

## INSPECTION

### 1. INSPECT 2WD ↔ 4HI SHIFT

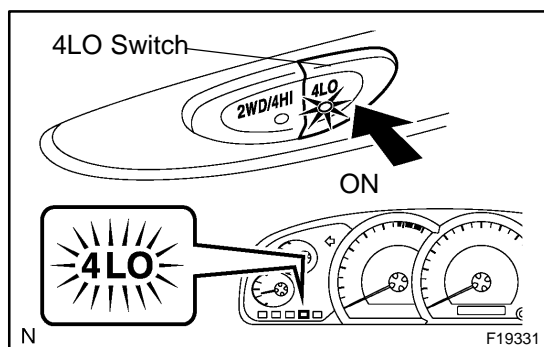
- Turn the ignition switch to the ON position.
- Check that the 4HI indicator lights come on when the 2WD/4HI switch is in the ON position.
- Check that the 4HI indicator lights go off when the 2WD/4HI switch is in the OFF position.

#### HINT:

- If the light does not come on, even though the switch has been turned ON, the vehicle should be moved back and forth.
- If switching is not completed after 3 seconds of shift operation, the 4HI indicator light will flash.

### 2. INSPECT 4HI ↔ 4LO SHIFT

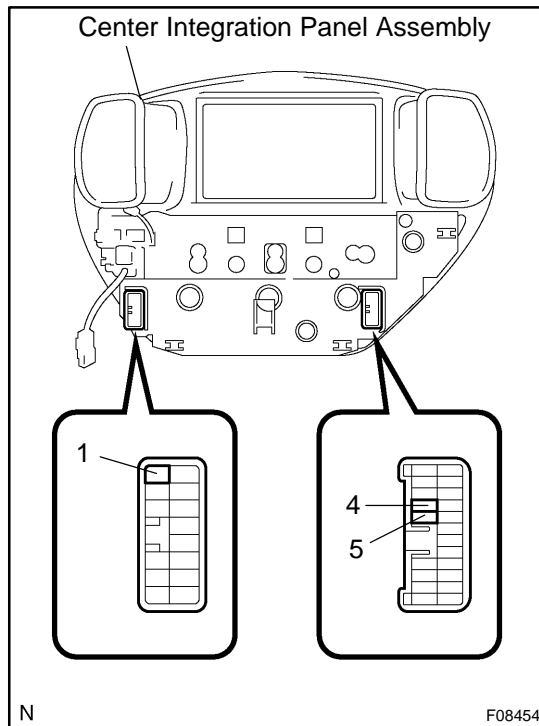
- Turn the ignition switch to the ON position.
- Shift the transmission shift lever in the N position.
- Turn the 2WD/4HI switch ON.



- Check that the 4LO indicator lights come on and the 4HI indicator lights go off when the 4LO switch is in the ON position.
- Check that the 4LO indicator lights go off and the 4HI indicator lights come on when pushing the 4LO switch once.

#### HINT:

- Inspection should be performed with the vehicle stopped, and transmission shift lever in the N position.
- If switching is not completed after 3 seconds of shift operation, the 4LO indicator light will flash.



### 3. INSPECT 2WD/4HI AND 4LO SWITCH CONTINUITY

- Remove the center integration panel assembly (See page [BO-111](#)).
- Measure the resistance between the terminals as shown.

#### 2WD/4HI switch

**Standard:**

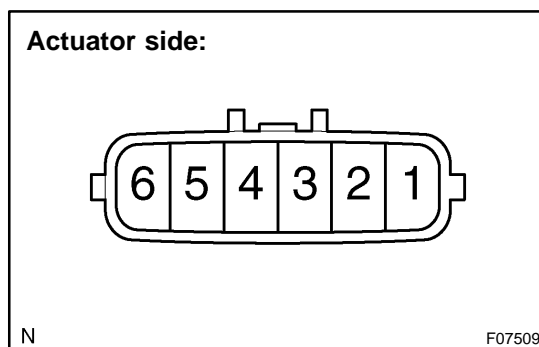
Switch position	Tester connection	Specified condition
OFF	1-5	10 k $\Omega$ or higher
ON	1-5	Below 1 $\Omega$

#### 4LO switch

**Standard:**

Switch position	Tester connection	Specified condition
OFF	1-4	10 k $\Omega$ or higher
ON	1-4	Below 1 $\Omega$

If the result is not as specified, replace the center integration panel assembly (See page [BO-111](#)).



### 4. INSPECT ACTUATOR RESISTANCE

- Using an ohmmeter, measure the resistance between terminals 1 and 2.

**Standard resistance: 0.3 to 100  $\Omega$**

- Using an ohmmeter, measure the resistance between terminals 1 or 2 and body ground.

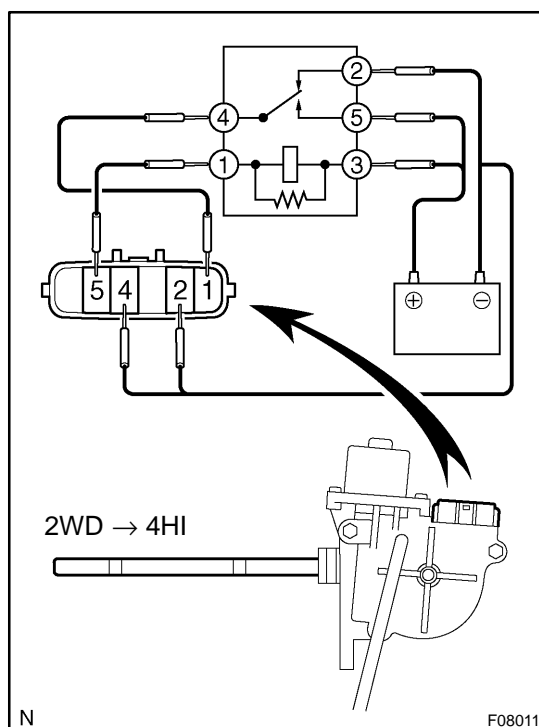
**Standard resistance: 0.5 M $\Omega$  or higher**

If the result is not as specified, replace the actuator assembly.

### 5. INSPECT ACTUATOR OPERATION

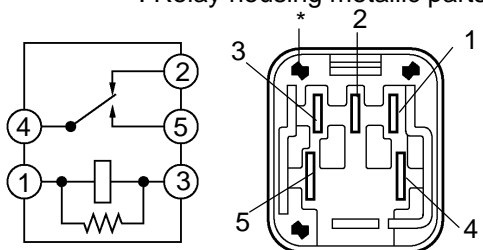
- 2WD  $\rightarrow$  4HI shift:

Connect lines via a relay as shown in the illustration, then check that the actuator fork shaft moves from the 2WD to 4HI position.



**Heater main relay:**

\*: Relay housing metallic parts



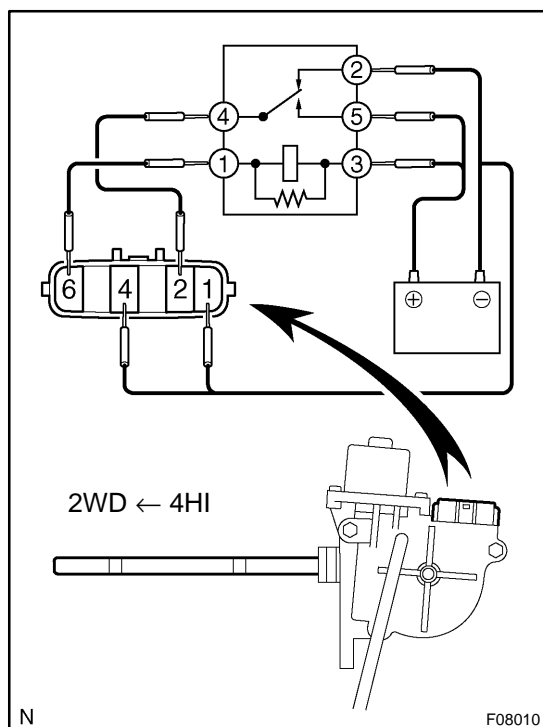
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**HINT:**

When inspecting the operation described above, use a heater main relay.

**NOTICE:**

**Be careful not to touch the neighboring terminals or metallic parts of the relay housing when connecting.**

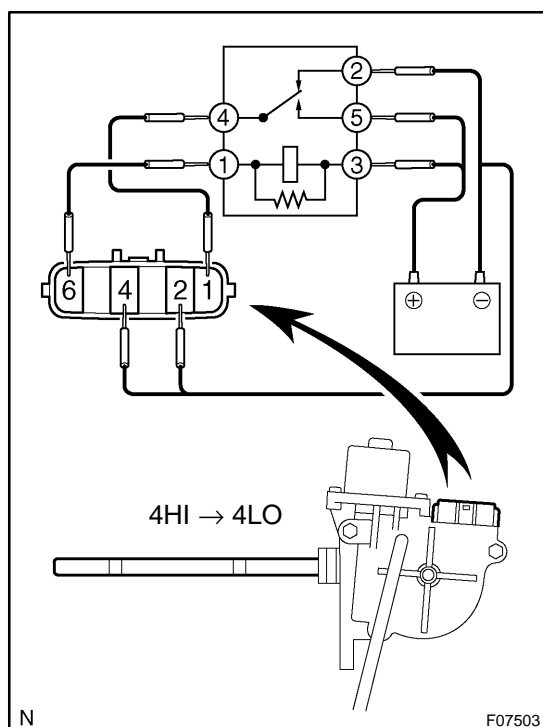


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## (b) 4HI → 2WD shift:

Connect lines via a relay as shown in the illustration, then check that the actuator fork shaft moves from the 4HI to 2WD position.

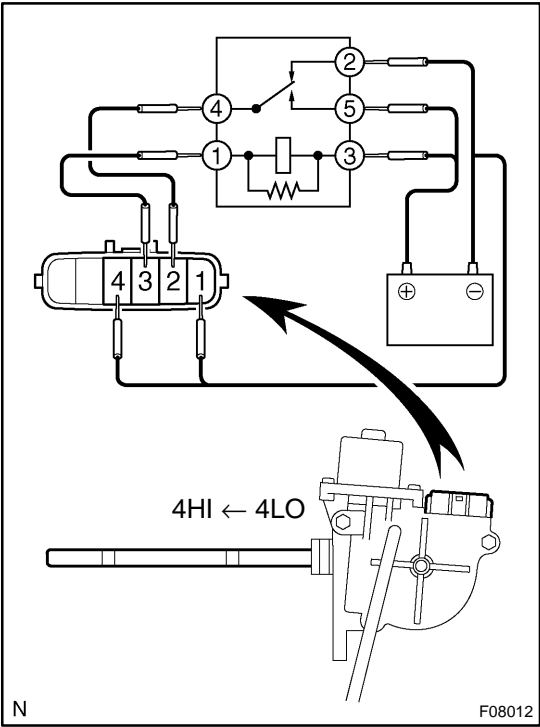


N

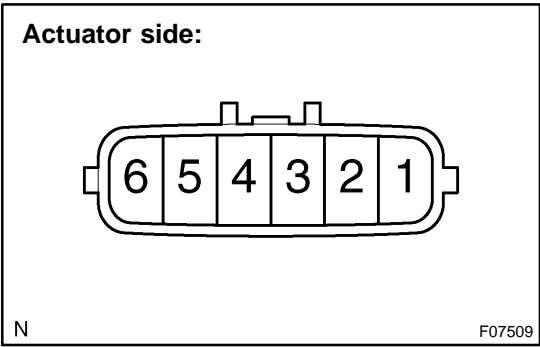
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## (c) 4HI → 4LO shift:

Connect lines via a relay as shown in the illustration, then check that the actuator fork shaft moves from the 4HI to 4LO position.



- (d) 4LO → 4HI shift:  
Connect lines via a relay as shown in the illustration, then check that the actuator fork shaft moves from the 4LO to 4HI position.



- 6. INSPECT LIMIT SWITCH CONTINUITY**
- (a) Start the engine and raise the vehicle.
- (b) With the actuator connector connected, shift the transfer shift lever and after checking the operating sound, disconnect the connector and measure the resistance between each terminal.

**HINT:**  
When shifting the actuator fork shaft, connect the connectors.

**Standard:**

Shift position	Tester connection	Specified condition
2WD	3-4	10 kΩ or higher
	3-5	10 kΩ or higher
	3-6	10 kΩ or higher
	4-5	Below 1 Ω
	4-6	10 kΩ or higher
	5-6	10 kΩ or higher
4HI	3-4	10 kΩ or higher
	3-5	10 kΩ or higher
	3-6	10 kΩ or higher
	4-5	10 kΩ or higher
	4-6	Below 1 Ω
	5-6	10 kΩ or higher
4LO	3-4	Below 1 Ω
	3-5	10 kΩ or higher
	3-6	10 kΩ or higher
	4-5	10 kΩ or higher
	4-6	10 kΩ or higher
	5-6	10 kΩ or higher

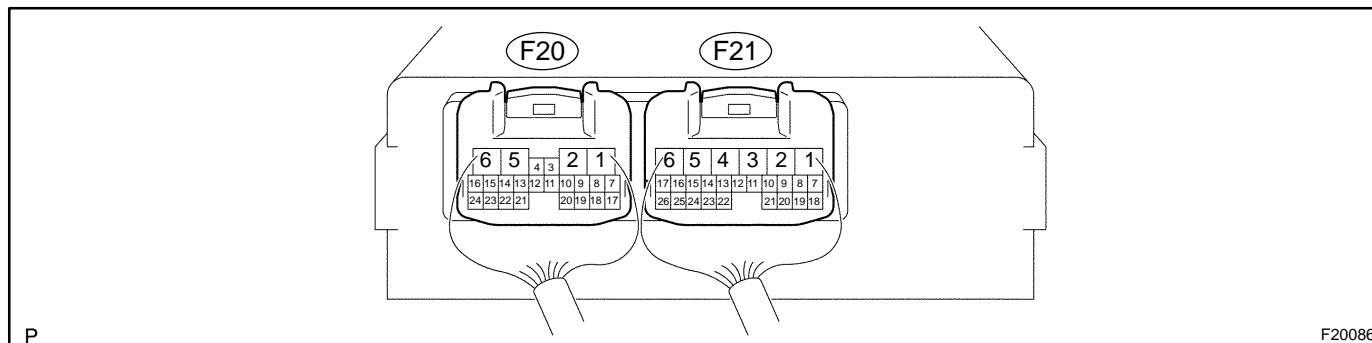
- 7. INSPECT VEHICLE SPEED SENSOR**  
(See page [BE-86](#))

**8. INSPECT 4HI AND 4LO INDICATOR LIGHT**

Check the combination meter (See page [BE-86](#)).

**9. INSPECT 4WD CONTROL ECU**

Connect the wire harness side connector to the 4WD control ECU and inspect the wire harness side connector from the back, as shown.



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**STANDARD VALUE OF ECU TERMINAL**

Terminals (Symbols)	Condition	STD Voltage (V)
F20-9 (SPD) – F20-6 (GND)	During driving	Pulse generation
F20-8 (2-4) – F20-6 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Touch select 2-4 switch OFF → ON</li> </ul>	10 to 14 → 1.5 or less
F20-22 (N) – F20-6 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Transmission shift lever : positions other than N → N</li> </ul>	10 to 14 → 1.5 or less
F21-22 (4WD) – F20-6 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Touch select 2-4 switch OFF → ON</li> </ul>	10 to 14 → 1.5 or less
F20-15 (LO) – F20-6 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON, touch select 2-4 switch ON</li> <li>Touch select high-low switch OFF → ON</li> </ul>	10 to 14 → 1.5 or less
F21-23 (TL3) – F20-6 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON, touch select 2-4 switch ON</li> <li>4HI (touch select high-low switch OFF) → 4LO (touch select high-low switch ON)</li> </ul>	10 to 14 → 0.88 or less
F21-25 (TL1) – F20-6 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>4HI (touch select 2-4 switch ON) → 2WD (touch select 2-4 switch OFF)</li> </ul>	10 to 14 → 0.88 or less
F20-13 (DL1) – F20-6 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>A.D.D. FREE → LOCK</li> </ul>	10 to 14 → 0.5 or less
F20-2 (DM1) – F20-1 (DM2)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>A.D.D. LOCK</li> </ul>	10 to 14 (for about 5 seconds) → less than 0.5
	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>A.D.D. FREE</li> </ul>	
F20-5 (IG) – F20-6 (GND)	Ignition switch ON	10 to 14
F21-2 (TM1) – F21-1 (TM2)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Touch select 2-4 switch OFF</li> </ul>	10 to 14 (for about 5 seconds) → less than 0.5
	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Touch select 2-4 switch ON</li> </ul>	
F21-7 (L4) – F20-6 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON, touch select 2-4 switch ON</li> <li>Touch select high-low switch OFF → ON</li> </ul>	10 to 14 → 1.5 or less
F21-26 (ADD) – F20-6 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>A.D.D. LOCK</li> </ul>	10 to 14 → 1.5 or less

F20-11 (IND2) – F20-6 (GND)	<ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• Touch select high-low switch ON</li> </ul>	1.5 to 3.5
F20-19 (IND1) – F20-6 (GND)	<ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• Touch select 2-4 switch ON</li> </ul>	1.5 to 3.5
F21-24 (TL2) – F20-6 (GND)	<ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• 2WD (touch select 2-4 switch OFF) → 4HI (touch select 2-4 switch ON)</li> </ul>	10 to 14 → 0.88 or less
F20-21 (DL2) – F20-6 (GND)	<ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• A.D.D. LOCK → FREE</li> </ul>	10 to 14 → 0.5 or less
F20-6 (GND) – Body ground	Ignition switch OFF	Below 1