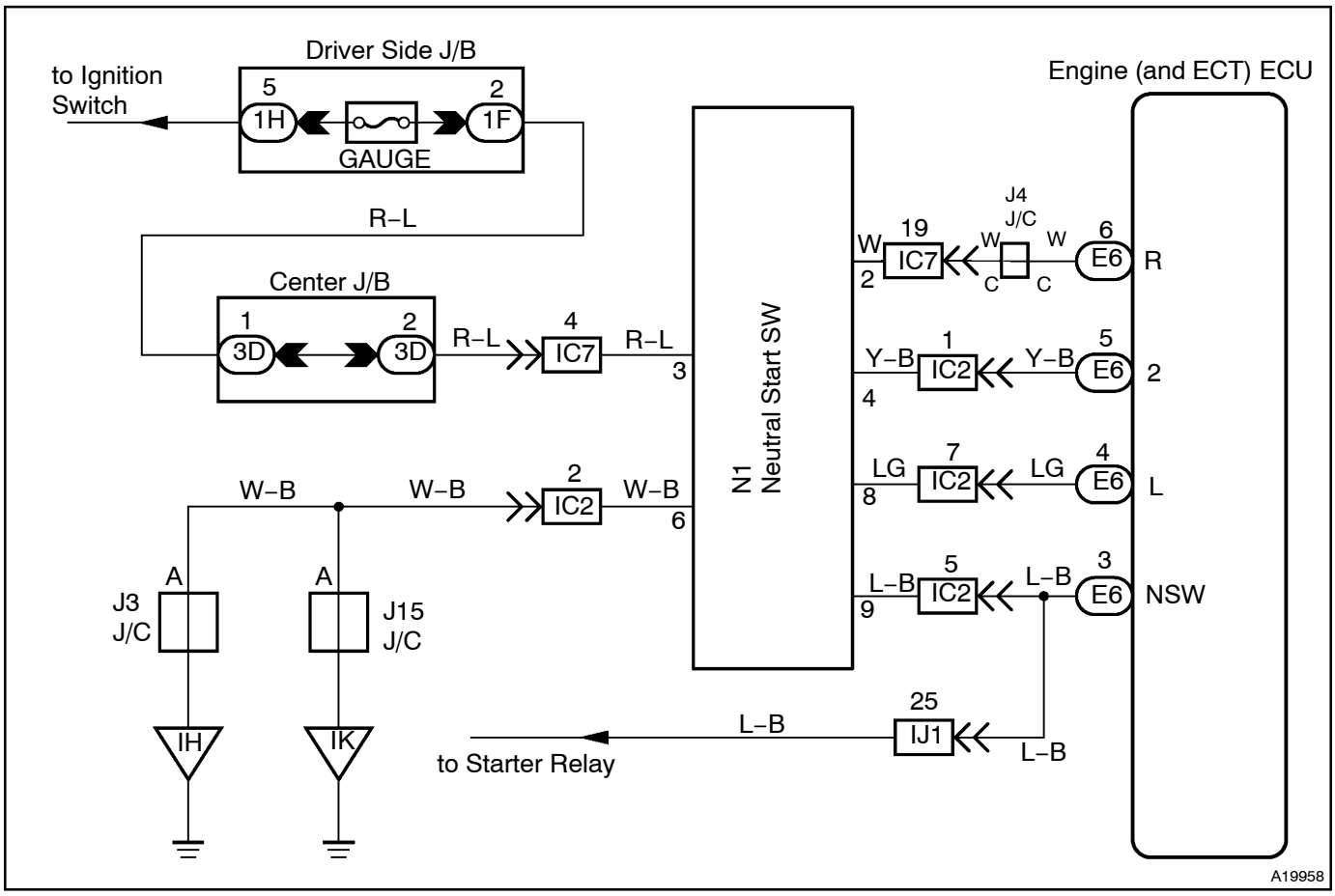
DI9Q4–02

Neutral Start Switch Circuit

CIRCUIT DESCRIPTION

The neutral start switch operates when the shift lever is in the N or P shift range. When it operates, terminal NSW of the engine (and ECT) ECU is grounded to the body ground via the starter relay, thus the terminal NSW voltage becomes 0V. When the shift lever is in the D, 2, L or R range, the neutral start switch does not operate, so the voltage of engine (and ECT) ECU terminal NSW becomes battery voltage and the voltage of the engine (and ECT) ECU internal power source. If the shift lever is moved from the N range to the D range, this signal is used for air–fuel ratio correction and for idle speed control (estimated control), etc.

WIRING DIAGRAM



INSPECTION PROCEDURE

1	**Check R, 2, L and NSW signals.**

When using hand–held tester:

PREPARATION:

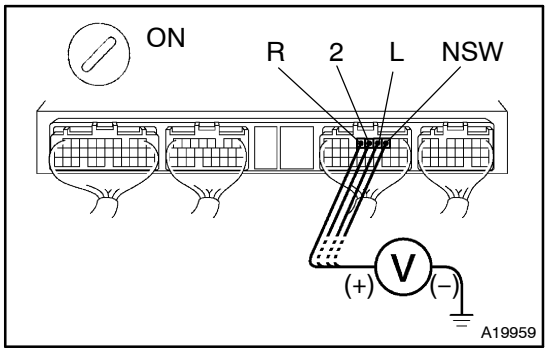
Turn the ignition switch ON.

CHECK:

When shifting the shift lever to the P, R, N, 2, or L ranges, read NSW, R, 2 and L signal on the hand–held tester.

OK:

Shift position	Signal
P, N	NSW OFF → ON
R	R OFF → ON
2	2 OFF → ON
L	L OFF → ON



When not using hand–held tester:

PREPARATION:

(a) Remove the glove compartment door.

(b) Turn the ignition switch ON.

CHECK:

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

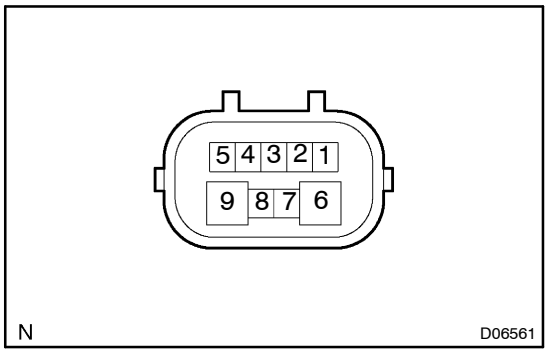
OK:

Range	R–Body ground	NSW–Body ground	2–Body ground	L–Body ground
P, N	Below 1 V	7.5 – 14 V	Below 1 V	Below 1 V
R	7.5 – 14 V	Below 1 V	Below 1 V	Below 1 V
D	Below 1 V	Below 1 V	Below 1 V	Below 1 V
2	Below 1 V	Below 1 V	7.5 – 14 V	Below 1 V
L	Below 1 V	Below 1 V	Below 1 V	7.5 – 14 V

OK → **Proceed to next circuit inspection shown on problem symptoms table (See page DI–21).**

NG

2	Check neutral start switch.



PREPARATION:

Remove the neutral start switch connector.

CHECK:

Check the continuity between each terminal shown below when the shift lever is shifted 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	3 – 7	–
2	3 – 4	–
L	3 – 8	–

NG → **Replace neutral start switch.**

OK ↓

3	Check harness and connector between battery and neutral start switch, neutral start switch and engine (and ECT) ECU (See page IN–20).

NG → **Repair or replace harness and connector.**

OK ↓

Check and replace engine (and ECT) ECU (See page IN–20).