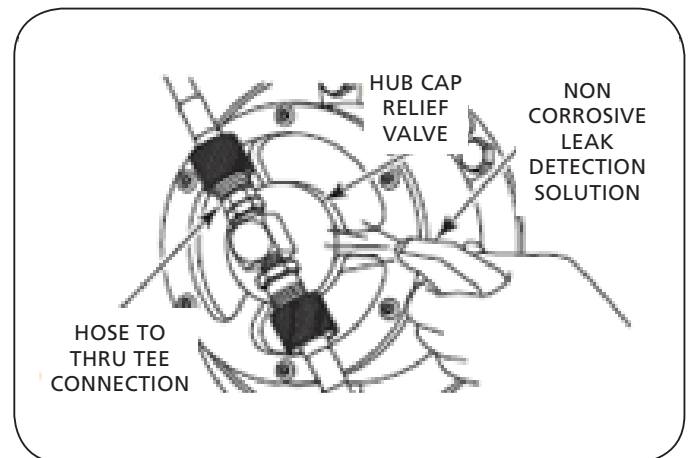


Figure 13



[illegible]



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SAF-HOLLAND Original Parts are tested and designed to provide maximum performance and durability. Will-fits, look-alikes or, worse yet, counterfeit parts will only limit the performance potential and could possibly void SAF-HOLLAND's warranty. Always be sure to spec SAF-HOLLAND Original Parts when servicing your SAF-HOLLAND product.

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