

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 for 2000 Nissan Xterra 2.5L Engine and ECT ECU

Engine and ECT ECU

- 9: STA
- 8: NSW
- 7: P
- 11: R
- 13: N
- 10: D
- 20: 3
- 9: 2
- 8: L
- 23: 4

J/B No.6

- 2: 6C
- 15: 6D
- 6: 6D
- 7: 6D

Shift Lock Control ECU

- 1: NSSD
- 6: NSSL
- 12: ATL
- 8: AT4

Cowl Side J/B RH (*1)

- 12: 3P
- 10: 2P
- 13: 3P
- 14: 2P
- 1: 3M
- 3: 2M
- 2: 3M
- 6: 2M
- (*1) (*2)

Cowl Side J/B LH (*2)

- 12: 3P
- 10: 2P
- 13: 3P
- 14: 2P
- 1: 3M
- 3: 2M
- 2: 3M
- 6: 2M
- (*1) (*2)

FL Block

- 1: F39
- 1: F38

Ignition SW

- 2: AM1
- 4: IG1

Cowl Side J/B LH

- 37: 2E
- 39: 2E
- 77: 2Q
- 1: 2C

Cowl Side J/B RH

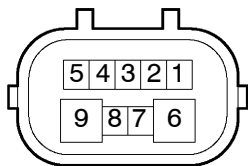
- 3: 3E
- 1: 3C
- 39: 3Q

Legend:

- *1: LHD
- *2: RHD

INSPECTION PROCEDURE

1 Check neutral start switch.



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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:

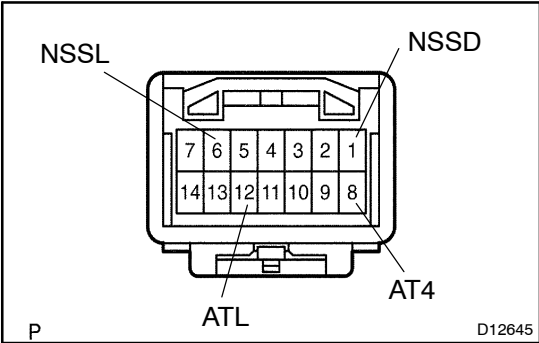
Shift range	Terminal No. to continuity	Terminal No. to continuity
P	1 – 3	6 – 9
R	2 – 3	–
N	3 – 5	6 – 9
D, 4	3 – 7	–
3	3 – 4	–
2, L	3 – 8	–

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:

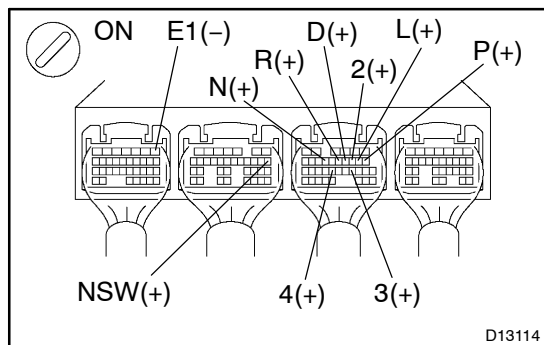
Shift range	Tester connection	Specified valve
D	1 – 8 (NSSD – AT4)	No continuity
4		Continuity
2	6 – 12 (NSSL – ATL)	No continuity
L		Continuity

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.



PREPARATION:

- Connect the shift lock control computer connector (transmission control switch).
- 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.

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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).