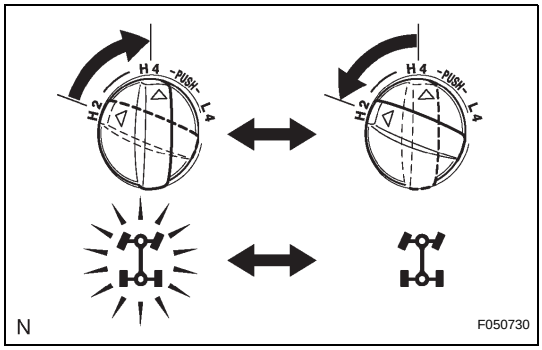
INSPECTION

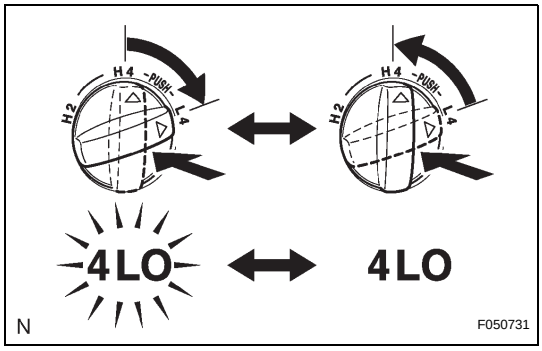
NOTICE:

- **A/T:**
  Switch the 4 wheel drive control switch when the A/T shift lever is in the N position and the vehicle speed is 5 km/h or less.
- **M/T:**
  Switch the 4 wheel drive control switch when the clutch start switch is turned ON and the vehicle speed is 3 km/h or less.
- **Do not change from H2 to H4 when the vehicle speed is 100 km/h or more.**



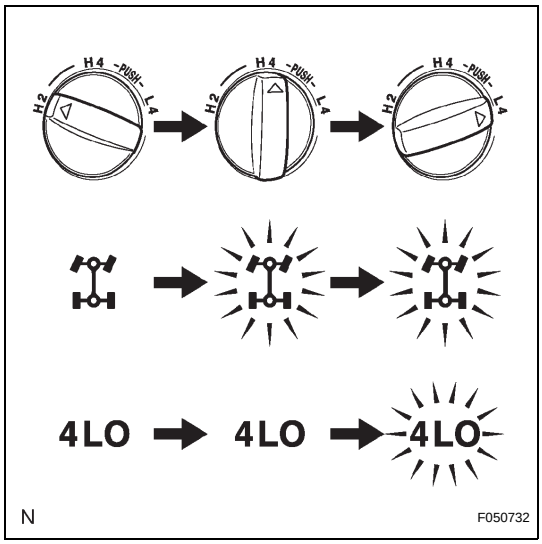
1. INSPECT H2 (2WD) - H4 (4WD) SHIFT

(a) Start the engine.
(b) Turn the 4 wheel drive control switch from the H2 to the H4 position.
(c) Check that the 4WD indicator light blinks and then stays on.
(d) Turn the 4 wheel drive control switch from the H4 to the H2 position
(e) Check that the 4WD indicator light blinks and then goes off.



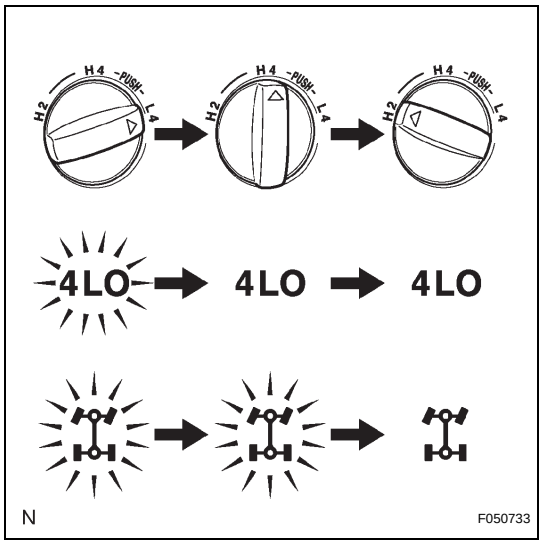
2. INSPECT H4 (4WD) - L4 (4WD) SHIFT

(a) Start the engine.
(b) Turn the 4 wheel drive control switch from the H4 to the L4 position while pressing it.
(c) Check that the 4LO indicator light blinks and then stays on.
(d) Turn the 4 wheel drive control switch from the L4 to the H4 position while pressing it.
(e) Check that the 4LO indicator light blinks and then goes off.



3. INSPECT H2 (2WD) - L4 (4WD) SHIFT

(a) Start the engine.
(b) Turn the 4 wheel drive control switch from the H2 to the H4 position.
(c) Check that the 4WD indicator light blinks and then stays on.
(d) Turn the 4 wheel drive control switch from the H4 to the L4 position while pressing it.
(e) Check that the 4LO indicator light blinks and then stays on.



4. INSPECT L4 (4WD) - H2 (2WD) SHIFT

(a) Start the engine.

(b) Turn the 4 wheel drive control switch from the L4 to the H4 position while pressing it.

(c) Check that the 4LO indicator light blinks and then goes off.

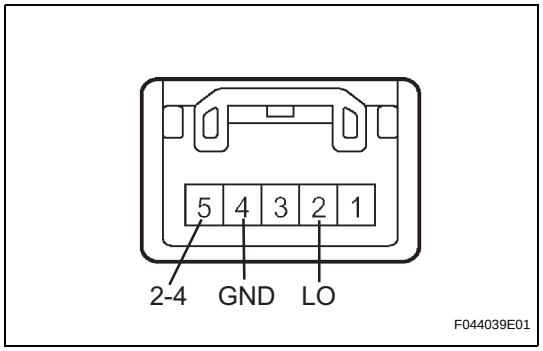
(d) Turn the 4 wheel drive control switch from the H4 to the H2 position.

(e) Check that the 4WD indicator light blinks and then goes off.

5. INSPECT 4 WHEEL DRIVE CONTROL SWITCH

(a) Remove the center instrument cluster finish panel sub-assembly.

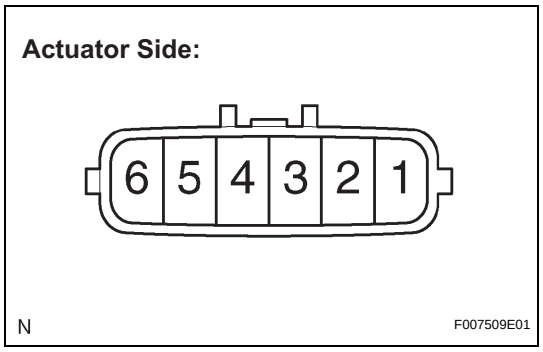
(b) Remove the 4 wheel drive control switch from the center instrument cluster finish panel sub-assembly.



(c) Using an ohmmeter, measure the resistance between the terminals.

Switch position	Tester connection	Specified condition
H2	5 (2-4) - 4 (GND)	Below 1Ω
H4	5 (2-4) → 4 (GND)	Below 1Ω
	5 (2-4) ← 4 (GND)	100 kΩ or higher
	2 (LO) → 4 (GND)	Below 1Ω
	2 (LO) ← 4 (GND)	100 kΩ or higher
L4	2 (LO) - 4 (GND)	Below 1Ω

If the results are not as specified, replace the 4 wheel drive control switch or bulb.



6. INSPECT ACTUATOR RESISTANCE

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

Standard resistance:

0.3 to 100 Ω

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

Standard resistance:

More than 0.5 MΩ

If the results are not as specified, replace the shift actuator assembly.

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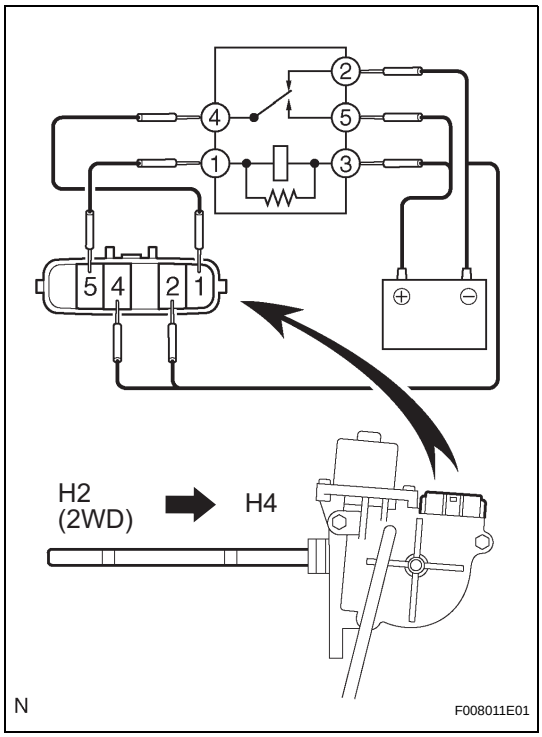
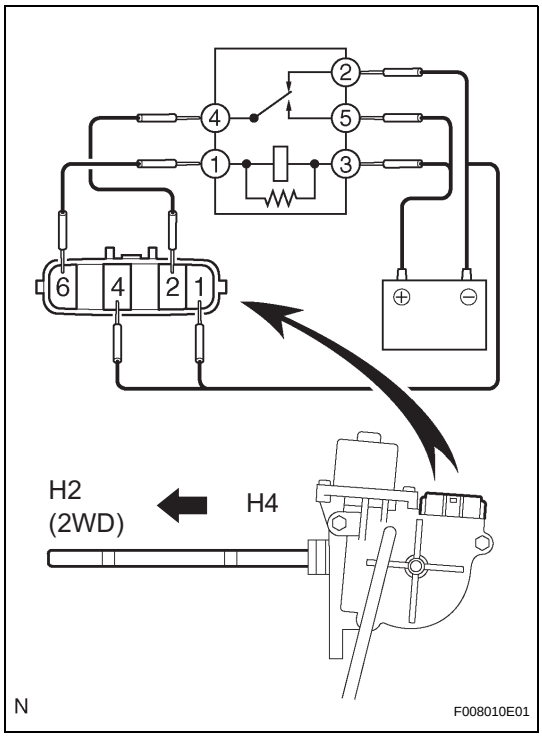


7. INSPECT ACTUATOR OPERATION

(a) H2 (2WD) → H4 shift:
Connect the lines via the relay as shown in the illustration, then check that the actuator fork shaft moves from the H2 (2WD) to the H4 positions.



(b) H4 → H2 (2WD) shift:
Connect the lines via the relay as shown in the illustration, then check that the actuator fork shaft moves from the H4 to the H2 (2WD) positions.

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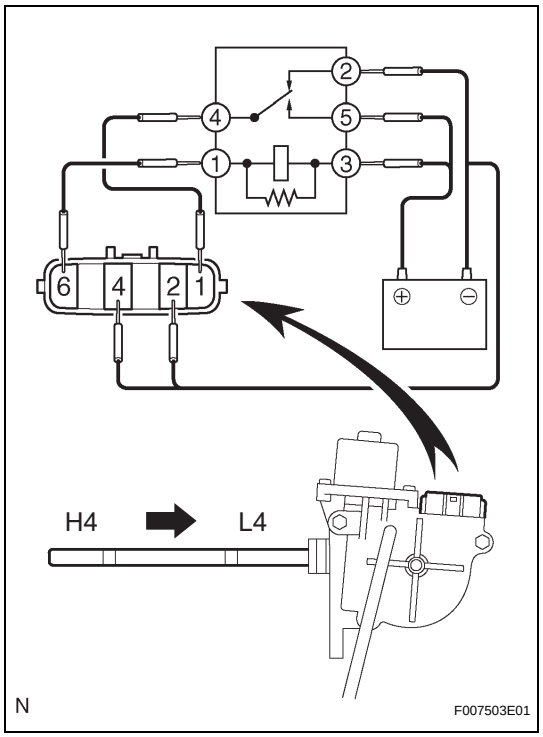
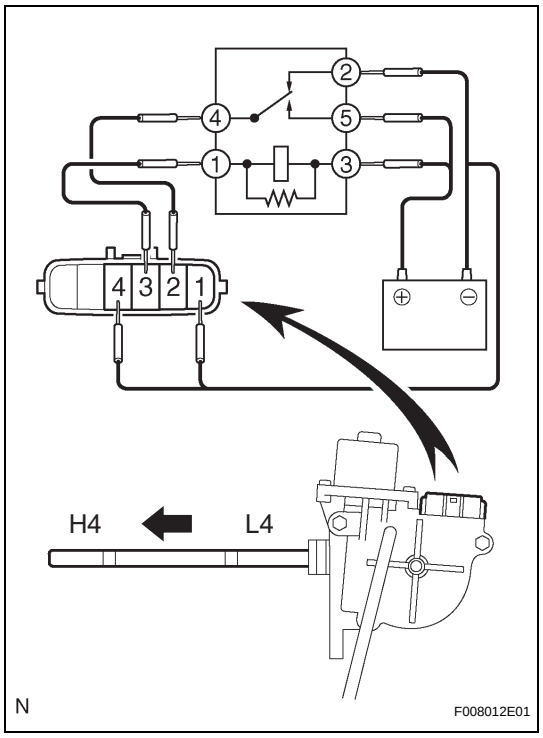
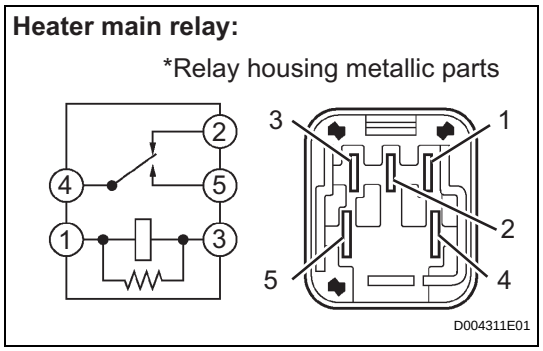


(c) H4 → L4 shift:
Connect the lines via the relay as shown in the illustration, then check that the actuator fork shaft moves from the H4 to the L4 positions.



(d) L4 →H4 shift:
Connect the lines via the relay as shown in the illustration, then check that the actuator fork shaft moves from the L4 to the H4 positions.



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 the relay housing.

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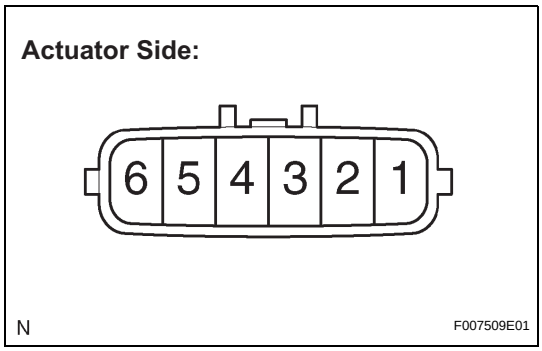


8. INSPECT LIMIT SWITCH CONTINUITY

(a) Start the engine and lift the vehicle up.

(b) With the actuator connector connected, after checking the operating sound, disconnect the connector and inspect the continuity between the terminals using an ohmmeter.

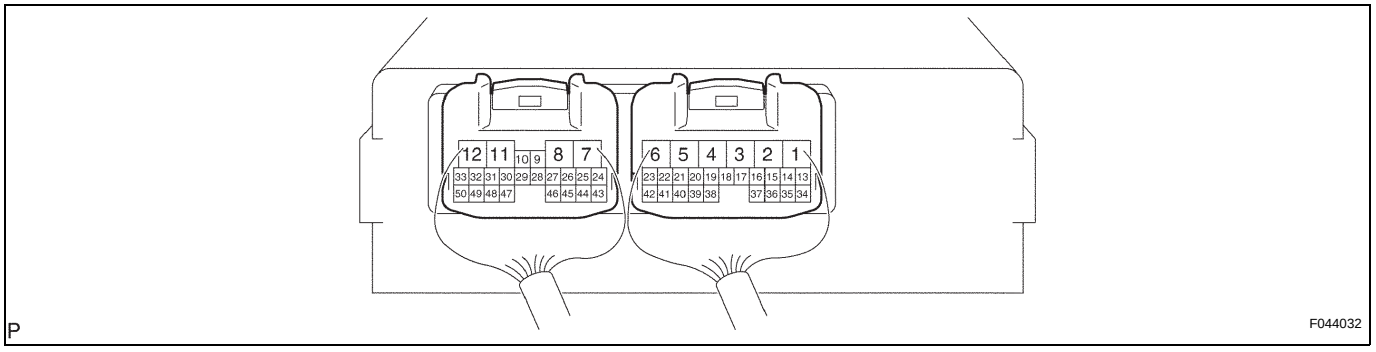
HINT:

When shifting the actuator fork shaft, connect the connectors.

Shift position	Tester connection	Specified condition
H2	3 - 4	100 kΩ or higher
	3 - 5	100 kΩ or higher
	3 - 6	100 kΩ or higher
	4 - 5	Below 1Ω
	4 - 6	100 kΩ or higher
	5 - 6	100 kΩ or higher
H4	3 - 4	100 kΩ or higher
	3 - 5	100 kΩ or higher
	3 - 6	100 kΩ or higher
	4 - 5	100 kΩ or higher
	4 - 6	Below 1Ω
	5 - 6	100 kΩ or higher
L4	3 - 4	Below 1Ω
	3 - 5	100 kΩ or higher
	3 - 6	100 kΩ or higher
	4 - 5	100 kΩ or higher
	4 - 6	100 kΩ or higher
	5 - 6	100 kΩ or higher

9. INSPECT 4 WHEEL DRIVE CONTROL ECU

(a) Connect the wire harness side connector to the 4 wheel drive control ECU and inspect the wire harness side connector from the back side, as shown.



STANDARD VALUE OF ECU TERMINAL

Terminals (Symbols)	Condition	STD Voltage (V)
2 (TM1) - 1 (TM2)	• Ignition switch ON • Differential lock switch in OFF position • 4 wheel drive control switch H2 position → H4 position	10 to 14 or 0 to 14 pulse generation then less than 0.5
1 (TM2) - 2 (TM1)	• Ignition switch ON • Keep pressing the differential lock switch for approx. 2 seconds to turn it ON • 4 wheel drive control switch L4 position → H4 position	10 to 14 or 0 to 14 pulse generation then less than 0.5
3 (DM1) - 4 (DM2)	• Ignition switch ON • A.D.D. FREE →LOCK	10 to 14 or 0 to 14 pulse generation then less than 0.5
4 (DM2) - 3 (DM1)	• Ignition switch ON • A.D.D. LOCK → FREE	10 to 14 or 0 to 14 pulse generation then less than 0.5

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12 (GND) - Body ground	Ignition switch OFF	Below 1Ω
11 (IG) - 12 (GND)	Ignition switch ON	10 to 14
18 (DL2) - 12 (GND)	• Ignition switch ON • A.D.D. LOCK → FREE	1.5 or less → 10 to 14
19 (DL1) - 12 (GND)	• Ignition switch ON • A.D.D. FREE → LOCK	1.5 or less → 10 to 14
25 (2-4) - 12 (GND)	• Ignition switch ON • 4 wheel drive control switch L4 position → H2 position or H4 position	10 to 14 → 2 or less
26 (SPD) - 12 (GND)	During driving	Pulse generation
28 (IND3) - 12 (GND)	• Ignition switch ON • 4 wheel drive control switch H4 position → L4 position	10 to 14 → 1.5 to 3.5
32 (LO) - 12 (GND)	• Ignition switch ON • 4 wheel drive control switch H4 position → L4 position	10 to 14 →1.5 or less
42 (ADD) - 12 (GND)	• Ignition switch ON • A.D.D. FREE → LOCK	10 to 14 →1.5 or less
23 (L4) - 12 (GND)	• Ignition switch ON • 4 wheel drive control switch H2 position or H4 position → L4 position	10 to 14 →1.5 or less
38 (4WD) - 12 (GND)	• Ignition switch ON • 4 wheel drive control switch H2 position →H4 position	10 to 14 →1.5 or less
39 (TL3) - 12 (GND)	• Ignition switch ON • 4 wheel drive control switch H2 position → L4 position	10 to 14 → 0.88 or less
40 (TL2) - 12 (GND)	• Ignition switch ON • 4 wheel drive control switch H2 position → H4 position	10 to 14 → 0.88 or less
41 (TL1) - 12 (GND)	• Ignition switch ON • 4 wheel drive control switch H2 position → H4 position or L4 position	0.88 or less → 10 to 14
45 (IND1) - 12 (GND)	• Ignition switch ON • 4 wheel drive control switch H2 position → H4 position or L4 position	10 to 14 → 0 to 3.5
48 (N) - 12 (GND)	• Ignition switch ON • Transmission shift lever other position → N position	1.5 or less → 10 to 14

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