

# Technical Bulletin



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Subject: **Corrective Action for Bendix® TABS-8™ Wheel Speed Sensor (WSS) Diagnostic Trouble Codes (DTCs)**

## OVERVIEW

This technical bulletin provides diagnostics and corrective actions for the Diagnostic Trouble Codes (DTCs) shown in *Table 1*.

**For new trailers delivered to a fleet or dealer after August 1, 2023, follow the procedure below.** For trailers built prior to August 1, 2023, confirm that the Antilock Braking System (ABS) ring is properly held onto the rotor before following the procedure detailed in this bulletin. If the tone ring on Air Disc Brake (ADB) applications is not properly held onto the rotor, follow the rotor manufacturer's guidelines to resolve the issue. Failure to address this issue may result in the reoccurrence of the DTCs outlined in *Table 1* on *Page 2* of this technical bulletin even after following the corrective actions provided.

For proper Wheel Speed Sensor (WSS) installation and maintenance, refer to the section titled *Bendix® WS-24™ Wheel Speed Sensor (WSS) in SD-13-47680, Bendix® TABS-8™ Advanced Single-Channel Trailer Antilock Braking System (ABS) Module, on B2Bendix.com*.

## PROCEDURE



**Prior to this procedure, follow all general safety guidelines provided in this technical bulletin.**

The following steps should be taken to investigate and address the DTCs shown in *Table 1* on *Page 2* of this technical bulletin.

1. With the trailer properly secured and all safety requirements adhered to, raise the trailer so that the wheels can rotate freely.
2. For air disc brake applications, remove the dust shield. For drum brake applications, remove the wheels. See *Figure 1*.

### GENERAL SAFETY GUIDELINES

**WARNING! PLEASE READ AND FOLLOW THESE INSTRUCTIONS TO AVOID PERSONAL INJURY OR DEATH:**

**When working on or around a vehicle, the following guidelines should be observed AT ALL TIMES:**

- ▲ Park the vehicle on a level surface, apply the parking brakes and always block the wheels. Always wear personal protection equipment.
- ▲ Stop the engine and remove the ignition key when working under or around the vehicle. When working in the engine compartment, the engine should be shut off and the ignition key should be removed. Where circumstances require that the engine be in operation, **EXTREME CAUTION** should be used to prevent personal injury resulting from contact with moving, rotating, leaking, heated or electrically-charged components.
- ▲ Do not attempt to install, remove, disassemble or assemble a component until you have read, and thoroughly understand, the recommended procedures. Use only the proper tools and observe all precautions pertaining to use of those tools.
- ▲ If the work is being performed on the vehicle's air brake system, or any auxiliary pressurized air systems, make certain to drain the air pressure from all reservoirs before beginning ANY work on the vehicle. If the vehicle is equipped with a Bendix® AD-IS® air dryer system, a Bendix® DRM™ dryer reservoir module, a Bendix® AD-9si®, AD-HF®, or AD-HF®i air dryer, be sure to drain the purge reservoir.
- ▲ Following the vehicle manufacturer's recommended procedures, deactivate the electrical system in a manner that safely removes all electrical power from the vehicle.
- ▲ Never exceed manufacturer's recommended pressures.
- ▲ Never connect or disconnect a hose or line containing pressure; it may whip and/or cause hazardous airborne dust and dirt particles. Wear eye protection. Slowly open connections with care, and verify that no pressure is present. Never remove a component or plug unless you are certain all system pressure has been depleted.
- ▲ Use only genuine Bendix® brand replacement parts, components and kits. Replacement hardware, tubing, hose, fittings, wiring, etc. must be of equivalent size, type and strength as original equipment and be designed specifically for such applications and systems.
- ▲ Components with stripped threads or damaged parts should be replaced rather than repaired. Do not attempt repairs requiring machining or welding unless specifically stated and approved by the vehicle and component manufacturer.
- ▲ Prior to returning the vehicle to service, make certain all components and systems are restored to their proper operating condition.
- ▲ For vehicles with Automatic Traction Control (ATC), the ATC function must be disabled (ATC indicator lamp should be ON) prior to performing any vehicle maintenance where one or more wheels on a drive axle are lifted off the ground and moving.
- ▲ The power **MUST** be temporarily disconnected from the radar sensor whenever any tests **USING A DYNAMOMETER** are conducted on a vehicle equipped with a Bendix® Wingman® system.
- ▲ You should consult the vehicle manufacturer's operating and service manuals, and any related literature, in conjunction with the Guidelines above.



Figure 1 – Removing the Dust Shield

3. Manually set an appropriate air gap. Using a set of feeler gauges (or a similar tool), set the air gap to 0.012 of an inch (0.3 mm) gap between the Wheel Speed Sensor (WSS) housing end face and the tone ring face. See Figure 2.

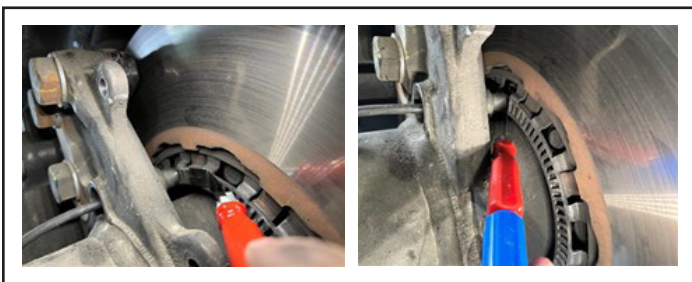


Figure 2 – Setting an Air Gap

4. Gently push the WSS up to the feeler gauge until it makes light contact with both the tone ring and the sensor face.

5. Rotate the wheel 360 degrees to ensure the gap is set from the highest point on the tone wheel. This process should ensure that the correct gapping is present from the installation phase and that no contact of the WSS housing and the tone ring will occur once the vehicle goes back into service.
6. In some instances there may be an additional Diagnostic Trouble Code (DTC) seen in a DTC report that states *Internal Lateral Acceleration Sensor – Mounting Error (0x014D00)*. This is a result of the number of S-C and S-D sensor DTCs that occur. Once the S-C and S-D sensor DTCs are rectified, this additional DTC should clear automatically when the vehicle is next driven after sensor DTCs are rectified.

The procedure above should resolve this fault. If the problem persists, please contact the Bendix Tech Team.

If the corrective actions provided in this bulletin do not resolve the DTCs, follow the procedures in *BW2453, Bendix® Wheel Speed Sensor Checklist, on B2Bendix.com* to rule out other failure modes.

## ADDITIONAL SUPPORT

For technical support, the Bendix Tech Team is available at 1-800-AIR-BRAKE (1-800-247-2725), option 2, Monday through Thursday, 8:00 a.m. to 6:00 p.m., and Friday, 8:00 a.m. to 5:00 p.m. ET. Follow the instructions in the recorded message. The Bendix Tech Team can also be reached by email at [techteam@bendix.com](mailto:techteam@bendix.com).

Blink Codes		DTC Description	Internal Code (HEX)	Possible Causes / Repair Information	J1587 (SID/FMI)
1st Digit	2nd Digit				
<b>Wheel Speed Sensors (WSS); “S-C” &amp; “S-D”</b>					
2	2	Shorted or open wire: Sensor “S-C”	0x000D00 0x001200	Static WSS DTC - shorted or open sensor wire. Refer to <i>SD-13-47680, Bendix® TABS-8 Advanced Single-Channel Trailer Antilock Braking System (ABS) Module, on B2Bendix.com.</i>	001/03 001/04
3	2	Shorted or open wire: Sensor “S-D”	0x000C00 0x001300		002/03 002/04

Table 1 – Wheel Speed Sensor (WSS) Diagnostic Trouble Codes (DTCs)

