

11. Diagnostic Chart with Trouble Code for RHD Vehicles

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 [T11B0].>
P0102	Mass air flow sensor circuit low input	<Ref. to 2-7 [T11C0].>
P0103	Mass air flow sensor circuit high input	<Ref. to 2-7 [T11D0].>
P0106	Pressure sensor circuit range/performance problem	<Ref. to 2-7 [T11E0].>
P0107	Pressure sensor circuit low input	<Ref. to 2-7 [T11F0].>
P0108	Pressure sensor circuit high input	<Ref. to 2-7 [T11G0].>
P0117	Engine coolant temperature sensor circuit low input	<Ref. to 2-7 [T11H0].>
P0118	Engine coolant temperature sensor circuit high input	<Ref. to 2-7 [T11I0].>
P0121	Throttle position sensor circuit range/performance problem (high input)	<Ref. to 2-7 [T11J0].>
P0122	Throttle position sensor circuit low input	<Ref. to 2-7 [T11K0].>
P0123	Throttle position sensor circuit high input	<Ref. to 2-7 [T11L0].>
P0125	Insufficient coolant temperature for closed loop fuel control	<Ref. to 2-7 [T11M0].>
P0130	Front oxygen sensor circuit malfunction	<Ref. to 2-7 [T11N0].>
P0133	Front oxygen sensor circuit slow response	<Ref. to 2-7 [T11O0].>
P0135	Front oxygen sensor heater circuit malfunction	<Ref. to 2-7 [T11P0].>
P0136	Rear oxygen sensor circuit malfunction	<Ref. to 2-7 [T11Q0].>
P0139	Rear oxygen sensor circuit slow response	<Ref. to 2-7 [T11R0].>
P0141	Rear oxygen sensor heater circuit malfunction	<Ref. to 2-7 [T11S0].>
P0170	Fuel trim malfunction	<Ref. to 2-7 [T11T0].>
P0181	Fuel temperature sensor A circuit range/performance problem	<Ref. to 2-7 [T11U0].>
P0182	Fuel temperature sensor A circuit low input	<Ref. to 2-7 [T11V0].>
P0183	Fuel temperature sensor A circuit high input	<Ref. to 2-7 [T11W0].>
P0261	Fuel injector circuit low input - #1	<Ref. to 2-7 [T11X0].>
P0262	Fuel injector circuit high input - #1	<Ref. to 2-7 [T11AB0].>
P0264	Fuel injector circuit low input - #2	<Ref. to 2-7 [T11Y0].>

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[T11A0] 2-7

11. Diagnostic Chart with Trouble Code for RHD Vehicles

DTC No.	Item	Index
P0265	Fuel injector circuit high input - #2	<Ref. to 2-7 [T11AC0].>
P0267	Fuel injector circuit low input - #3	<Ref. to 2-7 [T11Z0].>
P0268	Fuel injector circuit high input - #3	<Ref. to 2-7 [T11AD0].>
P0270	Fuel injector circuit low input - #4	<Ref. to 2-7 [T11AA0].>
P0271	Fuel injector circuit high input - #4	<Ref. to 2-7 [T11AE0].>
P0301	Cylinder 1 misfire detected	<Ref. to 2-7 [T11AF0].>
P0302	Cylinder 2 misfire detected	<Ref. to 2-7 [T11AG0].>
P0303	Cylinder 3 misfire detected	<Ref. to 2-7 [T11AH0].>
P0304	Cylinder 4 misfire detected	<Ref. to 2-7 [T11AI0].>
P0325	Knock sensor circuit malfunction	<Ref. to 2-7 [T11AJ0].>
P0335	Crankshaft position sensor circuit malfunction	<Ref. to 2-7 [T11AK0].>
P0336	Crankshaft position sensor circuit range/performance problem	<Ref. to 2-7 [T11AL0].>
P0340	Camshaft position sensor circuit malfunction	<Ref. to 2-7 [T11AM0].>
P0341	Camshaft position sensor circuit range/performance problem	<Ref. to 2-7 [T11AN0].>
P0400	Exhaust gas recirculation flow malfunction	<Ref. to 2-7 [T11AO0].>
P0403	Exhaust gas recirculation circuit low input	<Ref. to 2-7 [T11AP0].>
P0420	Catalyst system efficiency below threshold	<Ref. to 2-7 [T11AQ0].>
P0440	Evaporative emission control system malfunction	<Ref. to 2-7 [T11AR0].>
P0441	Evaporative emission control system incorrect purge flow	<Ref. to 2-7 [T11AS0].>
P0443	Evaporative emission control system purge control valve circuit low input	<Ref. to 2-7 [T11AT0].>
P0446	Evaporative emission control system vent control low input	<Ref. to 2-7 [T11AU0].>
P0451	Evaporative emission control system pressure sensor range/performance problem	<Ref. to 2-7 [T11AV0].>
P0452	Evaporative emission control system pressure sensor low input	<Ref. to 2-7 [T11AW0].>
P0453	Evaporative emission control system pressure sensor high input	<Ref. to 2-7 [T11AX0].>
P0461	Fuel level sensor circuit range/performance problem	<Ref. to 2-7 [T11AY0].>
P0462	Fuel level sensor circuit low input	<Ref. to 2-7 [T11AZ0].>
P0463	Fuel level sensor circuit high input	<Ref. to 2-7 [T11BA0].>

2-7 [T11A0]**ON-BORAD DIAGNOSTICS II SYSTEM**

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DTC No.	Item	Index
P0480	Cooling fan relay 1 circuit low input	<Ref. to 2-7 [T11BB0].>
P0483	Cooling fan function problem	<Ref. to 2-7 [T11BC0].>
P0500	Vehicle speed sensor malfunction	<Ref. to 2-7 [T11BD0].>
P0505	Idle control system malfunction	<Ref. to 2-7 [T11BE0].>
P0506	Idle control system RPM lower than expected	<Ref. to 2-7 [T11BF0].>
P0507	Idle control system RPM higher than expected	<Ref. to 2-7 [T11BG0].>
P0600	Serial communication link malfunction	<Ref. to 2-7 [T11BH0].>
P0601	Internal control module memory check sum error	<Ref. to 2-7 [T11BI0].>
P0703	Brake switch input malfunction	<Ref. to 2-7 [T11BJ0].>
P0705	Transmission range sensor circuit malfunction	<Ref. to 2-7 [T11BK0].>
P0710	Transmission fluid temperature sensor circuit malfunction	<Ref. to 2-7 [T11BL0].>
P0720	Output speed sensor (vehicle speed sensor 1) circuit malfunction	<Ref. to 2-7 [T11BM0].>
P0725	Engine speed input circuit malfunction	<Ref. to 2-7 [T11BN0].>
P0731	Gear 1 incorrect ratio	<Ref. to 2-7 [T11BO0].>
P0732	Gear 2 incorrect ratio	<Ref. to 2-7 [T11BP0].>
P0733	Gear 3 incorrect ratio	<Ref. to 2-7 [T11BQ0].>
P0734	Gear 4 incorrect ratio	<Ref. to 2-7 [T11BR0].>
P0740	Torque converter clutch system malfunction	<Ref. to 2-7 [T11BS0].>
P0743	Torque converter clutch system electrical	<Ref. to 2-7 [T11BT0].>
P0748	Pressure control solenoid electrical	<Ref. to 2-7 [T11BU0].>
P0753	Shift solenoid A electrical	<Ref. to 2-7 [T11BV0].>
P0758	Shift solenoid B electrical	<Ref. to 2-7 [T11BW0].>
P0760	Shift solenoid C malfunction	<Ref. to 2-7 [T11BX0].>
P0763	Shift solenoid C electrical	<Ref. to 2-7 [T11BY0].>
P1100	Starter switch circuit low input	<Ref. to 2-7 [T11BZ0].>
P1101	Neutral position switch circuit high input [AT vehicles]	<Ref. to 2-7 [T11CA0].>
P1102	Pressure sources switching solenoid valve circuit low input	<Ref. to 2-7 [T11CB0].>

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11. Diagnostic Chart with Trouble Code for RHD Vehicles

DTC No.	Item	Index
P1103	Engine torque control signal circuit malfunction	<Ref. to 2-7 [T11CC0].>
P1120	Starter switch circuit high input	<Ref. to 2-7 [T11CD0].>
P1121	Neutral position switch circuit low input [AT vehicles]	<Ref. to 2-7 [T11CE0].>
P1122	Pressure sources switching solenoid valve circuit high input	<Ref. to 2-7 [T11CF0].>
P1141	Mass air flow sensor circuit range/performance problem (high input)	<Ref. to 2-7 [T11CG0].>
P1142	Throttle position sensor circuit range/performance problem (low input)	<Ref. to 2-7 [T11CH0].>
P1143	Pressure sensor circuit range/performance problem (low input)	<Ref. to 2-7 [T11CI0].>
P1144	Pressure sensor circuit range/performance problem (high input)	<Ref. to 2-7 [T11CJ0].>
P1400	Fuel tank pressure control solenoid valve circuit low input	<Ref. to 2-7 [T11CK0].>
P1420	Fuel tank pressure control solenoid valve circuit high input	<Ref. to 2-7 [T11CL0].>
P1421	Exhaust gas recirculation circuit high input	<Ref. to 2-7 [T11CM0].>
P1422	Evaporative emission control system purge control valve circuit high input	<Ref. to 2-7 [T11CN0].>
P1423	Evaporative emission control system vent control high input	<Ref. to 2-7 [T11CO0].>
P1440	Fuel tank pressure control system function problem (low input)	<Ref. to 2-7 [T11CP0].>
P1441	Fuel tank pressure control system function problem (high input)	<Ref. to 2-7 [T11CQ0].>
P1442	Fuel level sensor circuit range/performance problem 2	<Ref. to 2-7 [T11CR0].>
P1443	Evaporative emission control system vent control function problem	<Ref. to 2-7 [T11CS0].>
P1507	Idle control system malfunction (fail-safe)	<Ref. to 2-7 [T11CT0].>
P1520	Cooling fan relay 1 circuit high input	<Ref. to 2-7 [T11CU0].>
P1540	Vehicle speed sensor malfunction 2	<Ref. to 2-7 [T11CV0].>
P1700	Throttle position sensor circuit malfunction for automatic transmission	<Ref. to 2-7 [T11CW0].>
P1701	Cruise control set signal circuit malfunction for automatic transmission	<Ref. to 2-7 [T11CX0].>
P1702	Automatic transmission diagnosis input signal circuit low input	<Ref. to 2-7 [T11CY0].>
P1722	Automatic transmission diagnosis input signal circuit high input	<Ref. to 2-7 [T11CZ0].>
P1742	Automatic transmission diagnosis input signal circuit malfunction	<Ref. to 2-7 [T11DA0].>

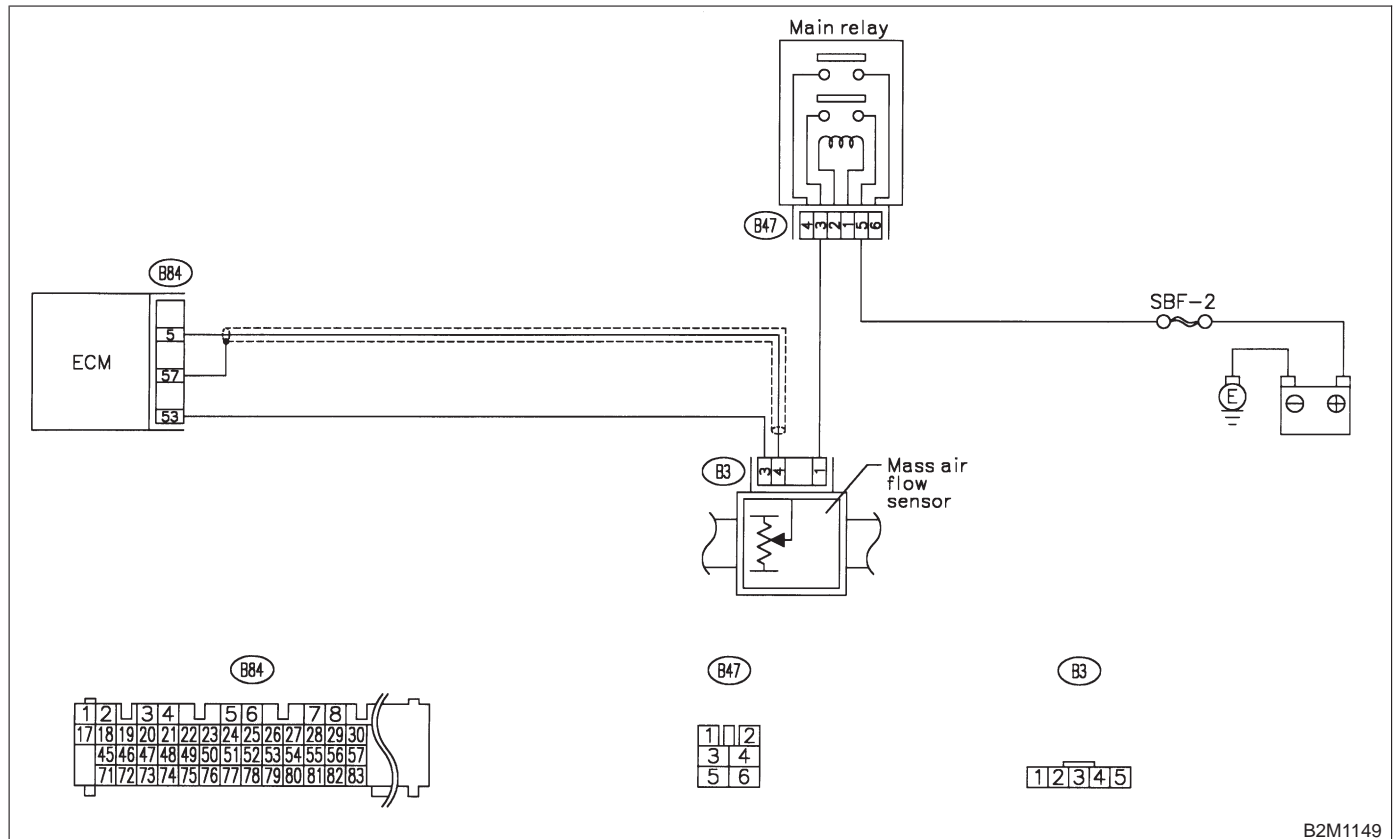
B: DTC P0101 — MASS AIR FLOW SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM (LOW INPUT) —

NOTE:

Check mass air flow sensor circuit.

<Ref. to 2-7 [T10B0].>

● **WIRING DIAGRAM:**



B2M1149

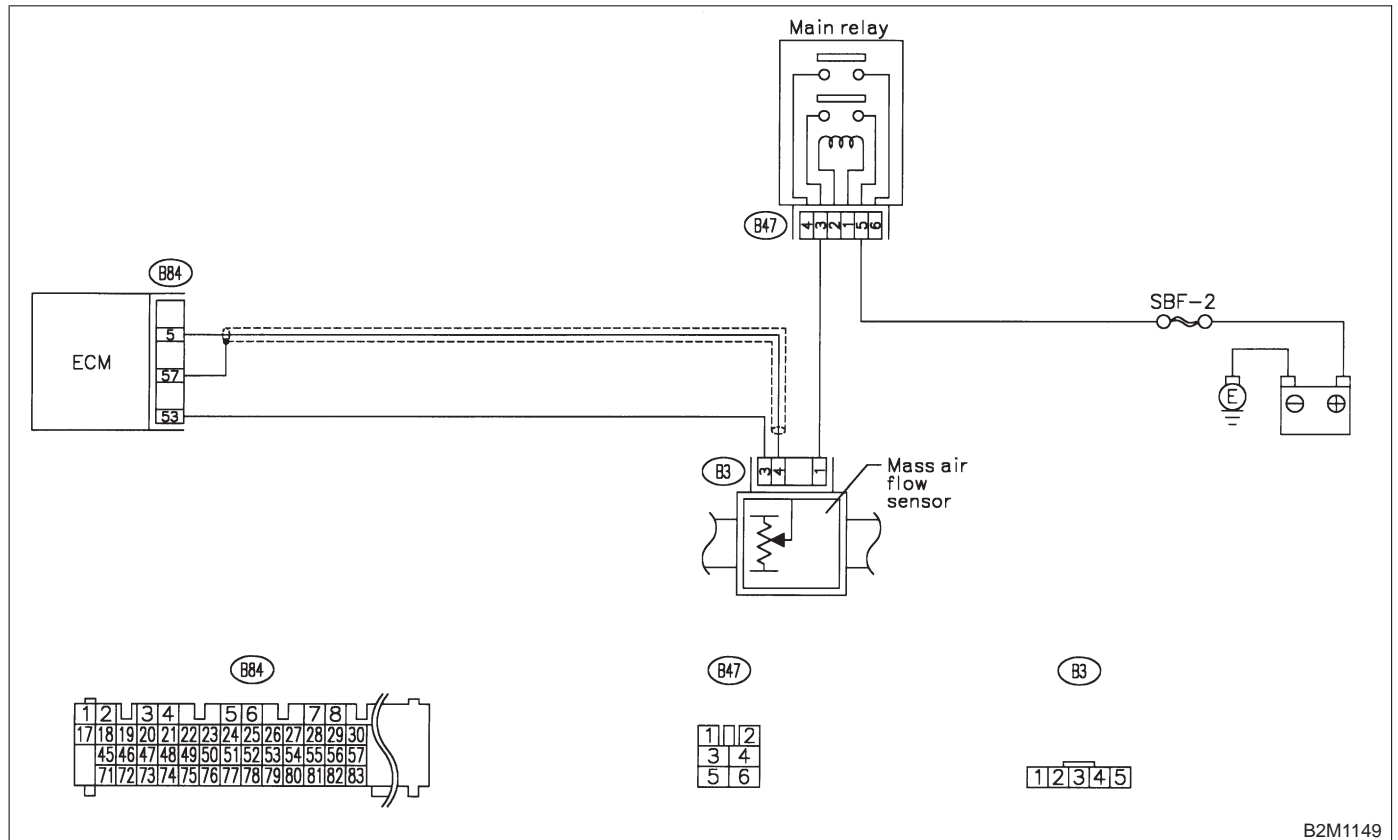
C: DTC P0102 — MASS AIR FLOW SENSOR CIRCUIT LOW INPUT —

NOTE:

Check mass air flow sensor circuit.

<Ref. to 2-7 [T10C0].>

● **WIRING DIAGRAM:**



B2M1149

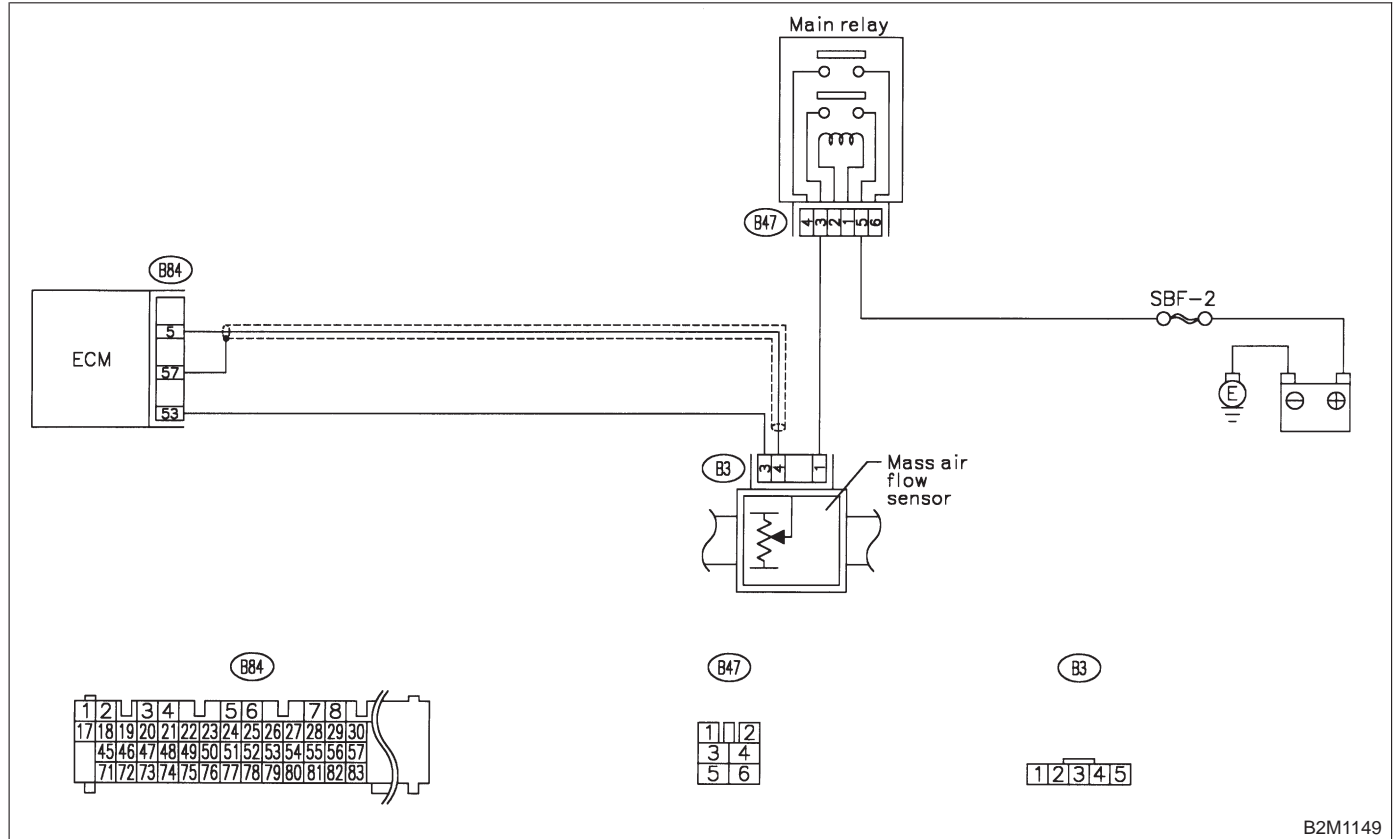
D: DTC P0103 — MASS AIR FLOW SENSOR CIRCUIT HIGH INPUT —

NOTE:

Check mass air flow sensor circuit.

<Ref. to 2-7 [T10D0].>

● **WIRING DIAGRAM:**



B2M1149

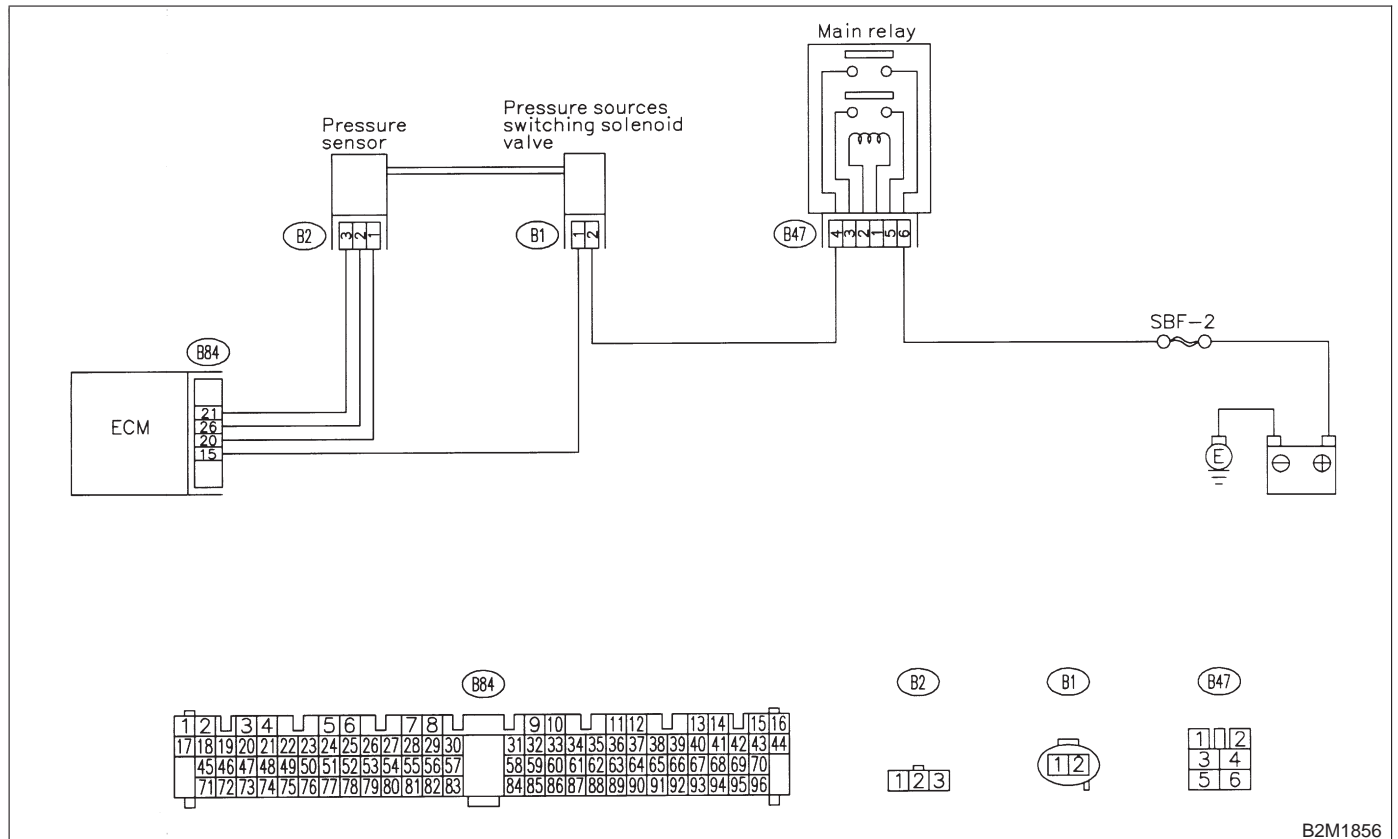
E: DTC P0106 — PRESSURE SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM —

NOTE:

Check pressure sensor circuit.

<Ref. to 2-7 [T10E0].>

● **WIRING DIAGRAM:**



B2M1856

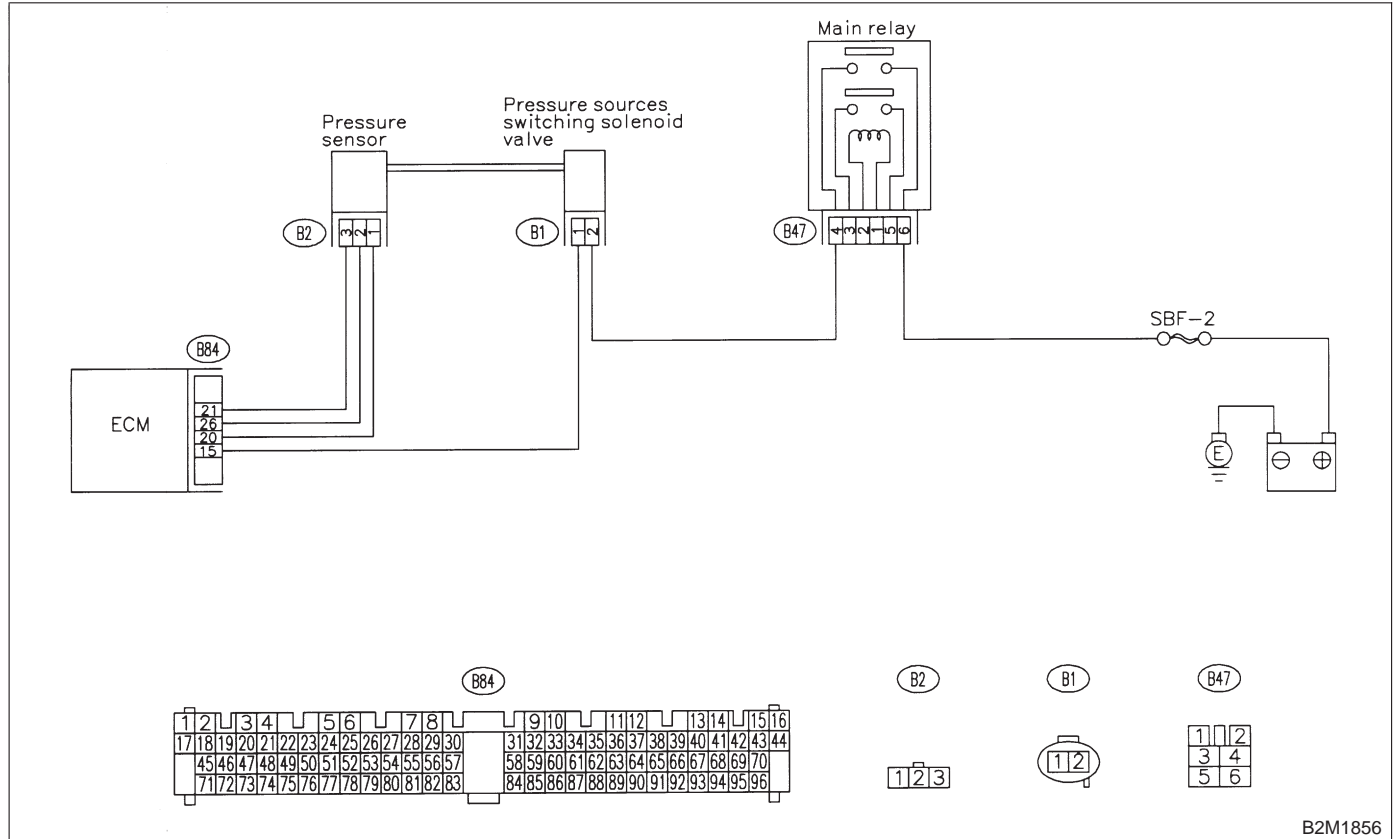
F: DTC P0107 — PRESSURE SENSOR CIRCUIT LOW INPUT —

NOTE:

Check pressure sensor circuit.

<Ref. to 2-7 [T10F0].>

● **WIRING DIAGRAM:**



B2M1856

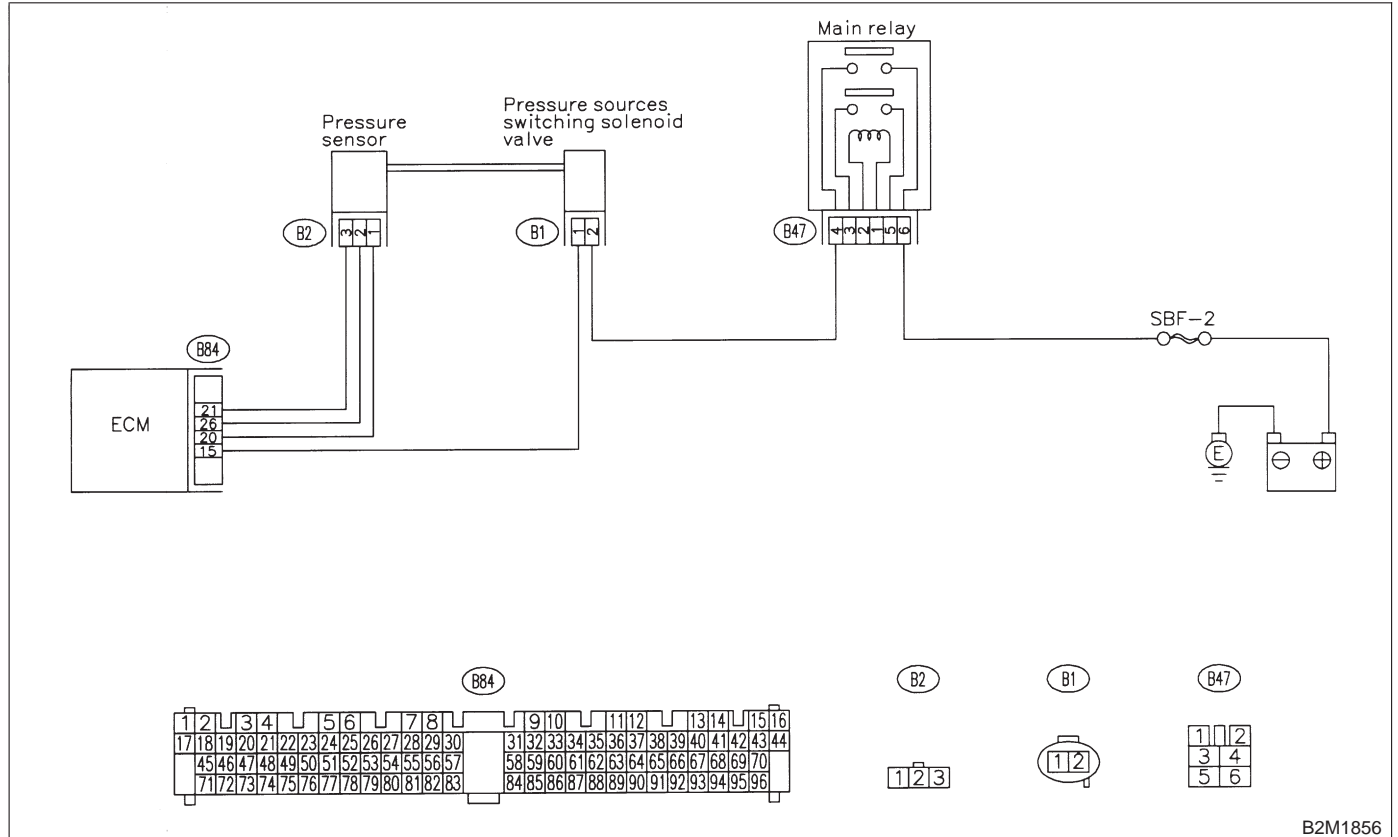
G: DTC P0108 — PRESSURE SENSOR CIRCUIT HIGH INPUT —

NOTE:

Check pressure sensor circuit.

<Ref. to 2-7 [T10G0].>

● **WIRING DIAGRAM:**



B2M1856

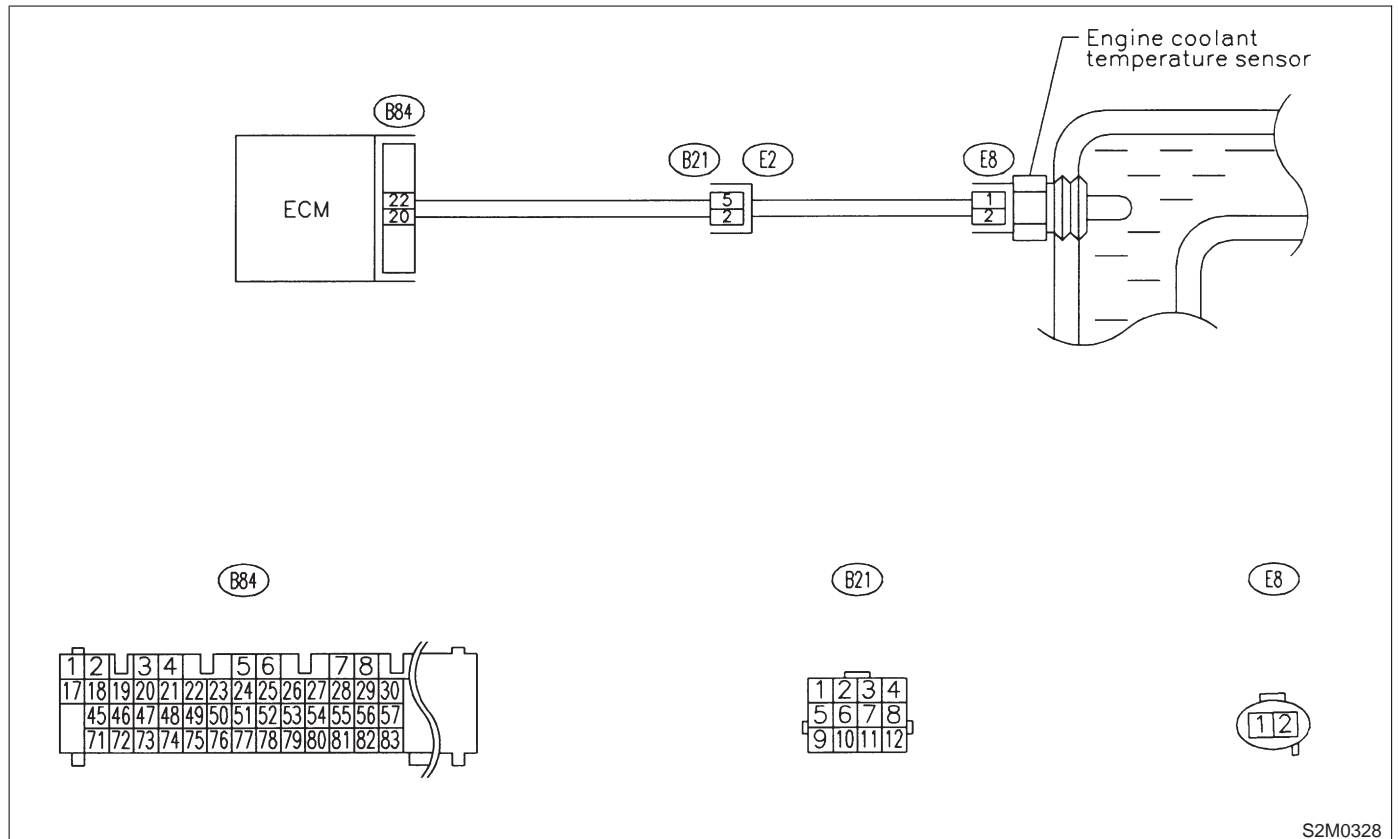
H: DTC P0117 — ENGINE COOLANT TEMPERATURE SENSOR CIRCUIT LOW INPUT —

NOTE:

Check engine coolant temperature sensor circuit.

<Ref. to 2-7 [T10H0].>

● **WIRING DIAGRAM:**



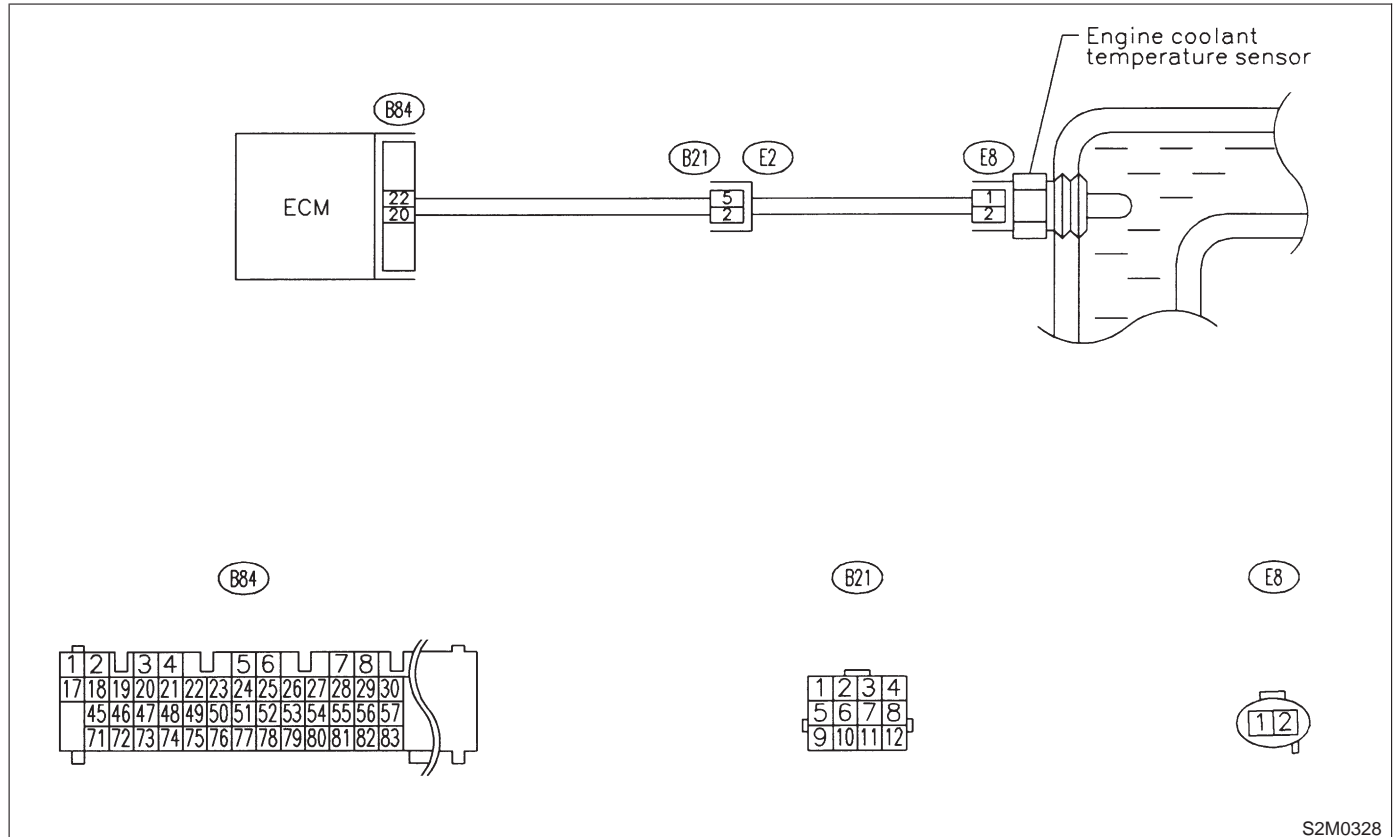
I: DTC P0118 — ENGINE COOLANT TEMPERATURE SENSOR CIRCUIT HIGH INPUT —

NOTE:

Check engine coolant temperature sensor circuit.

<Ref. to 2-7 [T1010].>

● WIRING DIAGRAM:



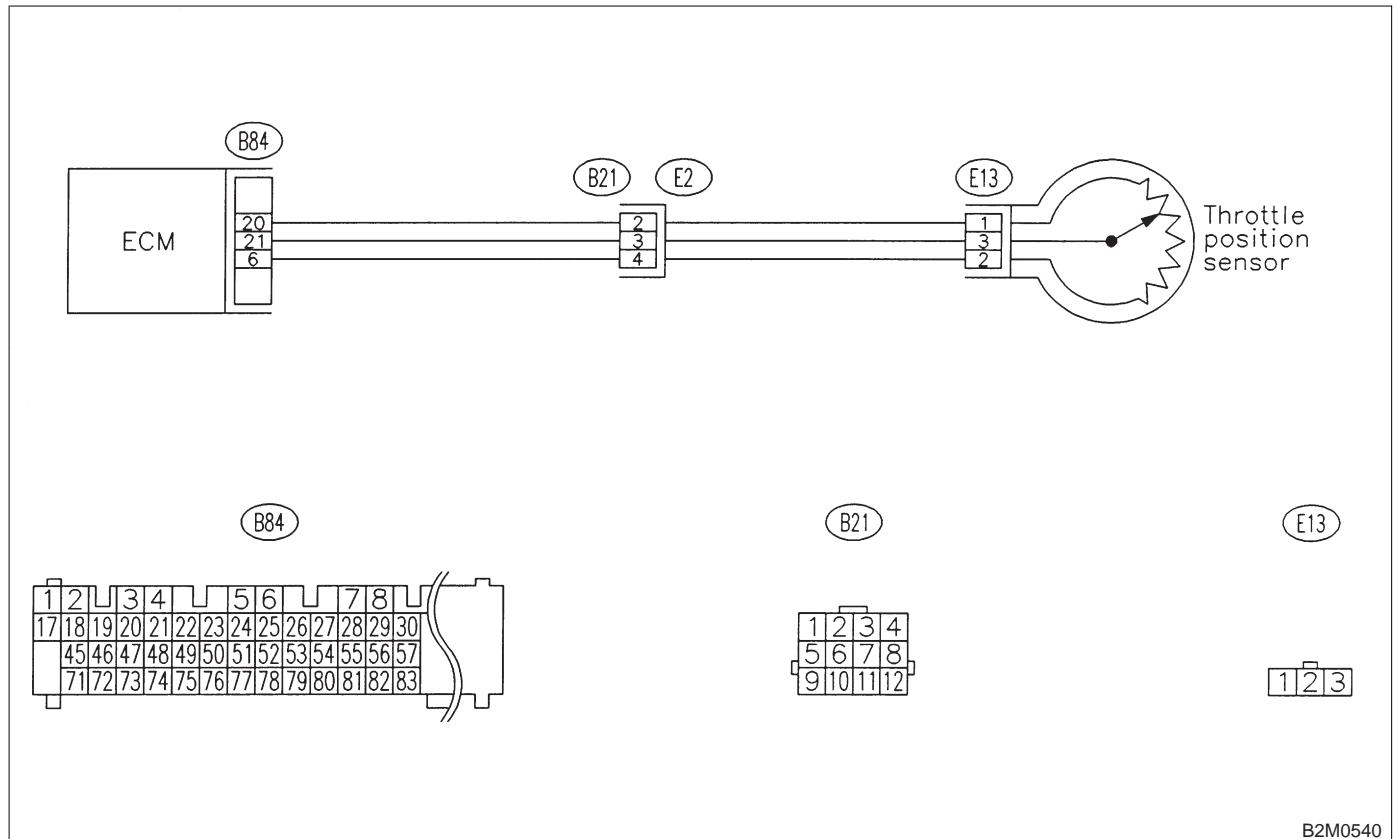
J: DTC P0121 — THROTTLE POSITION SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM (HIGH INPUT) —

NOTE:

Check throttle position sensor circuit.

<Ref. to 2-7 [T10J0].>

● **WIRING DIAGRAM:**



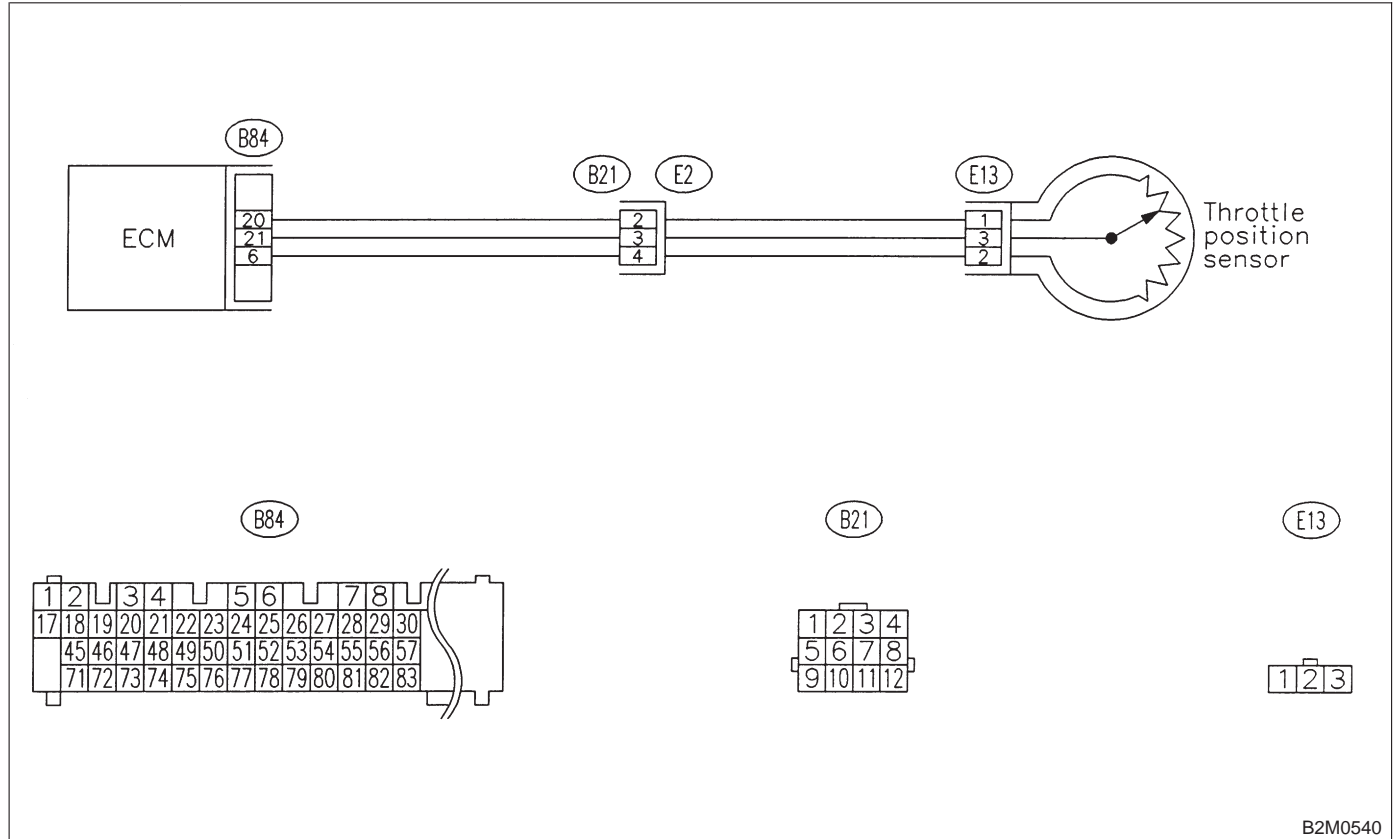
K: DTC P0122 — THROTTLE POSITION SENSOR CIRCUIT LOW INPUT —

NOTE:

Check throttle position sensor circuit.

<Ref. to 2-7 [T10K0].>

● **WIRING DIAGRAM:**



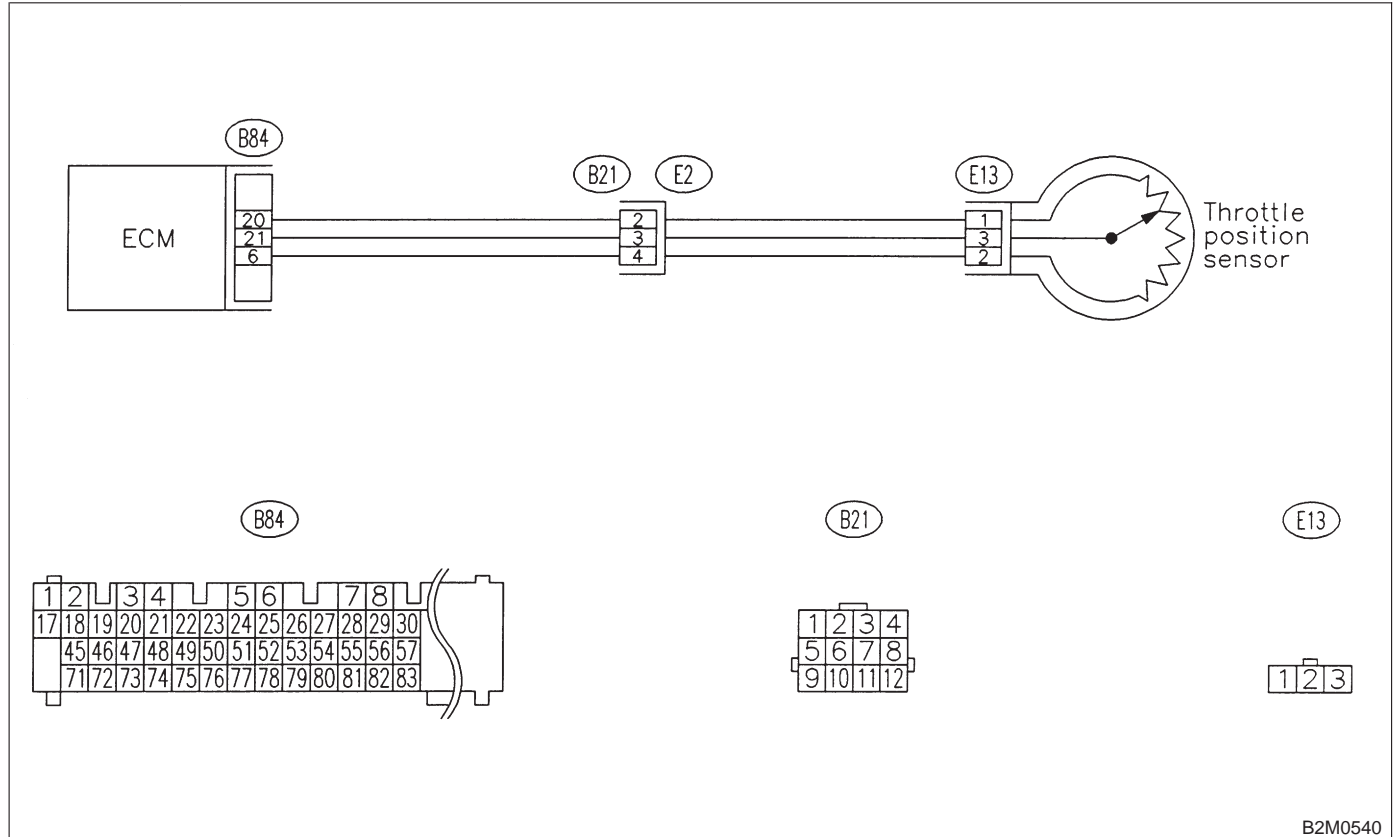
L: DTC P0123 — THROTTLE POSITION SENSOR CIRCUIT HIGH INPUT —

NOTE:

Check throttle position sensor circuit.

<Ref. to 2-7 [T10L0].>

● **WIRING DIAGRAM:**



B2M0540

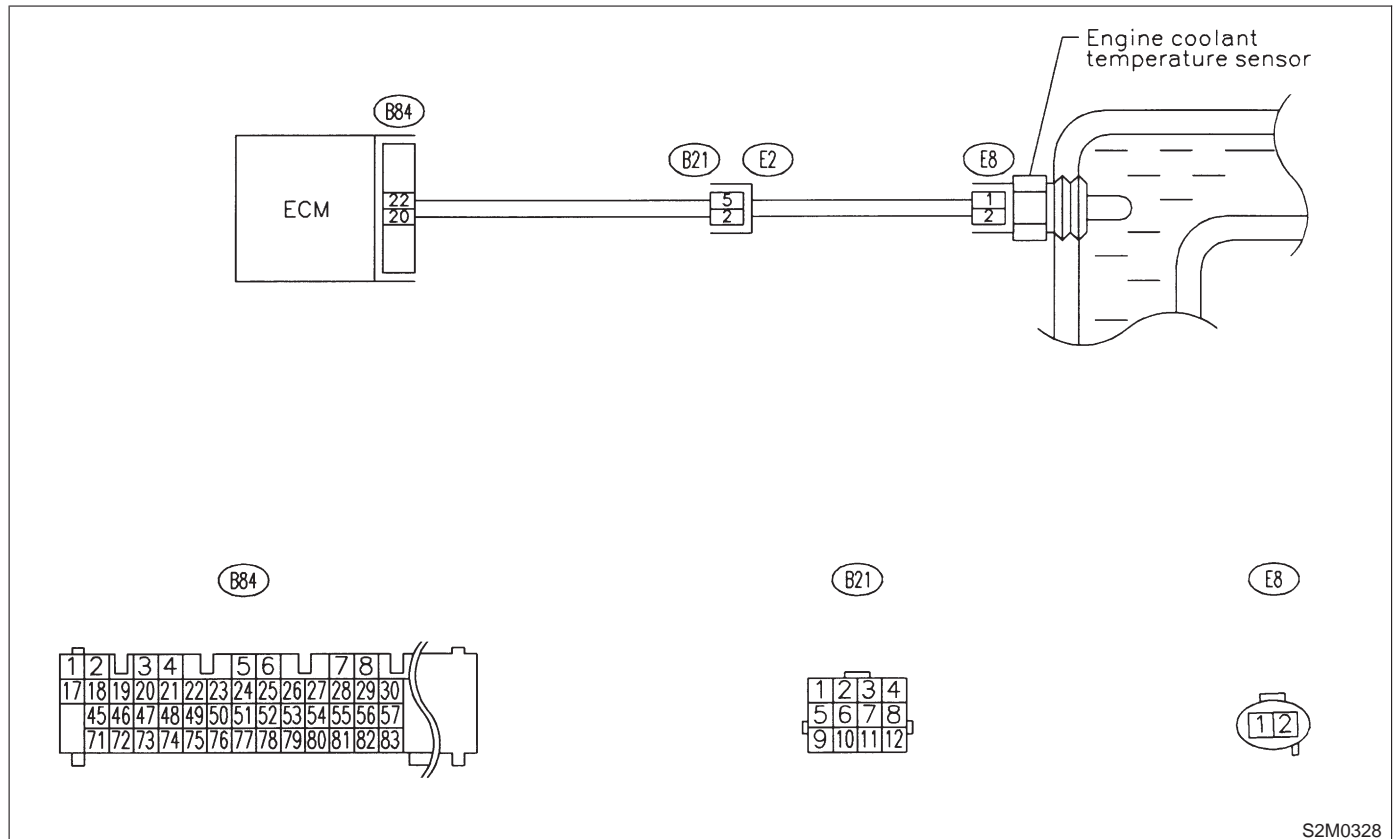
M: DTC P0125 — INSUFFICIENT COOLANT TEMPERATURE FOR CLOSED LOOP FUEL CONTROL —

NOTE:

Check insufficient coolant temperature for closed loop fuel control.

<Ref. to 2-7 [T10M0].>

● WIRING DIAGRAM:



S2M0328

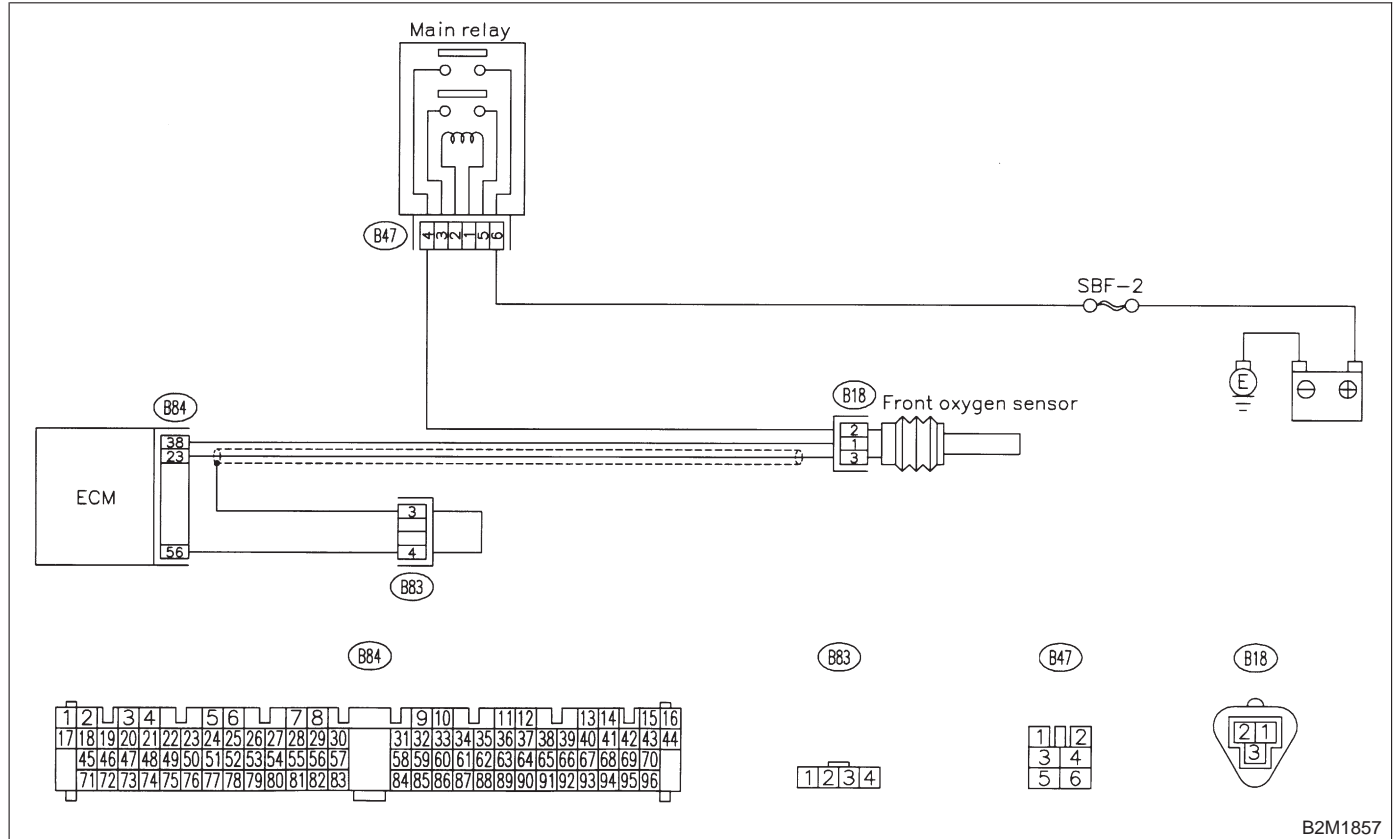
N: DTC P0130 — FRONT OXYGEN SENSOR CIRCUIT MALFUNCTION —

NOTE:

Check front oxygen sensor circuit.

<Ref. to 2-7 [T10N0].>

● **WIRING DIAGRAM:**



B2M1857

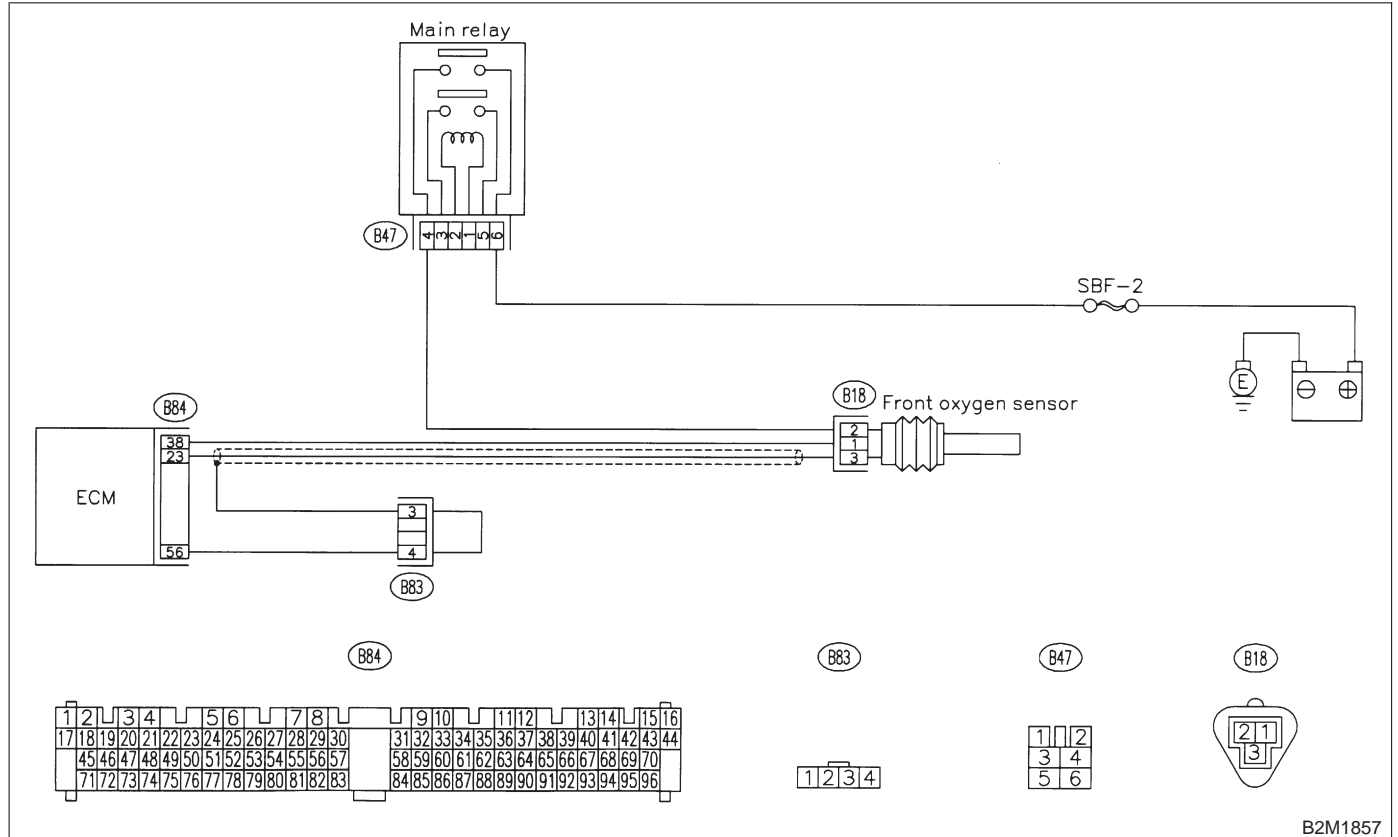
O: DTC P0133 — FRONT OXYGEN SENSOR CIRCUIT SLOW RESPONSE —

NOTE:

Check front oxygen sensor circuit.

<Ref. to 2-7 [T1000].>

● **WIRING DIAGRAM:**



B2M1857

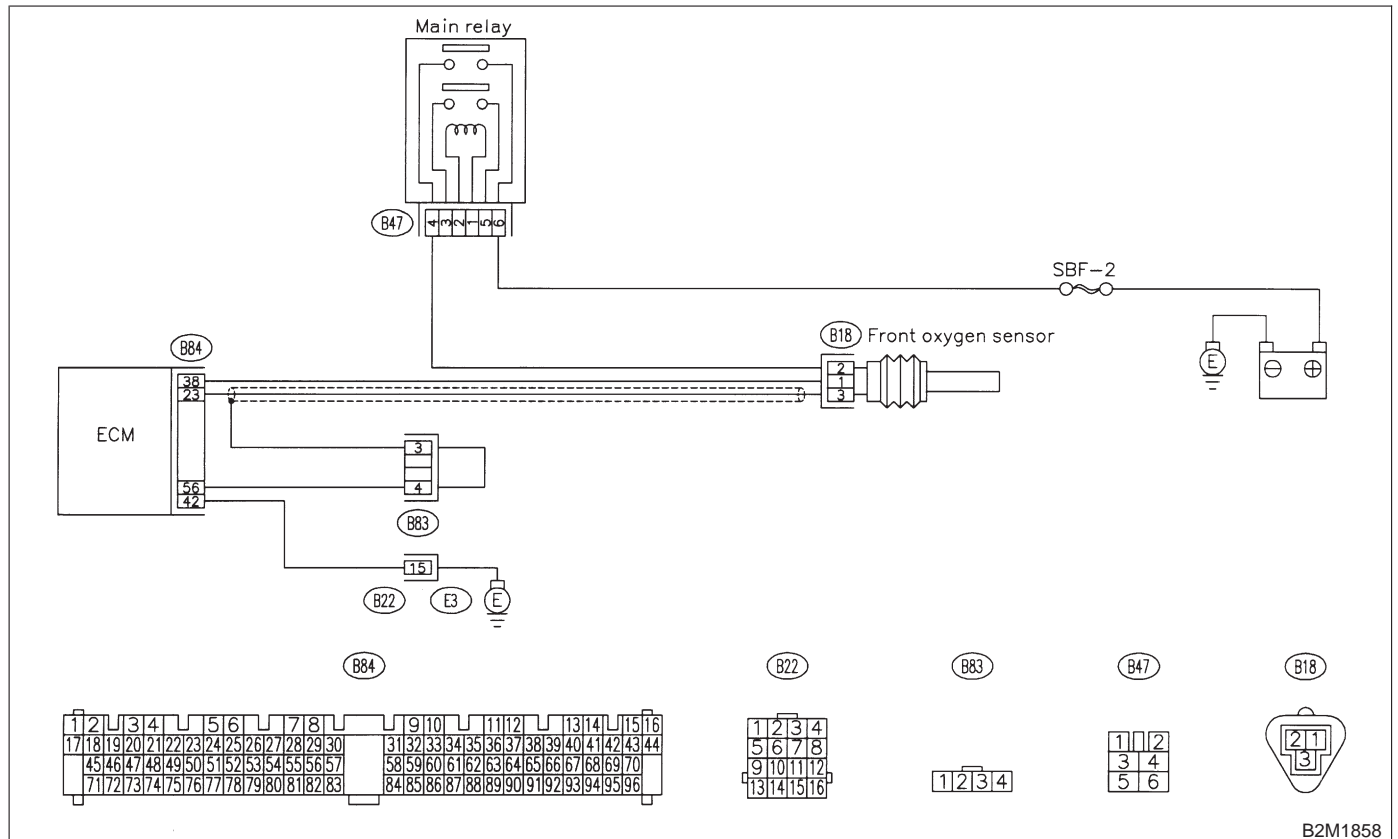
P: DTC P0135 — FRONT OXYGEN SENSOR HEATER CIRCUIT MALFUNCTION —

NOTE:

Check front oxygen sensor heater circuit.

<Ref. to 2-7 [T10P0].>

• WIRING DIAGRAM:



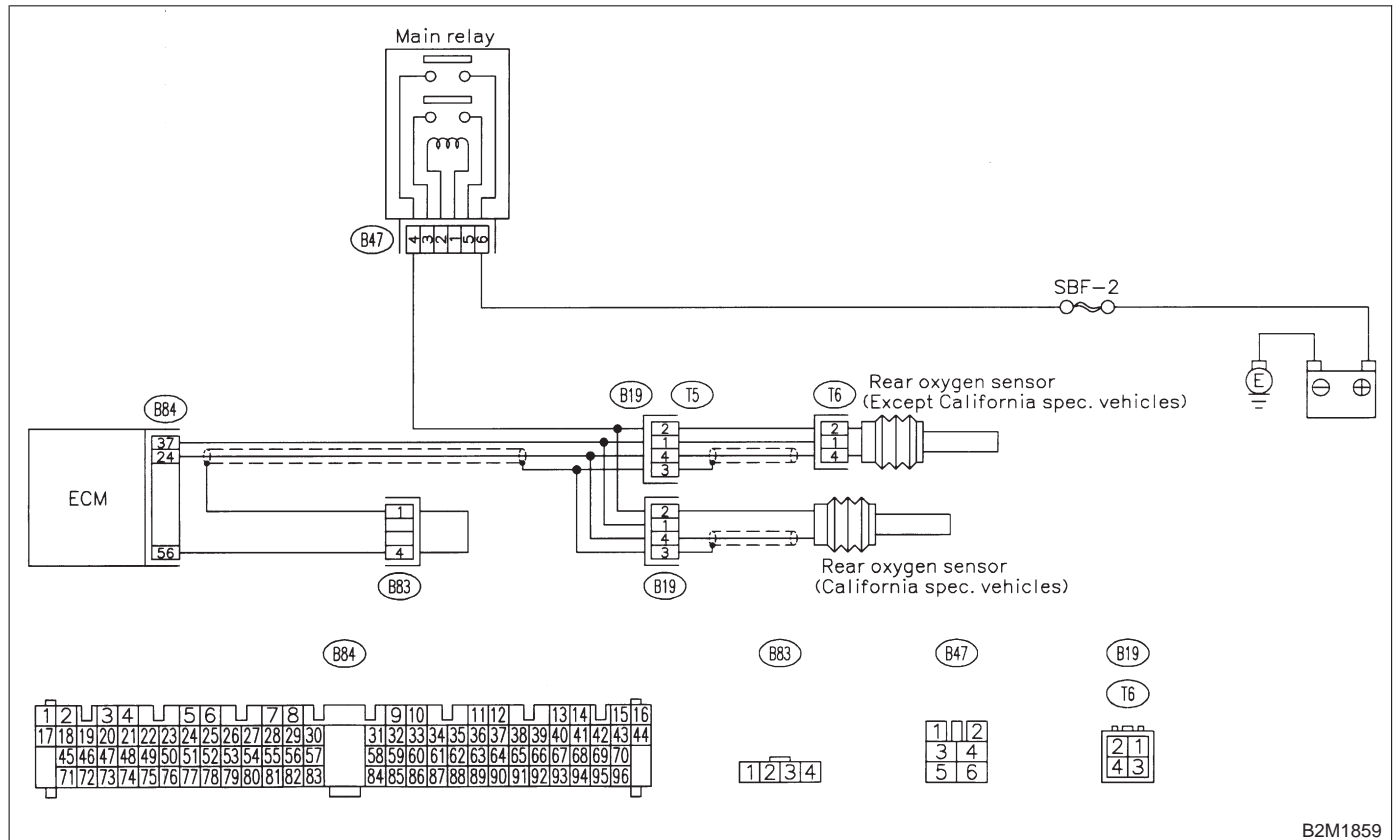
Q: DTC P0136 — REAR OXYGEN SENSOR CIRCUIT MALFUNCTION —

NOTE:

Check rear oxygen sensor circuit.

<Ref. to 2-7 [T10Q0].>

● **WIRING DIAGRAM:**

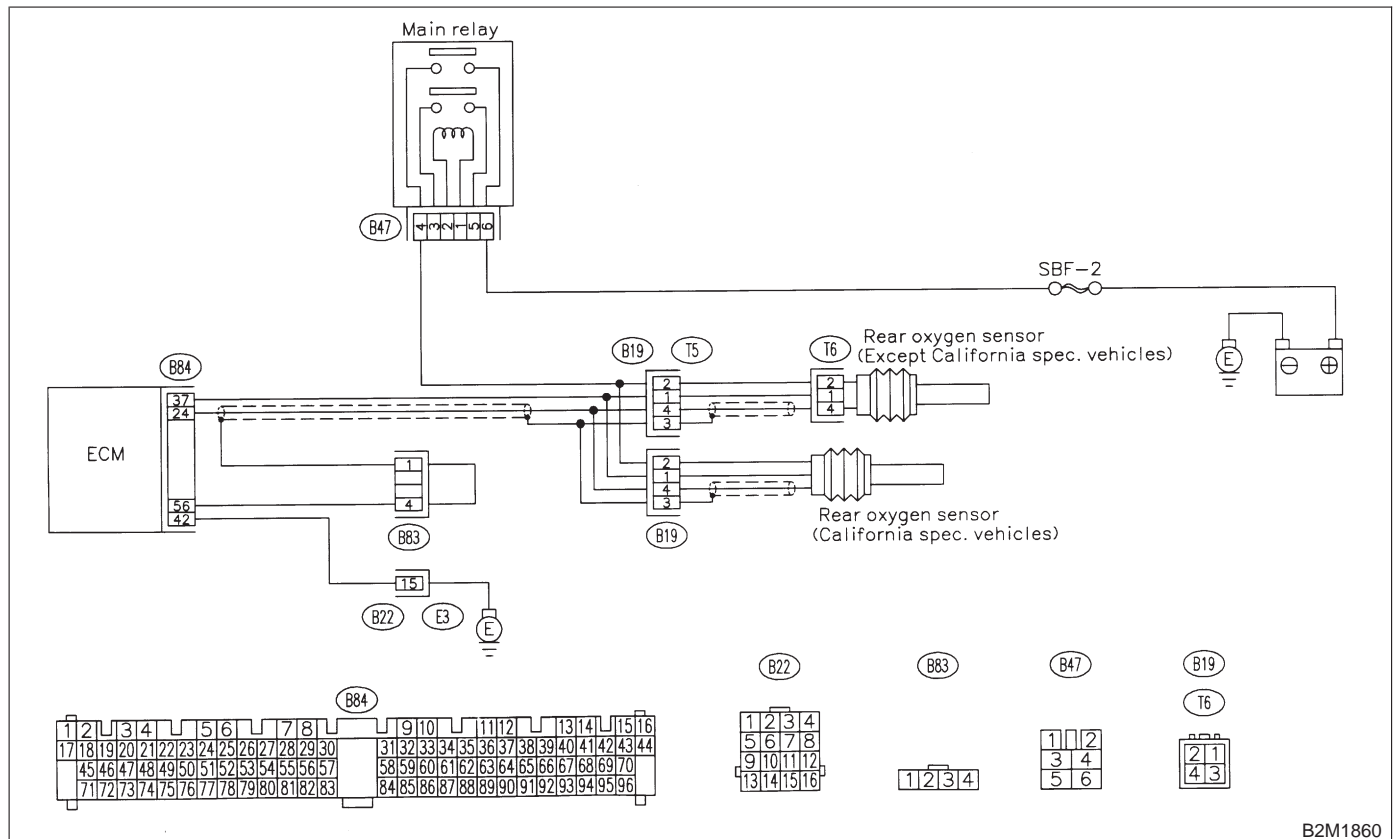


B2M1859

S: DTC P0141 — REAR OXYGEN SENSOR HEATER CIRCUIT MALFUNCTION

NOTE:
Check rear oxygen sensor heater circuit.
<Ref. to 2-7 [T10S0].>

● **WIRING DIAGRAM:**



B2M1860

T: DTC P0170 — FUEL TRIM MALFUNCTION —

NOTE:

Check fuel trim control system.

<Ref. to 2-7 [T10T0].>

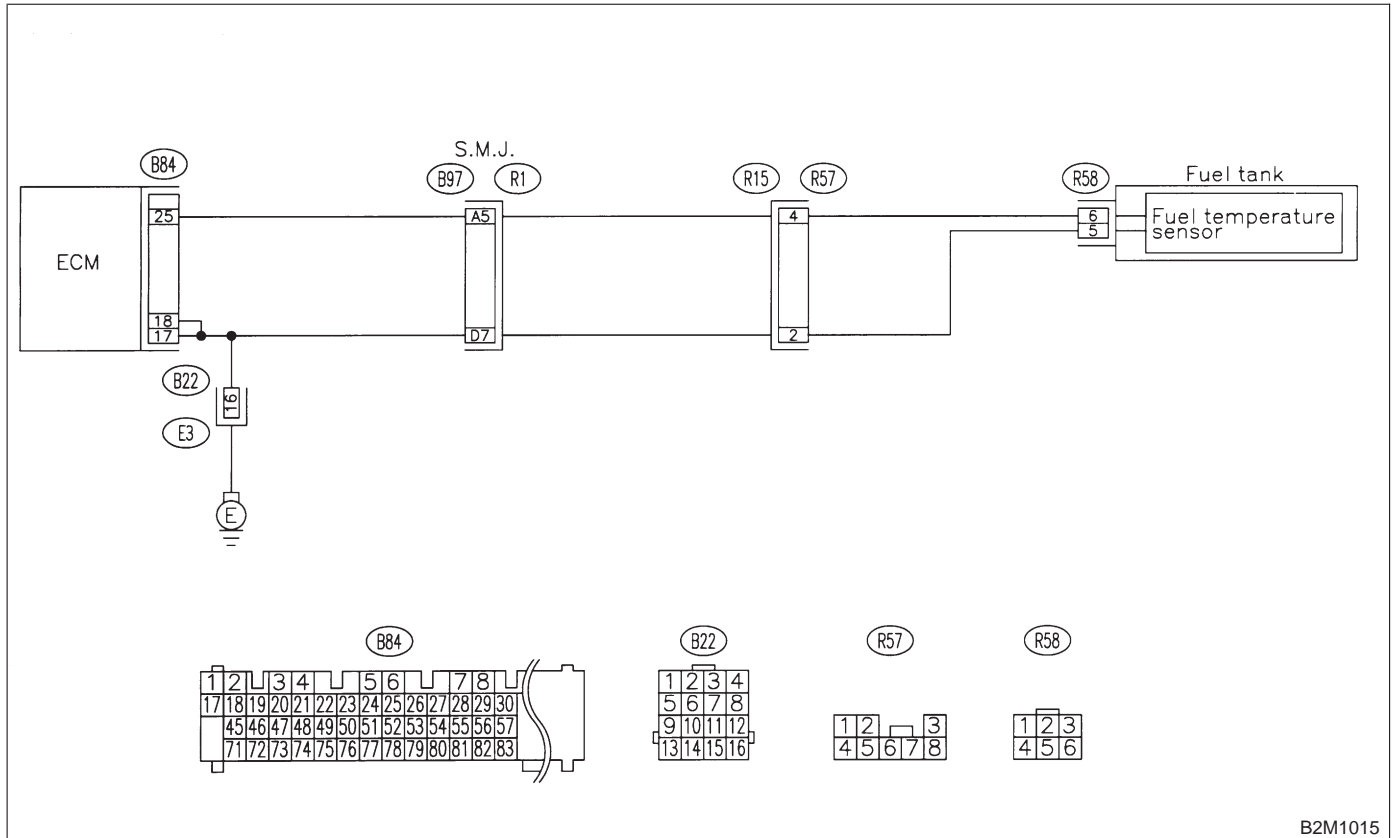
U: DTC P0181 — FUEL TEMPERATURE SENSOR A CIRCUIT RANGE/PERFORMANCE PROBLEM —

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

CAUTION:

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

● **WIRING DIAGRAM:**



B2M1015

11U1 : CHECK ANY OTHER DTC ON DISPLAY.

CHECK : Does the Subaru select monitor or OBD-II general scan tool indicate DTC P0182 or P0183?

YES : Inspect DTC P0182 or P0183 using "11. Diagnostics Chart with Trouble Code for RHD Vehicles". <Ref. to 2-7 [T1100].>

NOTE:

In this case, it is not necessary to inspect DTC P0181.

NO : Replace fuel temperature sensor.

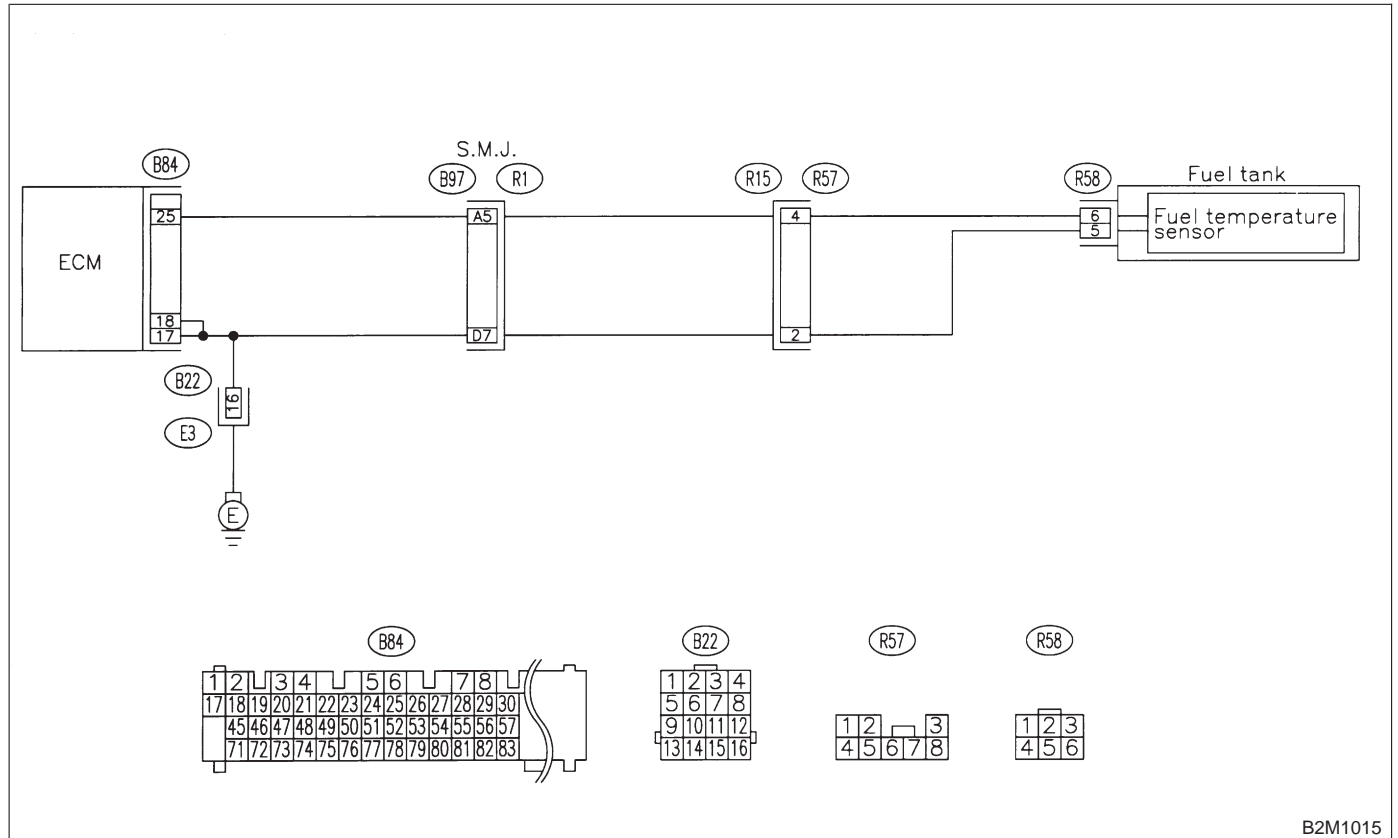
V: DTC P0182 — FUEL TEMPERATURE SENSOR A CIRCUIT LOW INPUT —

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

CAUTION:

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

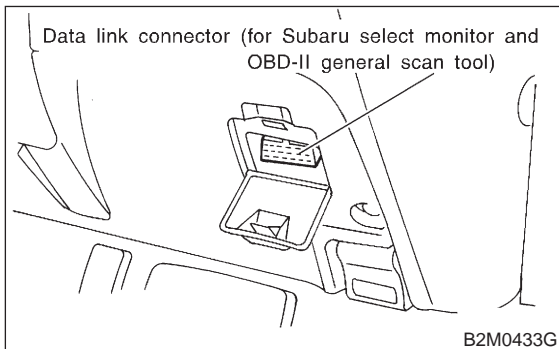
● **WIRING DIAGRAM:**



B2M1015

11V1 : CONNECT SUBARU SELECT MONITOR OR THE OBD-II GENERAL SCAN TOOL, AND READ DATA.

- 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 to ON and Subaru Select Monitor or OBD-II general scan tool switch to ON.
- 4) Start engine.
- 5) Read data of fuel temperature 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.

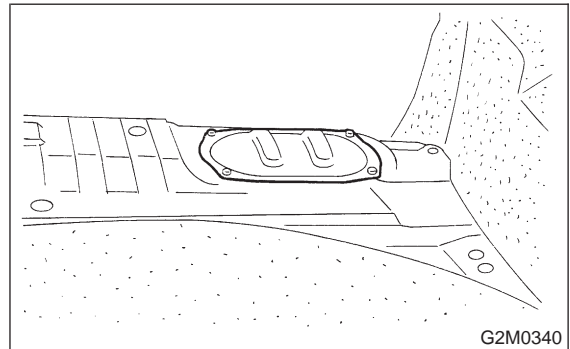
CHECK : *Is the value greater than 150°C (300°F)?*

YES : Go to step 11V2.

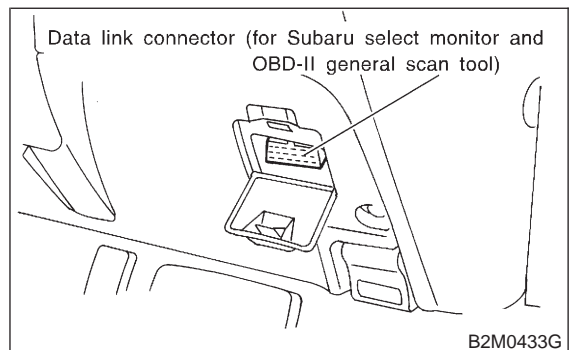
NO : Even if MIL lights up, the circuit has returned to a normal condition at this time.

11V2 : CHECK HARNESS BETWEEN FUEL TEMPERATURE SENSOR AND ECM CONNECTOR.

- 1) Turn ignition switch to OFF.
- 2) Remove access hole lid.



- 3) Disconnect connector from fuel pump.
- 4) Connect Subaru Select Monitor or the OBD-II general scan tool to data link connector.



- 5) Turn ignition switch and Subaru Select Monitor or OBD-II general scan tool switch to ON.
- 6) Read data of fuel temperature 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 -40°C (-40°F)?*

YES : Replace fuel temperature sensor.

NO : Repair ground short circuit in harness between fuel pump and ECM connector.

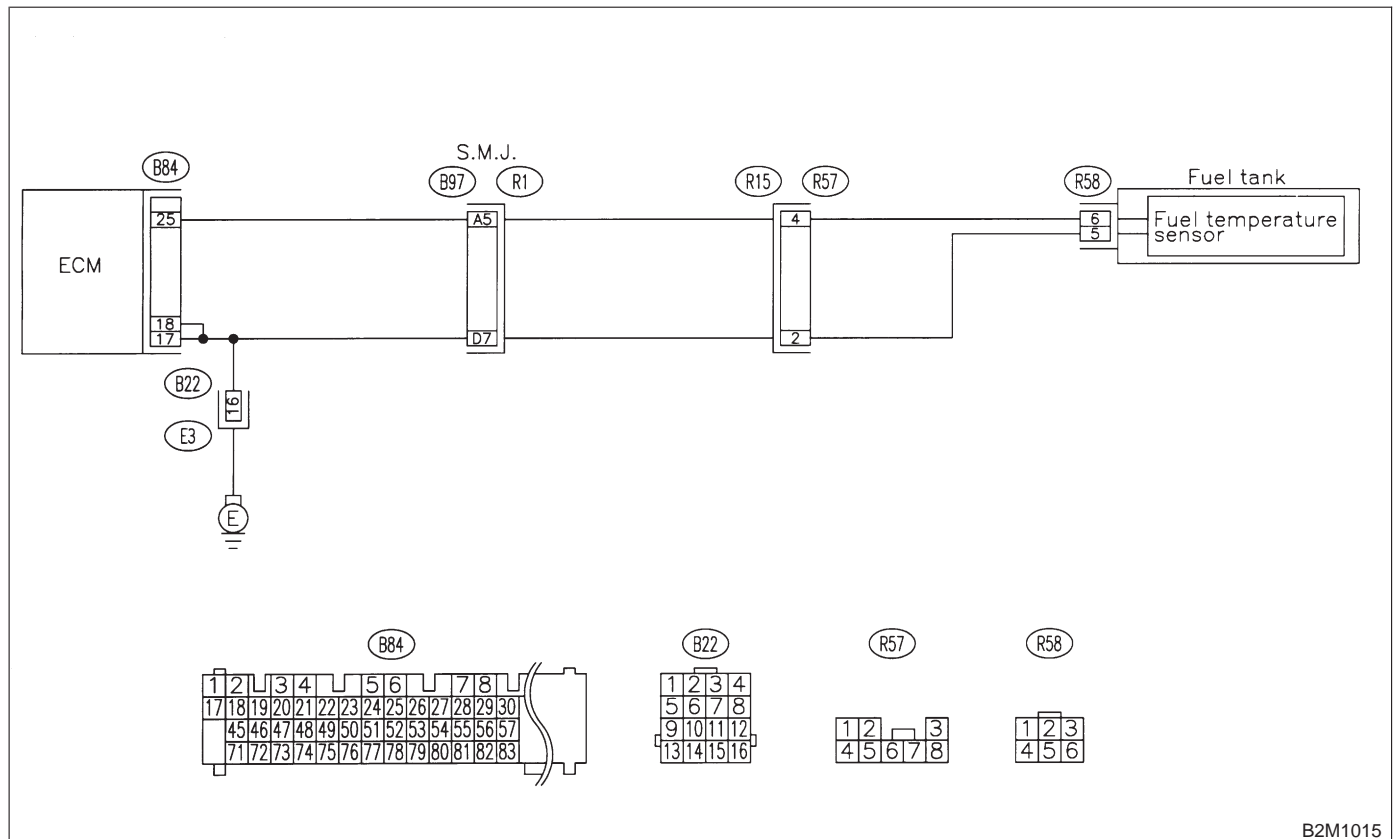
W: DTC P0183 — FUEL TEMPERATURE SENSOR A CIRCUIT HIGH INPUT —

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

CAUTION:

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

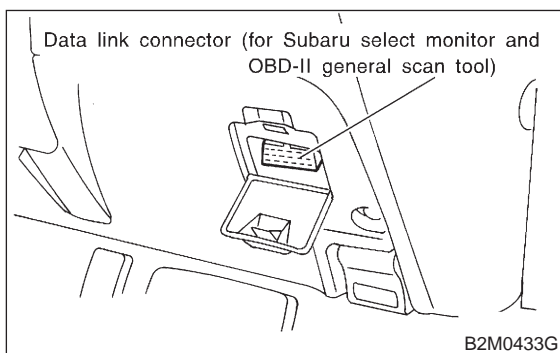
● **WIRING DIAGRAM:**



B2M1015

11W1 : CONNECT SUBARU SELECT MONITOR OR THE OBD-II GENERAL SCAN TOOL, AND READ DATA.

- 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 to ON and Subaru Select Monitor or OBD-II general scan tool switch to ON.
- 4) Start engine.
- 5) Read data of fuel temperature 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.

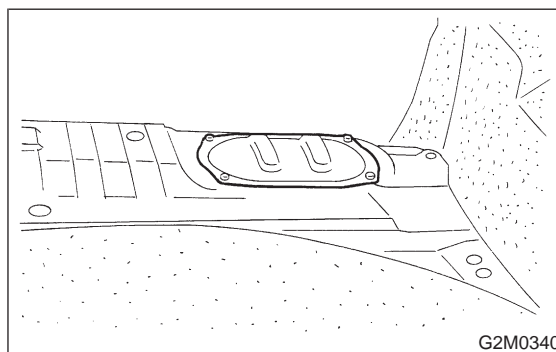
- CHECK** : *Is the value less than -40°C (-40°F)?*
- YES** : Go to step 11W2.
- NO** : Repair poor contact.

NOTE:

- In this case, repair the following:
- Poor contact in fuel pump connector
 - Poor contact in ECM connector
 - Poor contact in coupling connectors (B22, B97 and R57)

11W2 : CHECK HARNESS BETWEEN FUEL TEMPERATURE SENSOR AND ECM CONNECTOR.

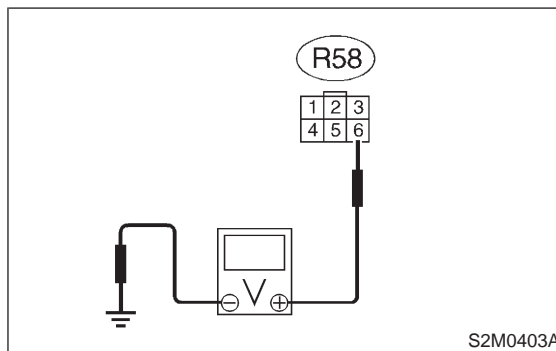
- 1) Turn ignition switch to OFF.
- 2) Remove access hole lid.



- 3) Disconnect connector from fuel pump.
- 4) Measure voltage between fuel pump connector and chassis ground.

Connector & terminal

(R58) No. 6 (+) — Chassis ground (-):

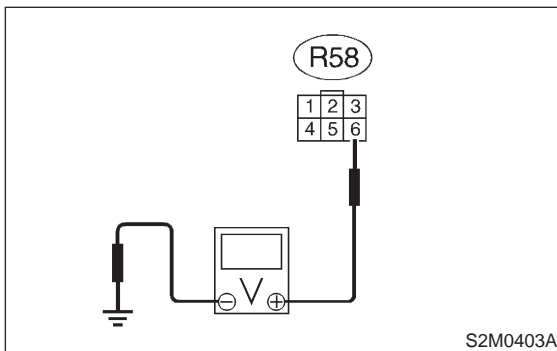


- CHECK** : *Is the voltage more than 10 V?*
- YES** : Repair battery short circuit in harness between ECM and fuel pump connector.
- NO** : Go to step 11W3.

11W3 : CHECK HARNESS BETWEEN FUEL TEMPERATURE SENSOR AND ECM CONNECTOR.

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

Connector & terminal
(R58) No. 6 (+) — Chassis ground (-):

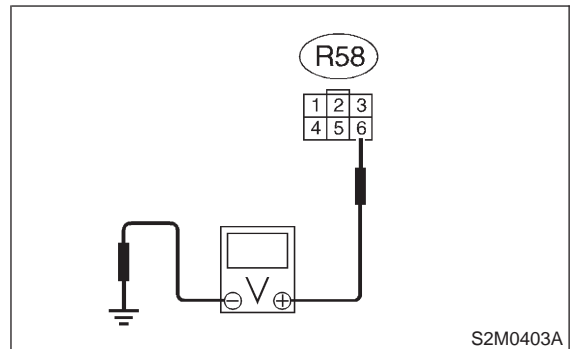


- CHECK** : *Is the voltage more than 10 V?*
- YES** : Repair battery short circuit in harness between ECM and fuel pump connector.
- NO** : Go to step **11W4**.

11W4 : CHECK HARNESS BETWEEN FUEL TEMPERATURE SENSOR AND ECM CONNECTOR.

Measure voltage between fuel pump connector and chassis ground.

Connector & terminal
(R58) No. 6 (+) — Chassis ground (-):



- CHECK** : *Is the voltage more than 4 V?*
- YES** : Go to step **11W5**.
- NO** : Repair harness and connector.

NOTE:

In this case, repair the following:

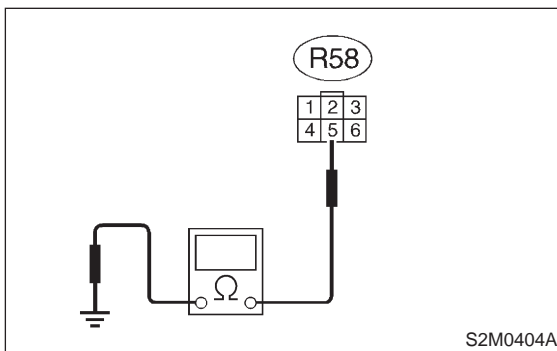
- Open circuit in harness between ECM and fuel pump connector
- Poor contact in fuel pump connector
- Poor contact in ECM connector
- Poor contact in coupling connectors (B97 and R57)

11W5 : CHECK HARNESS BETWEEN FUEL TEMPERATURE SENSOR AND ECM CONNECTOR.

- 1) Turn ignition switch to OFF.
- 2) Measure resistance of harness between fuel pump connector and chassis ground.

Connector & terminal

(R58) No. 5 — Chassis ground:



CHECK : **Is the resistance less than 5 Ω?**

YES : Replace fuel temperature sensor.

NO : Repair harness and connector.

NOTE:

In this case, repair the following:

- Open circuit in harness between ECM and fuel pump connector
- Poor contact in fuel pump connector
- Poor contact in ECM connector
- Poor contact in coupling connectors (B22, B97 and R57)

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

NOTE:

For the diagnostic procedure, refer to 2-7 [T11AA0].

<Ref. to 2-7 [T11AA0].>

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

NOTE:

For the diagnostic procedure, refer to 2-7 [T11AA0].

<Ref. to 2-7 [T11AA0].>

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

NOTE:

For the diagnostic procedure, refer to 2-7 [T11AA0].

<Ref. to 2-7 [T11AA0].>

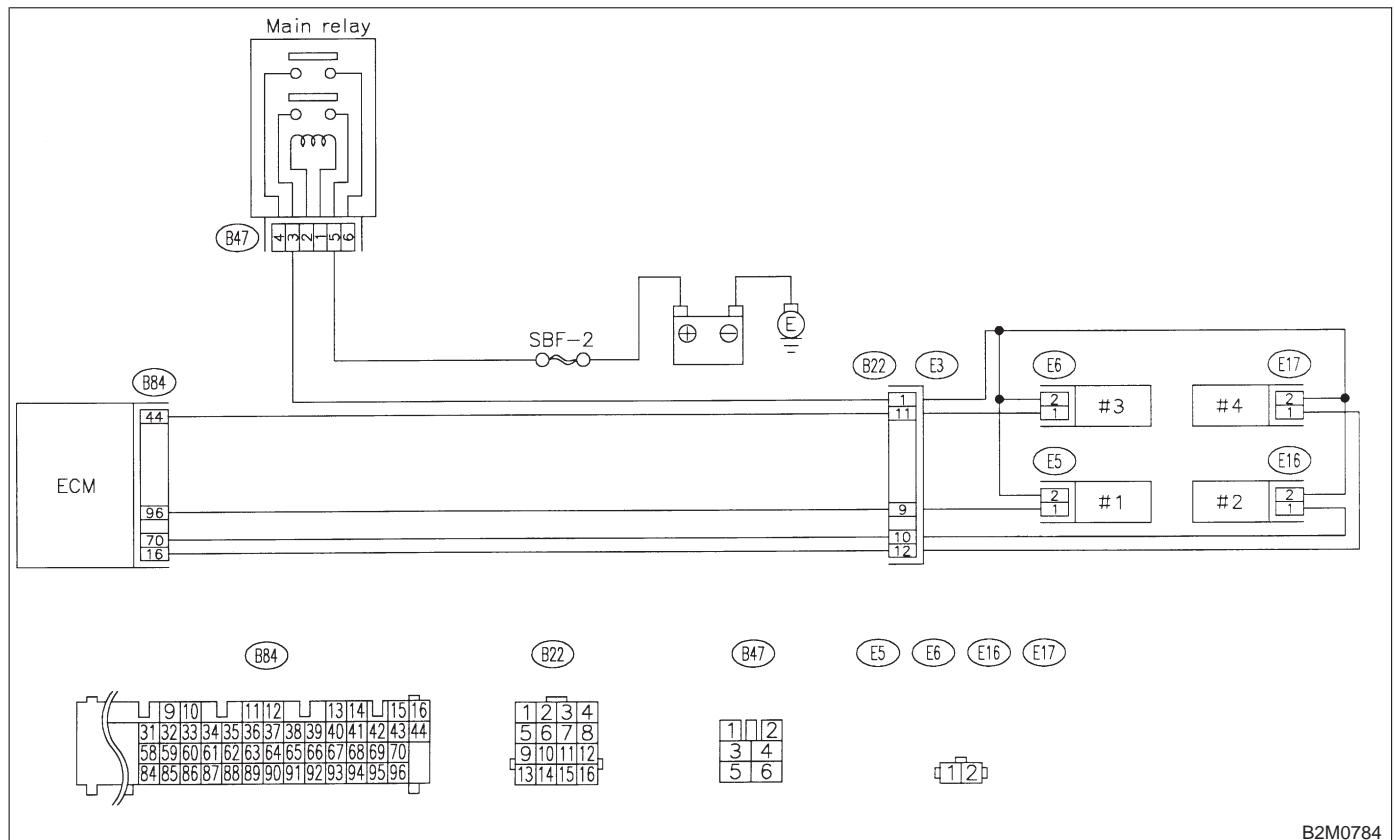
AA: DTC P0270 — FUEL INJECTOR CIRCUIT LOW INPUT - #4 —

NOTE:

Check fuel injector circuit.

<Ref. to 2-7 [T10AA0].>

● **WIRING DIAGRAM:**



B2M0784

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

NOTE:

For the diagnostic procedure, refer to 2-7 [T11AE0].

<Ref. to 2-7 [T11AE0].>

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

NOTE:

For the diagnostic procedure, refer to 2-7 [T11AE0].

<Ref. to 2-7 [T11AE0].>

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

NOTE:

For the diagnostic procedure, refer to 2-7 [T11AE0].

<Ref. to 2-7 [T11AE0].>

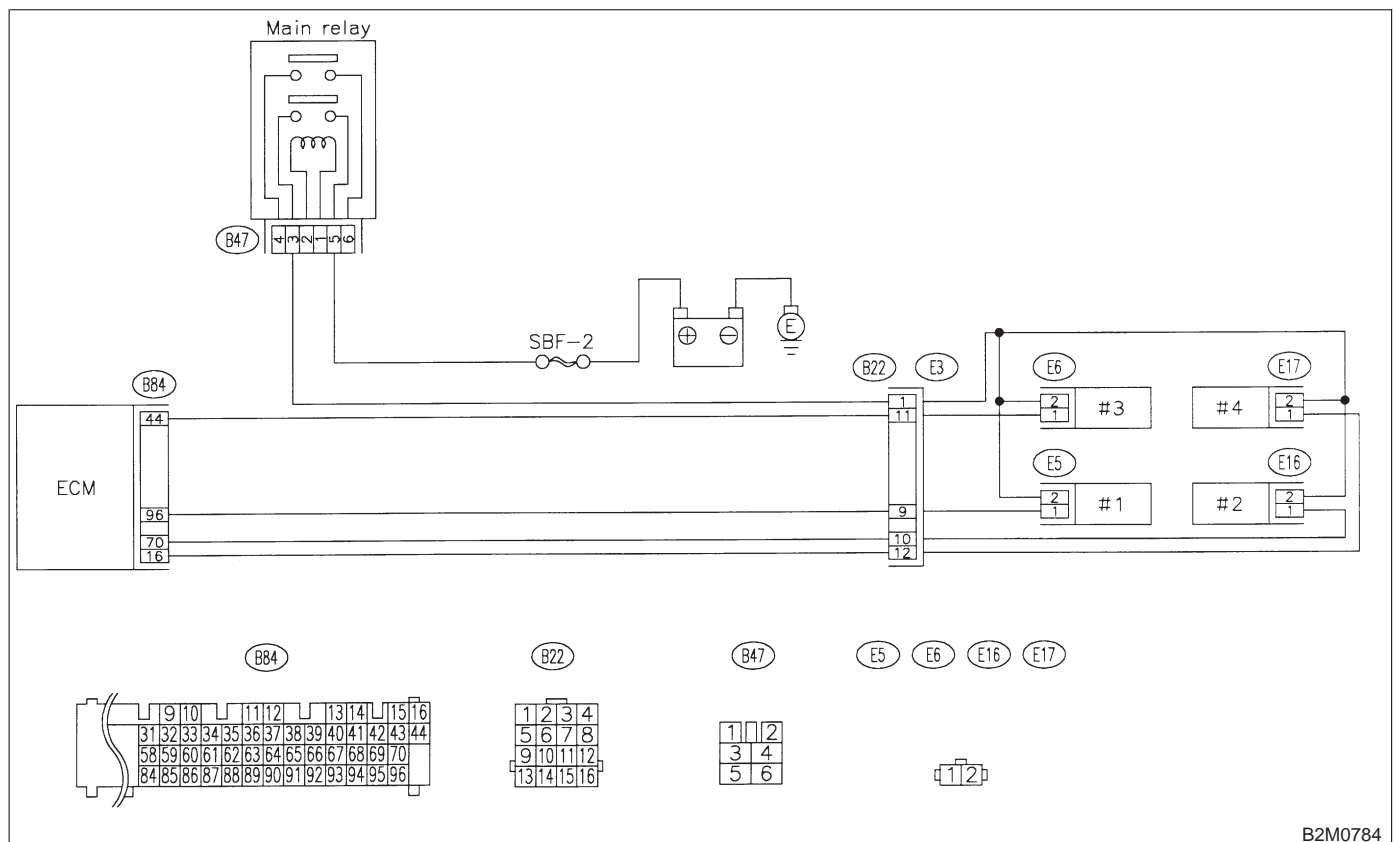
AE: DTC P0271 — FUEL INJECTOR CIRCUIT HIGH INPUT - #4 —

NOTE:

Check fuel injector circuit.

<Ref. to 2-7 [T10AE0].>

● **WIRING DIAGRAM:**



B2M0784

AF: DTC P0301 — CYLINDER 1 MISFIRE DETECTED —

NOTE:

For the diagnostic procedure, refer to 2-7 [T11AI0].

<Ref. to 2-7 [T11AI0].>

AG: DTC P0302 — CYLINDER 2 MISFIRE DETECTED —

NOTE:

For the diagnostic procedure, refer to 2-7 [T11AI0].

<Ref. to 2-7 [T11AI0].>

AH: DTC P0303 — CYLINDER 3 MISFIRE DETECTED —

NOTE:

For the diagnostic procedure, refer to 2-7 [T11AI0].

<Ref. to 2-7 [T11AI0].>

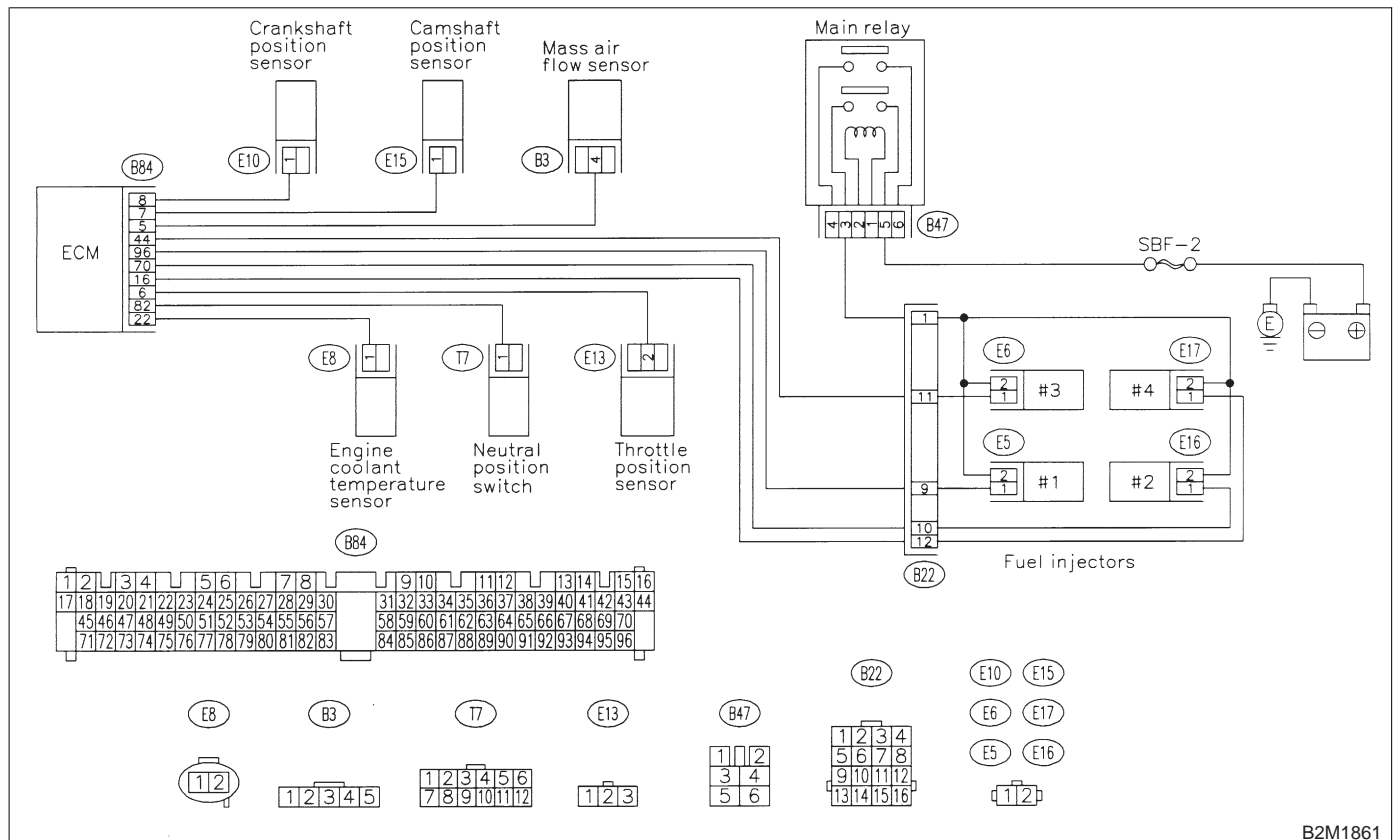
AI: DTC P0304 — CYLINDER 4 MISFIRE DETECTED —

NOTE:

Check fuel injection control system.

<Ref. to 2-7 [T10AI0].>

● **WIRING DIAGRAM:**



B2M1861

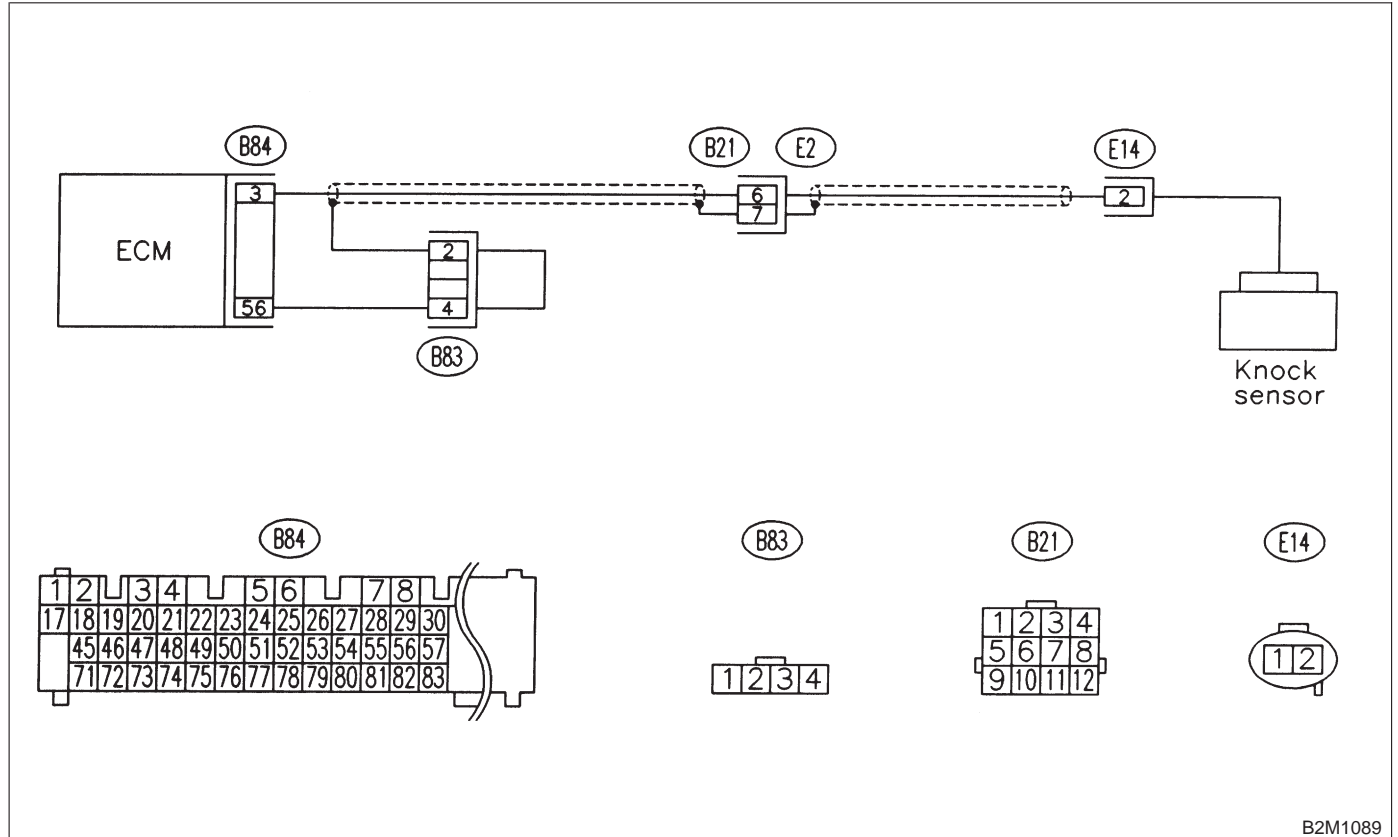
AJ: DTC P0325 — KNOCK SENSOR CIRCUIT MALFUNCTION —

NOTE:

Check knock sensor circuit.

<Ref. to 2-7 [T10AJ0].>

● **WIRING DIAGRAM:**



B2M1089

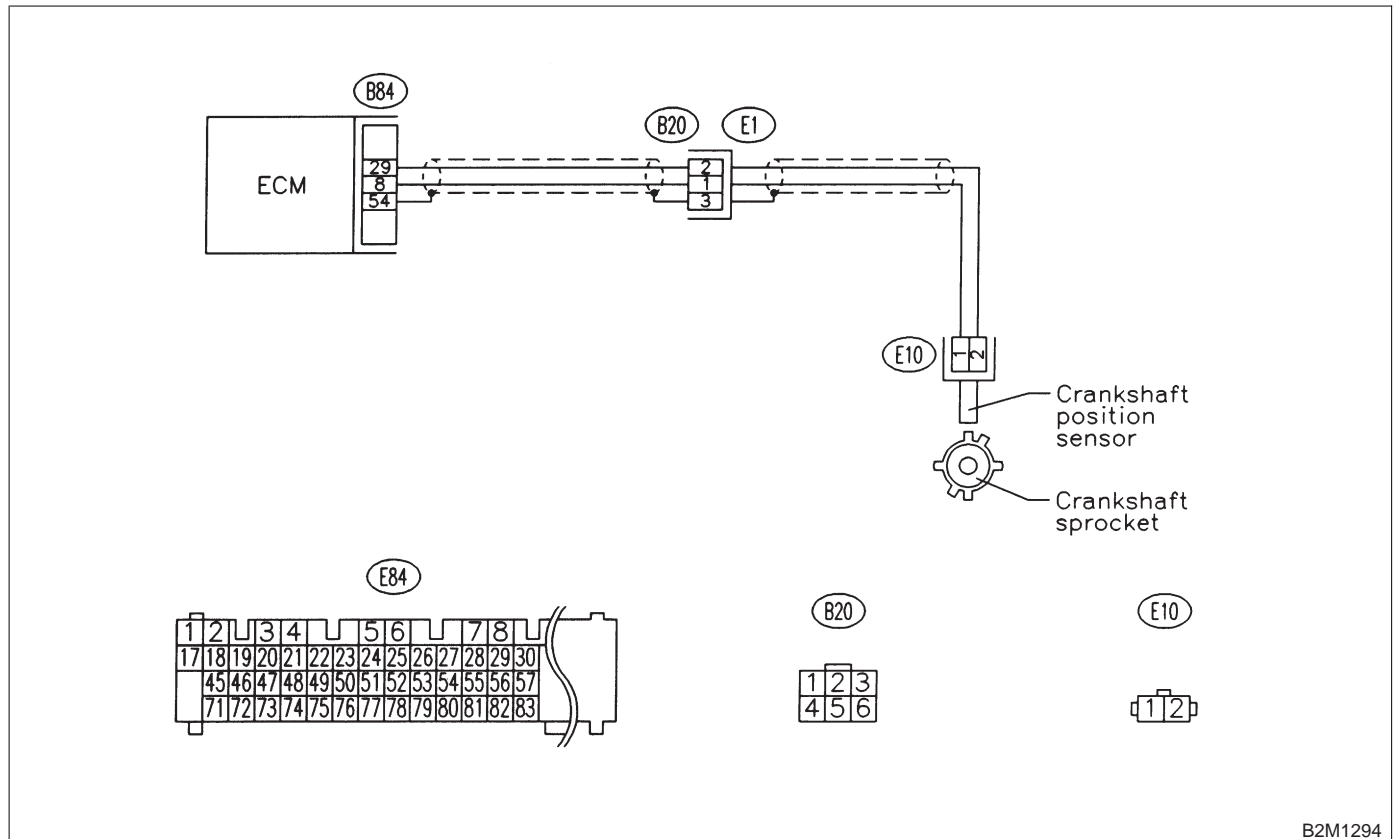
AK: DTC P0335 — CRANKSHAFT POSITION SENSOR CIRCUIT MALFUNCTION —

NOTE:

Check crankshaft position sensor circuit.

<Ref. to 2-7 [T10AK0].>

● WIRING DIAGRAM:



B2M1294

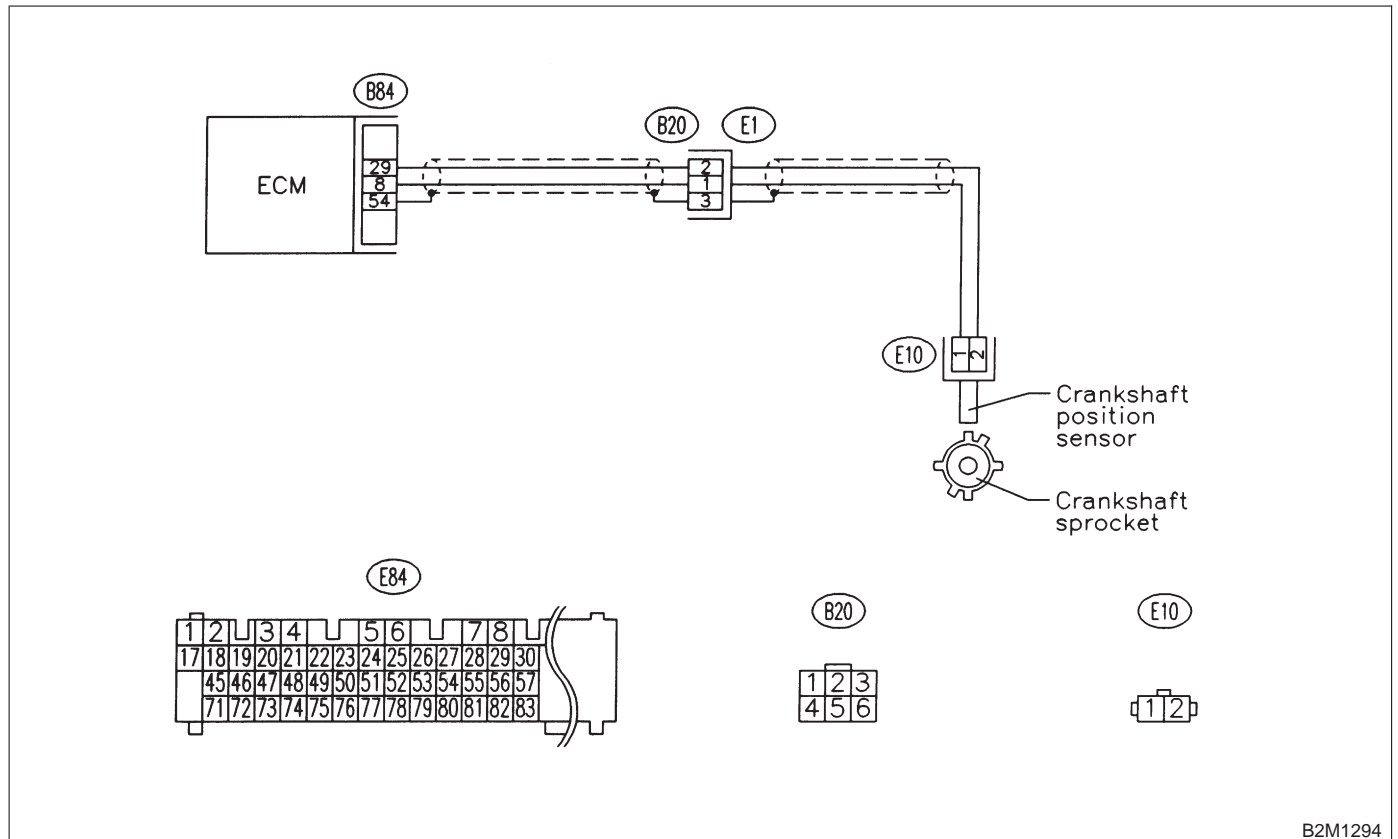
AL: DTC P0336 — CRANKSHAFT POSITION SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM —

NOTE:

Check crankshaft position sensor circuit.

<Ref. to 2-7 [T10AL0].>

● WIRING DIAGRAM:



B2M1294

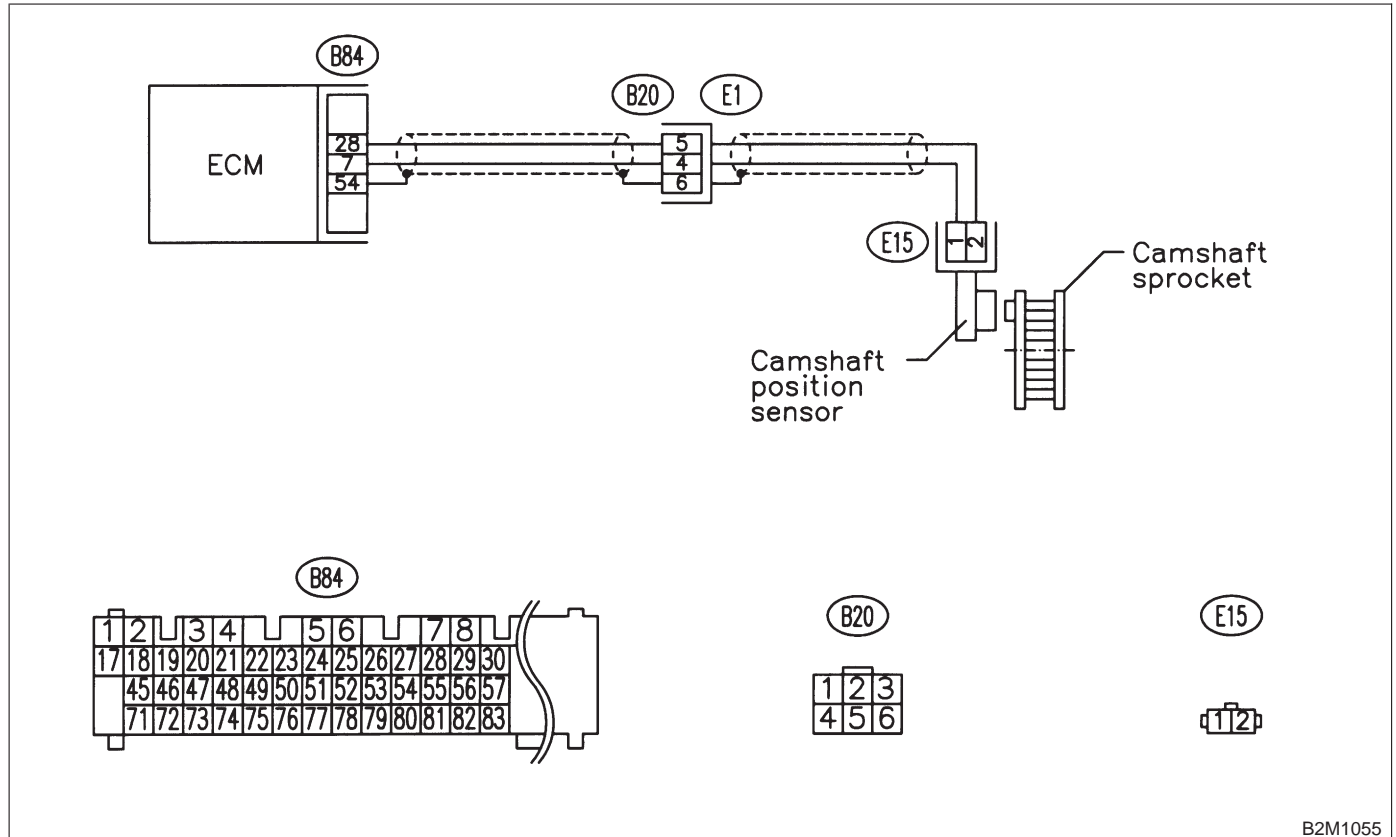
AM: DTC P0340 — CAMSHAFT POSITION SENSOR CIRCUIT MALFUNCTION

NOTE:

Check camshaft position sensor circuit.

<Ref. to 2-7 [T10AM0].>

● WIRING DIAGRAM:



B2M1055

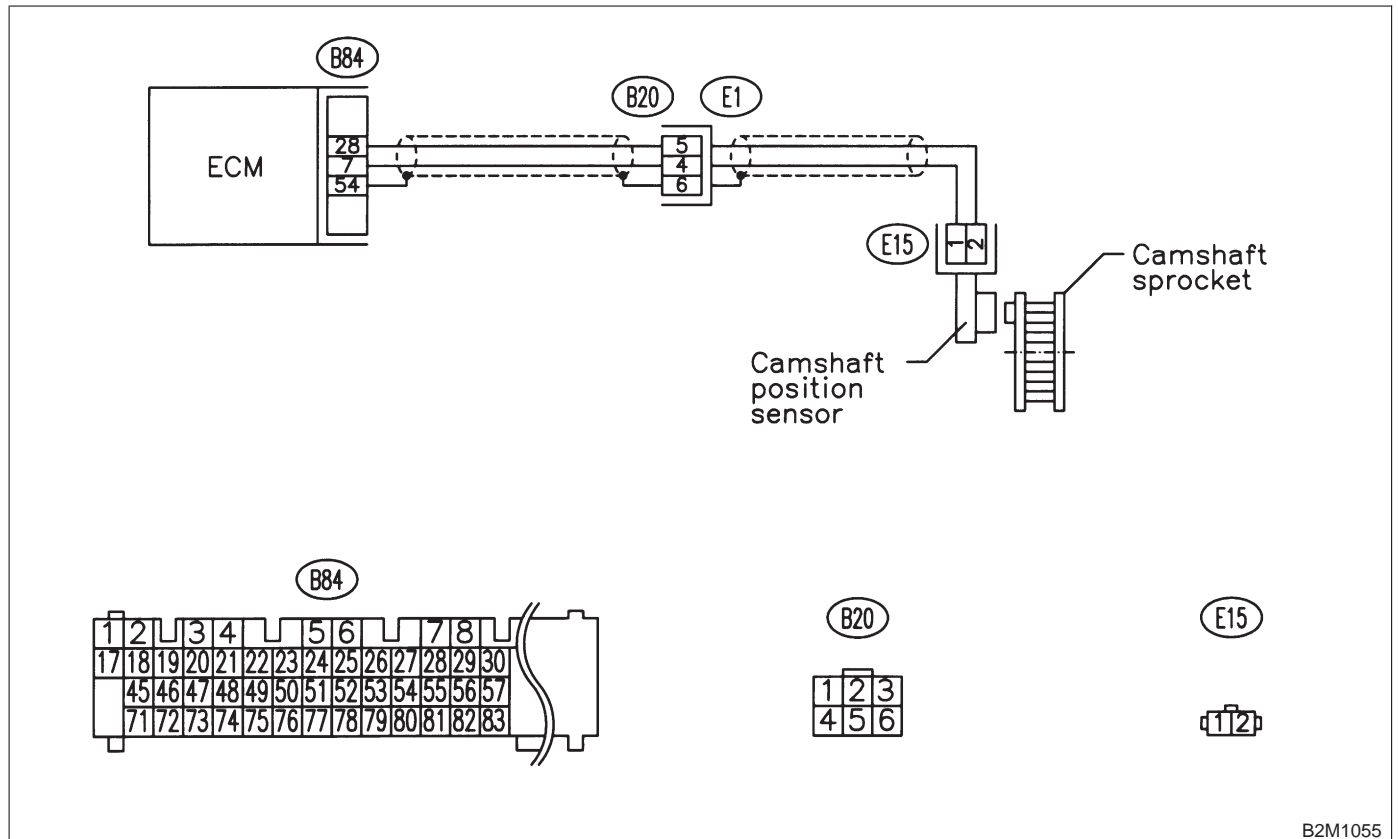
AN: DTC P0341 — CAMSHAFT POSITION SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM —

NOTE:

Check camshaft position sensor circuit.

<Ref. to 2-7 [T10AN0].>

● WIRING DIAGRAM:



B2M1055

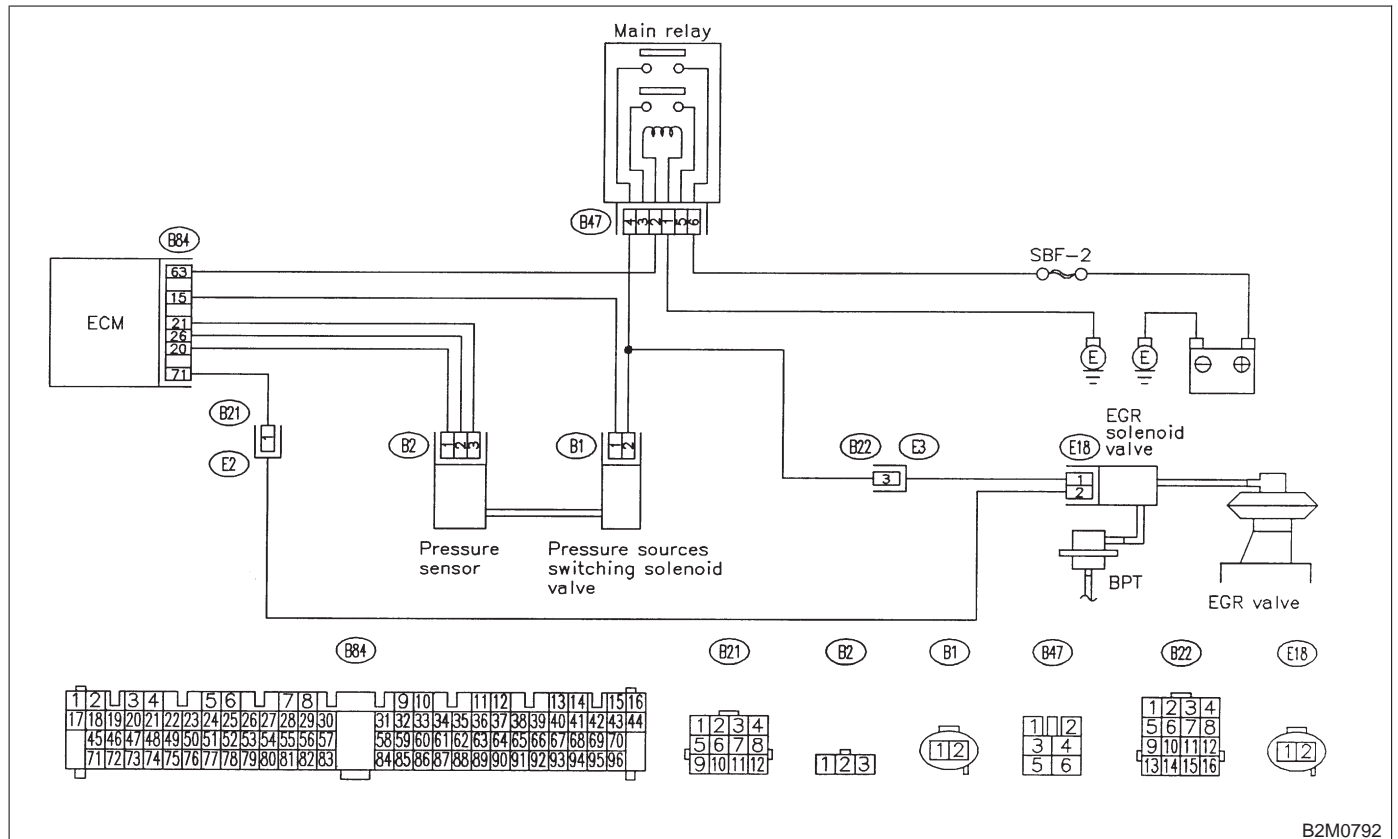
AO: DTC P0400 — EXHAUST GAS RECIRCULATION FLOW MALFUNCTION

NOTE:

Check exhaust gas recirculation control system.

<Ref. to 2-7 [T10A00].>

● WIRING DIAGRAM:



B2M0792

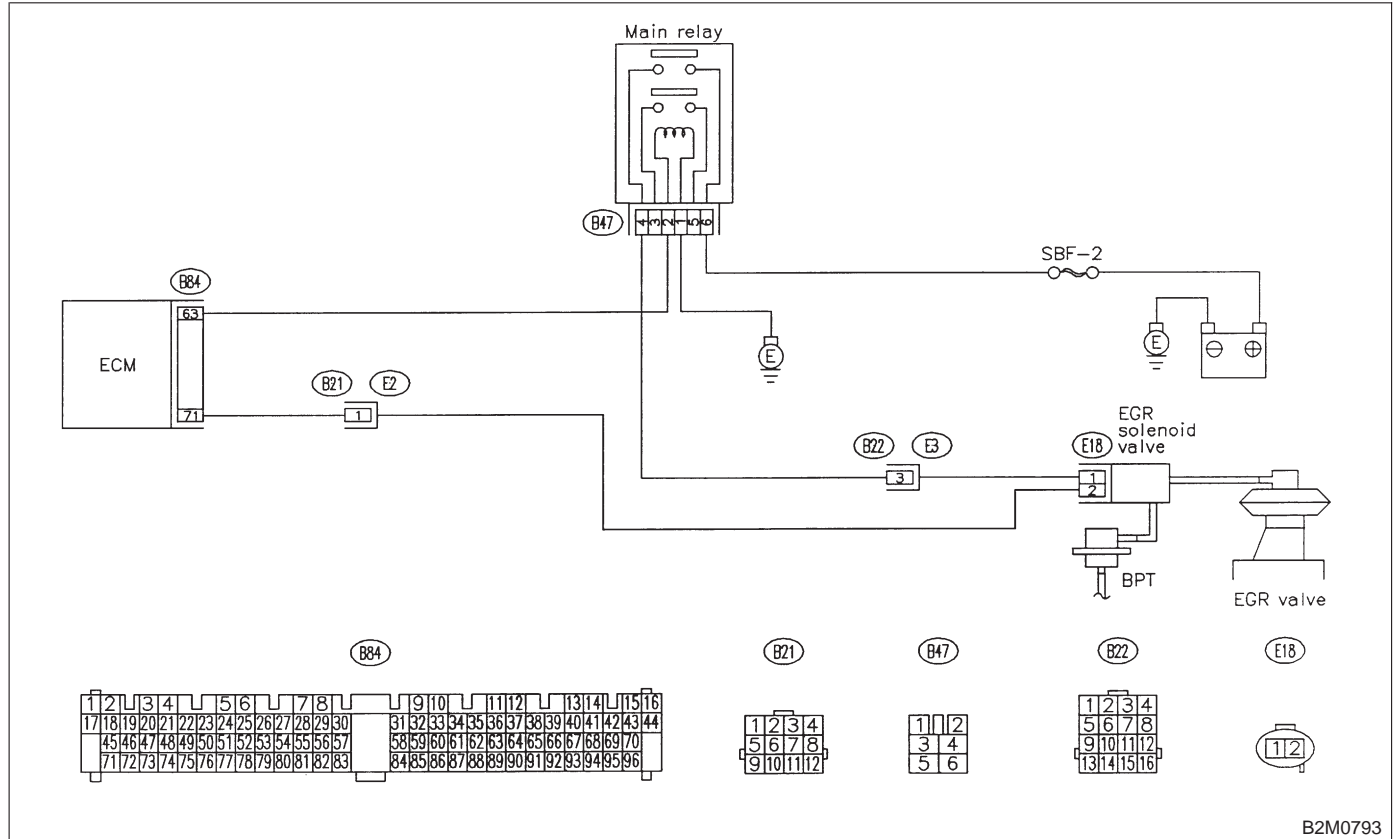
AP: DTC P0403 — EXHAUST GAS RECIRCULATION CIRCUIT LOW INPUT —

NOTE:

Check exhaust gas recirculation control solenoid valve circuit.

<Ref. to 2-7 [T10AP0].>

● **WIRING DIAGRAM:**



B2M0793

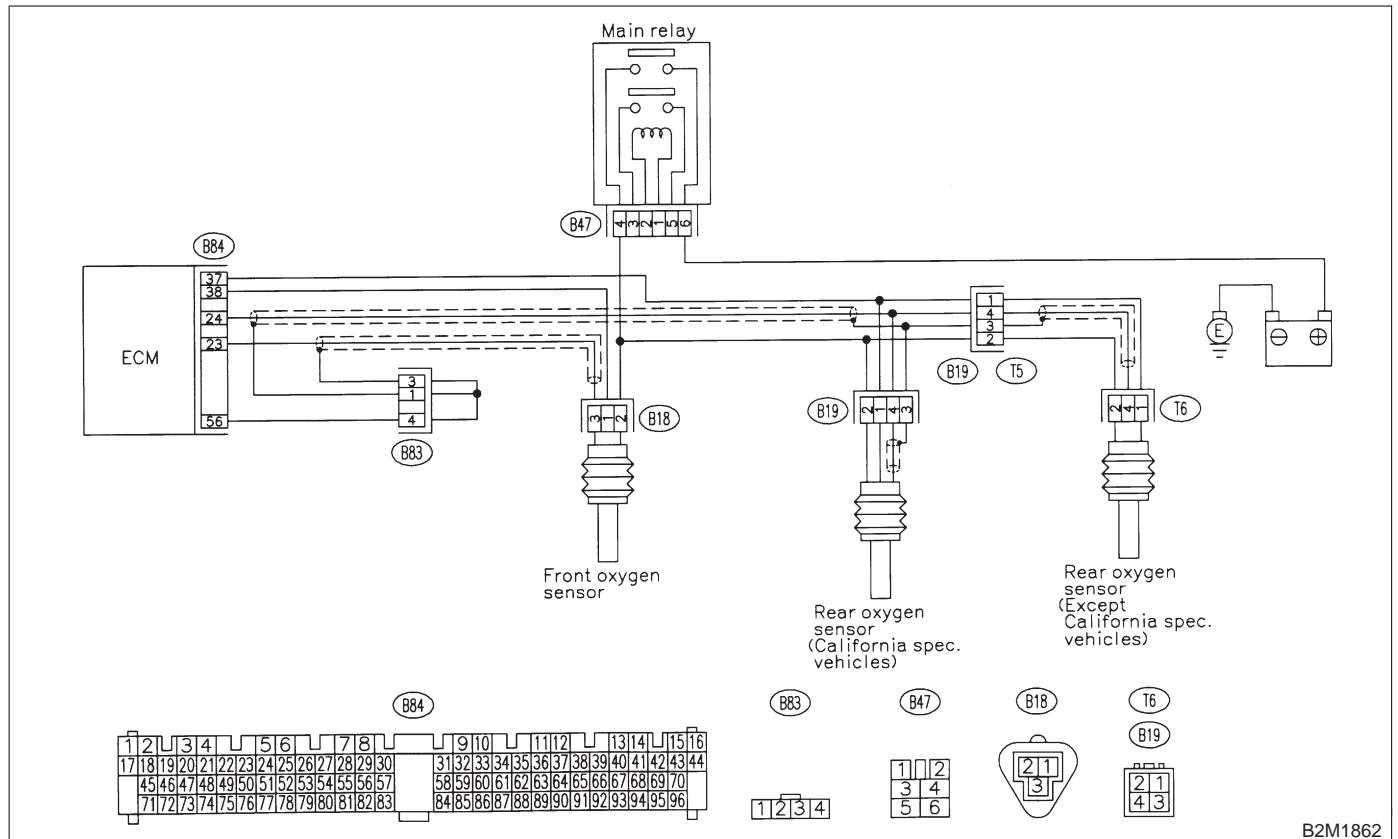
AQ: DTC P0420 — CATALYST SYSTEM EFFICIENCY BELOW THRESHOLD

NOTE:

Check catalyst system.

<Ref. to 2-7 [T10AQ0].>

• WIRING DIAGRAM:



B2M1862

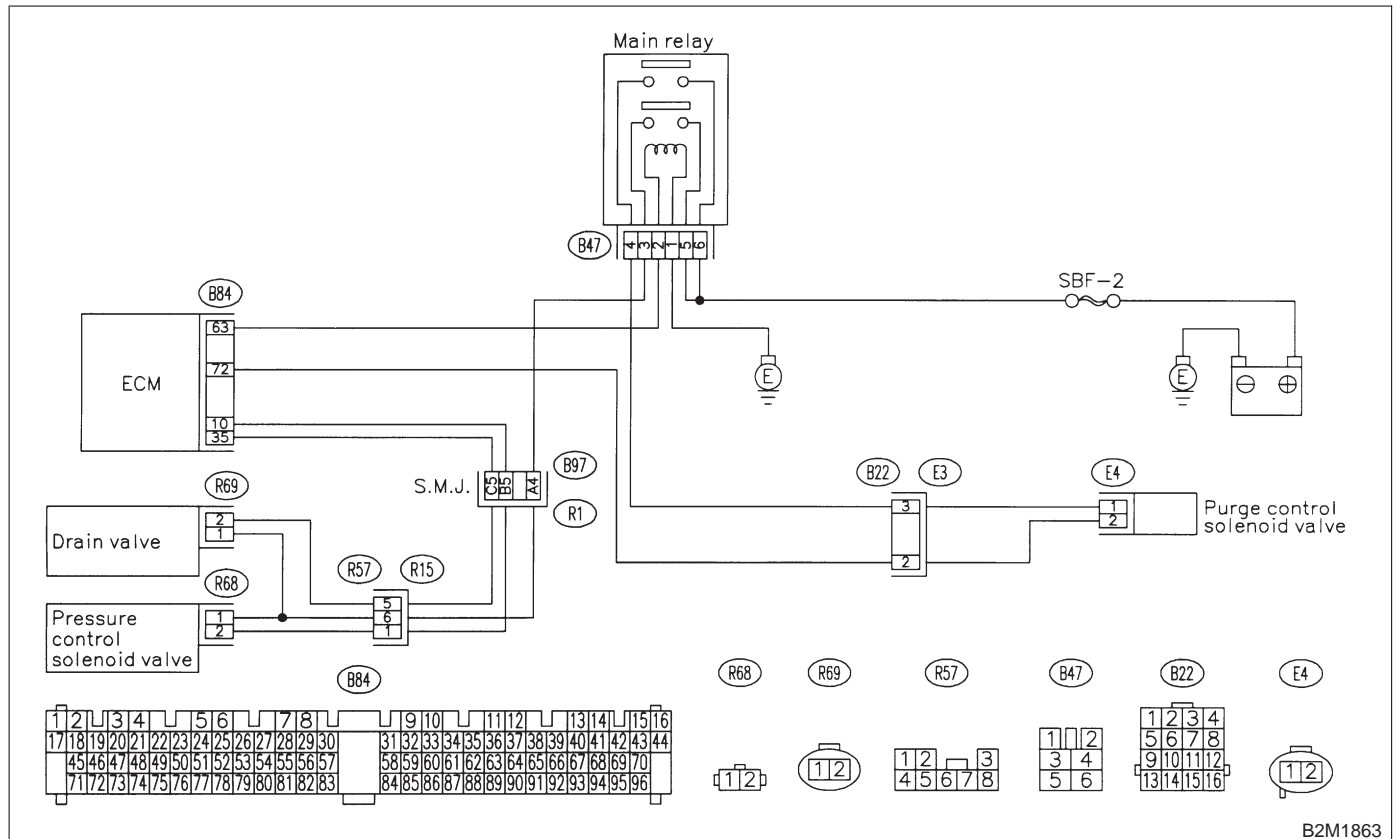
AR: DTC P0440 — EVAPORATIVE EMISSION CONTROL SYSTEM MALFUNCTION —

NOTE:

Check evaporative emission control system.

<Ref. to 2-7 [T10AR0].>

● WIRING DIAGRAM:



B2M1863

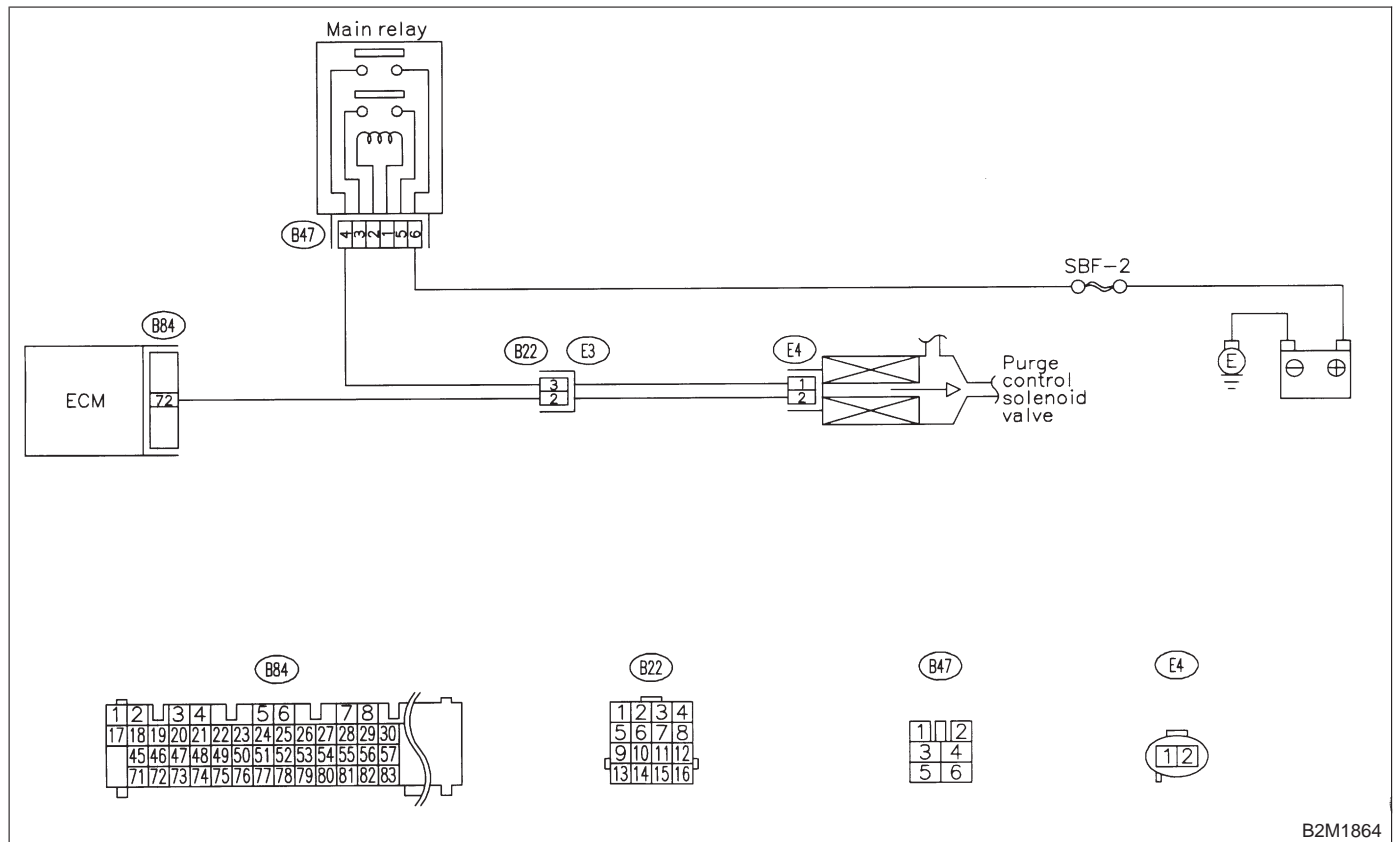
**AS: DTC P0441 — EVAPORATIVE EMISSION CONTROL SYSTEM
INCORRECT PURGE FLOW —**

NOTE:

Check canister purge control system.

<Ref. to 2-7 [T10AS0].>

● **WIRING DIAGRAM:**



B2M1864

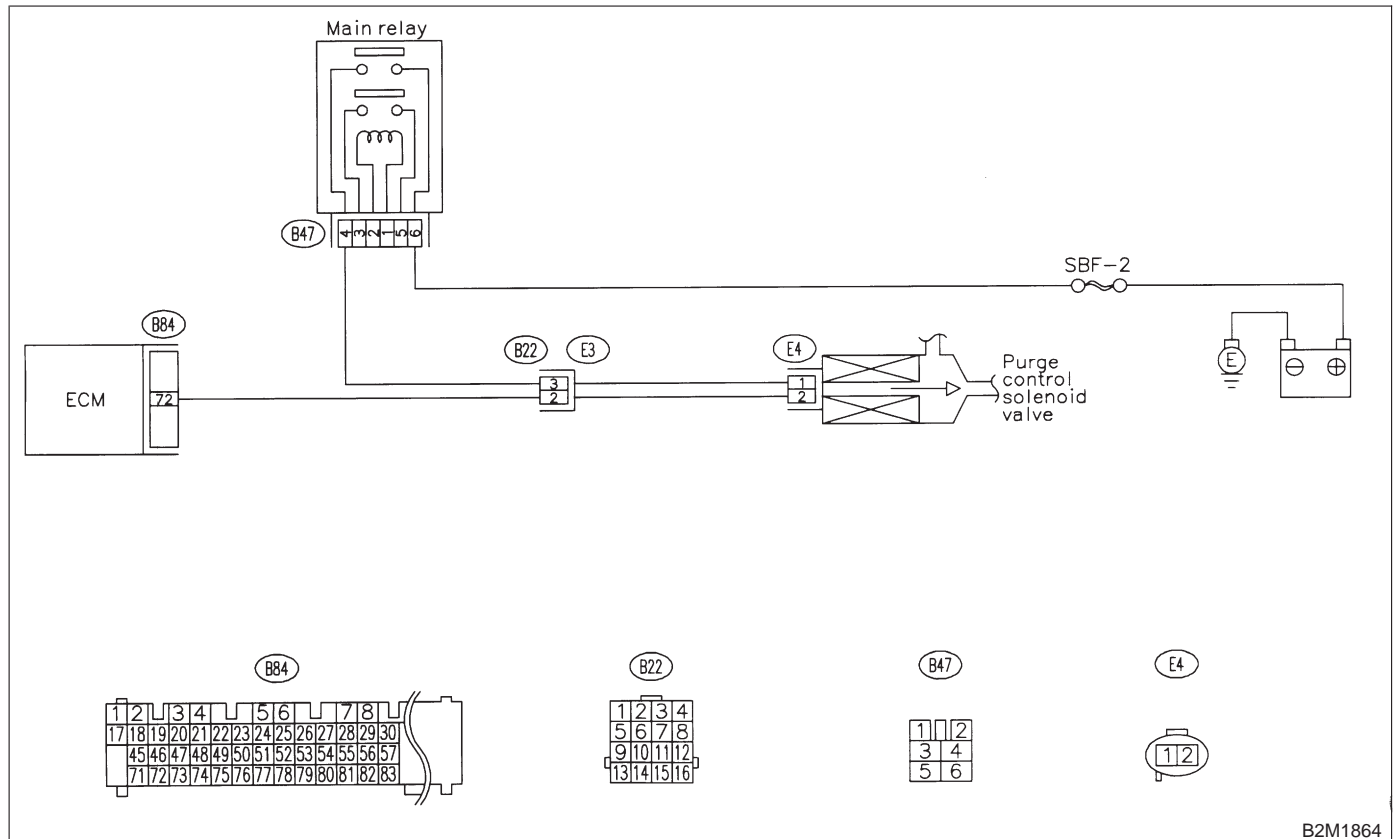
AT: DTC P0443 — EVAPORATIVE EMISSION CONTROL SYSTEM PURGE CONTROL VALVE CIRCUIT LOW INPUT —

NOTE:

Check purge control solenoid valve circuit.

<Ref. to 2-7 [T10AT0].>

● WIRING DIAGRAM:



B2M1864

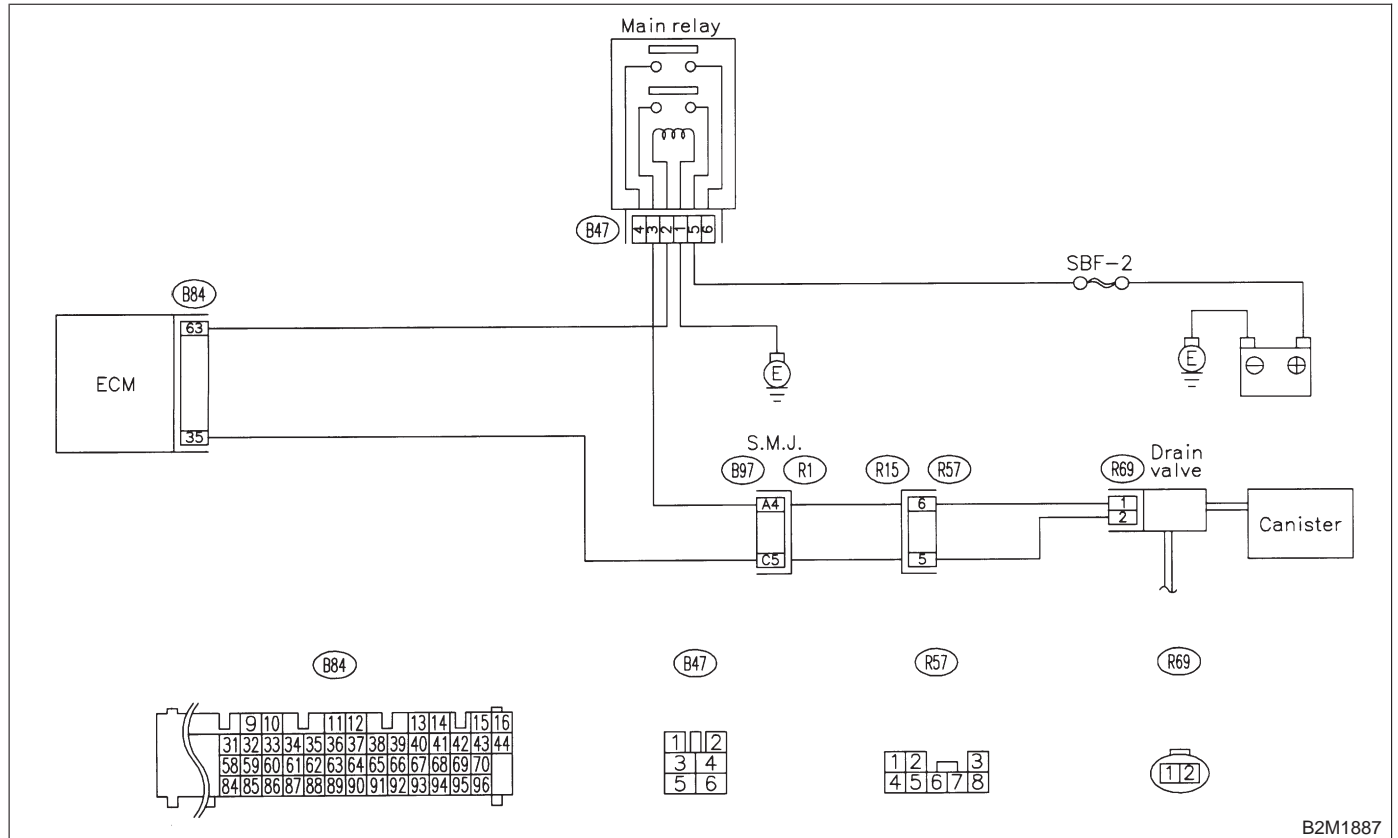
AU: DTC P0446 — EVAPORATIVE EMISSION CONTROL SYSTEM VENT CONTROL LOW INPUT —

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

CAUTION:

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

● **WIRING DIAGRAM:**

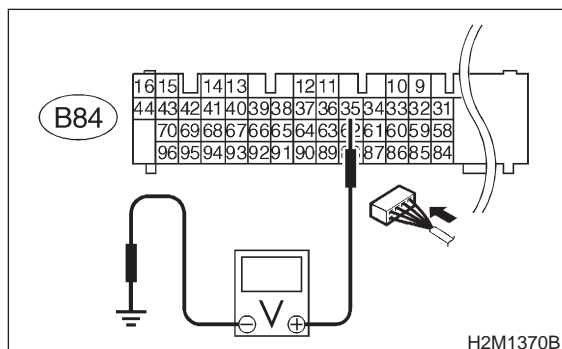


B2M1887

11AU1 : 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 11AU2.
NO : Go to step 11AU3.

11AU2 : 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:

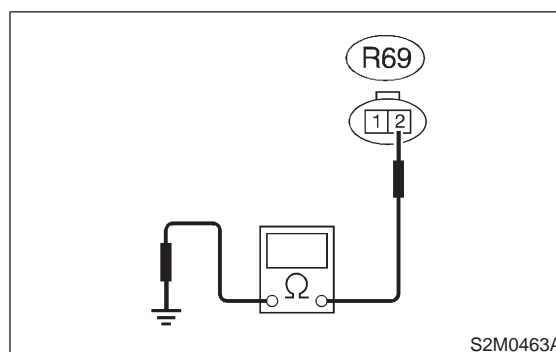
In this case, repair the following:

- Poor contact in drain valve connector
- Poor contact in ECM connector
- Poor contact in coupling connectors (B97 and R57)

11AU3 : 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 11AU4.

2-7 [T11AU4]

ON-BORAD DIAGNOSTICS II SYSTEM

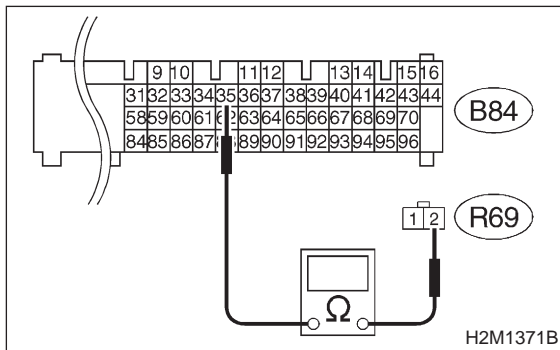
11. Diagnostic Chart with Trouble Code for RHD Vehicles

11AU4 : 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 11AU5.

NO : Repair harness and connector.

NOTE:

In this case, repair the following:

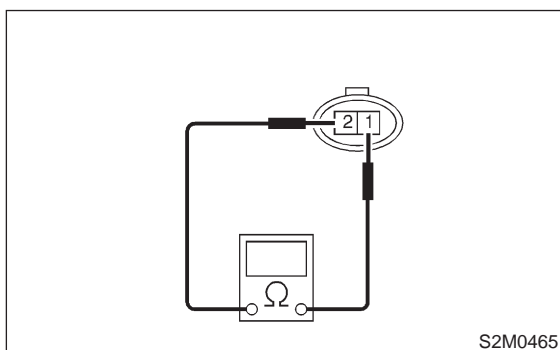
- Open circuit in harness between ECM and drain valve connector
- Poor contact in coupling connectors (B97 and R57)

11AU5 : 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 11AU6.

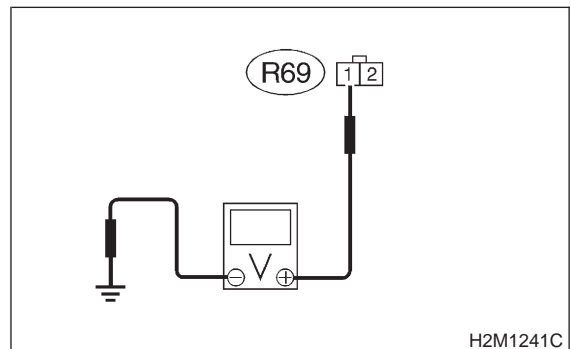
NO : Replace drain valve.

11AU6 : 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 11AU7.

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

11AU7 : CHECK POOR CONTACT.

Check poor contact in vent control solenoid 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.

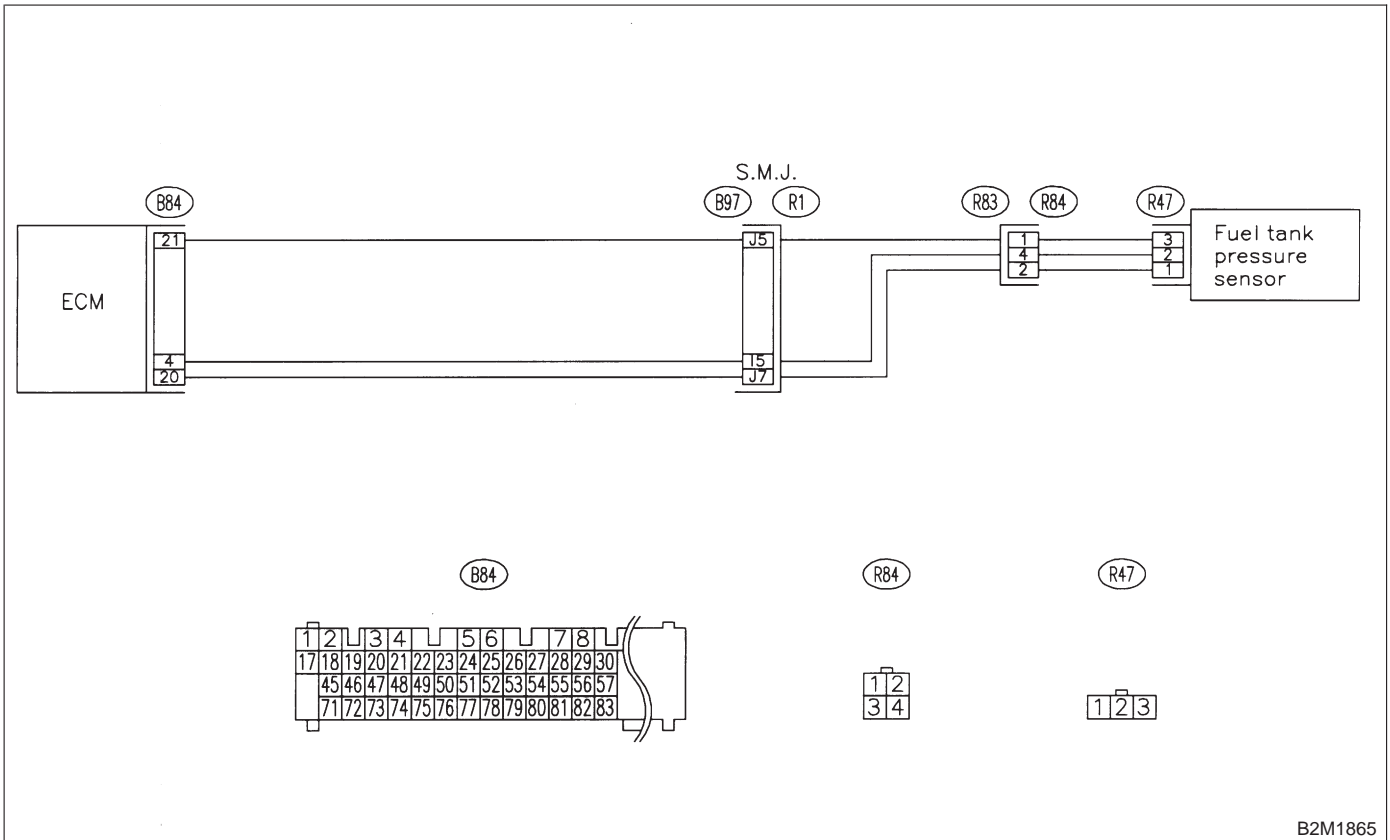
AV: DTC P0451 — EVAPORATIVE EMISSION CONTROL SYSTEM PRESSURE SENSOR RANGE/PERFORMANCE PROBLEM —

NOTE:

Check fuel tank pressure control system.

<Ref. to 2-7 [T10AW0].>

● **WIRING DIAGRAM:**



B2M1865

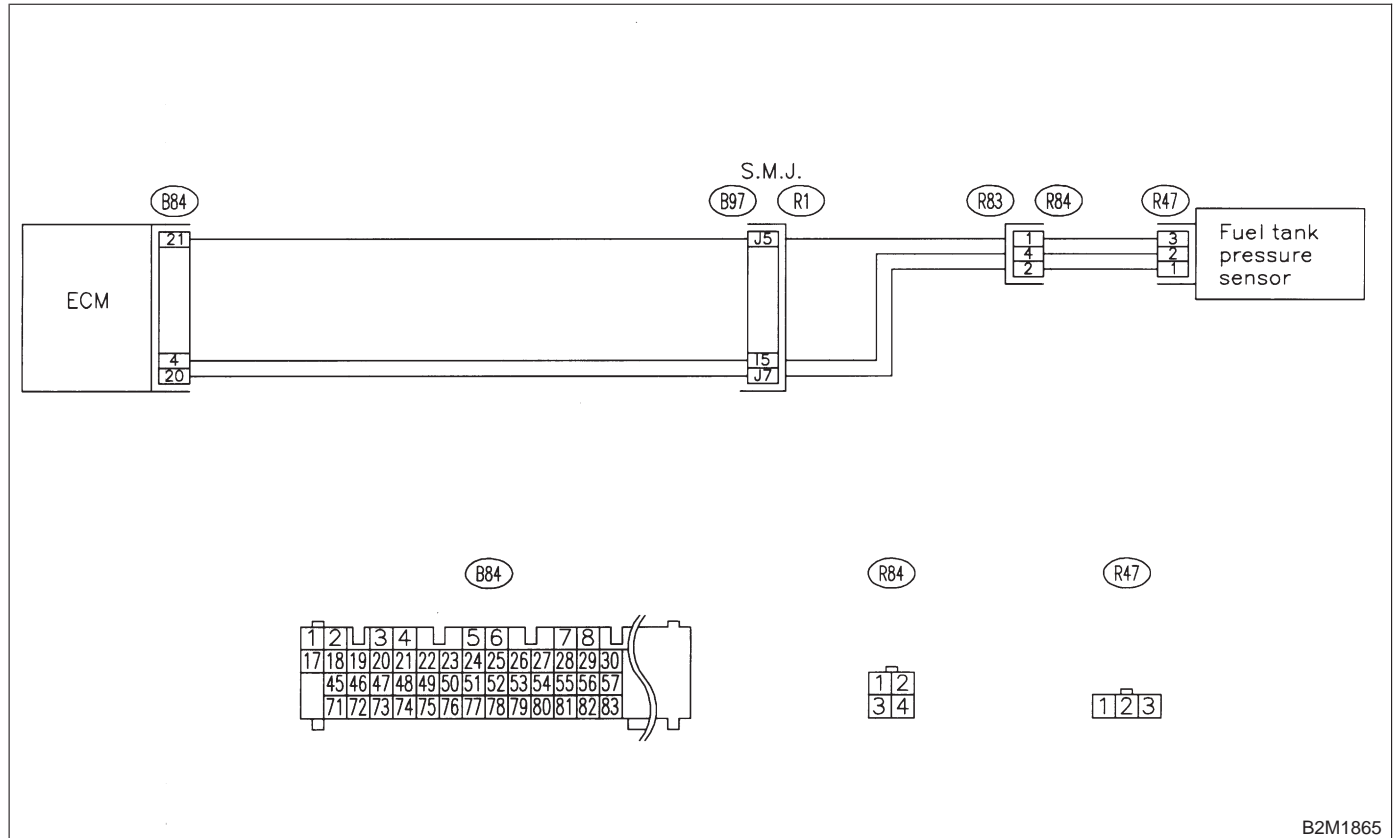
AW: DTC P0452 — EVAPORATIVE EMISSION CONTROL SYSTEM PRESSURE SENSOR LOW INPUT —

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

CAUTION:

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

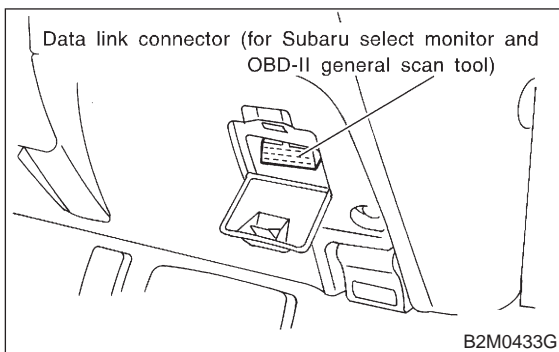
- **WIRING DIAGRAM:**



B2M1865

11AW1 : 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.

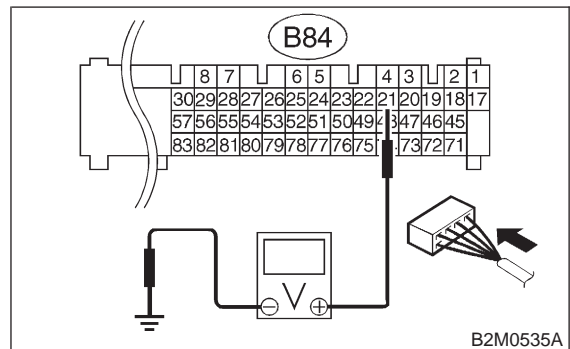
- CHECK** : *Is the value less than -2.8 kPa (-21.0 mmHg, -0.827 inHg)?*
- YES** : Go to step 11AW2.
- NO** : Even if MIL lights up, the circuit has returned to a normal condition at this time.

11AW2 : CHECK POWER SUPPLY TO FUEL TANK PRESSURE SENSOR.

Measure voltage between ECM connector and chassis ground.

Connector & terminal

(B84) No. 21 (+) — Chassis ground (-):



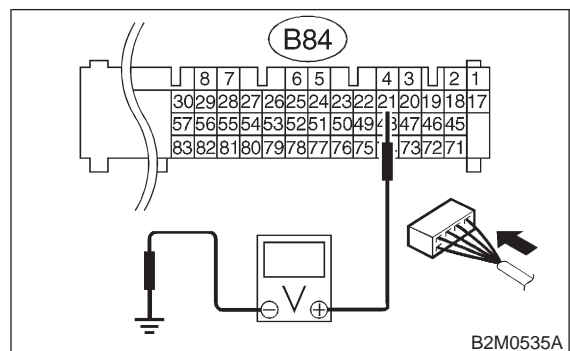
CHECK : *Is the voltage more than 4.5 V?*

YES : Go to step 11AW4.

NO : Go to step 11AW3.

11AW3 : CHECK POWER SUPPLY TO FUEL TANK PRESSURE SENSOR.

Measure voltage between ECM connector and 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.

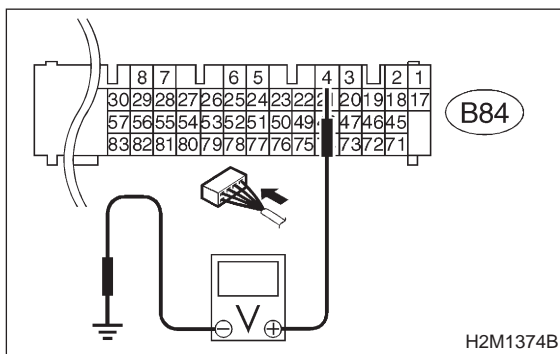
NOTE:

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

11AW4 : 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 11AW6.
- NO** : Go to step 11AW5.

11AW5 : CHECK INPUT SIGNAL FOR ECM. (USING SUBARU SELECT MONITOR.)

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

NOTE:

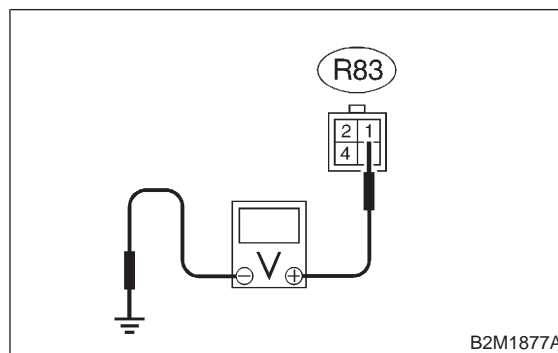
- Subaru Select Monitor
- For detailed operation procedure, refer to the "READ CURRENT DATA SHOWN ON DISPLAY FOR ENGINE". <Ref. to 2-7 [T3C4].>

- 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 11AW6.

11AW6 : 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 11AW7.
- NO** : Repair harness and connector.

NOTE:

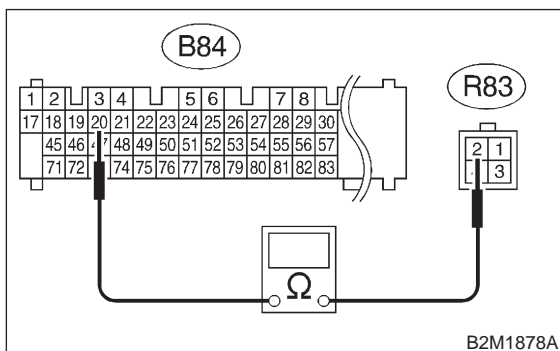
- In this case, repair the following:
- Open circuit in harness between ECM and rear wiring harness connector (R83)
 - Poor contact in coupling connector (B97)

11AW7 : 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 11AW8.
- NO** : Repair harness and connector.

NOTE:

In this case, repair the following:

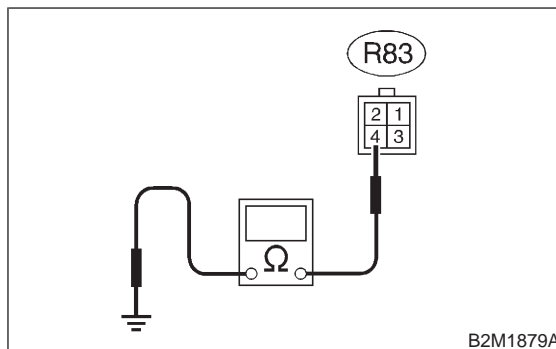
- Open circuit in harness between ECM and rear wiring harness connector (R83)
- Poor contact in coupling connector (B97)

11AW8 : 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:



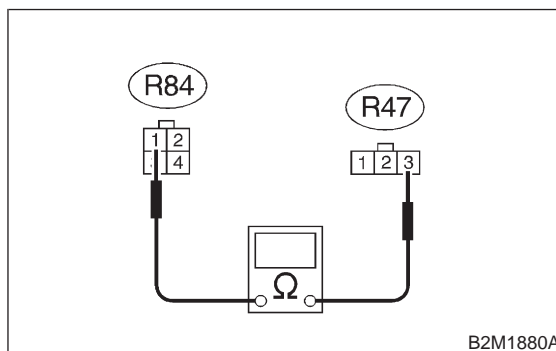
- CHECK** : Is the resistance more than 500 kΩ?
- YES** : Go to step 11AW9.
- NO** : Repair ground short circuit in harness between ECM and rear wiring harness connector (R83).

11AW9 : 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:



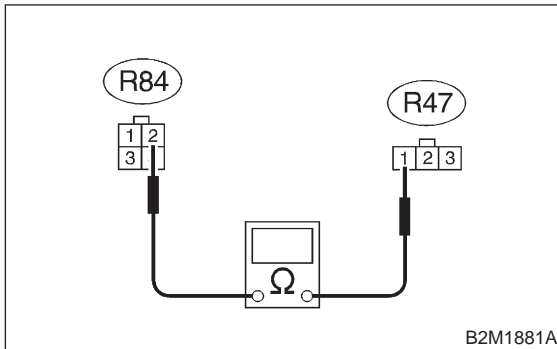
- CHECK** : Is the resistance less than 1 Ω?
- YES** : Go to step 11AW10.
- NO** : Repair open circuit in fuel tank cord.

11AW10 : CHECK FUEL TANK CORD.

Measure resistance of fuel tank cord.

Connector & terminal

(R84) No. 2 — (R47) No. 1:



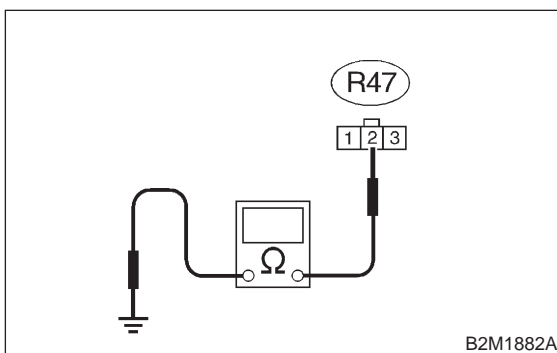
- CHECK** : **Is the resistance less than 1 Ω?**
- YES** : Go to step 11AW11.
- NO** : Repair open circuit in fuel tank cord.

11AW11 : 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 11AW12.
- NO** : Repair ground short circuit in fuel tank cord.

11AW12 : 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.

MEMO:

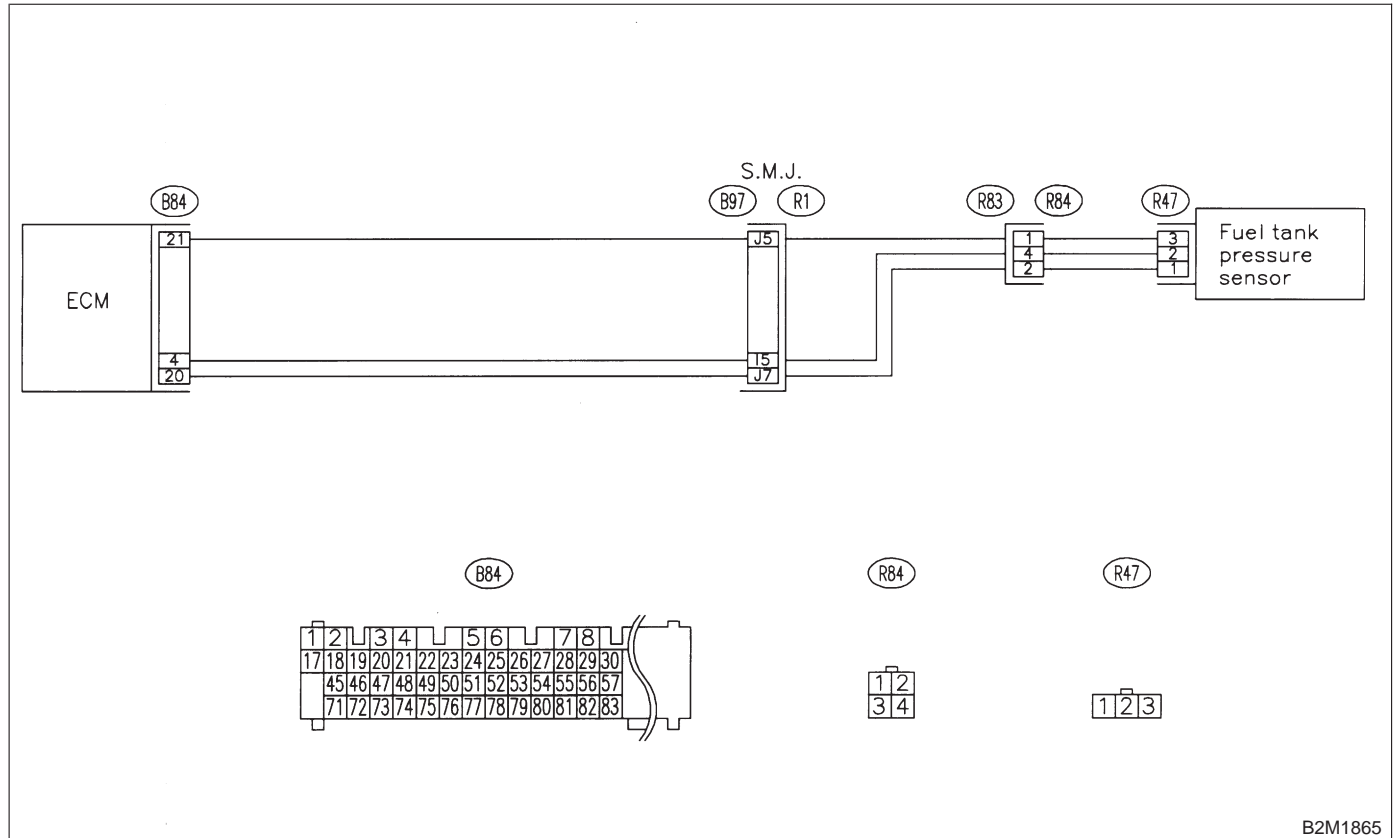
AX: DTC P0453 — EVAPORATIVE EMISSION CONTROL SYSTEM PRESSURE SENSOR HIGH INPUT —

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

CAUTION:

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

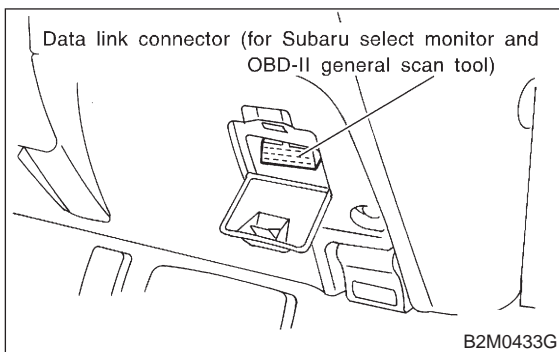
- **WIRING DIAGRAM:**



B2M1865

11AX1 : 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:

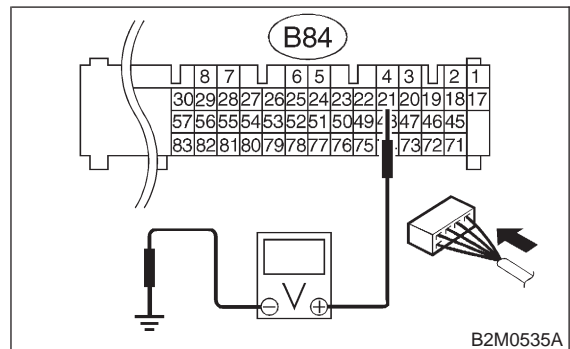
- Subaru Select Monitor
For detailed operation procedure, refer to the "READ CURRENT DATA SHOWN ON DISPLAY FOR ENGINE". <Ref. to 2-7 [T3C4].>
- OBD-II general scan tool
For detailed operation procedures, refer to the OBD-II General Scan Tool Instruction Manual.

- CHECK** : *Is the value more than 2.8 kPa (21.0 mmHg, 0.827 inHg)?*
- YES** : Go to step 11AX12.
- NO** : Go to step 11AX2.

11AX2 : CHECK POWER SUPPLY TO FUEL TANK PRESSURE SENSOR.

Measure voltage between ECM connector and chassis ground.

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

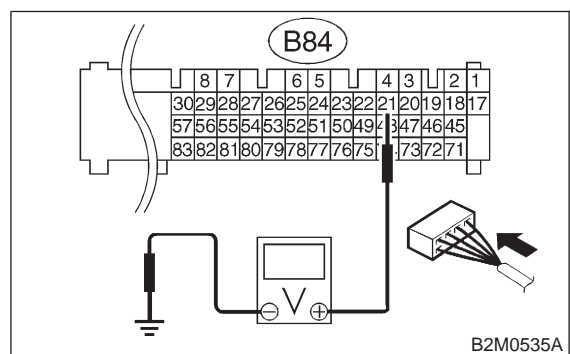


- CHECK** : *Is the voltage more than 4.5 V?*
- YES** : Go to step 11AX4.
- NO** : Go to step 11AX3.

11AX3 : CHECK POWER SUPPLY TO FUEL TANK PRESSURE SENSOR.

Measure voltage between ECM connector and chassis ground.

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



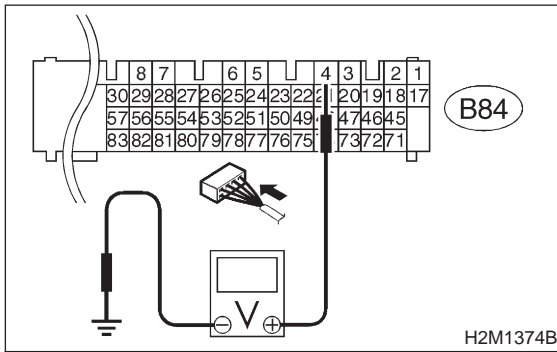
- CHECK** : *Does the voltage change more than 4.5 V by shaking harness and connector of ECM while monitoring the value with voltage meter?*
- YES** : Repair poor contact in ECM connector.
- NO** : Replace ECM.

11AX4 : 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 11AX6.
- NO** : Go to step 11AX5.

11AX5 : 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].>

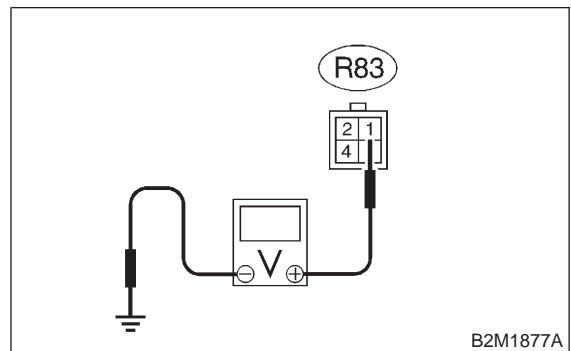
- CHECK** : **Does the value change more than -2.8 kPa (-21.0 mmHg, -0.827 inHg) by shaking harness and connector of ECM while monitoring the value with Subaru select monitor?**
- YES** : Repair poor contact in ECM connector.
- NO** : Go to step 11AX6.

11AX6 : 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 11AX7.
- NO** : Repair harness and connector.

NOTE:

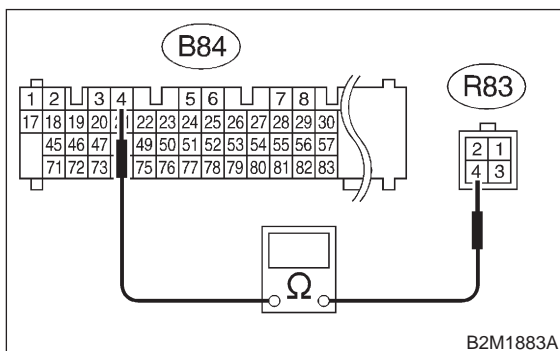
In this case, repair the following:

- Open circuit in harness between ECM and rear wiring harness connector (R83)
- Poor contact in coupling connector (B97)

11AX7 : 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 11AX8.
- NO** : Repair harness and connector.

NOTE:

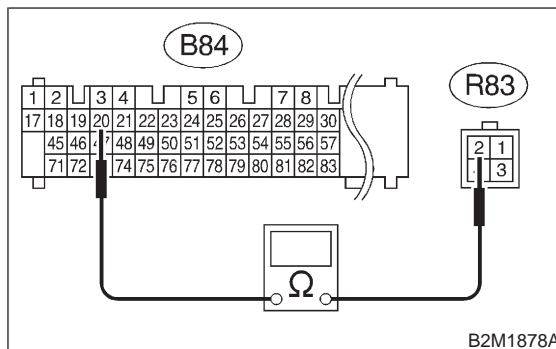
In this case, repair the following:

- Open circuit in harness between ECM and rear wiring harness connector (R83)
- Poor contact in coupling connector (B97)

11AX8 : 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:

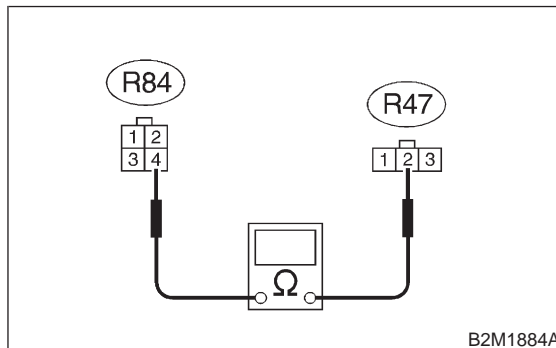


- CHECK** : Is the resistance less than 1 Ω?
- YES** : Go to step 11AX9.
- NO** : Repair ground short circuit in harness between ECM and rear wiring harness connector (R83).

11AX9 : 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:



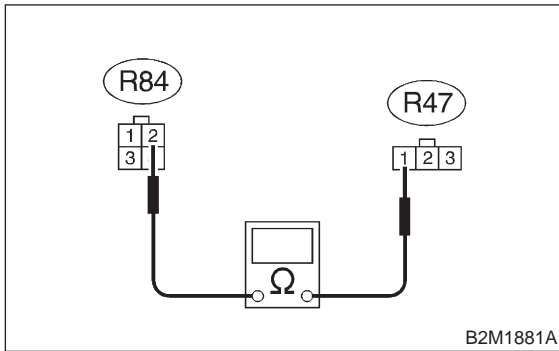
- CHECK** : Is the resistance less than 1 Ω?
- YES** : Go to step 11AX10.
- NO** : Repair open circuit in fuel tank cord.

11AX10 : 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 11AX11.
NO : Repair open circuit in fuel tank cord.

11AX11 : 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.

11AX12 : 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.

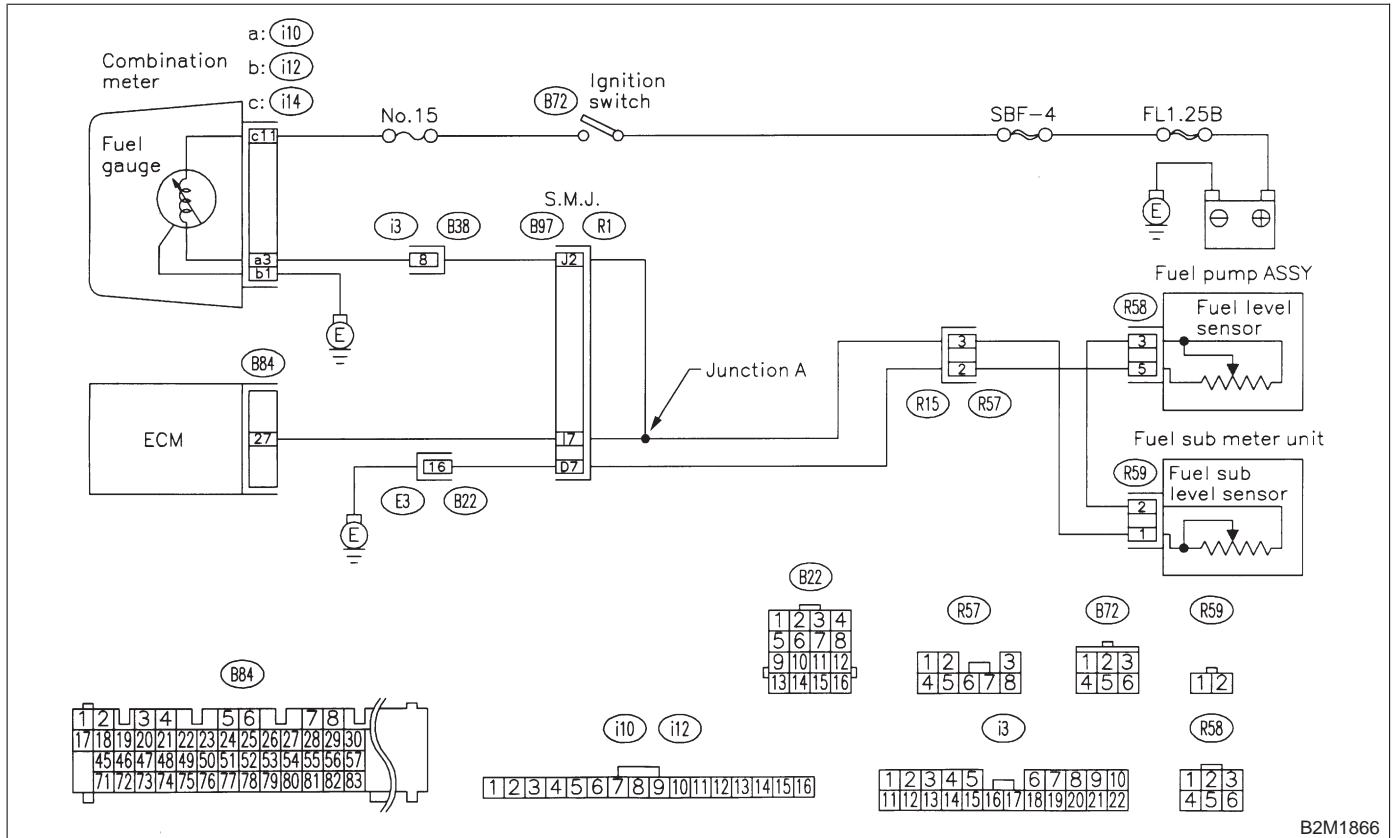
AY: DTC P0461 — FUEL LEVEL SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM —

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

CAUTION:

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

● **WIRING DIAGRAM:**



B2M1866

11AY1 : CHECK ANY OTHER DTC ON DISPLAY.

CHECK : Does the Subaru select monitor or OBD-II general scan tool indicate DTC P0462 or P0463?

YES : Inspect DTC P0462 or P0463 using "11. Diagnostics Chart with Trouble Code for RHD Vehicles". <Ref. to 2-7 [T1100].>

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

NO : Replace fuel sending unit and fuel sub meter unit.

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

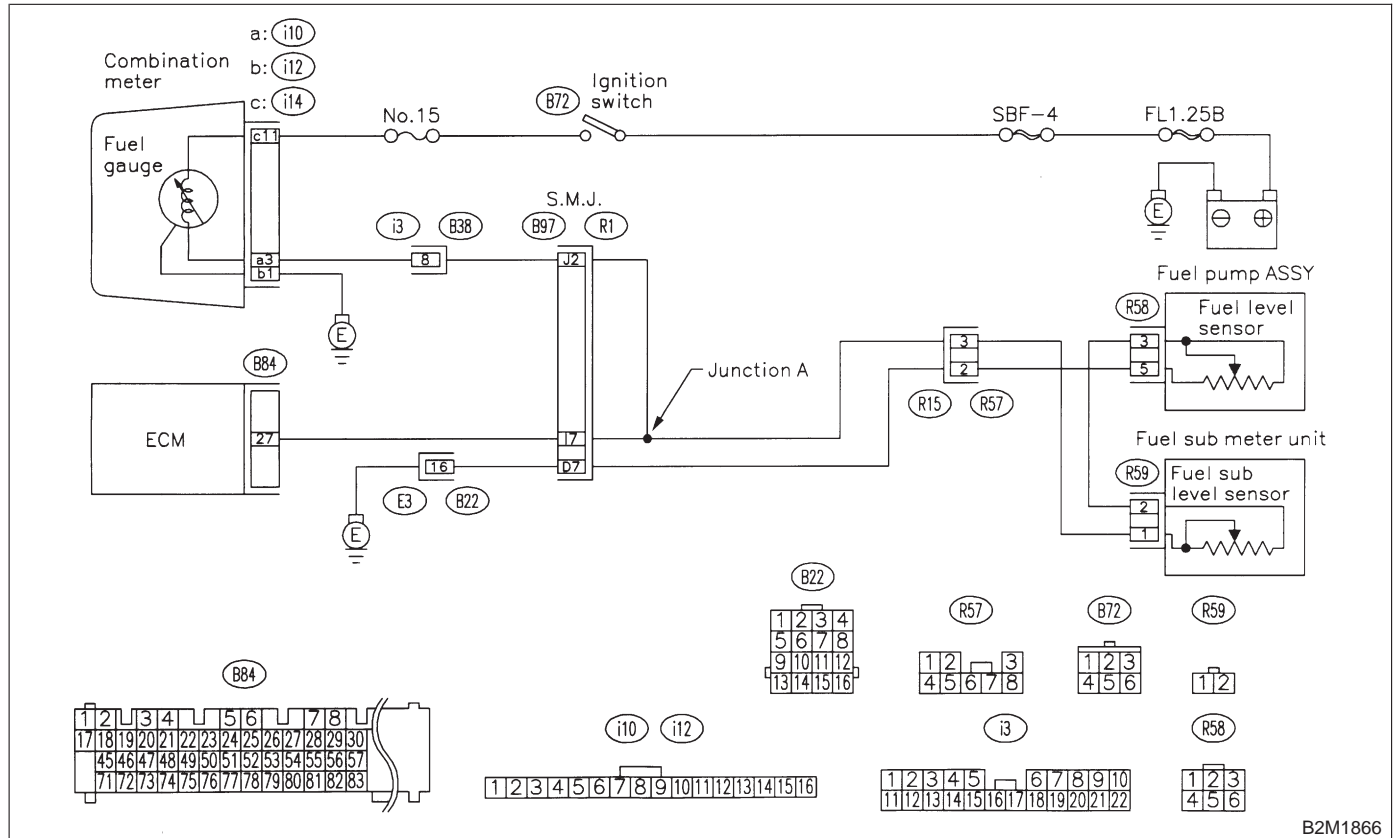
● DTC DETECTING CONDITION:

- Two consecutive driving cycles with fault

CAUTION:

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

● WIRING DIAGRAM:



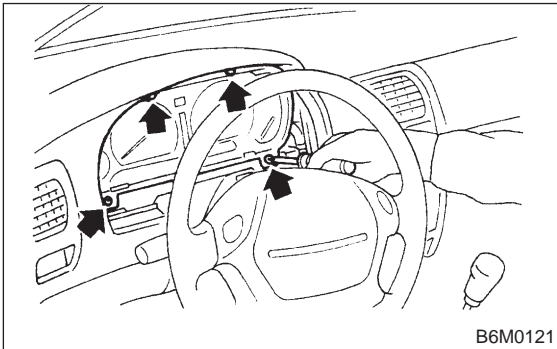
B2M1866

11AZ1 : CHECK SPEEDOMETER AND TACHOMETER OPERATION IN COMBINATION METER.

- CHECK** : Does speedometer and tachometer operate normally?
- YES** : Go to step 11AZ3.
- NO** : Go to step 11AZ2.

11AZ2 : CHECK GROUND CIRCUIT OF COMBINATION METER.

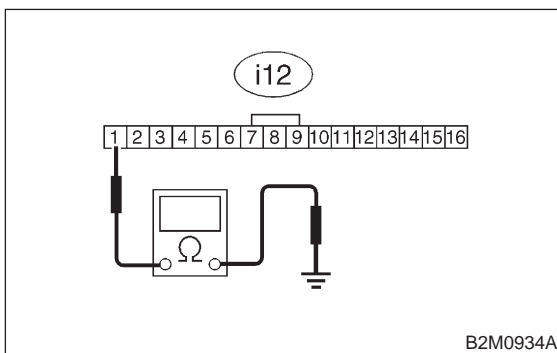
- 1) Turn ignition switch to OFF.
- 2) Pull out combination meter from instrument panel. <Ref. to 6-2 [W14A1].>



- 3) Disconnect connector from combination meter.
- 4) Measure resistance of harness between combination meter connector and chassis ground.

Connector & terminal

(i12) No. 1 — Chassis ground:



- CHECK** : Is resistance less than 5 Ω?
- YES** : Repair or replace combination meter.
- NO** : Repair harness and connector.

NOTE:

In this case, repair the following:

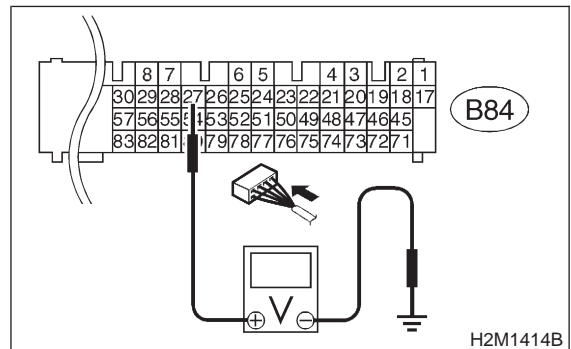
- Open circuit in harness between combination meter connector and grounding terminal
- Poor contact in combination meter connector
- Poor contact in grounding terminal

11AZ3 : CHECK INPUT SIGNAL FOR ECM.

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

Connector & terminal

(B84) No. 27 (+) — Chassis ground (-):



- CHECK** : Is the voltage less than 0.12 V?
- YES** : Go to step 11AZ5.
- NO** : Go to step 11AZ4.

11AZ4 : CHECK INPUT SIGNAL FOR ECM. (USING SUBARU SELECT MONITOR.)

Read data of fuel level 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 less than 0.12 V by shaking harness and connector of ECM while monitoring the value with Subaru Select Monitor?

- YES** : Repair poor contact in ECM connector.
- NO** : Even if MIL lights up, the circuit has returned to a normal condition at this time. A temporary poor contact of the connector may be the cause.

NOTE:

In this case, repair the following:

- Poor contact in fuel pump connector
- Poor contact in combination meter connector
- Poor contact in ECM connector
- Poor contact in coupling connectors (i3, B22, B97 and R57)

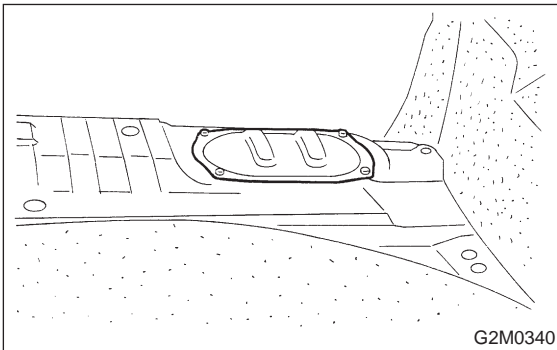
2-7 [T11AZ5]

ON-BORAD DIAGNOSTICS II SYSTEM

11. Diagnostic Chart with Trouble Code for RHD Vehicles

11AZ5 : CHECK HARNESS BETWEEN ECM, COMBINATION METER AND FUEL PUMP CONNECTOR.

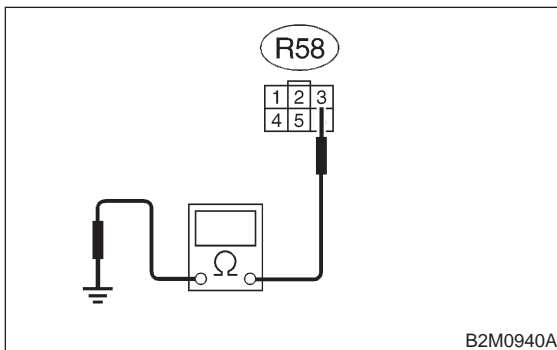
- 1) Turn ignition switch to OFF.
- 2) Remove fuel pump access hole lid located on the right rear of luggage compartment floor.



- 3) Disconnect connector from fuel pump.
- 4) Measure resistance of harness between fuel pump connector and chassis ground.

Connector & terminal

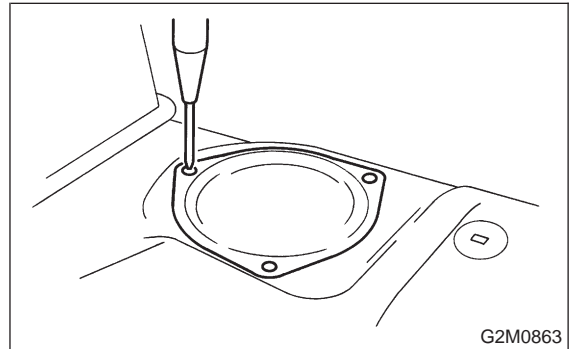
(R58) No. 3 — Chassis ground:



- CHECK** : Is the resistance less than 10 Ω?
- YES** : Go to step 11AZ6.
- NO** : Go to step 11AZ11.

11AZ6 : CHECK FUEL TANK CORD.

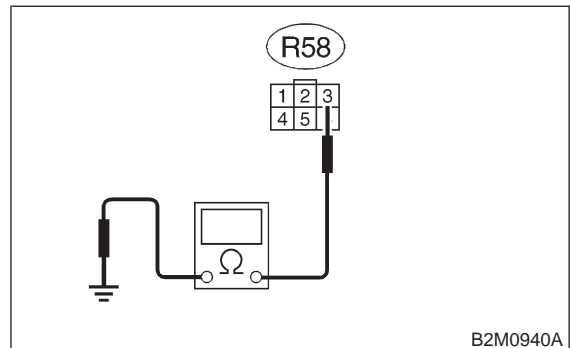
- 1) Remove service hole cover located on the left rear of luggage compartment floor.



- 2) Disconnect connector from fuel sub meter unit.
- 3) Measure resistance of harness between fuel pump connector and chassis ground.

Connector & terminal

(R58) No. 3 — Chassis ground:

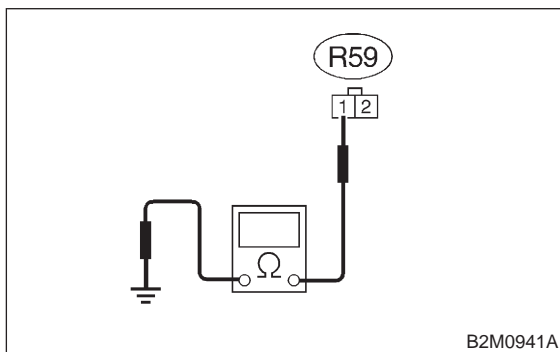


- CHECK** : Is the resistance less than 10 Ω?
- YES** : Repair ground short circuit in harness between fuel pump and fuel sub meter unit connector.
- NO** : Go to step 11AZ7.

11AZ7 : CHECK REAR WIRING HARNESS.

- 1) Separate fuel tank cord connector (R57) and rear wiring harness connector (R15).
- 2) Measure resistance of harness between fuel sub meter unit connector and chassis ground.

Connector & terminal
(R59) No. 1 — Chassis ground:

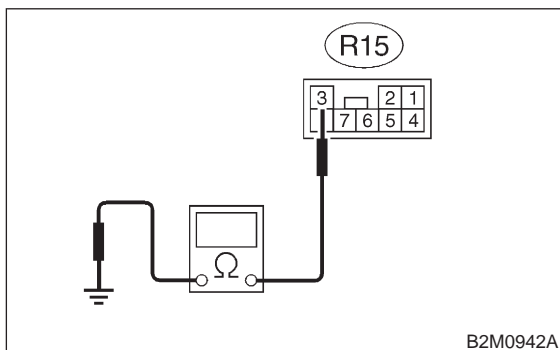


- CHECK** : Is the resistance less than 10 Ω?
- YES** : Repair ground short circuit in fuel tank cord.
- NO** : Go to step 11AZ8.

11AZ8 : CHECK REAR, BULKHEAD AND INSTRUMENT PANEL WIRING HARNESS.

- 1) Separate rear wiring harness connector (R1) and bulkhead wiring harness connector (B97).
- 2) Measure resistance of harness between rear wiring harness connector and chassis ground.

Connector & terminal
(R15) No. 3 — Chassis ground:

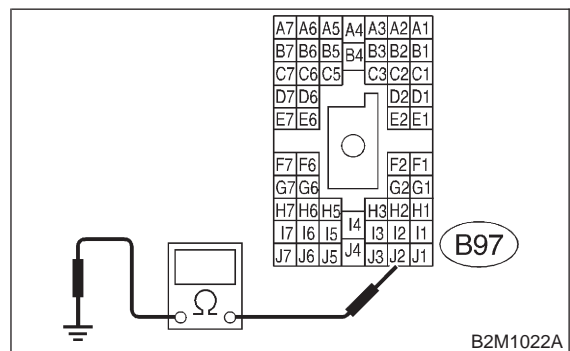


- CHECK** : Is the resistance less than 10 Ω?
- YES** : Repair ground short circuit in rear wiring harness.
- NO** : Go to step 11AZ9.

11AZ9 : CHECK REAR WIRING HARNESS.

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

Connector & terminal
(B97) No. J2 — Chassis ground:

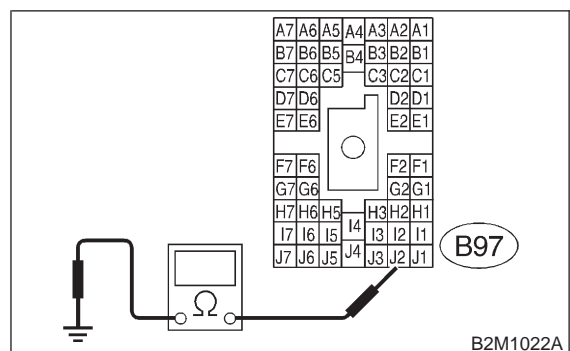


- CHECK** : Is the resistance less than 10 Ω?
- YES** : Go to step 11AZ10.
- NO** : Repair ground short circuit in harness between S.M.J. and ECM connector.

11AZ10 : CHECK BULKHEAD WIRING HARNESS.

- 1) Separate bulkhead wiring harness connector (B38) and instrument panel wiring harness connector (i3).
- 2) Measure resistance of harness between bulkhead wiring harness connector and chassis ground.

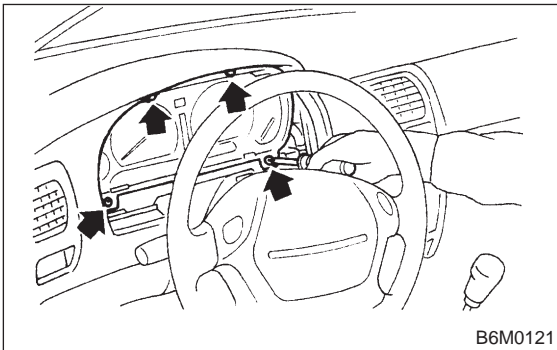
Connector & terminal
(B97) No. J2 — Chassis ground:



- CHECK** : Is the resistance less than 10 Ω?
- YES** : Repair ground short circuit in bulkhead wiring harness.
- NO** : Repair ground short circuit in instrument panel wiring harness.

11AZ11 : CHECK HARNESS BETWEEN COMBINATION METER AND FUEL PUMP CONNECTOR.

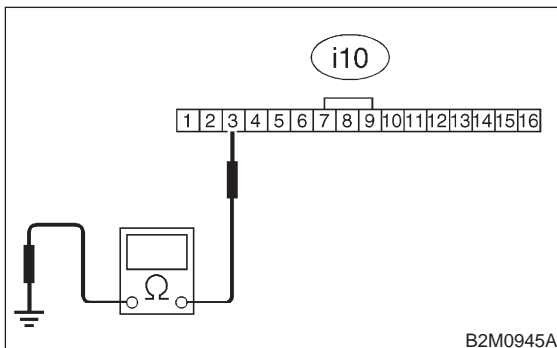
- 1) Connect connector to fuel pump.
- 2) Pull out combination meter from instrument panel. <Ref. to 6-2 [W14A1].>



- 3) Disconnect connector from combination meter.
- 4) Measure resistance of harness between combination meter connector and chassis ground.

Connector & terminal

(i10) No. 3 — Chassis ground:



- CHECK** : **Is the resistance less than 200 Ω?**
- YES** : Go to step **11AZ12**.
- NO** : Repair harness and connector.

NOTE:

In this case, repair the following:

- Open circuit in harness between combination meter connector and junction A on rear wiring harness
- Poor contact in coupling connectors (i3 and B97)

11AZ12 : CHECK COMBINATION METER.

Disconnect speedometer cable from combination meter and remove combination meter.

- CHECK** : **Is the fuel meter installation screw tightened securely?**
- YES** : Go to step **11AZ13**.
- NO** : Tighten fuel meter installation screw securely.

11AZ13 : CHECK COMBINATION METER PRINTED CIRCUIT PLATE.

Remove printed circuit plate assembly from combination meter assembly.

- CHECK** : **Is there flaw or burning on printed circuit plate assembly?**
- YES** : Replace printed circuit plate assembly.
- NO** : Replace fuel meter assembly.

MEMO:

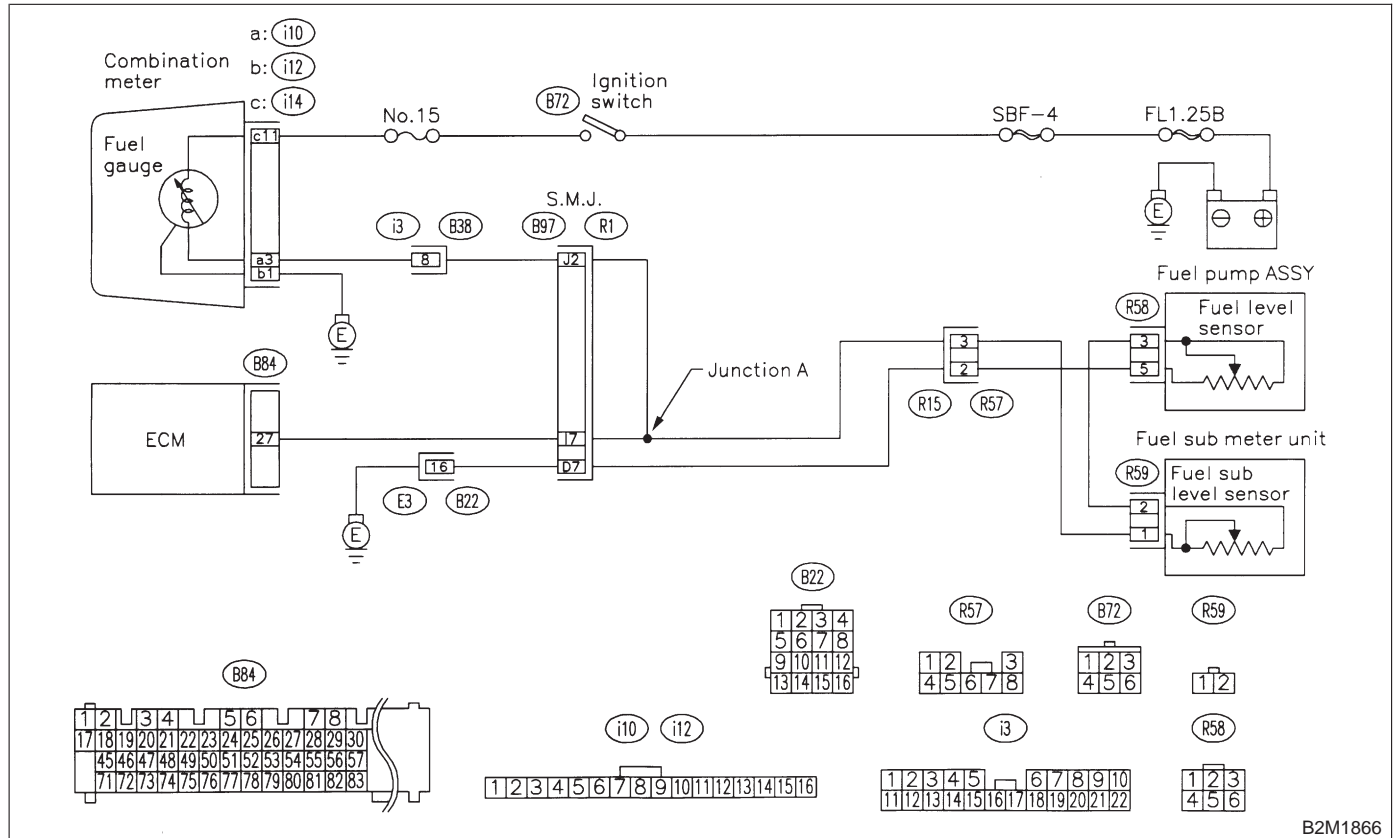
BA: DTC P0463 — FUEL LEVEL SENSOR CIRCUIT HIGH INPUT —

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

CAUTION:

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

● **WIRING DIAGRAM:**



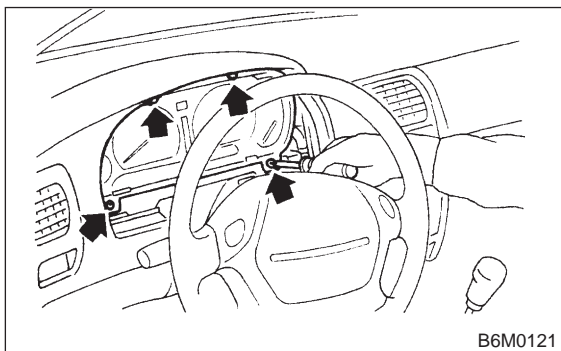
B2M1866

11BA1 : CHECK SPEEDOMETER AND TACHOMETER OPERATION IN COMBINATION METER.

- CHECK** : Does speedometer and tachometer operate normally?
- YES** : Go to step 11BA3.
- NO** : Go to step 11BA2.

11BA2 : CHECK GROUND CIRCUIT OF COMBINATION METER.

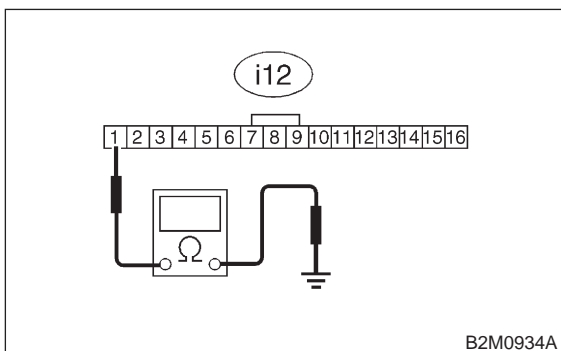
- 1) Turn ignition switch to OFF.
- 2) Pull out combination meter from instrument panel. <Ref. to 6-2 [W14A1].>



- 3) Disconnect connector from combination meter.
- 4) Measure resistance of harness between combination meter connector and chassis ground.

Connector & terminal

(i12) No. 1 — Chassis ground:



CHECK : Is resistance less than 5 Ω?

YES : Repair or replace combination meter.

NO : Repair harness and connector.

NOTE:

In this case, repair the following:

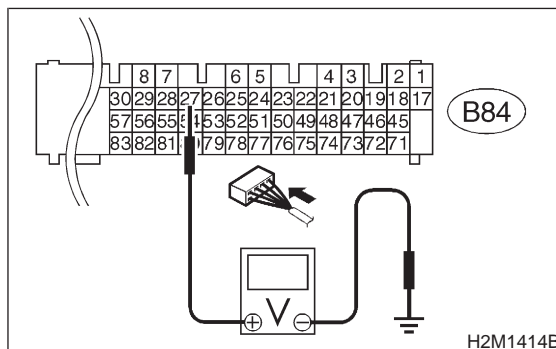
- Open circuit in harness between combination meter connector and grounding terminal
- Poor contact in combination meter connector
- Poor contact in grounding terminal

11BA3 : CHECK INPUT SIGNAL FOR ECM.

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

Connector & terminal

(B84) No. 27 (+) — Chassis ground (-):



CHECK : Is the voltage more than 4.75 V?

YES : Go to step 11BA4.

NO : Even if MIL lights up, the circuit has returned to a normal condition at this time. A temporary poor contact of the connector may be the cause.

NOTE:

In this case, repair the following:

- Poor contact in fuel pump connector
- Poor contact in combination meter connector
- Poor contact in ECM connector
- Poor contact in coupling connector (i3, B22, B97 and R57)

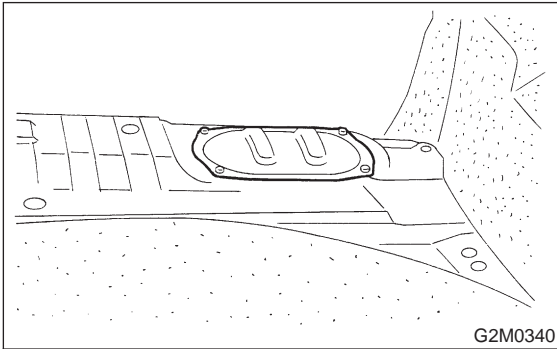
2-7 [T11BA4]

ON-BORAD DIAGNOSTICS II SYSTEM

11. Diagnostic Chart with Trouble Code for RHD Vehicles

11BA4 : CHECK FUEL LEVEL SENSOR.

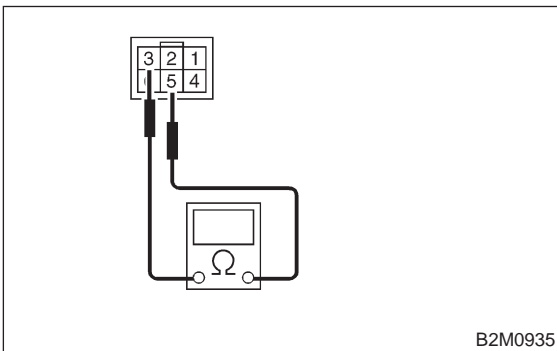
- 1) Turn ignition switch to OFF.
- 2) Remove fuel pump access hole lid located on the right rear of luggage compartment floor.



- 3) Disconnect connector from fuel pump.
- 4) Measure resistance between connector terminals of fuel pump.

Terminals

No. 3 — No. 5:



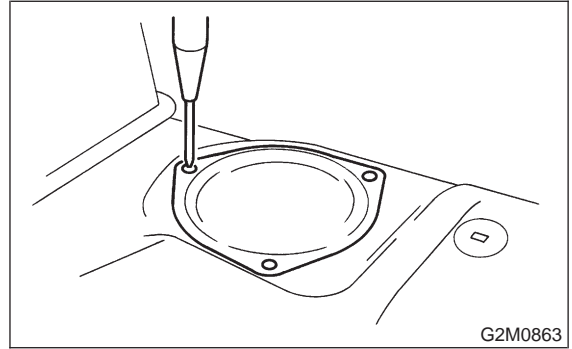
CHECK : Is the resistance less than 100 Ω?

YES : Go to step 11BA5.

NO : Replace fuel sending unit.

11BA5 : CHECK FUEL SUB LEVEL SENSOR.

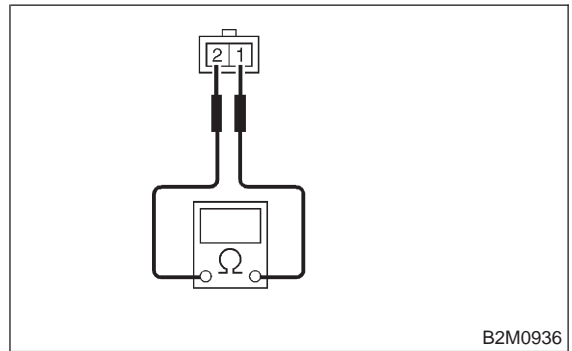
- 1) Remove service hole cover located on the left rear of luggage compartment floor.



- 2) Disconnect connector from fuel sub meter unit.
- 3) Measure resistance between connector terminals of fuel sub meter unit.

Terminals

No. 1 — No. 2:



CHECK : Is the resistance less than 100 Ω?

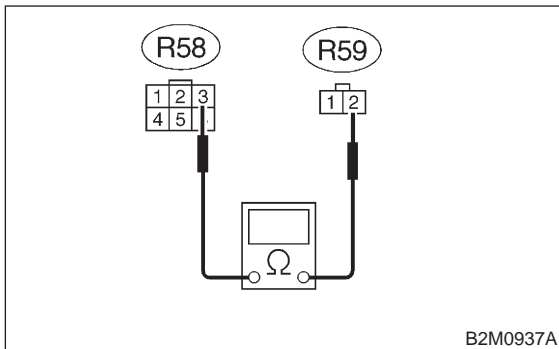
YES : Go to step 11BA6.

NO : Replace fuel sub meter unit.

11BA6 : CHECK HARNESS BETWEEN FUEL PUMP AND FUEL SUB METER UNIT CONNECTOR.

Measure resistance of harness between fuel pump and fuel sub meter unit connector.

Connector & terminal
(R58) No. 3 — (R59) No. 2:

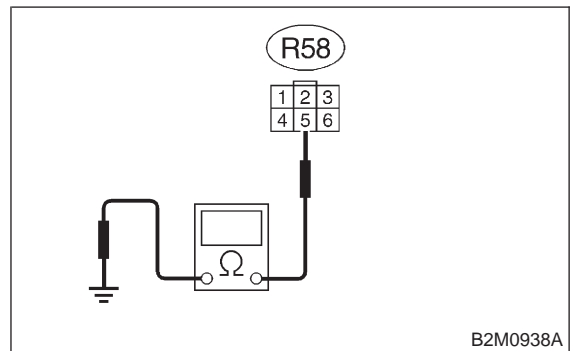


- CHECK** : *Is the resistance less than 1 Ω?*
- YES** : Go to step **11BA7**.
- NO** : Repair open circuit in harness between fuel pump and fuel sub meter unit connector.

11BA7 : CHECK GROUND CIRCUIT OF FUEL LEVEL SENSOR.

Measure resistance of harness between fuel pump connector and chassis ground.

Connector & terminal
(R58) No. 5 — Chassis ground:



- CHECK** : *Is the resistance less than 5 Ω?*
- YES** : Go to step **11BA8**.
- NO** : Repair harness and connector.

NOTE:

In this case, repair the following:

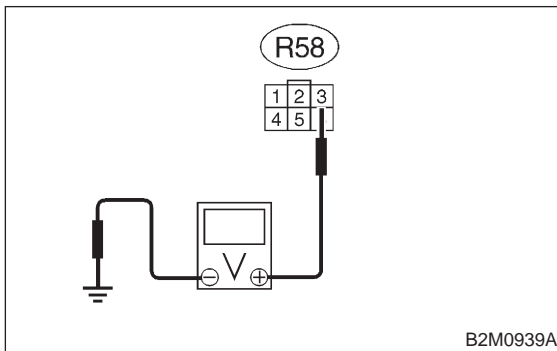
- Open circuit in harness between fuel pump connector and chassis grounding terminal
- Poor contact in fuel pump connector
- Poor contact in coupling connectors (R57, B97 and B22)

11BA8 : CHECK HARNESS BETWEEN ECM AND FUEL PUMP CONNECTOR.

- 1) Connect connector to fuel sub meter unit.
- 2) Turn ignition switch to ON.
- 3) Measure voltage between fuel pump connector and chassis ground.

Connector & terminal

(R58) No. 3 (+) — Chassis ground (-):



B2M0939A

CHECK : *Is the voltage less than 1 V?*

YES : Repair harness and connector.

NOTE:

In this case, repair the following:

- Open circuit in harness between fuel pump connector and junction A on rear wiring harness
- Poor contact in fuel sub meter unit connector
- Poor contact in fuel pump connector
- Poor contact in coupling connector (R57)

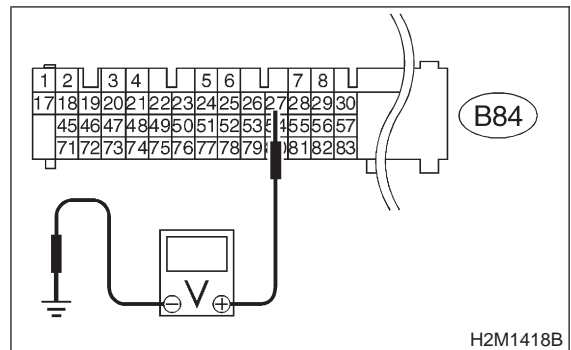
NO : Go to step **11BA9**.

11BA9 : CHECK HARNESS BETWEEN ECM AND FUEL PUMP CONNECTOR.

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

Connector & terminal

(B84) No. 27 (+) — Chassis ground (-):



H2M1418B

CHECK : *Is the voltage less than 1 V?*

YES : Repair harness and connector.

NOTE:

In this case, repair the following:

- Open circuit in harness between ECM connector and junction A on rear wiring harness
- Poor contact in coupling connector (B97)

NO : Repair connector.

NOTE:

In this case, repair the following:

- Poor contact in fuel pump connector
- Poor contact in fuel sub meter unit
- Poor contact in ECM connector

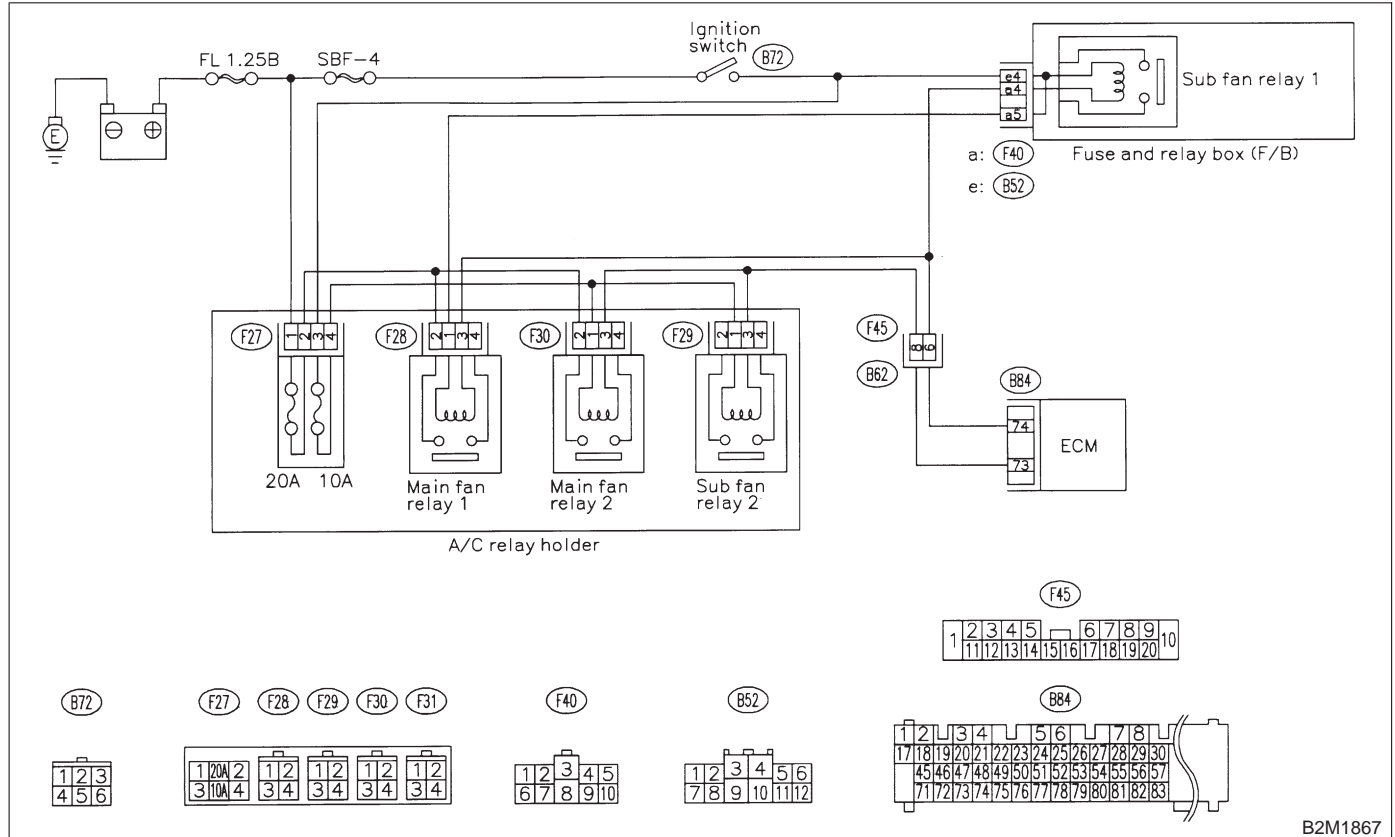
BB: DTC P0480 — COOLING FAN RELAY 1 CIRCUIT LOW INPUT —

NOTE:

Check radiator fan relay 1 circuit.

<Ref. to 2-7 [T10BC0].>

● **WIRING DIAGRAM:**



B2M1867

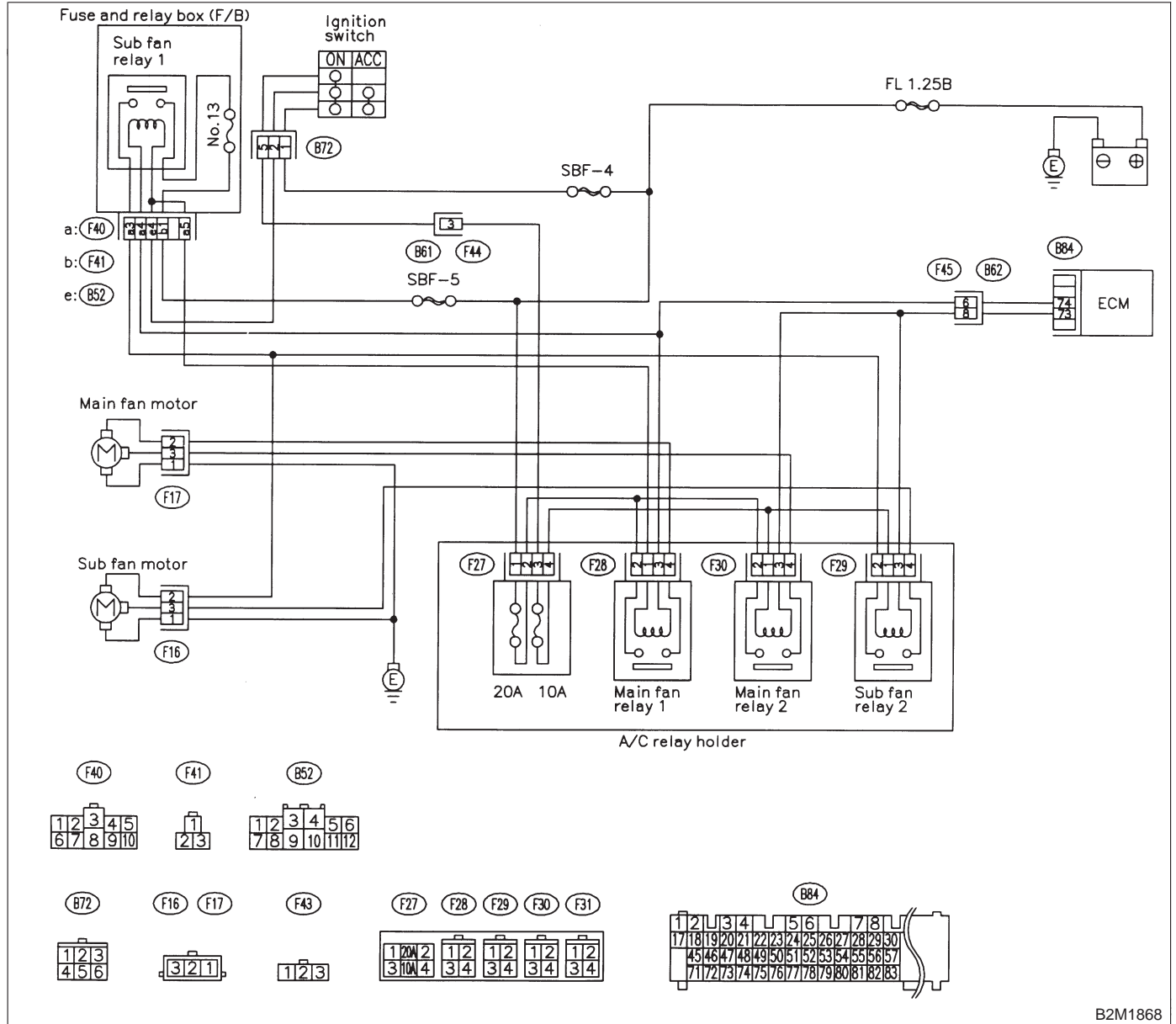
BC: DTC P0483 — COOLING FAN FUNCTION PROBLEM —

NOTE:

Check radiator fan control system.

<Ref. to 2-7 [T10BD0].>

● **WIRING DIAGRAM:**



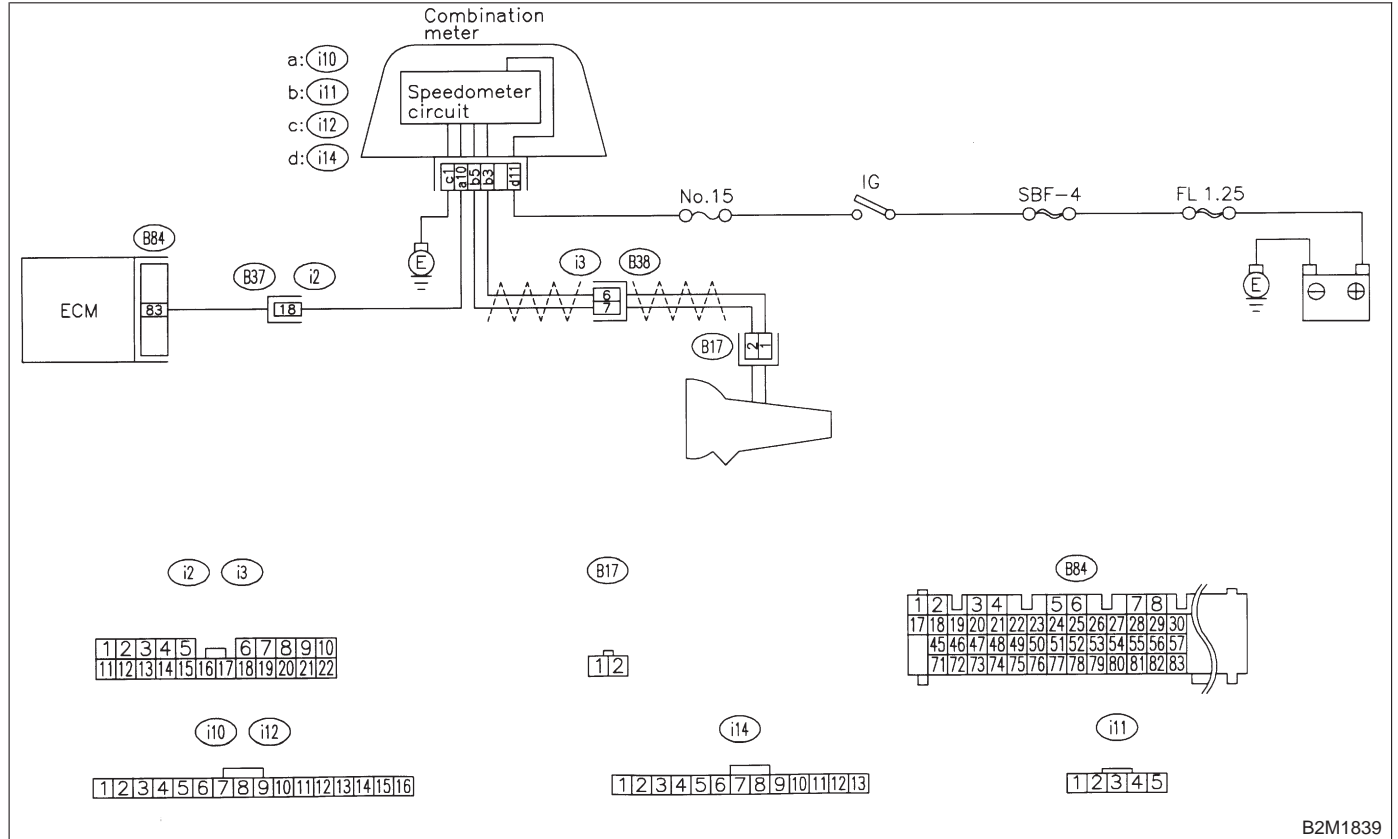
BD: DTC P0500 — VEHICLE SPEED SENSOR MALFUNCTION —

NOTE:

Check vehicle speed sensor 2 circuit.

<Ref. to 2-7 [T10BE0].>

● **WIRING DIAGRAM:**



B2M1839

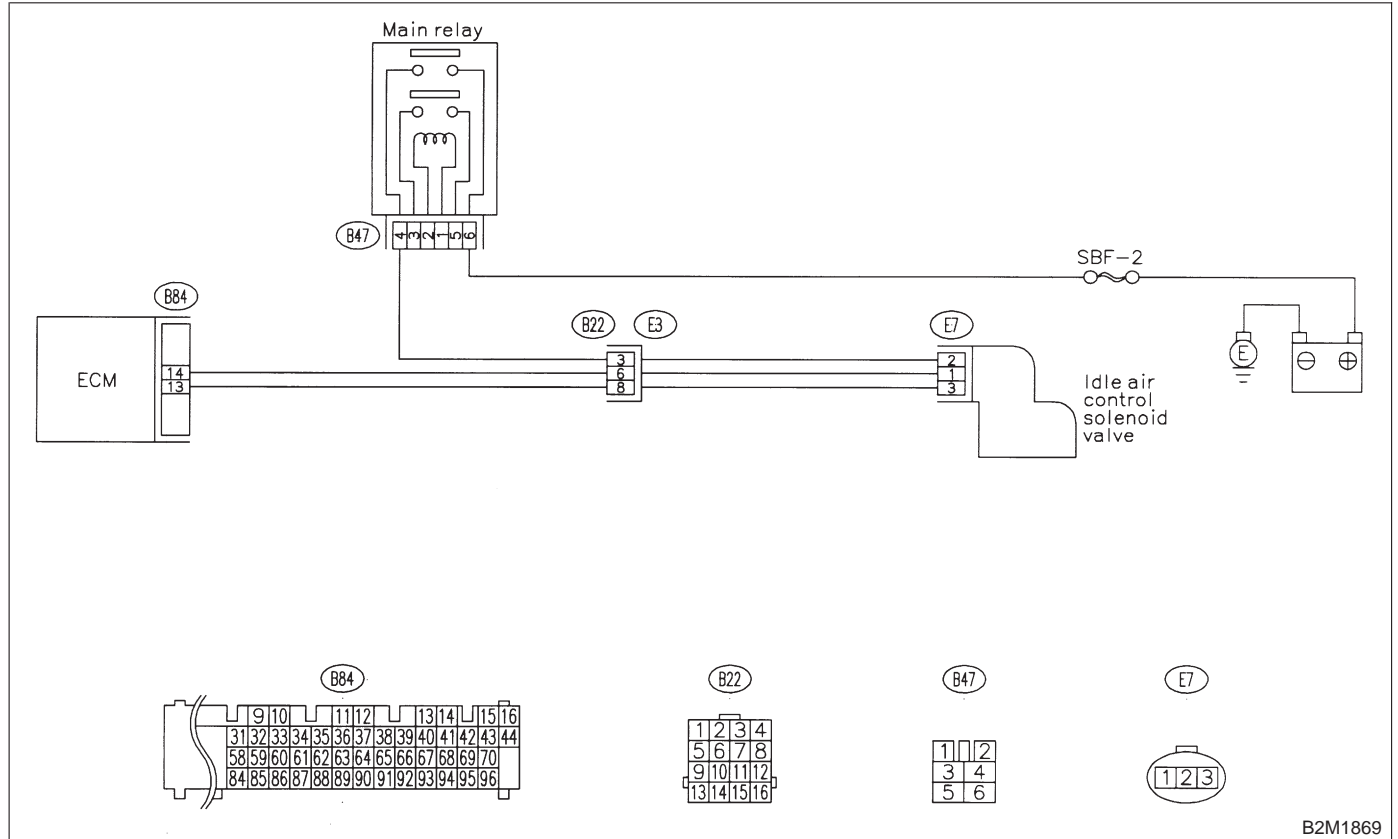
BE: DTC P0505 — IDLE CONTROL SYSTEM MALFUNCTION —

NOTE:

Check idle air control solenoid valve circuit.

<Ref. to 2-7 [T10BF0].>

● **WIRING DIAGRAM:**

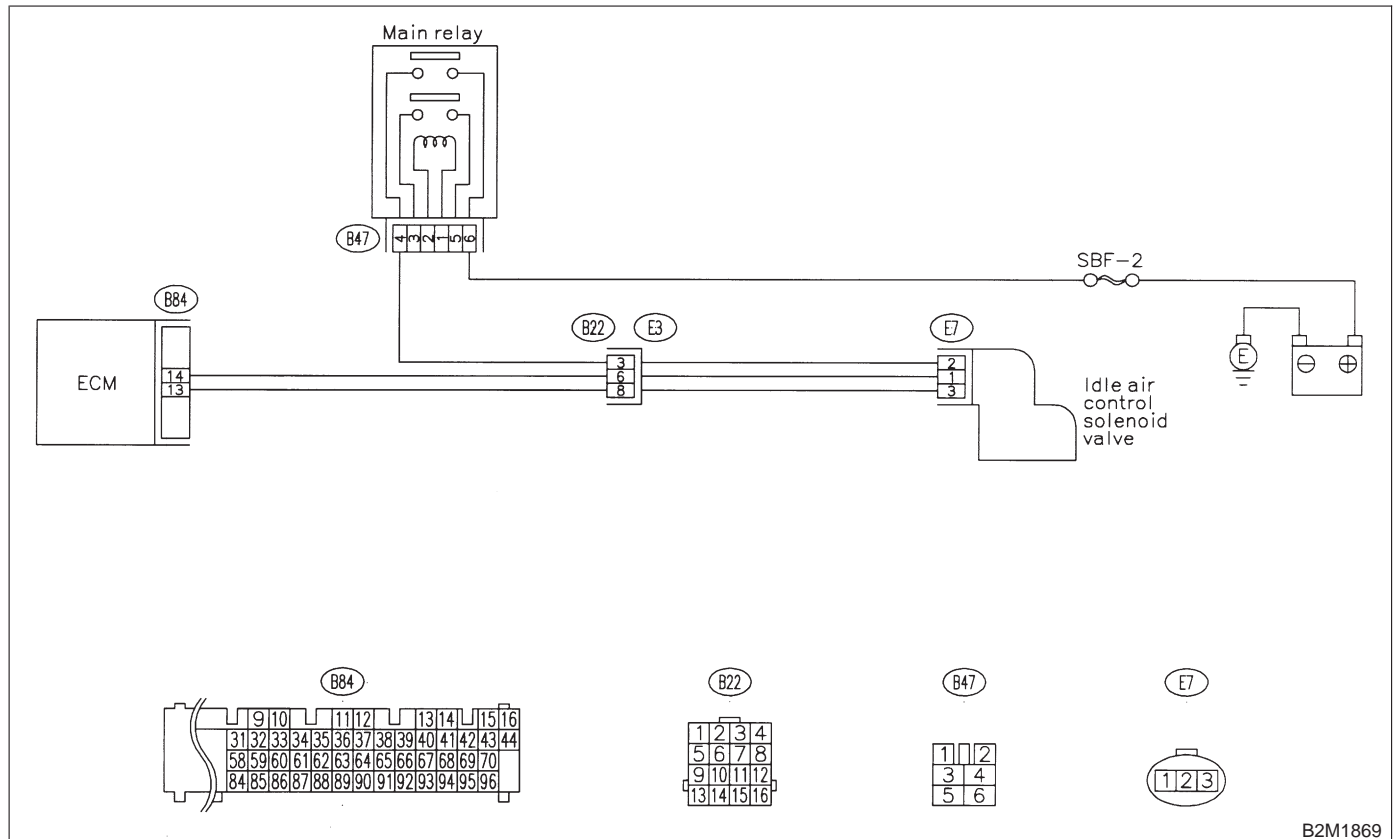


B2M1869

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

NOTE:
Check idle air control system.
<Ref. to 2-7 [T10BG0].>

● **WIRING DIAGRAM:**



B2M1869

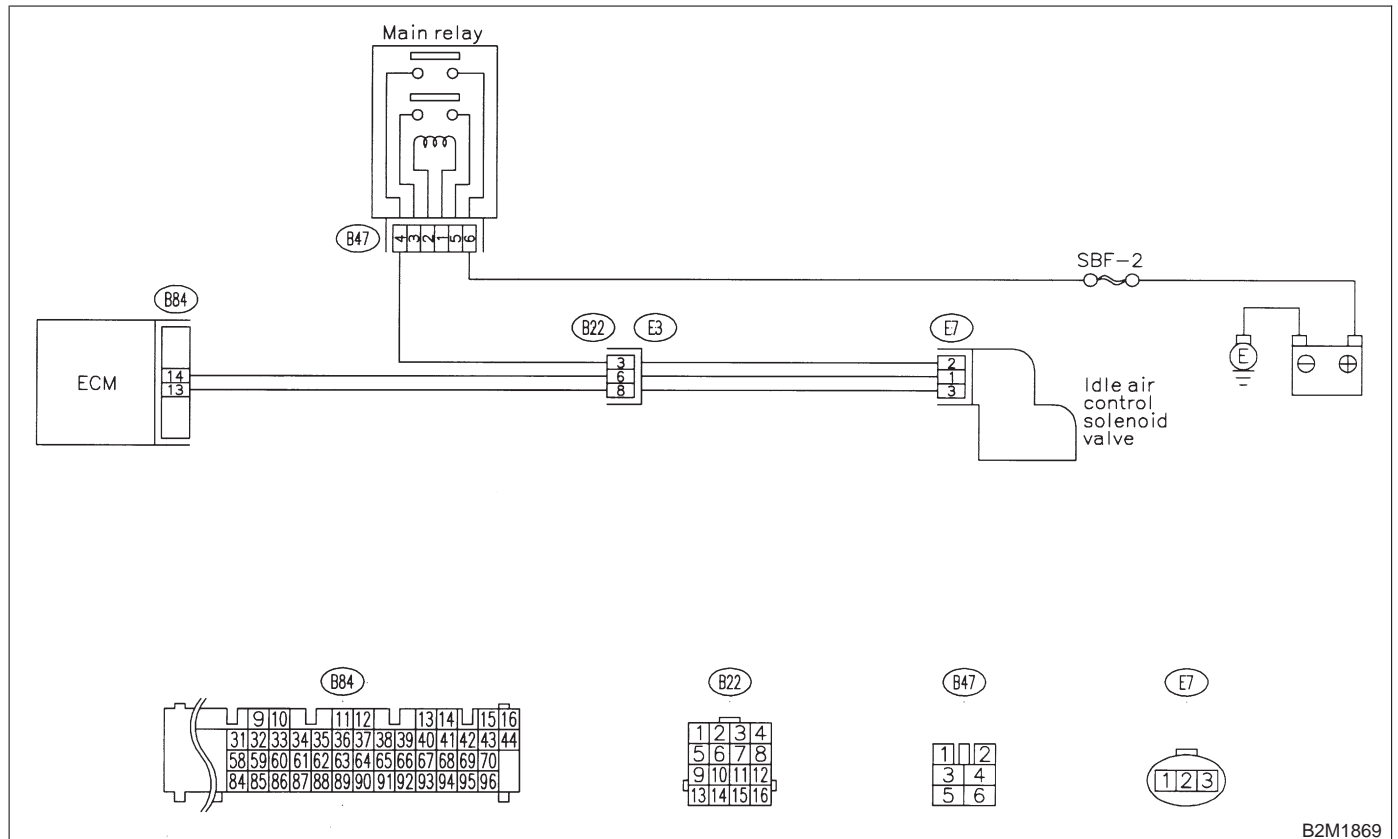
BG: DTC P0507 — IDLE CONTROL SYSTEM RPM HIGHER THAN EXPECTED

NOTE:

Check idle air control system.

<Ref. to 2-7 [T10BH0].>

● WIRING DIAGRAM:



B2M1869

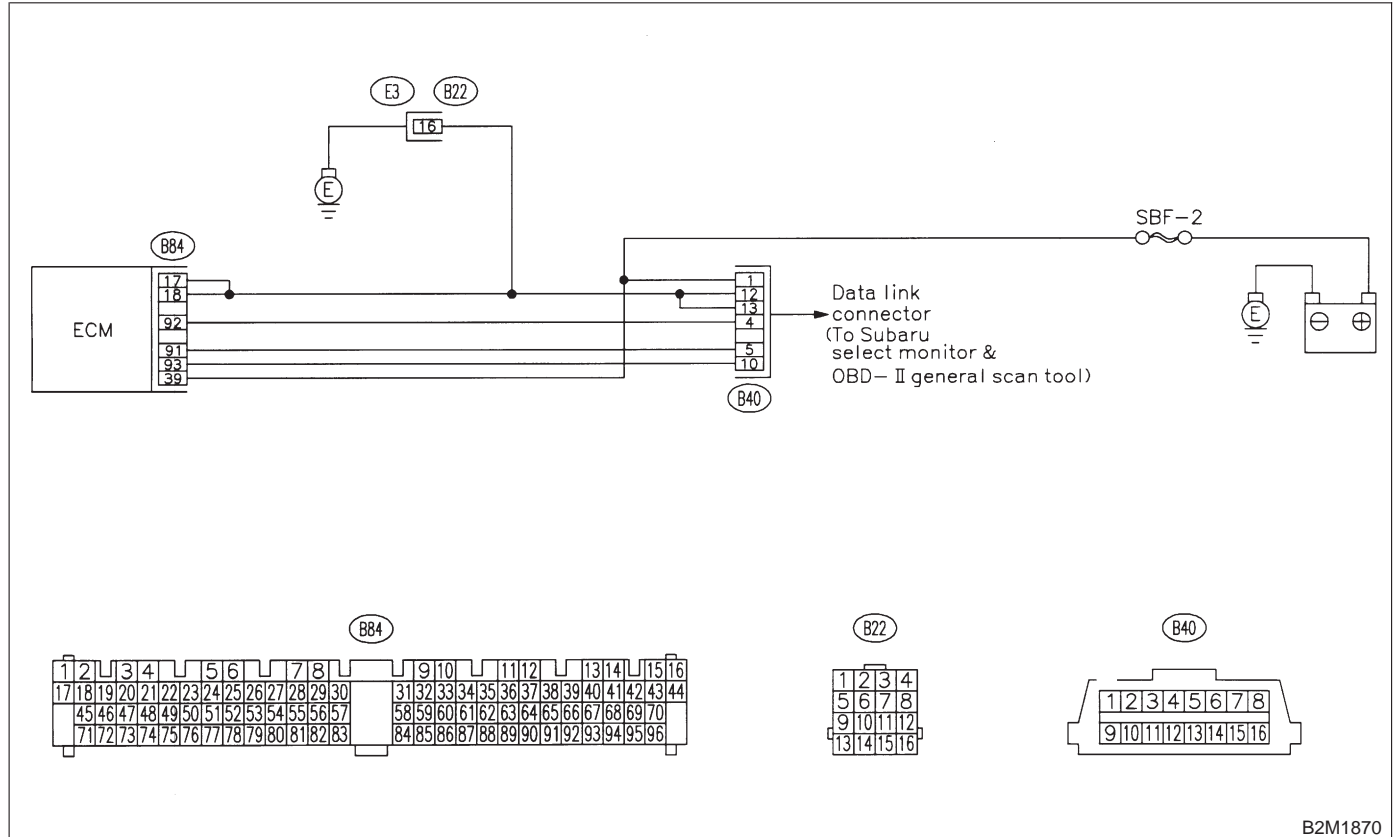
BH: DTC P0600 — SERIAL COMMUNICATION LINK MALFUNCTION —

NOTE:

Check serial communication circuit.

<Ref. to 2-7 [T10BI0].>

● **WIRING DIAGRAM:**



B2M1870

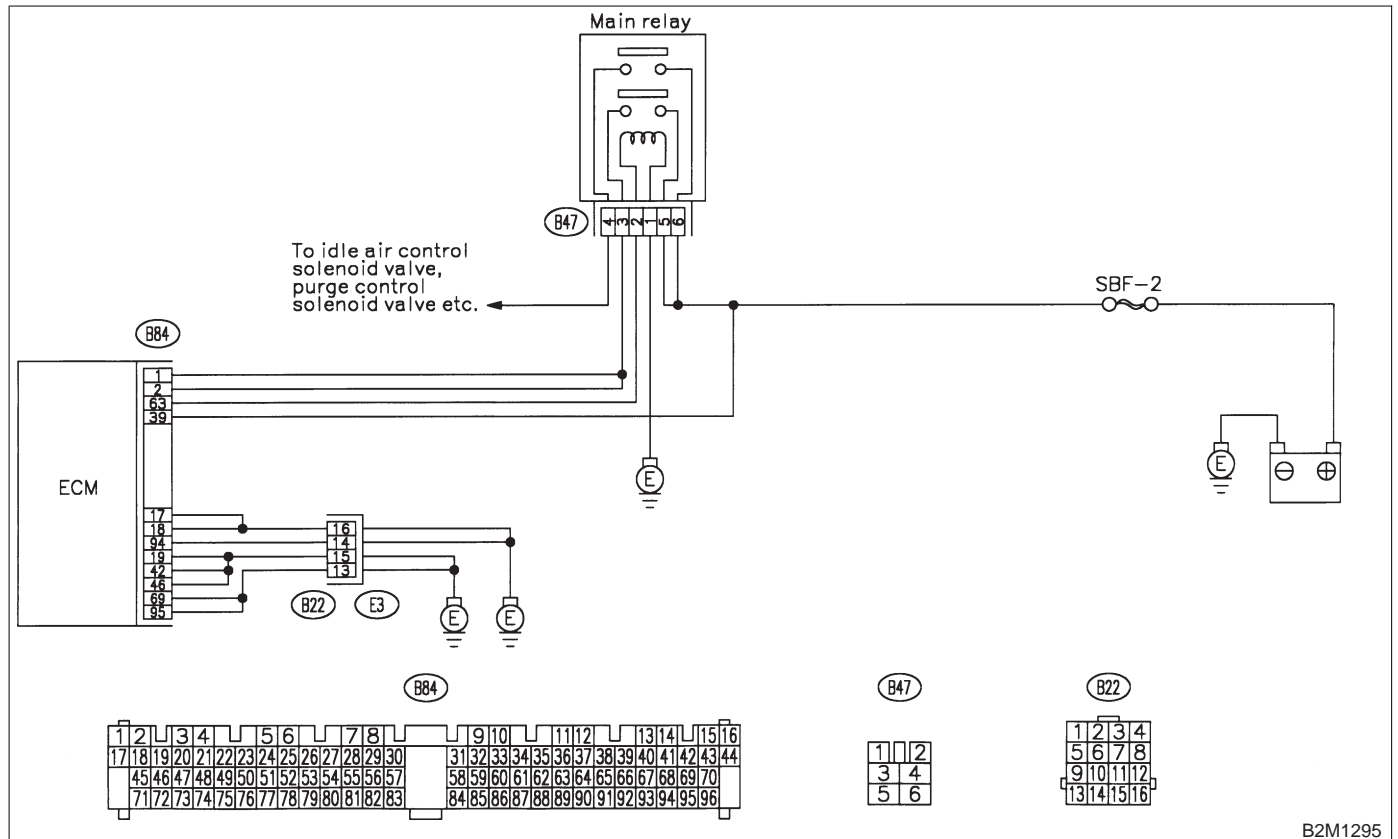
BI: DTC P0601 — INTERNAL CONTROL MODULE MEMORY CHECK SUM ERROR —

NOTE:

Check internal control module memory.

<Ref. to 2-7 [T10BJ0].>

● **WIRING DIAGRAM:**



B2M1295

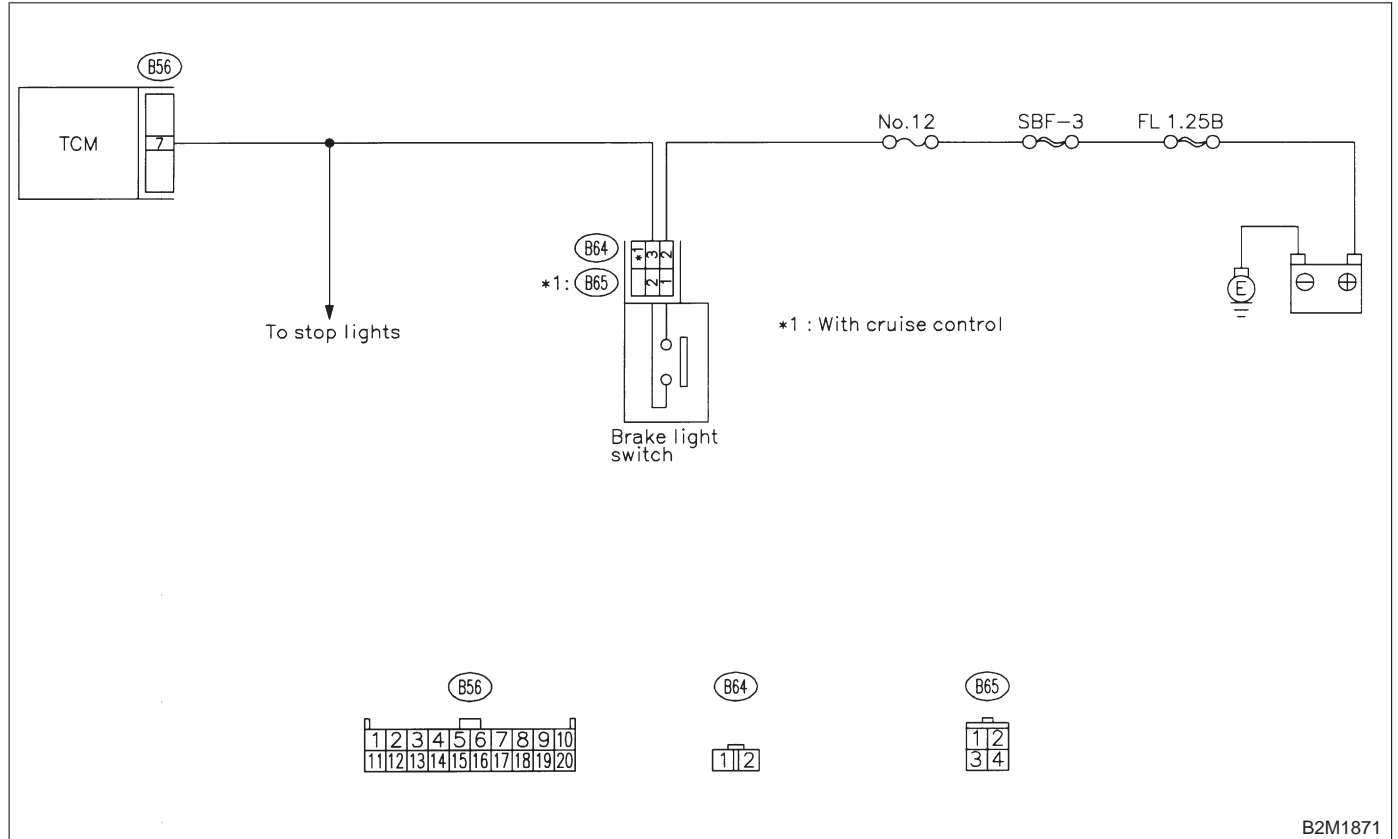
BJ: DTC P0703 — BRAKE SWITCH INPUT MALFUNCTION —

NOTE:

Check brake switch input signal circuit.

<Ref. to 2-7 [T10BK0].>

● WIRING DIAGRAM:



B2M1871

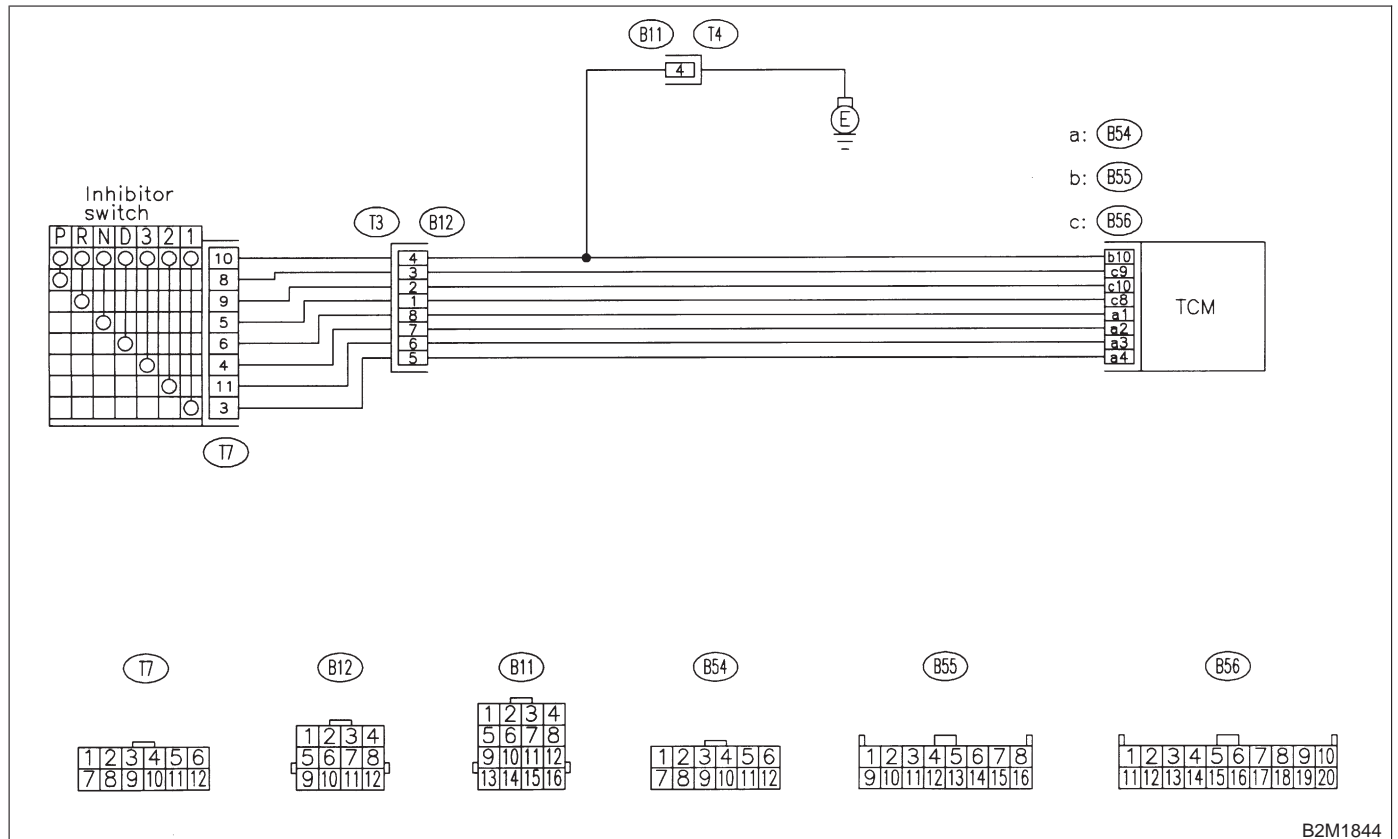
BK: DTC P0705 — TRANSMISSION RANGE SENSOR CIRCUIT MALFUNCTION —

NOTE:

Check inhibitor switch circuit.

<Ref. to 2-7 [T10BL0].>

● **WIRING DIAGRAM:**



B2M1844

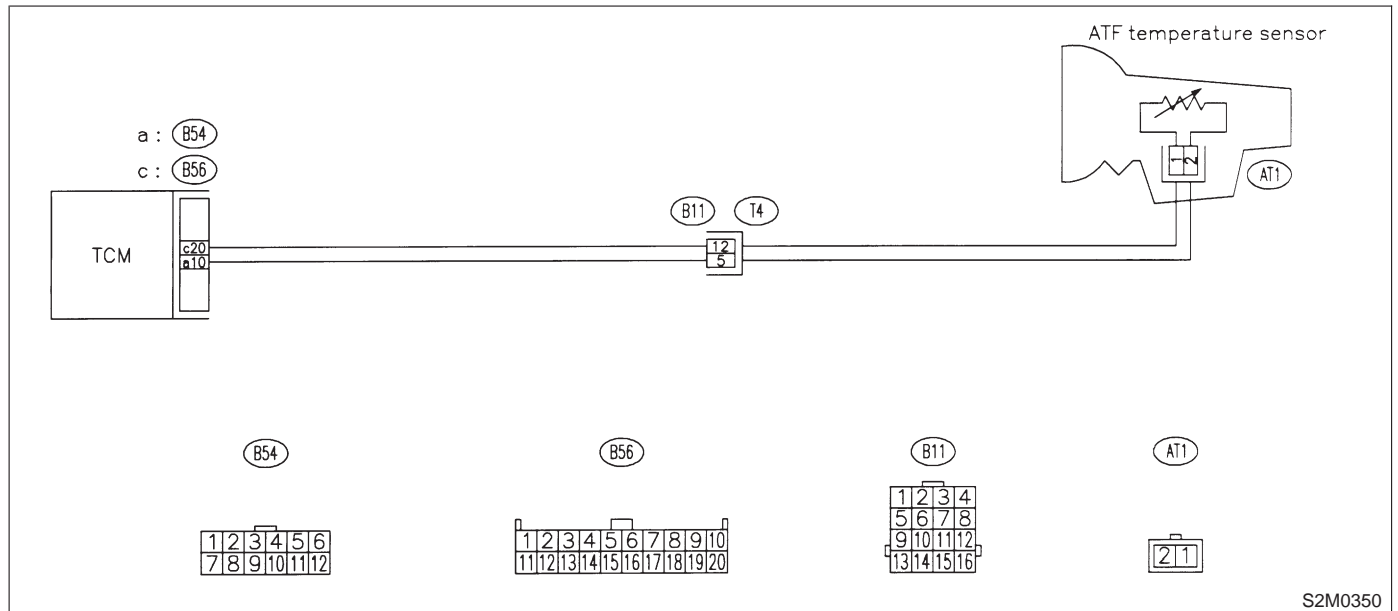
BL: DTC P0710 — TRANSMISSION FLUID TEMPERATURE SENSOR CIRCUIT MALFUNCTION —

NOTE:

Check automatic transmission fluid temperature sensor circuit.

<Ref. to 2-7 [T10BM0].>

● **WIRING DIAGRAM:**



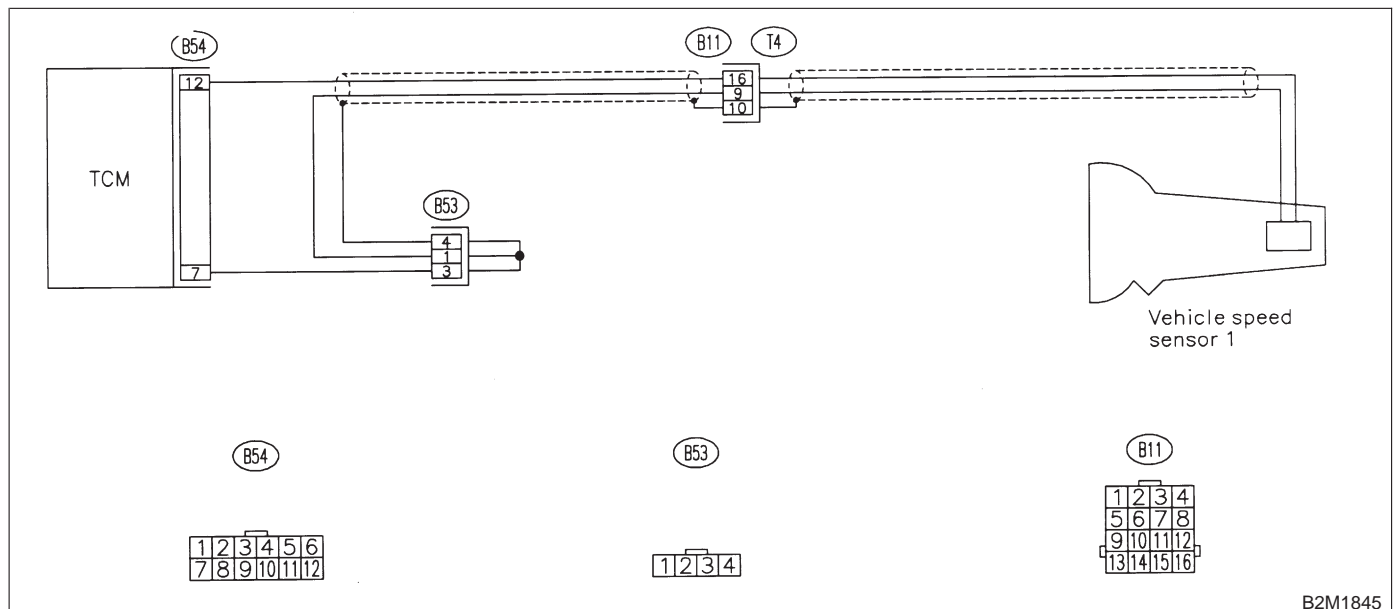
BM: DTC P0720 — OUTPUT SPEED SENSOR (VEHICLE SPEED SENSOR 1) CIRCUIT MALFUNCTION —

NOTE:

Check vehicle speed sensor 1 circuit.

<Ref. to 2-7 [T10BN0].>

● **WIRING DIAGRAM:**



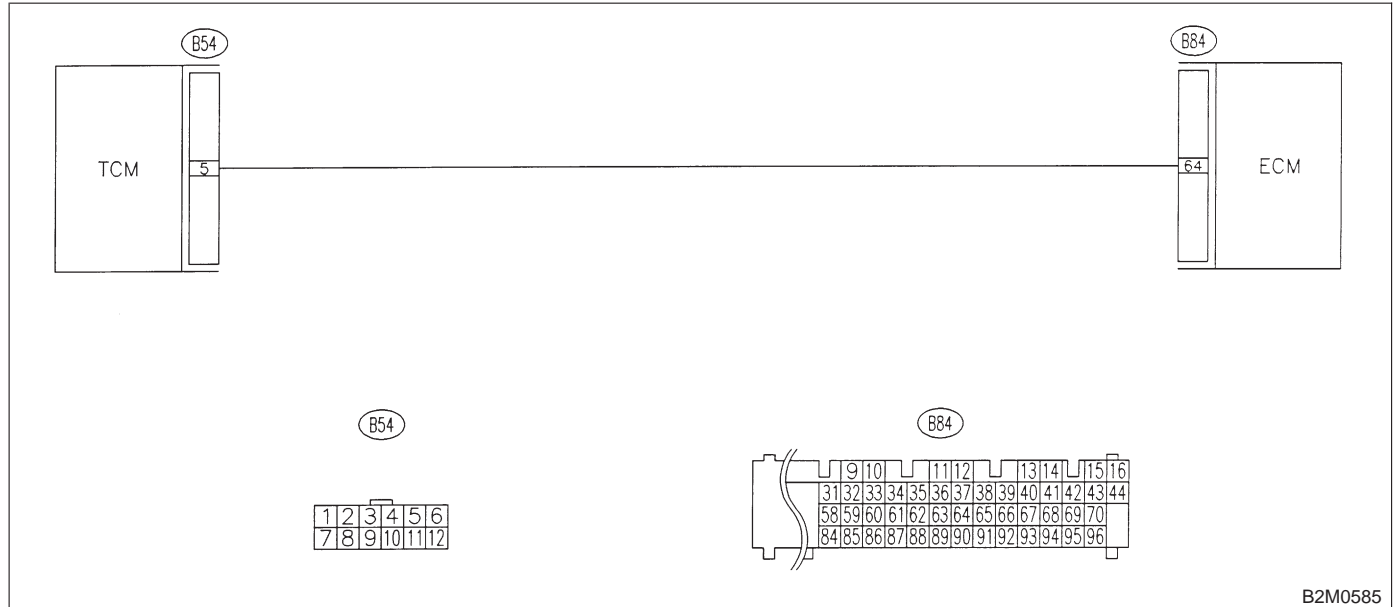
BN: DTC P0725 — ENGINE SPEED INPUT CIRCUIT MALFUNCTION —

NOTE:

Check engine speed signal input circuit.

<Ref. to 2-7 [T10B00].>

● WIRING DIAGRAM:



B2M0585

MEMO:

BO: DTC P0731 — GEAR 1 INCORRECT RATIO —

NOTE:

For the diagnostic procedure, refer to 2-7 [T11BR0].

<Ref. to 2-7 [T11BR0].>

BP: DTC P0732 — GEAR 2 INCORRECT RATIO —

NOTE:

For the diagnostic procedure, refer to 2-7 [T11BR0].

<Ref. to 2-7 [T11BR0].>

BQ: DTC P0733 — GEAR 3 INCORRECT RATIO —

NOTE:

For the diagnostic procedure, refer to 2-7 [T11BR0].

<Ref. to 2-7 [T11BR0].>

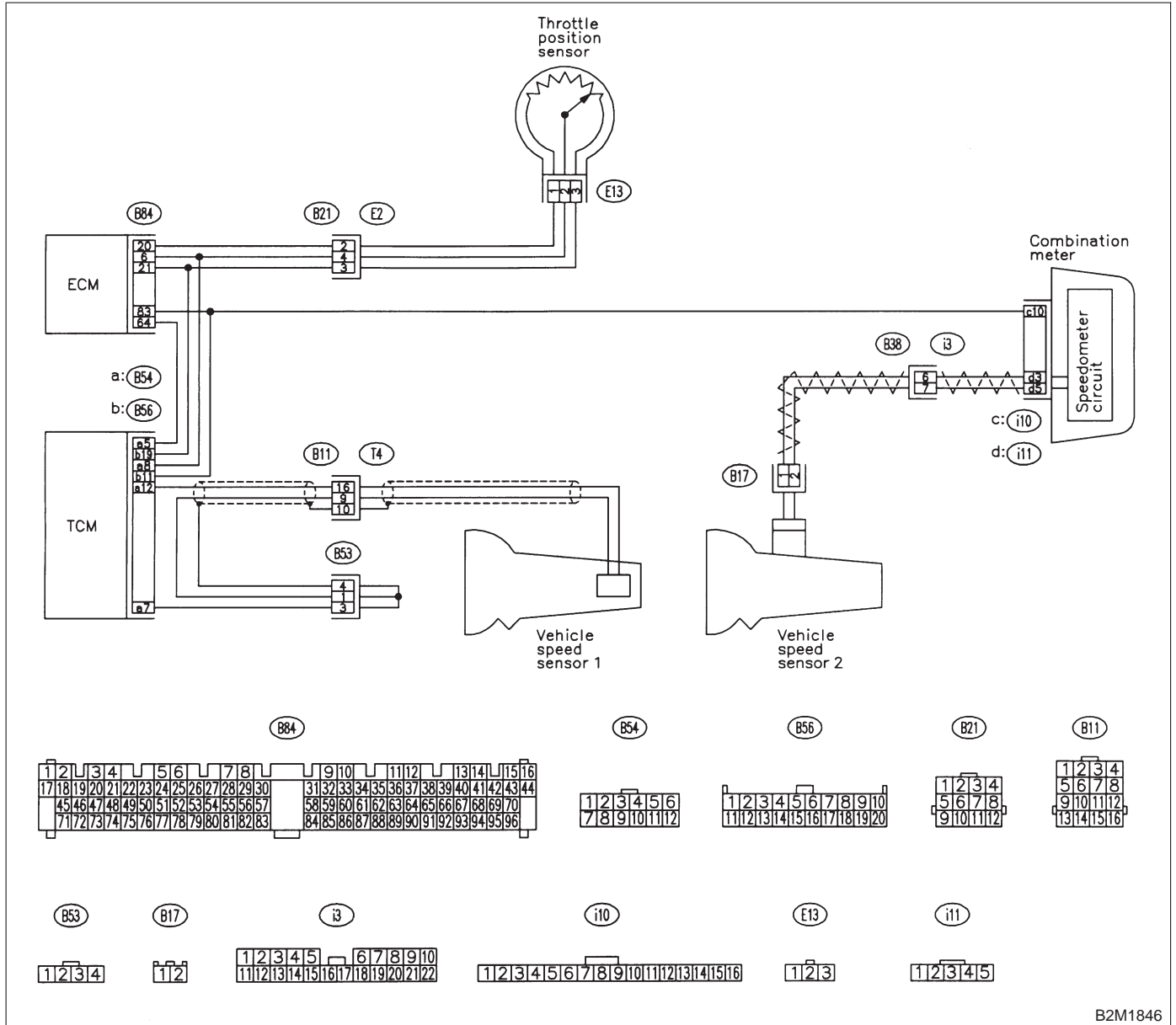
BR: DTC P0734 — GEAR 4 INCORRECT RATIO —

NOTE:

Check shift change control system.

<Ref. to 2-7 [T10BS0].>

● WIRING DIAGRAM:



B2M1846

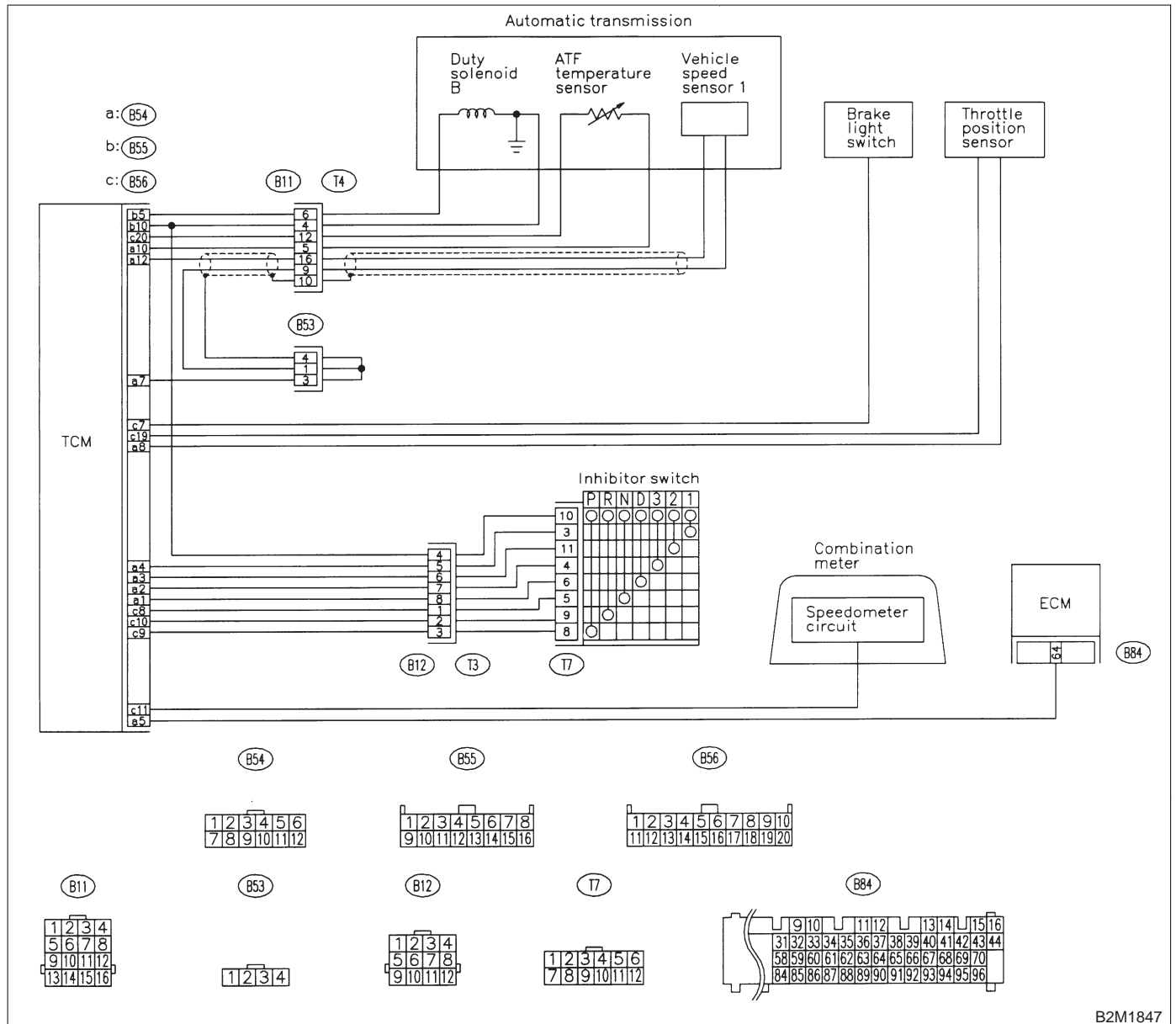
BS: DTC P0740 — TORQUE CONVERTER CLUTCH SYSTEM MALFUNCTION

NOTE:

Check torque converter lock-up control system.

<Ref. to 2-7 [T10BT0].>

● WIRING DIAGRAM:



B2M1847

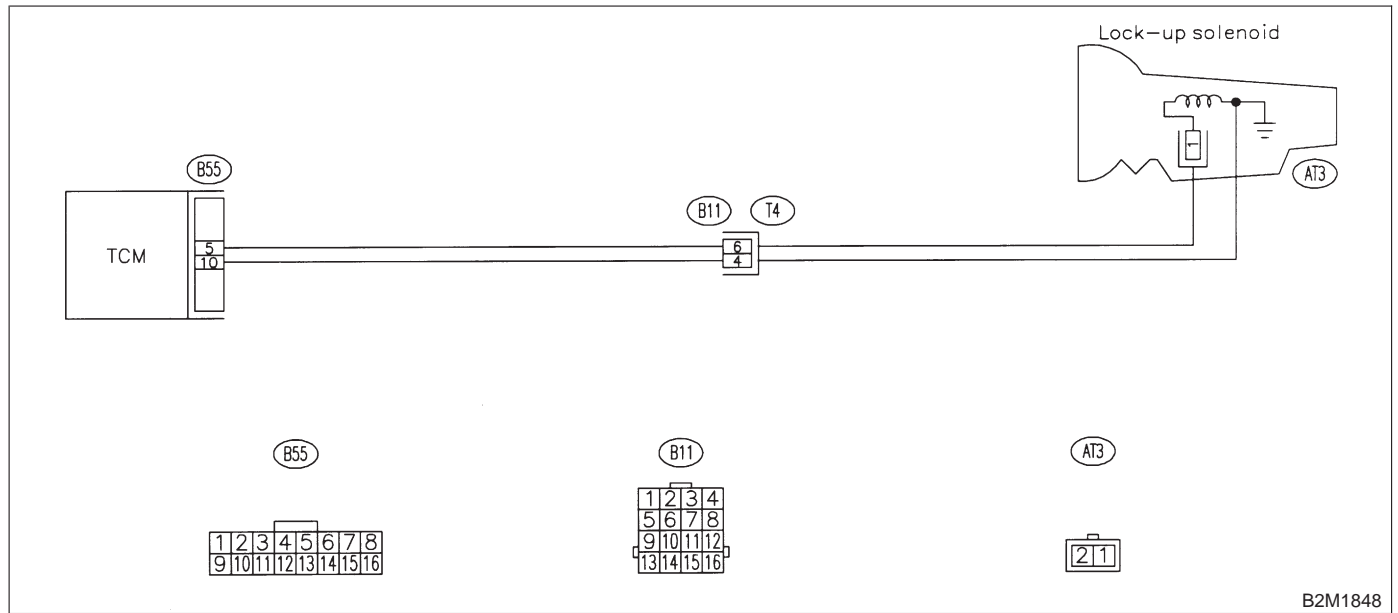
BT: DTC P0743 — TORQUE CONVERTER CLUTCH SYSTEM (DUTY SOLENOID B) ELECTRICAL —

NOTE:

Check duty solenoid B circuit.

<Ref. to 2-7 [T10BU0].>

● **WIRING DIAGRAM:**



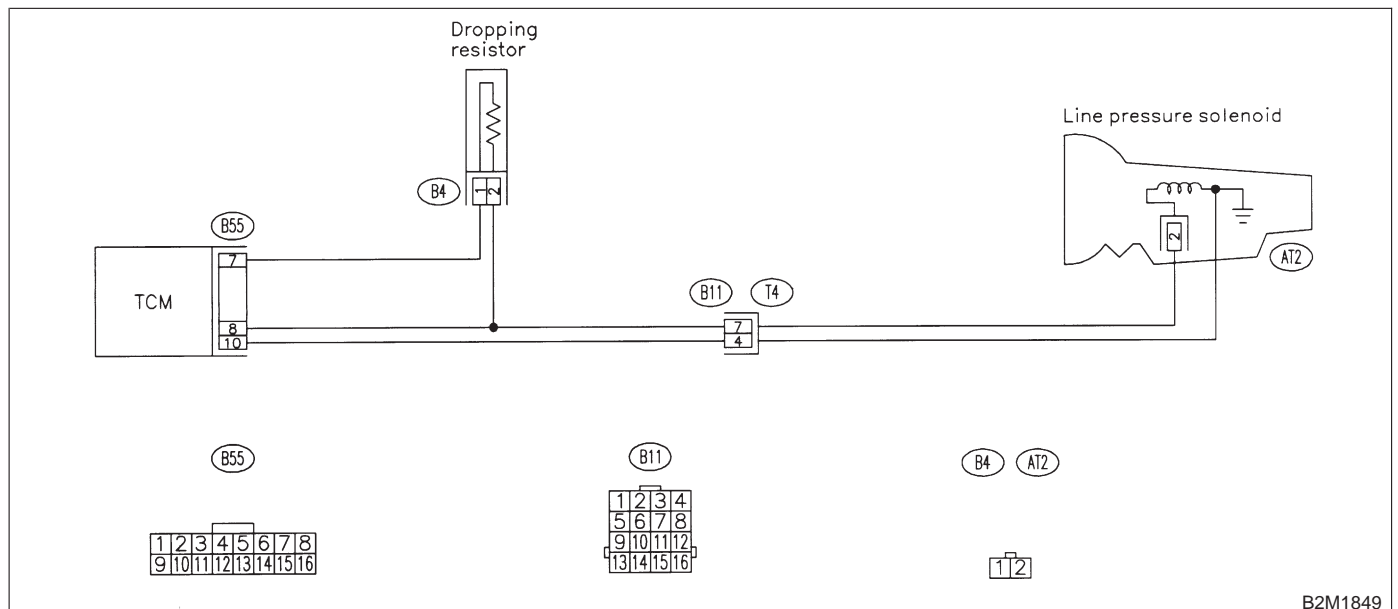
BU: DTC P0748 — PRESSURE CONTROL SOLENOID (DUTY SOLENOID A) ELECTRICAL —

NOTE:

Check duty solenoid A circuit.

<Ref. to 2-7 [T10BV0].>

● **WIRING DIAGRAM:**



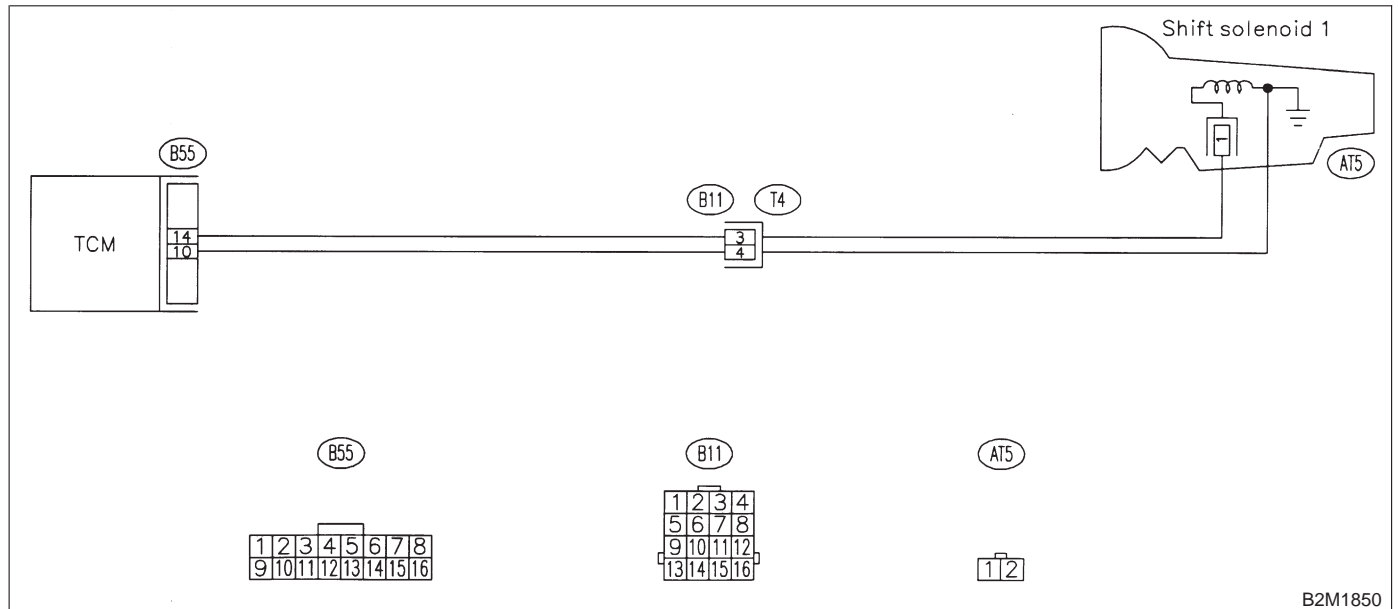
BV: DTC P0753 — SHIFT SOLENOID A (SHIFT SOLENOID 1) ELECTRICAL —

NOTE:

Check shift solenoid 1 circuit.

<Ref. to 2-7 [T10BW0].>

● **WIRING DIAGRAM:**



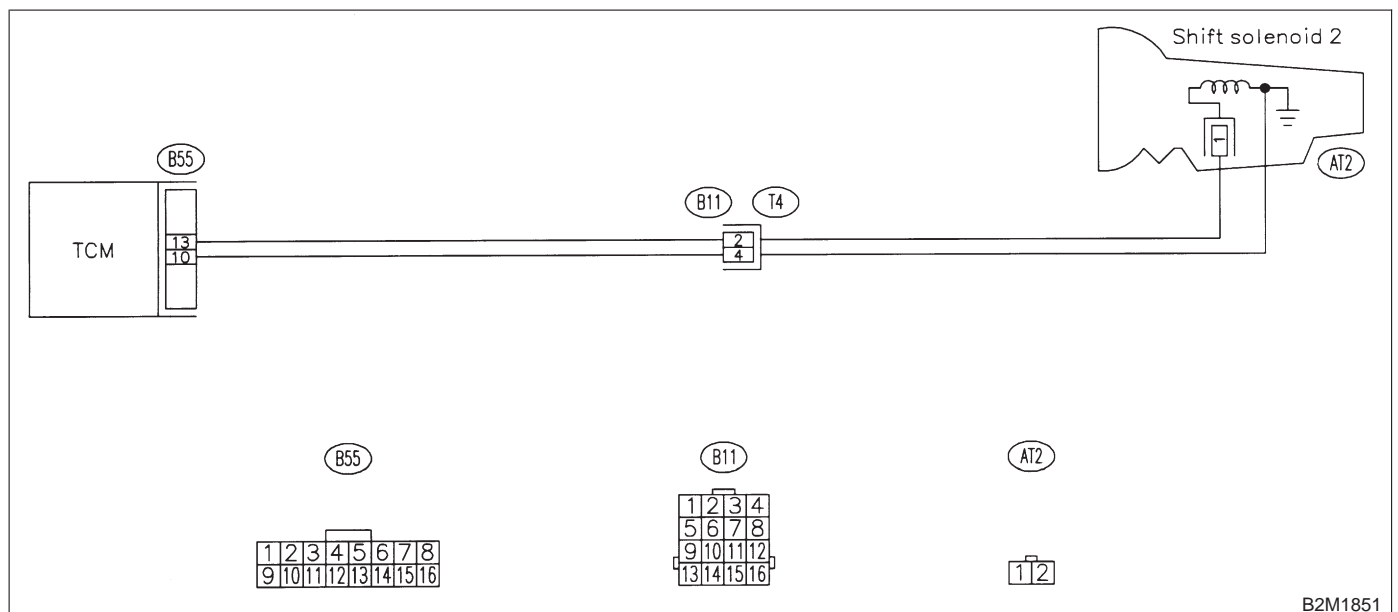
BW: DTC P0758 — SHIFT SOLENOID B (SHIFT SOLENOID 2) ELECTRICAL

NOTE:

Check shift solenoid 2 circuit.

<Ref. to 2-7 [T10BX0].>

● **WIRING DIAGRAM:**



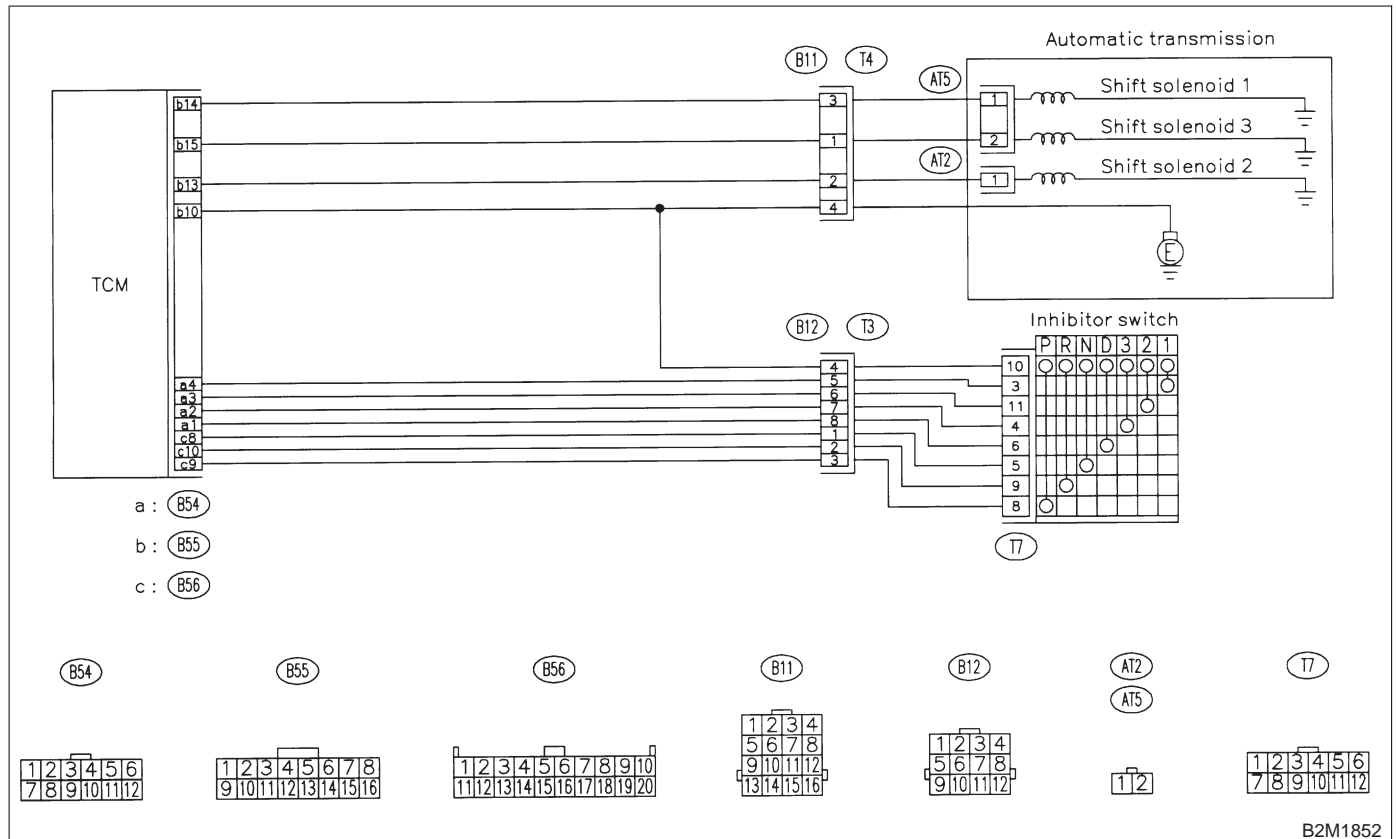
BX: DTC P0760 — SHIFT SOLENOID C (SHIFT SOLENOID 3) MALFUNCTION

NOTE:

Check shift solenoid 3 control system.

<Ref. to 2-7 [T10BY0].>

● WIRING DIAGRAM:



B2M1852

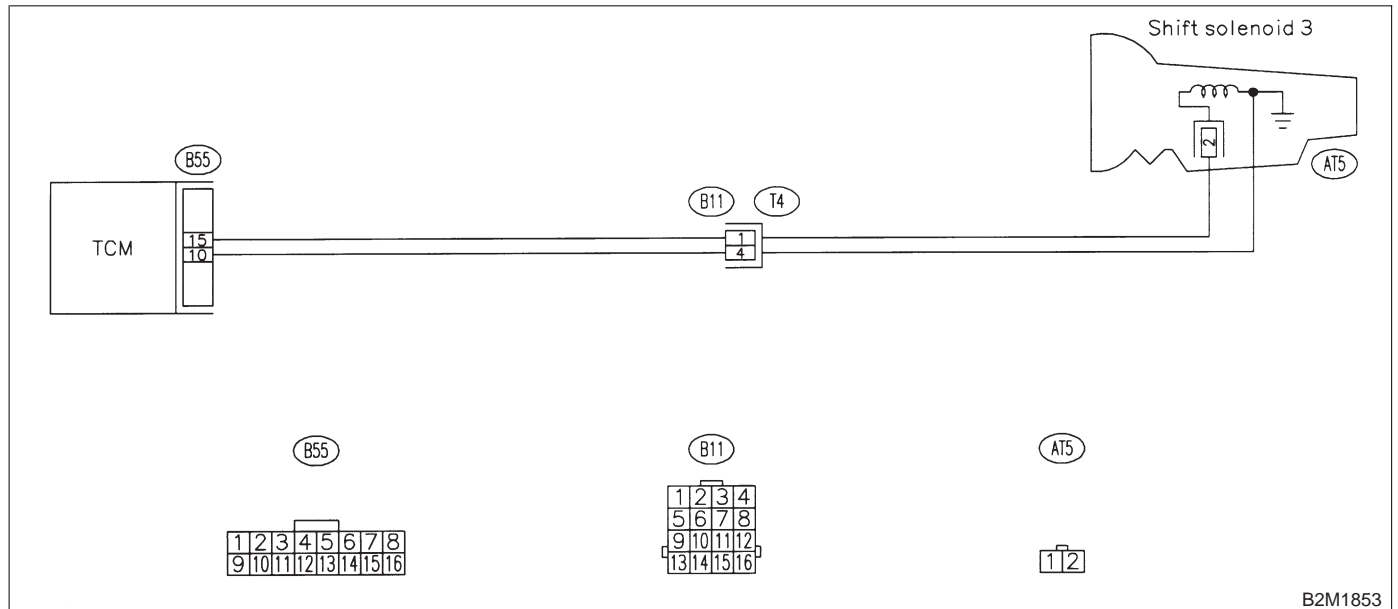
BY: DTC P0763 — SHIFT SOLENOID C (SHIFT SOLENOID 3) ELECTRICAL —

NOTE:

Check shift solenoid 3 circuit.

<Ref. to 2-7 [T10BZ0].>

● **WIRING DIAGRAM:**



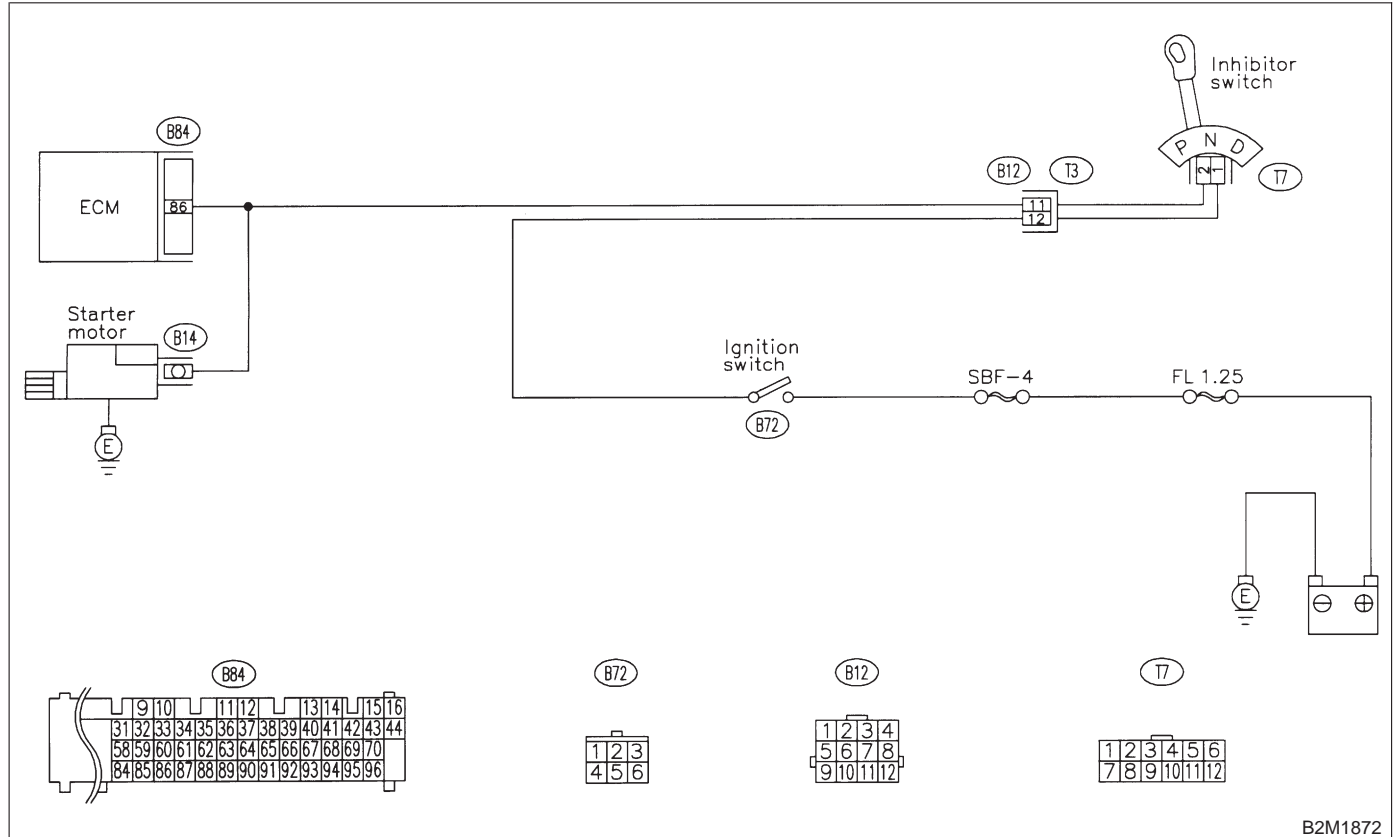
BZ: DTC P1100 — STARTER SWITCH CIRCUIT LOW INPUT —

NOTE:

Check starter switch circuit.

<Ref. to 2-7 [T10CA0].>

● **WIRING DIAGRAM:**



B2M1872

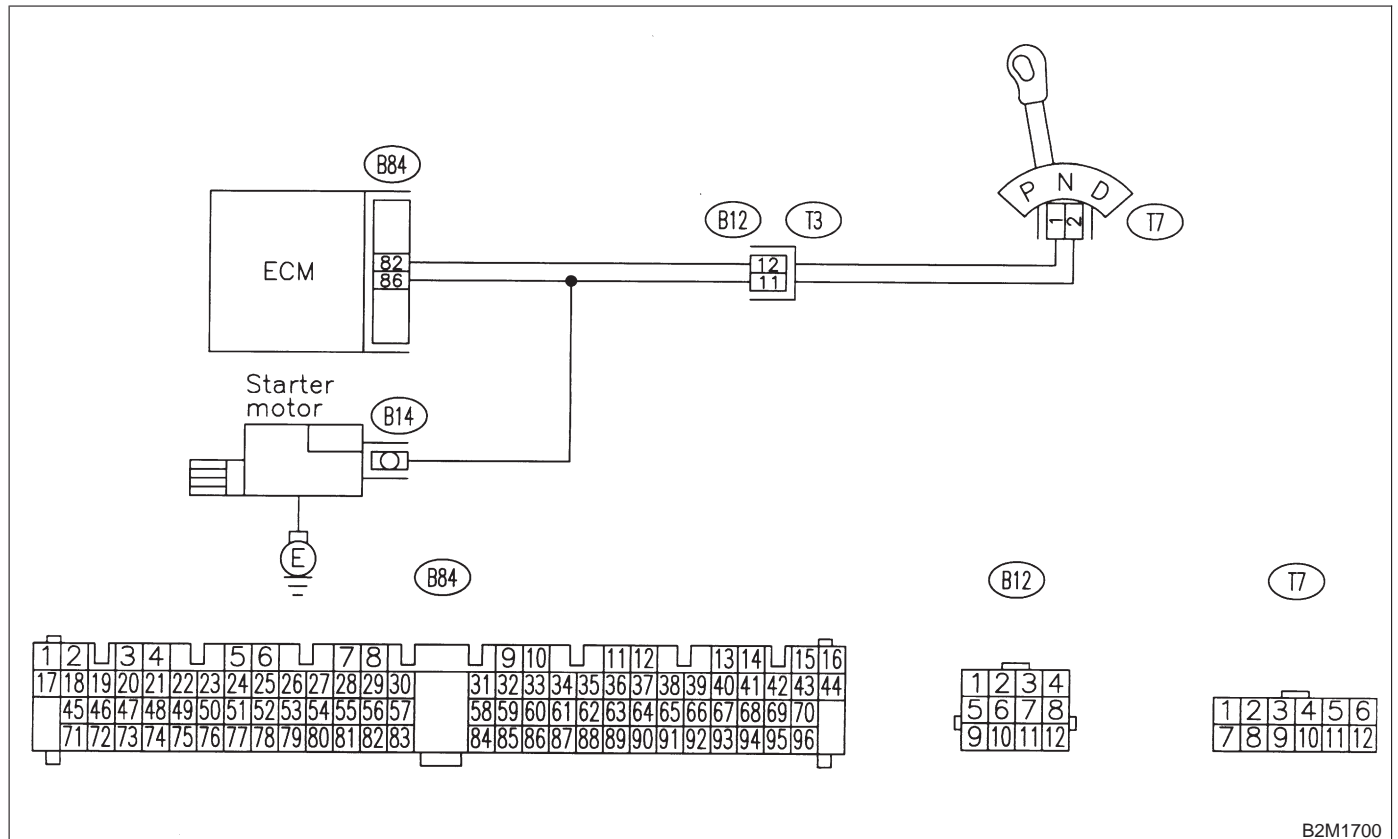
CA: DTC P1101 — NEUTRAL POSITION SWITCH CIRCUIT HIGH INPUT [AT VEHICLES] —

NOTE:

Check neutral position switch circuit.

<Ref. to 2-7 [T10CC0].>

● **WIRING DIAGRAM:**



B2M1700

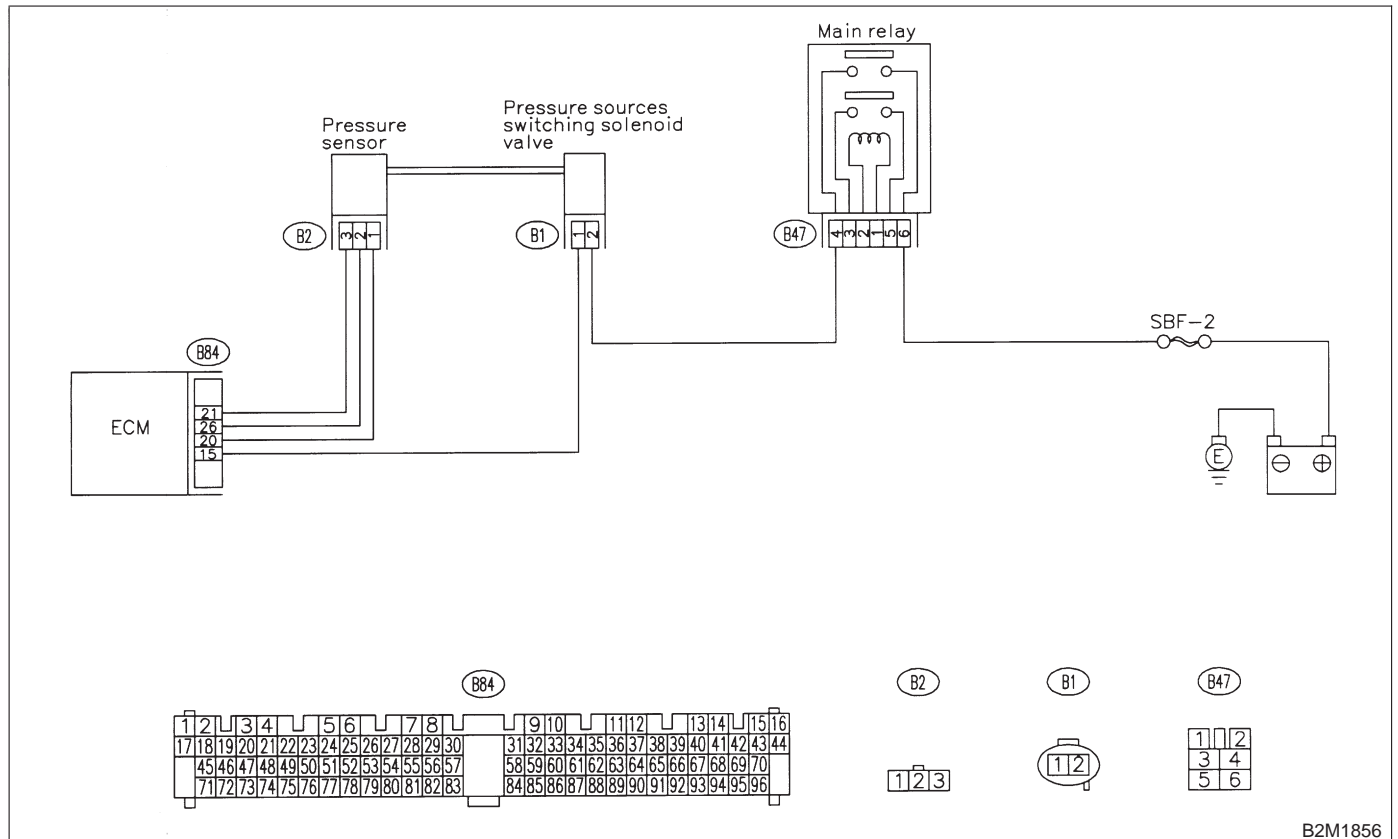
CB: DTC P1102 — PRESSURE SOURCES SWITCHING SOLENOID VALVE CIRCUIT LOW INPUT —

NOTE:

Check pressure sources switching solenoid valve circuit.

<Ref. to 2-7 [T10CD0].>

● WIRING DIAGRAM:



B2M1856

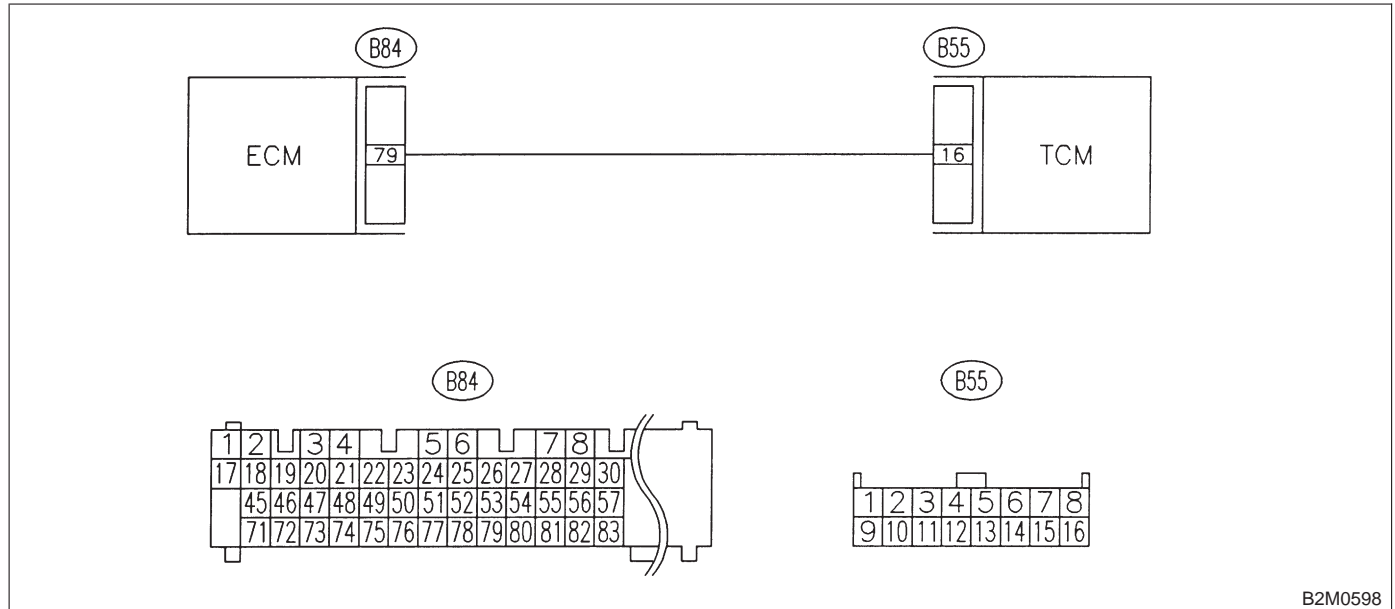
CC: DTC P1103 — ENGINE TORQUE CONTROL SIGNAL CIRCUIT MALFUNCTION —

NOTE:

Check engine torque control signal circuit.

<Ref. to 2-7 [T10CE0].>

● **WIRING DIAGRAM:**



B2M0598

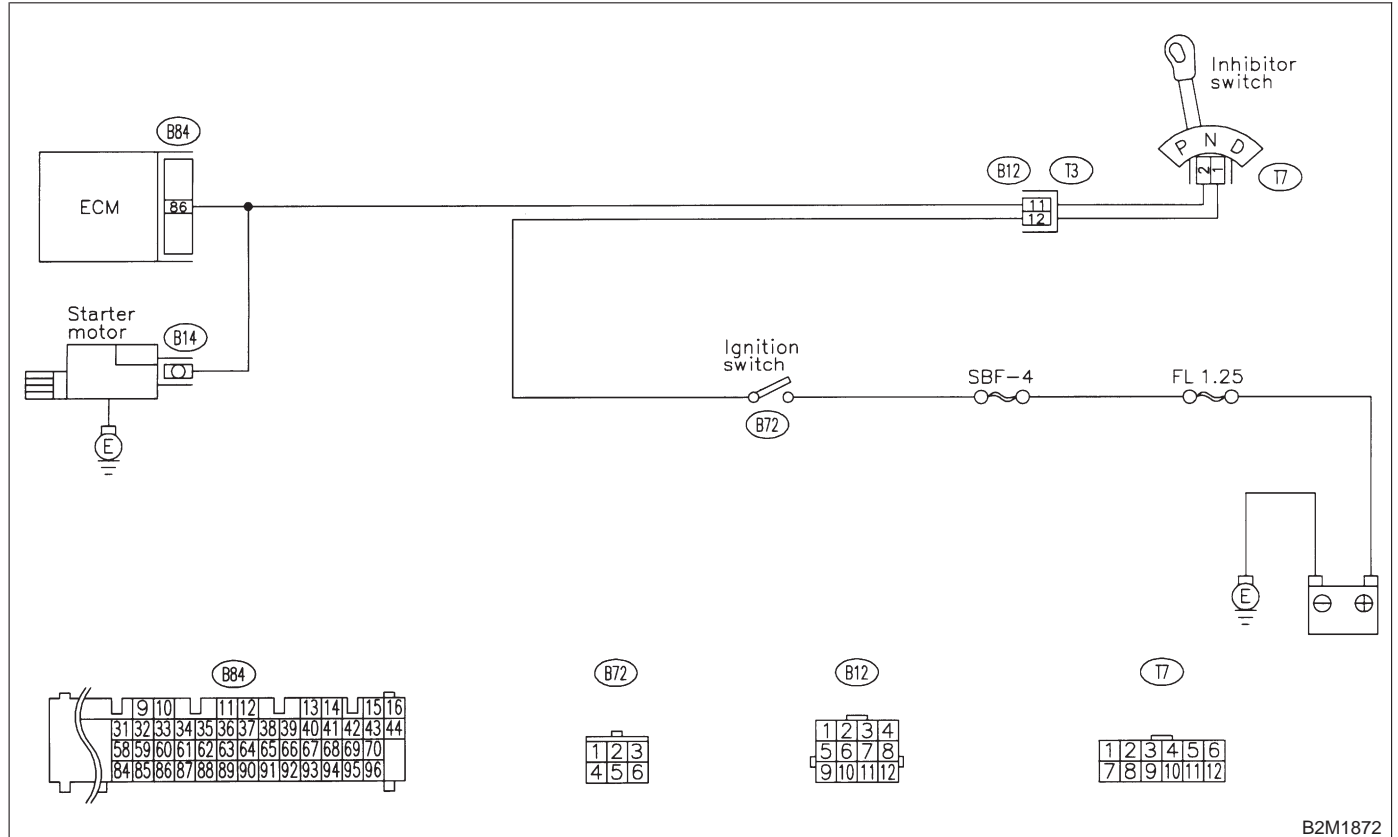
CD: DTC P1120 — STARTER SWITCH CIRCUIT HIGH INPUT —

NOTE:

Check starter switch circuit.

<Ref. to 2-7 [T10CG0].>

● **WIRING DIAGRAM:**



B2M1872

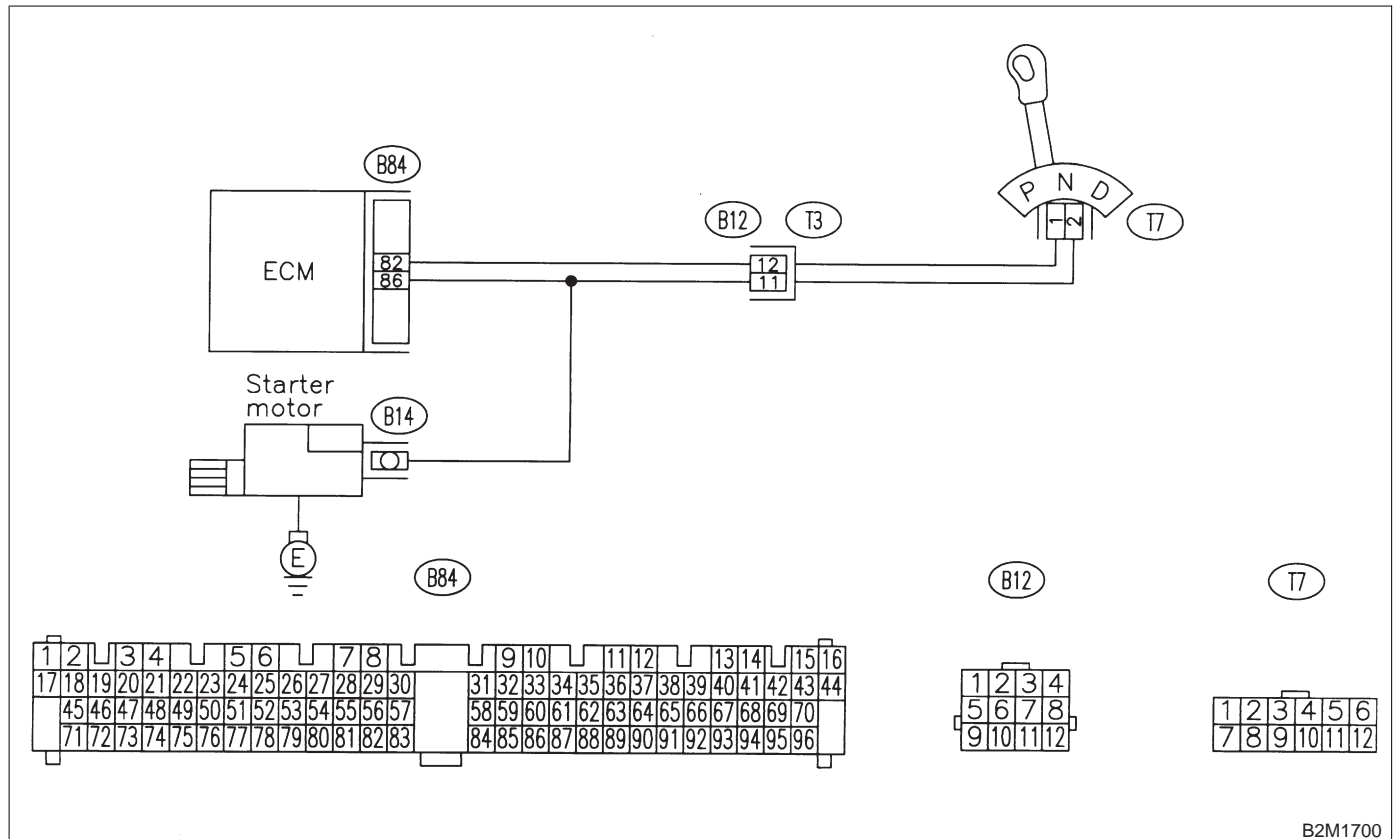
CE: DTC P1121 — NEUTRAL POSITION SWITCH CIRCUIT LOW INPUT [AT VEHICLES] —

NOTE:

Check neutral position switch circuit.

<Ref. to 2-7 [T10CH0].>

● **WIRING DIAGRAM:**



B2M1700

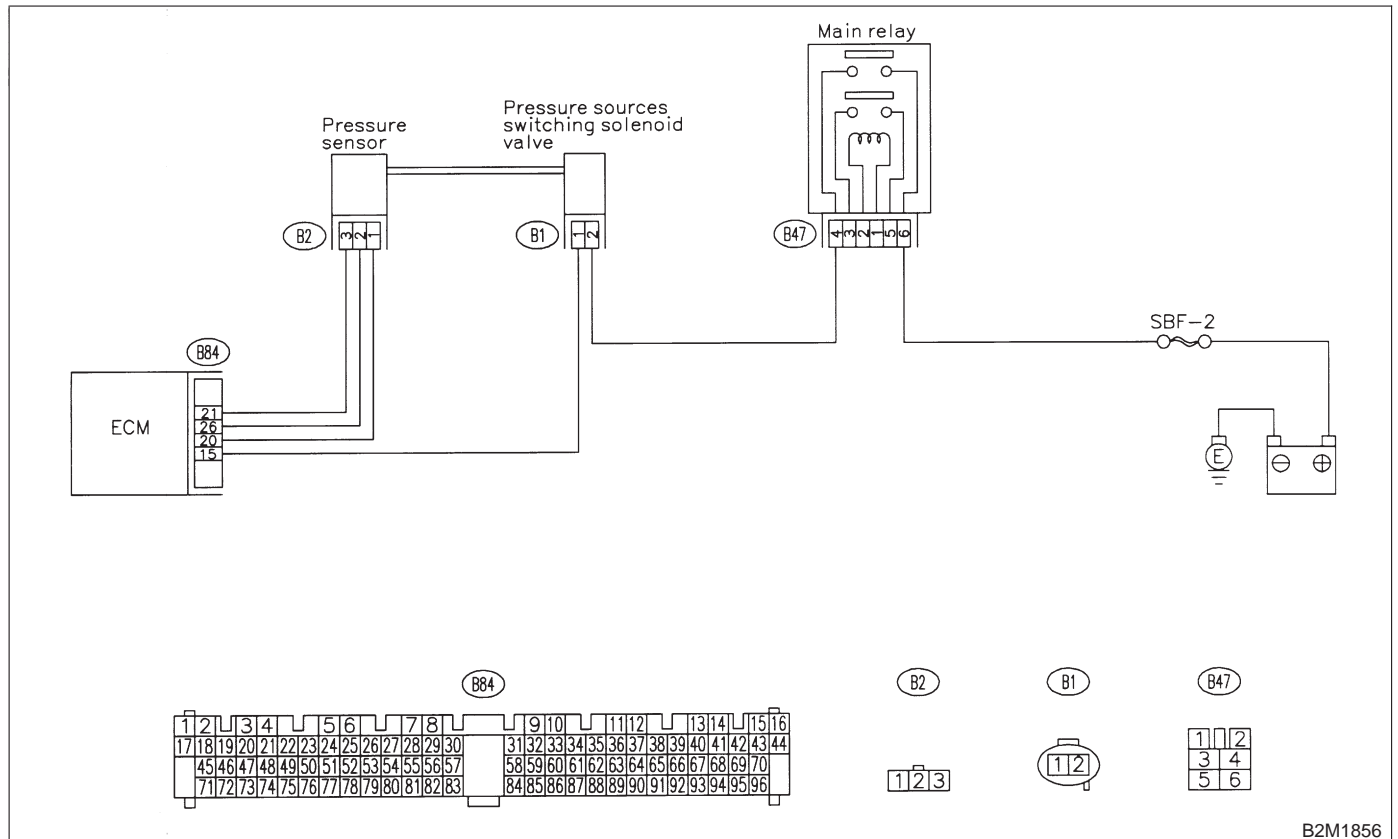
CF: DTC P1122 — PRESSURE SOURCES SWITCHING SOLENOID VALVE CIRCUIT HIGH INPUT —

NOTE:

Check pressure sources switching solenoid valve circuit.

<Ref. to 2-7 [T10CI0].>

● **WIRING DIAGRAM:**



B2M1856

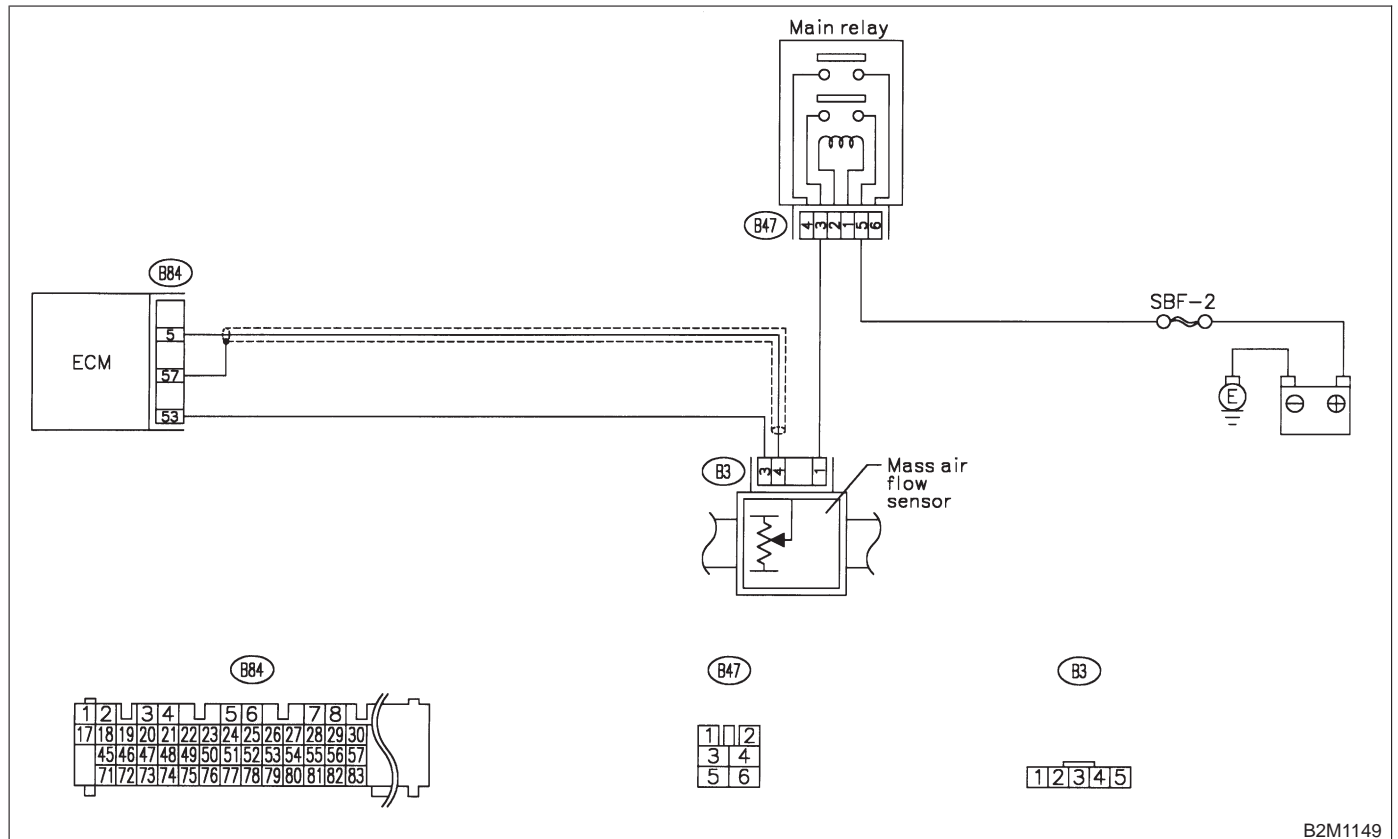
CG: DTC P1141 — MASS AIR FLOW SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM (HIGH INPUT) —

NOTE:

Check mass air flow sensor circuit.

<Ref. to 2-7 [T10CK0].>

● **WIRING DIAGRAM:**



B2M1149

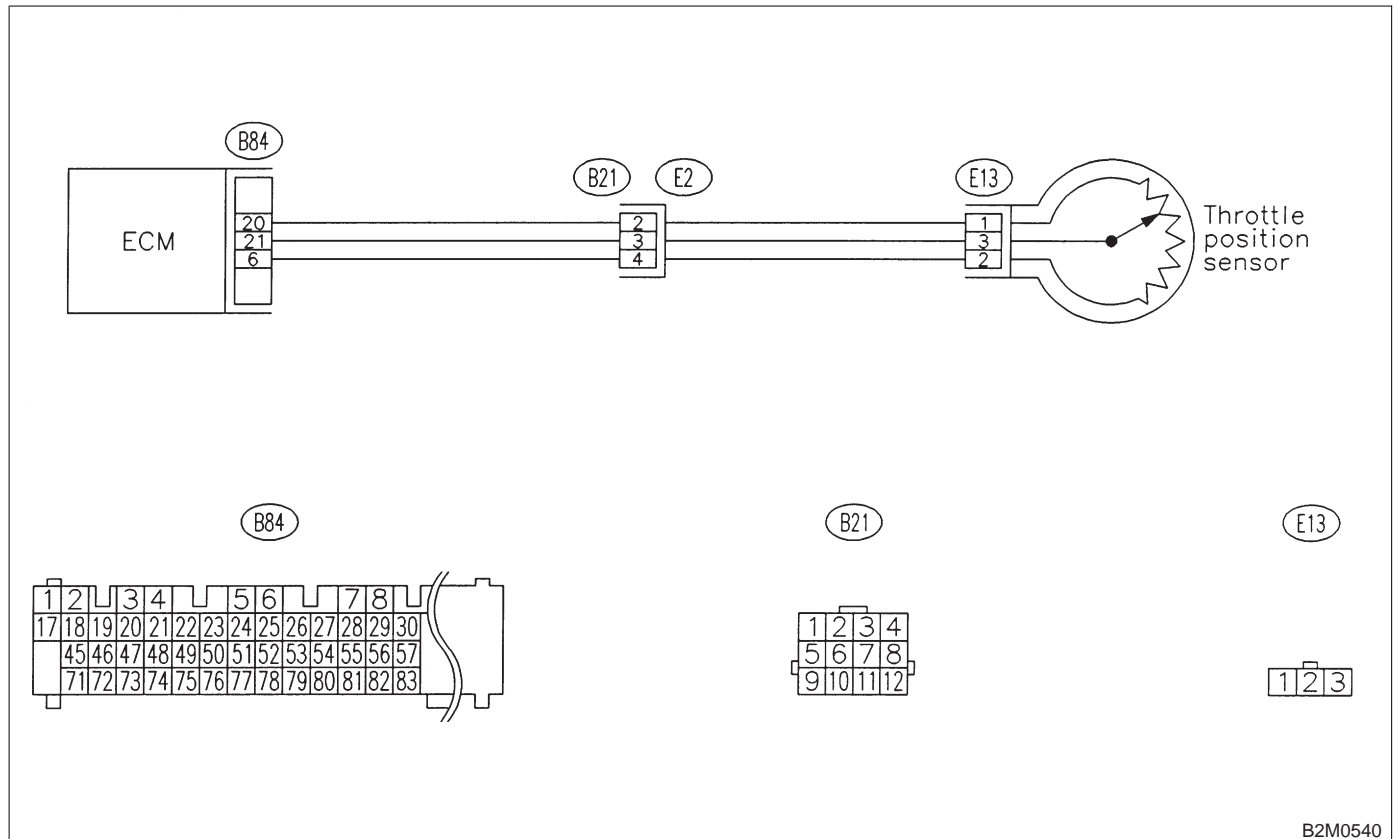
CH: DTC P1142 — THROTTLE POSITION SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM (LOW INPUT) —

NOTE:

Check throttle position sensor circuit.

<Ref. to 2-7 [T10CL0].>

● WIRING DIAGRAM:



B2M0540

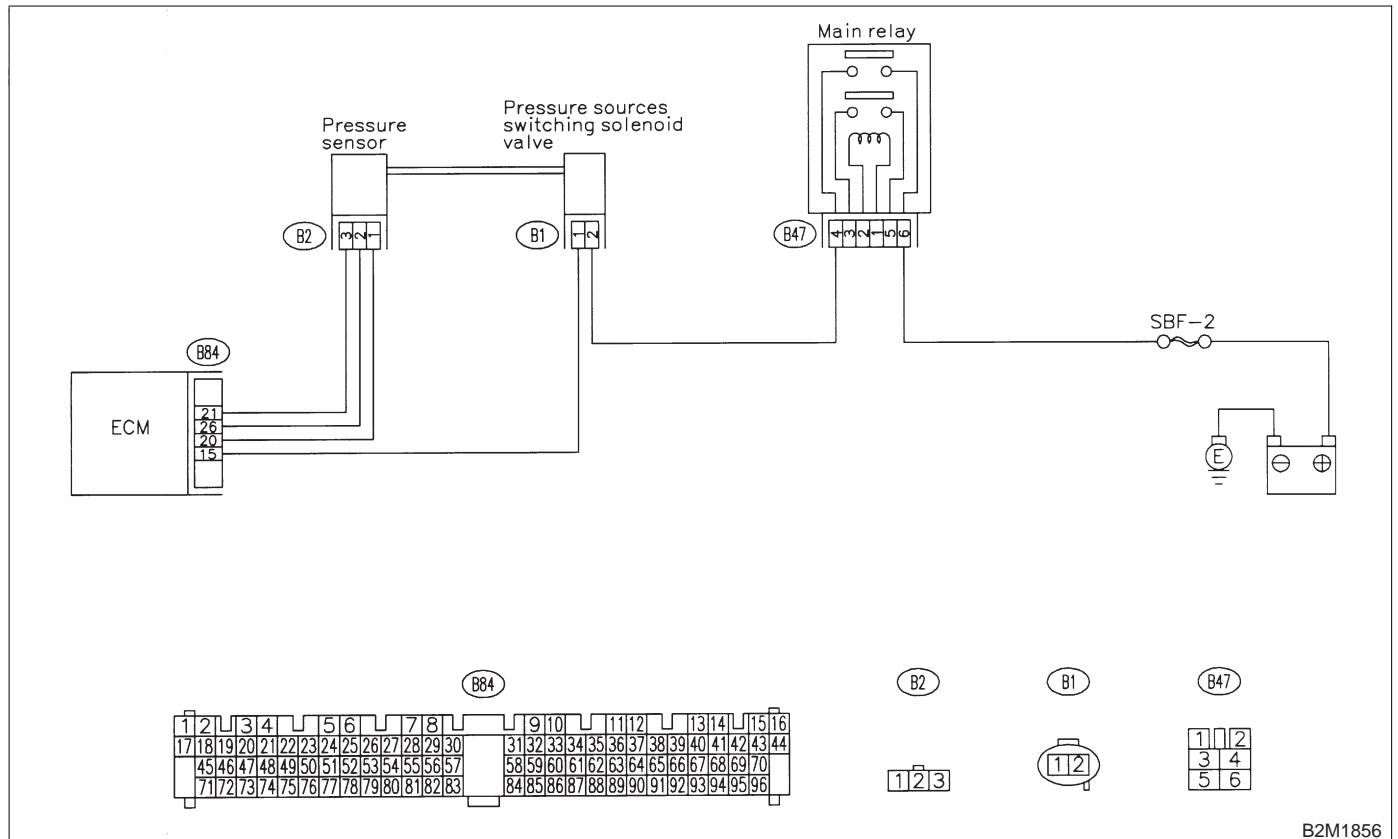
CI: DTC P1143 — PRESSURE SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM (LOW INPUT) —

NOTE:

Check pressure sensor circuit.

<Ref. to 2-7 [T10CM0].>

● **WIRING DIAGRAM:**



B2M1856

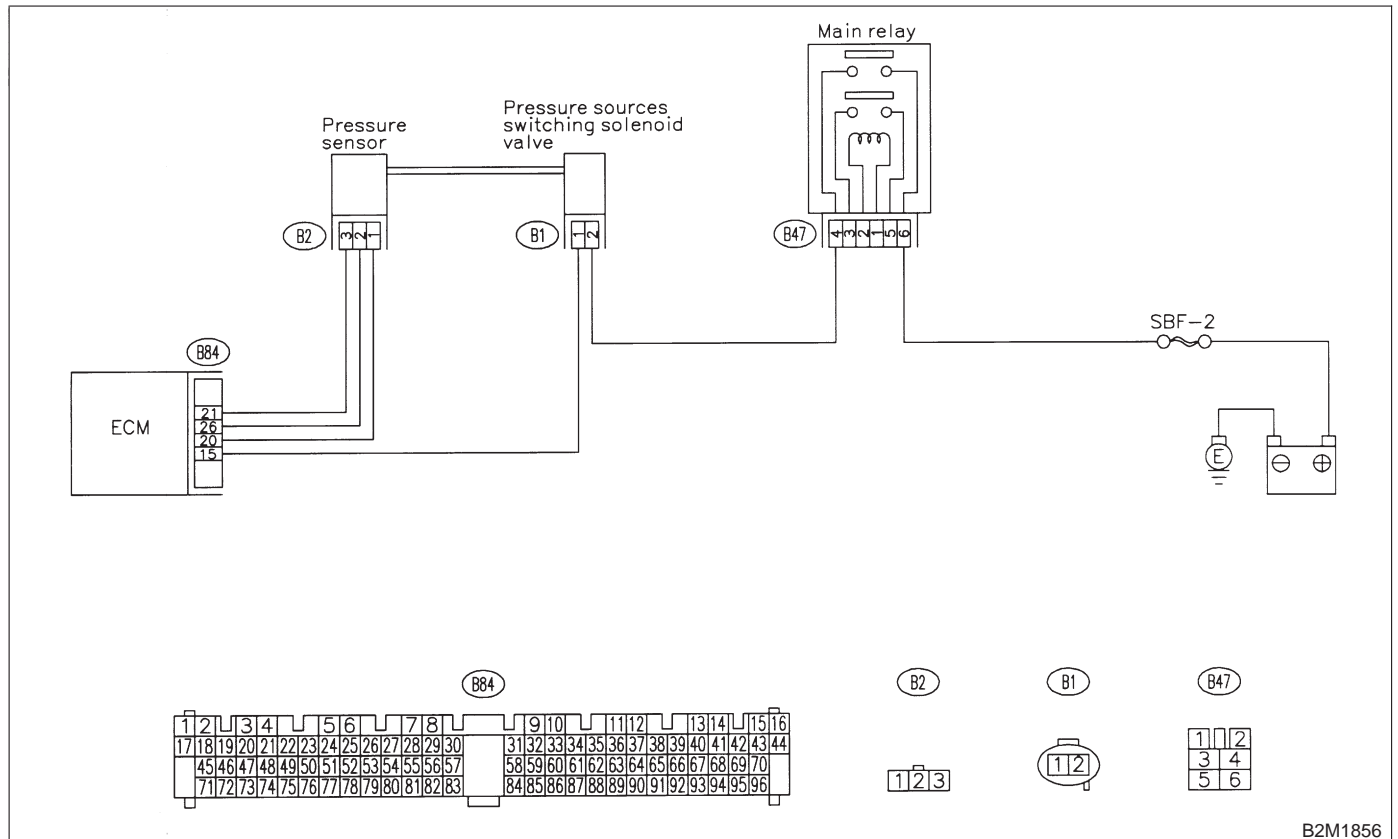
CJ: DTC P1144 — PRESSURE SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM (HIGH INPUT) —

NOTE:

Check pressure sensor circuit.

<Ref. to 2-7 [T10CN0].>

● **WIRING DIAGRAM:**



B2M1856

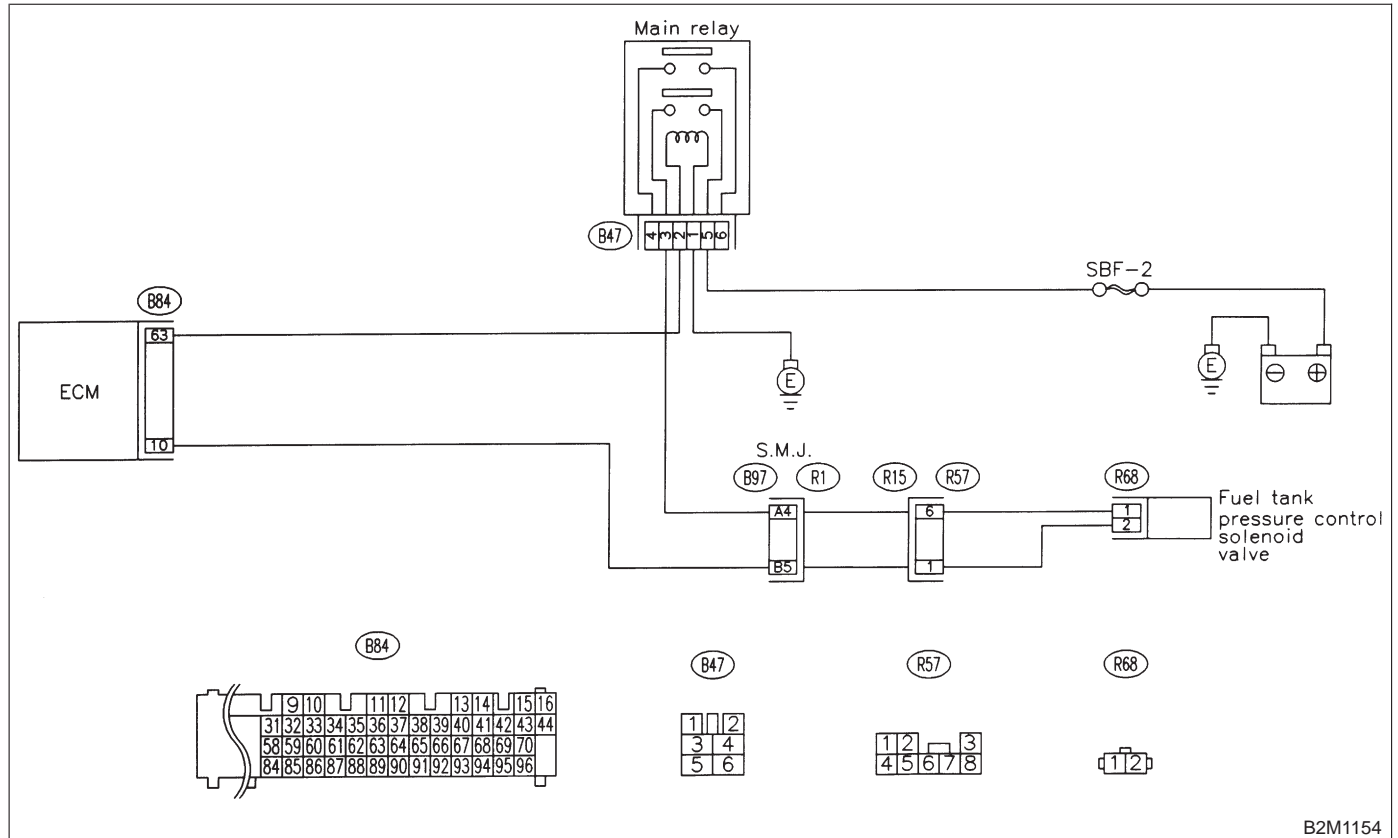
CK: DTC P1400 — FUEL TANK PRESSURE CONTROL SOLENOID VALVE CIRCUIT LOW INPUT —

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

CAUTION:

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

- **WIRING DIAGRAM:**

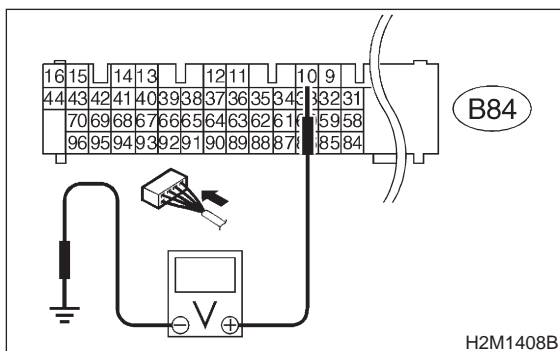


B2M1154

11CK1 : CHECK OUTPUT SIGNAL FROM ECM.

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

Connector & terminal
(B84) No. 10 (+) — Chassis ground (-):



- CHECK** : Is the voltage more than 10 V?
- YES** : Go to step 11CK2.
- NO** : Go to step 11CK3.

11CK2 : 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** : Contact with SOA service.

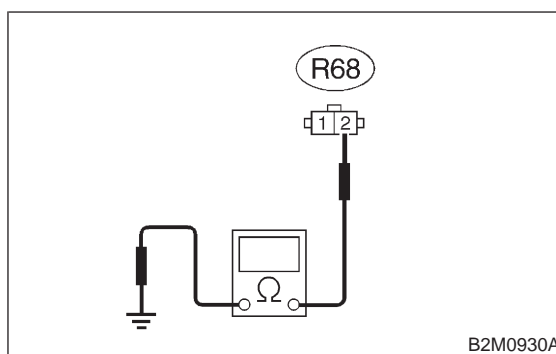
NOTE:

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

11CK3 : CHECK HARNESS BETWEEN FUEL TANK PRESSURE CONTROL SOLENOID VALVE AND ECM CONNECTOR.

- 1) Turn ignition switch to OFF.
- 2) Disconnect connectors from fuel tank pressure control solenoid valve and ECM.
- 3) Measure resistance of harness between fuel tank pressure control solenoid valve connector and chassis ground.

Connector & terminal
(R68) No. 2 — Chassis ground:



- CHECK** : Is the resistance less than 10 Ω?
- YES** : Repair ground short circuit in harness between ECM and fuel tank pressure control solenoid valve connector.
- NO** : Go to step 11CK4.

2-7 [T11CK4]

ON-BORAD DIAGNOSTICS II SYSTEM

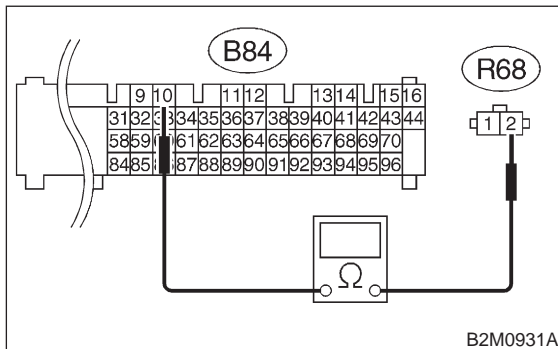
11. Diagnostic Chart with Trouble Code for RHD Vehicles

11CK4 : CHECK HARNESS BETWEEN FUEL TANK PRESSURE CONTROL SOLENOID VALVE AND ECM CONNECTOR.

Measure resistance of harness between ECM and fuel tank pressure control solenoid valve connector.

Connector & terminal

(B84) No. 10 — (R68) No. 2:



CHECK : Is the voltage less than 1 Ω?

YES : Go to step 11CK5.

NO : Repair harness and connector.

NOTE:

In this case, repair the following:

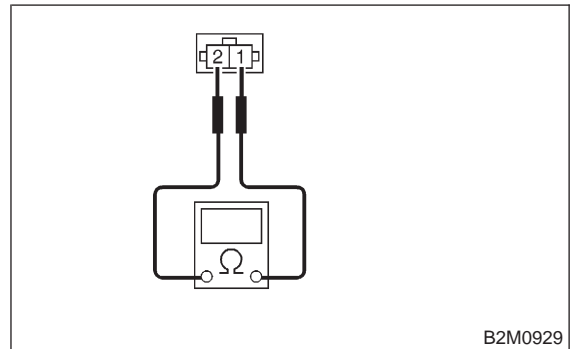
- Open circuit in harness between ECM and fuel tank pressure control solenoid valve connector
- Poor contact in coupling connectors (B97 and R57)

11CK5 : CHECK FUEL TANK PRESSURE CONTROL SOLENOID VALVE.

Measure resistance between fuel tank pressure control solenoid valve terminals.

Terminals

No. 1 — No. 2:



CHECK : Is the resistance between 10 and 100 Ω?

YES : Go to step 11CK6.

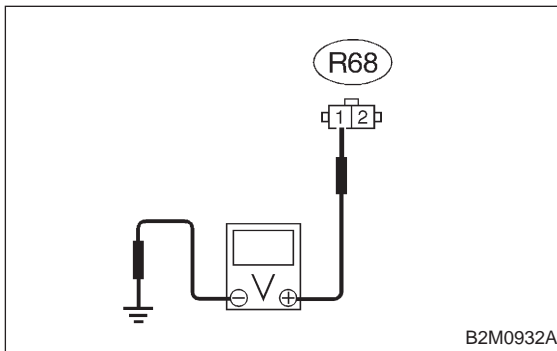
NO : Replace fuel tank pressure control solenoid valve.

11CK6 : CHECK POWER SUPPLY TO FUEL TANK PRESSURE CONTROL SOLENOID VALVE.

- 1) Turn ignition switch to ON.
- 2) Measure voltage between fuel tank pressure control solenoid valve and chassis ground.

Connector & terminal

(R68) No. 1 (+) — Chassis ground (-):



CHECK : **Is the voltage more than 10 V?**

YES : Go to step 11CK7.

NO : Repair harness and connector.

NOTE:

In this case, repair the following:

- Open circuit in harness between main relay and fuel tank pressure control solenoid valve connector
- Poor contact in coupling connectors (B97 and R57)
- Poor contact in main relay connector

11CK7 : CHECK POOR CONTACT.

Check poor contact in fuel tank pressure control solenoid valve connector.

<Ref. to FOREWORD [T3C1].>

CHECK : **Is there poor contact in fuel tank pressure control solenoid valve connector?**

YES : Repair poor contact in fuel tank pressure control solenoid valve connector.

NO : Contact with SOA service.

NOTE:

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

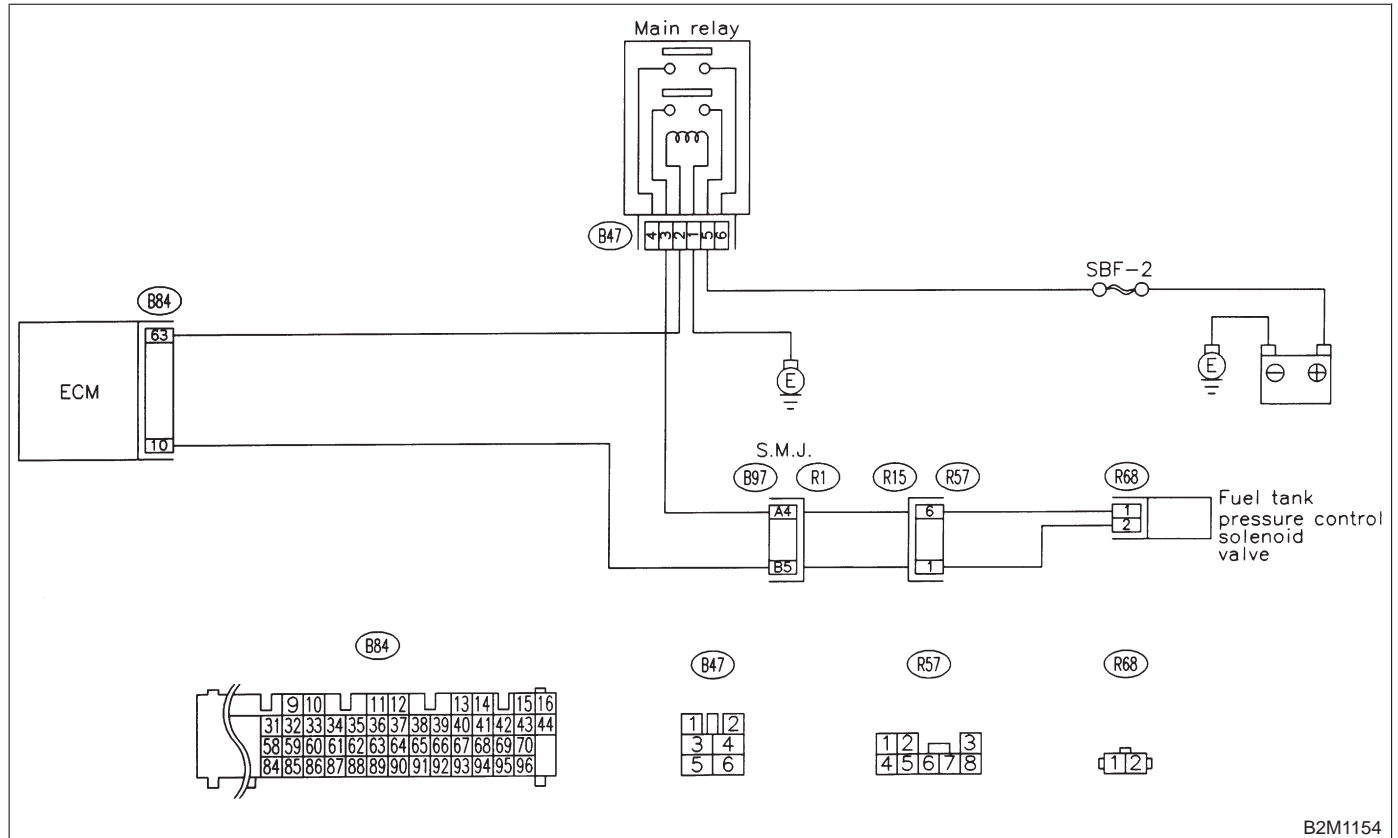
CL: DTC P1420 — FUEL TANK PRESSURE CONTROL SOLENOID VALVE CIRCUIT HIGH INPUT —

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

CAUTION:

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

- **WIRING DIAGRAM:**

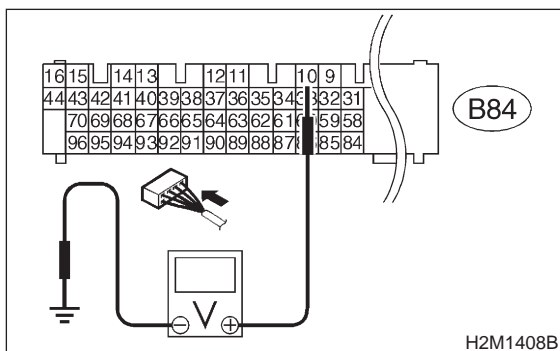


B2M1154

11CL1 : CHECK OUTPUT SIGNAL FROM ECM.

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

Connector & terminal
(B84) No. 10 (+) — Chassis ground (-):



- CHECK** : *Is the voltage more than 10 V?*
- YES** : Go to step 11CL3.
- NO** : Go to step 11CL2.

11CL2 : CHECK POOR CONTACT.

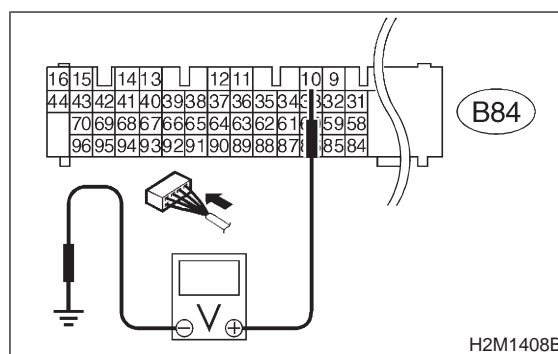
Check poor contact in ECM connector. <Ref. to FOREWORD [T3C1].>

- CHECK** : *Is there poor contact in ECM connector?*
- YES** : Repair poor contact in ECM connector.
- NO** : Replace ECM.

11CL3 : CHECK HARNESS BETWEEN FUEL TANK PRESSURE CONTROL SOLENOID VALVE AND ECM CONNECTOR.

- 1) Turn ignition switch to OFF.
- 2) Disconnect connector from fuel tank pressure control solenoid valve.
- 3) Turn ignition switch to ON.
- 4) Measure voltage between ECM and chassis ground.

Connector & terminal
(B84) No. 10 (+) — Chassis ground (-):



- CHECK** : *Is the voltage more than 10 V?*
- YES** : Repair battery short circuit in harness between ECM and fuel tank pressure control solenoid valve connector. After repair, replace ECM.
- NO** : Go to step 11CL4.

2-7 [T11CL4]

ON-BORAD DIAGNOSTICS II SYSTEM

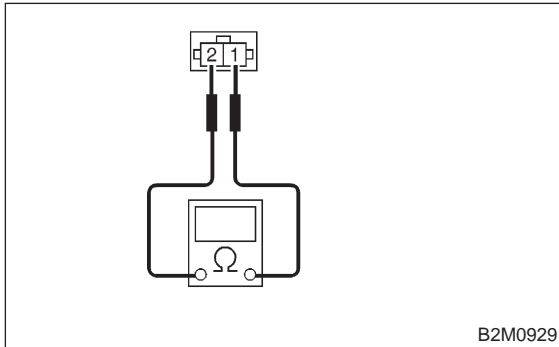
11. Diagnostic Chart with Trouble Code for RHD Vehicles

11CL4 : CHECK FUEL TANK PRESSURE CONTROL SOLENOID VALVE.

- 1) Turn ignition switch to OFF.
- 2) Measure resistance between fuel tank pressure control solenoid valve terminals.

Terminals

No. 1 — No. 2:



- CHECK** : *Is the resistance less than 1 Ω?*
- YES** : Replace fuel tank pressure control solenoid valve and ECM.
- NO** : Go to step **11CL5**.

11CL5 : 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.

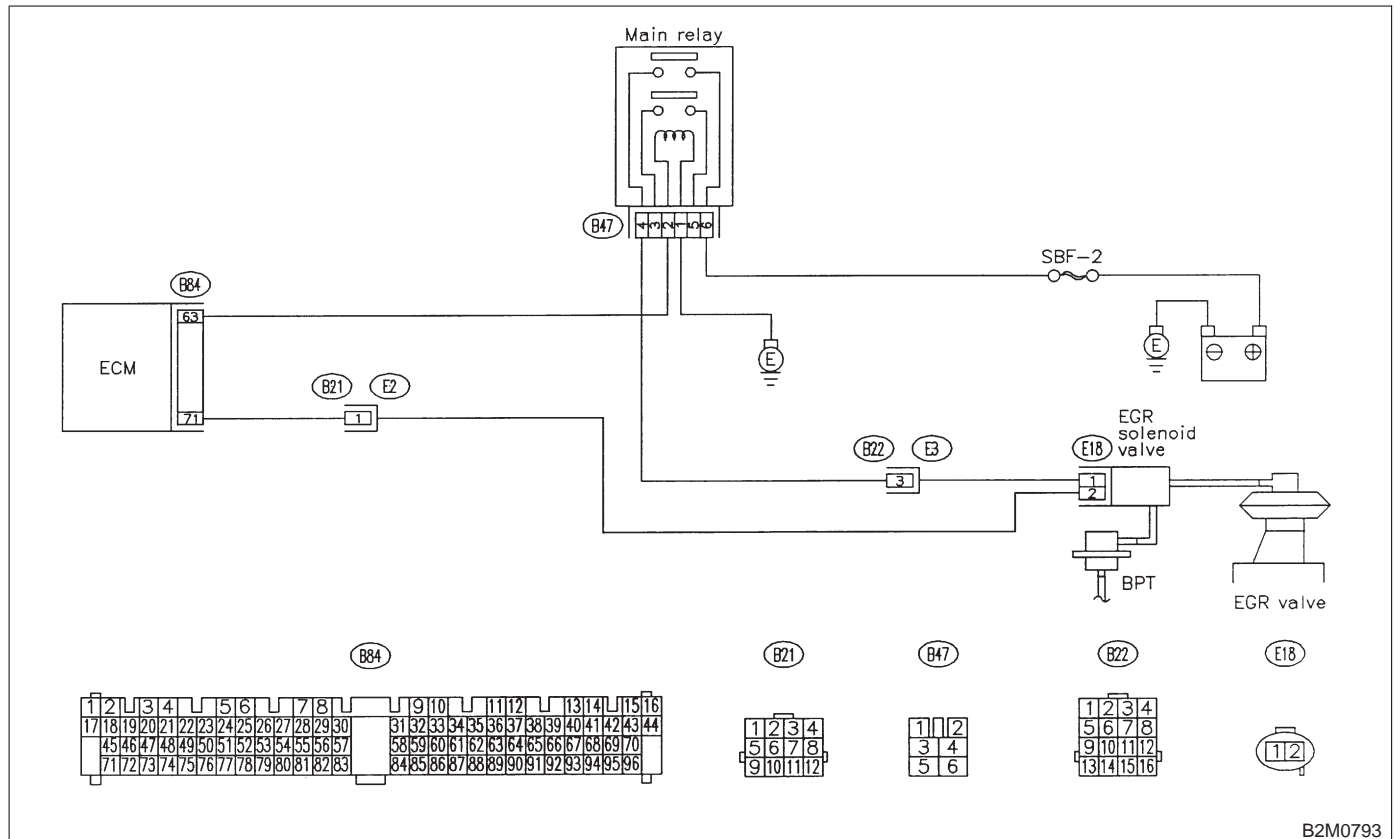
CM: DTC P1421 — EXHAUST GAS RECIRCULATION CIRCUIT HIGH INPUT

NOTE:

Check exhaust gas recirculation control solenoid valve circuit.

<Ref. to 2-7 [T10CQ0].>

● WIRING DIAGRAM:



B2M0793

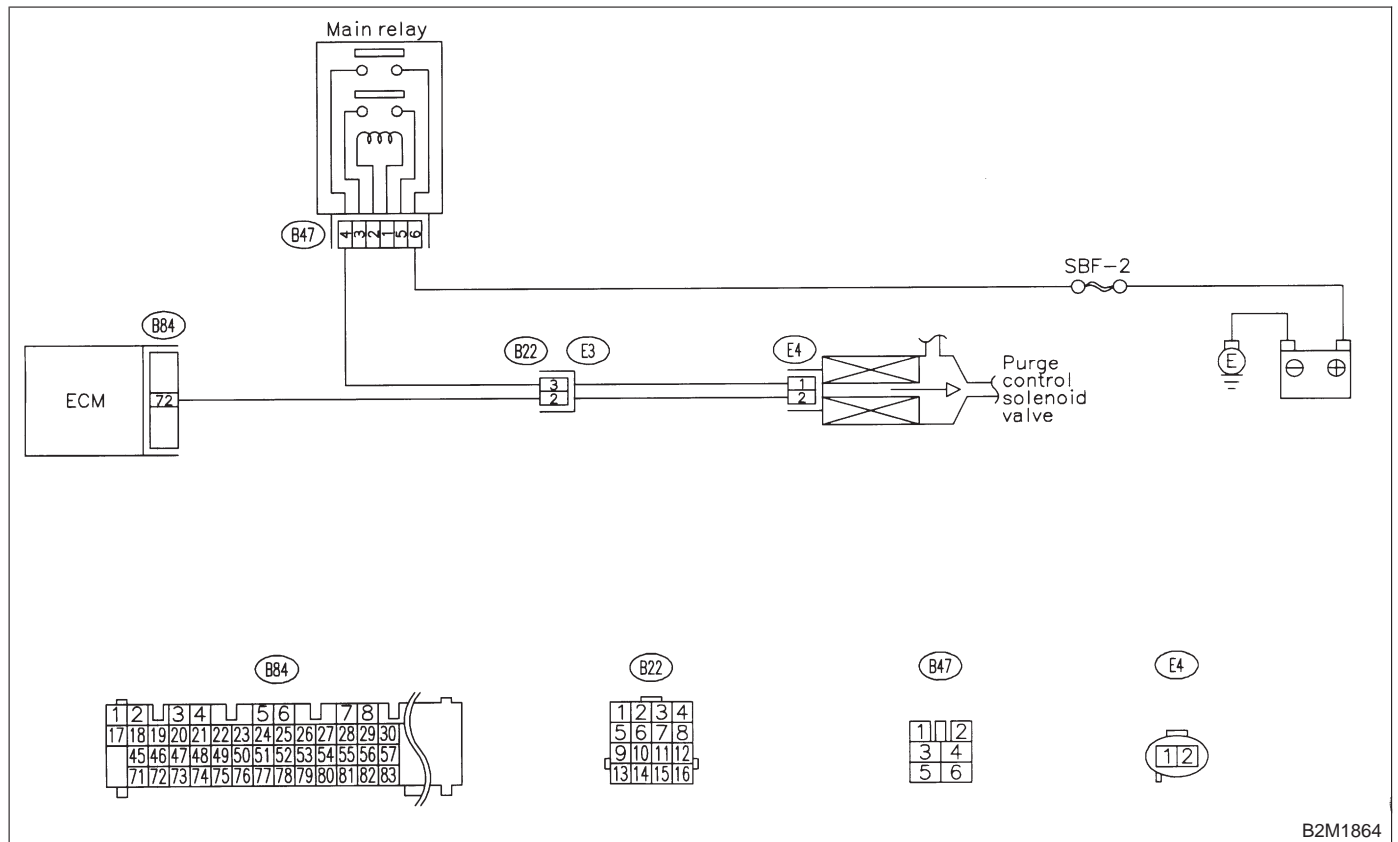
CN: DTC P1422 — EVAPORATIVE EMISSION CONTROL SYSTEM PURGE CONTROL VALVE CIRCUIT HIGH INPUT —

NOTE:

Check canister purge control system.

<Ref. to 2-7 [T10CR0].>

● **WIRING DIAGRAM:**



B2M1864

MEMO:

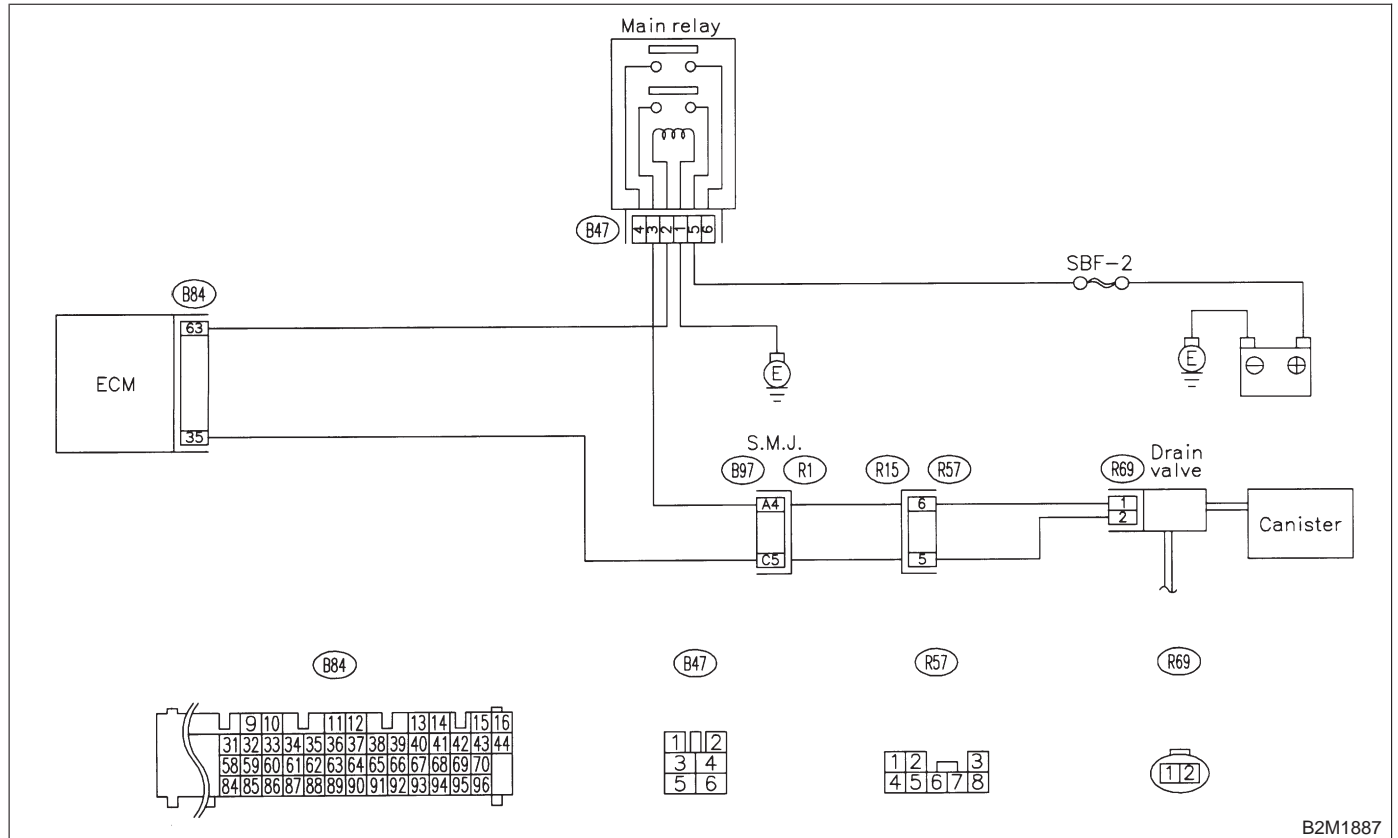
CO: DTC P1423 — EVAPORATIVE EMISSION CONTROL SYSTEM VENT CONTROL HIGH INPUT —

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

CAUTION:

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

- **WIRING DIAGRAM:**

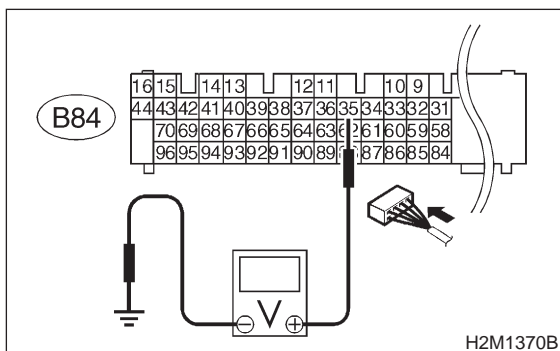


B2M1887

11C01 : 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 11C03.
NO : Go to step 11C02.

11C02 : CHECK POOR CONTACT.

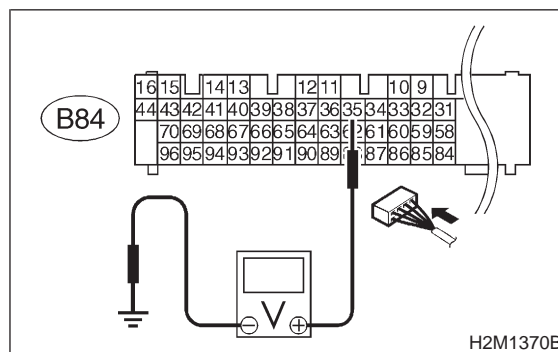
Check poor contact in ECM connector. <Ref. to FOREWORD [T3C1].>

- CHECK** : Is there poor contact in ECM connector?
YES : Repair poor contact in ECM connector.
NO : Replace ECM.

11C03 : 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 (-):

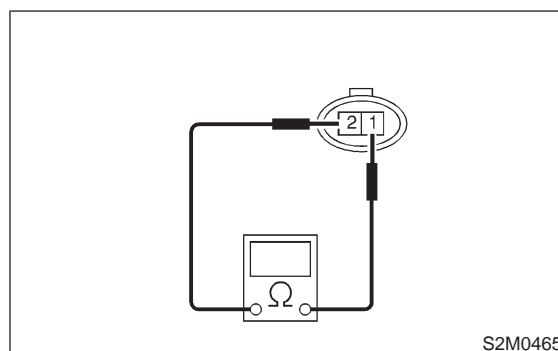


- CHECK** : Is the voltage more than 10 V?
YES : Repair battery short circuit in harness between ECM and drain valve connector. After repair, replace ECM.
NO : Go to step 11C04.

11C04 : 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 and ECM.
NO : Go to step 11C05.

2-7 [T11C05]

ON-BORAD DIAGNOSTICS II SYSTEM

11. Diagnostic Chart with Trouble Code for RHD Vehicles

11C05 : 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.

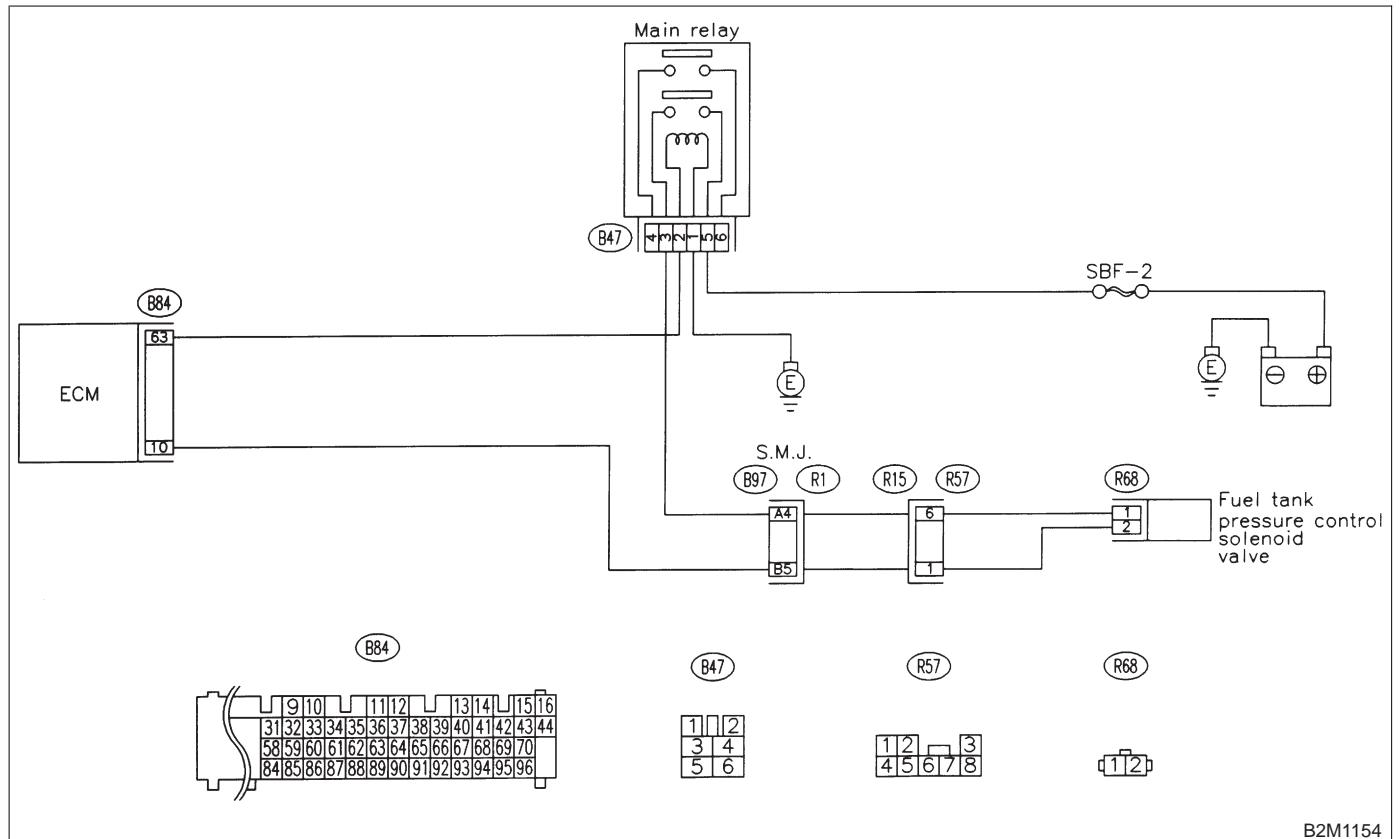
CP: DTC P1440 — FUEL TANK PRESSURE CONTROL SYSTEM FUNCTION PROBLEM (LOW INPUT) —

NOTE:

Check fuel tank pressure control system.

<Ref. to 2-7 [T10CU0].>

● **WIRING DIAGRAM:**



B2M1154

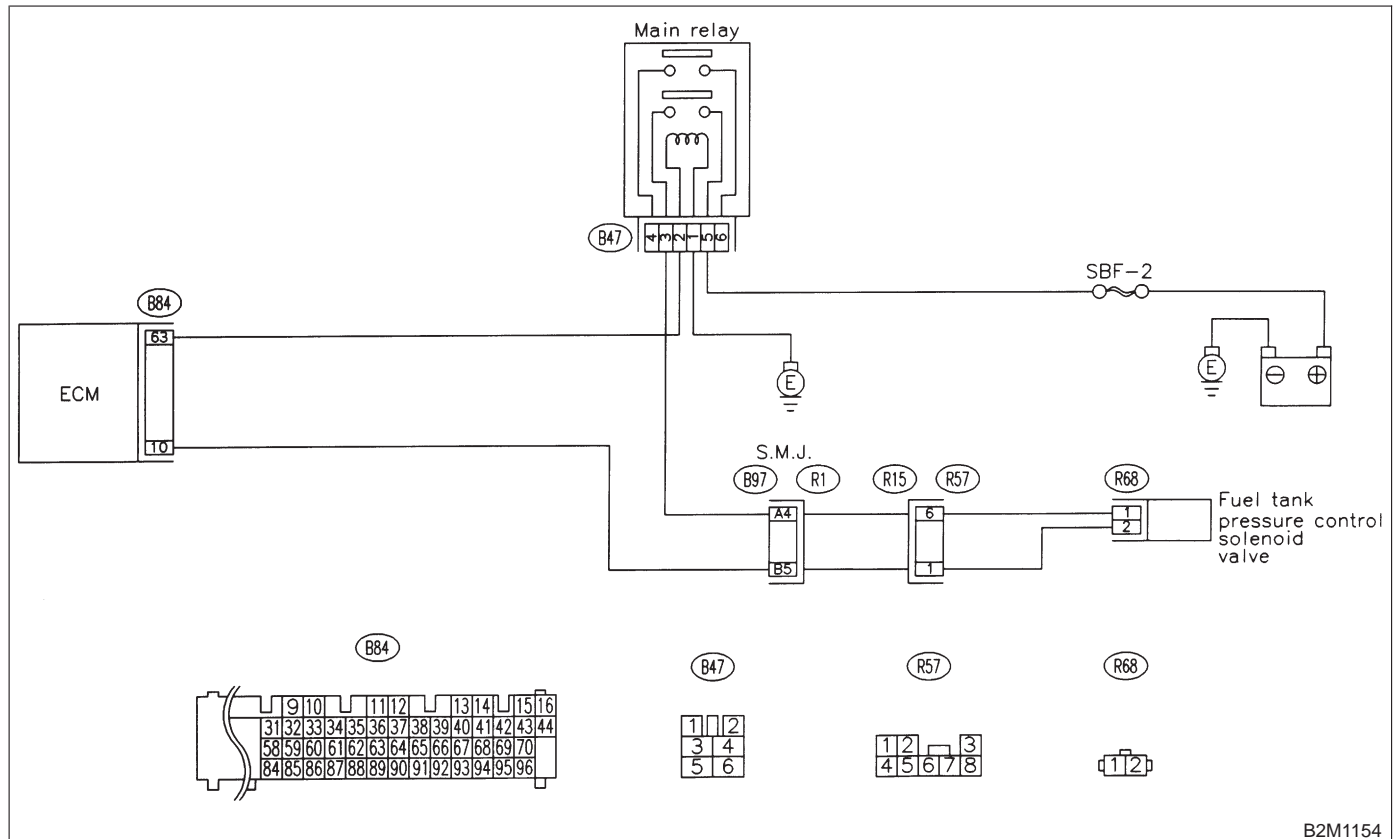
CQ: DTC P1441 — FUEL TANK PRESSURE CONTROL SYSTEM FUNCTION PROBLEM (HIGH INPUT) —

NOTE:

Check fuel tank pressure control system.

<Ref. to 2-7 [T10CV0].>

● **WIRING DIAGRAM:**



B2M1154

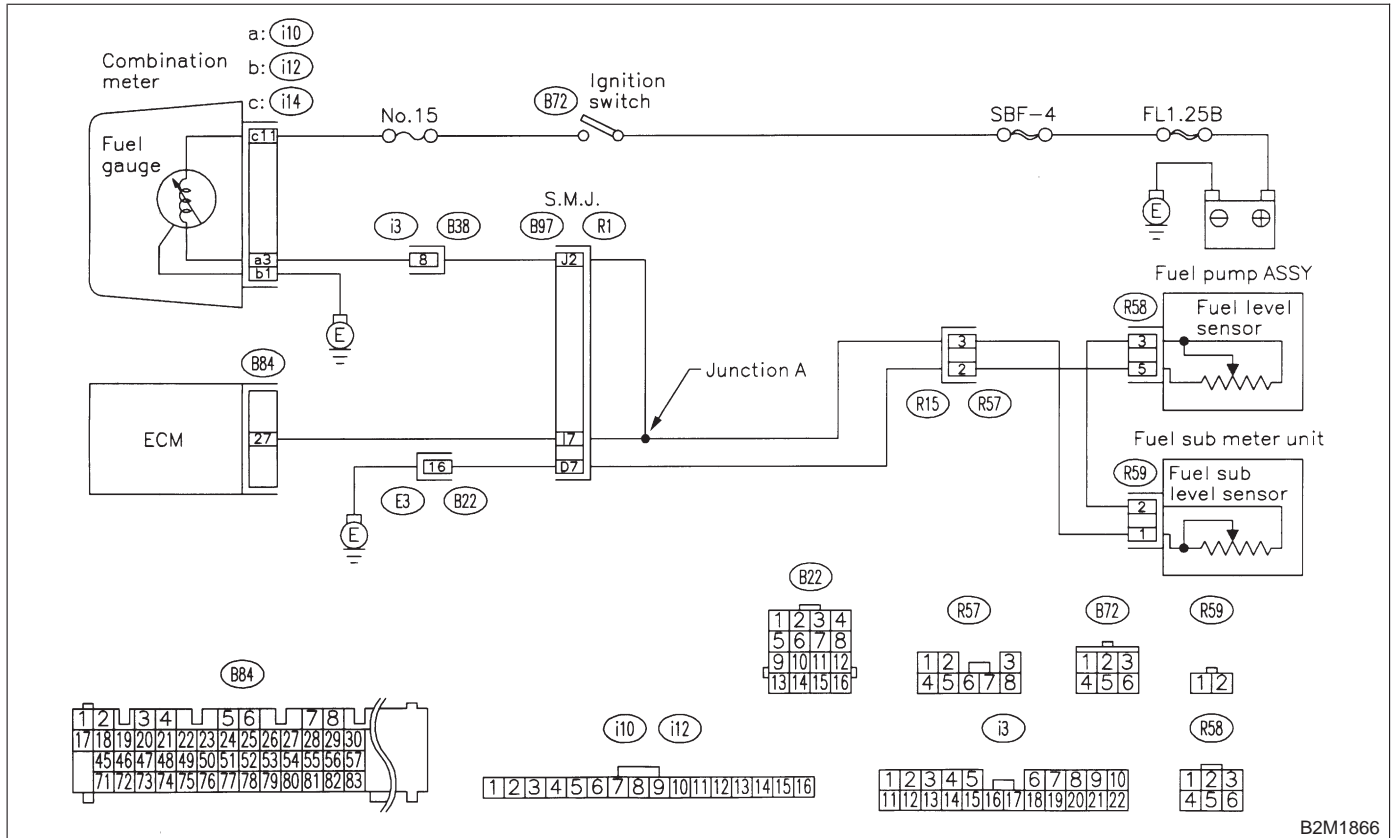
CR: DTC P1442 — FUEL LEVEL SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM 2 —

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

CAUTION:

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

● **WIRING DIAGRAM:**



B2M1866

11CR1 : CHECK ANY OTHER DTC ON DISPLAY.

- CHECK** : Does the Subaru select monitor or OBD-II general scan tool indicate DTC P0461, P0462 or P0463?
- YES** : Inspect DTC P0461, P0462 or P0463 using “11. Diagnostics Chart with Trouble Code for RHD Vehicles”. <Ref. to 2-7 [T1100].>

NOTE:

In this case, it is not necessary to inspect this trouble.

- NO** : Replace fuel sending unit and fuel sub meter unit.

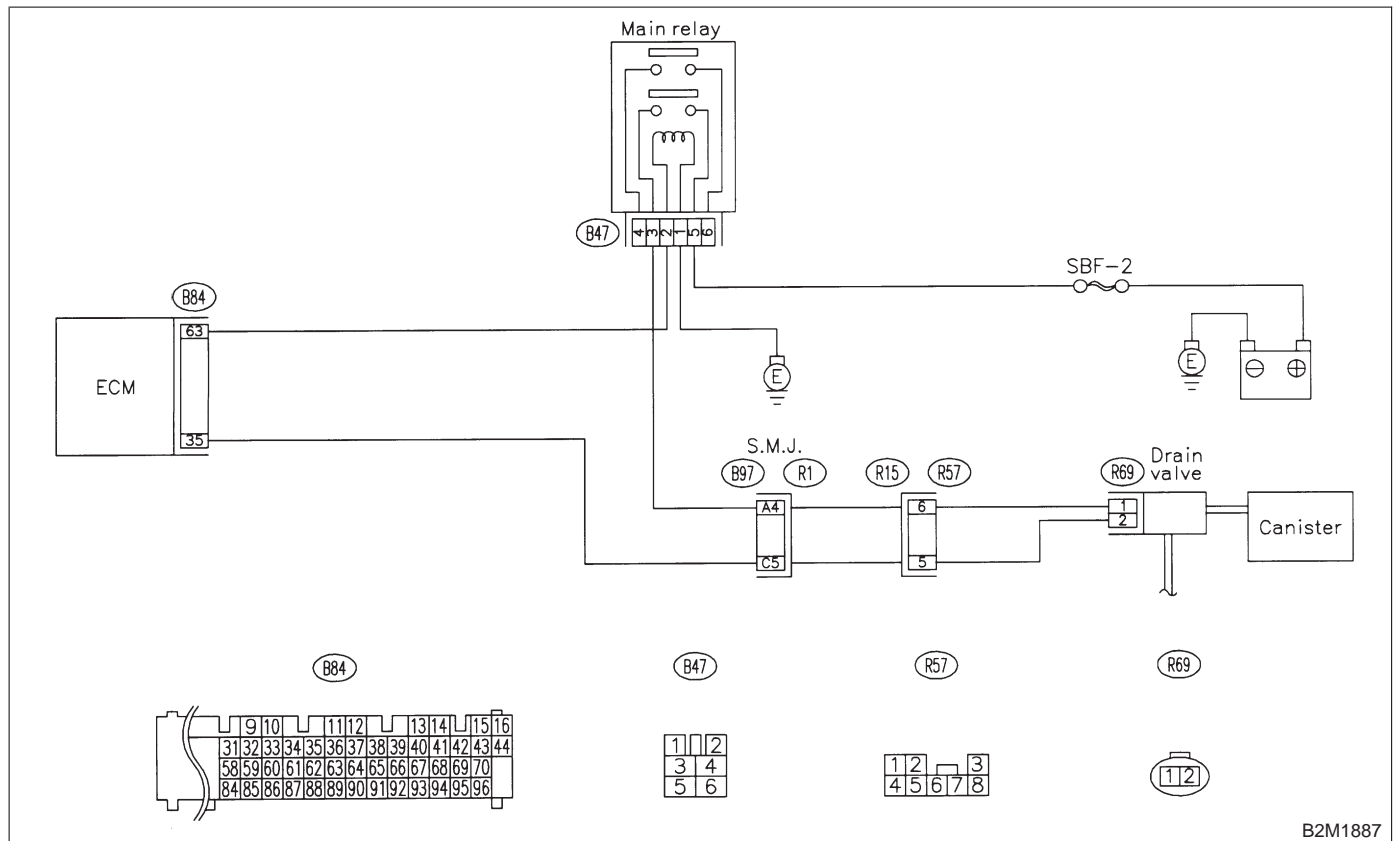
CS: DTC P1443 — EVAPORATIVE EMISSION CONTROL SYSTEM VENT CONTROL FUNCTION PROBLEM —

- **DTC DETECTING CONDITION:**
 - Immediately after fault occurrence
- **TROUBLE SYMPTOM:**
 - Improper fuel supply

CAUTION:

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

● **WIRING DIAGRAM:**



B2M1887

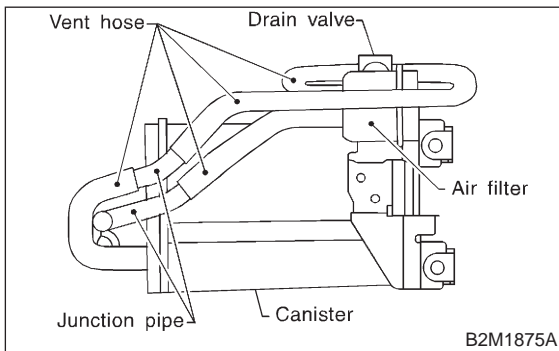
11CS1 : CHECK ANY OTHER DTC ON DISPLAY.

- CHECK** : *Is there any other DTC on display?*
- YES** : Inspect the relevant DTC using "11. Diagnostics Chart with Trouble Code for RHD Vehicles". <Ref. to 2-7 [T1100].>
- NO** : Go to step **11CS2**.

11CS2 : CHECK VENT LINE HOSES.

Check the following items.

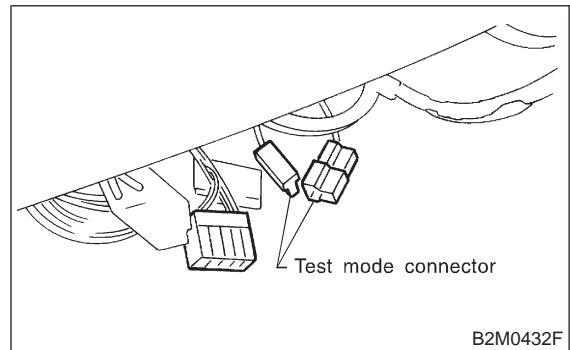
- Clogging of vent hoses between canister and drain valve
- Clogging of vent hose between drain valve and air filter
- Clogging of vent hose between air filter and junction pipe
- Clogging of junction pipe
- Clogging of air filter



- CHECK** : *Is there a fault in vent line?*
- YES** : Repair or replace the faulty part.
- NO** : Go to step 11CS3.

11CS3 : CHECK DRAIN VALVE OPERATION.

- 1) Turn ignition switch to OFF.
- 2) Connect test mode connector at the lower portion of instrument panel (on the driver's side), to the side of the center console box.



- 3) Turn ignition switch to ON.

NOTE:

Drain 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 drain valve produce operating sound?*

- YES** : Contact with SOA service.

NOTE:

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

- NO** : Replace drain valve.

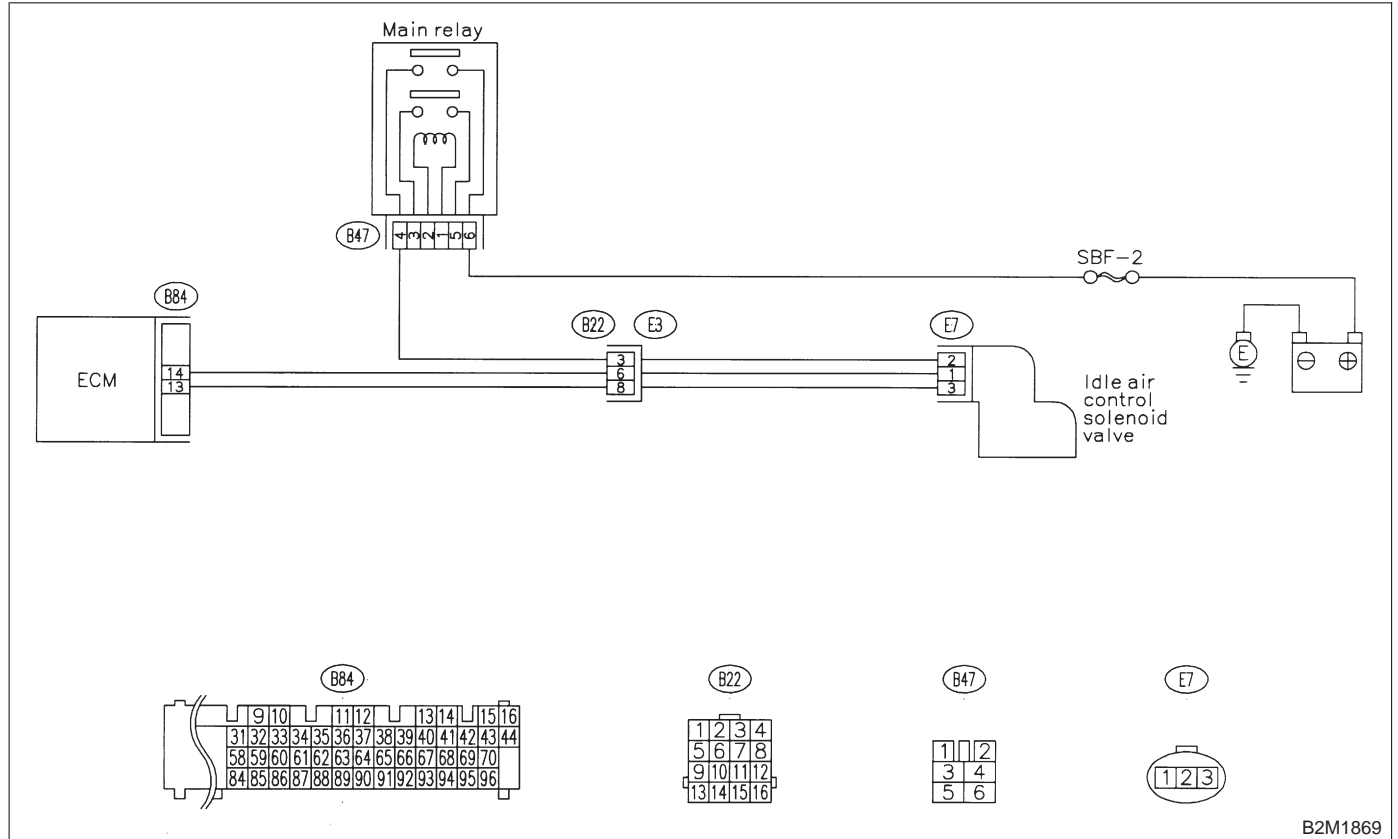
CT: DTC P1507 — IDLE CONTROL SYSTEM MALFUNCTION (FAIL-SAFE) —

NOTE:

Check idle air control system.

<Ref. to 2-7 [T10CY0].>

● **WIRING DIAGRAM:**



B2M1869

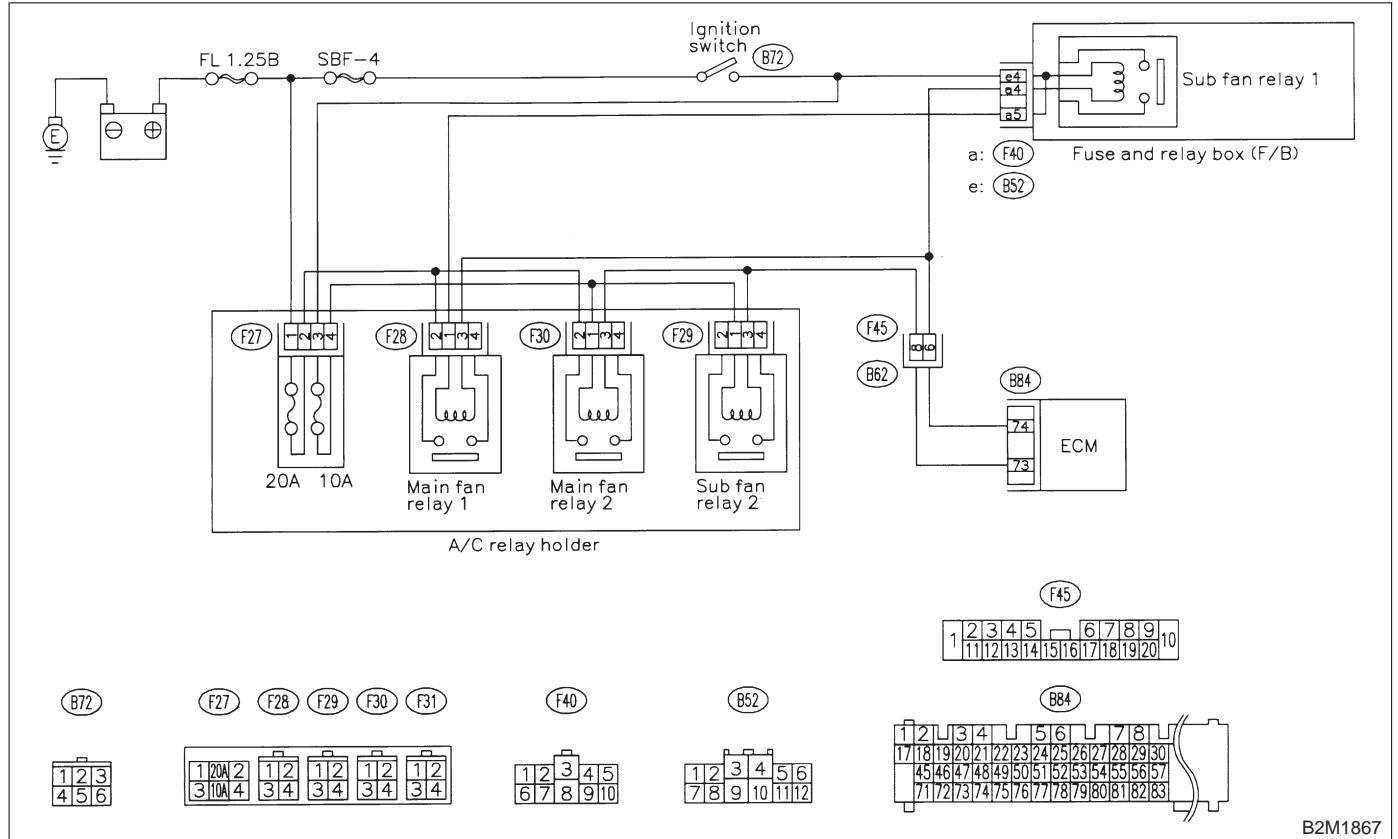
CU: DTC P1520 — COOLING FAN RELAY 1 CIRCUIT HIGH INPUT —

NOTE:

Check radiator fan relay 1 circuit.

<Ref. to 2-7 [T10CZ0].>

● **WIRING DIAGRAM:**



B2M1867

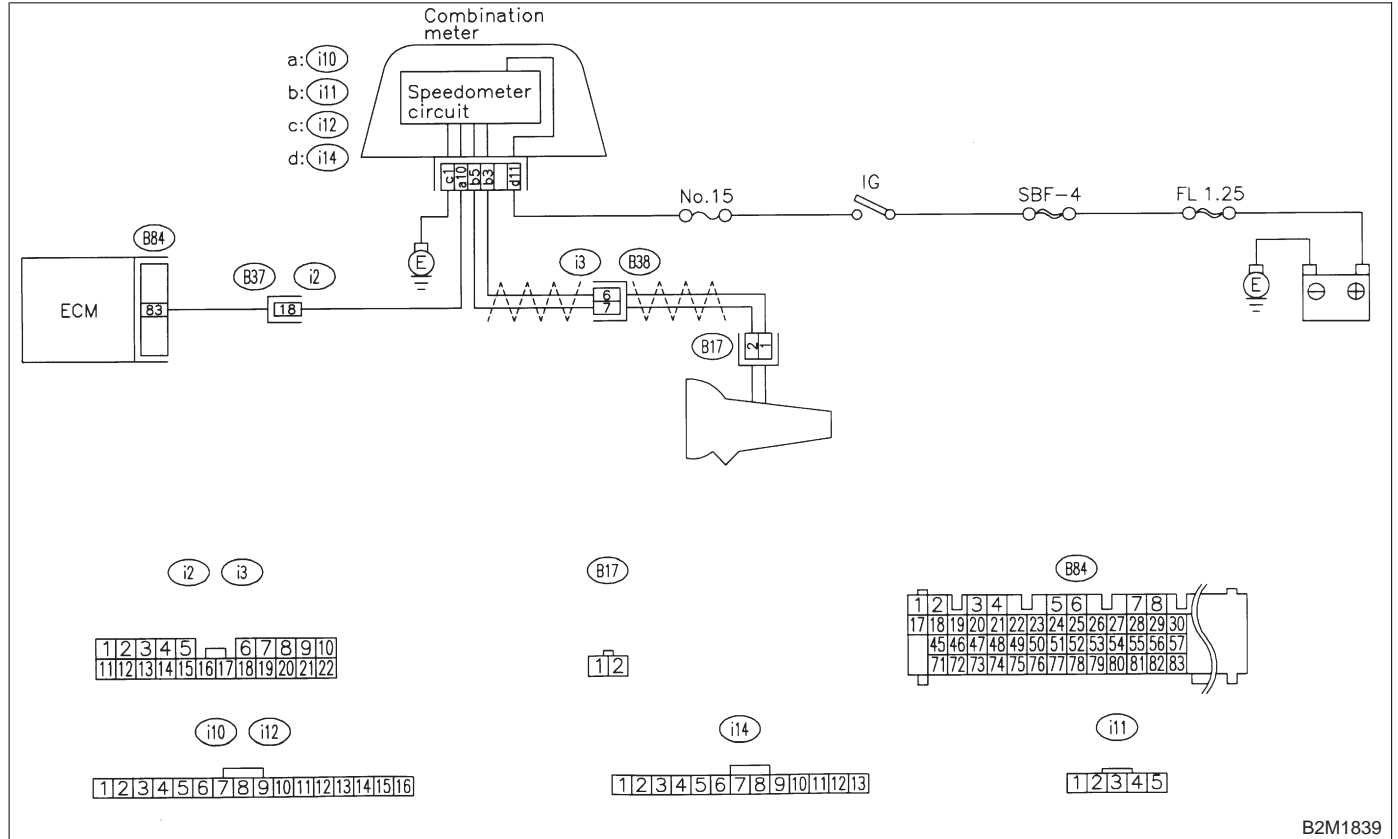
CV: DTC P1540 — VEHICLE SPEED SENSOR MALFUNCTION 2 —

NOTE:

Check vehicle speed sensor 2 circuit.

<Ref. to 2-7 [T10DA0].>

● **WIRING DIAGRAM:**



B2M1839

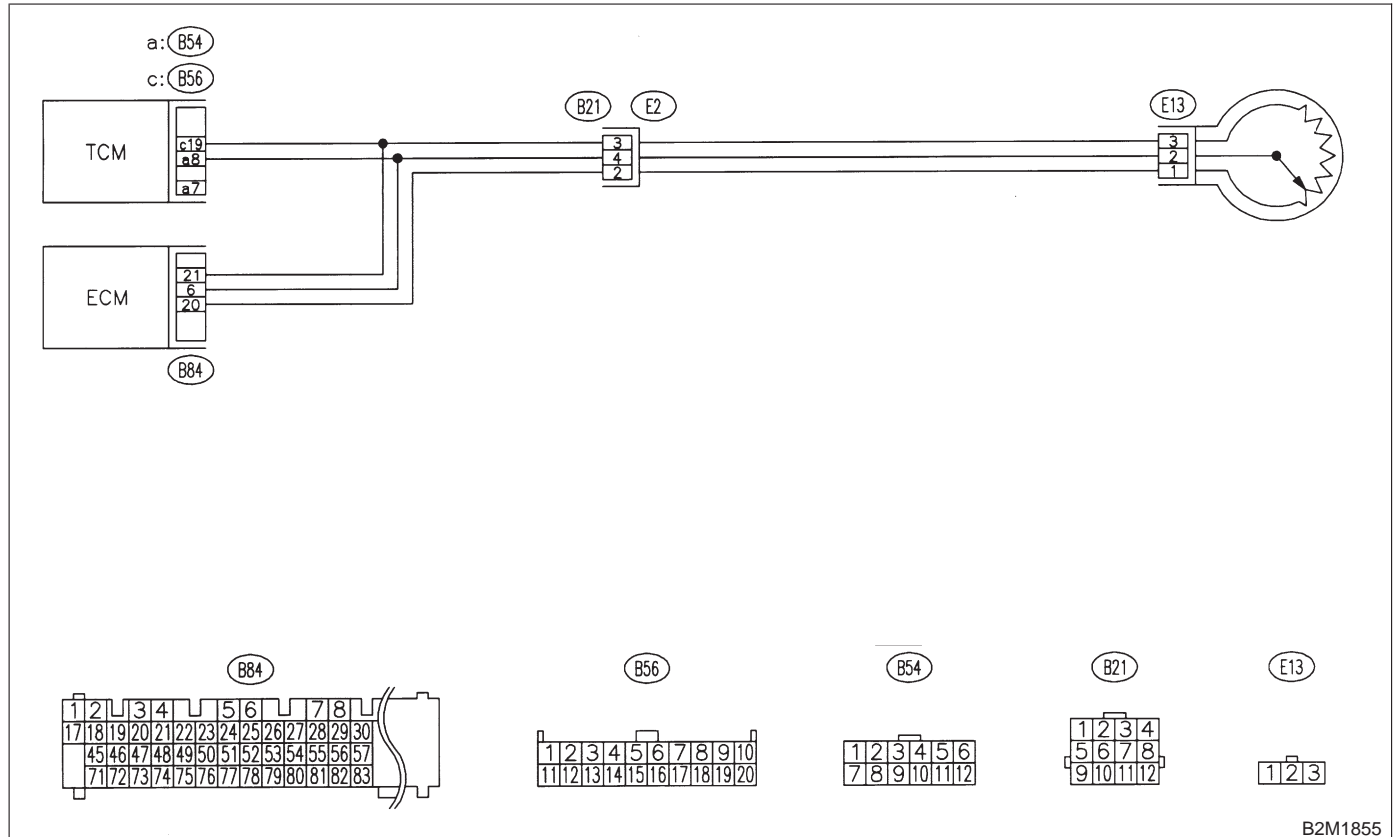
CW: DTC P1700 — THROTTLE POSITION SENSOR CIRCUIT MALFUNCTION FOR AUTOMATIC TRANSMISSION —

NOTE:

Check throttle position sensor circuit for automatic transmission.

<Ref. to 2-7 [T10DB0].>

● WIRING DIAGRAM:



B2M1855

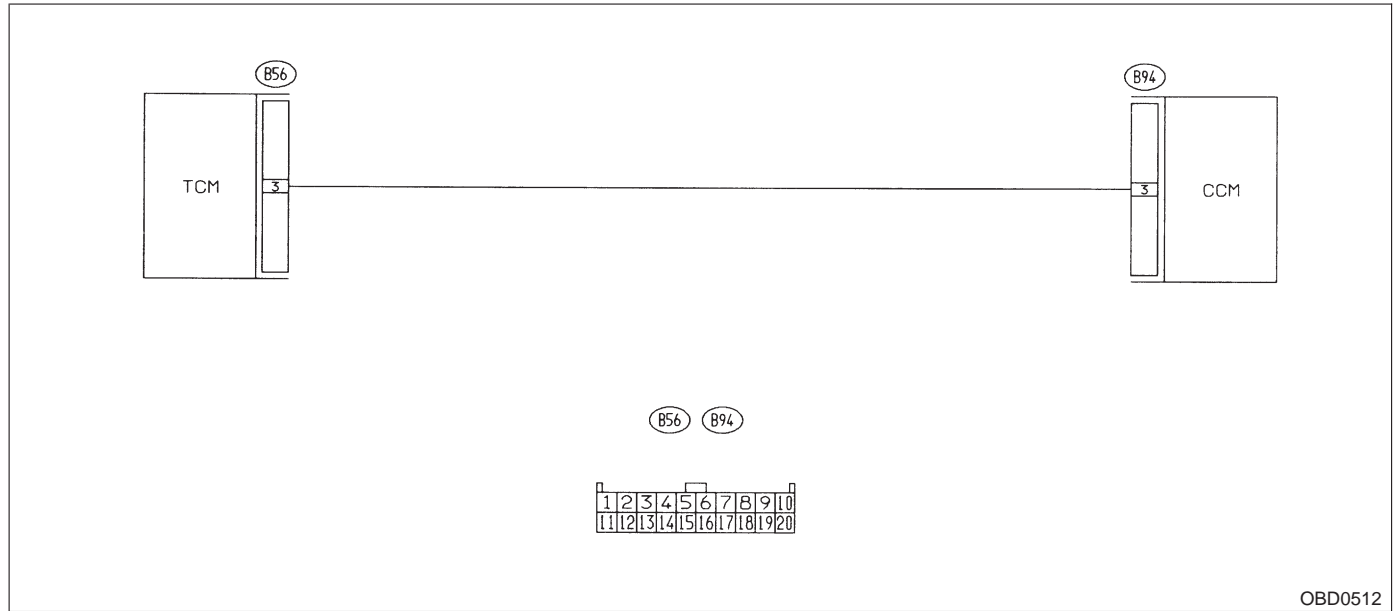
CX: DTC P1701 — CRUISE CONTROL SET SIGNAL CIRCUIT MALFUNCTION FOR AUTOMATIC TRANSMISSION —

NOTE:

Check cruise control set signal circuit.

<Ref. to 2-7 [T10DC0].>

● **WIRING DIAGRAM:**



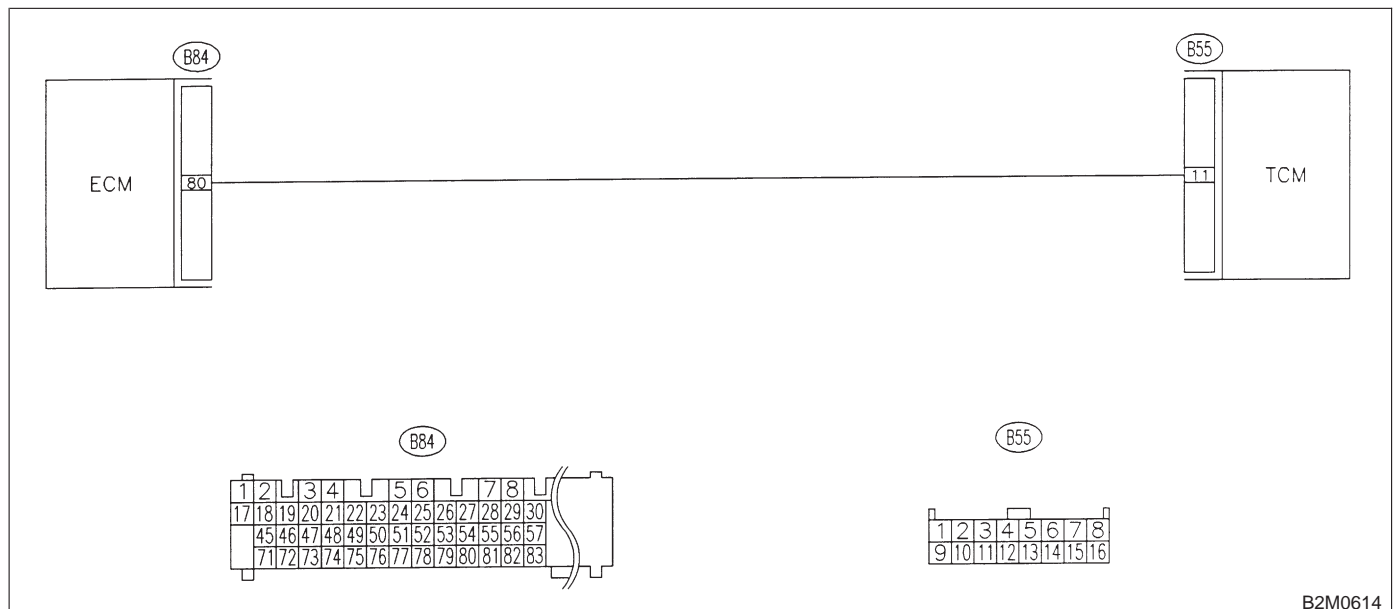
CY: DTC P1702 — AUTOMATIC TRANSMISSION DIAGNOSIS INPUT SIGNAL CIRCUIT LOW INPUT —

NOTE:

Check automatic transmission diagnosis input signal circuit.

<Ref. to 2-7 [T10DD0].>

● **WIRING DIAGRAM:**



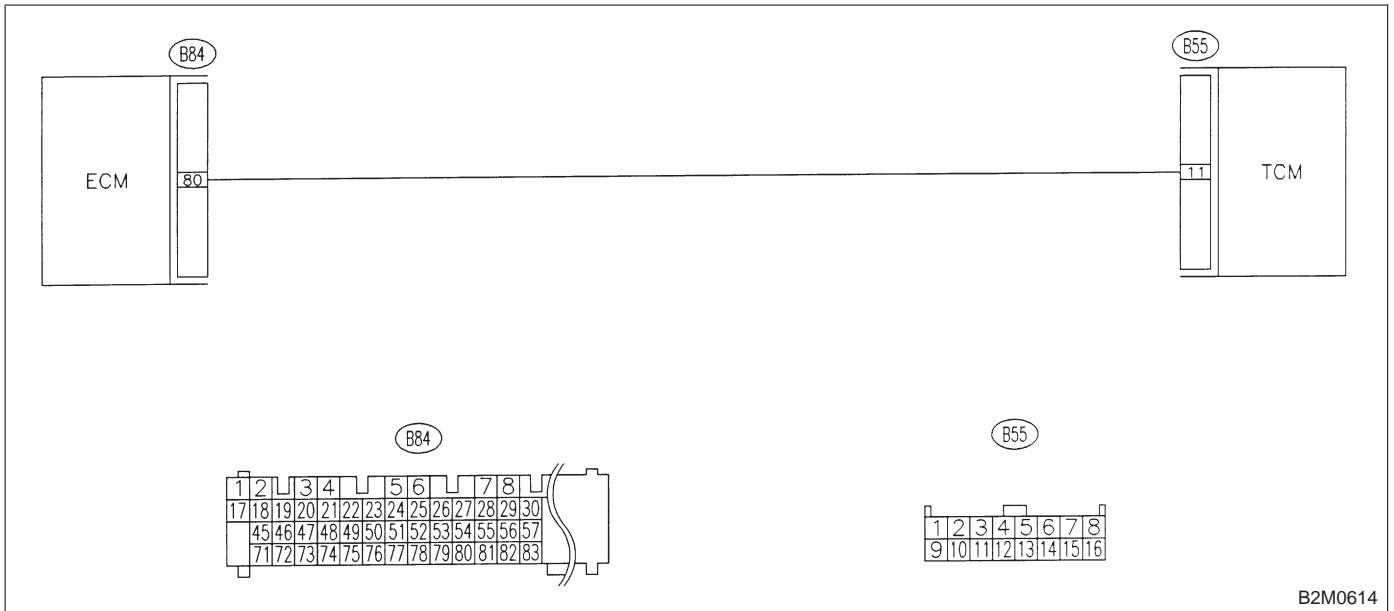
CZ: DTC P1722 — AUTOMATIC TRANSMISSION DIAGNOSIS INPUT SIGNAL CIRCUIT HIGH INPUT —

NOTE:

Check automatic transmission diagnosis input signal circuit.

<Ref. to 2-7 [T10DE0].>

● WIRING DIAGRAM:



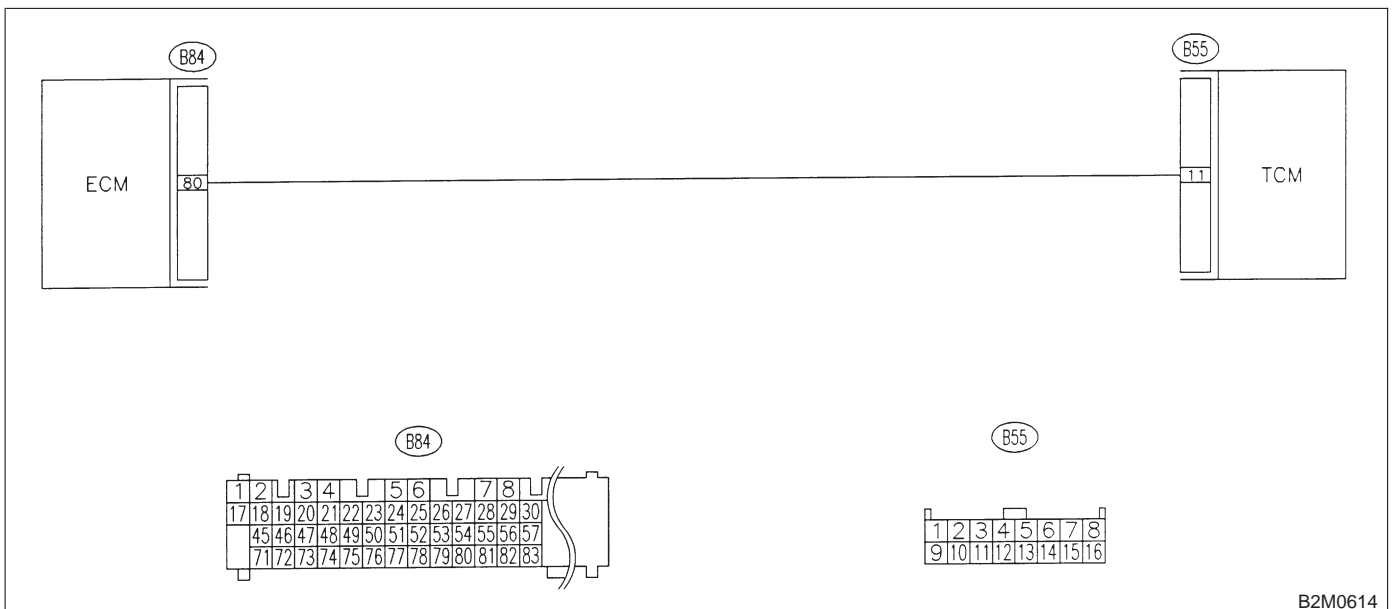
DA: DTC P1742 — AUTOMATIC TRANSMISSION DIAGNOSIS INPUT SIGNAL CIRCUIT MALFUNCTION —

NOTE:

Check automatic transmission diagnosis input signal circuit.

<Ref. to 2-7 [T10DF0].>

● WIRING DIAGRAM:



MEMO: