

Diagnostic Procedure for Subaru Select Monitor Communication

AUTOMATIC TRANSMISSION (DIAGNOSTICS)

11. Diagnostic Procedure for Subaru Select Monitor Communication

A: COMMUNICATION FOR INITIALIZING IMPOSSIBLE

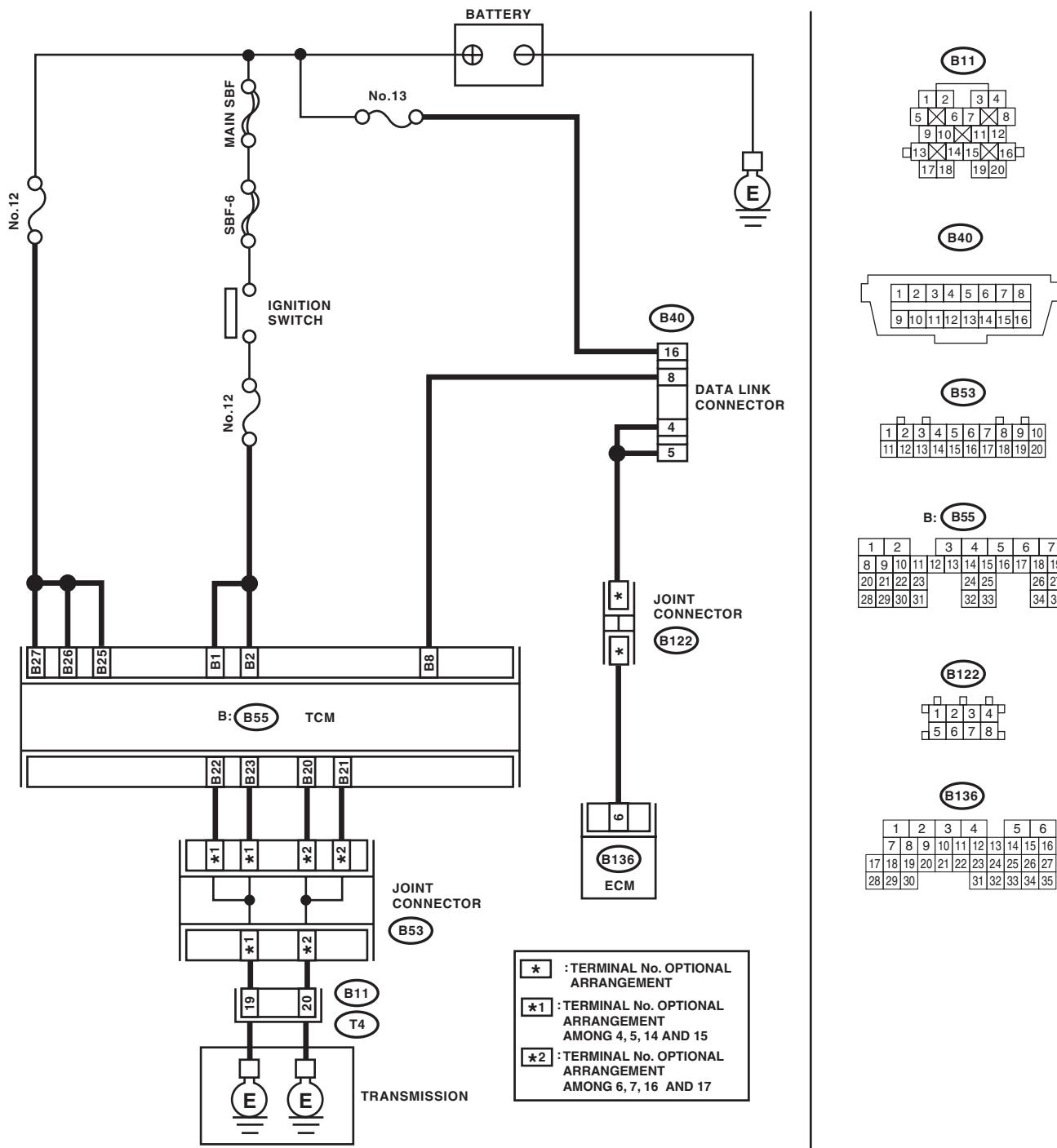
DIAGNOSIS:

Defective harness connector

TROUBLE SYMPTOM:

Subaru Select Monitor communication failure

WIRING DIAGRAM:



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Step	Check	Yes	No
1 CHECK INSTALLATION OF TCM CONNECTOR. Turn the ignition switch to OFF.	Is TCM connector connected to TCM?	Go to step 2.	Connect the TCM connector to TCM.
2 CHECK SUBARU SELECT MONITOR POWER SUPPLY CIRCUIT. Measure the voltage between data link connector and chassis ground. <i>Connector & terminal</i> <i>(B40) No. 16 (+) — Chassis ground (-):</i>	Is the voltage 10 V or more?	Go to step 3.	Repair harness connector between the battery and data link connector, and poor contact of the connector.
3 CHECK SUBARU SELECT MONITOR GROUND CIRCUIT. 1) Disconnect the connectors from the ECM. 2) Measure the resistance of harness between data link connector and ECM. <i>Connector & terminal</i> <i>(B40) No. 4 — (B136) No. 6:</i> <i>(B40) No. 5 — (B136) No. 6:</i>	Is resistance less than 1 Ω?	Go to step 4.	Repair the open circuit of harness between data link connector and ECM.
4 CHECK SUBARU SELECT MONITOR GROUND CIRCUIT. Measure the resistance of harness between data link connector and chassis ground. <i>Connector & terminal</i> <i>(B40) No. 4 — Chassis ground:</i> <i>(B40) No. 5 — Chassis ground:</i>	Is the resistance 1 MΩ or more?	Go to step 5.	Repair the short circuit of harness between data link connector and ground terminals.
5 CHECK ENGINE GROUND CIRCUIT. Check the engine ground circuit.	Is the engine ground circuit normal?	Go to step 6.	Repair ground circuit of ECM.
6 CHECK COMMUNICATION OF SUBARU SELECT MONITOR. 1) Turn the ignition switch to ON. 2) Using the Subaru Select Monitor, check whether communication to transmission system can be executed normally.	Is the name of system displayed on Subaru Select Monitor?	Go to step 11.	Go to step 7.
7 CHECK COMMUNICATION OF SUBARU SELECT MONITOR. 1) Turn the ignition switch to OFF. 2) Disconnect the TCM connector. 3) Check whether communication to engine system can be executed normally.	Is the name of system displayed on Subaru Select Monitor?	Go to step 9.	Go to step 8.
8 CHECK COMMUNICATION OF SUBARU SELECT MONITOR. 1) Turn the ignition switch to OFF. 2) Connect the TCM connector. 3) Disconnect the connectors of TPM control unit, airbag control module, body integrated unit, and ABS/SCM&H/U. CAUTION: When disconnecting the connector from airbag control module, always follow the precautions on AB section. <Ref. to AB-4, CAUTION, General Description.> 4) Check whether communication to transmission system can be executed normally.	Is the name of system displayed on Subaru Select Monitor?	Check each control module.	Go to step 9.

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Step	Check	Yes	No
9 CHECK HARNESS CONNECTOR BETWEEN EACH CONTROL MODULE AND DATA LINK CONNECTOR. 1) Turn the ignition switch to OFF. 2) Disconnect the connectors of TCM, ECM, TPM control unit, airbag control module, body integrated unit, and ABS/SCM&H/U. 3) Measure the resistance between TCM connector and chassis ground. <i>Connector & terminal (B40) No. 8 — Chassis ground:</i>	Is the resistance 1 MΩ or more?	Go to step 10.	Check harness and connector between each control module and data link connector.
10 CHECK OUTPUT SIGNAL OF TCM. 1) Turn the ignition switch to ON. 2) Measure the voltage between TCM and chassis ground. <i>Connector & terminal (B40) No. 8 (+) — Chassis ground (-):</i>	Is the voltage 1 V or more?	Check harness and connector between each control module and data link connector.	Go to step 11.
11 CHECK HARNESS CONNECTOR BETWEEN TCM AND DATA LINK CONNECTOR. Measure the resistance between TCM connector and data link connector. <i>Connector & terminal (B55) No. 8 — (B40) No. 8:</i>	Is resistance less than 1 Ω?	Go to step 12.	Repair the harness and connector between TCM and data link connector.
12 CHECK INSTALLATION OF TRANSMISSION HARNESS CONNECTOR.	Is the transmission harness connector connected to bulkhead harness connector?	Go to step 13.	Connect the bulkhead harness connector to transmission harness connector.
13 CHECK POOR CONTACT IN CONNECTORS.	Is there poor contact in control module power supply and data link connector?	Repair the poor contact.	Go to step 14.
14 CHECK POWER SUPPLY OF TCM. 1) Disconnect the connector from TCM. 2) Turn the ignition switch to ON. 3) Measure the voltage between TCM connector and chassis ground. <i>Connector & terminal (B55) No. 27 (+) — Chassis ground (-): (B55) No. 26 (+) — Chassis ground (-): (B55) No. 25 (+) — Chassis ground (-):</i>	Is the voltage 10 — 13 V?	Go to step 16.	Go to step 15.
15 CHECK FUSE (NO. 12). 1) Turn the ignition switch to OFF. 2) Remove the fuse (No. 12).	Is the fuse (No. 12) blown out?	Replace the fuse (No. 12). If the replaced fuse (No. 12) blows out easily, repair the short circuit of harness between fuse (No. 12) and TCM, or fuse (No. 12) and battery, and poor contact of the connector.	Repair the open circuit of harness between fuse (No. 12) and TCM, or fuse (No. 12) and battery, and poor contact of the connector.
16 CHECK IGNITION POWER SUPPLY CIRCUIT. 1) Turn the ignition switch to ON (engine OFF). 2) Measure the ignition power supply voltage between TCM connector and chassis ground. <i>Connector & terminal (B55) No. 1 (+) — Chassis ground (-): (B55) No. 2 (+) — Chassis ground (-):</i>	Is the voltage 10 — 13 V?	Go to step 18.	Go to step 17.

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Step	Check	Yes	No
17 CHECK FUSE (NO. 12). Remove the fuse (No. 12).	Is the fuse (No. 12) blown out?	Replace the fuse (No. 12). If the replaced fuse (No. 12) blows out easily, repair the short circuit of harness between fuse (No. 12) and TCM.	Repair the open circuit of harness between fuse (No. 12) and TCM, or fuse (No. 12) and battery, and poor contact of the connector.
18 CHECK HARNESS CONNECTOR BETWEEN TCM AND TRANSMISSION. 1) Turn the ignition switch to OFF. 2) Disconnect the connectors from TCM and transmission. 3) Measure the resistance of harness between TCM and transmission connector. <i>Connector & terminal</i> <i>(B55) No. 20 — (B11) No. 19:</i> <i>(B55) No. 21 — (B11) No. 19:</i> <i>(B55) No. 22 — (B11) No. 20:</i> <i>(B55) No. 23 — (B11) No. 20:</i>	Is resistance less than $1\ \Omega$?	Go to step 19.	Repair the open circuit of harness between TCM and transmission harness connector, and poor contact of connector.
19 CHECK HARNESS CONNECTOR BETWEEN TRANSMISSION AND TRANSMISSION GROUND. Measure the resistance of the harness between transmission and transmission ground. <i>Connector & terminal</i> <i>(T4) No. 19 — Transmission ground:</i> <i>(T4) No. 20 — Transmission ground:</i>	Is resistance less than $1\ \Omega$?	Go to step 20.	Repair the open circuit of the harness between transmission and transmission ground.
20 CHECK POOR CONTACT IN CONNECTORS.	Is there poor contact in TCM power supply, ground and data link connector?	Repair the connector.	Replace the TCM. <Ref. to 4AT-60, Transmission Control Module (TCM).>