DIB1E–01

DTC	P0705	Transmission Range Sensor Circuit Malfunction (PRNDL Input)

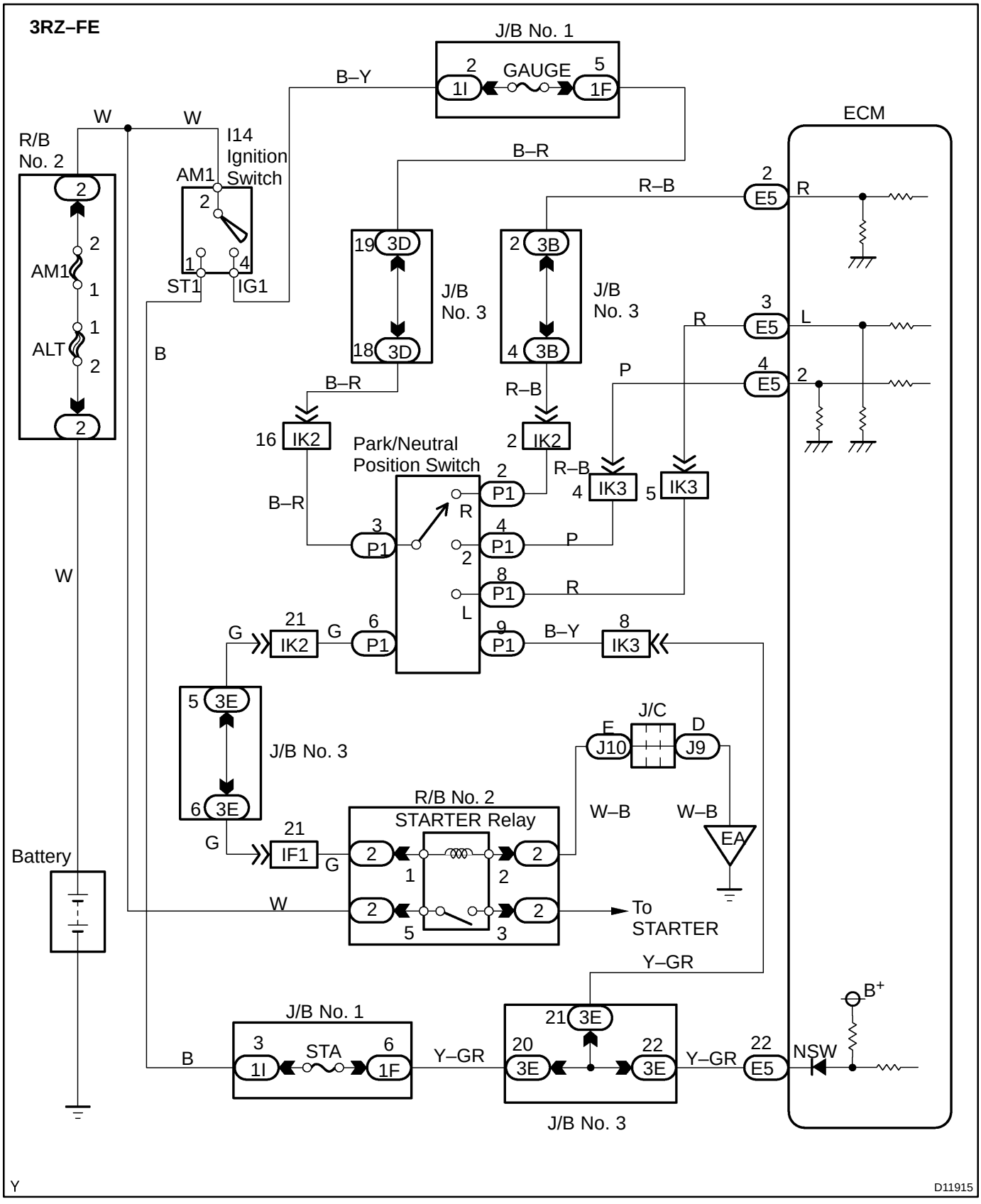
DTC	P0850	Park/Neutral Switch Input Circuit

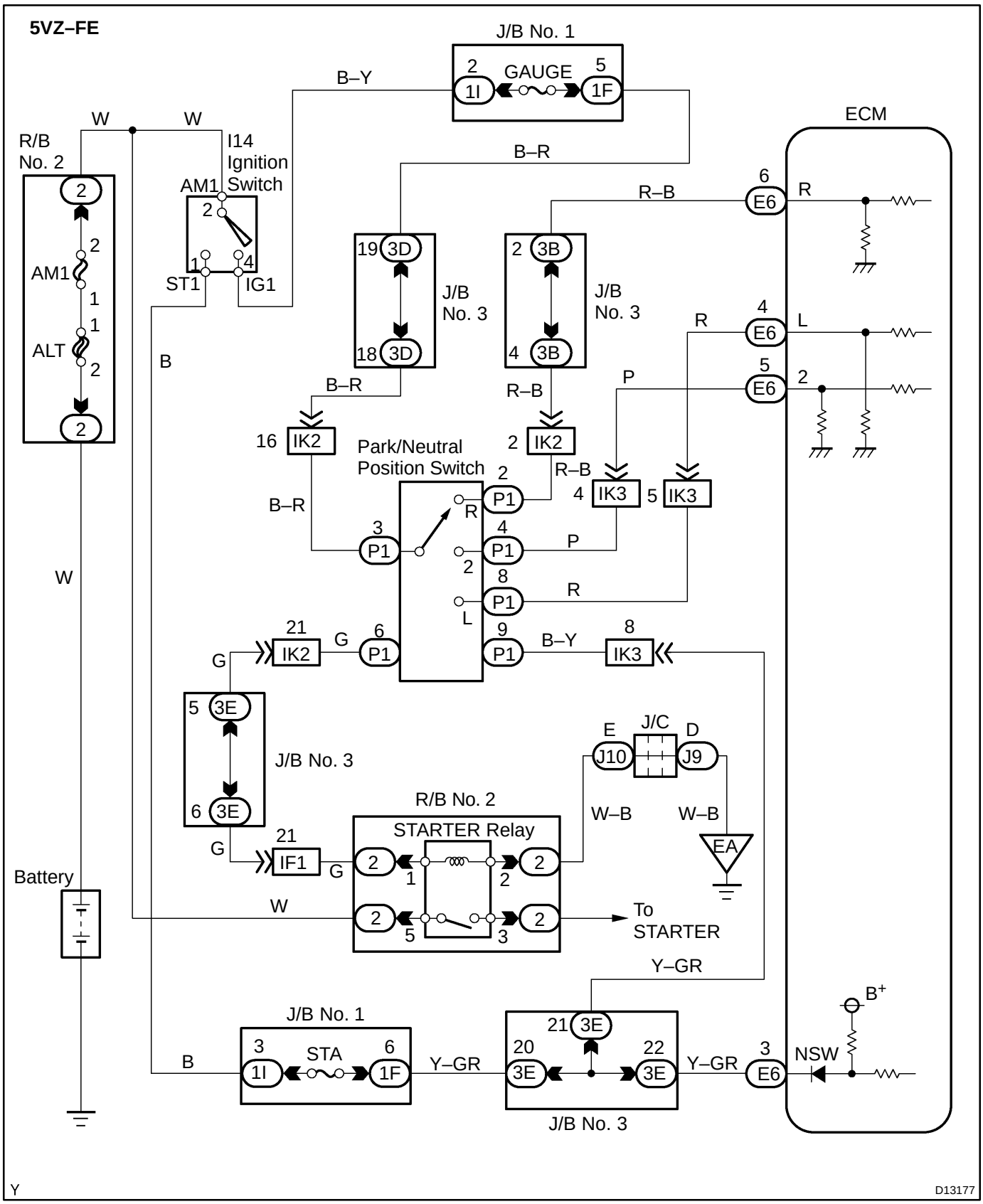
CIRCUIT DESCRIPTION

The park/neutral position switch detects the shift lever position and sends signals to the ECM.

DTC No.	DTC Detection Condition	Trouble Area
P0705	2 or more switches are ON simultaneously at R, N, D, 2 and L positions (2–trip detection logic)	• Short in park/neutral position switch circuit • Park/neutral position switch • ECM
P0850	Park/neutral position switch remaines ON while driving under conditions (a) and (b) for 30 sec. (2–trip detection logic) (a) Vehicle speed: 70 km/h (44 mph) or more (b) Engine speed: 1,500 – 2,500 rpm	

WIRING DIAGRAM




5VZ–FE
J/B No. 1
2
1I
GAUGE
5
1F
B–Y
ECM
W
W
R/B
No. 2
I14
Ignition
Switch
AM1
2
1
4
ST1
IG1
B–R
6
E6
R
R–B
19
3D
18
3D
J/B
No. 3
2
3B
4
3B
J/B
No. 3
R
4
E6
L
5
E6
2
P
B
16
IK2
B–R
Park/Neutral
Position Switch
2
IK2
R–B
2
P1
R
4
IK3
5
IK3
3
P1
4
P1
P
2
8
P1
R
L
9
P1
B–Y
8
IK3
21
IK2
G
6
P1
G
W
AM1
2
1
1
2
ALT
2
2
Battery
5
3E
6
3E
J/B No. 3
E
J/C
D
J10
J9
W–B
W–B
EA
R/B No. 2
STARTER Relay
21
IF1
G
G
2
1
2
2
W
2
5
3
2
To
STARTER
Y–GR
B+
J/B No. 1
21
3E
3
1I
STA
6
1F
B
Y–GR
20
3E
22
3E
Y–GR
3
E6
NSW
J/B No. 3
Y
D13177

INSPECTION PROCEDURE

1	**Read PNP, REVERSE, DRIVE, 2ND and LOW signals.**

When using hand–held tester

PREPARATION:

(a) Remove the DLC3 cover.
(b) Connect a hand–held tester to the DLC3.
(c) Turn the ignition switch ON and hand–held tester main switch ON.

CHECK:

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

OK:

Shift position	Signal
2	2ND OFF → ON
L	LOW OFF → ON
R	REVERSE OFF → ON
P, N	PNP OFF → ON

When not using hand–held tester

PREPARATION:

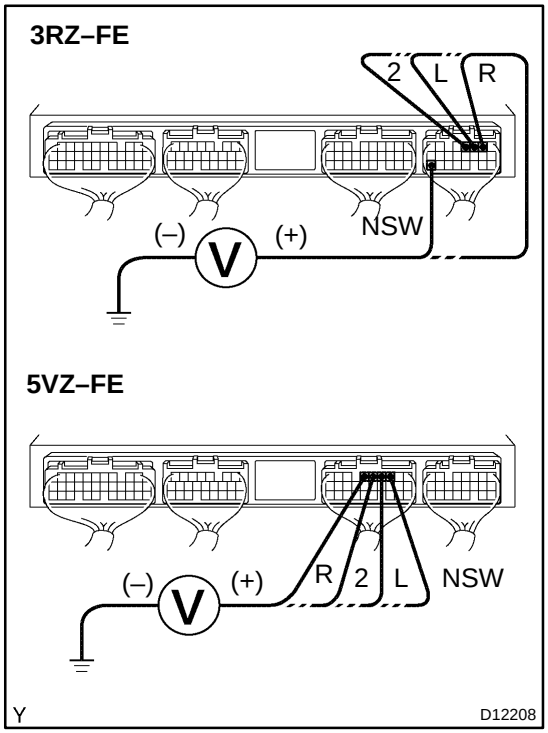
Turn the ignition switch ON.

CHECK:

Measure voltage between terminals NSW, 2, L and R of ECM and body ground when the shift lever is shifted to the following positions.

OK:

Position	NSW–Body ground	R–Body ground	2–Body ground	L–Body ground
P,N	0 V	0 V	0 V	0 V
R	7.5 – 14 V*	7.5 – 14 V*	0 V	0 V
D	7.5 – 14 V	0 V	0 V	0 V
2	7.5 – 14 V	0 V	7.5 – 14 V	0 V
L	7.5 – 14 V	0 V	0 V	7.5 – 14 V



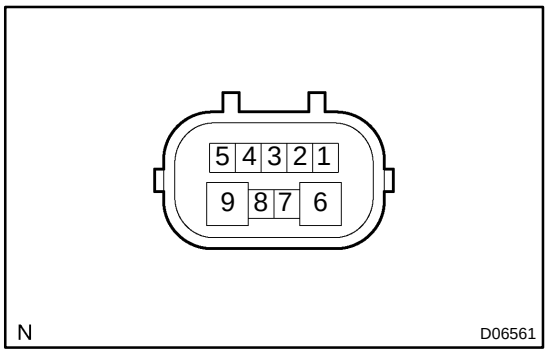
HINT:

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

OK → **Check and replace the ECM (See page IN–28).**

NG

2	Check park/neutral position switch.



PREPARATION:

Remove the park/neutral position switch.

CHECK:

Check the continuity between the switch terminals when operating the switch lever, as shown in the table below.

OK:

Switch Position	Terminal No.	Specified Condition
R	6 – 3	Contuinuity
Except R		No contuinuity
D	7 – 3	Contuinuity
Except D		No contuinuity
2	4 – 3	Contuinuity
Except 2		No contuinuity
L	8 – 3	Contuinuity
Except L		No contuinuity
P and N	9 – 6	Contuinuity
Except P and N		No contuinuity

NG → **Replace park/neutral position switch (See page AT–9).**

OK ↓

3	Check harness and connector between ECM and park/neutral position switch.

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

OK ↓

Check and replace the ECM (See page IN–28).