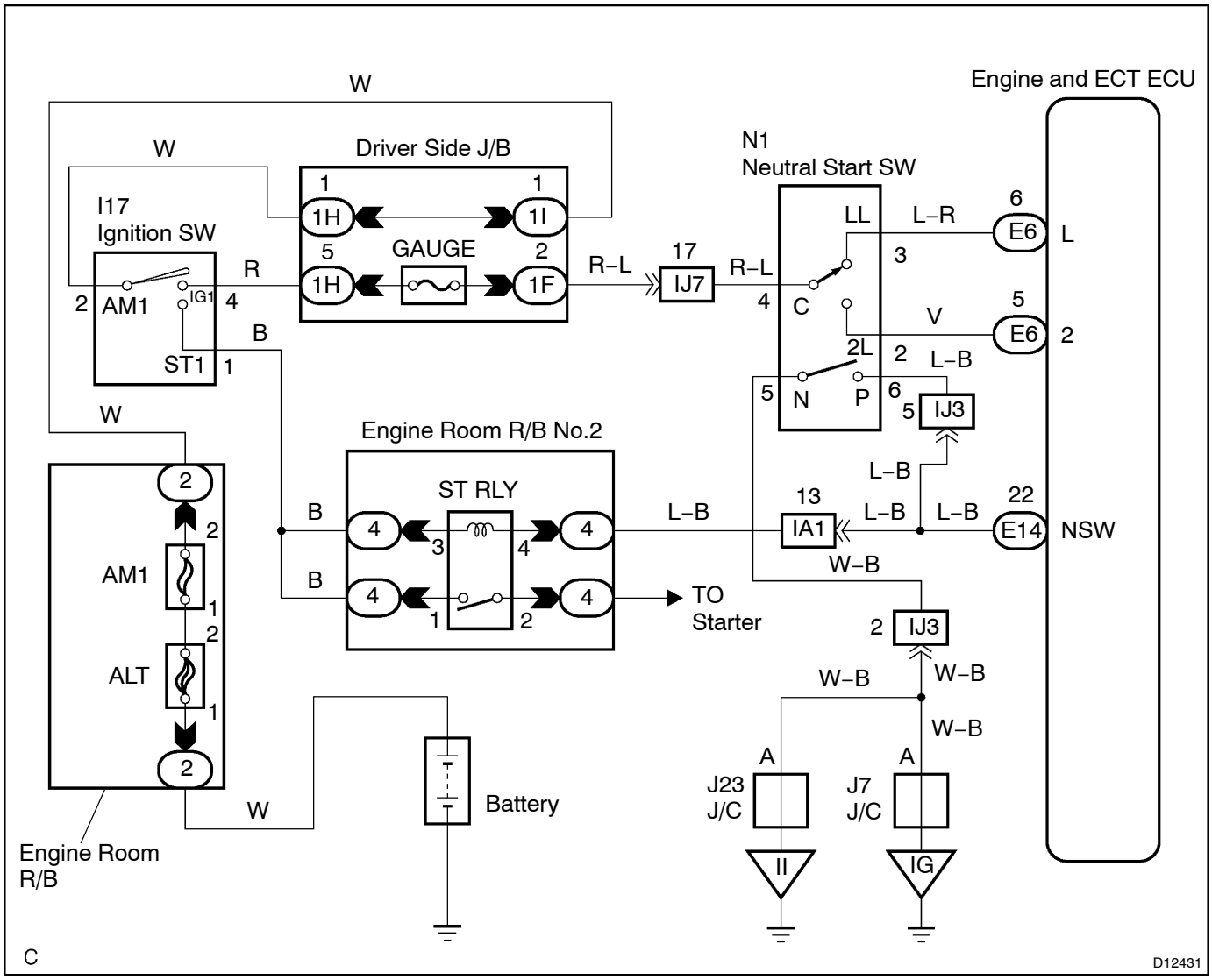
# Neutral Start Switch Malfunction

## CIRCUIT DESCRIPTION

The neutral start switch detects the shift lever position and sends signals to the Engine & ECT ECU.
The Engine & ECT ECU receives signals (NSW, R, 2 and L) from the neutral start switch. When the signal is not sent to the Engine & ECT ECU from the neutral start switch, the Engine & ECT ECU judges that the shift lever is in D range.

## WIRING DIAGRAM



# INSPECTION PROCEDURE

| | |
|---|---|
| 1 | **Read NSW, REVERSE, 2ND and LOW signals.** |

**When using hand–held tester:**

**PREPARATION:**

(a) Connect hand–held tester to the DLC3.

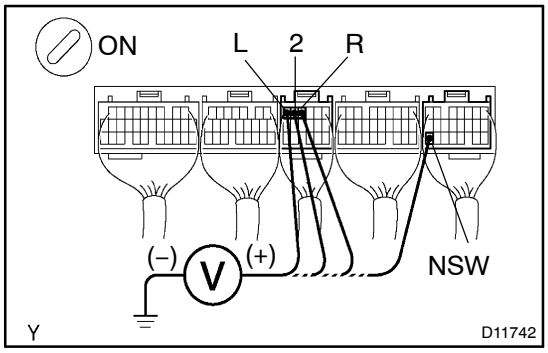
(b) Turn the ignition switch ON and hand–held tester main switch ON.

**CHECK:**

Shift lever into the P, R, N, 2 and L ranges, and read the NSW, REVERSE, 2ND and LOW signals on the hand–held tester.

**OK:**

| Shift Range | Signal |
|---|---|
| 2 | 2ND OFF → ON |
| L | LOW OFF → ON |
| R | REVERSE OFF → ON |
| P, N | NSW OFF → ON |




**When not using hand–held tester:**

**PREPARATION:**

Turn the ignition switch ON.

**CHECK:**

Measure voltage between terminals NSW, 2, L and R of the Engine & ECT ECU and body ground when the shift lever is shifted to the following ranges.

**OK:**

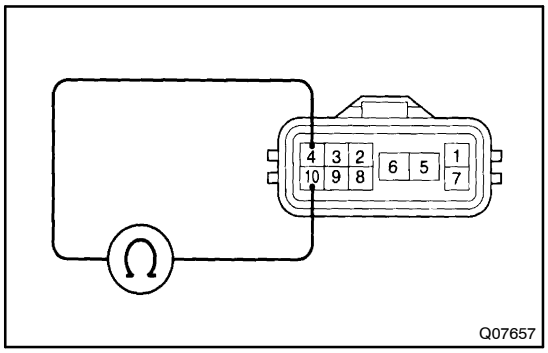
| Range | NSW–Body ground | R–Body ground | 2–Body ground | L–Body ground |
|---|---|---|---|---|
| P, N | 0 V | 0 V | 0 V | 0 V |
| R | 9 – 14 V* | 9 – 14 V* | 0 V | 0 V |
| D | 9 – 14 V | 0 V | 0 V | 0 V |
| 2 | 9 – 14 V | 0 V | 9 – 14 V | 0 V |
| L | 9 – 14 V | 0 V | 0 V | 9 – 14 V |

*: The voltage will drop slightly due to lighting up the back up light.

**OK** → **Check and replace Engine & ECT ECU (See page IN–26).**

**NG**

| 2 | Check neutral start switch. |
|---|---|




**PREPARATION:**

(a) Jack up the vehicle.

(b) Disconnect the neutral start switch connector.

**CHECK:**

Check continuity between each terminal shown below when the shift lever is moved to each range.

**OK:**

| Shift Range | Terminal No. to continuity | Terminal No. to continuity |
|---|---|---|
| P | 4 – 7 | 5 – 6 |
| R | 4 – 8 | – |
| N | 4 – 10 | 5 – 6 |
| D | 4 – 9 | – |
| 2 | 4 – 2 | – |
| L | 4 – 3 | – |

NG → **Replace neutral start switch.**

OK →

**Repair or replace harness and connector between battery and neutral start switch, neutral start switch and Engine & ECT ECU (See page IN–26).**