

Bendix® Wheel Speed Sensor Checklist



Prior to completing this checklist, follow all general safety guidelines in this document and in *SD-13-4860, Bendix® WS-24™ Antilock Wheel Speed Sensor (WSS) Service Data Sheet, on B2Bendix.com. Refer to BW8003 on B2Bendix.com for the full Bendix Warranty Policy.*

1. VEHICLE PREPARATION

- ☐ Ensure the vehicle is safely parked. Chock the wheels. Drain the air system. Turn off the ignition.
Connect the vehicle to Bendix® ACom® Diagnostic Software to identify the suspected WSS. Generate a
- ☐ Diagnostic Trouble Code (DTC) report and attempt to clear/reset active DTCs. If DTCs **cannot** be cleared, *proceed to Step 2.*

2. VISUAL INSPECTION

Clean and visually inspect the following components per *SD-13-4860 on B2Bendix.com.*

- ☐ WSS ☐ Electrical Connector
- ☐ Sensor Wire ☐ Associated Vehicle Harness

Are all components free of damage?

- ☐ YES – *Proceed to Step 3.*
- ☐ NO – *Correct the issue, then proceed to Step 3.*

3. RESISTANCE MEASUREMENT

Unplug the WSS at the Electronic Control Unit (ECU). Measure and record the resistance at the WSS plug.

Resistance: _____ Ohms

- ☐ Resistance within parameters (1575-2100 Ohms).
Proceed to Step 4.
- ☐ Resistance outside parameters (1575-2100 Ohms).
If components from Step 2 are free of visible damage, replace the WSS and clear DTCs with ACom Diagnostic Software.

4. INFINITE RESISTANCE CHECK

Check the resistance between the connector pins to the sensor head or chassis ground. **Are the connector pins fully insulated from chassis ground?**

- ☐ YES – *Proceed to Step 5.*
- ☐ NO – *Replace the WSS and clear DTCs with ACom Diagnostic Software.*

5. WSS POSITION ADJUSTMENT

Confirm the WSS and exciter ring are properly adjusted per *SD-13-4860 on B2Bendix.com.*

Are the WSS and exciter ring properly installed?

- ☐ YES – *Proceed to Step 6.*
- ☐ NO – *Repair, clear DTCs with ACom Diagnostic Software, troubleshoot the exciter ring for other potential problems per SD-13-4860 on B2Bendix.com, and retest.*

6. OUTPUT VOLTAGE TEST

Raise and rotate the wheel at least ½ revolution per second. Measure and record the voltage at the WSS plug.

Voltage: _____ Volts AC

- ☐ Voltage within parameters (≥ 0.25 Volts AC).
Proceed to Step 7.
- ☐ Voltage outside parameters (< 0.25 Volts AC).
Replace the WSS and clear DTCs with ACom Diagnostic Software.

7. WSS VERIFIED OK

Do not replace the WSS at this time. Refer to SD-13-4860, Bendix® WS-24™ Antilock Wheel Speed Sensor Service Data Sheet, on B2Bendix.com for further diagnostics.

SUBMITTING A WSS WARRANTY CLAIM TO BENDIX

CAUTION: DO NOT CUT THE SENSOR CABLE WHEN REMOVING THE WSS so that a proper analysis can be completed by Bendix Warranty Engineers. Cut or frayed cables are ineligible for warranty.

- Replace the WSS with a new, corresponding Bendix WSS service kit that contains the WSS and clamping sleeve.
- Clear DTCs and generate a DTC report with ACom Diagnostic Software.
- Include the following documentation when submitting a warranty claim:
 - » DTC report from the *Vehicle Preparation* section of this document (*including the DTCs that were unable to be cleared*)
 - » DTC report following the installation of the replacement WSS (*showing that all DTCs were successfully cleared*)
 - » This completed checklist

ECU Model _____ VIN # _____



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-HFi® 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.
- ▲ You should consult the vehicle manufacturer's operating and service manuals, and any related literature, in conjunction with the Guidelines above.
- ▲ 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.

TECHNICAL SUPPORT

For technical support, contact the Bendix Tech Team 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. The Bendix Tech Team can be reached by email at techteam@bendix.com.

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TECHNICAL SUPPORT

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