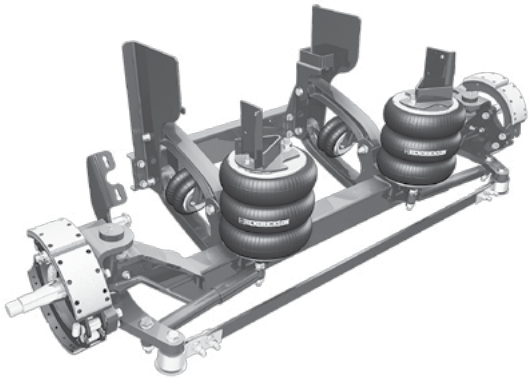

ASSEMBLY INSTRUCTIONS

COMPOSILITE® SC 08K/10K Steerable Suspension System

SUBJECT: Wheel End Grease Conversion and Component Replacement Service Kit

LIT NO: AI-H783

DATE: February 2016 **REVISION:** A

INTRODUCTION

This publication is intended to assist maintenance personnel, on an as needed basis, with the (1) replacement of oil in the hub assemblies with semi-fluid grease, specifically Chevron Delo® Synthetic SF, and (2) installation of replacement wheel end bearings, seals, spindle nuts and hub caps on COMPOSILITE SC 08K/10K suspensions, using replacement Service Kit R-014669.

- Any installation of this service kit on a suspension unit must be done for both wheel ends.

For complete safety, preventive maintenance and service instructions for COMPOSILITE SC Steerable Auxiliary Axle Systems, refer to Hendrickson Publication No. H633 available online at www.hendrickson-intl.com.

Hendrickson recommends the following procedure to ensure proper performance of vehicles equipped with a Hendrickson COMPOSILITE SC 08K/10K suspension that may be experiencing leaking or low levels of oil in the hub assembly.

SERVICE KIT R-014669	
Description	**QTY.**
Hub Cap Gasket	2
Axilok Spindle Nut	2
Hub Seal	2
Inner Bearing Cone*	2
Outer Bearing Cone*	2
Hub Cap	2
Hub Cap Fastener kit	1
1 Quart Chevron Delo semi-fluid grease	1

***NOTE:** To be used only in conjunction with the originally equipped Hendrickson COMPOSILITE SC 08K/10K inner and outer bearing cups.

⚠ WARNING

A TECHNICIAN USING A SERVICE PROCEDURE OR TOOL WHICH HAS NOT BEEN RECOMMENDED BY HENDRICKSON MUST FIRST SATISFY HIMSELF THAT NEITHER HIS SAFETY NOR THE VEHICLE'S SAFETY WILL BE JEOPARDIZED BY THE METHOD OR TOOL SELECTED. INDIVIDUALS DEVIATING IN ANY MANNER FROM THE INSTRUCTIONS PROVIDED WILL ASSUME ALL RISKS OF CONSEQUENTIAL PERSONAL INJURY OR DAMAGE TO EQUIPMENT INVOLVED.

YOU WILL NEED:

- Axle lock clamp
- Metered oil pump
- Pneumatic air supply
- Grease applicator brush
- ½" Socket wrench or impact gun
- Hub seal removal / installation tool (Seal Driver)

FIGURE 1

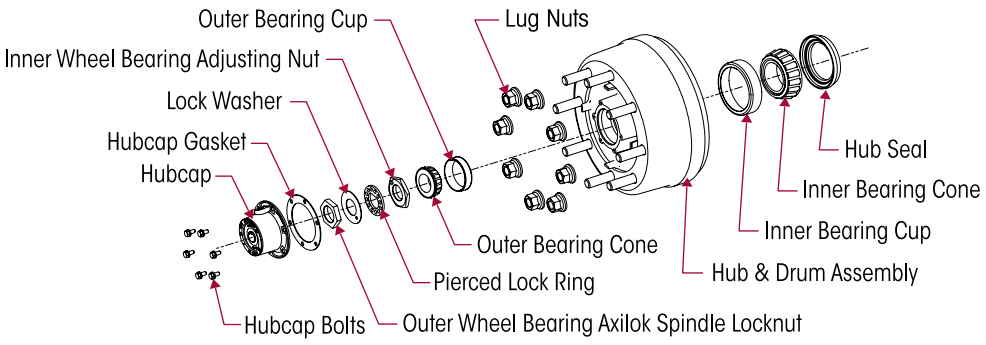

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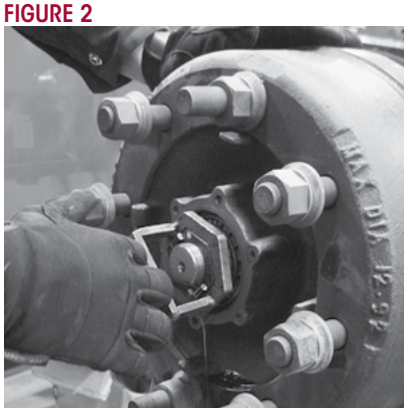
FIGURE 2



HUB DISASSEMBLY

1. Chock the front wheels.
2. Remove the lift axle tire.
3. Drain the hub oil. Use the drain hole or removable rubber plug.
4. Remove the outer wheel bearing Axilok spindle locknut and outer wheel bearing, see Figures 1 and 2.
5. Remove the hub.
6. Remove the hub seal and **INNER** bearing, see Figure 1.
7. Repeat steps 2-6 for opposite hub on the lift axle.

LUBRICATION AND HUB ASSEMBLY

1. Inspect the hub chamfer and bore for any burrs, nicks, roughness, deep scratches, etc.
2. Clean and correct any imperfections with emery cloth and wipe clean, see Figure 3.
3. Using an applicator brush that resists bristle pull outs or breaks, or an emery cloth, coat the cup races with Delo grease, see Figure 4.

FIGURE 3

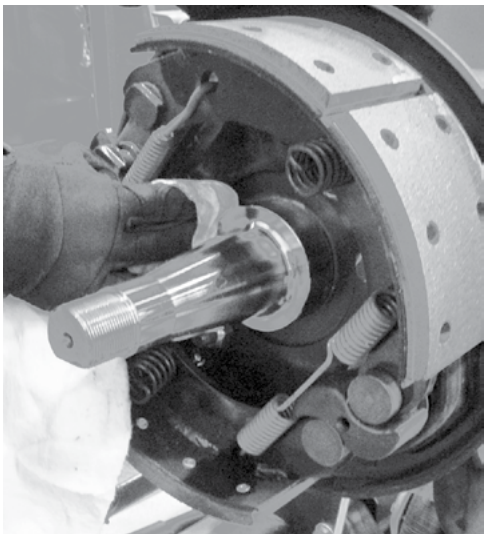


FIGURE 4

SERVICE HINT

Delo grease can be kept in a clean cup next to the seal press to ease in application.

4. Select the new **INNER** bearing cone (record the date code for your service log) and spin bearing to verify it functions properly.
5. Inject Delo grease into the **INNER** bearing cone (or prepack if the lubricated cone can be kept free from contamination such as in a lid covered container), see Figure 5.
6. While the hub sits with its outboard face down on the seal press, place the **INNER** bearing cone in the hub.

FIGURE 5

NOTE The outer diameter (OD) interface of the seal to the hub bore is steel, **DO NOT** lubricate the OD of the seal prior to pressing into the hub, see Figure 5.

7. Apply a thin film of Delo grease to the inner diameter (ID) of the new hub seal.
8. Using a seal driver, install the hub seal. Ensure that the **INNER** bearing cone is placed in the hub, see Figure 7.

FIGURE 6

FIGURE 7

FIGURE 8

9. Retract the seal driver head out from the hub.
10. Re-apply a thin film of Delo grease on the seal ID to assist it in the installation to the seal journal, see Figure 8. Grease is applied to the seal journal only. **DO NOT** apply to the axle's seal journal.
11. Prior to positioning the hub on the spindle, inspect the hub chamfer, bore and spindle for any burrs, nicks, roughness, deep scratches, etc. Clean and correct any imperfections with an emery cloth and wipe clean.
12. Apply Delo grease on the spindle including the **INNER** bearing shoulder. Avoid getting grease on the threads and on the seal journal.
13. Use a squeegee to remove excess grease from the seal journal. If the seal journal is not cleaned off properly, it will appear as if the seal is leaking.
14. Select the new **OUTER** bearing cone (record the date code for your service log) and spin bearing to verify it functions properly.
15. Pre-lube the **OUTER** bearing cone with Delo and have the bearing cone and spindle nut within arm's reach of the spindle being assembled in a clean location.

16. Slide the hub fully onto the spindle and support the hub so the **OUTER** bearing cup remains centered on the spindle. **DO NOT** allow the hub to sag down to prevent a kink or uneven pitch of the seal.

FIGURE 9

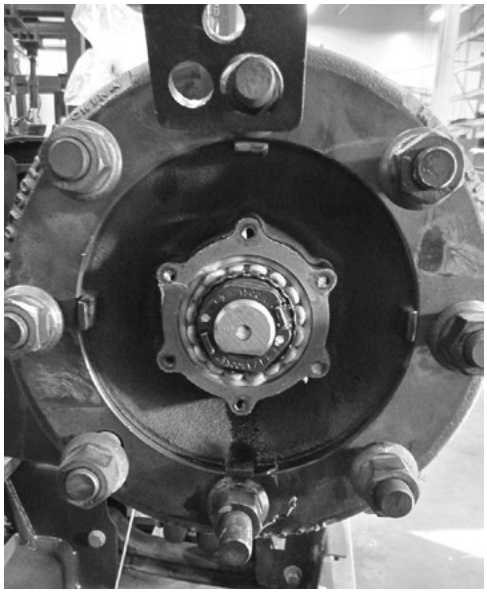
17. While supporting the hub centered on the spindle, pump 0.9 pints of Delo SF into the cavity, see Figure 9. Allow some of the Delo to be on the **OUTER** cup race.

SERVICE HINT

Use a needle-style end and spray the initial fill at the inboard cone end to force grease into the roller gaps. If any grease dripped out of the prepack or initial injection, fill the center section as far back and high up as possible to keep the Delo from dripping out on the floor.

18. When nearing the final amount of grease to fill, run a bead of the grease around the **OUTER** bearing cup race and inject any remaining grease back into the center hub cavity until the meter stops at 0.9 pints.
19. Install the **OUTER** bearing cone onto the spindle, pressing the cone into the cup by hand.
20. Touch an outside surface with the grease tip to indicate that the hub had been filled to leave a small amount of Delo grease visible.

FIGURE 10



21. Brush some grease on the outboard bearing cone face that will contact the nut. Verify there is some grease between the nut and the **OUTER** bearing cone prior to the axle leaving the factory.
22. Fasten Axilok spindle nut and tighten in two phases
    i. Tighten to 200 foot pounds and turn back 360°
    ii. Tighten to 50 foot pounds and turn back 90°
23. Add Delo grease to the nut face that contacts the **OUTER** bearing Cone, and perform your end play adjustment. Refer to Hendrickson Publication No. H633 for detailed instruction on adjusting end play.
24. With Delo grease, coat all exposed spindle ends, threads and nut surfaces to prevent rusting.

NOTE

Avoid getting Delo on the vent or having the Delo coating too thick on the hub cap face that it would drip down and clog the vent.

25. With Delo grease coat the inside of the hub cap to prevent rusting, see Figure 11.
26. Install the hub cap gasket and hub cap. Tighten the bolt to 12-14 foot pounds torque.
27. Verify grease is not piled up at the seal contact with the spindle, if so wipe off.
28. Install the lift axle tire.
29. Repeat procedure for opposite side of lift axle.
30. Remove the front wheel chocks.

FIGURE 11

Refer any questions on this publication to Hendrickson Auxiliary Axle Systems Tech Services:

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