

for Preparation [Click here](#)

**DESCRIPTION**

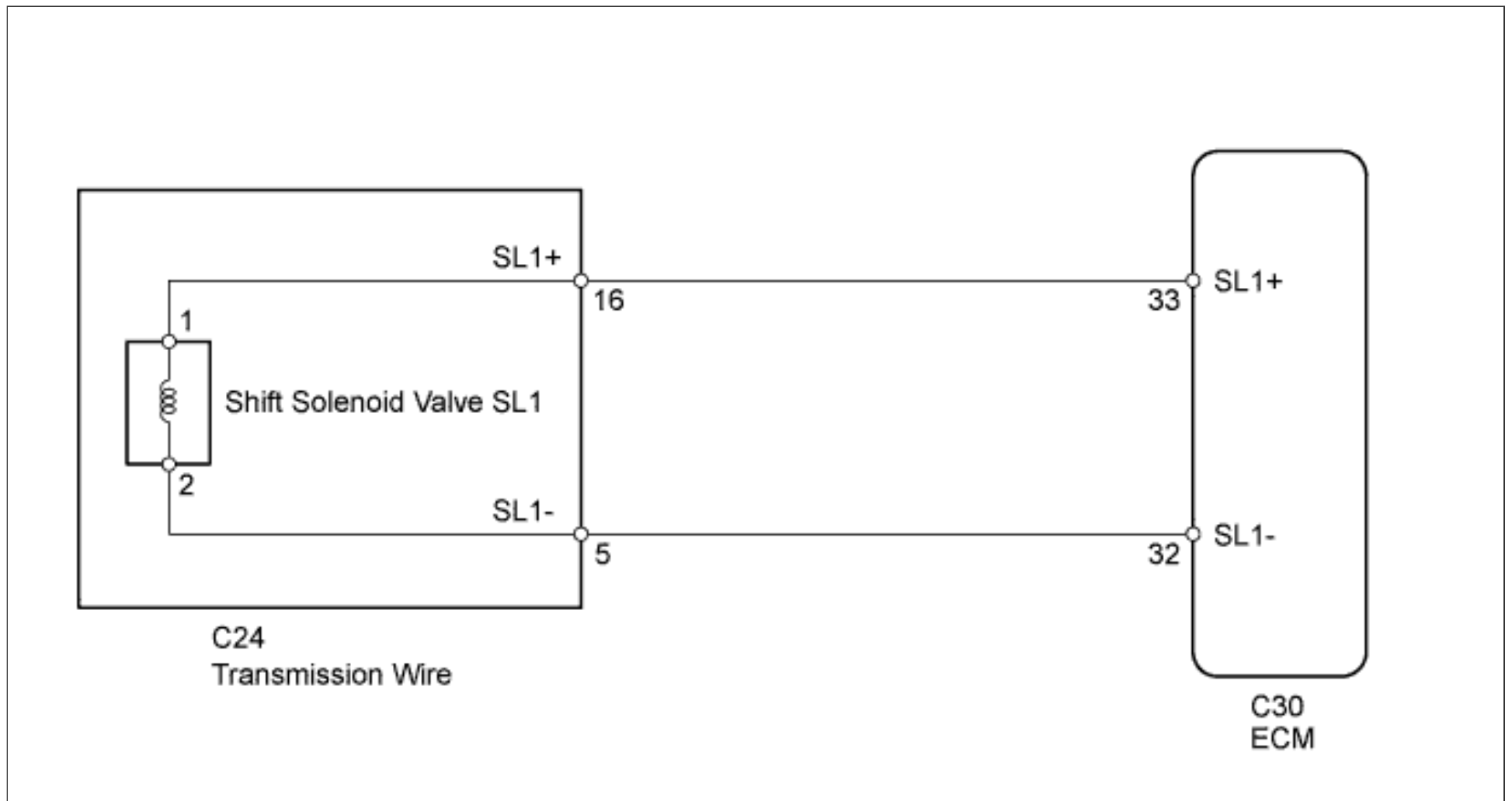
Shifting from 1st to 6th is performed in combination with the ON and OFF operation of shift solenoid valves SL1, SL2, S1, S2, S3, S4 and SR, which are controlled by the ECM. If an open or short circuit occurs in the shift solenoid valves, the ECM controls the remaining normal shift solenoid valves to allow the vehicle to be operated safely ([Click here](#)).

DTC Code	DTC Detection Condition	Trouble Area
P0748	The ECM checks for an open or short in the shift solenoid valve SL1 circuit while driving and shifting between 4th and 5th gear (1-trip detection logic). Output signal duty equals 100%.  <b>HINT:</b>  SL1 output signal duty is less than 100% under normal conditions.	<ul style="list-style-type: none"> <li>• Open or short in shift solenoid valve SL1 circuit</li> <li>• Shift solenoid valve SL1</li> <li>• ECM</li> </ul>

**MONITOR DESCRIPTION**

This DTC indicates an open or short in the shift solenoid valve SL1 circuit. The ECM commands gear shifts by turning the shift solenoid valves ON/OFF. When there is an open or short circuit in any shift solenoid valve circuit, the ECM detects the problem, illuminates the MIL and stores the DTC. Also, the ECM performs the fail-safe function and turns the other normal shift solenoid valves ON/OFF. In case of an open or short circuit, the ECM stops sending current to the open or short-circuited solenoid. While driving and shifting between 4th and 5th gears, if the ECM detects an open or short in the shift solenoid valve SL1 circuit, the ECM determines that there is a malfunction ([Click here](#)).

**WIRING DIAGRAM**



**INSPECTION PROCEDURE**

**HINT:**

Shift solenoid valve SL1 turns ON/OFF normally when the shift lever is in D:

ECM gear shift command	1st	2nd	3rd	4th	5th	6th
Shift solenoid valve SL1	OFF	OFF	OFF	OFF	ON	ON

**1.INSPECT TRANSMISSION WIRE (SHIFT SOLENOID VALVE SL1)**

- a. Disconnect the C24 transmission wire connector.
- b. Measure the resistance according to the value(s) in the table below.

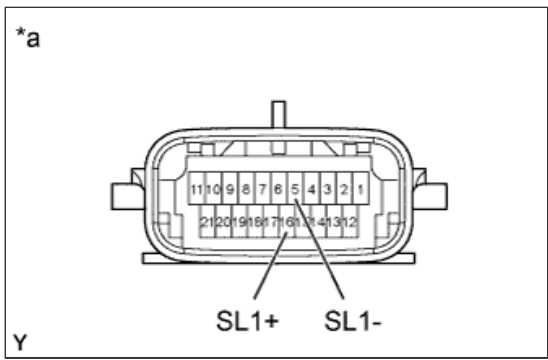
**Standard Resistance:**

Tester Connection	Condition	Specified

Tester Connection	Condition	Specified Condition
16 (SL1+) - 5 (SL1-)	20°C (68°F)	5.0 to 5.6 Ω
16 (SL1+) - Body ground	Always	10 kΩ or higher
5 (SL1-) - Body ground	Always	10 kΩ or higher

**Text in Illustration**

*a	Component without harness connected (Transmission Wire)
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[Go to step 3](#)

**OK**

**2.CHECK HARNESS AND CONNECTOR (TRANSMISSION WIRE - ECM)**

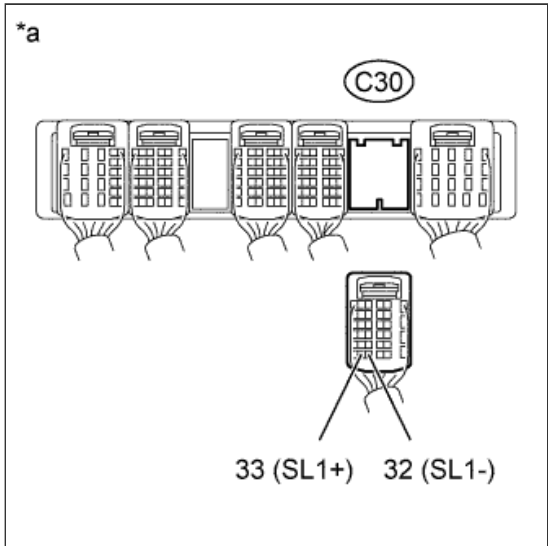
- a. Disconnect the C30 ECM connector.
- b. Measure the resistance according to the value(s) in the table below.

**Standard Resistance:**

Tester Connection	Condition	Specified Condition
C30-33 (SL1+) - C30-32 (SL1-)	20°C (68°F)	5.0 to 5.6 Ω
C30-33 (SL1+) - Body ground	Always	10 kΩ or higher
C30-32 (SL1-) - Body ground	Always	10 kΩ or higher

**Text in Illustration**

*a	Front view of wire harness connector (to ECM)
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**REPAIR OR REPLACE HARNESS OR CONNECTOR**

**OK**

**REPLACE ECM ([Click here](#))**

**3.INSPECT SHIFT SOLENOID VALVE SL1**

- a. Remove shift solenoid valve SL1.
- b. Measure the resistance according to the value(s) in the table below.

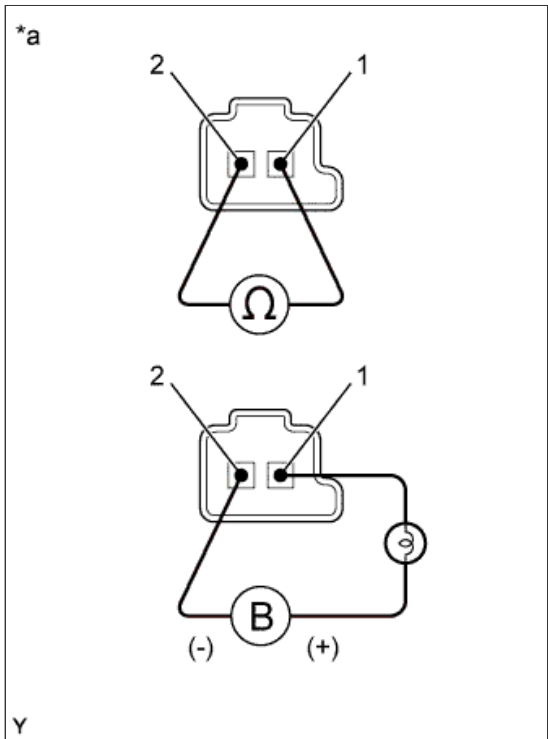
**Standard Resistance:**

Tester Connection	Condition	Specified Condition
1 - 2	20°C (68°F)	5.0 to 5.6 Ω

- c. Apply 12 V battery voltage to the shift solenoid valve and check that the valve moves and makes an operating noise.

**OK:**

Measurement Condition	Specified Condition
<ul style="list-style-type: none"> <li>Battery positive (+) with a 21 W bulb → Terminal 1</li> <li>Battery negative (-) → Terminal 2</li> </ul>	Valve moves and makes an operating noise



**Text in Illustration**

*a	Component without harness connected (Shift Solenoid Valve SL1)
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**REPLACE SHIFT SOLENOID VALVE SL1 ([Click here](#))**

**OK**

**REPAIR OR REPLACE TRANSMISSION WIRE ([Click here](#))**

