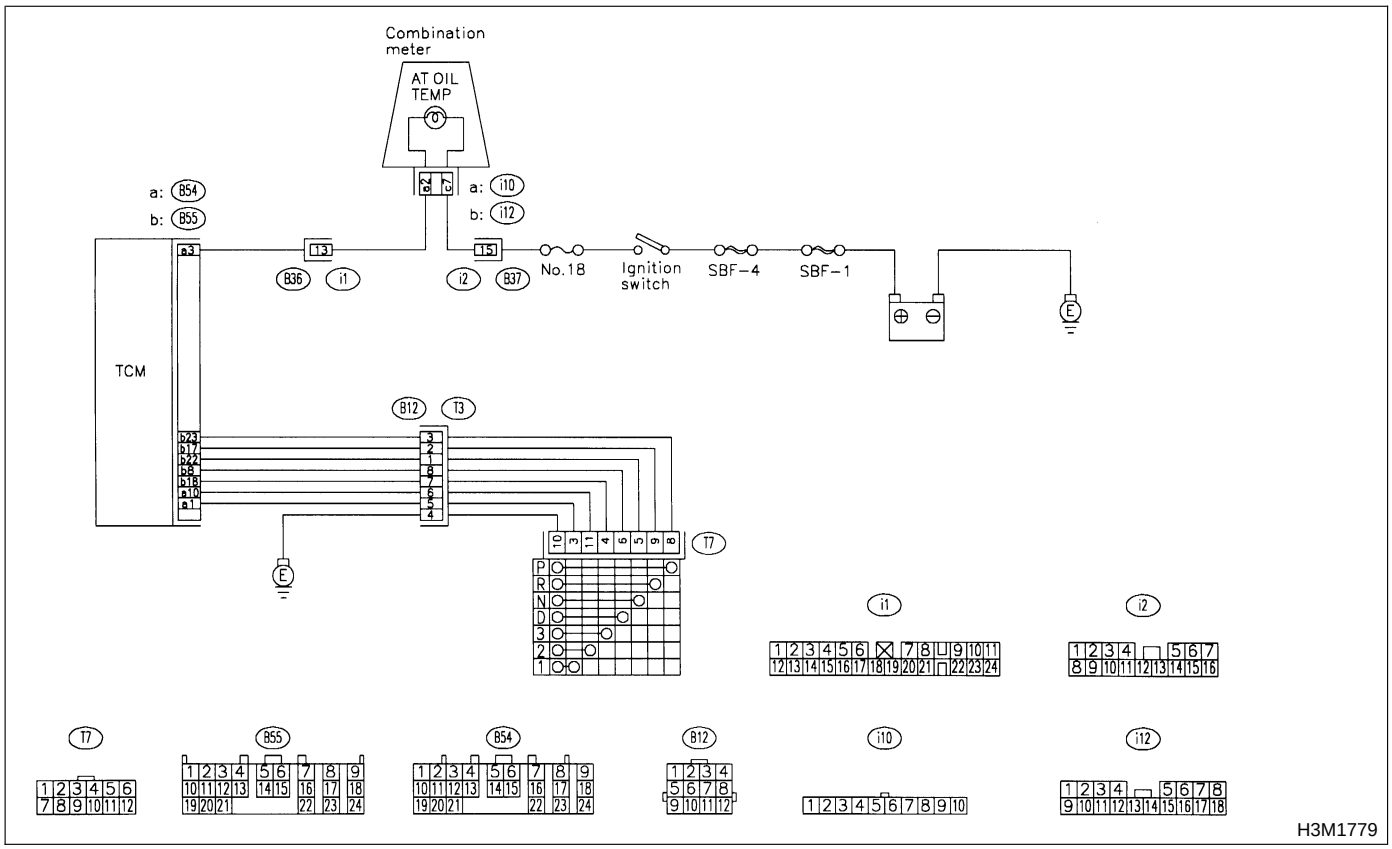
7. Diagnostics for On-board Diagnostics Failed

A: AT OIL TEMP INDICATOR LIGHT

DIAGNOSIS:
The AT OIL TEMP indicator light circuit is open or shorted.
TROUBLE SYMPTOM:
- When ignition switch is turned to ON (engine OFF), AT OIL TEMP indicator light does not illuminate.
- When on-board diagnostics is performed, AT OIL TEMP indicator light remains illuminated.

WIRING DIAGRAM:



7A1 : CHECK AT OIL TEMP INDICATOR LIGHT.

Turn ignition switch to ON (engine OFF).

CHECK : ***Does AT OIL TEMP indicator light illuminate?***

YES : Go to step **7A2**.

NO : Go to step **7A3**.

7A2 : CHECK AT OIL TEMP INDICATOR LIGHT.

Perform on-board diagnostics. <Ref. to 3-2 [T6C0].>

CHECK : ***Does AT OIL TEMP indicator light blink?***

YES : A temporary poor contact of the connector or harness may be the cause. Repair harness or connector in TCM, inhibitor switch and combination meter.

NO : Go to step **7A8**.

7A3 : CHECK FUSE (NO. 18).

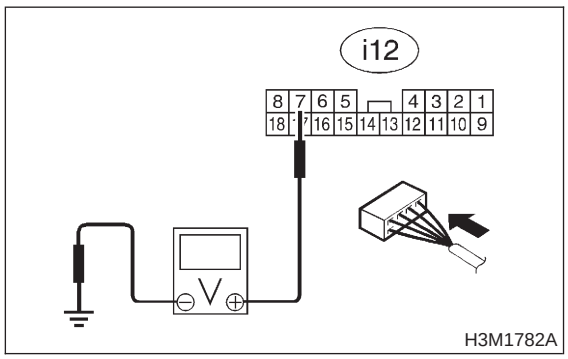
Remove fuse (No. 18).

CHECK : ***Is the fuse (No. 18) blown out?***
YES : Replace fuse (No. 18). If replaced fuse (No. 18) is blown out easily, repair short circuit in harness between fuse (No. 18) and combination meter.
NO : Go to step **7A4**.

7A4 : CHECK HARNESS CONNECTOR BETWEEN COMBINATION METER AND IGNITION SWITCH.

1) Turn ignition switch to ON (engine OFF).
2) Measure voltage between combination meter connector and chassis ground.

Connector & terminal
(i12) No. 7 (+) — Chassis ground (−):

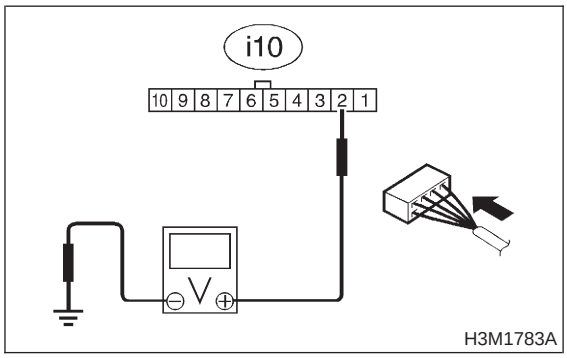


CHECK : ***Is voltage more than 10 V?***
YES : Go to step **7A5**.
NO : Repair open circuit in harness between combination meter and fuse, and poor contact in coupling connector.

7A5 : CHECK COMBINATION METER.

Measure voltage between combination meter connector and chassis ground.

Connector & terminal
(i10) No. 2 (+) — Chassis ground (−):

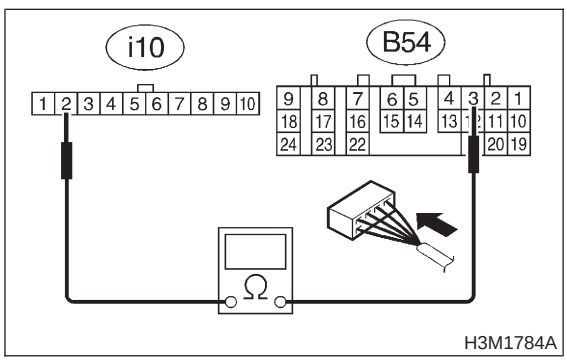


CHECK : ***Is voltage less than 1 V?***
YES : Go to step **7A6**.
NO : Replace combination meter. <Ref. to 6-2 [W800].>

7A6 : CHECK OPEN CIRCUIT OF HARNESS.

1) Disconnect connector from combination meter connector.
2) Measure resistance of harness between combination meter.

Connector & terminal
(B54) No. 3 — (i10) No. 2:

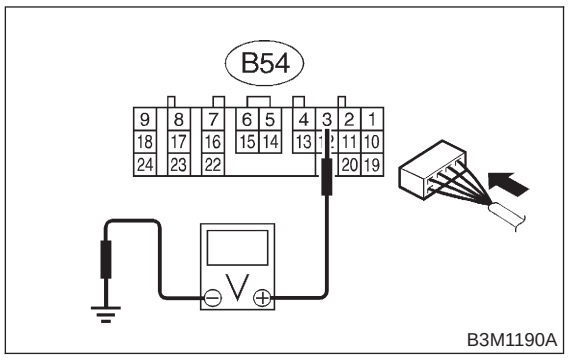


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **7A7**.
NO : Repair open circuit in harness between TCM and combination meter, and poor contact in coupling connector.

7A7 : CHECK INPUT SIGNAL FOR TCM.

1) Connect connector to TCM and combination meter.
2) Turn ignition switch to ON (engine OFF).
3) Measure voltage between TCM connector and chassis ground.

Connector & terminal
(B54) No. 3 (+) — Chassis ground (−):



CHECK : ***Is the voltage less than 1 V?***
YES : Even if AT OIL TEMP indicator lights up, the circuit has returned to a normal condition at this time. A temporary poor contact of the connector or harness may be the cause. Repair harness or connector in TCM.
NO : Replace TCM. <Ref. to 3-2 [W22A0].>

7A8 : CHECK INHIBITOR SWITCH.

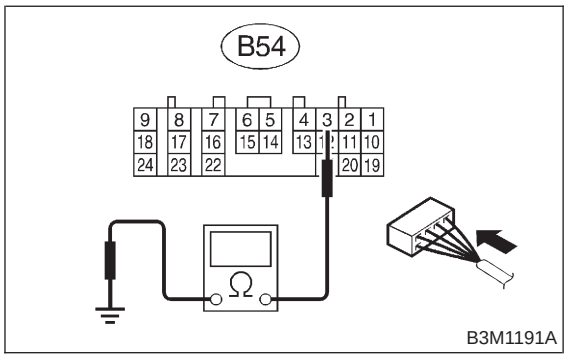
1) Connect Subaru Select Monitor to data link connector.
2) Turn ignition switch to ON.
3) Subaru Select Monitor to ON.
4) Read data of range switch using Subaru Select Monitor.
● Range switch is indicated in ON ⇔ OFF.

CHECK : ***When each range is selected, does LED of Subaru Select Monitor light up?***
YES : Go to step **7A9**.
NO : Check inhibitor switch circuit. <Ref. to 3-2 [T9T0].>

7A9 : CHECK SHORT CIRCUIT OF HARNESS.

1) Disconnect connector from TCM.
2) Remove combination meter.
3) Disconnect connector from combination meter.
4) Measure resistance of harness connector between TCM and combination meter.

Connector & terminal/specified resistance
(B54) No. 3 — Chassis ground:

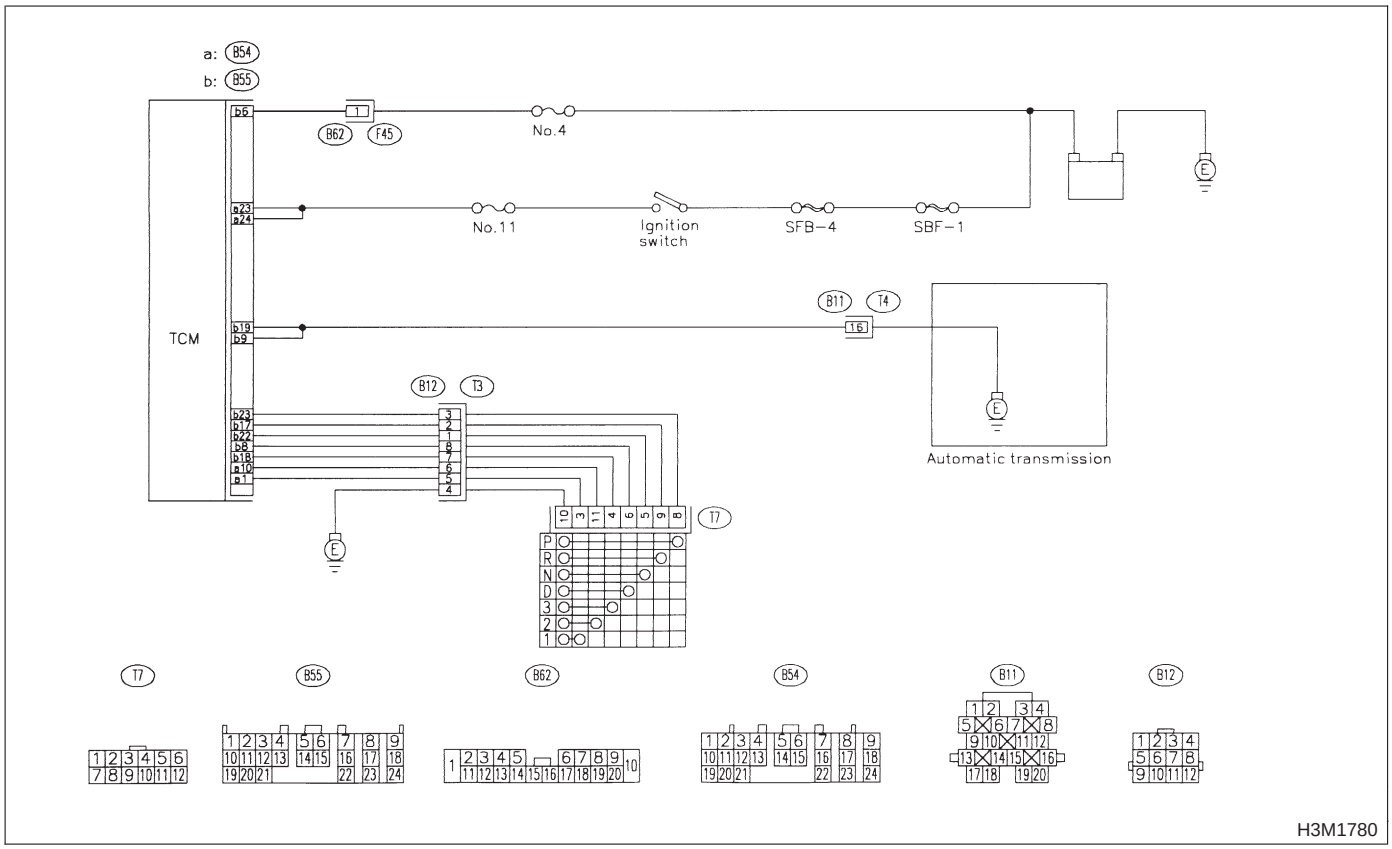


CHECK : ***Is the resistance less than 1 MΩ?***
YES : Replace TCM. <Ref. to 3-2 [W22A0].>
NO : Repair short circuit in harness between combination meter connector and TCM connector.

MEMO:

B: CONTROL MODULE POWER SUPPLY AND GROUND LINE

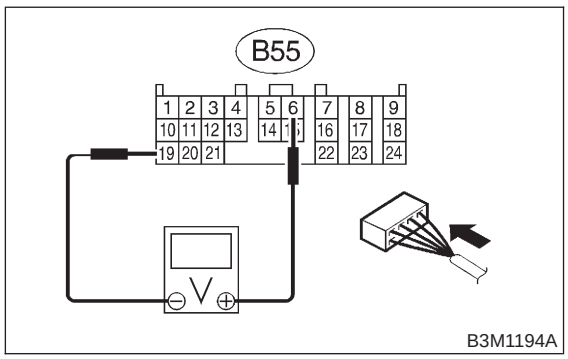
WIRING DIAGRAM:



7B1 : CHECK BACK-UP POWER SUPPLY CIRCUIT.

1) Turn ignition switch to ON.
2) Measure back-up power supply voltage between TCM connector terminal.

Connector & terminal
(B55) No. 6 (+) — No. 19 (−):



CHECK : ***Is the voltage more than 10 V?***
YES : Go to step **7B3**.
NO : Go to step **7B2**.

7B2 : CHECK FUSE (NO. 4).

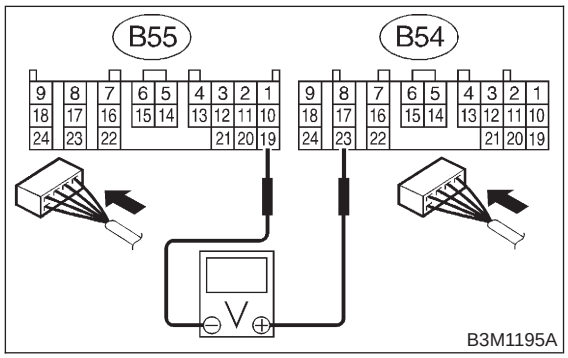
Remove fuse (No. 4).

CHECK : ***Is the fuse (No. 4) blown out?***
YES : Replace fuse (No. 4). If replaced fuse (No. 4) has blown out easily, repair short circuit in harness between fuse (No. 4) and TCM.
NO : Repair open circuit in harness between fuse (No. 4) and TCM, and poor contact in coupling connector.

7B3 : CHECK IGNITION POWER SUPPLY CIRCUIT.

1) Turn ignition switch to ON (engine OFF).
2) Measure ignition power supply voltage between TCM connector terminal.

Connector & terminal
(B54) No. 23 (+) — (B55) No. 19 (−):

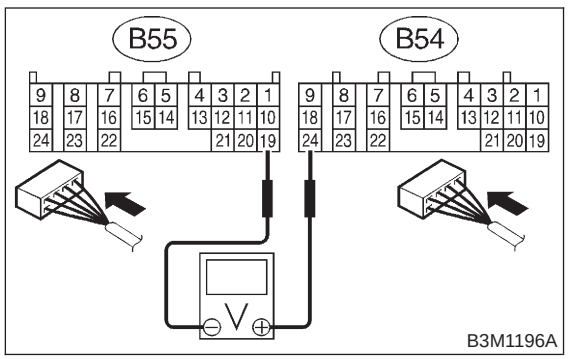


CHECK : ***Is the voltage more than 10 V?***
YES : Go to step **7B4**.
NO : Go to step **7B5**.

7B4 : CHECK IGNITION POWER SUPPLY CIRCUIT.

1) Turn ignition switch to ON (engine OFF).
2) Measure ignition power supply voltage between TCM connector terminal.

Connector & terminal
(B54) No. 24 (+) — (B55) No. 19:



CHECK : ***Is the voltage more than 10 V?***
YES : Go to step **7B6**.
NO : Go to step **7B5**.

7B5 : CHECK FUSE (NO. 11).

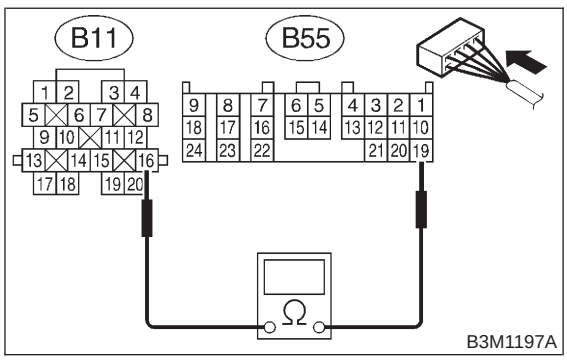
Remove fuse (No. 11).

CHECK : ***Is the fuse (No. 11) blown out?***
YES : Replace fuse (No. 11). If replaced fuse (No. 11) has blown out easily, repair short circuit in harness between fuse (No. 11) and TCM.
NO : Repair open circuit in harness between fuse (No. 11) and TCM, and poor contact in coupling connector.

7B6 : CHECK HARNESS CONNECTOR BETWEEN TCM AND TRANSMISSION.

1) Turn ignition switch to OFF.
2) Disconnect connector from TCM and transmission.
3) Measure resistance of harness between TCM and transmission connector.

Connector & terminal
(B55) No. 19 — (B11) No. 16:

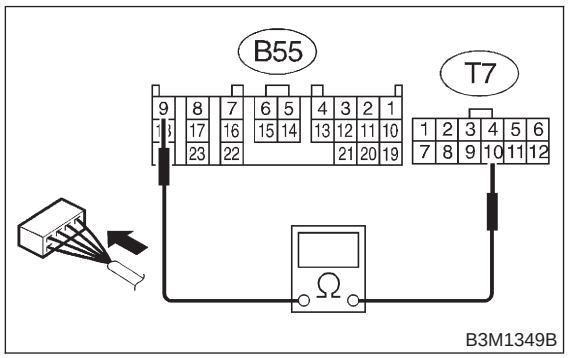


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **7B7**.
NO : Repair open circuit in harness between TCM and transmission harness connector.

7B7 : CHECK HARNESS CONNECTOR BETWEEN TCM AND INHIBITOR SWITCH.

1) Turn ignition switch to OFF.
2) Disconnect connector from inhibitor switch.
3) Measure resistance of harness between inhibitor switch side connector and chassis ground.

Connector & terminal
(T7) No. 10 — (B55) No. 9:

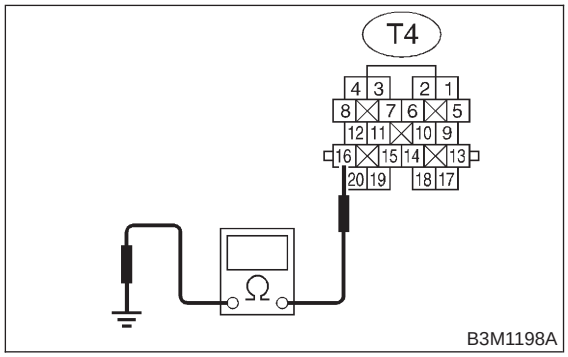


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **7B8**.
NO : Repair open circuit in harness between TCM and inhibitor side connector, and poor contact in coupling connector.

7B8 : CHECK HARNESS CONNECTOR BETWEEN TRANSMISSION AND TRANSMISSION GROUND.

Measure resistance of harness between transmission and transmission ground.

Connector & terminal
(T4) No. 16 — Transmission ground:



CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **7B9**.
NO : Repair open circuit in harness between transmission and transmission ground.

7B9 : CHECK POOR CONTACT.

CHECK : ***Is there poor contact in control module power supply and ground line?***
YES : Repair poor contact and ground terminal.
NO : Replace TCM. <Ref. to 3-2 [W22A0].>