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1997 CHEVROLET Tahoe 5 doors OEM Service and Repair Workshop Manual

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4. Verify the test lamp turns ON and OFF when commanding the Backup Lamps ON and OFF with a scan tool.
    - **If the test lamp is always OFF**
    1. Ignition OFF, disconnect the X7 harness connector at the K9 Body Control Module.
    2. Test for infinite resistance between the control circuit and ground.
        - If less than infinite resistance, repair the short to ground on the circuit.
        - If infinite resistance
    3. Test for less than 2 Ω in the control circuit end to end.
        - If 2 Ω or greater, repair the open/high resistance in the circuit.
        - If less than 2 Ω, replace the K9 Body Control Module.
    - **If the test lamp is always ON**
    1. Ignition OFF, disconnect the X7 harness connector at the K9 Body Control Module, ignition ON.
    2. Test for less than 1 V between the control circuit terminal and ground.
        - If 1 V or greater, repair the short to voltage on the circuit.
        - If less than 1 V, replace the K9 Body Control Module.
    - **If the test lamp turns ON and OFF**
5. Test or replace the E42 Tail Lamp Assembly.

Repair Instructions

Perform the Diagnostic Repair Verification after completing the repair.

- Rear Body Structure Stop Lamp Replacement
- Control Module References for BCM replacement, programming, and setup

DTC C0040 02	Right Front Wheel Speed Sensor Circuit Short to Ground
DTC C0040 04	Right Front Wheel Speed Sensor Circuit Open
DTC C0040 06	Right Front Wheel Speed Sensor Circuit Low Voltage/Open
DTC C0040 1B	Right Front Wheel Speed Sensor Circuit Signal Cross Coupled
DTC C0040 3A	Right Front Wheel Speed Sensor Circuit Incorrect Component Installed
DTC C0040 5A	Right Front Wheel Speed Sensor Circuit Not Plausible
DTC C0045 00	Left Rear Wheel Speed Sensor Circuit Malfunction
DTC C0045 01	Left Rear Wheel Speed Sensor Circuit Short to Battery
DTC C0045 02	Left Rear Wheel Speed Sensor Circuit Short to Ground
DTC C0045 04	Left Rear Wheel Speed Sensor Circuit Open
DTC C0045 06	Left Rear Wheel Speed Sensor Circuit Low Voltage/Open
DTC C0045 1B	Left Rear Wheel Speed Sensor Circuit Signal Cross Coupled
DTC C0045 3A	Left Rear Wheel Speed Sensor Circuit Incorrect Component Installed
DTC C0045 5A	Left Rear Wheel Speed Sensor Circuit Not Plausible
DTC C0050 00	Right Rear Wheel Speed Sensor Circuit Malfunction
DTC C0050 01	Right Rear Wheel Speed Sensor Circuit Short to Battery
DTC C0050 02	Right Rear Wheel Speed Sensor Circuit Short to Ground
DTC C0050 04	Right Rear Wheel Speed Sensor Circuit Open
DTC C0050 06	Right Rear Wheel Speed Sensor Circuit Low Voltage/Open
DTC C0050 1B	Right Rear Wheel Speed Sensor Circuit Signal Cross Coupled
DTC C0050 3A	Right Rear Wheel Speed Sensor Circuit Incorrect Component Installed

Component	Condition	DTC Symptom Byte
	• Loose or improperly mounted sensor • Air gap between the wheel speed sensor and the encoder ring too large • Water intrusion in the wiring harness	

Circuit/System Description

Each wheel speed sensor receives ignition voltage through the signal high circuit from the electronic brake control module. Wheel speeds are detected by active wheel speed sensors and encoder rings. The magnetic encoder rings consists of multiple north and south pole pairs surrounding the outer circumference. When the encoder ring rotates and passes by the wheel speed sensor; it generates a sign wave in the wheel speed sensor. The sensor converts the signal to a digital square wave; the square wave values switch between 7mA (Low) and 14mA (High) DC current. As the wheel spins, the module uses the frequency of the square wave signal to calculate the wheel speed.

Conditions for Running the DTC

C0035 00, C0040 00, C0045 00, C0050 00 — C0035 04, C0040 04, C0045 04, or C0050 04

Ignition ON

C0035 02, C0040 02, C0045 02, or C0050 02 — C0035 06, C0040 06, C0045 06, or C0050 06

Ignition ON

C0035 1B, C0040 1B, C0045 1B, or C0050 1B

Drive the vehicle on a winding or zigzag road at speeds under 30 km/h (18.6 MPH), then accelerate up to 70 km/h (43.5 MPH).

C0035 3A, C0040 3A, C0045 3A, or C0050 3A

Vehicle speed is greater than 16 km/h (10 MPH).

C0035 5A, C0040 5A, C0045 5A, or C0050 5A

Vehicle speed is greater than 60 km/h (37 MPH).

Conditions for Setting the DTC

C0035 00, C0040 00, C0045 00, C0050 00, or C0035 04, C0040 04, C0045 04, or C0050 04

Conditions for Clearing the DTC

- When the condition for setting the DTC is no longer present.
- The history DTC will clear after 40 consecutive fault-free ignition cycles have occurred.

Diagnostic Aids

- Do not use a magnet to clean the encoder ring.
- Inspect the wheel encoder ring for rust or corrosion.
- Inspect the wheel speed sensors and components for the correct parts.
- If two or more wheel speed sensors are inoperative, diagnose each wheel speed sensor individually.
- If symptom code 5A is set, refer to the Diagnostic Fault Information table for possible mechanical faults or conditions.
- If the customer comments that the ABS indicator is ON only during moist environmental conditions (rain, snow, vehicle wash, etc.), inspect the wheel speed sensor wiring for signs of water intrusion.

Reference Information

Schematic Reference

Antilock Brake System Schematics

Connector End View Reference

Component Connector End Views

Description and Operation

ABS Description and Operation

Electrical Information Reference

- Circuit Testing
- Connector Repairs
- Testing for Intermittent Conditions and Poor Connections
- Wiring Repairs

Scan Tool Reference

Control Module References for scan tool information