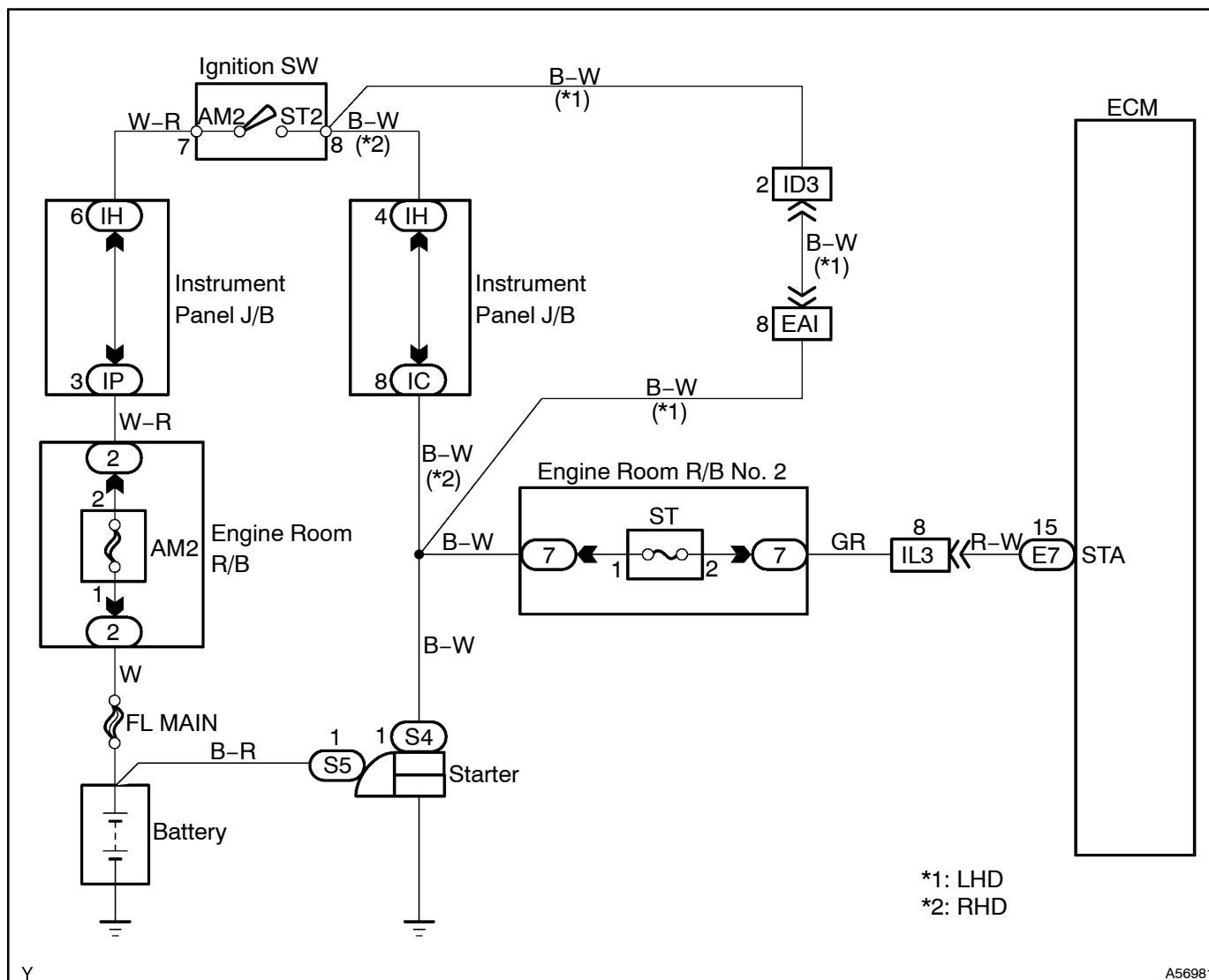


STARTER SIGNAL CIRCUIT

CIRCUIT DESCRIPTION

When the engine is being cranked, the intake air flow is slow, so fuel vaporization is poor. A rich mixture is therefore necessary in order to achieve good start ability. While the engine is being cranked, the battery positive voltage is applied to terminal STA of the ECM. The starter signal is mainly used to increase the fuel injection volume for the starting injection control and after-start injection control.

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

This diagnostic chart is based on the premise that the engine is being cranked under normal conditions. If the engine does not crank, proceed to the problem symptoms table on [page 05-170](#).

When using hand-held tester:

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

(a) Read the STA signal on the hand-held tester while the starter operates.

Result:

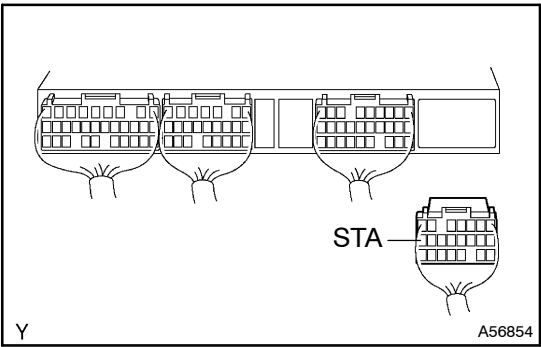
Ignition Switch Position	ON	STA
STA Signal	OFF	ON

OK

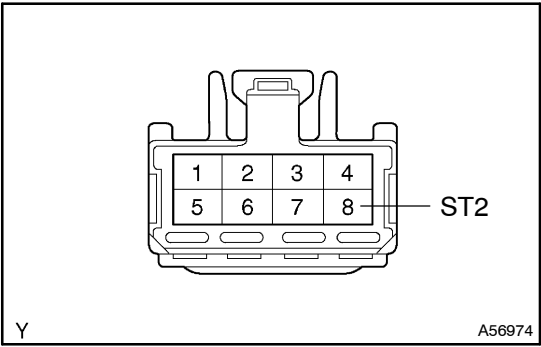
PROCEED TO NEXT CIRCUIT INSPECTION SHOWN ON PROBLEM SYMPTOM TABLE
(See [page 05-170](#))

NG

2 CHECK HARNESS AND CONNECTOR (ECM-IGNITION SWITCH)



- (a) Disconnect the ignition switch connector.
 - (b) Disconnect the ECM E7 connector.
 - (c) Check for open between the terminals STA of the ECM E7 connector and ST2 of the ignition switch harness side connector.
- Resistance: 1Ω or less**

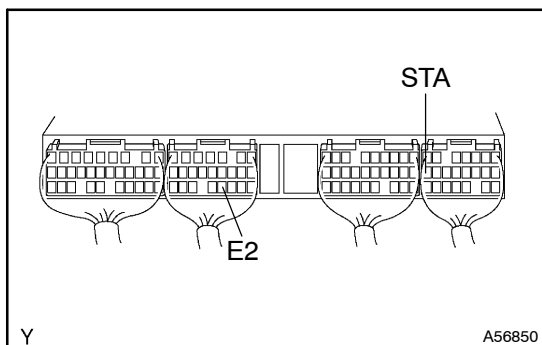


NG

REPAIR OR REPLACE HARNESS AND CONNECTOR

OK

CHECK AND REPLACE ECM

When not using hand-held tester:**1 INSPECT ECM**

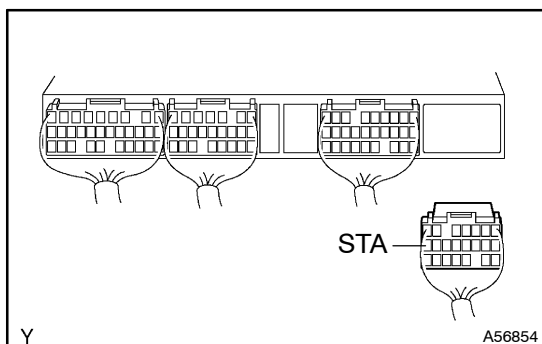
- (a) Turn the Ignition switch ON.
- (b) Measure the voltage between terminal STA and E2 of the ECM connector during cranking.

Voltage: 6.0V or more

OK

**PROCEED TO NEXT CIRCUIT INSPECTION
SHOWN ON PROBLEM SYMPTOM TABLE
(See page 05-170)**

NG

2 CHECK HARNESS AND CONNECTOR (ECM-IGNITION SWITCH)

- (a) Disconnect the ignition switch connector.
- (b) Disconnect the ECM E7 connector.
- (c) Check for open between the terminals STA of the ECM E7 connector and ST2 of the ignition switch harness side connector.

Result: 1Ω or less

NG

**REPAIR OR REPLACE
HARNESS AND CONNECTOR**

OK

CHECK AND REPLACE ECM