8. Gear motor

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

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

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

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

INCORRECT

CORRECT

Replace the gear motor.

9. Wiring connection

- Check the connections of the entire 2WD/4WD selecting system.
  Refer to "CIRCUIT DIAGRAM".

INCORRECT

CORRECT

Replace the C.D.I. unit.
6. Four-wheel drive relay 3

- Remove the four-wheel drive relay 3 from the wire harness.
- Connect the pocket tester (Ω x 1) and the battery (12 V) to the four-wheel drive relay 3 terminals.

<table>
<thead>
<tr>
<th>Battery (+) terminal</th>
<th>Brown/Red terminal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery (−) terminal</td>
<td>Yellow/Black terminal</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tester (+) lead</th>
<th>Brown terminal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tester (−) lead</td>
<td>Gray terminal</td>
</tr>
</tbody>
</table>

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

[Diagram of relay 3 with terminals labeled]

NO CONTINUITY

Replace the four-wheel drive relay 3.

CONTINUITY

INCORRECT

Replace the On-Command four-wheel drive switch and differential gear lock switch.

7. On-Command four-wheel drive switch and differential gear lock switch

Refer to "CHECKING THE SWITCHES".
4. Four-wheel drive relay 2

- Remove the four-wheel drive relay 2 from the wire harness.
- Connect the pocket tester ($\Omega \times 1$) and the battery (12 V) to the four-wheel drive relay 2 terminals.

<table>
<thead>
<tr>
<th>Tester (+) lead →</th>
<th>Black/Yellow terminal ①</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tester (−) lead →</td>
<td>Black terminal ②</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Battery (+) terminal →</th>
<th>Brown/Red terminal ③</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery (−) terminal →</td>
<td>Blue/Red terminal ④</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tester (+) lead →</th>
<th>Black/yellow terminal ①</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tester (−) lead →</td>
<td>Brown/Red terminal ⑤</td>
</tr>
</tbody>
</table>

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

5. Four-wheel drive relay 1

- Remove the four-wheel drive relay 1 from the wire harness.
- Connect the pocket tester ($\Omega \times 1$) and the battery (12 V) to the four-wheel drive relay 1 terminals.

<table>
<thead>
<tr>
<th>Tester (+) lead →</th>
<th>Brown/Black terminal ①</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tester (−) lead →</td>
<td>Black terminal ②</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Battery (+) terminal →</th>
<th>Brown/Red terminal ③</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery (−) terminal →</td>
<td>Blue/Green terminal ④</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tester (+) lead →</th>
<th>Brown/Black terminal ①</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tester (−) lead →</td>
<td>Brown/Red terminal ⑤</td>
</tr>
</tbody>
</table>

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

IF THE FOUR-WHEEL DRIVE INDICATOR FAILS TO COME ON:

Procedure
Check:
1. Fuses (main, four-wheel drive)
2. Battery
3. Main switch
4. Four-wheel drive relay 1
5. Four-wheel drive relay 2
6. Four-wheel drive relay 3

NOTE:
• Remove the following part(s) before troubleshooting:
  1) Console
• Use the following special tool(s) for troubleshooting.

Pocket tester
P/N. YU-03112-C, 90890-03112

1. Fuses (main, four-wheel drive)
   Refer to "CHECKING THE SWITCHES".

   NO CONTINUITY

   Replace the fuse.

   CONTINUITY

2. Battery
   • Check the battery condition.
     Refer to “CHECKING AND CHARGING THE BATTERY” in chapter 3.

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

   INCORRECT

   • Clean the battery terminals.
   • Recharge or replace the battery.

   CORRECT

3. Main switch
   Refer to "CHECKING THE SWITCHES".

   INCORRECT

   Replace the main switch.

   CORRECT

*
CHECKING THE SWITCH CONTINUITY
Refer to “CHECKING THE SWITCHES” and check for continuity between lead terminals.
Poor connection, no continuity → Correct or replace.
* The coupler locations are circled.
CHECKING THE SWITCHES

CHECKING THE SWITCHES

Use a pocket tester to check the terminals for continuity. If the continuity is faulty at any point, replace the switch.

Pocket tester
P/N. YU-03112-C, 90890-03112

NOTE:

- Set the pocket tester to “0” before starting the test.
- The pocket tester should be set to the “Ω x 1” range when testing the switch for continuity.
- Turn the switch on and off a few times when checking it.

CHECKING A SWITCH SHOWN IN THE MANUAL

The terminal connections for switches (main switch, light switch, etc.) are shown in a chart similar to the one on the left.

This chart shows the switch positions in the column and the switch lead colors in the top row.

For each switch position, “- - - -” indicates the terminals with continuity.

The example chart shows that:

There is continuity between the “Brown/Blue and Red” leads when the switch is set to “ON”.

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