17.Diagnostic Procedure with Diagnostic Trouble Code (DTC)

A: DTC P0500 VEHICLE SPEED SENSOR “A”

DTC DETECTING CONDITION:

- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-5, DTC P0500 VEHICLE SPEED SENSOR “A”, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

VDC does not operate.

	Step	Check	Yes	No
1	**CHECK DTC.** Read the DTC of VDC system using the Subaru Select Monitor.	Is DTC displayed?	Perform the diagnosis according to DTC. <Ref. to VDC(diag)-42, List of Diagnostic Trouble Code (DTC).>	Repair the poor contact of connector and harness between VDCCM&H/U and wheel speed sensor.

B: DTC P0601 INTERNAL CONTROL MODULE MEMORY CHECKSUM ERROR

DTC DETECTING CONDITION:

- Detected when two consecutive driving cycles with fault occur.
- GENERAL DESCRIPTION <Ref. to GD(CVT)-6, DTC P0601 INTERNAL CONTROL MODULE MEMORY CHECKSUM ERROR, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

TCM ROM malfunction

	Step	Check	Yes	No
1	**CHECK DTC.** 1) Perform the Clear Memory Mode using the Subaru Select Monitor. <Ref. to CVT(diag)-17, Clear Memory Mode.> 2) Read the DTC.	Is DTC P0601 displayed?	Replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>	Current condition is normal. Check for interference from noise, etc.

C: DTC P0604 INTERNAL CONTROL MODULE RANDOM ACCESS MEMORY (RAM) ERROR

DTC DETECTING CONDITION:

- Detected when two consecutive driving cycles with fault occur.
- GENERAL DESCRIPTION <Ref. to GD(CVT)-7, DTC P0604 INTERNAL CONTROL MODULE RANDOM ACCESS MEMORY (RAM) ERROR, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

TCM RAM malfunction

	Step	Check	Yes	No
1	**CHECK DTC.** 1) Perform the Clear Memory Mode using the Subaru Select Monitor. <Ref. to CVT(diag)-17, Clear Memory Mode.> 2) Read the DTC.	Is DTC P0604 displayed?	Replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>	Current condition is normal. Check for interference from noise, etc.

D: DTC P062F INTERNAL CONTROL MODULE EEPROM ERROR

DTC DETECTING CONDITION:

- Detected when two consecutive driving cycles with fault occur.
- GENERAL DESCRIPTION <Ref. to GD(CVT)-8, DTC P062F INTERNAL CONTROL MODULE EEPROM ERROR, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

TCM EEPROM malfunction

	Step	Check	Yes	No
1	**CHECK DTC.** 1) Perform the Clear Memory Mode using the Subaru Select Monitor. <Ref. to CVT(diag)-17, Clear Memory Mode.> 2) Read the DTC.	Is DTC P062F displayed?	Replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>	Current condition is normal. Check for interference from noise, etc.

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

DTC DETECTING CONDITION:

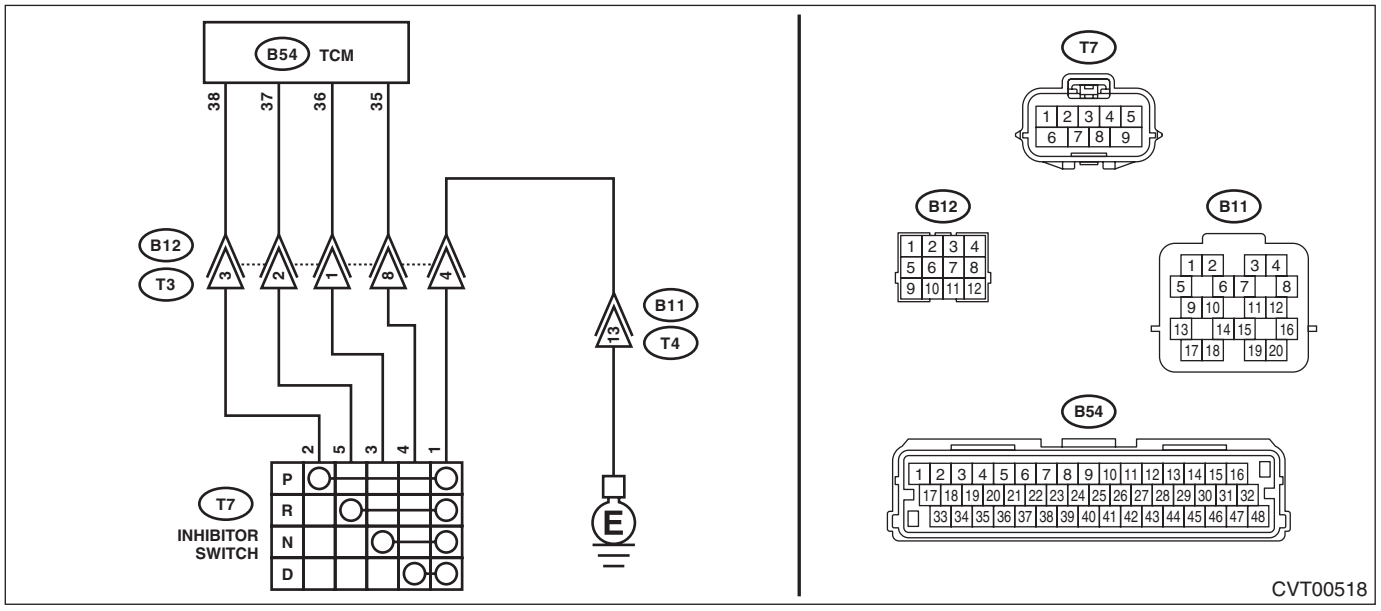
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-9, DTC P0705 TRANSMISSION RANGE SENSOR CIRCUIT (PRNDL INPUT), Diagnostic Trouble Code (DTC) Detecting Criteria.>

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:

CVT control system <Ref. to WI-148, CVT Control System.>



	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, and read the data of «P range», «R Range Signal», «N range» and «D Range Signal» 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. 38 — Chassis ground:*** ***(B54) No. 37 — Chassis ground:*** ***(B54) No. 36 — Chassis ground:*** ***(B54) No. 35 — Chassis ground:***	Is each resistance 1 MΩ or more?	Go to step **3**.	Repair the short circuit of body harness.
3	**CHECK HARNESS.** 1) Disconnect the inhibitor switch connector. 2) Measure the resistance between transmission connector and chassis ground. ***Connector & terminal*** ***(T3) No. 3 — Chassis ground:*** ***(T3) No. 2 — Chassis ground:*** ***(T3) No. 1 — Chassis ground:*** ***(T3) No. 8 — Chassis ground:***	Is each resistance 1 MΩ or more?	Go to step **4**.	Repair the short circuit of transmission 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(TR690)-92, Inhibitor Switch.>
5	**CHECK FOR POOR CONTACT.**	Is there poor contact between TCM, inhibitor switch, transmission ground?	Repair the poor contact.	Replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>

F: DTC P0708 AT RANGE SWITCH NOT INPUTTED

DTC DETECTING CONDITION:

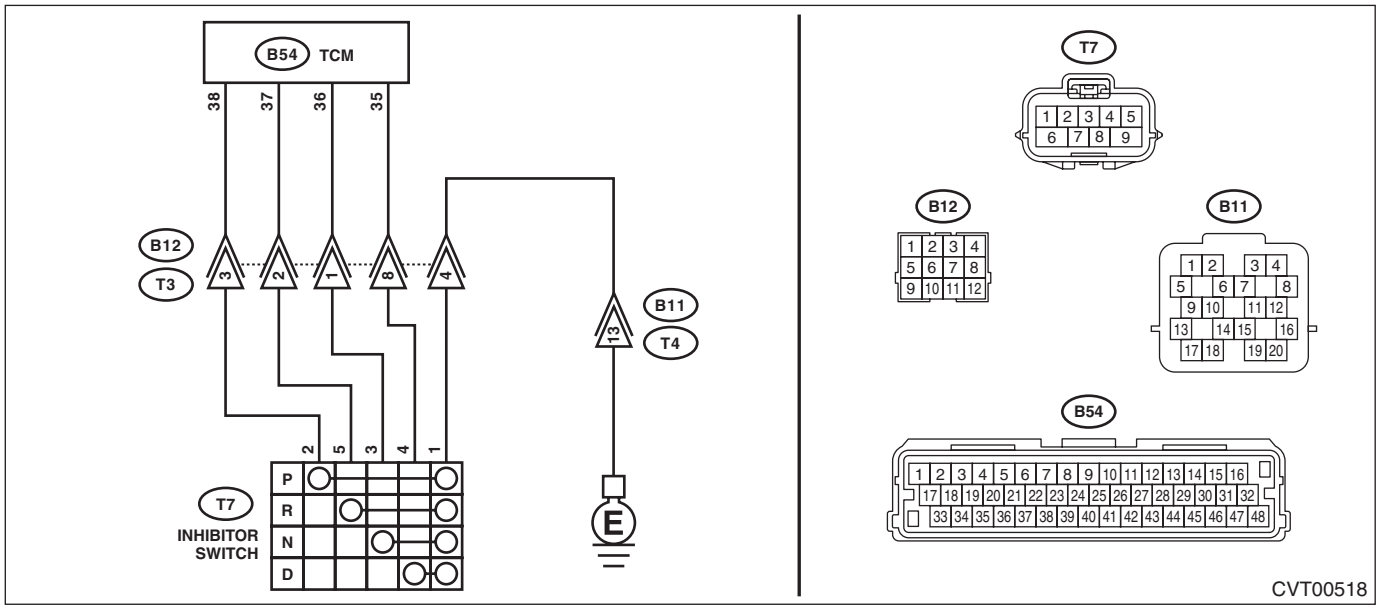
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-10, DTC P0708 AT RANGE SWITCH NOT INPUTTED, Diagnostic Trouble Code (DTC) Detecting Criteria.>

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:

CVT control system <Ref. to WI-148, CVT Control System.>



	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, and read the data of «P range», «R Range Signal», «N range» and «D Range Signal» 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. 38 — (B12) No. 3:*** ***(B54) No. 37 — (B12) No. 2:*** ***(B54) No. 36 — (B12) No. 1:*** ***(B54) No. 35 — (B12) No. 8:***	Is each resistance less than 1 Ω?	Go to step **3**.	Repair the open circuit of body harness.
3	**CHECK HARNESS.** Measure the resistance of harness between inhibitor switch connector and transmission ground. ***Connector & terminal*** ***(T7) No. 1 — 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:***	Is each resistance less than 1 Ω?	Go to step **5**.	Repair the open circuit of transmission 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(TR690)-92, 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 (–):*** ***Transmission connector (T7 side)*** ***(T7) No. 2 (+) — Chassis ground (–):*** ***(T7) No. 5 (+) — Chassis ground (–):*** ***(T7) No. 3 (+) — Chassis ground (–):*** ***(T7) No. 4 (+) — 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.	Replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>

G: DTC P0711 ATF TEMP. SENSOR CIRCUIT RANGE/PERFORMANCE

DTC DETECTING CONDITION:

- Detected when two consecutive driving cycles with fault occur.
- GENERAL DESCRIPTION <Ref. to GD(CVT)-11, DTC P0711 ATF TEMP. SENSOR CIRCUIT RANGE/PERFORMANCE, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

- Excessive shift shock
- Shift characteristics malfunction

NOTE:
For the diagnostic procedure, perform the diagnosis according to DTC P0712 and P0713. <Ref. to CVT(diag)-42, DTC P0712 TRANSMISSION FLUID TEMPERATURE SENSOR CIRCUIT LOW INPUT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).> <Ref. to CVT(diag)-44, DTC P0713 TRANSMISSION FLUID TEMPERATURE SENSOR CIRCUIT HIGH INPUT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

H: DTC P0712 TRANSMISSION FLUID TEMPERATURE SENSOR CIRCUIT LOW INPUT

DTC DETECTING CONDITION:

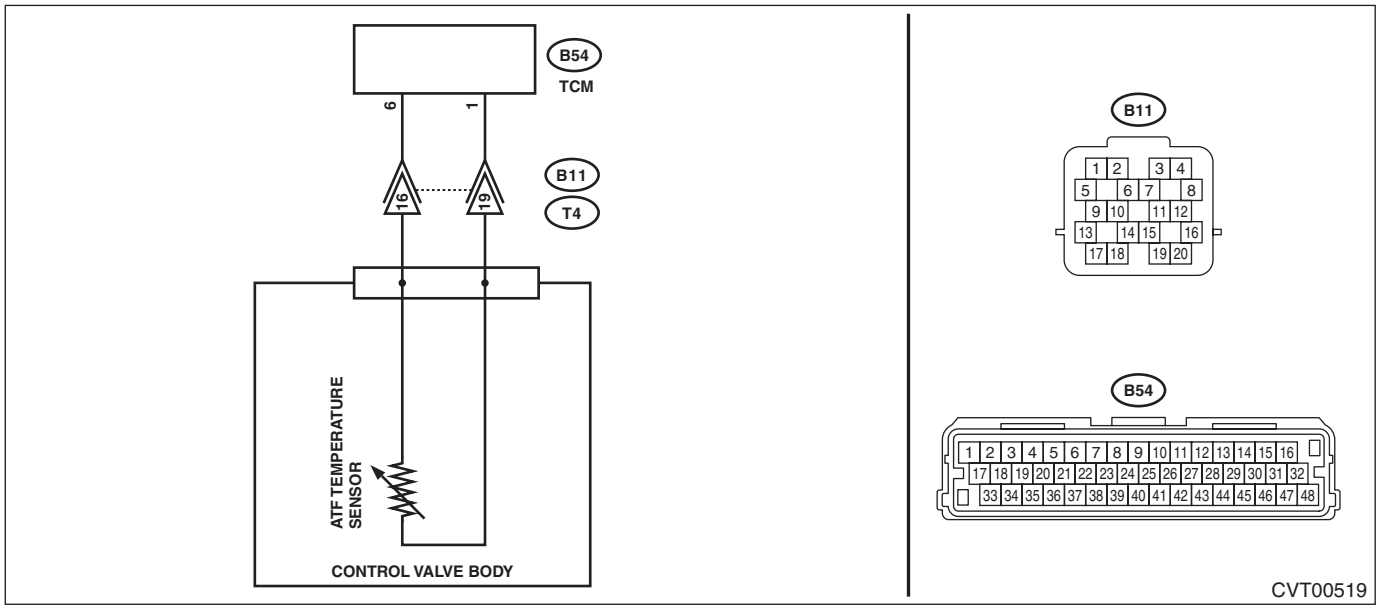
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-12, DTC P0712 TRANSMISSION FLUID TEMPERATURE SENSOR CIRCUIT LOW INPUT, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

- Excessive shift shock
- Shift characteristics malfunction

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



Step		Check	Yes	No
1	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM connector. 3) Measure the resistance of harness between TCM connector and chassis ground. ***Connector & terminal*** ***(B54) No. 1 — Chassis ground:*** ***(B54) No. 6 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Go to step **2**.
2	**CHECK HARNESS.** 1) Disconnect the transmission connector. 2) Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 16 — Transmission body:*** ***(T4) No. 19 — Transmission body:***	Is the resistance 1 MΩ or more?	Repair the short circuit of body harness.	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 fault in the harness?	Replace the transmission harness.	Go to step **4**.

	Step	Check	Yes	No
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	Replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>	Replace the control valve body. <Ref. to CVT(TR690)-112, Control Valve Body.>

I: DTC P0713 TRANSMISSION FLUID TEMPERATURE SENSOR CIRCUIT HIGH INPUT

DTC DETECTING CONDITION:

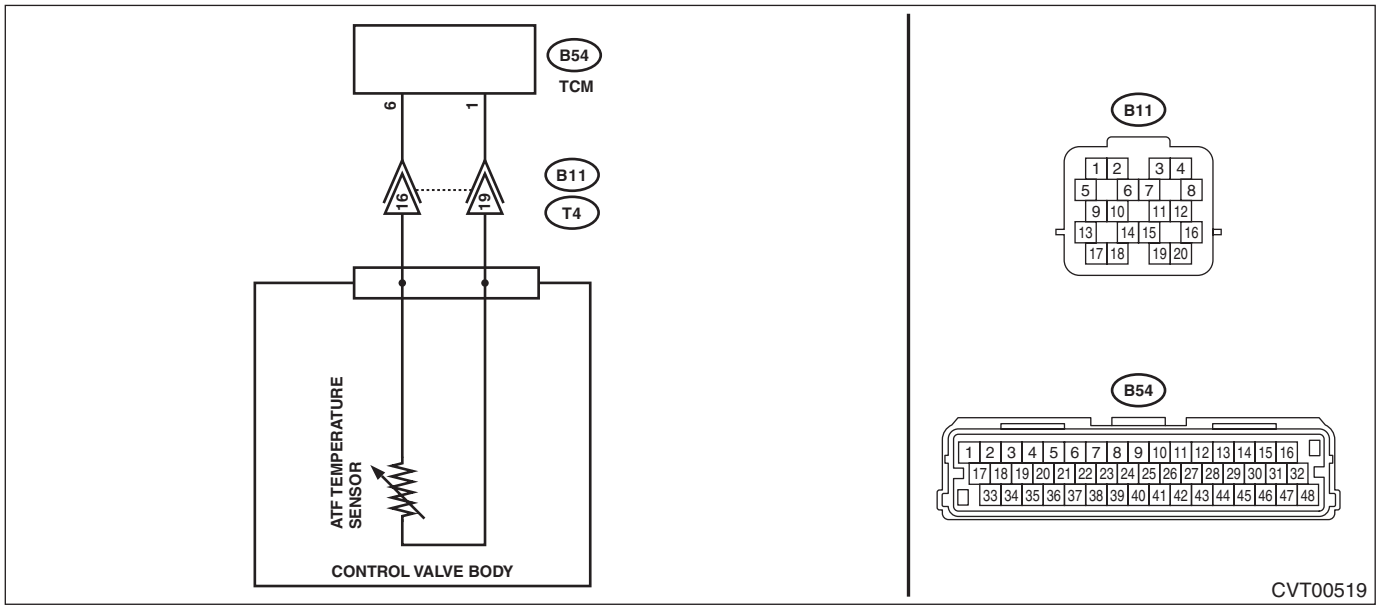
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-13, DTC P0713 TRANSMISSION FLUID TEMPERATURE SENSOR CIRCUIT HIGH INPUT, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

- Excessive shift shock
- Shift characteristics malfunction

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



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. 6 (+) — (B54) No. 1 (–):***	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) Disconnect the TCM and transmission connectors. 3) Measure the resistance between TCM connector and transmission connectors. ***Connector & terminal*** ***(B54) No. 6 — (B11) No. 16:*** ***(B54) No. 1 — (B11) No. 19:***	Is the resistance less than 1 Ω?	Go to step **3**.	Repair the open circuit of body harness.
3	**CHECK ATF TEMPERATURE SENSOR.** Measure the resistance between transmission connector terminals. ***Connector & terminal*** ***(T4) No. 16 — No. 19:***	Is the resistance 1 MΩ or more?	Repair the open circuit of transmission harness.	Go to step **4**.

	Step	Check	Yes	No
4	**CHECK ATF TEMPERATURE SENSOR.** 1) Connect the connectors to TCM and transmission. 2) Start the engine. 3) Warm up until the ATF temperature exceeds 50°C (122°F). 4) Turn the ignition switch to OFF. 5) Disconnect the transmission connector. 6) Measure the resistance between transmission connector terminals. ***Connector & terminal*** ***(T4) No. 16 — No. 19:***	Is the resistance 730 — 1120 Ω?	Go to step **5**.	Go to step **7**.
5	**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 **6**.	Replace the control valve body. <Ref. to CVT(TR690)-112, Control Valve Body.>
6	**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 Temp.» using the 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 defective part.	Go to step **7**.
7	**CHECK FOR POOR CONTACT.**	Is there poor contact of ATF temperature sensor circuit?	Repair the poor contact.	Replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>

J: DTC P0719 BRAKE SWITCH CIRCUIT LOW

DTC DETECTING CONDITION:

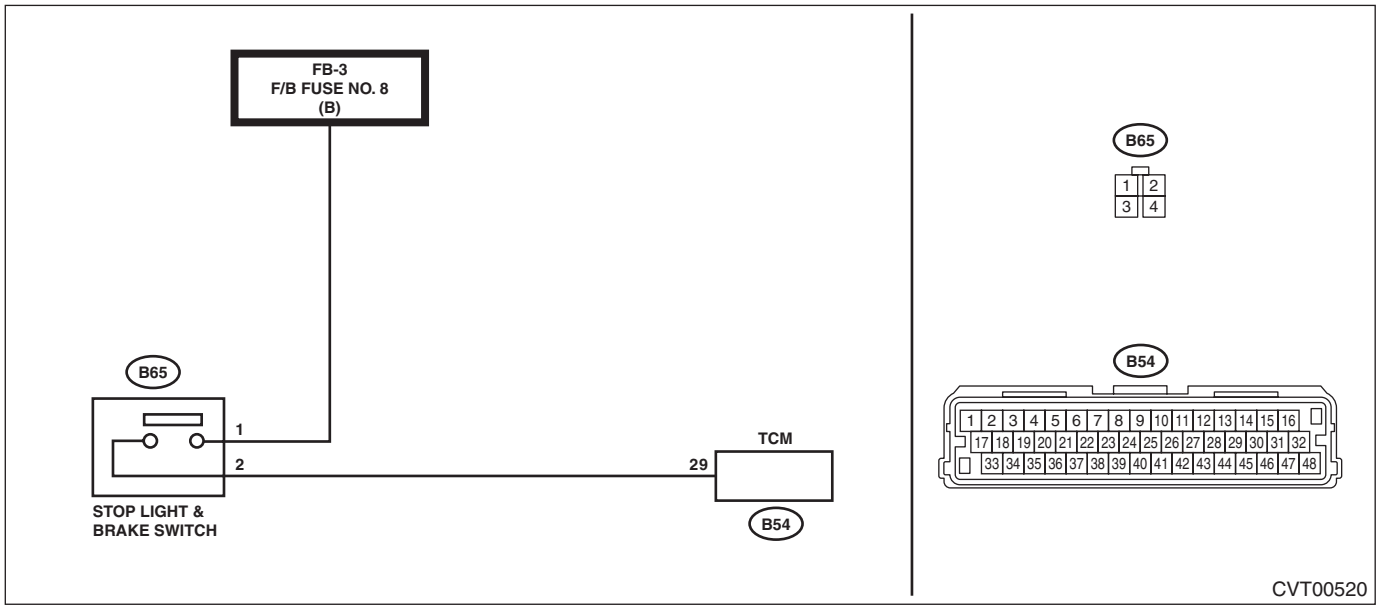
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-14, DTC P0719 BRAKE SWITCH CIRCUIT LOW, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

Gear is not shifted down when climbing a hill or driving down a hill.

WIRING DIAGRAM:

Stop light system <Ref. to WI-397, Stop Light System.>



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*** ***(B54) No. 29 — (B65) No. 2:***	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. 1 — fuse (No. 8):***	Is the resistance less than 1 Ω?	Go to step **4**.	Repair the open circuit of harness.

	Step	Check	Yes	No
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*** ***(B54) No. 29 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **5**.	Replace the stop light switch. <Ref. to BR-77, Stop Light Switch.>
5	**CHECK INPUT SIGNAL FOR TCM.** With brake pedal depressed, read the data of «Stop Light Switch» using Subaru Select Monitor.	Is “ON” displayed?	Current condition is normal. Check for poor contact in connectors or harnesses, and repair the defective part.	Go to step **6**.
6	**CHECK FOR POOR CONTACT.**	Is there poor contact of input signal of stop light switch?	Repair the poor contact.	Replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>

K: DTC P0720 OUTPUT SPEED SENSOR CIRCUIT

DTC DETECTING CONDITION:

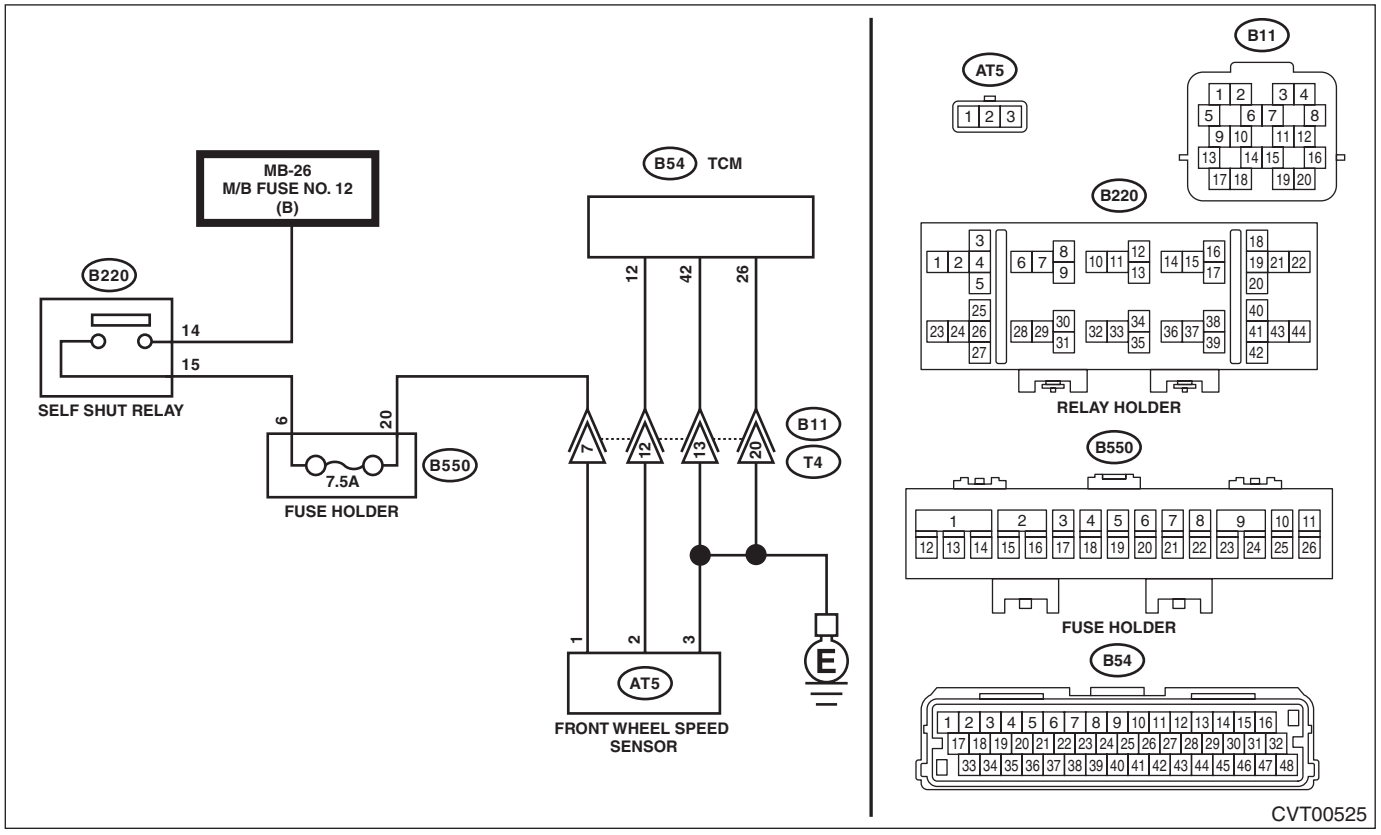
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-15, DTC P0720 OUTPUT SPEED SENSOR CIRCUIT, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

- Shock occurs when selecting shift position.
- Shift control malfunction

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



Step		Check	Yes	No
1	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Remove the fuse (7.5 A) from the fuse holder.	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. 12 — (B11) No. 12:*** ***(B54) No. 26 — (B11) No. 20:*** ***(B54) No. 42 — (B11) No. 13:*** ***(B550) No. 20 — (B11) No. 7:***	Is the resistance less than 1 Ω?	Go to step **3**.	Repair the open circuit of harness.

	Step	Check	Yes	No
3	**CHECK HARNESS.** 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 **4**.	Repair the short circuit of harness.
4	**CHECK TRANSMISSION HARNESS.** 1) Install the fuse. 2) Connect the TCM connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between transmission connector terminals. ***Connector & terminal*** ***(B11) No. 7 (+) — Chassis ground (–):***	Is the voltage approx. 10 — 13 V?	Go to step **5**.	Repair the poor contact of harness or 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 (19 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:*** ***(T4) No. 20 — (AT5) No. 3:***	Is the resistance less than 1 Ω?	Replace the front wheel speed sensor. <Ref. to CVT(TR690)-105, Front Wheel Speed Sensor.>	Replace the transmission harness.

L: DTC P0721 OUTPUT SHAFT SPEED SENSOR CIRCUIT RANGE/PERFORMANCE

DTC DETECTING CONDITION:

- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-16, DTC P0721 OUTPUT SHAFT SPEED SENSOR CIRCUIT RANGE/PERFORMANCE, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

- Acceleration is poor during standing start.
- No lock-up occurs.
- The engine stalls when the vehicle is stopped.
- Shift control malfunction

Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC using Subaru Select Monitor.	Besides DTC P0721, is DTC P1706 or P0500 displayed?	Perform the diagnosis according to DTCs other than P0721.	Perform the diagnosis according to DTC P0720. <Ref. to CVT(diag)-48, DTC P0720 OUTPUT SPEED SENSOR CIRCUIT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

M: DTC P0724 BRAKE SWITCH CIRCUIT HIGH

DTC DETECTING CONDITION:

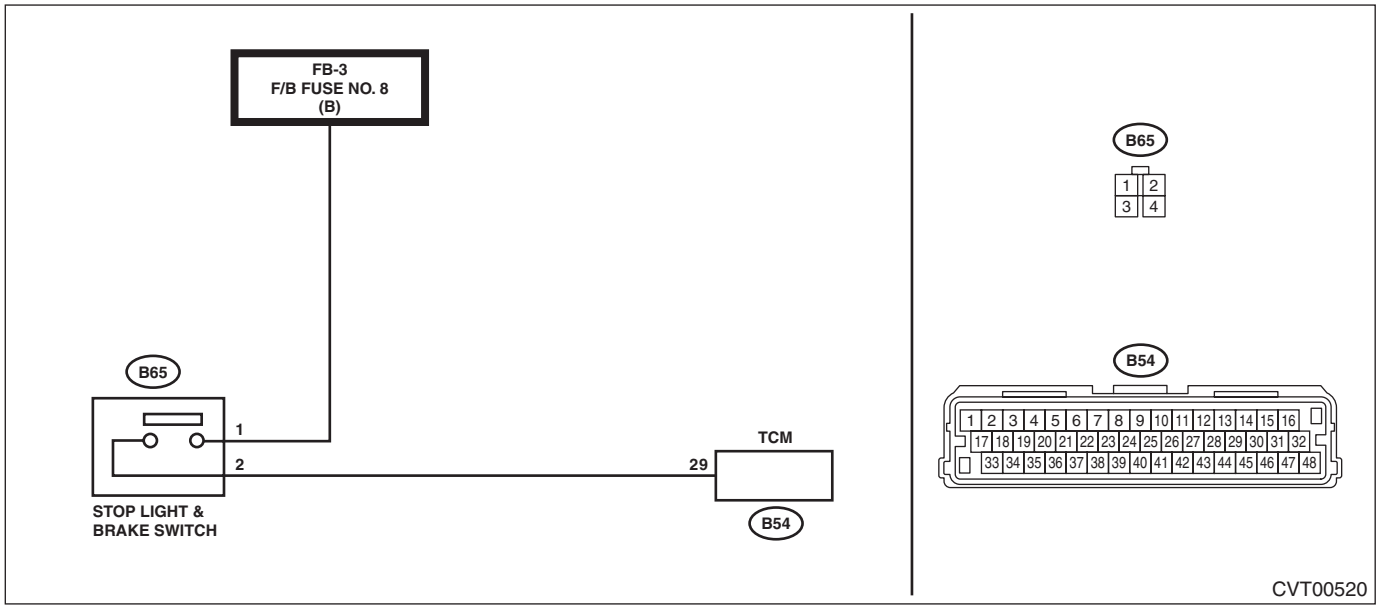
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-17, DTC P0724 BRAKE SWITCH CIRCUIT HIGH, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

Gear is not shifted down when climbing a hill or driving down a hill.

WIRING DIAGRAM:

Stop light system <Ref. to WI-397, Stop Light System.>



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 between stop light switch connectors. ***Connector & terminal*** ***(B65) No. 1 — No. 2:***	Is the resistance 1 MΩ or more?	Go to step **2**.	Replace the stop light switch. <Ref. to BR-77, 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*** ***(B54) No. 29 (+) — 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 in connectors or harnesses, and repair the defective part.	Go to step **4**.
4	**CHECK FOR POOR CONTACT.**	Is there poor contact of input signal of stop light switch?	Repair the poor contact.	Replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>

N: DTC P0730 GEARSHIFT CONTROL PERFORMANCE ABNORMAL

DTC DETECTING CONDITION:

- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-18, DTC P0730 GEARSHIFT CONTROL PERFORMANCE ABNORMAL, Diagnostic Trouble Code (DTC) Detecting Criteria.>

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 amount of ATF. <Ref. to CVT(TR690)-36, ADJUSTMENT, CVTF.>	Is the ATF amount correct?	Go to step **2**.	Adjust the amount of ATF. <Ref. to CVT(TR690)-36, ADJUSTMENT, CVTF.>
2	**CHECK TRANSMISSION FLUID.** Check the condition of ATF. <Ref. to CVT(TR690)-40, CONDITION CHECK, CVTF.>	Is the ATF OK?	Go to step **3**.	Check according to the “Corrective action” of ATF (CVTF) “CONDITION CHECK”. <Ref. to CVT(TR690)-40, CONDITION CHECK, 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 the «Actual secondary pressure» 0.5 — 1.5 MPa?	Go to step **4**.	Perform the diagnosis according to DTC P0841. <Ref. to CVT(diag)-68, DTC P0841 SECONDARY OIL PRESSURE SENSOR PERFORMANCE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
4	**CHECK INPUT SIGNAL FOR TCM.** 1) Set the select lever to “D” range. 2) Release the brake pedal to stabilize the engine speed and front wheel speed. 3) Read the data of «Actual Gear Ratio» using Subaru Select Monitor.	Is the «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 “D” range. 2) Slowly increase the speed to 40 km/h (25 MPH) and keep the constant speed. 3) Read the data of «Actual Gear Ratio» using Subaru Select Monitor.	Is the «Actual Gear Ratio» 0.5 — 0.8?	Go to step **6**.	Replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.>

	Step	Check	Yes	No
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)-18, Inspection Mode.>	Does the AT OIL TEMP light blink and is DTC P0730 displayed?	Replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.>	If there is shift problems, abrupt increase of engine speed, standing start problems, replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.> If it is normal, temporary poor contact occurs.

O: DTC P0746 PRESSURE CONTROL SOLENOID "A" PERFORMANCE/STUCK OFF

DTC DETECTING CONDITION:

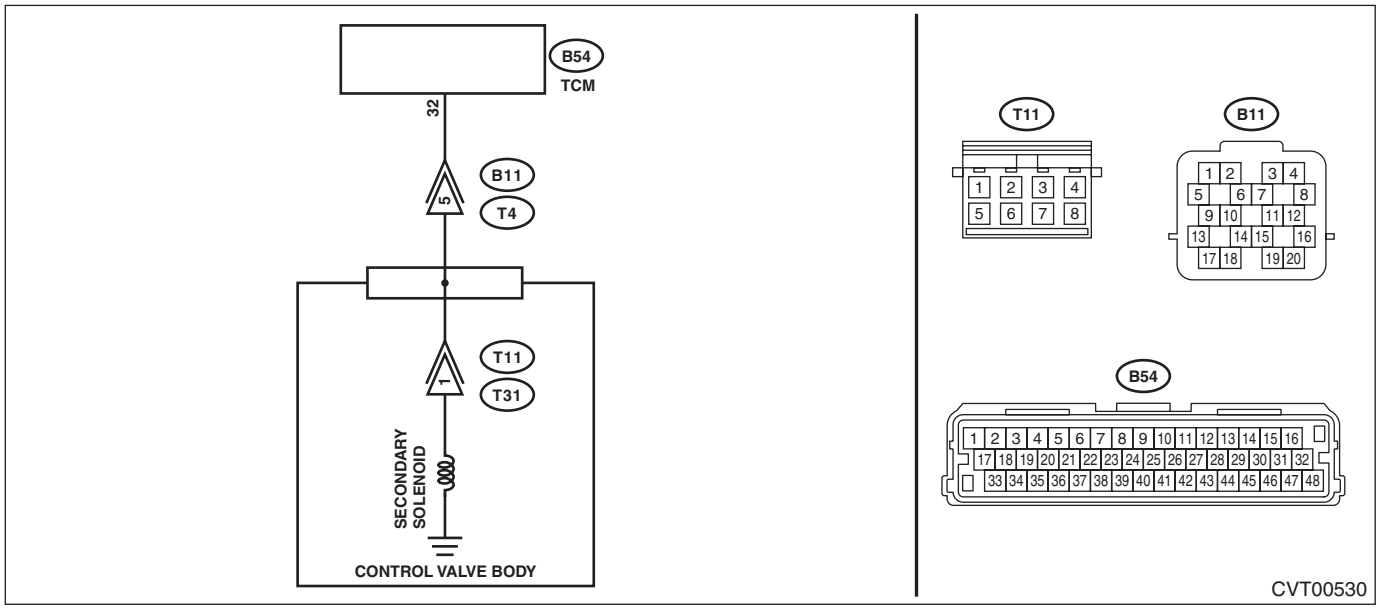
- Detected when two consecutive driving cycles with fault occur.
- GENERAL DESCRIPTION <Ref. to GD(CVT)-19, DTC P0746 PRESSURE CONTROL SOLENOID "A" PERFORMANCE/STUCK OFF, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

- Shift control malfunction
- CVT chain slippage

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC using Subaru Select Monitor.	Besides DTC P0746, is any of the DTCs P0842, P0843, P0962 and P0963 displayed?	Perform the diagnosis according to DTCs other than P0746.	Go to step **2**.
2	**CHECK SECONDARY SOLENOID (SYSTEM OPERATION CHECK MODE).** 1) Turn the ignition switch to ON. 2) Using the Subaru Select Monitor, perform forced operation of the secondary solenoid. <Ref. to CVT(diag)-22, System Operation Check Mode.>	Does the indication of 0 → 500 mA appear repeatedly during forced operation, and does operating sound emit during indicating 500 mA?	Go to step **5**.	Go to step **3**.
3	**CHECK SECONDARY SOLENOID.** 1) Turn the ignition switch to OFF. 2) Disconnect the transmission connector. 3) Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 5 — Transmission body:***	Is the resistance approx. 5 — 7 Ω? (when cold)	Go to step **7**.	Go to step **4**.
4	**CHECK HARNESS.** Check the continuity of transmission harness.	Is the harness normal? (Is it free from defects such as open circuit, power supply-output short or GND-output short circuit, or poor contact?)	Go to step **7**.	Repair the harness.

	Step	Check	Yes	No
5	**CHECK TRANSMISSION FLUID.** 1) Connect the transmission connector. 2) Check the amount of ATF. <Ref. to CVT(TR690)-36, ADJUSTMENT, CVTF.>	Is the ATF amount correct?	Go to step **6**.	Adjust the amount of ATF. <Ref. to CVT(TR690)-36, ADJUSTMENT, CVTF.>
6	**CHECK TRANSMISSION FLUID.** Check the condition of ATF. <Ref. to CVT(TR690)-40, CONDITION CHECK, CVTF.>	Is the ATF OK?	Go to step **7**.	Check according to the "Corrective action" of ATF (CVTF) "CONDITION CHECK". <Ref. to CVT(TR690)-40, CONDITION CHECK, CVTF.>
7	**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 the «Actual secondary pressure» 0.5 — 1.5 MPa?	Go to step **8**.	Replace the control valve body. <Ref. to CVT(TR690)-112, Control Valve Body.>
8	**CHECK INPUT SIGNAL FOR TCM.** 1) Keep the engine speed at 3,000 rpm. 2) Read the data of «Actual secondary pressure» using Subaru Select Monitor.	Is the «Actual secondary pressure» higher than step 7 value? Does the value change according to the engine speed, within the range of 1.5 — 2.5 MPa?	Go to step **9**.	Replace the control valve body. <Ref. to CVT(TR690)-112, Control Valve Body.>
9	**CHECK TCM INPUT SIGNAL (STALL TEST).** 1) Apply the parking brake. 2) Set the select lever to "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. **CAUTION:** **Do not perform a stall test for over 5 seconds at a time.**	Is the «Actual secondary pressure» higher than step 8 value? Does the value change according to the engine speed, within the range of 4.5 — 6.0 MPa?	Go to step **10**.	Replace the control valve body. <Ref. to CVT(TR690)-112, Control Valve Body.>
10	**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)-18, Inspection Mode.>	Does the AT OIL TEMP light blink and is DTC P0746 displayed?	Perform the secondary pressure test. <Ref. to CVT(TR690)-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(TR690)-56, Automatic Transmission Assembly.> If it is normal, temporary poor contact occurs.

P: DTC P0747 PRESSURE CONTROL SOLENOID "A" STUCK ON

DTC DETECTING CONDITION:

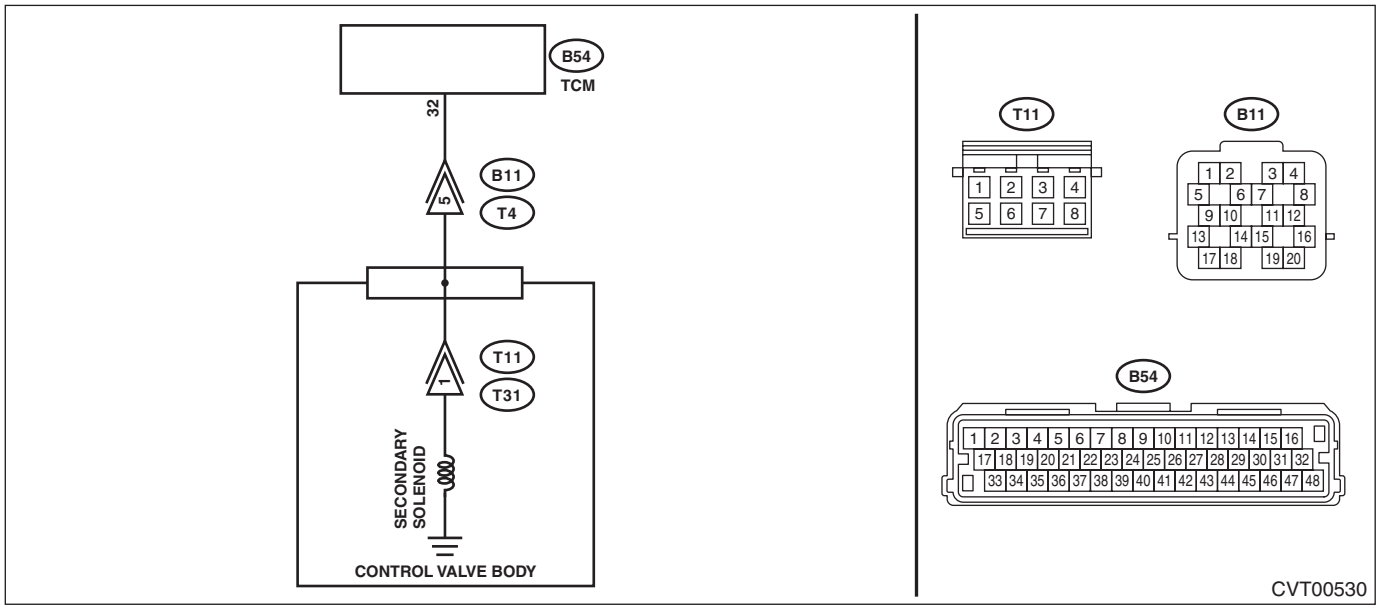
- Detected when two consecutive driving cycles with fault occur.
- GENERAL DESCRIPTION <Ref. to GD(CVT)-22, DTC P0747 PRESSURE CONTROL SOLENOID "A" STUCK ON, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

- Acceleration is poor during standing start.
- Shift control malfunction

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC using Subaru Select Monitor.	Besides DTC P0747, is any of the DTCs P0842, P0843, P0962 and P0963 displayed?	Perform the diagnosis according to DTCs other than P0747.	Go to step **2**.
2	**CHECK SECONDARY SOLENOID (SYSTEM OPERATION CHECK MODE).** 1) Turn the ignition switch to ON. 2) Using the Subaru Select Monitor, perform forced operation of the secondary solenoid. <Ref. to CVT(diag)-22, System Operation Check Mode.>	Does the indication of 0 → 500 mA appear repeatedly during forced operation, and does operating sound emit during indicating 500 mA?	Go to step **5**.	Go to step **3**.
3	**CHECK SECONDARY SOLENOID.** 1) Turn the ignition switch to OFF. 2) Disconnect the transmission connector. 3) Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 5 — Transmission body:***	Is the resistance approx. 5 — 7 Ω? (when cold)	Go to step **7**.	Go to step **4**.
4	**CHECK HARNESS.** Check the continuity of transmission harness.	Is the harness normal? (Is it free from defects such as open circuit, power supply-output short or GND-output short circuit, or poor contact?)	Go to step **7**.	Repair the harness.

	Step	Check	Yes	No
5	**CHECK TRANSMISSION FLUID.** 1) Connect the transmission connector. 2) Check the amount of ATF. <Ref. to CVT(TR690)-36, ADJUSTMENT, CVTF.>	Is the ATF amount correct?	Go to step **6**.	Adjust the amount of ATF. <Ref. to CVT(TR690)-36, ADJUSTMENT, CVTF.>
6	**CHECK TRANSMISSION FLUID.** Check the condition of ATF. <Ref. to CVT(TR690)-40, CONDITION CHECK, CVTF.>	Is the ATF OK?	Go to step **7**.	Check according to the "Corrective action" of ATF (CVTF) "CONDITION CHECK". <Ref. to CVT(TR690)-40, CONDITION CHECK, CVTF.>
7	**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 the «Actual secondary pressure» 0.5 — 1.5 MPa?	Go to step **8**.	Replace the control valve body. <Ref. to CVT(TR690)-112, Control Valve Body.>
8	**CHECK INPUT SIGNAL FOR TCM.** 1) Keep the engine speed at 3,000 rpm. 2) Read the data of «Actual secondary pressure» using Subaru Select Monitor.	Is the «Actual secondary pressure» higher than step 7 value? Does the value change according to the engine speed, within the range of 1.5 — 2.5 MPa?	Go to step **9**.	Replace the control valve body. <Ref. to CVT(TR690)-112, Control Valve Body.>
9	**CHECK TCM INPUT SIGNAL (STALL TEST).** 1) Apply the parking brake. 2) Set the select lever to "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. **CAUTION:** **Do not perform a stall test for over 5 seconds at a time.**	Is the «Actual secondary pressure» higher than step 8 value? Does the value change according to the engine speed, within the range of 4.5 — 6.0 MPa?	Go to step **10**.	Replace the control valve body. <Ref. to CVT(TR690)-112, Control Valve Body.>
10	**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)-18, Inspection Mode.>	Does the AT OIL TEMP light blink and is DTC P0747 displayed?	Perform the secondary pressure test. <Ref. to CVT(TR690)-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(TR690)-56, Automatic Transmission Assembly.> If it is normal, temporary poor contact occurs.

Q: DTC P0751 SHIFT SOLENOID "A" PERFORMANCE/STUCK OFF

DTC DETECTING CONDITION:

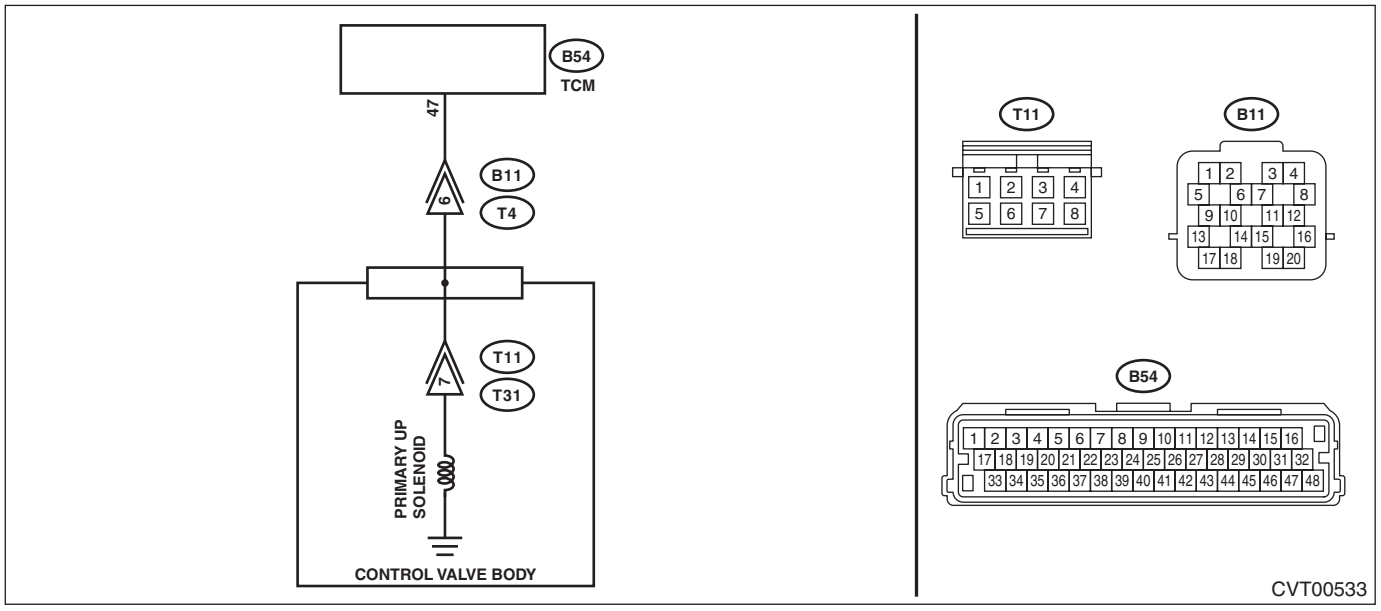
- Detected when two consecutive driving cycles with fault occur.
- GENERAL DESCRIPTION <Ref. to GD(CVT)-25, DTC P0751 SHIFT SOLENOID "A" PERFORMANCE/ STUCK OFF, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

- Shift control malfunction
- Engine speed increases abruptly.

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC using Subaru Select Monitor.	Besides DTC P0751, is any of the DTCs P0973, P0974, P0976, P0977, P2747 and P2751 displayed?	Perform the diagnosis according to DTCs other than P0751.	Go to step **2**.
2	**CHECK PRIMARY UP SOLENOID (SYSTEM OPERATION CHECK MODE).** 1) Turn the ignition switch to ON. 2) Using the Subaru Select Monitor, perform forced operation of the primary UP solenoid. <Ref. to CVT(diag)-22, System Operation Check Mode.>	Does the indication of 0 → 50% appear repeatedly during forced operation, and does operating sound emit during indicating 50%?	Go to step **5**.	Go to step **3**.
3	**CHECK PRIMARY UP SOLENOID.** 1) Turn the ignition switch to OFF. 2) Disconnect the transmission connector. 3) Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 6 — Transmission body:***	Is the resistance approx. 10 — 13.5 Ω? (when cold)	Go to step **7**.	Go to step **4**.
4	**CHECK HARNESS.** Check the continuity of transmission harness.	Is the harness normal? (Is it free from defects such as open circuit, power supply-output short or GND-output short circuit, or poor contact?)	Go to step **7**.	Repair the harness.

	Step	Check	Yes	No
5	**CHECK TRANSMISSION FLUID.** 1) Connect the transmission connector. 2) Check the amount of ATF. <Ref. to CVT(TR690)-36, ADJUSTMENT, CVTF.>	Is the ATF amount correct?	Go to step **6**.	Adjust the amount of ATF. <Ref. to CVT(TR690)-36, ADJUSTMENT, CVTF.>
6	**CHECK TRANSMISSION FLUID.** Check the condition of ATF. <Ref. to CVT(TR690)-40, CONDITION CHECK, CVTF.>	Is the ATF OK?	Go to step **7**.	Check according to the “Corrective action” of ATF (CVTF) “CONDITION CHECK”. <Ref. to CVT(TR690)-40, CONDITION CHECK, CVTF.>
7	**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 the «Actual secondary pressure» 0.5 — 1.5 MPa?	Go to step **8**.	Replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.>
8	**CHECK INPUT SIGNAL FOR TCM.** 1) Set the select lever to “D” range. 2) Release the brake pedal to stabilize the engine speed and front wheel speed. 3) Read the data of «Actual Gear Ratio» using Subaru Select Monitor. NOTE: Before operation, set SI-DRIVE to I mode.	Is the «Actual Gear Ratio» 2.0 — 2.4?	Go to step **9**.	Replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.>
9	**CHECK INPUT SIGNAL FOR TCM.** 1) Set the select lever to “D” range. 2) Slowly increase the speed to 40 km/h (25 MPH) and keep the constant speed. 3) Read the data of «Actual Gear Ratio» using Subaru Select Monitor. NOTE: Before operation, set SI-DRIVE to I mode.	Is the «Actual Gear Ratio» 0.5 — 0.8?	Go to step **10**.	Replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.>
10	**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)-18, Inspection Mode.>	Does the AT OIL TEMP light blink and is DTC P0751 displayed?	Replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.>	If there is shift problems, abrupt increase of engine speed, standing start problems, replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.> If it is normal, temporary poor contact occurs.

R: DTC P0752 SHIFT SOLENOID "A" STUCK ON

DTC DETECTING CONDITION:

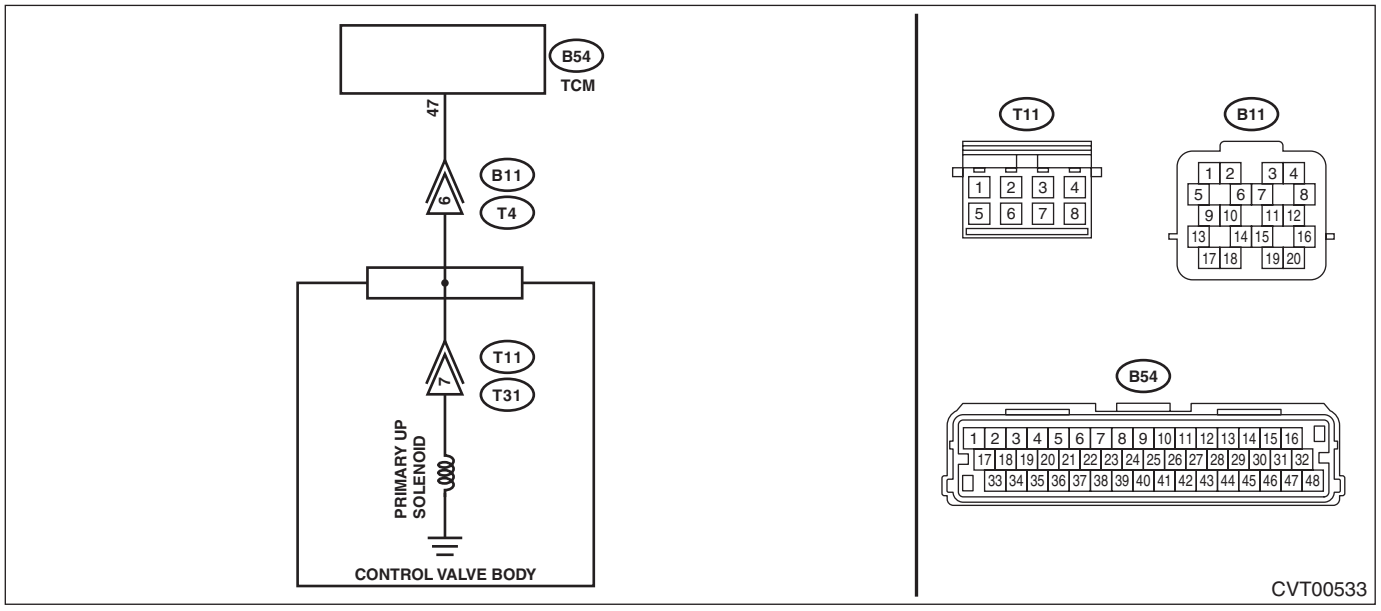
- Detected when two consecutive driving cycles with fault occur.
- GENERAL DESCRIPTION <Ref. to GD(CVT)-26, DTC P0752 SHIFT SOLENOID "A" STUCK ON, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

- Acceleration is poor during standing start.
- Shift control malfunction

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC using Subaru Select Monitor.	Besides DTC P0752, is any of the DTCs P0973, P0974, P0976, P0977, P2747 and P2751 displayed?	Perform the diagnosis according to DTCs other than P0752.	Go to step **2**.
2	**CHECK PRIMARY UP SOLENOID (SYSTEM OPERATION CHECK MODE).** 1) Turn the ignition switch to ON. 2) Using the Subaru Select Monitor, perform forced operation of the primary UP solenoid. <Ref. to CVT(diag)-22, System Operation Check Mode.>	Does the indication of 0 → 50% appear repeatedly during forced operation, and does operating sound emit during indicating 50%?	Go to step **5**.	Go to step **3**.
3	**CHECK PRIMARY UP SOLENOID.** 1) Turn the ignition switch to OFF. 2) Disconnect the transmission connector. 3) Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 6 — Transmission body:***	Is the resistance approx. 10 — 13.5 Ω? (when cold)	Go to step **7**.	Go to step **4**.
4	**CHECK HARNESS.** Check the continuity of transmission harness.	Is the harness normal? (Is it free from defects such as open circuit, power supply-output short or GND-output short circuit, or poor contact?)	Go to step **7**.	Repair the harness.

	Step	Check	Yes	No
5	**CHECK TRANSMISSION FLUID.** 1) Connect the transmission connector. 2) Check the amount of ATF. <Ref. to CVT(TR690)-36, ADJUSTMENT, CVTF.>	Is the ATF amount correct?	Go to step **6**.	Adjust the amount of ATF. <Ref. to CVT(TR690)-36, ADJUSTMENT, CVTF.>
6	**CHECK TRANSMISSION FLUID.** Check the condition of ATF. <Ref. to CVT(TR690)-40, CONDITION CHECK, CVTF.>	Is the ATF OK?	Go to step **7**.	Check according to the “Corrective action” of ATF (CVTF) “CONDITION CHECK”. <Ref. to CVT(TR690)-40, CONDITION CHECK, CVTF.>
7	**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 the «Actual secondary pressure» 0.5 — 1.5 MPa?	Go to step **8**.	Replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.>
8	**CHECK INPUT SIGNAL FOR TCM.** 1) Set the select lever to “D” range. 2) Release the brake pedal to stabilize the engine speed and front wheel speed. 3) Read the data of «Actual Gear Ratio» using Subaru Select Monitor. NOTE: Before operation, set SI-DRIVE to I mode.	Is the «Actual Gear Ratio» 2.0 — 2.4?	Go to step **9**.	Replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.>
9	**CHECK INPUT SIGNAL FOR TCM.** 1) Set the select lever to “D” range. 2) Slowly increase the speed to 40 km/h (25 MPH) and keep the constant speed. 3) Read the data of «Actual Gear Ratio» using Subaru Select Monitor. NOTE: Before operation, set SI-DRIVE to I mode.	Is the «Actual Gear Ratio» 0.5 — 0.8?	Go to step **10**.	Replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.>
10	**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)-18, Inspection Mode.>	Does the AT OIL TEMP light blink and is DTC P0752 displayed?	Replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.>	If there is shift problems, abrupt increase of engine speed, standing start problems, replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.> If it is normal, temporary poor contact occurs.

S: DTC P0756 SHIFT SOLENOID "B" PERFORMANCE/STUCK OFF

DTC DETECTING CONDITION:

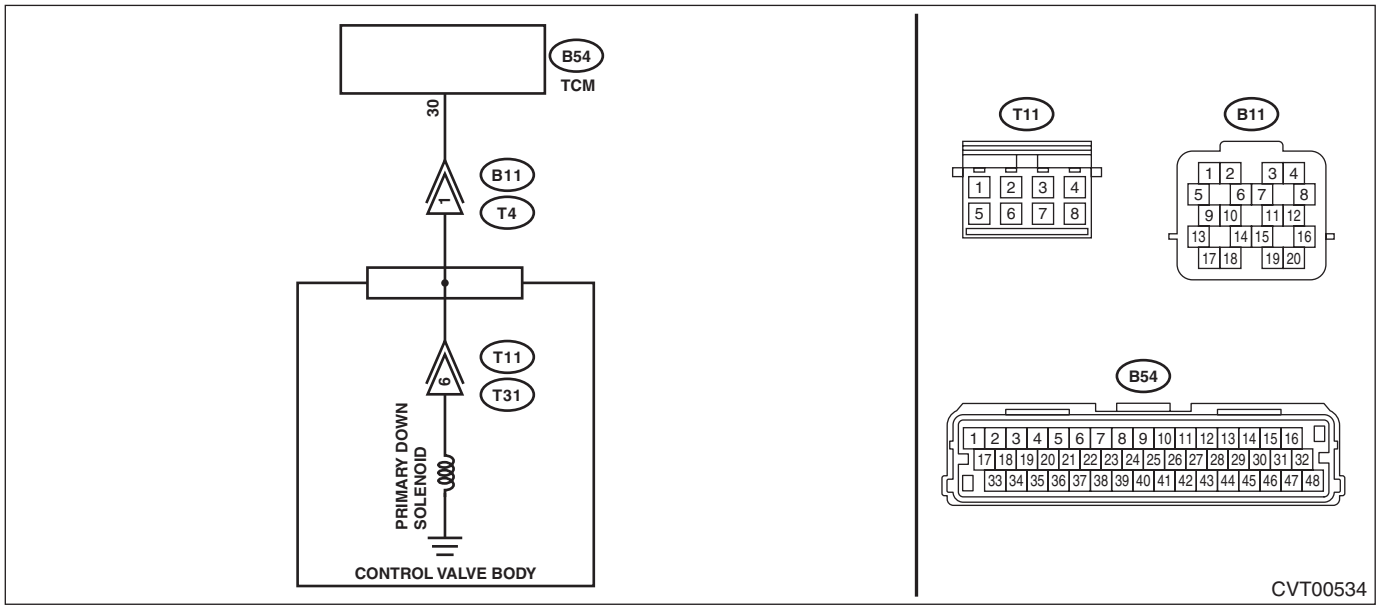
- Detected when two consecutive driving cycles with fault occur.
- GENERAL DESCRIPTION <Ref. to GD(CVT)-27, DTC P0756 SHIFT SOLENOID "B" PERFORMANCE/ STUCK OFF, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

- Acceleration is poor during standing start.
- Shift control malfunction

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC using Subaru Select Monitor.	Besides DTC P0756, is any of the DTCs P0973, P0974, P0976, P0977, P2747 and P2751 displayed?	Perform the diagnosis according to DTCs other than P0756.	Go to step **2**.
2	**CHECK PRIMARY DOWN SOLENOID (SYSTEM OPERATION CHECK MODE).** 1) Turn the ignition switch to ON. 2) Using the Subaru Select Monitor, perform forced operation of the primary DOWN solenoid. <Ref. to CVT(diag)-22, System Operation Check Mode.>	Does the indication of 0 → 50% appear repeatedly during forced operation, and does operating sound emit during indicating 50%?	Go to step **5**.	Go to step **3**.
3	**CHECK PRIMARY DOWN SOLENOID.** 1) Turn the ignition switch to OFF. 2) Disconnect the transmission connector. 3) Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 1 — Transmission body:***	Is the resistance approx. 10 — 13.5 Ω? (when cold)	Go to step **7**.	Go to step **4**.
4	**CHECK HARNESS.** Check the continuity of transmission harness.	Is the harness normal? (Is it free from defects such as open circuit, power supply-output short or GND-output short circuit, or poor contact?)	Go to step **7**.	Repair the harness.

	Step	Check	Yes	No
5	**CHECK TRANSMISSION FLUID.** 1) Connect the transmission connector. 2) Check the amount of ATF. <Ref. to CVT(TR690)-36, ADJUSTMENT, CVTF.>	Is the ATF amount correct?	Go to step **6**.	Adjust the amount of ATF. <Ref. to CVT(TR690)-36, ADJUSTMENT, CVTF.>
6	**CHECK TRANSMISSION FLUID.** Check the condition of ATF. <Ref. to CVT(TR690)-40, CONDITION CHECK, CVTF.>	Is the ATF OK?	Go to step **7**.	Check according to the “Corrective action” of ATF (CVTF) “CONDITION CHECK”. <Ref. to CVT(TR690)-40, CONDITION CHECK, CVTF.>
7	**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 the «Actual secondary pressure» 0.5 — 1.5 MPa?	Go to step **8**.	Replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.>
8	**CHECK INPUT SIGNAL FOR TCM.** 1) Set the select lever to “D” range. 2) Release the brake pedal to stabilize the engine speed and front wheel speed. 3) Read the data of «Actual Gear Ratio» using Subaru Select Monitor. NOTE: Before operation, set SI-DRIVE to I mode.	Is the «Actual Gear Ratio» 2.0 — 2.4?	Go to step **9**.	Replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.>
9	**CHECK INPUT SIGNAL FOR TCM.** 1) Set the select lever to “D” range. 2) Slowly increase the speed to 40 km/h (25 MPH) and keep the constant speed. 3) Read the data of «Actual Gear Ratio» using Subaru Select Monitor. NOTE: Before operation, set SI-DRIVE to I mode.	Is the «Actual Gear Ratio» 0.5 — 0.8?	Go to step **10**.	Replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.>
10	**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)-18, Inspection Mode.>	Does the AT OIL TEMP light blink and is DTC P0756 displayed?	Replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.>	If there is shift problems, abrupt increase of engine speed, standing start problems, replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.> If it is normal, temporary poor contact occurs.

T: DTC P0757 SHIFT SOLENOID "B" STUCK ON

DTC DETECTING CONDITION:

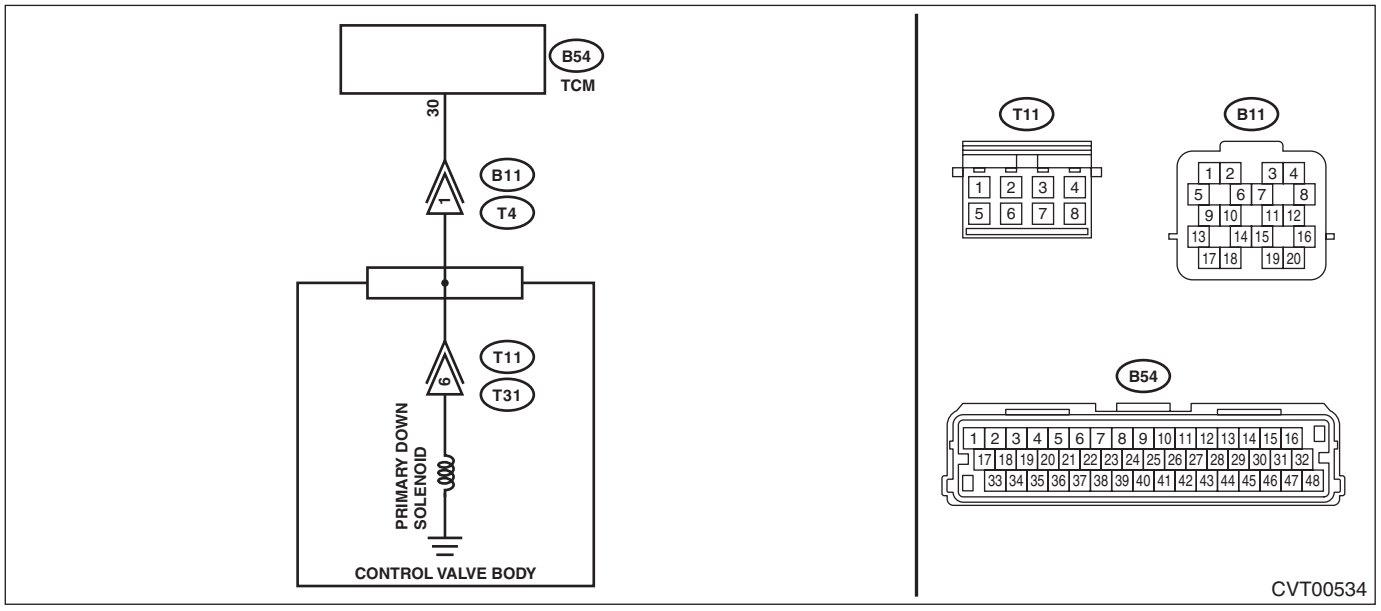
- Detected when two consecutive driving cycles with fault occur.
- GENERAL DESCRIPTION <Ref. to GD(CVT)-28, DTC P0757 SHIFT SOLENOID "B" STUCK ON, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

- Vibration occurs at shift change.
- Shift control malfunction

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC using Subaru Select Monitor.	Besides DTC P0757, is any of the DTCs P0973, P0974, P0976, P0977, P2747 and P2751 displayed?	Perform the diagnosis according to DTCs other than P0757.	Go to step **2**.
2	**CHECK PRIMARY DOWN SOLENOID (SYSTEM OPERATION CHECK MODE).** 1) Turn the ignition switch to ON. 2) Using the Subaru Select Monitor, perform forced operation of the primary DOWN solenoid. <Ref. to CVT(diag)-22, System Operation Check Mode.>	Does the indication of 0 → 50% appear repeatedly during forced operation, and does operating sound emit during indicating 50%?	Go to step **5**.	Go to step **3**.
3	**CHECK PRIMARY DOWN SOLENOID.** 1) Turn the ignition switch to OFF. 2) Disconnect the transmission connector. 3) Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 1 — Transmission body:***	Is the resistance approx. 10 — 13.5 Ω? (when cold)	Go to step **7**.	Go to step **4**.
4	**CHECK HARNESS.** Check the continuity of transmission harness.	Is the harness normal? (Is it free from defects such as open circuit, power supply-output short or GND-output short circuit, or poor contact?)	Go to step **7**.	Repair the harness.

	Step	Check	Yes	No
5	**CHECK TRANSMISSION FLUID.** 1) Connect the transmission connector. 2) Check the amount of ATF. <Ref. to CVT(TR690)-36, ADJUSTMENT, CVTF.>	Is the ATF amount correct?	Go to step **6**.	Adjust the amount of ATF. <Ref. to CVT(TR690)-36, ADJUSTMENT, CVTF.>
6	**CHECK TRANSMISSION FLUID.** Check the condition of ATF. <Ref. to CVT(TR690)-40, CONDITION CHECK, CVTF.>	Is the ATF OK?	Go to step **7**.	Check according to the “Corrective action” of ATF (CVTF) “CONDITION CHECK”. <Ref. to CVT(TR690)-40, CONDITION CHECK, CVTF.>
7	**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 the «Actual secondary pressure» 0.5 — 1.5 MPa?	Go to step **8**.	Replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.>
8	**CHECK INPUT SIGNAL FOR TCM.** 1) Set the select lever to “D” range. 2) Release the brake pedal to stabilize the engine speed and front wheel speed. 3) Read the data of «Actual Gear Ratio» using Subaru Select Monitor. NOTE: Before operation, set SI-DRIVE to I mode.	Is the «Actual Gear Ratio» 2.0 — 2.4?	Go to step **9**.	Replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.>
9	**CHECK INPUT SIGNAL FOR TCM.** 1) Set the select lever to “D” range. 2) Slowly increase the speed to 40 km/h (25 MPH) and keep the constant speed. 3) Read the data of «Actual Gear Ratio» using Subaru Select Monitor. NOTE: Before operation, set SI-DRIVE to I mode.	Is the «Actual Gear Ratio» 0.5 — 0.8?	Go to step **10**.	Replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.>
10	**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)-18, Inspection Mode.>	Does the AT OIL TEMP light blink and is DTC P0757 displayed?	Replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.>	If there is shift problems, abrupt increase of engine speed, standing start problems, replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.> If it is normal, temporary poor contact occurs.

U: DTC P0776 PRESSURE CONTROL SOLENOID "B" PERFORMANCE/STUCK OFF

DTC DETECTING CONDITION:

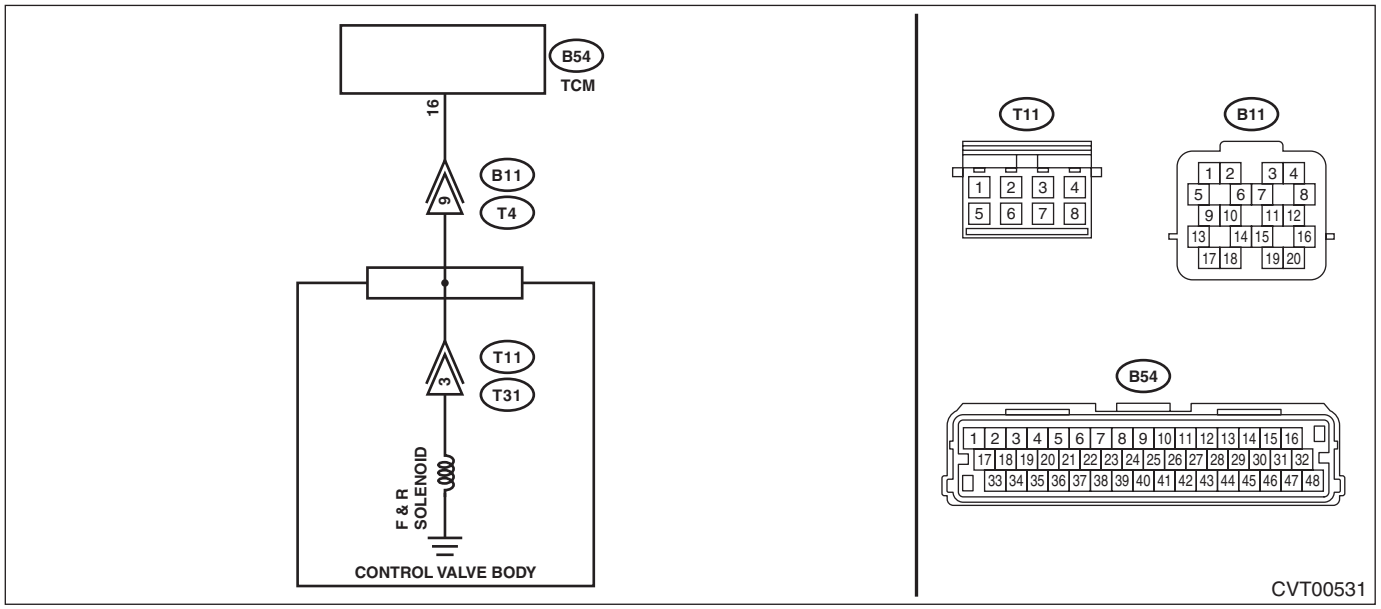
- Detected when two consecutive driving cycles with fault occur.
- GENERAL DESCRIPTION <Ref. to GD(CVT)-29, DTC P0776 PRESSURE CONTROL SOLENOID "B" PERFORMANCE/STUCK OFF, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

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

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC using Subaru Select Monitor.	Besides DTC P0776, is any of the DTCs P0720, P0966, P0967, P1706 and P2751 displayed?	Perform the diagnosis according to DTCs other than P0776.	Go to step **2**.
2	**CHECK F&R SOLENOID (SYSTEM OPERATION CHECK MODE).** 1) Turn the ignition switch to ON. 2) Using the Subaru Select Monitor, perform forced operation of the F&R solenoid. <Ref. to CVT(diag)-22, System Operation Check Mode.>	Does the indication of 0 → 500 mA appear repeatedly during forced operation, and does operating sound emit during indicating 500 mA?	Go to step **5**.	Go to step **3**.
3	**CHECK F&R SOLENOID.** 1) Turn the ignition switch to OFF. 2) Disconnect the transmission connector. 3) Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 9 — Transmission body:***	Is the resistance approx. 4 — 6 Ω? (when cold)	Go to step **7**.	Go to step **4**.
4	**CHECK HARNESS.** Check the continuity of transmission harness.	Is the harness normal? (Is it free from defects such as open circuit, power supply-output short or GND-output short circuit, or poor contact?)	Go to step **7**.	Repair the harness.

	Step	Check	Yes	No
5	**CHECK TRANSMISSION FLUID.** 1) Connect the transmission connector. 2) Check the amount of ATF. <Ref. to CVT(TR690)-36, ADJUSTMENT, CVTF.>	Is the ATF amount correct?	Go to step **6**.	Adjust the amount of ATF. <Ref. to CVT(TR690)-36, ADJUSTMENT, CVTF.>
6	**CHECK TRANSMISSION FLUID.** Check the condition of ATF. <Ref. to CVT(TR690)-40, CONDITION CHECK, CVTF.>	Is the ATF OK?	Go to step **7**.	Check according to the “Corrective action” of ATF (CVTF) “CONDITION CHECK”. <Ref. to CVT(TR690)-40, CONDITION CHECK, CVTF.>
7	**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 the «Actual secondary pressure» 0.5 — 1.5 MPa?	Go to step **8**.	Perform the diagnosis according to DTC P0841. <Ref. to CVT(diag)-68, DTC P0841 SECONDARY OIL PRESSURE SENSOR PERFORMANCE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
8	**STALL TEST.** Perform the stall test. <Ref. to CVT(TR690)-47, Stall Test.>	Is the stall test normal?	Go to step **9**.	If the engine speed increases abruptly, replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.>
9	**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)-18, Inspection Mode.>	Does the AT OIL TEMP light blink and is DTC P0776 displayed?	Replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.>	If there is abrupt increase of engine speed, standing start problems, replace the transmission assembly. <Ref. to CVT(TR690)-56, Automatic Transmission Assembly.> If it is normal, temporary poor contact occurs.

V: DTC P0801 REVERSE INHIBIT CONTROL CIRCUIT

DTC DETECTING CONDITION:

- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-30, DTC P0801 REVERSE INHIBIT CONTROL CIRCUIT, Diagnostic Trouble Code (DTC) Detecting Criteria.>

NOTE:
For diagnostic procedures, refer to “BODY CONTROL SYSTEM (DIAGNOSTICS)”. <Ref. to BC(diag)-39, DTC B1016 SHIFT LOCK CIRCUIT FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

W: DTC P0841 SECONDARY OIL PRESSURE SENSOR PERFORMANCE

DTC DETECTING CONDITION:

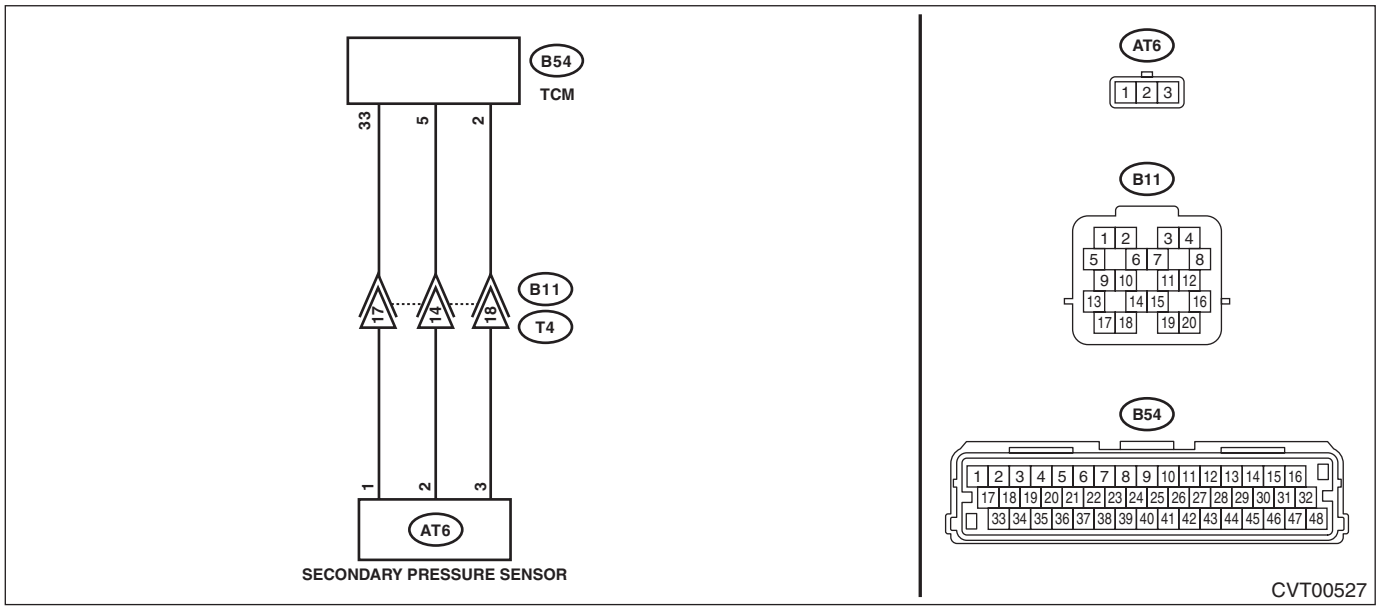
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-31, DTC P0841 SECONDARY OIL PRESSURE SENSOR PERFORMANCE, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

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

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC using Subaru Select Monitor.	Besides DTC P0841, is any of the DTCs P0842, P0843, P0962 and P0963 displayed?	Perform the diagnosis according to DTCs other than P0841.	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. 18:*** ***(B54) No. 5 — (B11) No. 14:*** ***(B54) No. 33 — (B11) No. 17:***	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. 5 — Chassis ground:*** ***(B54) No. 33 — 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(TR690)-110, Secondary Pressure Sensor.>	Go to step **7**.
7	**CHECK TRANSMISSION FLUID.** 1) Connect all connectors. 2) Check the amount of ATF. <Ref. to CVT(TR690)-36, ADJUSTMENT, CVTF.>	Is the ATF amount correct?	Go to step **8**.	Adjust the amount of ATF. <Ref. to CVT(TR690)-36, ADJUSTMENT, CVTF.>
8	**CHECK TRANSMISSION FLUID.** Check the condition of ATF. <Ref. to CVT(TR690)-40, CONDITION CHECK, CVTF.>	Is the ATF OK?	Go to step **9**.	Check according to the "Corrective action" of ATF (CVTF) "CONDITION CHECK". <Ref. to CVT(TR690)-40, CONDITION CHECK, CVTF.>
9	**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 the «Actual secondary pressure» 0.5 — 1.5 MPa?	Go to step **10**.	Replace the secondary pressure sensor. <Ref. to CVT(TR690)-110, Secondary Pressure Sensor.>
10	**CHECK INPUT SIGNAL FOR TCM.** 1) Keep the engine speed at 3,000 rpm. 2) Read the data of «Actual secondary pressure» using Subaru Select Monitor.	Is the «Actual secondary pressure» higher than step 9 value? Does the value change according to the engine speed, within the range of 1.5 — 2.5 MPa?	Go to step **11**.	Replace the secondary pressure sensor. <Ref. to CVT(TR690)-110, Secondary Pressure Sensor.>

	Step	Check	Yes	No
11	**CHECK TCM INPUT SIGNAL (STALL TEST).** 1) Apply the parking brake. 2) Set the select lever to “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. **CAUTION:** **Do not perform a stall test for over 5 seconds at a time.**	Is the «Actual secondary pressure» higher than step 10 value? Does the value change according to the engine speed, within the range of 4.5 — 6.0 MPa?	Go to step **12**.	Replace the secondary pressure sensor. <Ref. to CVT(TR690)-110, Secondary Pressure Sensor.>
12	**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)-18, Inspection Mode.>	Does the AT OIL TEMP light blink and is DTC P0841 displayed?	Perform the secondary pressure test. <Ref. to CVT(TR690)-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(TR690)-56, Automatic Transmission Assembly.> If it is normal, temporary poor contact occurs.

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

DTC DETECTING CONDITION:

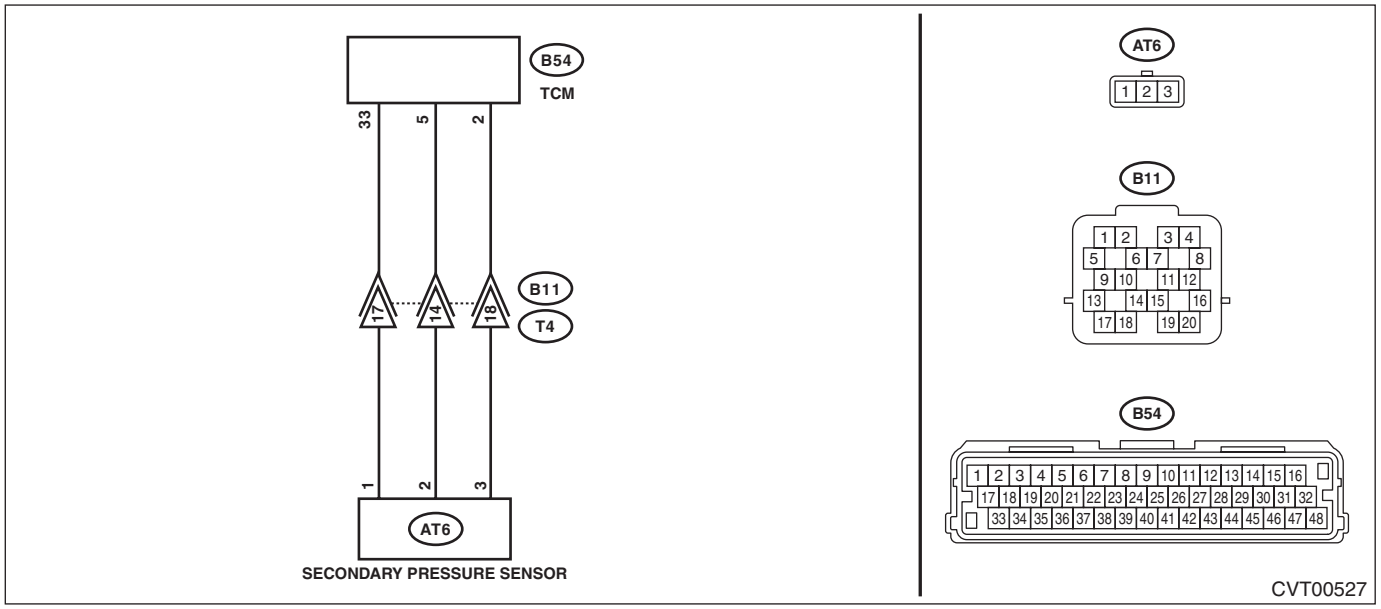
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-32, DTC P0842 SECONDARY OIL PRESSURE SENSOR CIRCUIT (LOW), Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

Shift characteristics malfunction

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



	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 the «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. 18:*** ***(B54) No. 5 — (B11) No. 14:*** ***(B54) No. 33 — (B11) No. 17:***	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. 5 — Chassis ground:*** ***(B54) No. 33 — 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(TR690)-110, Secondary Pressure Sensor.>	Check for poor contact of connector, and if no fault is found, replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>

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

DTC DETECTING CONDITION:

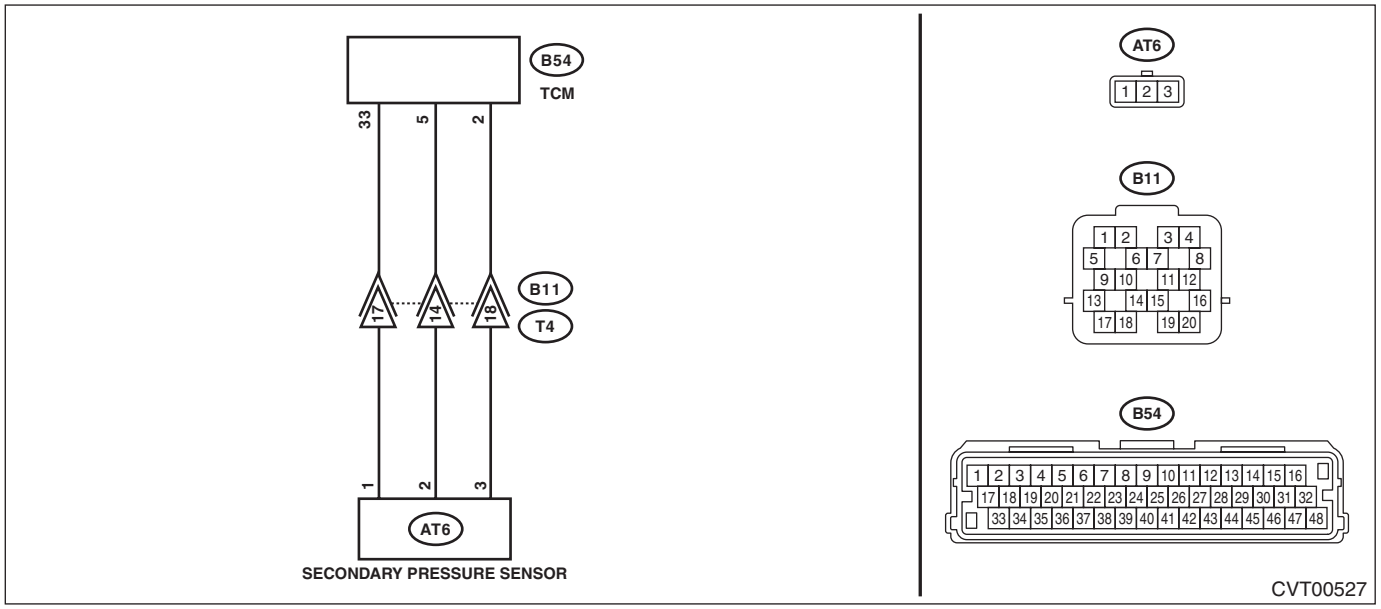
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-33, DTC P0843 SECONDARY OIL PRESSURE SENSOR CIRCUIT (HIGH), Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

Shift characteristics malfunction

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



	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 the «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. 5 (+) — Chassis ground (–):*** ***(B54) No. 33 (+) — 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. 5 — (B54) No. 33:***	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(TR690)-110, Secondary Pressure Sensor.>	Check for poor contact of connector, and if no fault is found, replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>

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

DTC DETECTING CONDITION:

- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-34, DTC P0890 AT SELF-SHUT RELAY DIAGNOSIS (LOW), Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

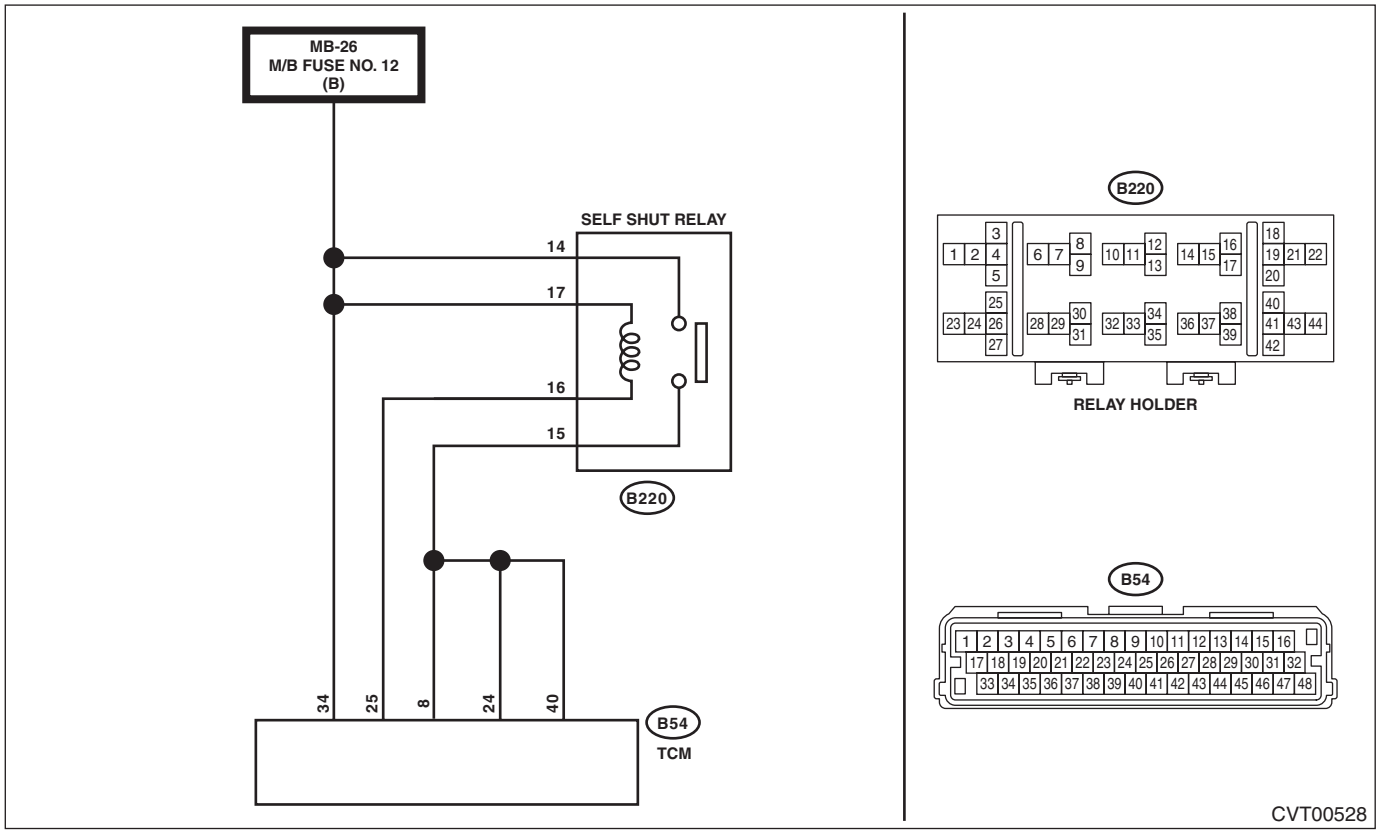
Gear is not changed.

CAUTION:

After diagnosis, perform Clear Memory Mode for ECM. <Ref. to EN(w/o STI)(diag)-61, Clear Memory Mode.>

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



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*** ***(B54) No. 25 — (B220) No. 16:*** ***(B54) No. 8 — (B220) No. 15:*** ***(B54) No. 24 — (B220) No. 15:*** ***(B54) No. 40 — (B220) No. 15:***	Is the resistance less than 1 Ω?	Go to step **2**.	Repair the open circuit of harness.

	Step	Check	Yes	No
2	**CHECK HARNESS.** Measure the resistance between TCM connector and chassis ground. ***Connector & terminal*** ***(B54) No. 25 — Chassis ground:*** ***(B54) No. 8 — Chassis ground:*** ***(B54) No. 24 — Chassis ground:*** ***(B54) No. 40 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **3**.	Repair the short circuit of harness.
3	**CHECK RELAY POWER SUPPLY.** Measure the voltage between self shut relay connector and chassis ground. ***Connector & terminal*** ***(B220) No. 14 (+) — Chassis ground (–):*** ***(B220) No. 17 (+) — Chassis ground (–):***	Is the voltage 11 — 13 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*** ***(B220) No. 16 — (B220) No. 17:***	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*** ***(B220) No. 14 — (B220) No. 15:***	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 «Control module voltage» using Subaru Select Monitor.	Is the «Control module voltage» 10 V or more?	Current condition is normal. Check for poor contact in connectors or harnesses, and repair the defective part.	Go to step **7**.
7	**CHECK FOR POOR CONTACT.**	Is there poor contact of the self shut relay circuit?	Repair the poor contact.	Replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>

AA:DTC P0951 MANUAL SWITCH

DTC DETECTING CONDITION:

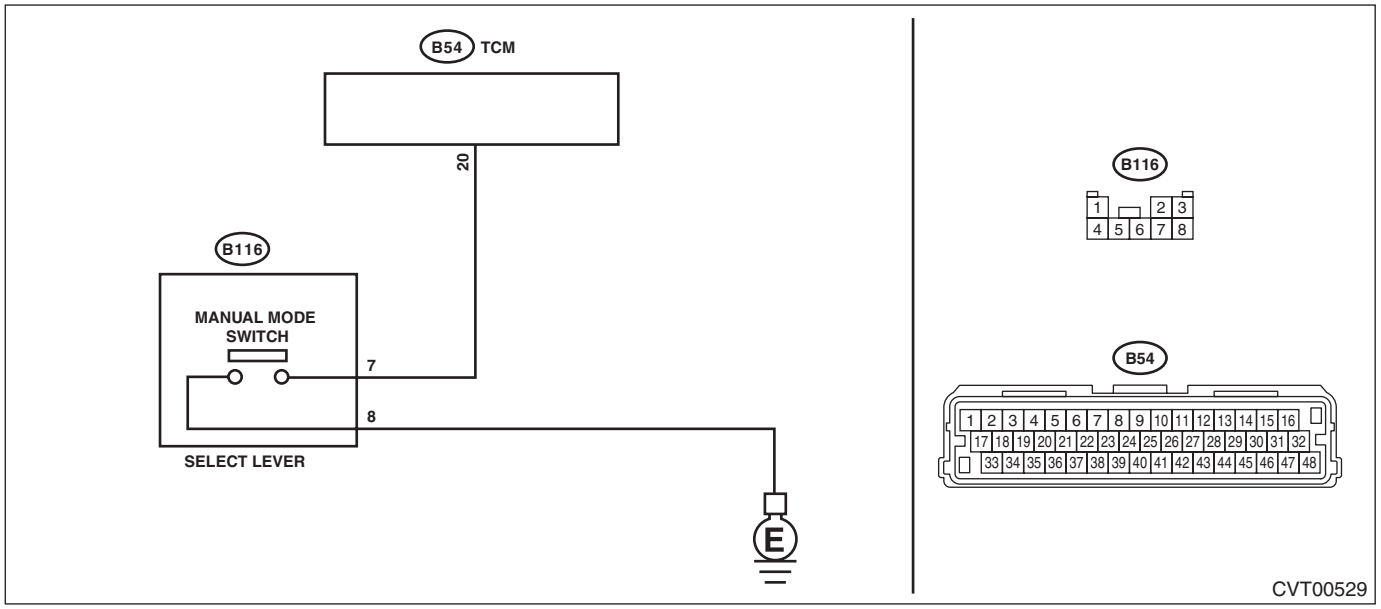
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-35, DTC P0951 MANUAL SWITCH, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

Manual mode can not be set.

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



	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-24, 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-24, Select Lever.>
4	**CHECK HARNESS.** 1) Disconnect the TCM connector. 2) Measure the resistance between TCM connector and manual mode switch connector. ***Connector & terminal*** ***(B54) No. 20 — (B116) No. 7:***	Is the resistance less than 1 Ω?	Go to step **5**.	Repair the open circuit of harness or poor contact of connector.

	Step	Check	Yes	No
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.
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 “D” range. 4) Read the data of «Tiptronic Mode Switch» using Subaru Select Monitor.	Does the value of «Tiptronic Mode Switch» change to “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.	Replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>

AB:DTC P0961 PRESSURE CONTROL SOLENOID "A" CONTROL CIRCUIT RANGE/PERFORMANCE

DTC DETECTING CONDITION:

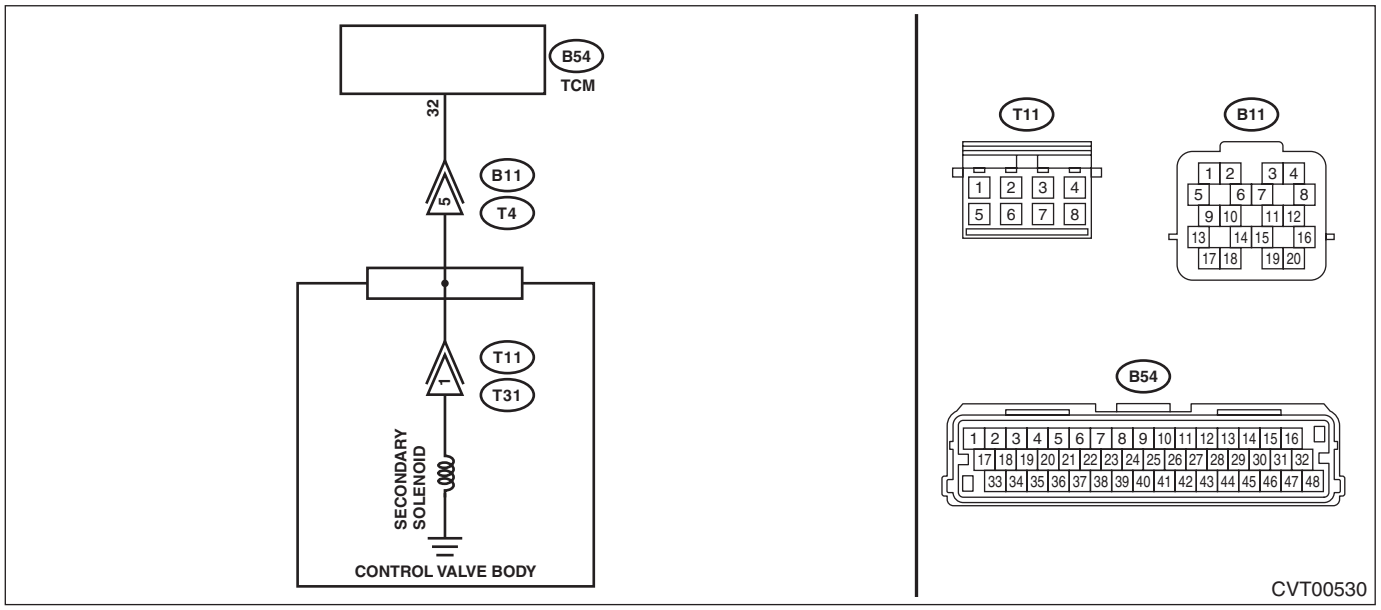
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-36, DTC P0961 PRESSURE CONTROL SOLENOID "A" CONTROL CIRCUIT RANGE/PERFORMANCE, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

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

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



	Step	Check	Yes	No
1	**CHECK DTC.** Read the DTC using Subaru Select Monitor.	Besides DTC P0961, is DTC P0962 or P0963 displayed?	Perform the diagnosis according to DTCs other than P0961.	Go to step **2**.
2	**CHECK SECONDARY SOLENOID (SYSTEM OPERATION CHECK MODE).** 1) Turn the ignition switch to ON. 2) Using the Subaru Select Monitor, perform forced operation of the secondary solenoid. <Ref. to CVT(diag)-22, System Operation Check Mode.>	Does the indication change as 300 → 500 → 700 mA during forced operation, and does «Sec. Sol. Actual Current» synchronize with «Sec. Sol. Set Current»?	Go to step **3**.	Replace the control valve body. <Ref. to CVT(TR690)-112, Control Valve Body.>
3	**CHECK FOR POOR CONTACT.** Check for poor contact of harness and connector between TCM and secondary solenoid.	Is there poor contact?	Repair the poor contact of harness and connector.	Go to step **4**.
4	**CHECK SECONDARY SOLENOID.** 1) Turn the ignition switch to OFF. 2) Disconnect the transmission connector. 3) Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 5 — Transmission body:***	Is the resistance approx. 5 — 7 Ω? (when cold)	Recheck the poor contact of harness and connector. Replace the TCM if no fault is found. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>	Replace the control valve body. <Ref. to CVT(TR690)-112, Control Valve Body.>

AC:DTC P0962 SECONDARY SOLENOID CIRCUIT (LOW)

DTC DETECTING CONDITION:

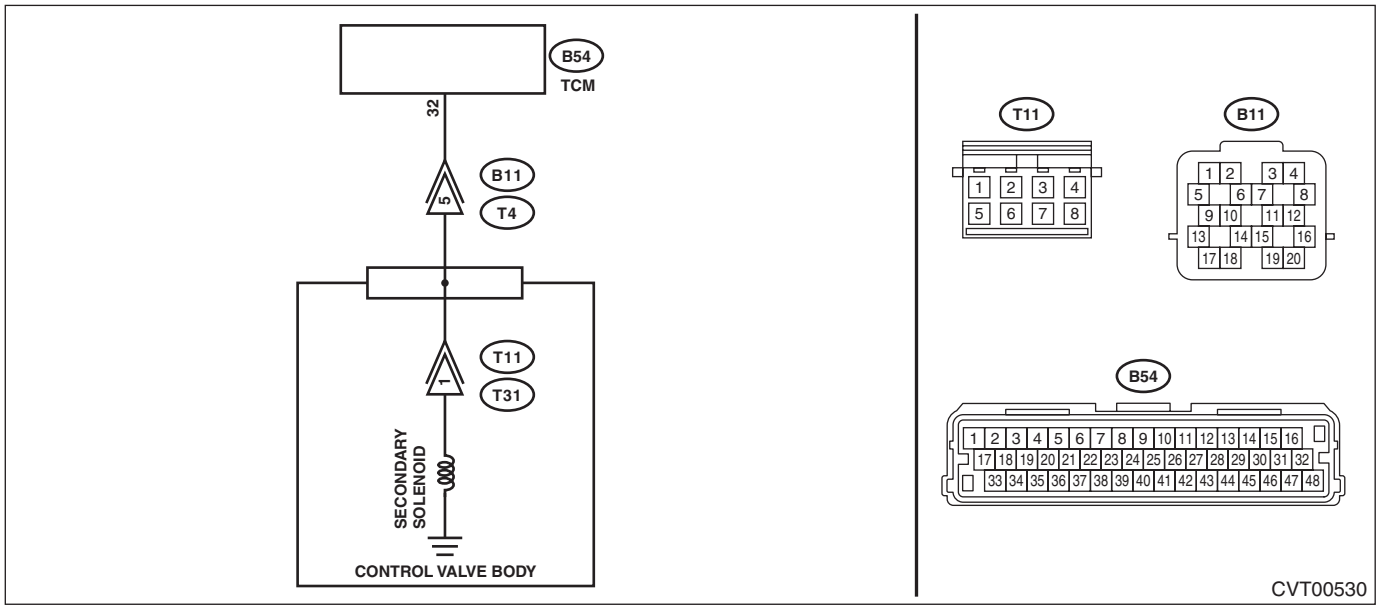
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-37, DTC P0962 SECONDARY SOLENOID CIRCUIT (LOW), Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

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

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



	Step	Check	Yes	No
1	**CHECK INPUT SIGNAL FOR TCM.** 1) After driving with warm up condition, park the vehicle while depressing the brake pedal 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. 32 — 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. 5 — 7 Ω? (when cold)	Check for poor contact of connector, and if no fault is found, replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>	Go to step **4**.

	Step	Check	Yes	No
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 fault in the harness?	Replace the transmission harness.	Go to step **5**.
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(TR690)-112, Control Valve Body.>	Replace the transmission harness.

AD:DTC P0963 SECONDARY SOLENOID CIRCUIT (HIGH)

DTC DETECTING CONDITION:

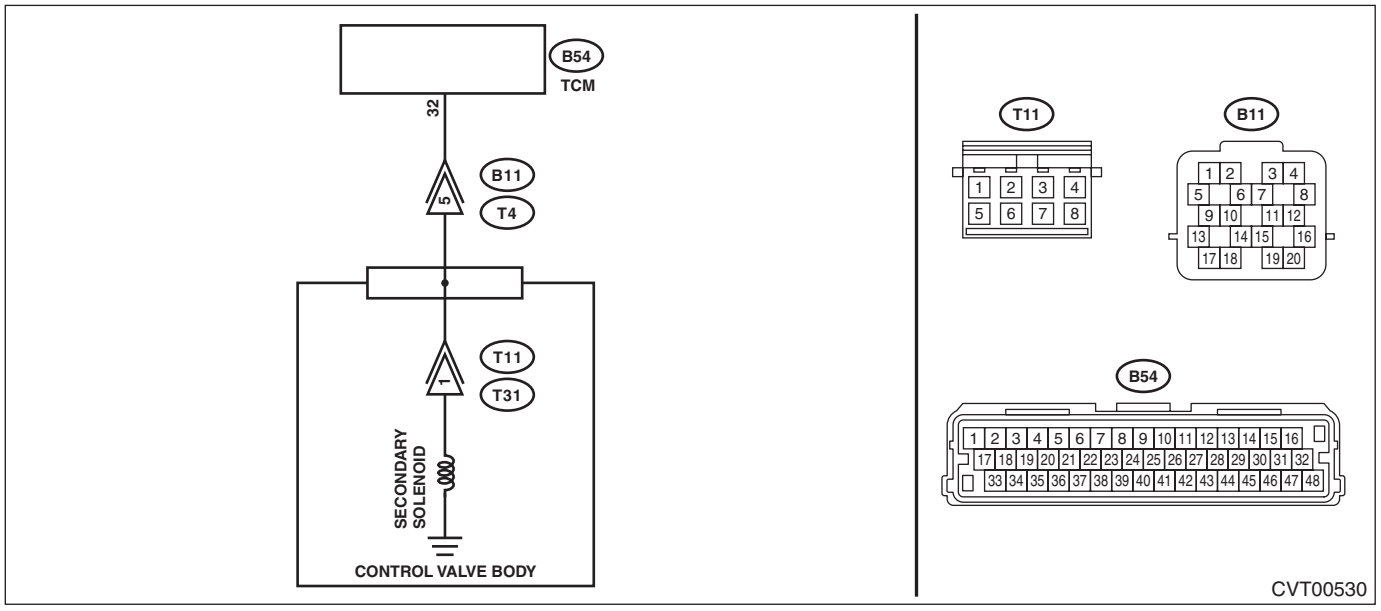
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-38, DTC P0963 SECONDARY SOLENOID CIRCUIT (HIGH), Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

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

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



Step		Check	Yes	No
1	**CHECK INPUT SIGNAL FOR TCM.** 1) After driving with warm up condition, park the vehicle while depressing the brake pedal 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. 32 — (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. 32 (+) — Chassis ground (–):***	Is the voltage approx. 0 V?	Go to step **4**.	Repair the short circuit of harness.

	Step	Check	Yes	No
4	**CHECK SECONDARY SOLENOID.** Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 5 — Transmission body:***	Is the resistance approx. 5 — 7 Ω? (when cold)	Check for poor contact of connector, and if no fault is found, replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>	Go to step **5**.
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 fault in the harness?	Replace the transmission harness.	Go to step **6**.
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(TR690)-112, Control Valve Body.>	Replace the transmission harness.

AE:DTC P0965 FORWARD & REVERSE SOLENOID FUNCTION

DTC DETECTING CONDITION:

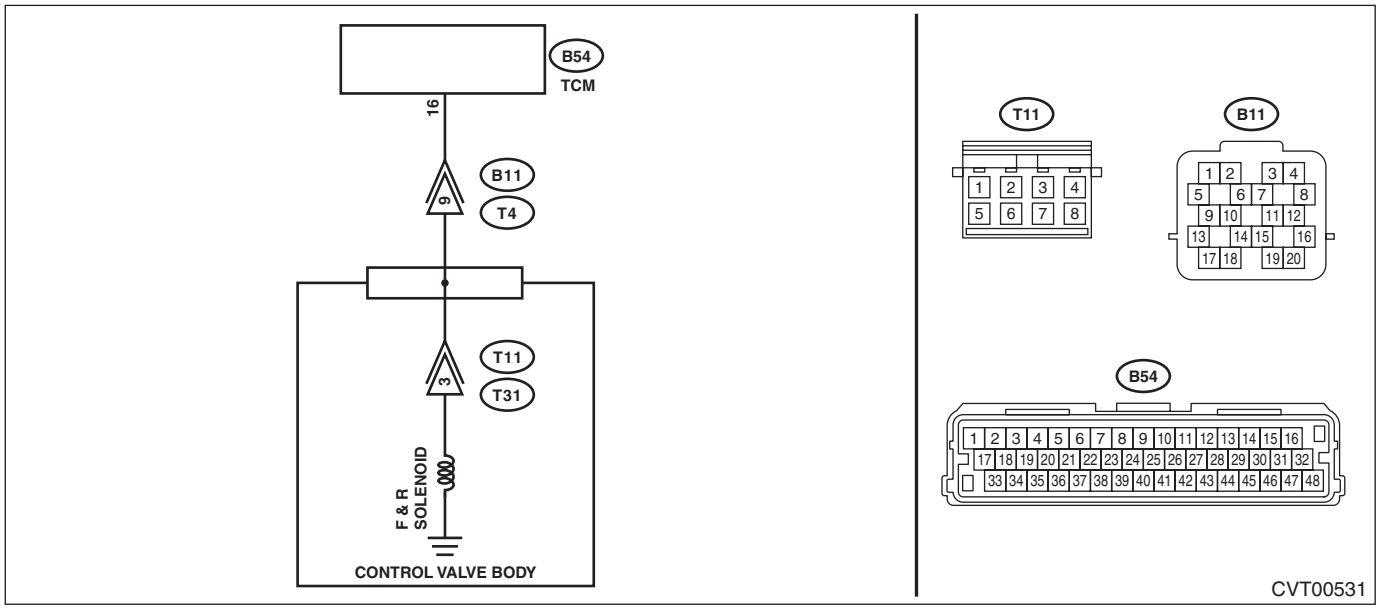
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-39, DTC P0965 FORWARD & REVERSE SOLENOID FUNCTION, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

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

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC using Subaru Select Monitor.	Besides DTC P0965, is any of the DTCs P0720, P0966, P0967, P1706 and P2751 displayed?	Perform the diagnosis according to DTCs other than P0965.	Go to step **2**.
2	**CHECK F&R SOLENOID (SYSTEM OPERATION CHECK MODE).** 1) Turn the ignition switch to ON. 2) Using the Subaru Select Monitor, perform forced operation of the F&R solenoid. <Ref. to CVT(diag)-22, System Operation Check Mode.>	Does the indication change as 300 → 500 → 700 mA during forced operation, and does «F&R Linear Solenoid Actual Current» synchronize with «F&R Linear Solenoid Set Current»?	Go to step **3**.	Replace the control valve body. <Ref. to CVT(TR690)-112, Control Valve Body.>
3	**CHECK FOR POOR CONTACT.** Check for poor contact of harness and connector between TCM and F&R solenoid.	Is there poor contact?	Repair the poor contact of harness and connector.	Go to step **4**.
4	**CHECK F&R SOLENOID.** 1) Turn the ignition switch to OFF. 2) Disconnect the transmission connector. 3) Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 9 — Transmission body:***	Is the resistance approx. 4 — 6 Ω? (when cold)	Recheck the poor contact of harness and connector. Replace the TCM if no fault is found. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>	Replace the control valve body. <Ref. to CVT(TR690)-112, Control Valve Body.>

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

DTC DETECTING CONDITION:

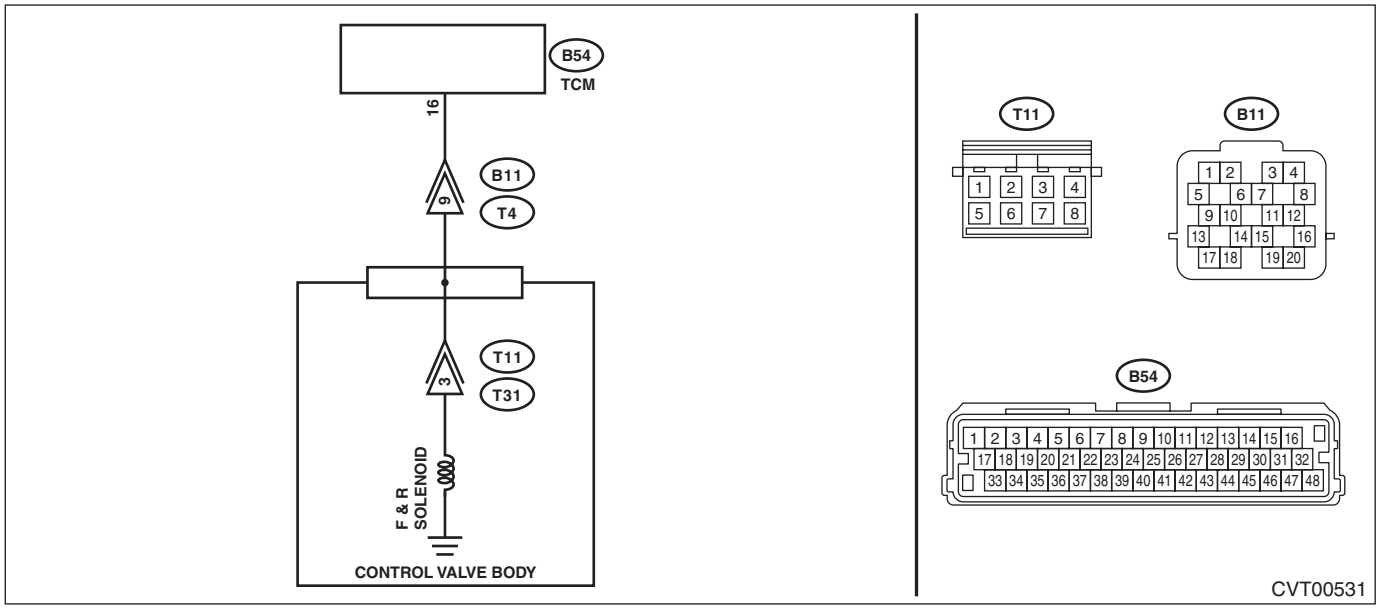
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-40, DTC P0966 FORWARD & REVERSE SOLENOID CIRCUIT (LOW), Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

Excessive shift shock

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



	Step	Check	Yes	No
1	**CHECK INPUT SIGNAL FOR TCM.** 1) After driving with warm up condition, park the vehicle while depressing the brake pedal at "D" range. 2) Read the data of «F&R Linear Solenoid Set Current» and «F&R Linear Solenoid Actual Current» using Subaru Select Monitor.	Does the value of «F&R Linear Solenoid Set Current» and «F&R Linear Solenoid 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. 16 — 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. 4 — 6 Ω? (when cold)	Check for poor contact of connector, and if no fault is found, replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>	Go to step **4**.

	Step	Check	Yes	No
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 fault in the harness?	Replace the transmission harness.	Go to step **5**.
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(TR690)-112, Control Valve Body.>	Replace the transmission harness.

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

DTC DETECTING CONDITION:

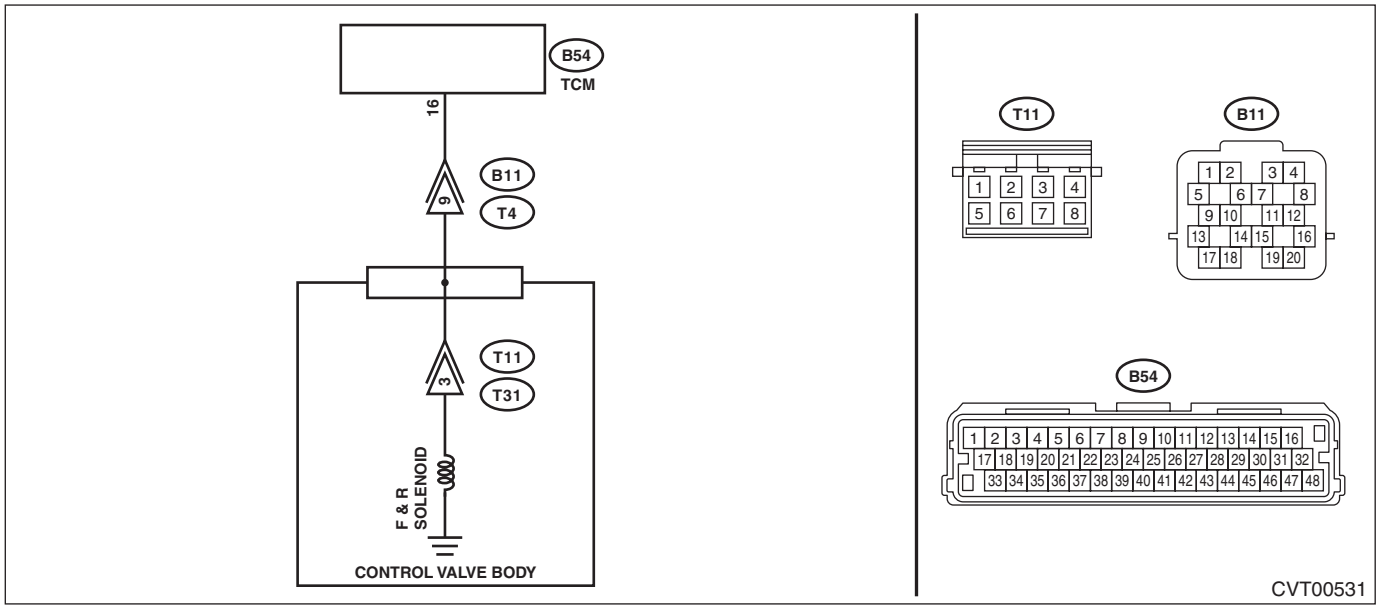
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-41, DTC P0967 FORWARD & REVERSE LINEAR SOLENOID CIRCUIT (HIGH), Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

Engine speed increases abruptly, and can not start.

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



Step		Check	Yes	No
1	**CHECK INPUT SIGNAL FOR TCM.** 1) After driving with warm up condition, park the vehicle while depressing the brake pedal at "D" range. 2) Read the data of «F&R Linear Solenoid Set Current» and «F&R Linear Solenoid Actual Current» using Subaru Select Monitor.	Does the value of «F&R Linear Solenoid Set Current» and «F&R Linear Solenoid 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. 16 — (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. 16 (+) — Chassis ground (–):***	Is the voltage approx. 0 V?	Go to step **4**.	Repair the short circuit of harness.

	Step	Check	Yes	No
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. 4 — 6 Ω? (when cold)	Check for poor contact of connector, and if no fault is found, replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>	Go to step **5**.
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 fault in the harness?	Replace the transmission harness.	Go to step **6**.
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(TR690)-112, Control Valve Body.>	Replace the transmission harness.

AH:DTC P0970 TRANSFER SOLENOID CIRCUIT (LOW)

DTC DETECTING CONDITION:

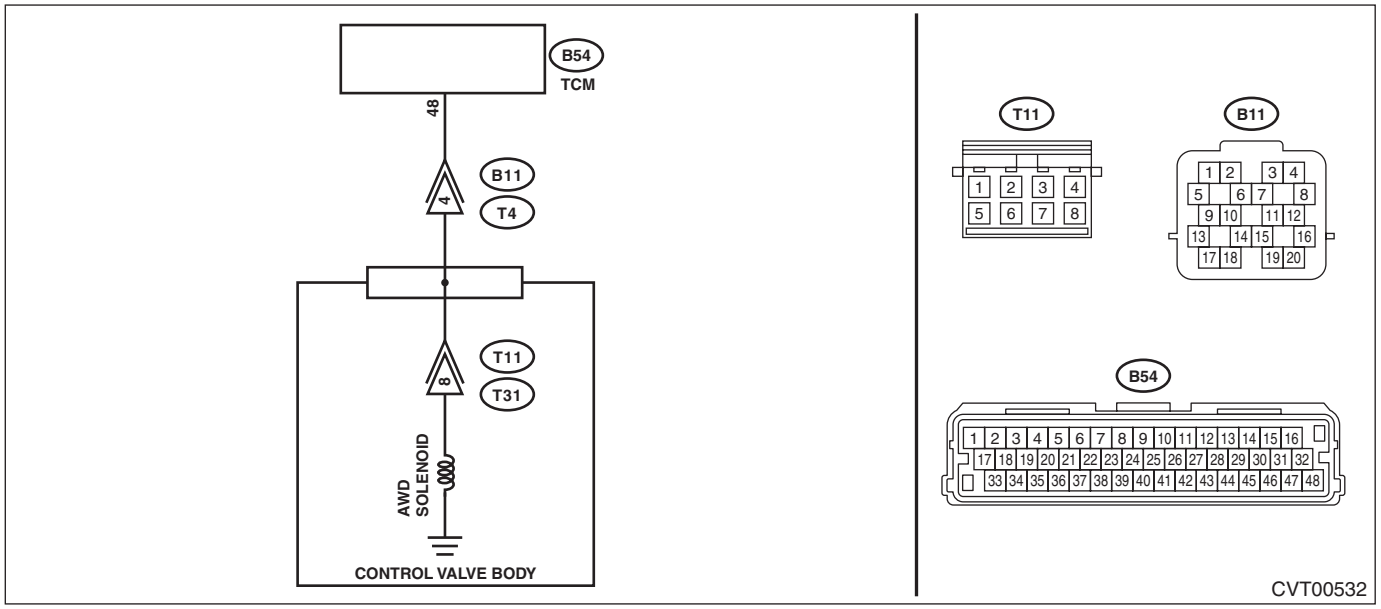
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-42, DTC P0970 TRANSFER SOLENOID CIRCUIT (LOW), Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

Drivability getting worse.

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



	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. 48 — 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. 2 — 4.5 Ω? (when cold)	Check for poor contact of connector, and if no fault is found, replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>	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 fault in the harness?	Replace the transmission harness.	Go to step **4**.

	Step	Check	Yes	No
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(TR690)-112, Control Valve Body.>	Replace the transmission harness.

AI: DTC P0971 TRANSFER SOLENOID CIRCUIT (HIGH)

DTC DETECTING CONDITION:

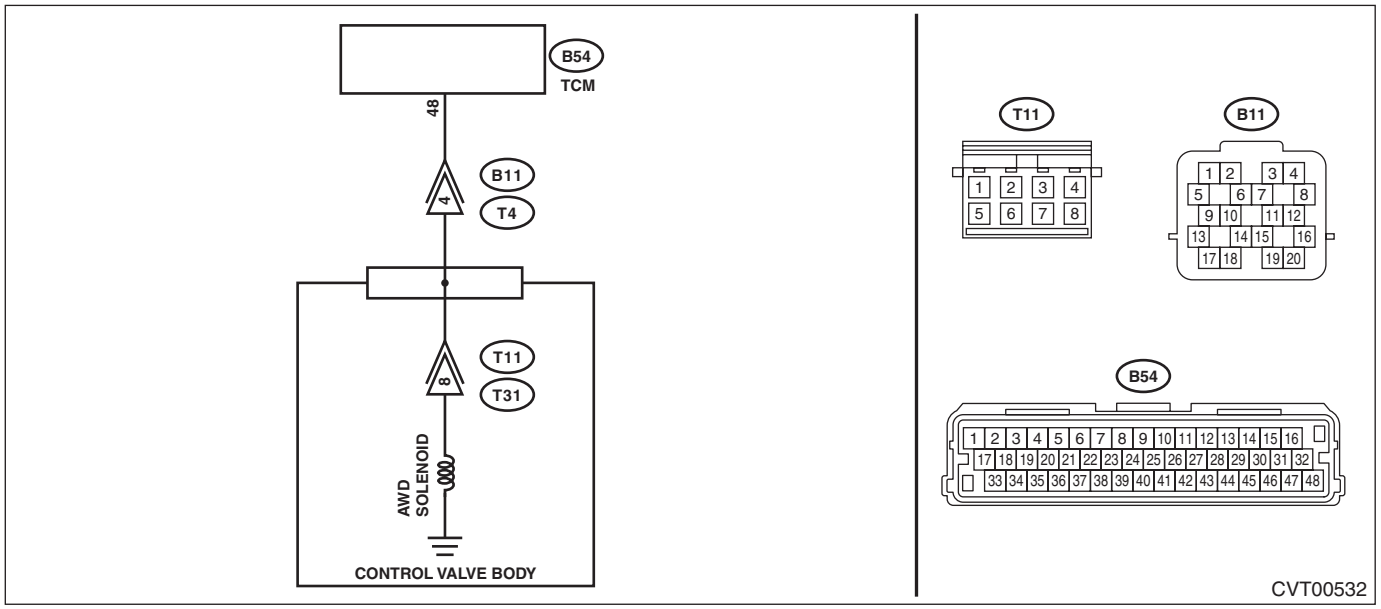
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-43, DTC P0971 TRANSFER SOLENOID CIRCUIT (HIGH), Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

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

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



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. 48 — (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. 48 (+) — 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. 2 — 4.5 Ω? (when cold)	Check for poor contact of connector, and if no fault is found, replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>	Go to step **4**.

	Step	Check	Yes	No
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 fault in the harness?	Replace the transmission harness.	Go to step **5**.
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(TR690)-112, Control Valve Body.>	Replace the transmission harness.

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

DTC DETECTING CONDITION:

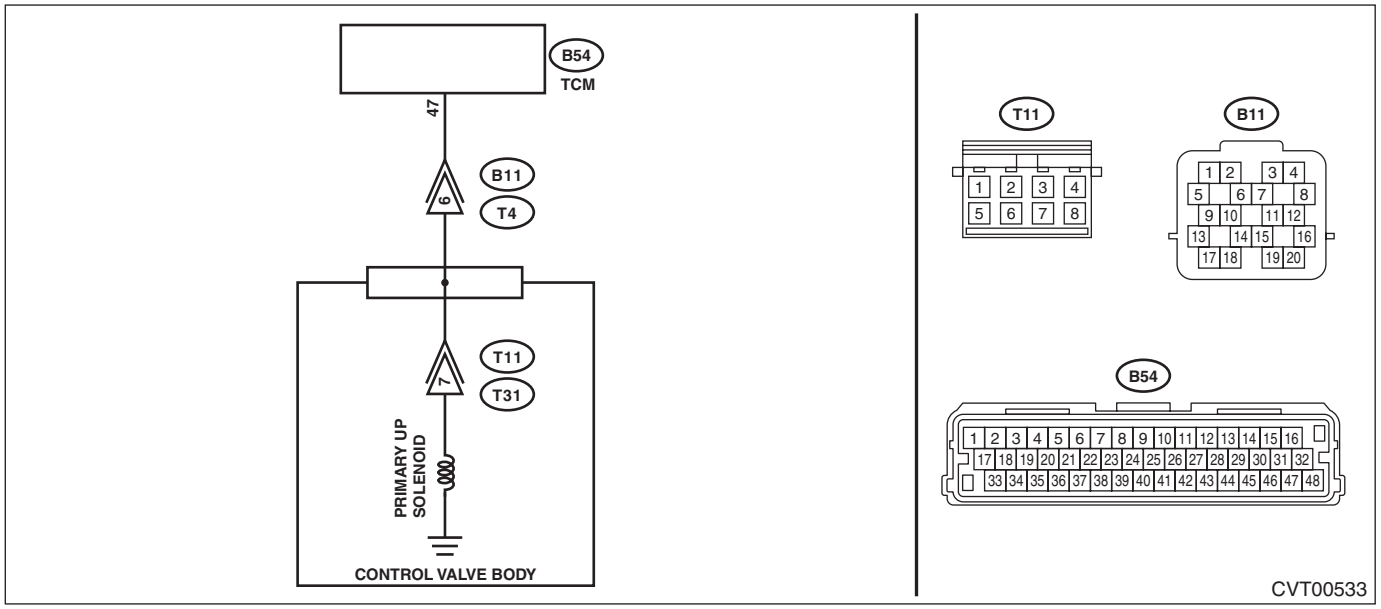
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-44, DTC P0973 PRIMARY SOLENOID SYSTEM A CIRCUIT (LOW), Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

Gear is not changed. (No up-shift)

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



	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. 47 — 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. 10 — 13.5 Ω? (when cold)	Check for poor contact of connector, and if no fault is found, replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>	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 fault in the harness?	Replace the transmission harness.	Go to step **4**.

	Step	Check	Yes	No
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(TR690)-112, Control Valve Body.>	Replace the transmission harness.

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

DTC DETECTING CONDITION:

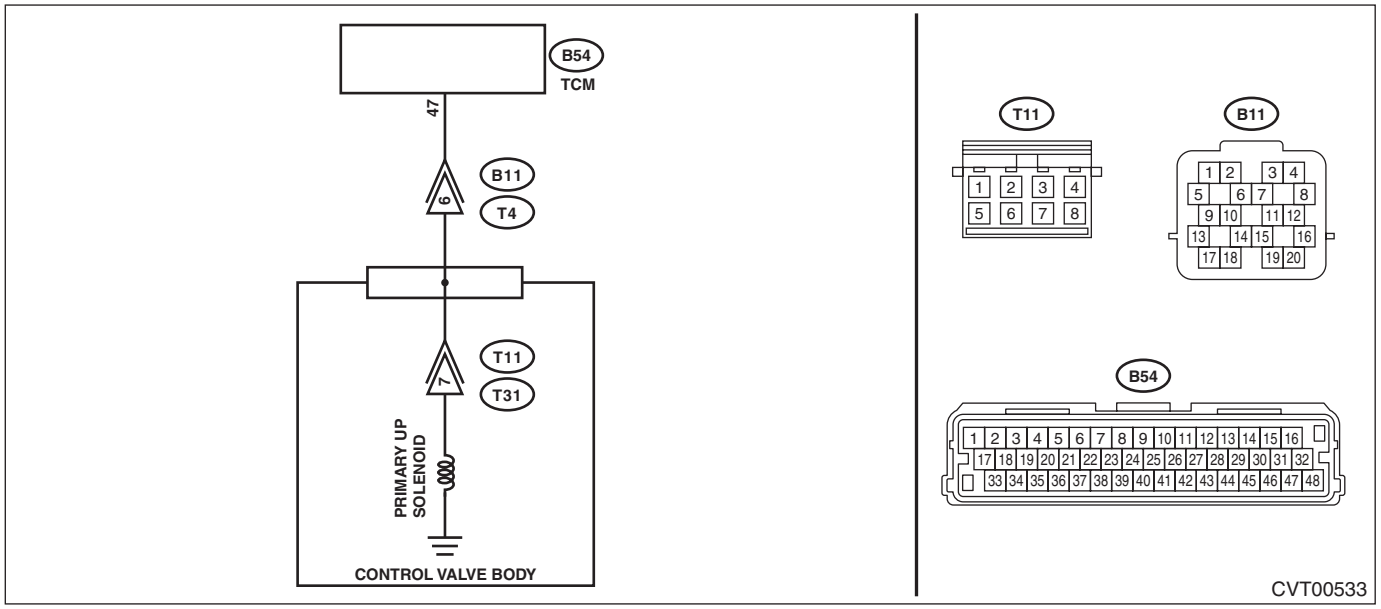
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-45, DTC P0974 PRIMARY SOLENOID SYSTEM A CIRCUIT (HIGH), Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

Gear is not changed. (No up-shift)

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



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. 47 — (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. 47 (+) — 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. 10 — 13.5 Ω? (when cold)	Check for poor contact of connector, and if no fault is found, replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>	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 fault in the harness?	Replace the transmission harness.	Go to step **5**.

	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(TR690)-112, Control Valve Body.>	Replace the transmission harness.

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

DTC DETECTING CONDITION:

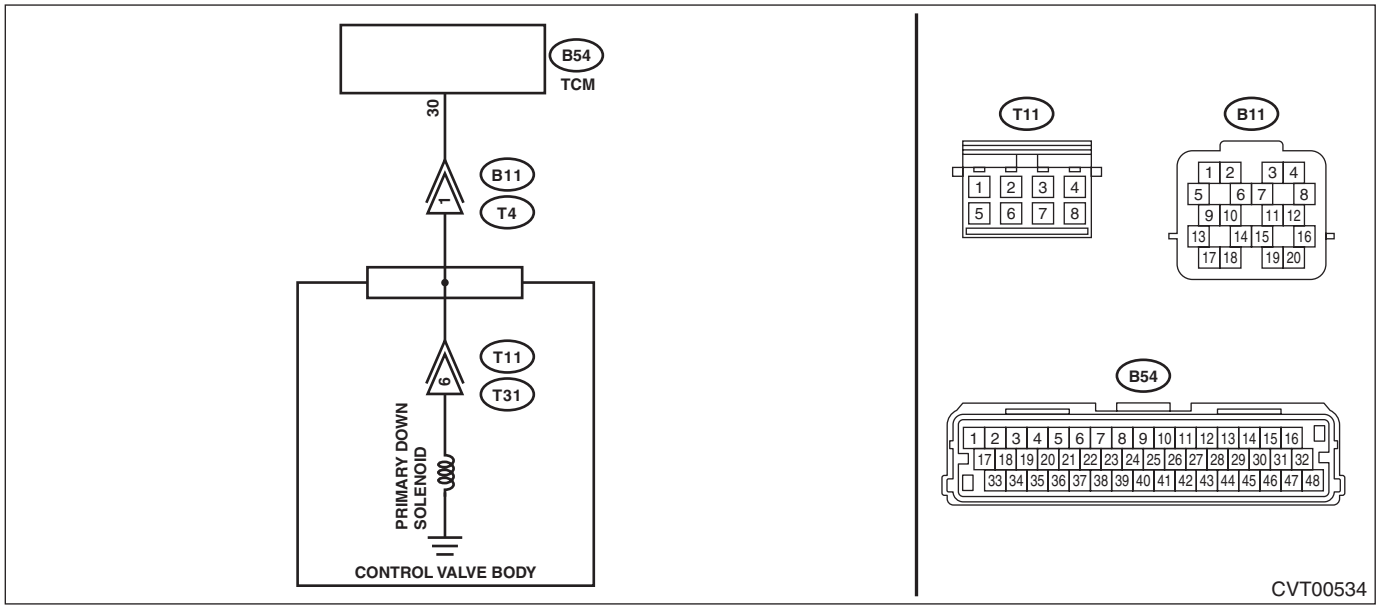
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-46, DTC P0976 PRIMARY SOLENOID SYSTEM B CIRCUIT (LOW), Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

Gear is not changed. (No down-shift)

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



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. 30 — 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. 10 — 13.5 Ω? (when cold)	Check for poor contact of connector, and if no fault is found, replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>	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 fault in the harness?	Replace the transmission harness.	Go to step **4**.

	Step	Check	Yes	No
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(TR690)-112, Control Valve Body.>	Replace the transmission harness.

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

DTC DETECTING CONDITION:

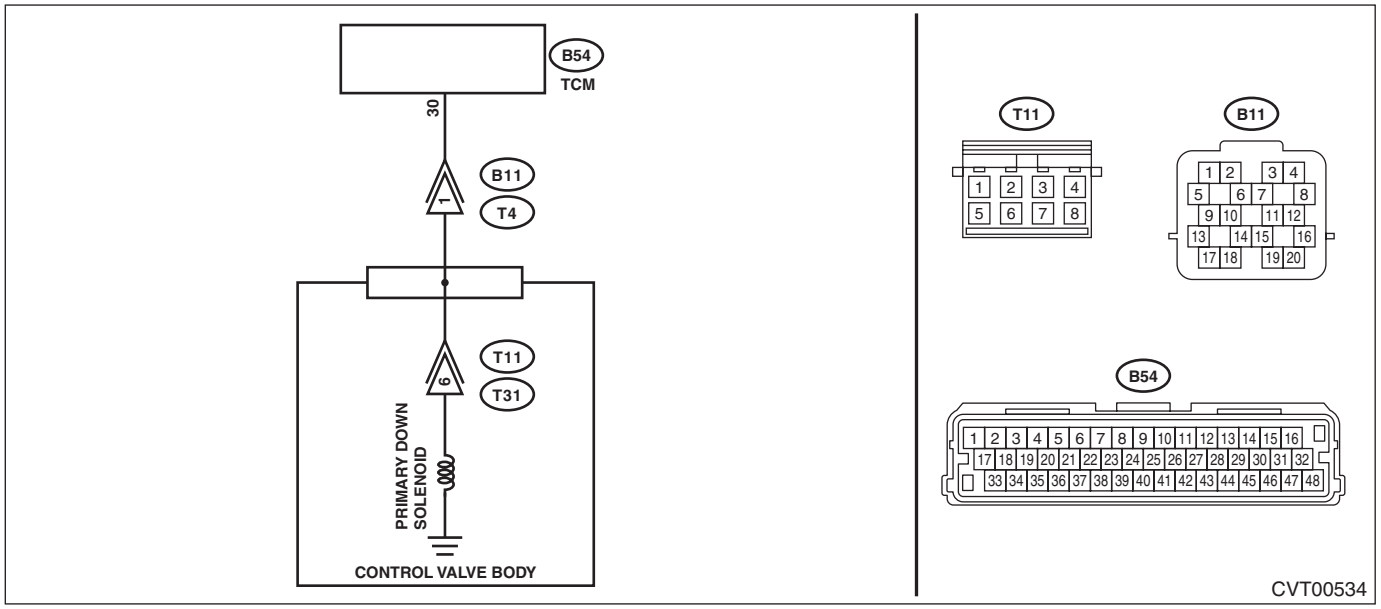
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-47, DTC P0977 PRIMARY SOLENOID SYSTEM B CIRCUIT (HIGH), Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

Gear is not changed. (No down-shift)

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



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. 30 — (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. 30 (+) — 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. 10 — 13.5 Ω? (when cold)	Check for poor contact of connector, and if no fault is found, replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>	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 fault in the harness?	Replace the transmission harness.	Go to step **5**.

	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(TR690)-112, Control Valve Body.>	Replace the transmission harness.

AN:DTC P160A RANDOM ACCESS MEMORY (RAM) ERROR

DTC DETECTING CONDITION:

- Detected when two consecutive driving cycles with fault occur.
- GENERAL DESCRIPTION <Ref. to GD(CVT)-48, DTC P160A RANDOM ACCESS MEMORY (RAM) ERROR, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

TCM RAM malfunction

	Step	Check	Yes	No
1	**CHECK DTC.** 1) Perform the Clear Memory Mode using the Subaru Select Monitor. <Ref. to CVT(diag)-17, Clear Memory Mode.> 2) Read the DTC.	Is DTC P160A displayed?	Replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>	Current condition is normal. Check for interference from noise, etc.

AO:DTC P1706 AT VEHICLE SPEED SENSOR CIRCUIT MALFUNCTION (REAR WHEEL)

DTC DETECTING CONDITION:

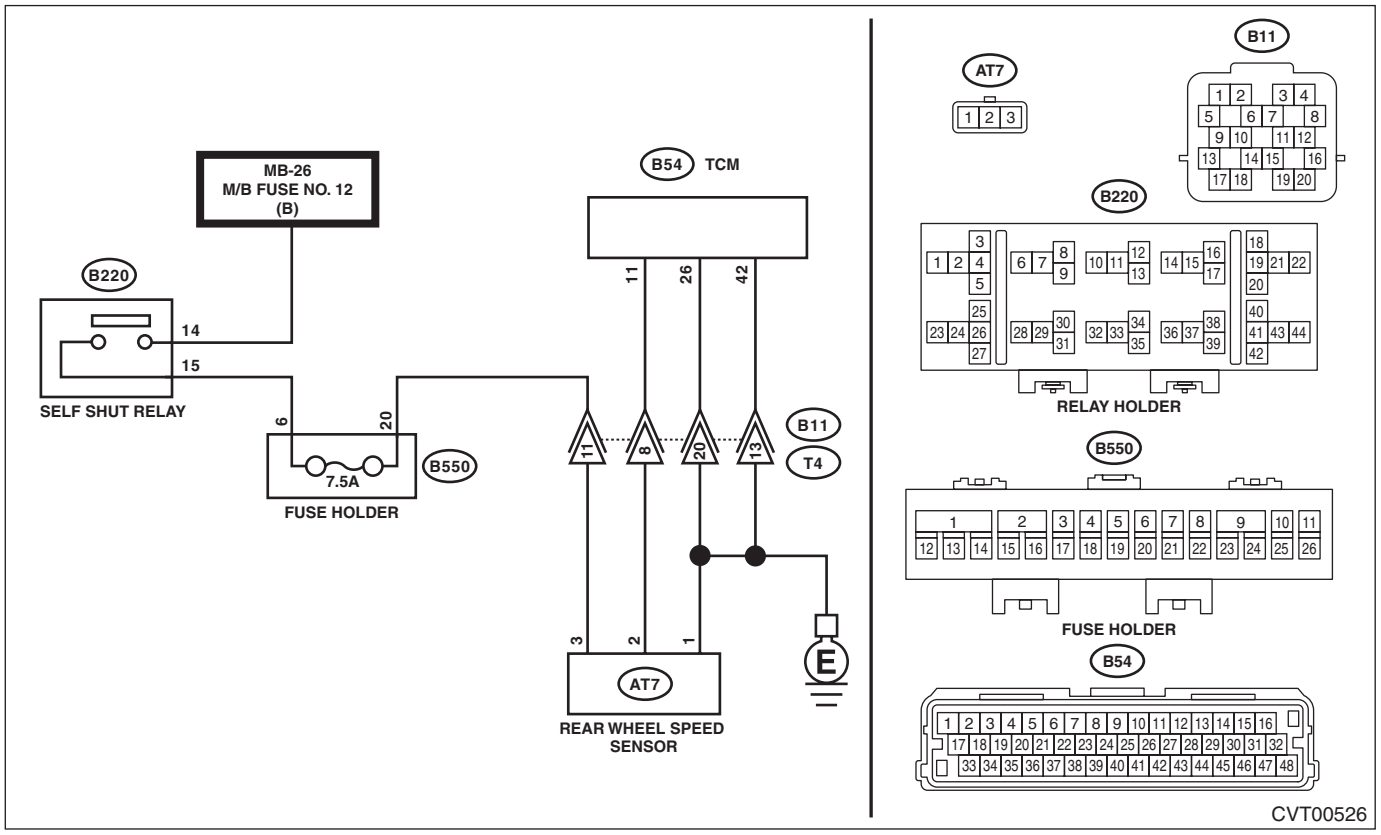
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-49, DTC P1706 AT VEHICLE SPEED SENSOR CIRCUIT MALFUNCTION (REAR WHEEL), Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

AWD does not function.

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



Step		Check	Yes	No
1	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Remove the fuse (7.5 A) from the fuse holder.	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. 11 — (B11) No. 8:*** ***(B54) No. 26 — (B11) No. 20:*** ***(B54) No. 42 — (B11) No. 13:*** ***(B550) No. 20 — (B11) No. 11:***	Is the resistance less than 1 Ω?	Go to step **3**.	Repair the open circuit of harness.

	Step	Check	Yes	No
3	**CHECK HARNESS.** 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 **4**.	Repair the short circuit of harness.
4	**CHECK TRANSMISSION HARNESS.** 1) Install the fuse. 2) Connect the TCM connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between transmission connector terminals. ***Connector & terminal*** ***(B11) No. 11 (+) — Chassis ground (–):***	Is the voltage approx. 10 — 13 V?	Go to step **5**.	Repair the poor contact of harness or 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 (19 MPH). 6) Read the data of «Rear Wheel Speed» using Subaru Select Monitor.	Does the value of «Rear Wheel Speed» change according to the engine speed?	Current condition is normal. Repair the poor contacts of harnesses of rear 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 rear wheel speed sensor connector. 5) Measure the resistance between transmission connector and rear wheel speed sensor connector. ***Connector & terminal*** ***(T4) No. 13 — (AT7) No. 1:*** ***(T4) No. 20 — (AT7) No. 1:*** ***(T4) No. 8 — (AT7) No. 2:*** ***(T4) No. 11 — (AT7) No. 3:***	Is the resistance less than 1 Ω?	Replace the rear wheel speed sensor. <Ref. to CVT(TR690)-107, Rear Wheel Speed Sensor.>	Replace the transmission harness.

AP:DTC P170B OUTPUT SPEED SENSOR CIRCUIT RANGE/PERFORMANCE REAR

DTC DETECTING CONDITION:

- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-50, DTC P170B OUTPUT SPEED SENSOR CIRCUIT RANGE/PERFORMANCE REAR, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

- Acceleration is poor during standing start.
- No lock-up occurs.
- The engine stalls when the vehicle is stopped.
- Shift control malfunction

	Step	Check	Yes	No
1	**CHECK DTC.** Read the DTC using Subaru Select Monitor.	Besides DTC P170B, is any of the DTCs P0720, P1706 and P0500 displayed?	Perform the diagnosis according to DTCs other than P170B.	Perform the diagnosis according to DTC P1706. <Ref. to CVT(diag)-102, DTC P1706 AT VEHICLE SPEED SENSOR CIRCUIT MALFUNCTION (REAR WHEEL), Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

AQ:DTC P2530 IGNITION SWITCH RUN POSITION CIRCUIT

DTC DETECTING CONDITION:

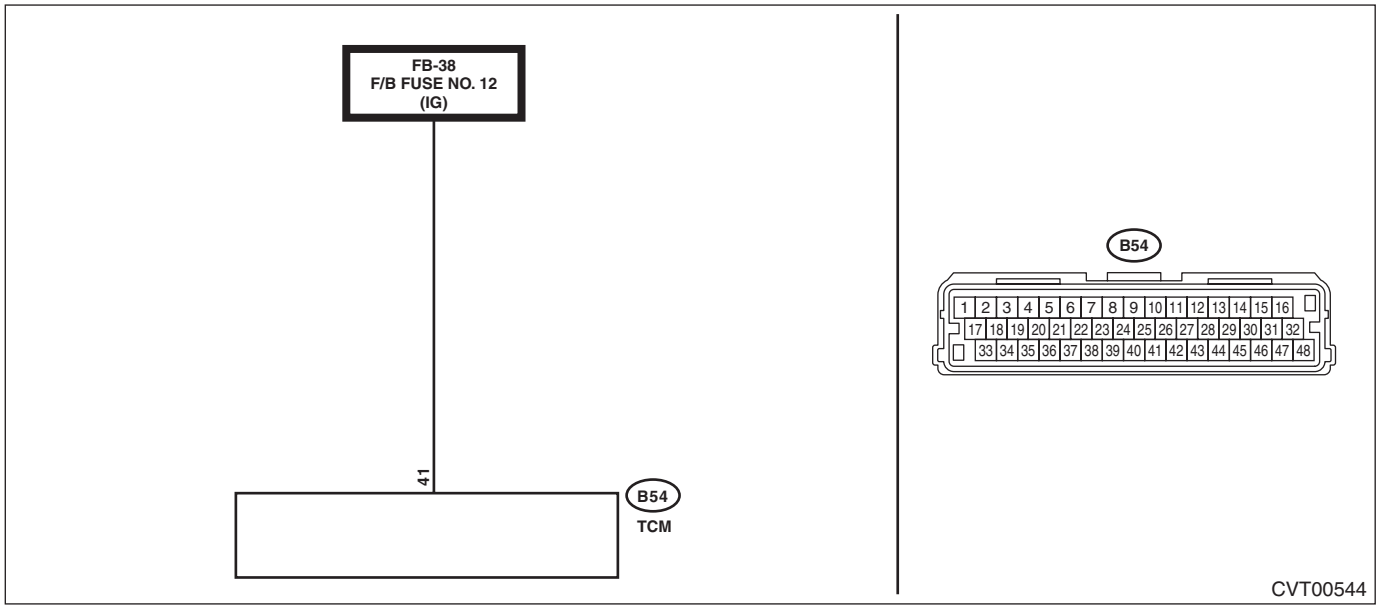
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-51, DTC P2530 IGNITION SWITCH RUN POSITION CIRCUIT, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

Faulty TCM operation

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



Step		Check	Yes	No
1	**CHECK CONNECTOR.** Check the installing condition of TCM connector.	Is the TCM connector installed properly?	Go to step **2**.	Install the TCM connector.

Step		Check	Yes	No
2	**CHECK INPUT VOLTAGE OF TCM.** 1) Turn the ignition switch to ON. 2) Measure the voltage between TCM connector and chassis ground. (While wiggling the harness) ***Connector & terminal*** ***(B54) No. 41 (+) — Chassis ground (–):***	Is the voltage 8 V or more?	Even if DTC is detected, the circuit has returned to a normal condition at this time. Reproduce the failure, and then perform the diagnosis again. NOTE: In this case, the following items may be the cause of fault. • Open circuit or short circuit to ground of harness between TCM connector and ignition switch connector (IG relay 1 connector for model with push button start) • Poor contact of ignition switch connector (IG relay 1 connector for model with push button start) • Poor contact of ignition switch (IG relay 1 for model with push button start)	Repair the harness and connector. NOTE: In this case, repair the following item: • Open circuit or short circuit to ground of harness between TCM connector and ignition switch connector (IG relay 1 connector for model with push button start) • Poor contact of ignition switch connector (IG relay 1 connector for model with push button start) • Poor contact of ignition switch (IG relay 1 for model with push button start)

AR:DTC P2746 PRIMARY PULLEY REVOLUTION SPEED SENSOR CIRCUIT

DTC DETECTING CONDITION:

- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-52, DTC P2746 PRIMARY PULLEY REVOLUTION SPEED SENSOR CIRCUIT, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

- Standing start problems
- Shock occurs when engaging the lockup clutch.
- Shock occurs when selecting shift position.

	Step	Check	Yes	No
1	**CHECK DTC.** Read the DTC using Subaru Select Monitor.	Besides DTC P2746, is any of the DTCs P2747, U0100 and U0401 displayed?	Perform the diagnosis according to DTCs other than P2746.	Perform the diagnosis according to DTC P2747. <Ref. to CVT(diag)-108, DTC P2747 INTERMEDIATE SHAFT SPEED SENSOR "B" CIRCUIT NO SIGNAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

AS:DTC P2747 INTERMEDIATE SHAFT SPEED SENSOR "B" CIRCUIT NO SIGNAL

DTC DETECTING CONDITION:

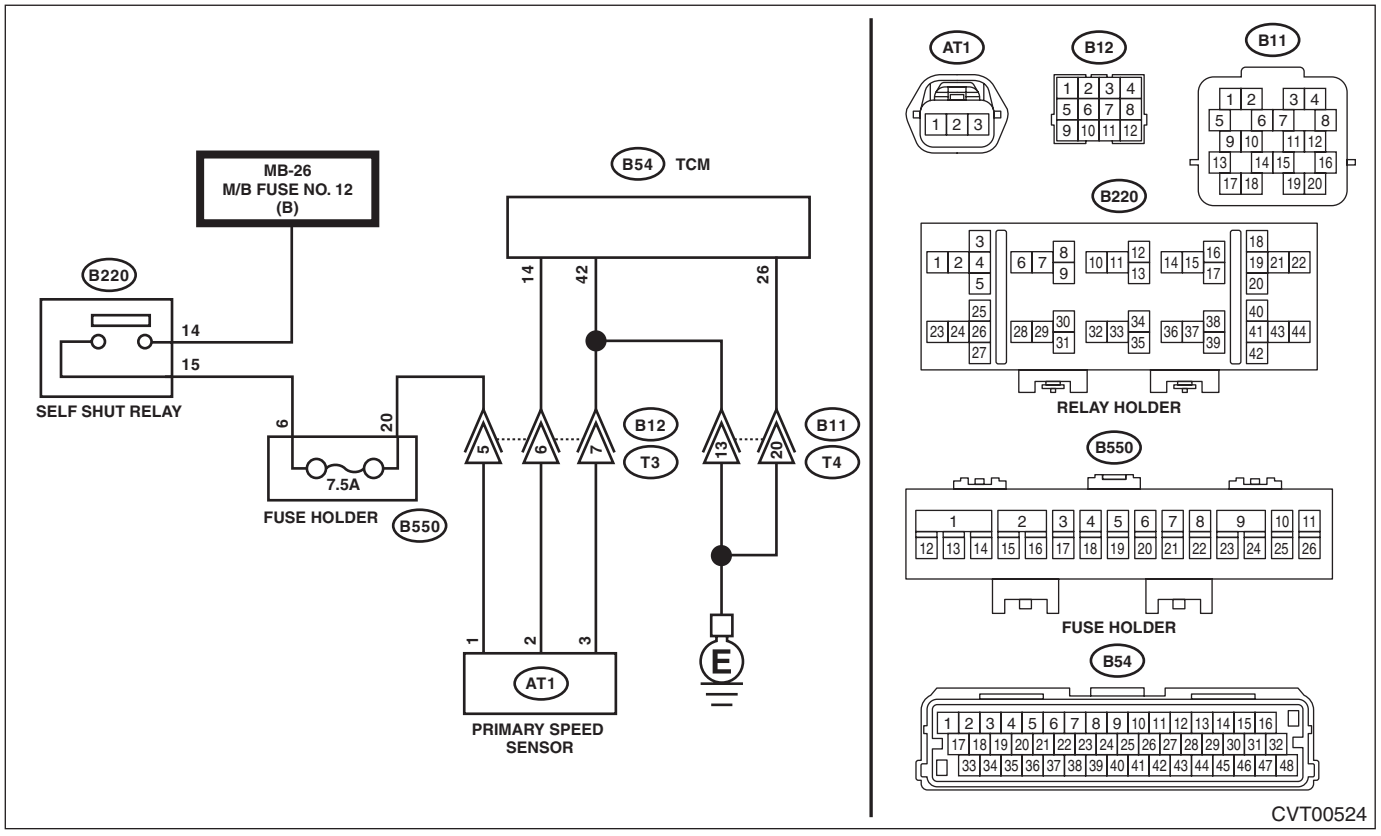
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-53, DTC P2747 INTERMEDIATE SHAFT SPEED SENSOR "B" CIRCUIT NO SIGNAL, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

- Standing start problems
- Shock occurs when engaging the lockup clutch.
- Shock occurs when selecting shift position.

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



Step		Check	Yes	No
1	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Remove the fuse (7.5 A) from the fuse holder.	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. 26 — (B11) No. 20:*** ***(B54) No. 42 — (B11) No. 13:*** ***(B54) No. 14 — (B12) No. 6:*** ***(B54) No. 42 — (B12) No. 7:*** ***(B550) No. 20 — (B12) No. 5:***	Is the resistance less than 1 Ω?	Go to step **3**.	Repair the open circuit of harness.

	Step	Check	Yes	No
3	**CHECK HARNESS.** Measure the resistance between TCM connector and chassis ground. ***Connector & terminal*** ***(B54) No. 14 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Repair the short circuit of harness.
4	**CHECK TRANSMISSION HARNESS.** 1) Install the fuse. 2) Connect the TCM connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between transmission connector terminals. ***Connector & terminal*** ***(B12) No. 5 (+) — Chassis ground (–):***	Is the voltage 10 — 13 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) Set the select lever to “D” range. 6) Read the data of «Primary Pulley Speed» using Subaru Select Monitor.	Does the value of «Primary Pulley Speed» change according to those of «Turbine Revolution 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(TR690)-102, Primary Speed Sensor.>	Replace the transmission harness.

AT:DTC P2750 SEC. PULLEY REVOLUTION SPEED SENSOR CIRCUIT

DTC DETECTING CONDITION:

- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-54, DTC P2750 SEC. PULLEY REVOLUTION SPEED SENSOR CIRCUIT, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

- Shifting shock is felt.
- Acceleration is poor during standing start.
- Shift control malfunction

Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC using Subaru Select Monitor.	Besides DTC P2750, is DTC P2747 or P2751 displayed?	Perform the diagnosis according to DTCs other than P2750.	Perform the diagnosis according to DTC P2751. <Ref. to CVT(diag)-111, DTC P2751 INTERMEDIATE SHAFT SPEED SENSOR "C" CIRCUIT NO SIGNAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

AU:DTC P2751 INTERMEDIATE SHAFT SPEED SENSOR "C" CIRCUIT NO SIGNAL

DTC DETECTING CONDITION:

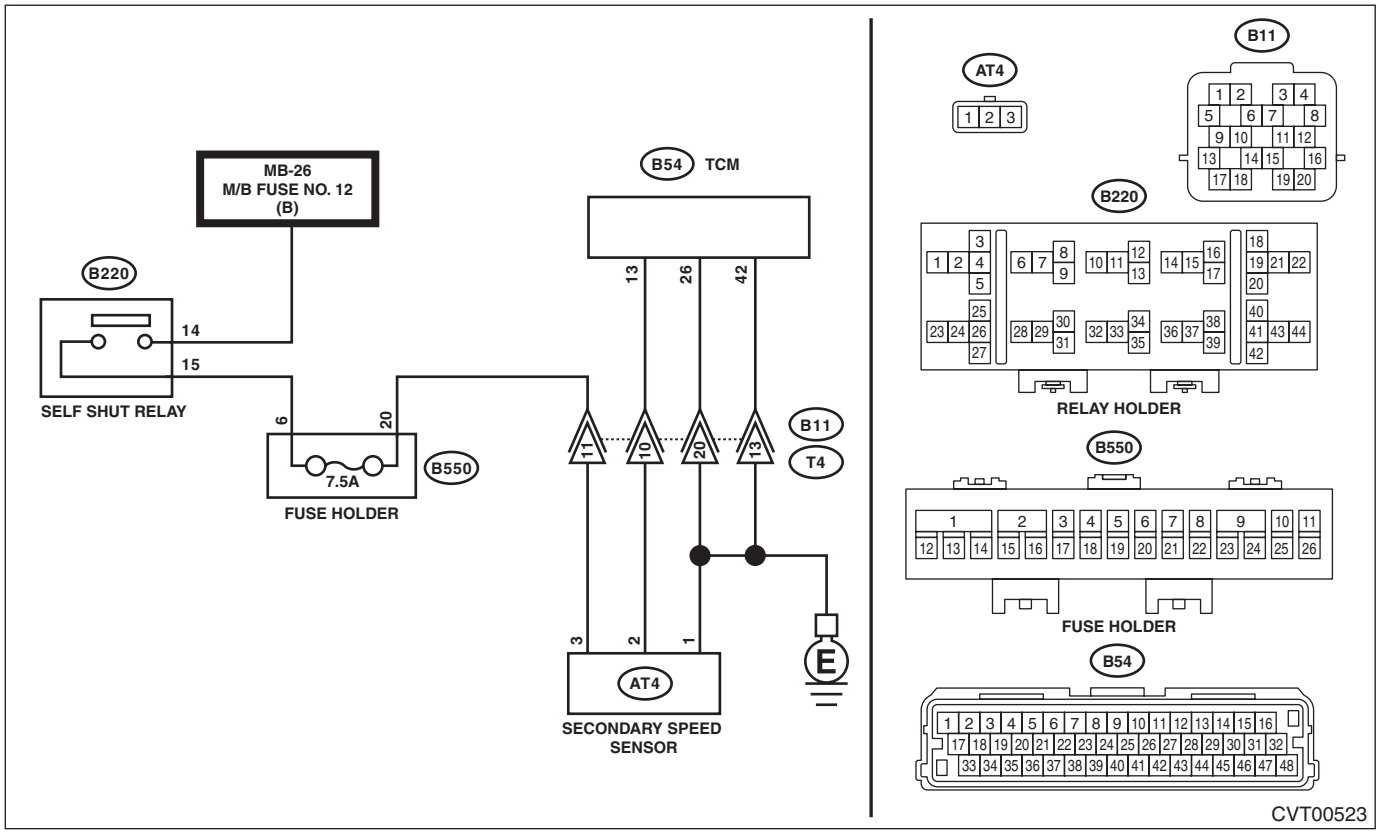
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-55, DTC P2751 INTERMEDIATE SHAFT SPEED SENSOR "C" CIRCUIT NO SIGNAL, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

- Shifting shock is felt.
- Acceleration is poor during standing start.
- Shift control malfunction

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



Step		Check	Yes	No
1	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Remove the fuse (7.5 A) from the fuse holder.	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. 13 — (B11) No. 10:*** ***(B54) No. 26 — (B11) No. 20:*** ***(B54) No. 42 — (B11) No. 13:*** ***(B550) No. 20 — (B11) No. 11:***	Is the resistance less than 1 Ω?	Go to step **3**.	Repair the open circuit of harness.

	Step	Check	Yes	No
3	**CHECK HARNESS.** 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 **4**.	Repair the short circuit of harness.
4	**CHECK TRANSMISSION HARNESS.** 1) Install the fuse. 2) Connect the TCM connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between transmission connector terminals. ***Connector & terminal*** ***(B11) No. 11 (+) — Chassis ground (–):***	Is the voltage 10 — 13 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) Set the select lever to “D” range. 6) Read the data of «Secondary Pulley Speed» using Subaru Select Monitor.	Does the value of «Secondary Pulley Speed» change according to those of «Front Wheel 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. 13 — (AT4) No. 1:*** ***(T4) No. 20 — (AT4) No. 1:***	Is the resistance less than 1 Ω?	Replace the secondary speed sensor. <Ref. to CVT(TR690)-99, Secondary Speed Sensor.>	Replace the transmission harness.

AV:DTC P2757 TORQUE CONVERTER CLUTCH PRESSURE CONTROL SOLENOID CONTROL CIRCUIT PERFORMANCE/STUCK OFF

DTC DETECTING CONDITION:

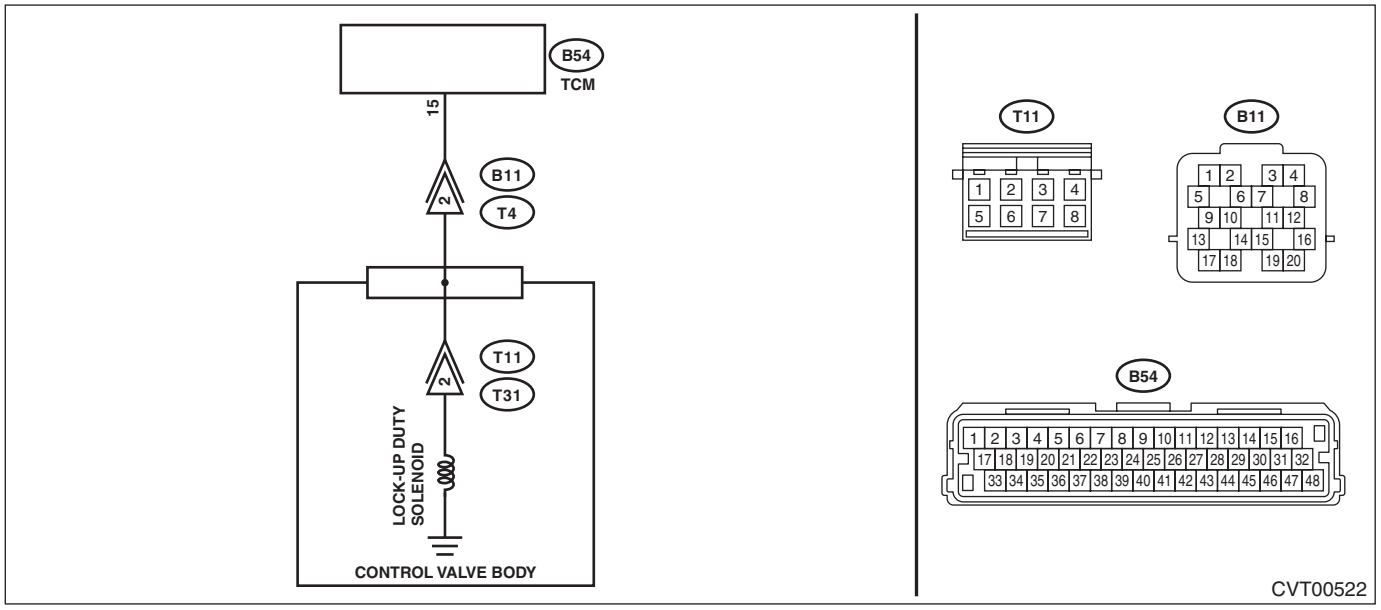
- Detected when two consecutive driving cycles with fault occur.
- GENERAL DESCRIPTION <Ref. to GD(CVT)-56, DTC P2757 TORQUE CONVERTER CLUTCH PRESSURE CONTROL SOLENOID CONTROL CIRCUIT PERFORMANCE/STUCK OFF, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

No lock-up occurs.

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC using Subaru Select Monitor.	Besides DTC P2757, is any of the DTCs P2747, P2763, P2764, U0100 and U0401 displayed?	Perform the diagnosis according to DTCs other than P2757.	Go to step **2**.
2	**CHECK LOCK-UP DUTY SOLENOID (SYSTEM OPERATION CHECK MODE).** 1) Turn the ignition switch to ON. 2) Using the Subaru Select Monitor, perform forced operation of the lock-up duty solenoid. <Ref. to CVT(diag)-22, System Operation Check Mode.>	Does the indication of 0 → 50% appear repeatedly during forced operation, and does operating sound emit during indicating 50%?	Go to step **5**.	Go to step **3**.
3	**CHECK LOCK-UP DUTY SOLENOID.** 1) Turn the ignition switch to OFF. 2) Disconnect the transmission connector. 3) Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 2 — Transmission body:***	Is the resistance approx. 10 — 13.5 Ω? (when cold)	Go to step **7**.	Go to step **4**.
4	**CHECK HARNESS.** Check the continuity of transmission harness.	Is the harness normal? (Is it free from defects such as open circuit, power supply-output short or GND-output short circuit, or poor contact?)	Go to step **7**.	Repair the harness.

	Step	Check	Yes	No
5	**CHECK TRANSMISSION FLUID.** 1) Connect the transmission connector. 2) Check the amount of ATF. <Ref. to CVT(TR690)-36, ADJUSTMENT, CVTF.>	Is the ATF amount correct?	Go to step **6**.	Adjust the amount of ATF. <Ref. to CVT(TR690)-36, ADJUSTMENT, CVTF.>
6	**CHECK TRANSMISSION FLUID.** Check the condition of ATF. <Ref. to CVT(TR690)-40, CONDITION CHECK, CVTF.>	Is the ATF OK?	Go to step **7**.	Check according to the “Corrective action” of ATF (CVTF) “CONDITION CHECK”. <Ref. to CVT(TR690)-40, CONDITION CHECK, CVTF.>
7	**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 the «Actual secondary pressure» 0.5 — 1.5 MPa?	Go to step **8**.	Perform the diagnosis according to DTC P0841. <Ref. to CVT(diag)-68, DTC P0841 SECONDARY OIL PRESSURE SENSOR PERFORMANCE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
8	**DRIVING CHECK FOR LOCK-UP CONDITION.** 1) Perform the “Clear Memory Mode”. <Ref. to CVT(diag)-17, Clear Memory Mode.> 2) Turn the ignition switch to OFF. 3) Start the engine. 4) Warm up until the ATF temperature exceeds 50°C. 5) Drive the vehicle for one minute or more while keeping such constant speed that «Lock Up Duty Ratio» is 70% or more, and «Front Wheel Speed» is 40 km/h (25 MPH) or more, which are displayed on the Subaru Select Monitor. 6) Turn the ignition switch to OFF. 7) Start the engine. 8) Perform the procedure in step 5) again. 9) Read the DTC using Subaru Select Monitor.	Does the AT OIL TEMP light blink and is DTC P2757 displayed?	Perform the secondary pressure test. <Ref. to CVT(TR690)-49, Secondary Pressure (Line Pressure) Test.> When DTC other than P2757 is displayed, perform the diagnosis corresponding to the DTC.	Current condition is normal. Temporary oil pressure malfunction.

AW:DTC P2758 TORQUE CONVERTER CLUTCH PRESSURE CONTROL SOLENOID CONTROL CIRCUIT STUCK ON

DTC DETECTING CONDITION:

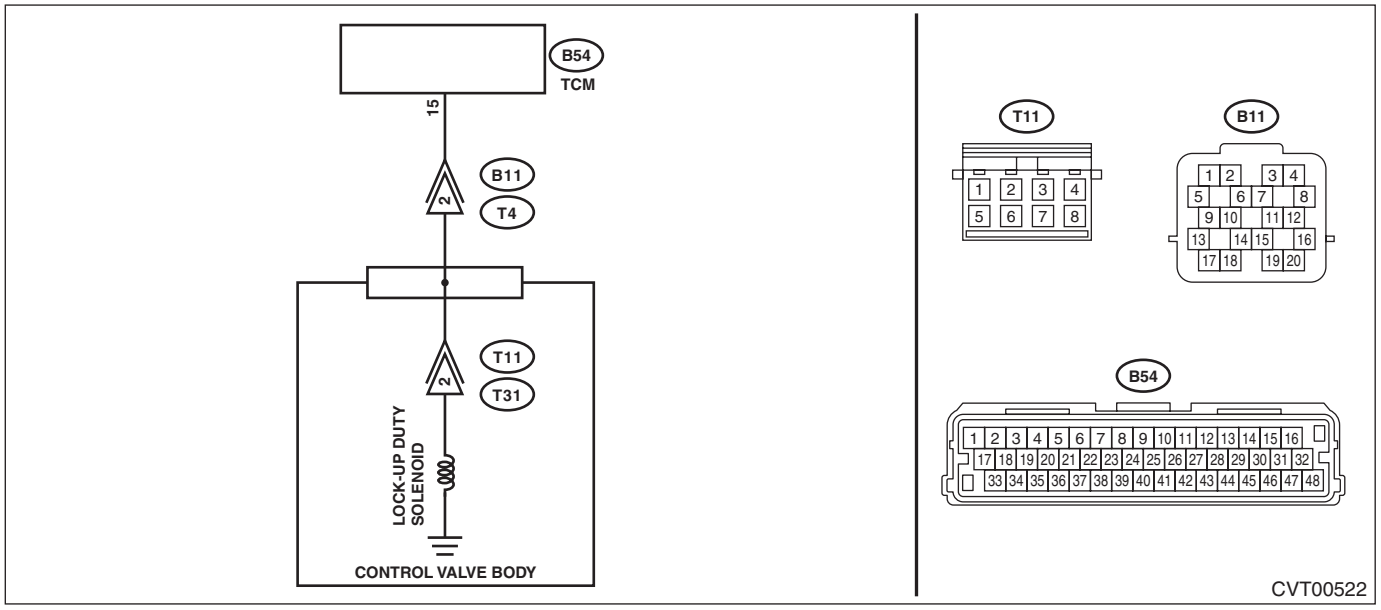
- Detected when two consecutive driving cycles with fault occur.
- GENERAL DESCRIPTION <Ref. to GD(CVT)-57, DTC P2758 TORQUE CONVERTER CLUTCH PRESSURE CONTROL SOLENOID CONTROL CIRCUIT STUCK ON, Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

The engine stalls when the vehicle is stopped.

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC using Subaru Select Monitor.	Besides DTC P2758, is any of the DTCs P2747, P2763, P2764, U0100 and U0401 displayed?	Perform the diagnosis according to DTCs other than P2758.	Go to step **2**.
2	**CHECK LOCK-UP DUTY SOLENOID (SYSTEM OPERATION CHECK MODE).** 1) Turn the ignition switch to ON. 2) Using the Subaru Select Monitor, perform forced operation of the lock-up duty solenoid. <Ref. to CVT(diag)-22, System Operation Check Mode.>	Does the indication of 0 → 50% appear repeatedly during forced operation, and does operating sound emit during indicating 50%?	Go to step **5**.	Go to step **3**.
3	**CHECK LOCK-UP DUTY SOLENOID.** 1) Turn the ignition switch to OFF. 2) Disconnect the transmission connector. 3) Measure the resistance between transmission connector and transmission body. ***Connector & terminal*** ***(T4) No. 2 — Transmission body:***	Is the resistance approx. 10 — 13.5 Ω? (when cold)	Go to step **7**.	Go to step **4**.
4	**CHECK HARNESS.** Check the continuity of transmission harness.	Is the harness normal? (Is it free from defects such as open circuit, power supply-output short or GND-output short circuit, or poor contact?)	Go to step **7**.	Repair the harness.

	Step	Check	Yes	No
5	**CHECK TRANSMISSION FLUID.** 1) Connect the transmission connector. 2) Check the amount of ATF. <Ref. to CVT(TR690)-36, ADJUSTMENT, CVTF.>	Is the ATF amount correct?	Go to step **6**.	Adjust the amount of ATF. <Ref. to CVT(TR690)-36, ADJUSTMENT, CVTF.>
6	**CHECK TRANSMISSION FLUID.** Check the condition of ATF. <Ref. to CVT(TR690)-40, CONDITION CHECK, CVTF.>	Is the ATF OK?	Go to step **7**.	Check according to the “Corrective action” of ATF (CVTF) “CONDITION CHECK”. <Ref. to CVT(TR690)-40, CONDITION CHECK, CVTF.>
7	**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 the «Actual secondary pressure» 0.5 — 1.5 MPa?	Go to step **8**.	Perform the diagnosis according to DTC P0841. <Ref. to CVT(diag)-68, DTC P0841 SECONDARY OIL PRESSURE SENSOR PERFORMANCE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
8	**DRIVING CHECK FOR LOCK-UP CONDITION.** 1) Perform the “Clear Memory Mode”. <Ref. to CVT(diag)-17, Clear Memory Mode.> 2) Turn the ignition switch to OFF. 3) Start the engine. 4) Warm up until the ATF temperature exceeds 50°C. 5) Drive the vehicle for one minute or more while keeping such constant speed that «Lock Up Duty Ratio» is 0%, and «Front Wheel Speed» is 5 km/h (3 MPH) or less, which are displayed on the Subaru Select Monitor. 6) Turn the ignition switch to OFF. 7) Start the engine. 8) Perform the procedure in step 5) again. 9) Read the DTC using Subaru Select Monitor.	Does the AT OIL TEMP light blink and is DTC P2758 displayed? Or does the engine stall?	Perform the secondary pressure test. <Ref. to CVT(TR690)-49, Secondary Pressure (Line Pressure) Test.> When DTC other than P2758 is displayed, perform the diagnosis according to the DTC.	Current condition is normal. Temporary oil pressure malfunction.

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

DTC DETECTING CONDITION:

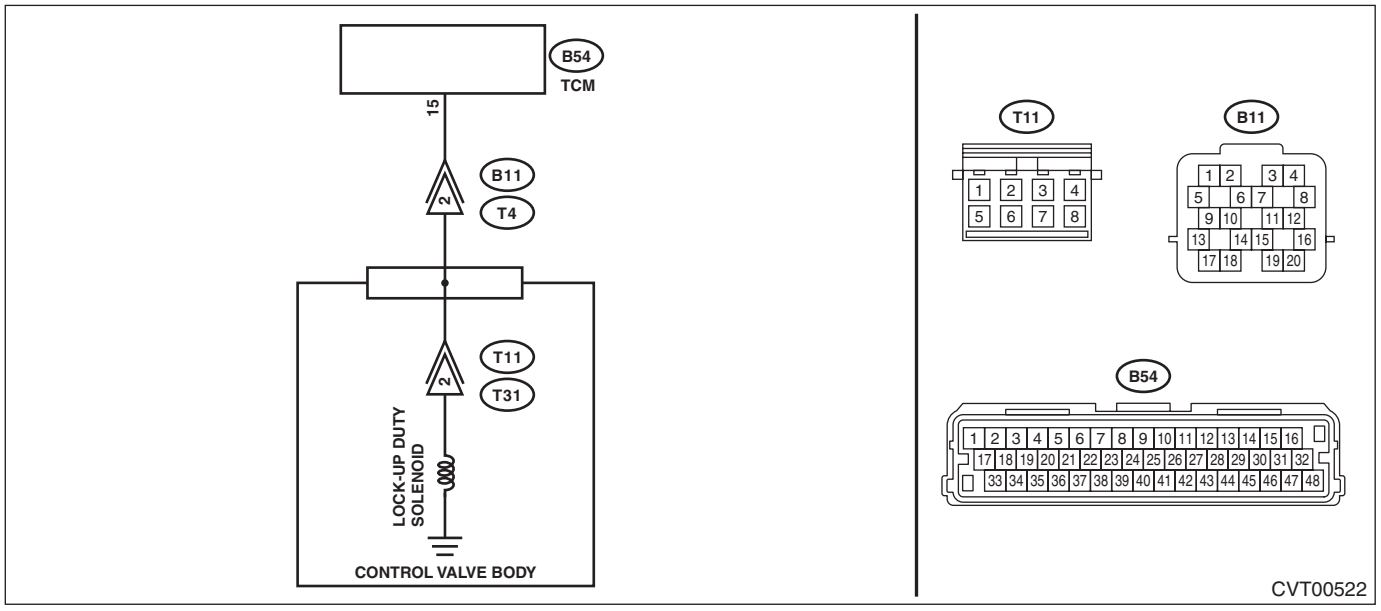
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-58, DTC P2763 LOCK-UP DUTY SOLENOID CIRCUIT (HIGH), Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

- No lock-up occurs.
- Engine stalls.

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



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. 15 — (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. 15 (+) — 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. 10 — 13.5 Ω? (when cold)	Check for poor contact of connector, and if no fault is found, replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>	Go to step **4**.

	Step	Check	Yes	No
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 fault in the harness?	Replace the transmission harness.	Go to step **5**.
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(TR690)-112, Control Valve Body.>	Replace the transmission harness.

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

DTC DETECTING CONDITION:

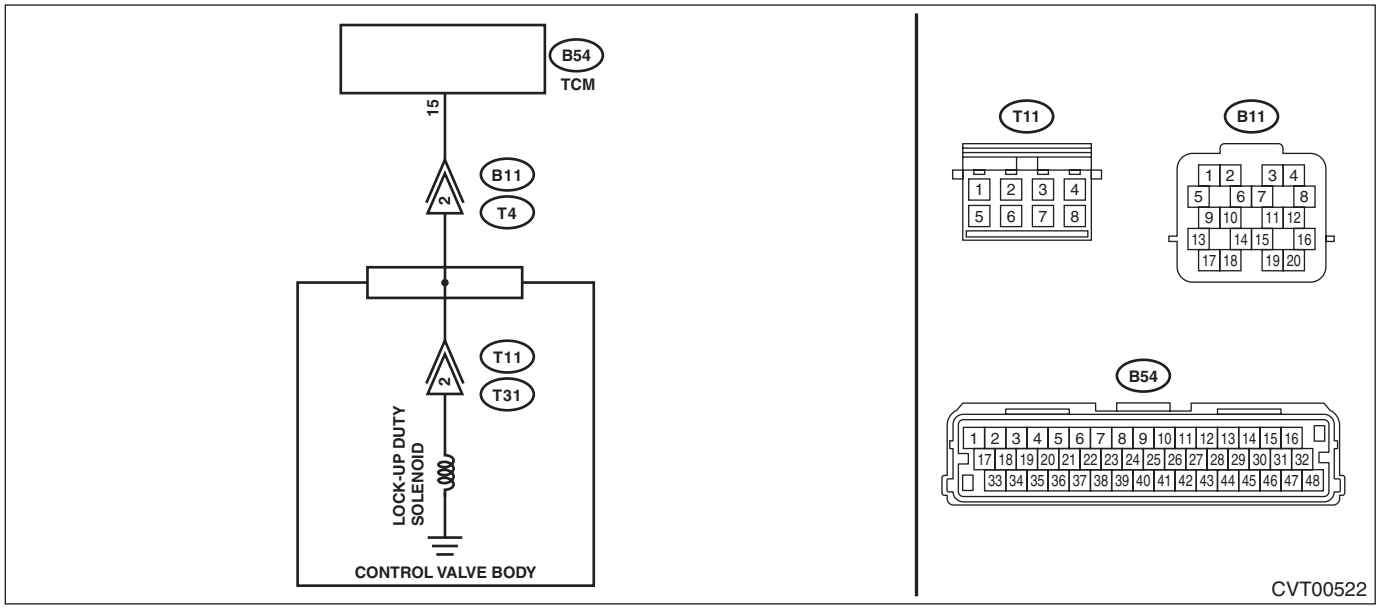
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-59, DTC P2764 LOCK-UP DUTY SOLENOID CIRCUIT (LOW), Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

No lock-up occurs.

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



	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. 15 — 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. 10 — 13.5 Ω? (when cold)	Check for poor contact of connector, and if no fault is found, replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>	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 fault in the harness?	Replace the transmission harness.	Go to step **4**.

	Step	Check	Yes	No
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(TR690)-112, Control Valve Body.>	Replace the transmission harness.

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

DTC DETECTING CONDITION:

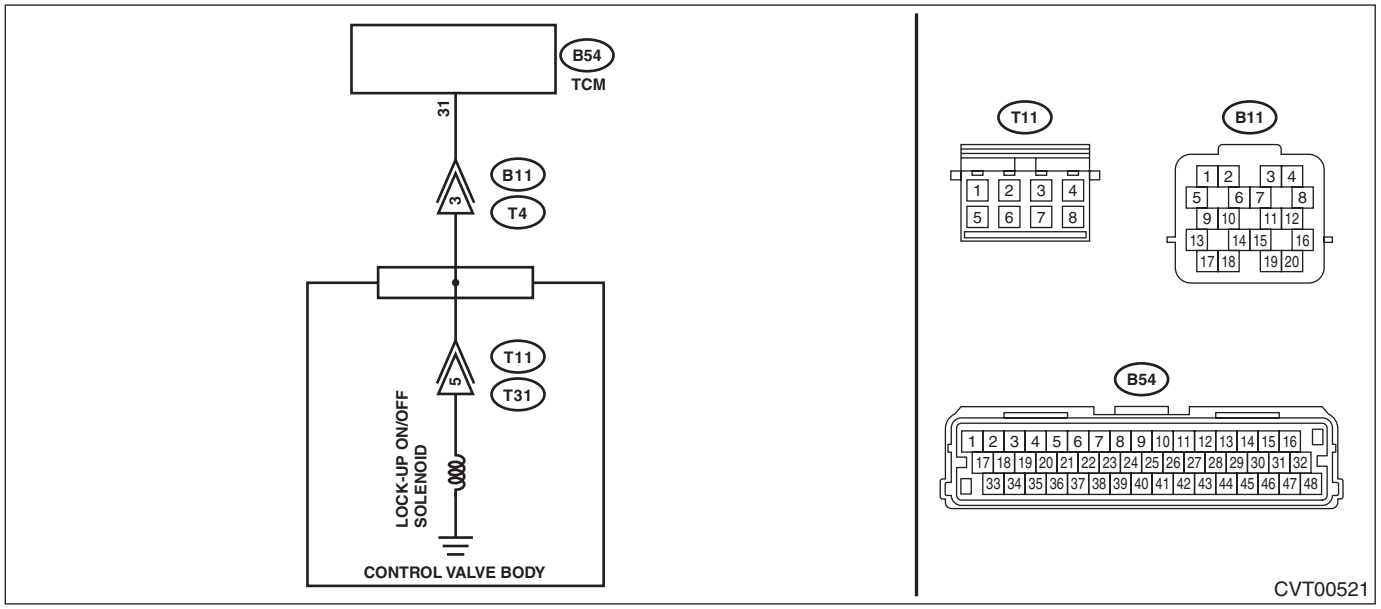
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-60, DTC P2769 LOCK-UP ON/OFF SOLENOID CIRCUIT (LOW), Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

No lock-up occurs.

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



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. 31 — 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. 13 — 18.5 Ω? (when cold)	Check for poor contact of connector, and if no fault is found, replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>	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 fault in the harness?	Replace the transmission harness.	Go to step **4**.

	Step	Check	Yes	No
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(TR690)-112, Control Valve Body.>	Replace the transmission harness.

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

DTC DETECTING CONDITION:

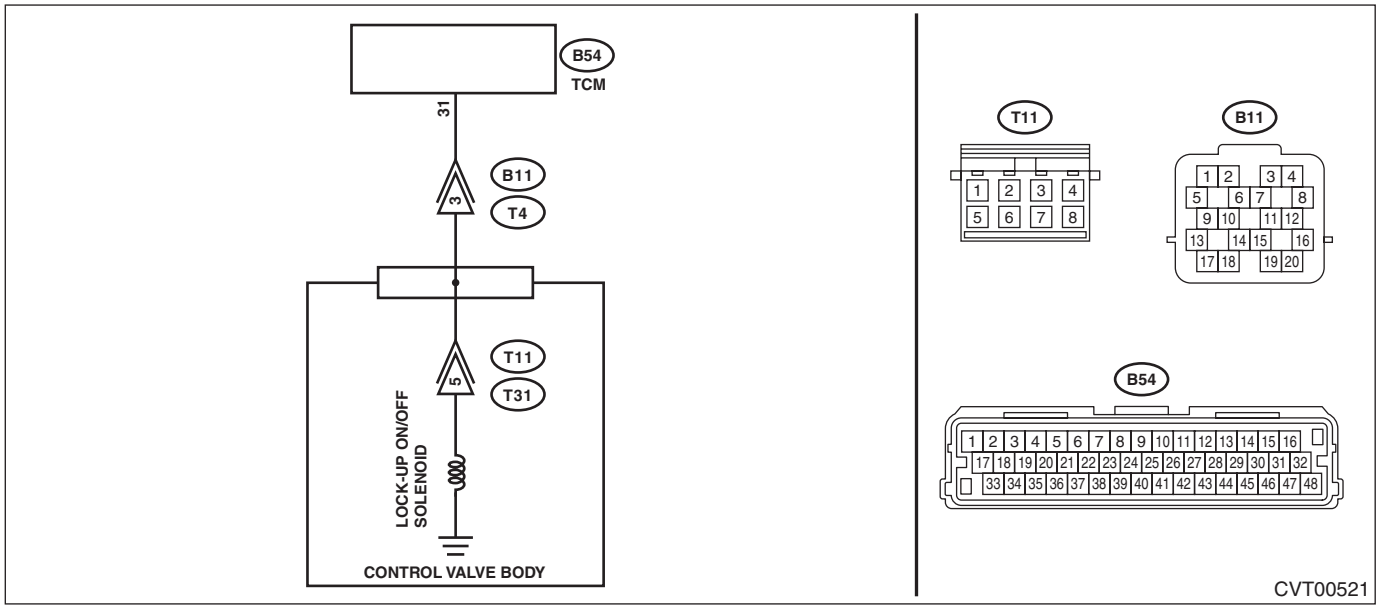
- Immediately at fault recognition
- GENERAL DESCRIPTION <Ref. to GD(CVT)-61, DTC P2770 LOCK-UP ON/OFF SOLENOID CIRCUIT (HIGH), Diagnostic Trouble Code (DTC) Detecting Criteria.>

TROUBLE SYMPTOM:

No lock-up occurs.

WIRING DIAGRAM:

CVT control system <Ref. to WI-148, CVT Control System.>



	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. 31 — (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. 31 (+) — 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. 13 — 18.5 Ω? (when cold)	Check for poor contact of connector, and if no fault is found, replace the TCM. <Ref. to CVT(TR690)-126, Transmission Control Module (TCM).>	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 fault in the harness?	Replace the transmission harness.	Go to step **5**.

	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(TR690)-112, Control Valve Body.>	Replace the transmission harness.

BB:DTC U0073 CONTROL MODULE COMMUNICATION BUS OFF

NOTE:
Refer to “LAN SYSTEM (DIAGNOSTICS)” for diagnostic procedure. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>

BC:DTC U0100 LOST COMMUNICATION WITH ECM/PCM “A”

NOTE:
Refer to “LAN SYSTEM (DIAGNOSTICS)” for diagnostic procedures. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>

BD:DTC U0122 LOST COMMUNICATION WITH VEHICLE DYNAMICS CONTROL MODULE

NOTE:
Refer to “LAN SYSTEM (DIAGNOSTICS)” for diagnostic procedures. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>

BE:DTC U0140 LOST COMMUNICATION WITH BODY CONTROL MODULE

NOTE:
Refer to “LAN SYSTEM (DIAGNOSTICS)” for diagnostic procedures. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>

BF:DTC U0155 LOST COMMUNICATION WITH INSTRUMENT PANEL CLUSTER (IPC) CONTROL MODULE

NOTE:
Refer to “LAN SYSTEM (DIAGNOSTICS)” for diagnostic procedures. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>

BG:DTC U0164 LOST COMMUNICATION WITH HVAC CONTROL MODULE

NOTE:
Refer to “LAN SYSTEM (DIAGNOSTICS)” for diagnostic procedure. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>

BH:DTC U0401 INVALID DATA RECEIVED FROM ECM/PCM “A”

NOTE:
Refer to “LAN SYSTEM (DIAGNOSTICS)” for diagnostic procedures. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>

BI: DTC U0416 INVALID DATA RECEIVED FROM VEHICLE DYNAMICS CONTROL MODULE

NOTE:
Refer to “LAN SYSTEM (DIAGNOSTICS)” for diagnostic procedures. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>

BJ:DTC U0422 INVALID DATA RECEIVED FROM BODY CONTROL MODULE

NOTE:
Refer to “LAN SYSTEM (DIAGNOSTICS)” for diagnostic procedures. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>

BK:DTC U0423 INVALID DATA RECEIVED FROM INSTRUMENT PANEL CLUSTER CONTROL MODULE

NOTE:
Refer to “LAN SYSTEM (DIAGNOSTICS)” for diagnostic procedures. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>

BL:DTC U0424 INVALID DATA RECEIVED FROM HVAC CONTROL MODULE

NOTE:
Refer to “LAN SYSTEM (DIAGNOSTICS)” for diagnostic procedure. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>