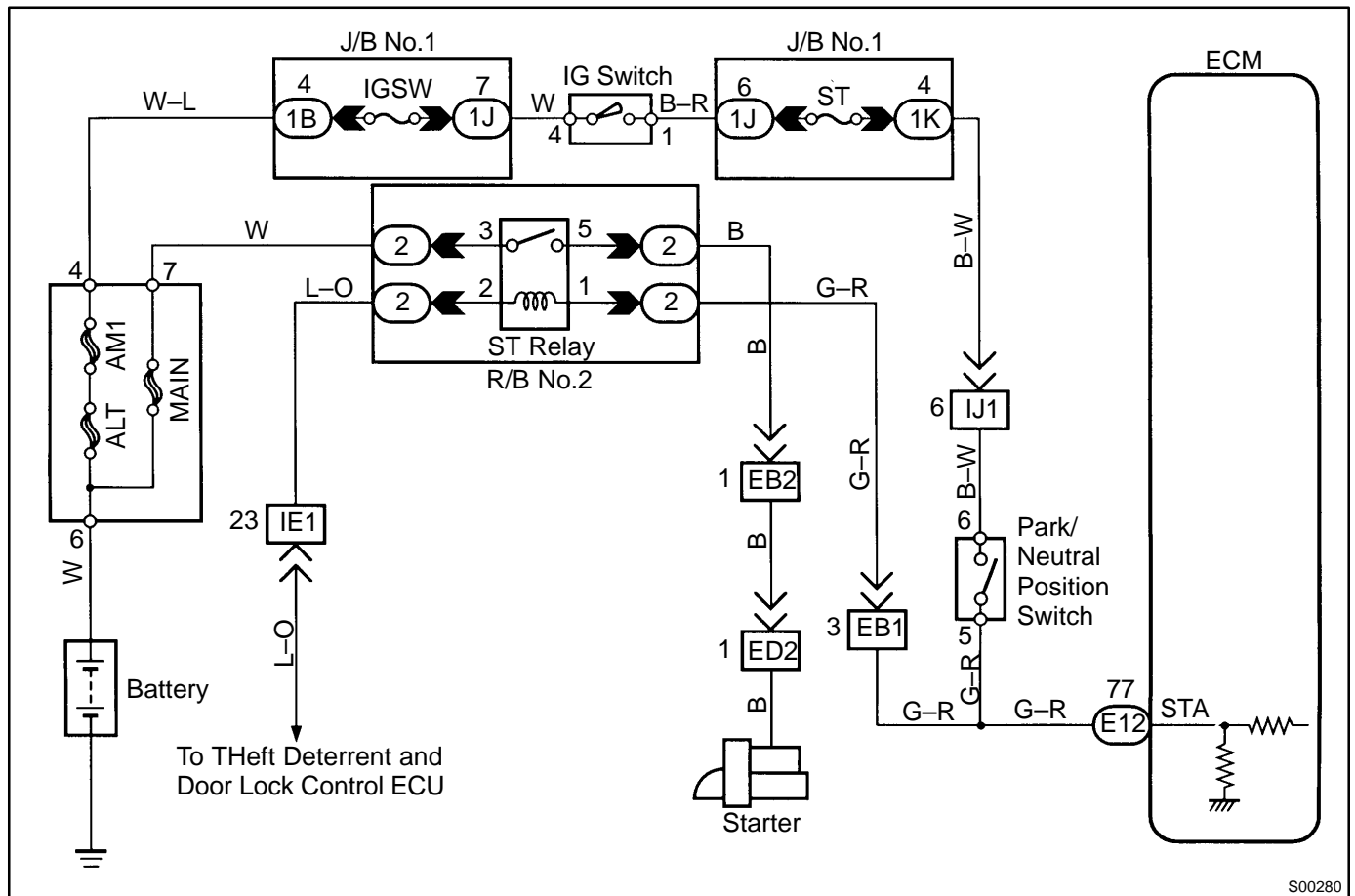


Starter Signal Circuit

CIRCUIT DESCRIPTION

When the engine is cranked, the intake air flow is slow, so fuel vaporization is poor. A rich mixture is therefore necessary in order to active good startability. 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 cranked normally. If the engine is not cranked, proceed to the matrix chart of problem symptoms on page [DI-171](#).

LEXUS hand-held tester

1	Connect the LEXUS hand-held tester and check STA signal.
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PREPARATION:

- (a) Connect the LEXUS hand-held tester to the DLC3.
- (b) Turn ignition switch ON and push LEXUS hand-held tester main switch ON.

CHECK:

Read STA signal on the LEXUS hand-held tester while starter operates.

Ignition Switch Position	ON	START
STA Signal	OFF	ON

OK

Proceed to next circuit inspection shown on matrix chart (See page [DI-171](#)).

NG

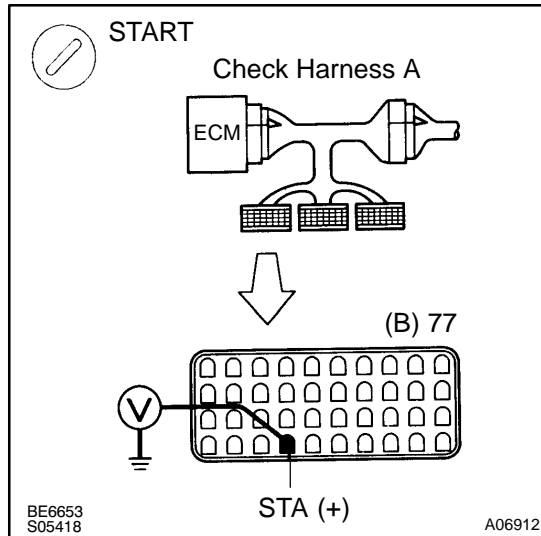
2	Check for open in harness and connector between ECM and starter relay (See page IN-29).
---	--

NG

Repair or replace harness or connector.

OK

Check and replace ECM (See page [IN-29](#)).

OBDII scan tool (excluding LEXUS hand-held tester)**1 Check voltage between terminal STA of ECM connector and body ground.****PREPARATION:**

Connect the Check Harness A.

CHECK:

Measure voltage between terminal STA of ECM connector and body ground during engine cranking.

OK:**Voltage: 6.0 V or more****OK****Proceed to next circuit inspection shown on matrix chart (See page [DI-171](#)).****NG****2 Check for open in harness and connector between ECM and starter relay (See page [IN-29](#)).****NG****Repair or replace harness or connector.****OK****Check and replace ECM (See page [IN-29](#)).**