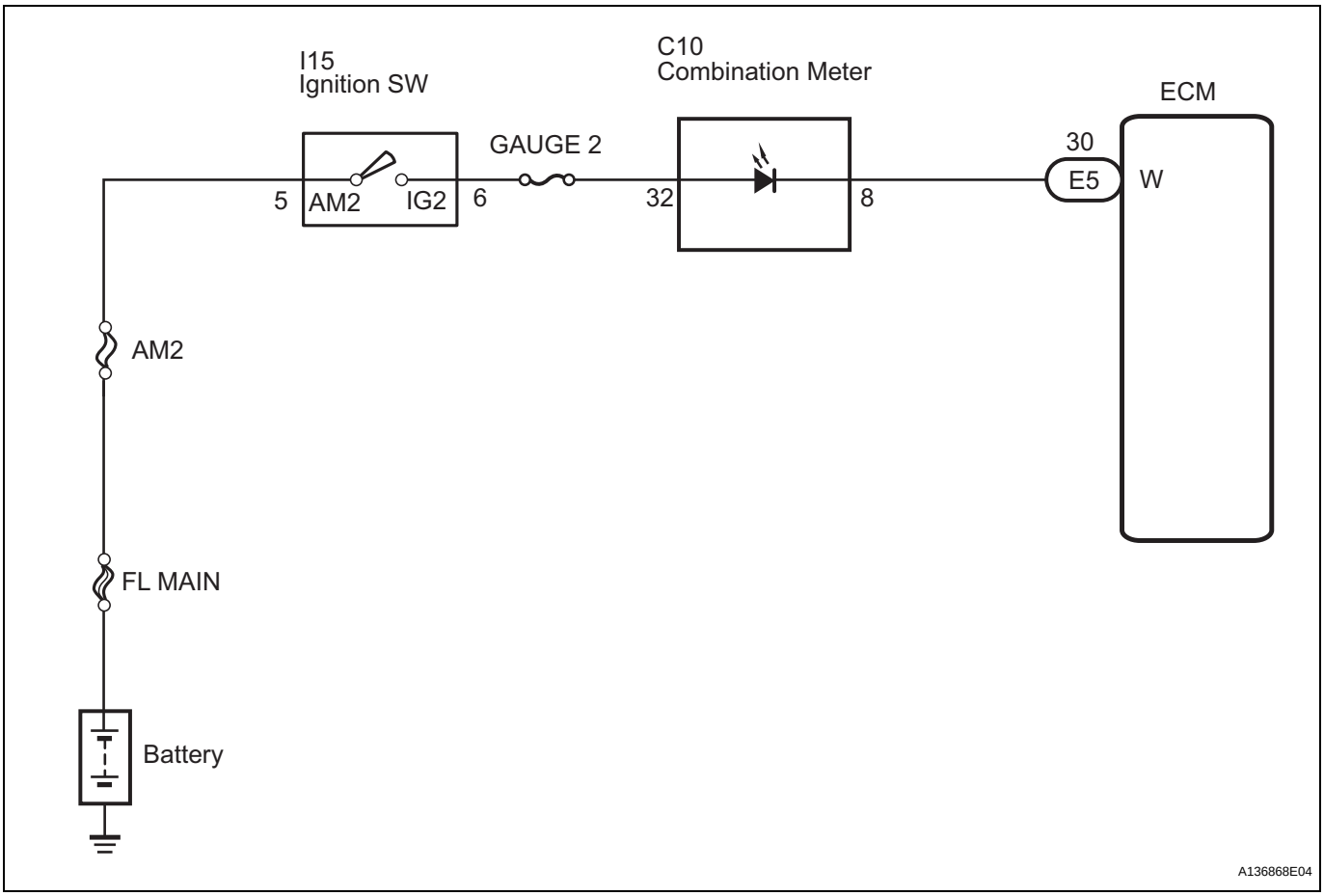
MIL Circuit

DESCRIPTION

The MIL (Malfunction Indicator Lamp) is used to indicate vehicle malfunctions detected by the ECM. When the ignition switch is turned to the ON position, power is supplied to the MIL circuit, and the ECM provides the circuit ground which illuminates the MIL.
The MIL operation can be checked visually. When the ignition switch is first turned to the ON position, the MIL should be illuminated and should then turn off. If the MIL remains illuminated or is not illuminated, conduct the following troubleshooting procedure using the intelligent tester.

WIRING DIAGRAM

ES



INSPECTION PROCEDURE

1	CHECK THAT MIL IS ILLUMINATED

(a) Turn the ignition switch to the ON position.
(b) Check the illumination of the MIL.

Result

Result	Proceed to
MIL remains illuminated (Even after ignition switch is turned to ON position and several seconds have passed, MIL still remains illuminated)	A
MIL remains off (Does not illuminate at all)	B
MIL illuminates for several seconds, but turns off after engine is started	C

B	Go to step 5
C	SYSTEM OK

A

2	CHECK WHETHER MIL TURNS OFF

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch to the ON position and turn the tester on.
(c) Select the following menu items: DIAGNOSIS / ENHANCED OBD II / DTC INFO / CURRENT CODES.
(d) Check if any DTCs have been stored. Note down any DTCs.
(e) Clear the DTCs (See page ES-39).
(f) Check if the MIL goes off.
Standard:
MIL goes off.

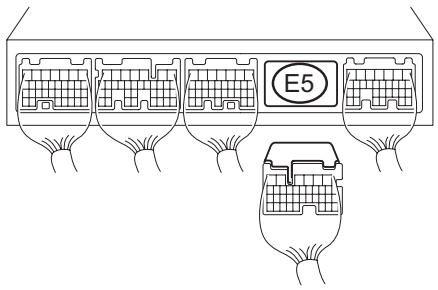
OK	REPAIR CIRCUITS INDICATED BY OUTPUT DTCS

NG

3	CHECK HARNESS AND CONNECTOR (CHECK FOR SHORT IN WIRE HARNESS)

Wire Harness Side:

ECM Connector



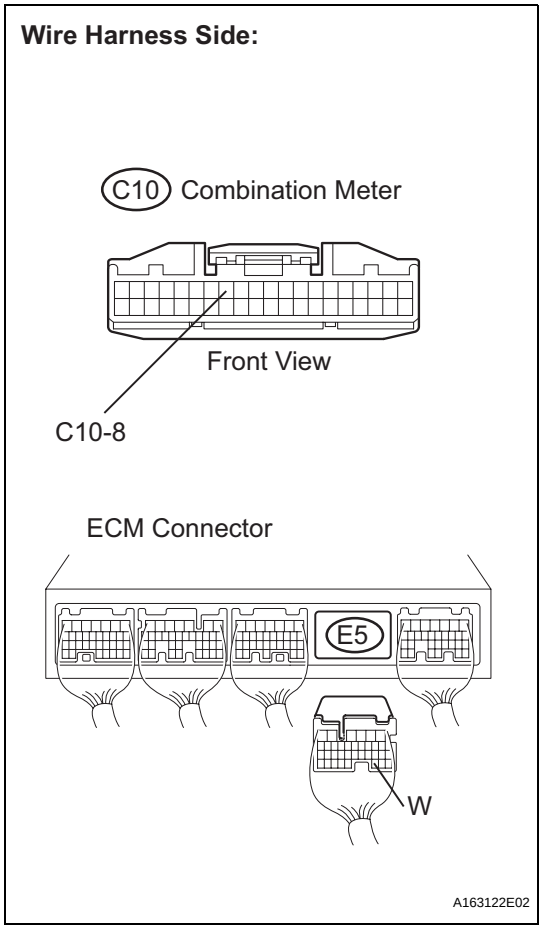
A163321E03

(a) Disconnect the E5 ECM connector.
(b) Turn the ignition switch to the ON position.
(c) Check that the MIL is not illuminated.
OK:
MIL is not illuminated.
(d) Reconnect the ECM connector.

OK	REPLACE ECM (See page ES-498)

NG

4	CHECK HARNESS AND CONNECTOR (COMBINATION METER - ECM)



(a) Disconnect the E5 ECM connector.
(b) Disconnect the C10 combination meter connector.
(c) Measure the resistance according to the value(s) in the table below.

Standard resistance (Check for Open)

Tester Connection	Specified Condition
W (E5-30) - C10-8	Bellow 1 Ω

Standard resistance (Check for Short)

Tester Connection	Specified Condition
W (E5-30) or C10-8 - Body ground	10 kΩ or higher

(d) Reconnect the ECM connector.
(e) Reconnect the combination meter connector.

OK → **REPLACE COMBINATION METER ASSEMBLY**

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR (COMBINATION METER - ECM)

5	CHECK THAT ENGINE STARTS

(a) Turn the ignition switch to the ON position.
(b) Start the engine.

Result

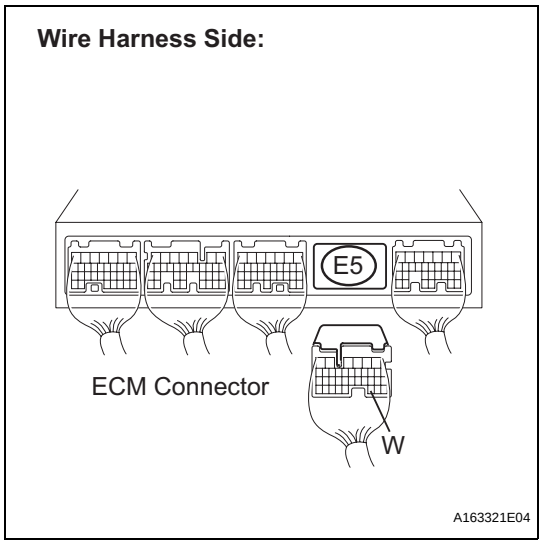
Result	Proceed to
Engine starts	A
Engine does not start*	B

HINT:
*: The intelligent tester cannot communicate with the ECM.

B → **GO TO VC OUTPUT CIRCUIT (See page ES-444)**

A

6 CHECK HARNESS AND CONNECTOR (COMBINATION METER - BODY GROUND)



(a) Disconnect the E5 ECM connector.
(b) Turn the ignition switch to the ON position.
(c) Measure the voltage according to the value(s) in the table below.

Standard voltage

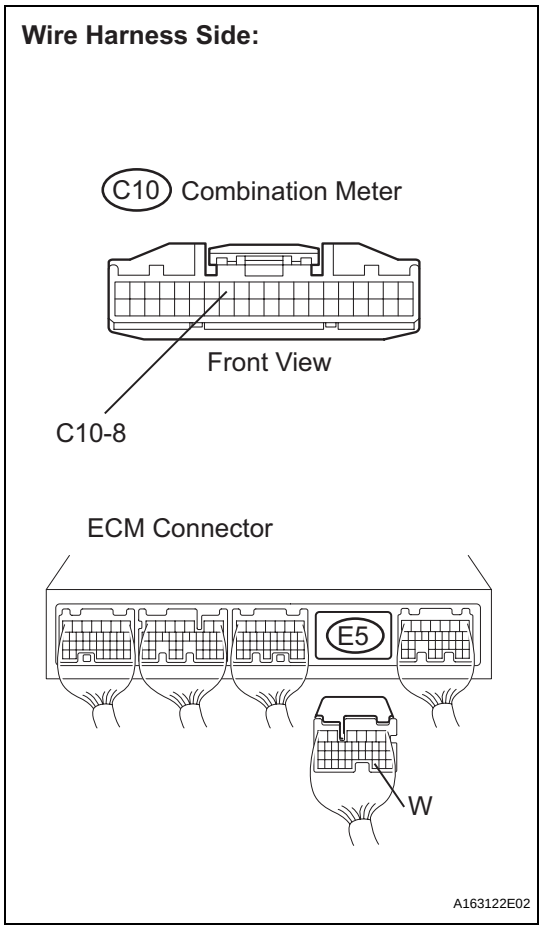
Tester Connection	Condition	Specified Condition
W (E5-30) - Body ground	Ignition switch ON	11 to 14 V

(d) Reconnect the ECM connector.

OK → **REPLACE ECM (See page ES-498)**

NG

7 CHECK HARNESS AND CONNECTOR (COMBINATION METER - ECM)



(a) Disconnect the E5 ECM connector.
(b) Disconnect the C10 combination meter connector.
(c) Measure the resistance according to the value(s) in the table below.

Standard resistance (Check for short)

Tester Connection	Specified Condition
W (E5-30) - C10-8	Bellow 1 Ω

Standard resistance (Check for Short)

Tester Connection	Specified Condition
W (E5-30) or C10-8 - Body ground	10 kΩ or higher

(d) Reconnect the ECM connector.
(e) Reconnect the combination meter connector.

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR (COMBINATION METER - ECM)**

ES

OK

REPLACE COMBINATION METER ASSEMBLY