

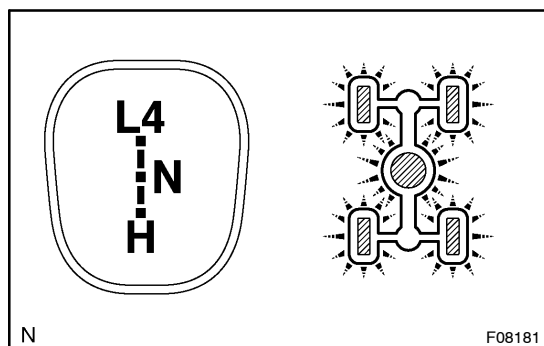
## INSPECTION

### 1. INSPECT H (2WD) ↔ H (4WD and Center diff. lock "FREE") SHIFT

- Start the engine, and shift the transfer shift lever to the "H" position.
- Check that the 4WD indicator light comes on when the 2-4 selector switch is in "ON" position. Check that the light goes off when the switch is in "OFF" position.

#### HINT:

- If the light does not light up, 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 4WD indicator light and center diff. lock indicator light flash.

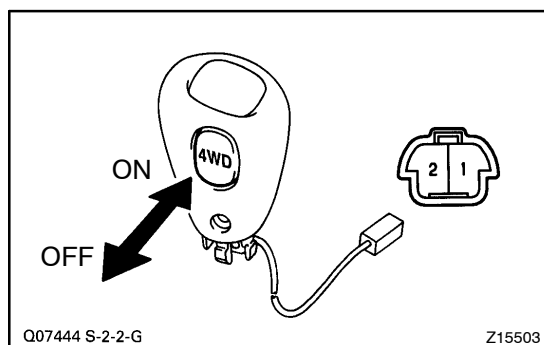


### 2. INSPECT H (2WD) • (4WD and Center diff. lock "FREE") ↔ L4 (Center diff. lock "LOCK") SHIFT

- Start the engine, and the 2-4 selector switch turns to "OFF".
- Check that the 4WD indicator light or center diff. lock indicator light comes on when the transfer shift lever is shifted to the "L4" position, and the center diff. lock switch is in "ON" position.
- Check that the light goes off when the transfer shift lever is shifted to the "H" position.

#### HINT:

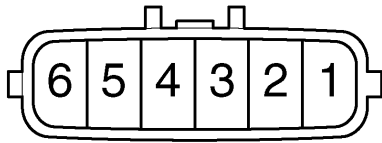
- Inspection should be performed with the vehicle stopped, and transmission shift lever in "N" position.
- If switching is not completed after 3 seconds of shift operation, the 4WD indicator light and center diff. lock indicator light flash.



### 3. INSPECT 2-4 SELECTOR SWITCH CONTINUITY

Switch position	Tester connection	Specified condition
OFF	1 - 2	No continuity
ON	1 - 2	Continuity

If continuity is not as specified, replace the shift lever knob.

**Actuator side:**

N

F07509

**4. INSPECT ACTUATOR RESISTANCE**

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

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

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

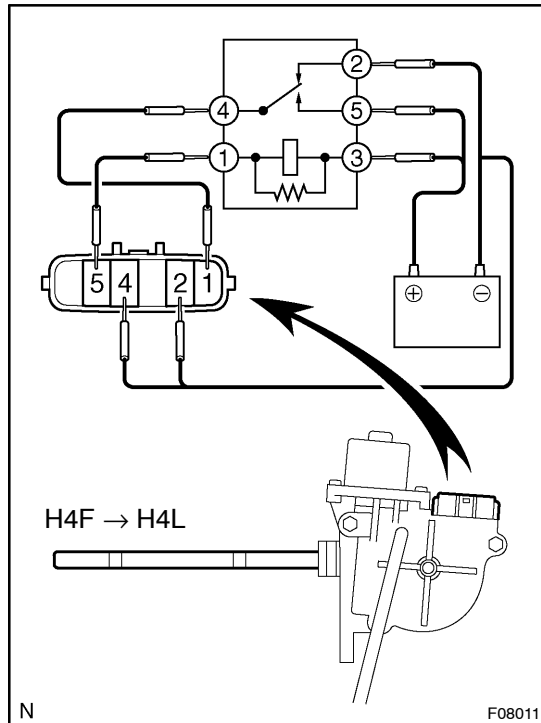
**Standard resistance: More than 0.5 M $\Omega$**

If resistance value is not as specified, replace the actuator assembly.

**5. INSPECT ACTUATOR OPERATION**

- (a) H4F (4WD and Center diff. lock "FREE") → H4L (4WD and Center diff. lock "LOCK") shift:

Connect lines via a relay as shown in the illustration, then check that the actuator fork shaft moves to H4F (4WD and Center diff. lock "FREE") → H4L (4WD and Center diff. lock "LOCK") position.

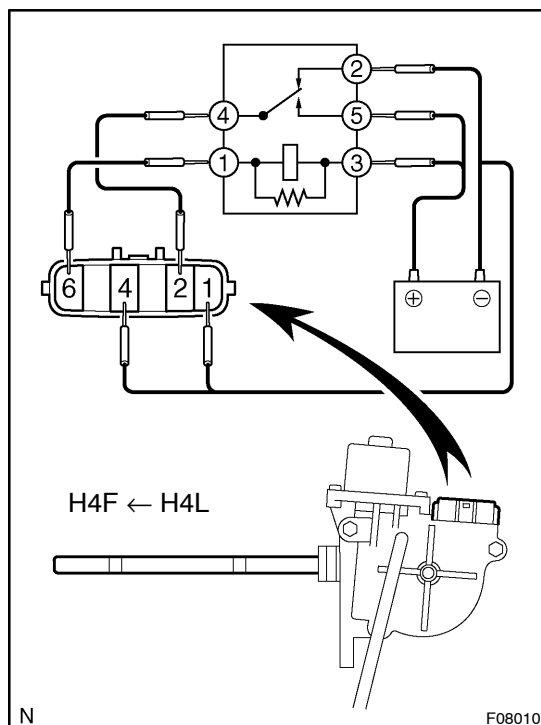


N

F08011

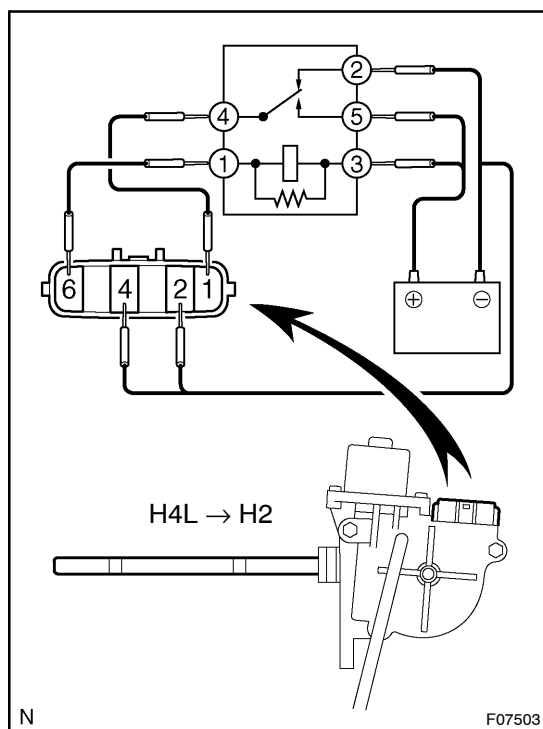
- (b) H4L (4WD and Center diff. lock "LOCK") → H4F (4WD and Center diff. lock "FREE") shift:

Connect lines via a relay as shown in the illustration, then check that the actuator fork shaft moves to H4L (4WD and Center diff. lock "LOCK") → H4F (4WD and Center diff. lock "FREE") position.



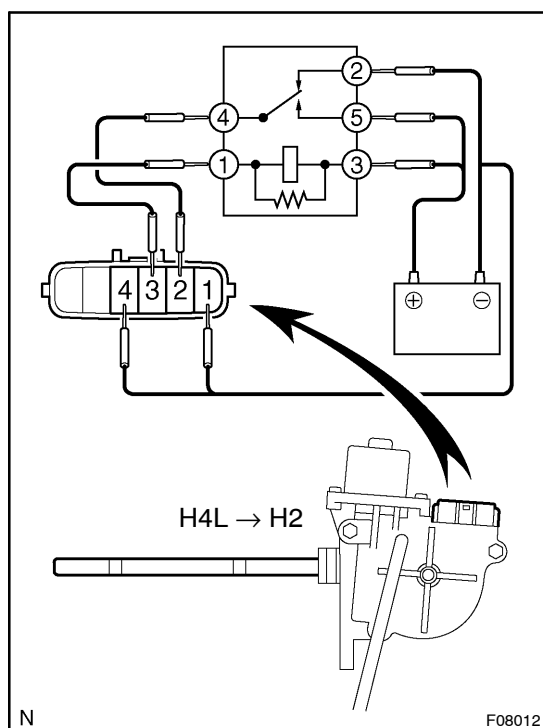
N

F08010



- (c) H4L (4WD and Center diff. lock "LOCK") → H2 (2WD) shift:

Connect lines via a relay as shown in the illustration, then check that the actuator fork shaft moves to H4L (4WD and Center diff. lock "LOCK") → H2 (2WD) position.

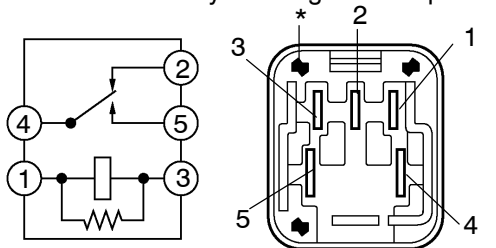


- (d) H2 (2WD) → H4L (4WD and Center diff. lock "LOCK") shift:

Connect lines via a relay as shown in the illustration, then check that the actuator fork shaft moves to H2 (2WD) → H4L (4WD and Center diff. lock "LOCK") position.

#### Heater main relay:

\*: Relay housing metallic parts

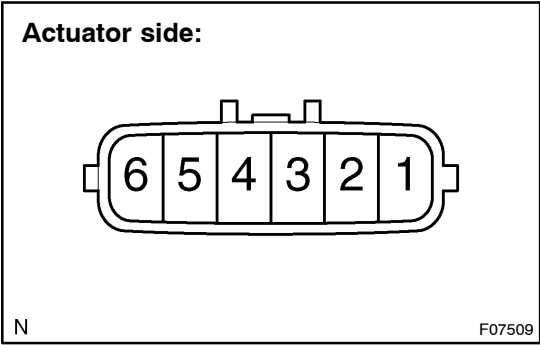


#### HINT:

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

#### NOTICE:

**Connect the terminals being careful not to touch the neighboring terminals or metallic parts of relay housing.**



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 inspect the continuity between each terminal.

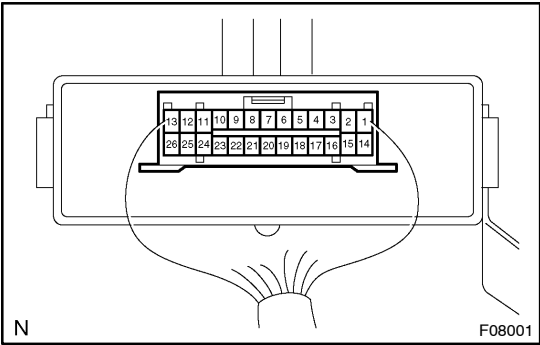
HINT:  
When shifting the actuator fork shaft, connect the connectors.

Shift position	Tester connection	Specified condition
H (2WD)	3-4	No continuity
	3-5	No continuity
	3-6	No continuity
	4-5	Continuity
	4-6	No continuity
	5-6	No continuity
H (4WD)	3-4	No continuity
	3-5	No continuity
	3-6	No continuity
	4-5	No continuity
	4-6	Continuity
	5-6	No continuity
L4	3-4	Continuity
	3-5	No continuity
	3-6	No continuity
	4-5	No continuity
	4-6	No continuity
	5-6	No continuity

7. INSPECT VEHICLE SPEED SENSOR (See page [BE-45](#))

8. INSPECT 4WD INDICATOR LIGHT

Check the combination meter (See page [BE-45](#)).



9. INSPECT 4WD CONTROL ECU

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

## STANDARD VALUE OF ECU TERMINAL

Terminals (Symbols)	Condition	STD Voltage (V)
3 (SPD) – 25 (GND)	During driving	Pulse generation
4 (2-4) – 25 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Touch select 2-4 switch OFF → ON</li> </ul>	10 – 14 → 2 or less
2 (N) – 25 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Transfer shift lever other positions → Transfer shift lever N position</li> </ul>	10 – 14 → 2 or less
6 (4WD) – 25 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Touch select 2-4 switch OFF → ON</li> </ul>	10 – 14 → 2 or less
7 (DL) – 25 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Touch select center diff. lock switch is in "OFF" position → "ON" position</li> </ul>	10 – 14 → 2 or less
8 (TL3) – 25 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON, touch select 2-4 switch OFF</li> <li>H (2WD (Transfer shift lever "H" position)) → L4 (4WD (Transfer shift lever "L4" position)) and center diff. lock switch is in "OFF" position → "ON" position</li> </ul>	2 or less → 10 – 14
9 (TL1) – 25 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON, touch select 2-4 switch ON</li> <li>Center diff. lock switch is in "OFF" position → "ON" position</li> </ul>	2 or less → 10 – 14
10 (DL1) – 25 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>A.D.D. FREE → LOCK</li> </ul>	2 or less → 10 – 14
11 (DM1) – 24 (DM2)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>A.D.D. LOCK</li> </ul>	10 – 14 (for about 5 seconds) then less than 0.5
	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>A.D.D. FREE</li> </ul>	
12 (IG) – 25 (GND)	Ignition switch ON	10 – 14
13 (TM1) – 26 (TM2)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Touch select 2-4 switch OFF</li> </ul>	10 – 14 (for about 5 seconds) then less than 0.5
	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Touch select 2-4 switch ON</li> </ul>	
5 (L4) – 25 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON, touch select 2-4 switch ON</li> <li>Transfer shift lever "H" position → Transfer shift lever "L4" position</li> </ul>	10 – 14 → 2 or less
19 (ADD) – 25 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>A.D.D. LOCK</li> </ul>	10 – 14 → 2 or less
20 (IND2) – 25 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Transfer shift lever "L4" position and center diff. lock switch is in "ON" position</li> </ul>	1.5 – 3.5
21 (IND1) – 25 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Touch select 2-4 switch ON</li> </ul>	1.5 – 3.5
22 (TL2) – 25 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON, touch select 2-4 switch ON and center diff. lock switch is in "ON" position</li> <li>H (4WD (touch select 2-4 switch ON)) → H (2WD (touch select 2-4 switch OFF))</li> </ul>	2 or less → 10 – 14
23 (DL2) – 25 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>A.D.D. LOCK → FREE</li> </ul>	2 or less → 10 – 14
25 (GND) – Body ground	Ignition switch OFF	Continuity