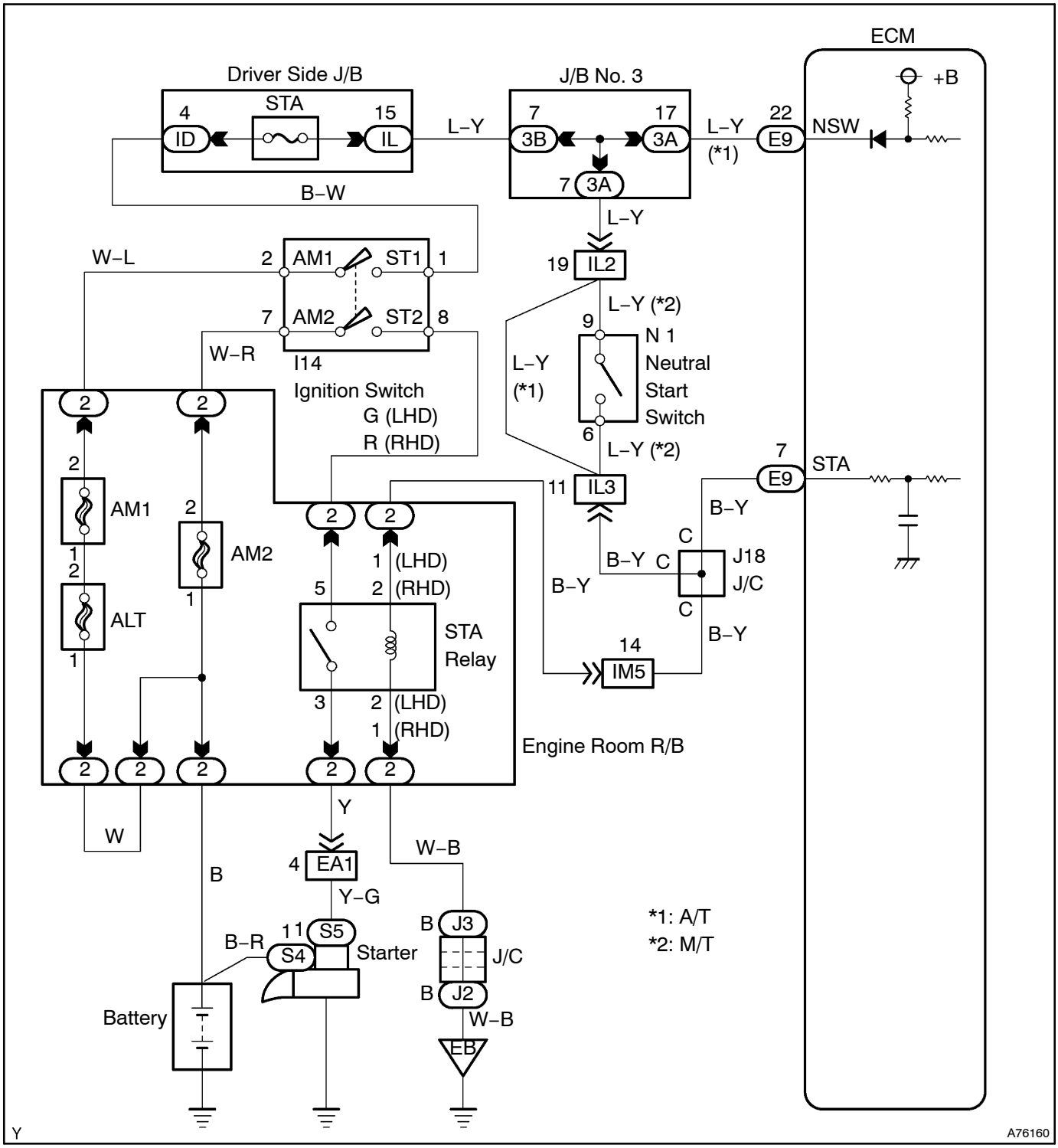
STARTER SIGNAL CIRCUIT

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

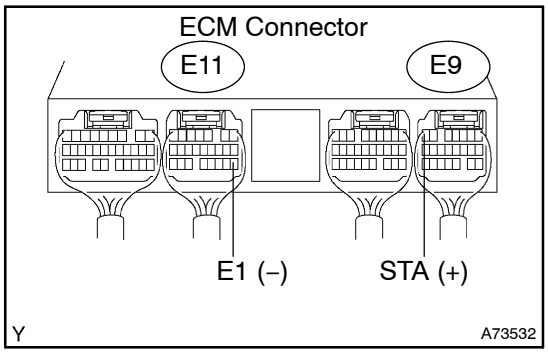


INSPECTION PROCEDURE

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 05–99.

1 CHECK ECM (STA VOLTAGE)



(a) Turn the ignition switch ON.

(b) Measure the voltage between the terminals E9 and E11 ECM connectors when the engine is cranking.

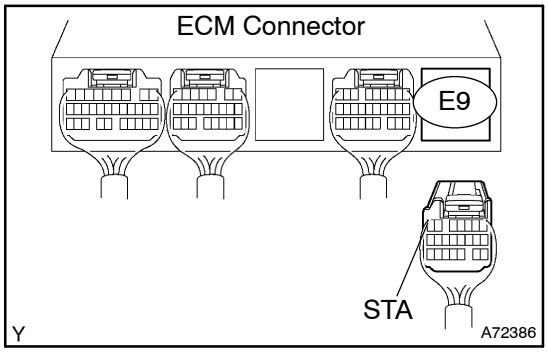
Voltage:

Symbols (Terminal No.)	Specified condition
STA (E9–7) ⇔ E1 (E11–17)	6.0 V or more

OK → **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN ON PROBLEM SYMPTOMS TABLE (See page 05–99)**

NG

2 CHECK HARNESS AND CONNECTOR (ECM ⇔ STA RELAY)



(a) Disconnect the E9 ECM connector.

(b) Remove the STA relay.

(c) Check the continuity between the wire harness side connectors.

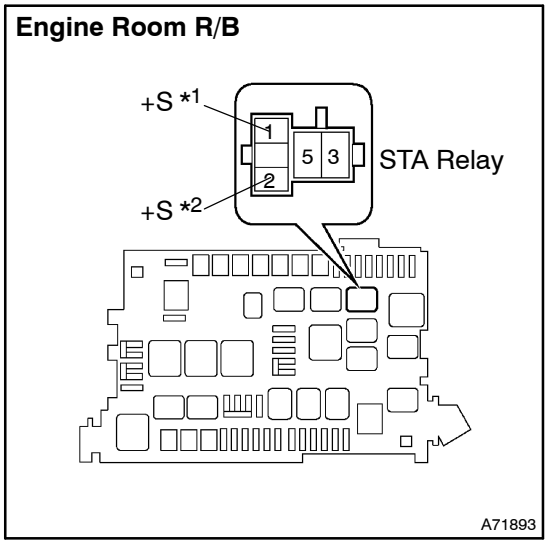
Standard (Check for open):

Symbols (Terminal No.)	Specified condition
STA (E9–7) ⇔ +S (STA relay terminal 1 of R/B) *1	Continuity
STA (E9–7) ⇔ +S (STA relay terminal 2 of R/B) *2	

Standard (Check for short):

Symbols (Terminal No.)	Specified condition
STA (E9–7) or +S (STA relay terminal 1 of R/B) *1 ⇔ Other terminals and body ground	No continuity
STA (E9–7) or +S (STA relay terminal 2 of R/B) *2 ⇔ Other terminals and body ground	

Engine Room R/B



NOTICE:

Do not insert the tester hard in the procedure (c), or the holder may be damaged.

HINT:

- *1: LHD
- *2: RHD

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

CHECK AND REPLACE HARNESS AND CONNECTOR (ECM ⇔ BATTERY)