

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.

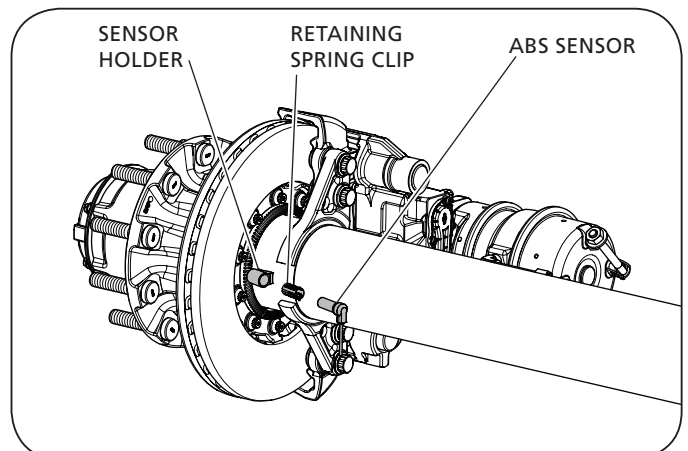
NOTE: If any metal shavings contaminate the spindle grease or spindle seal, the seal MUST be removed and the spindle MUST be thoroughly cleaned.

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

Figure 1



Figure 2



- c. Measure and mark 3/16" back from front of the ABS sensor block (**Figure 3**).
 - d. Measure and mark 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 5



Figure 3

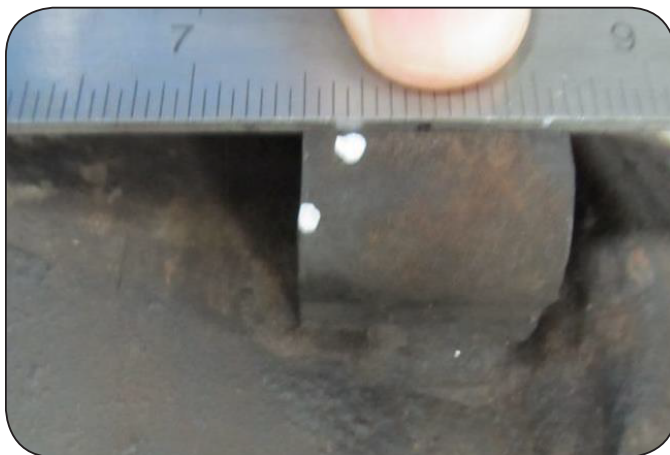
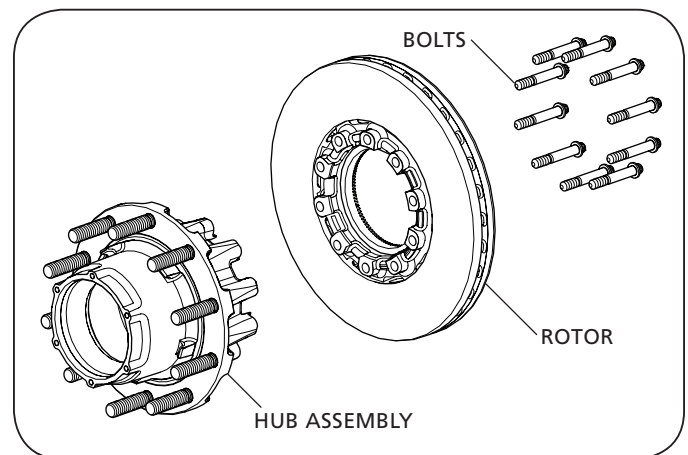


Figure 4



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

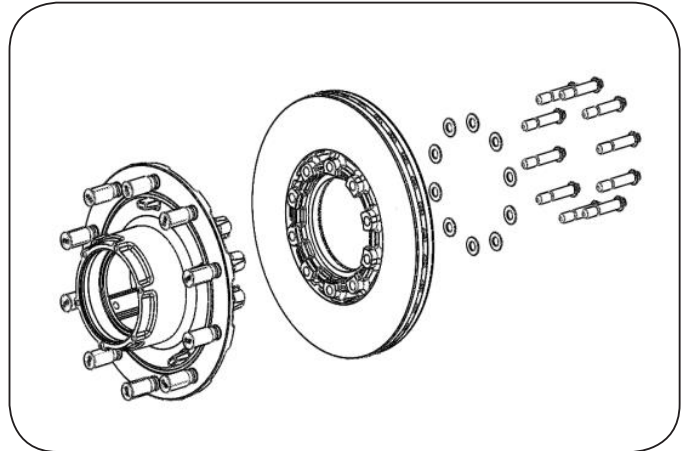
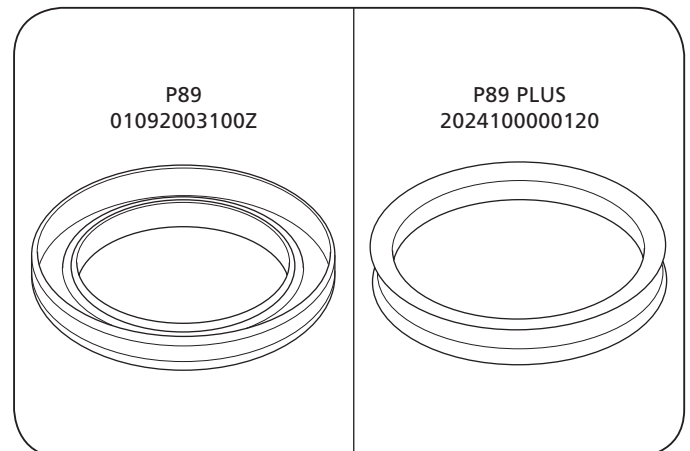


Figure 8



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

