

Service Bulletin

5.75" Diameter Trailer Axles With P89® Integral Disc Brakes

Rotor Replacement Procedure

October 2016

The following instructions provide the necessary information for the proper replacement of the rotor assembly on SAF-HOLLAND® P89 Disc Brake Axles equipped with INTEGRAL® Rotors. Additional information can be found in the SAF-HOLLAND® Disc Brake Axle service manuals (XL-SA20018UM-en-US for P89, XL-PS20024UM-en-US for P89 Plus).

NOTE: Before beginning any axle/brake service procedures, park the vehicle on a level surface. Block the wheels to prevent the vehicle from moving. Support the vehicle and axle(s) with safety stands. DO NOT work under a vehicle supported only by jacks.

⚠ WARNING

Failure to properly support the vehicle and axles prior to commencing work could create a crush hazard which, if not avoided, can result in death or serious injury.

The following parts are provided in the SAF-HOLLAND® P89/P89 Plus rotor replacement kit. One kit contains all parts required for one wheel end:

SAF-HOLLAND® ABS RING-ROTOR REPLACEMENT KIT			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	2019200000010	Disc Brake Rotor Assembly	1
2	04375101210Z	Rotor Attachment Bolt	10
3	2082100000190	Rotor Attachment Washer	10
4	01093002300Z	Hub Cap Gasket	1
5	04387002918	Spindle Grease (P89 Plus)	1

P89/P89 Plus INTEGRAL® Rotor Replacement

1. Remove the head unit. Refer to Section 7 of the XL-SA20018UM-en-US for the P89. Refer to Section 8 of the XL-SA20024UM-en-US for the P89 Plus.
2. Modify the ABS sensor block (**Figure 1**). Your ABS sensor block MUST be modified to provide clearance for your replacement rotor and ABS ring assembly. If your ABS sensor block is damaged, refer to SAF-HOLLAND® ABS sensor replacement manual XL-SA20030SB-en-US.

- a. Cover the spindle with plastic sheeting or a large plastic bag to prevent metal chips from contaminating the spindle grease.

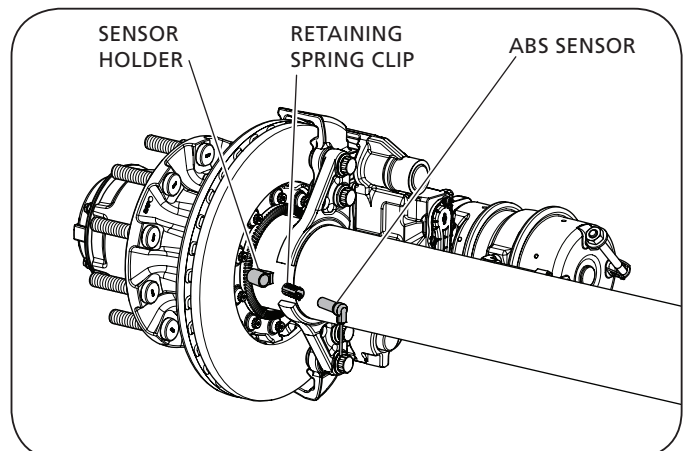
NOTE: If any metal shavings contaminate the spindle grease or spindle seal, the seal MUST be removed and the spindle MUST be thoroughly cleaned.

- b. Remove the ABS sensor and retaining clip (**Figure 2**).

Figure 1



Figure 2



- c. Measure and mark $\frac{3}{16}$ " back from front of the ABS sensor block (**Figure 3**).
 - d. Measure and mark $\frac{5}{8}$ " across the front of the ABS sensor block (**Figure 4**).
 - e. Remove material from the area of the ABS sensor block surrounded by the marks made in steps 2.b and 2.c above using a suitable grinder (**Figure 5**).
3. Replace the rotor/ABS tone ring assembly.
 - a. Remove the existing rotor from the head unit using a size 15 mm socket to loosen and discard all ten (10) connection bolts (**Figure 6**).

Figure 3

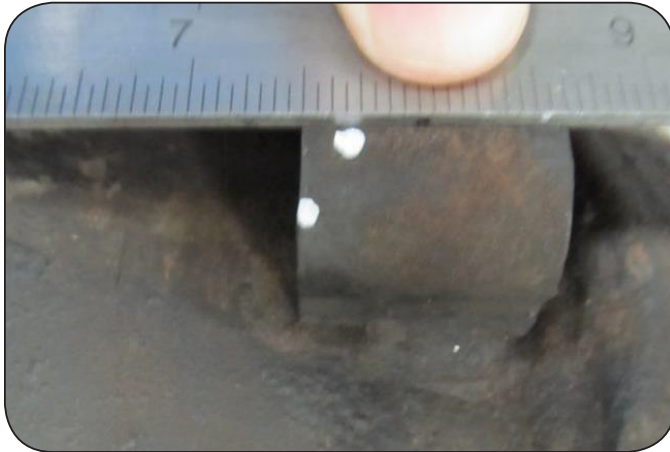


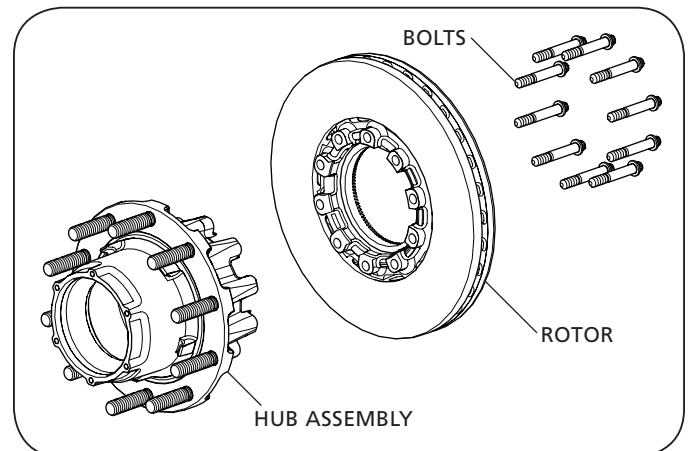
Figure 4



Figure 5



Figure 6



- b. Clean the rotor contact surface on the head unit. Using compressed air, clean the tapped holes in the disc unit. Check to make sure the threads are undamaged.
- c. Attach the new rotor to the hub using ten (10) new SAF® specific INTEGRAL® bolts and the ten (10) new washers (**Figure 7**). The washers slip into the groove in the ABS ring (**Figure 8**). Using a torque wrench, pre-tighten the bolts to 40 ft.-lbs. (54 N•m) using a crisscross pattern. For final torque, tighten bolts to 140 ft.-lbs. (190 N•m) using a crisscross pattern.

IMPORTANT: When attaching a new rotor head unit, use only new SAF® specified connection bolts. Bolts MUST be clean and free from oil and grease.

⚠ WARNING Failure to use only SAF® specified connections bolts could cause component failure which, if not avoided, could result in death or serious injury.

4. Reinstall the head unit on the spindle using the appropriate new spindle seal (01092003100Z for P89, 2024100000120 for P89 Plus(**Figure 9**)), reinstall the wheel end components. Refer to instructions detailed in Section 11 of XL-SA20018UM-en-US for P89, Section 8 of XL-SA20024UM-en-US for P89 Plus.

NOTE: For P89 Plus item 5, 04387002918 spindle grease, MUST be applied to the spindle bearing journals.

Figure 7

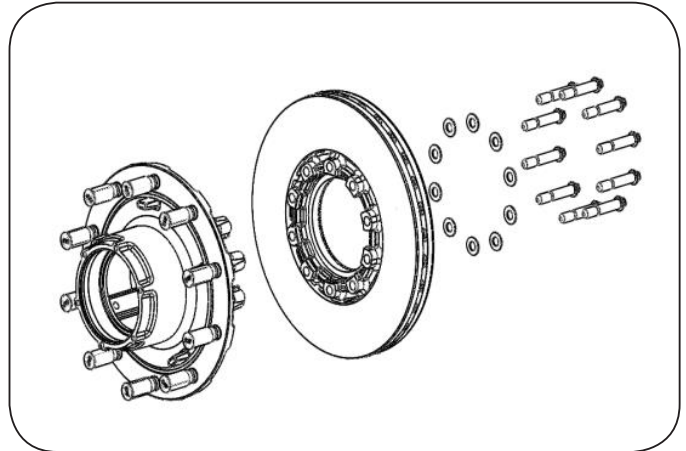
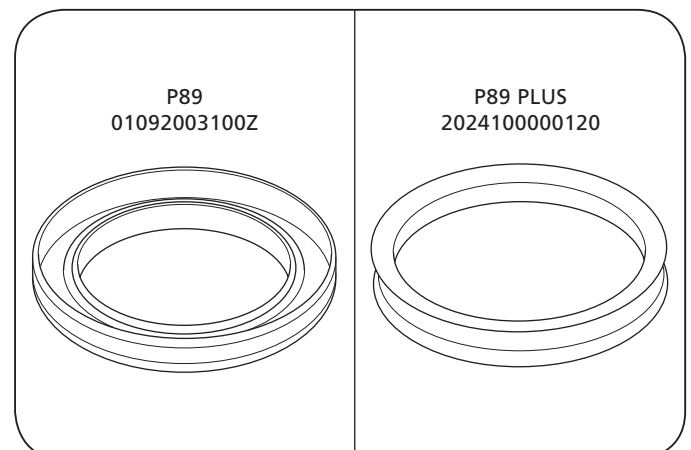


Figure 8



Figure 9



5. Reinstall the ABS sensor and retaining clip (refer to instructions detailed in Section 16 of the XL-SA20018UM-en-US for P89, Section 10 of the XL-SA20024UM-en-US for P89 Plus.

IMPORTANT: Rotate the wheel end to ensure there is no interference between the rotor attachment bolts and the ABS sensor block and sensor (**Figure 10**).

6. Reinstall hub cap using new hub cap gasket 01093002300Z, refer to section 13 of the XL-SA20018UM-en-US for P89, Section 8.2 of the XL-SA20024UM-en-US for P89 Plus Disc Brake Axle service manuals.
7. If the P89 hub lubrication medium is oil, refer to Section 12 of the XL-SA20018UM-en-US Disc Brake Axle service manual for lubrication instructions.
8. Reinstall the caliper according to Section 14 of the XL-SA20018UM-en-US for P89, Section 8.2 of the XL-SA20024UM-en-US for P89 Plus Disc Brake Axle service manuals.
9. Adjust the brakes.
Refer to Section 5 of XL-SA20018UM-en-US P89 Disc Brake service manual to determine whether your SAF-HOLLAND® trailer axle is fitted with Knorr Bremse SK7 calipers, or with SAF-HOLLAND® SBS 2220 K0 calipers.
For Knorr-Bremse SK7 Calipers adjustment procedures refer to the Knorr/Bendix® SK7 caliper service manual Y006474 which can be found at www.knorr-bremsecvs.com under documentation.
For SAF-HOLLAND® SBS 2220 K0 adjustment procedures refer to SBS 2220 K0 service manual XL-SA40001RM-en-DE which can be found at www.safholland.com.
10. Check the brake for proper application and release.

Figure 10

