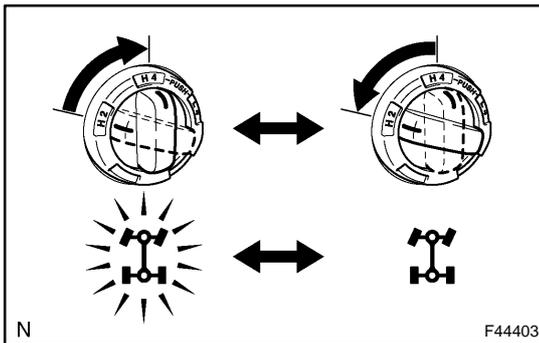


## INSPECTION

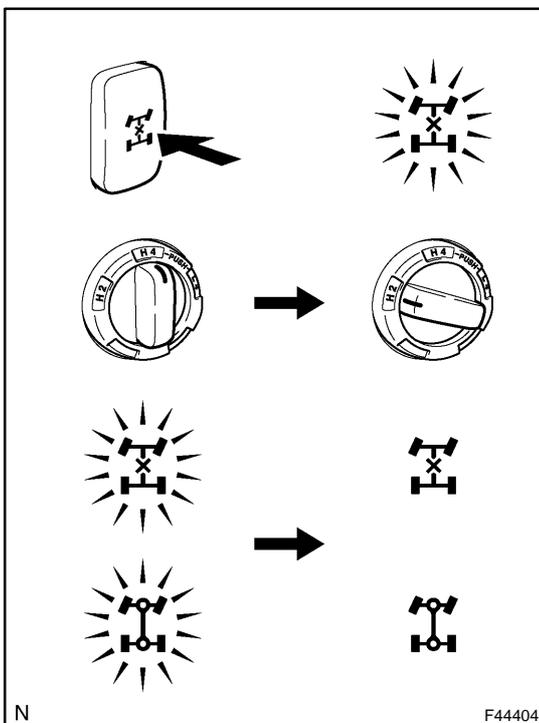
### NOTICE:

- **H4 ⇔ L4:** Stop the vehicle and apply brake, then shift the transmission shift lever into "N" position first.
- Do not operate the four wheel drive control switch and the differential lock switch at the same time.
- Do not change from 2WD to 4WD when the vehicle speed is 100 km/h or more.



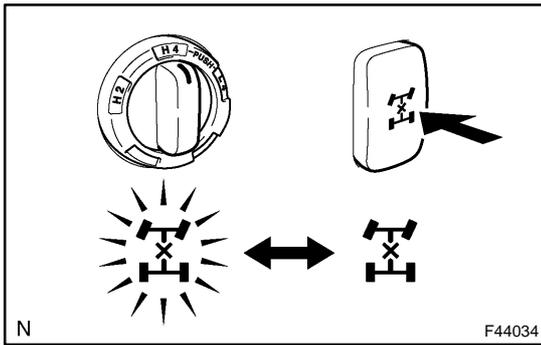
### 1. INSPECT H2 (2WD) ⇔ H4 (4WD and Differential lock "FREE") SHIFT

- Start the engine, and the differential lock switch is in "OFF" position.
- Turn the four wheel drive control switch from the "H2" position to the "H4" position.
- Check that the 4WD indicator light comes on after it is blinking. (The center diff. lock indicator blinks while shifting.)
- Turn the four wheel drive control switch from the "H4" position to the "H2" position. (The center diff. lock indicator blinks while shifting.)
- Check that the 4WD indicator light goes off after it is blinking.



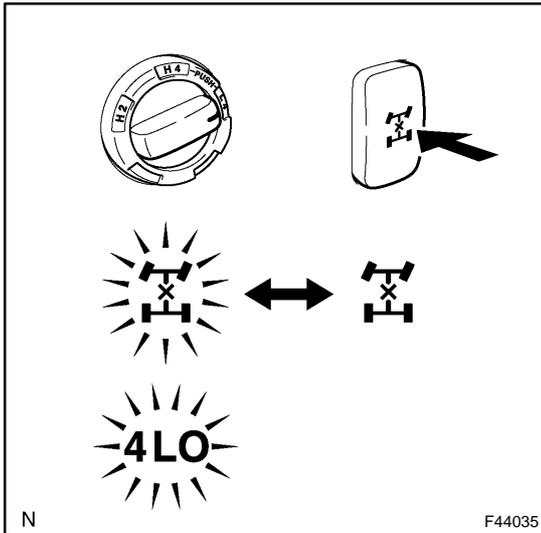
### 2. INSPECT H4 (4WD and Differential lock "LOCK") → H2 (2WD) SHIFT

- Start the engine, and differential lock switch is in "OFF" position.
- Check that the center diff. lock indicator light comes on after pressing the differential lock switch for 2 seconds.
- Turn the four wheel drive control switch from the "H4" position to the "H2" position.
- Check that the 4WD indicator light and center diff. lock indicator light goes off after those are blinking.



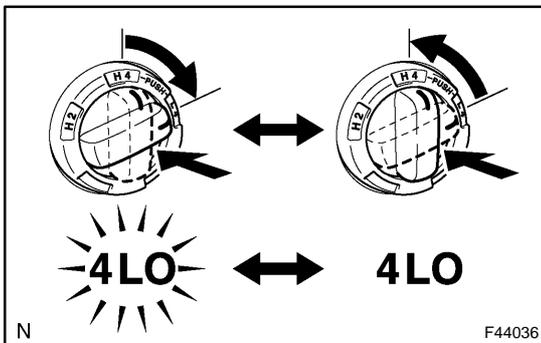
**3. INSPECT H4 (4WD and Differential lock "FREE") ↔ H4 (4WD and Differential lock "LOCK") SHIFT**

- (a) Start the engine, and the differential lock switch is in "OFF" position.
- (b) Turn the four wheel drive control switch to "H4" position while pressing it.
- (c) Check that the center diff. lock indicator light comes on after pressing the differential lock switch for 2 seconds. Check that the center diff. lock indicator light goes off after pressing the differential lock switch for 2 seconds.



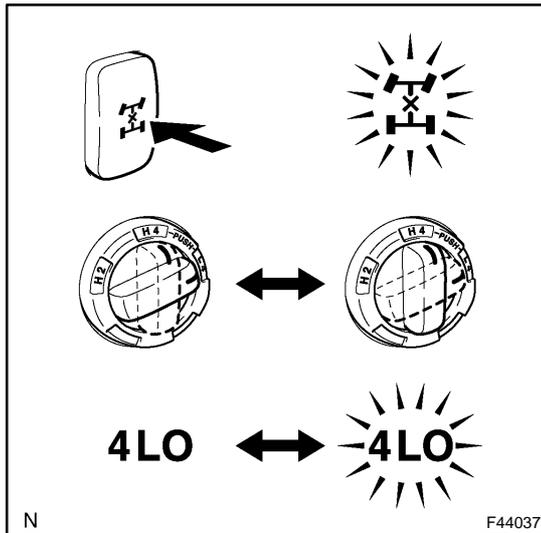
**4. INSPECT L4 (4WD and Differential lock "FREE") ↔ L4 (4WD and Differential lock "LOCK") SHIFT**

- (a) Start the engine, and differential lock switch is in "OFF" position.
- (b) Turn the four wheel drive control switch to "L4" position while pressing it.
- (c) Check that the 4LO indicator light comes on after it is blinking.
- (d) Check that the center diff. lock indicator light comes on after pressing the differential lock switch for 2 seconds. Check that the center diff. lock indicator light goes off after pressing the differential lock switch for 2 seconds.



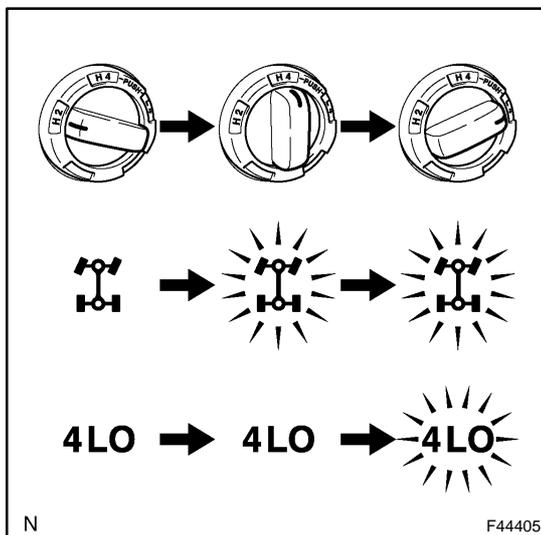
**5. INSPECT H4 (4WD and Differential lock "FREE") ↔ L4 (4WD and Differential lock "FREE") SHIFT**

- (a) Start the engine, and differential lock switch is in "OFF" position.
- (b) Turn the four wheel drive control switch from the "H4" position to the "L4" position while pressing it.
- (c) Check that the 4LO indicator light comes on after it is blinking.
- (d) Turn the four wheel drive control switch from the "L4" position to the "H4" position while pressing it.
- (e) Check that the 4LO indicator light goes off after it is blinking.



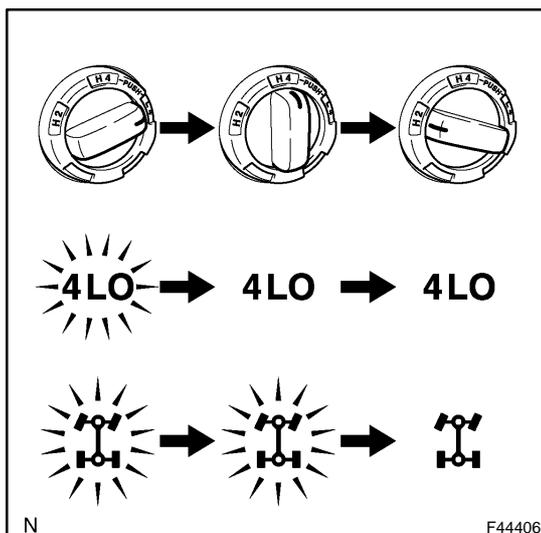
**6. INSPECT H4 (4WD and Differential lock "LOCK") ↔ L4 (4WD and Differential lock "LOCK") SHIFT**

- Start the engine, and differential lock switch is in "OFF" position.
- Check that the center diff. lock indicator light comes on after pressing the differential lock switch for 2 seconds.
- Turn the four wheel drive control switch from the "H4" position to the "L4" position while pressing it.
- Check that the 4LO indicator light comes on after it is blinking.
- Turn the four wheel drive control switch from the "L4" position to the "H4" position while pressing it.
- Check that the 4LO indicator light goes off after it is blinking.



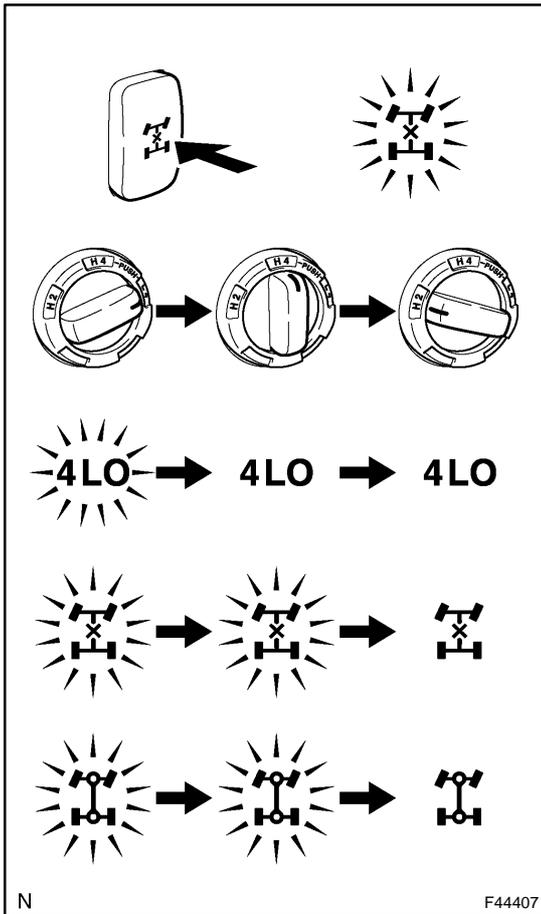
**7. INSPECT H2 (2WD) → L4 (4WD and Differential lock "FREE") SHIFT**

- Start the engine, and differential lock switch is in "OFF" position.
- Turn the four wheel drive control switch from the "H2" position to the "H4" position.
- Check that the 4WD indicator light comes on after it is blinking. (The center diff. lock indicator blinks while shifting.)
- Turn the four wheel drive control switch from the "H4" position to the "L4" position while pressing it.
- Check that the 4LO indicator light comes on after it is blinking.



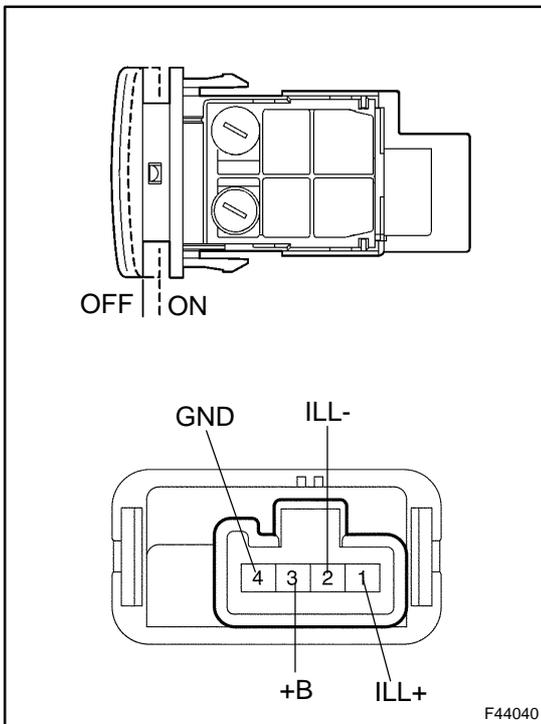
**8. INSPECT L4 (4WD and Differential lock "FREE") → H2 (2WD) SHIFT**

- Start the engine, and differential lock switch is in "OFF" position.
- Turn the four wheel drive control switch from the "L4" position to the "H4" position while pressing it.
- Check that the 4LO indicator light goes off after it is blinking.
- Turn the four wheel drive control switch from the "H4" position to the "H2" position.
- Check that the 4WD indicator light goes off after it is blinking. (The center diff. lock indicator blinks while shifting.)



**9. INSPECT L4 (4WD and Differential lock "LOCK") → H2 (2WD) SHIFT**

- (a) Start the engine, and differential lock switch is in "OFF" position.
- (b) Check that the center diff. lock indicator light comes on after pressing the differential lock switch for 2 seconds.
- (c) Turn the four wheel drive control switch from the "L4" position to the "H4" position while pressing it.
- (d) Check that the 4LO indicator light goes off after it is blinking.
- (e) Turn the four wheel drive control switch from the "H4" position to the "H2" position.
- (f) Check that the 4WD indicator light and center diff. lock indicator light goes off after those are blinking.

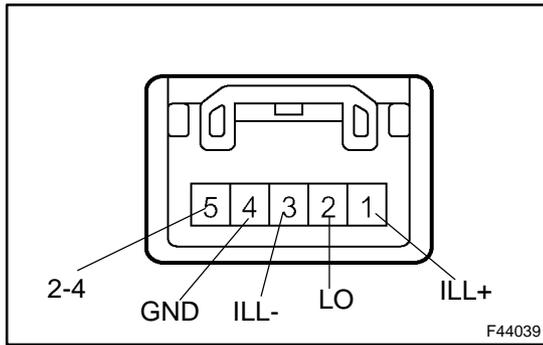


**10. INSPECT DIFFERENTIAL LOCK SWITCH CONTINUITY**

- (a) Remove the instrument panel finish lower panel sub-assy.
- (b) Remove the differential lock switch from the instrument panel finish lower sub-assy.
- (c) Inspect the continuity between the each terminal.

Switch position	Tester connection	Specified condition
OFF	+B (3) ↔ GND (4)	No continuity
Hold ON	+B (3) ↔ GND (4)	Continuity
Illumination	ILL+ (1) ↔ ILL- (2)	Continuity

If continuity is not as specified, replace the differential lock switch or bulb.



- 11. INSPECT FOUR WHEEL DRIVE CONTROL SWITCH**
- (a) Remove the center instrument cluster finish panel sub-assy.
  - (b) Remove the four wheel drive control switch from the center instrument cluster finish panel sub-assy.
  - (c) Inspect the continuity between the each terminals.

Switch position	Tester connection	Specified condition
H2	2-4 (5) ↔ GND (4)	Continuity
H4	2-4 (5) → GND (4)	Continuity
	2-4 (5) ← GND (4)	No continuity
	LO (2) → GND (4)	Continuity
	LO (2) ← GND (4)	No continuity
L4	LO (2) ↔ GND (4)	Continuity
Illumination	ILL+ (1) ↔ ILL- (3)	Continuity

If continuity is not as specified, replace the four wheel drive control switch or bulb.

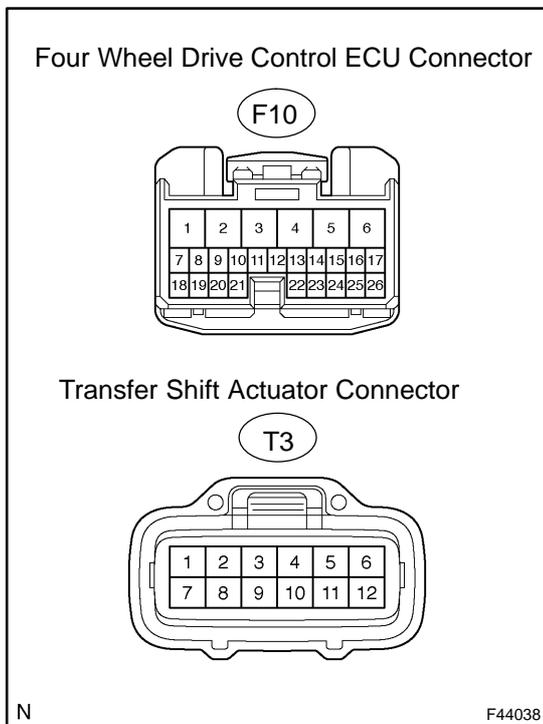
**12. INSPECT ACTUATOR**

**NOTICE:**

**Inspection for the actuator must be done with the actuator installed on the transfer assembly.**

- (a) Turn the ignition switch to ON.
- (b) Check the operating sound produced by four wheel drive control switch operation and the differential lock switch operation.

If the operating sound cannot be heard, check the four wheel control ECU and the wire harness in the next step. When the wire harness and four wheel drive control ECU is normal, replace the actuator.



**13. INSPECT WIRE HARNESS**

- (a) Disconnect the cable from the negative battery terminal or remove the 20A 4WD fuse.

**CAUTION:**

**Failure to disconnect power for the 4WD ECU may cause the transfer case actuator to be activated, resulting in damage to the transfer case actuator.**

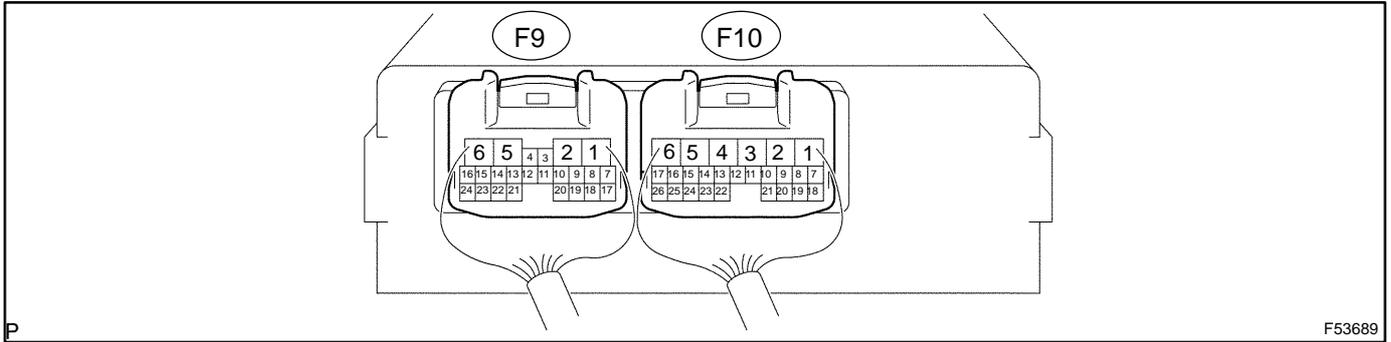
- (b) Disconnect the actuator connector and four wheel drive control ECU connector.
- (c) Check continuity on the wire harness between four wheel drive control ECU and the actuator.

Tester connection	Specified condition
TM1 (F10-2) - TM1 (T3-2)	Continuity
TM2 (F10-5) - TM2 (T3-1)	Continuity
TL2 (F10-24) - TL2 (T3-4)	Continuity
TL3 (F10-23) - TL3 (T3-5)	Continuity
HM2 (F10-4) - HM2 (T3-7)	Continuity
HM1 (F10-1) - HM1 (T3-8)	Continuity
P1 (F10-22) - CDL (T3-9)	Continuity
HL2 (F10-26) - HL2 (T3-11)	Continuity
HL1 (F10-17) - HL1 (T3-12)	Continuity

If continuity is not as specified, repair or replace the wire harness.

**14. INSPECT FOUR WHEEL DRIVE CONTROL ECU**

- (a) Connect the wire harness side connector to the four wheel drive control ECU.
- (b) Connect the cable to the negative battery terminal or install the 20A 4WD fuse.
- (c) Inspect the wire harness side connector from the back side, as shown below.



**STANDARD VALUE OF ECU TERMINAL**

Terminals (Symbols)	Condition	STD Voltage (V)
F10-1 (HM1) - F10-4 (HM2)	<ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• Four wheel drive control switch "H4" position → Four wheel drive control switch "L4" position</li> </ul>	10 - 14 → 2 or less
F10-4 (HM2) - F10-1 (HM1)	<ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• Four wheel drive control switch "L4" position → Four wheel drive control switch "H4" position</li> </ul>	or 0 (0.5 s) - 14 (50 ms) pulse generation
F10-2 (TM1) - F10-5 (TM2)	<ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• Differential lock switch is in "OFF" position</li> <li>• Four wheel drive control switch "H2" position → Four wheel drive control switch "H4" position</li> </ul>	10 - 14 → 2 or less
F10-5 (TM2) - F10-2 (TM1)	<ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• Keep pressing the differential lock switch approx. 2 seconds to turn it ON</li> <li>• Four wheel drive control switch "H4" position or "L4" position → Four wheel drive control switch "H2" position</li> </ul>	or 0 (0.5 s) - 14 (50 ms) pulse generation
F10-3 (DM1) - F10-6 (DM2)	<ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• A.D.D. FREE → A.D.D. LOCK</li> </ul>	10 - 14 → 2 or less
F10-6 (DM2) - F10-3 (DM1)	<ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• A.D.D. LOCK → A.D.D. FREE</li> </ul>	or 0 (0.5 s) - 14 (50 ms) pulse generation
F10-4 (HM2) - F9-1 (GND)	<ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• Four wheel drive control switch "H4" position → Four wheel drive control switch "L4" position</li> </ul>	2 or less → 10 - 14
F9-1 (GND) - Body ground	Ignition switch OFF	Continuity
F9-6 (IG) - F9-1 (GND)	Ignition switch ON	10 - 14
F10-12 (DL2) - F9-1 (GND)	<ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• A.D.D. LOCK → A.D.D. FREE</li> </ul>	2 or less → 10 - 14
F10-13 (DL1) - F9-1 (GND)	<ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• A.D.D. FREE → A.D.D. LOCK</li> </ul>	2 or less → 10 - 14
F10-17 (HL1) - F9-1 (GND)	<ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• Four wheel drive control switch "H4" position → Four wheel drive control switch "L4" position</li> </ul>	10 - 14 → 2 or less
F9-8 (2-4) - F9-1 (GND)	<ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• Four wheel drive control switch "L4" position → Four wheel drive control switch "H2" position or "H4" position</li> </ul>	10 - 14 → 2 or less
F9-9 (SPD) - F9-1 (GND)	During driving	Pulse generation
F9-11 (IND3) - F9-1 (GND)	<ul style="list-style-type: none"> <li>• Ignition switch ON</li> <li>• Four wheel drive control switch "H2" position → Four wheel drive control switch "L4" position</li> </ul>	10 - 14 → 0 - 3.5

Terminals (Symbols)	Condition	STD Voltage (V)
F9-15 (LO) - F9-1 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Four wheel drive control switch "H2" position → Four wheel drive control switch "L4" position</li> </ul>	10 - 14 → 2 or less
F9-16 (DL) - F9-1 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Differential lock switch is in "OFF" position → Keep pressing the differential lock switch approx. 2 seconds to turn it ON</li> </ul>	10 - 14 → 2 or less
F10-18 (ADD) - F9-1 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>A.D.D. FREE → A.D.D. LOCK</li> </ul>	10 - 14 → 2 or less
F10-23 (TL3) - F9-1 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Four wheel drive control switch "H2" position → Four wheel drive control switch "L4" position</li> <li>Differential lock switch is in "OFF" position → Keep pressing the differential lock switch approx. 2 seconds to turn it ON</li> </ul>	2 or less → 10 - 14
F10-24 (TL2) - F9-1 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Four wheel drive control switch "H2" position → Four wheel drive control switch "H4" position</li> <li>Differential lock switch is in "OFF" position → Keep pressing the differential lock switch approx. 2 seconds to turn it ON</li> </ul>	10 - 14 → 2 or less
F10-25 (TL1) - F9-1 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Four wheel drive control switch "H2" position → Four wheel drive control switch "H4" position or "L4" position</li> <li>Differential lock switch is in "OFF" position → "ON" position</li> </ul>	2 or less → 10 - 14
F10-26 (HL2) - F9-1 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Four wheel drive control switch "H4" position → Four wheel drive control switch "L4" position</li> </ul>	2 or less → 10 - 14
F9-19 (IND1) - F9-1 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Four wheel drive control switch "H2" position → Four wheel drive control switch "H4" position or "L4" position</li> </ul>	10 - 14 → 0 - 3.5
F9-20 (IND2) - F9-1 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Differential lock switch is in "OFF" position → Keep pressing the differential lock switch approx. 2 seconds to turn it ON</li> </ul>	10 - 14 → 0 - 3.5
F9-22 (N) - F9-1 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Transmission shift lever other position → Transmission shift lever N position</li> </ul>	2 or less → 10 - 14
F9-24 (L4) - F9-1 (GND)	<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Four wheel drive control switch "H4" position → Four wheel drive control switch "L4" position</li> </ul>	10 - 14 → 2 or less