CHECKING THE SWITCHES

Check each switch for damage or wear, proper connections, and also for continuity between the terminals. Refer to "CHECKING SWITCH CONTINUITY".

Incorrect continuity reading → Replace the switch.

- Improperly connected → Repair or replace.
CHECKING SWITCH CONTINUITY

Check each switch for continuity with the pocket tester. If the continuity reading is incorrect, check the wiring connections and if necessary, replace the switch.

**NOTICE**

Never insert the tester probes into the coupler terminal slots ①. Always insert the probes from the opposite end of the coupler, taking care not to loosen or damage the leads.

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Pocket tester
90890-03112
Analog pocket tester
YU-03112-C

**TIP:**
- Before checking for continuity, set the pocket tester to “0” and to the “Ω x 1” range.
- When checking for continuity, switch back and forth between the switch positions a few times.

The terminal connections for switches (e.g., main switch) are shown in an illustration similar to the one on the left.
The switch positions ③ are shown in the far left column and the switch lead colors ⑤ are shown in the top row in the switch illustration.

**TIP:**
“○—○” indicates a continuity of electricity between switch terminals (i.e., a closed circuit at the respective switch position).

The example illustration on the left shows that:
There is continuity between brown/red and red/black when the switch is set to “ON”.

---

9 - 3
8. Differential gear motor

- Disconnect the differential gear motor coupler.
- Remove the differential gear motor from the differential gear case.
- Refer to "FRONT CONSTANT VELOCITY JOINTS, DIFFERENTIAL GEAR AND DRIVE SHAFT" in chapter 7.
- Connect two C size batteries to the differential gear motor terminals (as shown illustrations).

A Check that the pinion gear ② turns counterclockwise.
B Check that the pinion gear ② turns clockwise.

• Make sure that the drive gear (shift fork sliding gear) operates correctly.

TIP:
When installing the differential gear motor, refer to "FRONT CONSTANT VELOCITY JOINTS, DIFFERENTIAL GEAR AND DRIVE SHAFT" in chapter 7.

9. Wiring connection

- Check the connections of the entire 2WD/4WD selecting system.
- Refer to "CIRCUIT DIAGRAM".
- Is the 2WD/4WD system wiring properly connected and without defects?

\[\text{YES} \rightarrow \text{NO}\]

Replace the ECU.

\[\text{YES} \rightarrow \text{NO}\]

Properly connect or repair the 2WD/4WD selecting system wiring.

Replace the differential gear motor.
6. Four-wheel-drive motor relay 3
   • Remove the four-wheel-drive motor relay 3 from the wire harness.
   • Connect the pocket tester (Ω × 1) and the battery (12 V) to the four-wheel-drive motor relay 3 terminals.

   Positive battery terminal → brown/red ①
   Negative battery terminal → yellow/black ②

   Positive tester probe → brown ③
   Negative tester probe → gray ④

   • Check the four-wheel-drive motor relay 3 for continuity.

   YES  NO

   Replace the four-wheel-drive motor relay 3.

---

7. On-command four-wheel-drive motor switch and differential gear lock switch
   • Check the on-command four-wheel-drive motor switch and differential gear lock switch for continuity.
     Refer to "CHECKING THE SWITCHES".
   • Is the on-command four-wheel-drive motor switch and differential gear lock switch OK?

   YES  NO

   Replace the on-command four-wheel-drive motor switch and differential gear lock switch.
4. Four-wheel-drive motor relay 1

- Remove the four-wheel-drive motor relay 1 from the wire harness.
- Connect the pocket tester (Ω x 1) and the battery (12 V) to the four-wheel-drive motor relay 1 terminals.

Positive tester probe → black/yellow (1)
Negative tester probe → black (2)

Positive battery terminal → brown/red (3)
Negative battery terminal → blue/red (4)

Positive tester probe → black/yellow (1)
Negative tester probe → brown/red (5)

- Check the four-wheel-drive motor relay 1 for continuity.

        YES

Replace the four-wheel-drive motor relay 1.

        NO

5. Four-wheel-drive motor relay 2

- Remove the four-wheel-drive motor relay 2 from the wire harness.
- Connect the pocket tester (Ω x 1) and the battery (12 V) to the four-wheel-drive motor relay 2 terminals.

Positive tester probe → brown/black (1)
Negative tester probe → black (2)

Positive battery terminal → brown/red (3)
Negative battery terminal → blue/green (4)

Positive tester probe → brown/black (1)
Negative tester probe → brown/red (5)

- Check the four-wheel-drive motor relay 2 for continuity.

        YES

Replace the four-wheel-drive motor relay 2.

        NO
**TROUBLESHOOTING**

The four-wheel-drive motor indicator light fails to come on.

Check:
1. main, ignition and four-wheel-drive motor fuses
2. battery
3. main switch
4. four-wheel-drive motor relay 1
5. four-wheel-drive motor relay 2
6. four-wheel-drive motor relay 3
7. on-command four-wheel-drive motor switch and differential gear lock switch
8. differential gear motor
9. wiring connection
   (the entire 2WD/4WD selecting system)

**TIP:**
- Before troubleshooting, remove the following part(s):
  1. rear console
  2. Troubleshoot with the following special tool(s).

---

**1. Main, ignition and four-wheel-drive motor fuses**

- Check the main, ignition and four-wheel-drive motor fuses for continuity. Refer to "CHECKING THE FUSES" in chapter 3.
- Are the main, ignition and four-wheel-drive motor fuses OK?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Replace the fuse(s).</td>
</tr>
</tbody>
</table>

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**2. Battery**

- Check the condition of the battery. Refer to "CHECKING AND CHARGING THE BATTERY" in chapter 3.

Minimum open-circuit voltage
12.8 V or more at 20 °C (68 °F)

- Is the battery OK?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>
|     | Clean the battery terminals.  
|     | Recharge or replace the battery. |

---

**3. Main switch**

- Check the main switch for continuity. Refer to "CHECKING THE SWITCHES".
- Is the main switch OK?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Replace the main switch.</td>
</tr>
</tbody>
</table>