16.Diagnostic Procedure with Diagnostic Trouble Code (DTC)

A: DTC P0705 TRANSMISSION RANGE SENSOR CIRCUIT (PRNDL INPUT)

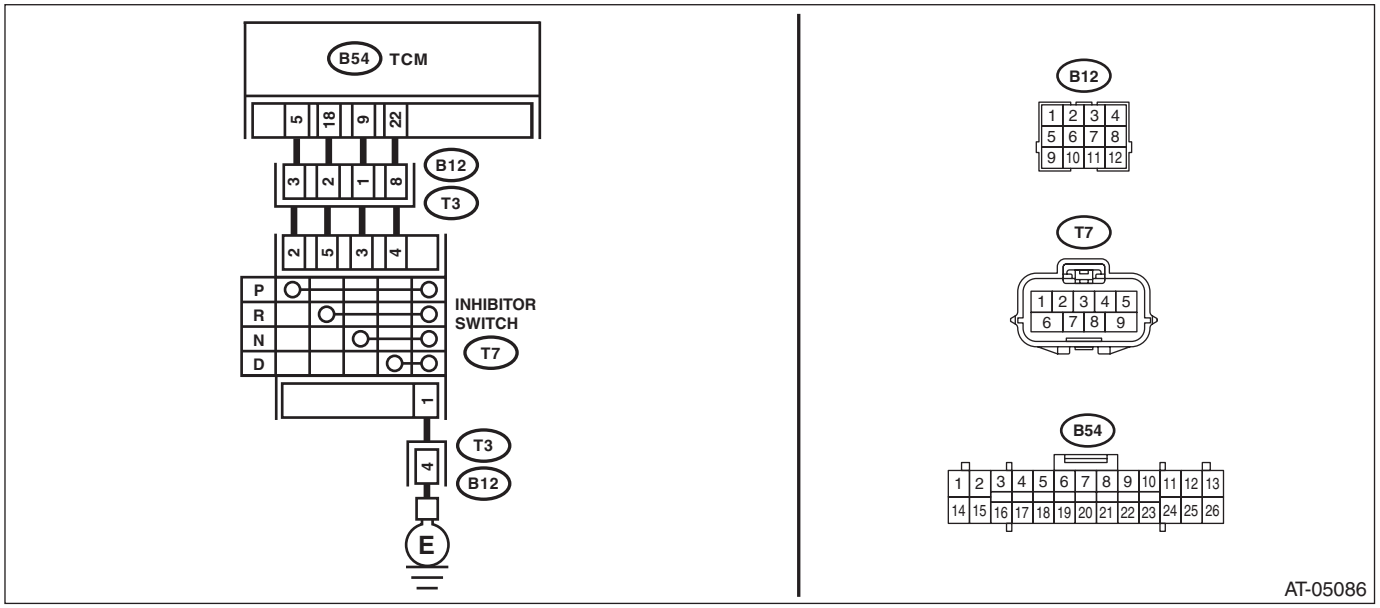
DTC DETECTING CONDITION:

- Inhibitor switch is faulty.
- At least 2 range signal is input.

TROUBLE SYMPTOM:

- Shift characteristics are erroneous.
- The range position of the select lever and the position of shift indicator display do not match.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK INPUT SIGNAL FOR TCM.** 1) Turn the ignition switch to ON. 2) Move the select lever to each range, read the data of "P, R, N, D range" using the Subaru Select Monitor.	Is display "OFF" for the range other than corresponding range?	Go to step **5**.	Go to step **2**.
2	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM and transmission connectors. 3) Measure the resistance between TCM connector and chassis ground. ***Connector & terminal*** ***(B54) No. 5 — Chassis ground:*** ***(B54) No. 18 — Chassis ground:*** ***(B54) No. 9 — Chassis ground:*** ***(B54) No. 22 — Chassis ground:***	Is each resistance 1 MΩ or more?	Go to step **3**.	Repair the short circuit of harness.
3	**CHECK HARNESS.** 1) Disconnect the inhibitor switch connector. 2) Measure the resistance between transmission connector and inhibitor switch connector. ***Connector & terminal*** ***(T3) No. 3 — (T7) No. 2:*** ***(T3) No. 2 — (T7) No. 5:*** ***(T3) No. 1 — (T7) No. 3:*** ***(T3) No. 8 — (T7) No. 4:***	Is each resistance 1 MΩ or more?	Go to step **4**.	Repair the short circuit of harness.

	Step	Check	Yes	No
4	**CHECK INHIBITOR SWITCH.** Move the select lever to each range, and measure the resistance between inhibitor switch connector terminals ***Connector & terminal*** ***(T7) No. 2 — (T7) No. 1:*** ***(T7) No. 5 — (T7) No. 1:*** ***(T7) No. 3 — (T7) No. 1:*** ***(T7) No. 4 — (T7) No. 1:***	Is the resistance other than corresponding range 1 MΩ or more?	Go to step **5**.	Replace the inhibitor switch. <Ref. to CVT-94, Inhibitor Switch.>
5	**CHECK FOR POOR CONTACT.**	Is there poor contact between TCM, inhibitor switch, transmission ground?	Repair the poor contact.	Check the TCM.

B: DTC P0708 AT RANGE SWITCH NOT INPUTTED

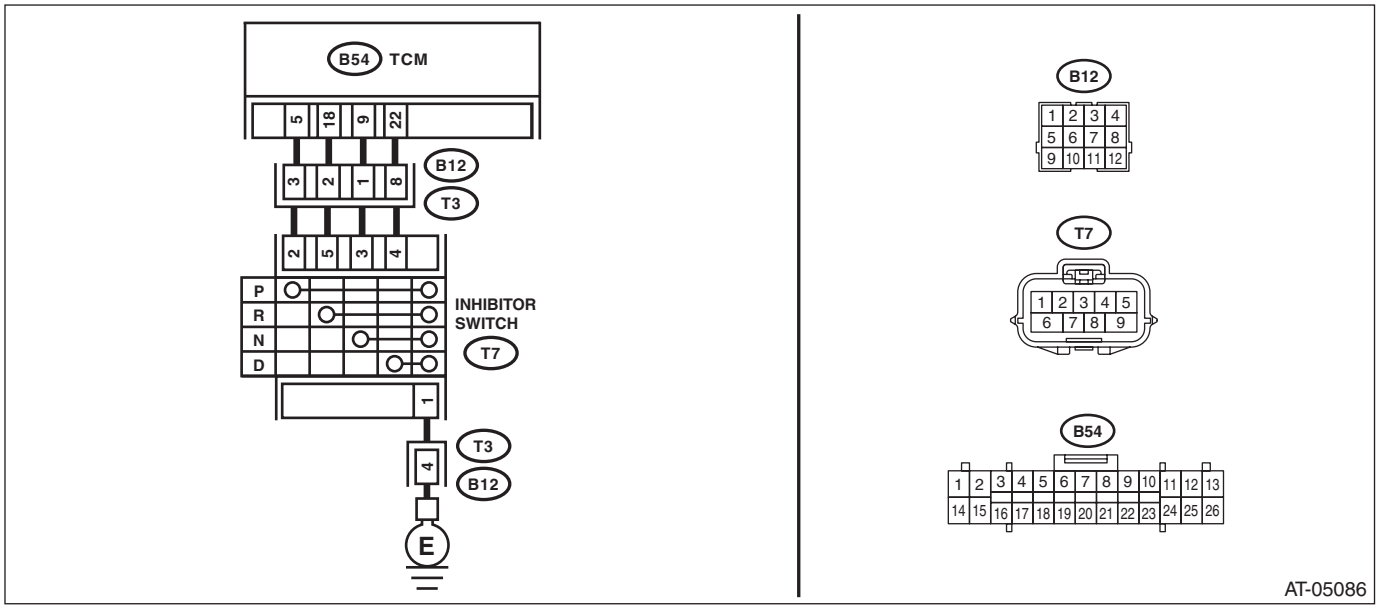
DTC DETECTING CONDITION:

- Inhibitor switch is faulty.
- No range signal is input.

TROUBLE SYMPTOM:

- Shift characteristics are erroneous.
- The range position of the select lever and the position of shift indicator display do not match.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK INPUT SIGNAL FOR TCM.** 1) Turn the ignition switch to ON. 2) Move the select lever to each range, read the data of "P, R, N, D range" using the Subaru Select Monitor.	Is the display of the corresponding range "ON"?	Go to step **7**.	Go to step **2**.
2	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM and transmission connectors. 3) Measure the resistance of harness between TCM connector and transmission connector. ***Connector & terminal*** ***(B54) No. 5 — (B12) No. 3:*** ***(B54) No. 18 — (B12) No. 2:*** ***(B54) No. 9 — (B12) No. 1:*** ***(B54) No. 22 — (B12) No. 8:***	Is each resistance less than 1 Ω?	Go to step **3**.	Repair the open circuit of harness.
3	**CHECK HARNESS.** Measure the resistance of harness between transmission connector and transmission ground. ***Connector & terminal*** ***(B12) No. 4 — Transmission ground:***	Is the resistance less than 1 Ω?	Go to step **4**.	Repair the open circuit of harness.

	Step	Check	Yes	No
4	**CHECK HARNESS.** 1) Disconnect the inhibitor switch connector. 2) Measure the resistance between transmission connector and inhibitor switch connector. ***Connector & terminal*** ***(T3) No. 3 — (T7) No. 2:*** ***(T3) No. 2 — (T7) No. 5:*** ***(T3) No. 1 — (T7) No. 3:*** ***(T3) No. 8 — (T7) No. 4:*** ***(T3) No. 4 — (T7) No. 1:***	Is each resistance less than 1 Ω?	Go to step **5**.	Repair the open circuit of harness.
5	**CHECK INHIBITOR SWITCH.** Move the select lever to each range, and measure the resistance between inhibitor switch connector terminals ***Connector & terminal*** ***(T7) No. 2 — (T7) No. 1:*** ***(T7) No. 5 — (T7) No. 1:*** ***(T7) No. 3 — (T7) No. 1:*** ***(T7) No. 4 — (T7) No. 1:***	Is the resistance of the corresponding range less than 1 MΩ?	Go to step **6**.	Replace the inhibitor switch. <Ref. to CVT-94, Inhibitor Switch.>
6	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Measure the voltage between each connector and chassis ground. ***Connector & terminal*** ***Transmission connector (B12 side)*** ***(B12) No. 3 (+) — Chassis ground (–):*** ***(B12) No. 2 (+) — Chassis ground (–):*** ***(B12) No. 1 (+) — Chassis ground (–):*** ***(B12) No. 8 (+) — Chassis ground (–):*** ***(B12) No. 4 (+) — Chassis ground (–):*** ***Transmission connector (T7 side)*** ***(T7) No. 2 (+) — Chassis ground (–):*** ***(T7) No. 5 (+) — Chassis ground (–):*** ***(T7) No. 3 (+) — Chassis ground (–):*** ***(T7) No. 4 (+) — Chassis ground (–):*** ***(T7) No. 1 (+) — Chassis ground (–):***	Is each voltage less than 1 V?	Go to step **7**.	Repair the harness which outputs 1 V or more.
7	**CHECK FOR POOR CONTACT.**	Is there poor contact between TCM, inhibitor switch, transmission ground?	Repair the poor contact.	Check the TCM.

C: DTC P0712 TRANSMISSION FLUID TEMPERATURE SENSOR CIRCUIT LOW INPUT

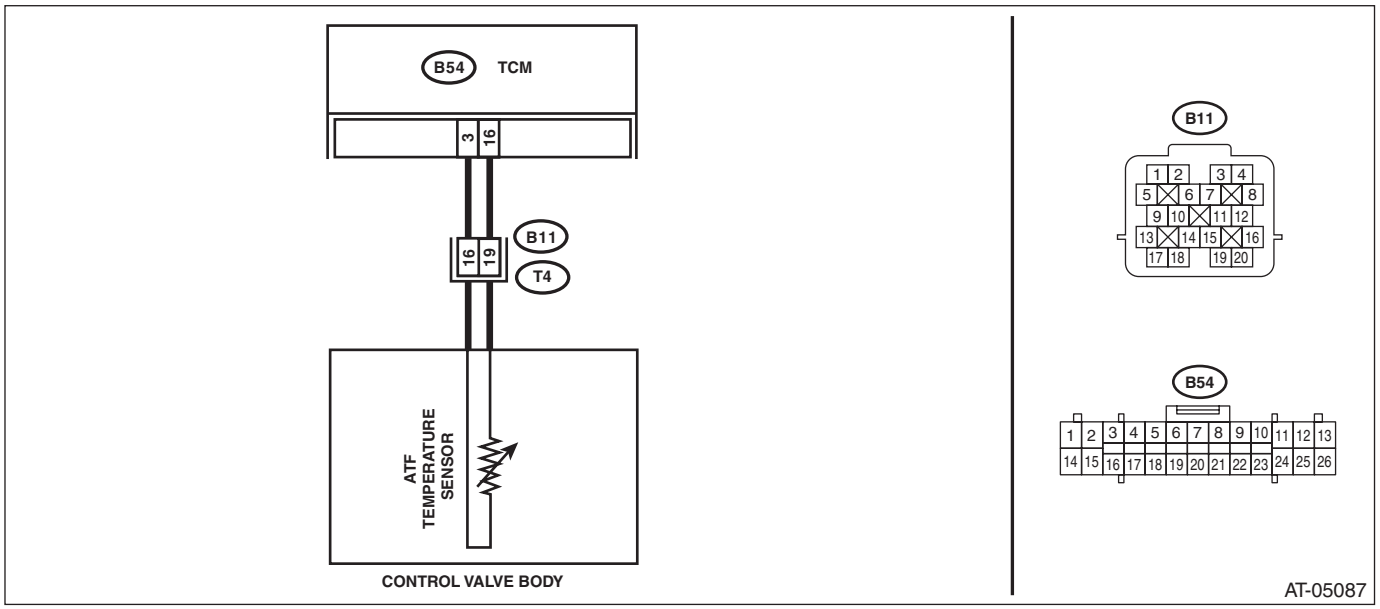
DTC DETECTING CONDITION:

Input signal circuit of ATF temperature sensor is shorted.

TROUBLE SYMPTOM:

- Excessive shift shock
- Shift characteristics malfunction

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM and transmission connectors. 3) Measure the resistance of harness between TCM connector and chassis ground. ***Connector & terminal*** ***(B54) No. 3 — Chassis ground:*** ***(B54) No. 16 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **2**.	Repair the short circuit of harness.
2	**CHECK HARNESS.** Measure the resistance between TCM connector and transmission body. ***Connector & terminal*** ***(T4) No. 16 — Transmission body:*** ***(T4) No. 19 — Transmission body:***	Is the resistance 1 MΩ or more?	Go to step **3**.	Repair the short circuit of harness.
3	**CHECK HARNESS INSIDE TRANSMISSION.** **CAUTION:** **Start work after ATF cools down.** 1) Remove the transmission oil pan. 2) Check for the harness pinch, damage.	Is there any malfunction in harness?	Go to step **4**.	Replace the transmission harness.
4	**CHECK ATF TEMPERATURE SENSOR.** Measure the resistance between transmission connector terminals. ***Connector & terminal*** ***(T4) No. 16 — No. 19:***	Is resistance as follows? Fluid temperature 0°C → approx. 6.2 kΩ Fluid temperature 20°C → approx. 2.6 kΩ Fluid temperature 80°C → approx. 370 Ω	Check the TCM.	Replace the transmission harness.

D: DTC P0713 TRANSMISSION FLUID TEMPERATURE SENSOR CIRCUIT HIGH INPUT

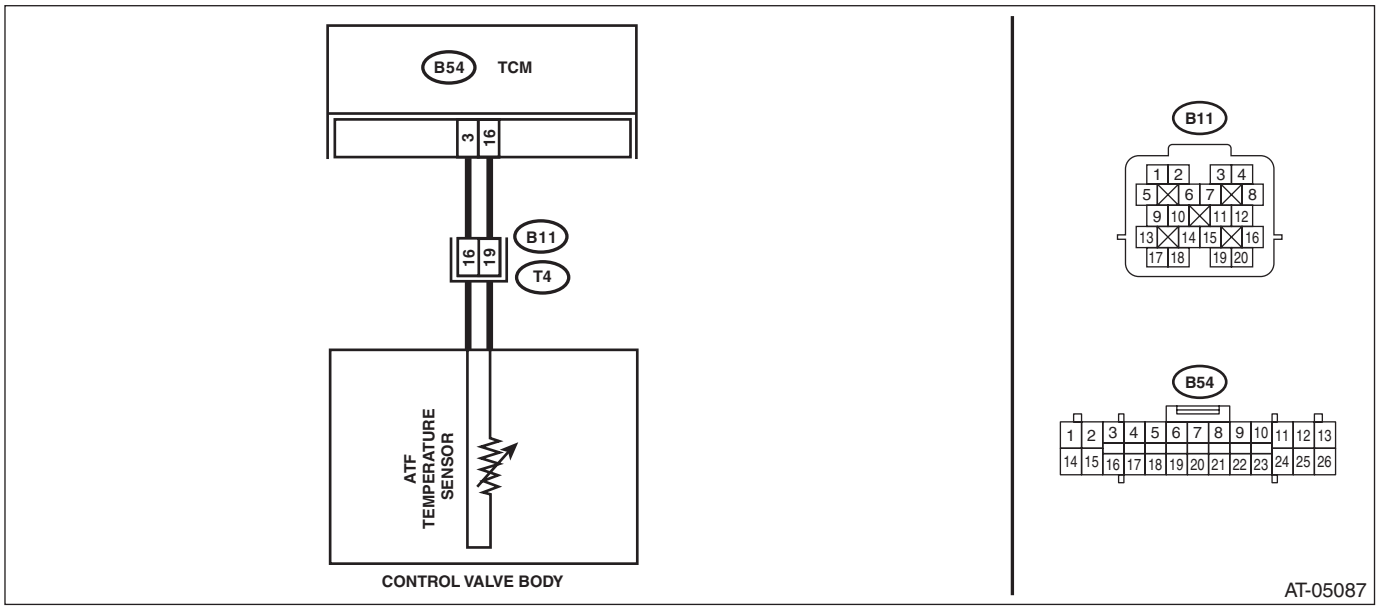
DTC DETECTING CONDITION:

Input signal circuit of ATF temperature sensor is open or shorted.

TROUBLE SYMPTOM:

- Excessive shift shock
- Shift characteristics malfunction

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Measure the voltage between TCM connectors. ***Connector & terminal*** ***(B54) No. 3 (+) — (B54) No. 16 (–):***	Is the voltage 5 V or more?	Repair the short circuit of harness.	Go to step **2**.
2	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Measure the resistance between TCM connector and transmission connectors. ***Connector & terminal*** ***(B54) No. 3 — (B11) No. 16:*** ***(B54) No. 16 — (B11) No. 19:***	Is the resistance less than 1 Ω?	Go to step **3**.	Repair the open circuit of harness.
3	**CHECK ATF TEMPERATURE SENSOR.** 1) Turn the ignition switch to OFF. 2) Connect the connectors to TCM and transmission. 3) Start the engine. 4) Warm up until the ATF temperature exceeds 50°C (122°F). 5) Turn the ignition switch to OFF. 6) Disconnect the transmission connector. 7) Measure the resistance between transmission connector terminals. ***Connector & terminal*** ***(T4) No. 16 — No. 19:***	Is the resistance 730 — 1120 Ω?	Go to step **4**.	Go to step **6**.

	Step	Check	Yes	No
4	**CHECK ATF TEMPERATURE SENSOR.** Measure the resistance between transmission connector terminals. ***Connector & terminal*** ***(T4) No. 16 — No. 19:***	Does the resistance value increase gradually while the ATF temperature decreases?	Go to step **5**.	Replace the transmission harness.
5	**CHECK INPUT SIGNAL FOR TCM.** 1) Connect the connector to transmission. 2) Turn the ignition switch to ON. (Do not start engine.) 3) Read the data of ATF temperature using Subaru Select Monitor.	Does the ATF temperature gradually decrease?	Check for poor contact of the ATF temperature sensor and transmission connector harness, and repair the fault location.	Go to step **6**.
6	**CHECK FOR POOR CONTACT.**	Is there poor contact of ATF temperature sensor circuit?	Repair the poor contact.	Check the TCM.

E: DTC P0719 BRAKE SWITCH CIRCUIT LOW

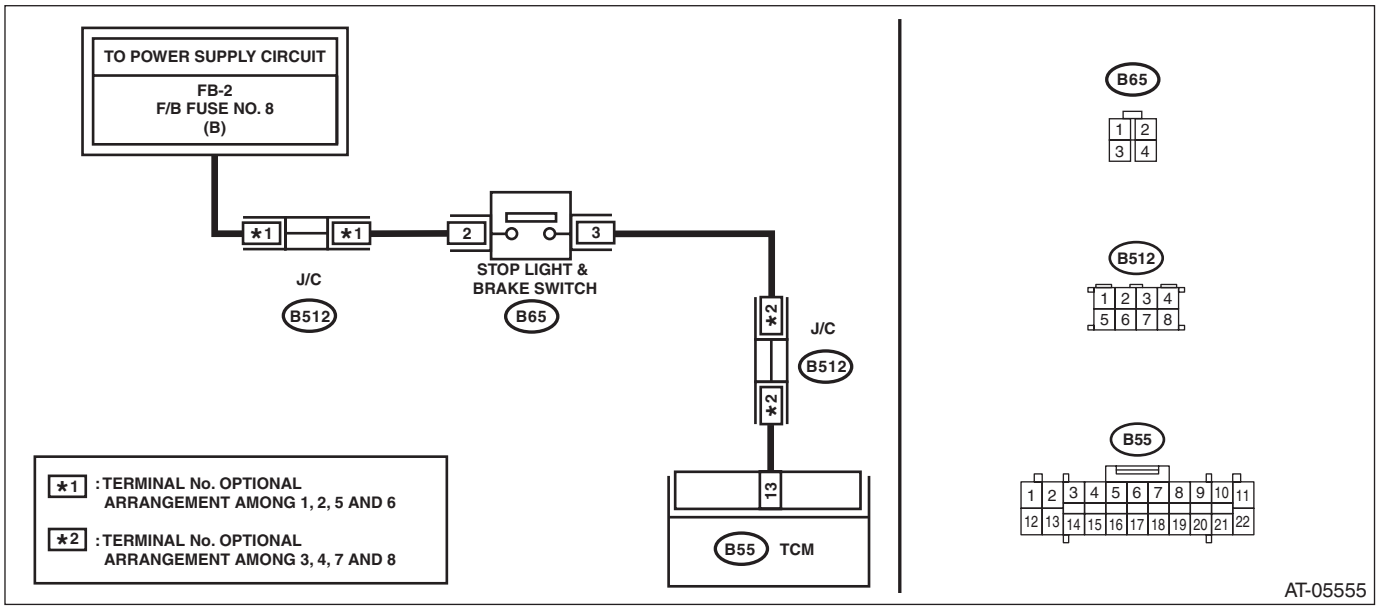
DTC DETECTING CONDITION:

Brake switch malfunction or input signal circuit of brake switch is open or shorted.

TROUBLE SYMPTOM:

- Gear is not shifted down when climbing a hill or driving down a hill.
- Neutral control does not operate.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK FUSE (NO. 8).** 1) Turn the ignition switch to OFF. 2) Remove the fuse (No. 8).	Is the fuse (No. 8) blown out?	Replace the fuse (No. 8). If the new fuse (No. 8) has blown out easily, repair the short circuit of harness between fuse (No. 8) and stop light switch.	Go to step **2**.
2	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM and stop light switch connector. 3) Measure the resistance between TCM connector and stop light switch connector. ***Connector & terminal*** ***(B55) No. 13 — (B65) No. 3:***	Is the resistance less than 1 Ω?	Go to step **3**.	Repair the open circuit of harness.
3	**CHECK HARNESS.** Measure the resistance between TCM connector and fuse (No. 8). ***Connector & terminal*** ***(B65) No. 2 — fuse (No. 8):***	Is the resistance less than 1 Ω?	Go to step **4**.	Repair the open circuit of harness.
4	**CHECK INPUT SIGNAL FOR TCM.** 1) Install the fuse (No. 8). 2) Connect the TCM and stop light switch connector. 3) Depress the brake pedal. 4) Measure the voltage between TCM connector and chassis ground. ***Connector & terminal*** ***(B55) No. 13 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **5**.	Replace the stop light switch.

	Step	Check	Yes	No
5	**CHECK INPUT SIGNAL FOR TCM.** With brake pedal depressed, read the data of "Stop lamp SW" using Subaru Select Monitor.	Is "ON" displayed?	Current condition is normal. Check for poor contact of the connector or harness, and repair the fault location.	Go to step **6**.
6	**CHECK FOR POOR CONTACT.**	Is there poor contact of input signal of stop light switch?	Repair the poor contact.	Check the TCM.

F: DTC P0720 OUTPUT SPEED SENSOR CIRCUIT

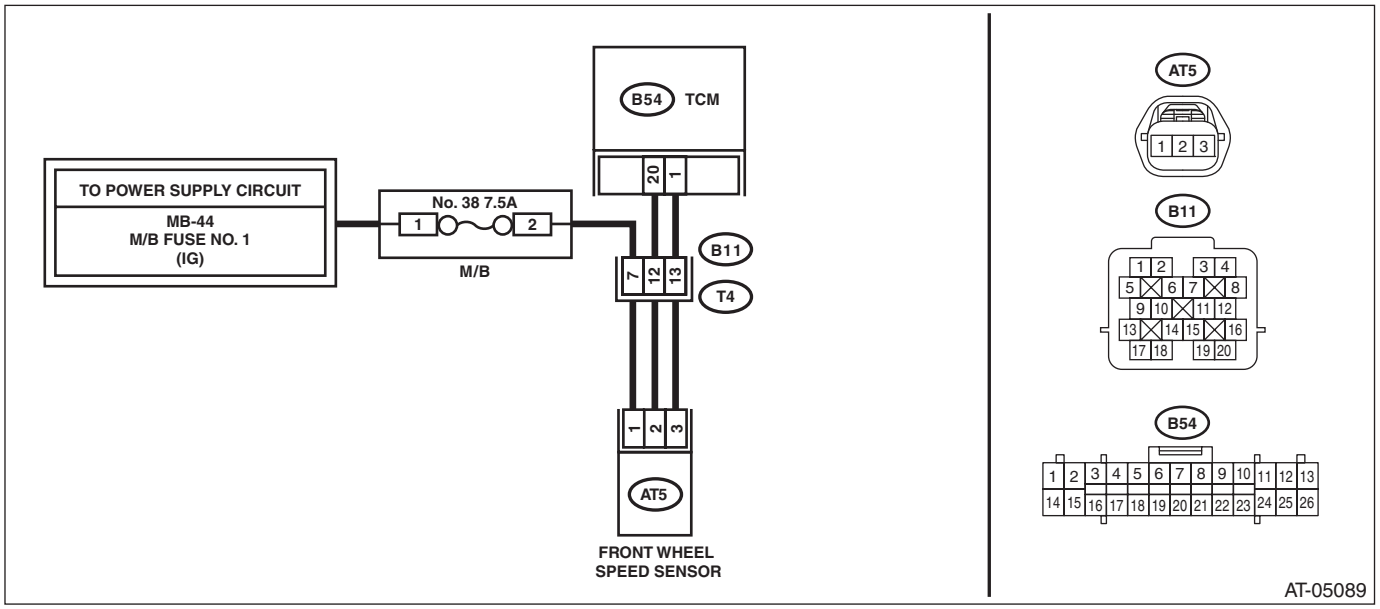
DTC DETECTING CONDITION:

- Input signal circuit of TCM is open or shorted.
- Front wheel speed sensor malfunction

TROUBLE SYMPTOM:

- Excessive shift shock on N → D or N → R.
- Driving performance is poor.
- Neutral control does not operate.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Remove the fuse (No. 38).	Is the fuse OK?	Go to step **2**.	Replace the fuse. If the fuse blows out easily, repair the short circuit of harness.
2	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM and transmission connectors. 3) Measure the resistance between TCM connector and transmission connectors. ***Connector & terminal*** ***(B54) No. 1 — (B11) No. 13:*** ***(B54) No. 20 — (B11) No. 12:*** ***(M/B No. 38) No. 2 — (B11) No. 7:***	Is the resistance less than 1 Ω?	Go to step **3**.	Repair the open circuit of harness.
3	**CHECK HARNESS.** Measure the resistance between TCM connector and chassis ground. ***Connector & terminal*** ***(B11) No. 7 — Chassis ground:*** ***(B11) No. 12 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Repair the short circuit of harness.

	Step	Check	Yes	No
4	**CHECK TRANSMISSION HARNESS.** 1) Connect the TCM connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between transmission connector and chassis ground. ***Connector & terminal*** ***(B11) No. 12 (+) — Chassis ground (–):*** NOTE: Delete the TCM memory after completing the CVT control system diagnosis. <Ref. to CVT(diag)-18, Clear Memory Mode.>	Is the voltage approx. 5 V?	Go to step **5**.	Repair the open circuit of harness or poor contact of connector.
5	**CHECK INPUT SIGNAL FOR TCM.** 1) Turn the ignition switch to OFF. 2) Connect the transmission connector. 3) Lift up the vehicle. 4) Start the engine. 5) Slowly increase the speed to 30 km/h (18 MPH). 6) Read the data of "Front Wheel Speed" using Subaru Select Monitor.	Does the value of "Front Wheel Speed" change according to the engine speed?	Current condition is normal. Repair the poor contacts of harnesses of front wheel speed sensor and transmission connector.	Go to step **6**.
6	**CHECK TRANSMISSION HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the transmission connector. 3) Lift up the vehicle. 4) Disconnect the front wheel speed sensor connector. 5) Measure the resistance between transmission connector and front wheel speed sensor connector. ***Connector & terminal*** ***(T4) No. 7 — (AT5) No. 1:*** ***(T4) No. 12 — (AT5) No. 2:*** ***(T4) No. 13 — (AT5) No. 3:***	Is the resistance less than 1 Ω?	Replace the front wheel speed sensor. <Ref. to CVT-105, Front Wheel Speed Sensor.>	Replace the transmission harness.

G: DTC P0724 BRAKE SWITCH CIRCUIT HIGH

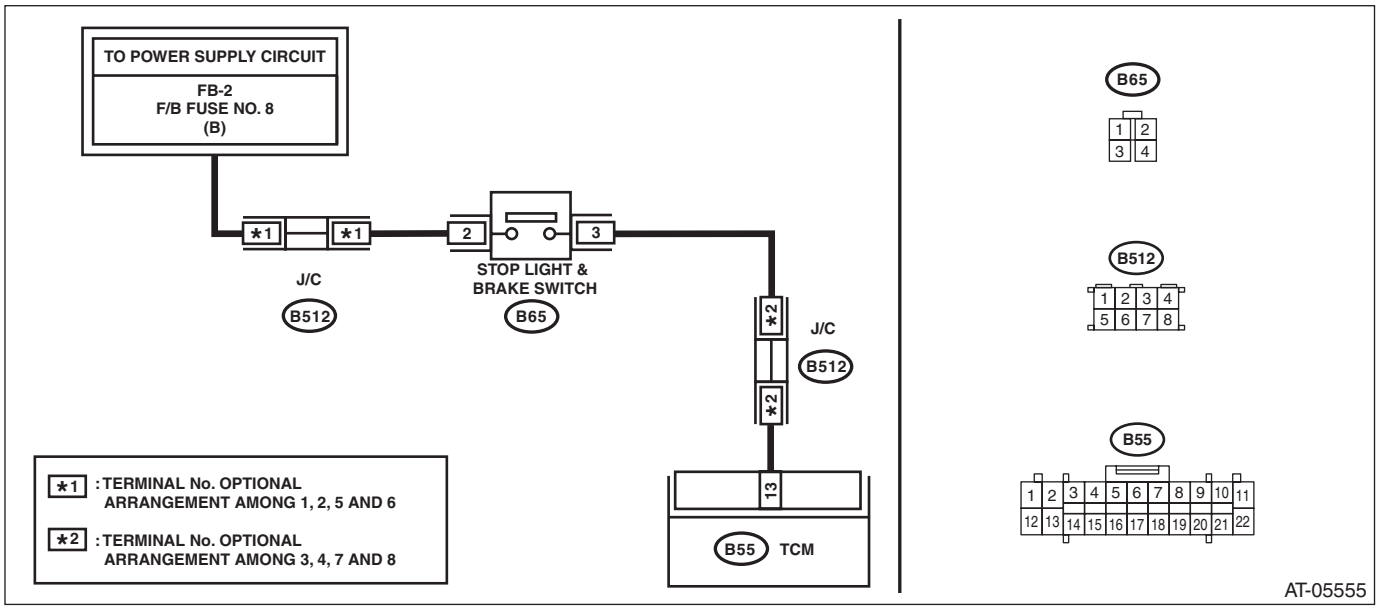
DTC DETECTING CONDITION:

Brake switch malfunction or input signal circuit of brake switch is shorted.

TROUBLE SYMPTOM:

- Gear is not shifted down when driving a down hill.
- Neutral control does not operate.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK STOP LIGHT SWITCH.** 1) Turn the ignition switch to OFF. 2) Disconnect the stop light switch connector. 3) Measure the resistance of harness between stop light switch connectors. ***Connector & terminal*** ***(B65) No. 2 — No. 3:***	Is the resistance 1 MΩ or more?	Go to step **2**.	Replace the stop light switch.
2	**CHECK HARNESS.** 1) Disconnect the TCM connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between TCM connector and chassis ground. ***Connector & terminal*** ***(B55) No. 13 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Repair the short circuit of harness.	Go to step **3**.
3	**CHECK INPUT SIGNAL FOR TCM.** 1) Connect the TCM and stop light switch connector. 2) Turn the ignition switch to ON. 3) Read the data of “Stop Light Switch” using Subaru Select Monitor.	Is “OFF” displayed?	Current condition is normal. Check for poor contact of the connector or harness, and repair the fault location.	Go to step **4**.
4	**CHECK FOR POOR CONTACT.**	Is there poor contact of input signal of stop light switch?	Repair the poor contact.	Check the TCM.

H: DTC P0730 GEARSHIFT CONTROL PERFORMANCE ABNORMAL

DTC DETECTING CONDITION:

- Control valve hydraulic circuit malfunction
- Primary UP solenoid, primary Down solenoid characteristics malfunction
- CVT chain slippage

TROUBLE SYMPTOM:

- Acceleration is poor during standing start.
- Shift control malfunction
- Engine speed increases abruptly.

	Step	Check	Yes	No
1	**CHECK TRANSMISSION FLUID.** Check the condition of ATF. <Ref. to CVT-39, CONDITION CHECK, CVTF.>	Is the ATF OK?	Go to step **2**.	Check according to the "corrective action" of ATF (CVTF) "CONDITION CHECK". <Ref. to CVT-39, CONDITION CHECK, CVTF.>
2	**CHECK TRANSMISSION FLUID.** Check the amount of ATF. <Ref. to CVT-35, ADJUSTMENT, CVTF.>	Is the ATF amount correct?	Go to step **3**.	Adjust the amount of ATF. <Ref. to CVT-35, ADJUSTMENT, CVTF.>
3	**CHECK INPUT SIGNAL FOR TCM.** 1) Lift up the vehicle. 2) Start the engine. 3) Warm up until the ATF temperature reaches to 40 — 70°C (104 — 158°F). 4) Shift the select lever to "P" range. 5) Stabilize the engine speed at idle. 6) Read the data of "Actual secondary pressure" using Subaru Select Monitor.	Is "Actual secondary pressure" 0.5 — 1.5 MPa?	Go to step **4**.	Perform the diagnosis according to DTC P0841 procedure.
4	**CHECK INPUT SIGNAL FOR TCM.** Read the data of "Actual Gear Ratio" using Subaru Select Monitor.	Is "Actual Gear Ratio" 2.0 — 2.4?	Go to step **5**.	Go to step **6**.
5	**CHECK INPUT SIGNAL FOR TCM.** 1) Set the select lever to the "D" range. 2) Slowly increase the speed to 40 km/h (24 MPH) and keep the constant speed. 3) Read the data of "Actual Gear Ratio" using Subaru Select Monitor.	Is "Actual Gear Ratio" 0.5 — 0.8?	Go to step **6**.	Replace the transmission assembly. <Ref. to CVT-54, Automatic Transmission Assembly.>
6	**DRIVING CHECK BY INSPECTION MODE.** 1) Turn the ignition switch to OFF. 2) Perform a drive check based on the "Inspection Mode". <Ref. to CVT(diag)-19, Inspection Mode.>	Does the AT OIL TEMP light blink and is DTC P0730 displayed?	Replace the transmission assembly. <Ref. to CVT-54, Automatic Transmission Assembly.>	If there is shift problems, abrupt increase of engine speed, standing start problems, replace the transmission assembly. <Ref. to CVT-54, Automatic Transmission Assembly.> If it is normal, temporary poor contact occurs.

I: DTC P0801 REVERSE INHIBIT CONTROL CIRCUIT

NOTE:
DTC P0801 AT shift lock solenoid circuit, refer to “LAN System”. <Ref. to LAN(diag)-10, Read Diagnostic Trouble Code (DTC).>

J: DTC P0841 SECONDARY OIL PRESSURE SENSOR PERFORMANCE

DTC DETECTING CONDITION:

- Control valve hydraulic circuit malfunction
- Secondary pressure sensor fault or characteristics malfunction

TROUBLE SYMPTOM:

- Acceleration is poor during standing start.
- Shift control malfunction
- Engine speed increases abruptly.

	Step	Check	Yes	No
1	**CHECK TRANSMISSION FLUID.** Check the condition of ATF. <Ref. to CVT-39, CONDITION CHECK, CVTF.>	Is the ATF OK?	Go to step **2**.	Check according to the "corrective action" of ATF (CVTF) "CONDITION CHECK". <Ref. to CVT-39, CONDITION CHECK, CVTF.>
2	**CHECK TRANSMISSION FLUID.** Check the amount of ATF. <Ref. to CVT-35, ADJUSTMENT, CVTF.>	Is the ATF amount correct?	Go to step **3**.	Adjust the amount of ATF. <Ref. to CVT-35, ADJUSTMENT, CVTF.>
3	**CHECK INPUT SIGNAL FOR TCM.** 1) Lift up the vehicle. 2) Start the engine. 3) Warm up until the ATF temperature reaches to 40 — 70°C (104 — 158°F). 4) Shift the select lever to "P" range. 5) Stabilize the engine speed at idle. 6) Read the data of "Actual secondary pressure" using Subaru Select Monitor.	Is "Actual secondary pressure" 0.5 — 1.5 MPa?	Go to step **4**.	Go to step **6**.
4	**CHECK INPUT SIGNAL FOR TCM.** 1) Keep the engine speed at 3000 rpm. 2) Read the data of "Actual secondary pressure" using Subaru Select Monitor.	Is "Actual secondary pressure" higher than Step 3 value? Does the value change according to the engine speed, and is the value is 1.5 — 2.5 MPa?	Go to step **5**.	Go to step **6**.
5	**CHECK TCM INPUT SIGNAL (STALL TEST).** 1) Apply the electronic parking brake. 2) Set the select lever to the "D" range. 3) Depress the brake pedal firmly. 4) Slowly open the accelerator fully, and stabilize the engine speed. 5) Read the data of "Actual secondary pressure" using Subaru Select Monitor.	Is "Actual secondary pressure" higher than Step 4 value? Does the value change according to the engine speed, and is the value is 5.0 — 6.0 MPa?	Go to step **7**.	Go to step **6**.
6	**CHECK SECONDARY PRESSURE SENSOR.**	Is the secondary pressure sensor damaged from the standpoint of appearance?	Replace the secondary pressure sensor. <Ref. to CVT-107, Secondary Pressure Sensor.>	Perform the diagnosis according to DTC P0842, P0843 procedure.

Step		Check	Yes	No
7	**DRIVING CHECK BY INSPECTION MODE.** 1) Turn the ignition switch to OFF. 2) Perform a drive check based on the “Inspection Mode”. <Ref. to CVT(diag)-19, Inspection Mode.>	Does the AT OIL TEMP light blink and is DTC P0841 displayed?	Perform the secondary pressure test. <Ref. to CVT-49, Secondary Pressure (Line Pressure) Test.>	If there is shift problems, abrupt increase of engine speed, standing start problems, replace the transmission assembly. <Ref. to CVT-54, Automatic Transmission Assembly.> If it is normal, temporary poor contact occurs.

K: DTC P0842 SECONDARY OIL PRESSURE SENSOR CIRCUIT (LOW)

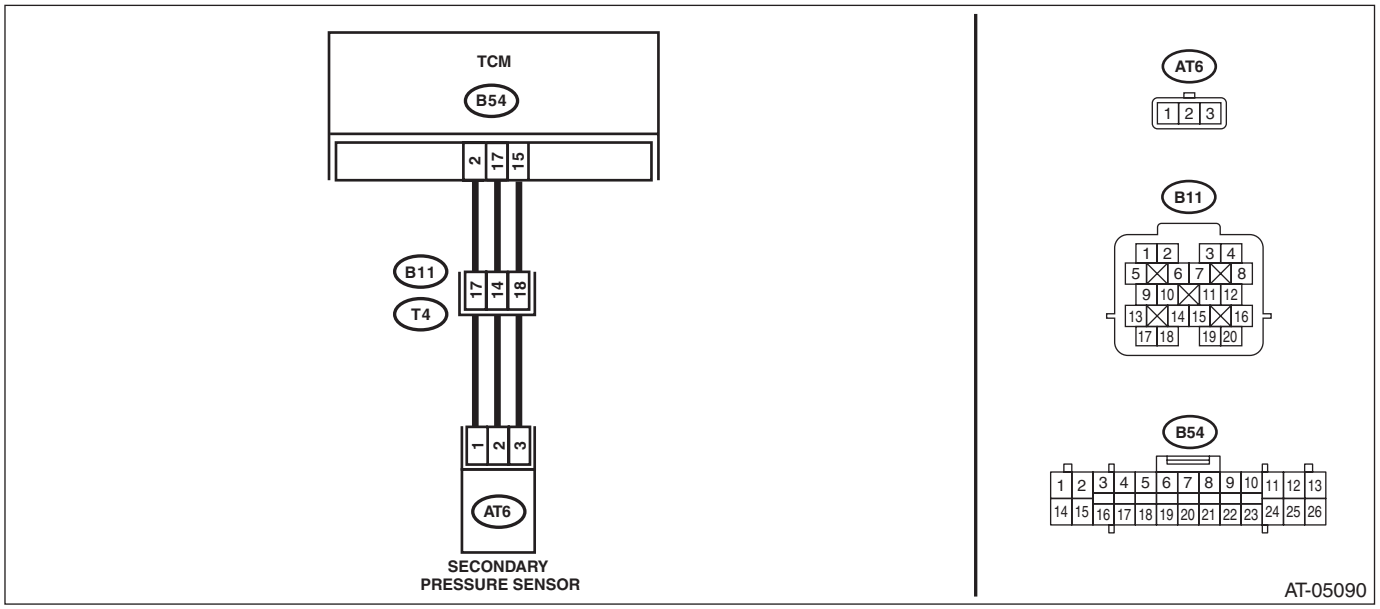
DTC DETECTING CONDITION:

Input signal circuit of secondary pressure sensor is open or shorted.

TROUBLE SYMPTOM:

Shift characteristics malfunction

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK INPUT SIGNAL FOR TCM.** 1) Start the engine. 2) Warm up until the ATF temperature reaches to 40 — 70°C (104 — 158°F). 3) Shift the select lever to "P" range. 4) Stabilize the engine speed at idle. 5) Read the data of "Actual secondary pressure" using Subaru Select Monitor.	Is "Actual secondary pressure" 0.5 — 1.5 MPa?	Check for poor contact of connector.	Go to step **2**.
2	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM and transmission connectors. 3) Measure the resistance between TCM connector and transmission connectors. ***Connector & terminal*** ***(B54) No. 2 — (B11) No. 17:*** ***(B54) No. 15 — (B11) No. 18:*** ***(B54) No. 17 — (B11) No. 14:***	Is the resistance less than 1 Ω?	Go to step **3**.	Repair the open circuit of harness.
3	**CHECK HARNESS.** Measure the resistance between TCM connector and chassis ground. ***Connector & terminal*** ***(B54) No. 2 — Chassis ground:*** ***(B54) No. 17 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Repair the short circuit of harness.

	Step	Check	Yes	No
4	**CHECK TRANSMISSION HARNESS.** 1) Disconnect the secondary pressure sensor connector. 2) Measure the resistance between transmission connector and secondary pressure sensor connector. ***Connector & terminal*** ***(T4) No. 14 — (AT6) No. 2:*** ***(T4) No. 17 — (AT6) No. 1:*** ***(T4) No. 18 — (AT6) No. 3:***	Is the resistance less than 1 Ω?	Go to step **5**.	Repair the open circuit of harness.
5	**CHECK TRANSMISSION HARNESS.** Measure the resistance between transmission connector and chassis ground. ***Connector & terminal*** ***(T4) No. 14 — Chassis ground:*** ***(T4) No. 17 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **6**.	Repair the short circuit of harness.
6	**CHECK SENSOR POWER SUPPLY.** 1) Connect the connectors of TCM and transmission. 2) Turn the ignition switch to ON. 3) Measure the voltage between secondary pressure sensor connector terminals. ***Connector & terminal*** ***(AT6) No. 1 (+) — (AT6) No. 3 (–):***	Is the voltage 4.5 V or more?	Replace the secondary pressure sensor. <Ref. to CVT-107, Secondary Pressure Sensor.>	Check for poor contact of the connector, and repair the fault location.

L: DTC P0843 SECONDARY OIL PRESSURE SENSOR CIRCUIT (HIGH)

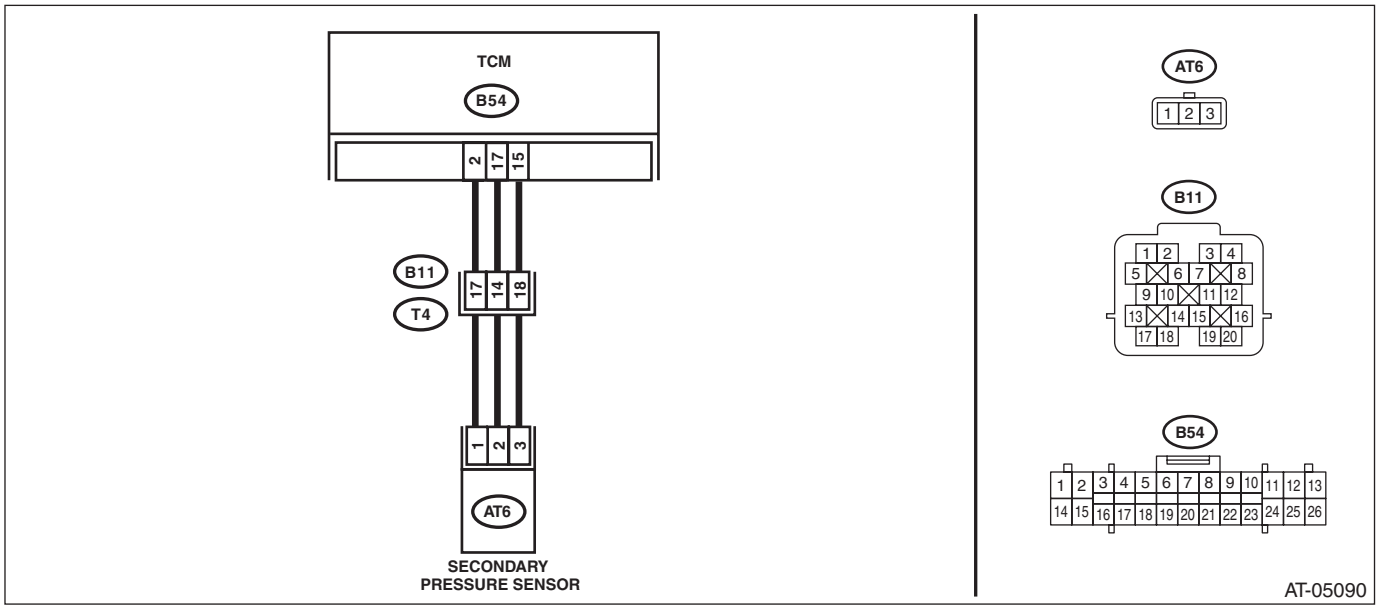
DTC DETECTING CONDITION:

Input signal circuit of secondary pressure sensor is shorted.

TROUBLE SYMPTOM:

Shift characteristics malfunction

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK INPUT SIGNAL FOR TCM.** 1) Start the engine. 2) Warm up until the ATF temperature reaches to 40 — 70°C (104 — 158°F). 3) Shift the select lever to "P" range. 4) Stabilize the engine speed at idle. 5) Read the data of "Actual secondary pressure" using Subaru Select Monitor.	Is "Actual secondary pressure" 0.5 — 1.5 MPa?	Check for poor contact of connector.	Go to step **2**.
2	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM and transmission connectors. 3) Turn the ignition switch to ON. 4) Measure the voltage between TCM connector and chassis ground. ***Connector & terminal*** ***(B54) No. 2 (+) — Chassis ground (–):*** ***(B54) No. 17 (+) — Chassis ground (–):***	Is the voltage approx. 0 V?	Go to step **3**.	Repair the short circuit of harness.
3	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Measure the resistance between TCM connector terminals. ***Connector & terminal*** ***(B54) No. 2 — (B54) No. 17:***	Is the resistance less than 1 Ω?	Repair the short circuit of harness.	Go to step **4**.

	Step	Check	Yes	No
4	**CHECK TRANSMISSION HARNESS.** 1) Disconnect the secondary pressure sensor connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between transmission connector and chassis ground. ***Connector & terminal*** ***(T4) No. 14 (+) — Chassis ground (–):*** ***(T4) No. 17 (+) — Chassis ground (–):***	Is the voltage approx. 0 V?	Go to step **5**.	Repair the short circuit of harness.
5	**CHECK TRANSMISSION HARNESS.** 1) Turn the ignition switch to OFF. 2) Measure the resistance between transmission connector terminals. ***Connector & terminal*** ***(T4) No. 14 — (T4) No. 17:***	Is the resistance less than 1 Ω?	Repair the short circuit of harness.	Go to step **6**.
6	**CHECK SENSOR POWER SUPPLY.** 1) Connect the connectors of TCM and transmission. 2) Turn the ignition switch to ON. 3) Measure the voltage between secondary pressure sensor connector terminals. ***Connector & terminal*** ***(AT6) No. 1 (+) — (AT6) No. 3 (–):***	Is the voltage 4.5 V or more?	Replace the secondary pressure sensor. <Ref. to CVT-107, Secondary Pressure Sensor.>	Check for poor contact of the connector, and repair the fault location.

M: DTC P0890 AT SELF-SHUT RELAY DIAGNOSIS (LOW)

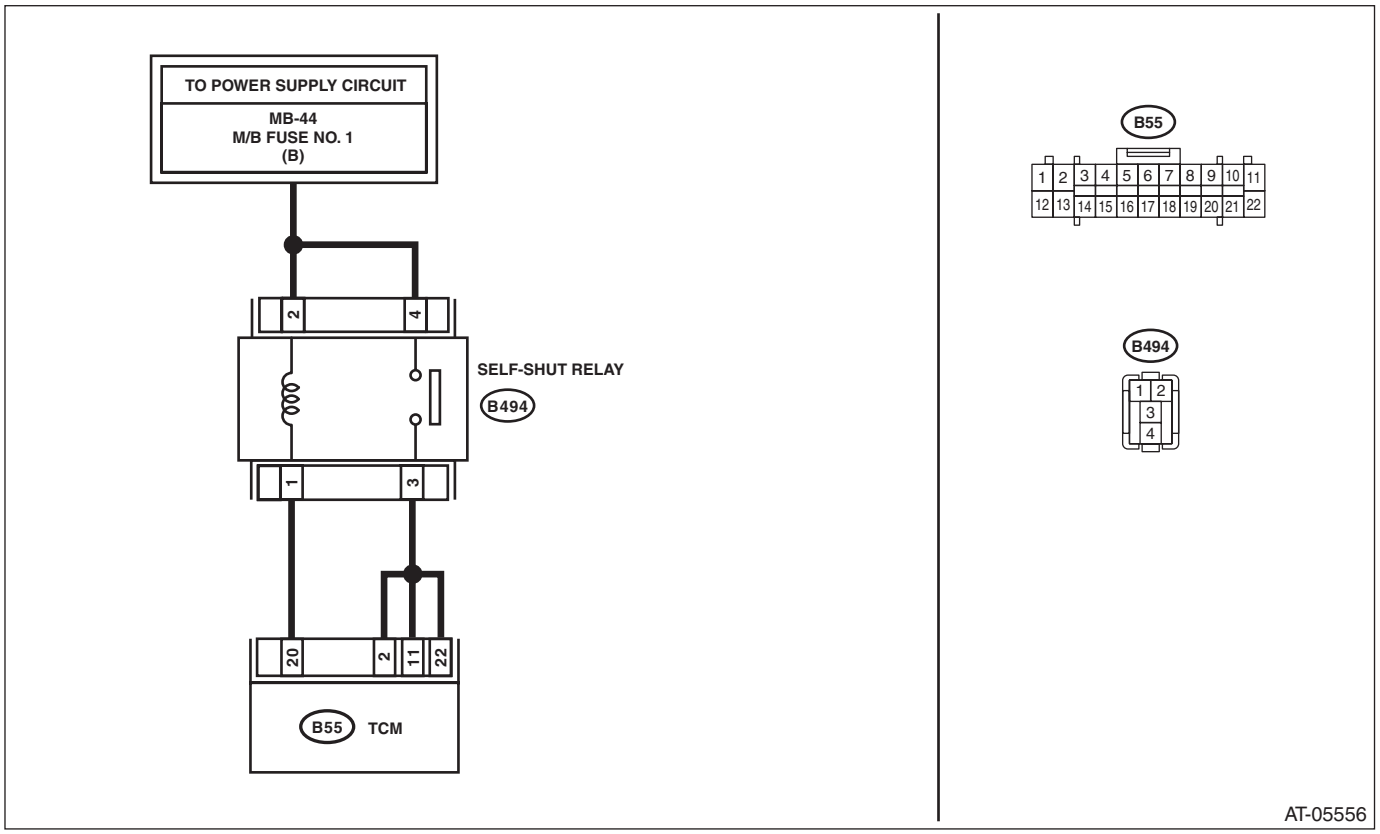
DTC DETECTING CONDITION:

- Power supply circuit of TCM is open or shorted.
- Self shut relay malfunction

TROUBLE SYMPTOM:

Gear is not changed.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK HARNESS.** 1) Disconnect the TCM and self shut relay connectors. 2) Measure the resistance between TCM connector and self shut relay connector. ***Connector & terminal*** ***(B55) No. 20 — (B494) No. 1:*** ***(B55) No. 2 — (B494) No. 3:*** ***(B55) No. 11 — (B494) No. 3:*** ***(B55) No. 22 — (B494) No. 3:***	Is the resistance less than 1 Ω?	Go to step **2**.	Repair the open circuit of harness.
2	**CHECK HARNESS.** Measure the resistance between TCM connector and chassis ground. ***Connector & terminal*** ***(B55) No. 20 — Chassis ground:*** ***(B55) No. 2 — Chassis ground:*** ***(B55) No. 11 — Chassis ground:*** ***(B55) No. 22 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **3**.	Repair the short circuit of harness.

	Step	Check	Yes	No
3	**CHECK RELAY POWER SUPPLY.** Measure the voltage between self shut relay connector and chassis ground. ***Connector & terminal*** ***(B494) No. 2 (+) — Chassis ground (–):*** ***(B494) No. 4 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **4**.	Repair the open or short circuit of harness.
4	**CHECK SELF SHUT RELAY.** Measure the resistance between self shut relay terminals. ***Connector & terminal*** ***(B494) No. 1 — (B494) No. 2:***	Is the resistance 110 — 140 Ω?	Go to step **5**.	Replace the self shut relay.
5	**CHECK SELF SHUT RELAY.** Measure the resistance between self shut relay terminals. ***Connector & terminal*** ***(B494) No. 3 — (B494) No. 4:***	Is the resistance 1 MΩ or more?	Go to step **6**.	Replace the self shut relay.
6	**CHECK INPUT SIGNAL FOR TCM.** 1) Connect the connectors of TCM and self shut relay. 2) Read the data of “Battery voltage” using Subaru Select Monitor.	Is the “Battery voltage” 10 V or more?	Current condition is normal. Check for poor contact of the connector or harness, and repair the fault location.	Go to step **7**.
7	**CHECK FOR POOR CONTACT.**	Is there poor contact of the self shut relay circuit?	Repair the poor contact.	Check the TCM.

N: DTC P0951 MANUAL SWITCH

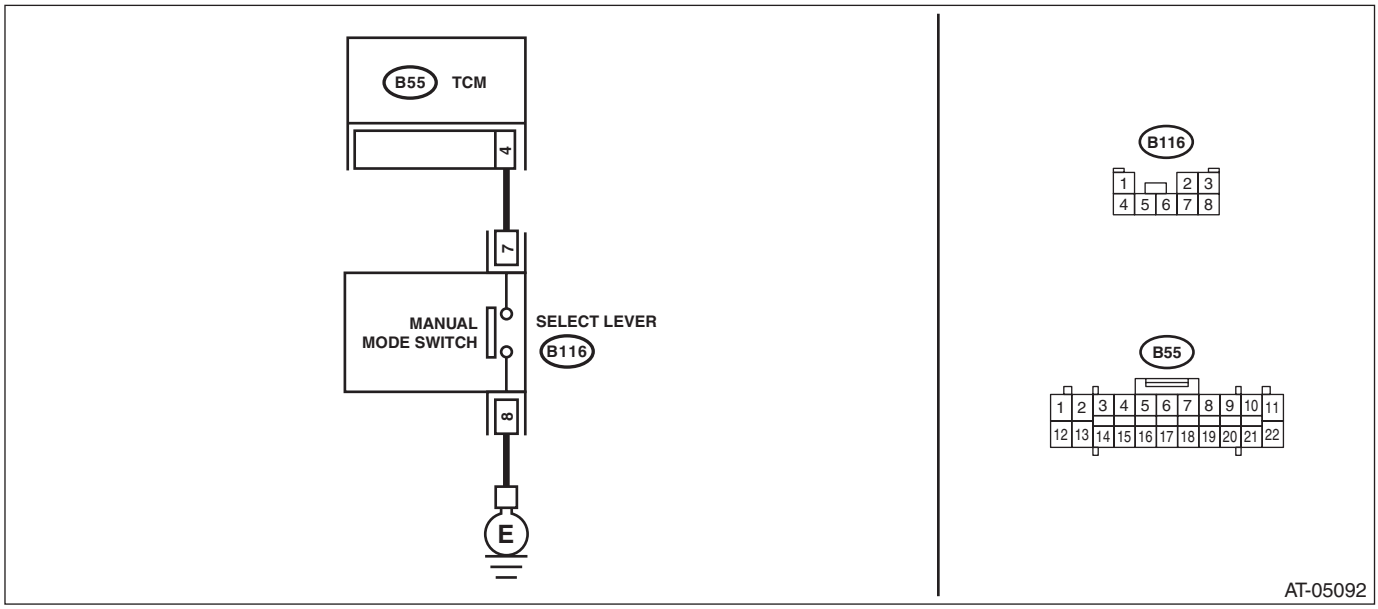
DTC DETECTING CONDITION:

Input signal circuit of manual mode switch is open or shorted.

TROUBLE SYMPTOM:

Manual mode can not be set.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the manual mode switch connector. 3) Measure the resistance between manual mode switch connector and chassis ground. ***Connector & terminal*** ***(B116) No. 8 — Chassis ground:***	Is the resistance less than 1 Ω?	Go to step **2**.	Repair the open circuit of harness.
2	**CHECK MANUAL MODE SWITCH.** Measure the resistance between manual mode switch terminals. ***Connector & terminal*** ***(B116) No. 7 — No. 8:***	Is the resistance 1 MΩ or more?	Go to step **3**.	Replace the select lever assembly. <Ref. to CS-21, Select Lever.>
3	**CHECK MANUAL MODE SWITCH.** 1) Shift the select lever to manual mode. 2) Measure the resistance between manual mode switch terminals. ***Connector & terminal*** ***(B116) No. 7 — No. 8:***	Is the resistance less than 1 Ω?	Go to step **4**.	Replace the select lever assembly. <Ref. to CS-21, Select Lever.>
4	**CHECK HARNESS.** 1) Disconnect the TCM connector. 2) Measure the resistance between TCM connector and manual mode switch connector. ***Connector & terminal*** ***(B116) No. 7 — (B55) No. 4:***	Is the resistance less than 1 Ω?	Go to step **5**.	Repair the open circuit of harness or poor contact of connector.
5	**CHECK HARNESS.** Measure the resistance between manual mode switch connector and chassis ground. ***Connector & terminal*** ***(B116) No. 7 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **6**.	Repair the short circuit of harness.

	Step	Check	Yes	No
6	**CHECK INPUT SIGNAL FOR TCM.** 1) Connect the TCM and manual mode switch connector. 2) Turn the ignition switch to ON. 3) Set the select lever to the “D” range. 4) Read the “Manual Mode Switch” data using the Subaru Select Monitor.	Does “Manual Mode Switch” display “ON” with select lever in manual mode, and “OFF” with select lever in other than manual mode?	Current condition is normal.	Go to step **7**.
7	**CHECK FOR POOR CONTACT.**	Is there poor contact of the manual mode switch circuit?	Repair the poor contact.	Check the TCM.

O: DTC P0962 SECONDARY SOLENOID CIRCUIT (LOW)

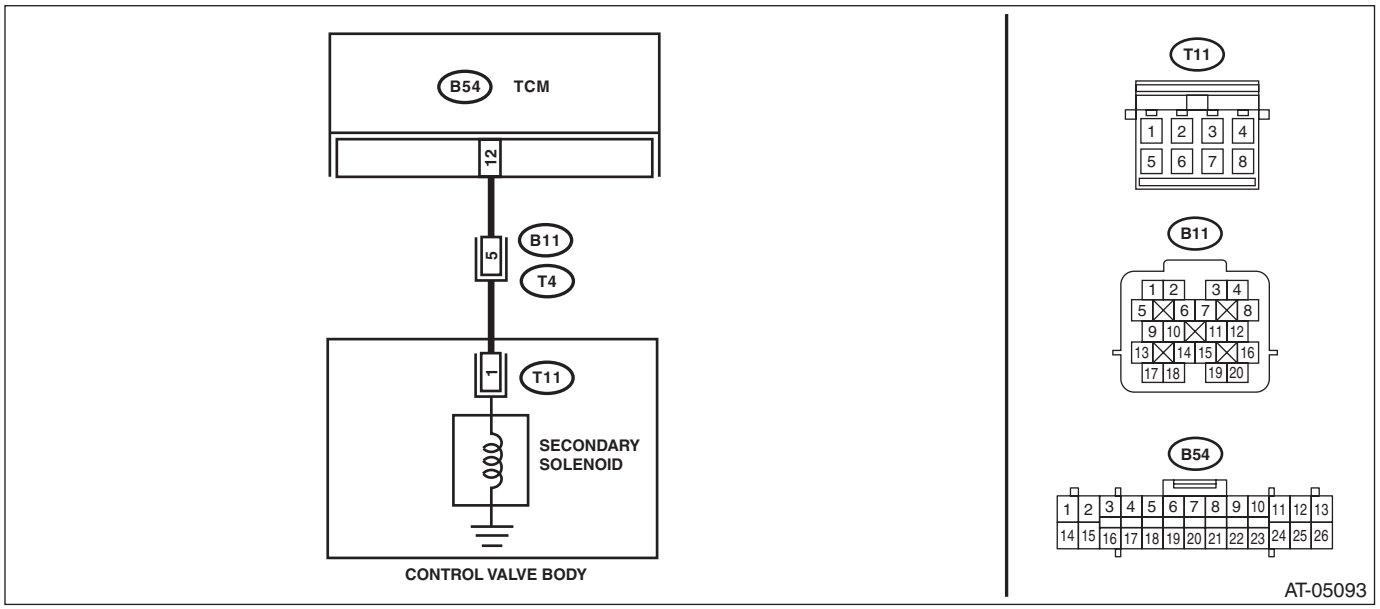
DTC DETECTING CONDITION:

Output signal circuit of secondary solenoid is shorted.

TROUBLE SYMPTOM:

- Engine speed increases abruptly, and can not start.
- Engine speed increases abruptly during driving.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK INPUT SIGNAL FOR TCM.** 1) After driving with warm up condition, park the vehicle while depressing the brake at "N" range. 2) Read the data of "Sec. Sol. Set Current" and "Sec. Sol. Actual Current" using Subaru Select Monitor.	Does the value of "Sec. Sol. Set Current" and "Sec. Sol. Actual Current" almost correspond?	Check for poor contact of connector.	Go to step **2**.
2	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM and transmission connectors. 3) Measure the resistance between TCM connector and chassis ground. ***Connector & terminal*** ***(B54) No. 12 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **3**.	Repair the short circuit of harness.
3	**CHECK SECONDARY SOLENOID.** Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 5 — Transmission body:***	Is the resistance approx. 7 Ω? (when engine cold)	Check for poor contact of the connector, and repair the fault location.	Go to step **4**.
4	**CHECK HARNESS INSIDE TRANSMISSION.** **CAUTION:** **Start work after ATF cools down.** 1) Remove the transmission oil pan. 2) Check for the harness pinch, damage.	Is there any malfunction in harness?	Go to step **5**.	Replace the transmission harness.

	Step	Check	Yes	No
5	**CHECK HARNESS INSIDE TRANSMISSION.** 1) Disconnect the control valve body connector. 2) Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 5 — Transmission body:***	Is the resistance 1 MΩ or more?	Replace the control valve body. <Ref. to CVT-109, Control Valve Body.>	Replace the transmission harness.

P: DTC P0963 SECONDARY SOLENOID CIRCUIT (HIGH)

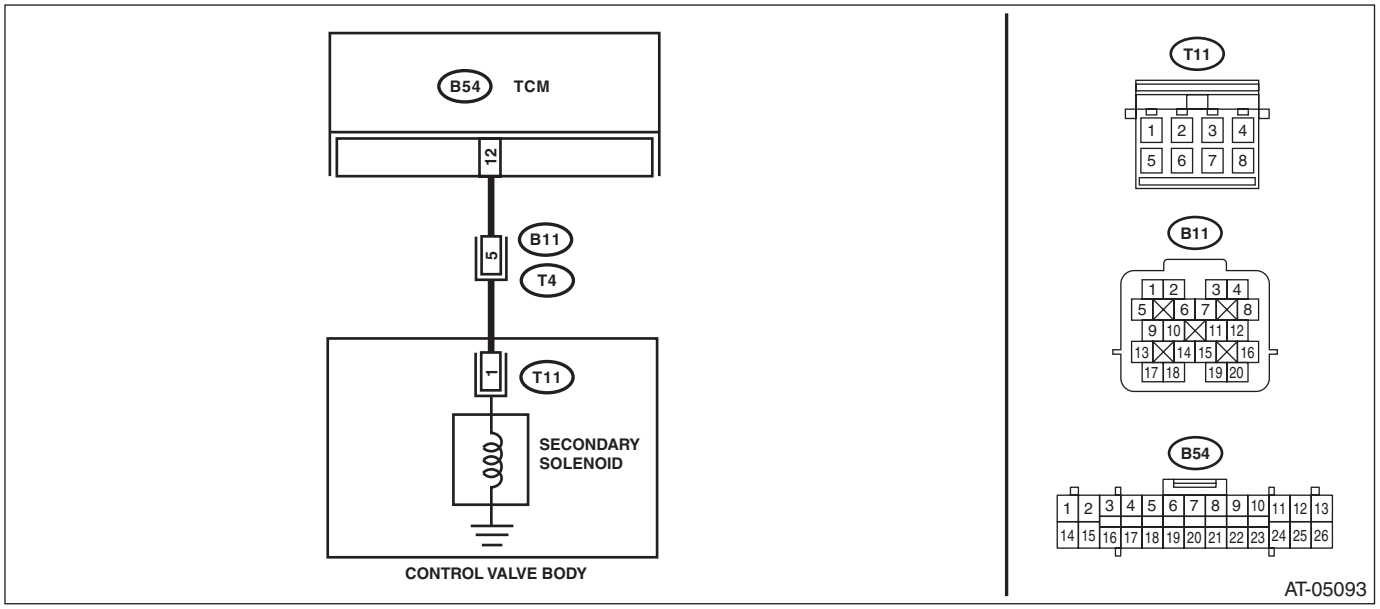
DTC DETECTING CONDITION:

- Output signal circuit of secondary solenoid is open or shorted.
- Secondary solenoid has open circuit inside.

TROUBLE SYMPTOM:

- Engine speed increases abruptly, and can not start.
- Engine speed increases abruptly during driving.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK INPUT SIGNAL FOR TCM.** 1) After driving with warm up condition, park the vehicle while depressing the brake at "N" range. 2) Read the data of "Sec. Sol. Set Current" and "Sec. Sol. Actual Current"using Subaru Select Monitor.	Does the value of "Sec. Sol. Set Current" and "Sec. Sol. Actual Current" almost correspond?	Check for poor contact of connector.	Go to step **2**.
2	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM and transmission connectors. 3) Measure the resistance between TCM connector and transmission connectors. ***Connector & terminal*** ***(B54) No. 12 — (B11) No. 5:***	Is the resistance less than 1 Ω?	Go to step **3**.	Repair the open circuit of harness.
3	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Measure the voltage between TCM connector and chassis ground. ***Connector & terminal*** ***(B54) No. 12 (+) — Chassis ground (–):***	Is the voltage approx. 0 V?	Go to step **4**.	Repair the short circuit of harness.
4	**CHECK SECONDARY SOLENOID.** Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 5 — Transmission body:***	Is the resistance approx. 7 Ω? (when engine cold)	Check for poor contact of the connector, and repair the fault location.	Go to step **5**.

	Step	Check	Yes	No
5	**CHECK HARNESS INSIDE TRANSMISSION.** **CAUTION:** **Start work after ATF cools down.** 1) Remove the transmission oil pan. 2) Check for the harness pinch, damage.	Is there any malfunction in harness?	Go to step **6**.	Replace the transmission harness.
6	**CHECK HARNESS INSIDE TRANSMISSION.** 1) Disconnect the control valve body connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 5 (+) — Transmission body (–):***	Is the voltage approx. 0 V?	Replace the control valve body. <Ref. to CVT-109, Control Valve Body.>	Replace the transmission harness.

Q: DTC P0965 FORWARD & REVERSE SOLENOID FUNCTION

DTC DETECTING CONDITION:

- Control valve hydraulic circuit malfunction
- F&R solenoid characteristics malfunction
- Clutch slippage caused by forward clutch facing deterioration
- Clutch slippage caused by hydraulic pressure leaks

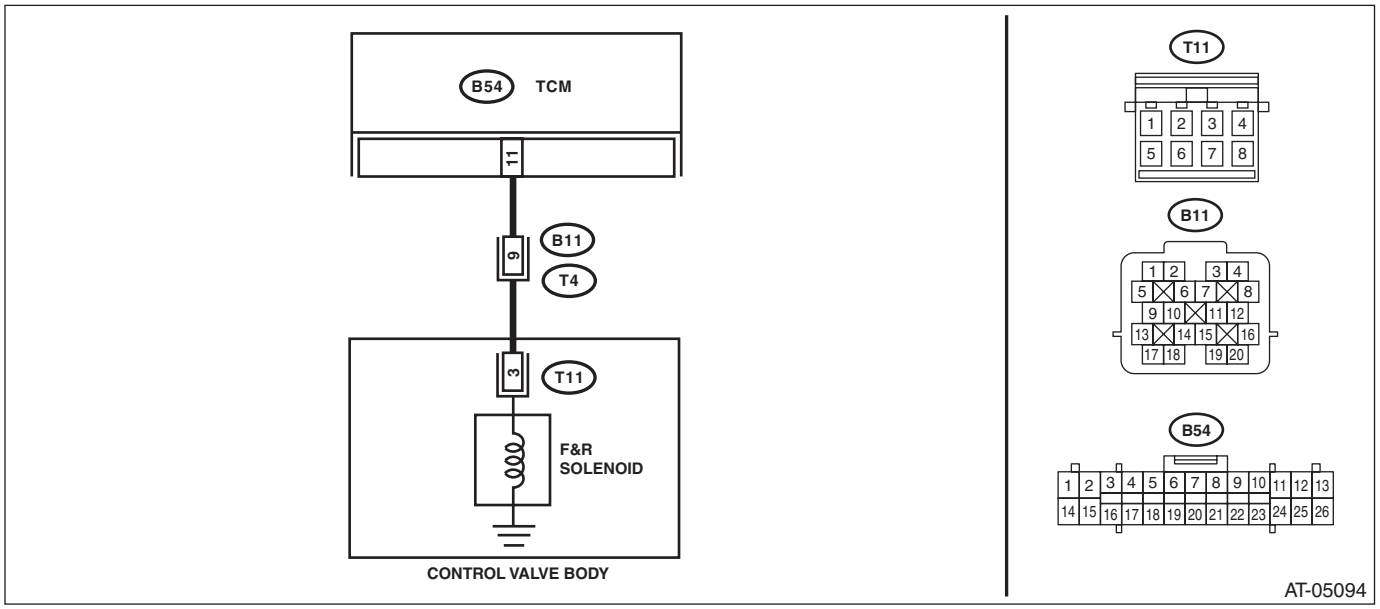
TROUBLE SYMPTOM:

- Engine speed increases abruptly, and can not accelerate.
- Excessive slippage is felt.

	Step	Check	Yes	No
1	**CHECK TRANSMISSION FLUID.** Check the condition of ATF. <Ref. to CVT-39, CONDITION CHECK, CVTF.>	Is the ATF OK?	Go to step **2**.	Check according to the "corrective action" of ATF (CVTF) "CONDITION CHECK". <Ref. to CVT-39, CONDITION CHECK, CVTF.>
2	**CHECK TRANSMISSION FLUID.** Check the amount of ATF. <Ref. to CVT-35, ADJUSTMENT, CVTF.>	Is the ATF amount correct?	Go to step **3**.	Adjust the amount of ATF. <Ref. to CVT-35, ADJUSTMENT, CVTF.>
3	**CHECK INPUT SIGNAL FOR TCM.** 1) Start the engine. 2) Warm up until the ATF temperature reaches to 40 — 70°C (104 — 158°F). 3) Shift the select lever to "P" range. 4) Stabilize the engine speed at idle. 5) Read the data of "Actual secondary pressure" using Subaru Select Monitor.	Is "Actual secondary pressure" 0.5 — 1.5 MPa?	Go to step **4**.	Perform the diagnosis according to DTC P0841 procedure.
4	**STALL TEST.** Perform the stall test. <Ref. to CVT-47, Stall Test.>	Is the stall test normal?	Go to step **5**.	If the engine speed increases abruptly, replace the transmission assembly. <Ref. to CVT-54, Automatic Transmission Assembly.>
5	**DRIVING CHECK BY INSPECTION MODE.** 1) Turn the ignition switch to OFF. 2) Perform a drive check based on the "Inspection Mode". <Ref. to CVT(diag)-19, Inspection Mode.>	Does the AT OIL TEMP light blink and is DTC P0965 displayed?	Replace the transmission assembly. <Ref. to CVT-54, Automatic Transmission Assembly.>	If there is abrupt increase of engine speed, standing start problems, replace the transmission assembly. <Ref. to CVT-54, Automatic Transmission Assembly.> If it is normal, temporary poor contact occurs.

R: DTC P0966 FORWARD & REVERSE SOLENOID CIRCUIT (LOW)

DTC DETECTING CONDITION:
Output signal circuit of F&R solenoid is shorted.
TROUBLE SYMPTOM:
Excessive shift shock
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK INPUT SIGNAL FOR TCM.** 1) After driving with warm up condition, park the vehicle while depressing the brake at "D" range. 2) Read the data of "Commanded Forward & Reverse Linear Solenoid Current" and "Actual Forward & Reverse Linear Solenoid Current" using Subaru Select Monitor.	Does the value of "Commanded Forward & Reverse Linear Solenoid Current" and "Actual Forward & Reverse Linear Solenoid Current" almost correspond?	Check for poor contact of connector.	Go to step **2**.
2	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM and transmission connectors. 3) Measure the resistance between TCM connector and chassis ground. ***Connector & terminal*** ***(B54) No. 11 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **3**.	Repair the short circuit of harness.
3	**CHECK F&R SOLENOID.** Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 9 — Transmission body:***	Is the resistance approx. 6 Ω? (when engine cold)	Check for poor contact of the connector, and repair the fault location.	Go to step **4**.
4	**CHECK HARNESS INSIDE TRANSMISSION.** **CAUTION:** **Start work after ATF cools down.** 1) Remove the transmission oil pan. 2) Check for the harness pinch, damage.	Is there any malfunction in harness?	Go to step **5**.	Replace the transmission harness.

	Step	Check	Yes	No
5	**CHECK HARNESS INSIDE TRANSMISSION.** 1) Disconnect the control valve body connector. 2) Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 9 — Transmission body:***	Is the resistance 1 MΩ or more?	Replace the control valve body. <Ref. to CVT-109, Control Valve Body.>	Replace the transmission harness.

S: DTC P0967 FORWARD & REVERSE LINEAR SOLENOID CIRCUIT (HIGH)

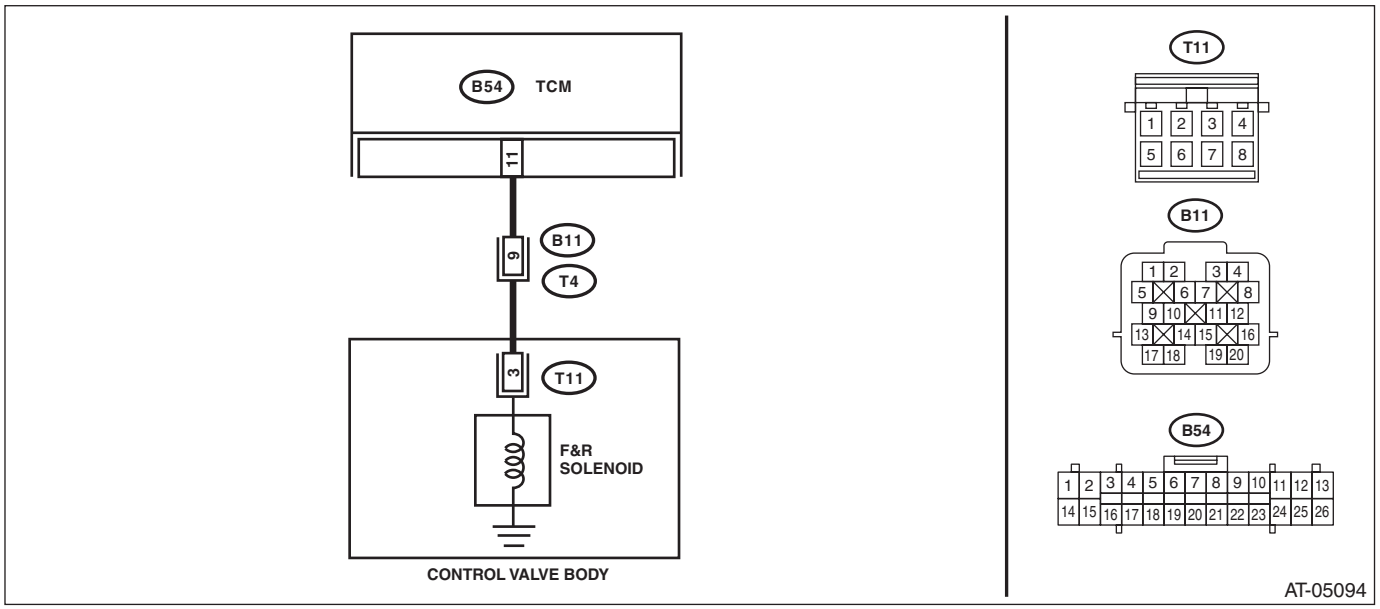
DTC DETECTING CONDITION:

- Output signal circuit of F&R solenoid is open or shorted.
- F&R solenoid has open circuit inside.

TROUBLE SYMPTOM:

Engine speed increases abruptly, and can not start.

WIRING DIAGRAM:

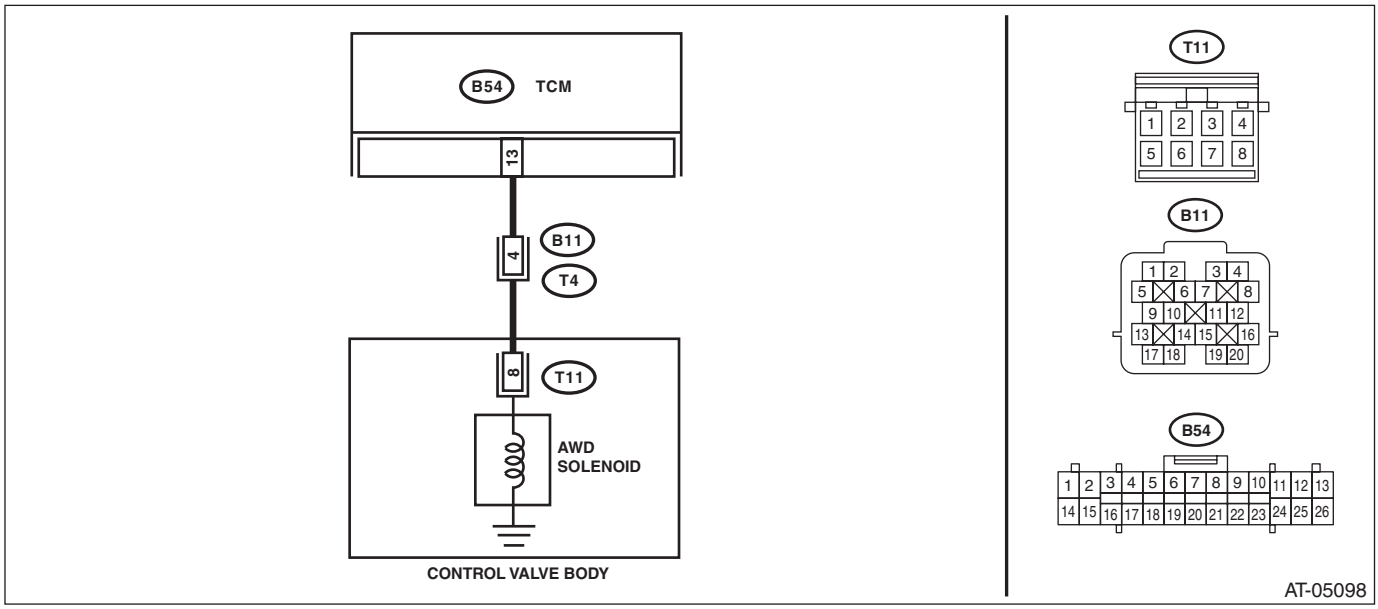


Step		Check	Yes	No
1	**CHECK INPUT SIGNAL FOR TCM.** 1) After driving with warm up condition, park the vehicle while depressing the brake at "D" range. 2) Read the data of "Commanded Forward & Reverse Linear Solenoid Current" and "Actual Forward & Reverse Linear Solenoid Current" using Subaru Select Monitor.	Does the value of "Commanded Forward & Reverse Linear Solenoid Current" and "Actual Forward & Reverse Linear Solenoid Current" almost correspond?	Check for poor contact of connector.	Go to step **2**.
2	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM and transmission connectors. 3) Measure the resistance between TCM connector and transmission connectors. ***Connector & terminal*** ***(B54) No. 11 — (B11) No. 9:***	Is the resistance less than 1 Ω?	Go to step **3**.	Repair the open circuit of harness.
3	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Measure the voltage between TCM connector and chassis ground. ***Connector & terminal*** ***(B54) No. 11 (+) — Chassis ground (–):***	Is the voltage approx. 0 V?	Go to step **4**.	Repair the short circuit of harness.
4	**CHECK F&R SOLENOID.** Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 9 — Transmission body:***	Is the resistance approx. 6 Ω? (when engine cold)	Check for poor contact of the connector, and repair the fault location.	Go to step **5**.

	Step	Check	Yes	No
5	**CHECK HARNESS INSIDE TRANSMISSION.** **CAUTION:** **Start work after ATF cools down.** 1) Remove the transmission oil pan. 2) Check for the harness pinch, damage.	Is there any malfunction in harness?	Go to step **6**.	Replace the transmission harness.
6	**CHECK HARNESS INSIDE TRANSMISSION.** 1) Disconnect the control valve body connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 9 (+) — Transmission body (–):***	Is the voltage approx. 0 V?	Replace the control valve body. <Ref. to CVT-109, Control Valve Body.>	Replace the transmission harness.

T: DTC P0970 TRANSFER SOLENOID CIRCUIT (LOW)

DTC DETECTING CONDITION:
Output signal circuit of AWD solenoid is shorted.
TROUBLE SYMPTOM:
Drivability getting worse.
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM and transmission connectors. 3) Measure the resistance between TCM connector and chassis ground. ***Connector & terminal*** ***(B54) No. 13 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **2**.	Repair the short circuit of harness.
2	**CHECK AWD SOLENOID.** Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 4 — Transmission body:***	Is the resistance approx. 4 Ω? (when engine cold)	Check for poor contact of the connector, and repair the fault location.	Go to step **3**.
3	**CHECK HARNESS INSIDE TRANSMISSION.** **CAUTION:** **Start work after ATF cools down.** 1) Remove the transmission oil pan. 2) Check for the harness pinch, damage.	Is there any malfunction in harness?	Go to step **4**.	Replace the transmission harness.
4	**CHECK HARNESS INSIDE TRANSMISSION.** 1) Disconnect the control valve body connector. 2) Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 4 — Transmission body:***	Is the resistance 1 MΩ or more?	Replace the control valve body. <Ref. to CVT-109, Control Valve Body.>	Replace the transmission harness.

U: DTC P0971 TRANSFER SOLENOID CIRCUIT (HIGH)

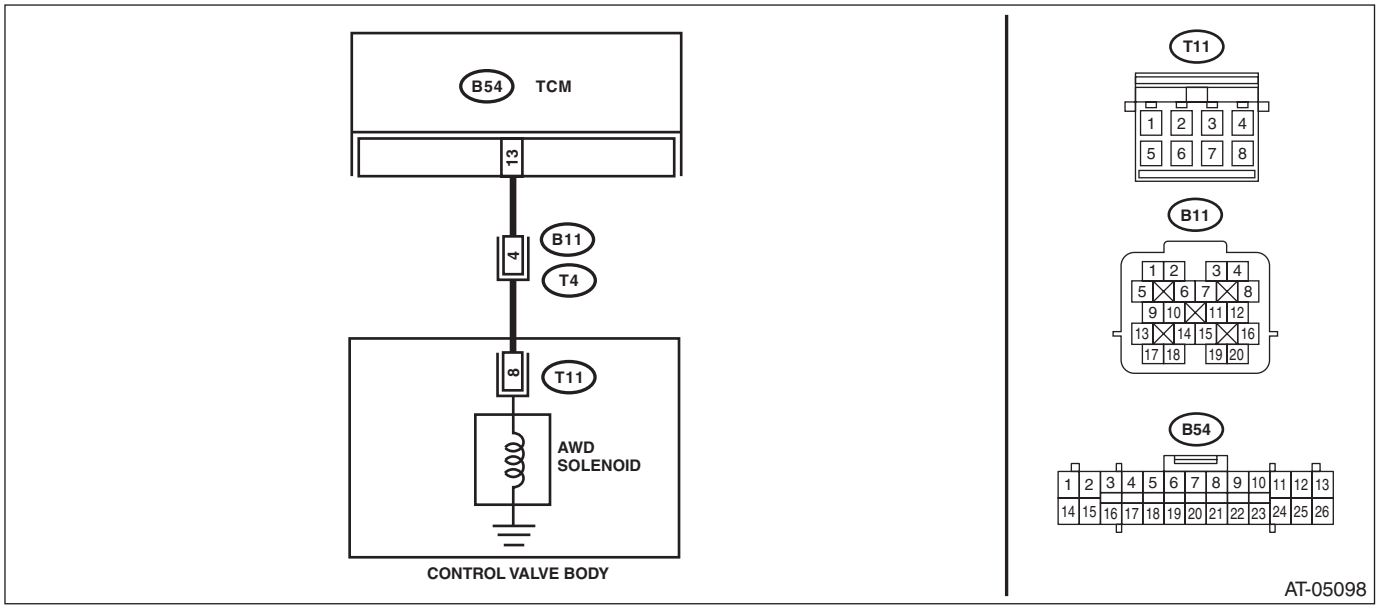
DTC DETECTING CONDITION:

- Output signal circuit of AWD solenoid is open or shorted.
- AWD solenoid has open circuit inside.

TROUBLE SYMPTOM:

- Tight corner braking phenomenon occurs.
- Drivability getting worse.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM and transmission connectors. 3) Measure the resistance between TCM connector and transmission connectors. ***Connector & terminal*** ***(B54) No. 13 — (B11) No. 4:***	Is the resistance less than 1 Ω?	Go to step **2**.	Repair the open circuit of harness.
2	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Measure the voltage between TCM connector and chassis ground. ***Connector & terminal*** ***(B54) No. 13 (+) — Chassis ground (–):***	Is the voltage approx. 0 V?	Go to step **3**.	Repair the short circuit of harness.
3	**CHECK AWD SOLENOID.** Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 4 — Transmission body:***	Is the resistance approx. 4 Ω? (when engine cold)	Check for poor contact of the connector, and repair the fault location.	Go to step **4**.
4	**CHECK HARNESS INSIDE TRANSMISSION.** **CAUTION:** **Start work after ATF cools down.** 1) Remove the transmission oil pan. 2) Check for the harness pinch, damage.	Is there any malfunction in harness?	Go to step **5**.	Replace the transmission harness.

	Step	Check	Yes	No
5	**CHECK HARNESS INSIDE TRANSMISSION.** 1) Disconnect the control valve body connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 4 (+) — Transmission body (–):***	Is the voltage approx. 0 V?	Replace the control valve body. <Ref. to CVT-109, Control Valve Body.>	Replace the transmission harness.

V: DTC P0973 PRIMARY SOLENOID SYSTEM A CIRCUIT (LOW)

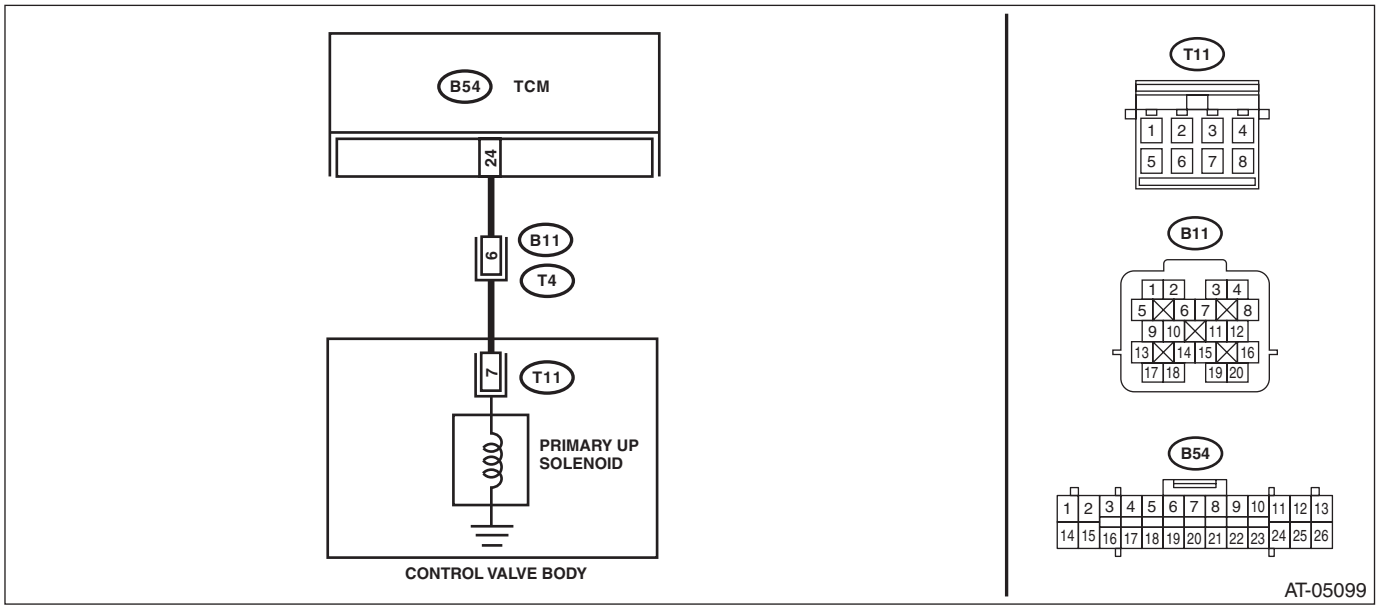
DTC DETECTING CONDITION:

Output signal circuit of primary UP solenoid is shorted.

TROUBLE SYMPTOM:

Gear is not changed. (No up-shift)

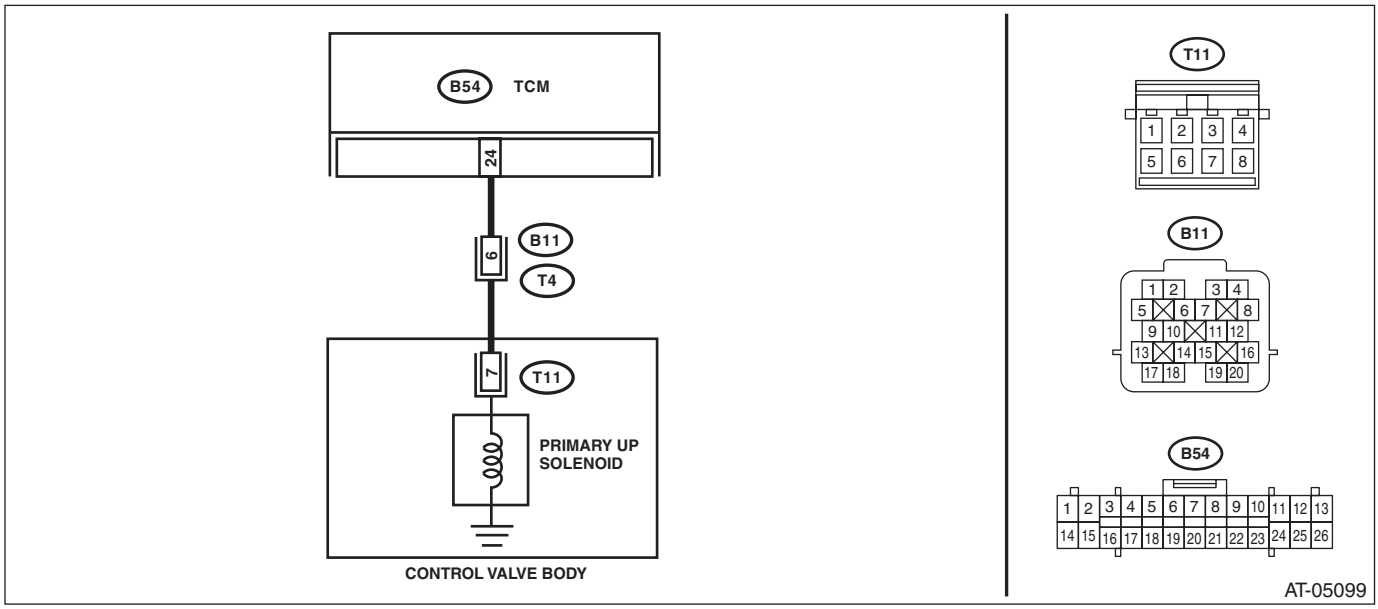
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM and transmission connectors. 3) Measure the resistance between TCM connector and chassis ground. ***Connector & terminal*** ***(B54) No. 24 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **2**.	Repair the short circuit of harness.
2	**CHECK PRIMARY UP SOLENOID.** Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 6 — Transmission body:***	Is the resistance approx. 13 Ω? (when engine cold)	Check for poor contact of the connector, and repair the fault location.	Go to step **3**.
3	**CHECK HARNESS INSIDE TRANSMISSION.** **CAUTION:** **Start work after ATF cools down.** 1) Remove the transmission oil pan. 2) Check for the harness pinch, damage.	Is there any malfunction in harness?	Go to step **4**.	Replace the transmission harness.
4	**CHECK HARNESS INSIDE TRANSMISSION.** 1) Disconnect the control valve body connector. 2) Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 6 — Transmission body:***	Is the resistance 1 MΩ or more?	Replace the control valve body. <Ref. to CVT-109, Control Valve Body.>	Replace the transmission harness.

W: DTC P0974 PRIMARY SOLENOID SYSTEM A CIRCUIT (HIGH)

DTC DETECTING CONDITION:
Output signal circuit of primary UP solenoid is open or shorted.
TROUBLE SYMPTOM:
Gear is not changed. (No up-shift)
WIRING DIAGRAM:

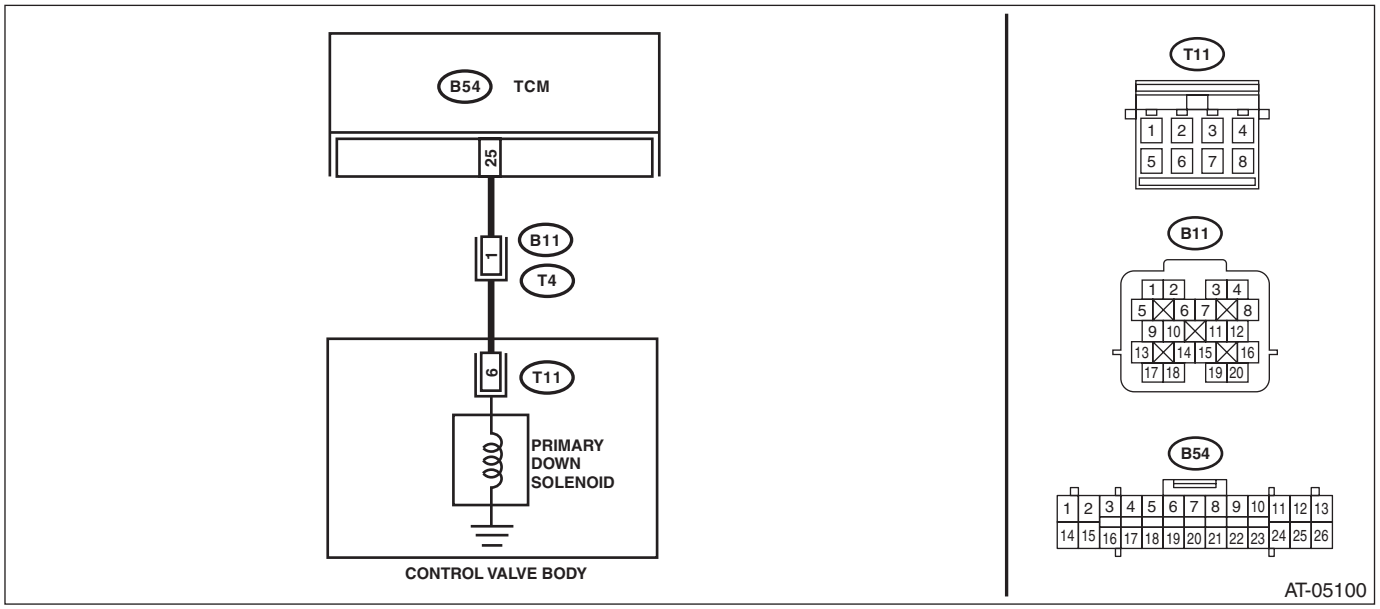


Step		Check	Yes	No
1	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM and transmission connectors. 3) Measure the resistance between TCM connector and transmission connectors. ***Connector & terminal*** ***(B54) No. 24 — (B11) No. 6:***	Is the resistance less than 1 Ω?	Go to step **2**.	Repair the open circuit of harness.
2	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Measure the voltage between TCM connector and chassis ground. ***Connector & terminal*** ***(B54) No. 24 (+) — Chassis ground (–):***	Is the voltage approx. 0 V?	Go to step **3**.	Repair the short circuit of harness.
3	**CHECK PRIMARY UP SOLENOID.** Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 6 — Transmission body:***	Is the resistance approx. 13 Ω? (when engine cold)	Check for poor contact of the connector, and repair the fault location.	Go to step **4**.
4	**CHECK HARNESS INSIDE TRANSMISSION.** **CAUTION:** **Start work after ATF cools down.** 1) Remove the transmission oil pan. 2) Check for the harness pinch, damage.	Is there any malfunction in harness?	Go to step **5**.	Replace the transmission harness.

	Step	Check	Yes	No
5	**CHECK HARNESS INSIDE TRANSMISSION.** 1) Disconnect the control valve body connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 6 (+) — Transmission body (–):***	Is the voltage approx. 0 V?	Replace the control valve body. <Ref. to CVT-109, Control Valve Body.>	Replace the transmission harness.

X: DTC P0976 PRIMARY SOLENOID SYSTEM B CIRCUIT (LOW)

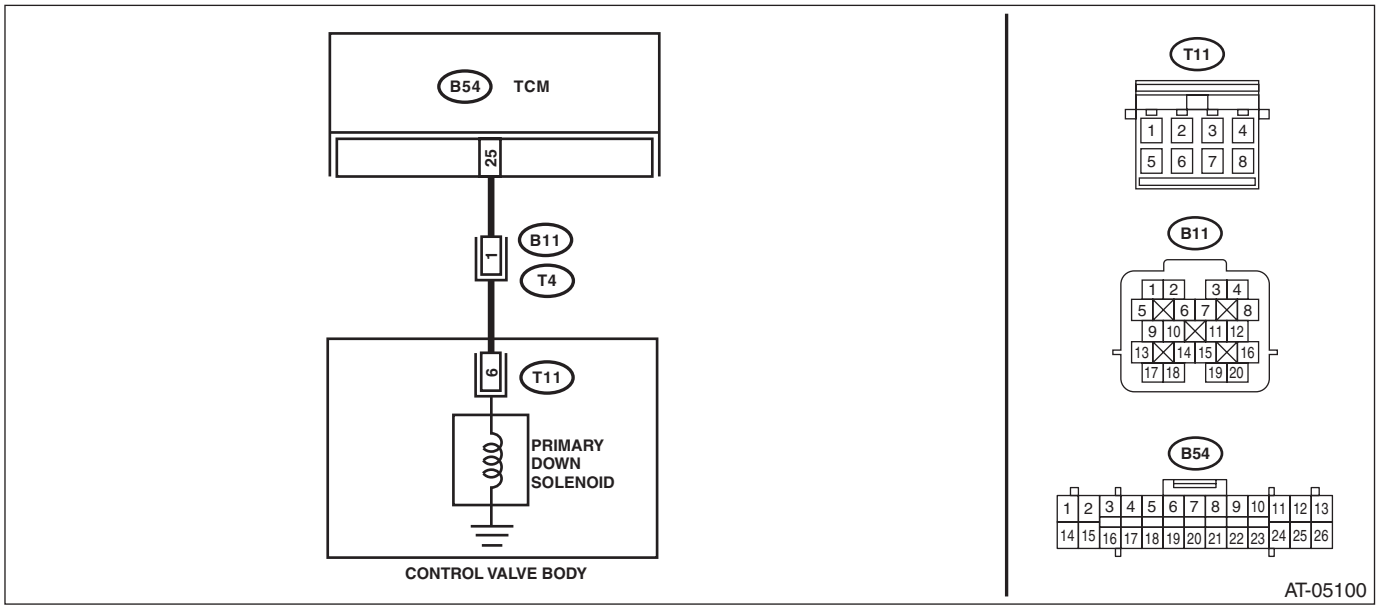
DTC DETECTING CONDITION:
Output signal circuit of primary DOWN solenoid is shorted.
TROUBLE SYMPTOM:
Gear is not changed. (No down-shift)
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM and transmission connectors. 3) Measure the resistance between TCM connector and chassis ground. ***Connector & terminal*** ***(B54) No. 25 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **2**.	Repair the short circuit of harness.
2	**CHECK PRIMARY DOWN SOLENOID.** Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 1 — Transmission body:***	Is the resistance approx. 13 Ω? (when engine cold)	Check for poor contact of the connector, and repair the fault location.	Go to step **3**.
3	**CHECK HARNESS INSIDE TRANSMISSION.** **CAUTION:** **Start work after ATF cools down.** 1) Remove the transmission oil pan. 2) Check for the harness pinch, damage.	Is there any malfunction in harness?	Go to step **4**.	Replace the transmission harness.
4	**CHECK HARNESS INSIDE TRANSMISSION.** 1) Disconnect the control valve body connector. 2) Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 1 — Transmission body:***	Is the resistance 1 MΩ or more?	Replace the control valve body. <Ref. to CVT-109, Control Valve Body.>	Replace the transmission harness.

Y: DTC P0977 PRIMARY SOLENOID SYSTEM B CIRCUIT (HIGH)

DTC DETECTING CONDITION:
Output signal circuit of primary DOWN solenoid is open or shorted.
TROUBLE SYMPTOM:
Gear is not changed. (No down-shift)
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM and transmission connectors. 3) Measure the resistance between TCM connector and transmission connectors. ***Connector & terminal*** ***(B54) No. 25 — (B11) No. 1:***	Is the resistance less than 1 Ω?	Go to step **2**.	Repair the open circuit of harness.
2	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Measure the voltage between TCM connector and chassis ground. ***Connector & terminal*** ***(B54) No. 25 (+) — Chassis ground (–):***	Is the voltage approx. 0 V?	Go to step **3**.	Repair the short circuit of harness.
3	**CHECK PRIMARY DOWN SOLENOID.** Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 1 — Transmission body:***	Is the resistance approx. 13 Ω? (when engine cold)	Check for poor contact of the connector, and repair the fault location.	Go to step **4**.
4	**CHECK HARNESS INSIDE TRANSMISSION.** **CAUTION:** **Start work after ATF cools down.** 1) Remove the transmission oil pan. 2) Check for the harness pinch, damage.	Is there any malfunction in harness?	Go to step **5**.	Replace the transmission harness.

	Step	Check	Yes	No
5	**CHECK HARNESS INSIDE TRANSMISSION.** 1) Disconnect the control valve body connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 1 (+) — Transmission body (–):***	Is the voltage approx. 0 V?	Replace the control valve body. <Ref. to CVT-109, Control Valve Body.>	Replace the transmission harness.

Z: DTC P1718 AT CAN COMMUNICATION CIRCUIT

NOTE:
For DTC P1718 AT CAN communication circuit, refer to “LAN System”. <Ref. to LAN(diag)-10, Read Diagnostic Trouble Code (DTC).>

AA:DTC P1724 AT EEPROM ERROR

DTC DETECTING CONDITION:

- TCM EEPROM malfunction
- EEPROM writing error during self shut control

TROUBLE SYMPTOM:

- AT learning is not finished.
- Shock occurs when selecting N → D, N → R.

	Step	Check	Yes	No
1	**CHECK TCM CONNECTOR.**	Is the connection of TCM connector correct?	Go to step **2**.	Connect the TCM connector.
2	**CHECK SELF SHUT RELAY.** Turn the ignition switch to ON.	Does the relay operates simultaneously?	Go to step **3**.	Perform the diagnosis according to DTC P0890 procedure.
3	**CHECK SELF SHUT RELAY.** Turn the ignition switch to OFF.	Does the relay operate after two or three seconds delay?	Go to step **4**.	Perform the diagnosis according to DTC P0890 procedure.
4	**PERFORM AT LEARNING.** 1) Perform the {Clear Memories 2}. 2) Perform the AT learning. <Ref. to CVT(diag)-20, Learning Control.> 3) Start the engine.	Does the AT OIL TEMP light blink after AT learning is finished correctly?	Check the TCM.	Go to step **5**.
5	**CHECK INDICATION OF DTC.** 1) Perform the {Clear Memory}. 2) Turn the ignition switch to OFF. 3) Start the engine after 10 seconds. 4) Repeat steps 2) and 3).	Does the AT OIL TEMP light blink and is DTC P1724 displayed?	Check the TCM.	Current condition is normal. Check for poor contact of TCM connector or harness.

AB:DTC P1725 AT BODY SYSTEM CAN COMMUNICATION TROUBLE

NOTE:
DTC P1725 AT BODY SYSTEM CAN COMMUNICATION TROUBLE, refer to “LAN System”. <Ref. to LAN(diag)-10, Read Diagnostic Trouble Code (DTC).>

AC:DTC P2746 PRIMARY PULLEY REVOLUTION SPEED SENSOR CIRCUIT

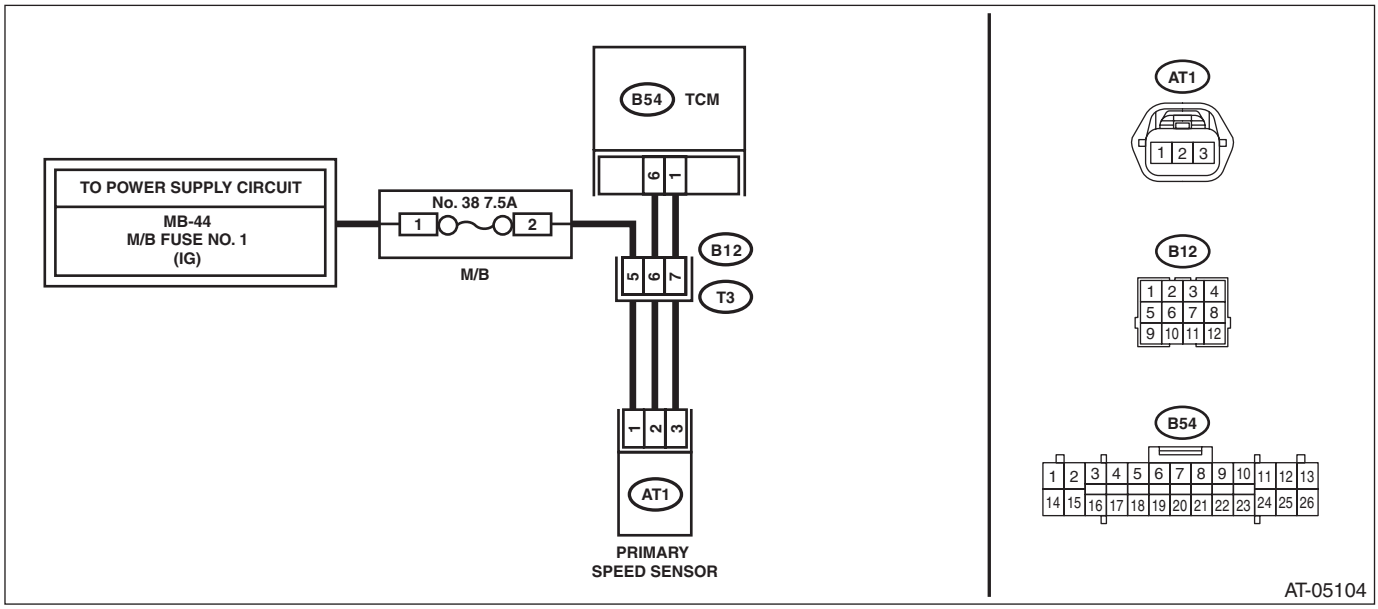
DTC DETECTING CONDITION:

- Output signal circuit of primary speed sensor is open or shorted.
- Primary speed sensor malfunction

TROUBLE SYMPTOM:

- Standing start problems
- Shock occurs when engaging the lockup clutch.
- Neutral control does not operate.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Remove the fuse (No. 38).	Is the fuse OK?	Go to step **2**.	Replace the fuse. If the fuse blows out easily, repair the short circuit of harness.
2	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM and transmission connectors. 3) Measure the resistance between TCM connector and transmission connectors. ***Connector & terminal*** ***(B54) No. 1 — (B12) No. 7:*** ***(B54) No. 6 — (B12) No. 6:*** ***(M/B No. 38) No. 2 — (B12) No. 5:***	Is the resistance less than 1 Ω?	Go to step **3**.	Repair the open circuit of harness.
3	**CHECK HARNESS.** Measure the resistance between TCM connector and chassis ground. ***Connector & terminal*** ***(B12) No. 5 — Chassis ground:*** ***(B12) No. 6 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Repair the short circuit of harness.

	Step	Check	Yes	No
4	**CHECK TRANSMISSION HARNESS.** 1) Connect the TCM connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between transmission connector and chassis ground. ***Connector & terminal*** ***(B12) No. 6 (+) — Chassis ground (–):*** NOTE: Delete the TCM memory after completing the CVT control system diagnosis. <Ref. to CVT(diag)-18, Clear Memory Mode.>	Is the voltage approx. 5 V?	Go to step **5**.	Repair the open circuit of harness or poor contact of connector.
5	**CHECK INPUT SIGNAL FOR TCM.** 1) Turn the ignition switch to OFF. 2) Connect the transmission connector. 3) Lift up the vehicle. 4) Start the engine. 5) Slowly increase the speed to 30 km/h (18 MPH). 6) Read the data of “Primary Pulley Speed” using Subaru Select Monitor.	Does the value of “Primary Pulley Speed” change according to the engine speed?	Current condition is normal. Repair the poor contacts of harnesses of primary speed sensor and transmission connector.	Go to step **6**.
6	**CHECK TRANSMISSION HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the transmission connector. 3) Disconnect the primary speed sensor connector. 4) Measure the resistance between transmission connector and primary speed sensor connector. ***Connector & terminal*** ***(T3) No. 5 — (AT1) No. 1:*** ***(T3) No. 6 — (AT1) No. 2:*** ***(T3) No. 7 — (AT1) No. 3:***	Is the resistance less than 1 Ω?	Replace the primary speed sensor. <Ref. to CVT-103, Primary Speed Sensor.>	Replace the transmission harness.

AD:DTC P2750 SEC. PULLEY REVOLUTION SPEED SENSOR CIRCUIT

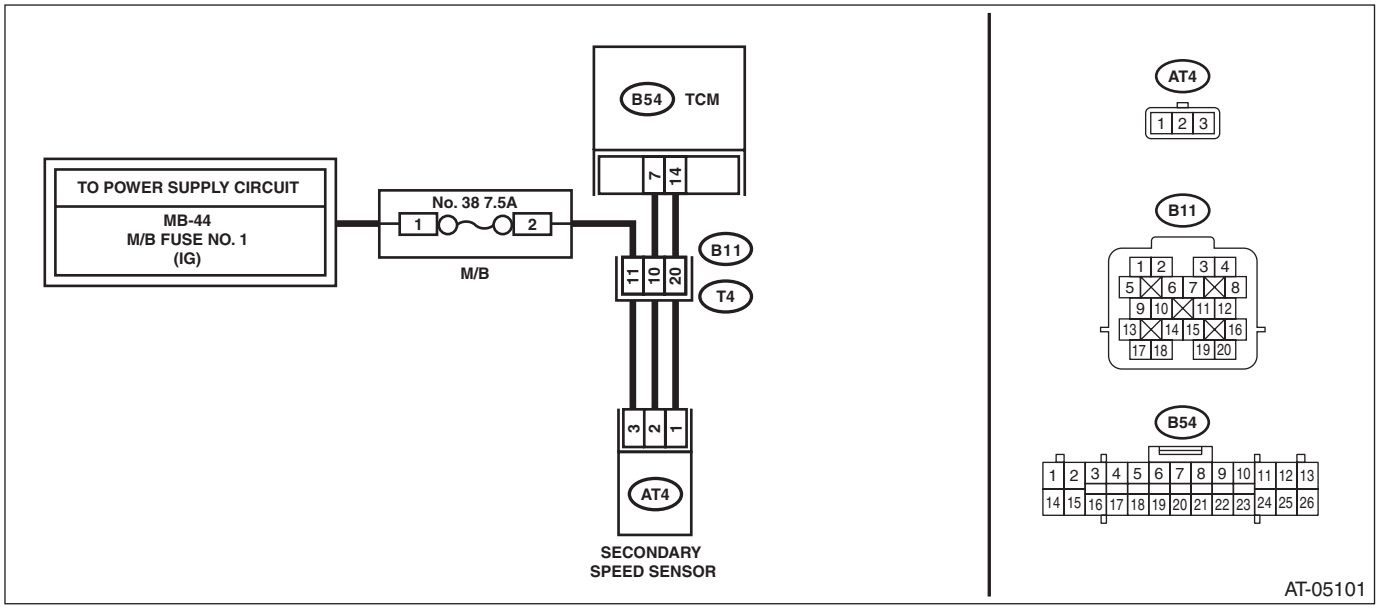
DTC DETECTING CONDITION:

- Output signal circuit of secondary speed sensor is open or shorted.
- Secondary speed sensor malfunction

TROUBLE SYMPTOM:

- Shock occurs when selecting N → D, N → R.
- Neutral control does not operate.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Remove the fuse (No. 38).	Is the fuse OK?	Go to step **2**.	Replace the fuse. If the fuse blows out easily, repair the short circuit of harness.
2	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM and transmission connectors. 3) Measure the resistance between TCM connector and transmission connectors. ***Connector & terminal*** ***(B54) No. 7 — (B11) No. 10:*** ***(B54) No. 14 — (B11) No. 20:*** ***(M/B No. 38) No. 2 — (B11) No. 11:***	Is the resistance less than 1 Ω?	Go to step **3**.	Repair the open circuit of harness.
3	**CHECK HARNESS.** Measure the resistance between TCM connector and chassis ground. ***Connector & terminal*** ***(B11) No. 10 — Chassis ground:*** ***(B11) No. 11 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Repair the short circuit of harness.

	Step	Check	Yes	No
4	**CHECK TRANSMISSION HARNESS.** 1) Connect the TCM connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between transmission connector and chassis ground. ***Connector & terminal*** ***(B11) No. 10 (+) — Chassis ground (–):*** NOTE: Delete the TCM memory after completing the CVT control system diagnosis. <Ref. to CVT(diag)-18, Clear Memory Mode.>	Is the voltage approx. 5 V?	Go to step **5**.	Repair the open circuit of harness or poor contact of connector.
5	**CHECK INPUT SIGNAL FOR TCM.** 1) Turn the ignition switch to OFF. 2) Connect the transmission connector. 3) Lift up the vehicle. 4) Start the engine. 5) Slowly increase the speed to 30 km/h (18 MPH). 6) Read the data of “Secondary Pulley Speed” using Subaru Select Monitor.	Does the value of “Secondary Pulley Speed” change according to the vehicle speed?	Current condition is normal. Repair the poor contacts of harnesses of secondary speed sensor and transmission connector.	Go to step **6**.
6	**CHECK TRANSMISSION HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the transmission connector. 3) Disconnect the secondary speed sensor connector. 4) Measure the resistance between transmission connector and secondary speed sensor connector. ***Connector & terminal*** ***(T4) No. 10 — (AT4) No. 2:*** ***(T4) No. 11 — (AT4) No. 3:*** ***(T4) No. 20 — (AT4) No. 1:***	Is the resistance less than 1 Ω?	Replace the secondary speed sensor. <Ref. to CVT-101, Secondary Speed Sensor.>	Replace the transmission harness.

AE:DTC P2762 LOCK-UP DUTY SOLENOID MALFUNCTION

DTC DETECTING CONDITION:

- Lock up clutch malfunction
- Hydraulic leaks or hydraulic valve stick of lock up system
- Hydraulic leaks or hydraulic valve stick of lock up ON/OFF valve system
- Lock up duty solenoid or lock up ON/OFF solenoid characteristics malfunction

TROUBLE SYMPTOM:

- No lock-up occurs.
- Engine speed increases abruptly during driving.

	Step	Check	Yes	No
1	**CHECK DTC.** Read the DTC relating the ECM using the Subaru Select Monitor.	Is DTC displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK DTC.** Read the DTC relating the TCM using the Subaru Select Monitor.	Are DTC P0841, P0842, P0843 displayed?	Perform the diagnosis according to DTC.	Go to step **3**.
3	**CHECK TRANSMISSION FLUID.** Check the condition of ATF. <Ref. to CVT-39, CONDITION CHECK, CVTF.>	Is the ATF OK?	Go to step **4**.	Check according to the "corrective action" of ATF (CVTF) "CONDITION CHECK". <Ref. to CVT-39, CONDITION CHECK, CVTF.>
4	**CHECK TRANSMISSION FLUID.** Check the amount of ATF. <Ref. to CVT-35, ADJUSTMENT, CVTF.>	Is the ATF amount correct?	Go to step **5**.	Adjust the amount of ATF. <Ref. to CVT-35, ADJUSTMENT, CVTF.>
5	**CHECK INPUT SIGNAL FOR TCM.** 1) Lift up the vehicle. 2) Start the engine. 3) Warm up until the ATF temperature reaches to 40 — 70°C (104 — 158°F). 4) Shift the select lever to "P" range. 5) Stabilize the engine speed at idle. 6) Read the data of "Actual secondary pressure" using Subaru Select Monitor.	Is "Actual secondary pressure" 0.5 — 1.5 MPa?	Go to step **6**.	Perform the diagnosis according to DTC P0841 procedure.
6	**DRIVING CHECK FOR LOCK-UP CONDITION.** 1) Perform the "Clear Memory Mode". <Ref. to CVT(diag)-18, Clear Memory Mode.> 2) Start the engine after turning the ignition switch OFF. 3) Warm up until the ATF temperature exceeds 50°C. 4) Drive the vehicle for one minutes or more keeping the constant speed so that the display shown in the Subaru Select Monitor is as follows: "Lock Up Duty Ratio" is 70 % or more, "Lock-Up ON/OFF Solenoid" is ON, "Front Wheel Speed" is 40 km/h or more. 5) Turn the ignition switch to OFF. 6) Start the engine. 7) Perform the procedure in step 4) again. 8) Read the DTC using Subaru Select Monitor.	Does the AT OIL TEMP light blink and is DTC P2762 displayed?	Perform the secondary pressure test. <Ref. to CVT-49, Secondary Pressure (Line Pressure) Test.> When DTC other than P2762 is displayed, perform the diagnosis corresponding to the DTC.	Current condition is normal. Temporary oil pressure malfunction.

AF:DTC P2763 LOCK-UP DUTY SOLENOID CIRCUIT (HIGH)

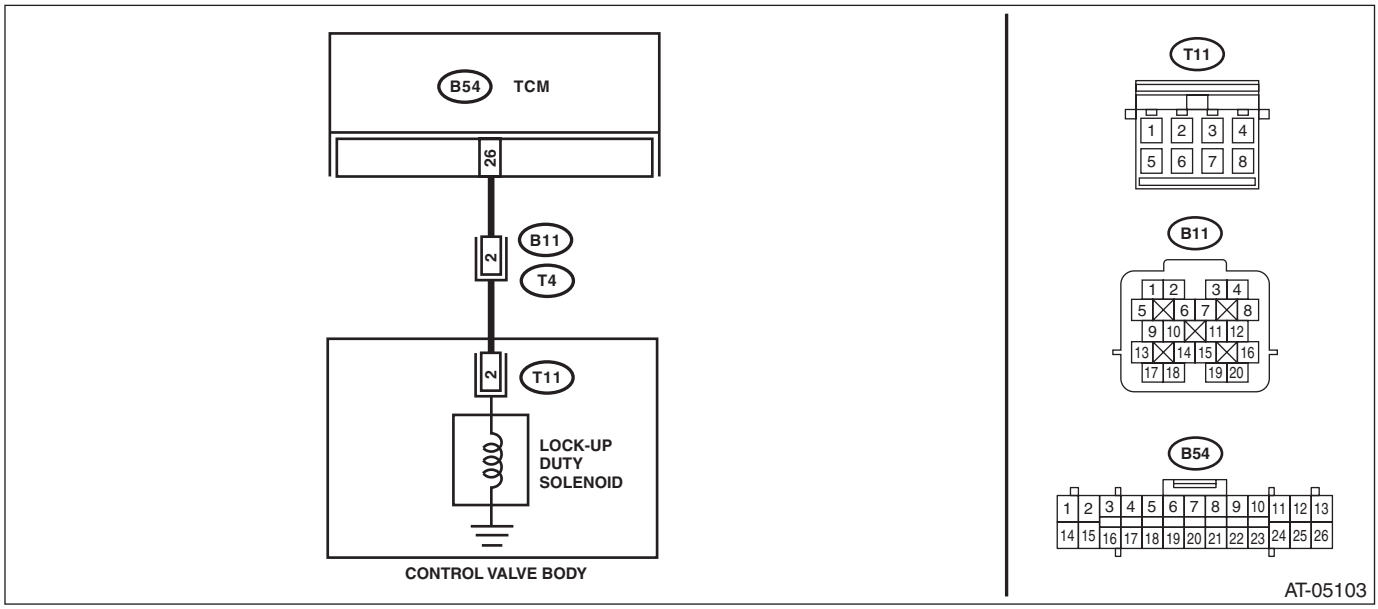
DTC DETECTING CONDITION:

Output signal circuit of lock-up duty solenoid is open or shorted.

TROUBLE SYMPTOM:

No lock-up occurs.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM and transmission connectors. 3) Measure the resistance between TCM connector and transmission connectors. ***Connector & terminal*** ***(B54) No. 26 — (B11) No. 2:***	Is the resistance less than 1 Ω?	Go to step **2**.	Repair the open circuit of harness.
2	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Measure the voltage between TCM connector and chassis ground. ***Connector & terminal*** ***(B54) No. 26 (+) — Chassis ground (–):***	Is the voltage approx. 0 V?	Go to step **3**.	Repair the short circuit of harness.
3	**CHECK LOCK-UP DUTY SOLENOID.** Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 2 — Transmission body:***	Is the resistance approx. 13 Ω? (when engine cold)	Check for poor contact of the connector, and repair the fault location.	Go to step **4**.
4	**CHECK HARNESS INSIDE TRANSMISSION.** **CAUTION:** **Start work after ATF cools down.** 1) Remove the transmission oil pan. 2) Check for the harness pinch, damage.	Is there any malfunction in harness?	Go to step **5**.	Replace the transmission harness.

	Step	Check	Yes	No
5	**CHECK HARNESS INSIDE TRANSMISSION.** 1) Disconnect the control valve body connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 2 (+) — Transmission body (–):***	Is the voltage approx. 0 V?	Replace the control valve body. <Ref. to CVT-109, Control Valve Body.>	Replace the transmission harness.

AG:DTC P2764 LOCK-UP DUTY SOLENOID CIRCUIT (LOW)

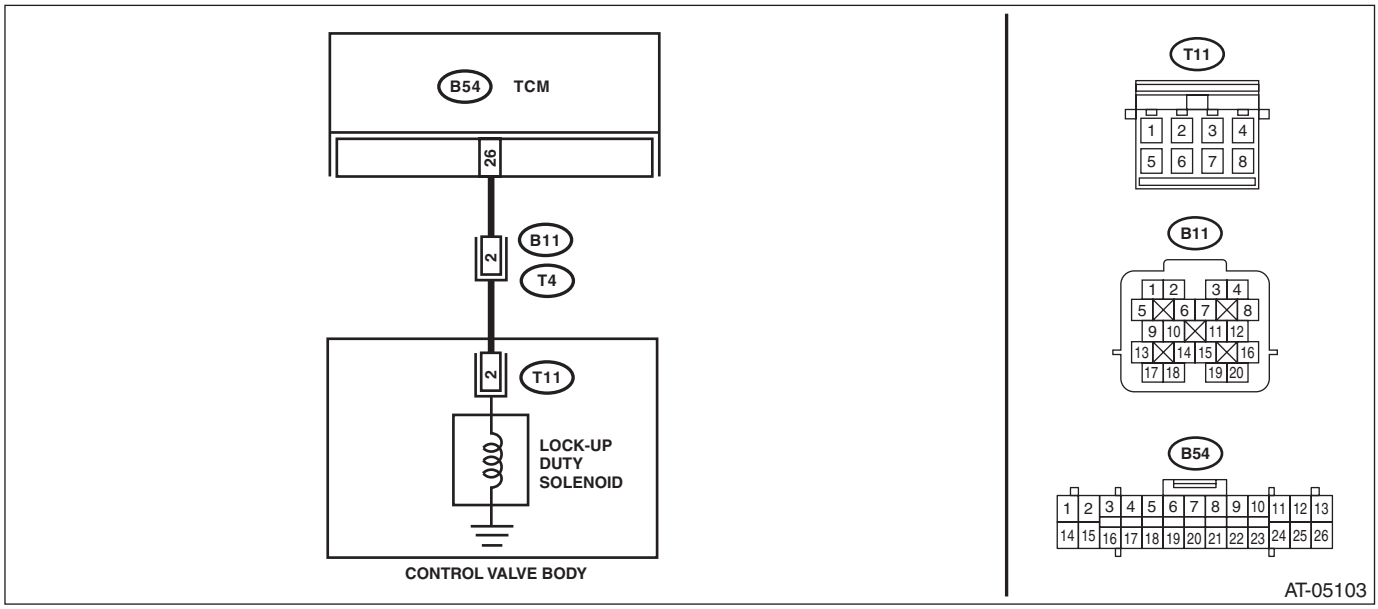
DTC DETECTING CONDITION:

Output signal circuit of lock up duty solenoid is shorted.

TROUBLE SYMPTOM:

No lock-up occurs.

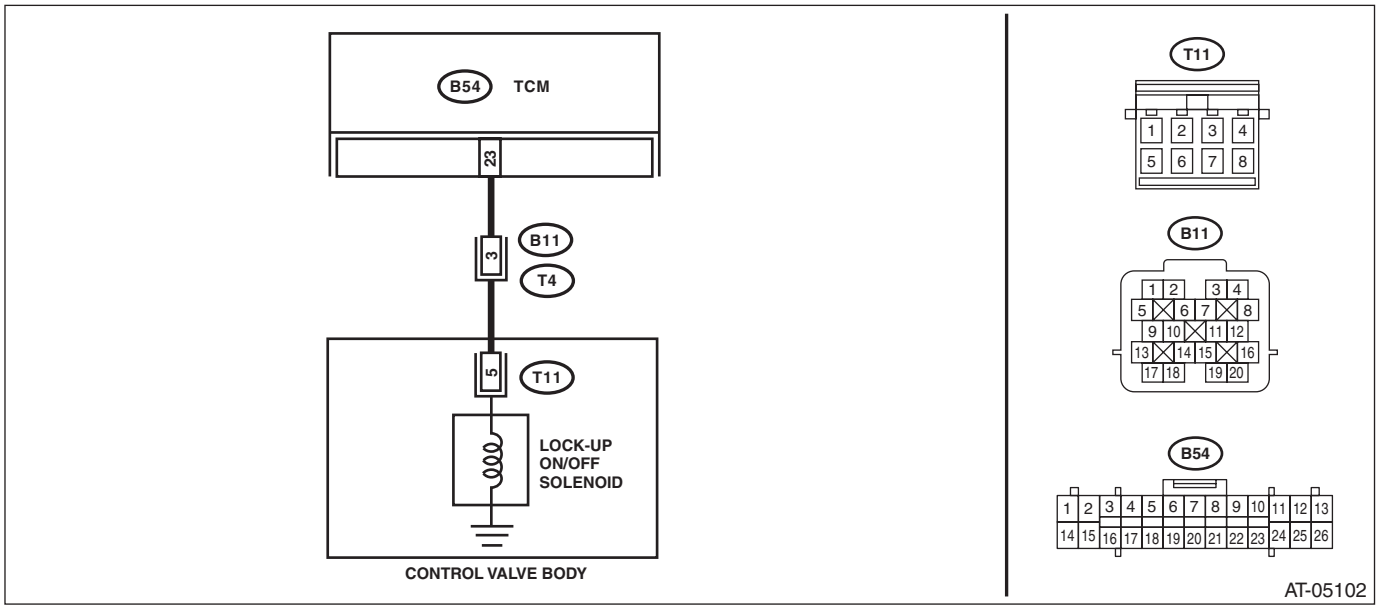
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM and transmission connectors. 3) Measure the resistance between TCM connector and chassis ground. ***Connector & terminal*** ***(B54) No. 26 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **2**.	Repair the short circuit of harness.
2	**CHECK LOCK-UP DUTY SOLENOID.** Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 2 — Transmission body:***	Is the resistance approx. 13 Ω? (when engine cold)	Check for poor contact of the connector, and repair the fault location.	Go to step **3**.
3	**CHECK HARNESS INSIDE TRANSMISSION.** **CAUTION:** **Start work after ATF cools down.** 1) Remove the transmission oil pan. 2) Check for the harness pinch, damage.	Is there any malfunction in harness?	Go to step **4**.	Replace the transmission harness.
4	**CHECK HARNESS INSIDE TRANSMISSION.** 1) Disconnect the control valve body connector. 2) Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 2 — Transmission body:***	Is the resistance 1 MΩ or more?	Replace the control valve body. <Ref. to CVT-109, Control Valve Body.>	Replace the transmission harness.

AH:DTC P2769 LOCK-UP ON/OFF SOLENOID CIRCUIT (LOW)

DTC DETECTING CONDITION:
Output signal circuit of lock up ON/OFF solenoid is shorted.
TROUBLE SYMPTOM:
No lock-up occurs.
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM and transmission connectors. 3) Measure the resistance between TCM connector and chassis ground. ***Connector & terminal*** ***(B54) No. 23 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **2**.	Repair the short circuit of harness.
2	**CHECK LOCK UP ON/OFF SOLENOID.** Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 3 — Transmission body:***	Is the resistance approx. 17 Ω? (when engine cold)	Check for poor contact of the connector, and repair the fault location.	Go to step **3**.
3	**CHECK HARNESS INSIDE TRANSMISSION.** **CAUTION:** **Start work after ATF cools down.** 1) Remove the transmission oil pan. 2) Check for the harness pinch, damage.	Is there any malfunction in harness?	Go to step **4**.	Replace the transmission harness.
4	**CHECK HARNESS INSIDE TRANSMISSION.** 1) Disconnect the control valve body connector. 2) Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 3 — Transmission body:***	Is the resistance 1 MΩ or more?	Replace the control valve body. <Ref. to CVT-109, Control Valve Body.>	Replace the transmission harness.

AI: DTC P2770 LOCK-UP ON/OFF SOLENOID CIRCUIT (HIGH)

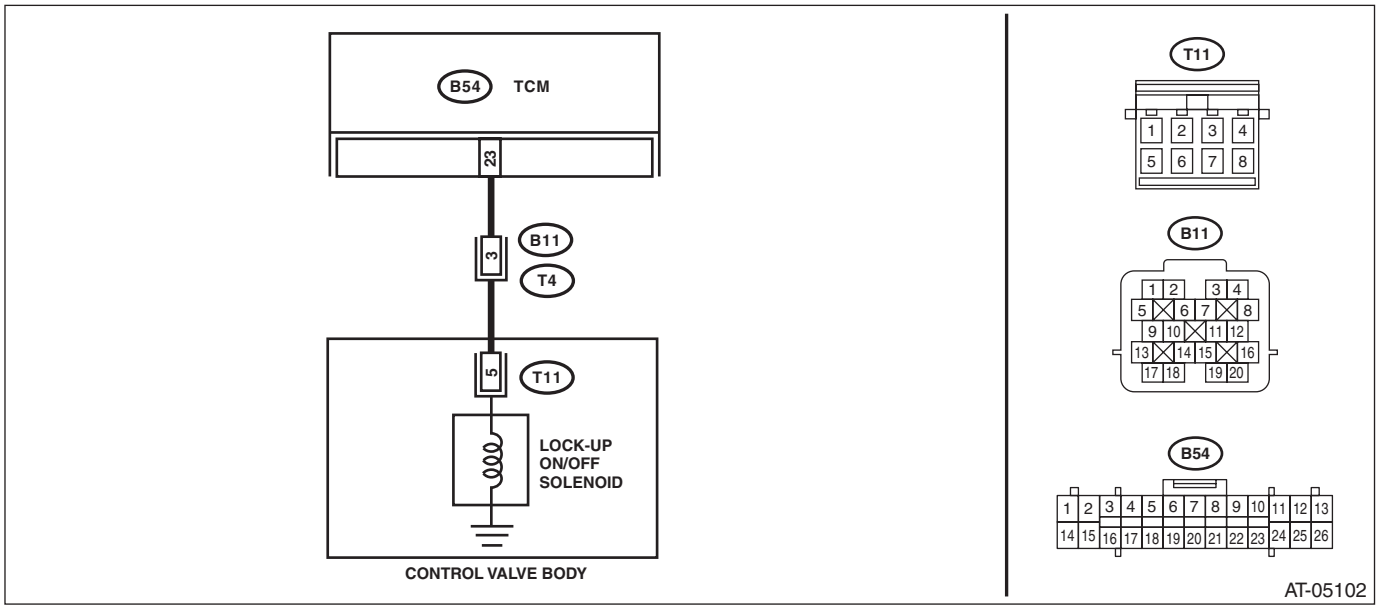
DTC DETECTING CONDITION:

Output signal circuit of lock-up duty solenoid is open or shorted.

TROUBLE SYMPTOM:

No lock-up occurs.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM and transmission connectors. 3) Measure the resistance between TCM connector and transmission connectors. ***Connector & terminal*** ***(B54) No. 23 — (B11) No. 3:***	Is the resistance less than 1 Ω?	Go to step **2**.	Repair the open circuit of harness.
2	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Measure the voltage between TCM connector and chassis ground. ***Connector & terminal*** ***(B54) No. 23 (+) — Chassis ground (–):***	Is the voltage approx. 0 V?	Go to step **3**.	Repair the short circuit of harness.
3	**CHECK LOCK UP ON/OFF SOLENOID.** Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 3 — Transmission body:***	Is the resistance approx. 17 Ω? (when engine cold)	Check for poor contact of the connector, and repair the fault location.	Go to step **4**.
4	**CHECK HARNESS INSIDE TRANSMISSION.** **CAUTION:** **Start work after ATF cools down.** 1) Remove the transmission oil pan. 2) Check for the harness pinch, damage.	Is there any malfunction in harness?	Go to step **5**.	Replace the transmission harness.

	Step	Check	Yes	No
5	**CHECK HARNESS INSIDE TRANSMISSION.** 1) Disconnect the control valve body connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 3 (+) — Transmission body (–):***	Is the voltage approx. 0 V?	Replace the control valve body. <Ref. to CVT-109, Control Valve Body.>	Replace the transmission harness.