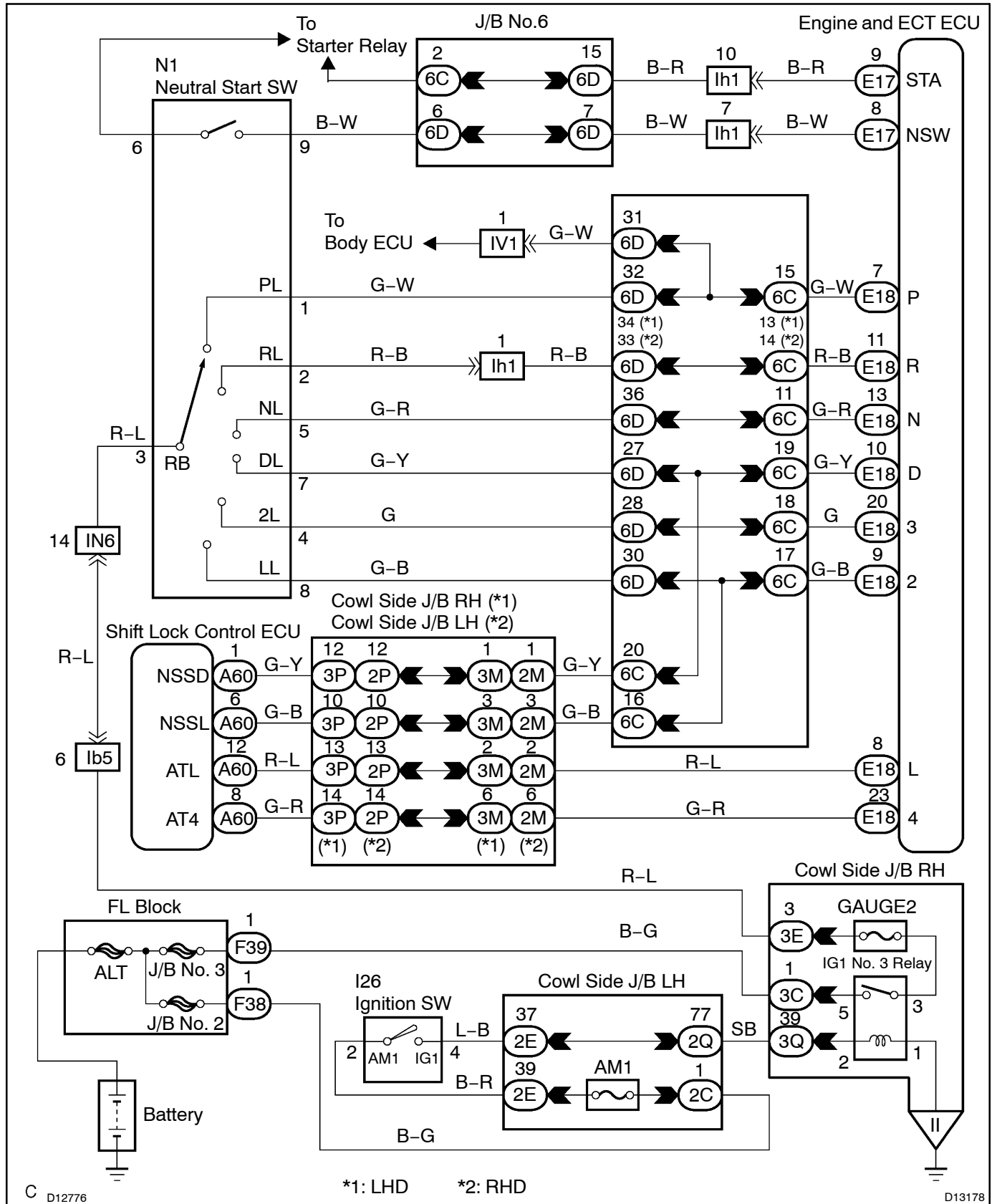DIAVO−01

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, P, R, N, D, 4, 3, 2 and L) from the neutral start switch.
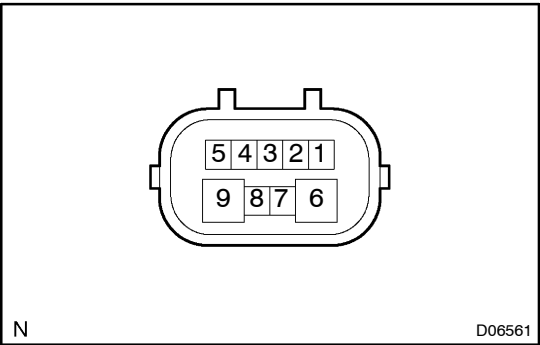
WIRING DIAGRAM

*1: LHD   *2: RHD

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INSPECTION PROCEDURE

1	Check neutral start switch.

PREPARATION:
(a) Jack up the vehicle.
(b) Disconnect the neutral start switch connector.
CHECK:
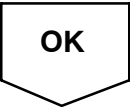Check continuity between each terminal shown below when the shift lever is moved to each range.
OK:

Shift range	Terminal No. to continuity	Terminal No. to continuity
P	1 – 3	6 – 9
R	2 – 3	–
N	3 – 5	6 – 9
D, 4	3 – 7	–
3	3 – 4	–
2, L	3 – 8	–

NG	Replace neutral start switch (See page AT−7).

OK

2	Check transmission control switch.
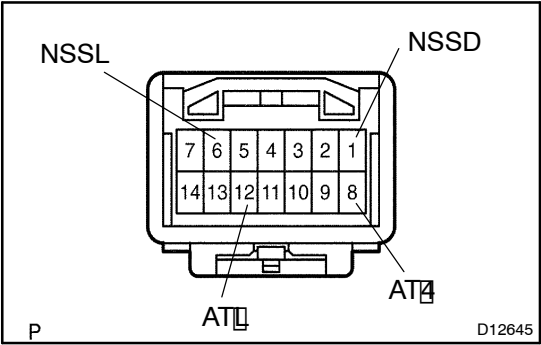
PREPARATION:
(a) Connect the neutral start switch connector.
(b) Disconnect the shift lock control computer connector (transmission control switch).

CHECK:
Check continuity between each terminal of shift lock control computer (transmission control switch).

OK:

Shift range	Tester connection	Specified valve
D	1 − 8 (NSSD − AT4)	No continuity
4		Continuity
2	6 − 12 (NSSL − ATL)	No continuity
L		Continuity

NG	**Replace the transmission control switch (See page AT−21).**

OK

3	Measure voltage between each terminals of NSW, P, R, N, D, 4, 3, 2, L and E1 of Engine and ECT ECU.

ON E1(−) D(+) L(+)
R(+) 2(+) P(+)
N(+)

NSW(+) 4(+) 3(+)

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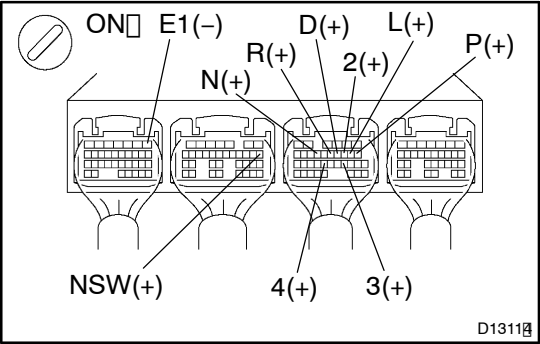
PREPARATION:
(a) Connect the shift lock control computer connector (transmission control switch).
(b) Turn the ignition switch ON.

CHECK:
Measure voltage between each terminals NSW, P, R, N, D, 4, 3, 2, L and E1 of Engine and ECT ECU when the shift lever is shifted to the following ranges.

OK:

Tester connection	Condition	Specified condition
NSW – Body ground	Shift lever range: P and N	Below 1 V
	Shift lever range: Except P and N	Battery voltage
P– Body ground	Shift lever range: P	Battery voltage
R – Body ground	Shift lever range: R	Battery voltage*
N – Body ground	Shift lever range: N	Battery voltage
D – Body ground	Shift lever range: D and 4	Battery voltage
4 – Body ground	Shift lever range: 4	Battery voltage
3 – Body ground	Shift lever range: 3	Battery voltage
2 – Body ground	Shift lever range: 2 and L	Battery voltage
L – Body ground	Shift lever range: L	Battery voltage

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

NG	Repair or replace the harness or connector (See page IN–38).

OK

Proceed to next circuit inspection shown on problem symptoms table (See page DI–119).