Service Bulletin

5.75" Diameter Trailer Axles With P89® Integral Disc Brakes

ABS Sensor Block Replacement

October 2016

The following instructions provide the necessary information for the proper replacement of the ABS sensor block on SAF-HOLLAND® P89 INTEGRAL® Rotor Disc Brake Axles. Additional information can be found in the SAF-HOLLAND® Disc Brake Axle service manuals (XL-SA20018UM-en-US for P89, XL-SA20024-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 ABS sensor block replacement kit. One kit contains all parts required for one wheel end:

SAF-HOLLAND® ABS SENSOR BLOCK REPLACEMENT KIT			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	04029107100Z	ABS Sensor	1
2	04029107200Z	ABS Sensor Clip	1
3	2001100000070	ABS Sensor Block	1
4a	01092003100Z	Spindle Seal (P89)	1
4b	2024100000120	Spindle Seal (P89 Plus)	1
5	01093002300Z	hub Cap Gasket	1
6	04387002918	Spindle Grease (P89 Plus)	1

P89/P89 Plus INTEGRAL® ABS Sensor Block 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. Remove the hub spindle seal.
3. 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.

4. Clearly mark the centerline of the damaged ABS sensor block on the Axle ***(Figure 1)***.

IMPORTANT: These marks are needed in step 6 to properly position the replacement ABS sensor block.

Figure 1

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5. Remove the damaged ABS sensor block using a suitable abrasive cutoff tool and/or an air chisel ***(Figure 2)***.

IMPORTANT: DO NOT use an oxi-acetylene torch.
DO NOT cut into the axle body.
DO use an appropriate sized abrasive cut off tool to weaken one weld ***(Figure 2)***.

Completely remove the damaged ABS sensor block using an air chisel ***(Figure 3)***.

Remove the remainder of the damaged ABS sensor block using a hand grinder with a 60 or coarser grit flexible sanding disc ***(Figure 4)***.

IMPORTANT: DO NOT remove excessive axle material.

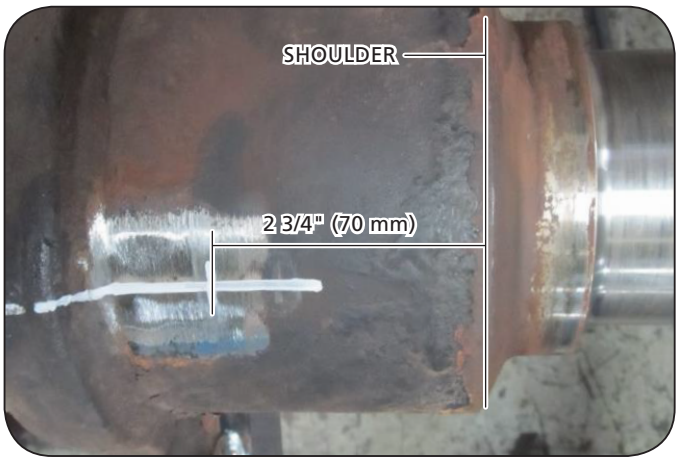
6. Connect the ABS sensor block center line marks made in Step 4 above and mark a line 2 3/4" ± 1/16" (70 ± 2 mm) from the spindle shoulder ***(Figure 5)***.

Figure 2

Figure 3

Figure 4

Figure 5



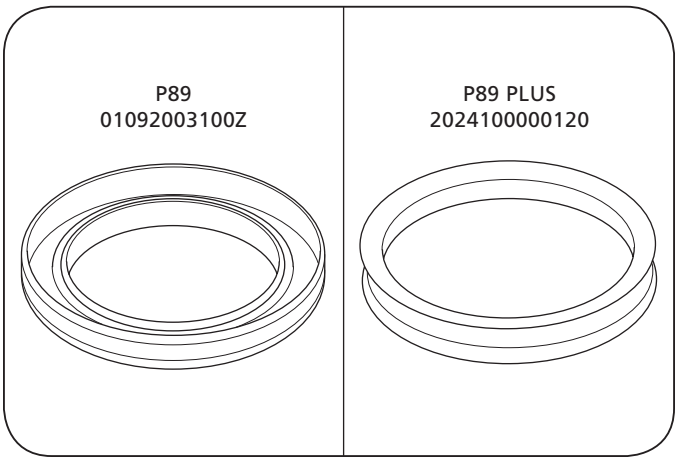
7. Center the replacement ABS sensor block on the line marked in step 4 and 6. Line it up with the 2 3/4" (70 mm) mark made in step 6. Using appropriate welding gloves, hold it firmly in place and tack it in place on both sides ***(Figure 6)***.
8. Weld both sides with a 3/16" fillet weld. DO NOT weld around the ends of the ABS sensor block ***(Figure 7)***.
9. Reinstall the head unit on the spindle using the appropriate new spindle seal (01092003100Z for P89, 2024100000120 for P89 Plus***(Figure 8)***), 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 6, 04387002918 spindle grease, must be applied to the spindle bearing journals.

Figure 6

Figure 7

Figure 8



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10. Re-Install the ABS sensor and retaining clip (Refer to instructions detailed in Section 16 of XL-SA20018UM-en-US for P89, Section 10 of XL-SA20024UM-en-US for P89 Plus). Rotate the wheel end and ensure there is no interference between the rotor attachment bolts and the ABS sensor block and sensor ***(Figure 9)***:
11. Reinstall hub cap using new hub cap gasket 01093002300Z, refer to Section 13 of XL-SA20018UM-en-US for P89, Section 8.2 of XL-SA20024UM-en-US for P89 Plus Disc Brake Axle service manuals.

NOTE: If the P89 hub lubrication medium is oil, lubrication procedures will occur after hub cap installation.

12. If the P89 hub lubrication medium is oil, refer to Section 12 of XL-SA20018UM-en-US Disc Brake Axle service manual for lubrication instructions.
13. Reinstall the caliper according to Section 14 of the XL-SA20018UM-en-US for P89, Section 8.2 of XL-SA20024UM-en-US for P89 Plus Disc Brake Axle service manuals.
14. 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.
15. Check the brake for proper application and release.

Figure 9