

### 12.Diagnostic Procedure for Subaru Select Monitor Communication

#### A: COMMUNICATION FOR INITIALIZING IMPOSSIBLE

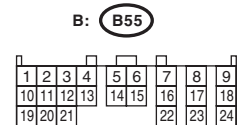
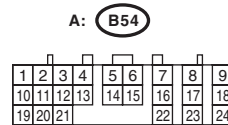
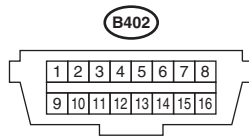
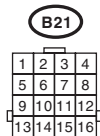
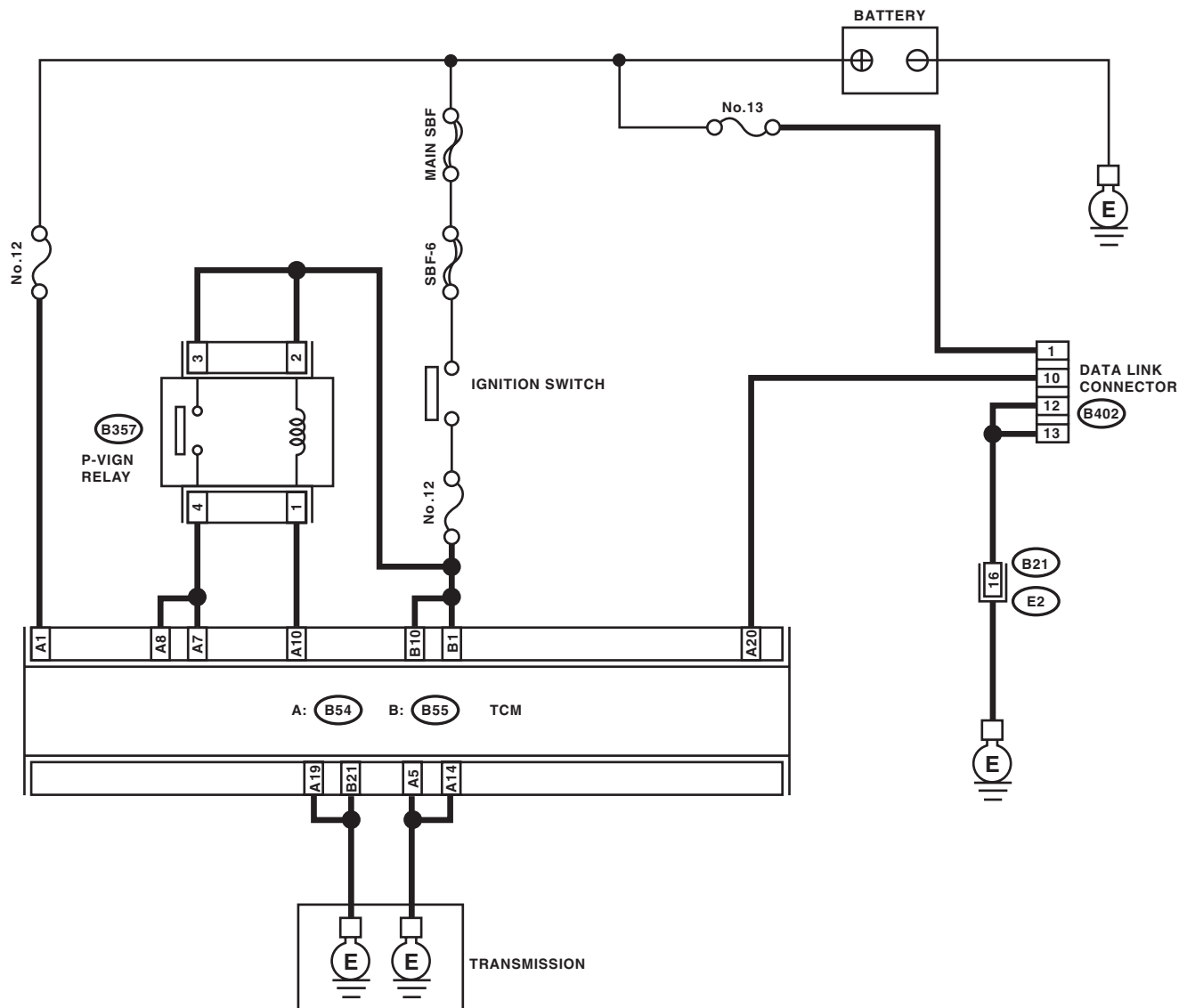
##### DIAGNOSIS:

Defective harness connector

##### TROUBLE SYMPTOM:

Subaru Select Monitor communication failure

##### WIRING DIAGRAM:



# Diagnostic Procedure for Subaru Select Monitor Communication

## AUTOMATIC TRANSMISSION (DIAGNOSTICS)

| Step   | Check   | Yes  | No   |
|--|---|--|--|
| <b>1 CHECK SUBARU SELECT MONITOR POWER SUPPLY CIRCUIT.</b><br>Measure the voltage between data link connector and chassis ground.<br><b>Connector &amp; terminal</b><br><b>(B402) No. 1 (+) — Chassis ground (-):</b>  | Is the voltage 10 V or more?  | Go to step 2.  | Repair the harness connector between battery and data link connector, and poor contact of connector.               |
| <b>2 CHECK SUBARU SELECT MONITOR GROUND CIRCUIT.</b><br>Measure the resistance of harness between data link connector and chassis ground.<br><b>Connector &amp; terminal</b><br><b>(B402) No. 12 — Chassis ground:</b><br><b>(B402) No. 13 — Chassis ground:</b>   | Is the resistance less than 1 $\Omega$ ?                            | Go to step 3.  | Repair the open circuit of harness between data link connector and ground terminal, and poor contact of connector. |
| <b>3 CHECK COMMUNICATION OF SUBARU SELECT MONITOR.</b><br>1) Turn the ignition switch to ON.<br>2) Using the Subaru Select Monitor, check whether communication to 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.  |
| <b>4 CHECK COMMUNICATION OF SUBARU SELECT MONITOR.</b><br>1) Turn the ignition switch to OFF.<br>2) Disconnect the TCM connector.<br>3) Turn the ignition switch to ON.<br>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.  |
| <b>5 CHECK COMMUNICATION OF SUBARU SELECT MONITOR.</b><br>1) Turn the ignition switch to OFF.<br>2) Connect the TCM connector.<br>3) Disconnect the connector from ECM.<br>4) Turn the ignition switch to ON.<br>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.  |
| <b>6 CHECK HARNESS CONNECTOR BETWEEN EACH CONTROL MODULE AND DATA LINK CONNECTOR.</b><br>1) Turn the ignition switch to OFF.<br>2) Disconnect the TCM and ECM connector.<br>3) Measure the resistance between TCM connector and chassis ground.<br><b>Connector &amp; terminal</b><br><b>(B402) No. 10 — Chassis ground:</b> | Is the resistance more than 1 M $\Omega$ ?                          | Go to step 7.  | Check harness and connector between each control module and data link connector.                                   |
| <b>7 CHECK OUTPUT SIGNAL OF TCM.</b><br>1) Turn the ignition switch to ON.<br>2) Measure the voltage between TCM and chassis ground.<br><b>Connector &amp; terminal</b><br><b>(B402) No. 10 (+) — Chassis ground (-):</b>  | Is the voltage 1 V or more?   | Check harness and connector between each control module and data link connector. | Go to step 8.  |
| <b>8 CHECK HARNESS CONNECTOR BETWEEN TCM AND DATA LINK CONNECTOR.</b><br>Measure the resistance between TCM connector and data link connector.<br><b>Connector &amp; terminal</b><br><b>(B54) No. 20 — (B402) No. 10:</b>  | Is the resistance less than 1 $\Omega$ ?                            | Go to step 9.  | Repair the harness and connector between TCM and data link connector.  |
| <b>9 CHECK INSTALLATION OF TCM CONNECTOR.</b><br>Turn the ignition switch to OFF.  | Is TCM connector connected to TCM?                                  | Go to step 10.   | Connect the TCM connector to TCM.  |

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## AUTOMATIC TRANSMISSION (DIAGNOSTICS)

| Step   | Check   | Yes   | No   |
|--|---|---|--|
| <b>10</b><br><b>CHECK INSTALLATION OF TRANSMISSION HARNESS CONNECTOR.</b>  | Is the transmission harness connector connected to bulk-head harness connector? | Go to step 11.  | Connect the bulk-head harness connector to transmission harness connector. |
| <b>11</b><br><b>CHECK POOR CONTACT OF CONNECTORS.</b>  | Is there poor contact in control module power supply and data link connector?   | Repair the poor contact.  | Go to step 12.   |
| <b>12</b><br><b>CHECK POWER SUPPLY OF TCM.</b><br>1) Disconnect the connector from TCM.<br>2) Turn the ignition switch to ON.<br>3) Measure the voltage between TCM connector and chassis ground.<br><b>Connector &amp; terminal</b><br><b>(B54) No. 1 (+) — Chassis ground (-):</b>   | Is the voltage 10 — 13 V?   | Go to step 15.  | Go to step 13.   |
| <b>13</b><br><b>CHECK FUSE (No. 12).</b><br>1) Turn the ignition switch to OFF.<br>2) Remove the fuse (No. 12).  | Is the fuse (No. 12) blown out?   | Replace the fuse (No. 12).  | Go to step 14.   |
| <b>14</b><br><b>CHECK HARNESS.</b><br>Measure the resistance between TCM connector and chassis ground.<br><b>Connector &amp; terminal</b><br><b>(B54) No. 1 — Chassis ground:</b>  | Is the resistance less than 10 $\Omega$ ?                                       | Replace the fuse (No. 32). If the replaced fuse (No. 32) blows out easily, repair the short circuit of harness between fuse (No. 32) and TCM. | Go to step 15.   |
| <b>15</b><br><b>CHECK IGNITION POWER SUPPLY CIRCUIT.</b><br>1) Turn the ignition switch to ON (engine OFF).<br>2) Measure the ignition power supply voltage between TCM connector and chassis ground.<br><b>Connector &amp; terminal</b><br><b>(B55) No. 1 (+) — Chassis ground (-):</b><br><b>(B55) No. 10 (+) — Chassis ground (-):</b>  | Is the voltage 10 — 13 V?   | Go to step 17.  | Go to step 16.   |
| <b>16</b><br><b>CHECK FUSE (No. 12).</b><br>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.   |
| <b>17</b><br><b>CHECK HARNESS CONNECTOR BETWEEN TCM AND TRANSMISSION.</b><br>1) Turn the ignition switch to OFF.<br>2) Disconnect the connector from TCM.<br>3) Measure the resistance of the harness between TCM and transmission ground.<br><b>Connector &amp; terminal</b><br><b>(B54) No. 19 — Transmission ground:</b><br><b>(B55) No. 21 — Transmission ground:</b><br><b>(B54) No. 5 — Transmission ground:</b><br><b>(B54) No. 14 — Transmission ground:</b> | Is the resistance more than 1 M $\Omega$ ?                                      | Repair the short circuit of harness between TCM and transmission harness connector, and poor contact of connector.                            | Go to step 18.   |
| <b>18</b><br><b>CHECK POOR CONTACT OF CONNECTORS.</b>  | Is there poor contact in TCM power supply, ground and data link connector?      | Repair the connector.   | Replace the TCM. <Ref. to 5AT-58, Transmission Control Module (TCM).>      |