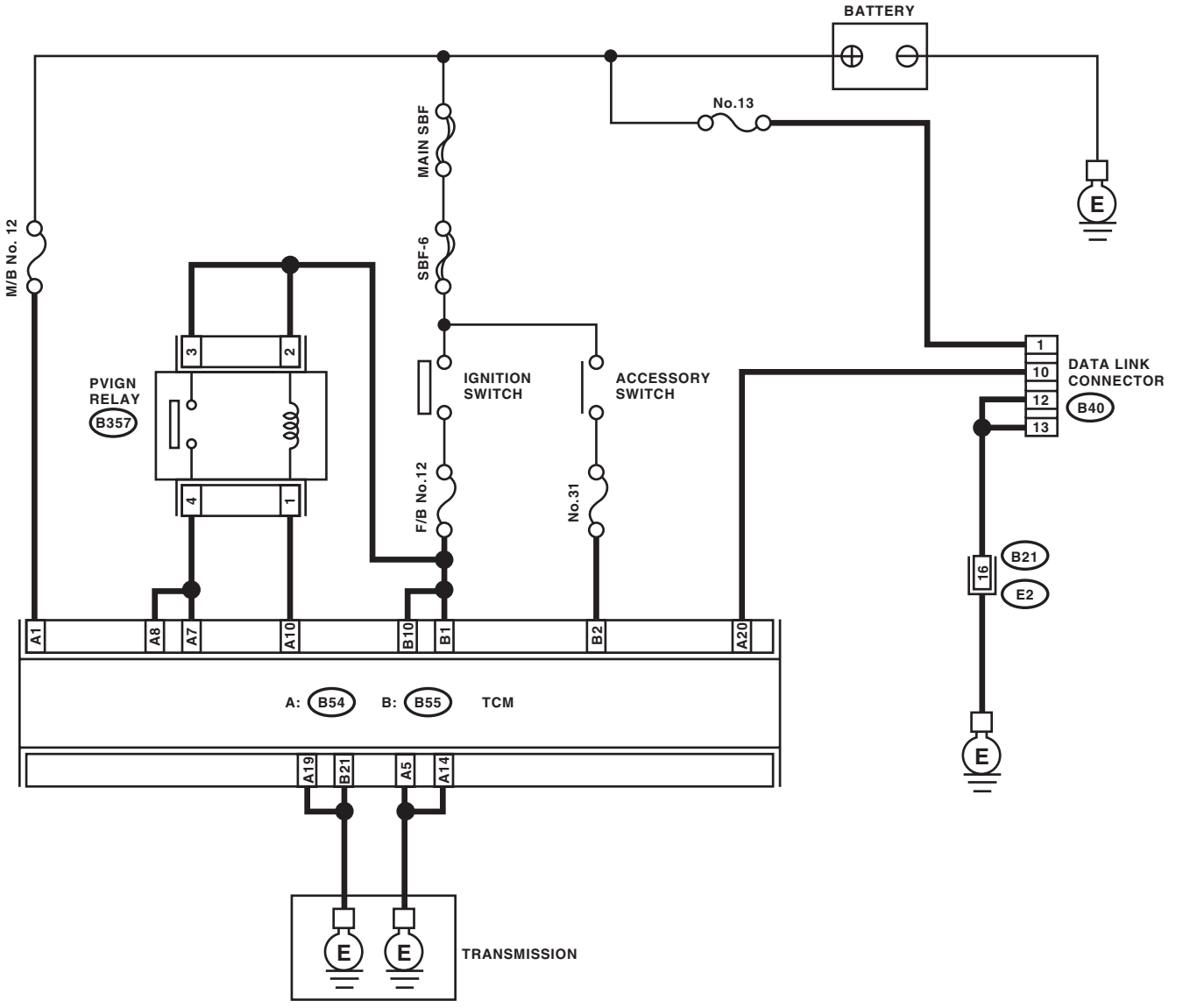
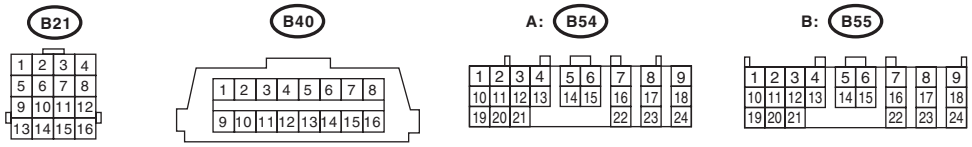
12.Diagnostic Procedure for Subaru Select Monitor Communication

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 SUBARU SELECT MONITOR POWER SUPPLY CIRCUIT.** Measure the voltage between data link connector and chassis ground. ***Connector & terminal*** ***(B40) No. 1 (+) — Chassis ground (–):***	Is the voltage more than 10 V?	Go to step **2**.	Repair harness connector between the battery and data link connector, and poor contact of the connector.
2	**CHECK SUBARU SELECT MONITOR GROUND CIRCUIT.** Measure the resistance of harness between data link connector and chassis ground. ***Connector & terminal*** ***(B40) No. 12 — Chassis ground:*** ***(B40) No. 13 — Chassis ground:***	Is the resistance less than 1 Ω?	Go to step **3**.	Repair the open circuit of harness between data link connector and ground terminal, and poor contact of connector.
3	**CHECK COMMUNICATION OF SUBARU SELECT MONITOR.** 1) Turn the ignition switch to ON. 2) Using the Subaru Select Monitor, check whether communication to the transmission system can be executed normally.	Are the name and year of system displayed on Subaru Select Monitor?	Go to step **8**.	Go to step **4**.
4	**CHECK COMMUNICATION OF SUBARU SELECT MONITOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM connector. 3) Turn the ignition switch to ON. 4) Check whether communication to engine system can be executed normally.	Are the name and year of system displayed on Subaru Select Monitor?	Go to step **6**.	Go to step **5**.
5	**CHECK COMMUNICATION OF SUBARU SELECT MONITOR.** 1) Turn the ignition switch to OFF. 2) Connect the TCM connector. 3) Disconnect the connector from ECM. 4) Turn the ignition switch to ON. 5) Check whether communication to transmission system can be executed normally.	Are the name and year of system displayed on Subaru Select Monitor?	Inspect the ECM.	Go to step **6**.
6	**CHECK HARNESS CONNECTOR BETWEEN EACH CONTROL MODULE AND DATA LINK CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM and ECM connector. 3) Measure the resistance between TCM connector and chassis ground. ***Connector & terminal*** ***(B40) No. 10 — Chassis ground:***	Is the resistance more than 1 MΩ?	Go to step **7**.	Check harness and connector between each control module and data link connector.
7	**CHECK OUTPUT SIGNAL OF TCM.** 1) Turn the ignition switch to ON. 2) Measure the voltage between TCM and chassis ground. ***Connector & terminal*** ***(B40) No. 10 (+) — Chassis ground (–):***	Is the voltage more than 1 V?	Check harness and connector between each control module and data link connector.	Go to step **8**.
8	**CHECK HARNESS CONNECTOR BETWEEN TCM AND DATA LINK CONNECTOR.** Measure the resistance between TCM connector and data link connector. ***Connector & terminal*** ***(B54) No. 20 — (B40) No. 10:***	Is the resistance less than 1 Ω?	Go to step **9**.	Repair the harness and connector between TCM and data link connector.
9	**CHECK INSTALLATION OF TCM CONNECTOR.** Turn the ignition switch to OFF.	Is TCM connector connected to TCM?	Go to step **10**.	Connect the TCM connector to TCM.

	Step	Check	Yes	No
10	**CHECK INSTALLATION OF TRANSMISSION HARNESS CONNECTOR.**	Is the transmission harness connector connected to bulkhead harness connector?	Go to step **11**.	Connect the bulkhead harness connector to transmission harness connector.
11	**CHECK POOR CONTACT OF CONNECTORS.**	Is there poor contact in control module power supply and data link connector?	Repair the poor contact.	Go to step **12**.
12	**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. ***Connector & terminal*** ***(B54) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 — 13 V?	Go to step **15**.	Go to step **13**.
13	**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).	Go to step **14**.
14	**CHECK HARNESS.** Measure the resistance between TCM connector and chassis ground. ***Connector & terminal*** ***(B54) No. 1 — Chassis ground:***	Is the resistance less than 10 Ω?	Replace the fuse (No. 12). If the new fuse (No. 12) has blown out easily, repair the short circuit of harness between fuse (No. 12) and TCM.	Go to step **15**.
15	**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. ***Connector & terminal*** ***(B55) No. 1 (+) — Chassis ground (–):*** ***(B55) No. 10 (+) — Chassis ground (–):***	Is the voltage 10 — 13 V?	Go to step **17**.	Go to step **16**.
16	**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.	Go to step **17**.
17	**CHECK HARNESS CONNECTOR BETWEEN TCM AND TRANSMISSION.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector from TCM. 3) Measure the resistance of the harness between TCM and transmission ground. ***Connector & terminal*** ***(B54) No. 19 — Transmission ground:*** ***(B55) No. 21 — Transmission ground:*** ***(B54) No. 5 — Transmission ground:*** ***(B54) No. 14 — Transmission ground:***	Is the resistance more than 1 MΩ?	Repair the short circuit of harness between TCM and transmission harness connector, and poor contact of connector.	Go to step **18**.
18	**CHECK POOR CONTACT OF CONNECTORS.**	Is there poor contact in TCM power supply, ground and data link connector?	Repair the connector.	Replace the TCM. <Ref. to 5AT-56, Transmission Control Module (TCM).>