

DTC C0532

Circuit Description

The rear wheel steering module monitors the input signal of the rear wheel position sensor and the hall sensor circuits. The rear wheel steering module tracks the signals sent by the rear wheel position sensor and the hall sensor circuits, phase A, phase B, and phase C. If any one of the hall sensor circuits are open, shorted to voltage, or shorted to ground while the rear steering motor is tracking the rear wheel position sensor, an invalid motor position will occur, thus setting the DTC.

If the rear wheel position sensor signals have invalid values, the rear wheel steering control module will not be able to track the position of the rear wheel position sensor, causing an invalid motor position, thus setting the DTC.

DTC Descriptor

This diagnostic procedure supports the following DTC:

DTC C0532 Rear Steering Position and Motor Position Sensors Uncorrelated

Conditions for Running the DTC

The fault is detected when the ignition is ON and the engine is ON.

Conditions for Setting the DTC

Comparison of the rear position sensor and the rear wheel position differ by more than 1.4 degrees.

Action Taken When the DTC Sets

- The Service 4 Wheel Steer indicator in the instrument panel cluster (IPC) will be displayed.
- The code is displayed on the scan tool as DTC C0532.
- The output command to the motor is zeroed. The motor drive circuits are disabled using commands to open the power relay and to close the motor shorting relay.
- The rear wheels are returned to the centered position.

Conditions for Clearing the DTC

- The conditions for setting the DTC are not currently present.
- The rear wheel steering control module receives a clear code command from the scan tool.
- The DTC clears after 100 malfunction-free ignition cycles.

Diagnostic Aids

- Inspect for poor connections at the harness connector of the rear wheel steering control module, rear wheel position sensor, and the rear wheel steering motor connectors. Refer to **Testing for Intermittent Conditions and Poor Connections** and **Connector Repairs** in Wiring Systems.
- Inspect the rear wheel position sensor for damage. If none is found, then remove and inspect the sensor and coupler for damage or water intrusion. Refer to **Rear Position Sensor Replacement**. If water damage is found, refer to **Rack and Pinion Boot Replacement**.
- Observe the rear wheel steering mode select switch. If all of the mode indicator LEDs are illuminated, the rear wheel steering control module has lost its memory settings and the scan tool must be used to re-calibrate the rear wheel steering alignment data in the rear wheel steering control module. Refer to **Measuring Wheel Alignment (w/Rear Wheel Steering)** or **Measuring Wheel Alignment (w/o Rear Wheel Steering)** in Wheel Alignment.

Test Description

The numbers below refer to the step numbers on the diagnostic table.

- 2:** This step tests for the proper operation of the rear steering position sensor.
- 3:** This step tests for the proper operation of the rear steering motor position sensor.
- 4:** This step performs the diagnostic procedure for the rear steering position sensor.
- 5:** This step performs the diagnostic procedure for the rear steering motor position sensor.

DTC C0532

Step	Action	Yes	No
Schematic Reference: <u>Rear Wheel Steering Schematics</u> Connector End View Reference: <u>Rear Wheel Steering Connector End Views</u>			
1	Did you perform the Diagnostic System Check - Vehicle?	Go to Step 2	Go to <u>Diagnostic System Check - Vehicle</u> in Vehicle DTC Information
2	<ol style="list-style-type: none"> 1. Install a scan tool. 2. Turn the ignition switch to the ON position, with the engine ON. 3. With a scan tool, select the Display DTC function on the scan tool. <p>Does the scan tool display DTC C0522 along with DTC C0532?</p>	Go to Step 4	Go to Step 3
3	Does the scan tool display DTC C0527 along with DTC C0532?	Go to Step 5	Go to Step 6
4	Perform the diagnostic procedure for DTC C0522. Refer to <u>DTC C0522</u> . Did you find and correct the condition?	Go to Step 8	Go to Step 6
5	Perform the diagnostic procedure for DTC C0527. Refer to <u>DTC C0527</u> . Did you find and correct the condition?	Go to Step 8	Go to Step 6
6	Inspect for poor connections at the rear wheel steering control module, the rear wheel position sensor, and rear wheel steering motor connectors. Refer to <u>Testing for Intermittent Conditions and Poor Connections</u> and <u>Connector Repairs</u> in Wiring Systems. Did you find and correct the condition?	Go to Step 8	Go to Step 7
7	Replace the rear wheel steering module. Refer to <u>Control Module References</u> in Computer/Integrating Systems for replacement, setup, and programming. Did you complete the replacement?	Go to Step 8	-
8	<ol style="list-style-type: none"> 1. Use the scan tool in order to clear the DTCs. 2. Operate the vehicle within the Conditions for Running the DTC as specified in the supporting text. <p>Does DTC C0532 reset?</p>	Go to Step 2	System OK