15.Malfunction Indicator Light

A: PROCEDURE

1. Activation of malfunction indicator light. <Ref. to EN(H6DO)(diag)-57, ACTIVATION OF MALFUNCTION INDICATOR LIGHT, Malfunction Indicator Light.>
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2. Malfunction indicator light does not come on. <Ref. to EN(H6DO)(diag)-58, MALFUNCTION INDICATOR LIGHT DOES NOT COME ON, Malfunction Indicator Light.>
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3. Malfunction indicator light does not go off. <Ref. to EN(H6DO)(diag)-60, MALFUNCTION INDICATOR LIGHT DOES NOT GO OFF, Malfunction Indicator Light.>
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4. Malfunction indicator light does not blink. <Ref. to EN(H6DO)(diag)-61, MALFUNCTION INDICATOR LIGHT DOES NOT BLINK, Malfunction Indicator Light.>
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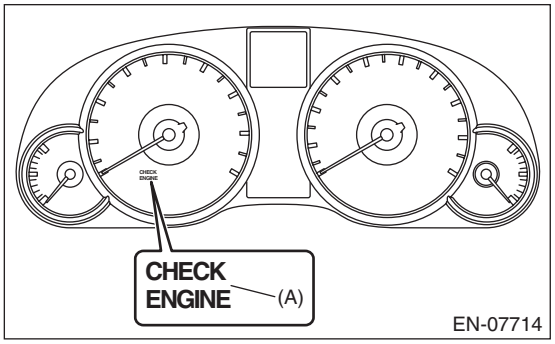
5. Malfunction indicator light remains blinking. <Ref. to EN(H6DO)(diag)-63, MALFUNCTION INDICATOR LIGHT REMAINS BLINKING, Malfunction Indicator Light.>

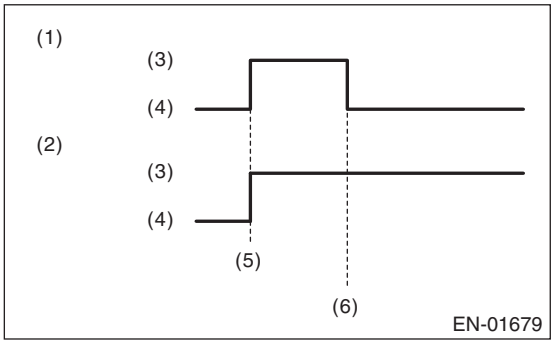
B: ACTIVATION OF MALFUNCTION INDICATOR LIGHT

1) When the ignition switch is turned to ON (engine OFF), the malfunction indicator light (A) in the combination meter illuminates.

NOTE:
If the malfunction indicator light does not illuminate, perform diagnostics of the malfunction indicator light circuit or the combination meter circuit. <Ref. to EN(H6DO)(diag)-58, MALFUNCTION INDICATOR LIGHT DOES NOT COME ON, Malfunction Indicator Light.>

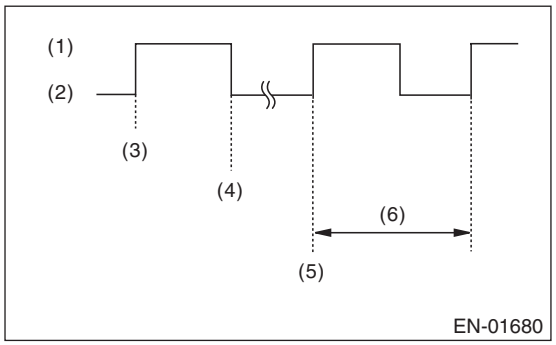


2) After starting the engine, the malfunction indicator light goes out. If it does not go off, any of the engine and emission control system has malfunction.



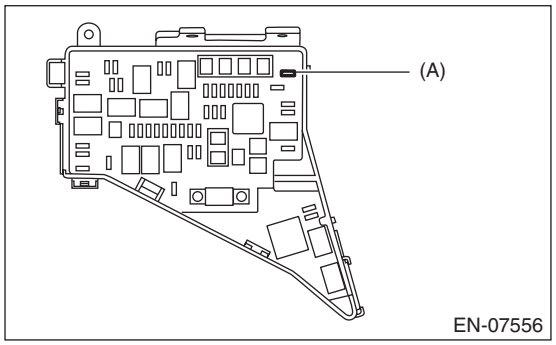
(1) No faulty
(2) Trouble occurs
(3) ON
(4) OFF
(5) Ignition switch ON
(6) Engine start

3) If the diagnostic system detects a misfire which could damage the catalyst, the malfunction indicator light will blink at a cycle of 1 Hz.

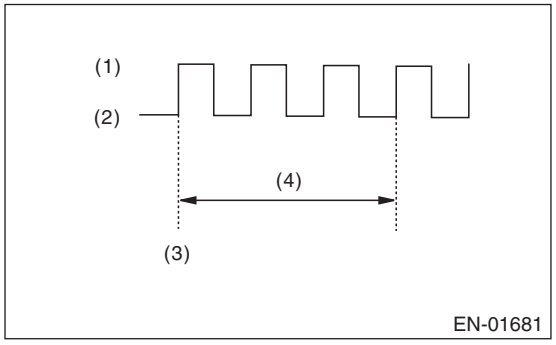


(1) ON
(2) OFF
(3) Ignition switch ON
(4) Engine start
(5) Misfire start
(6) 1 second

4) Install the delivery (test) mode fuse (A) with ignition switch to OFF.



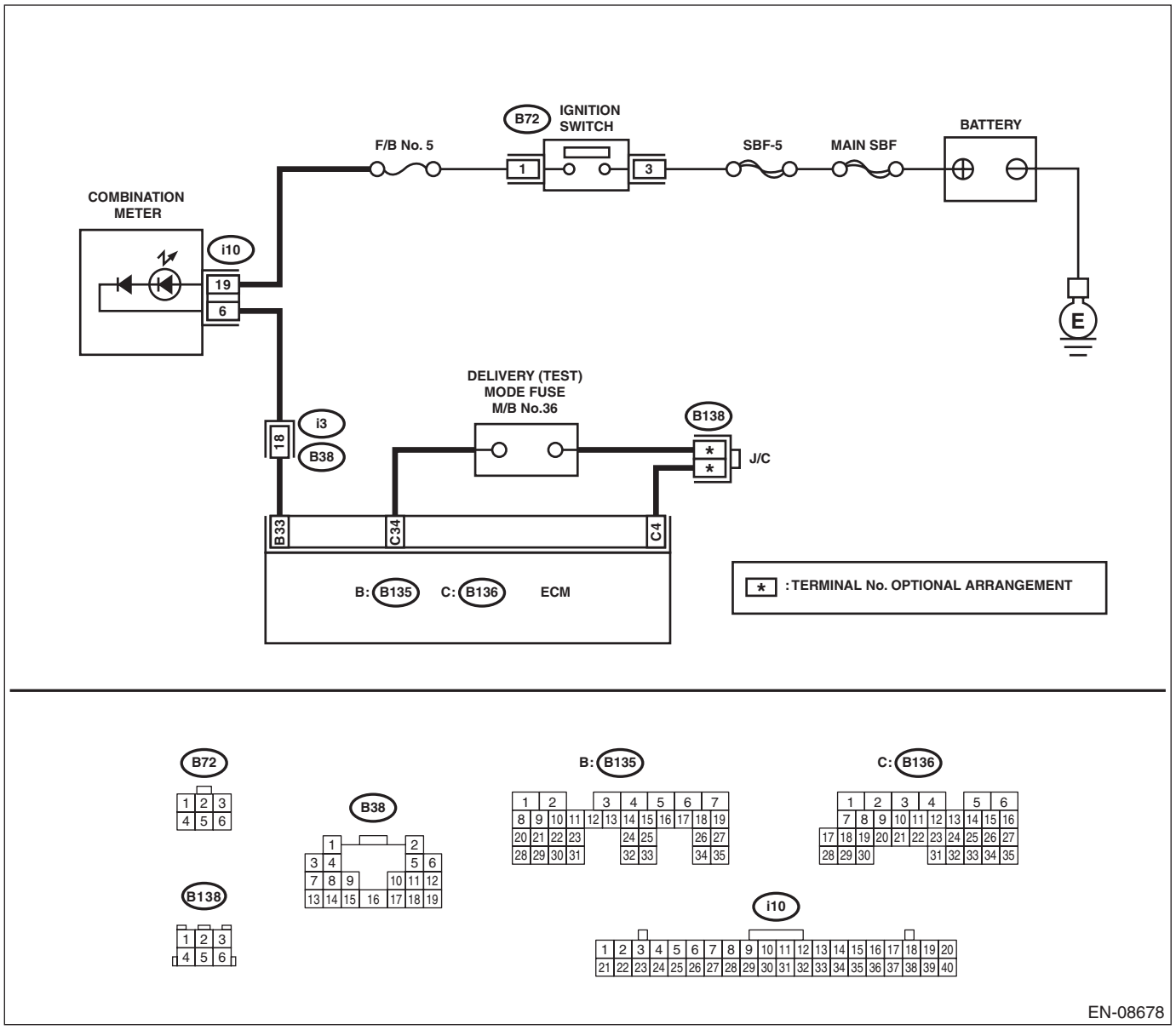
(1) When the ignition switch is turned to ON (engine OFF), the malfunction indicator light illuminates.
(2) After the engine starts, malfunction indicator light blinks in a cycle of 0.5 Hz. (During diagnosis)
(3) Malfunction indicator light blinks at a cycle of 3 Hz after diagnosis if there is no trouble. Malfunction indicator light illuminates if faulty.



(1) ON
(2) OFF
(3) Ignition switch ON
(4) 1 second

C: MALFUNCTION INDICATOR LIGHT DOES NOT COME ON

DIAGNOSIS:
The malfunction indicator light circuit is open or shorted.
TROUBLE SYMPTOM:
When the ignition switch is turned to ON (engine OFF), malfunction indicator light does not illuminate.
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK OUTPUT SIGNAL OF ECM.** 1) Turn the ignition switch to ON. 2) Measure the voltage between ECM connector and chassis ground. ***Connector & terminal*** ***(B135) No. 33 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **5**.	Go to step **2**.

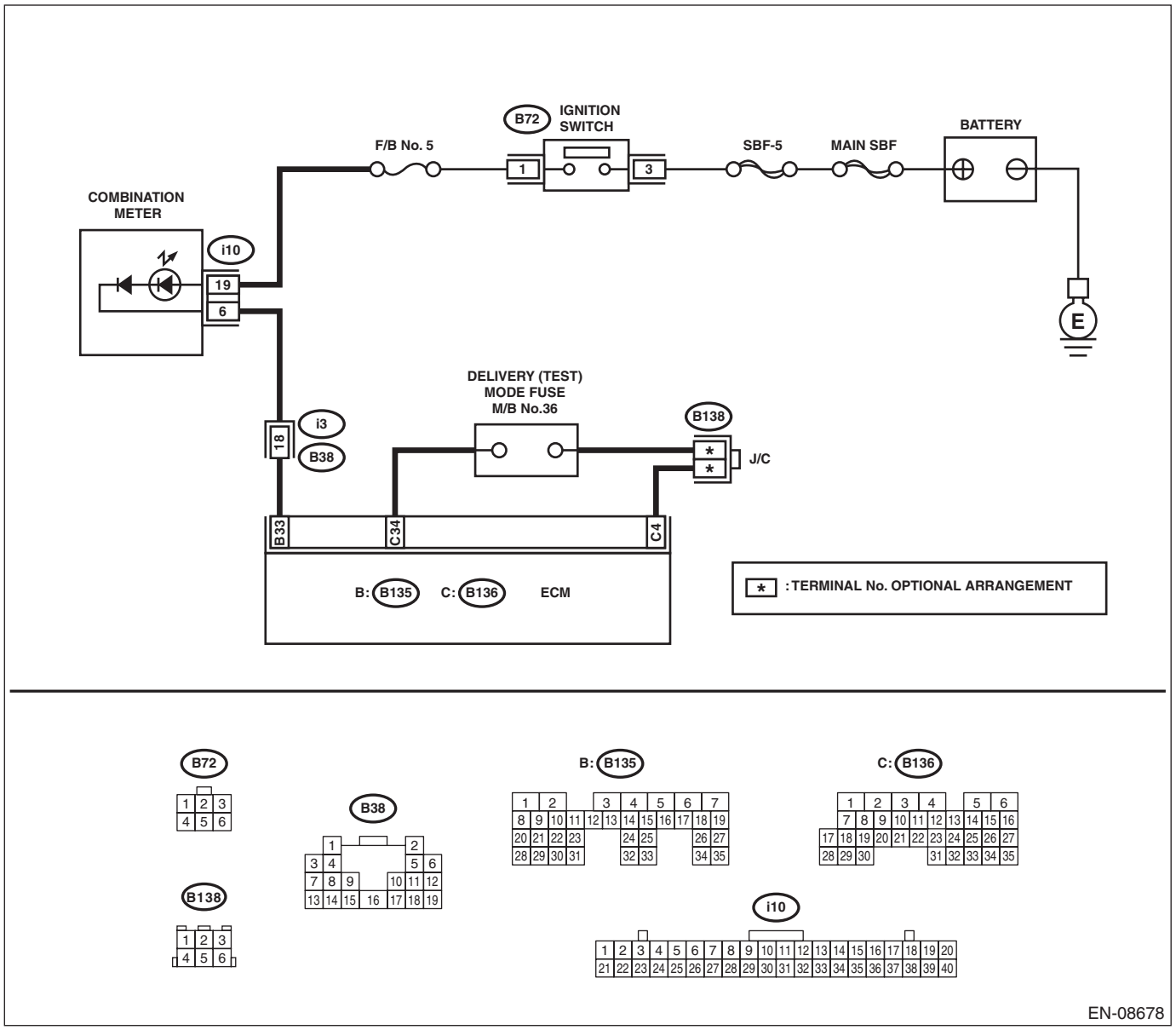
	Step	Check	Yes	No
2	**CHECK HARNESS BETWEEN COMBINATION METER AND ECM CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Remove the combination meter. <Ref. to IDI-20, Combination Meter.> 3) Disconnect the connector from ECM and combination meter. 4) Measure the resistance of harness between ECM connector and combination meter connector. ***Connector & terminal*** ***(B135) No. 33 — (i10) No. 6:***	Is the resistance less than 1 Ω?	Go to step **3**.	Repair the harness and connector. NOTE: In this case, repair the following item: • Open circuit in harness between ECM and combination meter connector • Poor contact of coupling connector
3	**CHECK FOR POOR CONTACT.** Check for poor contact of combination meter connector.	Is there poor contact of combination meter connector?	Repair the poor contact of combination meter connector.	Go to step **4**.
4	**CHECK HARNESS BETWEEN COMBINATION METER AND IGNITION SWITCH CONNECTOR.** 1) Turn the ignition switch to ON. 2) Measure the voltage between combination meter connector and chassis ground. ***Connector & terminal*** ***(i10) No. 19 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Replace the meter case assembly of combination meter. <Ref. to IDI-20, Combination Meter.>	Check the following item and repair if necessary. NOTE: • Blown-out of fuse (F/B No. 5) • Open harness of the power supply circuit or defective grounding
5	**CHECK FOR POOR CONTACT.** Check for poor connection by shaking or pulling ECM connector and harness.	Does the malfunction indicator light illuminate?	Repair the poor contact of ECM connector.	Go to step **6**.
6	**CHECK ECM CONNECTOR.** Check the connection of ECM connector.	Is the ECM connector correctly connected?	Replace the ECM. <Ref. to FU(H6DO)-52, Engine Control Module (ECM).>	Repair the connection of ECM connector.

D: MALFUNCTION INDICATOR LIGHT DOES NOT GO OFF

DIAGNOSIS:
The malfunction indicator light circuit is shorted.

TROUBLE SYMPTOM:
Although malfunction indicator light comes on when the engine runs, DTC is not shown on the Subaru Select Monitor or general scan tool display.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK HARNESS BETWEEN COMBINATION METER AND ECM CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the connectors from ECM. 3) Turn the ignition switch to ON.	Does the malfunction indicator light illuminate?	Repair the ground short circuit of harness between combination meter and ECM connector.	Replace the ECM. <Ref. to FU(H6DO)-52, Engine Control Module (ECM).>

E: MALFUNCTION INDICATOR LIGHT DOES NOT BLINK

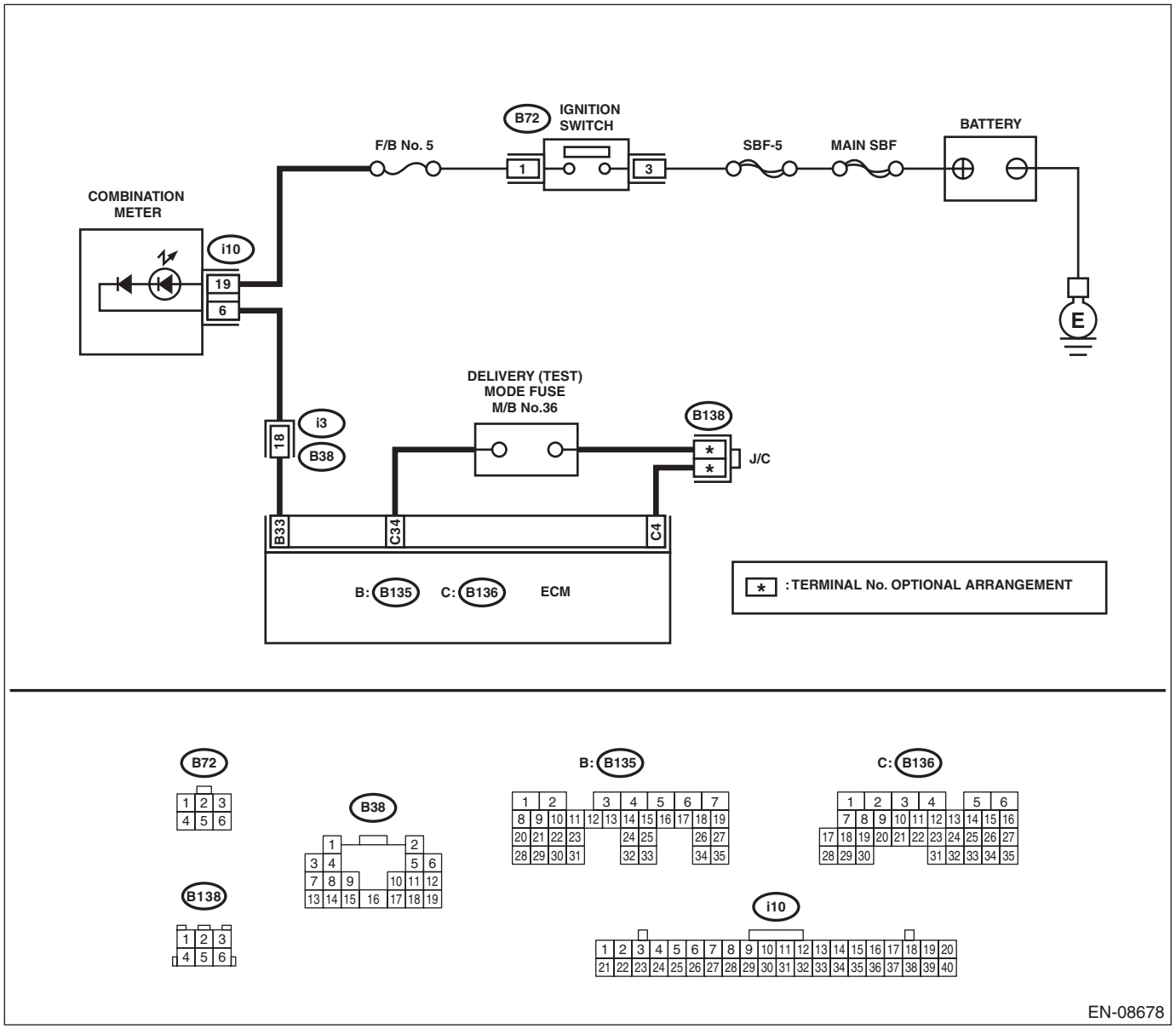
DIAGNOSIS:

- The malfunction indicator light circuit is open or shorted.
- The delivery (test) mode fuse circuit is open.

TROUBLE SYMPTOM:

Malfunction indicator light does not blink during Inspection Mode.

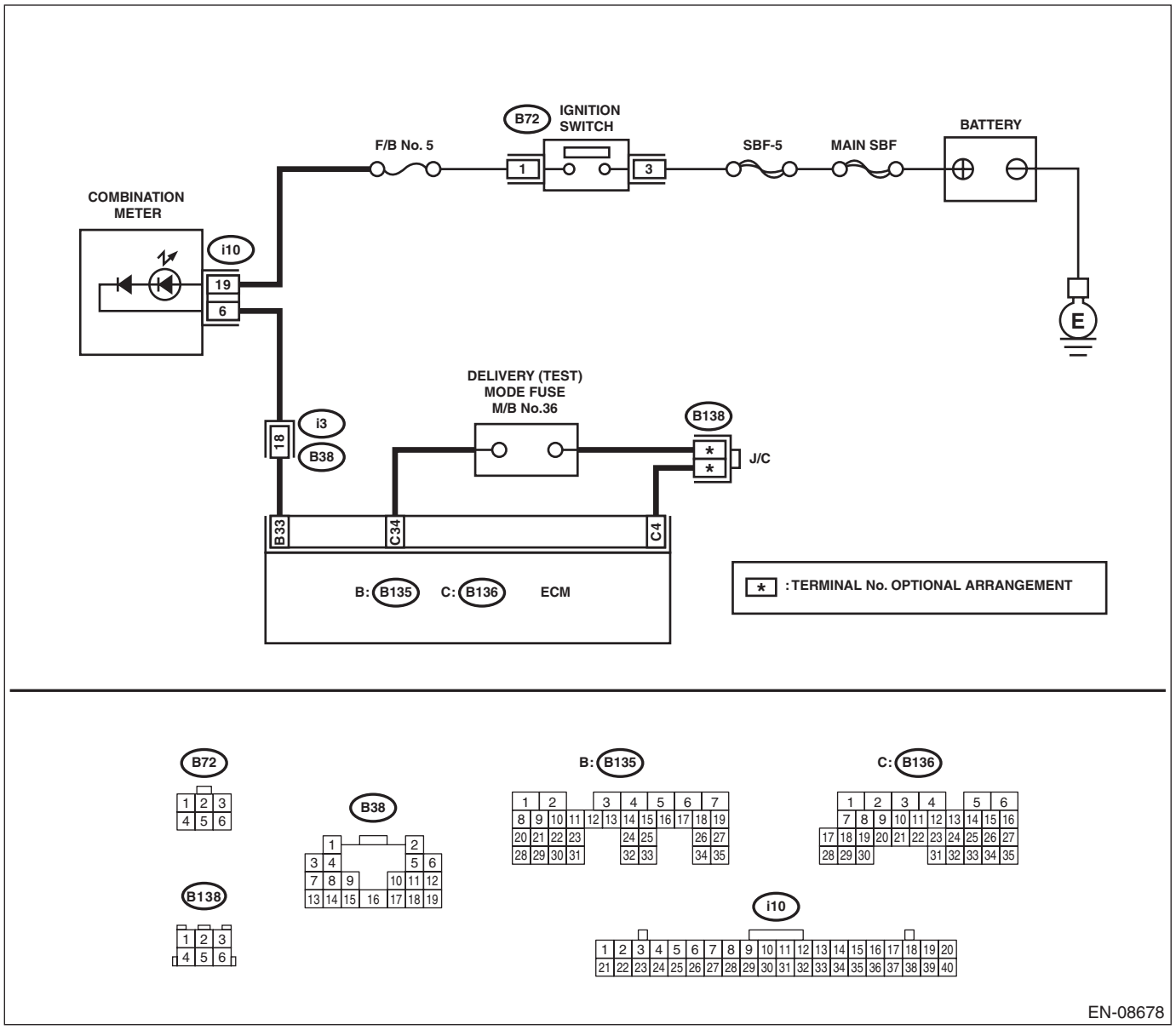
WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK STATUS OF MALFUNCTION INDICATOR LIGHT.** 1) Turn the ignition switch to OFF. 2) Check the delivery (test) mode fuse is removed. 3) Turn the ignition switch to ON. (engine OFF)	Does the malfunction indicator light illuminate?	Go to step **2**.	Repair the malfunction indicator light circuit. <Ref. to EN(H6DO)(diag)-58, MALFUNCTION INDICATOR LIGHT DOES NOT COME ON, Malfunction Indicator Light.>
2	**CHECK HARNESS BETWEEN COMBINATION METER AND ECM CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the connectors from ECM. 3) Turn the ignition switch to ON.	Does the malfunction indicator light illuminate?	Repair the ground short circuit of harness between combination meter and ECM connector.	Go to step **3**.
3	**CHECK HARNESS BETWEEN ECM AND DELIVERY (TEST) MODE FUSE.** 1) Turn the ignition switch to OFF. 2) Install the delivery (test) mode fuse of the main fuse box. 3) Measure the resistance of harness between ECM connectors. ***Connector & terminal*** ***(B136) No. 4 — (B136) No. 34***	Is the resistance less than 1 Ω?	Go to step **4**.	Repair the harness and connector. NOTE: In this case, repair the following item: • Open circuit of harness between ECM and delivery (test) mode fuse • Poor contact of joint connector
4	**CHECK FOR POOR CONTACT.** Check for poor contact of ECM connector.	Is there poor contact of ECM connector?	Repair the poor contact of ECM connector.	Replace the ECM. <Ref. to FU(H6DO)-52, Engine Control Module (ECM).>

F: MALFUNCTION INDICATOR LIGHT REMAINS BLINKING

DIAGNOSIS:
The delivery (test) mode fuse circuit is shorted.
TROUBLE SYMPTOM:
Malfunction indicator light blinks when delivery (test) mode fuse is not connected.
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK DELIVERY (TEST) MODE FUSE.** 1) Check the delivery (test) mode fuse is removed. 2) Turn the ignition switch to ON.	Does the malfunction indicator light blink?	Go to step **2**.	System is normal. NOTE: Malfunction indicator light blinks when delivery (test) mode fuse is connected.

	Step	Check	Yes	No
2	**CHECK HARNESS BETWEEN ECM CONNECTOR AND CHASSIS GROUND TERMINAL.** 1) Turn the ignition switch to OFF. 2) Disconnect the connectors from ECM. 3) Measure the resistance of harness between ECM connector and chassis ground. ***Connector & terminal*** ***(B136) No. 34 — Chassis ground:***	Is the resistance less than 5 Ω?	Repair the short circuit to ground in harness between ECM and delivery (test) mode fuse.	Replace the ECM. <Ref. to FU(H6DO)-52, Engine Control Module (ECM).>