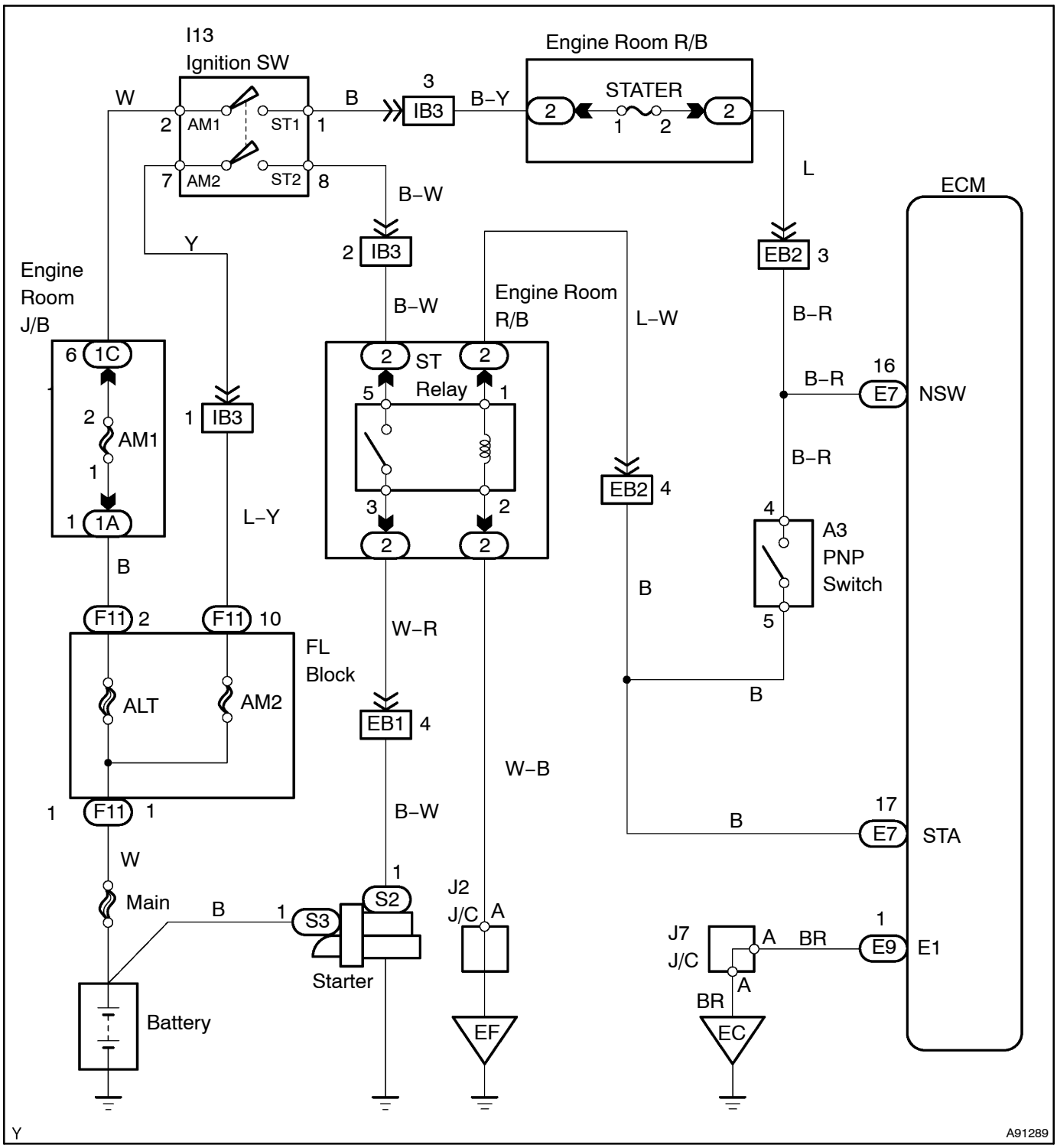
DTC	P0617	STARTER RELAY CIRCUIT HIGH

CIRCUIT DESCRIPITION

While the engine is being cranked, the battery positive voltage is applied to terminal STA of the ECM.
If the vehicle is being driven and the ECM detects the starter control signal (STA), the ECM concludes that the starter control circuit is malfunctioning. The ECM will turn on the CHK ENG and a DTC is set.

DTC No.	DTC Detecting Condition	Trouble Area
P0617	When conditions (a), (b) and (c) are met and the battery (+B) voltage 10.5 V or more is applied for 20 seconds: (a) Vehicle speed greater than 12 mph (20 km/h) (b) Engine revolution greater than 1,000 rpm (c) STA signal ON	• Short in PNP switch assy circuit • PNP switch assy • Ignition switch • ECM

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Read freeze frame data using the hand–held tester. Freeze frame data records the engine conditions when a malfunction is detected. When troubleshooting, it is useful for determining whether the vehicle was running or stopped, the engine was warmed up or not, the air–fuel ratio was lean or rich, etc. at the time of the malfunction.

1	READ VALUE OF HAND–HELD TESTER (STA SIGNAL)

(a) Connect the hand–held tester to the DLC3.
(b) Turn the ignition switch ON. Push the hand–held tester main switch ON.
(c) On the hand–held tester, enter the following menus: DIAGNOSIS / OBD / MOBD / DATA LIST / ALL / STARTER SIG. Read the values.

Result:

Ignition Switch Condition	ON	START
STA Signal	OFF	ON

OK ⇨ REPLACE ECM (See page 10–13)

NG

2	INSPECT PNP SWITCH ASSY (See page 05–378)

OK:
When shift lever is the N position, the PNP switch is ON.
When shift lever is the P position, the PNP switch is OFF.

NG ⇨ REPLACE PARK/NEUTRAL POSITION SWITCH ASSY (See page 05–121) (Go to step 3 AFTER REPLACEMENT)

OK

3	READ VALUE OF HAND–HELD TESTER (STA SIGNAL)

(a) Connect the hand–held tester to the DLC3.
(b) Turn the ignition switch ON. Push the hand–held tester main switch ON.
(c) On the hand–held tester, enter the following menus: DIAGNOSIS / OBD / MOBD / DATA LIST / ALL / STARTER SIG. Read the values.

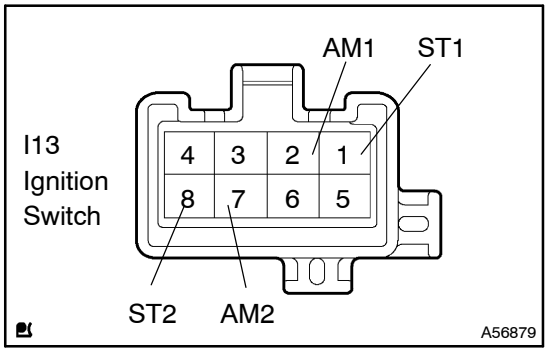
Result:

Ignition Switch Position	ON	START
STA Signal	OFF	ON

OK ⇨ SYSTEM OK

NG

4 INSPECT IGNITION OR STARTER SWITCH ASSY



(a) Check the resistance of the ignition switch terminals.
Standard:

Switch Condition	Tester Connection	Specified Condition
LOCK	1 – 2 7 – 8	10 kΩ or higher
START	1 – 2 7 – 8	Below 1 Ω

NG → **REPLACE IGNITION OR STARTER SWITCH ASSY (Go to next step 5 AFTER REPLACEMENT)**

OK

5 READ VALUE OF HAND–HELD TESTER (STA SIGNAL)

(a) Connect the hand–held tester to the DLC3.
(b) Turn the ignition switch ON and push the hand–held tester main switch ON.
(c) On the hand–held tester, enter the following menus: DIAGNOSIS / OBD/MOBD / DATA LIST / ALL / STARTER SIG. Read the values.
Result:

Ignition Switch Position	ON	START
STA Signal	OFF	ON

OK → **SYSTEM OK**

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR