16. Diagnostics Chart with Trouble Code for 2500 cc Models

A: DIAGNOSTIC TROUBLE CODE (DTC) LIST

DTC No.	Item	Index
P0101	Mass air flow sensor circuit range/performance problem (low input)	<Ref. to 2-7 [T16B0].>
P0102	Mass air flow sensor circuit low input	<Ref. to 2-7 [T16C0].>
P0103	Mass air flow sensor circuit high input	<Ref. to 2-7 [T16D0].>
P0106	Pressure sensor circuit range/performance problem	<Ref. to 2-7 [T16E0].>
P0107	Pressure sensor circuit low input	<Ref. to 2-7 [T16F0].>
P0108	Pressure sensor circuit high input	<Ref. to 2-7 [T16G0].>
P0116	Engine coolant temperature sensor circuit low input	<Ref. to 2-7 [T16H0].>
P0117	Engine coolant temperature sensor circuit high input	<Ref. to 2-7 [T16I0].>
P0121	Throttle position sensor circuit range/performance problem (high input)	<Ref. to 2-7 [T16J0].>
P0122	Throttle position sensor circuit low input	<Ref. to 2-7 [T16K0].>
P0123	Throttle position sensor circuit high input	<Ref. to 2-7 [T16L0].>
P0125	Insufficient coolant temperature for closed loop fuel control	<Ref. to 2-7 [T16M0].>
P0130	Front oxygen sensor circuit malfunction	<Ref. to 2-7 [T16N0].>
P0133	Front oxygen sensor circuit slow response	<Ref. to 2-7 [T16O0].>
P0135	Front oxygen sensor heater circuit low input	<Ref. to 2-7 [T16P0].>
P0136	Rear oxygen sensor circuit malfunction	<Ref. to 2-7 [T16Q0].>
P0139	Rear oxygen sensor circuit slow response	<Ref. to 2-7 [T16R0].>
P0141	Rear oxygen sensor heater circuit low input	<Ref. to 2-7 [T16S0].>
P0170	Fuel trim malfunction	<Ref. to 2-7 [T16T0].>
P0181	Fuel temperature sensor A circuit range/performance problem	<Ref. to 2-7 [T16U0].>
P0182	Fuel temperature sensor A circuit low input	<Ref. to 2-7 [T16V0].>
P0183	Fuel temperature sensor A circuit high input	<Ref. to 2-7 [T16W0].>
P0261	Fuel injector circuit low input - #1	<Ref. to 2-7 [T16X0].>
P0262	Fuel injector circuit high input - #1	<Ref. to 2-7 [T16AB0].>
P0264	Fuel injector circuit low input - #2	<Ref. to 2-7 [T16Y0].>

DTC No.	Item	Index
P0265	Fuel injector circuit high input - #2	<Ref. to 2-7 [T16AC0].>
P0267	Fuel injector circuit low input - #3	<Ref. to 2-7 [T16Z0].>
P0268	Fuel injector circuit high input - #3	<Ref. to 2-7 [T16AD0].>
P0270	Fuel injector circuit low input - #4	<Ref. to 2-7 [T16AA0].>
P0271	Fuel injector circuit high input - #4	<Ref. to 2-7 [T16AE0].>
P0301	Cylinder 1 misfire detected	<Ref. to 2-7 [T16AF0].>
P0302	Cylinder 2 misfire detected	<Ref. to 2-7 [T16AG0].>
P0303	Cylinder 3 misfire detected	<Ref. to 2-7 [T16AH0].>
P0304	Cylinder 4 misfire detected	<Ref. to 2-7 [T16AI0].>
P0325	Knock sensor circuit malfunction	<Ref. to 2-7 [T16AJ0].>
P0335	Crankshaft position sensor circuit malfunction	<Ref. to 2-7 [T16AK0].>
P0336	Crankshaft position sensor circuit range/performance problem	<Ref. to 2-7 [T16AL0].>
P0340	Camshaft position sensor circuit malfunction	<Ref. to 2-7 [T16AM0].>
P0341	Camshaft position sensor circuit range/performance problem	<Ref. to 2-7 [T16AN0].>
P0400	Exhaust gas recirculation flow malfunction	<Ref. to 2-7 [T16AO0].>
P0403	Exhaust gas recirculation circuit low input	<Ref. to 2-7 [T16AP0].>
P0420	Catalyst system efficiency below threshold	<Ref. to 2-7 [T16AQ0].>
P0440	Evaporative emission control system malfunction	<Ref. to 2-7 [T16AR0].>
P0441	Evaporative emission control system incorrect purge flow	<Ref. to 2-7 [T16AS0].>
P0443	Evaporative emission control system purge control valve circuit low input	<Ref. to 2-7 [T16AT0].>
P0446	Evaporative emission control system vent control low input	<Ref. to 2-7 [T16AU0].>
P0451	Evaporative emission control system pressure sensor range/performance problem	<Ref. to 2-7 [T16AV0].>
P0452	Evaporative emission control system pressure sensor low input	<Ref. to 2-7 [T16AW0].>
P0453	Evaporative emission control system pressure sensor high input	<Ref. to 2-7 [T16AX0].>
P0461	Fuel level sensor circuit range/performance problem	<Ref. to 2-7 [T16AY0].>
P0462	Fuel level sensor circuit low input	<Ref. to 2-7 [T16AZ0].>
P0463	Fuel level sensor circuit high input	<Ref. to 2-7 [T16BA0].>

DTC No.	Item	Index
P0480	Cooling fan relay 1 circuit low input	<Ref. to 2-7 [T16BB0].>
P0483	Cooling fan function problem	<Ref. to 2-7 [T16BC0].>
P0500	Vehicle speed sensor malfunction	<Ref. to 2-7 [T16BD0].>
P0505	Idle control system malfunction	<Ref. to 2-7 [T16BE0].>
P0506	Idle control system RPM lower than expected	<Ref. to 2-7 [T16BF0].>
P0507	Idle control system RPM higher than expected	<Ref. to 2-7 [T16BG0].>
P0600	Serial communication link malfunction	<Ref. to 2-7 [T16BH0].>
P0601	Internal control module memory check sum error	<Ref. to 2-7 [T16BI0].>
P0703	Brake switch input malfunction	<Ref. to 2-7 [T16BJ0].>
P0705	Transmission range sensor circuit malfunction	<Ref. to 2-7 [T16BK0].>
P0710	Transmission fluid temperature sensor circuit malfunction	<Ref. to 2-7 [T16BL0].>
P0715	Torque converter turbine speed sensor circuit malfunction	<Ref. to 2-7 [T16BM0].>
P0720	Output speed sensor (vehicle speed sensor 2) circuit malfunction	<Ref. to 2-7 [T16BN0].>
P0725	Engine speed input circuit malfunction	<Ref. to 2-7 [T16BO0].>
P0731	Gear 1 incorrect ratio	<Ref. to 2-7 [T16BP0].>
P0732	Gear 2 incorrect ratio	<Ref. to 2-7 [T16BQ0].>
P0733	Gear 3 incorrect ratio	<Ref. to 2-7 [T16BR0].>
P0734	Gear 4 incorrect ratio	<Ref. to 2-7 [T16BS0].>
P0740	Torque converter clutch system malfunction	<Ref. to 2-7 [T16BT0].>
P0743	Torque converter clutch system (Duty solenoid B) electrical	<Ref. to 2-7 [T16BU0].>
P0748	Pressure control solenoid (Duty solenoid A) electrical	<Ref. to 2-7 [T16BV0].>
P0753	Shift solenoid A (Shift solenoid 1) electrical	<Ref. to 2-7 [T16BW0].>
P0758	Shift solenoid B (Shift solenoid 2) electrical	<Ref. to 2-7 [T16BX0].>
P1100	Starter switch circuit low input	<Ref. to 2-7 [T16BY0].>
P1101	Neutral position switch circuit malfunction [MT vehicles]	<Ref. to 2-7 [T16BZ0].>
P1101	Neutral position switch circuit high input [AT vehicles]	<Ref. to 2-7 [T16CA].>
P1102	Pressure sources switching solenoid valve circuit low input	<Ref. to 2-7 [T16CB0].>

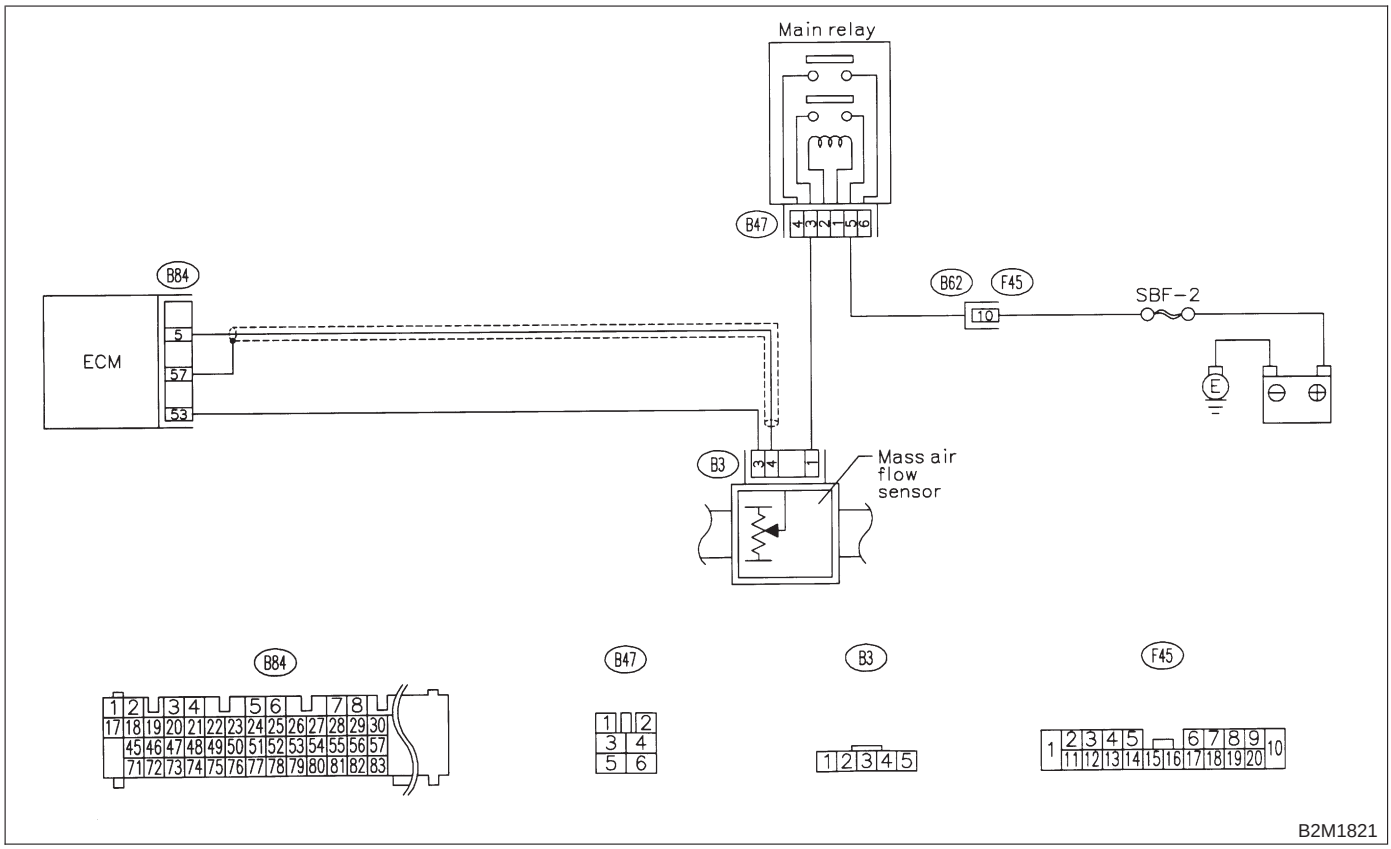
DTC No.	Item	Index
P1103	Engine torque control signal circuit 1 malfunction	<Ref. to 2-7 [T16CC0].>
P1106	Engine torque control signal circuit 2 malfunction	<Ref. to 2-7 [T16CD0].>
P1115	Engine torque control cut signal circuit high input	<Ref. to 2-7 [T16CE0].>
P1116	Engine torque control cut signal circuit low input	<Ref. to 2-7 [T16CF0].>
P1120	Starter switch circuit high input	<Ref. to 2-7 [T16CG0].>
P1121	Neutral position switch circuit low input [AT vehicles]	<Ref. to 2-7 [T16CH0].>
P1122	Pressure sources switching solenoid valve circuit high input	<Ref. to 2-7 [T16CI0].>
P1141	Mass air flow sensor circuit range/performance problem (high input)	<Ref. to 2-7 [T16CJ0].>
P1142	Throttle position sensor circuit range/performance problem (low input)	<Ref. to 2-7 [T16CK0].>
P1143	Pressure sensor circuit range/performance problem (low input)	<Ref. to 2-7 [T16CL0].>
P1144	Pressure sensor circuit range/performance problem (high input)	<Ref. to 2-7 [T16CM0].>
P1150	Front oxygen sensor heater circuit high input	<Ref. to 2-7 [T16CN0].>
P1151	Rear oxygen sensor heater circuit high input	<Ref. to 2-7 [T16CO0].>
P1400	Fuel tank pressure control solenoid valve circuit low input	<Ref. to 2-7 [T16CP0].>
P1420	Fuel tank pressure control solenoid valve circuit high input	<Ref. to 2-7 [T16CQ0].>
P1421	Exhaust gas recirculation circuit high input	<Ref. to 2-7 [T16CR0].>
P1422	Evaporative emission control system purge control valve circuit high input	<Ref. to 2-7 [T16CS0].>
P1423	Evaporative emission control system vent control high input	<Ref. to 2-7 [T16CT0].>
P1440	Fuel tank pressure control system function problem (low input)	<Ref. to 2-7 [T16CU0].>
P1441	Fuel tank pressure control system function problem (high input)	<Ref. to 2-7 [T16CV0].>
P1442	Fuel level sensor circuit range/performance problem 2	<Ref. to 2-7 [T16CW0].>
P1443	Evaporative emission control system vent control function problem	<Ref. to 2-7 [T16CX0].>
P1507	Idle control system malfunction (fail-safe)	<Ref. to 2-7 [T16CY0].>
P1520	Cooling fan relay 1 circuit high input	<Ref. to 2-7 [T16CZ0].>
P1540	Vehicle speed sensor malfunction 2	<Ref. to 2-7 [T16DA0].>
P1700	Throttle position sensor circuit malfunction for automatic transmission	<Ref. to 2-7 [T16DB0].>
P1701	Cruise control set signal circuit malfunction for automatic transmission	<Ref. to 2-7 [T16DC0].>

DTC No.	Item	Index
P1702	Automatic transmission diagnosis input signal circuit low input	<Ref. to 2-7 [T16DD0].>
P1703	Low clutch timing control solenoid valve circuit malfunction	<Ref. to 2-7 [T16DE0].>
P1704	2-4 brake timing control solenoid valve circuit malfunction	<Ref. to 2-7 [T16DF0].>
P1705	2-4 brake pressure control solenoid valve (Duty solenoid D) circuit malfunction	<Ref. to 2-7 [T16DG0].>
P1722	Automatic transmission diagnosis input signal circuit high input	<Ref. to 2-7 [T16DH0].>
P1742	Automatic transmission diagnosis input signal circuit malfunction	<Ref. to 2-7 [T16DI0].>

B: DTC P0101 — MASS AIR FLOW SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM (LOW INPUT) —

NOTE:
Check mass air flow sensor circuit.
<Ref. to 2-7 [T16B0].>

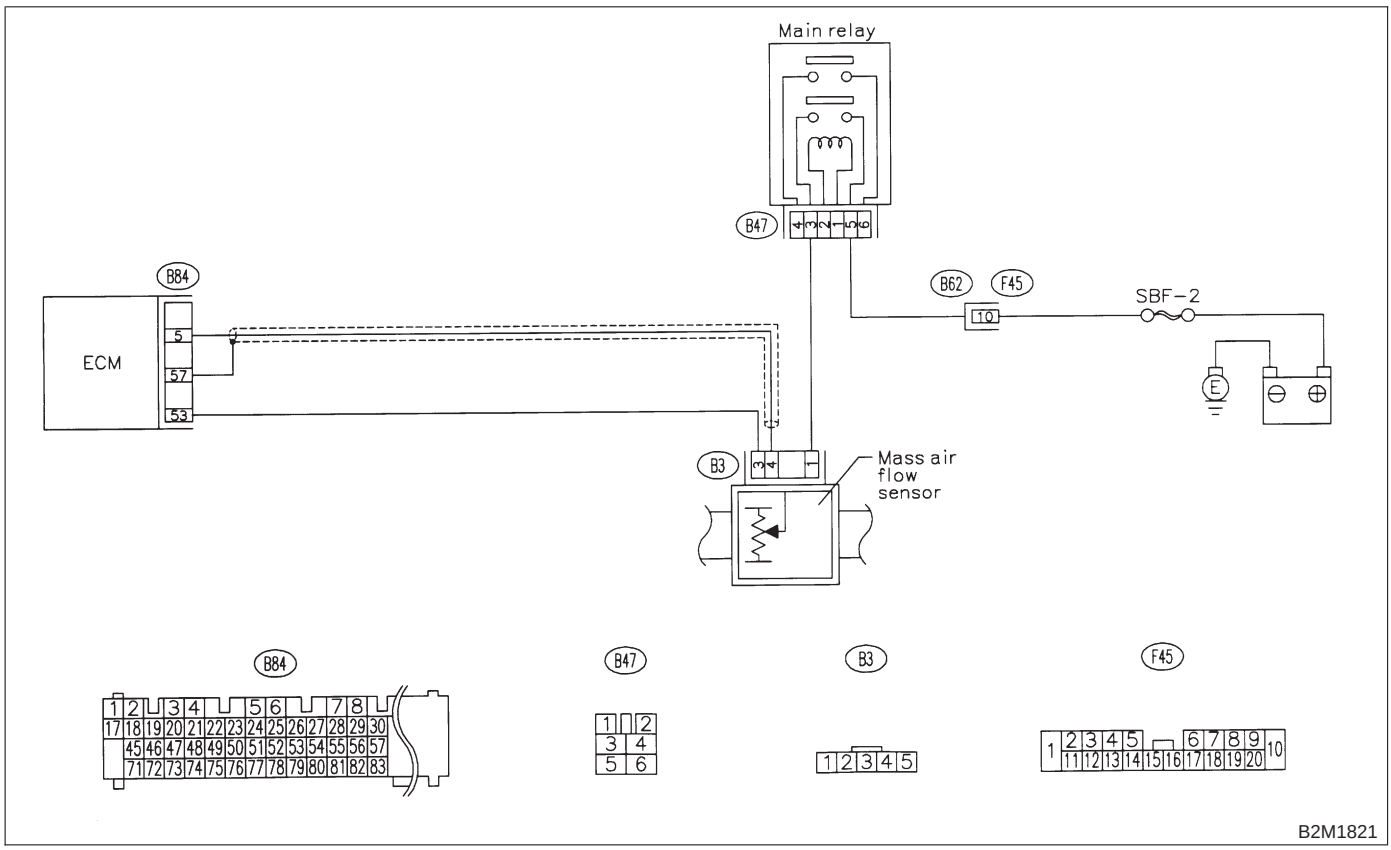
- **WIRING DIAGRAM:**



C: DTC P0102 — MASS AIR FLOW SENSOR CIRCUIT LOW INPUT —

NOTE:
Check mass air flow sensor circuit.
<Ref. to 2-7 [T16C0].>

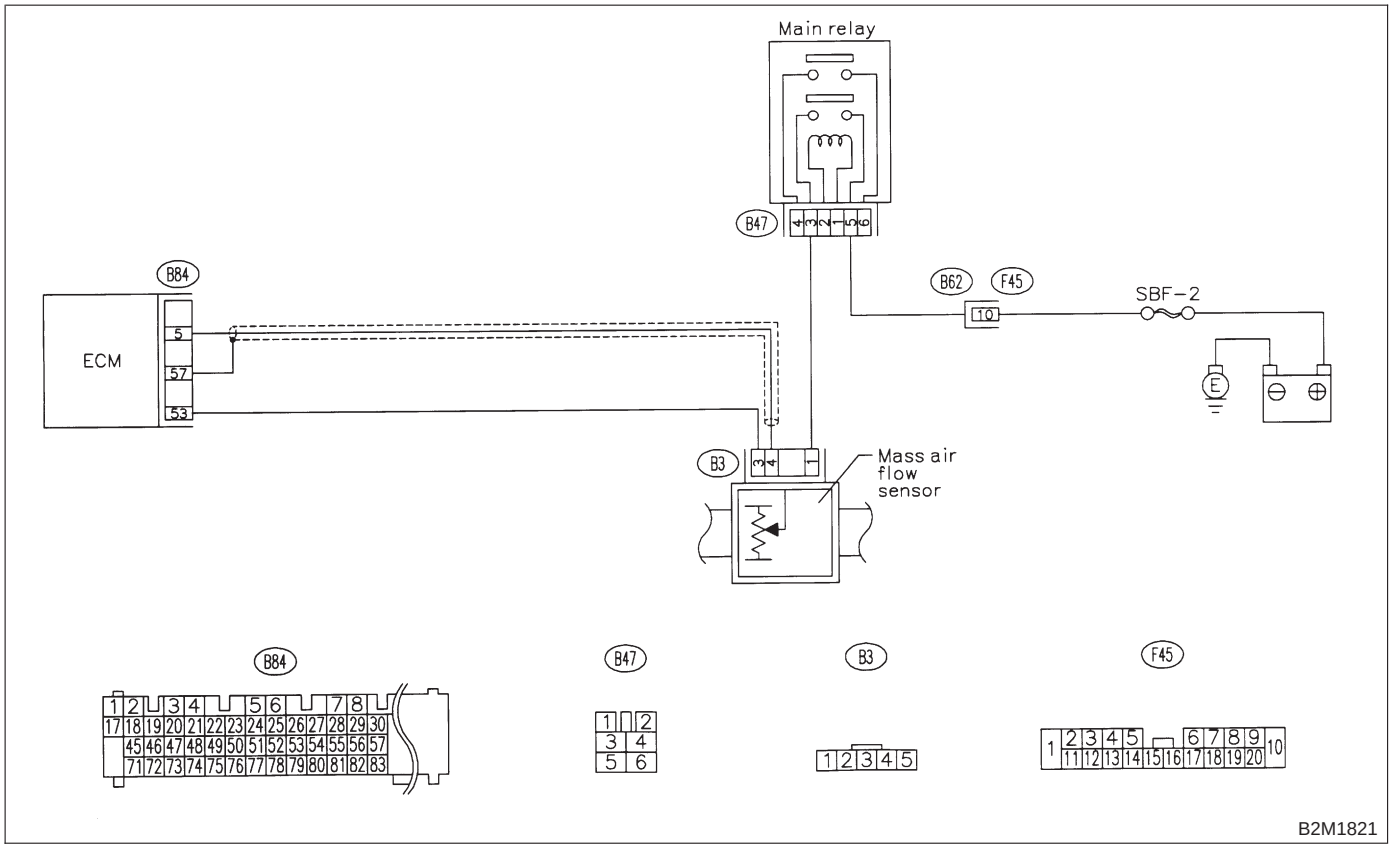
- **WIRING DIAGRAM:**



D: DTC P0103 — MASS AIR FLOW SENSOR CIRCUIT HIGH INPUT —

NOTE:
Check mass air flow sensor circuit.
<Ref. to 2-7 [T16D0].>

- **WIRING DIAGRAM:**

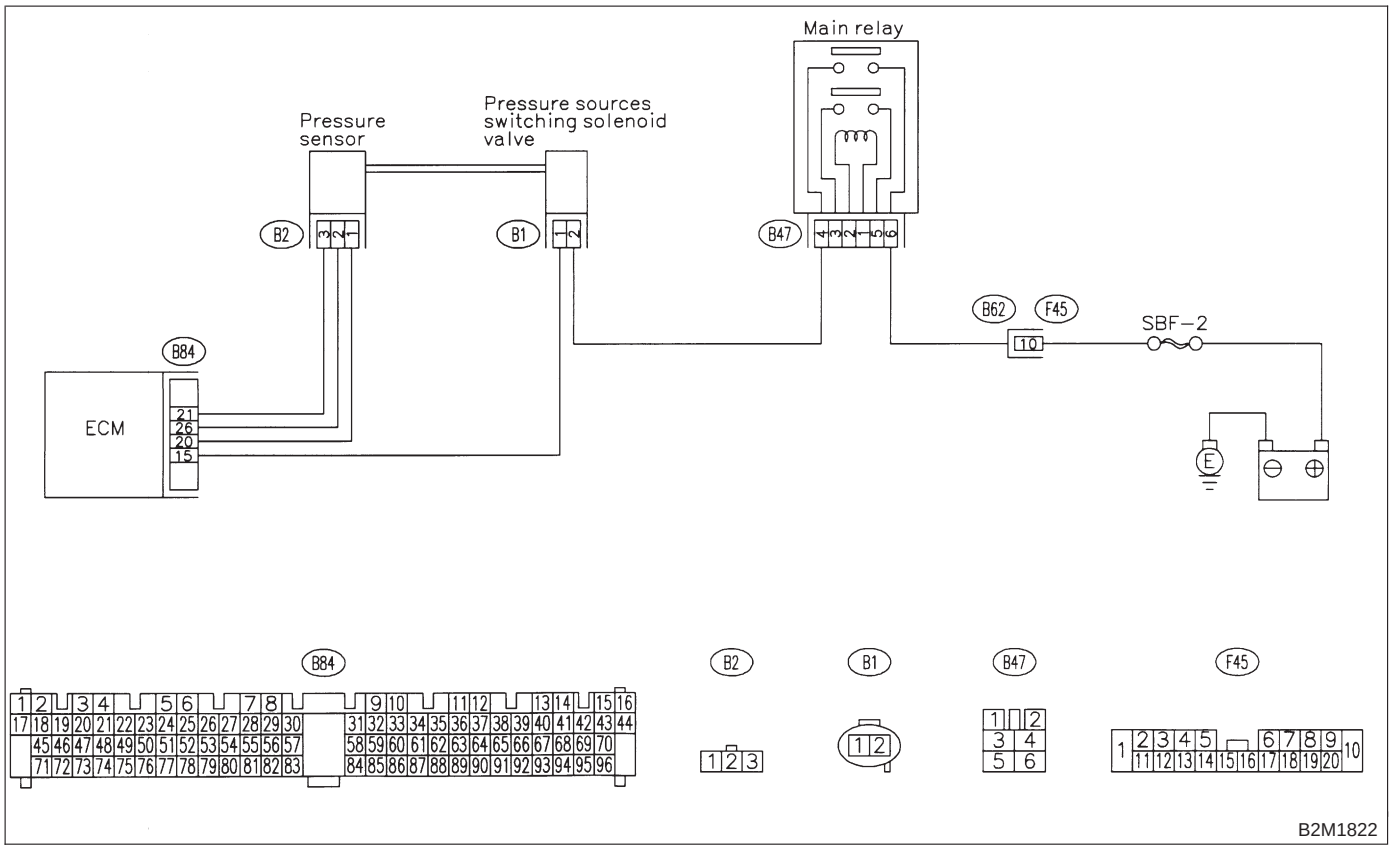


E: DTC P0106 — PRESSURE SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



16E1 : CHECK ANY OTHER DTC ON DISPLAY.

NOTE:
In this case, it is not necessary to inspect DTC P0106.

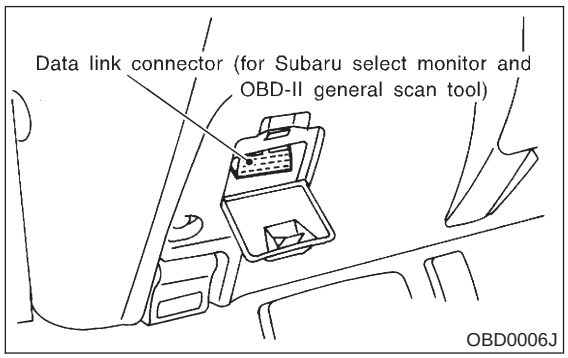
CHECK : ***Does the Subaru Select Monitor or OBD-II general scan tool indicate DTC P0107, P0108, P1102 or P1122?***

YES : Inspect DTC P0107, P0108, P1102 or P1122 using “16. Diagnostics Chart with Trouble Code for 2500 cc Models”. <Ref. to 2-7 [T16A0].>

NO : Go to step **16E2**.

16E2 : CHECK IDLE SWITCH SIGNAL.

1) Turn ignition switch to OFF.
2) Connect Subaru Select Monitor to data link connector.



3) Turn ignition switch to ON and Subaru Select Monitor switch to ON.
4) Operate the LED operation mode for engine using Subaru Select Monitor.

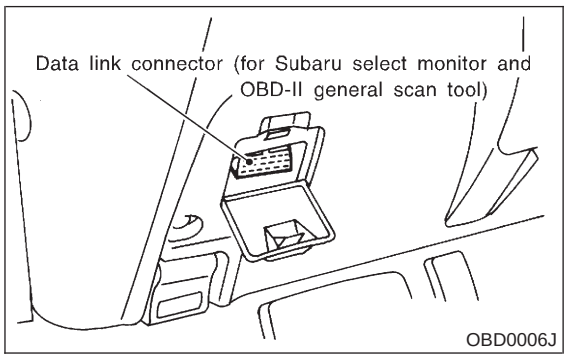
NOTE:
● Subaru Select Monitor
For detailed operation procedure, refer to the "LED OPERATION MODE FOR ENGINE". <Ref. to 2-7 [T3C8].>

CHECK : ***Does the LED of {Idle Switch Signal} come on?***
YES : Go to step **16E3**.
NO : Check throttle position sensor circuit. <Ref. to 2-7 [T16K0].>

NOTE:
In this case, it is not necessary to inspect DTC P0106.

16E3 : CHECK DATA FOR CONTROL.

1) Turn ignition switch to OFF.
2) Connect Subaru Select Monitor or the OBD-II general scan tool to data link connector.



3) Turn ignition switch ON and Subaru Select Monitor or the OBD-II general scan tool switch ON.
4) Start engine.
5) Read data of intake manifold absolute pressure signal using Subaru Select Monitor or OBD-II general scan tool.

NOTE:
● Subaru Select Monitor
For detailed operation procedure, refer to the "READ CURRENT DATA SHOWN ON DISPLAY FOR ENGINE". <Ref. to 2-7 [T3C4].>
● OBD-II general scan tool
For detailed operation procedures, refer to the OBD-II General Scan Tool Instruction Manual.

CHECK : ***Is the value more than 85 kPa (638 mmHg, 25.12 inHg)?***
YES : Go to step **16E6**.
NO : Go to step **16E4**.

16E4 : CHECK DATA FOR CONTROL.

Read data of atmospheric absolute pressure signal using Subaru Select Monitor or OBD-II general scan tool.

CHECK : ***Is the value less than 32 kPa (240 mmHg, 9.45 inHg)?***
YES : Go to step **16E7**.
NO : Go to step **16E5**.

16E5 : CHECK DATA FOR CONTROL.

Read data of atmospheric absolute pressure signal using Subaru Select Monitor or OBD-II general scan tool.

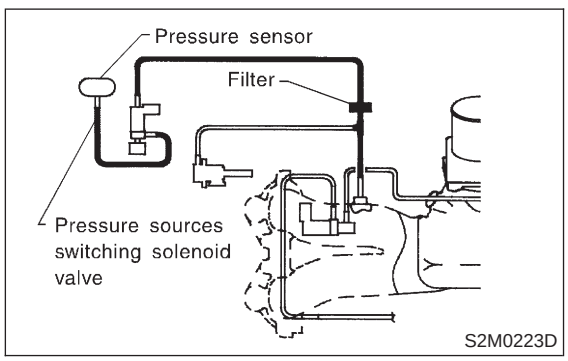
CHECK : ***Is the value more than 133 kPa (998 mmHg, 39.29 inHg)?***

YES : Replace pressure sensor. <Ref. to 2-7 [W11A0].>

NO : Repair poor contact in pressure sensor connector, pressure sources switching solenoid valve connector, and ECM connector.

16E6 : CHECK VACUUM HOSES.

Check the following items.
- Disconnection of the vacuum hose from pressure sources switching solenoid valve to intake manifold
- Holes in the vacuum hose between pressure sources switching solenoid valve to intake manifold
- Clogging of the vacuum hose between pressure sources switching solenoid valve to intake manifold
- Disconnection of the vacuum hose from pressure sensor to pressure sources switching solenoid valve
- Holes in the vacuum hose between pressure sensor and pressure sources switching solenoid valve
- Clogging of the vacuum hose between pressure sensor and pressure sources switching solenoid valve
- Clogging of the filter



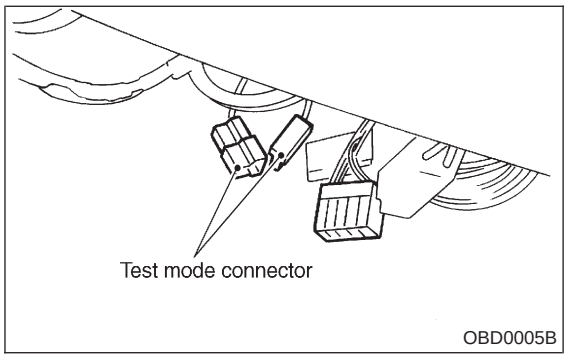
CHECK : ***Is there a fault in vacuum hose?***

YES : Repair or replace hoses or filter.

NO : Go to step **16E7**.

16E7 : CHECK PRESSURE SOURCES SWITCHING SOLENOID VALVE.

1) Turn ignition switch to OFF.
2) Connect test mode connector.



3) Turn ignition switch to ON.

NOTE:
Pressure sources switching solenoid valve operation check can also be executed using Subaru Select Monitor. For the procedure, refer to the "COMPULSORY VALVE OPERATION CHECK MODE". <Ref. to 2-7 [T3F0].>

CHECK : ***Does pressure sources switching solenoid valve produce operating sound? (ON ⇔ OFF each 1.5 sec.)***

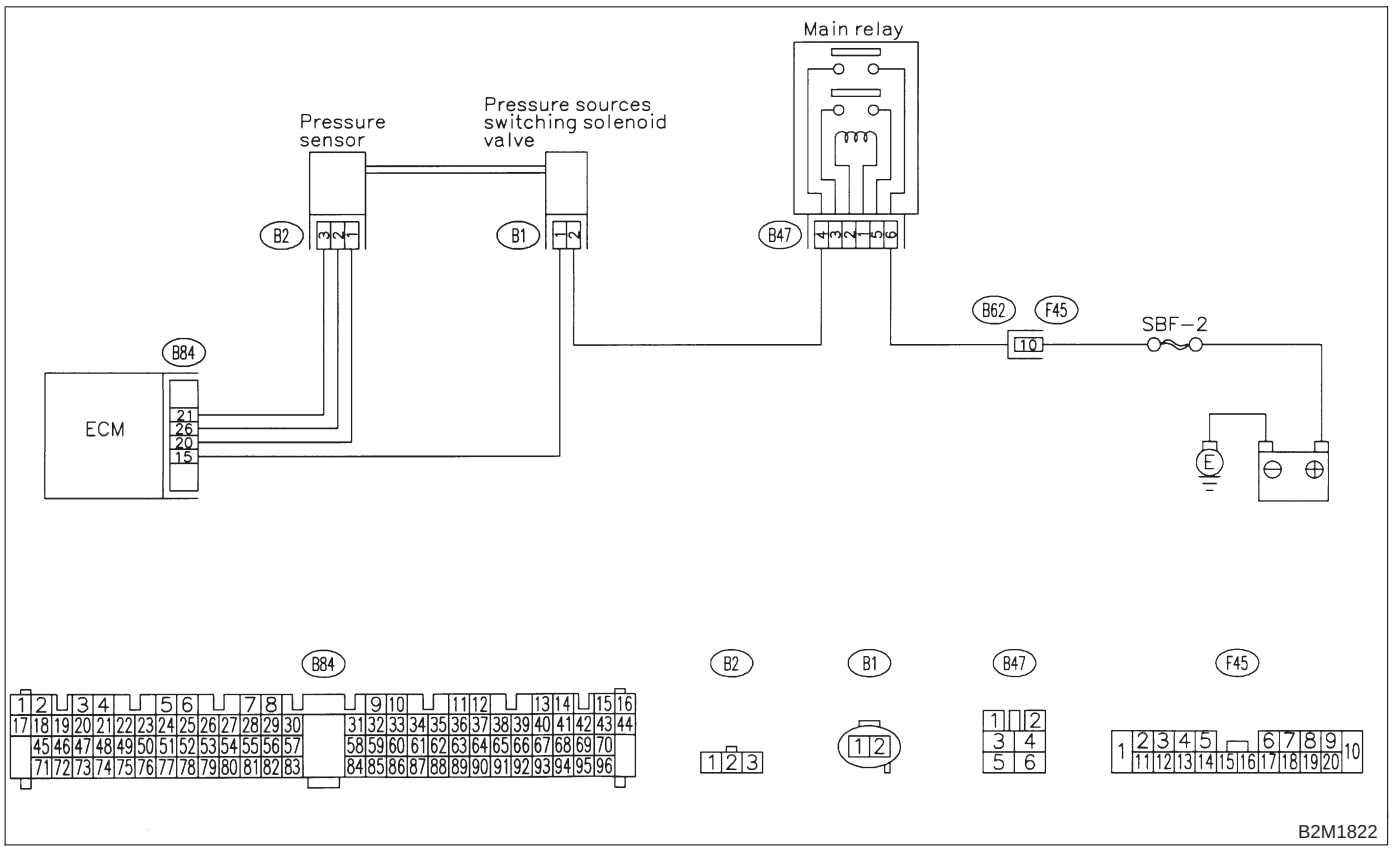
YES : Replace pressure sensor. <Ref. to 2-7 [W11A0].>

NO : Replace pressure sources switching solenoid valve. <Ref. to 2-7 [W13A0].>

F: DTC P0107 — PRESSURE SENSOR CIRCUIT LOW INPUT —

NOTE:
Check pressure sensor circuit.
<Ref. to 2-7 [T16F0].>

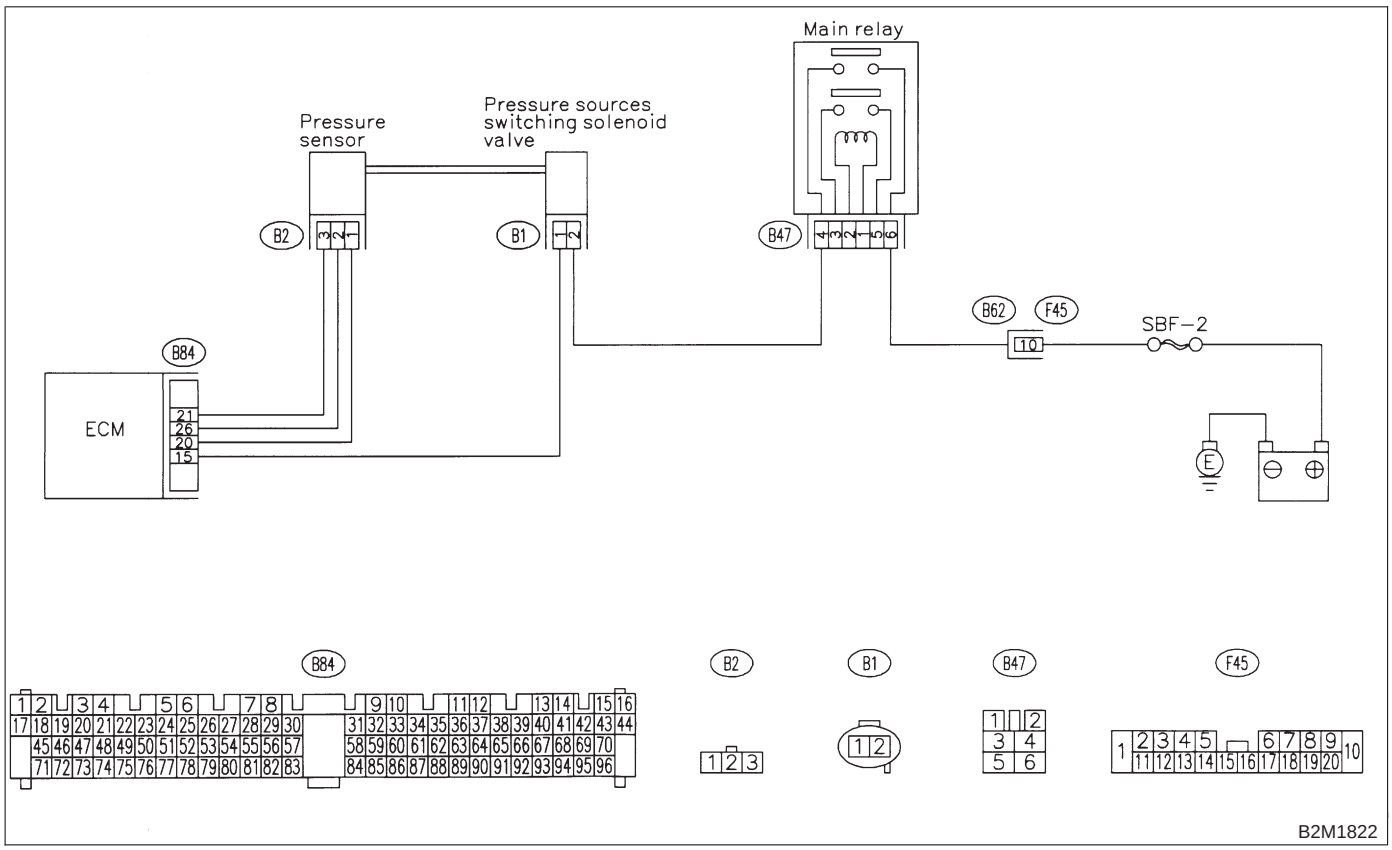
- **WIRING DIAGRAM:**



G: DTC P0108 — PRESSURE SENSOR CIRCUIT HIGH INPUT —

NOTE:
Check pressure sensor circuit.
<Ref. to 2-7 [T16G0].>

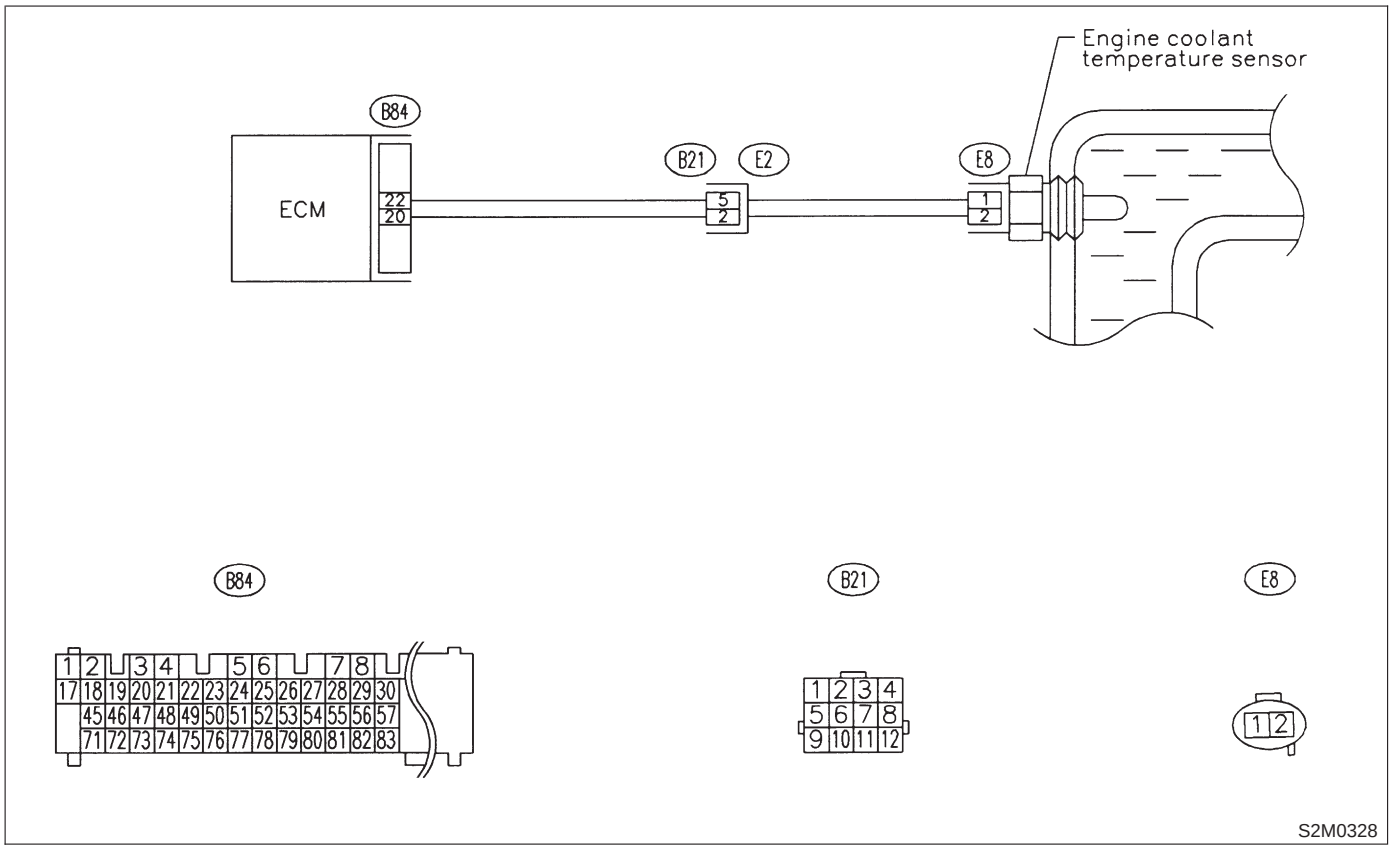
- **WIRING DIAGRAM:**



H: DTC P0116 — ENGINE COOLANT TEMPERATURE SENSOR CIRCUIT LOW INPUT —

NOTE:
Check engine coolant temperature sensor circuit.
<Ref. to 2-7 [T16H0].>

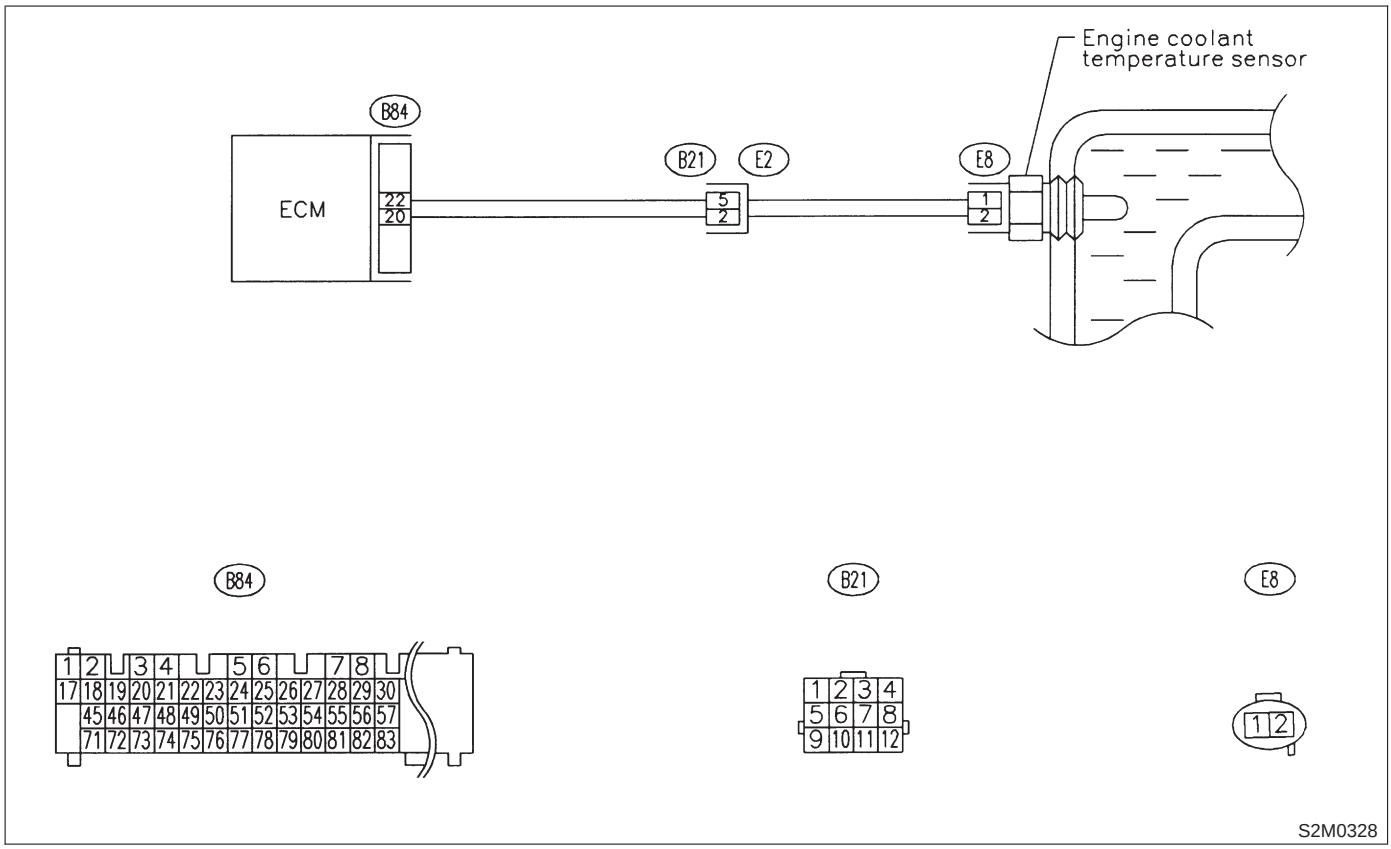
- **WIRING DIAGRAM:**



I: DTC P0117 — ENGINE COOLANT TEMPERATURE SENSOR CIRCUIT HIGH INPUT —

NOTE:
Check engine coolant temperature sensor circuit.
<Ref. to 2-7 [T16I0].>

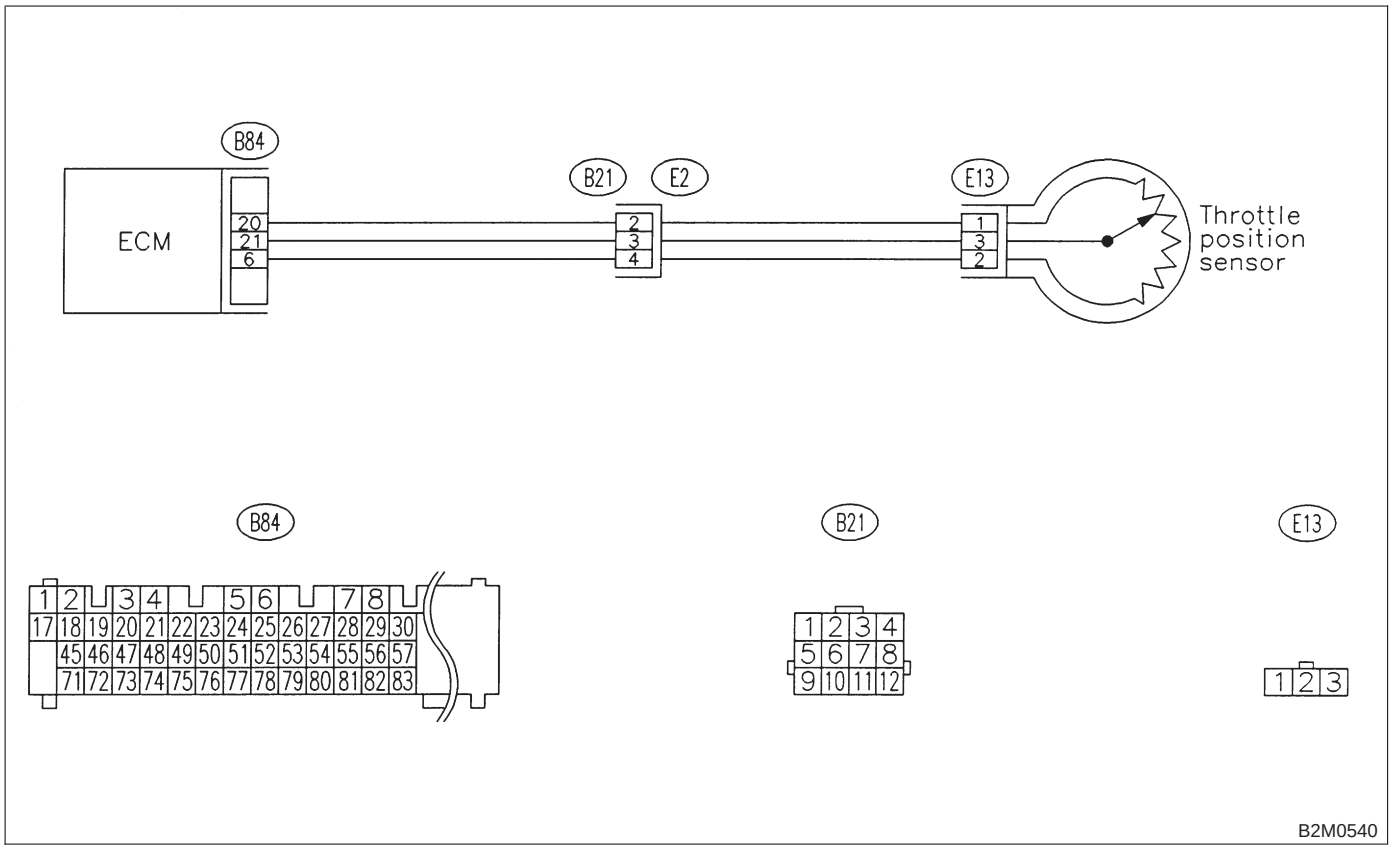
- **WIRING DIAGRAM:**



J: DTC P0121 — THROTTLE POSITION SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM (HIGH INPUT) —

NOTE:
Check throttle position sensor circuit.
<Ref. to 2-7 [T16J0].>

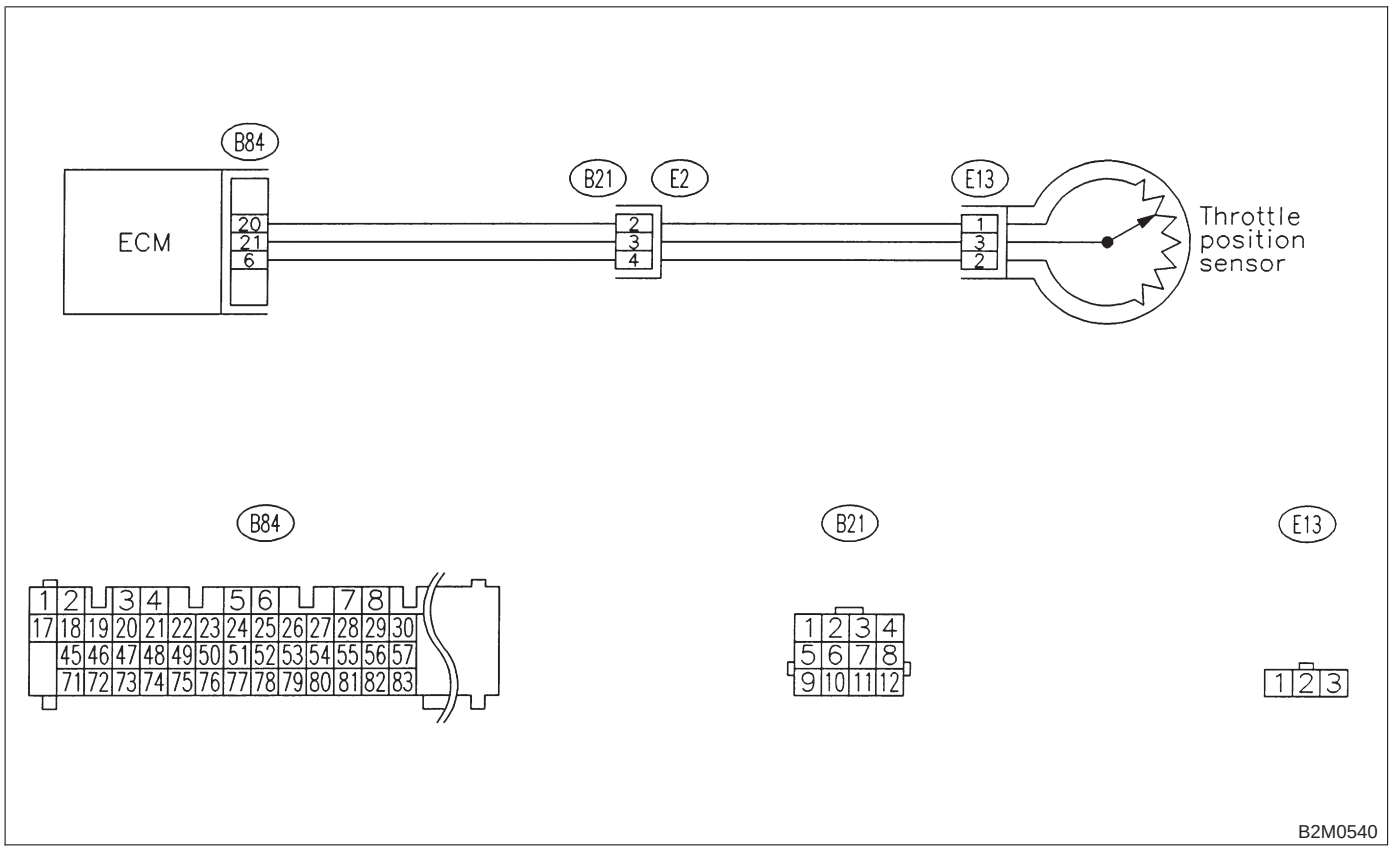
- **WIRING DIAGRAM:**



K: DTC P0122 — THROTTLE POSITION SENSOR CIRCUIT LOW INPUT —

NOTE:
Check throttle position sensor circuit.
<Ref. to 2-7 [T16K0].>

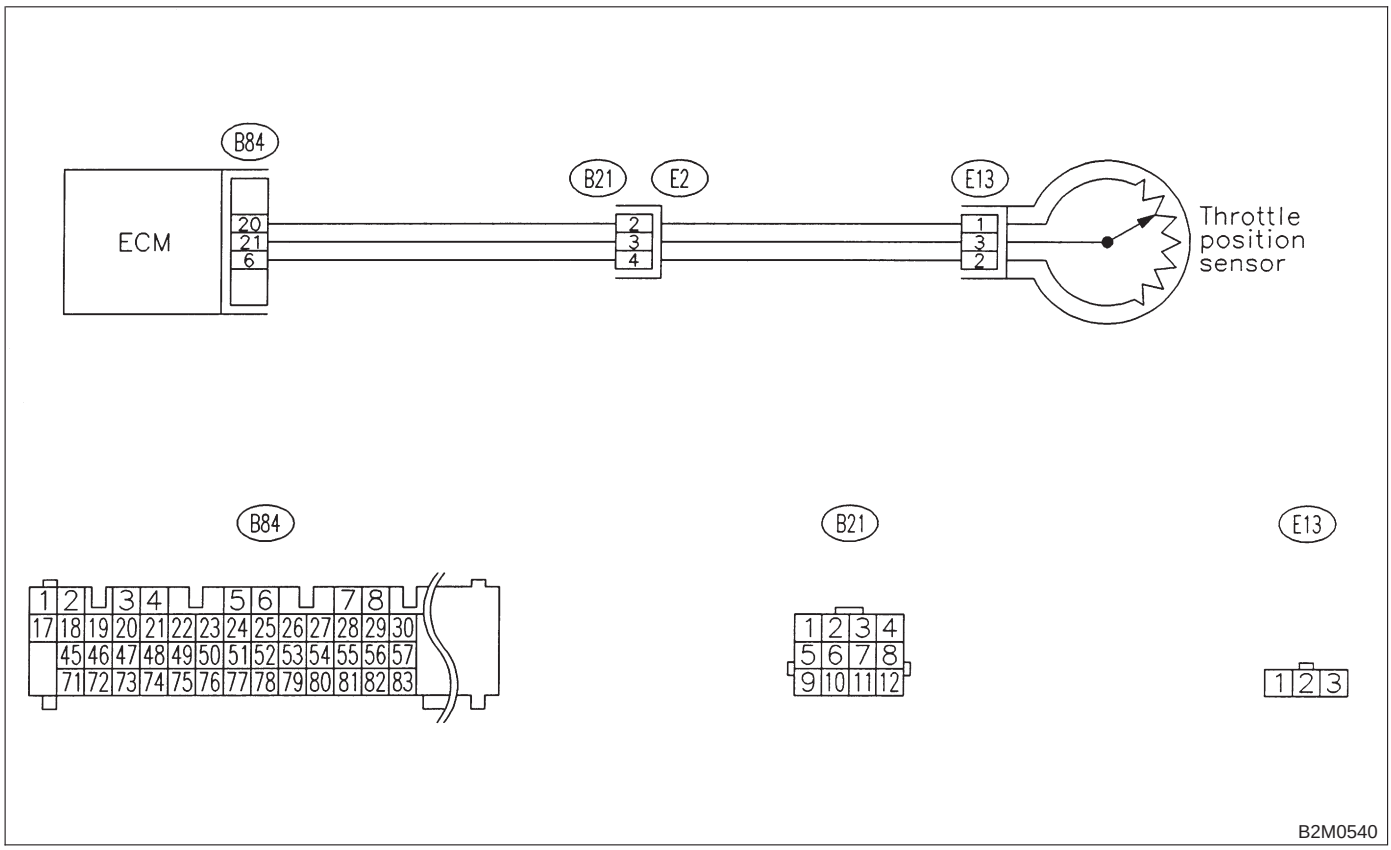
- **WIRING DIAGRAM:**



L: DTC P0123 — THROTTLE POSITION SENSOR CIRCUIT HIGH INPUT —

NOTE:
Check throttle position sensor circuit.
<Ref. to 2-7 [T16L0].>

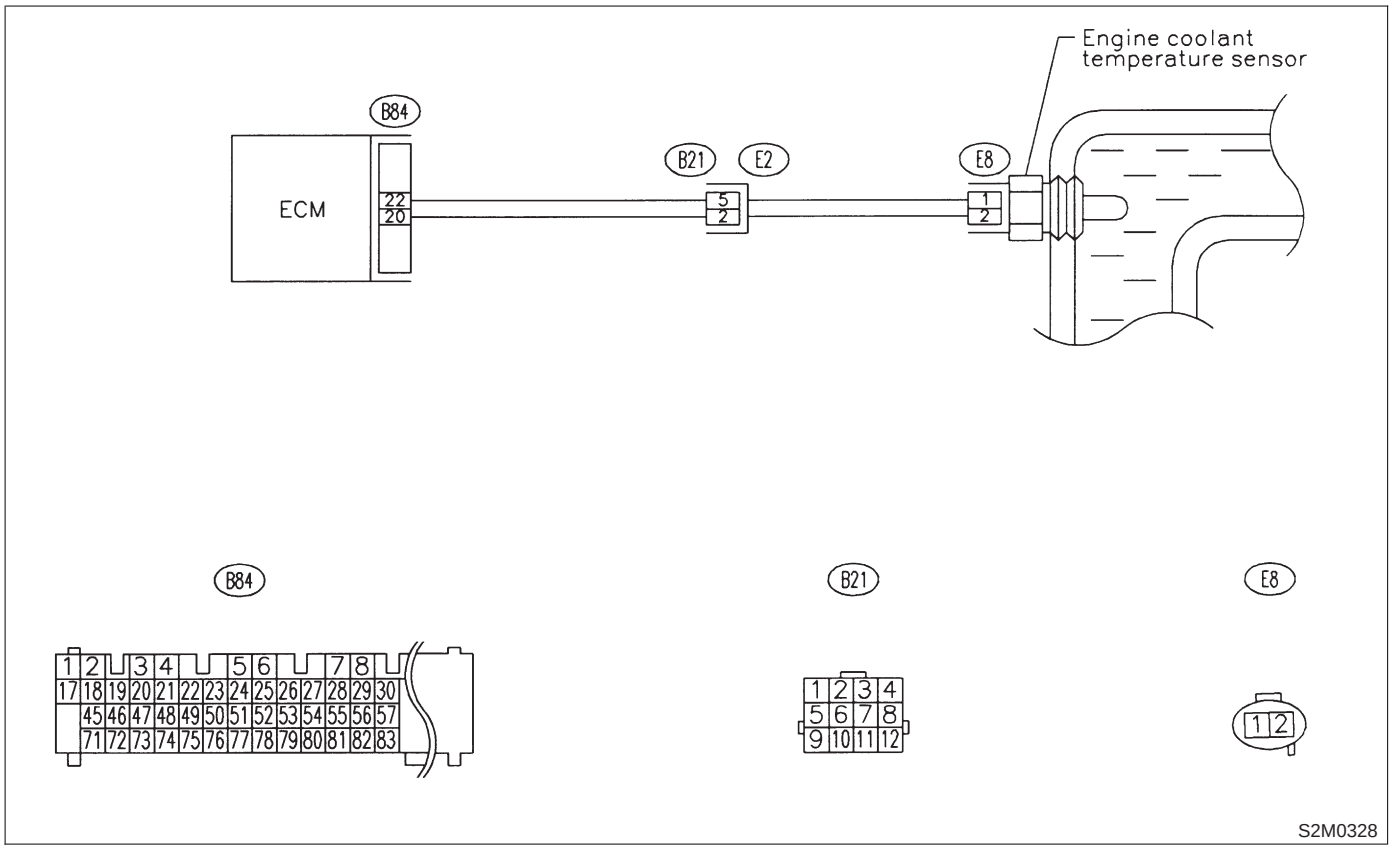
- **WIRING DIAGRAM:**



M: DTC P0125 — INSUFFICIENT COOLANT TEMPERATURE FOR CLOSED LOOP FUEL CONTROL —

NOTE:
Check insufficient coolant temperature for closed loop fuel control.
<Ref. to 2-7 [T16M0].>

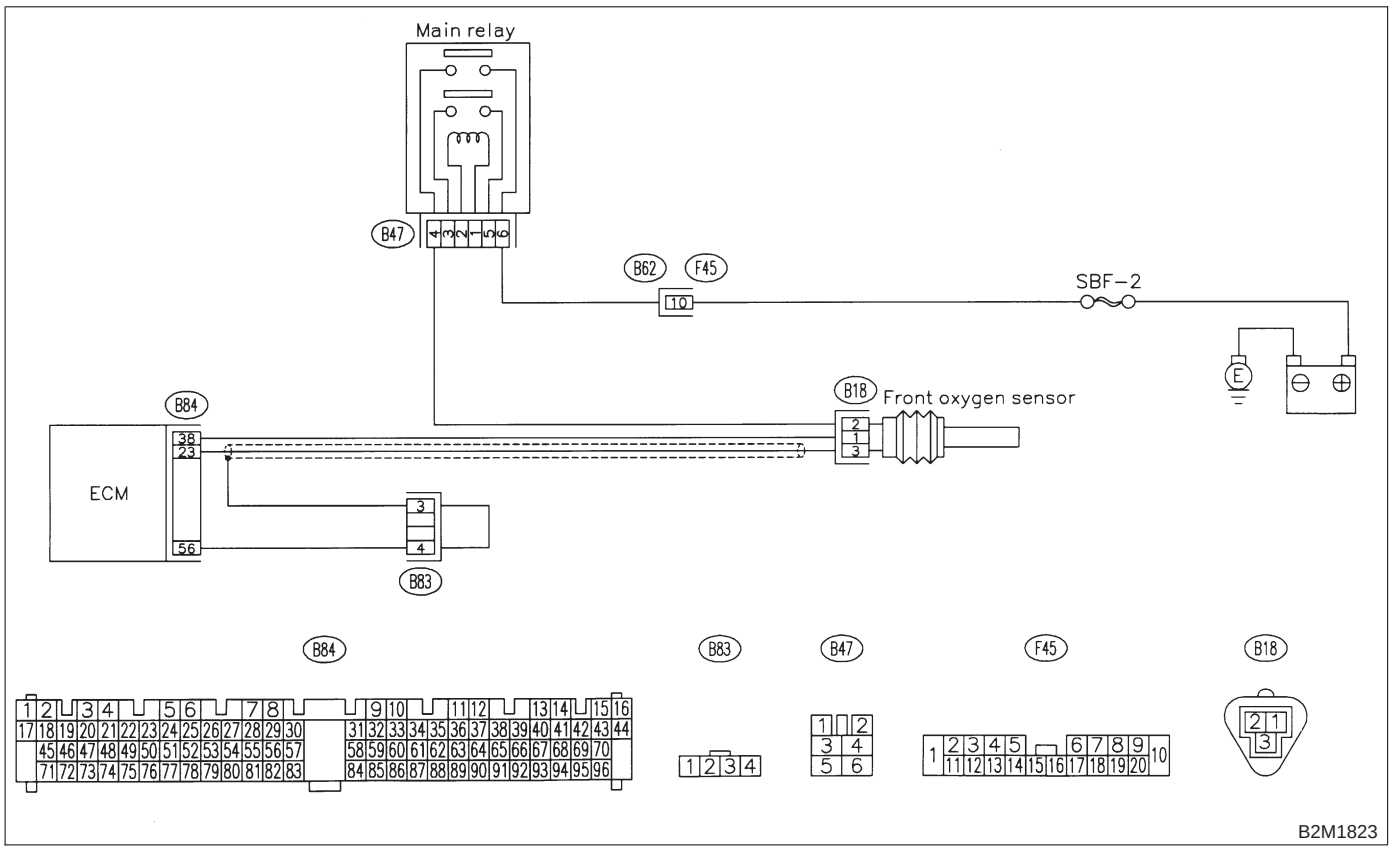
- **WIRING DIAGRAM:**



N: DTC P0130 — FRONT OXYGEN SENSOR CIRCUIT MALFUNCTION —

NOTE:
Check front oxygen sensor circuit.
<Ref. to 2-7 [T16N0].>

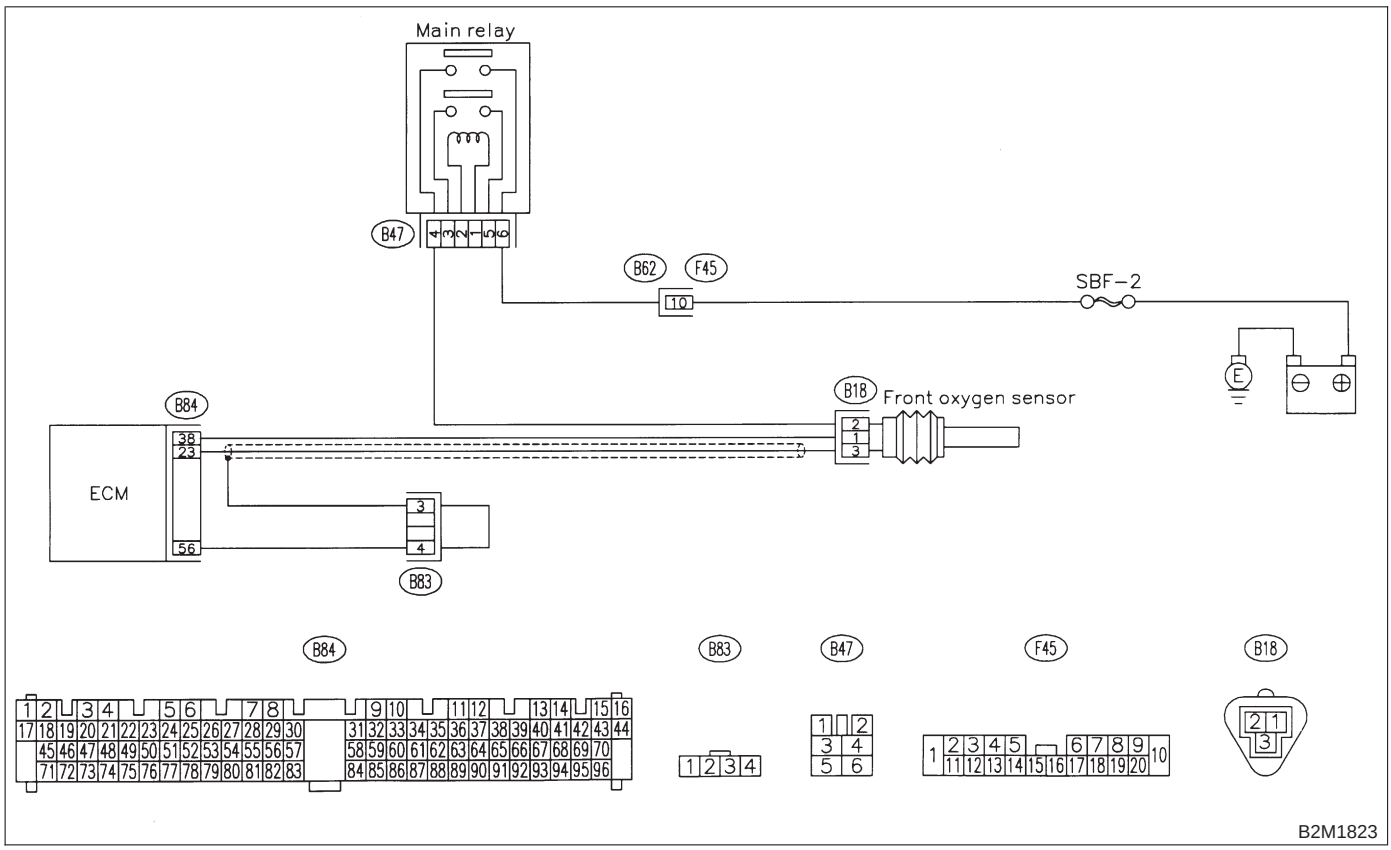
- **WIRING DIAGRAM:**



O: DTC P0133 — FRONT OXYGEN SENSOR CIRCUIT SLOW RESPONSE —

NOTE:
Check front oxygen sensor circuit.
<Ref. to 2-7 [T16O0].>

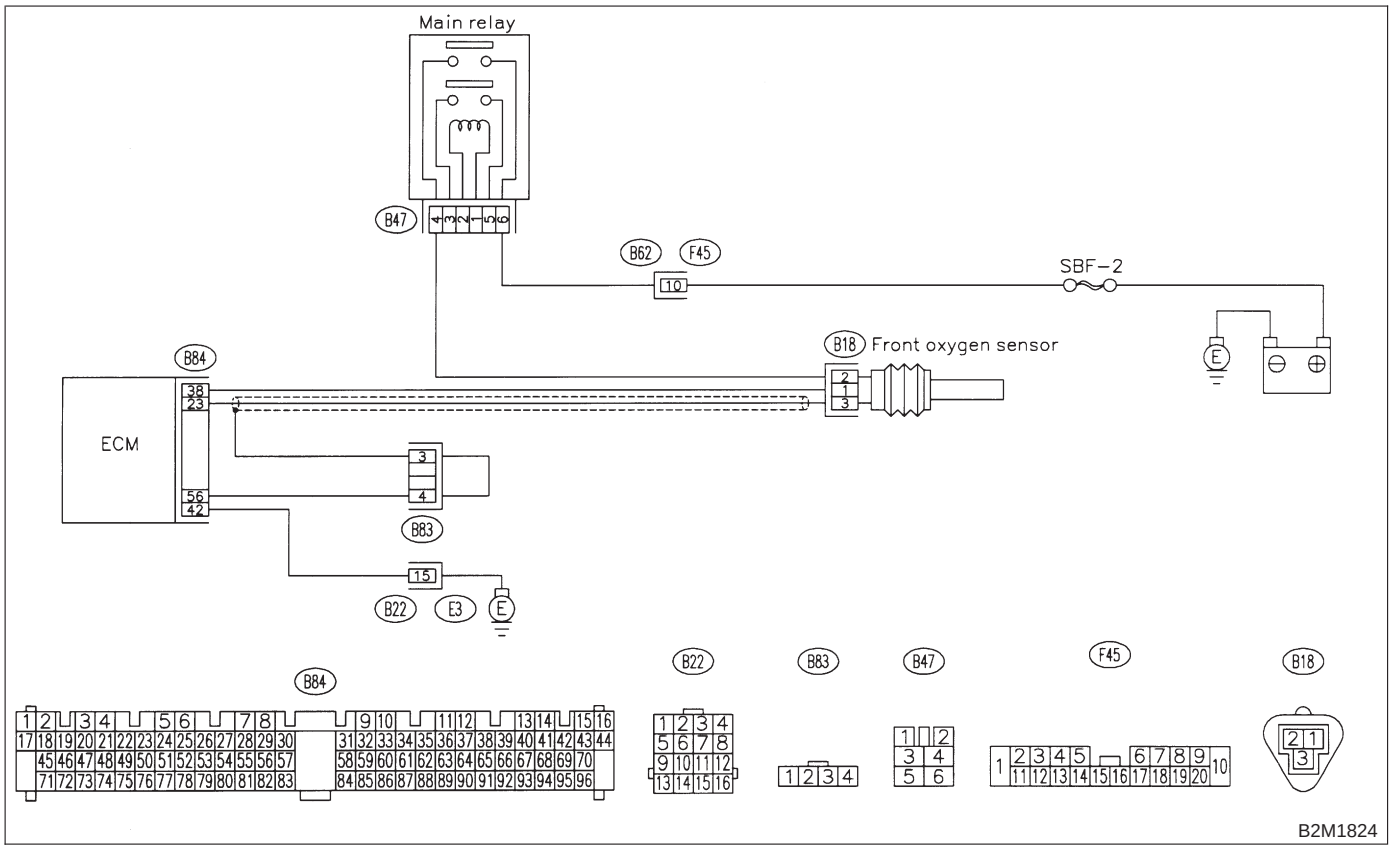
- **WIRING DIAGRAM:**



P: DTC P0135 — FRONT OXYGEN SENSOR HEATER CIRCUIT LOW INPUT —

NOTE:
Check front oxygen sensor heater circuit.
<Ref. to 2-7 [T16P0].>

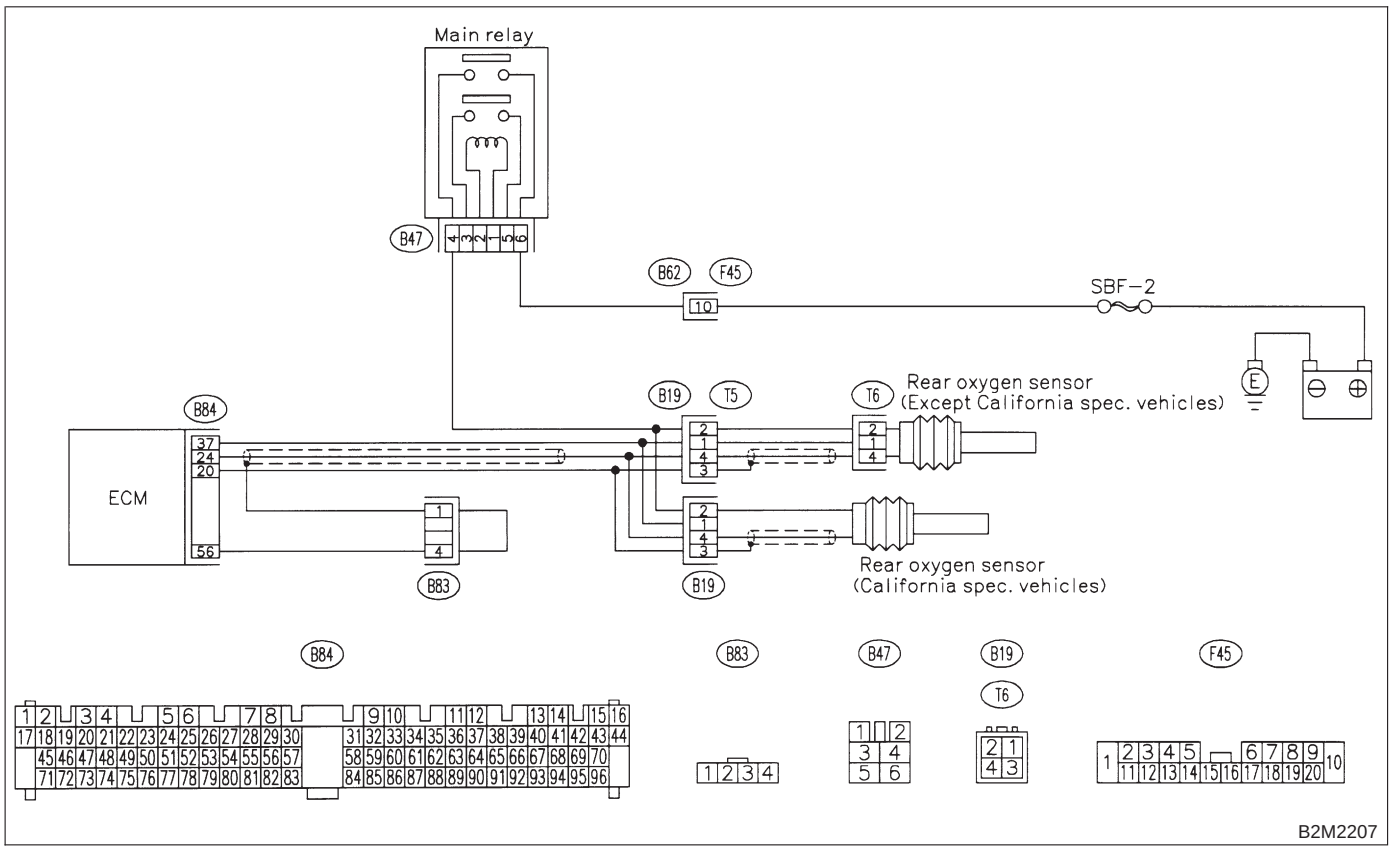
- **WIRING DIAGRAM:**



Q: DTC P0136 — REAR OXYGEN SENSOR CIRCUIT MALFUNCTION —

NOTE:
Check rear oxygen sensor circuit.
<Ref. to 2-7 [T16Q0].>

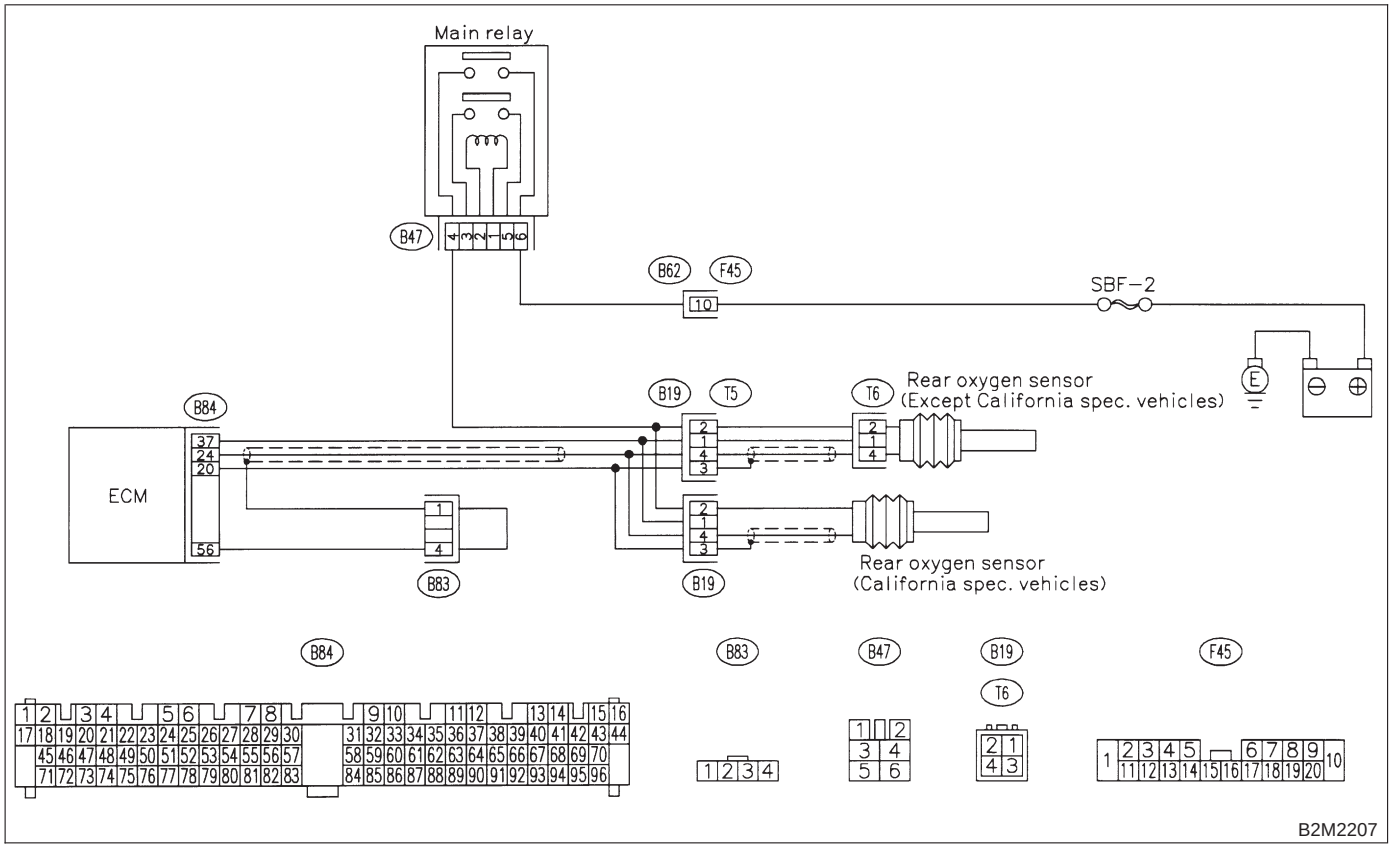
- **WIRING DIAGRAM:**



R: DTC P0139 — REAR OXYGEN SENSOR CIRCUIT SLOW RESPONSE —

NOTE:
Check rear oxygen sensor circuit.
<Ref. to 2-7 [T16R0].>

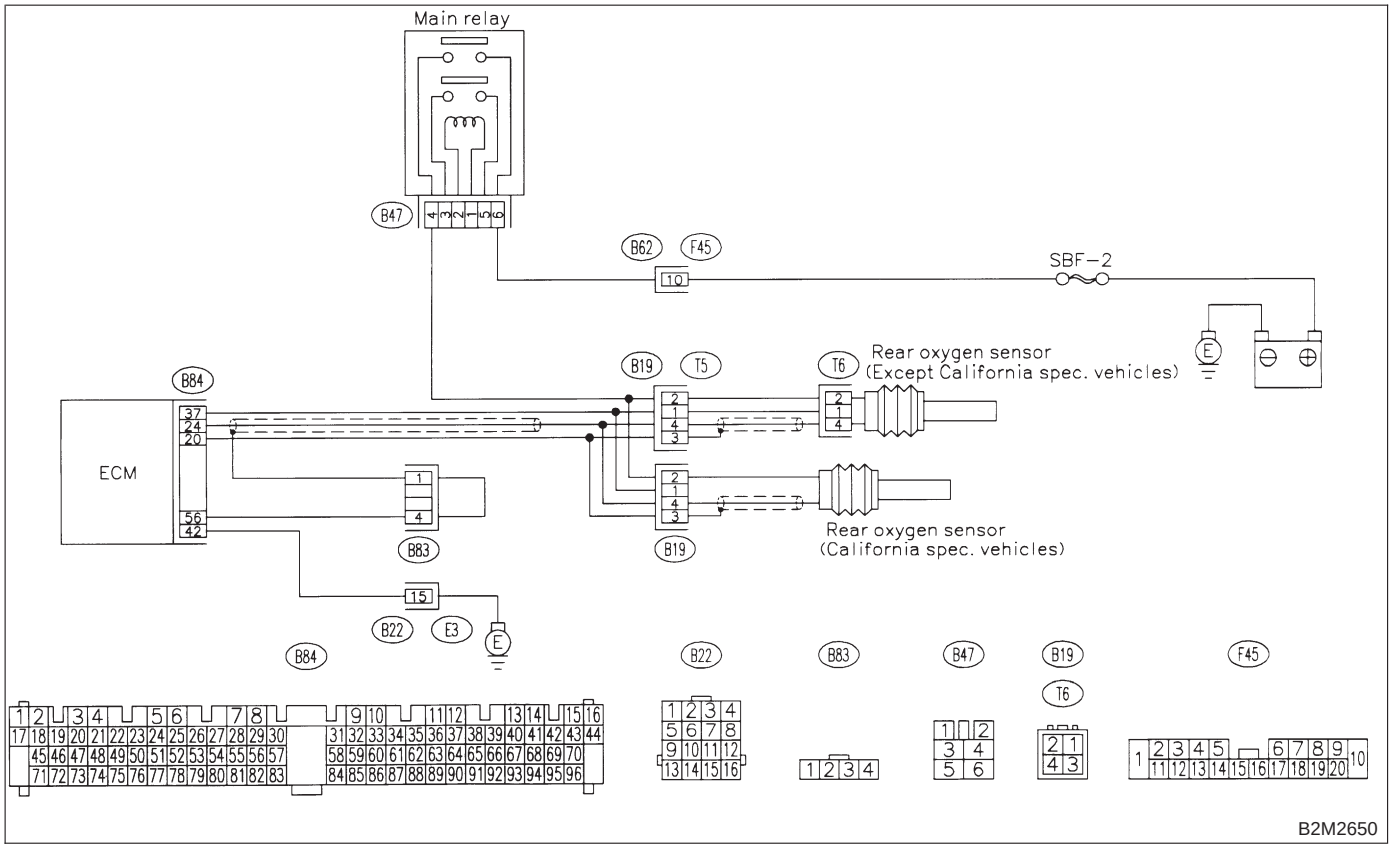
- **WIRING DIAGRAM:**



S: DTC P0141 — REAR OXYGEN SENSOR HEATER CIRCUIT LOW INPUT —

NOTE:
Check rear oxygen sensor heater circuit.
<Ref. to 2-7 [T16S0].>

- **WIRING DIAGRAM:**



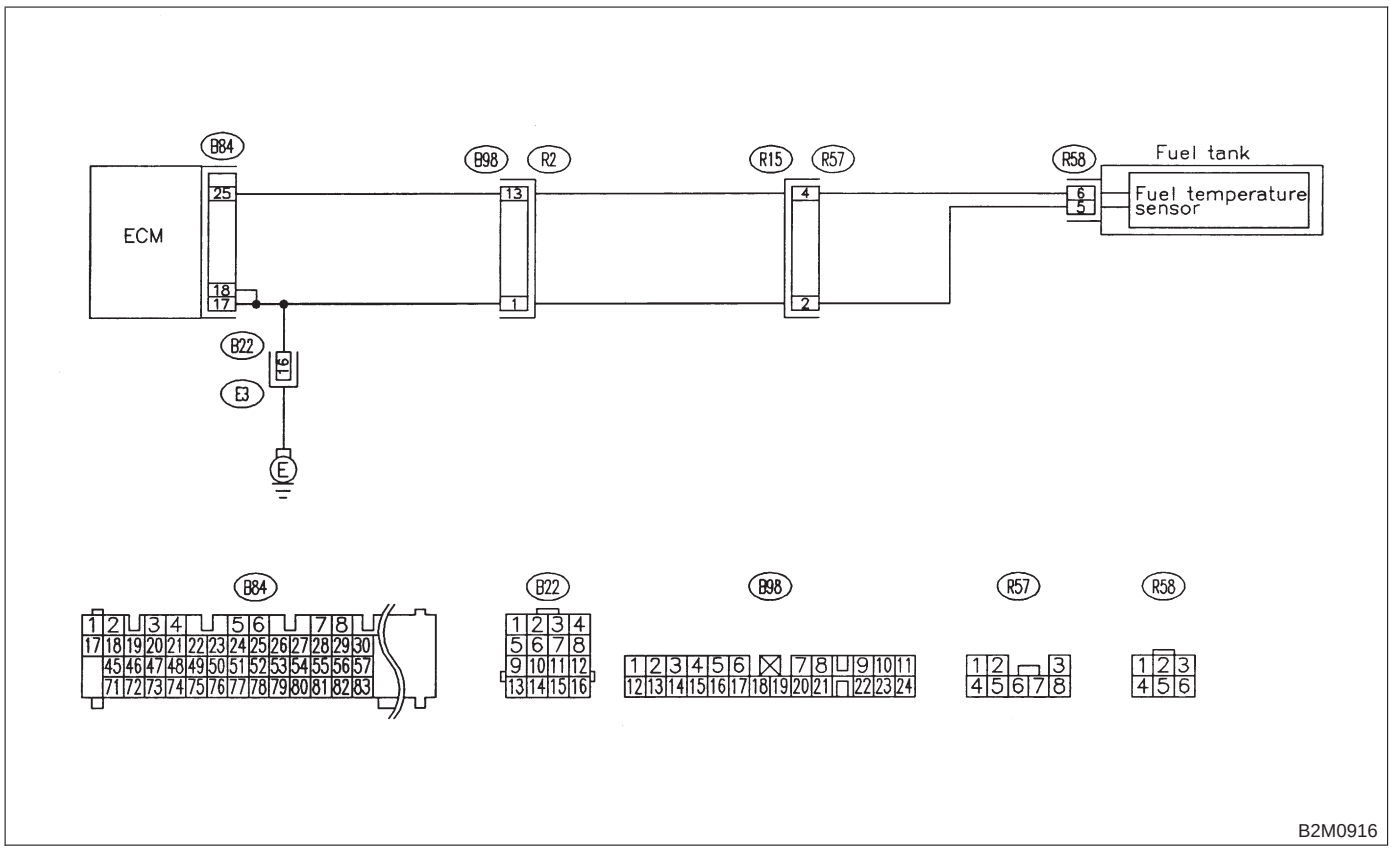
T: DTC P0170 — FUEL TRIM MALFUNCTION —

NOTE:
Check fuel trim control system.
<Ref. to 2-7 [T16T0].>

U: DTC P0181 — FUEL TEMPERATURE SENSOR A CIRCUIT RANGE/PERFORMANCE PROBLEM —

NOTE:
Check fuel temperature sensor circuit.
<Ref. to 2-7 [T16U0].>

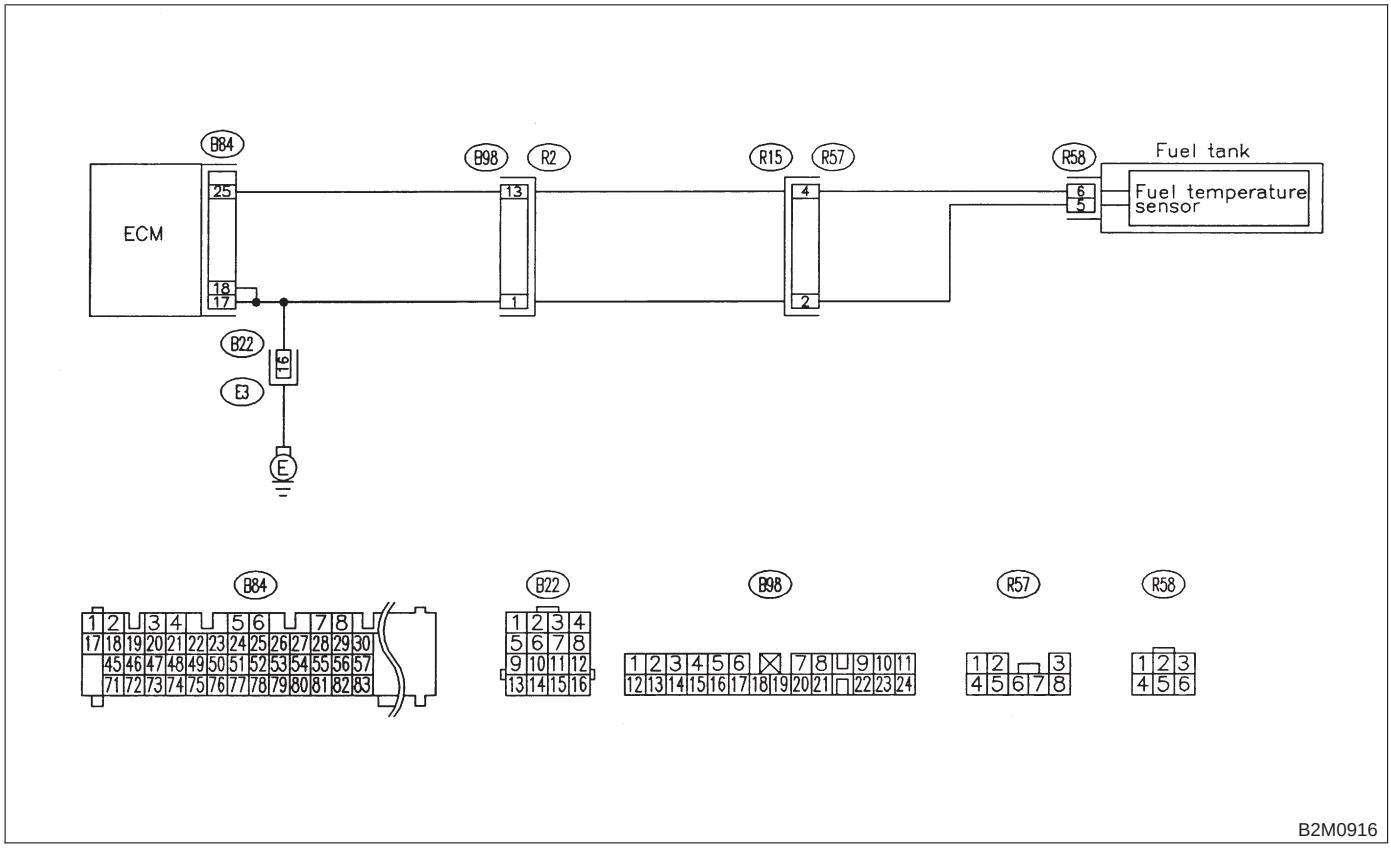
- **WIRING DIAGRAM:**



V: DTC P0182 — FUEL TEMPERATURE SENSOR A CIRCUIT LOW INPUT —

NOTE:
Check fuel temperature sensor circuit.
<Ref. to 2-7 [T16V0].>

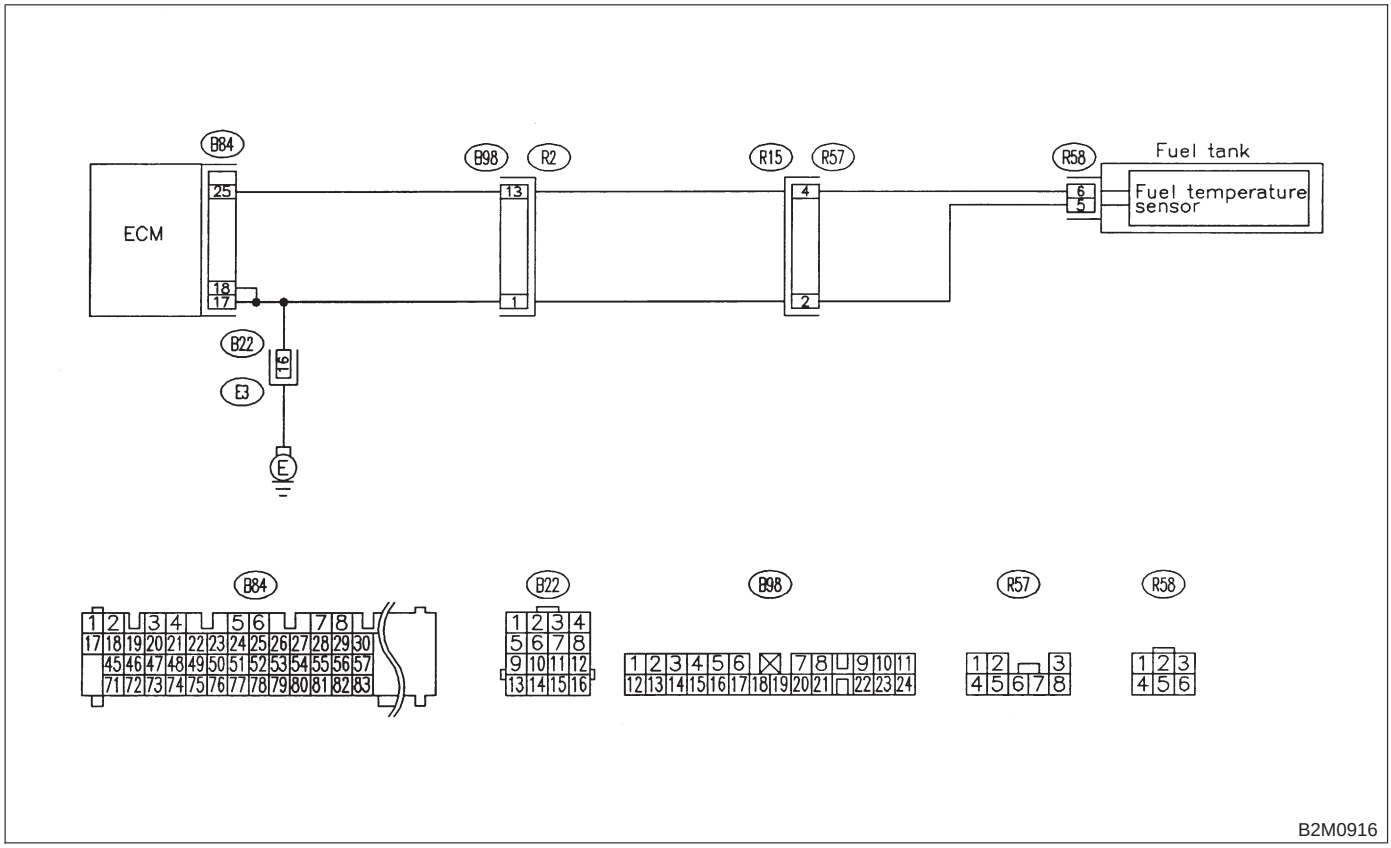
- **WIRING DIAGRAM:**



W: DTC P0183 — FUEL TEMPERATURE SENSOR A CIRCUIT HIGH INPUT —

NOTE:
Check fuel temperature sensor circuit.
<Ref. to 2-7 [T16W0].>

- **WIRING DIAGRAM:**



X: DTC P0261 — FUEL INJECTOR CIRCUIT LOW INPUT - #1 —

NOTE:
For the diagnostic procedure, refer to 2-7 [T16AA0].
<Ref. to 2-7 [T16AA0].>

Y: DTC P0264 — FUEL INJECTOR CIRCUIT LOW INPUT - #2 —

NOTE:
For the diagnostic procedure, refer to 2-7 [T16AA0].
<Ref. to 2-7 [T16AA0].>

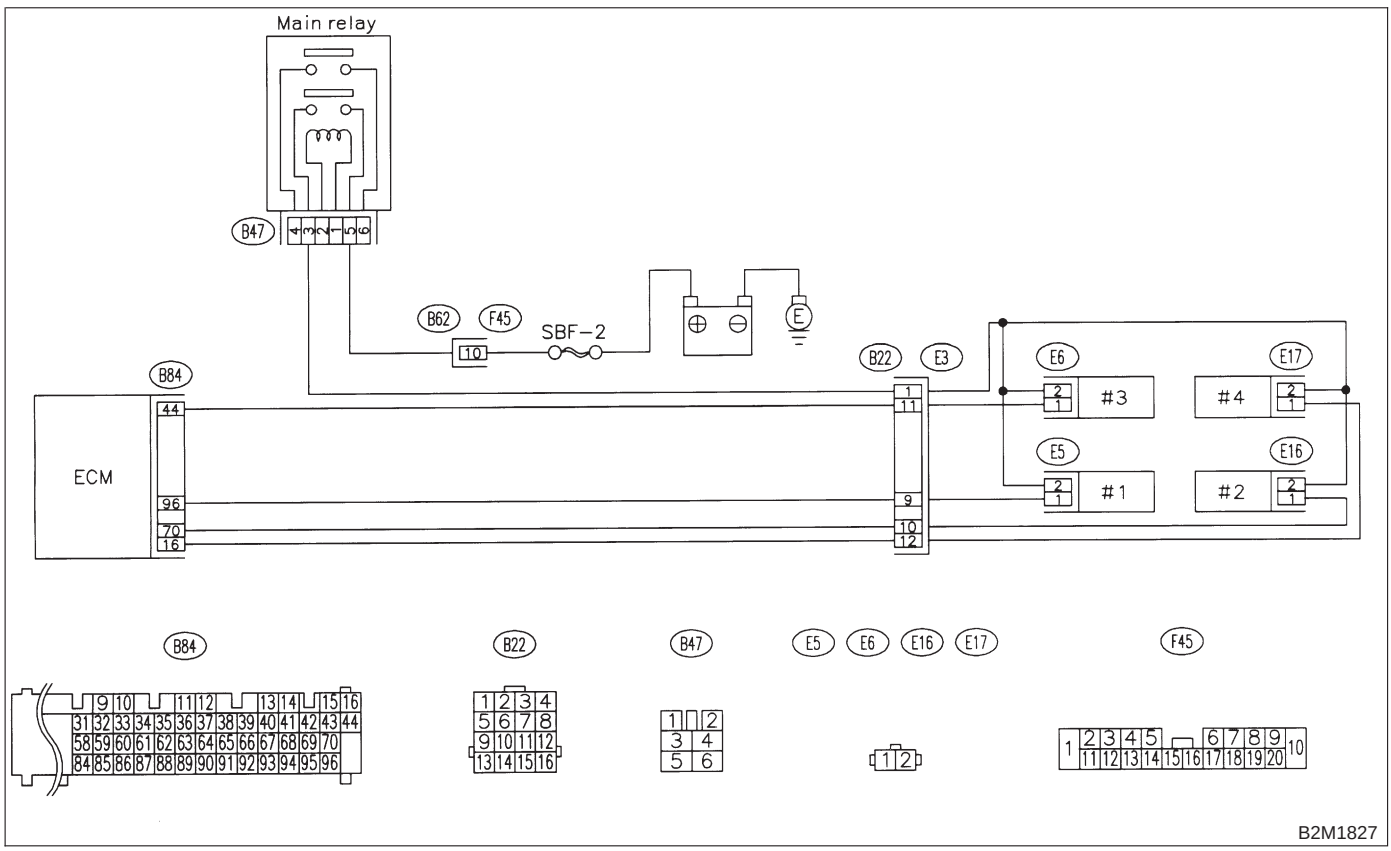
Z: DTC P0267 — FUEL INJECTOR CIRCUIT LOW INPUT - #3 —

NOTE:
For the diagnostic procedure, refer to 2-7 [T16AA0].
<Ref. to 2-7 [T16AA0].>

AA: DTC P0270 — FUEL INJECTOR CIRCUIT LOW INPUT - #4 —

NOTE:
Check fuel injector circuit.
<Ref. to 2-7 [T16X0].>

- **WIRING DIAGRAM:**



AB: DTC P0262 — FUEL INJECTOR CIRCUIT HIGH INPUT - #1 —

NOTE:
For the diagnostic procedure, refer to 2-7 [T16AE0].
<Ref. to 2-7 [T16AE0].>

AC: DTC P0265 — FUEL INJECTOR CIRCUIT HIGH INPUT - #2 —

NOTE:
For the diagnostic procedure, refer to 2-7 [T16AE0].
<Ref. to 2-7 [T16AE0].>

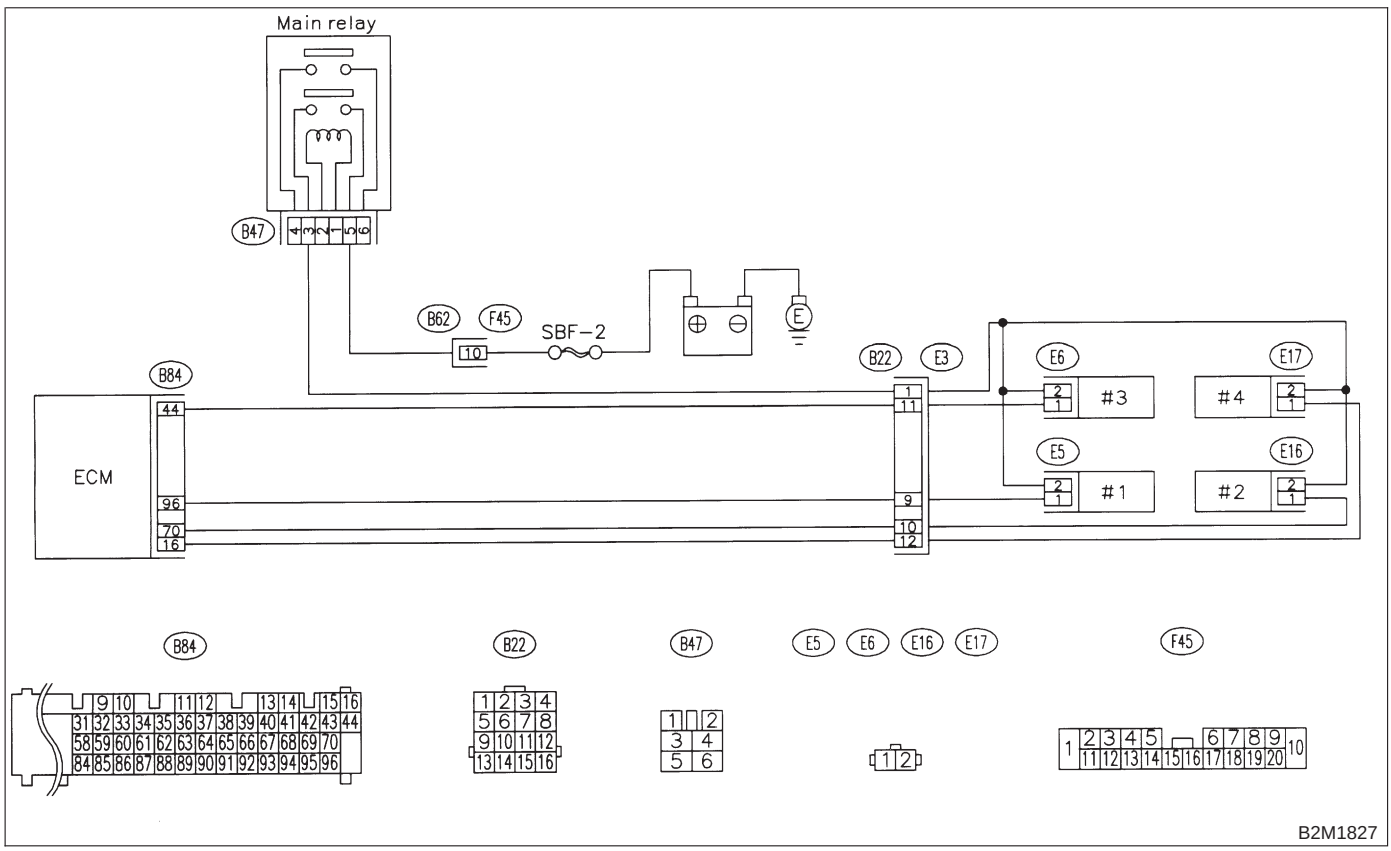
AD: DTC P0268 — FUEL INJECTOR CIRCUIT HIGH INPUT - #3 —

NOTE:
For the diagnostic procedure, refer to 2-7 [T16AE0].
<Ref. to 2-7 [T16AE0].>

AE: DTC P0271 — FUEL INJECTOR CIRCUIT HIGH INPUT - #4 —

NOTE:
Check fuel injector circuit.
<Ref. to 2-7 [T16AB0].>

- **WIRING DIAGRAM:**



AF: DTC P0301 — CYLINDER 1 MISFIRE DETECTED —

NOTE:
For the diagnostic procedure, refer to 2-7 [T16AI0].
<Ref. to 2-7 [T16AI0].>

AG: DTC P0302 — CYLINDER 2 MISFIRE DETECTED —

NOTE:
For the diagnostic procedure, refer to 2-7 [T16AI0].
<Ref. to 2-7 [T16AI0].>

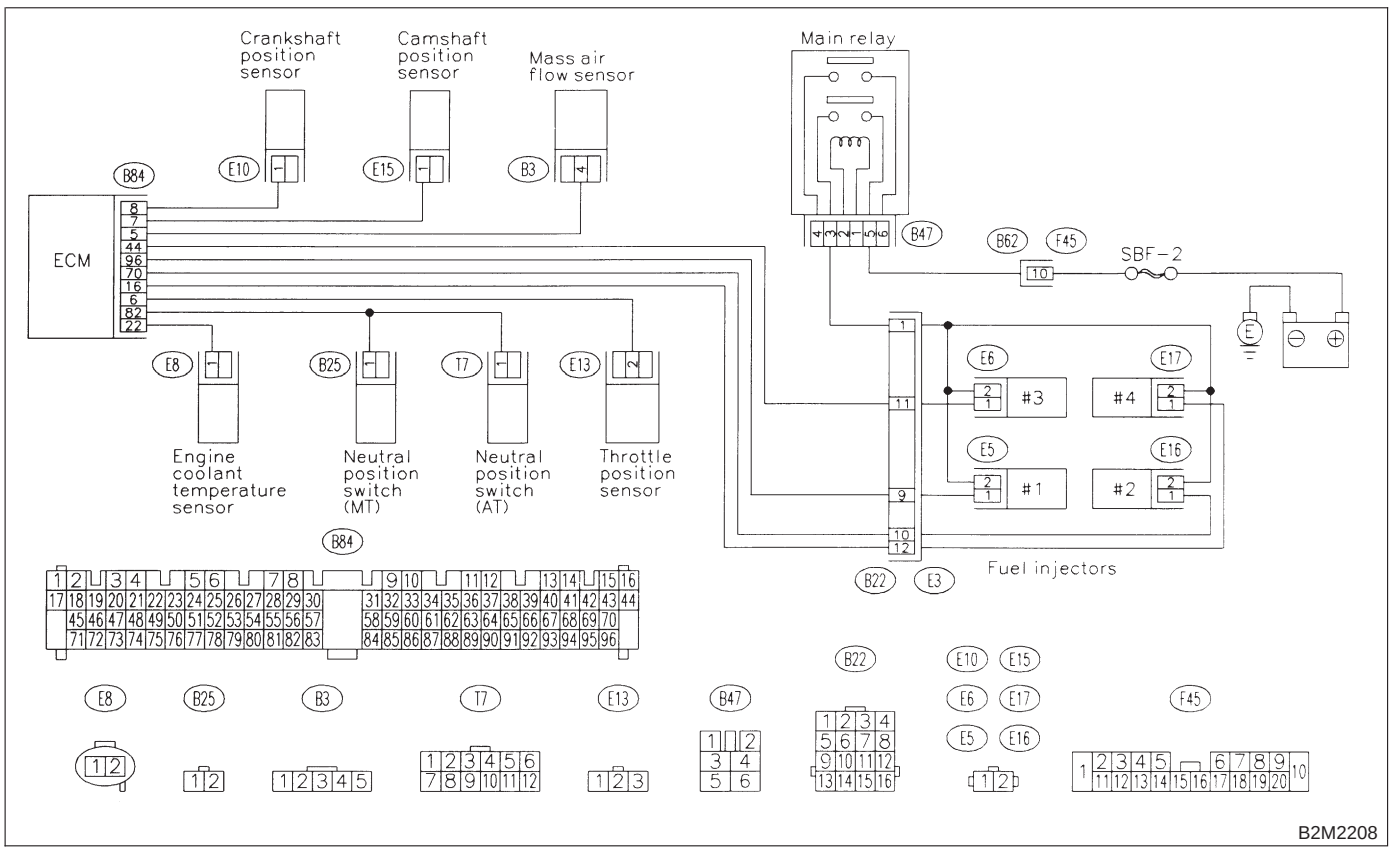
AH: DTC P0303 — CYLINDER 3 MISFIRE DETECTED —

NOTE:
For the diagnostic procedure, refer to 2-7 [T16AI0].
<Ref. to 2-7 [T16AI0].>

AI: DTC P0304 — CYLINDER 4 MISFIRE DETECTED —

NOTE:
Check fuel injection control system.
<Ref. to 2-7 [T16AF0].>

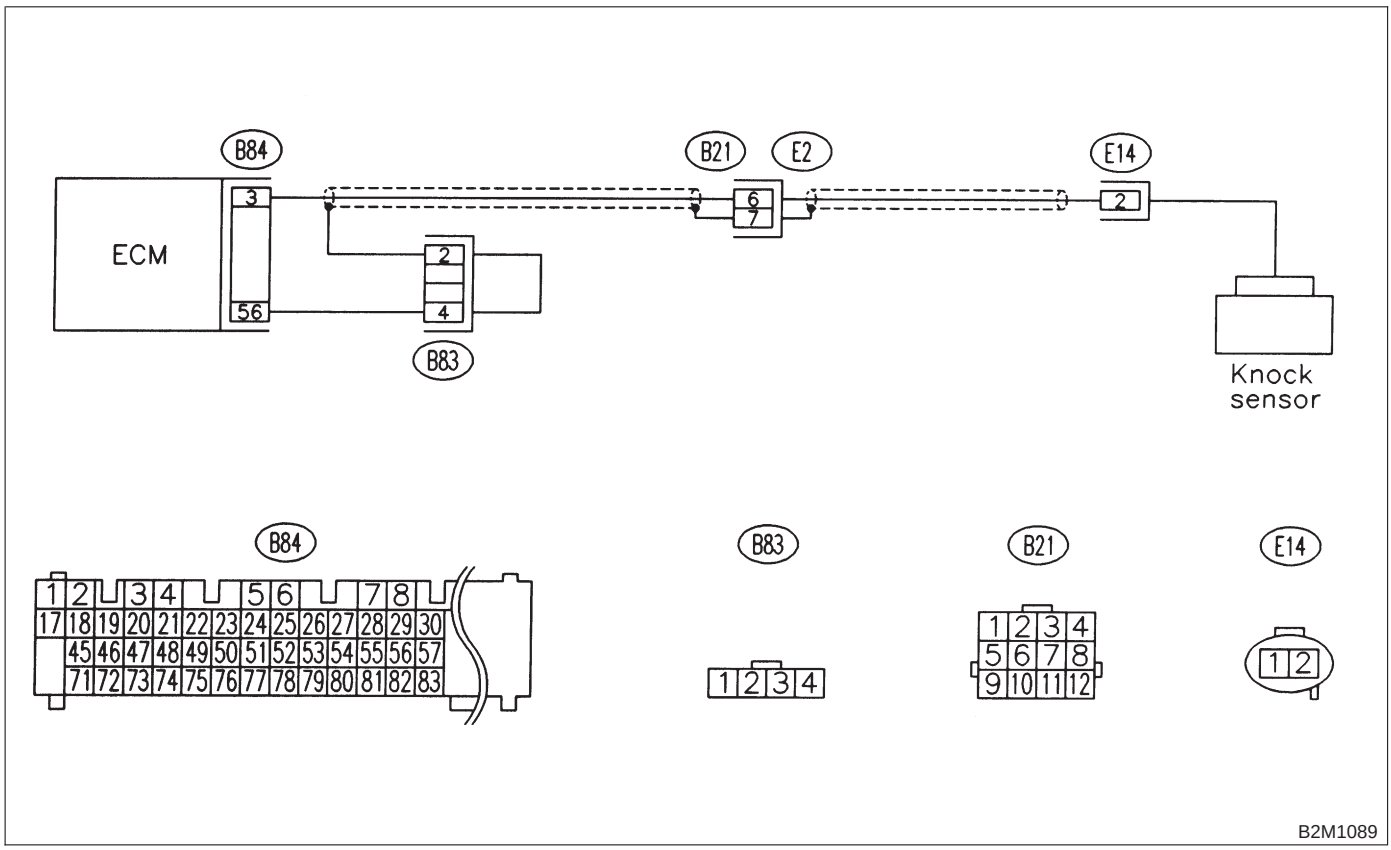
- **WIRING DIAGRAM:**



AJ: DTC P0325 — KNOCK SENSOR CIRCUIT MALFUNCTION —

NOTE:
Check knock sensor circuit.
<Ref. to 2-7 [T16AJ0].>

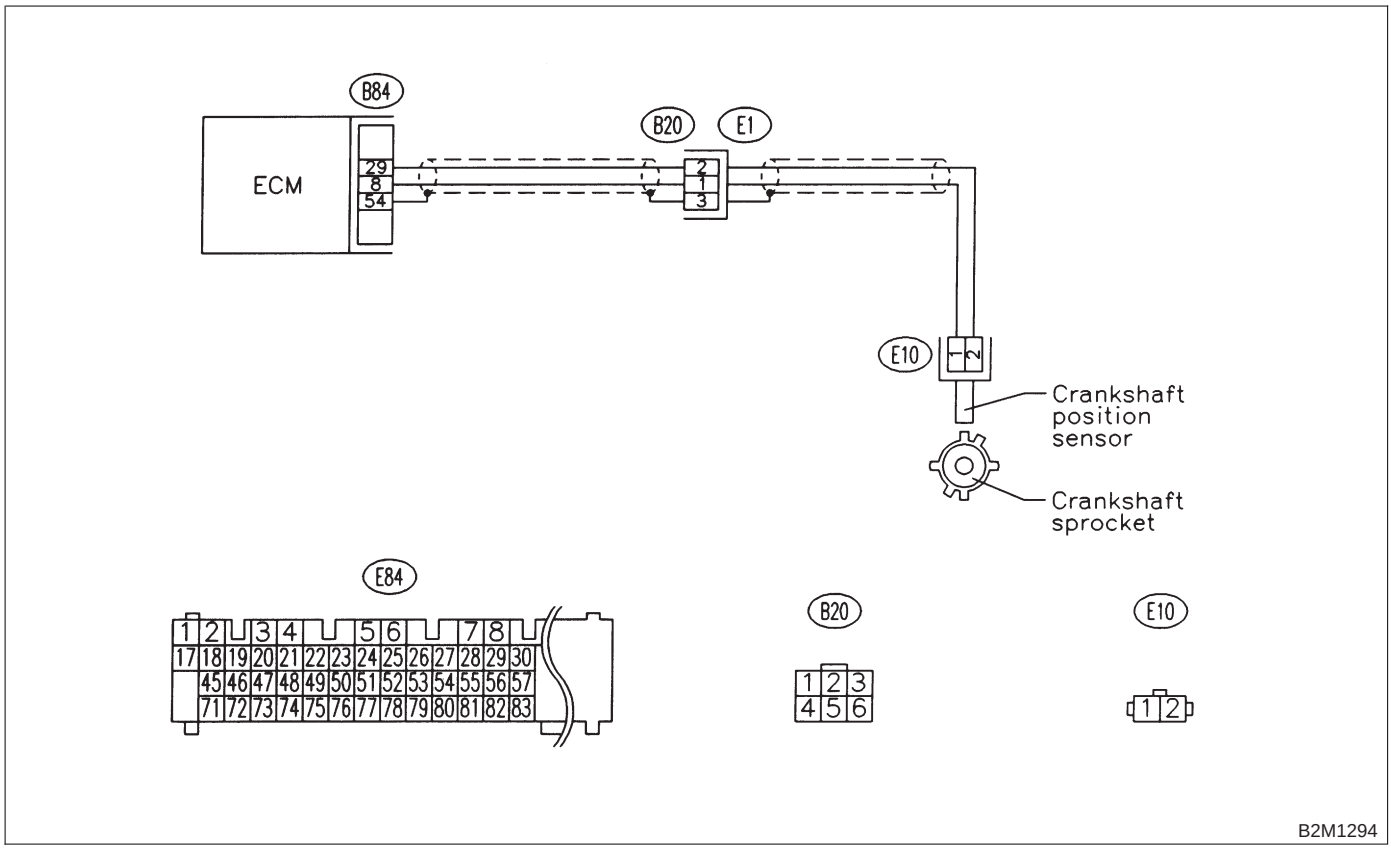
- **WIRING DIAGRAM:**



AK: DTC P0335 — CRANKSHAFT POSITION SENSOR CIRCUIT MALFUNCTION —

NOTE:
Check crankshaft position sensor circuit.
<Ref. to 2-7 [T16AK0].>

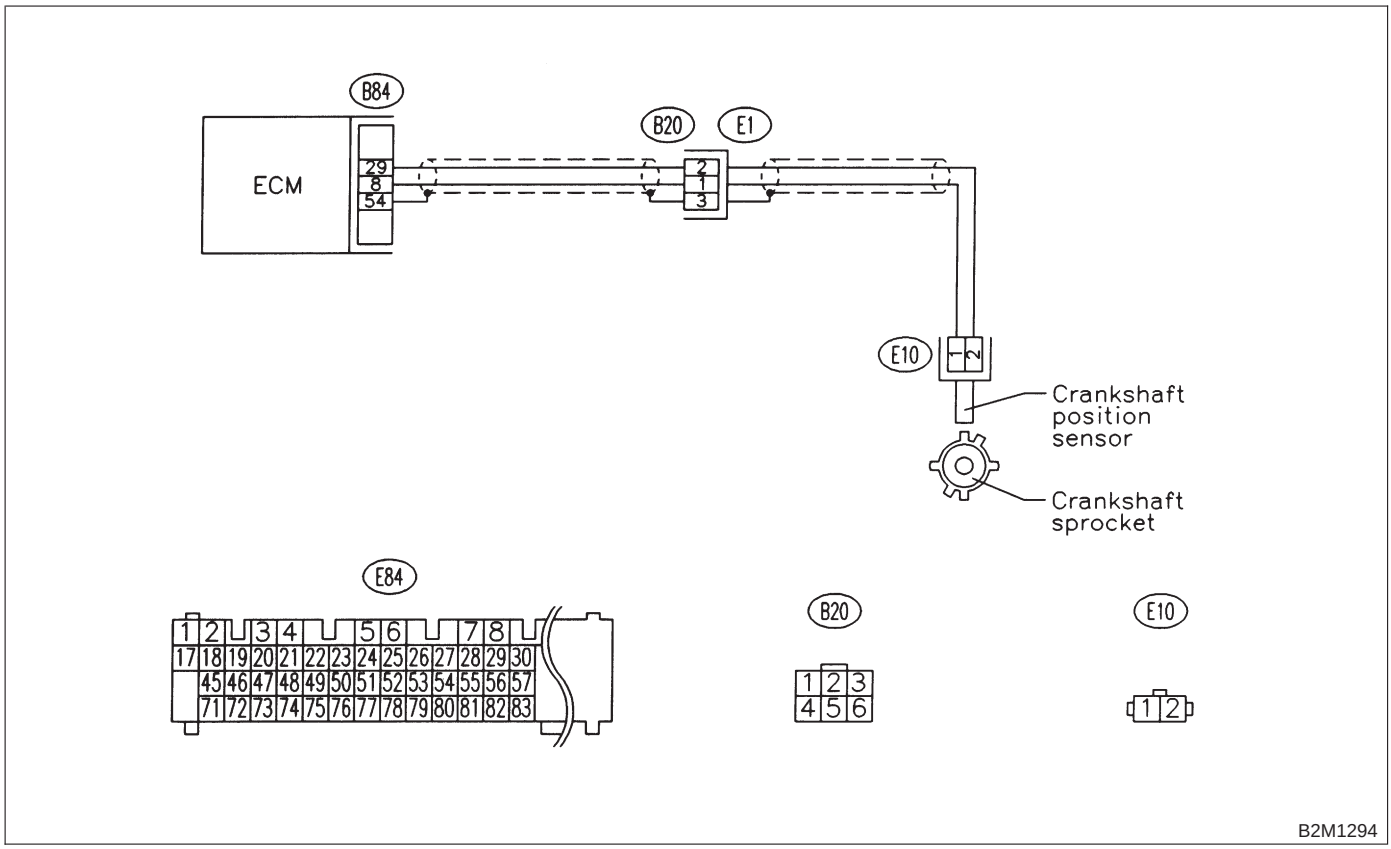
- **WIRING DIAGRAM:**



AL: DTC P0336 — CRANKSHAFT POSITION SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM —

NOTE:
Check crankshaft position sensor circuit.
<Ref. to 2-7 [T16AL0].>

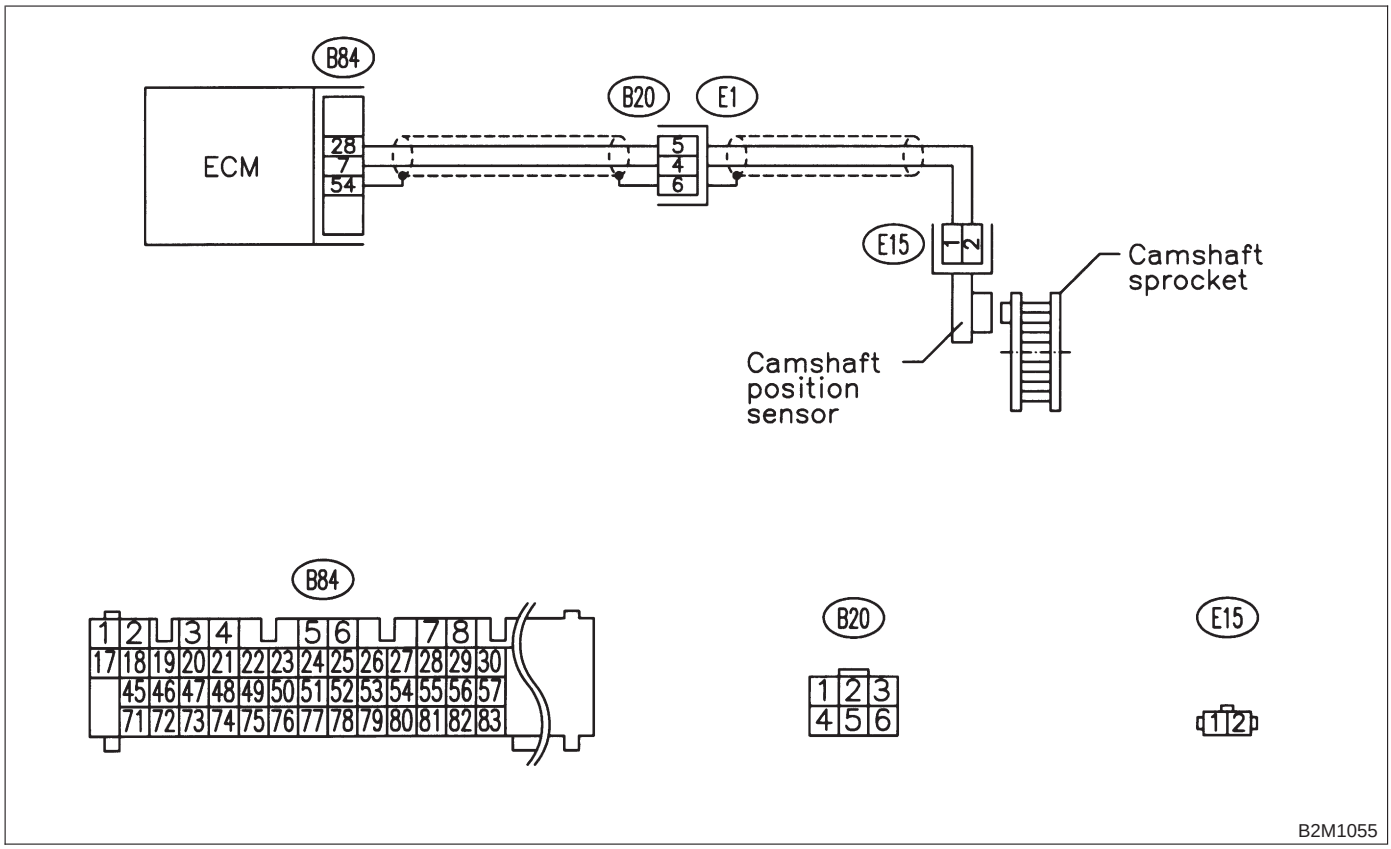
- **WIRING DIAGRAM:**



AM: DTC P0340 — CAMSHAFT POSITION SENSOR CIRCUIT MALFUNCTION —

NOTE:
Check camshaft position sensor circuit.
<Ref. to 2-7 [T16AM0].>

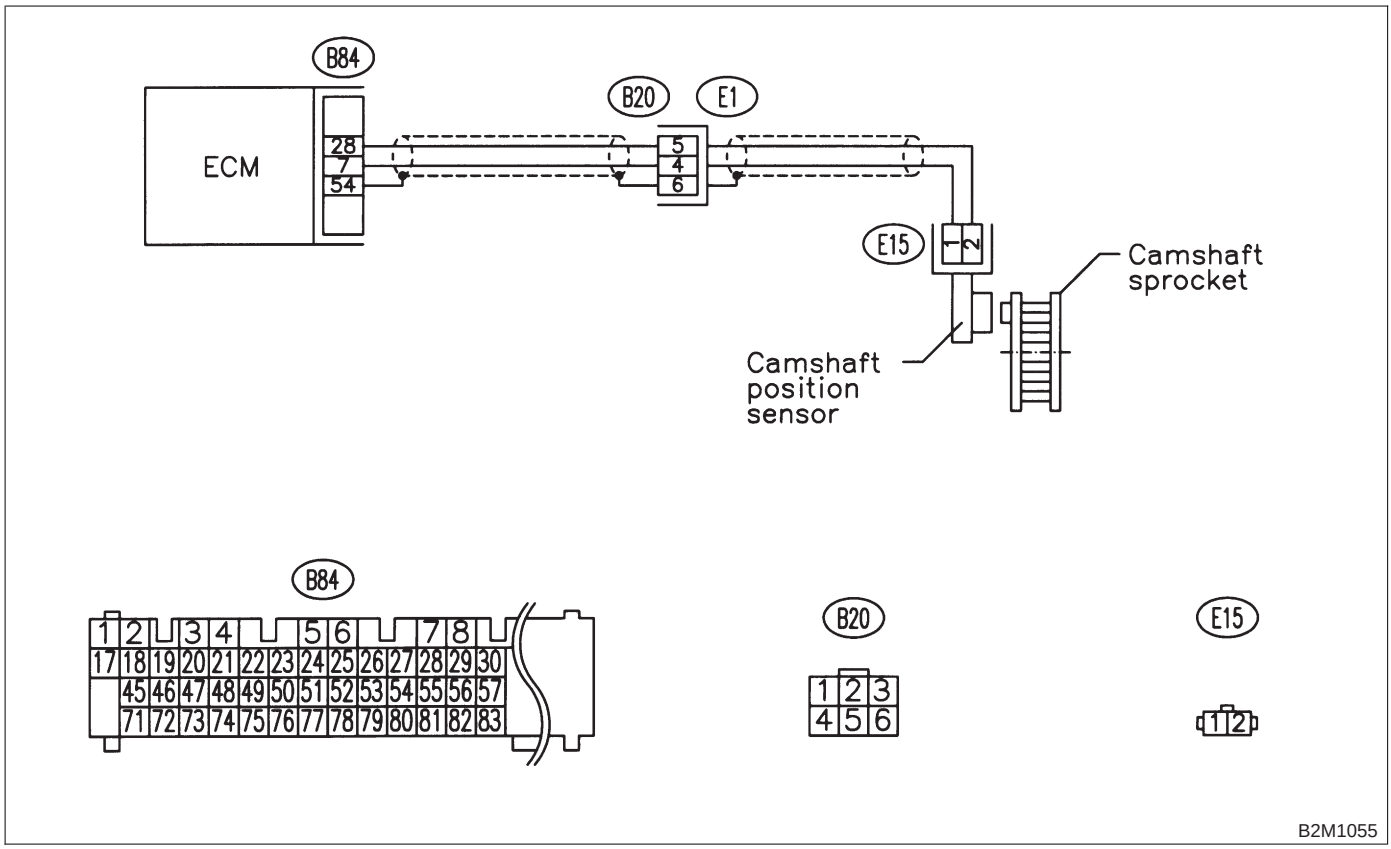
- **WIRING DIAGRAM:**



AN: DTC P0341 — CAMSHAFT POSITION SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM —

NOTE:
Check camshaft position sensor circuit.
<Ref. to 2-7 [T16AN0].>

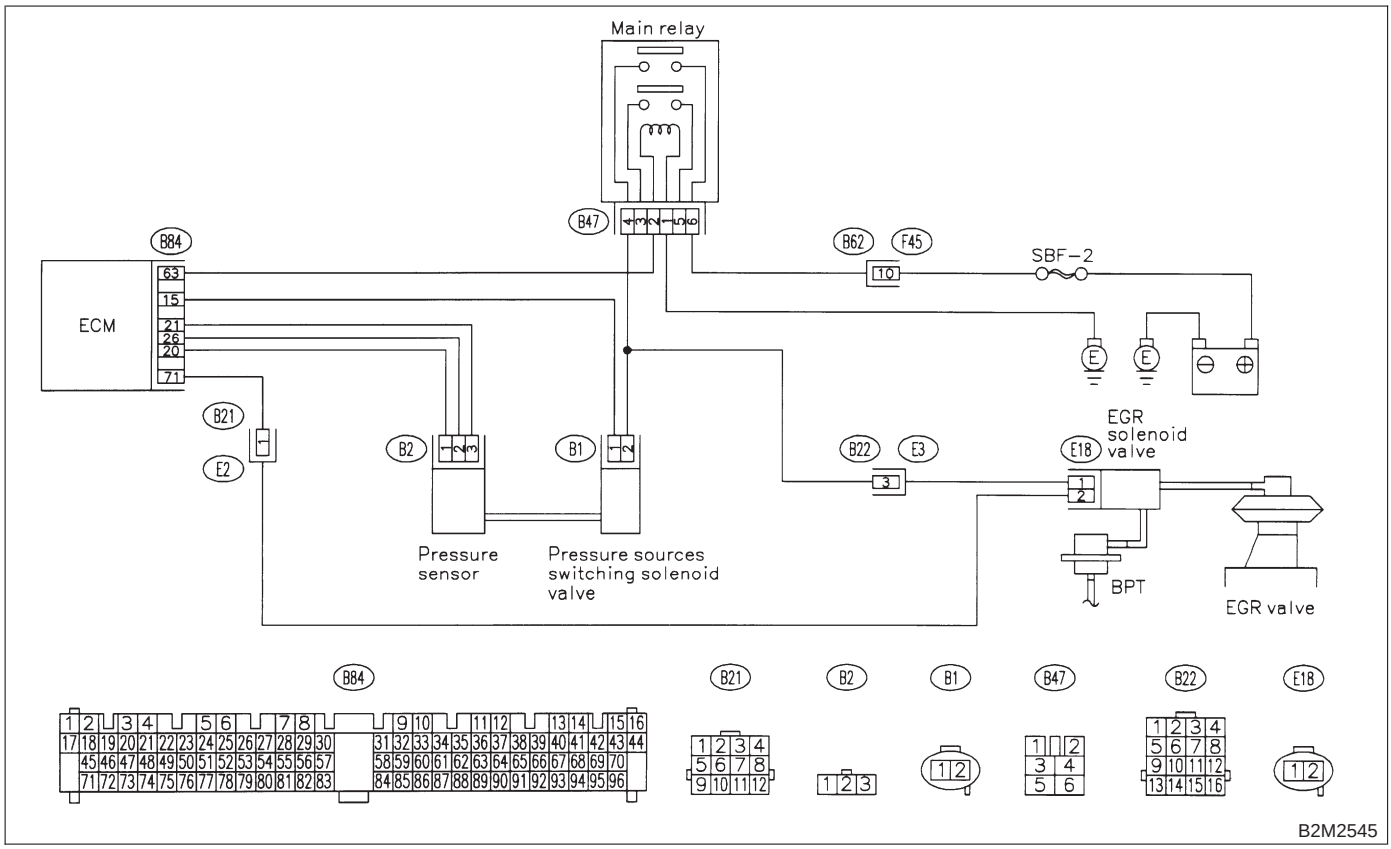
- **WIRING DIAGRAM:**



AO: DTC P0400 — EXHAUST GAS RECIRCULATION FLOW MALFUNCTION —

NOTE:
Check exhaust gas recirculation control system.
<Ref. to 2-7 [T16AO0].>

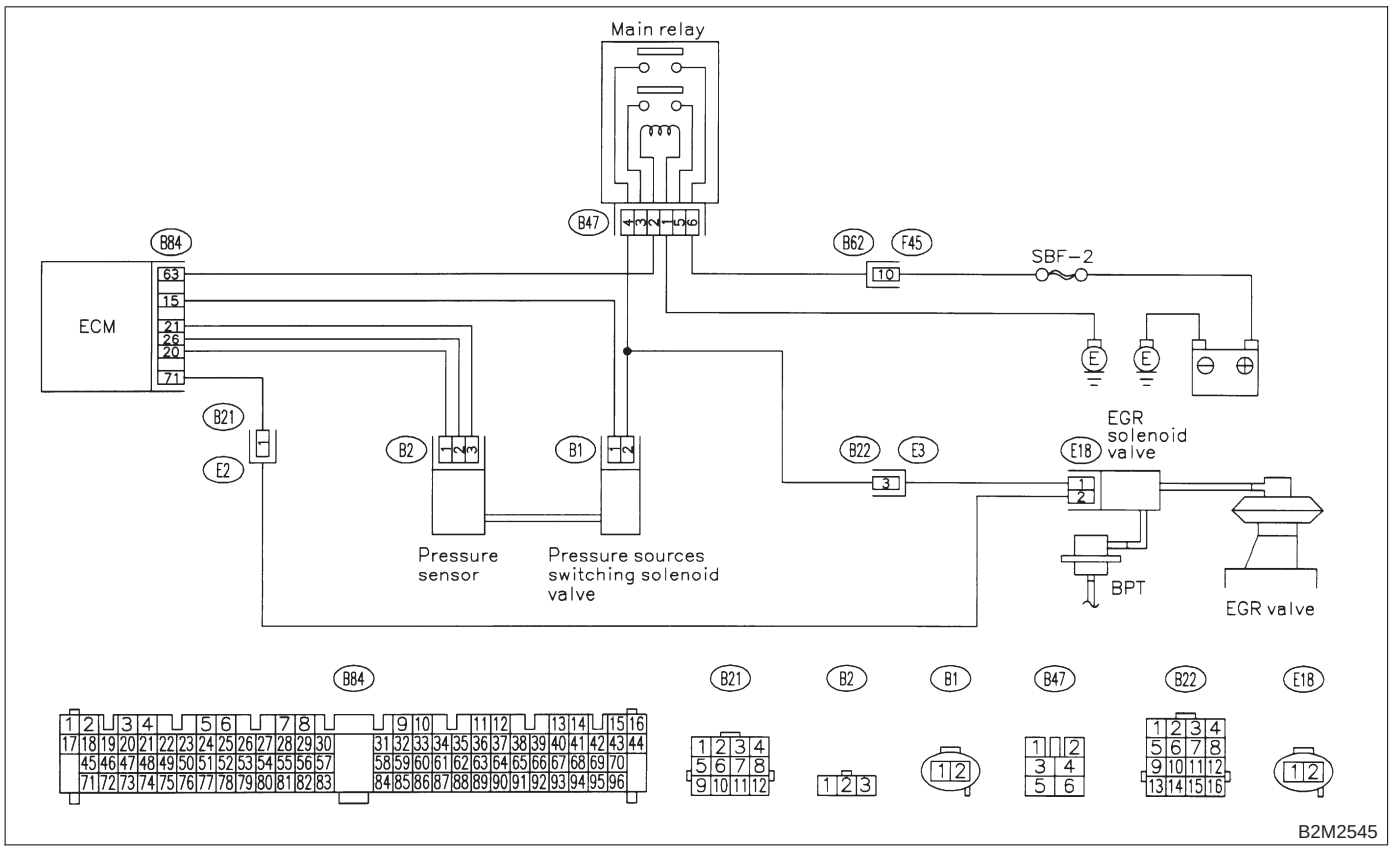
- **WIRING DIAGRAM:**



AP: DTC P0403 — EXHAUST GAS RECIRCULATION CIRCUIT LOW INPUT —

NOTE:
Check exhaust gas recirculation control solenoid valve circuit.
<Ref. to 2-7 [T16AP0].>

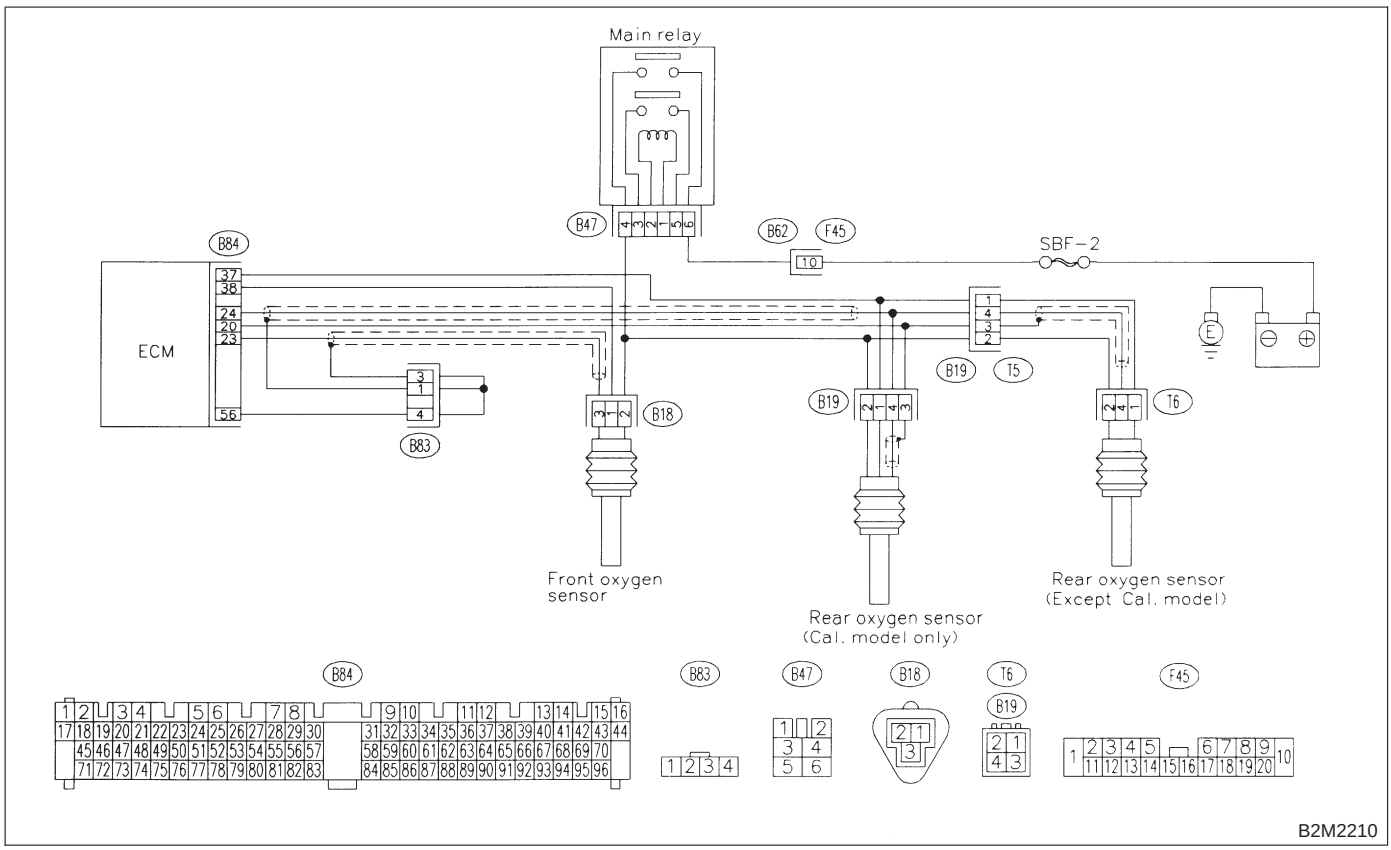
- **WIRING DIAGRAM:**



AQ: DTC P0420 — CATALYST SYSTEM EFFICIENCY BELOW THRESHOLD —

NOTE:
Check catalyst system.
<Ref. to 2-7 [T16AQ0].>

- **WIRING DIAGRAM:**

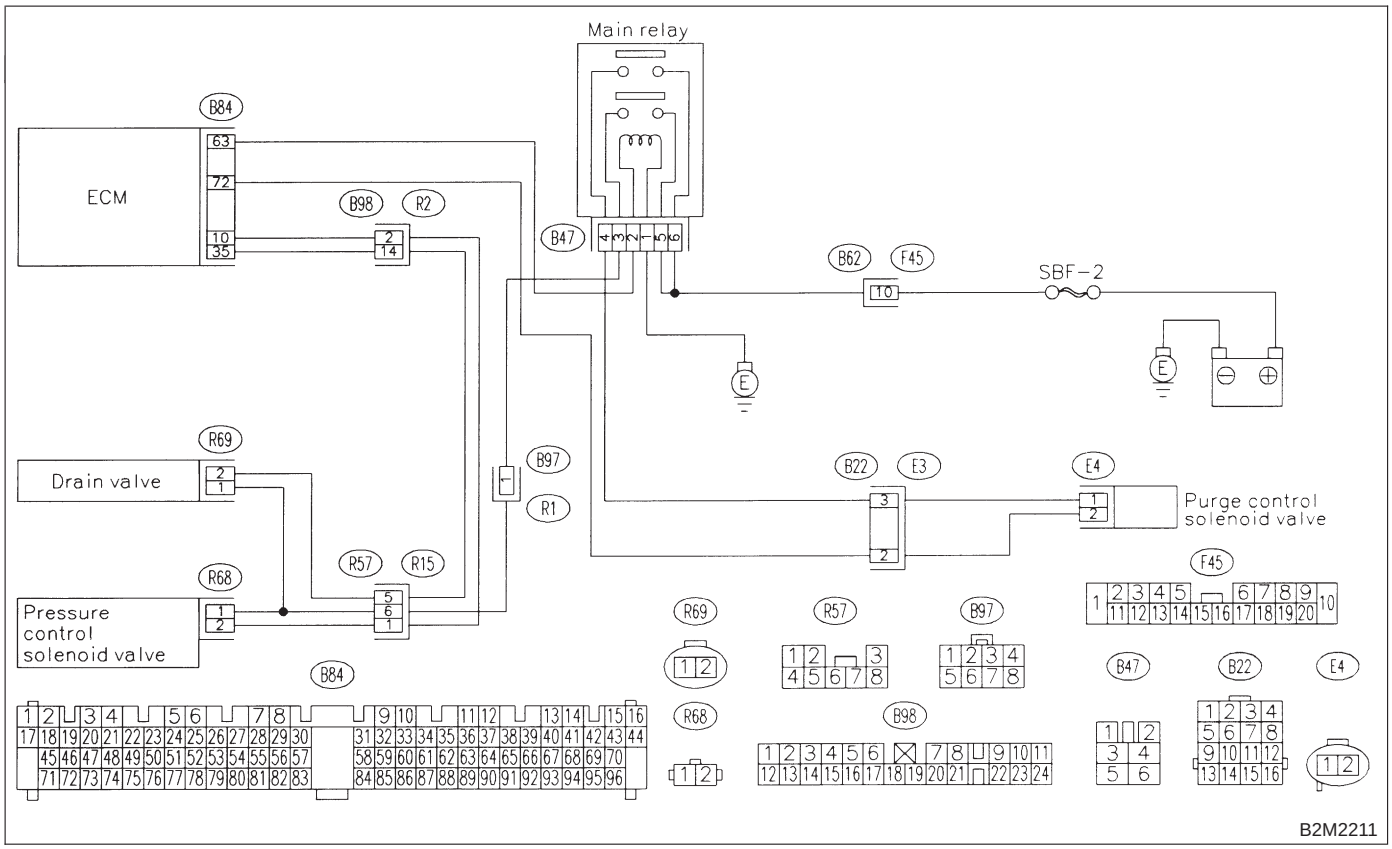


AR: DTC P0440 — EVAPORATIVE EMISSION CONTROL SYSTEM MALFUNCTION —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault
- **TROUBLE SYMPTOM:**
  - Gasoline smell

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



16AR1 : CHECK ANY OTHER DTC ON DISPLAY.

CHECK : ***Is there any other DTC on display?***
YES : Inspect the relevant DTC using “16. Diagnostics Chart with Trouble Code for 2500 cc Models”. <Ref. to 2-7 [T16A0].>
NO : Go to step **16AR2**.

16AR2 : CHECK FUEL FILLER CAP.

1) Turn ignition switch to OFF.
2) Open the fuel flap.

CHECK : ***Is the fuel filler cap tightened securely?***
YES : Tighten fuel filler cap securely.
NO : Go to step **16AR3**.

16AR3 : CHECK FUEL FILLER PIPE PACKING.

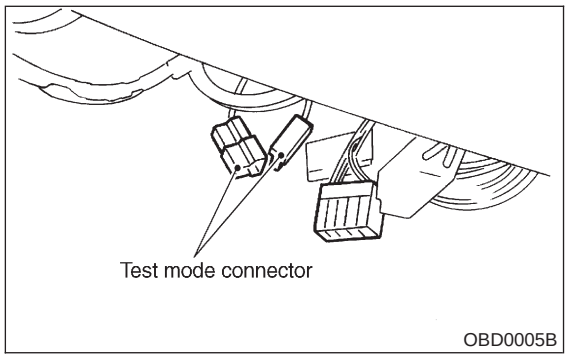
CHECK : ***Is there any damage to the seal between fuel filler cap and fuel filler pipe?***

YES : Repair or replace fuel filler cap and fuel filler pipe. <Ref. to 2-8 [W3A0].>

NO : Go to step **16AR4**.

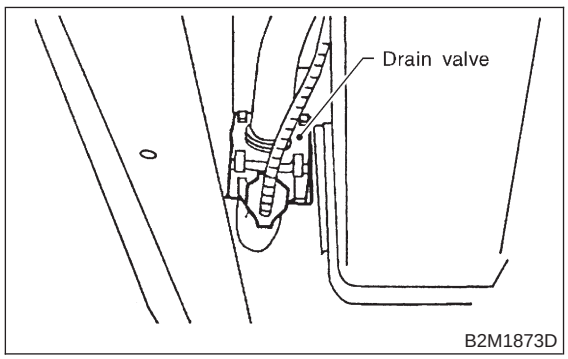
16AR4 : CHECK DRAIN VALVE.

1) Connect test mode connector.



2) Turn ignition switch to ON.

NOTE:
Drain valve operation check can also be executed using Subaru Select Monitor. For the procedure, refer to “COMPULSORY VALVE OPERATION CHECK MODE”. <Ref. to 2-7 [T3F0].>



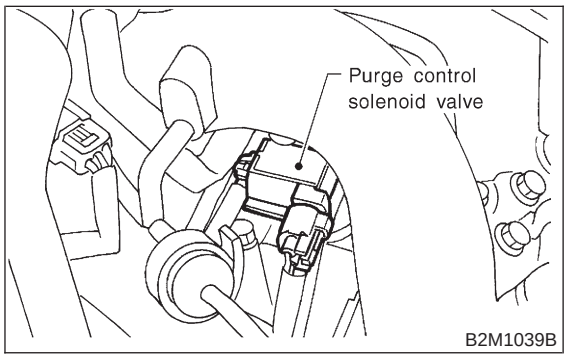
CHECK : ***Does drain valve produce operating sound?***

YES : Go to step **16AR5**.

NO : Replace drain valve. <Ref. to 2-1 [W17A0].>

16AR5 : CHECK PURGE CONTROL SOLENOID VALVE.

NOTE:
Purge control solenoid valve operation check can also be executed using Subaru Select Monitor. For the procedure, refer to “COMPULSORY VALVE OPERATION CHECK MODE”. <Ref. to 2-7 [T3F0].>



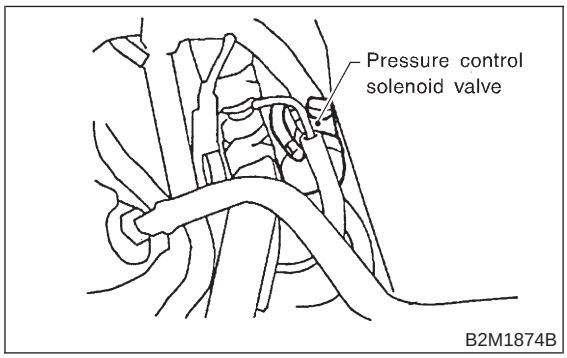
CHECK : ***Does purge control solenoid valve produce operating sound?***

YES : Go to step **16AR6**.

NO : Replace purge control solenoid valve. <Ref. to 2-1 [W4A0].>

16AR6 : CHECK PRESSURE CONTROL SOLENOID VALVE.

NOTE:
Pressure control solenoid valve operation check can also be executed using Subaru Select Monitor. For the procedure, refer to “COMPULSORY VALVE OPERATION CHECK MODE”. <Ref. to 2-7 [T3F0].>



CHECK : ***Does pressure control solenoid valve produce operating sound?***

YES : Go to step **16AR7**.

NO : Replace pressure control solenoid valve. <Ref. to 2-1 [W10A0].>

16AR7 : CHECK EVAPORATIVE EMISSION CONTROL SYSTEM LINE.

Turn ignition switch to OFF.

CHECK : ***Does fuel leak in fuel line?***
YES : Repair or replace fuel line. <Ref. to 2-8 [W7A0].>
NO : Go to step **16AR8**.

16AR8 : CHECK CANISTER.

CHECK : ***Is there any damage at canister?***
YES : Repair or replace canister. <Ref. to 2-1 [W3A0].>
NO : Go to step **16AR9**.

16AR9 : CHECK FUEL TANK.

CHECK : ***Is there any damage at fuel tank?***
YES : Repair or replace fuel tank. <Ref. to 2-8 [W2A0].>
NO : Go to step **16AR10**.

16AR10 : CHECK ANY OTHER MECHANICAL TROUBLE IN EVAPORATIVE EMISSION CONTROL SYSTEM.

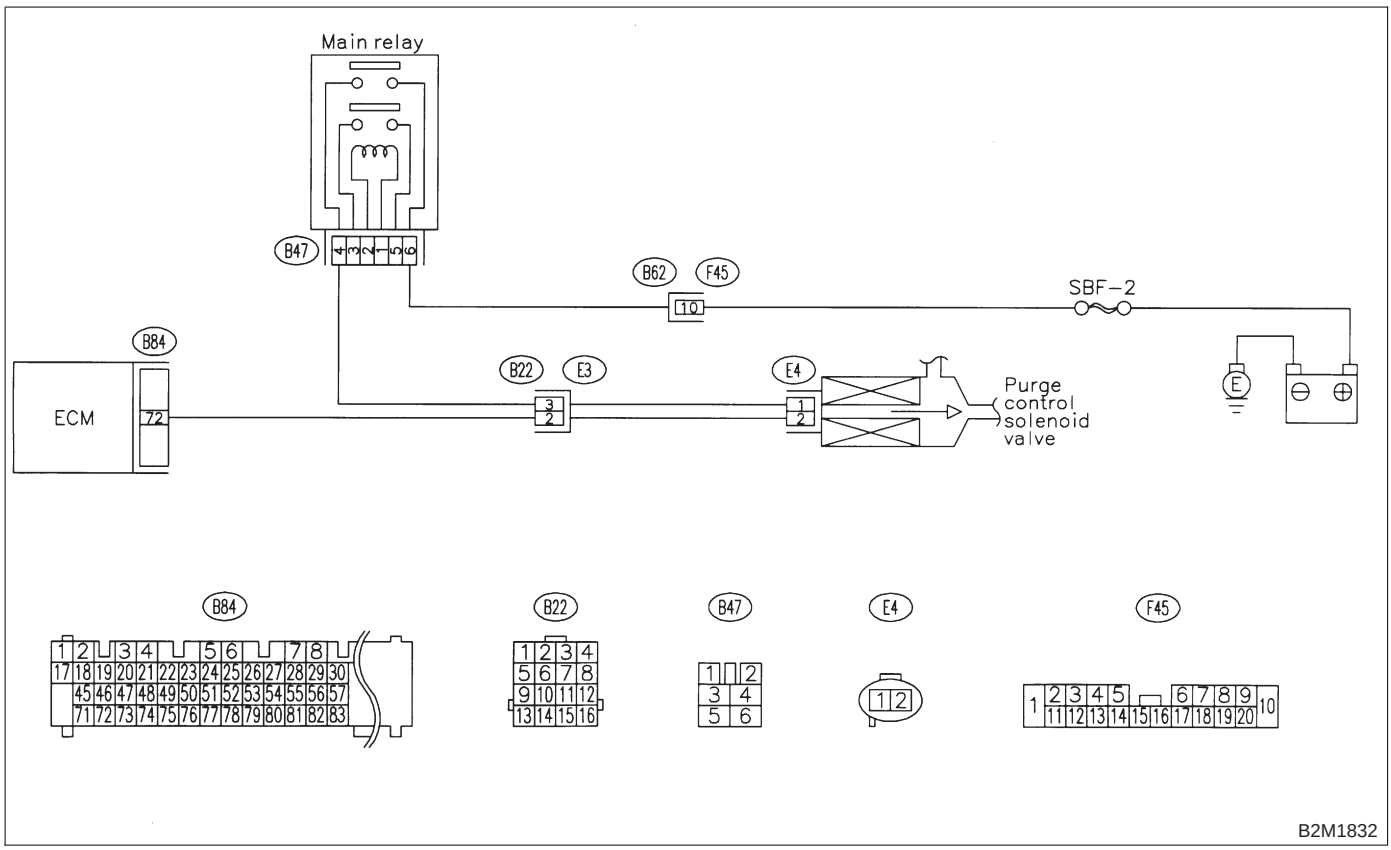
CHECK : ***Are there holes, cracks, clogging or disconnections of hoses or pipes in evaporative emission control system?***
YES : Repair or replace hoses or pipes.
NO : Contact with SOA service.

NOTE:
Inspection by DTM is required, because probable cause is deterioration of multiple parts.

AS: DTC P0441 — EVAPORATIVE EMISSION CONTROL SYSTEM INCORRECT PURGE FLOW —

NOTE:
Check canister purge control system.
<Ref. to 2-7 [T16AS0].>

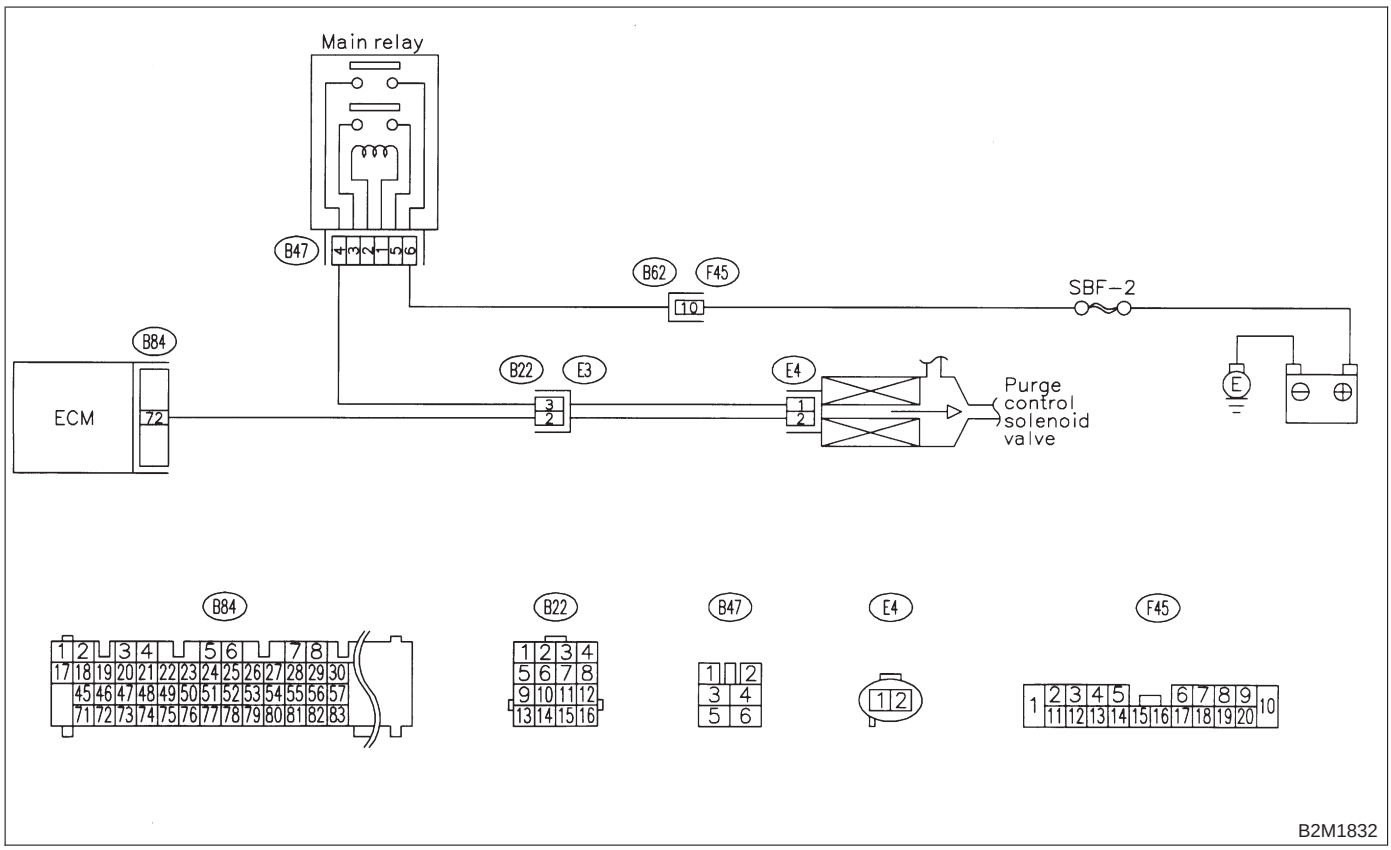
- **WIRING DIAGRAM:**



AT: DTC P0443 — EVAPORATIVE EMISSION CONTROL SYSTEM PURGE CONTROL VALVE CIRCUIT LOW INPUT —

NOTE:
Check purge control solenoid valve circuit.
<Ref. to 2-7 [T16AT0].>

- **WIRING DIAGRAM:**



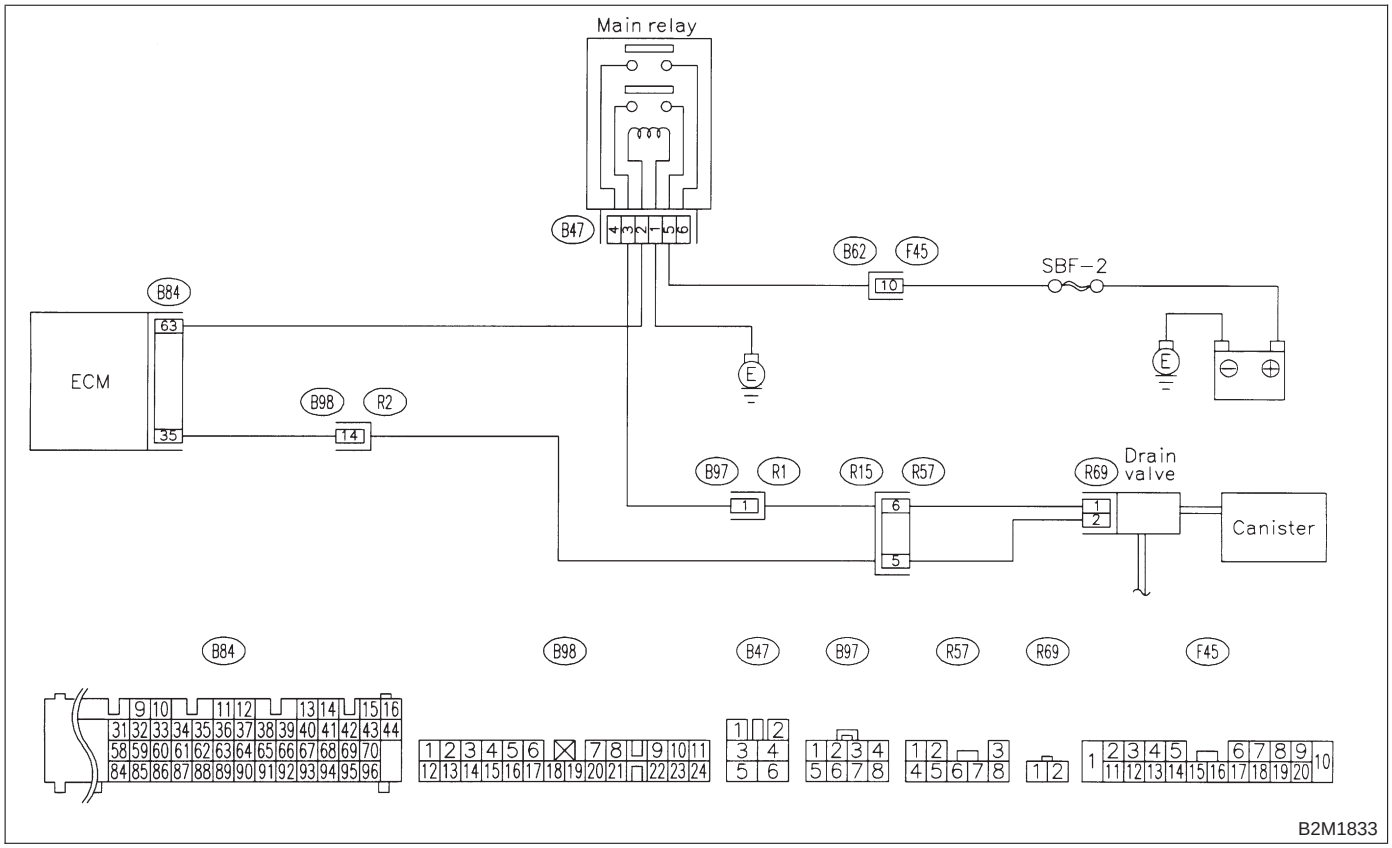
MEMO:

AU: DTC P0446 — EVAPORATIVE EMISSION CONTROL SYSTEM VENT CONTROL LOW INPUT —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

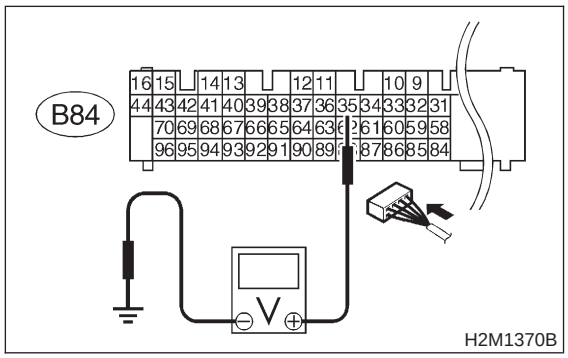
- **WIRING DIAGRAM:**



16AU1 : CHECK OUTPUT SIGNAL FROM ECM.

1) Turn ignition switch to ON.
2) Measure voltage between ECM and chassis ground.

Connector & terminal
(B84) No. 35 (+) — Chassis ground (−):



CHECK : ***Is the voltage more than 10 V?***
YES : Go to step **16AU2**.
NO : Go to step **16AU3**.

16AU2 : CHECK POOR CONTACT.

Check poor contact in ECM connector. <Ref. to FOREWORD [T3C1].>

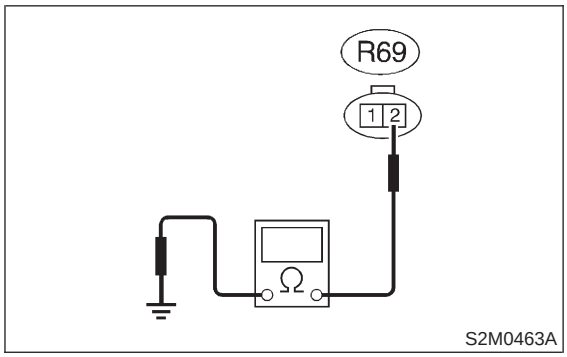
CHECK : ***Is there poor contact in ECM connector?***
YES : Repair poor contact in ECM connector.
NO : Even if MIL lights up, the circuit has returned to a normal condition at this time. (However, the possibility of poor contact still remains.)

NOTE:
In this case, repair the following:
- Poor contact in drain valve connector
- Poor contact in ECM connector
- Poor contact in coupling connectors (B97, B98 and R57)

16AU3 : CHECK HARNESS BETWEEN DRAIN VALVE AND ECM CONNECTOR.

1) Turn ignition switch to OFF.
2) Disconnect connectors from drain valve and ECM.
3) Measure resistance of harness between drain valve connector and chassis ground.

Connector & terminal
(R69) No. 2 — Chassis ground:

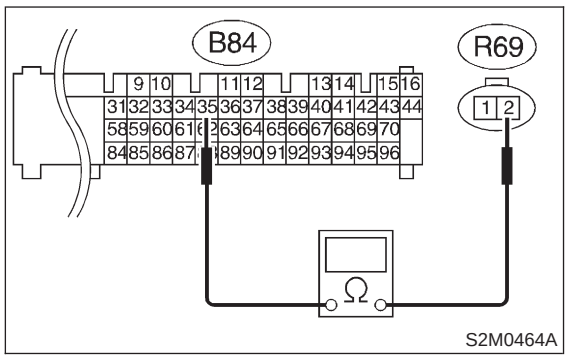


CHECK : ***Is the resistance less than 10 Ω?***
YES : Repair ground short circuit in harness between ECM and drain valve connector.
NO : Go to step **16AU4**.

16AU4 : CHECK HARNESS BETWEEN DRAIN VALVE AND ECM CONNECTOR.

Measure resistance of harness between ECM and drain valve connector.

Connector & terminal
(B84) No. 35 — (R69) No. 2:



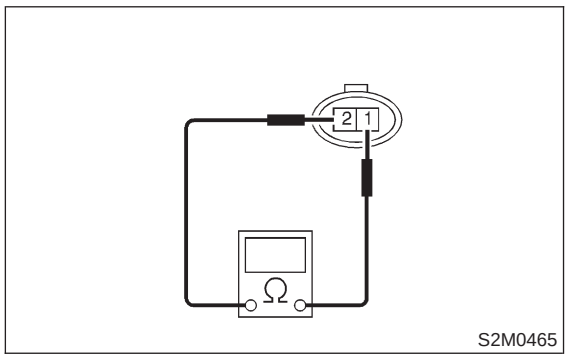
CHECK : ***Is the voltage less than 1 Ω?***
YES : Go to step **16AU5**.
NO : Repair harness and connector.

NOTE:
In this case, repair the following:
● Open circuit in harness between ECM and drain valve connector
● Poor contact in coupling connectors (B98 and R57)

16AU5 : CHECK DRAIN VALVE.

Measure resistance between drain valve terminals.

Terminals
No. 1 — No. 2:

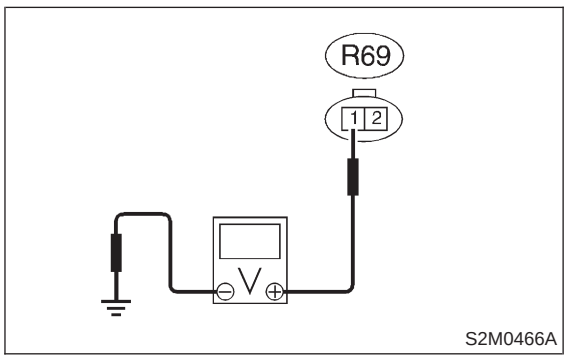


CHECK : ***Is the resistance between 10 and 100 Ω?***
YES : Go to step **16AU6**.
NO : Replace drain valve. <Ref. to 2-1 [W17A0].>

16AU6 : CHECK POWER SUPPLY TO DRAIN VALVE.

1) Turn ignition switch to ON.
2) Measure voltage between drain valve and chassis ground.

Connector & terminal
(R69) No. 1 (+) — Chassis ground (−):



CHECK : ***Is the voltage more than 10 V?***
YES : Go to step **16AU7**.
NO : Repair harness and connector.

NOTE:
In this case, repair the following:
● Open circuit in harness between main relay and drain valve
● Poor contact in coupling connectors (B97 and R57)
● Poor contact in main relay connector

16AU7 : CHECK POOR CONTACT.

Check poor contact in drain valve connector. <Ref. to FOREWORD [T3C1].>

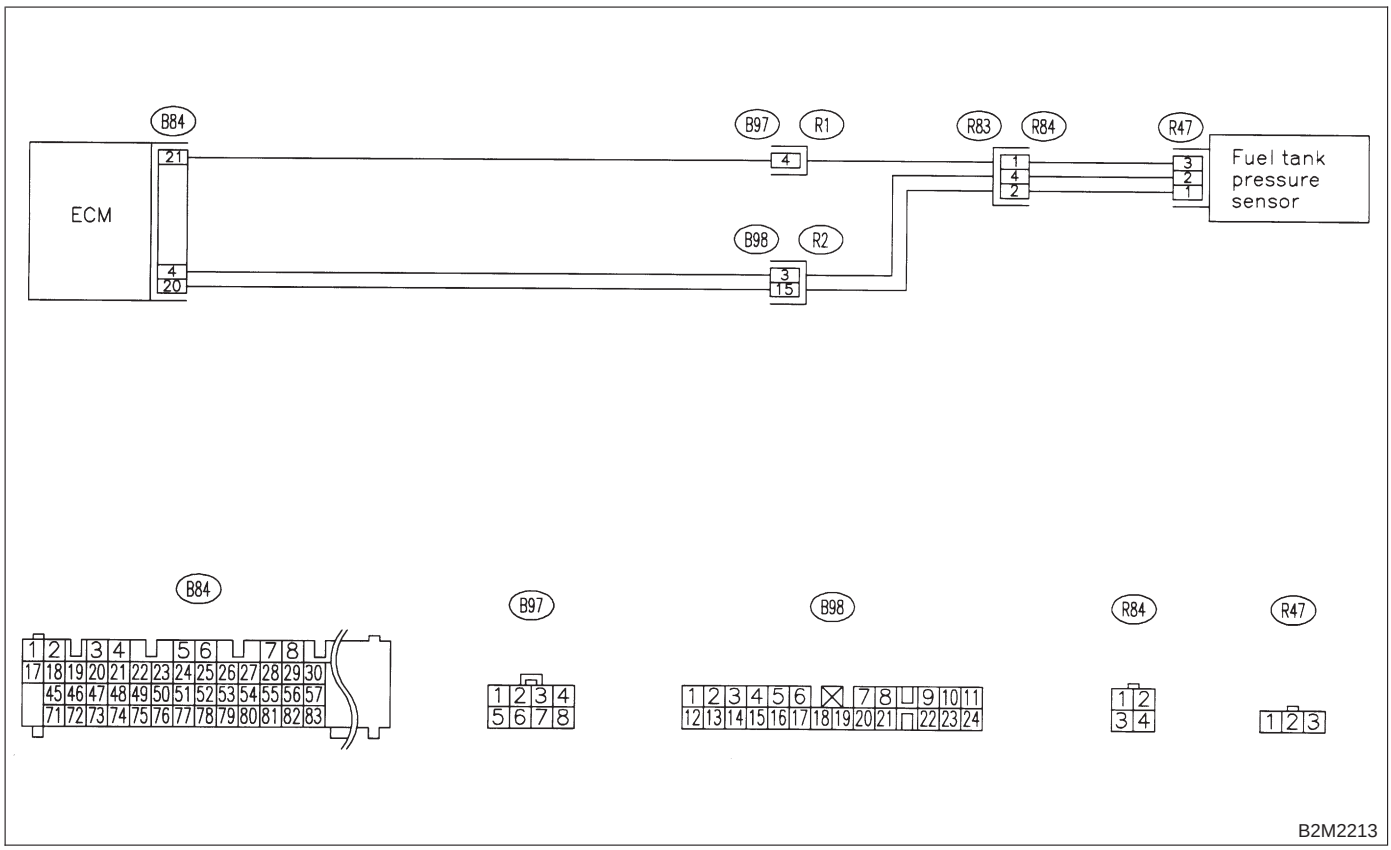
CHECK : ***Is there poor contact in drain valve connector?***
YES : Repair poor contact in drain valve connector.
NO : Contact with SOA service.

NOTE:
Inspection by DTM is required, because probable cause is deterioration of multiple parts.

AV: DTC P0451 — EVAPORATIVE EMISSION CONTROL SYSTEM PRESSURE SENSOR RANGE/PERFORMANCE PROBLEM —

NOTE:
Check fuel tank pressure control system.
<Ref. to 2-7 [T16AW0].>

- **WIRING DIAGRAM:**

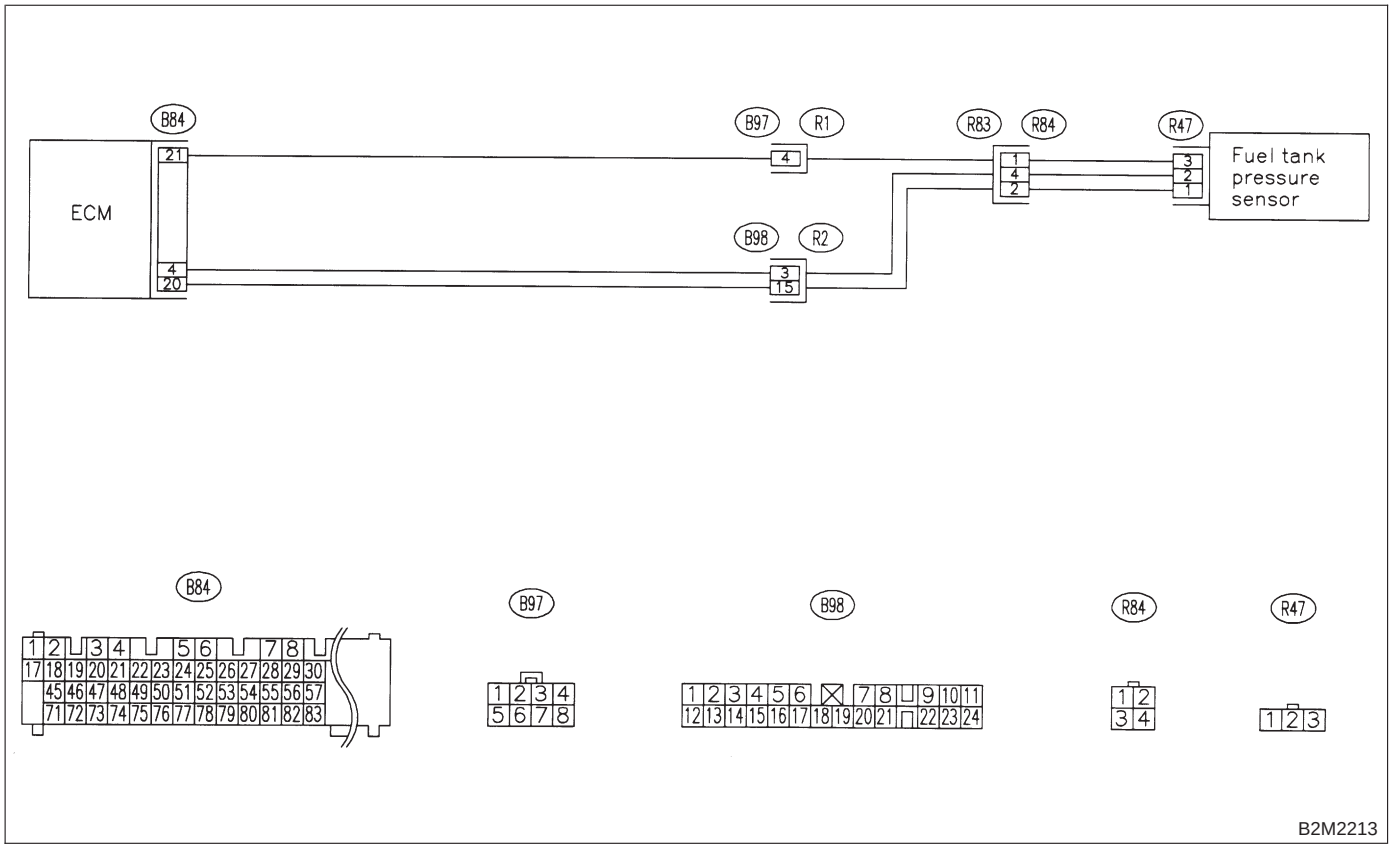


AW: DTC P0452 — EVAPORATIVE EMISSION CONTROL SYSTEM PRESSURE SENSOR LOW INPUT —

- **DTC DETECTING CONDITION:**
  - Immediately at fault recognition

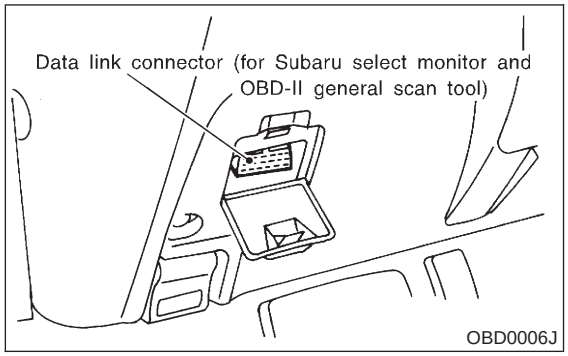
CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



16AW1 : CONNECT SUBARU SELECT MONITOR OR THE OBD-II GENERAL SCAN TOOL, AND READ DATA.

1) Turn ignition switch to OFF.
2) Remove fuel filler cap.
3) Install fuel filler cap.
4) Connect Subaru Select Monitor or the OBD-II general scan tool to data link connector.



5) Turn ignition switch to ON and Subaru Select Monitor or the OBD-II general scan tool switch to ON.
6) Read the data of fuel tank pressure sensor signal using Subaru Select Monitor or the OBD-II general scan tool.

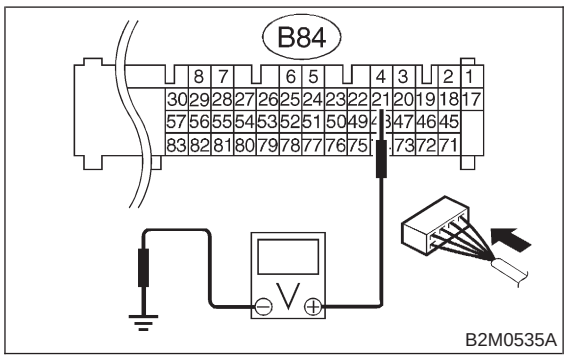
NOTE:
● Subaru Select Monitor
For detailed operation procedure, refer to the "READ CURRENT DATA SHOWN ON DISPLAY FOR ENGINE". <Ref. to 2-7 [T3C4].>
● OBD-II general scan tool
For detailed operation procedures, refer to the OBD-II General Scan Tool Instruction Manual.

CHECK : ***Is the value less than −2.8 kPa (−21.0 mmHg, −0.827 inHg)?***
YES : Go to step **16AW2**.
NO : Even if MIL lights up, the circuit has returned to a normal condition at this time.

16AW2 : CHECK POWER SUPPLY TO FUEL TANK PRESSURE SENSOR.

Measure voltage between ECM connector and chassis ground.

Connector & terminal
(B84) No. 21 (+) — Chassis ground (−):

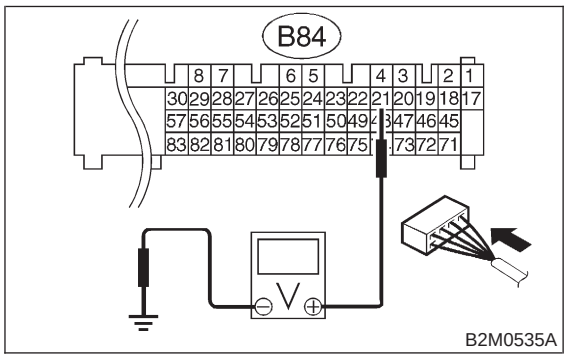


CHECK : ***Is the voltage more than 4.5 V?***
YES : Go to step **16AW4**.
NO : Go to step **16AW3**.

16AW3 : CHECK POWER SUPPLY TO FUEL TANK PRESSURE SENSOR.

Measure voltage between ECM connector and chassis ground.

Connector & terminal
(B84) No. 21 (+) — Chassis ground (−):



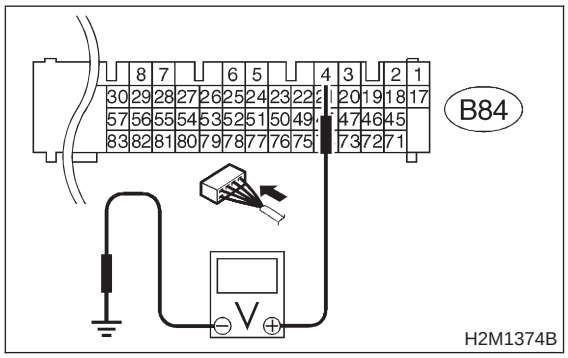
CHECK : ***Does the voltage change more than 4.5 V by shaking harness and connector of ECM while monitoring the value with voltage meter?***
YES : Repair poor contact in ECM connector.
NO : Contact with SOA service.

NOTE:
Inspection by DTM is required, because probable cause is deterioration of multiple parts.

16AW4 : CHECK INPUT SIGNAL FOR ECM.

Measure voltage between ECM and chassis ground.

Connector & terminal
(B84) No. 4 (+) — Chassis ground (−):



CHECK : ***Is the voltage less than 0.2 V?***
YES : Go to step **16AW6**.
NO : Go to step **16AW5**.

16AW5 : CHECK INPUT SIGNAL FOR ECM. (USING SUBARU SELECT MONITOR.)

Read data of fuel tank pressure sensor signal using Subaru Select Monitor.

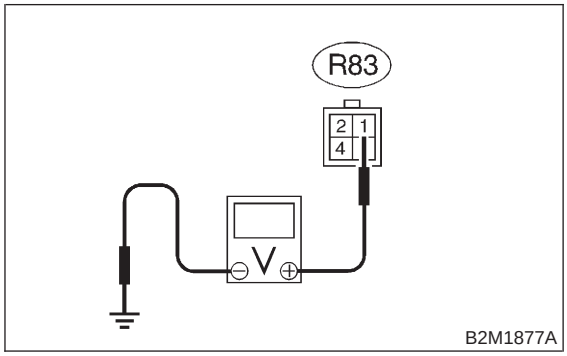
NOTE:
● Subaru Select Monitor
For detailed operation procedure, refer to the “READ CURRENT DATA SHOWN ON DISPLAY FOR ENGINE”. <Ref. to 2-7 [T3C4].>

CHECK : ***Does the value change more than −2.8 kPa (−21.0 mmHg, −0.827 inHg) by shaking harness and connector of ECM while monitoring the value with Subaru select monitor?***
YES : Repair poor contact in ECM connector.
NO : Go to step **16AW6**.

16AW6 : CHECK HARNESS BETWEEN ECM AND COUPLING CONNECTOR IN REAR WIRING HARNESS.

1) Turn ignition switch to OFF.
2) Remove rear seat cushion (Sedan) or move rear seat cushion (Wagon).
3) Separate rear wiring harness and fuel tank cord.
4) Turn ignition switch to ON.
5) Measure voltage between rear wiring harness connector and chassis ground.

Connector & terminal
(R83) No. 1 (+) — Chassis ground (−):



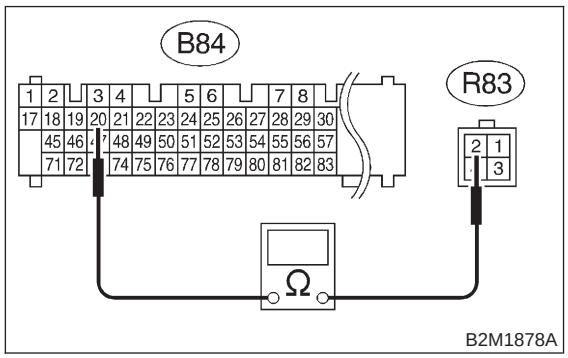
CHECK : ***Is the voltage more than 4.5 V?***
YES : Go to step **16AW7**.
NO : Repair harness and connector.

NOTE:
In this case, repair the following:
● Open circuit in harness between ECM and rear wiring harness connector (R83)
● Poor contact in coupling connector (B97)

16AW7 : CHECK HARNESS BETWEEN ECM AND COUPLING CONNECTOR IN REAR WIRING HARNESS.

1) Turn ignition switch to OFF.
2) Disconnect connector from ECM.
3) Measure resistance of harness between ECM and rear wiring harness connector.

Connector & terminal
(B84) No. 20 — (R83) No. 2:



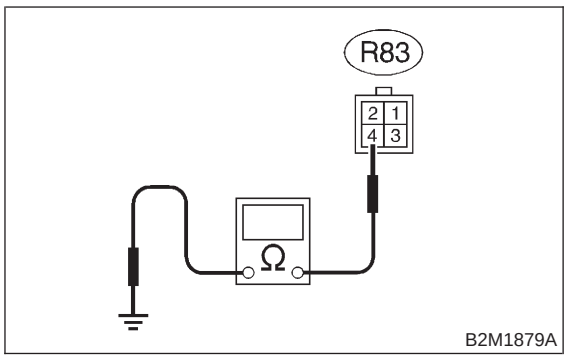
CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16AW8**.
NO : Repair harness and connector.

NOTE:
In this case, repair the following:
- Open circuit in harness between ECM and rear wiring harness connector (R83)
- Poor contact in coupling connector (B98)

16AW8 : CHECK HARNESS BETWEEN ECM AND COUPLING CONNECTOR IN REAR WIRING HARNESS.

Measure resistance of harness between rear wiring harness connector and chassis ground.

Connector & terminal
(R83) No. 4 — Chassis ground:

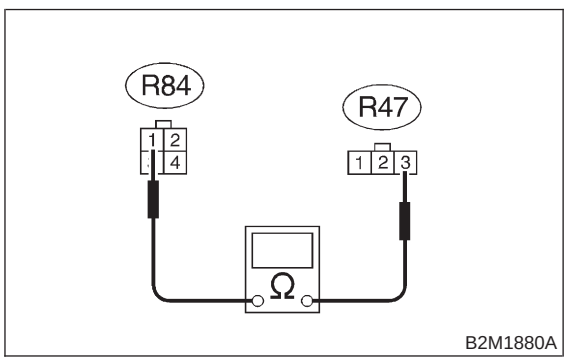


CHECK : ***Is the resistance more than 500 kΩ?***
YES : Go to step **16AW9**.
NO : Repair ground short circuit in harness between ECM and rear wiring harness connector (R83).

16AW9 : CHECK FUEL TANK CORD.

1) Remove fuel tank. <Ref. to 2-8 [W2A0].>
2) Disconnect connector from fuel tank pressure sensor.
3) Measure resistance of fuel tank cord.

Connector & terminal
(R84) No. 1 — (R47) No. 3:

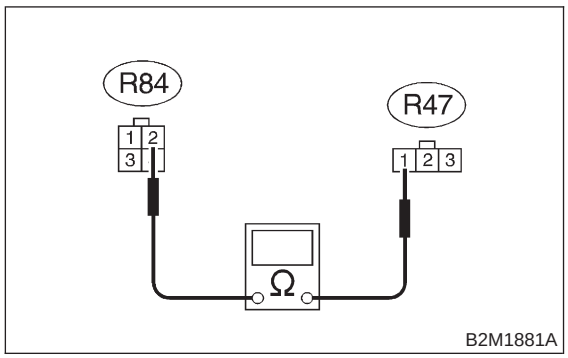


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16AW10**.
NO : Repair open circuit in fuel tank cord.

16AW10 : CHECK FUEL TANK CORD.

Measure resistance of fuel tank cord.

Connector & terminal
(R84) No. 2 — (R47) No. 1:

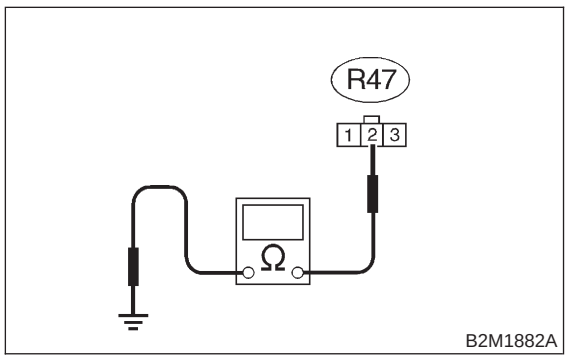


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16AW11**.
NO : Repair open circuit in fuel tank cord.

16AW11 : CHECK FUEL TANK CORD.

Measure resistance of harness between fuel tank pressure sensor connector and chassis ground.

Connector & terminal
(R47) No. 2 — Chassis ground:



CHECK : ***Is the resistance more than 500 kΩ?***
YES : Go to step **16AW12**.
NO : Repair ground short circuit in fuel tank cord.

16AW12 : CHECK POOR CONTACT.

Check poor contact in fuel tank pressure sensor connector. <Ref. to FOREWORD [T3C1].>

CHECK : ***Is there poor contact in fuel tank pressure sensor connector?***
YES : Repair poor contact in fuel tank pressure sensor connector.
NO : Replace fuel tank pressure sensor. <Ref. to 2-1 [W9A0].>

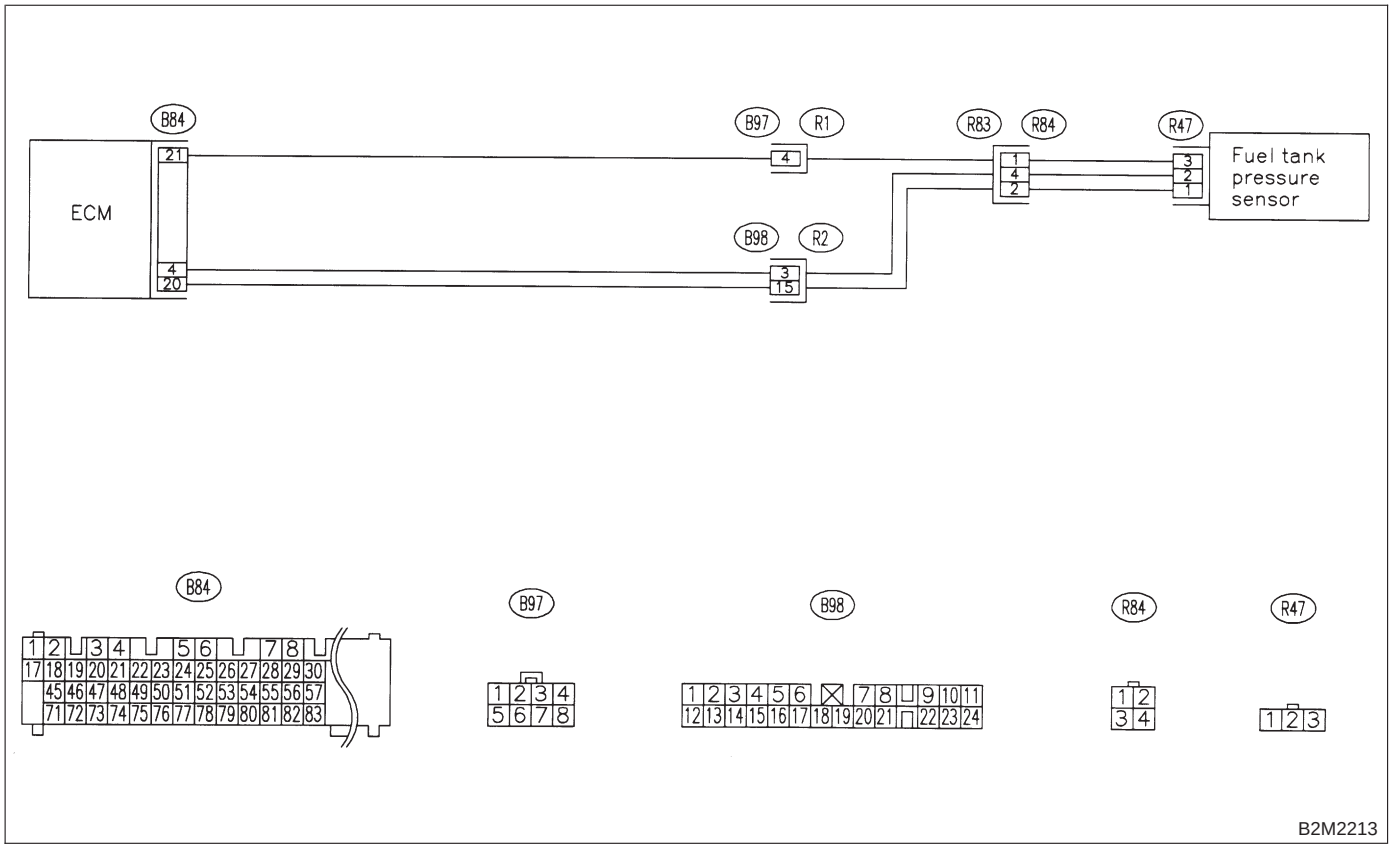
MEMO:

AX: DTC P0453 — EVAPORATIVE EMISSION CONTROL SYSTEM PRESSURE SENSOR HIGH INPUT —

- **DTC DETECTING CONDITION:**
  - Immediately at fault recognition

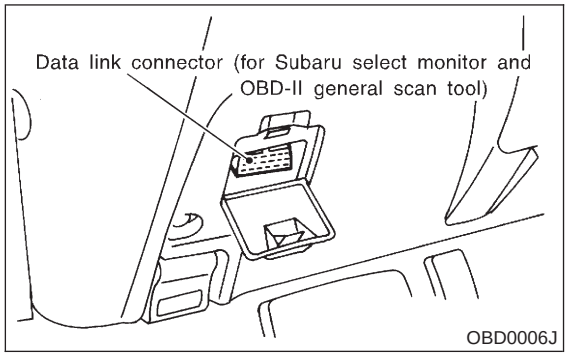
CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



16AX1 : CONNECT SUBARU SELECT MONITOR OR THE OBD-II GENERAL SCAN TOOL, AND READ DATA.

1) Turn ignition switch to OFF.
2) Remove fuel filler cap.
3) Install fuel filler cap.
4) Connect Subaru Select Monitor or the OBD-II general scan tool to data link connector.



5) Turn ignition switch to ON and Subaru Select Monitor or the OBD-II general scan tool switch to ON.
6) Read data of fuel tank pressure sensor signal using Subaru Select Monitor or OBD-II general scan tool.

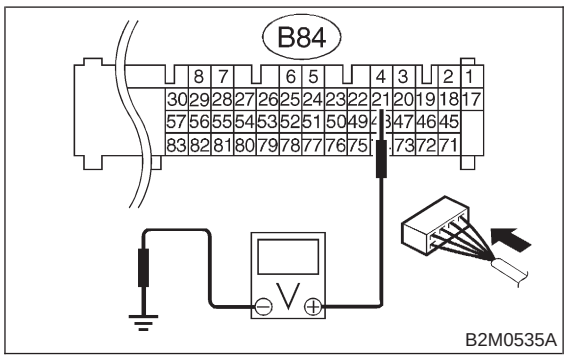
NOTE:
● Subaru Select Monitor
For detailed operation procedure, refer to the "READ CURRENT DATA SHOWN ON DISPLAY FOR ENGINE". <Ref. to 2-7 [T3C4].>
● OBD-II general scan tool
For detailed operation procedures, refer to the OBD-II General Scan Tool Instruction Manual.

CHECK : ***Is the value more than 2.8 kPa (21.0 mmHg, 0.827 inHg)?***
YES : Go to step **16AX12**.
NO : Go to step **16AX2**.

16AX2 : CHECK POWER SUPPLY TO FUEL TANK PRESSURE SENSOR.

Measure voltage between ECM connector and chassis ground.

Connector & terminal
(B84) No. 21 (+) — Chassis ground (−):

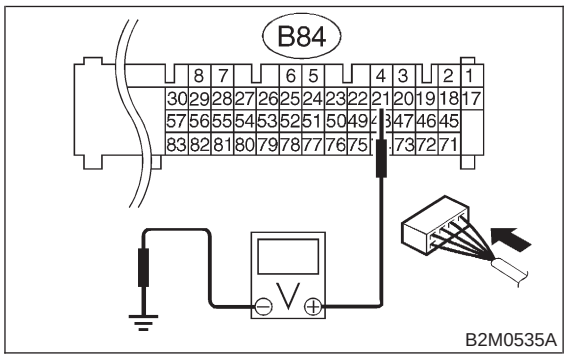


CHECK : ***Is the voltage more than 4.5 V?***
YES : Go to step **16AX4**.
NO : Go to step **16AX3**.

16AX3 : CHECK POWER SUPPLY TO FUEL TANK PRESSURE SENSOR.

Measure voltage between ECM connector and chassis ground.

Connector & terminal
(B84) No. 21 (+) — Chassis ground (−):

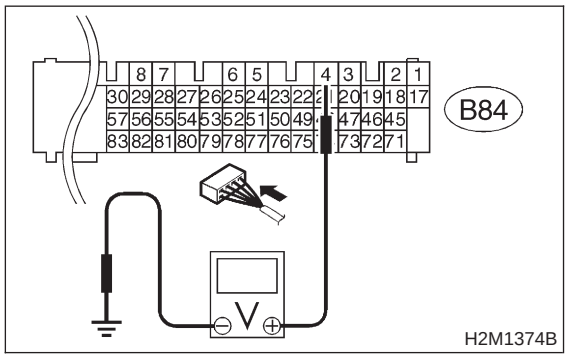


CHECK : ***Does the voltage change more than 4.5 V by shaking harness and connector of ECM while monitoring the value with voltage meter?***
YES : Repair poor contact in ECM connector.
NO : Replace ECM. <Ref. to 2-7 [W15A2].>

16AX4 : CHECK INPUT SIGNAL FOR ECM.

Measure voltage between ECM and chassis ground.

Connector & terminal
(B84) No. 4 (+) — Chassis ground (−):



CHECK : ***Is the voltage less than 0.2 V?***
YES : Go to step **16AX6**.
NO : Go to step **16AX5**.

16AX5 : CHECK INPUT SIGNAL FOR ECM. (USING SUBARU SELECT MONITOR.)

Read data of fuel tank pressure sensor signal using Subaru Select Monitor.

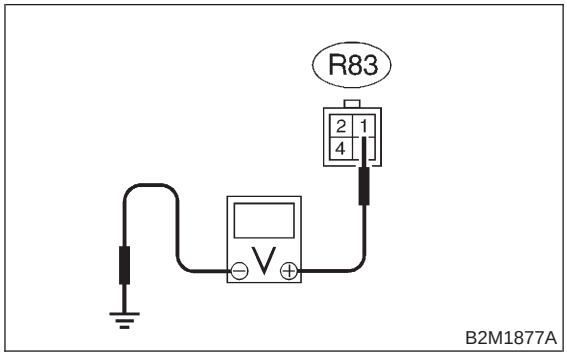
NOTE:
● Subaru Select Monitor
For detailed operation procedure, refer to the “READ CURRENT DATA SHOWN ON DISPLAY FOR ENGINE”. <Ref. to 2-7 [T3C4].>

CHECK : ***Does the value change more than −2.8 kPa (−21.0 mmHg, −0.827 inHg) by shaking harness and connector of ECM while monitoring the value with Subaru select monitor?***
YES : Repair poor contact in ECM connector.
NO : Go to step **16AX6**.

16AX6 : CHECK HARNESS BETWEEN ECM AND COUPLING CONNECTOR IN REAR WIRING HARNESS.

1) Turn ignition switch to OFF.
2) Remove rear seat cushion (Sedan) or move rear seat cushion (Wagon).
3) Separate rear wiring harness and fuel tank cord.
4) Turn ignition switch to ON.
5) Measure voltage between rear wiring harness connector and chassis ground.

Connector & terminal
(R83) No. 1 (+) — Chassis ground (−):



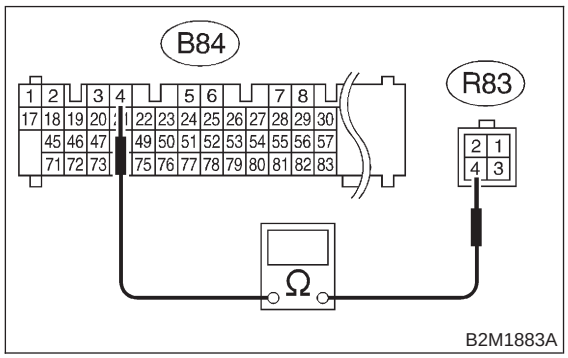
CHECK : ***Is the voltage more than 4.5 V?***
YES : Go to step **16AX7**.
NO : Repair harness and connector.

NOTE:
In this case, repair the following:
● Open circuit in harness between ECM and rear wiring harness connector (R83)
● Poor contact in coupling connector (B97)

16AX7 : CHECK HARNESS BETWEEN ECM AND COUPLING CONNECTOR IN REAR WIRING HARNESS.

1) Turn ignition switch to OFF.
2) Disconnect connector from ECM.
3) Measure resistance of harness between ECM and rear wiring harness connector.

Connector & terminal
(B84) No. 4 — (R83) No. 4:



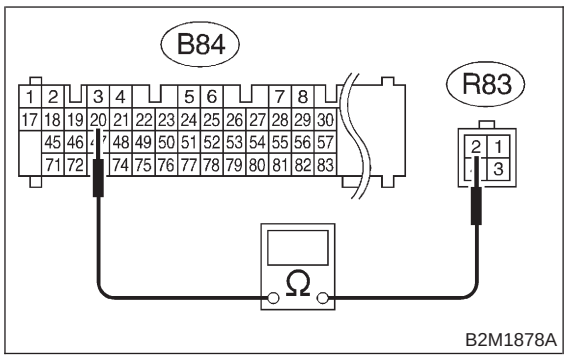
CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16AX8**.
NO : Repair harness and connector.

NOTE:
In this case, repair the following:
- Open circuit in harness between ECM and rear wiring harness connector (R83)
- Poor contact in coupling connector (B98)

16AX8 : CHECK HARNESS BETWEEN ECM AND COUPLING CONNECTOR IN REAR WIRING HARNESS.

Measure resistance of harness between rear wiring harness connector and chassis ground.

Connector & terminal
(B84) No. 20 — (R83) No. 2:

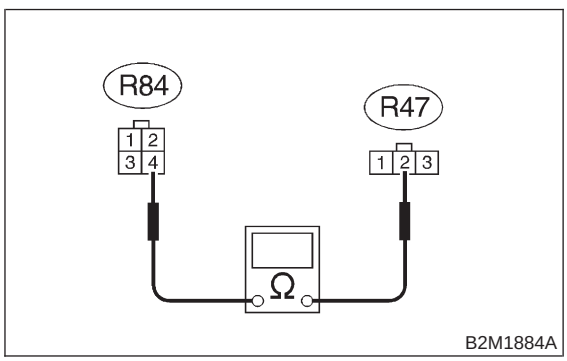


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16AX9**.
NO : Repair ground short circuit in harness between ECM and rear wiring harness connector (R83).

16AX9 : CHECK FUEL TANK CORD.

1) Remove fuel tank. <Ref. to 2-8 [W2A0].>
2) Disconnect connector from fuel tank pressure sensor.
3) Measure resistance of fuel tank cord.

Connector & terminal
(R84) No. 4 — (R47) No. 2:

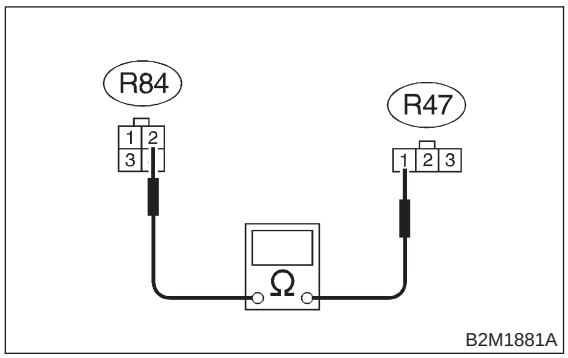


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16AX10**.
NO : Repair open circuit in fuel tank cord.

16AX10 : CHECK FUEL TANK CORD.

Measure resistance of fuel tank cord.

Connector & terminal
(R84) No. 2 — (R47) No. 1:



CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16AX11**.
NO : Repair open circuit in fuel tank cord.

16AX11 : CHECK POOR CONTACT.

Check poor contact in fuel tank pressure sensor connector. <Ref. to FOREWORD [T3C1].>

CHECK : ***Is there poor contact in fuel tank pressure sensor connector?***
YES : Repair poor contact in fuel tank pressure sensor connector.
NO : Replace fuel tank pressure sensor. <Ref. to 2-1 [W9A0].>

16AX12 : CHECK HARNESS BETWEEN ECM AND FUEL TANK PRESSURE SENSOR CONNECTOR.

1) Turn ignition switch to OFF and Subaru Select Monitor or the OBD-II general scan tool switch to OFF.
2) Remove fuel tank. <Ref. to 2-8 [W2A0].>
3) Remove fuel tank cord from fuel tank.
4) Connect fuel tank cord to rear wiring harness.
5) Remove fuel filler cap.
6) Install fuel filler cap.
7) Turn ignition switch to ON and Subaru Select Monitor or the OBD-II general scan tool switch to ON.
8) Read data of fuel tank pressure sensor signal using Subaru select monitor or the OBD-II general scan tool.

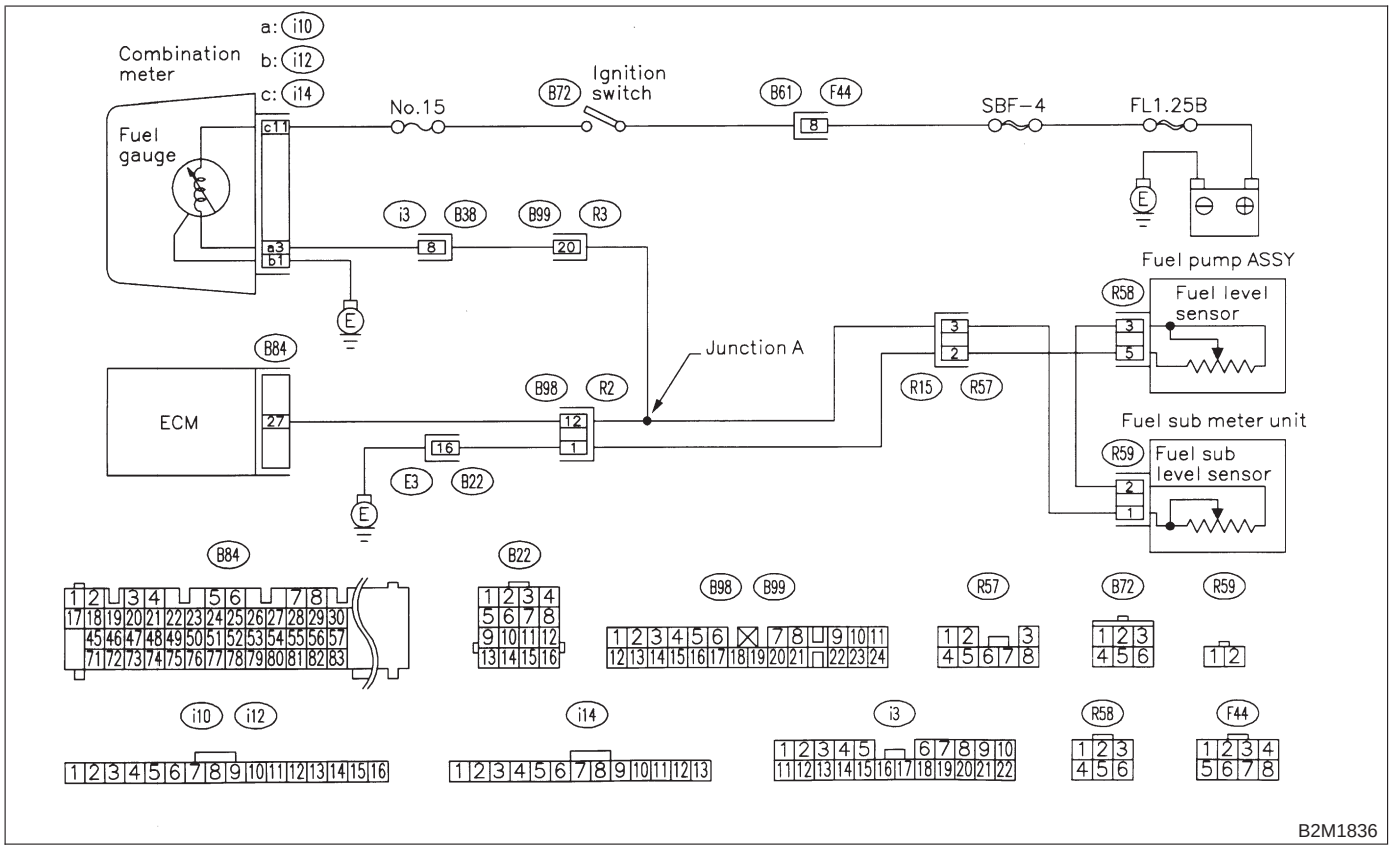
NOTE:
● Subaru Select Monitor
For detailed operation procedure, refer to the "READ CURRENT DATA SHOWN ON DISPLAY FOR ENGINE". <Ref. to 2-7 [T3C4].>
● OBD-II general scan tool
For detailed operation procedures, refer to the OBD-II General Scan Tool Instruction Manual.

CHECK : ***Is the value more than 2.8 kPa (21.0 mmHg, 0.827 inHg)?***
YES : Repair battery short circuit in harness between ECM and fuel tank pressure sensor connector.
NO : Replace fuel tank pressure sensor. <Ref. to 2-1 [W9A0].>

AY: DTC P0461 — FUEL LEVEL SENSOR CIRCUIT RANGE/ PERFORMANCE PROBLEM —

NOTE:
Check fuel level sensor circuit.
<Ref. to 2-7 [T16AZ0].>

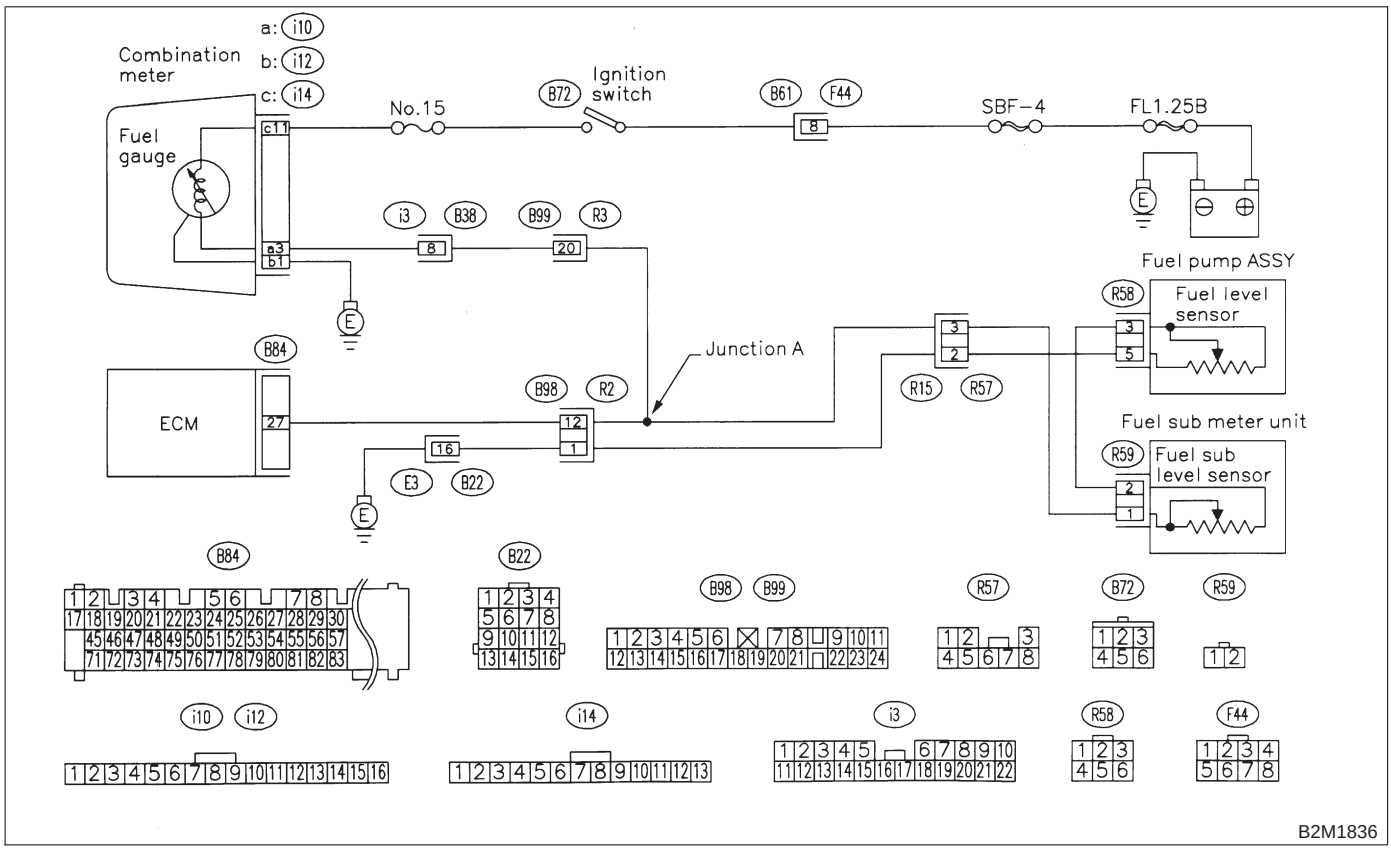
- **WIRING DIAGRAM:**



AZ: DTC P0462 — FUEL LEVEL SENSOR CIRCUIT LOW INPUT —

NOTE:
Check fuel level sensor circuit.
<Ref. to 2-7 [T16BA0].>

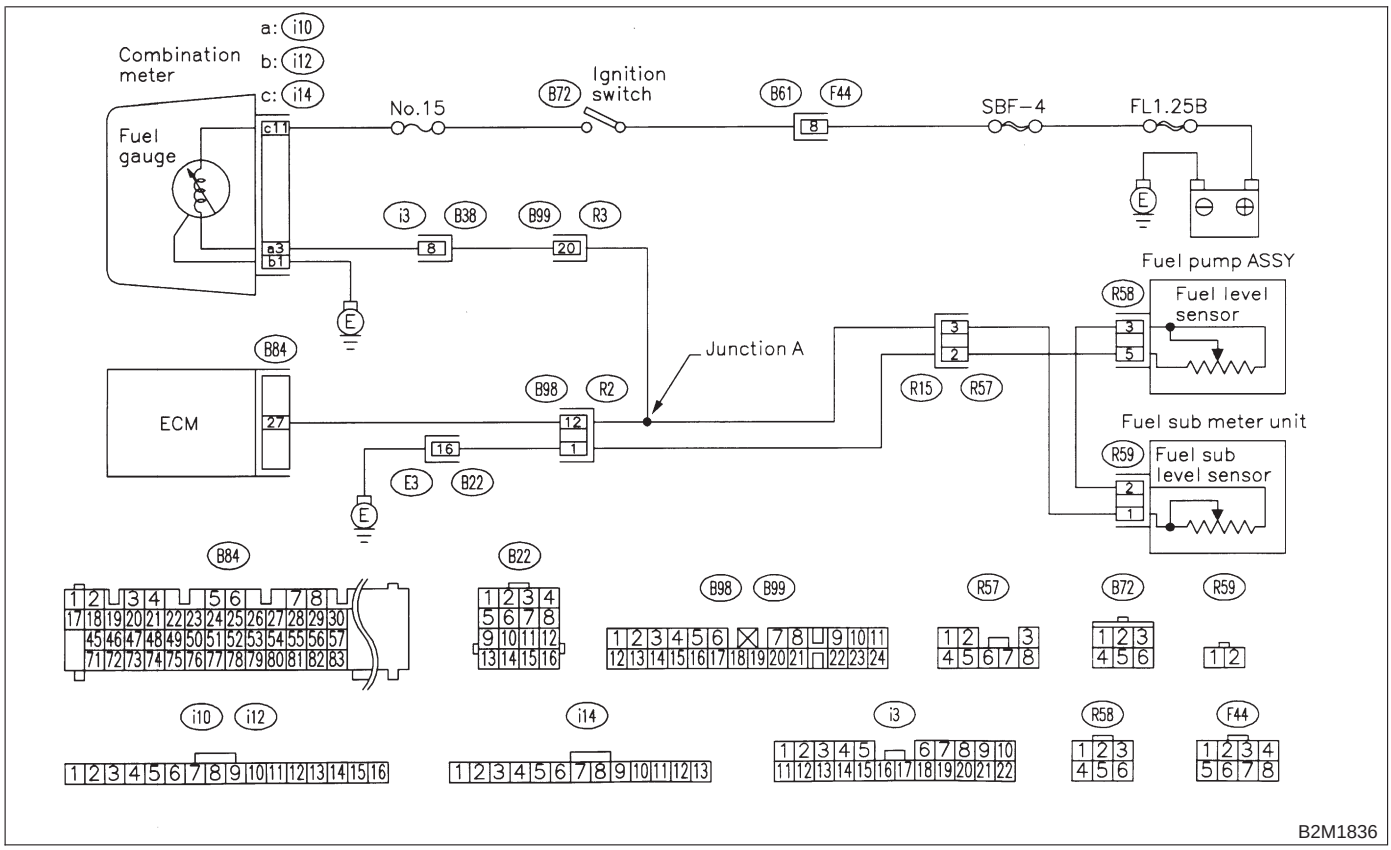
- **WIRING DIAGRAM:**



BA: DTC P0463 — FUEL LEVEL SENSOR CIRCUIT HIGH INPUT —

NOTE:
Check fuel level sensor circuit.
<Ref. to 2-7 [T16BB0].>

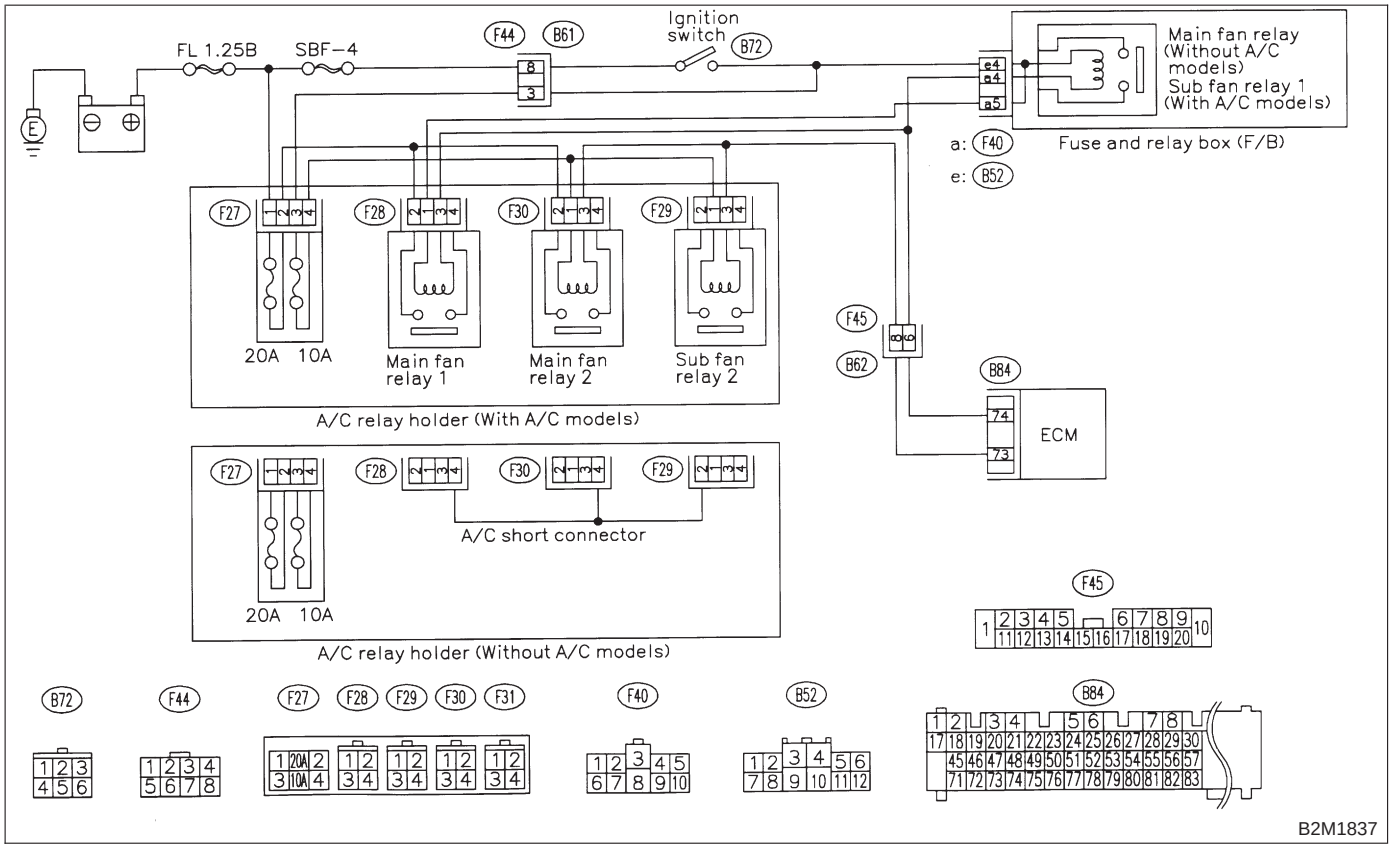
- **WIRING DIAGRAM:**



BB: DTC P0480 — COOLING FAN RELAY 1 CIRCUIT LOW INPUT —

NOTE:
Check radiator fan relay 1 circuit.
<Ref. to 2-7 [T16BC0].>

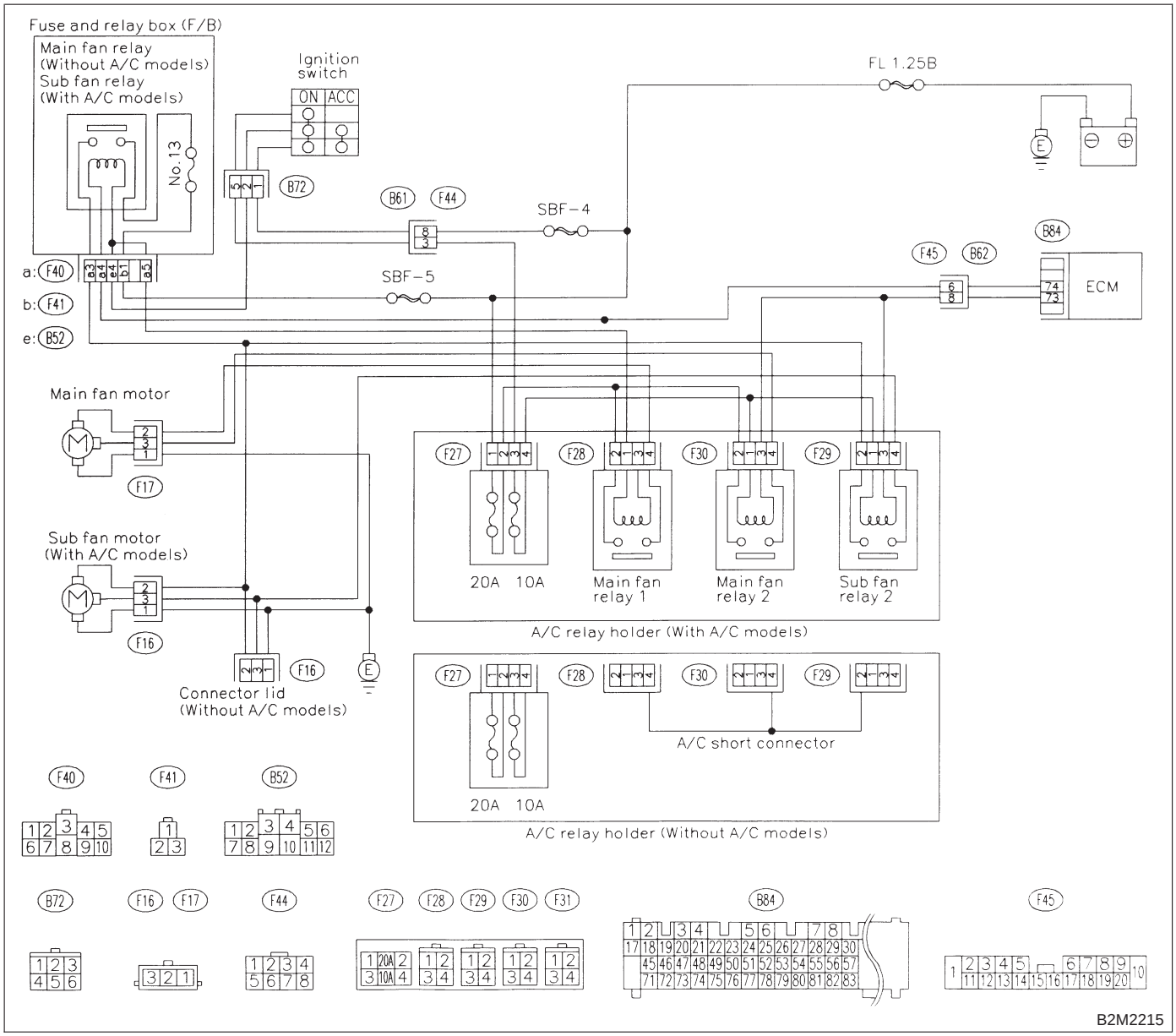
- **WIRING DIAGRAM:**



BC: DTC P0483 — COOLING FAN FUNCTION PROBLEM —

NOTE:
Check radiator fan control system.
<Ref. to 2-7 [T16BD0].>

- **WIRING DIAGRAM:**

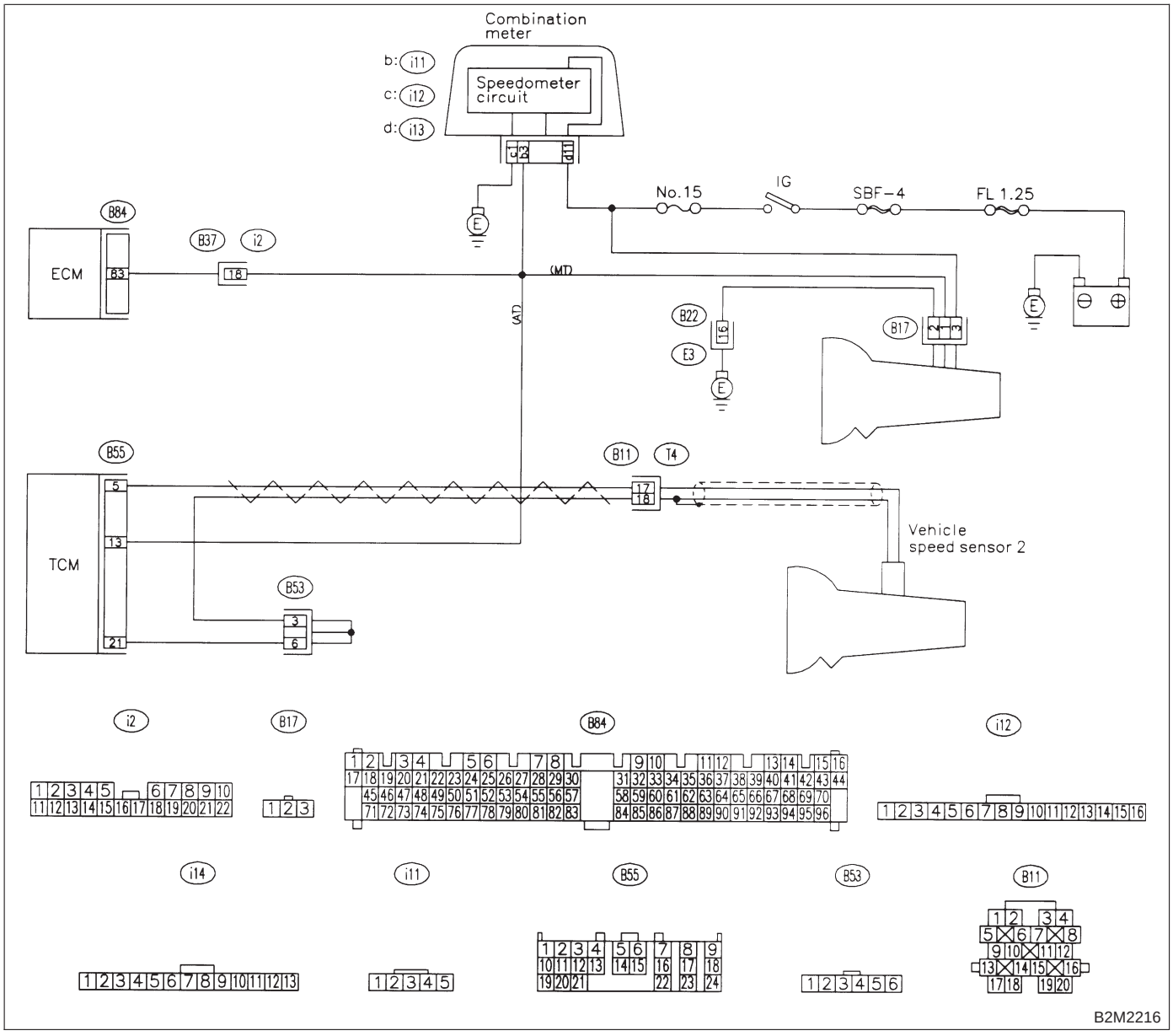


BD: DTC P0500 — VEHICLE SPEED SENSOR MALFUNCTION —

- **DTC DETECTING CONDITION:**
  - Immediately at fault recognition

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



16BD1 : CHECK VEHICLE MODEL.

CHECK : ***Is the vehicle AT model?***
YES : Go to step **16BD2**.
NO : Go to step **16BD3**.

16BD2 : CHECK DTC P0720 ON DISPLAY.

CHECK : ***Does the Subaru Select Monitor or OBD-II general scan tool indicate DTC P0720?***
YES : Check vehicle speed sensor. <Ref. to 3-2 [T8G0].>
NO : Go to step **16BD3**.

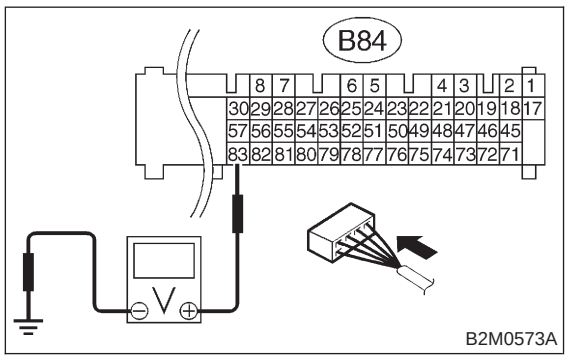
16BD3 : CHECK SPEEDOMETER OPERATION IN COMBINATION METER.

CHECK : ***Does speedometer operate normally?***
YES : Go to step **16BD4**.
NO : Check speedometer and vehicle speed sensor. <Ref. to 6-2b [T3A0].>

16BD4 : CHECK HARNESS BETWEEN ECM AND COMBINATION METER CONNECTOR.

1) Turn ignition switch to OFF.
2) Disconnect connector from ECM.
3) Turn ignition switch to ON.
4) Measure voltage between ECM and chassis ground.

Connector & terminal
(B84) No. 83 (+) — Chassis ground (−):



CHECK : ***Is the voltage more than 2 V?***
YES : Repair harness and connector.

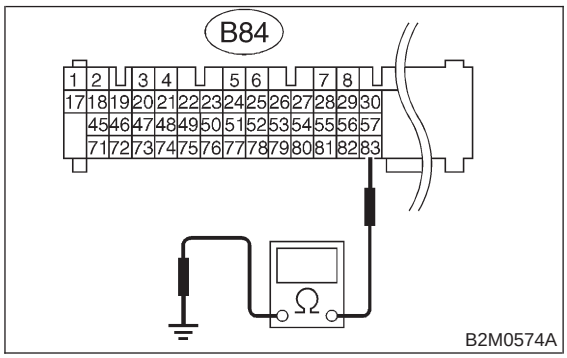
NOTE:
In this case, repair the following:
- Open circuit in harness between ECM and combination meter connector
- Poor contact in ECM connector
- Poor contact in combination meter connector
- Poor contact in coupling connector (B37)

NO : Go to step **16BD5**.

16BD5 : CHECK HARNESS BETWEEN ECM AND COMBINATION METER CONNECTOR.

1) Turn ignition switch to OFF.
2) Disconnect connector from ECM.
3) Measure resistance of harness between ECM connector and chassis ground.

Connector & terminal
(B84) No. 83 — Chassis ground:

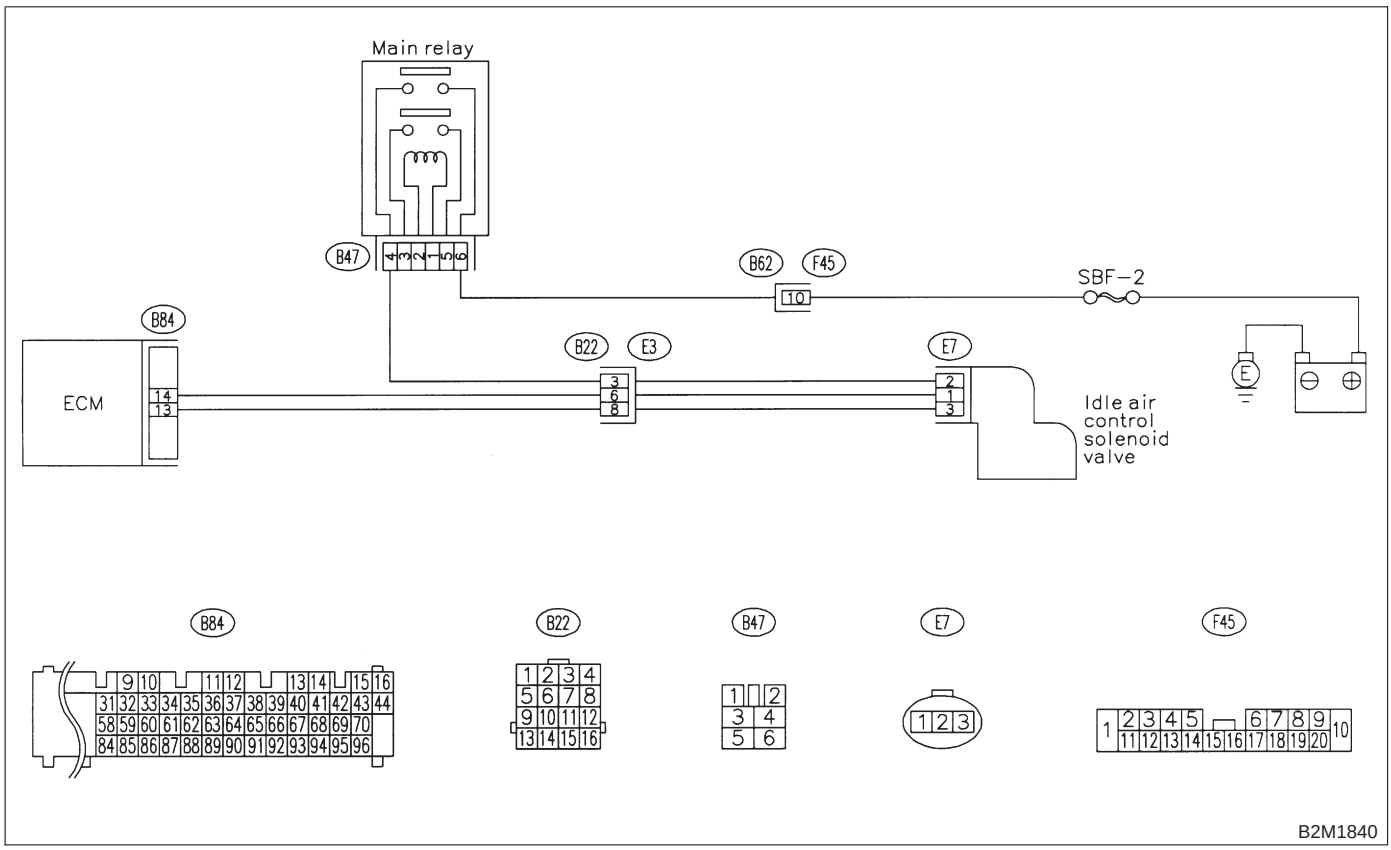


CHECK : ***Is the resistance less than 10 Ω?***
YES : Repair ground short circuit in harness between ECM and combination meter connector.
NO : Repair poor contact in ECM connector.

BE: DTC P0505 — IDLE CONTROL SYSTEM MALFUNCTION —

NOTE:
Check idle air control solenoid valve circuit.
<Ref. to 2-7 [T16BF0].>

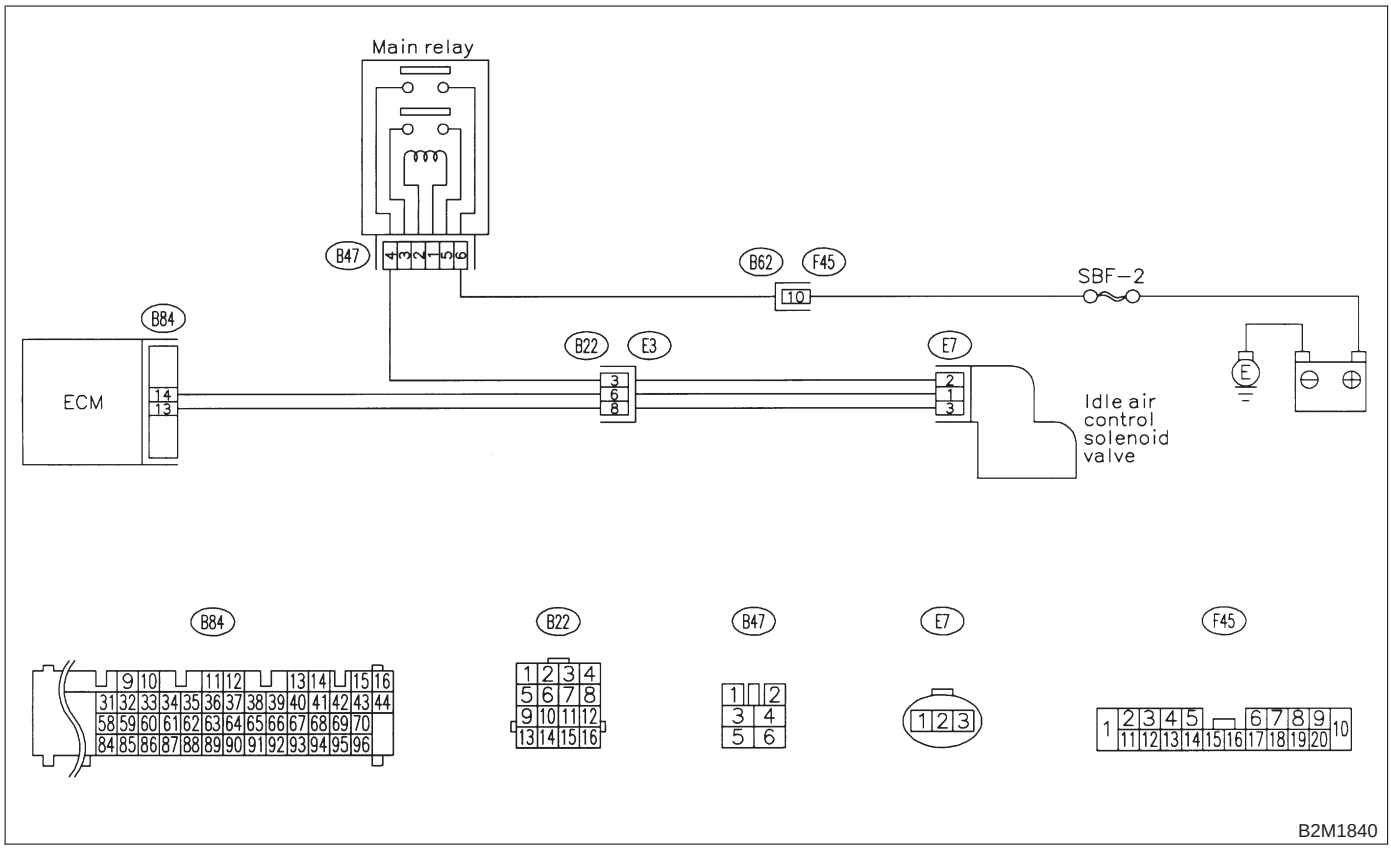
- **WIRING DIAGRAM:**



BF: DTC P0506 — IDLE CONTROL SYSTEM RPM LOWER THAN EXPECTED —

NOTE:
Check idle air control system.
<Ref. to 2-7 [T16BG0].>

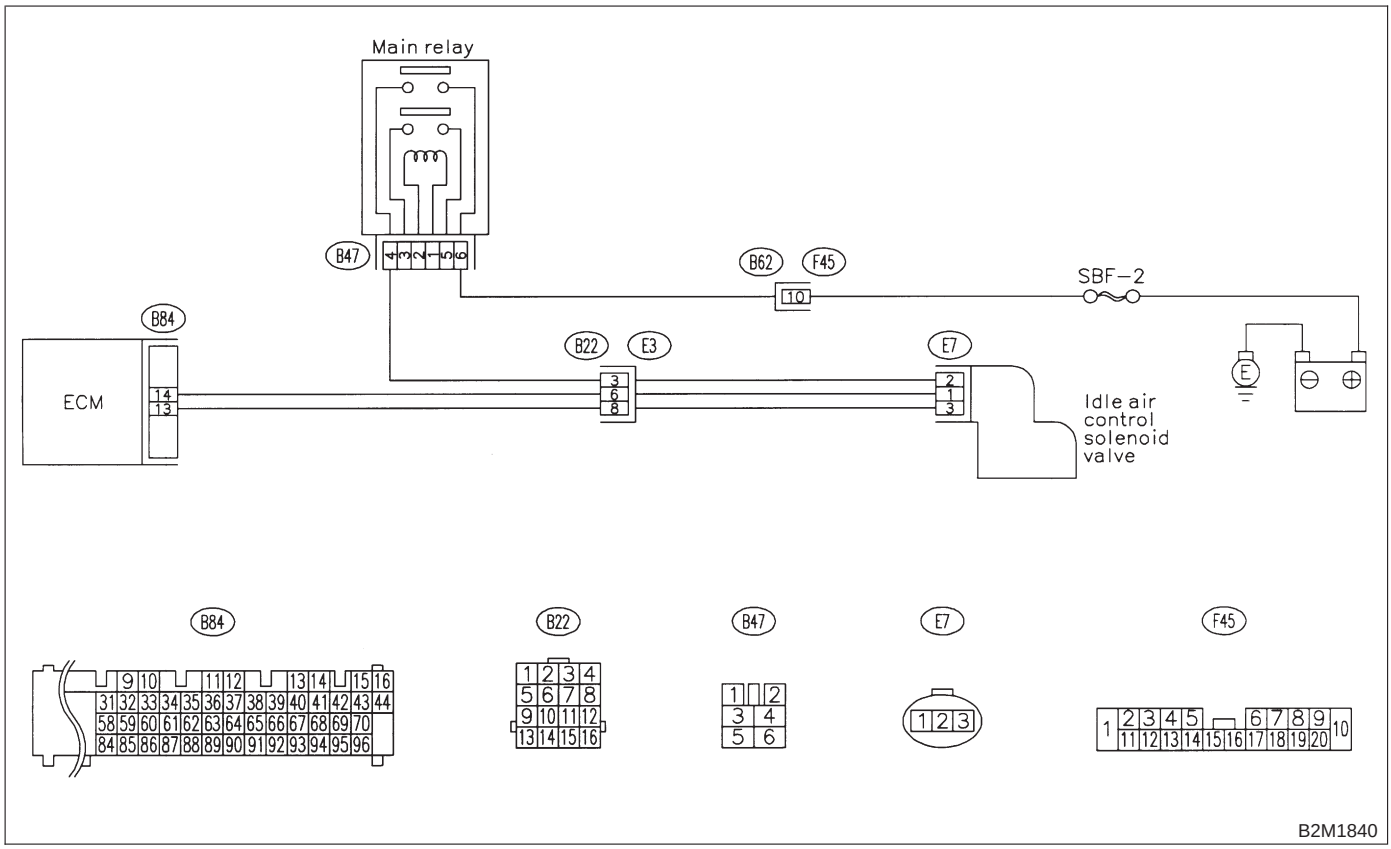
- **WIRING DIAGRAM:**



BG: DTC P0507 — IDLE CONTROL SYSTEM RPM HIGHER THAN EXPECTED —

NOTE:
Check idle air control system.
<Ref. to 2-7 [T16BH0].>

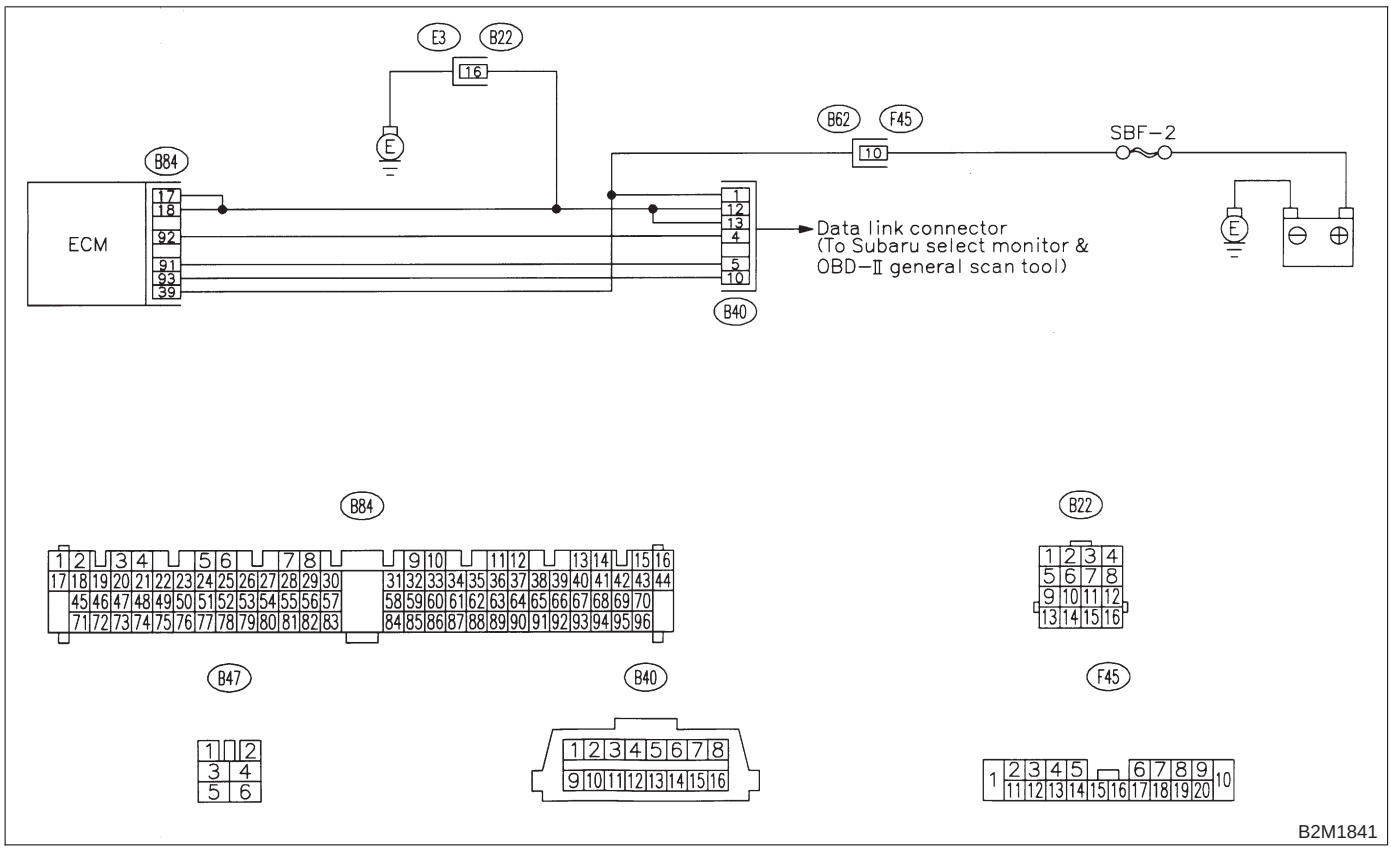
- **WIRING DIAGRAM:**



BH: DTC P0600 — SERIAL COMMUNICATION LINK MALFUNCTION —

NOTE:
Check serial communication circuit.
<Ref. to 2-7 [T16BI0].>

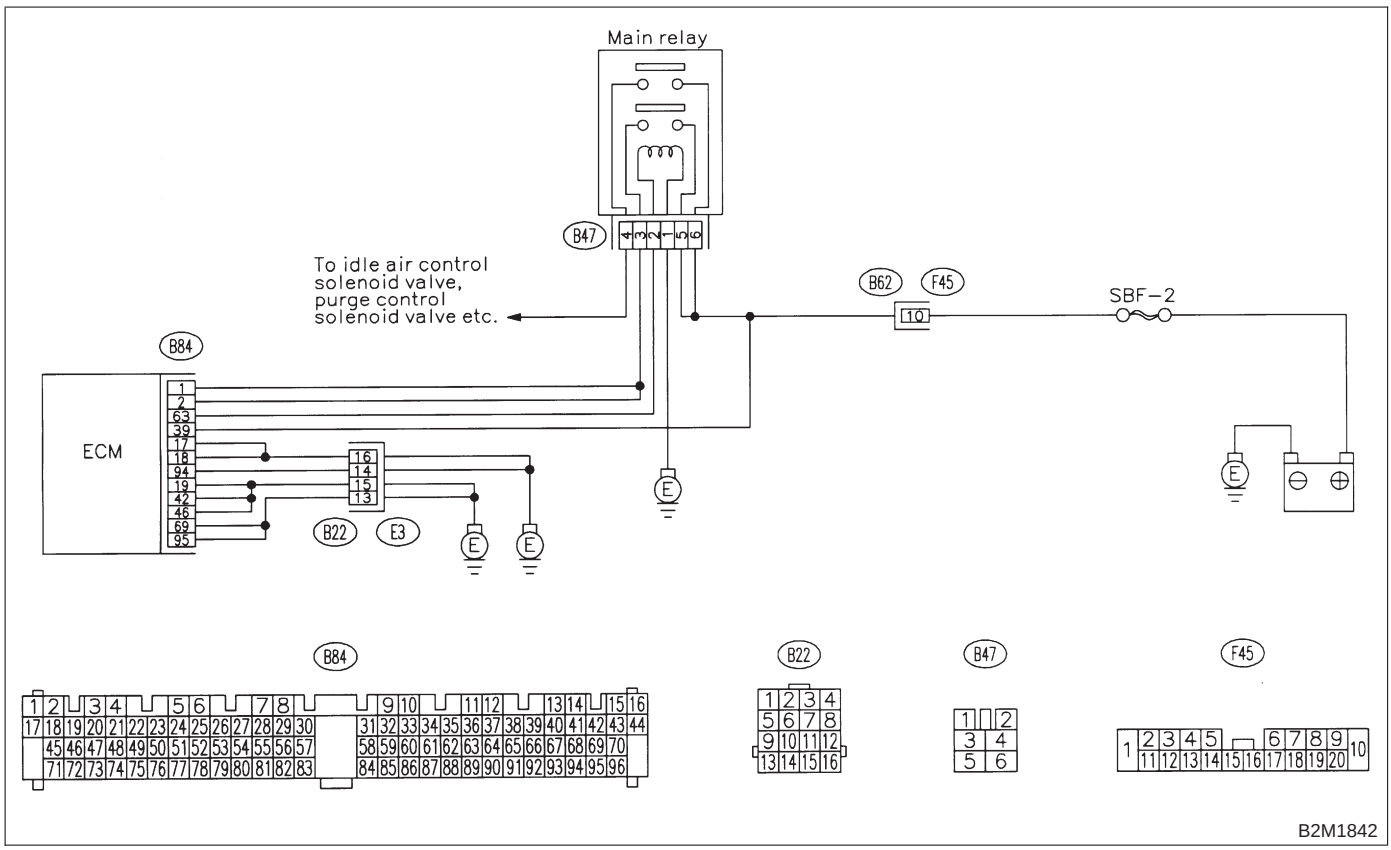
- **WIRING DIAGRAM:**



BI: DTC P0601 — INTERNAL CONTROL MODULE MEMORY CHECK SUM ERROR —

NOTE:
Check internal control module memory.
<Ref. to 2-7 [T16BJ0].>

- **WIRING DIAGRAM:**



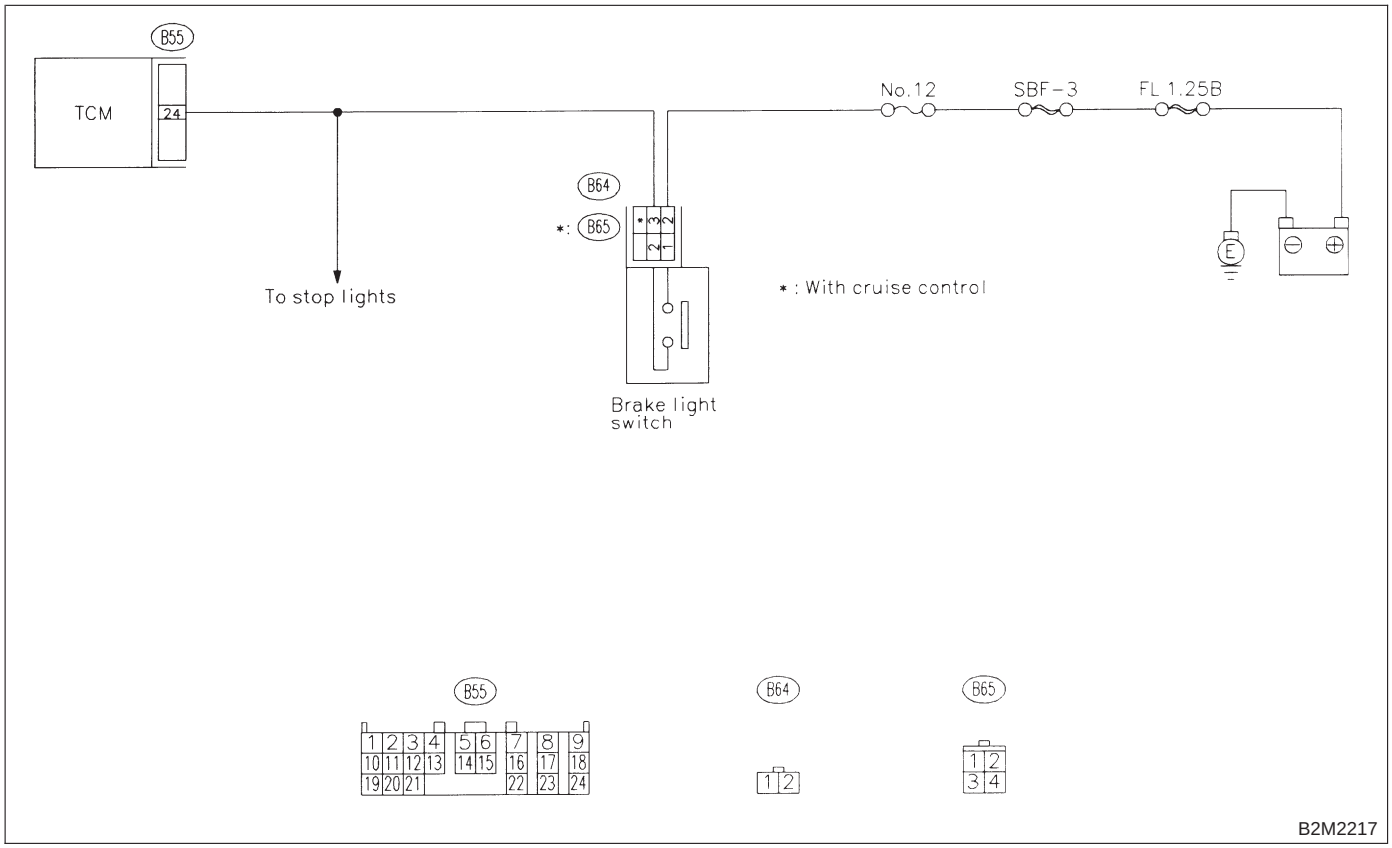
MEMO:

BJ: DTC P0703 — BRAKE SWITCH INPUT MALFUNCTION —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



16BJ1 : CHECK OPERATION OF BRAKE LIGHT.

CHECK : ***Does brake light come on when depressing the brake pedal?***

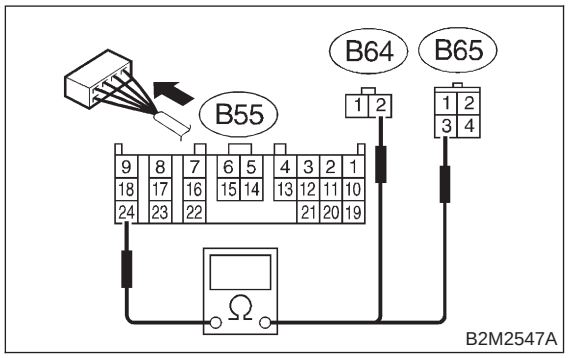
YES : Go to step **16BJ2**.

NO : Repair or replace brake light circuit.

16BJ2 : CHECK HARNESS BETWEEN TCM AND BRAKE LIGHT SWITCH CONNECTOR.

1) Disconnect connectors from TCM and brake light switch.
2) Measure resistance of harness between TCM and brake light switch connector.

Connector & terminal
(B55) No. 24 — (B64) No. 2:
(B55) No. 24 — (B65) No. 3 (With cruise control):



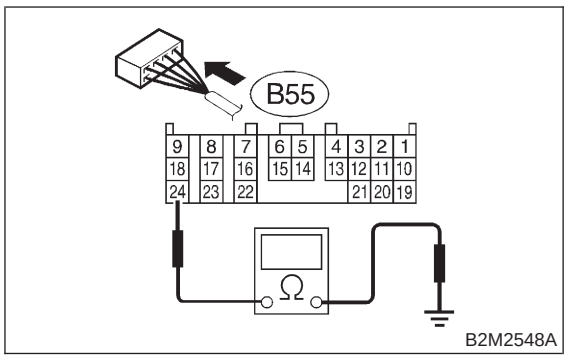
CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16BJ3**.
NO : Repair or replace harness and connector.

NOTE:
In this case, repair the following:
- Open circuit in harness between TCM and brake light switch connector
- Poor contact in TCM connector
- Poor contact in brake light switch connector

16BJ3 : CHECK HARNESS BETWEEN TCM AND BRAKE LIGHT SWITCH CONNECTOR.

Measure resistance of harness between TCM and chassis ground.

Connector & terminal
(B55) No. 24 — Chassis ground:

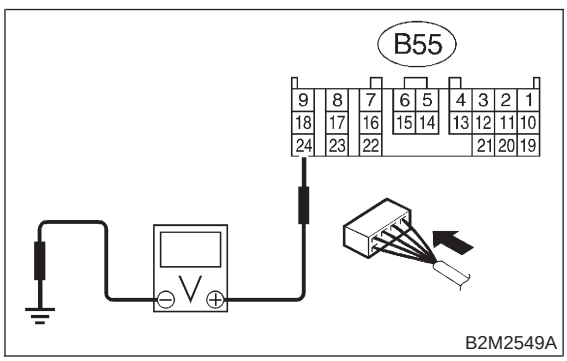


CHECK : ***Is the resistance more than 1 MΩ?***
YES : Go to step **16BJ4**.
NO : Repair ground short circuit in harness between TCM and brake light switch connector.

16BJ4 : CHECK INPUT SIGNAL FOR TCM.

1) Connect connectors to TCM and brake light switch.
2) Measure voltage between TCM and chassis ground.

Connector & terminal
(B55) No. 24 (+) — Chassis ground (−):

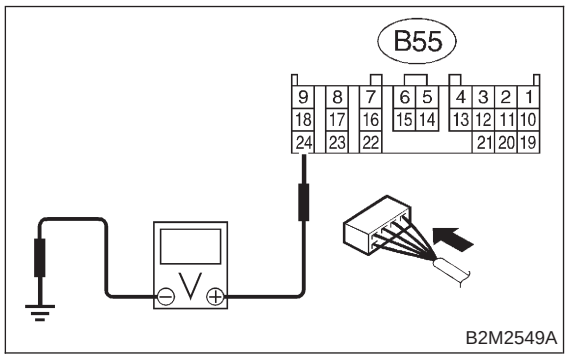


CHECK : ***Is the voltage less than 1 V when releasing the brake pedal?***
YES : Go to step **16BJ5**.
NO : Adjust or replace brake light switch. <Ref. to 4-5 [W1A1].>

16BJ5 : CHECK INPUT SIGNAL FOR TCM.

Measure voltage between TCM and chassis ground.

Connector & terminal
(B55) No. 24 (+) — Chassis ground (−):



CHECK : ***Is the voltage more than 10 V when depressing the brake pedal?***

YES : Go to step **16BJ6**.

NO : Adjust or replace brake light switch. <Ref. to 4-5 [W1A1].>

16BJ6 : CHECK POOR CONTACT.

Check poor contact in TCM connector. <Ref. to FOREWORD [T3C1].>

CHECK : ***Is there poor contact in TCM connector?***

YES : Repair poor contact in TCM connector.

NO : Replace TCM. <Ref. to 3-2 [W22A0].>

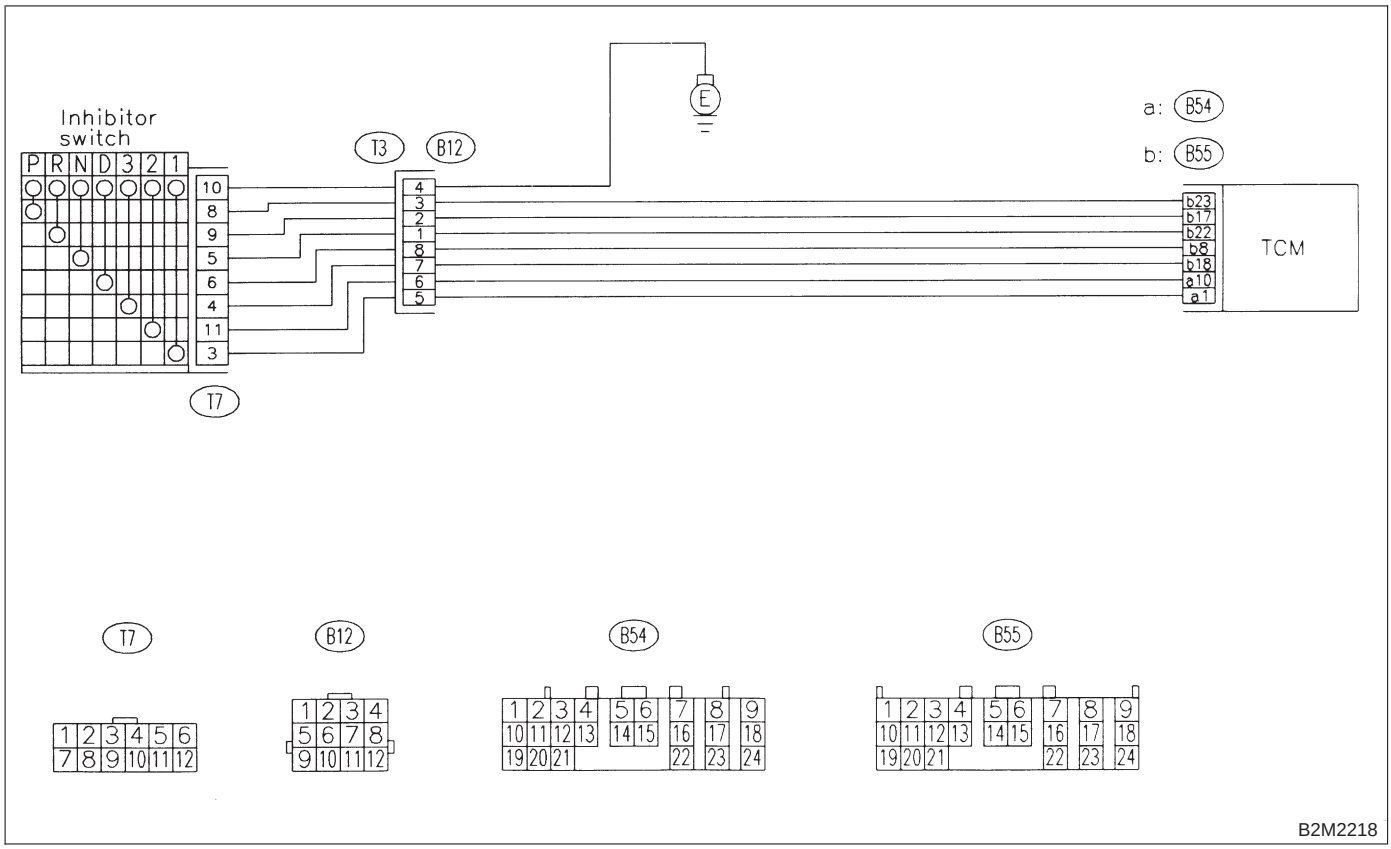
MEMO:

BK: DTC P0705 — TRANSMISSION RANGE SENSOR CIRCUIT MALFUNCTION —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault
- **TROUBLE SYMPTOM:**
  - Starter does not rotate when selector lever is in “P” or “N” range.
  - Starter rotates when selector lever is in “R”, “D”, “3”, “2” or “1” range.
  - Engine brake is not effected when selector lever is in “3” range.
  - Shift characteristics are erroneous.

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

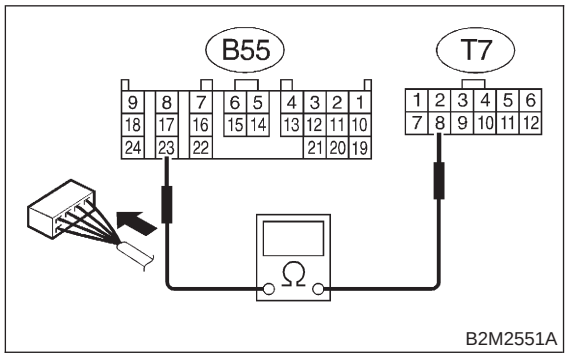
- **WIRING DIAGRAM:**



16BK1 : CHECK HARNESS BETWEEN TCM AND INHIBITOR SWITCH CONNECTOR.

1) Turn ignition switch to OFF.
2) Disconnect connectors from TCM and transmission.
3) Measure resistance of harness between TCM and transmission harness connector.

Connector & terminal
(B55) No. 23 — (T7) No. 8:



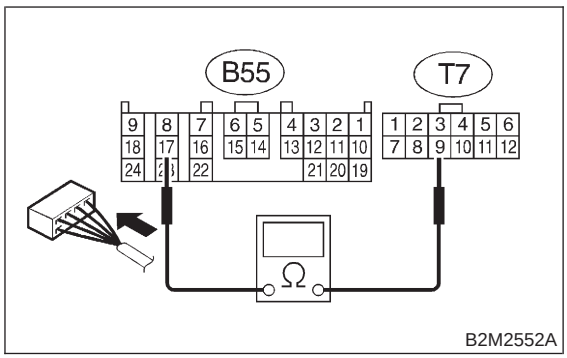
CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16BK2**.
NO : Repair harness and connector.

NOTE:
In this case, repair the following:
● Open circuit in harness between ECM and inhibitor switch connector
● Poor contact in coupling connector (B12)

16BK2 : CHECK HARNESS BETWEEN TCM AND INHIBITOR SWITCH CONNECTOR.

Measure resistance of harness between TCM and transmission harness connector.

Connector & terminal
(B55) No. 17 — (T7) No. 9:



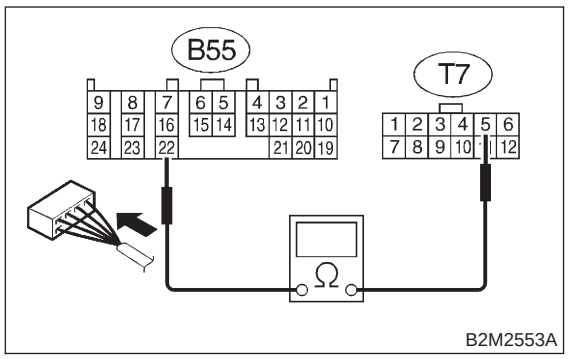
CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16BK3**.
NO : Repair harness and connector.

NOTE:
In this case, repair the following:
● Open circuit in harness between ECM and inhibitor switch connector
● Poor contact in coupling connector (B12)

16BK3 : CHECK HARNESS BETWEEN TCM AND INHIBITOR SWITCH CONNECTOR.

Measure resistance of harness between TCM and transmission harness connector.

Connector & terminal
(B55) No. 22 — (T7) No. 5:



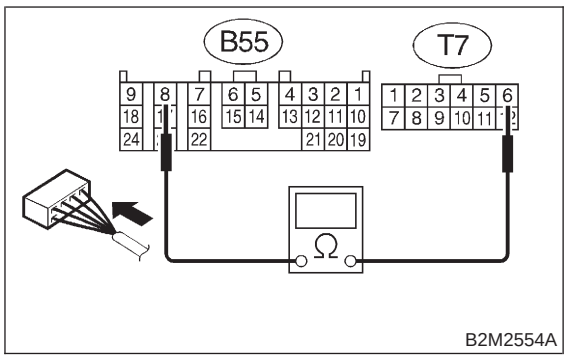
CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16BK4**.
NO : Repair harness and connector.

NOTE:
In this case, repair the following:
- Open circuit in harness between ECM and inhibitor switch connector.
- Poor contact in coupling connector (B12)

16BK4 : CHECK HARNESS BETWEEN TCM AND INHIBITOR SWITCH CONNECTOR.

Measure resistance of harness between TCM and transmission harness connector.

Connector & terminal
(B55) No. 8 — (T7) No. 6:



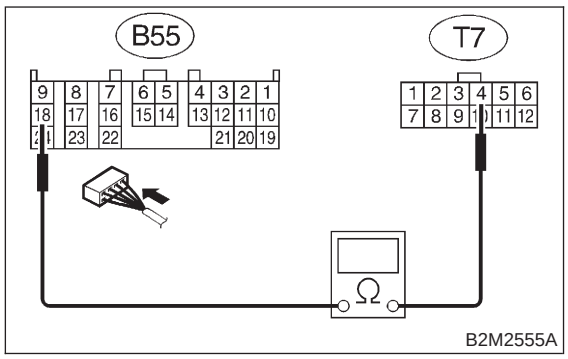
CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16BK5**.
NO : Repair harness and connector.

NOTE:
In this case, repair the following:
- Open circuit in harness between ECM and inhibitor switch connector.
- Poor contact in coupling connector (B12)

16BK5 : CHECK HARNESS BETWEEN TCM AND INHIBITOR SWITCH CONNECTOR.

Measure resistance of harness between TCM and transmission harness connector.

Connector & terminal
(B55) No. 18 — (T7) No. 4:



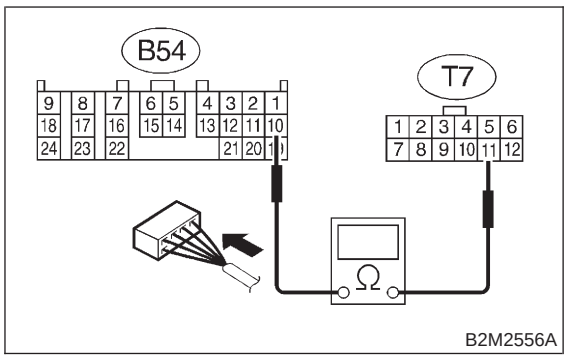
CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16BK6**.
NO : Repair harness and connector.

NOTE:
In this case, repair the following:
- Open circuit in harness between ECM and inhibitor switch connector.
- Poor contact in coupling connector (B12)

16BK6 : CHECK HARNESS BETWEEN TCM AND INHIBITOR SWITCH CONNECTOR.

Measure resistance of harness between TCM and transmission harness connector.

Connector & terminal
(B54) No. 10 — (T7) No. 11:



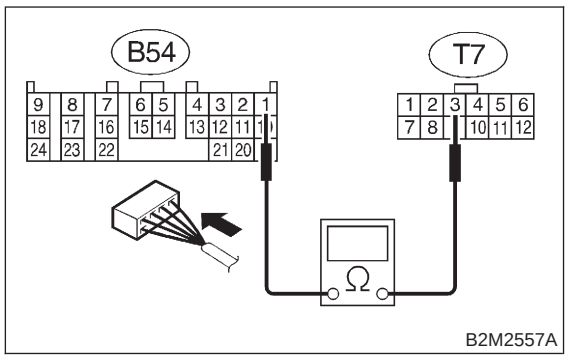
CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16BK7**.
NO : Repair harness and connector.

NOTE:
In this case, repair the following:
- Open circuit in harness between ECM and inhibitor switch connector.
- Poor contact in coupling connector (B12)

16BK7 : CHECK HARNESS BETWEEN TCM AND INHIBITOR SWITCH CONNECTOR.

Measure resistance of harness between TCM and transmission harness connector.

Connector & terminal
(B54) No. 1 — (T7) No. 3:



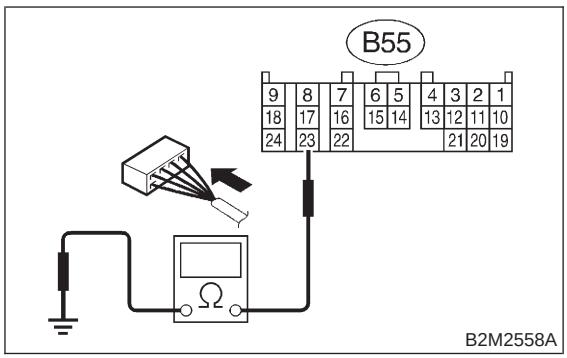
CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16BK8**.
NO : Repair harness and connector.

NOTE:
In this case, repair the following:
- Open circuit in harness between ECM and inhibitor switch connector.
- Poor contact in coupling connector (B12)

16BK8 : CHECK HARNESS BETWEEN TCM AND INHIBITOR SWITCH CONNECTOR.

Measure resistance of harness between TCM and chassis ground.

Connector & terminal
(B55) No. 23 — Chassis ground:

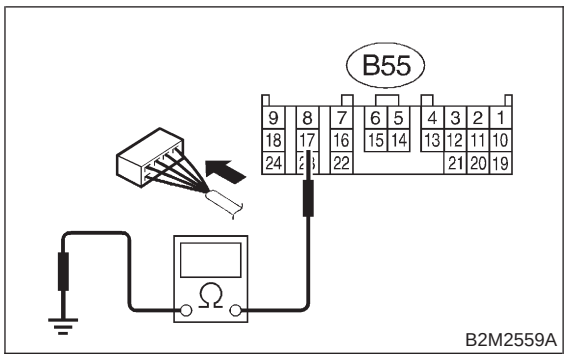


CHECK : ***Is the resistance more than 1 MΩ?***
YES : Go to step **16BK9**.
NO : Repair ground short circuit in harness between TCM and transmission harness connector.

16BK9 : CHECK HARNESS BETWEEN TCM AND INHIBITOR SWITCH CONNECTOR.

Measure resistance of harness between TCM and chassis ground.

Connector & terminal
(B55) No. 17 — Chassis ground:

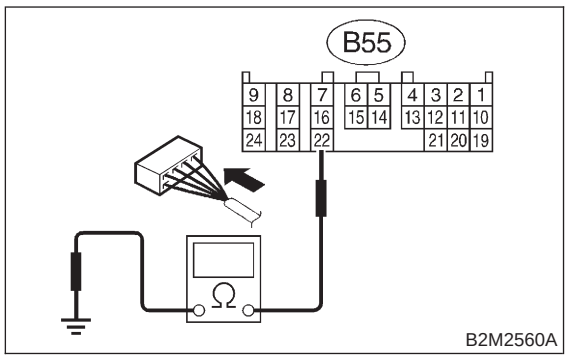


CHECK : ***Is the resistance more than 1 MΩ?***
YES : Go to step **16BK10**.
NO : Repair ground short circuit in harness between TCM and transmission harness connector.

16BK10 : CHECK HARNESS BETWEEN TCM AND INHIBITOR SWITCH CONNECTOR.

Measure resistance of harness between TCM and chassis ground.

Connector & terminal
(B55) No. 22 — Chassis ground:

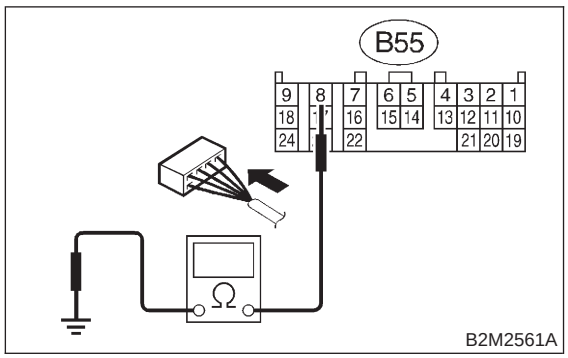


CHECK : ***Is the resistance more than 1 MΩ?***
YES : Go to step **16BK11**.
NO : Repair ground short circuit in harness between TCM and transmission harness connector.

16BK11 : CHECK HARNESS BETWEEN TCM AND INHIBITOR SWITCH CONNECTOR.

Measure resistance of harness between TCM and chassis ground.

Connector & terminal
(B55) No. 8 — Chassis ground:

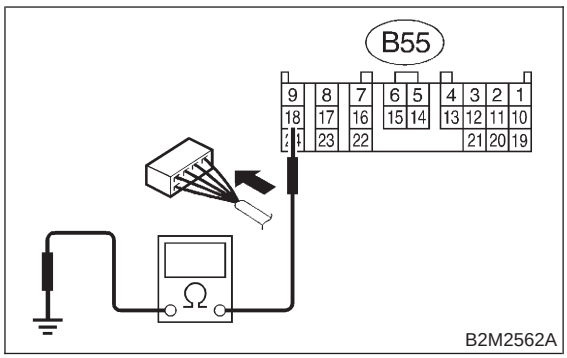


CHECK : ***Is the resistance more than 1 MΩ?***
YES : Go to step **16BK12**.
NO : Repair ground short circuit in harness between TCM and transmission harness connector.

16BK12 : CHECK HARNESS BETWEEN TCM AND INHIBITOR SWITCH CONNECTOR.

Measure resistance of harness between TCM and chassis ground.

Connector & terminal
(B55) No. 18 — Chassis ground:

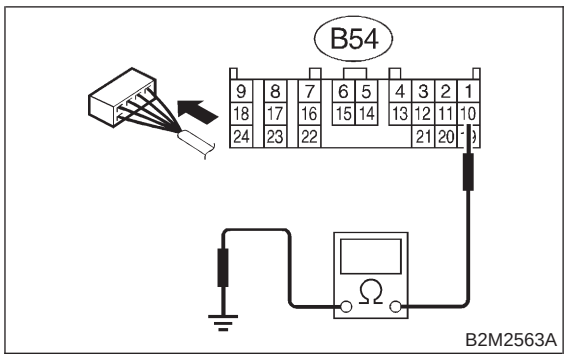


CHECK : ***Is the resistance more than 1 MΩ?***
YES : Go to step **16BK13**.
NO : Repair ground short circuit in harness between TCM and transmission harness connector.

16BK13 : CHECK HARNESS BETWEEN TCM AND INHIBITOR SWITCH CONNECTOR.

Measure resistance of harness between TCM and chassis ground.

Connector & terminal
(B54) No. 10 — Chassis ground:

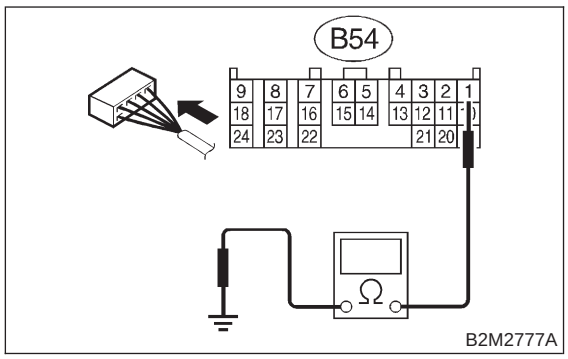


CHECK : ***Is the resistance more than 1 MΩ?***
YES : Go to step **16BK14**.
NO : Repair ground short circuit in harness between TCM and transmission harness connector.

16BK14 : CHECK HARNESS BETWEEN TCM AND INHIBITOR SWITCH CONNECTOR.

Measure resistance of harness between TCM and chassis ground.

Connector & terminal
(B54) No. 1 — Chassis ground:

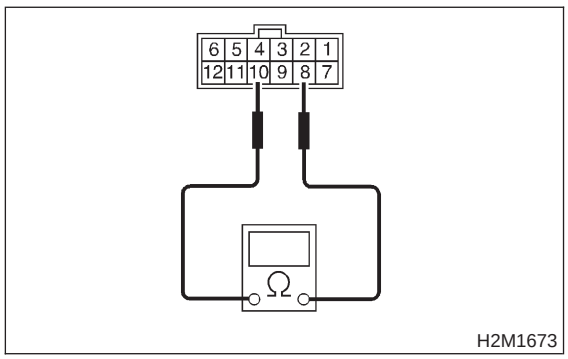


CHECK : ***Is the resistance more than 1 MΩ?***
YES : Go to step **16BK15**.
NO : Repair ground short circuit in harness between TCM and transmission harness connector.

16BK15 : CHECK INHIBITOR SWITCH.

Measure resistance between inhibitor switch connector receptacle's terminals in selector lever "P" position.

Terminals
No. 8 — No. 10:

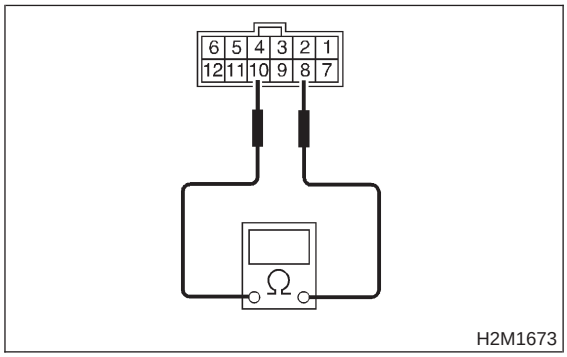


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16BK16**.
NO : Go to step **16BK29**.

16BK16 : CHECK INHIBITOR SWITCH.

Measure resistance between inhibitor switch connector receptacle's terminals in selector lever except for "P" position.

Terminals
No. 8 — No. 10:

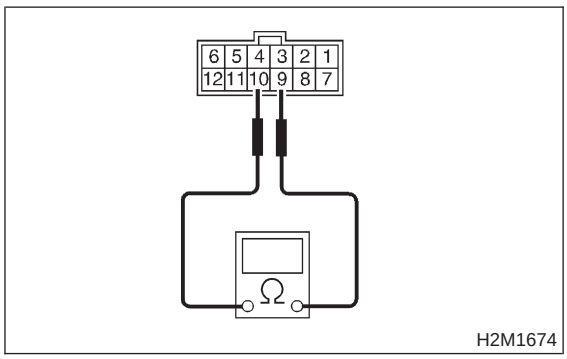


CHECK : ***Is the resistance more than 1 MΩ?***
YES : Go to step **16BK17**.
NO : Go to step **16BK29**.

16BK17 : CHECK INHIBITOR SWITCH.

Measure resistance between inhibitor switch connector receptacle's terminals in selector lever for "R" position.

Terminals
No. 9 — No. 10:

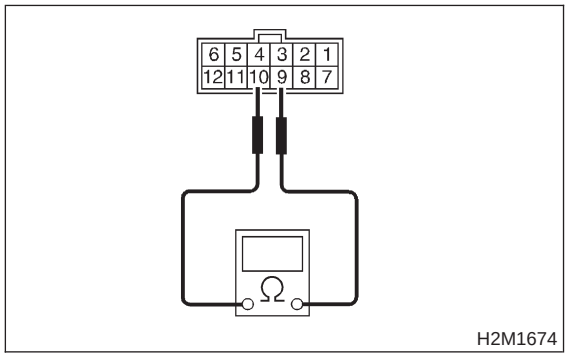


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16BK18**.
NO : Go to step **16BK29**.

16BK18 : CHECK INHIBITOR SWITCH.

Measure resistance between inhibitor switch connector receptacle's terminals in selector lever except for "R" position.

Terminals
No. 9 — No. 10:

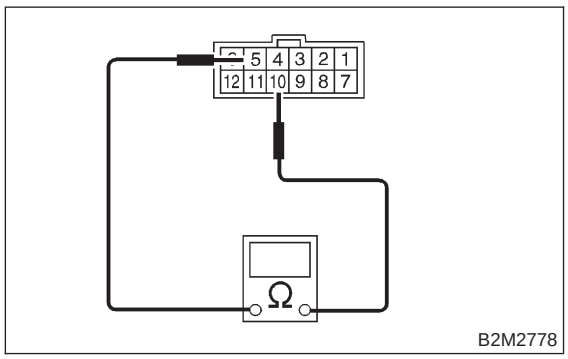


CHECK : ***Is the resistance more than 1 MΩ?***
YES : Go to step **16BK19**.
NO : Go to step **16BK29**.

16BK19 : CHECK INHIBITOR SWITCH.

Measure resistance between inhibitor switch connector receptacle's terminals in selector lever for "N" position.

Terminals
No. 5 — No. 10:

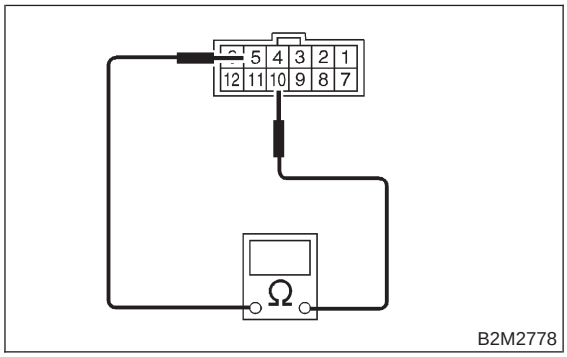


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16BK20**.
NO : Go to step **16BK29**.

16BK20 : CHECK INHIBITOR SWITCH.

Measure resistance between inhibitor switch connector receptacle's terminals in selector lever except for "N" position.

Terminals
No. 5 — No. 10:

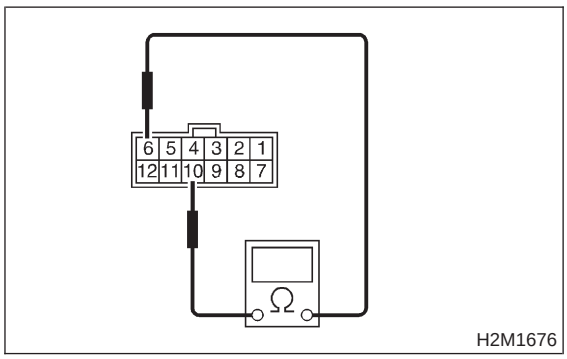


CHECK : ***Is the resistance more than 1 MΩ?***
YES : Go to step **16BK21**.
NO : Go to step **16BK29**.

16BK21 : CHECK INHIBITOR SWITCH.

Measure resistance between inhibitor switch connector receptacle's terminals in selector lever except for "D" position.

Terminals
No. 6 — No. 10:

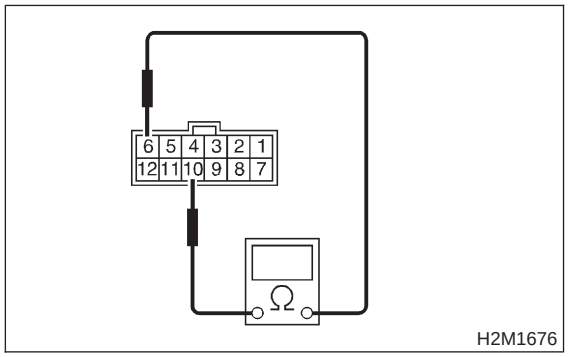


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16BK22**.
NO : Go to step **16BK29**.

16BK22 : CHECK INHIBITOR SWITCH.

Measure resistance between inhibitor switch connector receptacle's terminals in selector lever except for "D" position.

Terminals
No. 6 — No. 10:

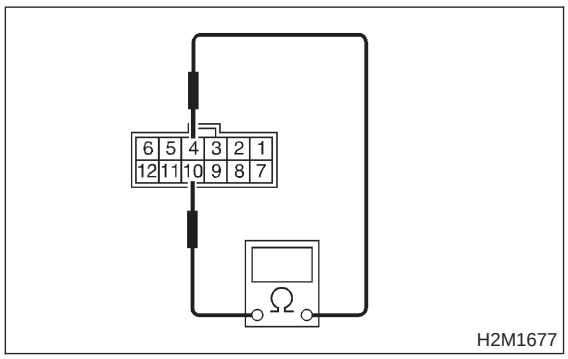


CHECK : ***Is the resistance more than 1 MΩ?***
YES : Go to step **16BK23**.
NO : Go to step **16BK29**.

16BK23 : CHECK INHIBITOR SWITCH.

Measure resistance between inhibitor switch connector receptacle's terminals in selector lever for "3" position.

Terminals
No. 4 — No. 10:

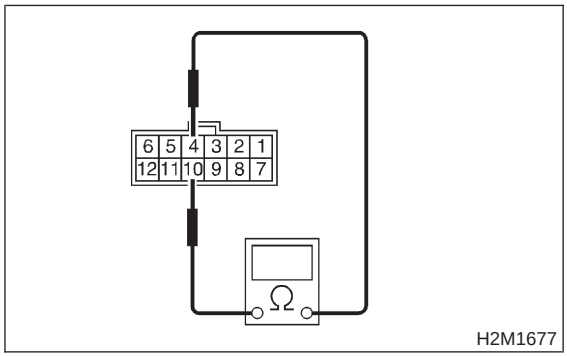


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16BK24**.
NO : Go to step **16BK29**.

16BK24 : CHECK INHIBITOR SWITCH.

Measure resistance between inhibitor switch connector receptacle's terminals in selector lever except for "3" position.

Terminals
No. 4 — No. 10:

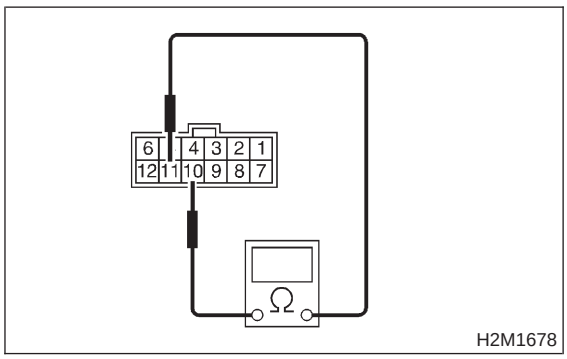


CHECK : ***Is the resistance more than 1 MΩ?***
YES : Go to step **16BK25**.
NO : Go to step **16BK29**.

16BK25 : CHECK INHIBITOR SWITCH.

Measure resistance between inhibitor switch connector receptacle's terminals in selector lever except for "2" position.

Terminals
No. 11 — No. 10:

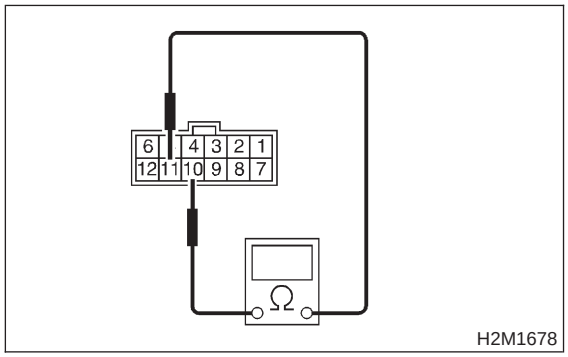


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16BK26**.
NO : Go to step **16BK29**.

16BK26 : CHECK INHIBITOR SWITCH.

Measure resistance between inhibitor switch connector receptacle's terminals in selector lever except for "R" position.

Terminals
No. 11 — No. 10:

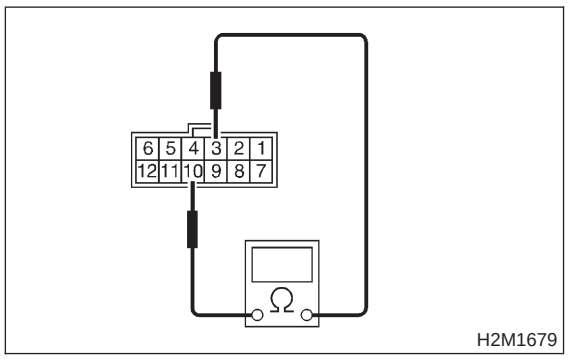


CHECK : ***Is the resistance more than 1 MΩ?***
YES : Go to step **16BK27**.
NO : Go to step **16BK29**.

16BK27 : CHECK INHIBITOR SWITCH.

Measure resistance between inhibitor switch connector receptacle's terminals in selector lever except for "1" position.

Terminals
No. 3 — No. 10:

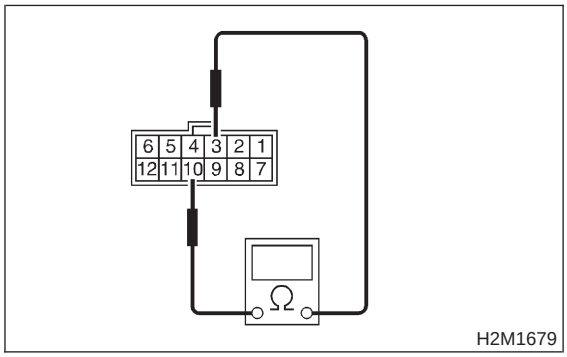


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16BK28**.
NO : Go to step **16BK29**.

16BK28 : CHECK INHIBITOR SWITCH.

Measure resistance between inhibitor switch connector receptacle's terminals in selector lever except for "1" position.

Terminals
No. 3 — No. 10:



CHECK : ***Is the resistance more than 1 MΩ?***
YES : Go to step **16BK30**.
NO : Go to step **16BK29**.

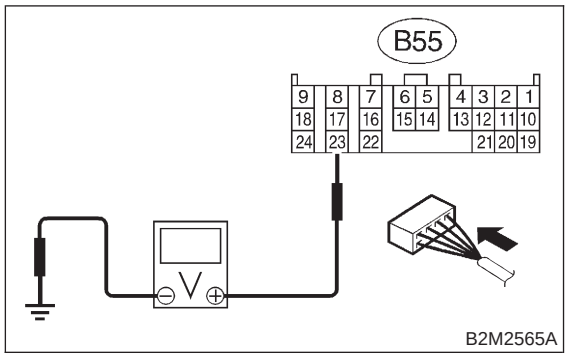
16BK29 : CHECK SELECTOR CABLE.

CHECK : ***Is there faulty connection in the selector cable?***
YES : Repair connection of selector cable.
NO : Replace inhibitor switch. <Ref. to 3-2 [W2C0].>

16BK30 : CHECK INPUT SIGNAL FOR TCM.

1) Turn ignition switch to OFF.
2) Connect connector to TCM and transmission.
3) Turn ignition switch to ON.
4) Measure voltage between TCM and chassis ground.

Connector & terminal
(B55) No. 23 (+) — Chassis ground (−):

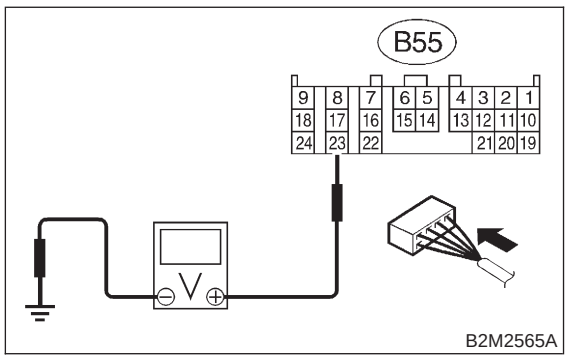


CHECK : ***Is the voltage less than 1 V?***
YES : Go to step **16BK31**.
NO : Go to step **16BK44**.

16BK31 : CHECK INPUT SIGNAL FOR TCM.

Measure voltage between TCM chassis ground in selector lever except for “P” and “N” positions.

Connector & terminal
(B55) No. 23 (+) — Chassis ground (−):

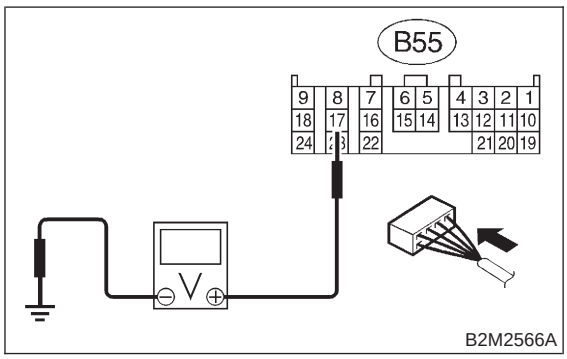


CHECK : ***Is the voltage more than 8 V?***
YES : Go to step **16BK32**.
NO : Go to step **16BK44**.

16BK32 : CHECK INPUT SIGNAL FOR TCM.

Measure voltage between TCM chassis ground in selector lever “R” position.

Connector & terminal
(B55) No. 17 (+) — Chassis ground (−):

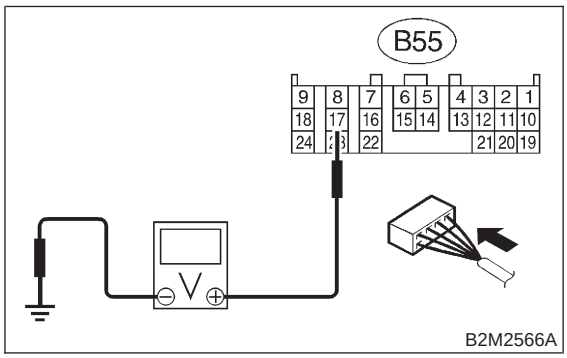


CHECK : ***Is the voltage less than 1 V?***
YES : Go to step **16BK33**.
NO : Go to step **16BK44**.

16BK33 : CHECK INPUT SIGNAL FOR TCM.

Measure voltage between TCM chassis ground in selector lever except for “R” position.

Connector & terminal
(B55) No. 17 (+) — Chassis ground (−):

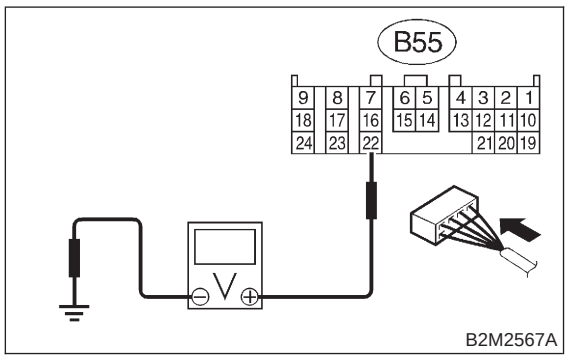


CHECK : ***Is the voltage more than 6 V?***
YES : Go to step **16BK34**.
NO : Go to step **16BK44**.

16BK34 : CHECK INPUT SIGNAL FOR TCM.

Measure voltage between TCM chassis ground in selector lever “P” and “N” positions.

Connector & terminal
(B55) No. 22 (+) — Chassis ground (−):

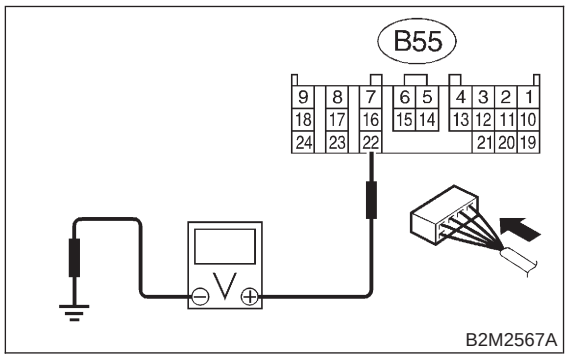


CHECK : ***Is the voltage less than 1 V?***
YES : Go to step **16BK35**.
NO : Go to step **16BK44**.

16BK35 : CHECK INPUT SIGNAL FOR TCM.

Measure voltage between TCM chassis ground in selector lever except for “N” and “P” positions.

Connector & terminal
(B55) No. 22 (+) — Chassis ground (−):

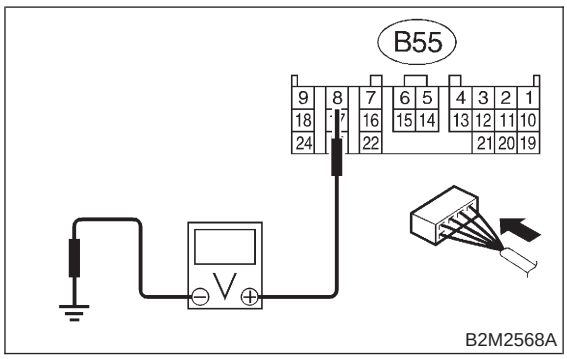


CHECK : ***Is the voltage more than 8 V?***
YES : Go to step **16BK36**.
NO : Go to step **16BK44**.

16BK36 : CHECK INPUT SIGNAL FOR TCM.

Measure voltage between TCM and chassis ground in selector lever “D” position.

Connector & terminal
(B55) No. 8 (+) — Chassis ground (−):

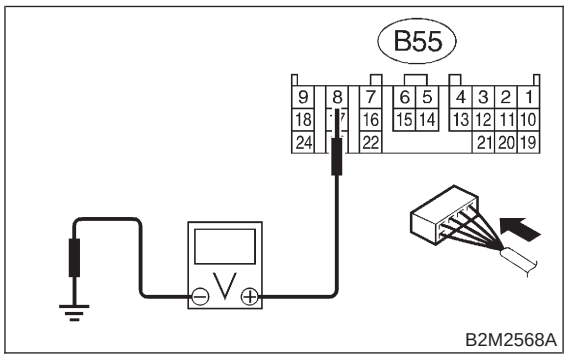


CHECK : ***Is the voltage less than 1 V?***
YES : Go to step **16BK37**.
NO : Go to step **16BK44**.

16BK37 : CHECK INPUT SIGNAL FOR TCM.

Measure voltage between TCM chassis ground in selector lever except for “N” and “P” positions.

Connector & terminal
(B55) No. 8 (+) — Chassis ground (−):

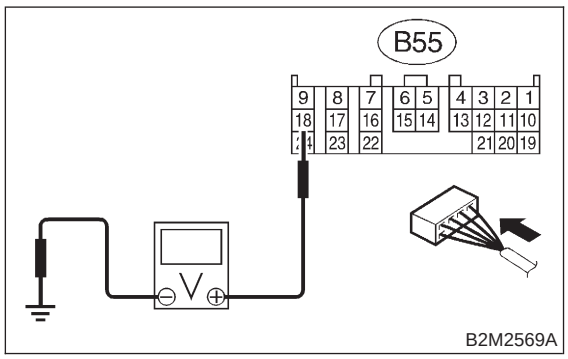


CHECK : ***Is the voltage more than 6 V?***
YES : Go to step **16BK38**.
NO : Go to step **16BK44**.

16BK38 : CHECK INPUT SIGNAL FOR TCM.

Measure voltage between TCM chassis ground in selector lever “3” position.

Connector & terminal
(B55) No. 18 (+) — Chassis ground (−):

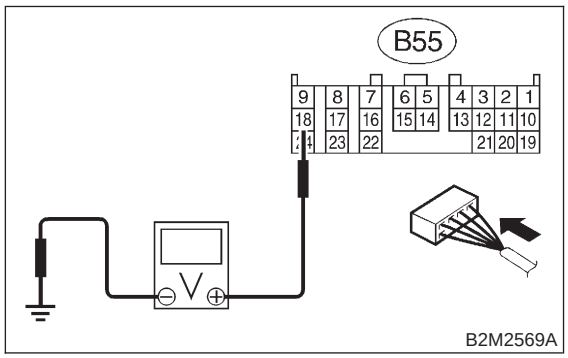


CHECK : ***Is the voltage less than 1 V?***
YES : Go to step **16BK39**.
NO : Go to step **16BK44**.

16BK39 : CHECK INPUT SIGNAL FOR TCM.

Measure voltage between TCM and chassis ground in selector lever except for “3” position.

Connector & terminal
(B55) No. 18 (+) — Chassis ground (−):

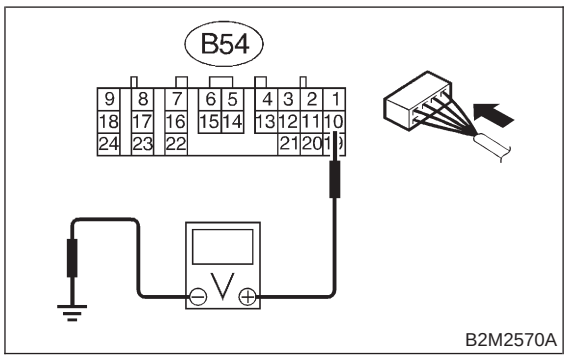


CHECK : ***Is the voltage more than 6 V?***
YES : Go to step **16BK40**.
NO : Go to step **16BK44**.

16BK40 : CHECK INPUT SIGNAL FOR TCM.

Measure voltage between TCM chassis ground in selector lever “2” position.

Connector & terminal
(B54) No. 10 (+) — Chassis ground (−):

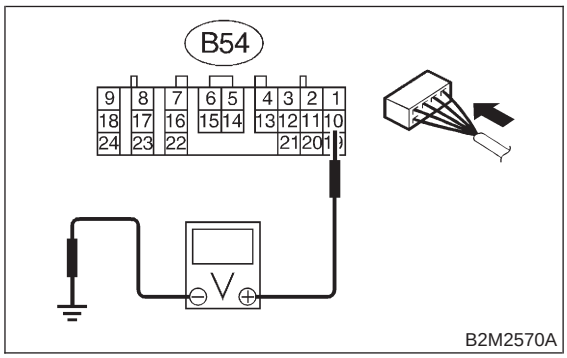


CHECK : ***Is the voltage less than 1 V?***
YES : Go to step **16BK41**.
NO : Go to step **16BK44**.

16BK41 : CHECK INPUT SIGNAL FOR TCM.

Measure voltage between TCM and chassis ground in selector lever except for “2” position.

Connector & terminal
(B54) No. 10 (+) — Chassis ground (−):

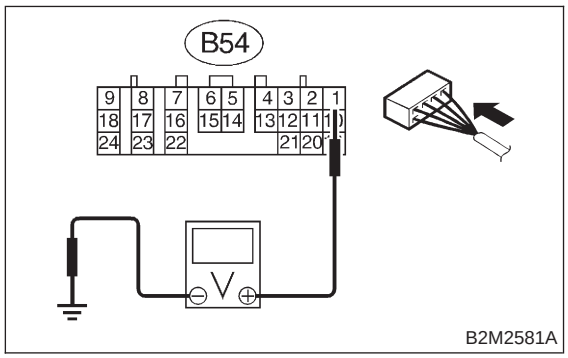


CHECK : ***Is the voltage more than 6 V?***
YES : Go to step **16BK42**.
NO : Go to step **16BK44**.

16BK42 : CHECK INPUT SIGNAL FOR TCM.

Measure voltage between TCM chassis ground in selector lever “1” position.

Connector & terminal
(B54) No. 1 (+) — Chassis ground (−):

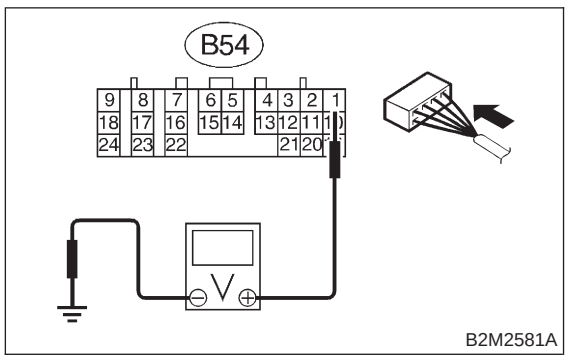


CHECK : ***Is the voltage less than 1 V?***
YES : Go to step **16BK43**.
NO : Go to step **16BK44**.

16BK43 : CHECK INPUT SIGNAL FOR TCM.

Measure voltage between TCM chassis ground in selector lever except for “1” position.

Connector & terminal
(B54) No. 1 (+) — Chassis ground (−):



CHECK : ***Is the voltage more than 6 V?***
YES : Repair poor contact in TCM connector.
NO : Go to step **16BK44**.

16BK44 : CHECK POOR CONTACT.

Check poor contact in TCM connector. <Ref. to FOREWORD [T3C1].>

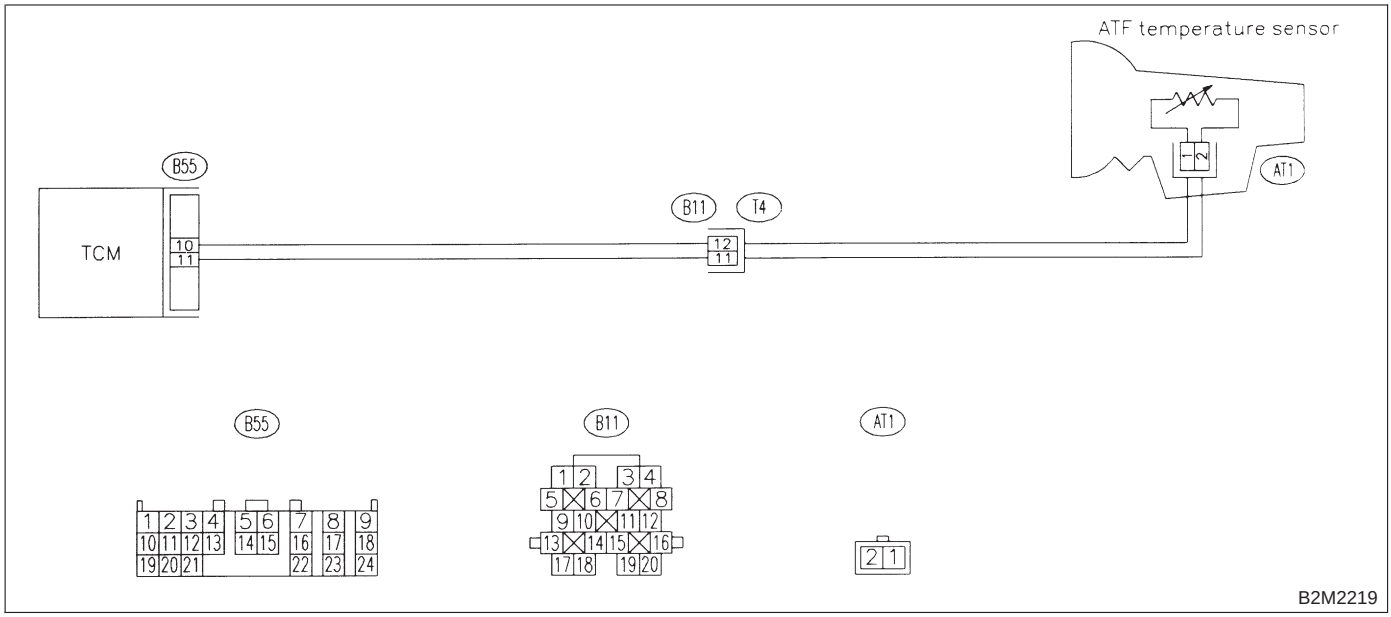
CHECK : ***Is there poor contact in TCM connector?***
YES : Repair poor contact in TCM connector.
NO : Replace TCM. <Ref. to 3-2 [W22A0].>

BL: DTC P0710 — TRANSMISSION FLUID TEMPERATURE SENSOR CIRCUIT MALFUNCTION —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault
- **TROUBLE SYMPTOM:**
  - No shift up to 4th speed (after engine warm-up)
  - No lock-up (after engine warm-up)
  - Excessive shift shock

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



16BL1 : CHECK DTC P0710 ON DISPLAY.

CHECK : ***Does the Subaru Select Monitor or OBD-II general scan tool indicate DTC P0710?***

YES : Check ATF temperature sensor circuit. <Ref. to 3-2 [T8E0].>

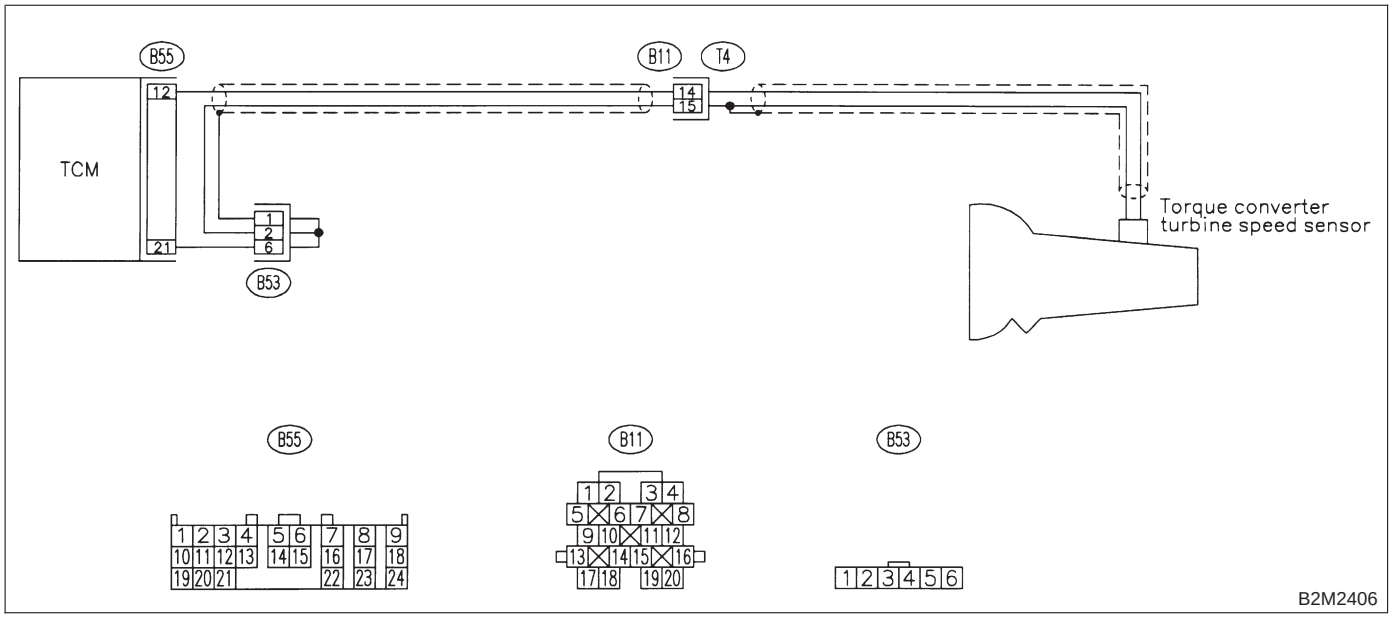
NO : It is not necessary to inspect DTC P0710.

BM: DTC P0715 — TORQUE CONVERTER TURBIN SPEED SENSOR CIRCUIT MALFUNCTION —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



16BM1 : CHECK DTC P0715 ON DISPLAY.

CHECK : ***Does the Subaru Select Monitor or OBD-II general scan tool indicate DTC P0715?***

YES : Check torque converter turbin speed sensor circuit. <Ref. to 3-2 [T8H0].>

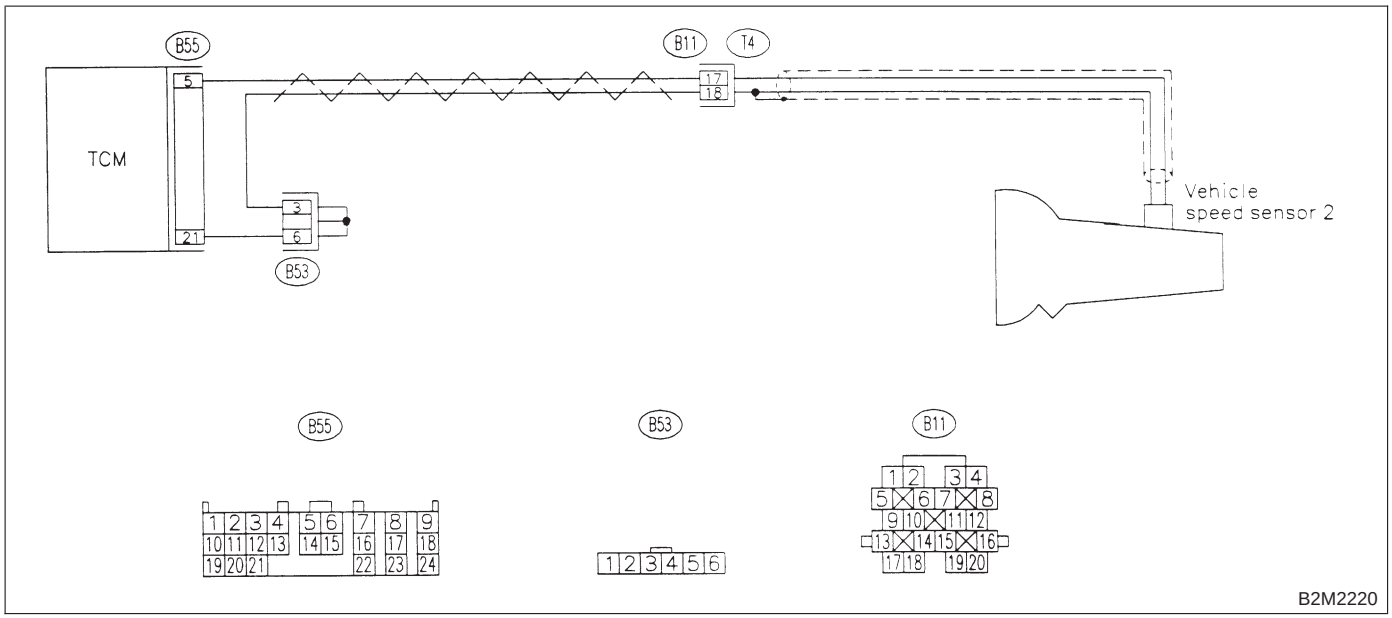
NO : It is not necessary to inspect DTC P0715.

BN: DTC P0720 — OUTPUT SPEED SENSOR (VEHICLE SPEED SENSOR 2) CIRCUIT MALFUNCTION —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault
- **TROUBLE SYMPTOM:**
  - No shift or excessive tight corner “braking”

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



16BN1 : CHECK DTC P0720 ON DISPLAY.

CHECK : ***Does the Subaru Select Monitor or OBD-II general scan tool indicate DTC P0720?***

YES : Check vehicle speed sensor 1 circuit. <Ref. to 3-2 [T8G0].>

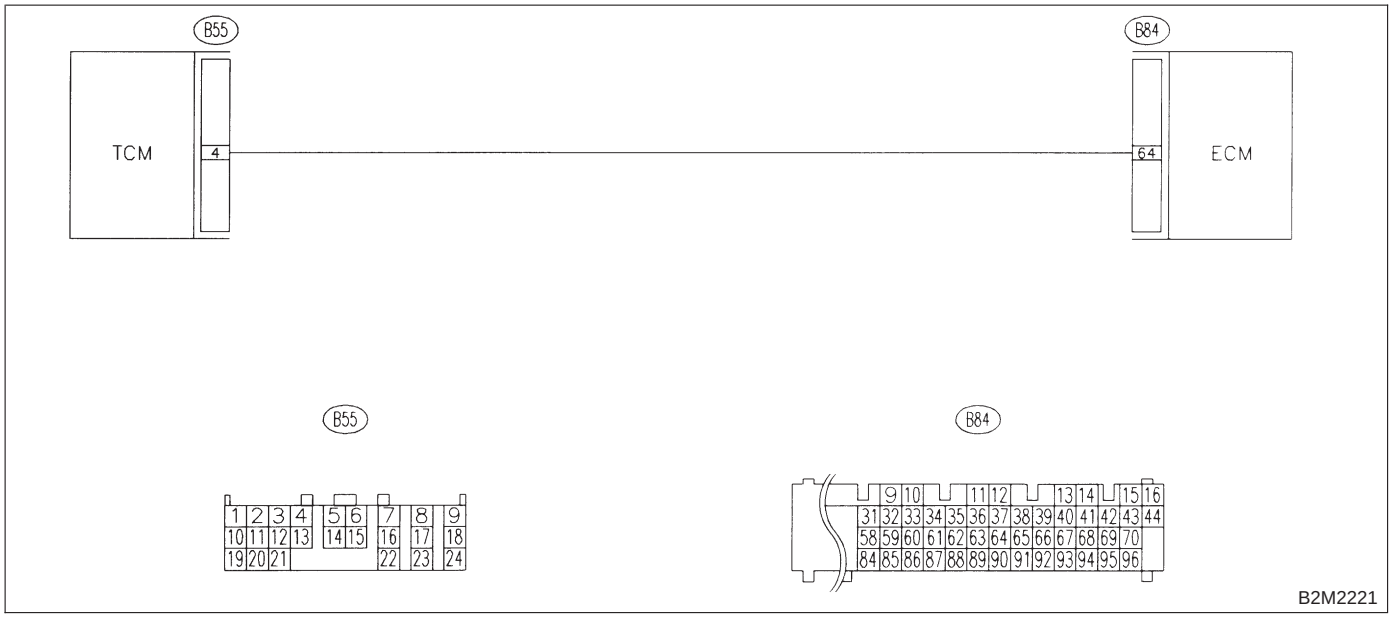
NO : It is not necessary to inspect DTC P0720.

BO: DTC P0725 — ENGINE SPEED INPUT CIRCUIT MALFUNCTION —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault
- **TROUBLE SYMPTOM:**
  - No lock-up (after engine warm-up)
  - AT diagnostic indicator light (AT OIL TEMP indicator light) remains on when vehicle speed is “0”.

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



16BO1 : CHECK DTC P0725 ON DISPLAY.

CHECK : ***Does the Subaru Select Monitor or OBD-II general scan tool indicate DTC P0725?***

YES : Check engine speed input circuit. <Ref. to 3-2 [T8C0].>

NO : It is not necessary to inspect DTC P0725.

BP: DTC P0731 — GEAR 1 INCORRECT RATIO —

NOTE:
For the diagnostic procedure, refer to 2-7 [T16BS0]. <Ref. to 2-7 [T16BS0].>

BQ: DTC P0732 — GEAR 2 INCORRECT RATIO —

NOTE:
For the diagnostic procedure, refer to 2-7 [T16BS0]. <Ref. to 2-7 [T16BS0].>

BR: DTC P0733 — GEAR 3 INCORRECT RATIO —

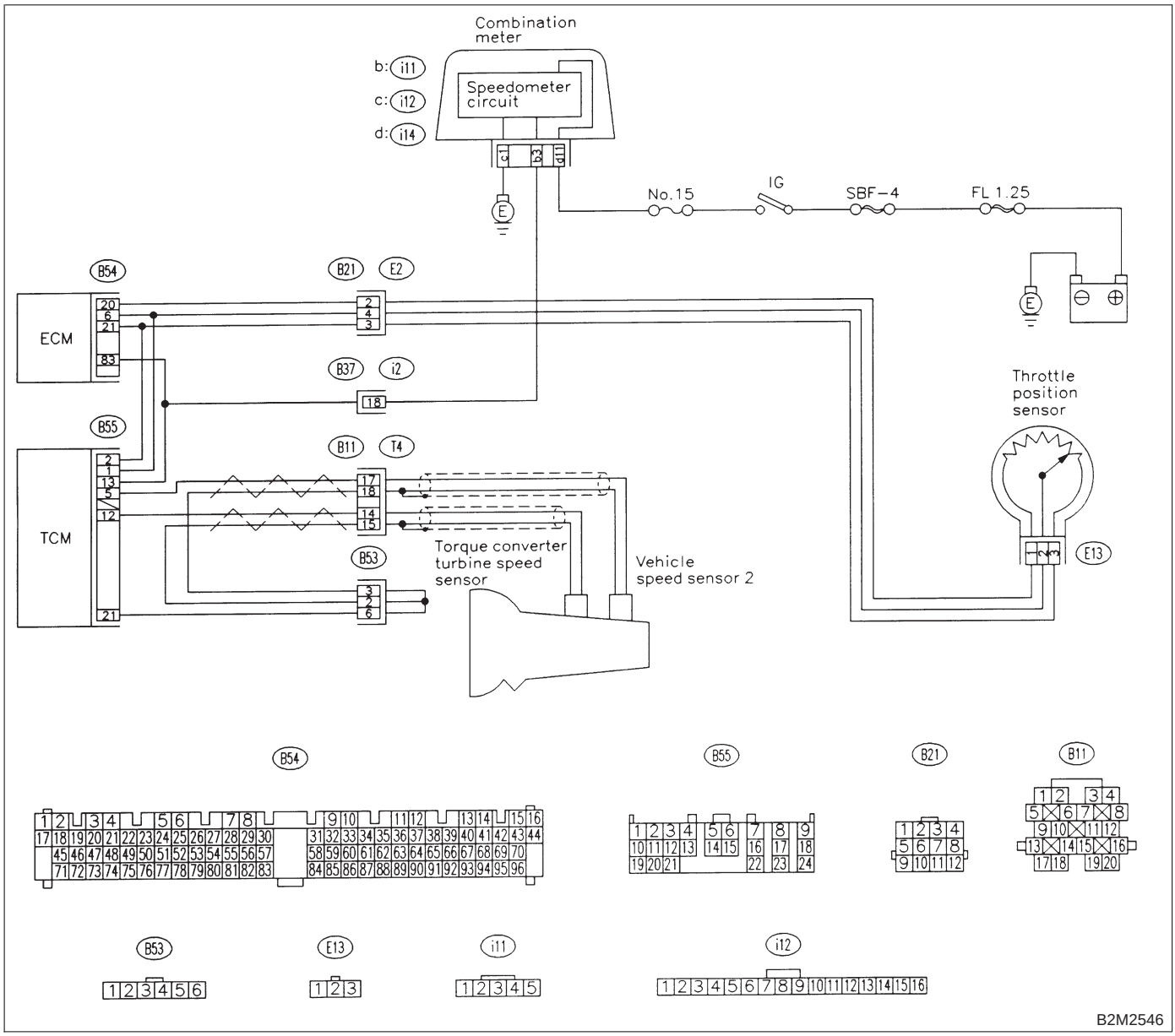
NOTE:
For the diagnostic procedure, refer to 2-7 [T16BS0]. <Ref. to 2-7 [T16BS0].>

BS: DTC P0734 — GEAR 4 INCORRECT RATIO —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault
- **TROUBLE SYMPTOM:**
  - Shift point too high or too low; engine brake not effected in “3” range; excessive shift shock; excessive tight corner “braking”

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

● **WIRING DIAGRAM:**



16BS1 : CHECK ANY OTHER DTC ON DISPLAY.

CHECK : ***Is there any other DTC on display?***

YES : Inspect relevant DTC using “16. Diagnostics Chart with Trouble Code for 2500 cc Models”. <Ref. to 2-7 [T16A0].>

NO : Go to step **16BS2**.

16BS2 : CHECK THROTTLE POSITION SENSOR CIRCUIT.

Check throttle position sensor circuit. <Ref. to 3-2 [T8F0].>

CHECK : ***Is there any trouble in throttle position sensor circuit?***

YES : Repair or replace throttle position sensor circuit.

NO : Go to step **16BS3**.

16BS3 : CHECK VEHICLE SPEED SENSOR 2 CIRCUIT.

Check vehicle speed sensor 2 circuit. <Ref. to 3-2 [T8G0].>

CHECK : ***Is there any trouble in vehicle speed sensor 2 circuit?***

YES : Repair or replace vehicle speed sensor 2 circuit.

NO : Go to step **16BS4**.

16BS4 : CHECK TORQUE CONVERTER TURBINE SPEED SENSOR CIRCUIT.

Check torque converter turbine speed sensor circuit. <Ref. to 3-2 [T8H0].>

CHECK : ***Is there any trouble in torque converter turbine speed sensor circuit?***

YES : Repair or replace torque converter turbine speed sensor circuit.

NO : Go to step **16BS5**.

16BS5 : CHECK POOR CONTACT.

Check poor contact in TCM connector. <Ref. to FOREWORD [T3C1].>

CHECK : ***Is there poor contact in TCM connector?***

YES : Repair poor contact in TCM connector.

NO : Go to step **16BS6**.

16BS6 : CHECK MECHANICAL TROUBLE.

Check mechanical trouble in automatic transmission.

CHECK : ***Is there any mechanical trouble in automatic transmission?***

YES : Repair or replace automatic transmission. <Ref. to 2-11 [W300].>

NO : Replace TCM. <Ref. to 3-2 [W22A0].>

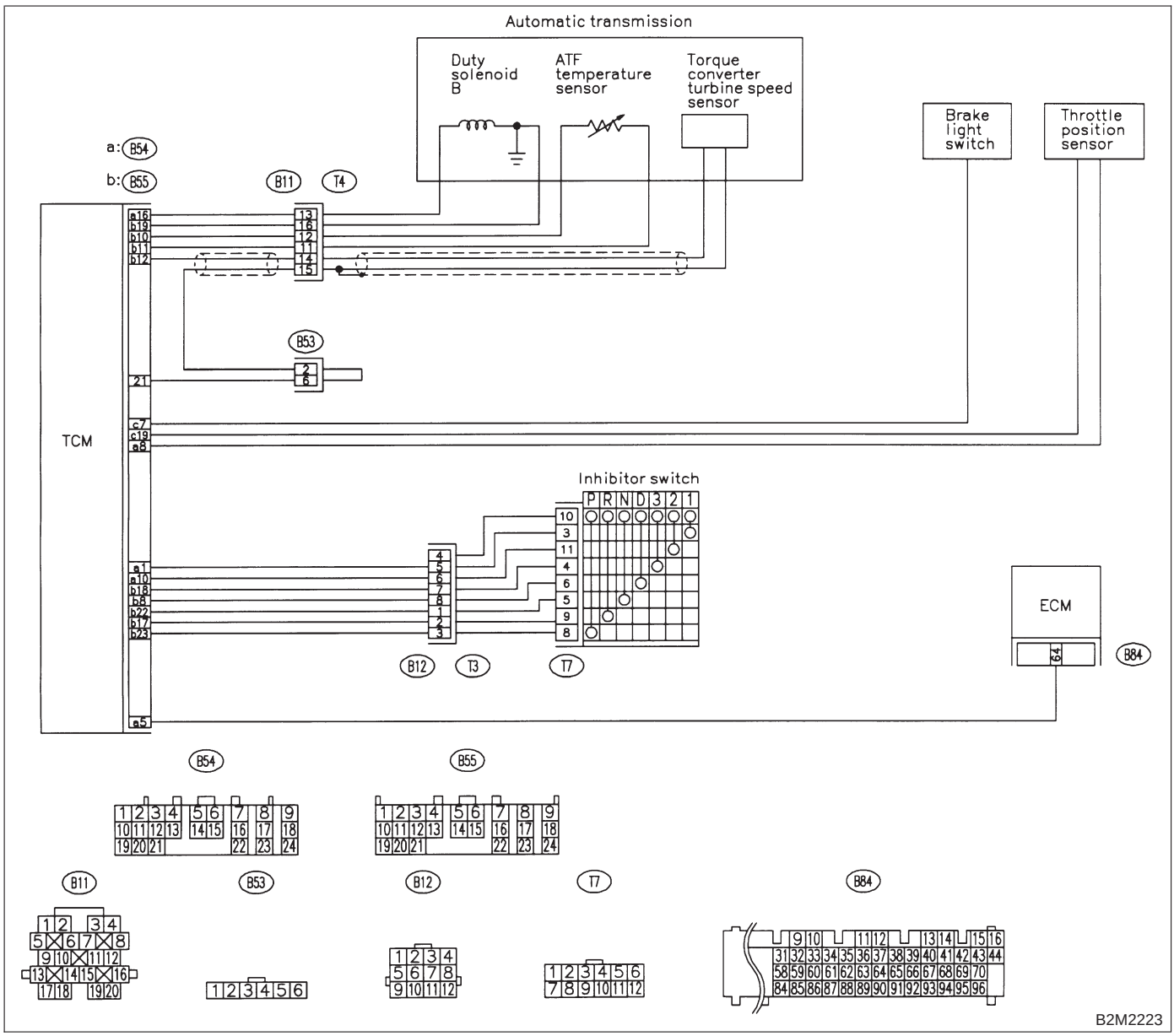
MEMO:

BT: DTC P0740 — TORQUE CONVERTER CLUTCH SYSTEM MALFUNCTION —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault
- **TROUBLE SYMPTOM:**
  - No lock-up (after engine warm-up)
  - No shift or excessive tight corner “braking”

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



16BT1 : CHECK ANY OTHER DTC ON DISPLAY.

CHECK : ***Is there any other DTC on display?***
YES : Inspect the relevant DTC using "16. Diagnostics Chart with Trouble Code for 2500 cc Models". <Ref. to 2-7 [T16A0].>
NO : Go to step **16BT2**.

16BT2 : CHECK DUTY SOLENOID B CIRCUIT.

Check duty solenoid B circuit. <Ref. to 3-2 [T8Q0].>

CHECK : ***Is there any trouble in duty solenoid B circuit?***
YES : Repair or replace duty solenoid B circuit.
NO : Go to step **16BT3**.

16BT3 : CHECK THROTTLE POSITION SENSOR CIRCUIT.

Check throttle position sensor circuit. <Ref. to 3-2 [T8F0].>

CHECK : ***Is there any trouble in throttle position sensor circuit?***
YES : Repair or replace throttle position sensor circuit.
NO : Go to step **16BT4**.

16BT4 : CHECK TORQUE CONVERTER TURBINE SPEED SENSOR CIRCUIT.

Check torque converter turbine speed sensor circuit. <Ref. to 3-2 [T8H0].>

CHECK : ***Is there any trouble in torque converter turbine speed sensor circuit?***
YES : Repair or replace torque converter turbine speed sensor circuit.
NO : Go to step **16BT5**.

16BT5 : CHECK ENGINE SPEED INPUT CIRCUIT.

Check engine speed input circuit. <Ref. to 3-2 [T8C0].>

CHECK : ***Is there any trouble in engine speed input circuit?***
YES : Repair or replace engine speed input circuit.
NO : Go to step **16BT6**.

16BT6 : CHECK INHIBITOR SWITCH CIRCUIT.

Check inhibitor switch circuit. <Ref. to 2-7 [T16BK0].>

CHECK : ***Is there any trouble in inhibitor switch circuit?***
YES : Repair or replace inhibitor switch circuit.
NO : Go to step **16BT7**.

16BT7 : CHECK BRAKE LIGHT SWITCH CIRCUIT.

Check brake light switch circuit. <Ref. to 2-7 [T16BJ0].>

CHECK : ***Is there any trouble in brake light switch circuit?***
YES : Repair or replace brake light switch circuit.
NO : Go to step **16BT8**.

16BT8 : CHECK ATF TEMPERATURE SENSOR CIRCUIT.

Check ATF temperature sensor circuit. <Ref. to 3-2 [T8E0].>

CHECK : ***Is there any trouble in ATF temperature sensor circuit?***
YES : Repair or replace ATF temperature sensor circuit.
NO : Go to step **16BT9**.

16BT9 : CHECK POOR CONTACT.

Check poor contact in TCM connector. <Ref. to FOREWORD [T3C1].>

CHECK : ***Is there poor contact in TCM connector?***

YES : Repair poor contact in TCM connector.

NO : Go to step **16BT10**.

16BT10 : CHECK MECHANICAL TROUBLE.

Check mechanical trouble in automatic transmission.

CHECK : ***Is there any mechanical trouble in automatic transmission?***

YES : Repair or replace automatic transmission. <Ref. to 2-11 [W300].>

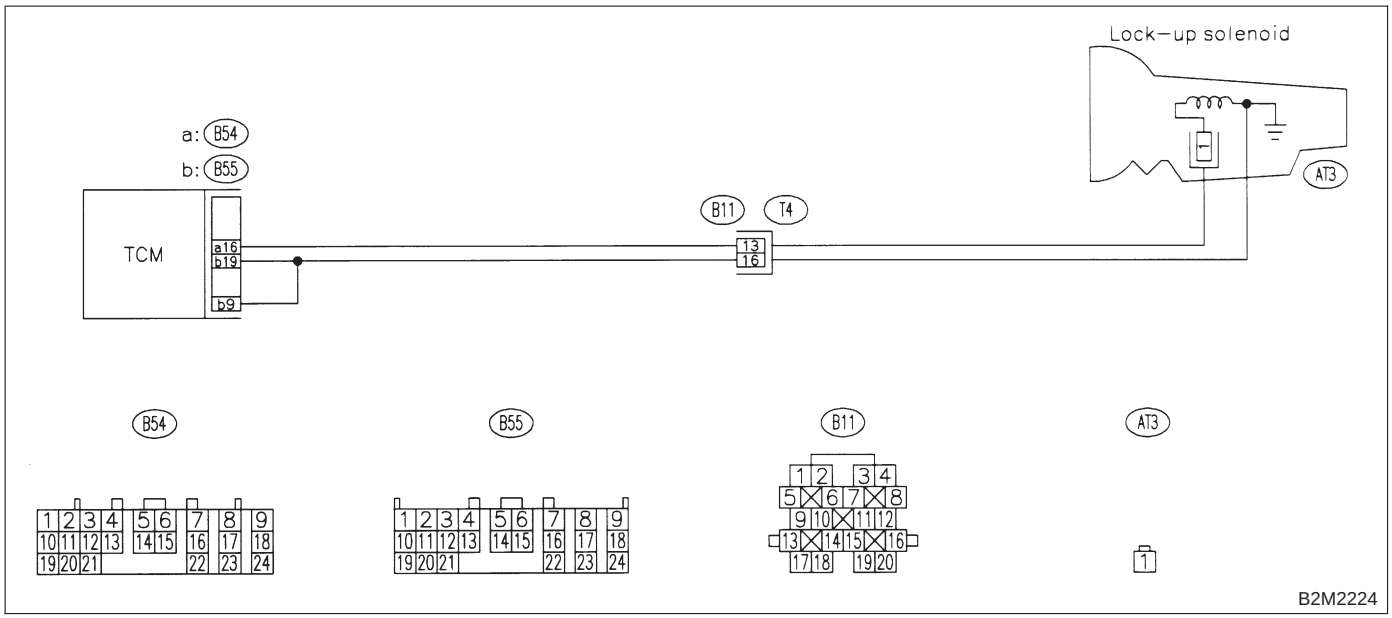
NO : Replace TCM. <Ref. to 3-2 [W22A0].>

BU: DTC P0743 — TORQUE CONVERTER CLUTCH SYSTEM (DUTY SOLENOID B) ELECTRICAL —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault
- **TROUBLE SYMPTOM:**
  - No lock-up (after engine warm-up)

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



16BU1 : CHECK DTC P0743 ON DISPLAY.

CHECK : ***Does the Subaru Select Monitor or OBD-II general scan tool indicate DTC P0743?***

YES : Check duty solenoid B circuit. <Ref. to 3-2 [T8Q0].>

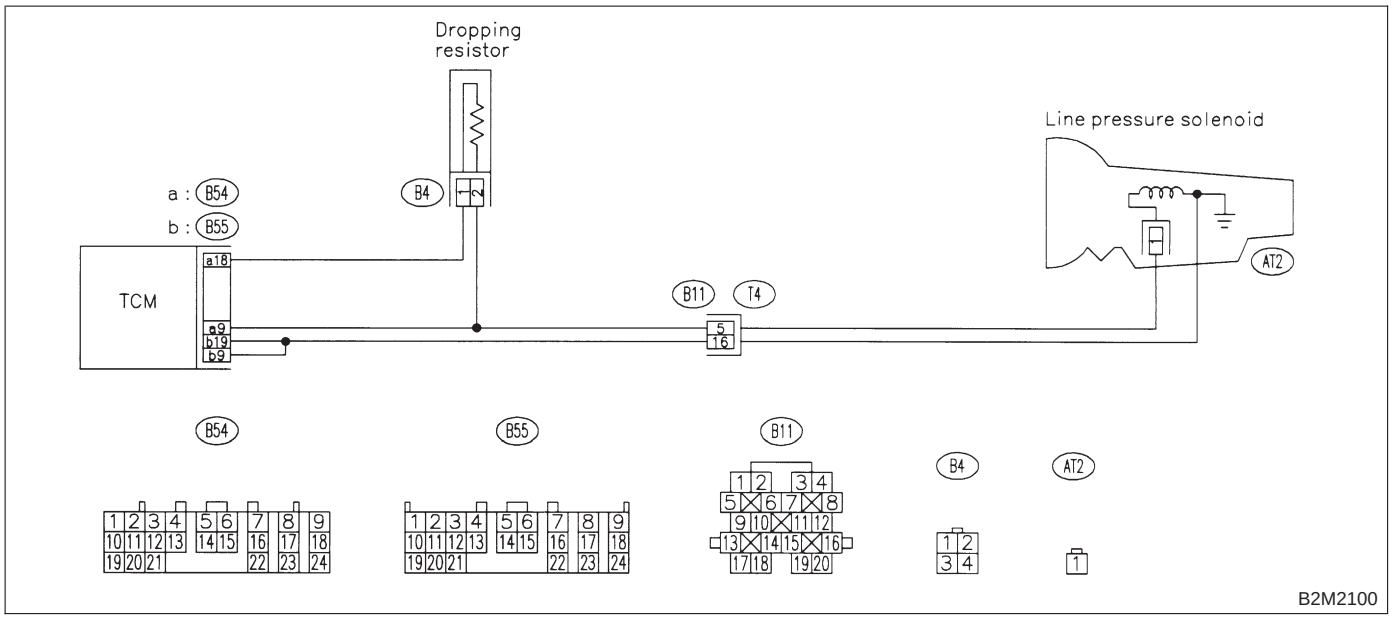
NO : It is not necessary to inspect DTC P0743.

BV: DTC P0748 — PRESSURE CONTROL SOLENOID (DUTY SOLENOID A) ELECTRICAL —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault
- **TROUBLE SYMPTOM:**
  - Excessive shift shock

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



16BV1 : CHECK DTC P0748 ON DISPLAY.

CHECK : ***Does the Subaru Select Monitor or OBD-II general scan tool indicate DTC P0748?***

YES : Check duty solenoid A circuit. <Ref. to 3-2 [T8O0].>

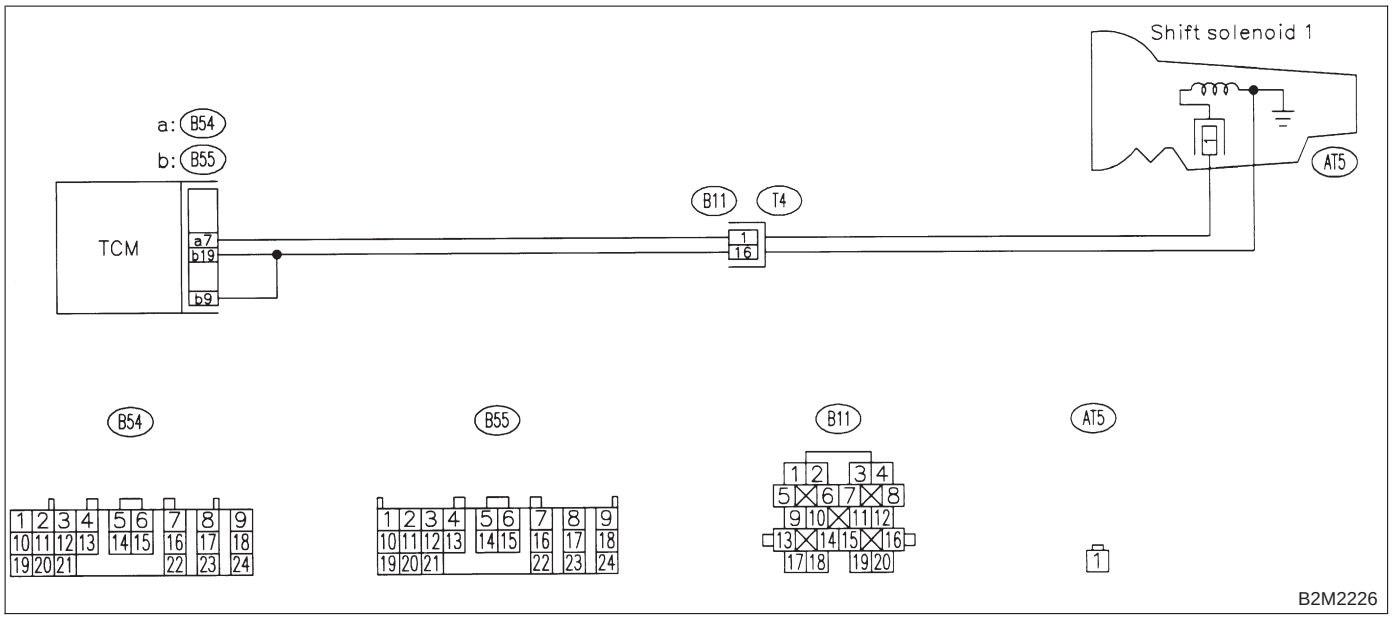
NO : It is not necessary to inspect DTC P0748.

BW: DTC P0753 — SHIFT SOLENOID A (SHIFT SOLENOID 1) ELECTRICAL —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault
- **TROUBLE SYMPTOM:**
  - No shift

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



16BW1 : CHECK DTC P0753 ON DISPLAY.

CHECK : ***Does the Subaru Select Monitor or OBD-II general scan tool indicate DTC P0753?***

YES : Check shift solenoid 1 circuit. <Ref. to 3-2 [T8K0].>

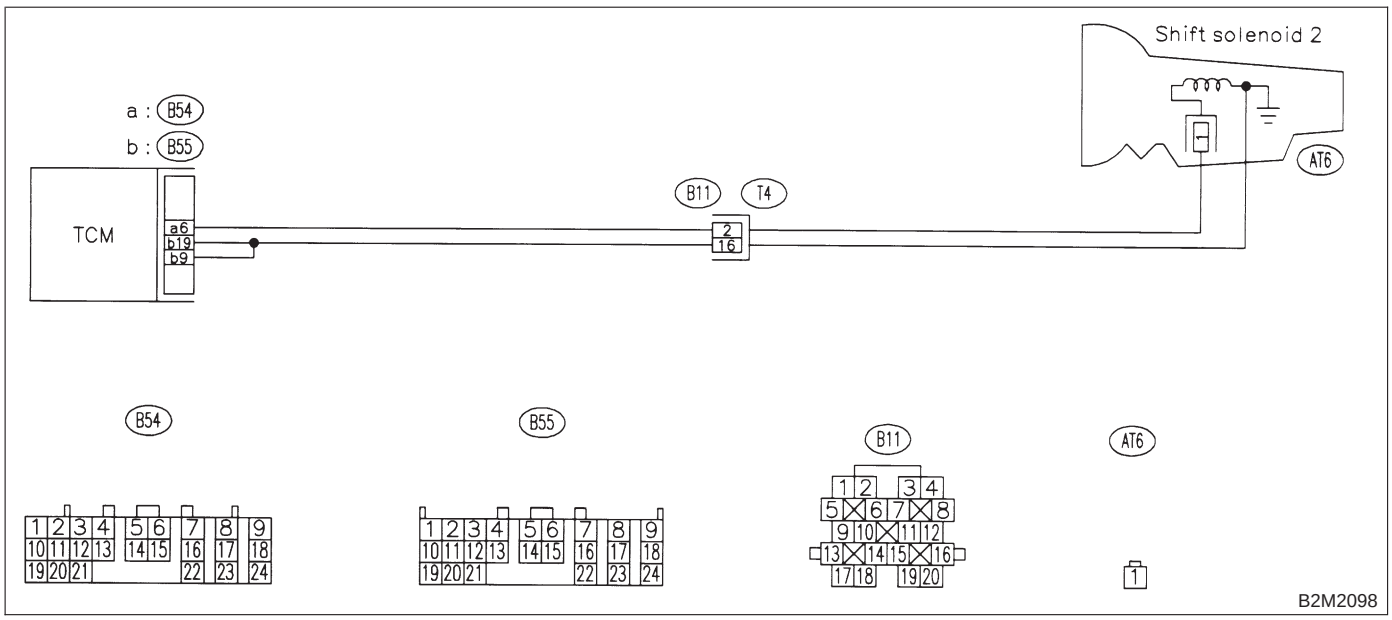
NO : It is not necessary to inspect DTC P0753.

BX: DTC P0758 — SHIFT SOLENOID B (SHIFT SOLENOID 2) ELECTRICAL —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault
- **TROUBLE SYMPTOM:**
  - No shift

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



16BX1 : CHECK DTC P0758 ON DISPLAY.

CHECK : ***Does the Subaru Select Monitor or OBD-II general scan tool indicate DTC P0758?***

YES : Check shift solenoid 2 circuit. <Ref. to 3-2 [T8L0].>

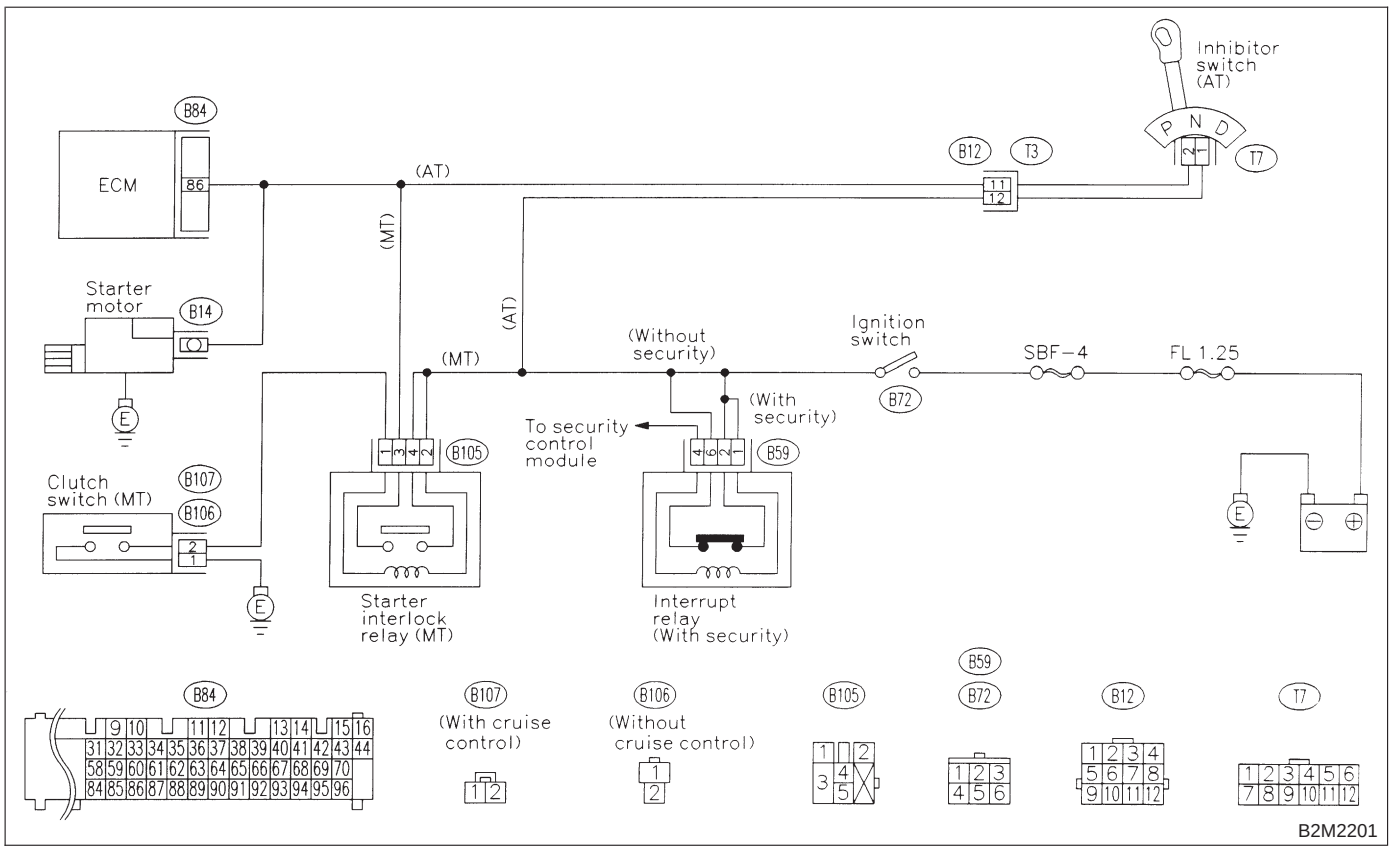
NO : It is not necessary to inspect DTC P0758.

BY: DTC P1100 — STARTER SWITCH CIRCUIT LOW INPUT —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault
- **TROUBLE SYMPTOM:**
  - Failure of engine to start

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



16BY1 : CHECK OPERATION OF STARTER MOTOR.

NOTE:
- On AT vehicles, place the inhibitor switch in the "P" or "N" position.
- On MT vehicles, depress the clutch pedal.

CHECK : ***Does starter motor operate when ignition switch to "ST"?***

YES : Repair harness and connector.

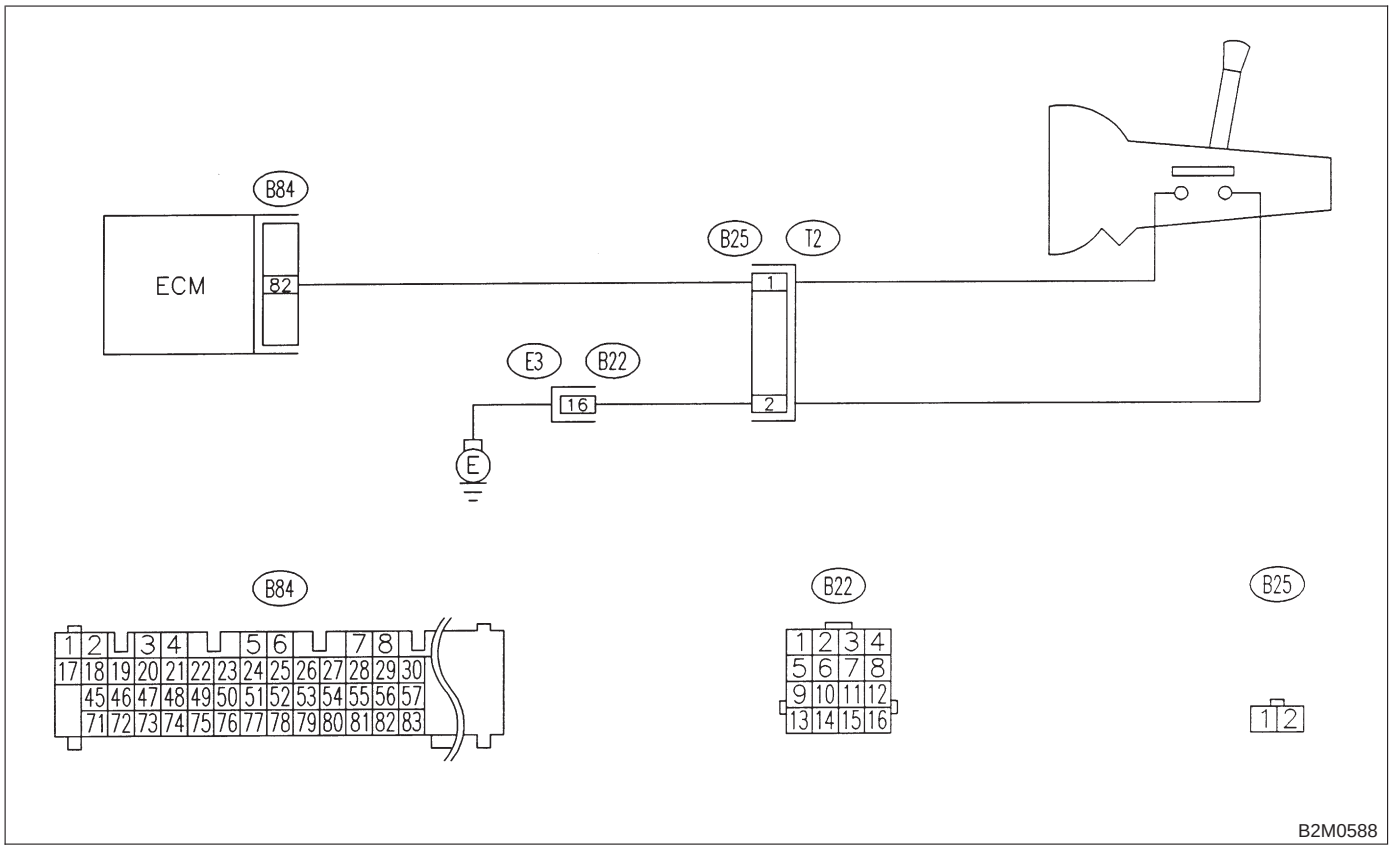
NOTE:
In this case, repair the following:
- Open or ground short circuit in harness between ECM and starter motor connector.
- Poor contact in ECM connector.

NO : Check starter motor circuit. <Ref. to 2-7 [T10B0].>

BZ: DTC P1101 — NEUTRAL POSITION SWITCH CIRCUIT MALFUNCTION [MT VEHICLES] —

NOTE:
Check neutral position switch circuit.
<Ref. to 2-7 [T16CB0].>

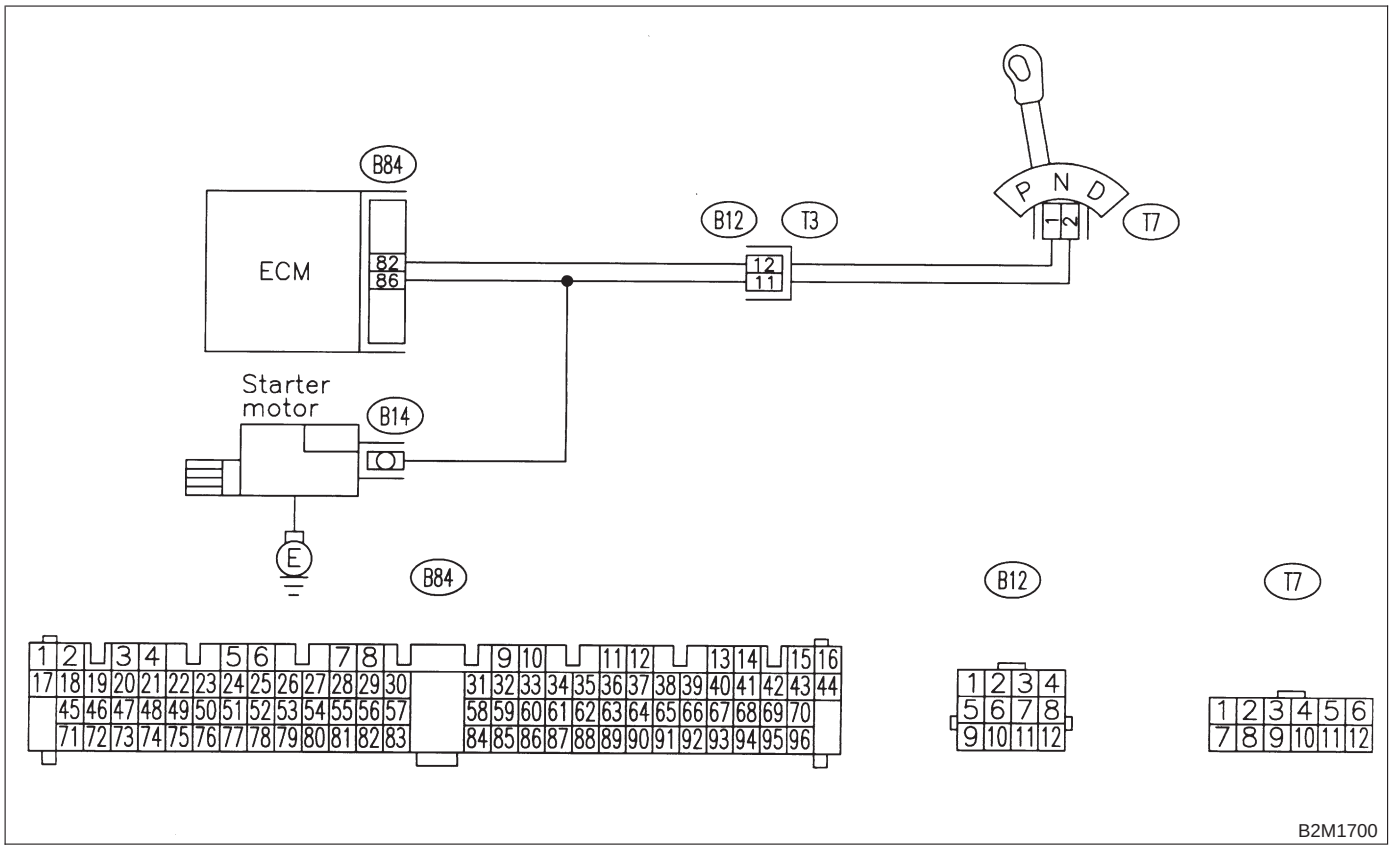
- **WIRING DIAGRAM:**



CA: DTC P1101 — NEUTRAL POSITION SWITCH CIRCUIT HIGH INPUT [AT VEHICLES] —

NOTE:
Check neutral position switch circuit.
<Ref. to 2-7 [T16CC0].>

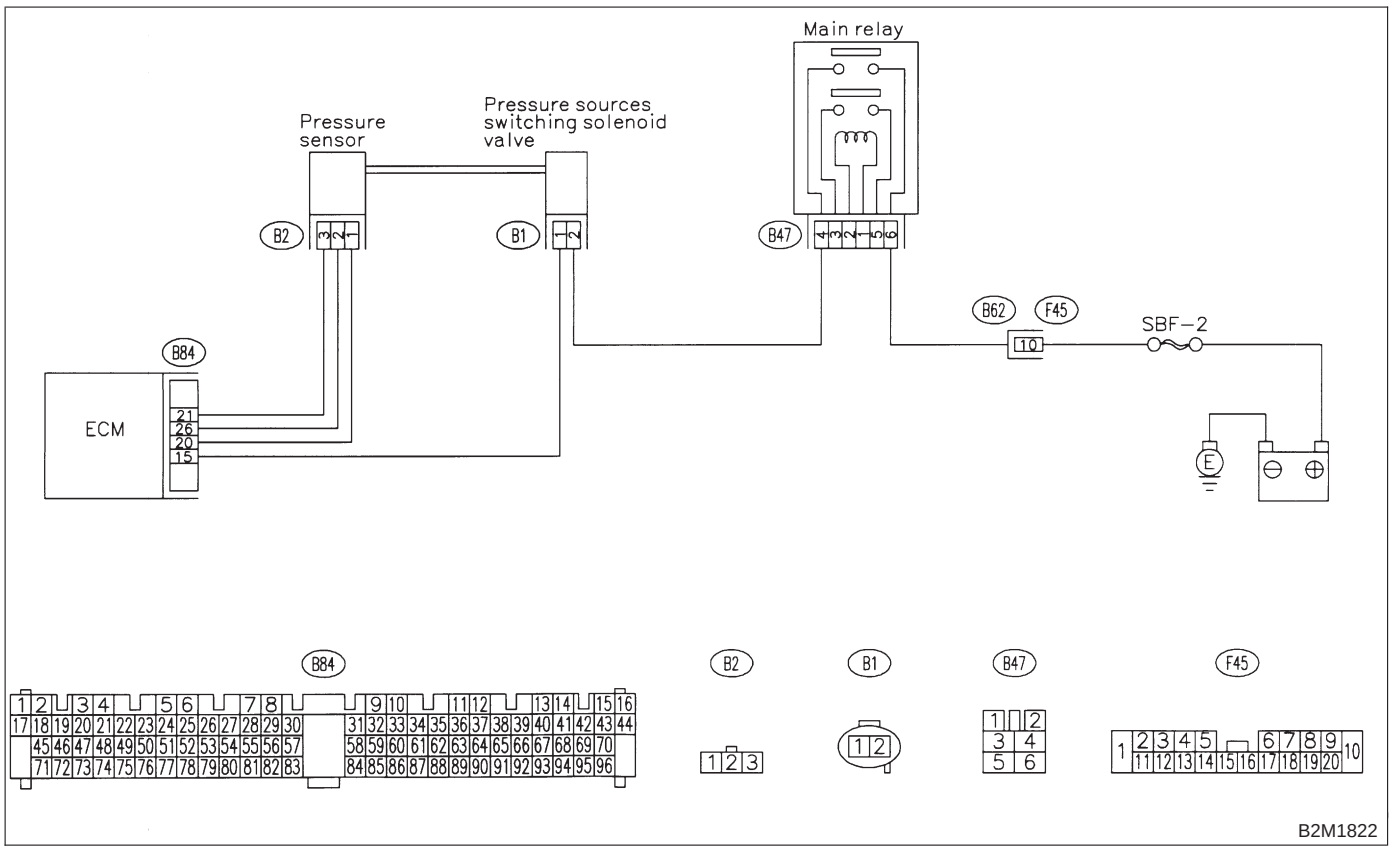
- **WIRING DIAGRAM:**



CB: DTC P1102 — PRESSURE SOURCES SWITCHING SOLENOID VALVE CIRCUIT LOW INPUT —

NOTE:
Check pressure sources switching solenoid valve circuit.
<Ref. to 2-7 [T16CD0].>

- **WIRING DIAGRAM:**



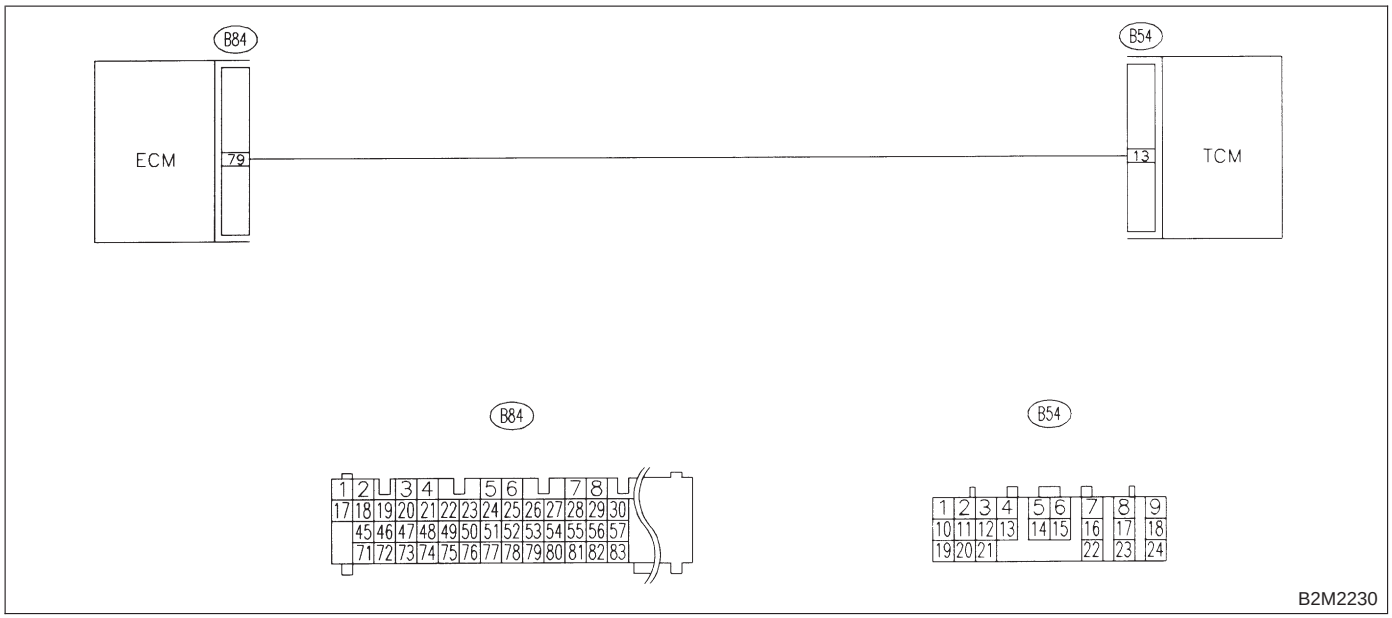
MEMO:

CC: DTC P1103 — ENGINE TORQUE CONTROL SIGNAL CIRCUIT 1 MALFUNCTION —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault
- **TROUBLE SYMPTOM:**
  - Excessive shift shock

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

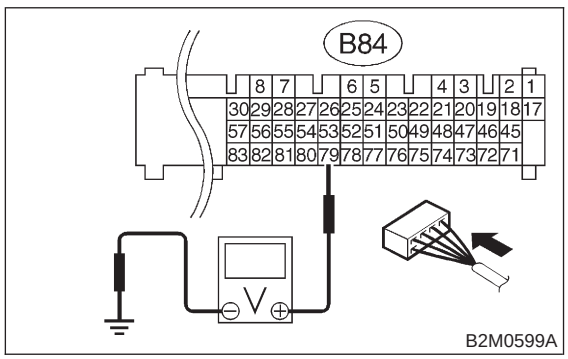
- **WIRING DIAGRAM:**



16CC1 : CHECK INPUT SIGNAL FOR ECM.

1) Turn ignition switch to ON.
2) Measure voltage between ECM and chassis ground.

Connector & terminal
(B84) No. 79 (+) — Chassis ground (−):



CHECK : ***Is the voltage more than 4.5 V?***
YES : Go to step **16CC2**.
NO : Go to step **16CC3**.

16CC2 : CHECK POOR CONTACT.

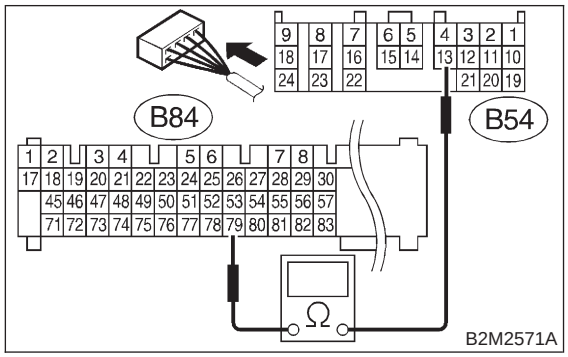
Check poor contact in ECM connector. <Ref. to FOREWORD [T3C1].>

CHECK : ***Is there poor contact in ECM connector?***
YES : Repair poor contact in ECM connector.
NO : Replace ECM. <Ref. to 2-7 [W15A2].>

16CC3 : CHECK HARNESS BETWEEN ECM AND TCM CONNECTOR.

1) Turn ignition switch to OFF.
2) Disconnect connectors from ECM and TCM.
3) Measure resistance of harness between ECM and TCM connector.

Connector & terminal
(B84) No. 79 — (B54) No. 13:

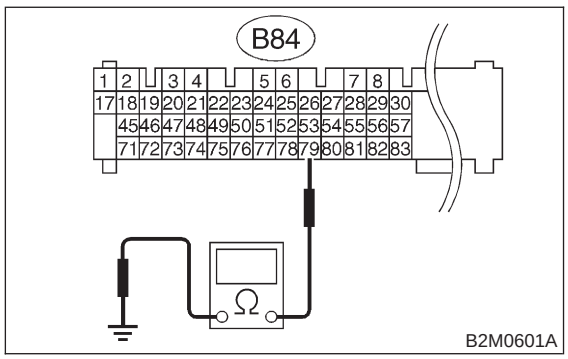


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16CC4**.
NO : Repair open circuit in harness between ECM and TCM connector.

16CC4 : CHECK HARNESS BETWEEN ECM AND TCM CONNECTOR.

Measure resistance of harness between ECM and chassis ground.

Connector & terminal
(B84) No. 79 — Chassis ground:



CHECK : ***Is the resistance less than 10 Ω?***
YES : Repair ground short circuit in harness between ECM and TCM connector.
NO : Go to step **16CC5**.

16CC5 : CHECK POOR CONTACT.

Check poor contact in TCM connector. <Ref. to FOREWORD [T3C1].>

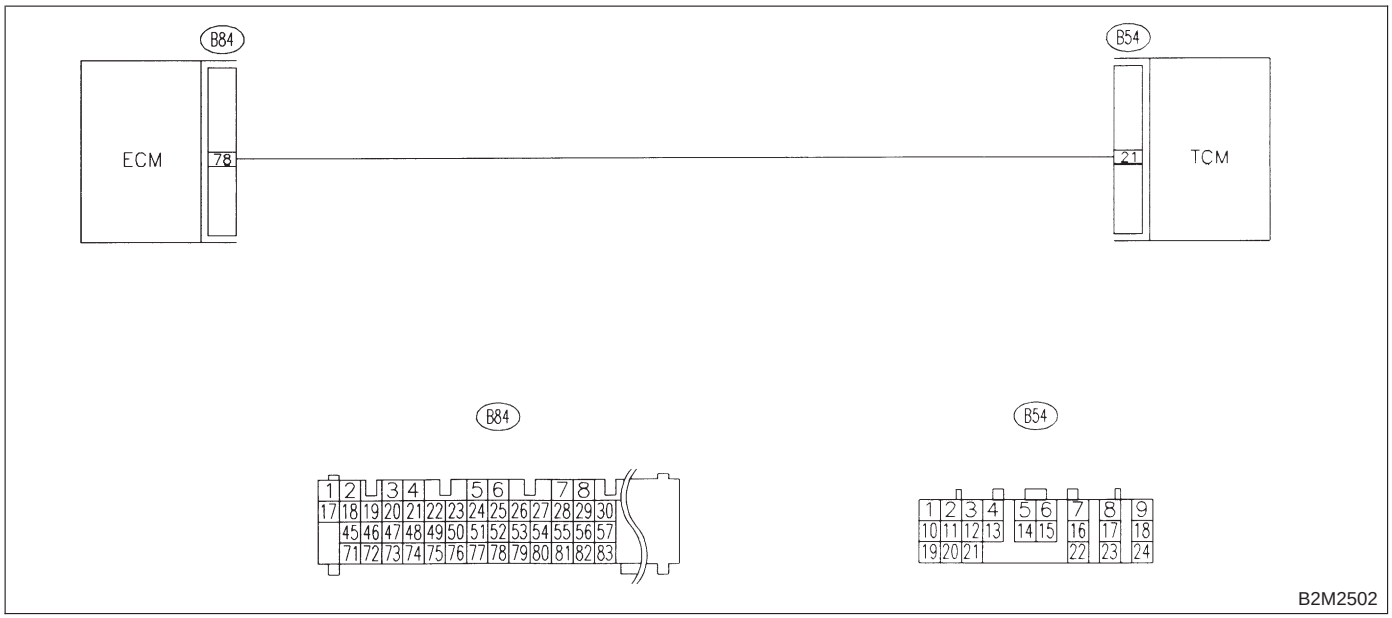
CHECK : ***Is there poor contact in TCM connector?***
YES : Repair poor contact in TCM connector.
NO : Replace TCM. <Ref. to 3-2 [W22A0].>

CD: DTC P1106 — ENGINE TORQUE CONTROL SIGNAL CIRCUIT 2 MALFUNCTION —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault
- **TROUBLE SYMPTOM:**
  - Excessive shift shock

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

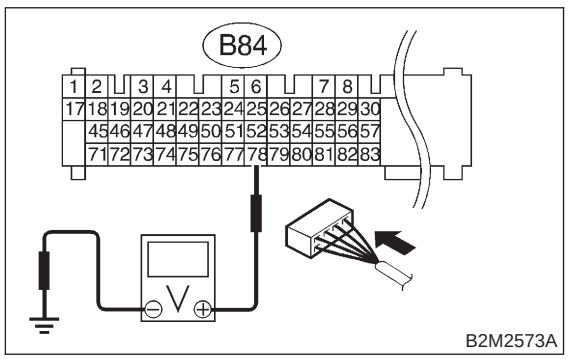
- **WIRING DIAGRAM:**



16CD1 : CHECK INPUT SIGNAL FOR ECM.

1) Turn ignition switch to ON.
2) Measure voltage between ECM and chassis ground.

Connector & terminal
(B84) No. 78 (+) — Chassis ground (−):



CHECK : ***Is the voltage more than 4.5 V?***
YES : Go to step **16CD2**.
NO : Go to step **16CD3**.

16CD2 : CHECK POOR CONTACT.

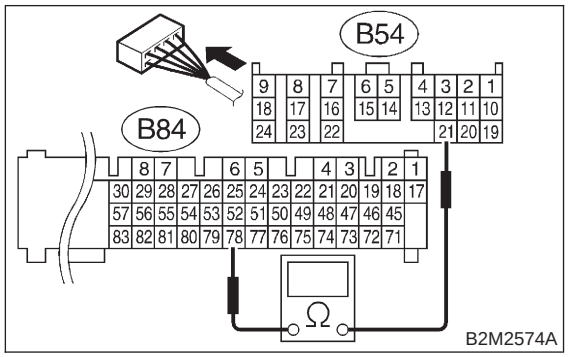
Check poor contact in ECM connector. <Ref. to FOREWORD [T3C1].>

CHECK : ***Is there poor contact in ECM connector?***
YES : Repair poor contact in ECM connector.
NO : Replace ECM. <Ref. to 2-7 [W15A2].>

16CD3 : CHECK HARNESS BETWEEN ECM AND TCM CONNECTOR.

1) Turn ignition switch to OFF.
2) Disconnect connectors from ECM and TCM.
3) Measure resistance of harness between ECM and TCM connector.

Connector & terminal
(B84) No. 78 — (B54) No. 21:

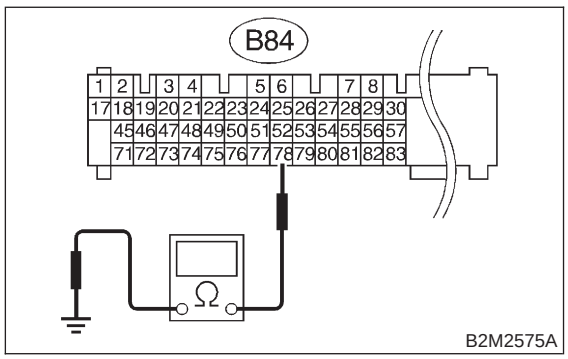


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16CD4**.
NO : Repair open circuit in harness between ECM and TCM connector.

16CD4 : CHECK HARNESS BETWEEN ECM AND TCM CONNECTOR.

Measure resistance of harness between ECM and chassis ground.

Connector & terminal
(B84) No. 78 — Chassis ground:



CHECK : ***Is the resistance less than 10 Ω?***
YES : Repair ground short circuit in harness between ECM and TCM connector.
NO : Go to step **16CD5**.

16CD5 : CHECK POOR CONTACT.

Check poor contact in TCM connector. <Ref. to FOREWORD [T3C1].>

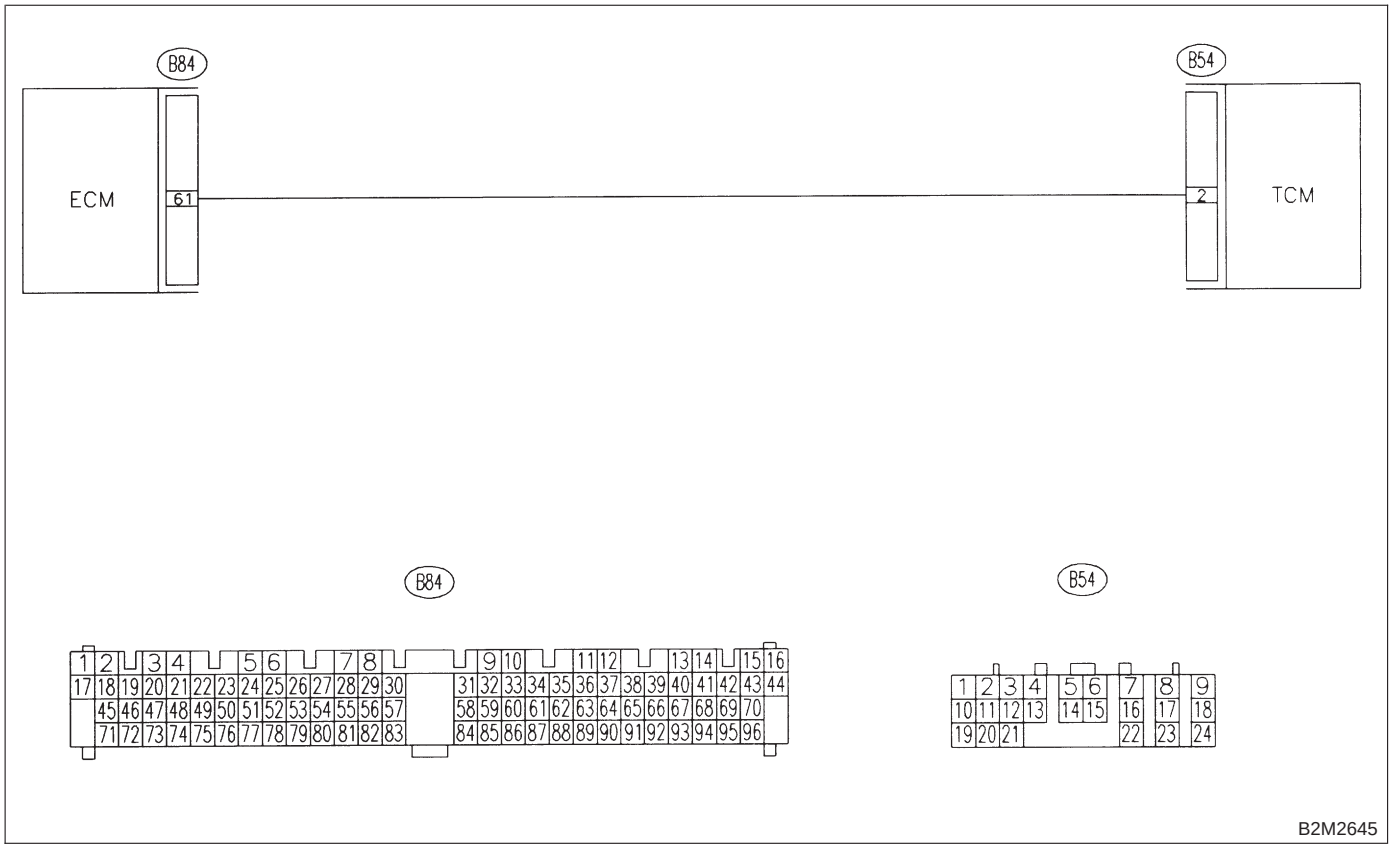
CHECK : ***Is there poor contact in TCM connector?***
YES : Repair poor contact in TCM connector.
NO : Replace TCM. <Ref. to 3-2 [W22A0].>

CE: DTC P1115 — ENGINE TORQUE CONTROL CUT SIGNAL CIRCUIT HIGH INPUT —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

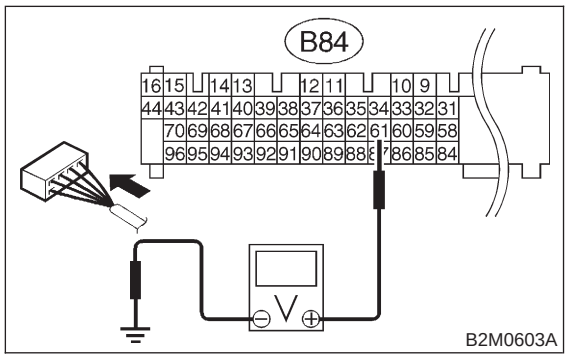
- **WIRING DIAGRAM:**



16CE1 : CHECK OUTPUT SIGNAL FROM ECM.

1) Turn ignition switch to ON.
2) Measure voltage between ECM and chassis ground.

Connector & terminal
(B84) No. 61 (+) — Chassis ground (−):

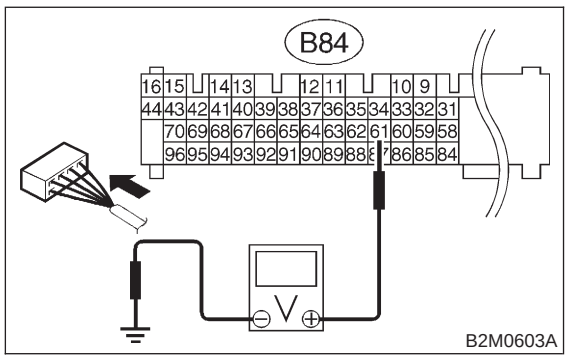


CHECK : ***Is the voltage more than 8 V?***
YES : Go to step **16CE2**.
NO : Go to step **16CE4**.

16CE2 : CHECK HARNESS BETWEEN ECM AND TCM CONNECTOR.

1) Turn ignition switch to OFF.
2) Disconnect connectors from ECM and TCM.
3) Measure voltage between ECM connector and chassis ground.

Connector & terminal
(B84) No. 61 (+) — Chassis ground (−):

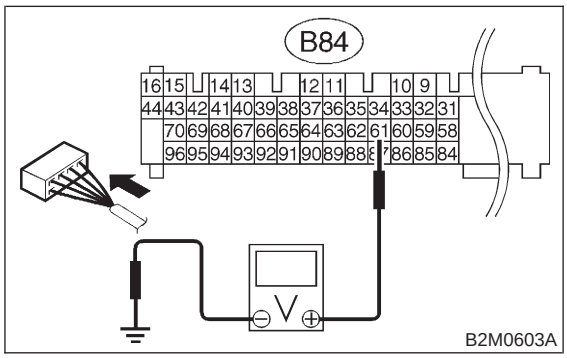


CHECK : ***Is the voltage more than 10 V?***
YES : Repair battery short circuit in harness between ECM and TCM connector.
NO : Go to step **16CE3**.

16CE3 : CHECK HARNESS BETWEEN ECM AND TCM CONNECTOR.

1) Turn ignition switch to ON.
2) Measure voltage between ECM connector and chassis ground.

Connector & terminal
(B84) No. 61 (+) — Chassis ground (−):

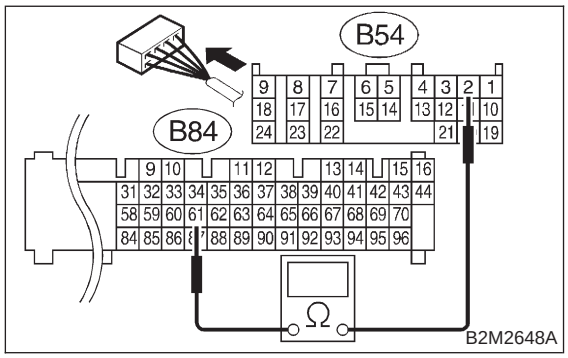


CHECK : ***Is the voltage more than 10 V?***
YES : Repair battery short circuit in harness between ECM and TCM connector.
NO : Go to step **16CE4**.

16CE4 : CHECK HARNESS BETWEEN ECM AND TCM CONNECTOR.

1) Turn ignition switch to OFF.
2) Disconnect connector from ECM and TCM connector.
3) Measure resistance of harness between ECM and TCM connector.

Connector & terminal
(B84) No. 61 — (B54) No. 2:



CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16CE5**.
NO : Repair harness and connector.

NOTE:
In this case, repair the following:
- Open circuit in harness between ECM and TCM connector.
- Poor contact ECM connector.
- Poor contact TCM connector.

16CE5 : CHECK POOR CONTACT.

Check poor contact in ECM or TCM connector. <Ref. to FOREWORD [T3C1].>

CHECK : ***Is there poor contact in ECM or TCM connector?***
YES : Repair poor contact in ECM or TCM connector.
NO : Contact with SOA service.

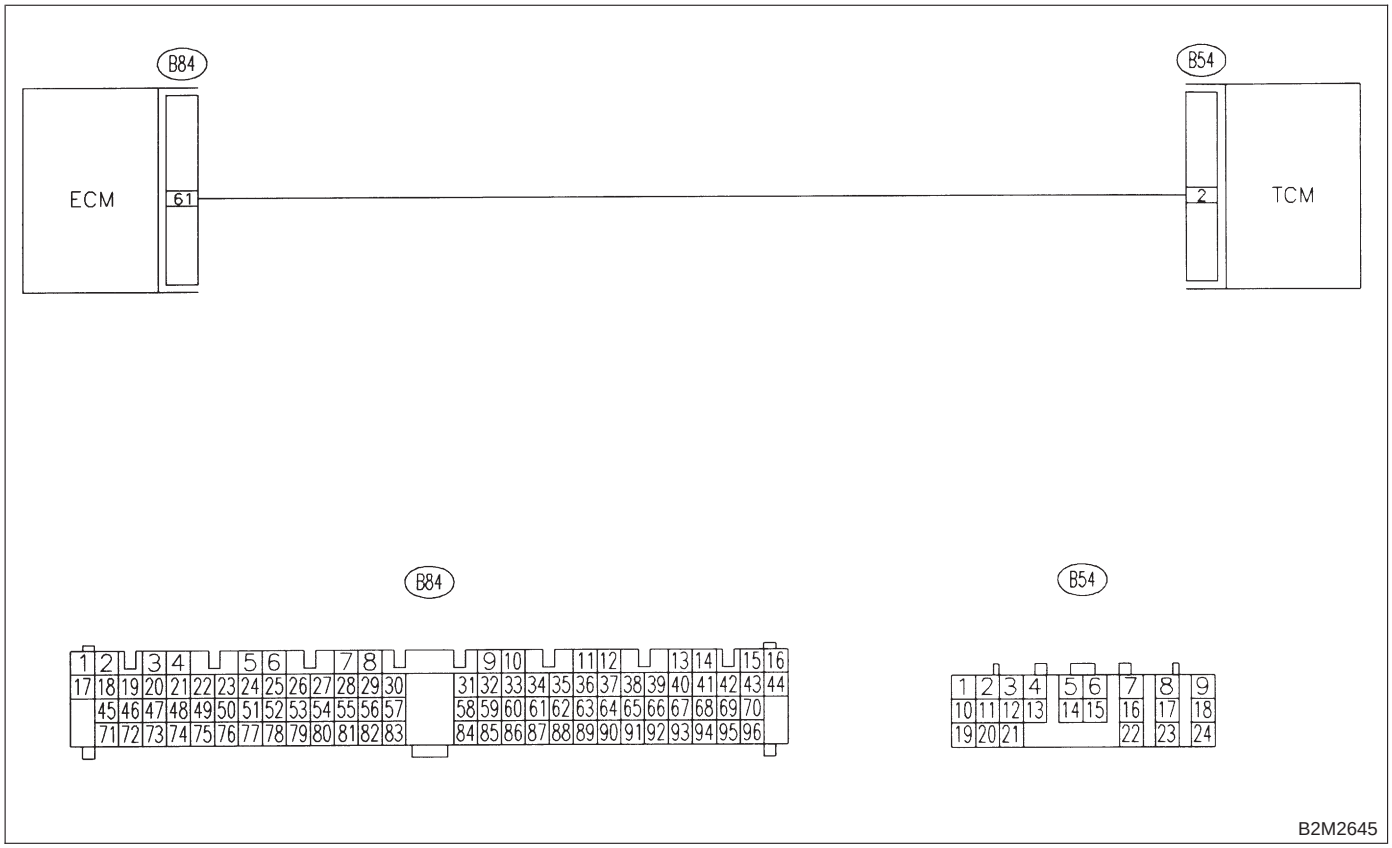
MEMO:

CF: DTC P1116 — ENGINE TORQUE CONTROL CUT SIGNAL CIRCUIT LOW INPUT —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

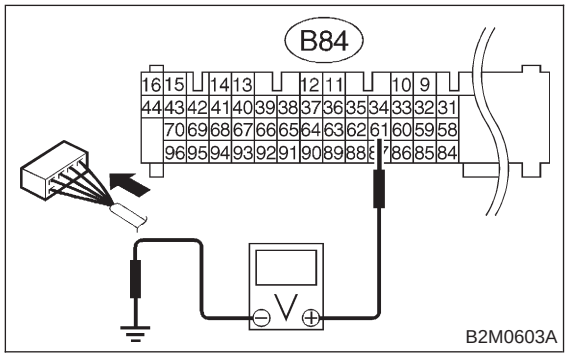
- **WIRING DIAGRAM:**



16CF1 : CHECK OUTPUT SIGNAL FROM ECM.

1) Turn ignition switch to ON.
2) Measure voltage between ECM and chassis ground.

Connector & terminal
(B84) No. 61 (+) — Chassis ground (−):

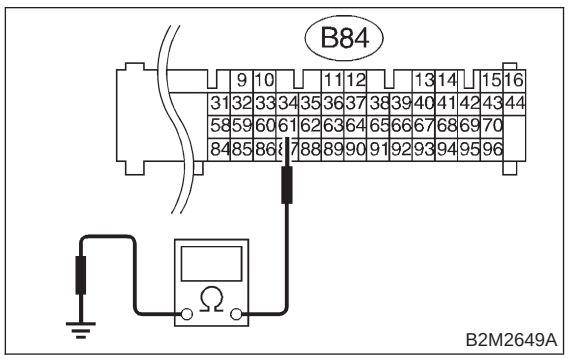


CHECK : ***Is the voltage more than 8 V?***
YES : Repair poor contact in ECM connector.
NO : Go to step **16CF2**.

16CF2 : CHECK HARNESS BETWEEN ECM AND TCM CONNECTOR.

1) Turn ignition switch to OFF.
2) Disconnect connectors from ECM and TCM.
3) Measure resistance of harness between ECM and chassis ground.

Connector & terminal
(B84) No. 61 — Chassis ground:

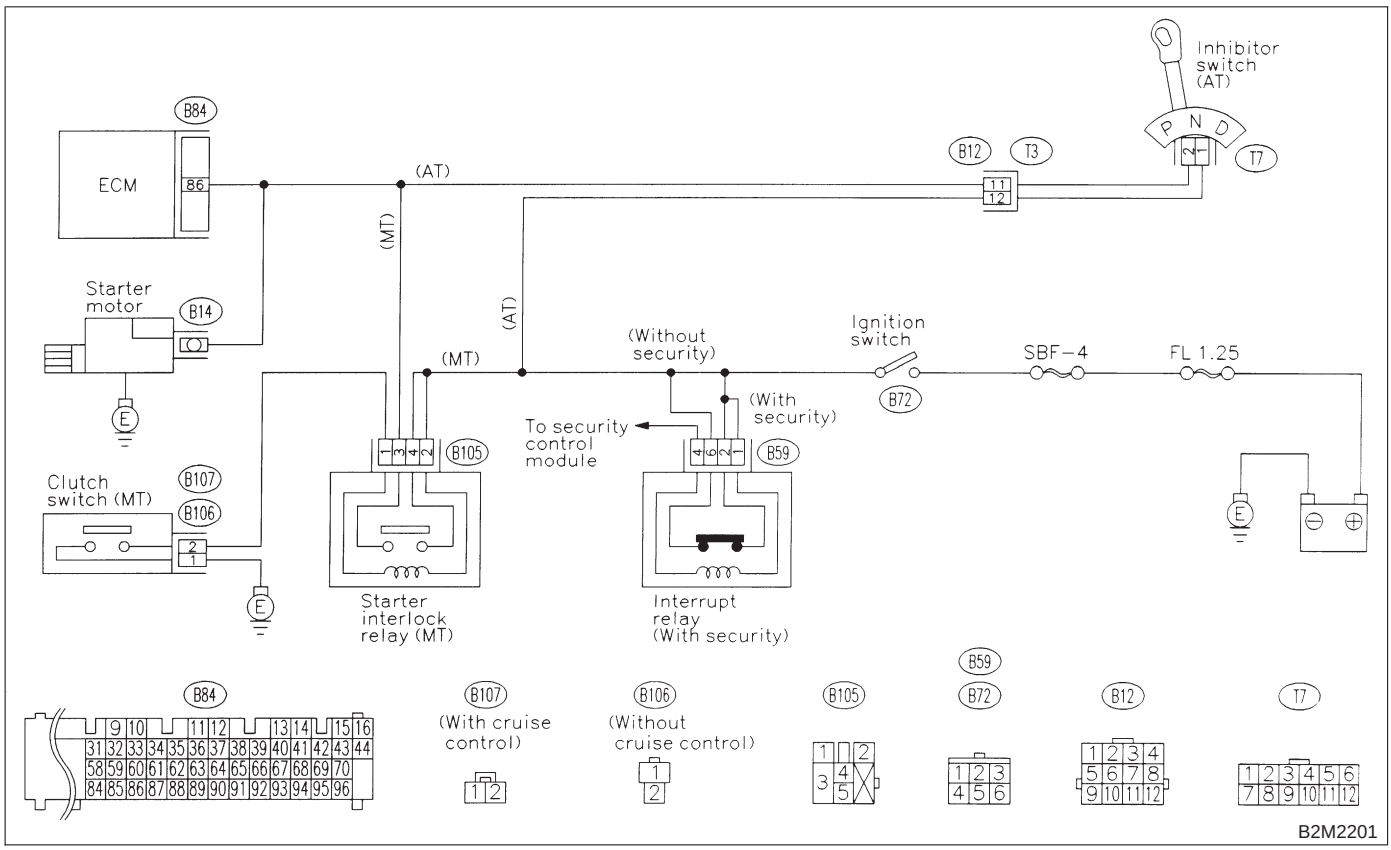


CHECK : ***Is the resistance less than 10 Ω?***
YES : Repair ground short circuit in harness between ECM and TCM connector.
NO : Contact with SOA service.

CG: DTC P1120 — STARTER SWITCH CIRCUIT HIGH INPUT —

NOTE:
Check starter switch circuit.
<Ref. to 2-7 [T16CG0].>

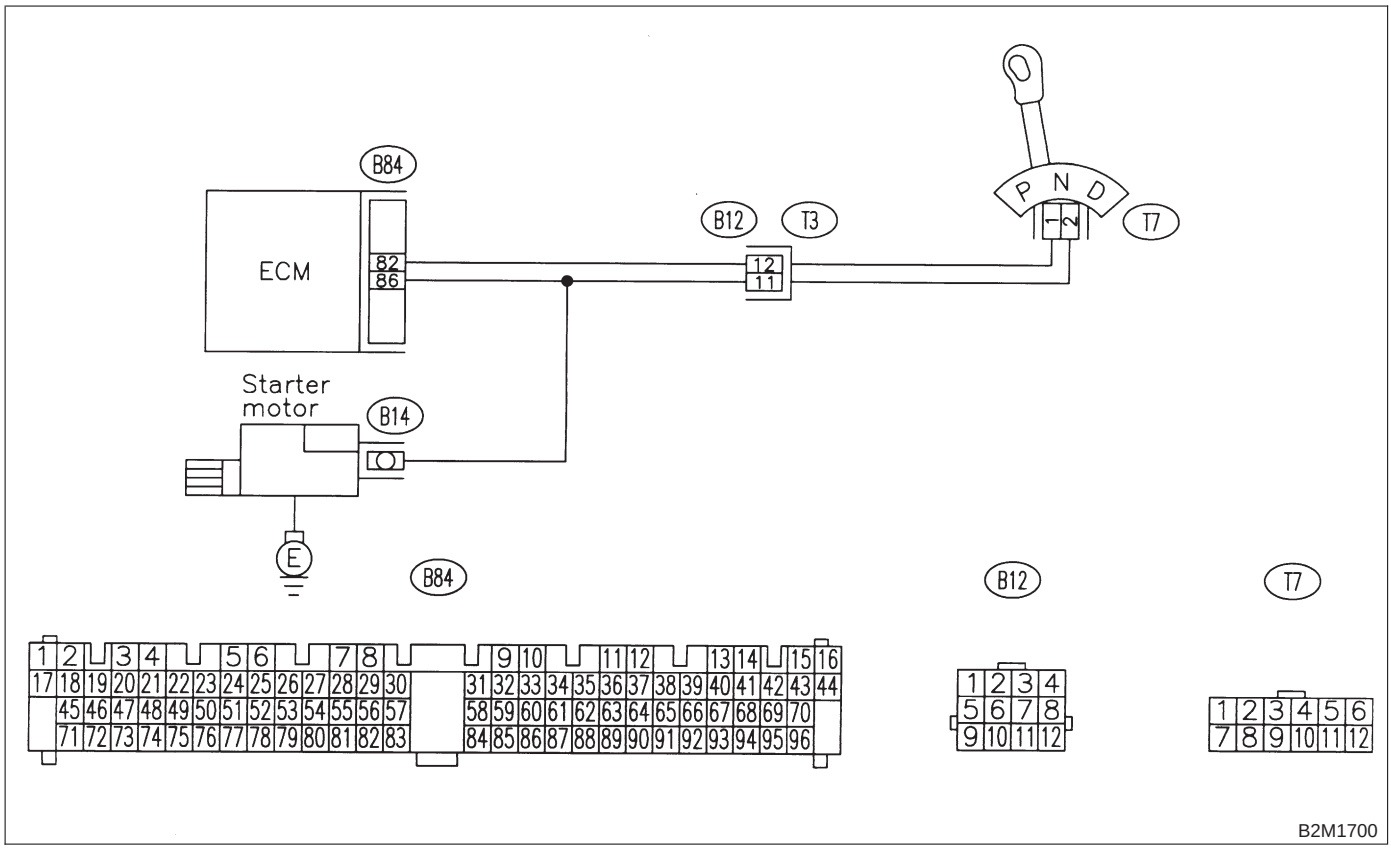
- **WIRING DIAGRAM:**



CH: DTC P1121 — NEUTRAL POSITION SWITCH CIRCUIT LOW INPUT [AT VEHICLES] —

NOTE:
Check neutral position switch circuit.
<Ref. to 2-7 [T16CH0].>

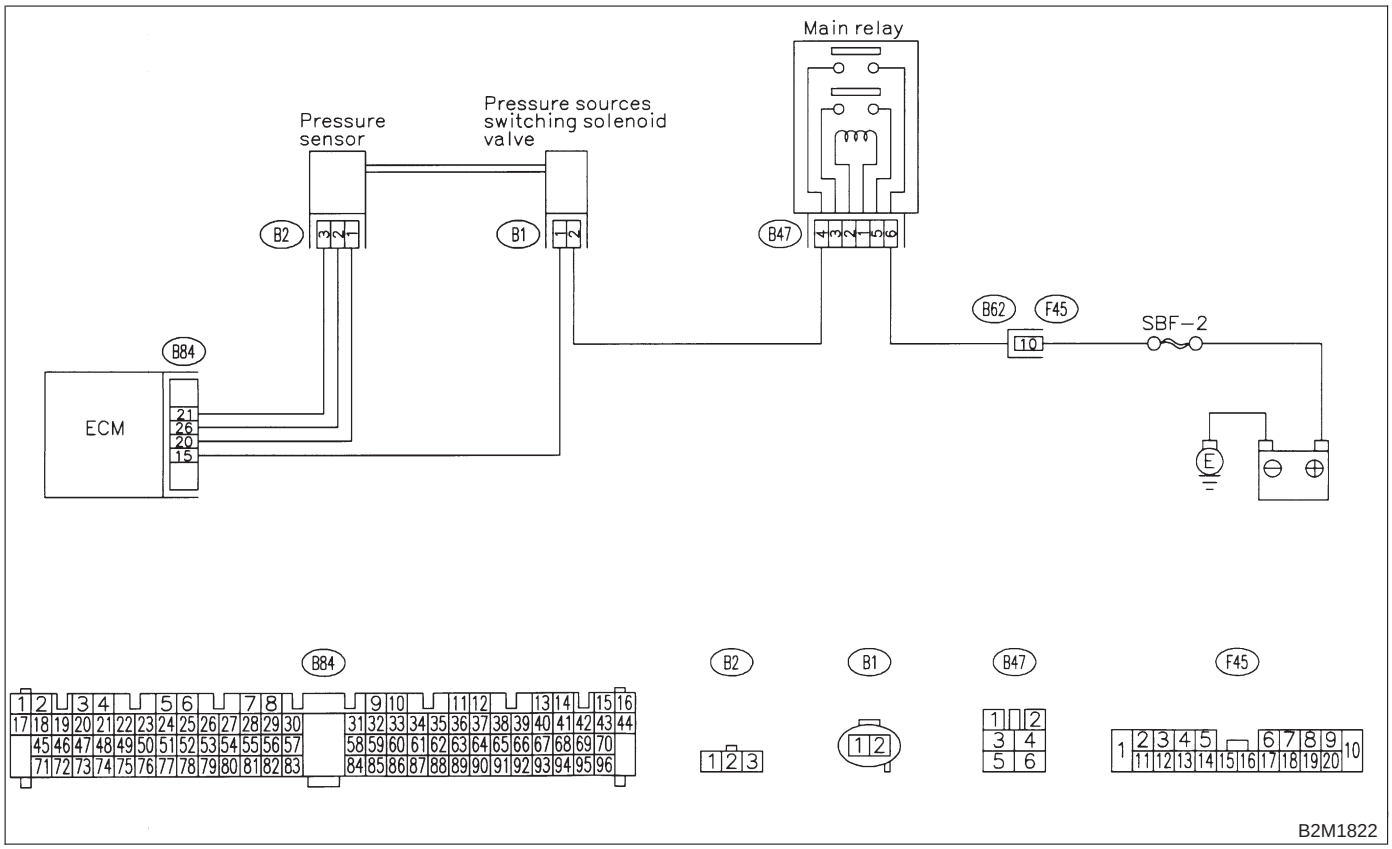
- **WIRING DIAGRAM:**



CI: DTC P1122 — PRESSURE SOURCES SWITCHING SOLENOID VALVE CIRCUIT HIGH INPUT —

NOTE:
Check pressure sources switching solenoid valve circuit.
<Ref. to 2-7 [T16CI0].>

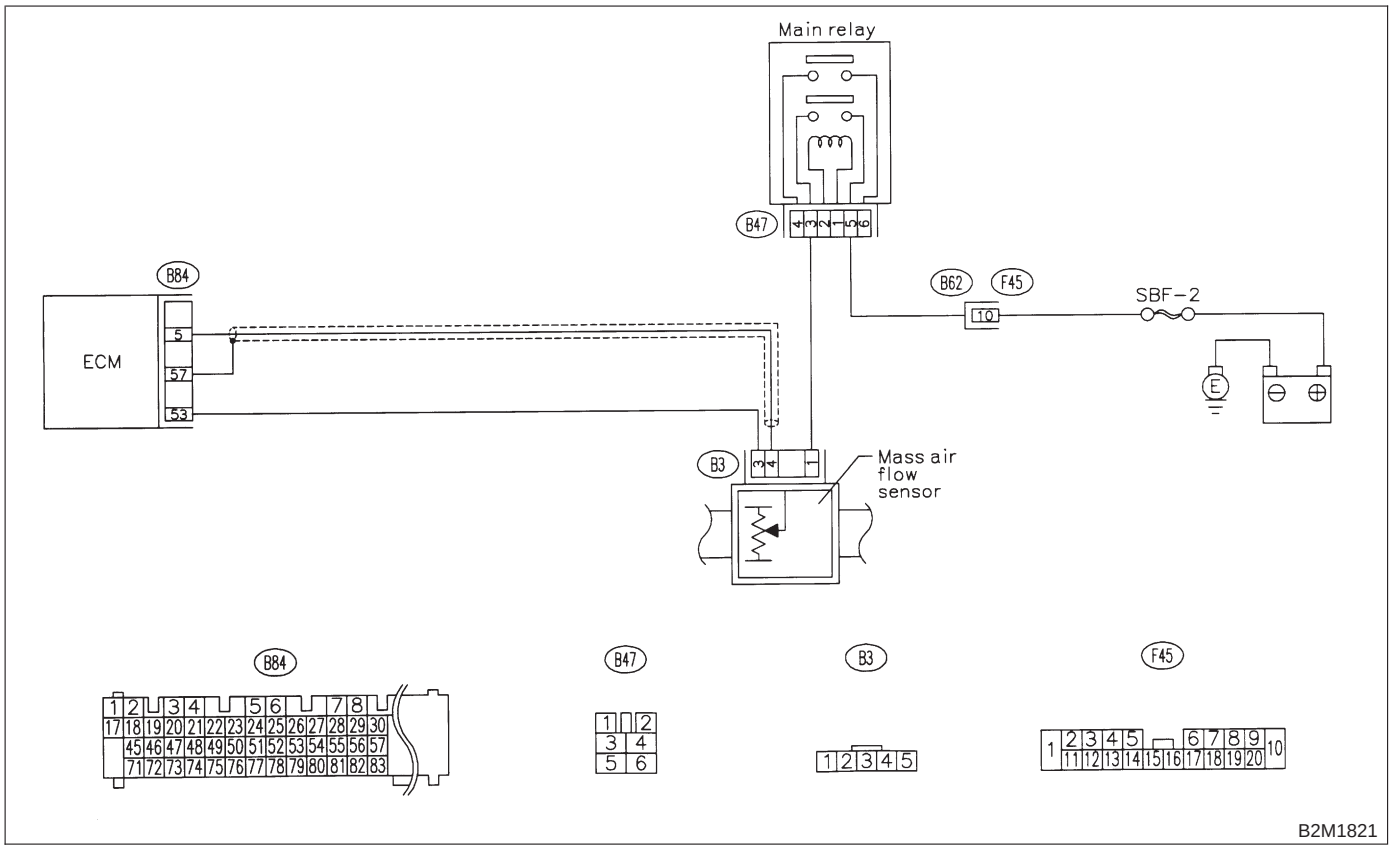
- **WIRING DIAGRAM:**



CJ: DTC P1141 — MASS AIR FLOW SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM (HIGH INPUT) —

NOTE:
Check mass air flow sensor circuit.
<Ref. to 2-7 [T16CK0].>

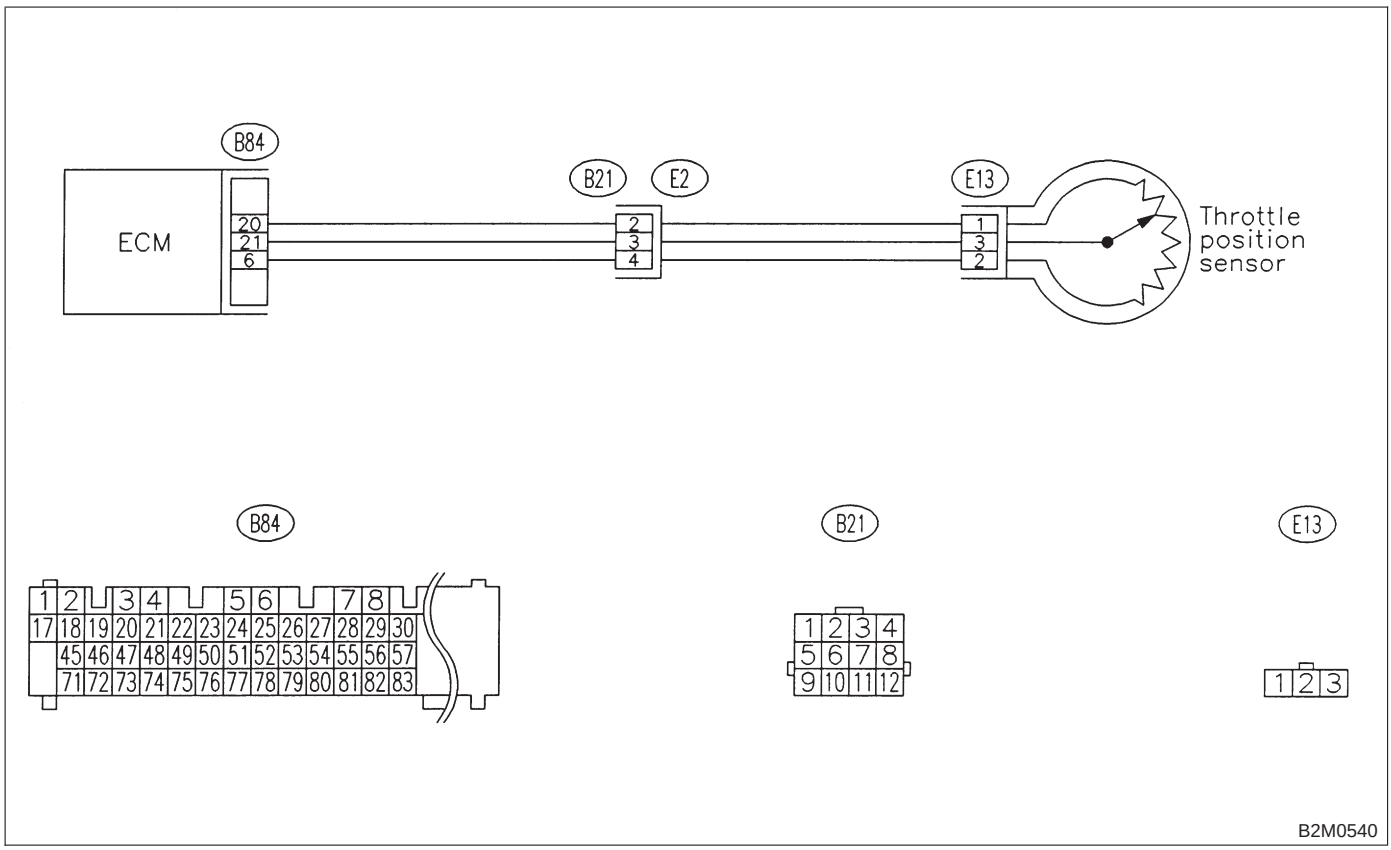
- **WIRING DIAGRAM:**



CK: DTC P1142 — THROTTLE POSITION SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM (LOW INPUT) —

NOTE:
Check throttle position sensor circuit.
<Ref. to 2-7 [T16CL0].>

- **WIRING DIAGRAM:**



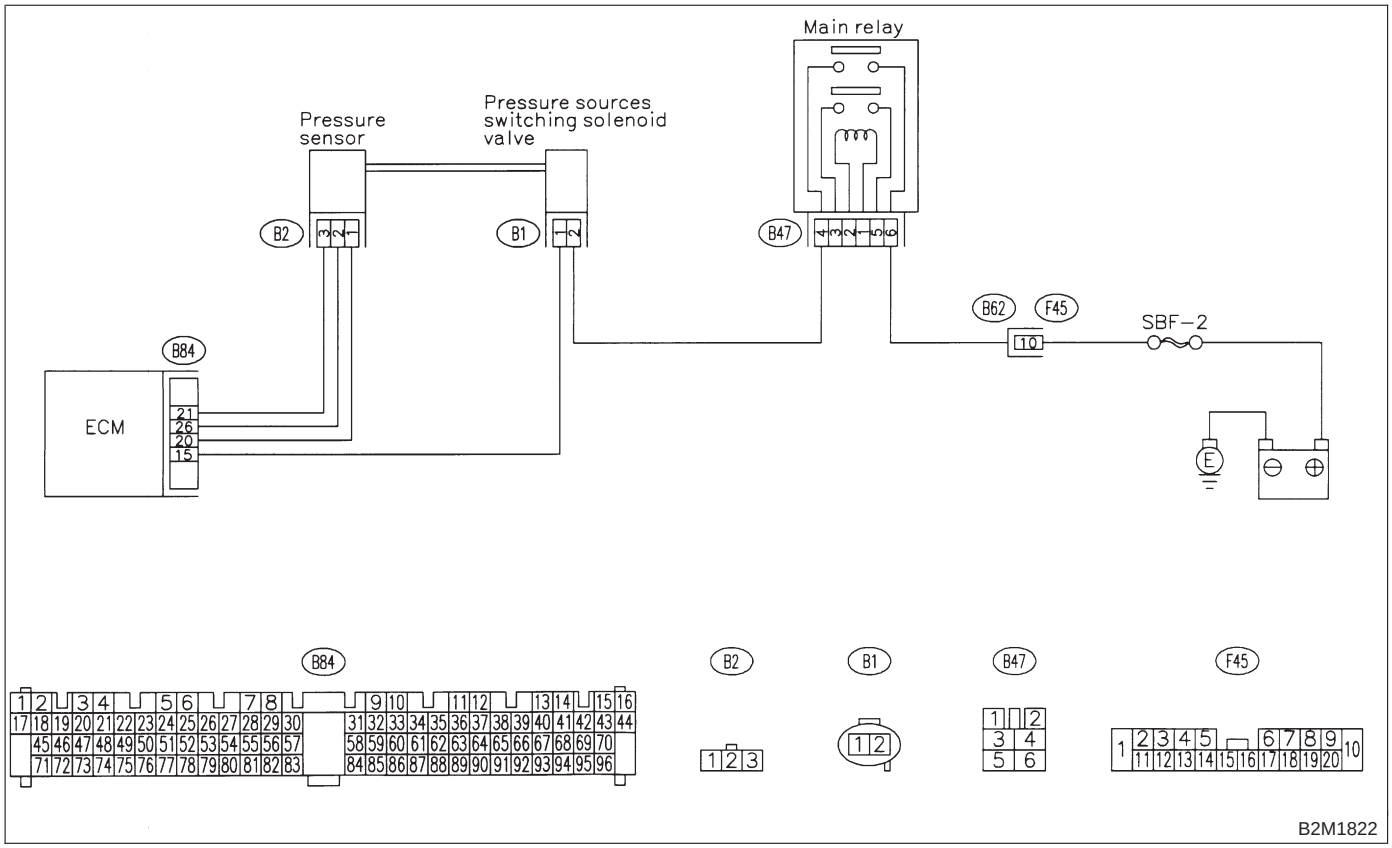
MEMO:

CL: DTC P1143 — PRESSURE SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM (LOW INPUT) —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault

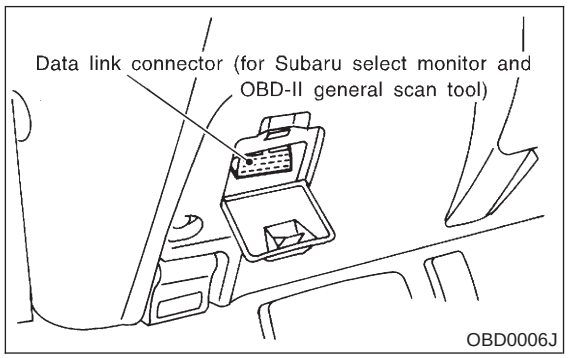
CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



16CL1 : CHECK DATA FOR CONTROL.

1) Turn ignition switch to OFF.
2) Connect Subaru Select Monitor or the OBD-II general scan tool to data link connector.



3) Turn ignition switch ON and Subaru Select Monitor or the OBD-II general scan tool switch ON.
4) Start engine.
5) Read data of atmospheric absolute pressure signal using Subaru Select Monitor or OBD-II general scan tool.

NOTE:
● Subaru Select Monitor
For detailed operation procedure, refer to the "READ CURRENT DATA SHOWN ON DISPLAY FOR ENGINE". <Ref. to 2-7 [T3C4].>
● OBD-II general scan tool
For detailed operation procedures, refer to the OBD-II General Scan Tool Instruction Manual.

CHECK : ***Is the value less than 32 kPa (240 mmHg, 9.45 inHg)?***
YES : Go to step **16CL3**.
NO : Go to step **16CL2**.

16CL2 : CHECK PRESSURE SENSOR.

1) Measure actual atmospheric pressure.
2) Read data of atmospheric absolute pressure signal using Subaru Select Monitor or OBD-II general scan tool.

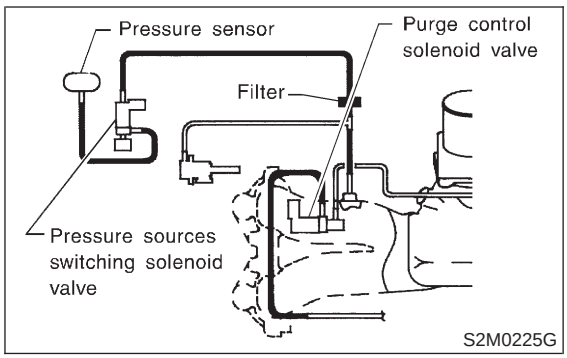
NOTE:
● Subaru Select Monitor
For detailed operation procedure, refer to the "READ CURRENT DATA SHOWN ON DISPLAY FOR ENGINE". <Ref. to 2-7 [T3C4].>

CHECK : ***Is the difference between absolute value of Subaru Selector Monitor indication and actual atmospheric pressure greater than 10 kPa (75 mmHg, 2.95 inHg)?***
YES : Replace pressure sensor. <Ref. to 2-7 [W11A0].>
NO : Even if MIL lights up, the circuit has returned to a normal condition at this time. Contact with SOA service.

NOTE:
Inspection by DTM is required, because probable cause is deterioration of multiple parts.

16CL3 : CHECK VACUUM HOSES.

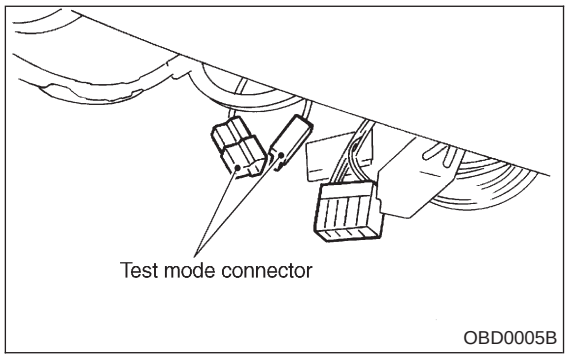
Check the following item. Incorrect hose connections in line between the pressure sources switching solenoid valve and pressure sensor, intake manifold and/or CPC solenoid valve.



CHECK : ***Is there a fault in vacuum hose?***
YES : Repair or replace hoses or filter.
NO : Go to step **16CL4**.

16CL4 : CHECK PRESSURE SOURCES SWITCHING SOLENOID VALVE.

1) Turn ignition switch to OFF.
2) Connect test mode connector.



3) Turn ignition switch to ON.

NOTE:
Pressure sources switching solenoid valve operation check can also be executed using Subaru Select Monitor. For the procedure, refer to the "COMPULSORY VALVE OPERATION CHECK MODE". <Ref. to 2-7 [T3F0].>

CHECK : ***Does pressure sources switching solenoid valve produce operating sound? (ON ⟷ OFF each 1.5 sec.)***

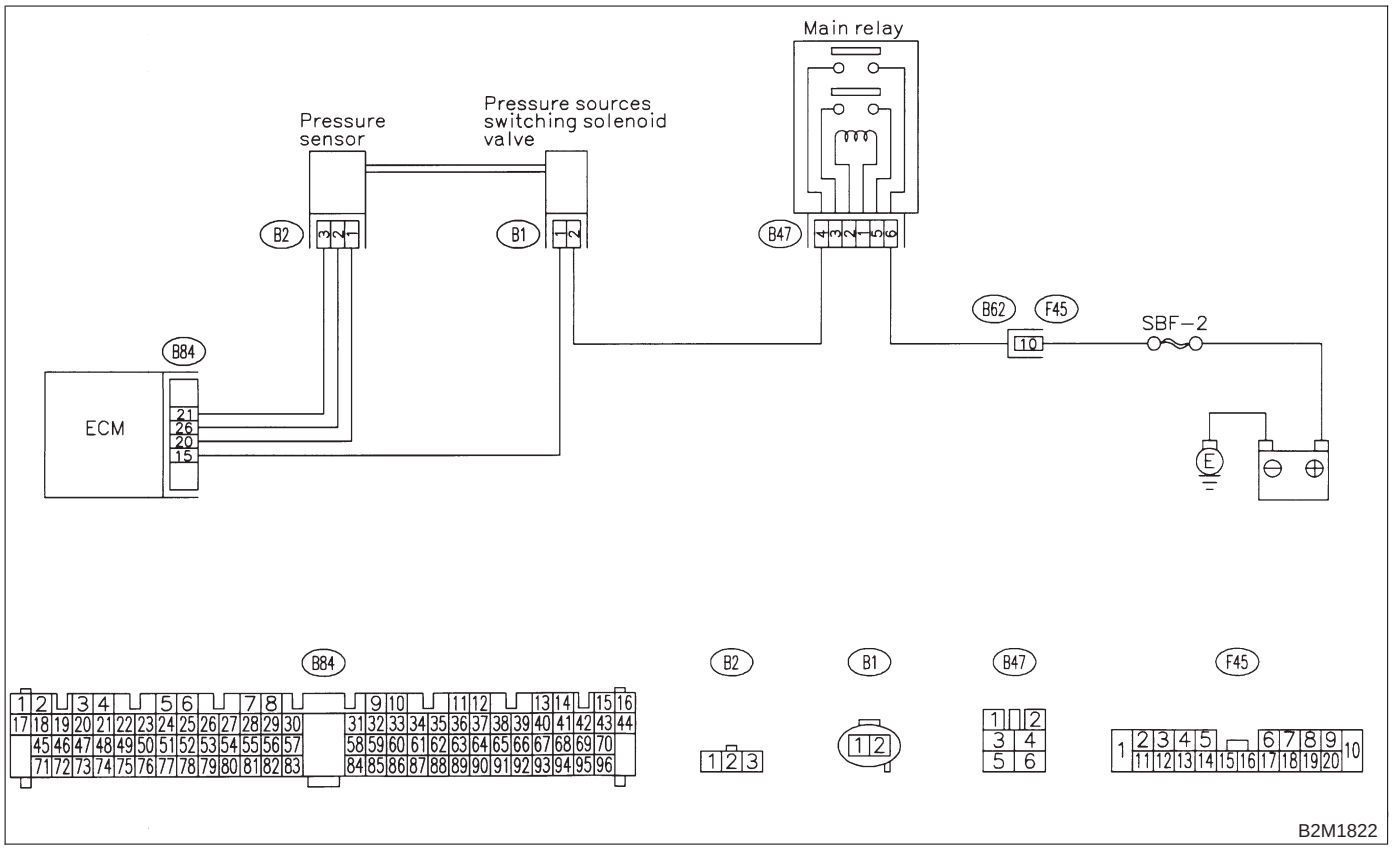
YES : Replace pressure sensor. <Ref. to 2-7 [W11A0].>

NO : Replace pressure sources switching solenoid valve. <Ref. to 2-7 [W13A0].>

CM: DTC P1144 — PRESSURE SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM (HIGH INPUT) —

NOTE:
Check pressure sensor circuit.
<Ref. to 2-7 [T16CN0].>

- **WIRING DIAGRAM:**

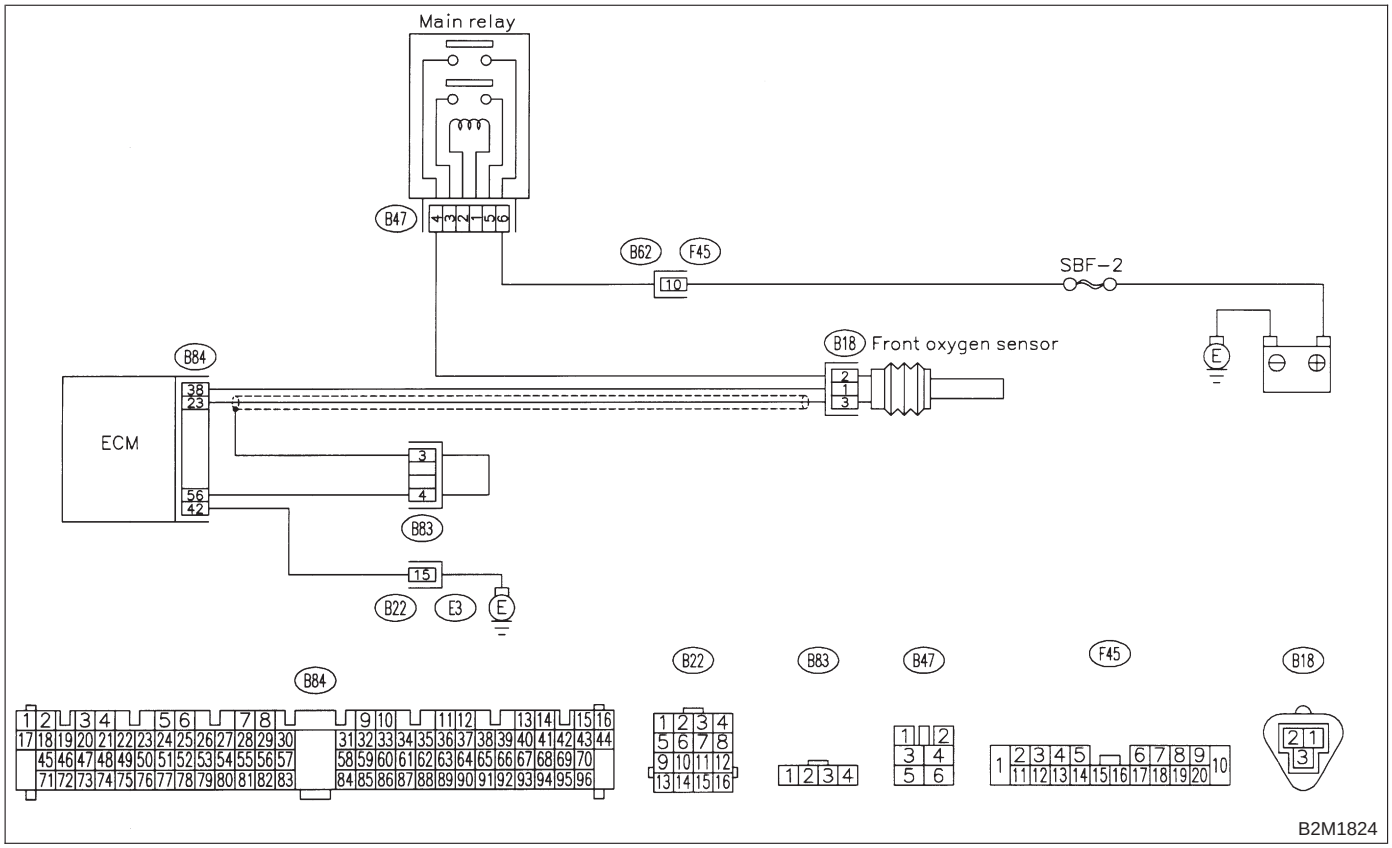


CN: DTC P1150 — FRONT OXYGEN SENSOR HEATER CIRCUIT HIGH INPUT —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

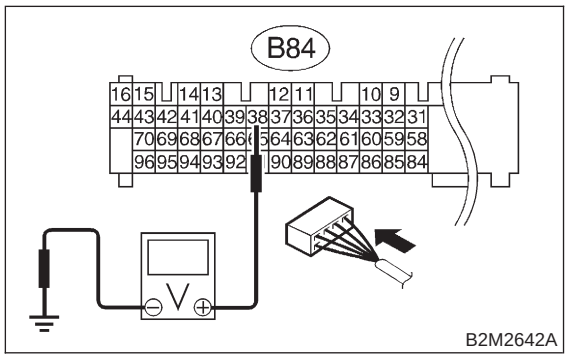
- **WIRING DIAGRAM:**



16CN1 : CHECK OUTPUT SIGNAL FROM ECM.

1) Turn ignition switch to ON.
2) Measure voltage ECM connector and chassis ground.

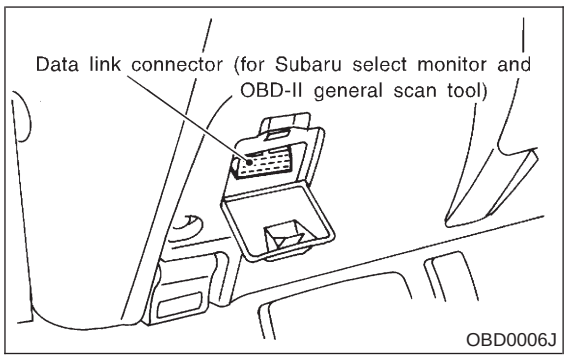
Connector & terminal
(B84) No. 38 (+) — Chassis ground (−):



CHECK : ***Is the voltage more than 8 V?***
YES : Go to step **16CN2**.
NO : Go to step **16CN3**.

16CN2 : CHECK FRONT OXYGEN SENSOR HEATER CURRENT.

1) Turn ignition switch to OFF.
2) Repair battery short circuit in harness between ECM and front oxygen sensor connector.
3) Connect Subaru Select Monitor or OBD-II general scan tool to data link connector.



4) Turn ignition switch to ON and Subaru Select Monitor or OBD-II general scan tool switch to ON.
5) Read data of front oxygen sensor heater current using Subaru Select Monitor or the OBD-II general scan tool.

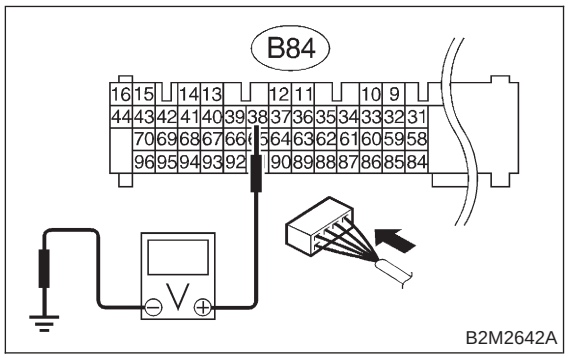
NOTE:
● Subaru Select Monitor
For detailed operation procedure, refer to the “READ CURRENT DATA SHOWN ON DISPLAY FOR ENGINE”. <Ref. to 2-7 [T3C4].>
● OBD-II general scan tool
For detailed operation procedures, refer to the OBD-II General Scan Tool Instruction Manual.

CHECK : ***Is the value more than 7 A?***
YES : Replace ECM. <Ref. to 2-7 [W15A2].>
NO : END

16CN3 : CHECK OUTPUT SIGNAL FROM ECM.

Measure voltage of ECM connector and chassis ground.

Connector & terminal
(B84) No. 38 (+) — Chassis ground (−):



CHECK : ***Does the voltage change more than 8 V by shaking harness and connector of ECM while monitoring the value with voltage meter?***

YES : Repair battery short circuit in harness between ECM and front oxygen sensor connector.

NO : END

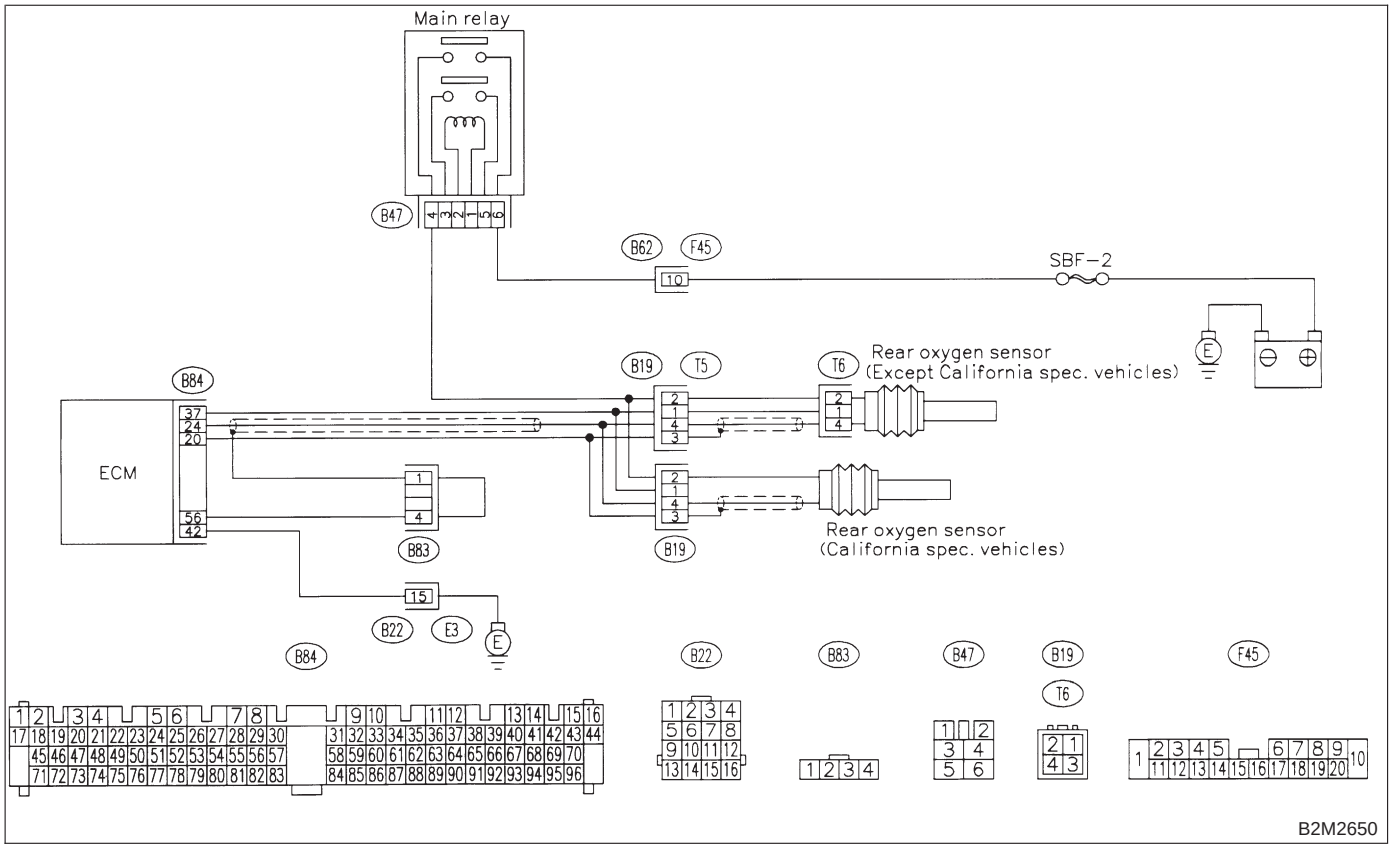
MEMO:

CO: DTC P1151 — REAR OXYGEN SENSOR HEATER CIRCUIT HIGH INPUT —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

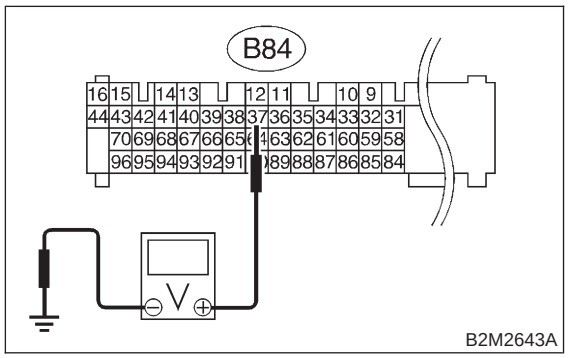
- **WIRING DIAGRAM:**



16CO1 : CHECK OUTPUT SIGNAL FROM ECM.

1) Turn ignition switch to ON.
2) Measure voltage ECM connector and chassis ground.

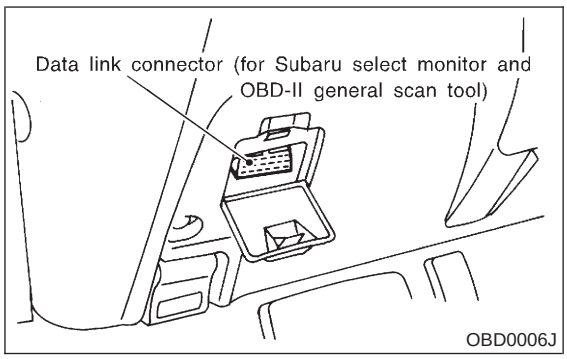
Connector & terminal
(B84) No. 37 (+) — Chassis ground (−):



CHECK : ***Is the voltage more than 8 V?***
YES : Go to step **16CO2**.
NO : Go to step **16CO3**.

16CO2 : CHECK FRONT OXYGEN SENSOR HEATER CURRENT.

1) Turn ignition switch to OFF.
2) Repair battery short circuit in harness between ECM and front oxygen sensor connector.
3) Connect Subaru Select Monitor or OBD-II general scan tool to data link connector.



4) Turn ignition switch to ON and Subaru Select Monitor or OBD-II general scan tool switch to ON.
5) Read data of front oxygen sensor heater current using Subaru Select Monitor or the OBD-II general scan tool.

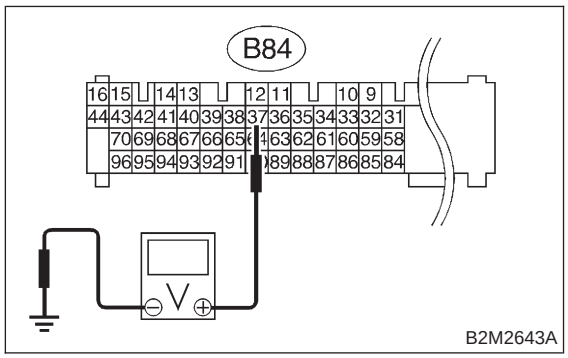
NOTE:
● Subaru Select Monitor
For detailed operation procedure, refer to the “READ CURRENT DATA SHOWN ON DISPLAY FOR ENGINE”. <Ref. to 2-7 [T3C4].>
● OBD-II general scan tool
For detailed operation procedures, refer to the OBD-II General Scan Tool Instruction Manual.

CHECK : ***Is the value more than 7 A?***
YES : Replace ECM. <Ref. to 2-7 [W15A2].>
NO : END

16CO3 : CHECK OUTPUT SIGNAL FROM ECM.

Measure voltage of ECM connector and chassis ground.

Connector & terminal
(B84) No. 37 (+) — Chassis ground (−):



CHECK : ***Does the voltage change more than 8 V by shaking harness and connector of ECM while monitoring the value with voltage meter?***

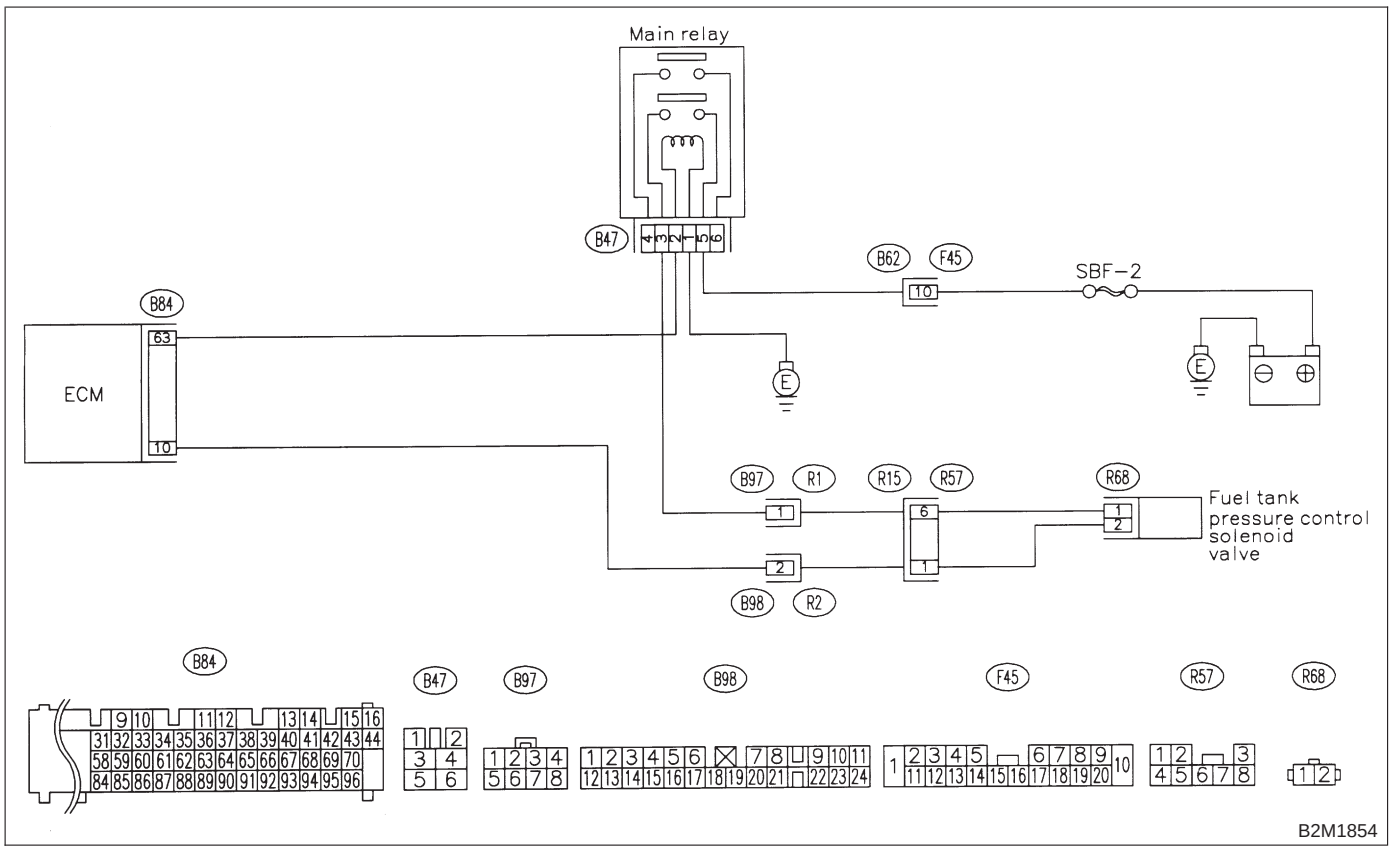
YES : Repair battery short circuit in harness between ECM and front oxygen sensor connector.

NO : END

CP: DTC P1400 — FUEL TANK PRESSURE CONTROL SOLENOID VALVE CIRCUIT LOW INPUT —

NOTE:
Check fuel tank pressure control solenoid valve circuit.
<Ref. to 2-7 [T16CO0].>

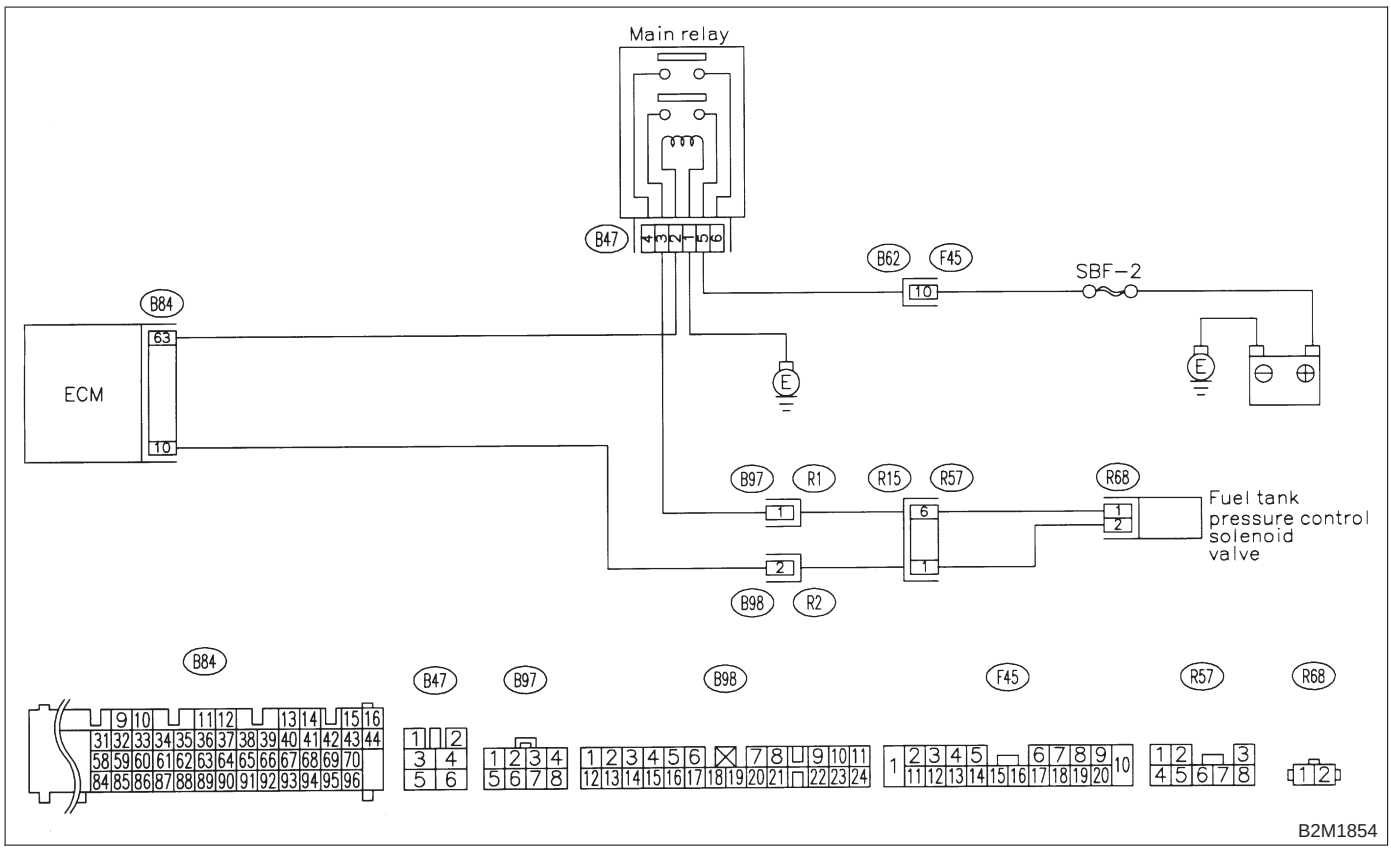
- **WIRING DIAGRAM:**



CQ: DTC P1420 — FUEL TANK PRESSURE CONTROL SOLENOID VALVE CIRCUIT HIGH INPUT —

NOTE:
Check fuel tank pressure control solenoid valve circuit.
<Ref. to 2-7 [T16CP0].>

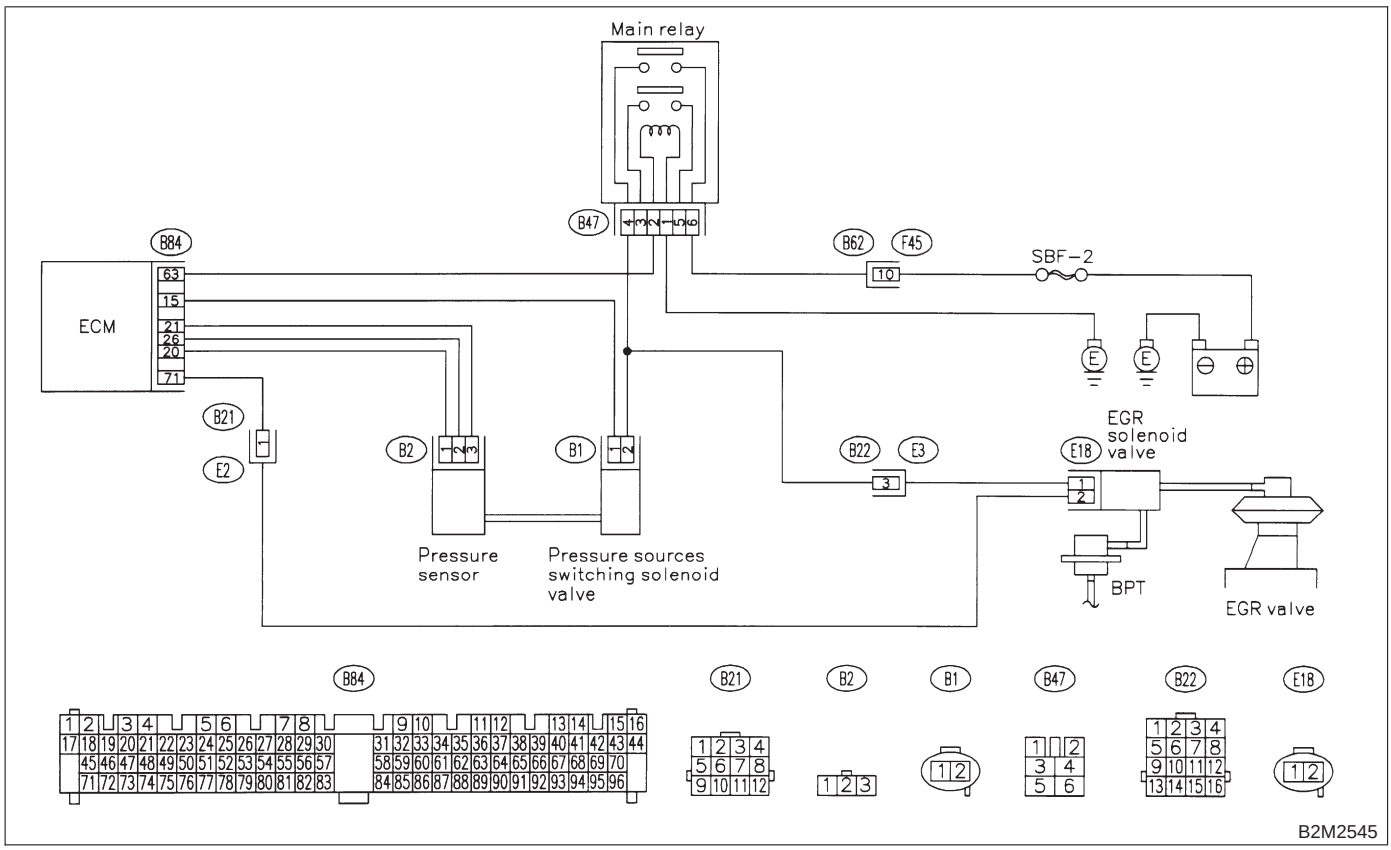
- **WIRING DIAGRAM:**



CR: DTC P1421 — EXHAUST GAS RECIRCULATION CIRCUIT HIGH INPUT —

NOTE:
Check exhaust gas recirculation circuit.
<Ref. to 2-7 [T16CQ0].>

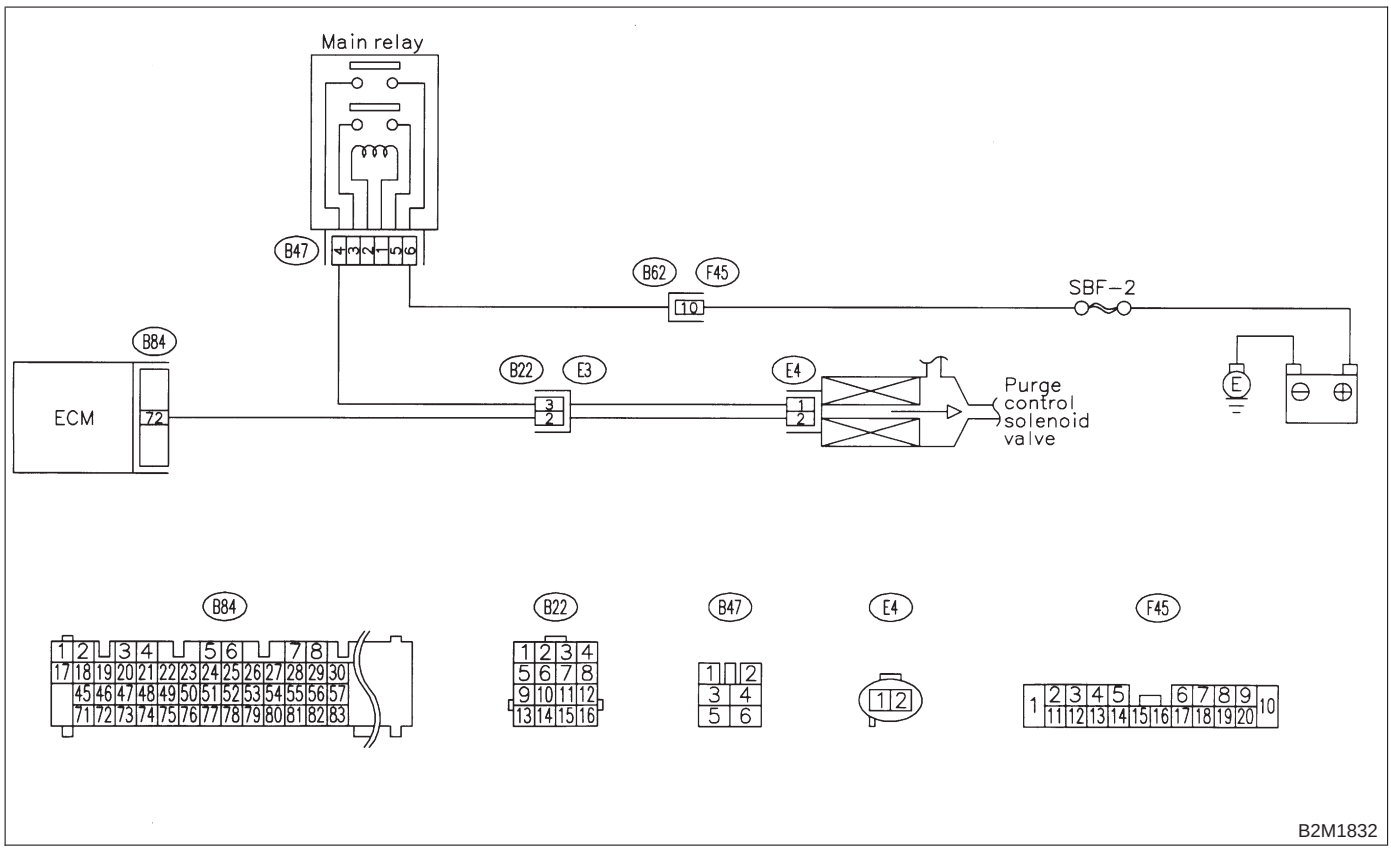
- **WIRING DIAGRAM:**



CS: DTC P1422 — EVAPORATIVE EMISSION CONTROL SYSTEM PURGE CONTROL VALVE CIRCUIT HIGH INPUT —

NOTE:
Check canister purge control system.
<Ref. to 2-7 [T16CR0].>

- **WIRING DIAGRAM:**



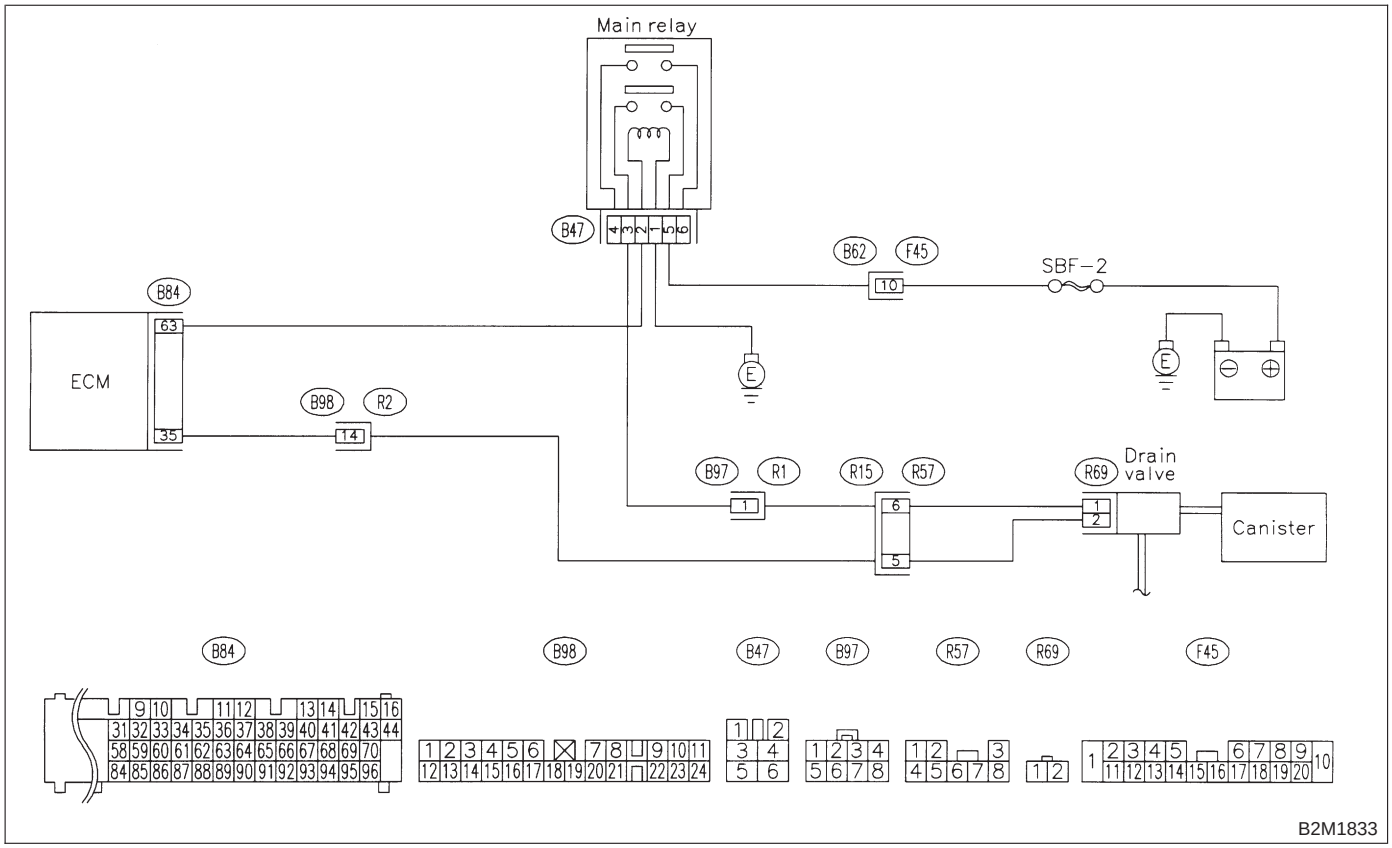
MEMO:

CT: DTC P1423 — EVAPORATIVE EMISSION CONTROL SYSTEM VENT CONTROL HIGH INPUT —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

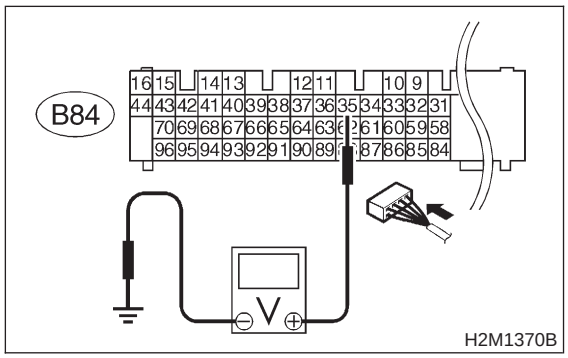
- **WIRING DIAGRAM:**



16CT1 : CHECK OUTPUT SIGNAL FROM ECM.

1) Turn ignition switch to ON.
2) Measure voltage between ECM and chassis ground.

Connector & terminal
(B84) No. 35 (+) — Chassis ground (−):



CHECK : ***Is the voltage more than 10 V?***
YES : Go to step **16CT3**.
NO : Go to step **16CT2**.

16CT2 : CHECK POOR CONTACT.

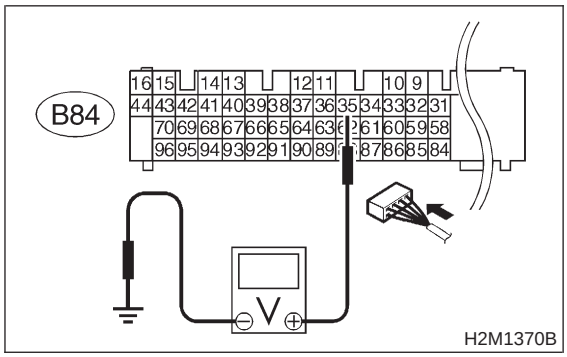
Check poor contact in ECM connector. <Ref. to FOREWORD [T3C1].>

CHECK : ***Is there poor contact in ECM connector?***
YES : Repair poor contact in ECM connector.
NO : Replace ECM. <Ref. to 2-7 [W15A2].>

16CT3 : CHECK HARNESS BETWEEN DRAIN VALVE AND ECM CONNECTOR.

1) Turn ignition switch to OFF.
2) Disconnect connector from drain valve.
3) Turn ignition switch to ON.
4) Measure voltage between ECM and chassis ground.

Connector & terminal
(B84) No. 35 (+) — Chassis ground (−):

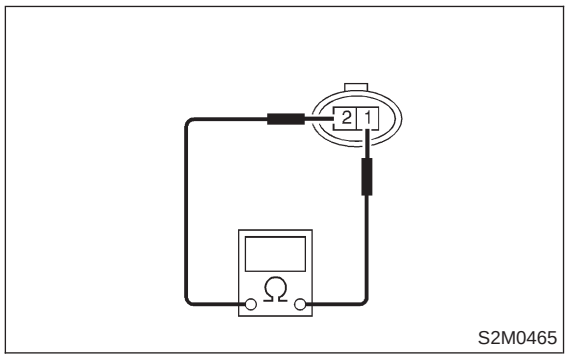


CHECK : ***Is the voltage more than 10 V?***
YES : Repair battery short circuit in harness between ECM and drain valve connector. After repair, replace ECM. <Ref. to 2-7 [W15A2].>
NO : Go to step **16CT4**.

16CT4 : CHECK DRAIN VALVE.

1) Turn ignition switch to OFF.
2) Measure resistance between drain valve terminals.

Terminals
No. 1 — No. 2:



CHECK : ***Is the resistance less than 1 Ω?***
YES : Replace drain valve <Ref. to 2-1 [W17A0].> and ECM <Ref. to 2-7 [W15A2].>.
NO : Go to step **16CT5**.

16CT5 : CHECK POOR CONTACT.

Check poor contact in ECM connector. <Ref. to FOREWORD [T3C1].>

CHECK : ***Is there poor contact in ECM connector?***
YES : Repair poor contact in ECM connector.
NO : Replace ECM. <Ref. to 2-7 [W15A2].>

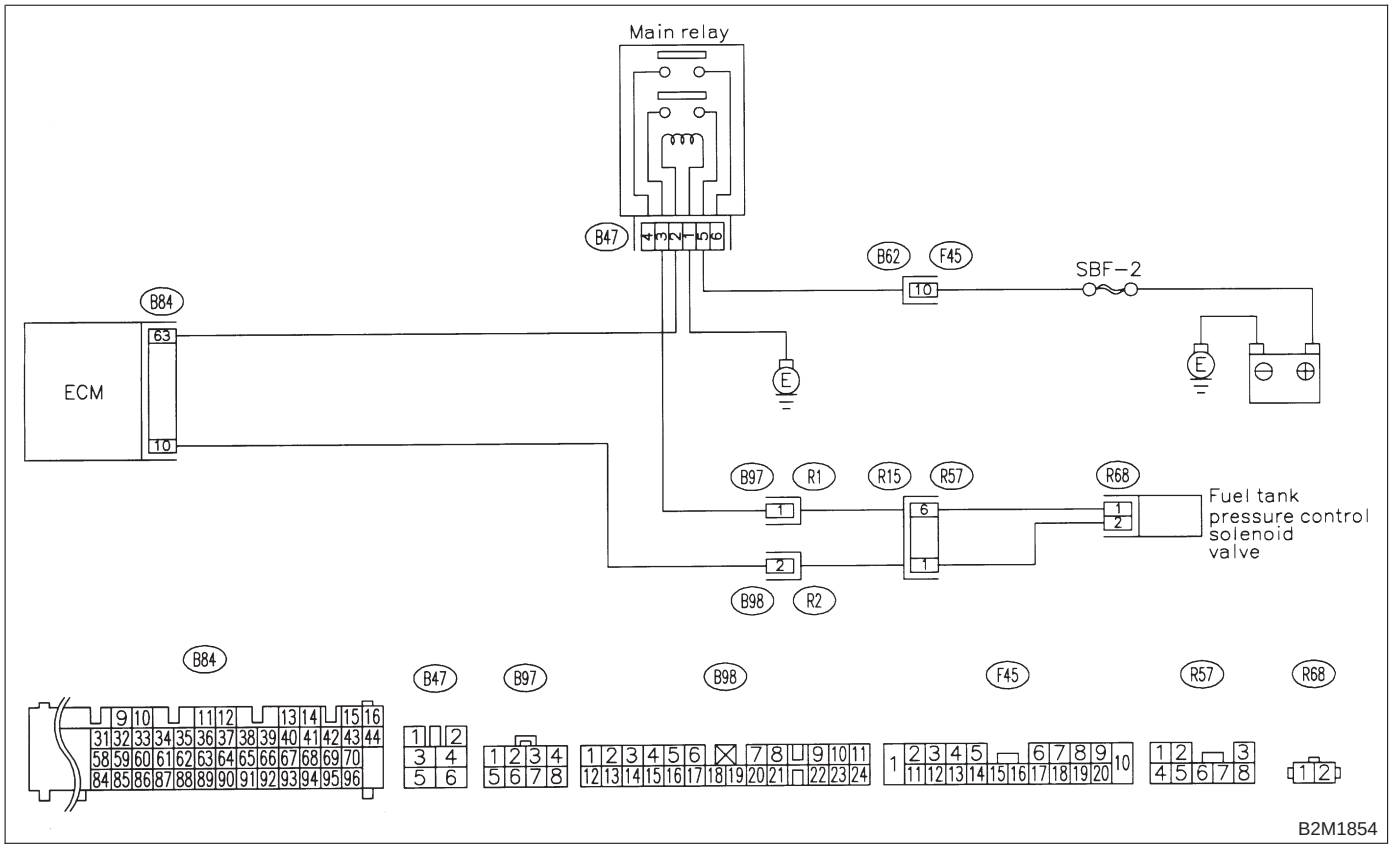
MEMO:

CU: DTC P1440 — FUEL TANK PRESSURE CONTROL SYSTEM FUNCTION PROBLEM (LOW INPUT) —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault

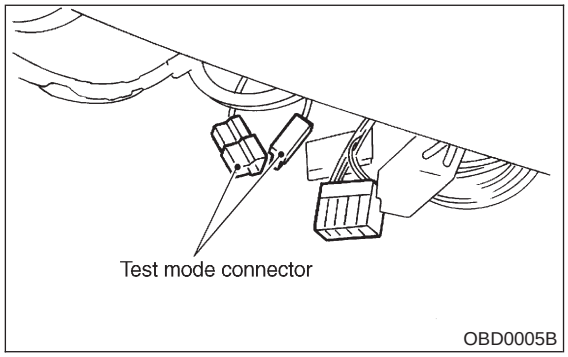
CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



16CU1 : CHECK FUEL TANK PRESSURE CONTROL SOLENOID VALVE.

1) Turn ignition switch to OFF.
2) Connect test mode connector.



3) Turn ignition switch to ON.

NOTE:
Fuel tank pressure control solenoid valve operation check can also be executed using Subaru Select Monitor. For the procedure, refer to "COMPULSORY VALVE OPERATION CHECK MODE". <Ref. to 2-7 [T3F0].>

CHECK : ***Does fuel tank pressure control solenoid valve produce operating sound?***
YES : Go to step **16CU2**.
NO : Replace fuel tank pressure control solenoid valve. <Ref. to 2-1 [W10A0].>

16CU2 : CHECK FUEL FILLER CAP.

1) Turn ignition switch to OFF.
2) Open the fuel flap.

CHECK : ***Is the fuel filler cap tightened securely?***
YES : Tighten fuel filler cap securely.
NO : Go to step **16CU3**.

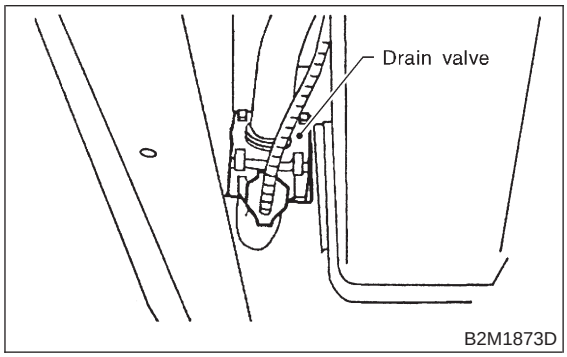
16CU3 : CHECK FUEL FILLER PIPE SEAL.

CHECK : ***Is there any damage to the seal between fuel filler cap and fuel filler pipe?***
YES : Repair or replace fuel filler cap and fuel filler pipe. <Ref. to 2-8 [W3A0].>
NO : Go to step **16CU4**.

16CU4 : CHECK DRAIN VALVE.

Turn ignition switch to ON.

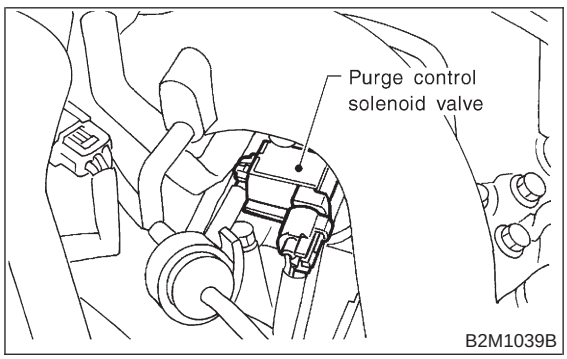
NOTE:
Drain valve operation check can also be executed using Subaru Select Monitor. For the procedure, refer to "COMPULSORY VALVE OPERATION CHECK MODE". <Ref. to 2-7 [T3F0].>



CHECK : ***Does drain valve produce operating sound?***
YES : Go to step **16CU5**.
NO : Replace drain valve. <Ref. to 2-1 [W17A0].>

16CU5 : CHECK PURGE CONTROL SOLENOID VALVE.

NOTE:
Purge control solenoid valve operation check can also be executed using Subaru Select Monitor. For the procedure, refer to "COMPULSORY VALVE OPERATION CHECK MODE". <Ref. to 2-7 [T3F0].>



CHECK : ***Does purge control solenoid valve produce operating sound?***
YES : Go to step **16CU6**.
NO : Replace purge control solenoid valve. <Ref. to 2-1 [W4A0].>

16CU6 : CHECK EVAPORATIVE EMISSION CONTROL SYSTEM LINE.

Turn ignition switch to OFF.

CHECK : ***Does fuel leak in fuel line?***
YES : Repair or replace fuel line. <Ref. to 2-8 [W7A0].>
NO : Go to step **16CU7**.

16CU7 : CHECK CANISTER.

CHECK : ***Is there any damage at canister?***
YES : Repair or replace canister. <Ref. to 2-1 [W3A0].>
NO : Go to step **16CU8**.

16CU8 : CHECK FUEL TANK.

CHECK : ***Is there any damage at fuel tank?***
YES : Repair or replace fuel tank. <Ref. to 2-8 [W2A0].>
NO : Go to step **16CU9**.

16CU9 : CHECK OTHER MECHANICAL TROUBLE.

CHECK : ***Are there holes, cracks or disconnections of hoses or pipes in evaporative emission control system?***
YES : Repair or replace hoses or pipes.
NO : Contact with SOA service.

NOTE:
Inspection by DTM is required, because probable cause is deterioration of multiple parts.

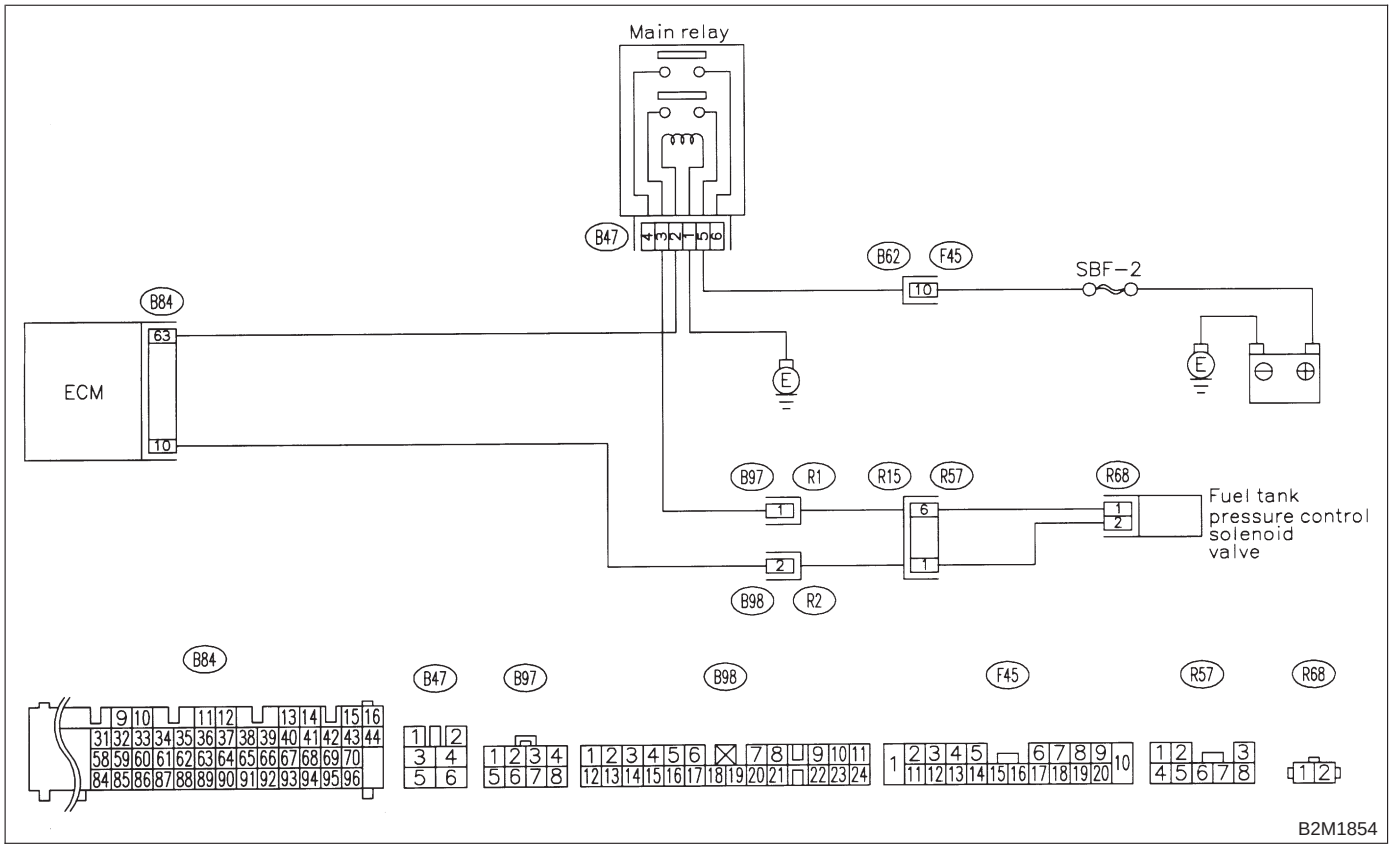
MEMO:

CV: DTC P1441 — FUEL TANK PRESSURE CONTROL SYSTEM FUNCTION PROBLEM (HIGH INPUT) —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault

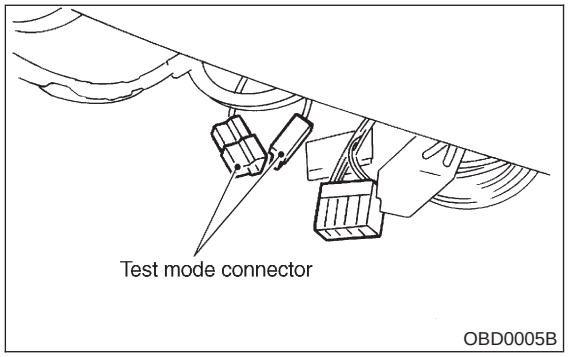
CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



16CV1 : CHECK FUEL TANK PRESSURE CONTROL SOLENOID VALVE.

1) Turn ignition switch to OFF.
2) Connect test mode connector.



3) Turn ignition switch to ON.

NOTE:
Fuel tank pressure control solenoid valve operation check can also be executed using Subaru Select Monitor. For the procedure, refer to "COMPULSORY VALVE OPERATION CHECK MODE". <Ref. to 2-7 [T3F0].>

CHECK : ***Does fuel tank pressure control solenoid valve produce operating sound?***
YES : Go to step **16CV2**.
NO : Replace fuel tank pressure control solenoid valve. <Ref. to 2-1 [W10A0].>

16CV2 : CHECK FUEL FILLER CAP.

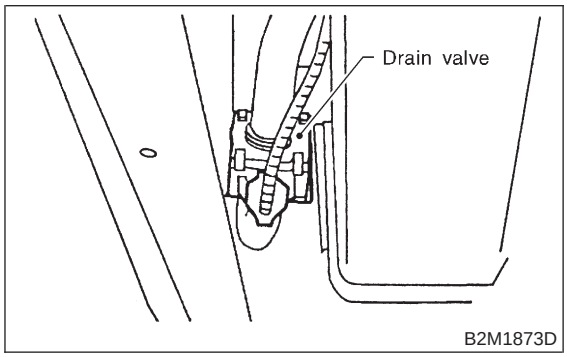
1) Turn ignition switch to OFF.
2) Open the fuel flap.

CHECK : ***Is there any damage at fuel filler cap and fuel filler pipe?***
YES : Repair or replace fuel filler cap and fuel filler pipe. <Ref. to 2-8 [W3A0].>
NO : Go to step **16CV3**.

16CV3 : CHECK DRAIN VALVE.

Turn ignition switch to ON.

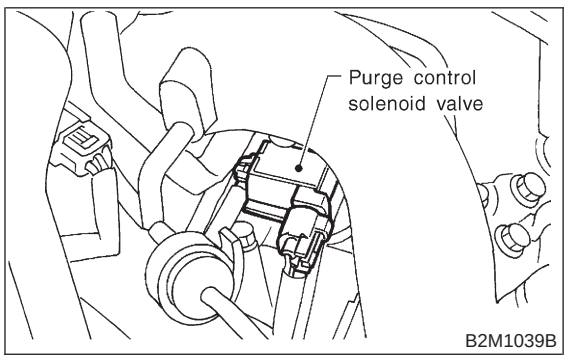
NOTE:
Drain valve operation check can also be executed using Subaru Select Monitor. For the procedure, refer to "COMPULSORY VALVE OPERATION CHECK MODE". <Ref. to 2-7 [T3F0].>



CHECK : ***Does drain valve produce operating sound?***
YES : Go to step **16CV4**.
NO : Replace drain valve. <Ref. to 2-1 [W17A0].>

16CV4 : CHECK PURGE CONTROL SOLENOID VALVE.

NOTE:
Purge control solenoid valve operation check can also be executed using Subaru Select Monitor. For the procedure, refer to "COMPULSORY VALVE OPERATION CHECK MODE". <Ref. to 2-7 [T3F0].>



CHECK : ***Does purge control solenoid valve produce operating sound?***
YES : Go to step **16CV5**.
NO : Replace purge control solenoid valve. <Ref. to 2-1 [W4A0].>

16CV5 : CHECK EVAPORATIVE EMISSION CONTROL SYSTEM LINE.

Turn ignition switch to OFF.

CHECK : ***Is there any damage at canister?***
YES : Repair or replace canister. <Ref. to 2-1 [W3A0].>
NO : Go to step **16CV6**.

16CV6 : CHECK FUEL TANK.

CHECK : ***Is there any damage at fuel tank?***
YES : Repair or replace fuel tank. <Ref. to 2-8 [W2A0].>
NO : Go to step **16CV7**.

16CV7 : CHECK OTHER MECHANICAL TROUBLE.

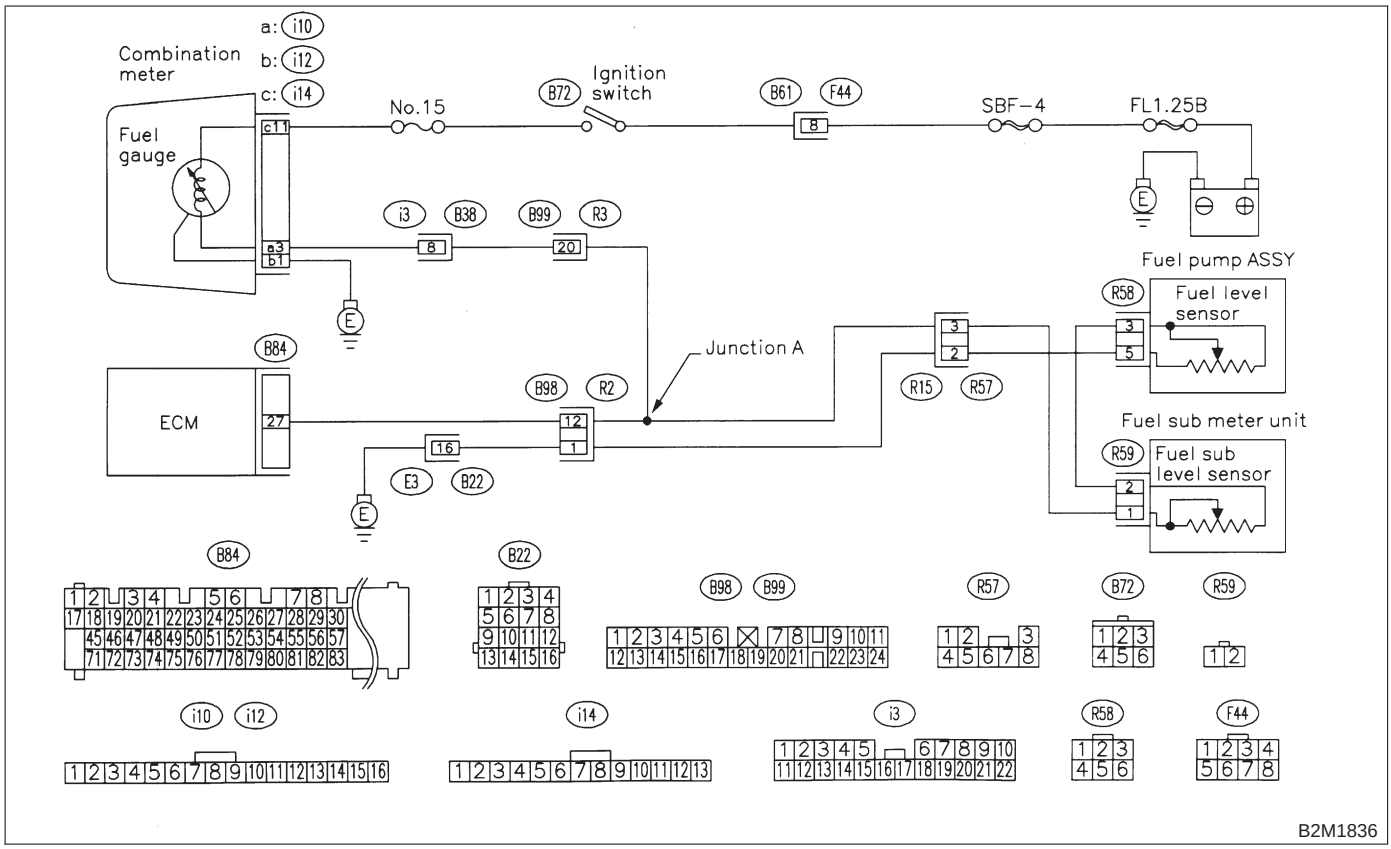
CHECK : ***Is there clogging of hoses or pipes in evaporative emission control system?***
YES : Repair or replace hoses or pipes.
NO : Contact with SOA service.

NOTE:
Inspection by DTM is required, because probable cause is deterioration of multiple parts.

CW: DTC P1442 — FUEL LEVEL SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM 2 —

NOTE:
Check fuel level sensor circuit.
<Ref. to 2-7 [T16CW0].>

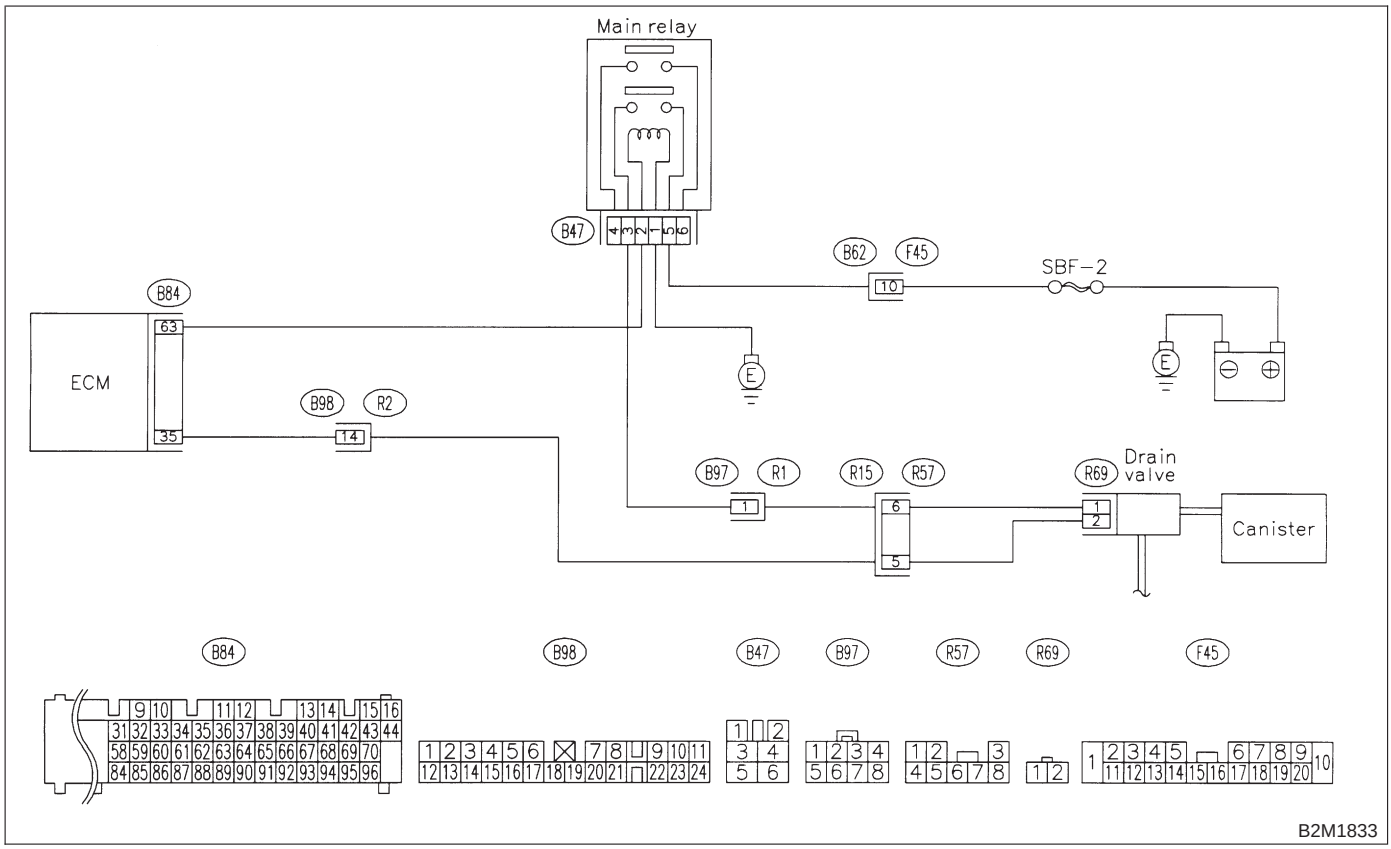
- **WIRING DIAGRAM:**



CX: DTC P1443 — EVAPORATIVE EMISSION CONTROL SYSTEM VENT CONTROL FUNCTION PROBLEM —

NOTE:
Check evaporative emission control system.
<Ref. to 2-7 [T16CX0].>

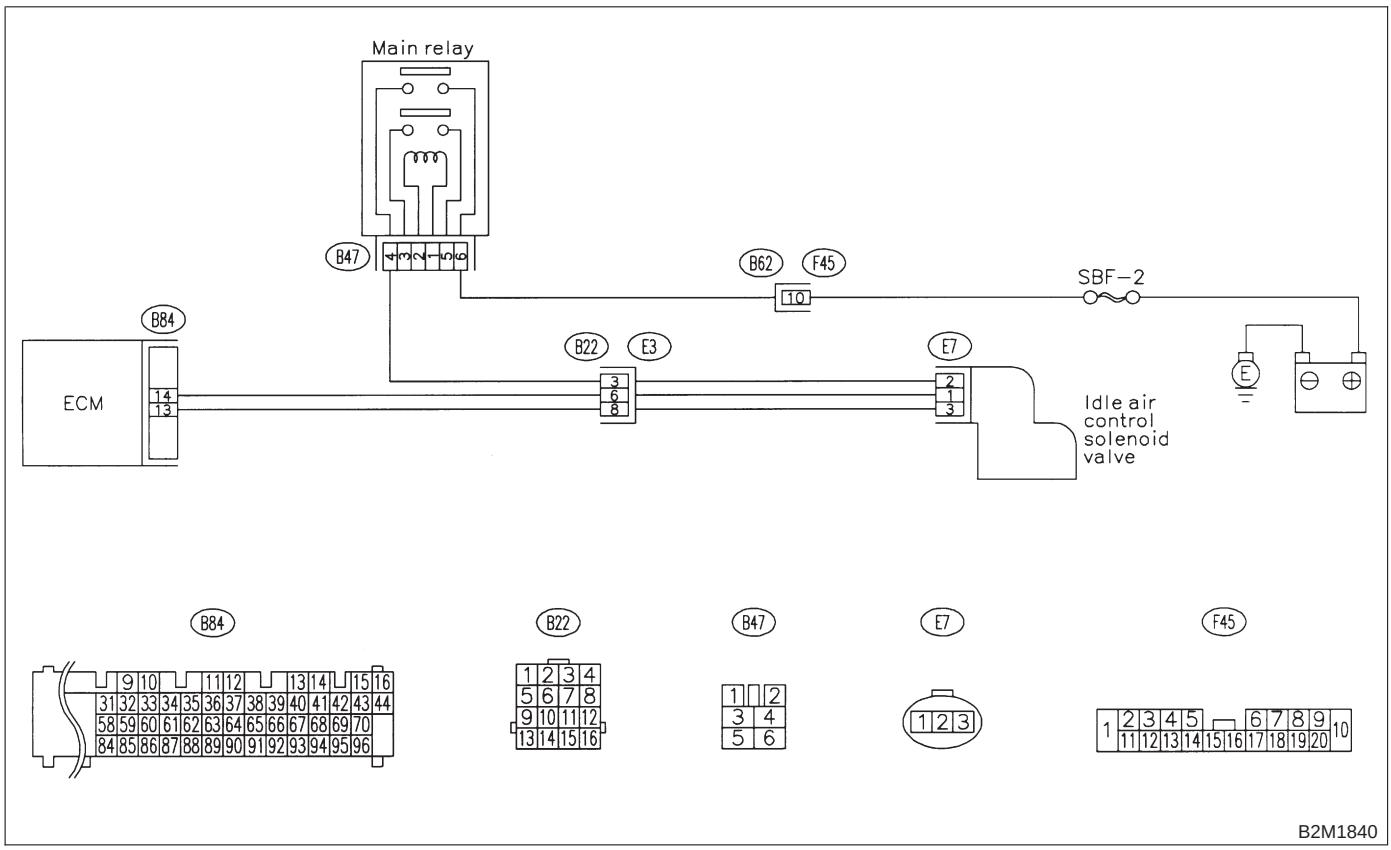
- **WIRING DIAGRAM:**



CY: DTC P1507 — IDLE CONTROL SYSTEM MALFUNCTION (FAIL-SAFE) —

NOTE:
Check idle air control system.
<Ref. to 2-7 [T16CY0].>

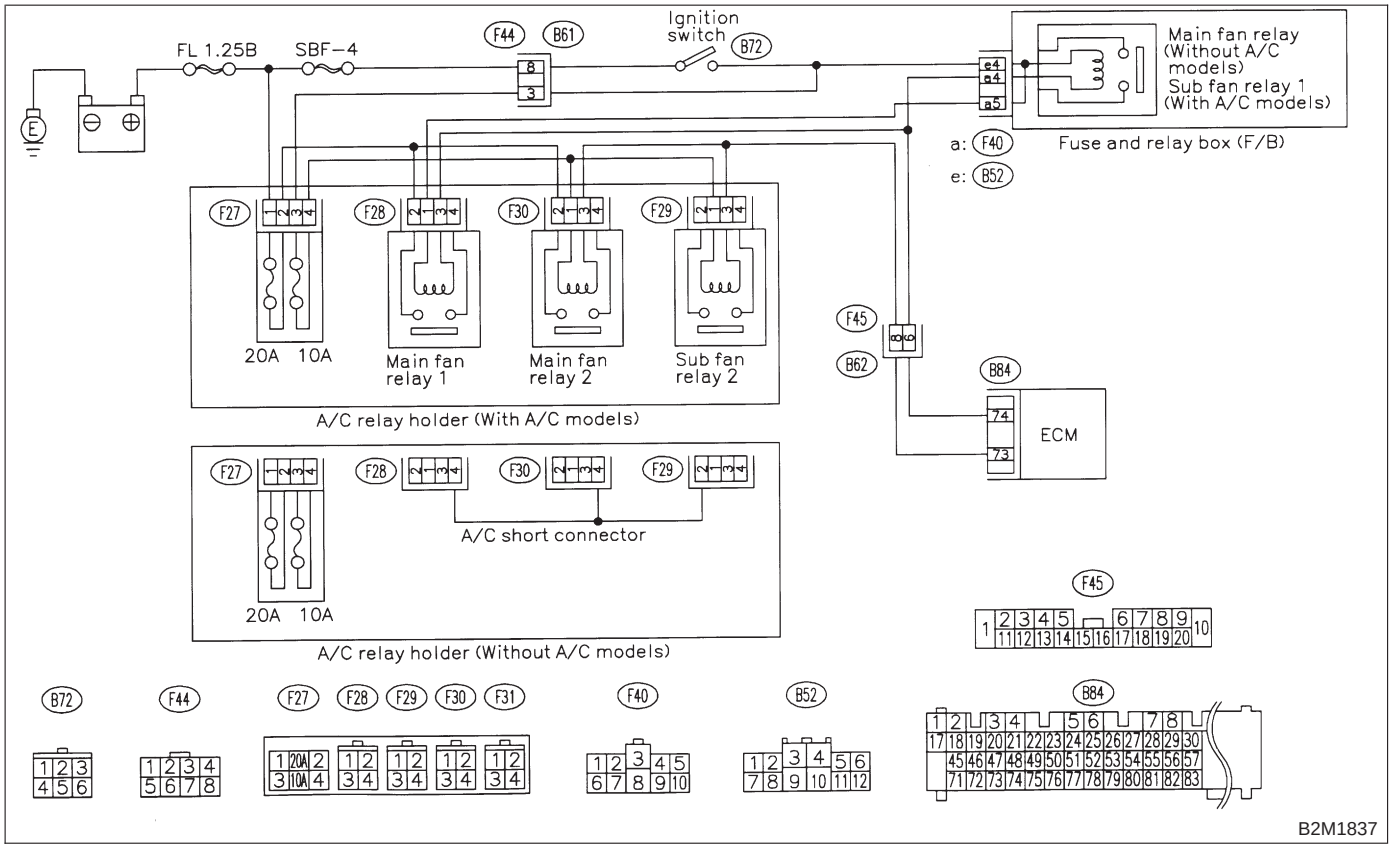
- **WIRING DIAGRAM:**



CZ: DTC P1520 — COOLING FAN RELAY 1 CIRCUIT HIGH INPUT —

NOTE:
Check radiator fan relay 1 circuit.
<Ref. to 2-7 [T16CZ0].>

- **WIRING DIAGRAM:**



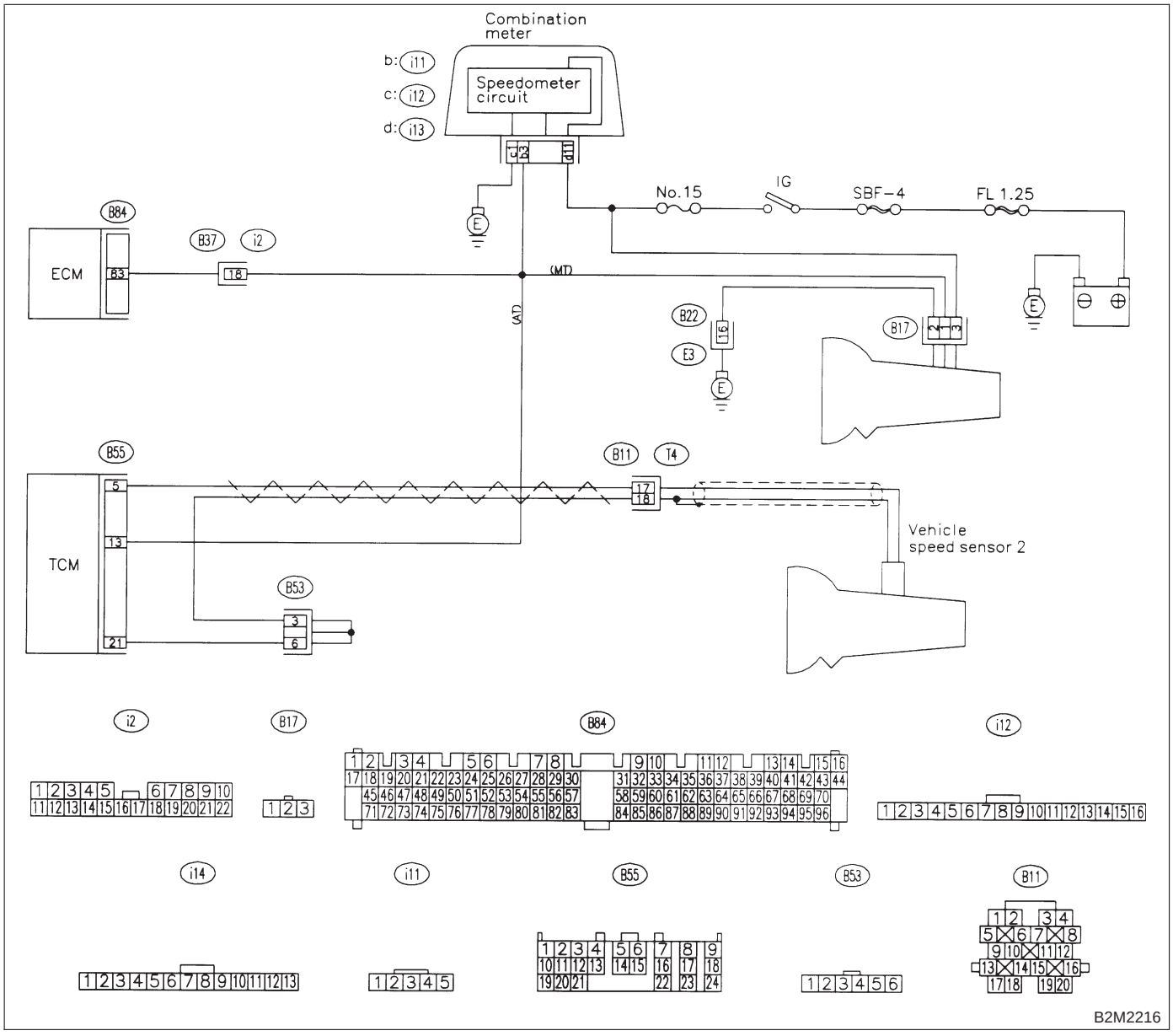
MEMO:

DA: DTC P1540 — VEHICLE SPEED SENSOR MALFUNCTION 2 —

- **DTC DETECTING CONDITION:**
  - Immediately at fault recognition

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



16DA1 : CHECK VEHICLE MODEL.

CHECK : ***Is the vehicle AT model?***
YES : Go to step **16DA2**.
NO : Go to step **16DA3**.

16DA2 : CHECK DTC P0720 ON DISPLAY.

CHECK : ***Does the Subaru Select Monitor or OBD-II general scan tool indicate DTC P0720?***
YES : Check vehicle speed sensor circuit. <Ref. to 3-2 [T8G0].>
NO : Go to step **16DA3**.

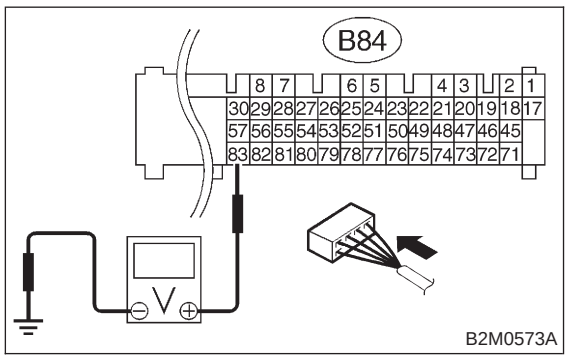
16DA3 : CHECK SPEEDOMETER OPERATION IN COMBINATION METER.

CHECK : ***Does speedometer operate normally?***
YES : Go to step **16DA4**.
NO : Check speedometer and vehicle speed sensor <Ref. to 6-2b [T3A0].>.

16DA4 : CHECK HARNESS BETWEEN ECM AND COMBINATION METER CONNECTOR.

1) Turn ignition switch to OFF.
2) Disconnect connector from TCM.
3) Turn ignition switch to ON.
4) Measure voltage between ECM and chassis ground.

Connector & terminal
(B84) No. 83 (+) — Chassis ground (−):



CHECK : ***Is the voltage more than 2 V?***
YES : Repair harness and connector.

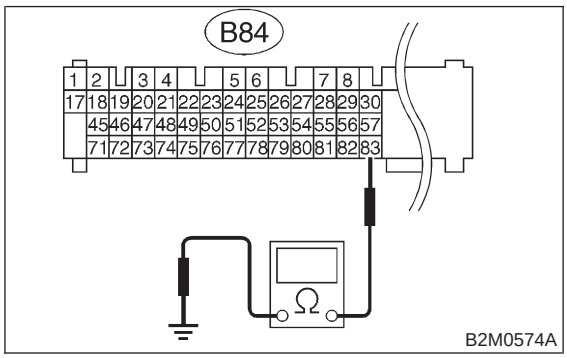
NOTE:
In this case, repair the following:
- Open circuit in harness between ECM and combination meter connector
- Poor contact in ECM connector
- Poor contact in combination meter connector
- Poor contact in coupling connector (B37)

NO : Go to step **16DA5**.

16DA5 : CHECK HARNESS BETWEEN ECM AND COMBINATION METER CONNECTOR.

1) Turn ignition switch to OFF.
2) Disconnect connector from ECM.
3) Measure resistance of harness between ECM connector and chassis ground.

Connector & terminal
(B84) No. 83 — Chassis ground:



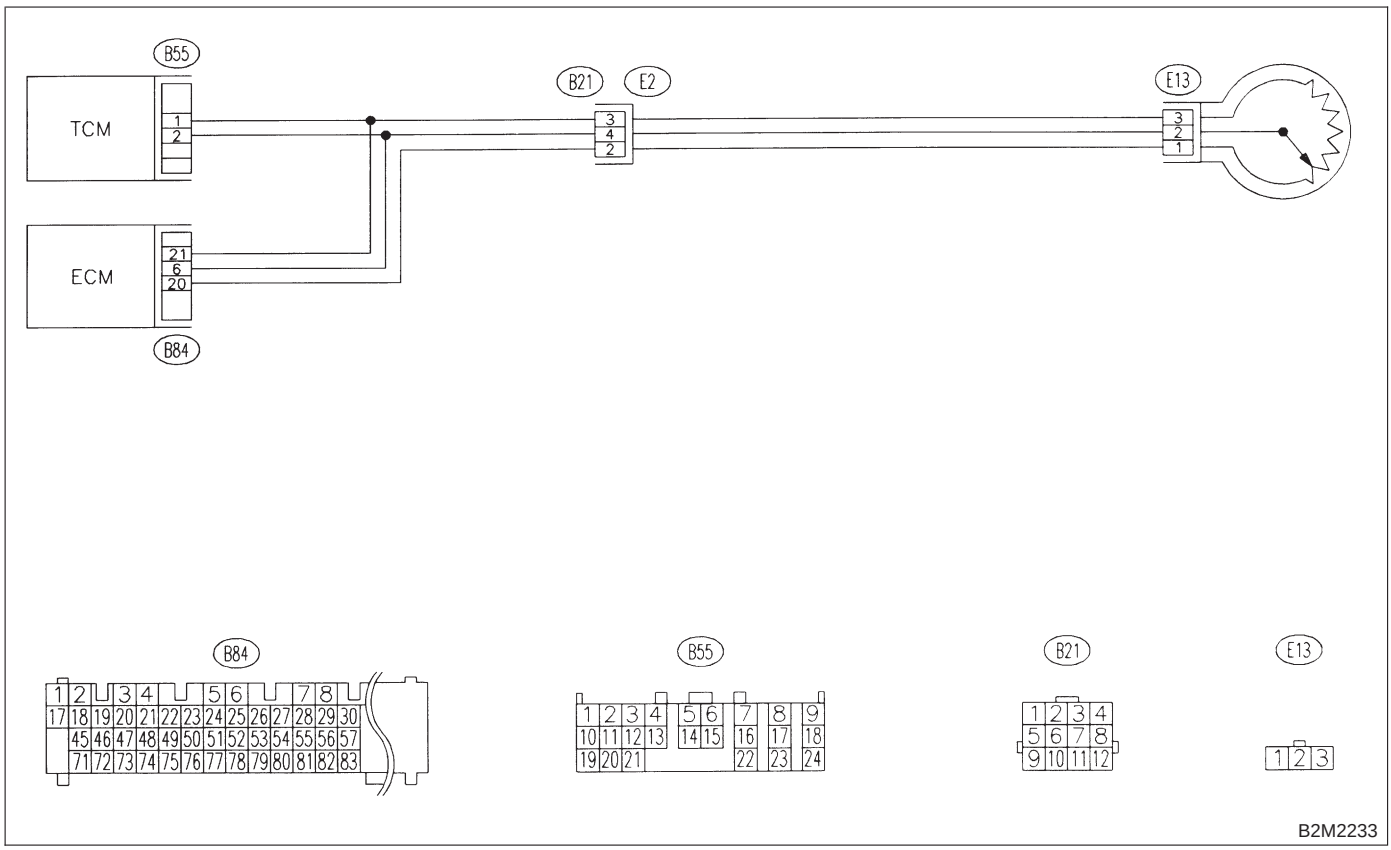
CHECK : ***Is the resistance less than 10 Ω?***
YES : Repair ground short circuit in harness between ECM and combination meter connector.
NO : Repair poor contact in ECM connector.

DB: DTC P1700 — THROTTLE POSITION SENSOR CIRCUIT MALFUNCTION FOR AUTOMATIC TRANSMISSION —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault
- **TROUBLE SYMPTOM:**
  - Shift point too high or too low; engine brake not effected in “3” range; excessive shift shock; excessive tight corner “braking”

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



16DB1 : CHECK DTC P1700 ON DISPLAY.

CHECK : ***Does the Subaru Select Monitor or OBD-II general scan tool indicate DTC P1700?***

YES : Check throttle position sensor circuit. <Ref. to 3-2 [T8F0].>

NO : It is not necessary to inspect DTC P1700.

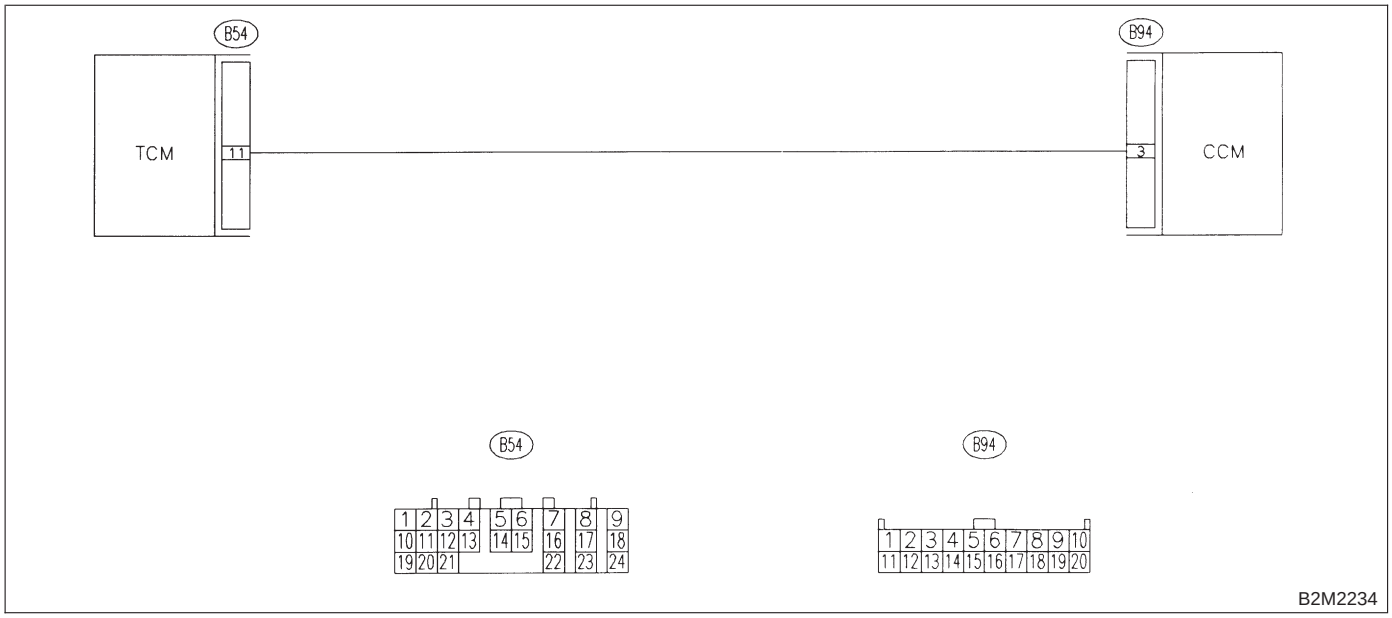
MEMO:

DC: DTC P1701 — CRUISE CONTROL SET SIGNAL CIRCUIT MALFUNCTION FOR AUTOMATIC TRANSMISSION —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

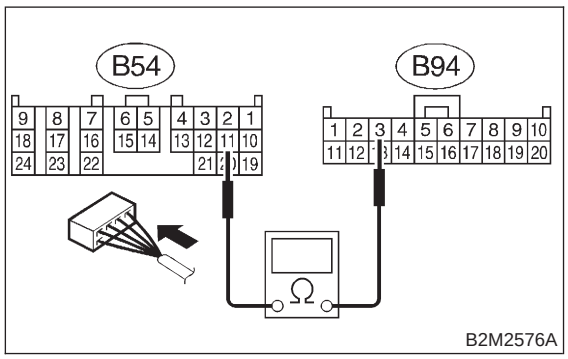
- **WIRING DIAGRAM:**



16DC1 : CHECK HARNESS BETWEEN TCM AND CCM CONNECTOR.

1) Turn ignition switch to OFF.
2) Disconnect connectors from TCM and CCM.
3) Measure resistance of harness between TCM and CCM connector.

Connector & terminal
(B54) No. 11 — (B94) No. 3:

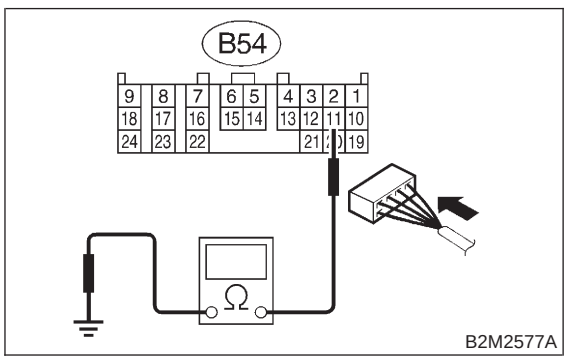


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **16DC2**.
NO : Repair open circuit in harness between TCM and CCM connector.

16DC2 : CHECK HARNESS BETWEEN TCM AND CCM CONNECTOR.

Measure resistance of harness between TCM and chassis ground.

Connector & terminal
(B54) No. 11 — Chassis ground:



CHECK : ***Is the resistance less than 10 Ω?***
YES : Repair short circuit in harness between TCM and CCM connector.
NO : Go to step **16DC3**.

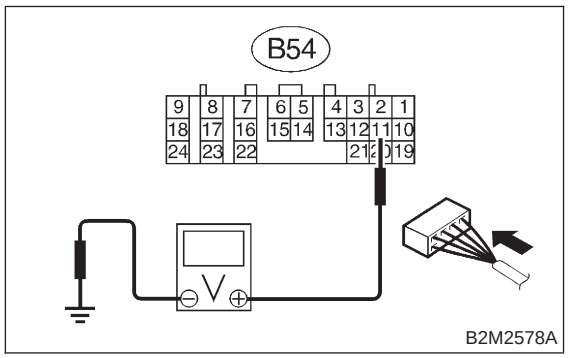
16DC3 : CHECK INPUT SIGNAL FOR TCM.

1) Connect connector to TCM and CCM.
2) Lift-up the vehicle or set the vehicle on free rollers.

CAUTION:
Raise all wheels off ground.

3) Start the engine.
4) Cruise control main switch to ON.
5) Move selector lever to “D” and slowly increase vehicle speed to 50 km/h (31 MPH).
6) Cruise control set switch to ON.
7) Measure voltage between TCM and chassis ground.

Connector & terminal
(B54) No. 11 (+) — Chassis ground (−):



CHECK : ***Is the resistance less than 1 V?***
YES : Go to step **16DC4**.
NO : Check cruise control set circuit. <Ref. to 6-2a [T7A0].>

16DC4 : CHECK POOR CONTACT.

Check poor contact in TCM connector. <Ref. to FOREWORD [T3C1].>

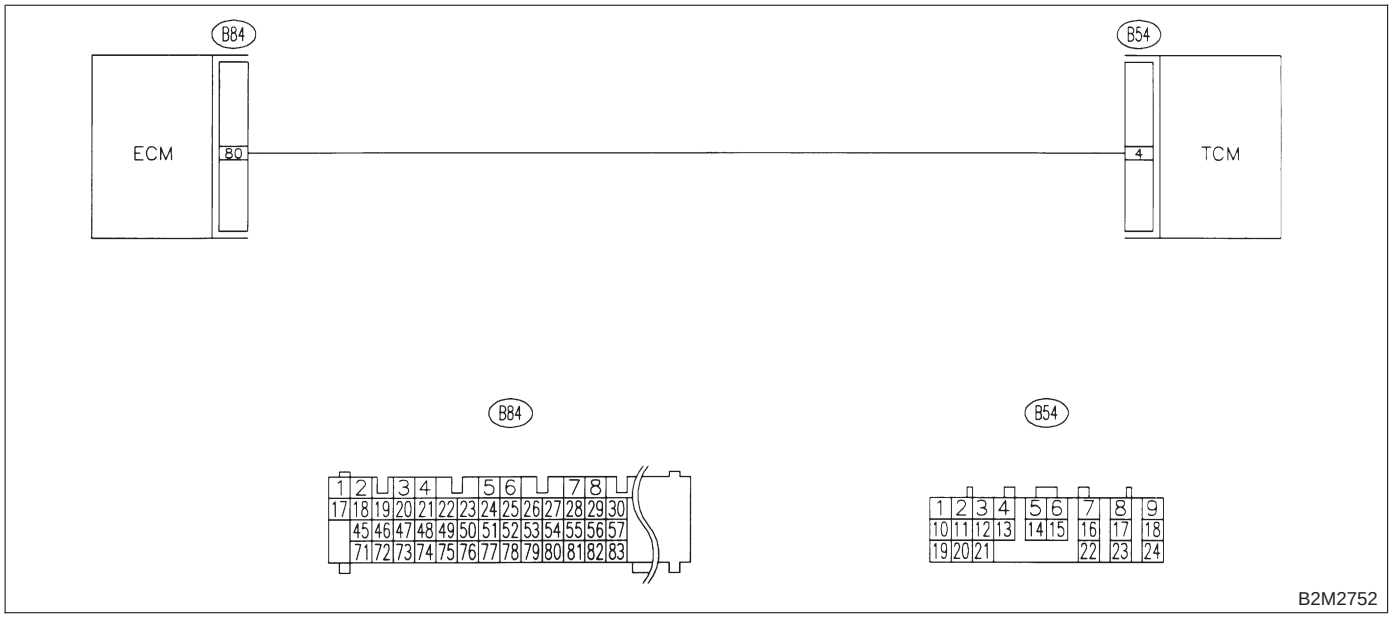
CHECK : ***Is there poor contact in TCM connector?***
YES : Repair poor contact in TCM connector.
NO : Replace TCM. <Ref. to 3-2 [W22A0].>

DD: DTC P1702 — AUTOMATIC TRANSMISSION DIAGNOSIS INPUT SIGNAL CIRCUIT LOW INPUT —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



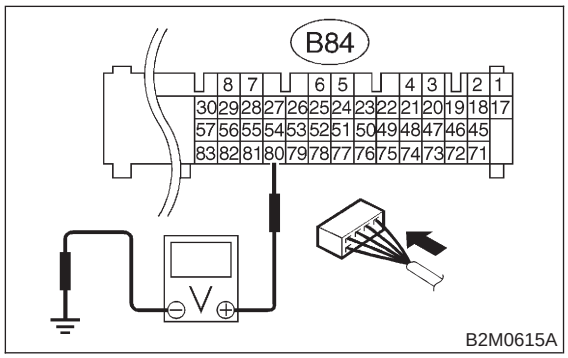
16DD1 : CHECK TRANSMISSION TYPE.

CHECK : ***Is transmission type AT?***
YES : Go to step **16DD2**.
NO : Check AT/MT identification circuit. <Ref. to 2-7 [T16DJ0].>

16DD2 : CHECK HARNESS BETWEEN ECM AND TCM CONNECTOR.

1) Turn ignition switch to ON.
2) Measure voltage between ECM and chassis ground.

Connector & terminal
(B84) No. 80 (+) — Chassis ground (−):



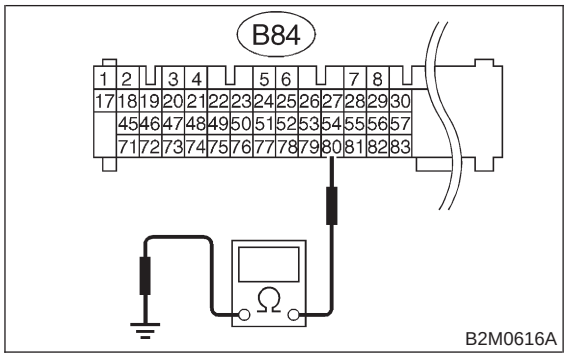
CHECK : ***Is the voltage less than 1 V?***
YES : Go to step **16DD3**.
NO : Even if MIL lights up, the circuit has returned to a normal condition at this time.

NOTE:
In this case, repair the following:
- Poor contact in ECM connector
- Poor contact in TCM connector

16DD3 : CHECK HARNESS BETWEEN ECM AND TCM CONNECTOR.

1) Turn ignition switch to OFF.
2) Disconnect connector from ECM and TCM.
3) Measure resistance of harness between ECM and chassis ground.

Connector & terminal
(B84) No. 80 — Chassis ground:

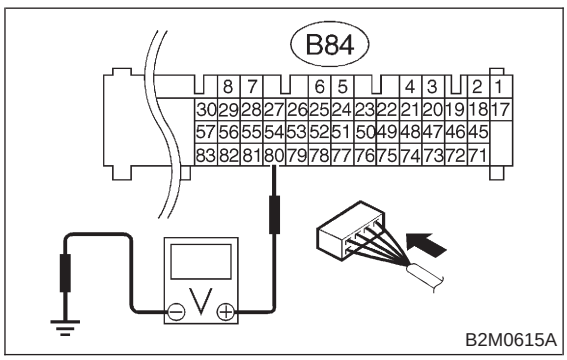


CHECK : ***Is the resistance less than 10 Ω?***
YES : Repair ground short circuit in harness between ECM and TCM connector.
NO : Go to step **16DD4**.

16DD4 : CHECK OUTPUT SIGNAL FOR ECM.

1) Connect connector to ECM.
2) Turn ignition switch to ON.
3) Measure voltage between ECM and chassis ground.

Connector & terminal
(B84) No. 80 (+) — Chassis ground (−):



CHECK : ***Is the voltage more than 5 V?***
YES : Replace TCM. <Ref. to 3-2 [W22A0].>
NO : Contact SOA service.

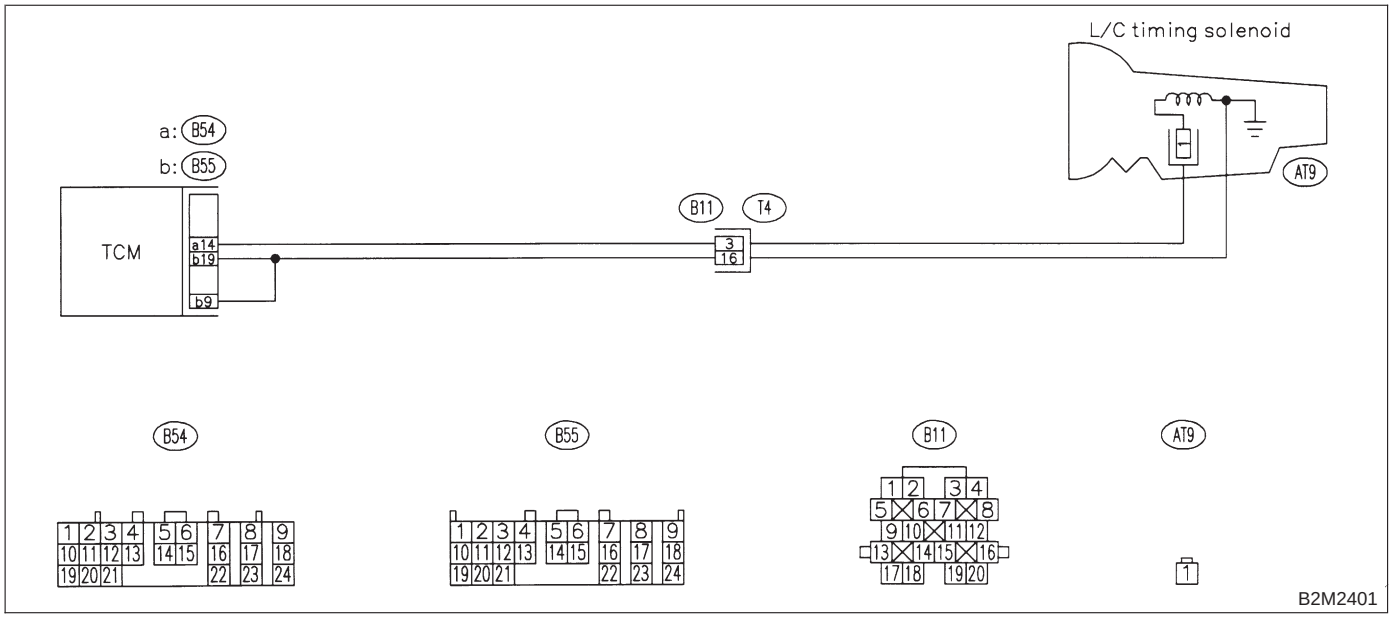
NOTE:
Inspection by DTM is required, because probable cause is deterioration of multiple parts.

DE: DTC P1703 — LOW CLUTCH TIMING CONTROL SOLENOID VALVE CIRCUIT MALFUNCTION —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



16DE1 : CHECK DTC P1703 ON DISPLAY.

CHECK : ***Does the Subaru Select Monitor or OBD-II general scan tool indicate DTC P1703?***

YES : Check low clutch timing control solenoid valve circuit. <Ref. to 3-2 [T8M0].>

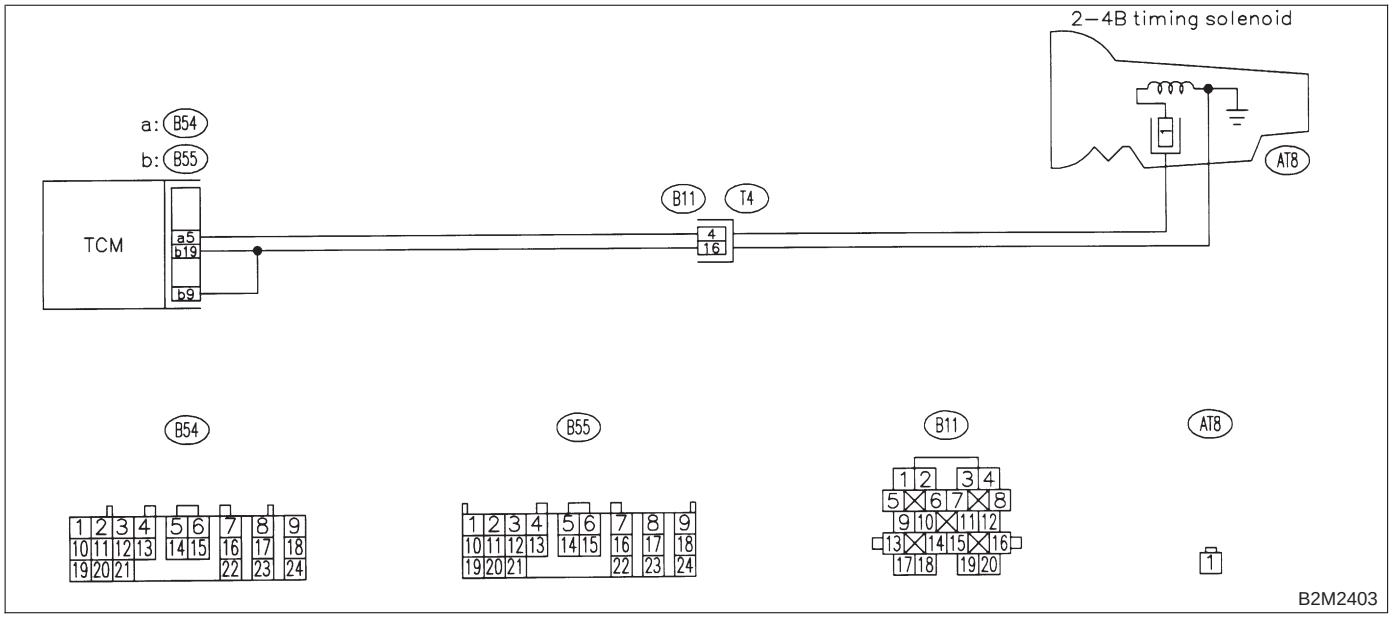
NO : It is not necessary to inspect DTC P1703.

DF: DTC P1704 — 2-4 BRAKE TIMING CONTROL SOLENOID VALVE CIRCUIT MALFUNCTION —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



16DF1 : CHECK DTC P1704 ON DISPLAY.

CHECK : ***Does the Subaru Select Monitor or OBD-II general scan tool indicate DTC P1705?***

YES : Check 2-4 brake timing control solenoid valve circuit. <Ref. to 3-2 [T8N0].>

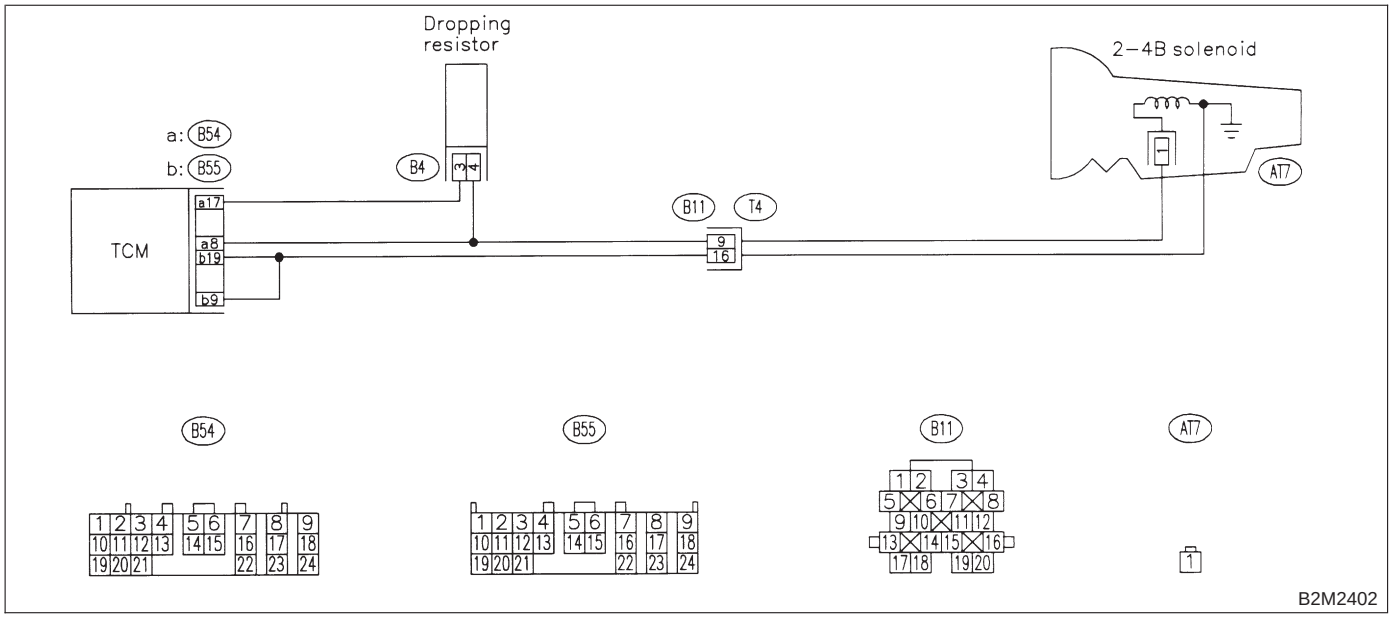
NO : It is not necessary to inspect DTC P1704.

DG: DTC P1705 — 2-4 BRAKE PRESSURE CONTROL SOLENOID VALVE (DUTY SOLENOID D) MALFUNCTION —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



16DG1 : CHECK DTC P1705 ON DISPLAY.

CHECK : ***Does the Subaru Select Monitor or OBD-II general scan tool indicate DTC P1705?***

YES : Check 2-4 brake pressure control solenoid valve circuit. <Ref. to 3-2 [T8P0].>

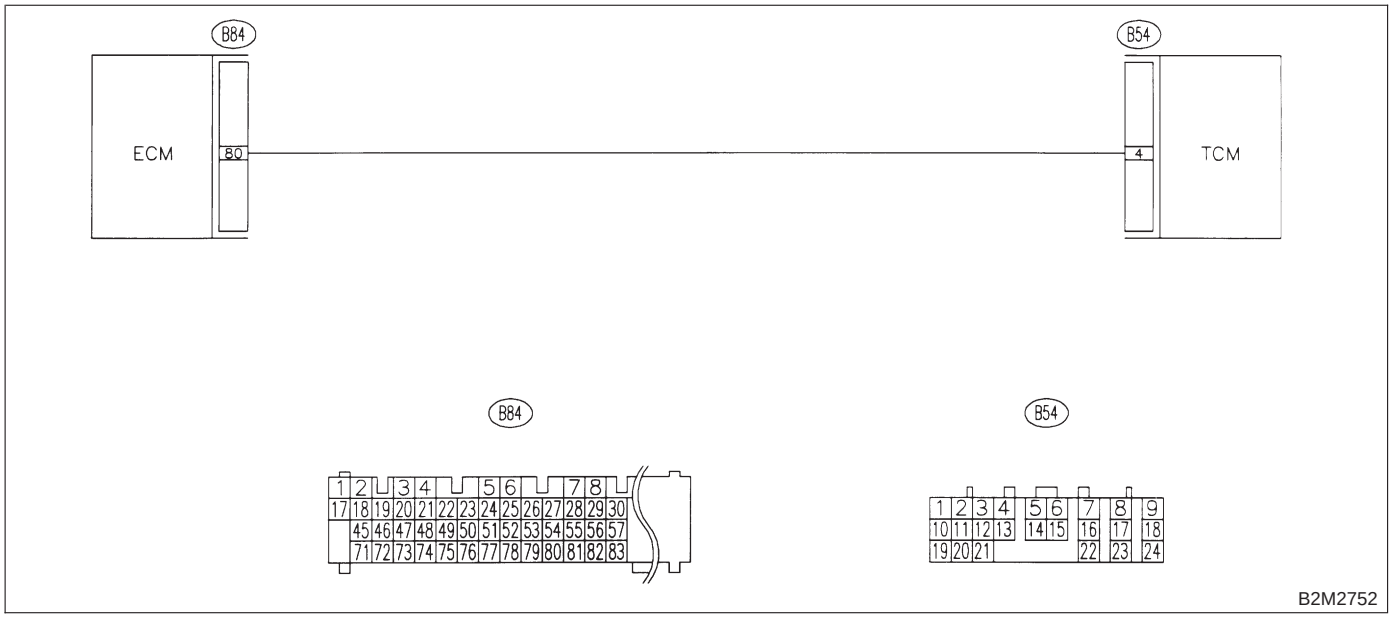
NO : It is not necessary to inspect DTC P1705.

DH: DTC P1722 — AUTOMATIC TRANSMISSION DIAGNOSIS INPUT SIGNAL CIRCUIT HIGH INPUT —

- **DTC DETECTING CONDITION:**
  - Two consecutive driving cycles with fault

CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



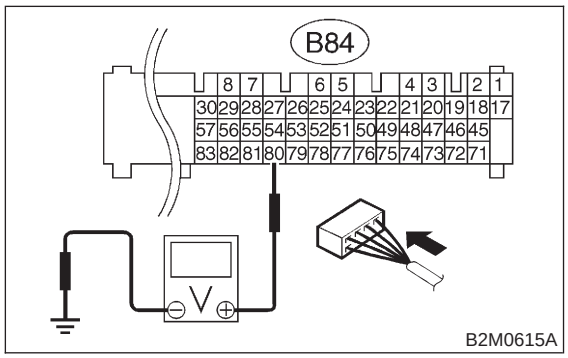
16DH1 : CHECK TRANSMISSION TYPE.

CHECK : ***Is transmission type AT?***
YES : Go to step **16DH2**.
NO : Check AT/MT identification circuit. <Ref. to 2-7 [T16DJ0].>

16DH2 : CHECK HARNESS BETWEEN ECM AND TCM CONNECTOR.

1) Turn ignition switch to ON.
2) Measure voltage between ECM and chassis ground.

Connector & terminal
(B84) No. 80 (+) — Chassis ground (−):

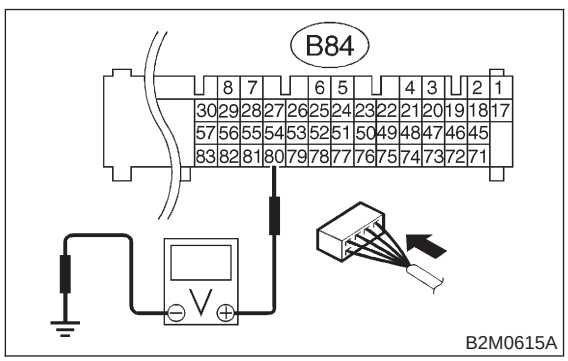


CHECK : ***Is the voltage more than 10 V?***
YES : Repair battery short circuit in harness between ECM and TCM connector. After repair, replace ECM. <Ref. to 2-7 [W15A2].>
NO : Go to step **16DH3**.

16DH3 : CHECK HARNESS BETWEEN ECM AND TCM CONNECTOR.

Measure voltage between ECM connector and chassis ground.

Connector & terminal
(B84) No. 80 (+) — Chassis ground (−):

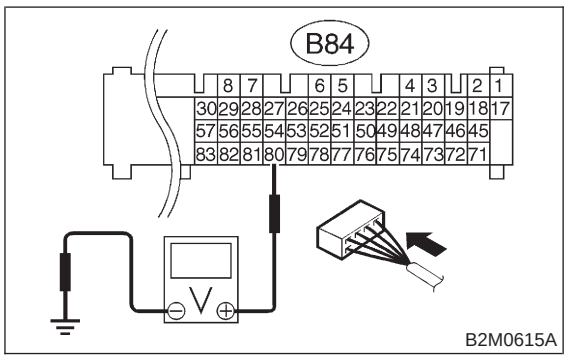


CHECK : ***Is the voltage more than 4 V?***
YES : Go to step **16DH6**.
NO : Go to step **16DH4**.

16DH4 : CHECK HARNESS BETWEEN ECM AND TCM CONNECTOR.

Measure voltage between ECM connector and chassis ground.

Connector & terminal
(B84) No. 80 (+) — Chassis ground (−):

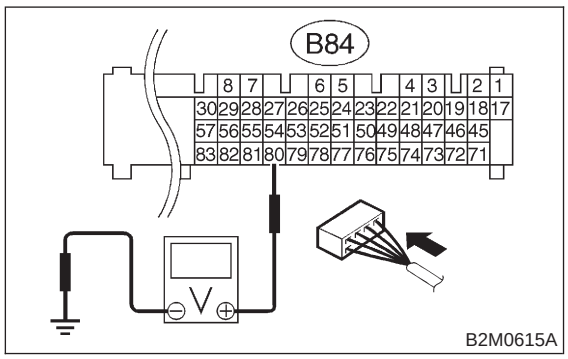


CHECK : ***Is the voltage less than 1 V?***
YES : Repair poor contact in ECM connector.
NO : Go to step **16DH5**.

16DH5 : CHECK OUTPUT SIGNAL FROM ECM.

Measure voltage between ECM and chassis ground.

Connector & terminal
(B84) No. 80 (+) — Chassis ground (−):



CHECK : ***Does the voltage change from 1 V to 4 V while monitoring the value with voltage meter?***

YES : Even if MIL lights up, the circuit has returned to a normal condition at this time.

NOTE:
In this case, repair the following:
- Poor contact in ECM connector
- Poor contact in TCM connector

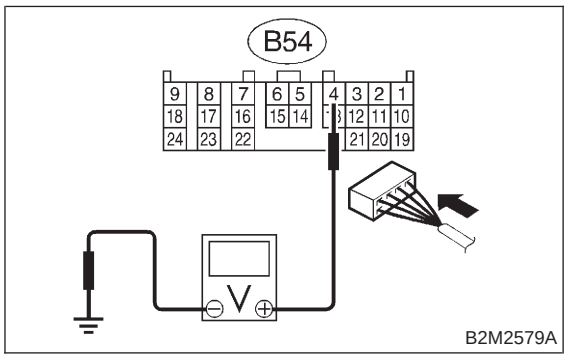
NO : Contact with SOA service.

NOTE:
Inspection by DTM is required, because probable cause is deterioration of multiple parts.

16DH6 : CHECK HARNESS BETWEEN ECM AND TCM CONNECTOR.

Measure voltage between TCM and chassis ground.

Connector & terminal
(B54) No. 4 (+) — Chassis ground (−):



CHECK : ***Is the voltage more than 4 V?***

YES : Go to step **16DH7**.

NO : Repair open circuit in harness between ECM and TCM connector.

16DH7 : CHECK POOR CONTACT.

Check poor contact in TCM connector. <Ref. to FOREWORD [T3C1].>

CHECK : ***Is there poor contact in TCM connector?***

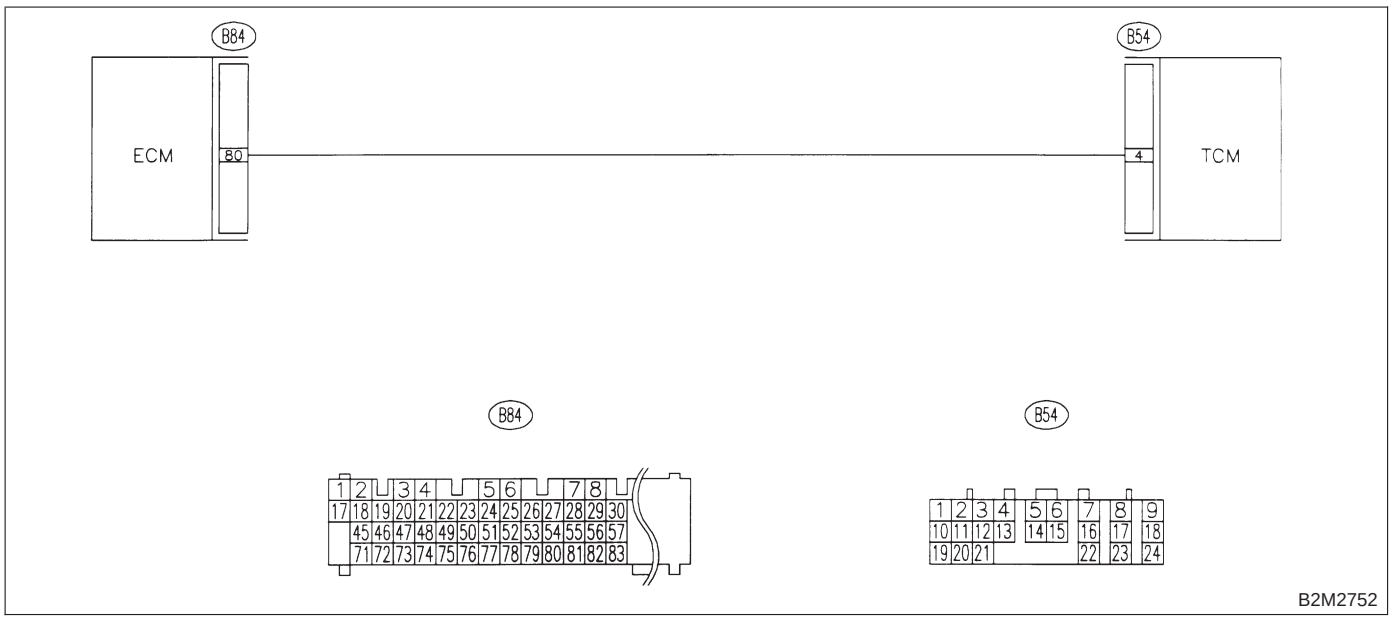
YES : Repair poor contact in TCM connector.

NO : Check TCM power supply line and grounding line.

DI: DTC P1742 — AUTOMATIC TRANSMISSION DIAGNOSIS INPUT SIGNAL CIRCUIT MALFUNCTION —

NOTE:
Check automatic transmission diagnosis input signal circuit.
<Ref. to 2-7 [T16DF0].>

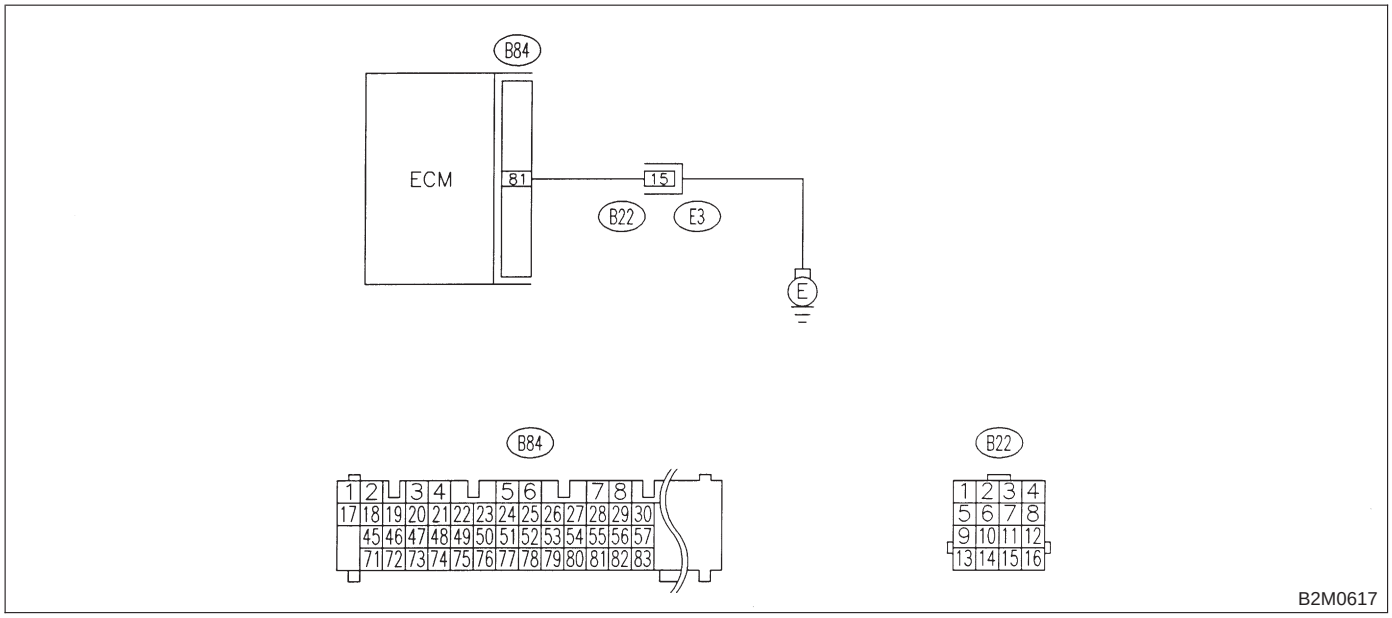
- **WIRING DIAGRAM:**



DJ: — AT/MT IDENTIFICATION CIRCUIT MALFUNCTION [MT VEHICLES] —

NOTE:
Check AT/MT identification circuit.
<Ref. to 2-7 [T16DG0].>

- **WIRING DIAGRAM:**



MEMO: