13. Diagnostics Chart with Trouble Code for 2200 cc California Spec. RHD Vehicles

A: DIAGNOSTIC TROUBLE CODE (DTC) LIST

DTC No.	Item	Index
P0106	Intake manifold pressure sensor circuit range/performance problem	<Ref. to 2-7 [T13B0].>
P0107	Intake manifold pressure sensor circuit low input	<Ref. to 2-7 [T13C0].>
P0108	Intake manifold pressure sensor circuit high input	<Ref. to 2-7 [T13D0].>
P0111	Intake air temperature sensor circuit range/performance problem	<Ref. to 2-7 [T13E0].>
P0112	Intake air temperature sensor circuit low input	<Ref. to 2-7 [T13F0].>
P0113	Intake air temperature sensor circuit high input	<Ref. to 2-7 [T13G0].>
P0116	Engine coolant temperature sensor circuit low input	<Ref. to 2-7 [T13H0].>
P0117	Engine coolant temperature sensor circuit high input	<Ref. to 2-7 [T13I0].>
P0121	Throttle position sensor circuit range/performance problem (high input)	<Ref. to 2-7 [T13J0].>
P0122	Throttle position sensor circuit low input	<Ref. to 2-7 [T13K0].>
P0123	Throttle position sensor circuit high input	<Ref. to 2-7 [T13L0].>
P0125	Insufficient coolant temperature for closed loop fuel control	<Ref. to 2-7 [T13M0].>
P0131	Front oxygen (A/F) sensor circuit range/performance problem (low input)	<Ref. to 2-7 [T13N0].>
P0132	Front oxygen (A/F) sensor circuit range/performance problem (high input)	<Ref. to 2-7 [T13O0].>
P0133	Front oxygen (A/F) sensor circuit slow response	<Ref. to 2-7 [T13P0].>
P0136	Rear oxygen sensor circuit malfunction	<Ref. to 2-7 [T13Q0].>
P0139	Rear oxygen sensor circuit slow response	<Ref. to 2-7 [T13R0].>
P0141	Rear oxygen sensor heater circuit malfunction	<Ref. to 2-7 [T13S0].>
P0171	Fuel trim malfunction (A/F too lean)	<Ref. to 2-7 [T13T0].>
P0172	Fuel trim malfunction (A/F too rich)	<Ref. to 2-7 [T13U0].>
P0181	Fuel temperature sensor A circuit range/performance problem	<Ref. to 2-7 [T13V0].>
P0182	Fuel temperature sensor A circuit low input	<Ref. to 2-7 [T13W0].>
P0183	Fuel temperature sensor A circuit high input	<Ref. to 2-7 [T13X0].>
P0301	Cylinder 1 misfire detected	<Ref. to 2-7 [T13Y0].>
P0302	Cylinder 2 misfire detected	<Ref. to 2-7 [T13Z0].>

DTC No.	Item	Index
P0303	Cylinder 3 misfire detected	<Ref. to 2-7 [T13AA0].>
P0304	Cylinder 4 misfire detected	<Ref. to 2-7 [T13AB0].>
P0325	Knock sensor circuit malfunction	<Ref. to 2-7 [T13AC0].>
P0335	Crankshaft position sensor circuit malfunction	<Ref. to 2-7 [T13AD0].>
P0336	Crankshaft position sensor circuit range/performance problem	<Ref. to 2-7 [T13AE0].>
P0340	Camshaft position sensor circuit malfunction	<Ref. to 2-7 [T13AF0].>
P0341	Camshaft position sensor circuit range/performance problem	<Ref. to 2-7 [T13AG0].>
P0420	Catalyst system efficiency below threshold	<Ref. to 2-7 [T13AH0].>
P0440	Evaporative emission control system malfunction	<Ref. to 2-7 [T13AI0].>
P0443	Evaporative emission control system purge control valve circuit low input	<Ref. to 2-7 [T13AJ0].>
P0446	Evaporative emission control system vent control low input	<Ref. to 2-7 [T13AK0].>
P0451	Evaporative emission control system pressure sensor range/performance problem	<Ref. to 2-7 [T13AL0].>
P0452	Evaporative emission control system pressure sensor low input	<Ref. to 2-7 [T13AM0].>
P0453	Evaporative emission control system pressure sensor high input	<Ref. to 2-7 [T13AN0].>
P0461	Fuel level sensor circuit range/performance problem	<Ref. to 2-7 [T13AO0].>
P0462	Fuel level sensor circuit low input	<Ref. to 2-7 [T13AP0].>
P0463	Fuel level sensor circuit high input	<Ref. to 2-7 [T13AQ0].>
P0480	Cooling fan relay 1 circuit low input	<Ref. to 2-7 [T13AR0].>
P0483	Cooling fan function problem	<Ref. to 2-7 [T13AS0].>
P0500	Vehicle speed sensor malfunction	<Ref. to 2-7 [T13AT0].>
P0505	Idle control system malfunction	<Ref. to 2-7 [T13AU0].>
P0506	Idle control system RPM lower than expected	<Ref. to 2-7 [T13AV0].>
P0507	Idle control system RPM higher than expected	<Ref. to 2-7 [T13AW0].>
P0601	Internal control module memory check sum error	<Ref. to 2-7 [T13AX0].>
P0703	Brake switch input malfunction	<Ref. to 2-7 [T13AY0].>
P0705	Transmission range sensor circuit malfunction	<Ref. to 2-7 [T13AZ0].>
P0710	Transmission fluid temperature sensor circuit malfunction	<Ref. to 2-7 [T13BA0].>

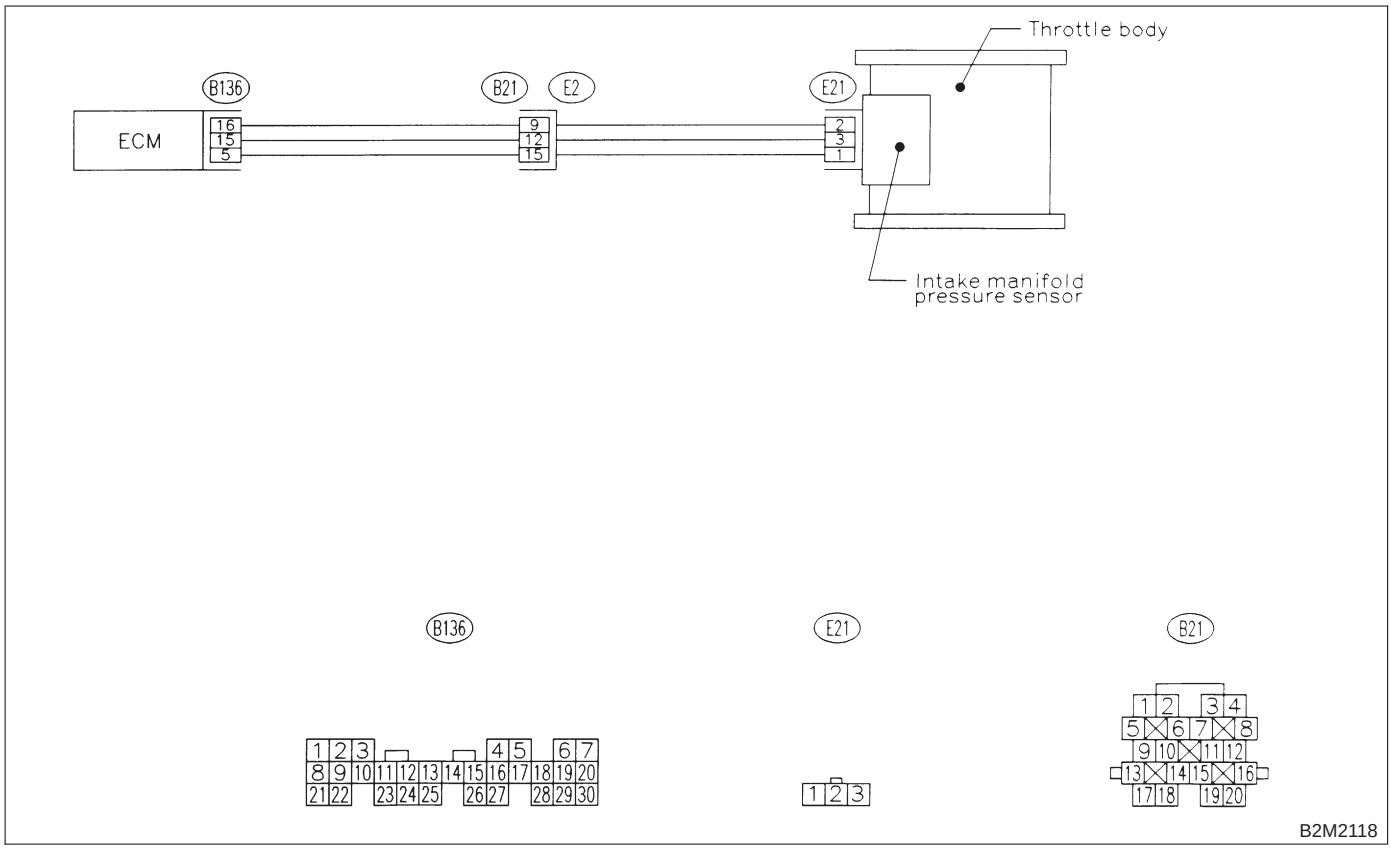
DTC No.	Item	Index
P0715	Torque converter turbine speed sensor circuit malfunction	<Ref. to 2-7 [T13BB0].>
P0720	Output speed sensor (vehicle speed sensor 2) circuit malfunction	<Ref. to 2-7 [T13BC0].>
P0725	Engine speed input circuit malfunction	<Ref. to 2-7 [T13BD0].>
P0731	Gear 1 incorrect ratio	<Ref. to 2-7 [T13BE0].>
P0732	Gear 2 incorrect ratio	<Ref. to 2-7 [T13BF0].>
P0733	Gear 3 incorrect ratio	<Ref. to 2-7 [T13BG0].>
P0734	Gear 4 incorrect ratio	<Ref. to 2-7 [T13BH0].>
P0740	Torque converter clutch system malfunction	<Ref. to 2-7 [T13BI0].>
P0743	Torque converter clutch system (Duty solenoid B) electrical	<Ref. to 2-7 [T13BJ0].>
P0748	Pressure control solenoid (Duty solenoid A) electrical	<Ref. to 2-7 [T13BK0].>
P0753	Shift solenoid A (Shift solenoid 1) electrical	<Ref. to 2-7 [T13BL0].>
P0758	Shift solenoid B (Shift solenoid 2) electrical	<Ref. to 2-7 [T13BM0].>
P1100	Starter switch circuit low input	<Ref. to 2-7 [T13BN0].>
P1101	Neutral position switch circuit high input [AT vehicles]	<Ref. to 2-7 [T13BO0].>
P1103	Engine torque control signal 1 circuit malfunction	<Ref. to 2-7 [T13BP0].>
P1106	Engine torque control signal 2 circuit malfunction	<Ref. to 2-7 [T13BQ0].>
P1110	Atmospheric pressure sensor circuit low input	<Ref. to 2-7 [T13BR0].>
P1111	Atmospheric pressure sensor circuit high input	<Ref. to 2-7 [T13BS0].>
P1112	Atmospheric pressure sensor circuit range/performance problem	<Ref. to 2-7 [T13BT0].>
P1115	Engine torque control cut signal circuit high input	<Ref. to 2-7 [T13BU0].>
P1116	Engine torque control cut signal circuit low input	<Ref. to 2-7 [T13BV0].>
P1120	Starter switch circuit high input	<Ref. to 2-7 [T13BW0].>
P1121	Neutral position switch circuit low input [AT vehicles]	<Ref. to 2-7 [T13BX0].>
P1130	Front oxygen (A/F) sensor circuit malfunction (open circuit)	<Ref. to 2-7 [T13BY0].>
P1131	Front oxygen (A/F) sensor circuit malfunction (short circuit)	<Ref. to 2-7 [T13BZ0].>
P1132	Front oxygen (A/F) sensor heater circuit low input	<Ref. to 2-7 [T13CA0].>
P1133	Front oxygen (A/F) sensor heater circuit high input	<Ref. to 2-7 [T13CB0].>

DTC No.	Item	Index
P1134	Front oxygen (A/F) sensor micro-computer problem	<Ref. to 2-7 [T13CC0].>
P1139	Front oxygen (A/F) sensor #1 heater circuit range/performance problem	<Ref. to 2-7 [T13CD0].>
P1142	Throttle position sensor circuit range/performance problem (low input)	<Ref. to 2-7 [T13CE0].>
P1151	Rear oxygen sensor heater circuit high input	<Ref. to 2-7 [T13CF0].>
P1400	Fuel tank pressure control solenoid valve circuit low input	<Ref. to 2-7 [T13CG0].>
P1420	Fuel tank pressure control solenoid valve circuit high input	<Ref. to 2-7 [T13CH0].>
P1422	Evaporative emission control system purge control valve circuit high input	<Ref. to 2-7 [T13CI0].>
P1423	Evaporative emission control system vent control high input	<Ref. to 2-7 [T13CJ0].>
P1443	Evaporative emission control system vent control function problem	<Ref. to 2-7 [T13CK0].>
P1505	Idle control system circuit high input	<Ref. to 2-7 [T13CL0].>
P1507	Idle control system malfunction (fail-safe)	<Ref. to 2-7 [T13CM0].>
P1520	Cooling fan relay 1 circuit high input	<Ref. to 2-7 [T13CN0].>
P1560	Back-up voltage circuit malfunction	<Ref. to 2-7 [T13CO0].>
P1700	Throttle position sensor circuit malfunction for automatic transmission	<Ref. to 2-7 [T13CP0].>
P1701	Cruise control set signal circuit malfunction for automatic transmission	<Ref. to 2-7 [T13CQ0].>
P1702	Automatic transmission diagnosis input signal circuit low input	<Ref. to 2-7 [T13CR0].>
P1703	Low clutch timing control solenoid valve circuit malfunction	<Ref. to 2-7 [T13CS0].>
P1704	2-4 brake timing control solenoid valve circuit malfunction	<Ref. to 2-7 [T13CT0].>
P1705	2-4 brake pressure control solenoid valve (Duty solenoid D) circuit malfunction	<Ref. to 2-7 [T13CU0].>
P1722	Automatic transmission diagnosis input signal circuit high input	<Ref. to 2-7 [T13CV0].>
P1742	Automatic transmission diagnosis input signal circuit malfunction	<Ref. to 2-7 [T13CW0].>

B: DTC P0106 — INTAKE MANIFOLD PRESSURE SENSOR CIRCUIT RANGE/ PERFORMANCE PROBLEM —

NOTE:
Check pressure sensor circuit.
<Ref. to 2-7 [T12B0].>

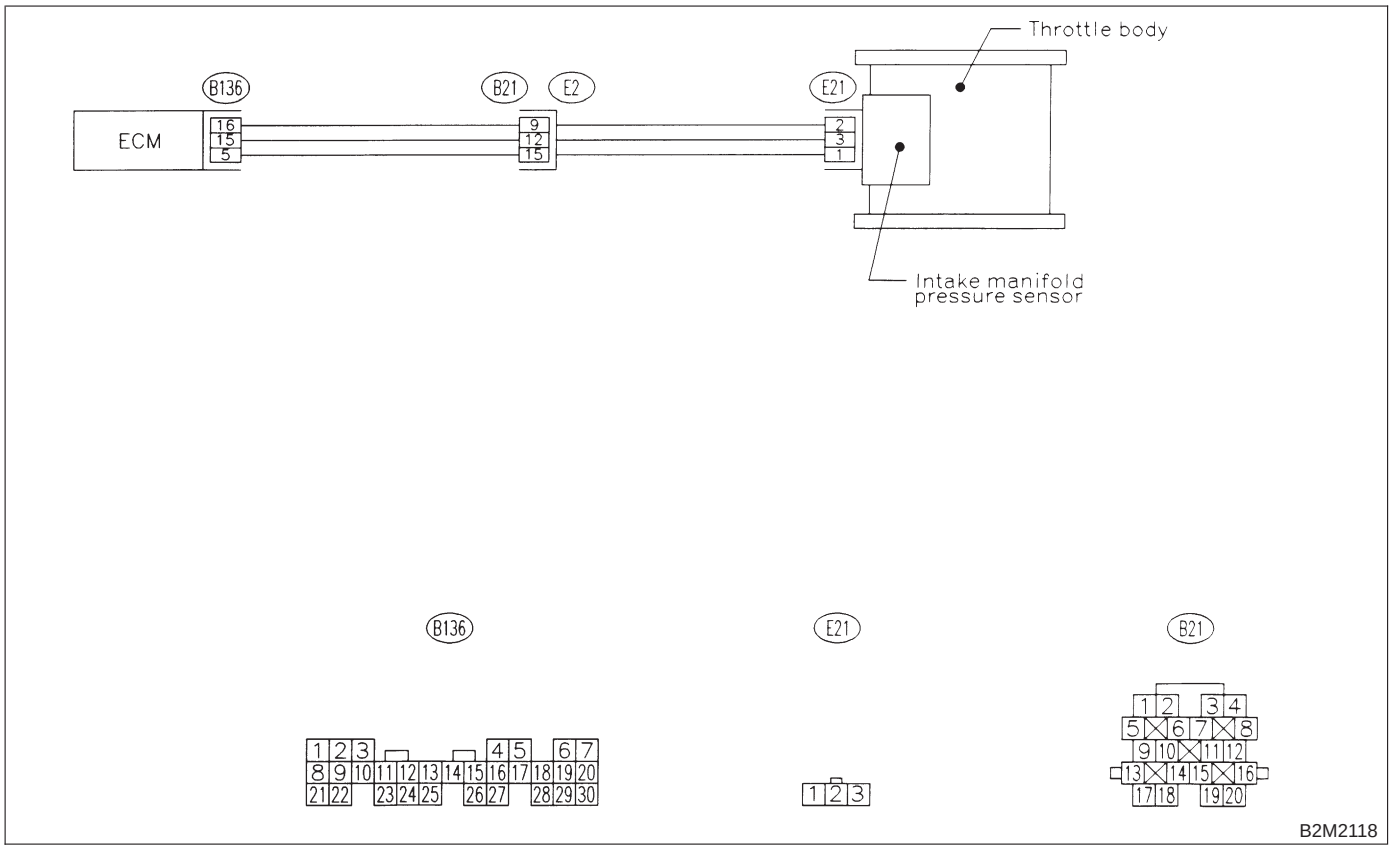
- **WIRING DIAGRAM:**



C: DTC P0107 — INTAKE MANIFOLD PRESSURE SENSOR CIRCUIT LOW INPUT —

NOTE:
Check pressure sensor circuit.
<Ref. to 2-7 [T12C0].>

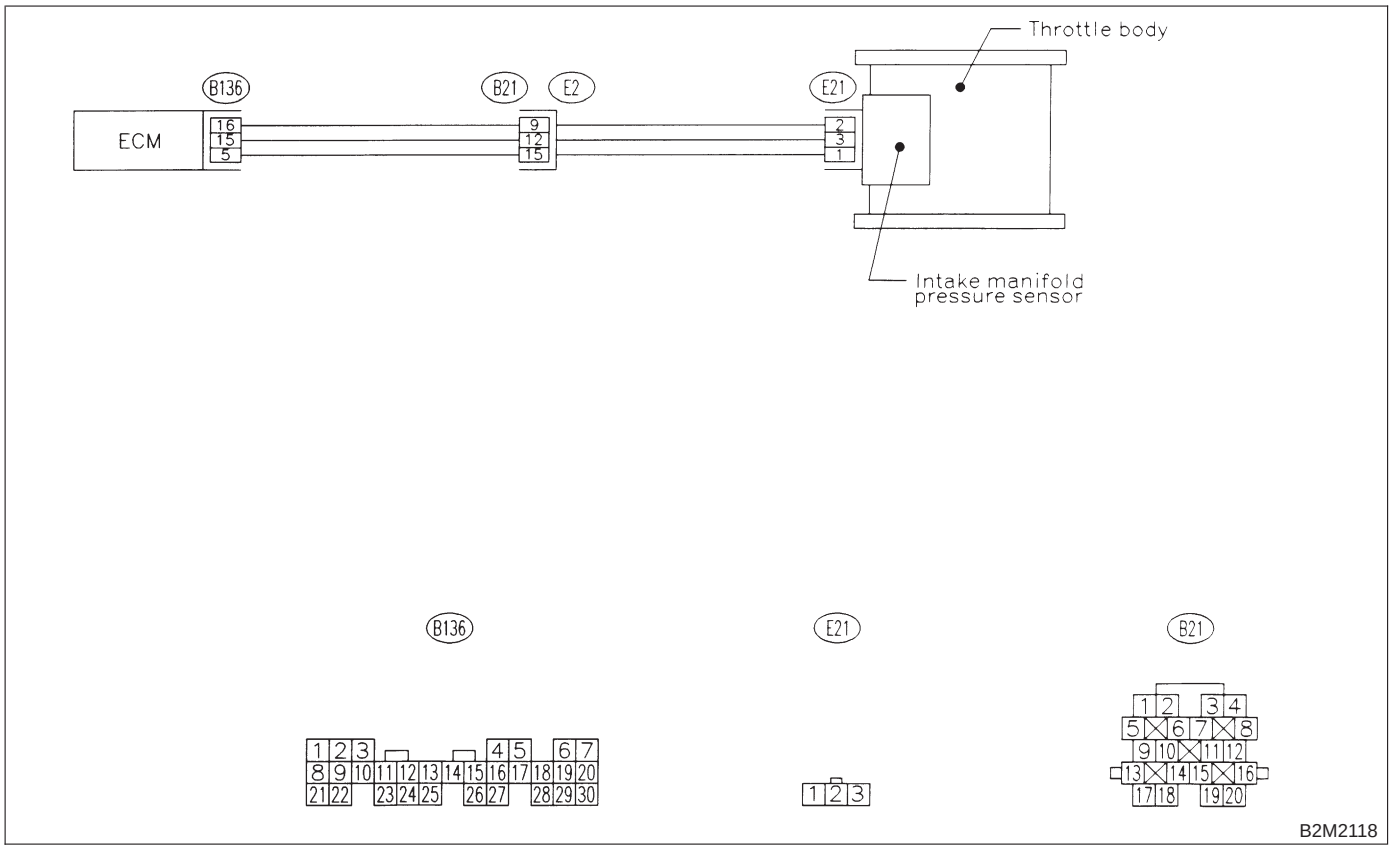
- **WIRING DIAGRAM:**



D: DTC P0108 — INTAKE MANIFOLD PRESSURE SENSOR CIRCUIT HIGH INPUT —

NOTE:
Check pressure sensor circuit.
<Ref. to 2-7 [T12D0].>

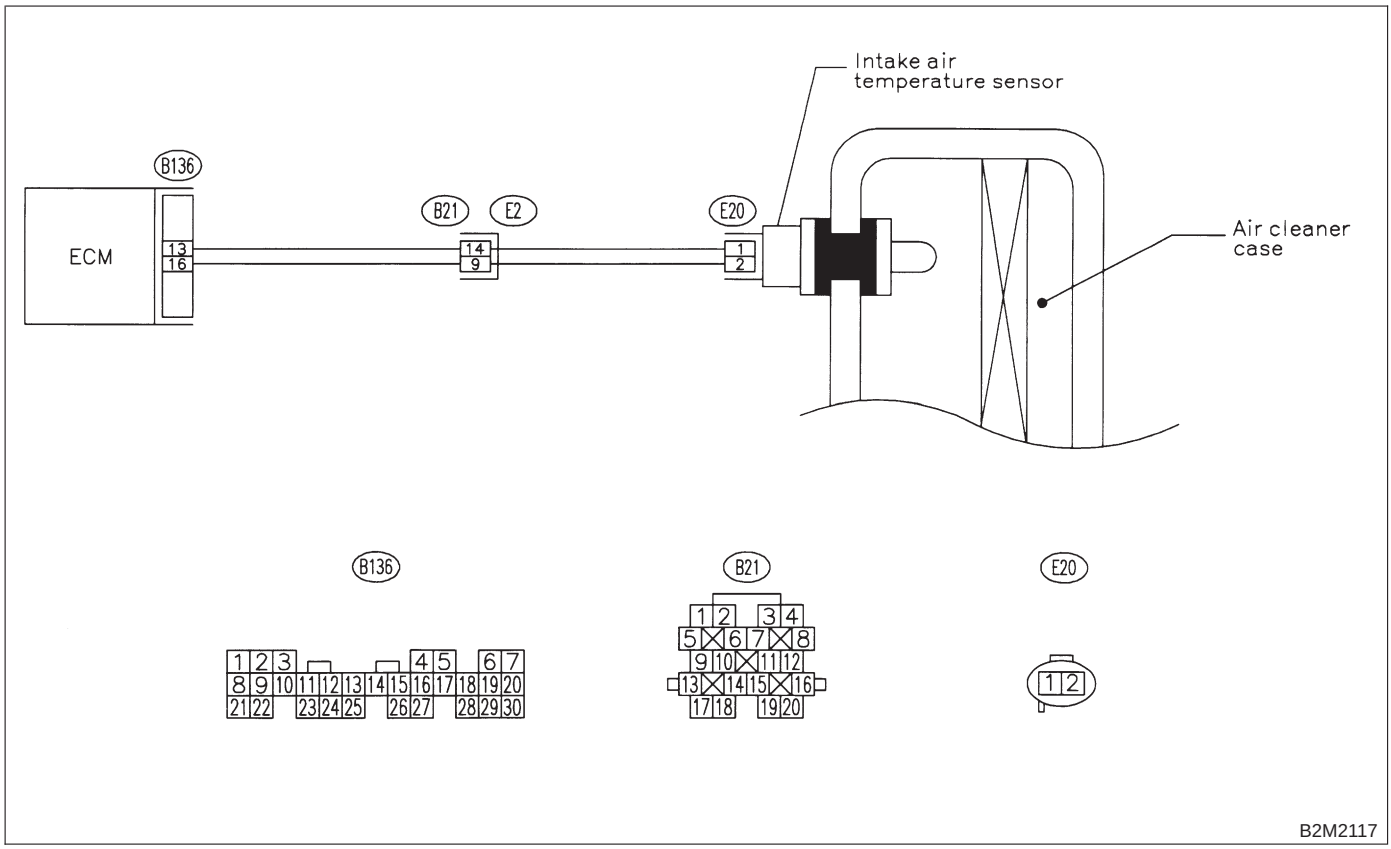
- **WIRING DIAGRAM:**



E: DTC P0111 — INTAKE AIR TEMPERATURE SENSOR CIRCUIT RANGE/ PERFORMANCE PROBLEM —

NOTE:
Check intake air temperature sensor circuit.
<Ref. to 2-7 [T12E0].>

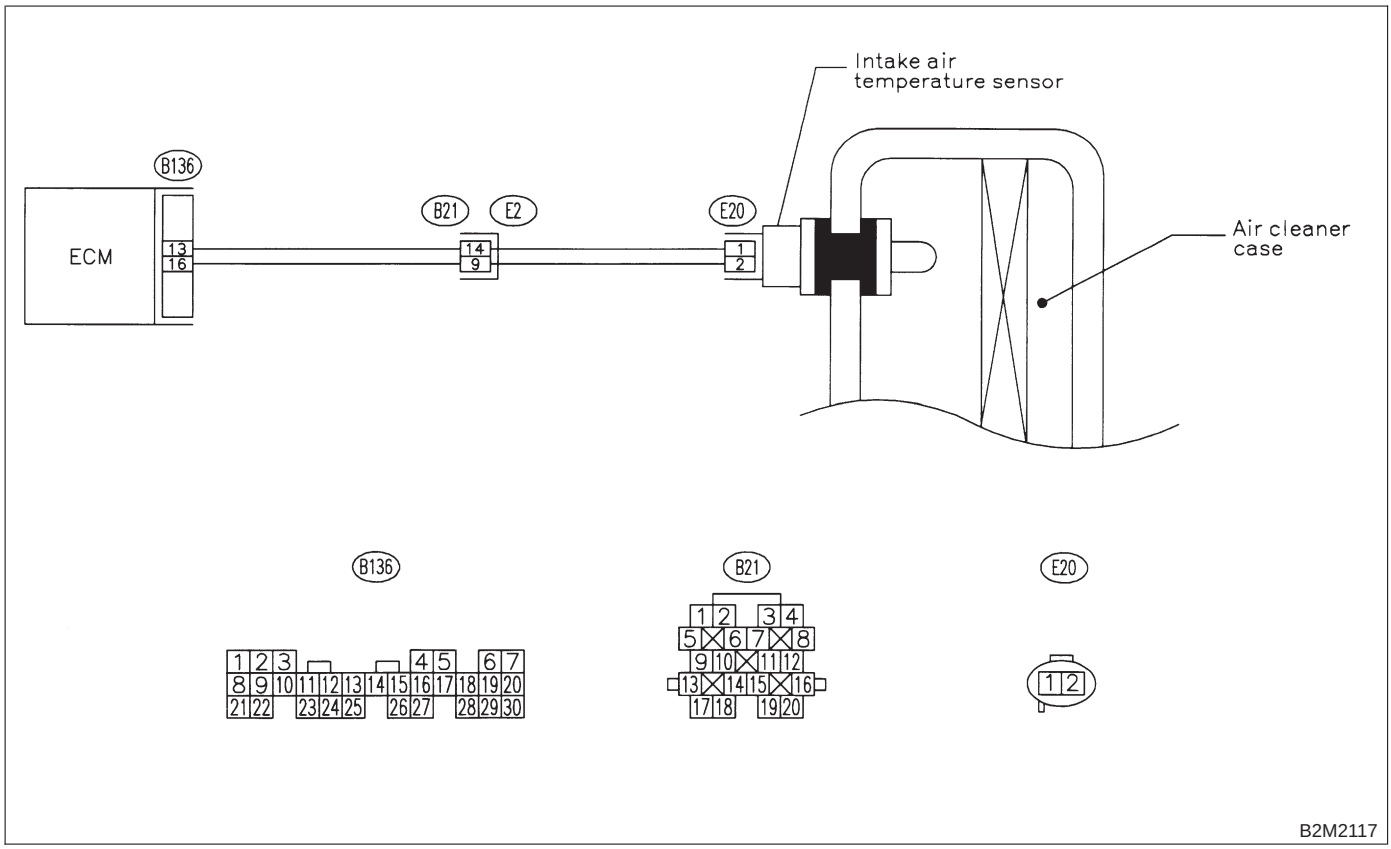
- **WIRING DIAGRAM:**



F: DTC P0112 — INTAKE AIR TEMPERATURE SENSOR CIRCUIT LOW INPUT —

NOTE:
Check intake air temperature sensor circuit.
<Ref. to 2-7 [T12F0].>

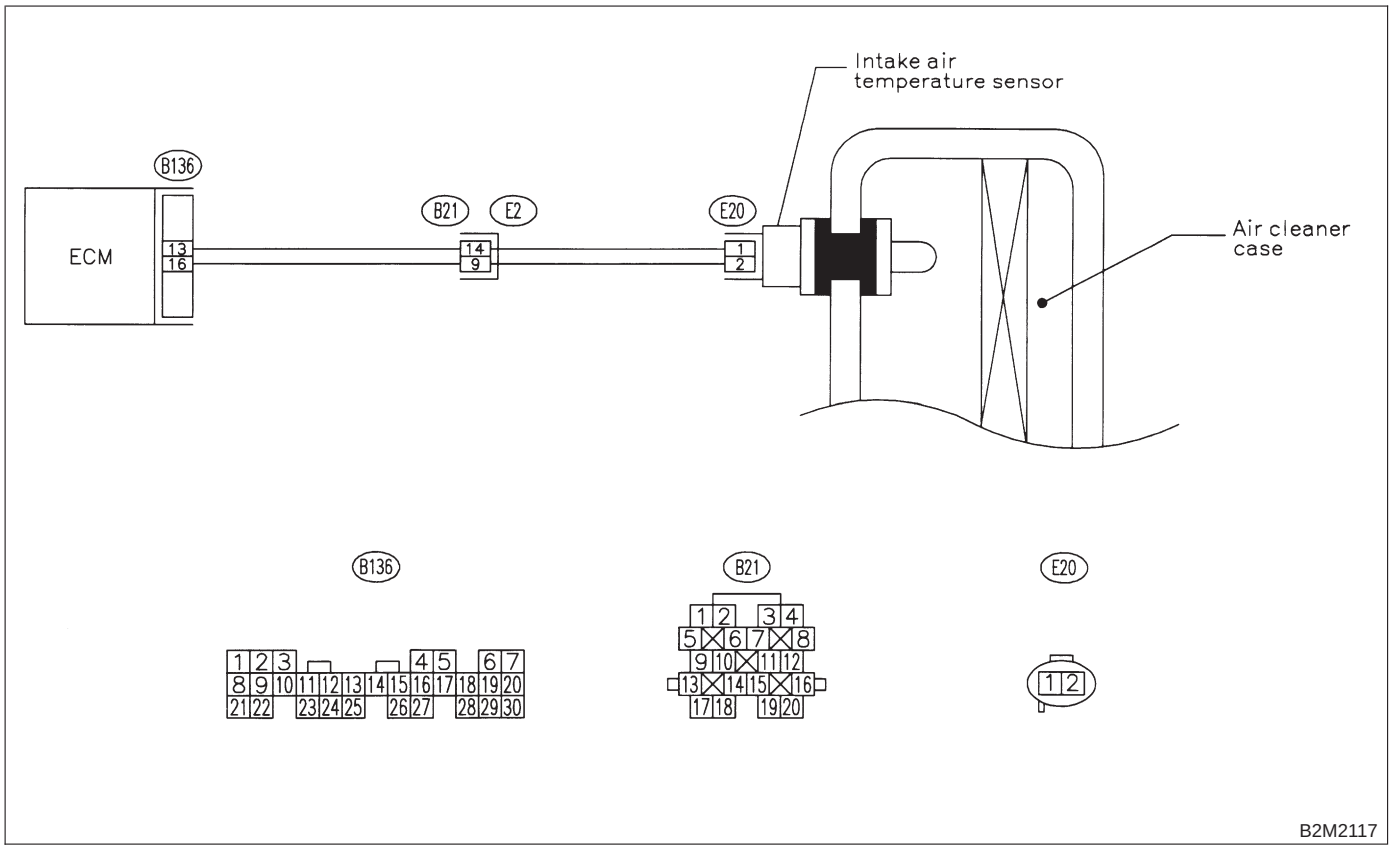
- **WIRING DIAGRAM:**



G: DTC P0113 — INTAKE AIR TEMPERATURE SENSOR CIRCUIT HIGH INPUT —

NOTE:
Check intake air temperature sensor circuit.
<Ref. to 2-7 [T12G0].>

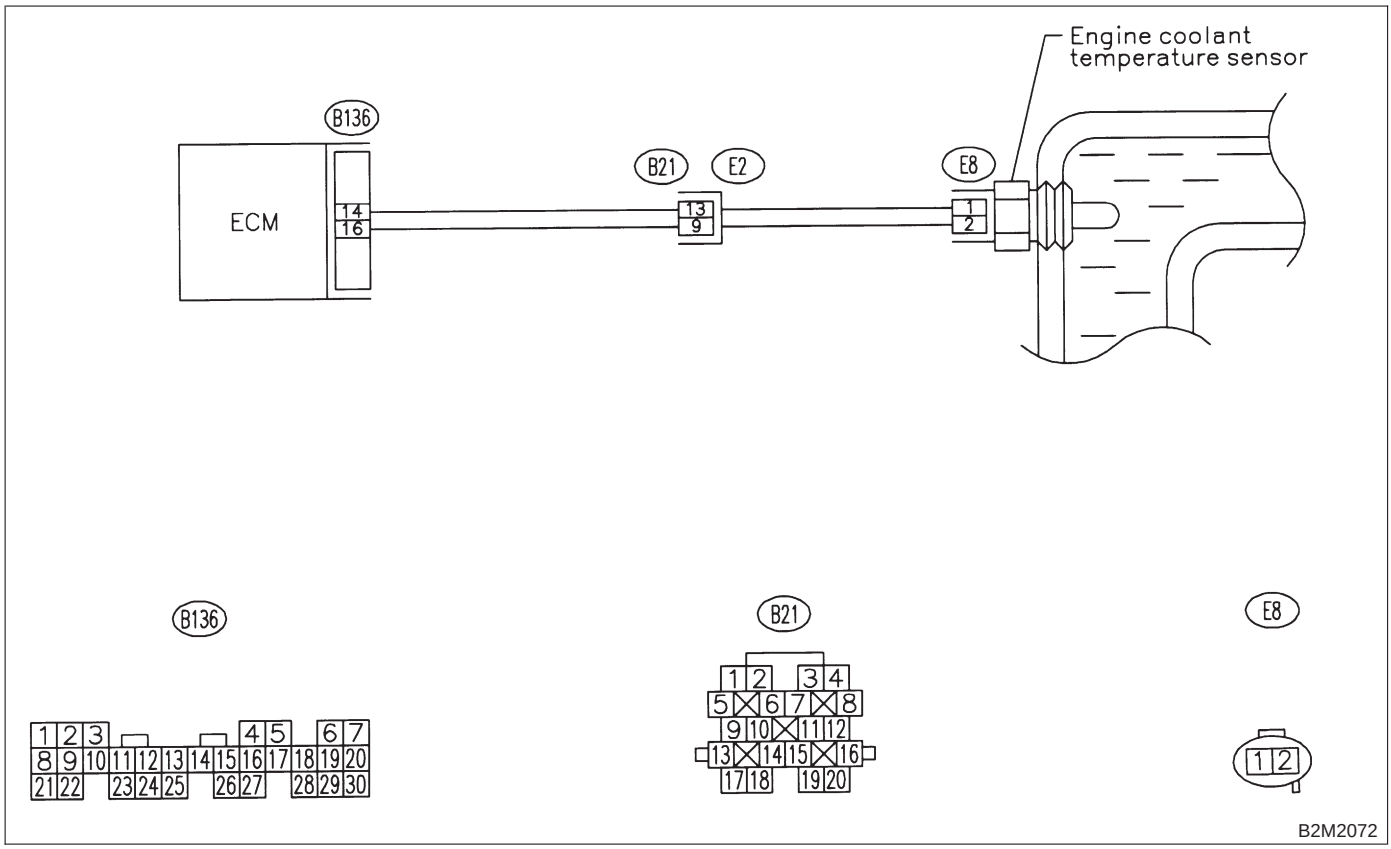
- **WIRING DIAGRAM:**



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

NOTE:
Check engine coolant temperature sensor circuit.
<Ref. to 2-7 [T12H0].>

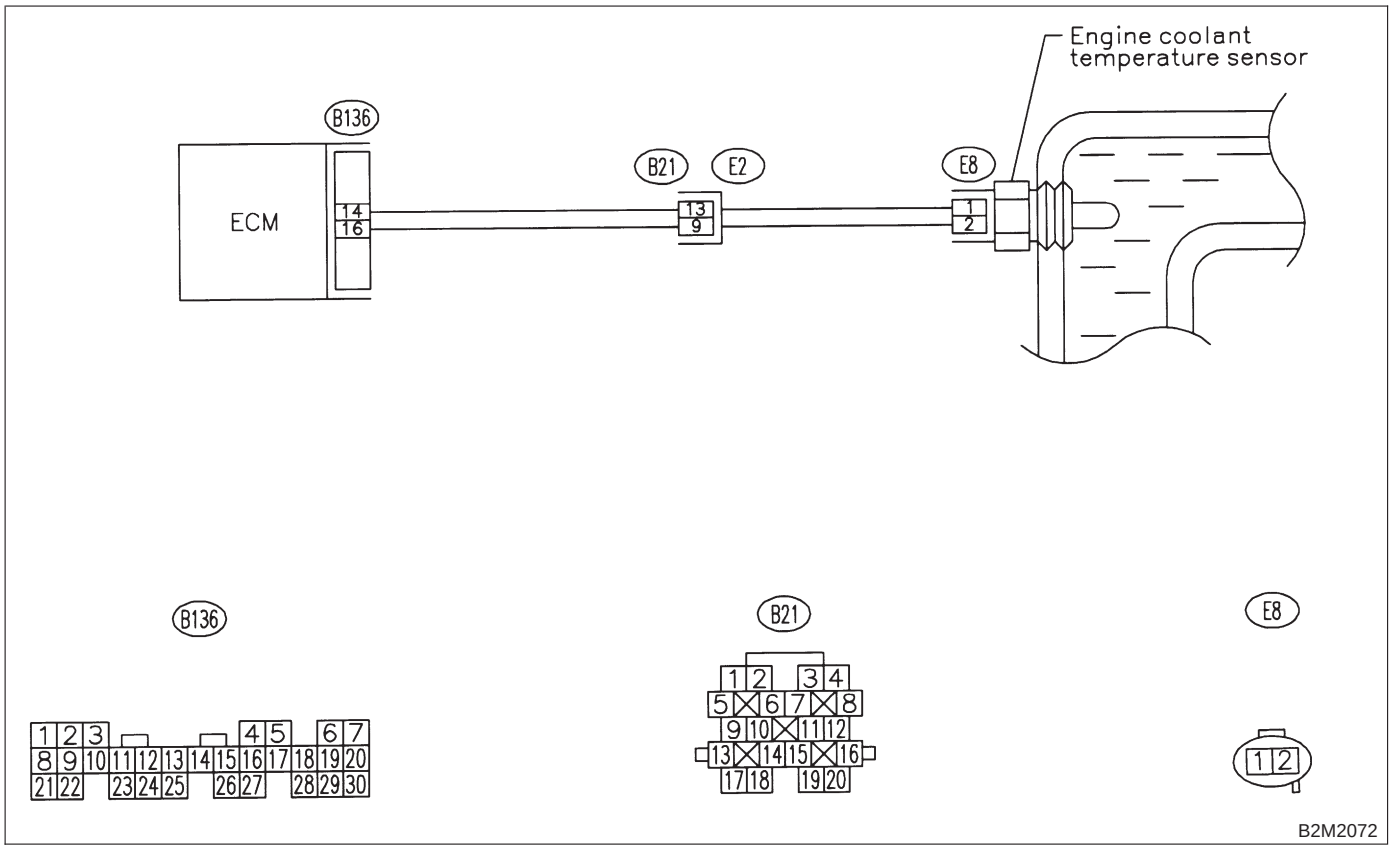
- **WIRING DIAGRAM:**



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

NOTE:
Check engine coolant temperature sensor circuit.
<Ref. to 2-7 [T12I0].>

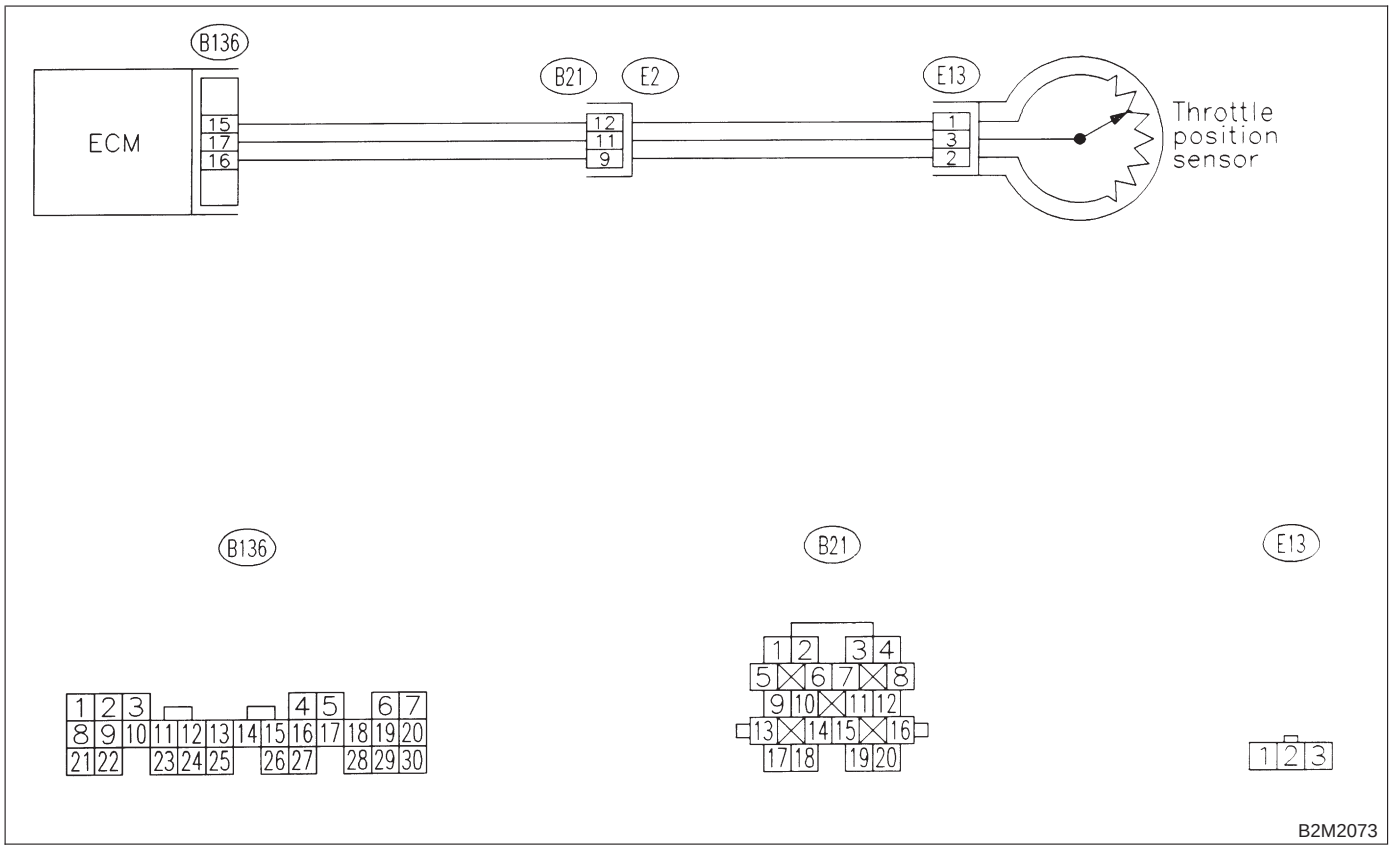
- **WIRING DIAGRAM:**



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

NOTE:
Check throttle position sensor circuit.
<Ref. to 2-7 [T12J0].>

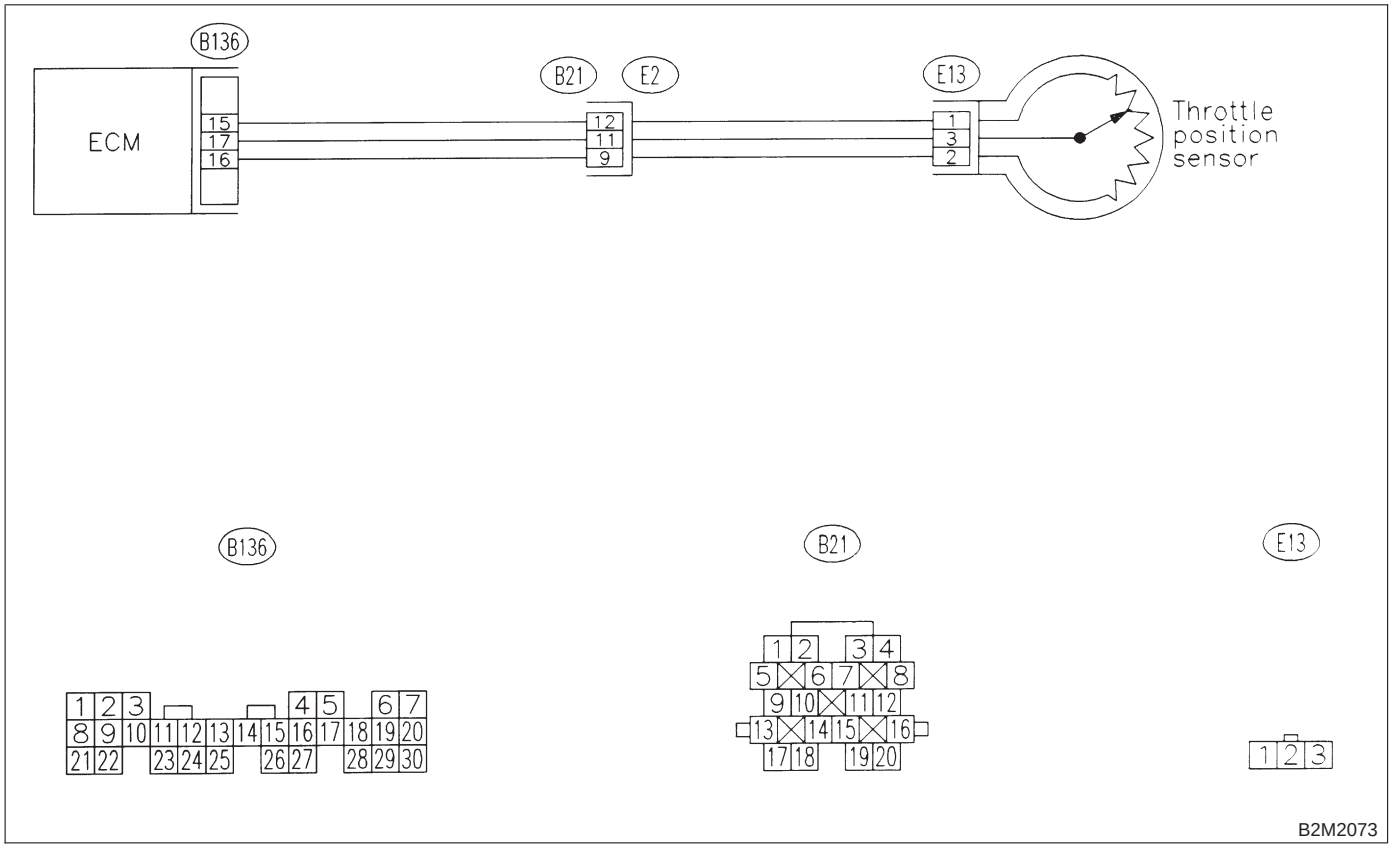
- **WIRING DIAGRAM:**



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

NOTE:
Check throttle position sensor circuit.
<Ref. to 2-7 [T12K0].>

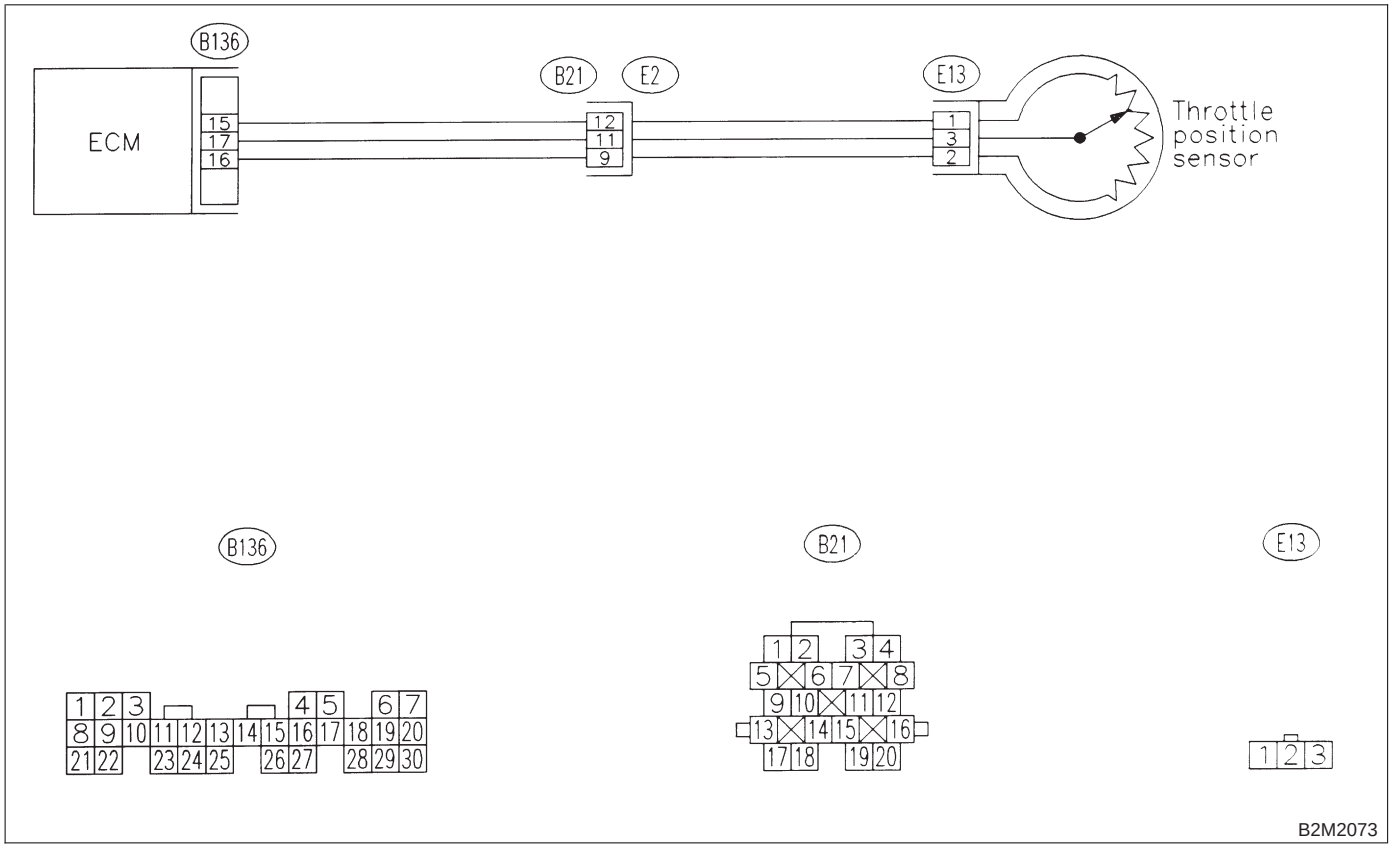
- **WIRING DIAGRAM:**



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

NOTE:
Check throttle position sensor circuit.
<Ref. to 2-7 [T12L0].>

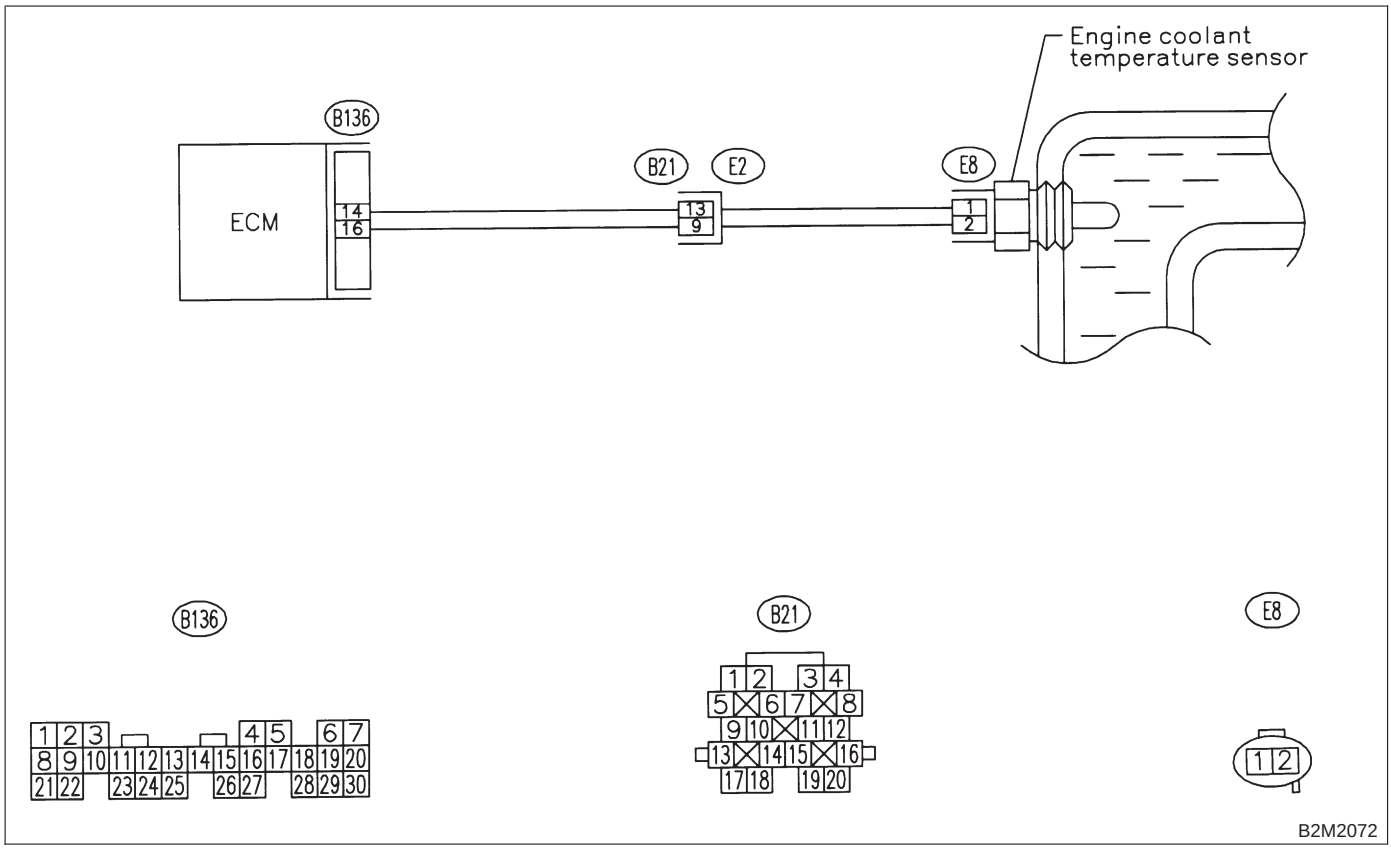
- **WIRING DIAGRAM:**



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

NOTE:
Check insufficient coolant temperature for closed loop fuel control.
<Ref. to 2-7 [T12M0].>

- **WIRING DIAGRAM:**



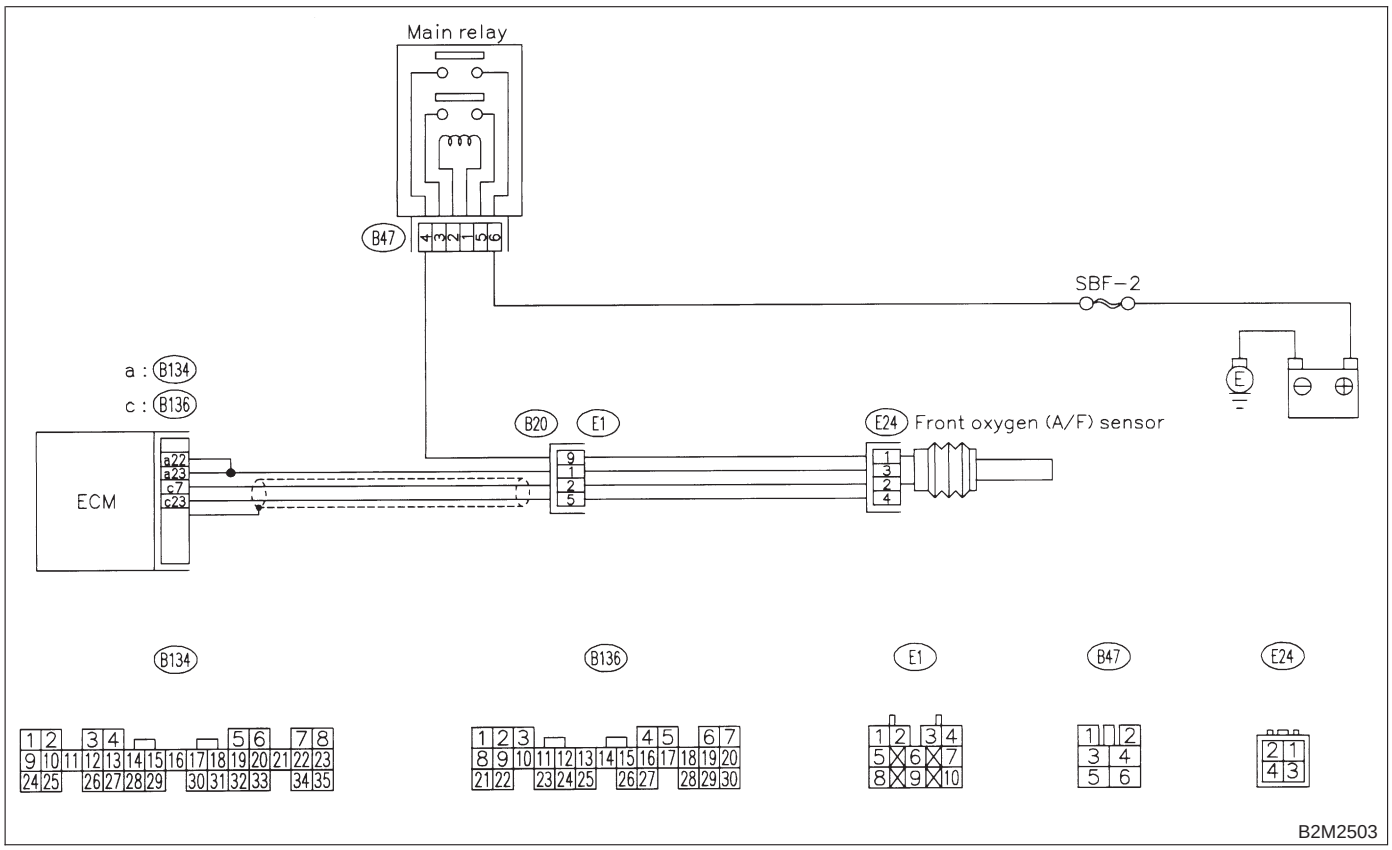
N: DTC P0131 — FRONT OXYGEN (A/F) SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM (LOW INPUT) —

NOTE:
For the diagnostic procedure, refer to 2-7 [T13O0]. <Ref. to 2-7 [T13O0].>

O: DTC P0132 — FRONT OXYGEN (A/F) SENSOR CIRCUIT RANGE/PERFORMANCE PROBLEM (HIGH INPUT) —

NOTE:
Check front oxygen (A/F) sensor circuit.
<Ref. to 2-7 [T12O0].>

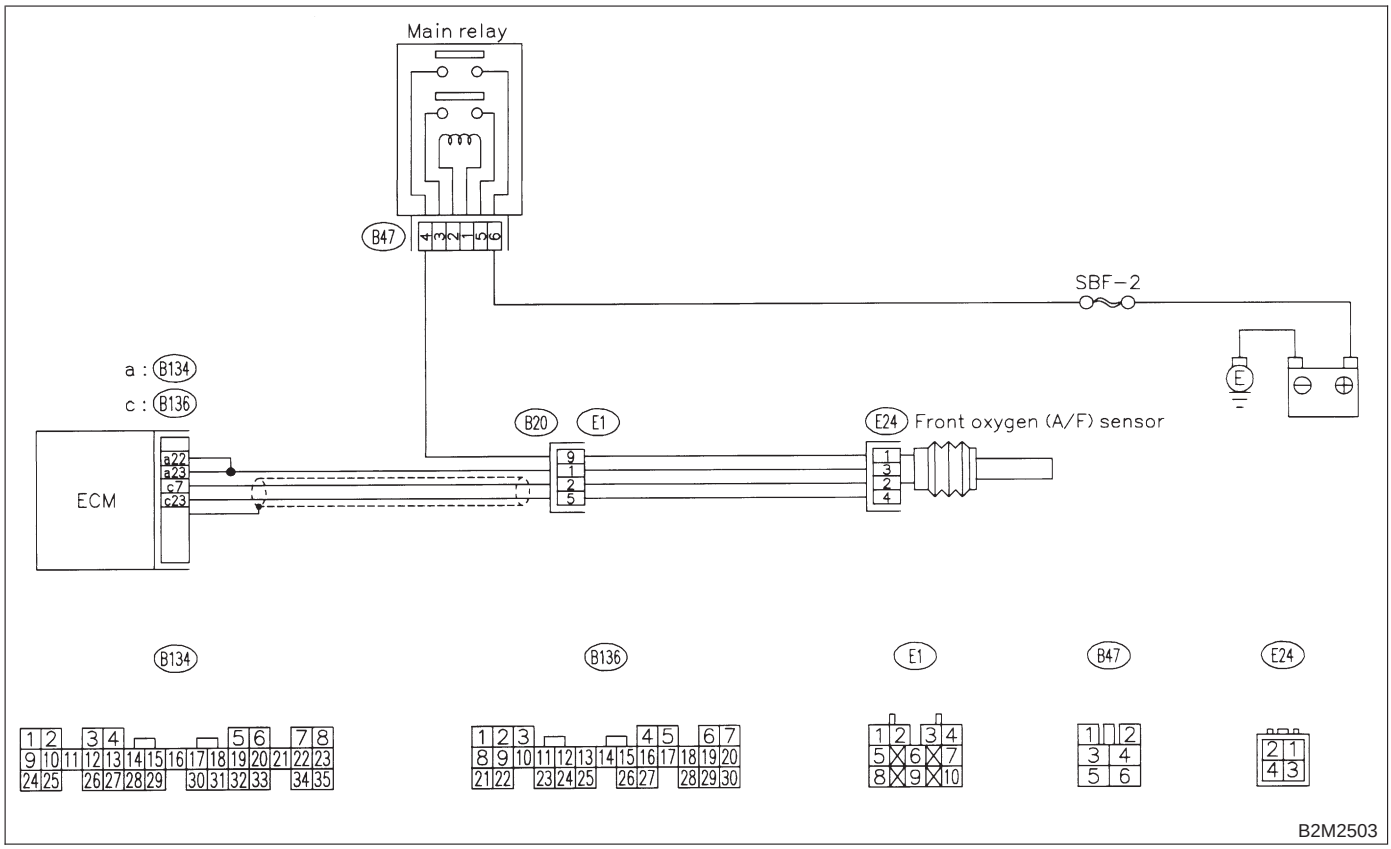
- **WIRING DIAGRAM:**



P: DTC P0133 — FRONT OXYGEN (A/F) SENSOR CIRCUIT SLOW RESPONSE —

NOTE:
Check front oxygen (A/F) sensor circuit.
<Ref. to 2-7 [T12P0].>

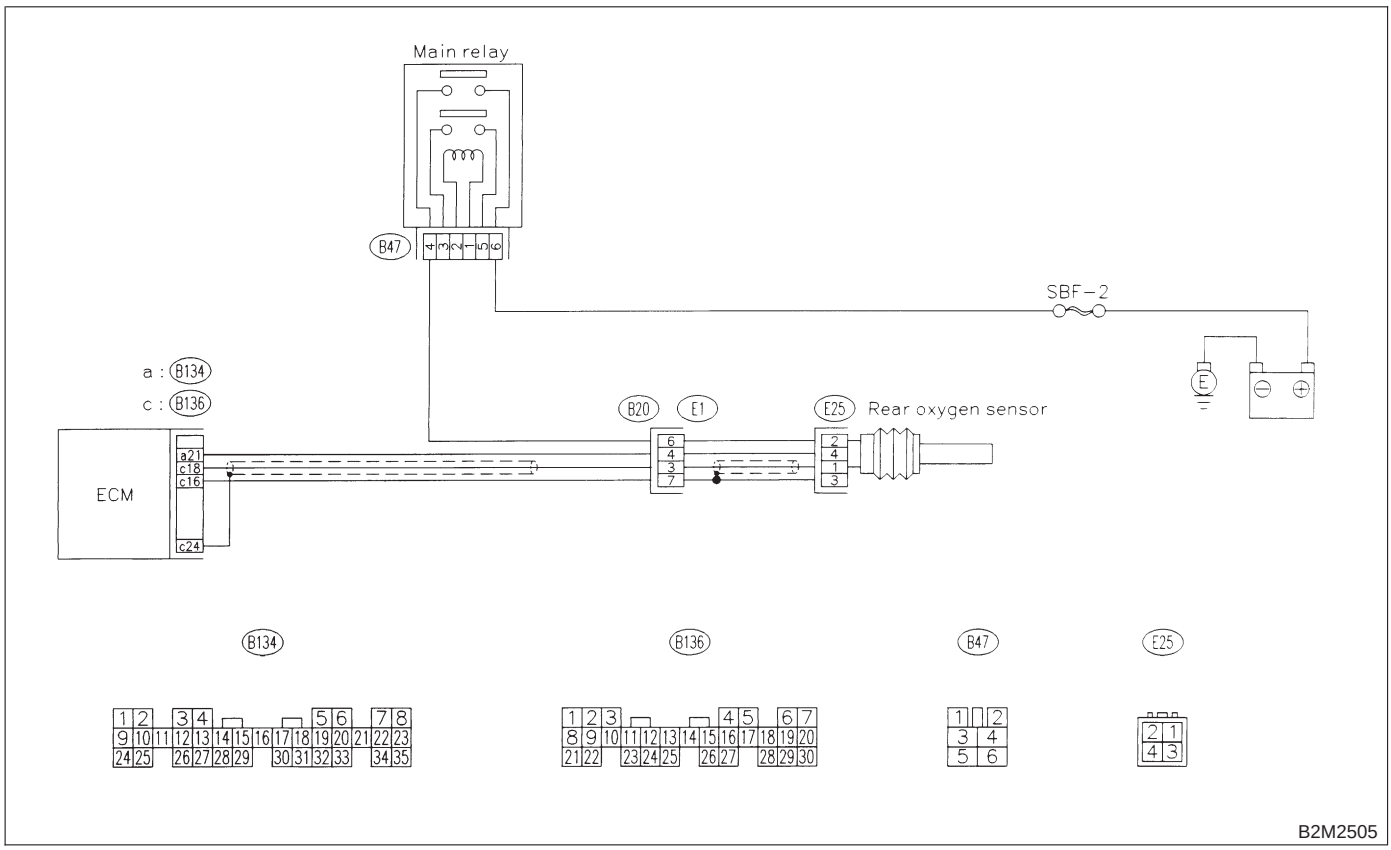
- **WIRING DIAGRAM:**



Q: DTC P0136 — REAR OXYGEN SENSOR CIRCUIT MALFUNCTION —

NOTE:
Check rear oxygen sensor circuit.
<Ref. to 2-7 [T12Q0].>

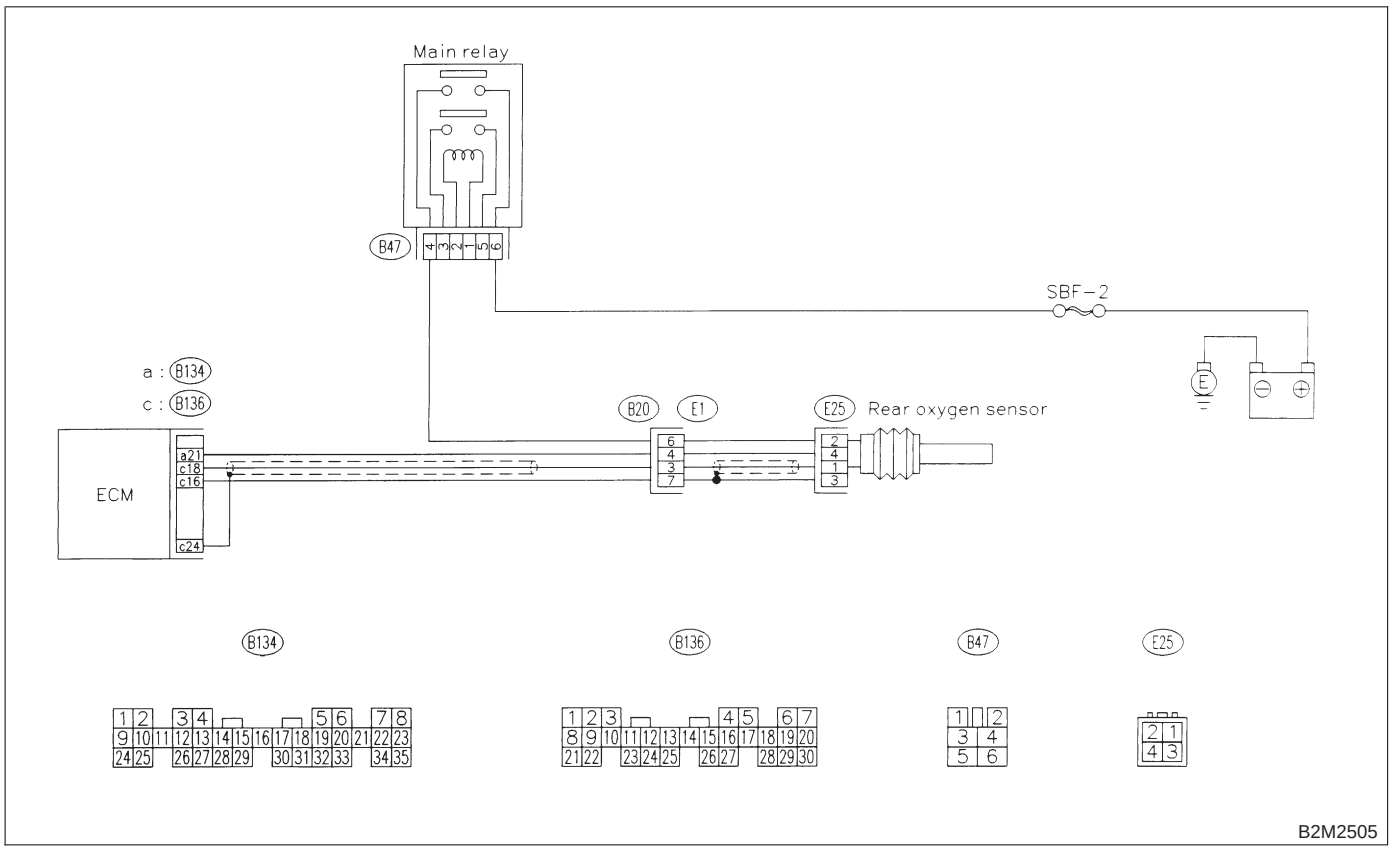
- **WIRING DIAGRAM:**



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

NOTE:
Check rear oxygen sensor circuit.
<Ref. to 2-7 [T12R0].>

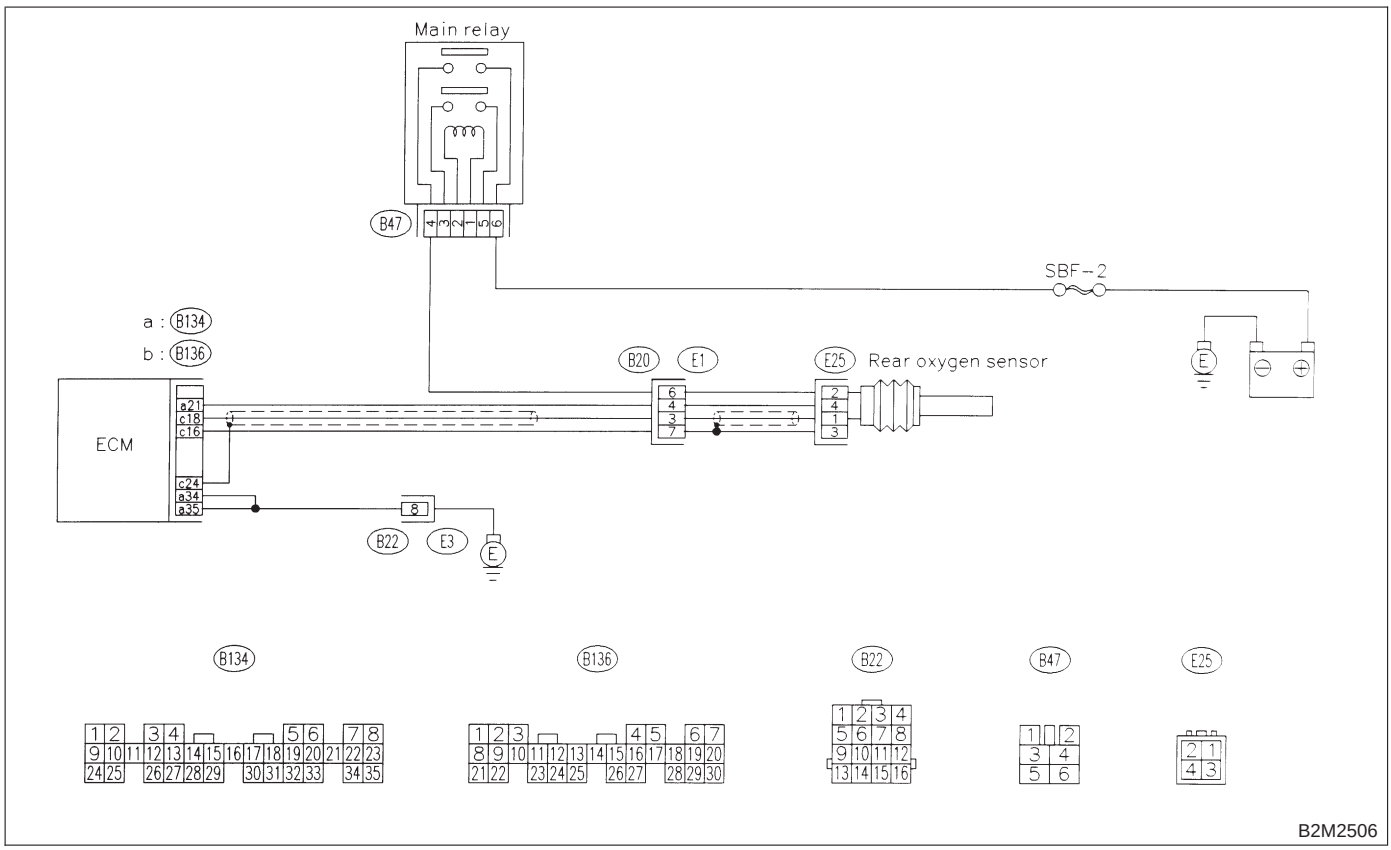
- **WIRING DIAGRAM:**



S: DTC P0141 — REAR OXYGEN SENSOR HEATER CIRCUIT MALFUNCTION —

NOTE:
Check rear oxygen sensor heater circuit.
<Ref. to 2-7 [T12S0].>

- **WIRING DIAGRAM:**



T: DTC P0171 — FUEL TRIM MALFUNCTION (A/F TOO LEAN) —

NOTE:
For the diagnostic procedure, refer to 2-7 [T13U0]. <Ref. to 2-7 [T13U0].>

U: DTC P0172 — FUEL TRIM MALFUNCTION (A/F TOO RICH) —

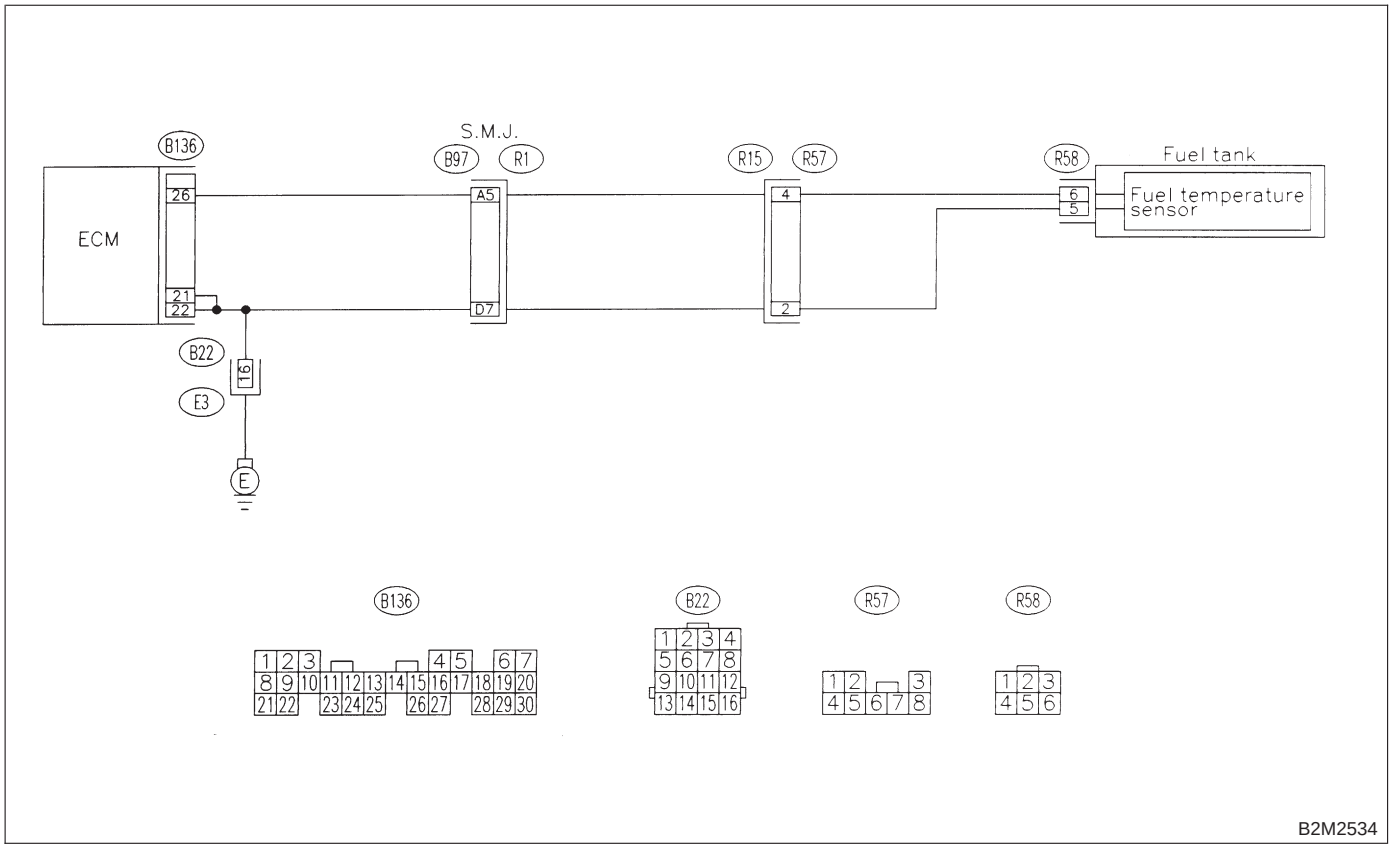
NOTE:
Check fuel trim control system.
<Ref. to 2-7 [T12T0].>

V: 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 MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



B2M2534

13V1 : 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 “13. Diagnostics Chart with Trouble Code for 2200 cc California Spec. RHD Vehicles”. <Ref. to 2-7 [T13A0].>

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

NO : Replace fuel temperature sensor. <Ref. to 2-1 [W8A0].>

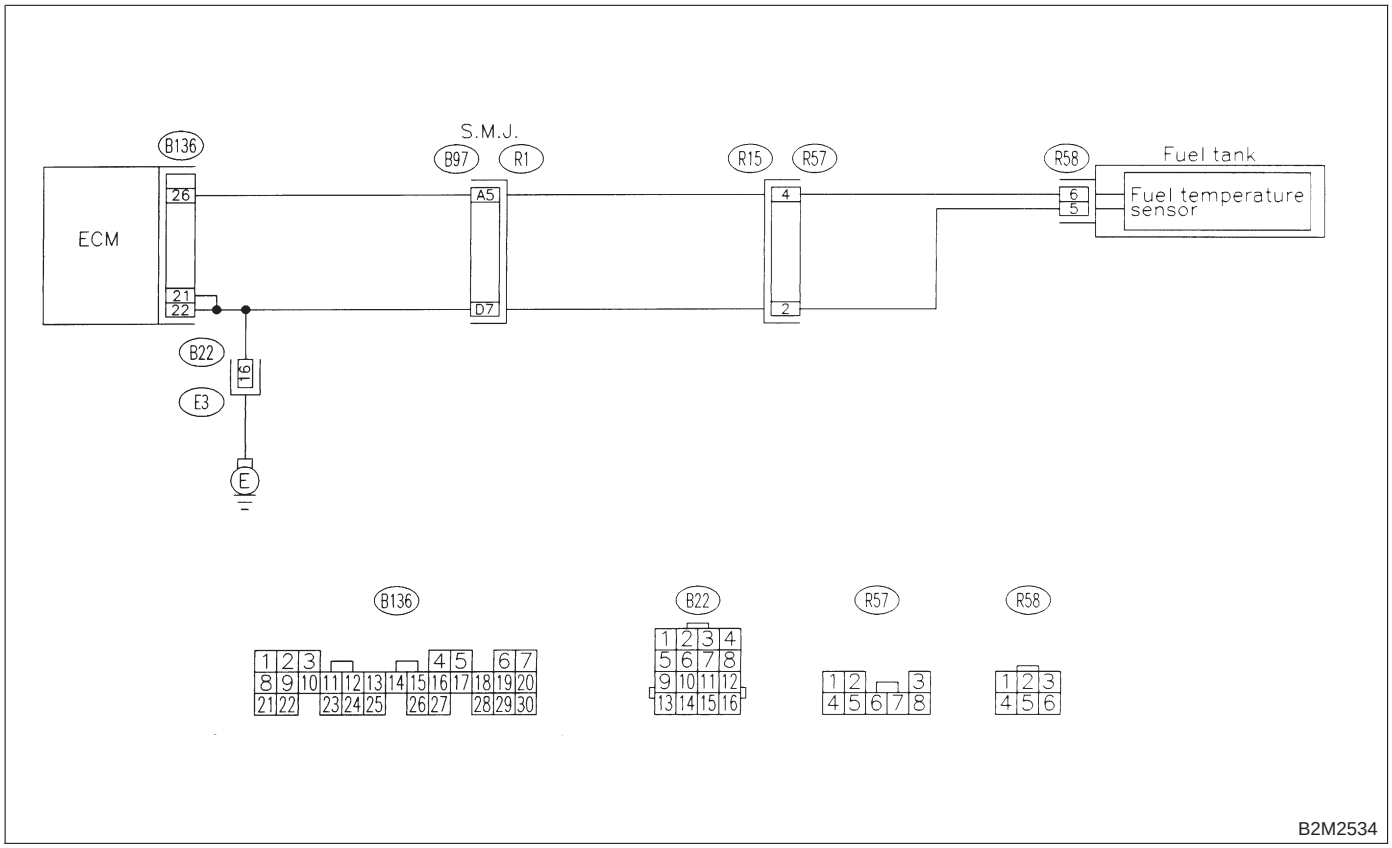
MEMO:

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

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

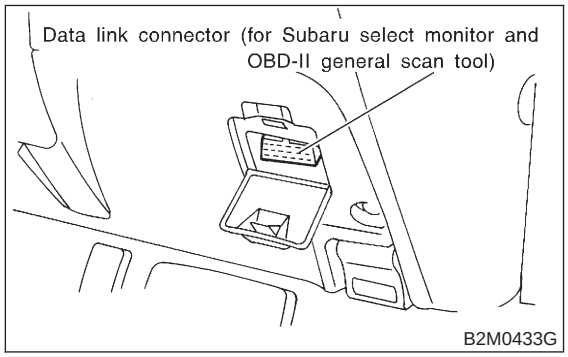
CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



13W1 : 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.



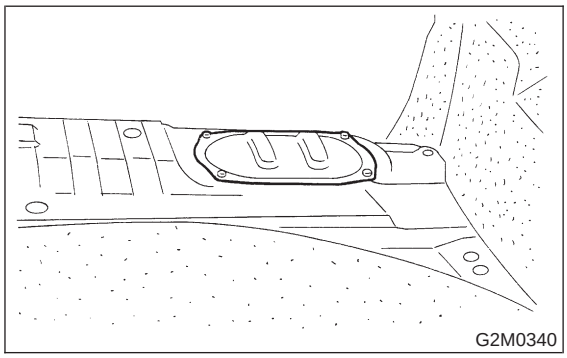
3) Turn ignition switch to ON and Subaru Select Monitor or OBD-II general scan tool switch to ON.
4) Start engine.
5) Read data of fuel temperature sensor signal using Subaru Select Monitor or OBD-II general scan tool.

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.

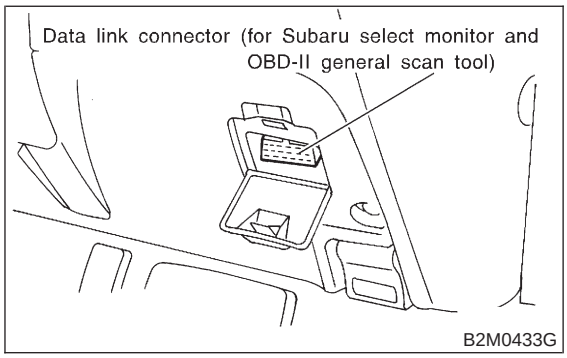
CHECK : ***Is the value greater than 150°C (300°F)?***
YES : Go to step **13W2**.
NO : Even if MIL lights up, the circuit has returned to a normal condition at this time.

13W2 : 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.

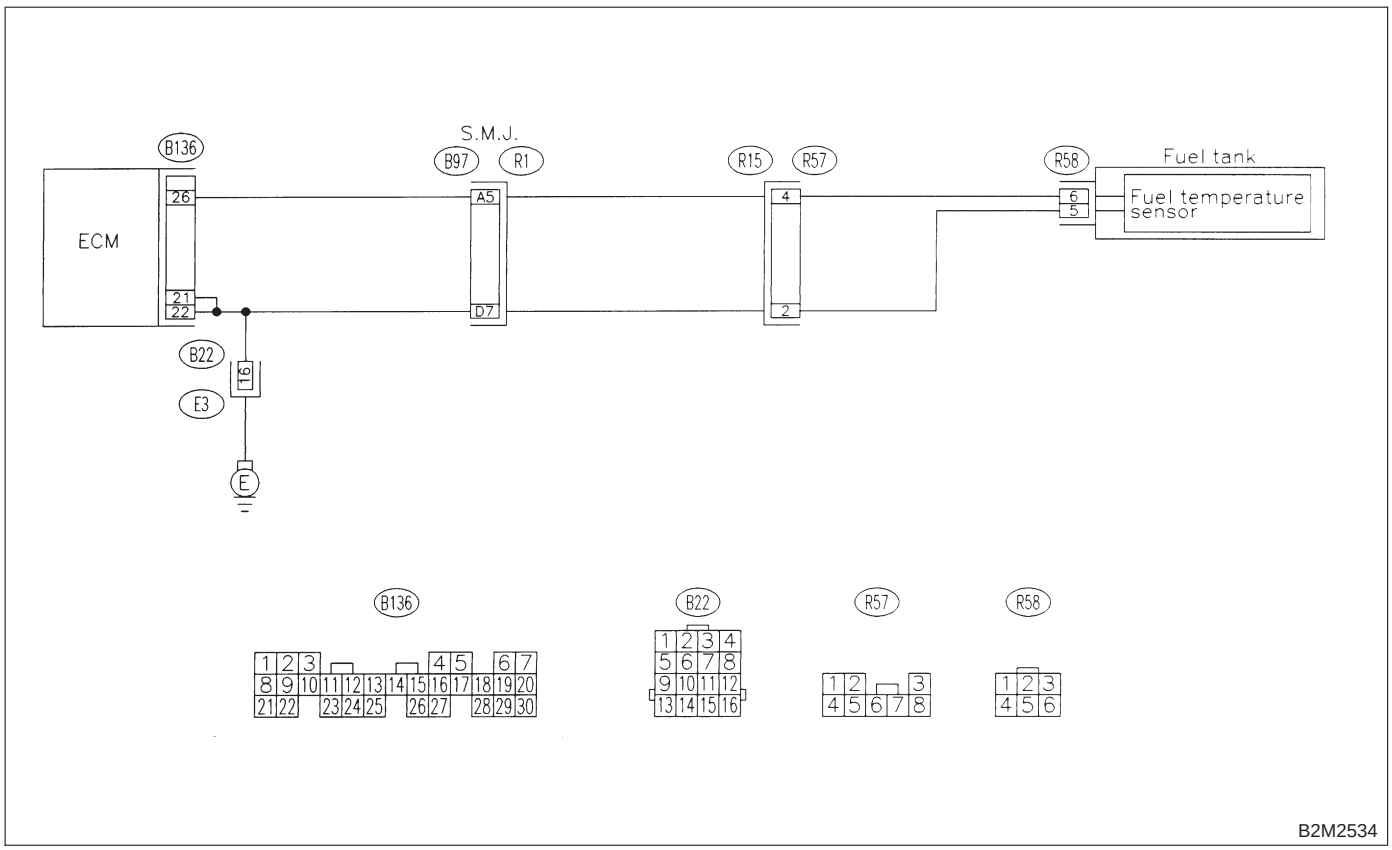
CHECK : ***Is the value less than −40°C (−40°F)?***
YES : Replace fuel temperature sensor. <Ref. to 2-1 [W8A0].>
NO : Repair ground short circuit in harness between fuel pump and ECM connector.

X: 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 MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

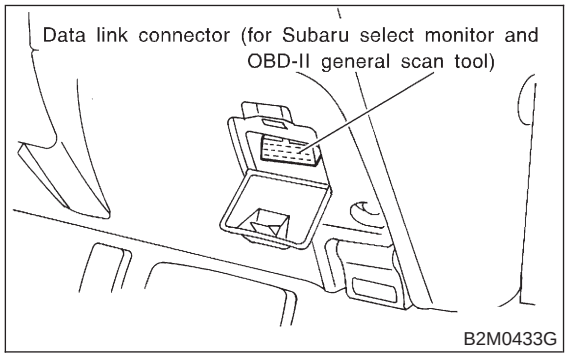
- **WIRING DIAGRAM:**



B2M2534

13X1 : 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.

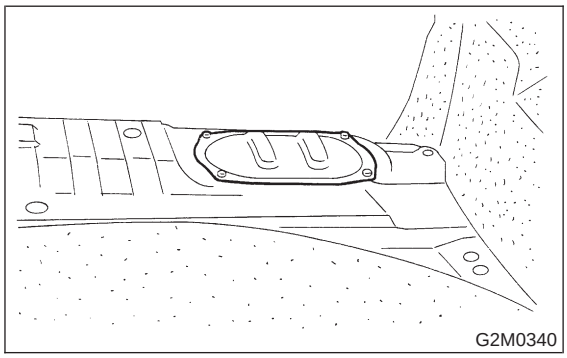
NOTE:
● Subaru Select Monitor
For detailed operation procedure, refer to the "READ CURRENT DATA SHOWN ON DISPLAY FOR ENGINE". <Ref. to 2-7 [T3C4].>
● OBD-II general scan tool
For detailed operation procedures, refer to the OBD-II General Scan Tool Instruction Manual.

CHECK : ***Is the value less than −40°C (−40°F)?***
YES : Go to step **13X2**.
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)

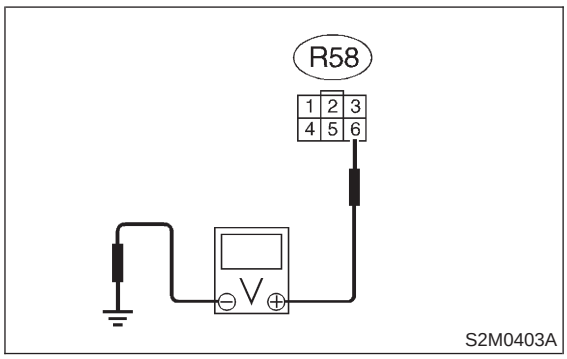
13X2 : CHECK HARNESS BETWEEN FUEL TEMPERATURE SENSOR AND ECM CONNECTOR.

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 (−):

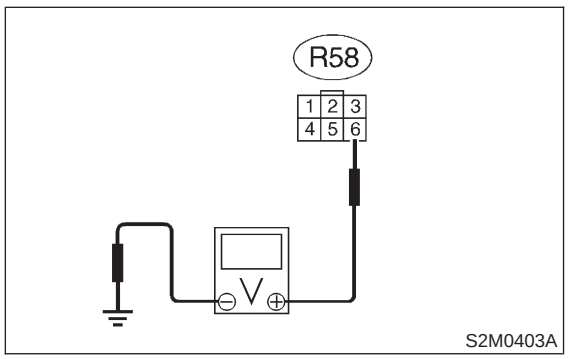


CHECK : ***Is the voltage more than 10 V?***
YES : Repair battery short circuit in harness between ECM and fuel pump connector.
NO : Go to step **13X3**.

13X3 : 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 (−):

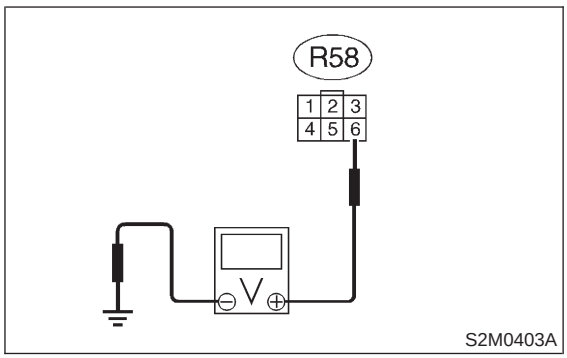


CHECK : ***Is the voltage more than 10 V?***
YES : Repair battery short circuit in harness between ECM and fuel pump connector.
NO : Go to step **13X4**.

13X4 : 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 (−):



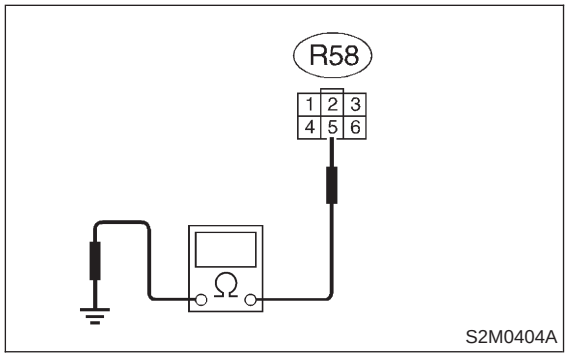
CHECK : ***Is the voltage more than 4 V?***
YES : Go to step **13X5**.
NO : Repair harness and connector.

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)

13X5 : 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. <Ref. to 2-1 [W8A0].>
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)

Y: DTC P0301 — CYLINDER 1 MISFIRE DETECTED —

NOTE:
For the diagnostic procedure, refer to 2-7 [T13AB0].
<Ref. to 2-7 [T13AB0].>

Z: DTC P0302 — CYLINDER 2 MISFIRE DETECTED —

NOTE:
For the diagnostic procedure, refer to 2-7 [T13AB0].
<Ref. to 2-7 [T13AB0].>

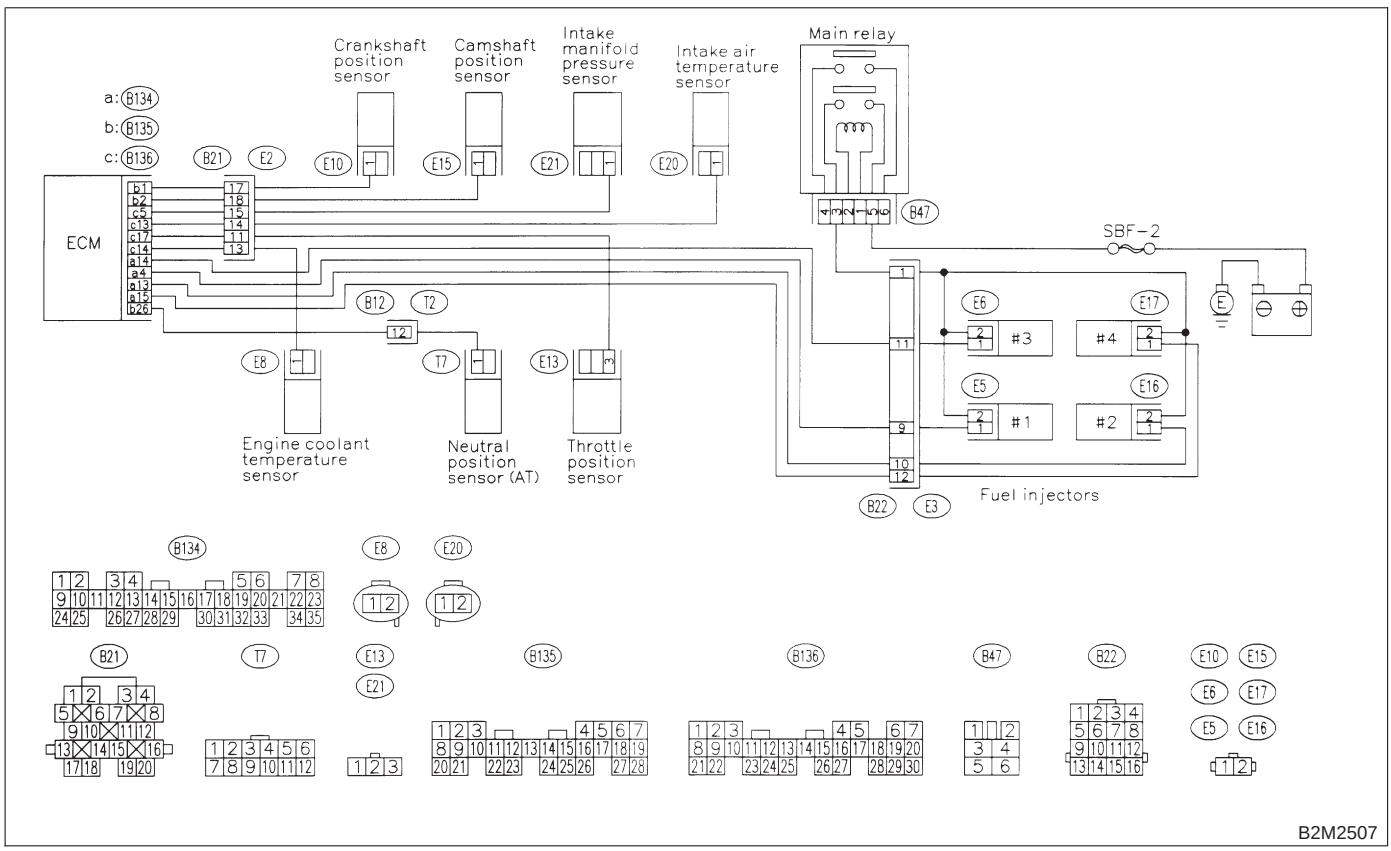
AA: DTC P0303 — CYLINDER 3 MISFIRE DETECTED —

NOTE:
For the diagnostic procedure, refer to 2-7 [T13AB0].
<Ref. to 2-7 [T13AB0].>

AB: DTC P0304 — CYLINDER 4 MISFIRE DETECTED —

NOTE:
Check fuel injection control system.
<Ref. to 2-7 [T12AB0].>

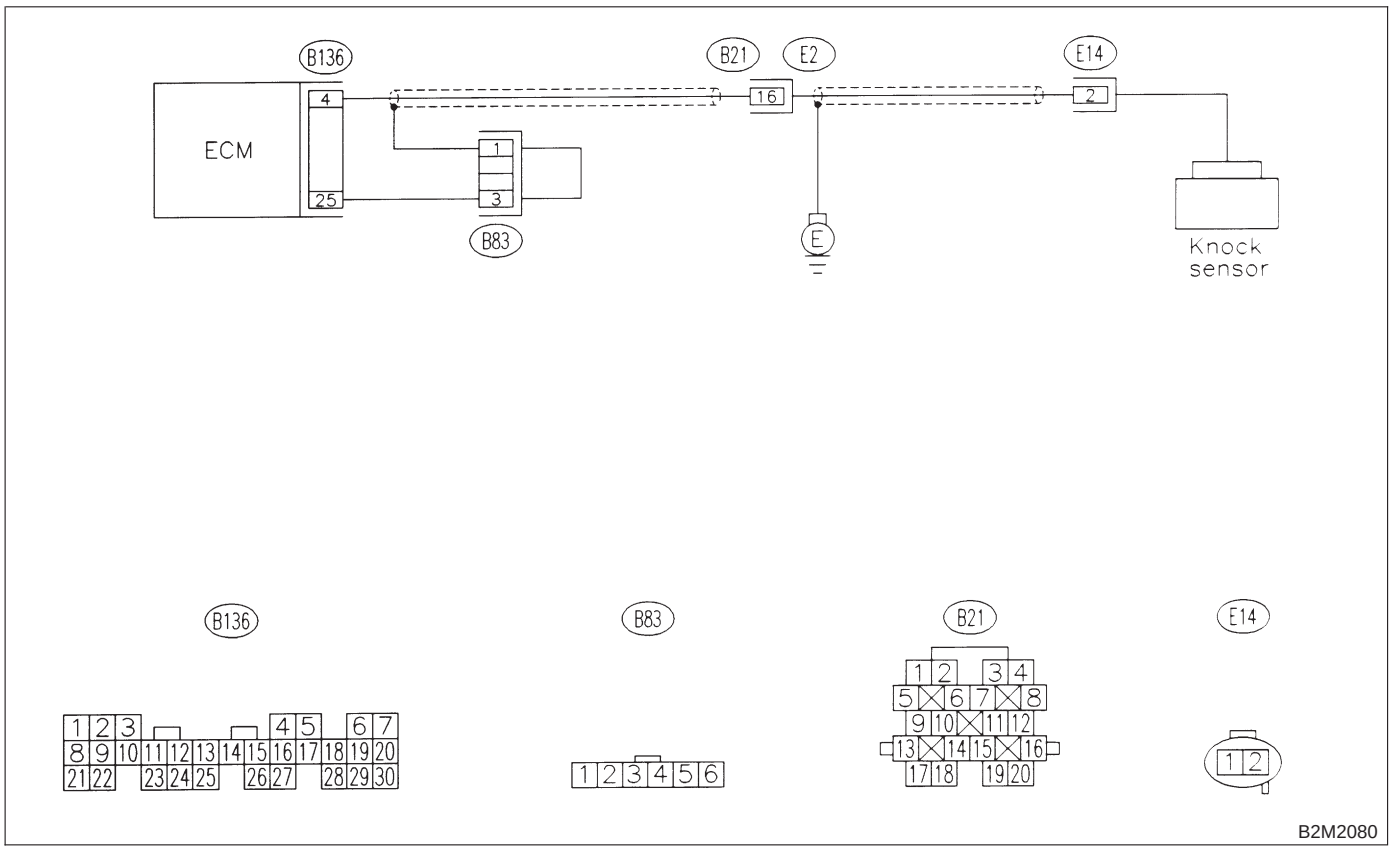
- **WIRING DIAGRAM:**



AC: DTC P0325 — KNOCK SENSOR CIRCUIT MALFUNCTION —

NOTE:
Check knock sensor circuit.
<Ref. to 2-7 [T12AC0].>

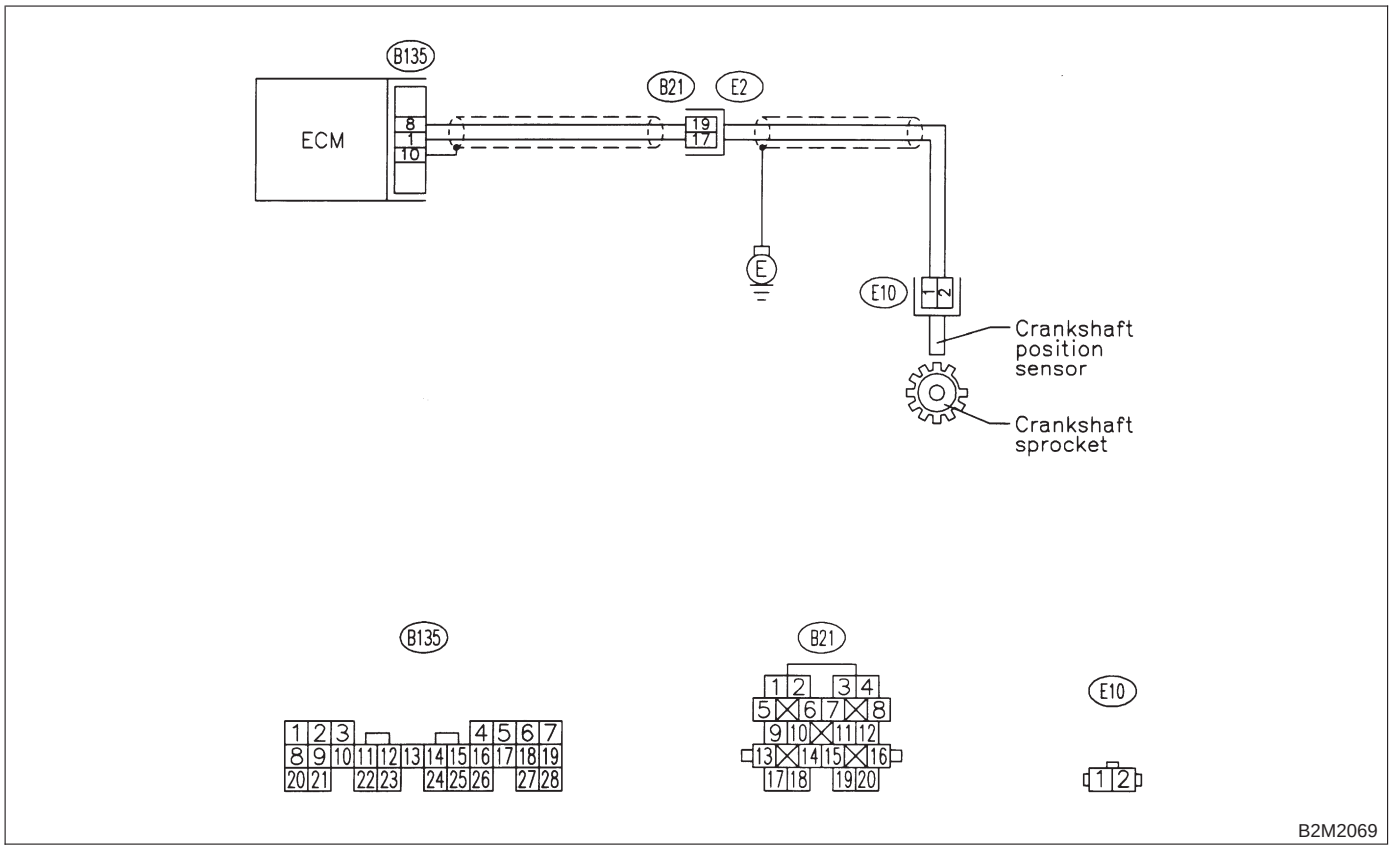
- **WIRING DIAGRAM:**



AD: DTC P0335 — CRANKSHAFT POSITION SENSOR CIRCUIT MALFUNCTION —

NOTE:
Check crankshaft position sensor circuit.
<Ref. to 2-7 [T12AD0].>

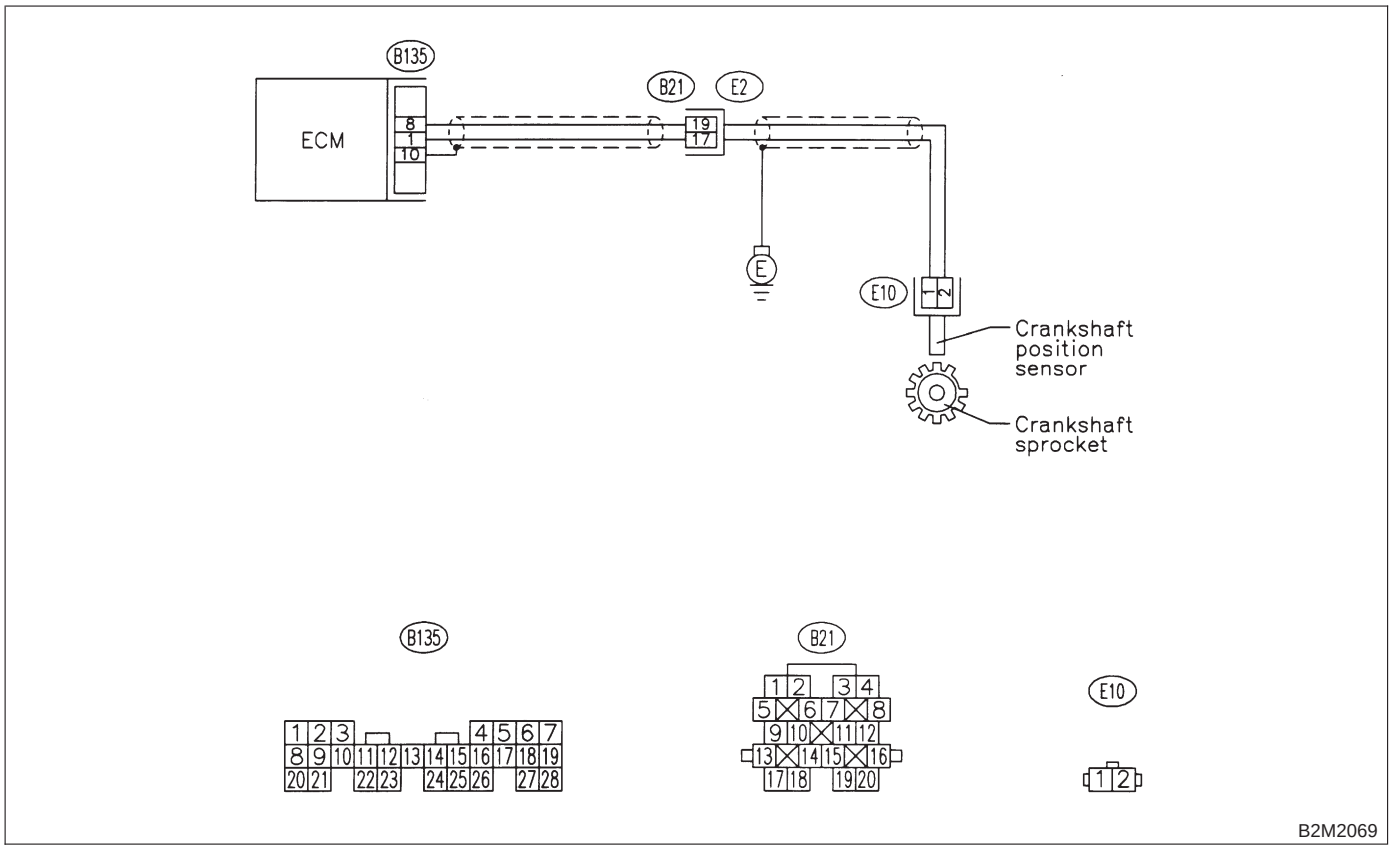
- **WIRING DIAGRAM:**



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

NOTE:
Check crankshaft position sensor circuit.
<Ref. to 2-7 [T12AE0].>

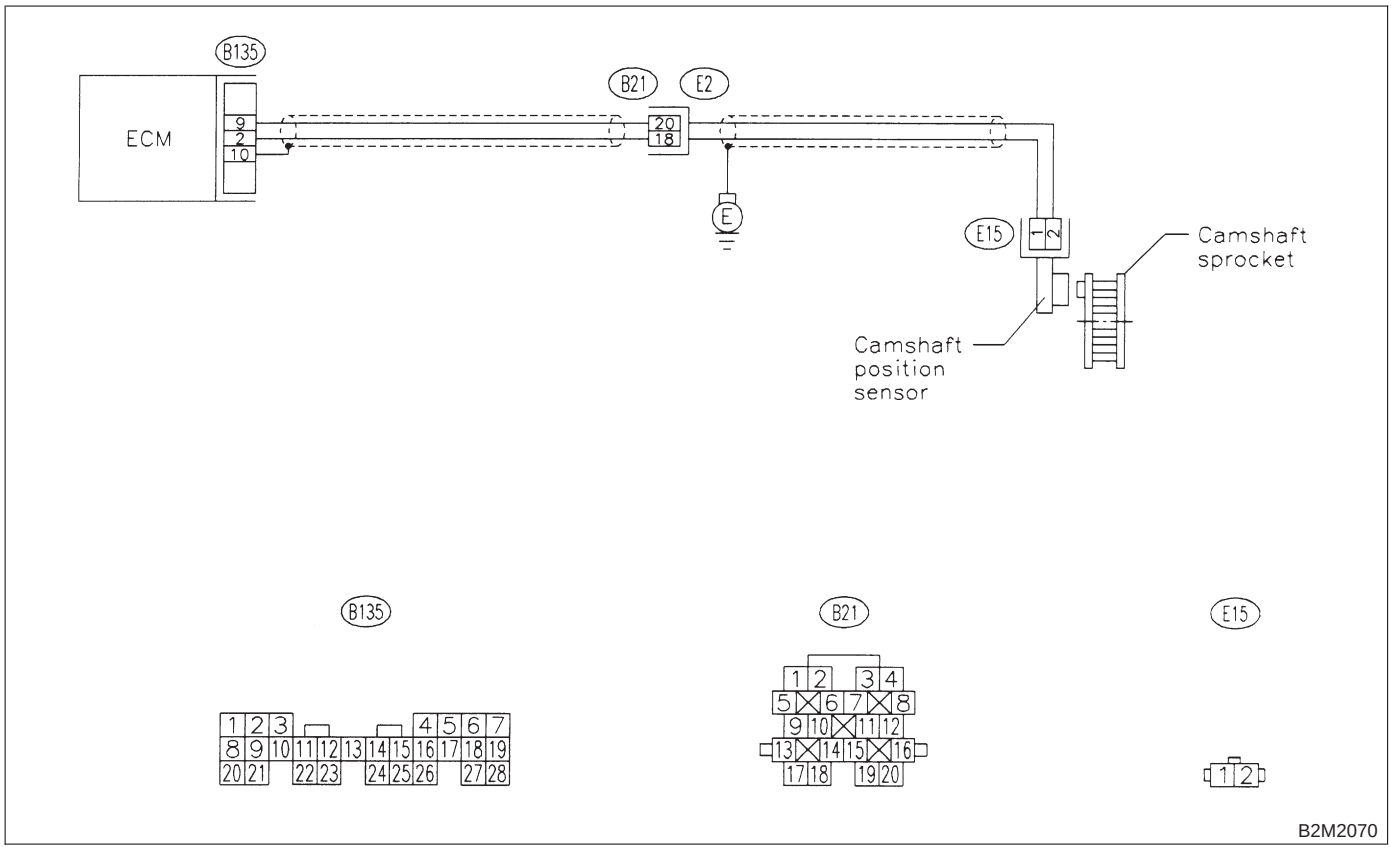
- **WIRING DIAGRAM:**



AF: DTC P0340 — CAMSHAFT POSITION SENSOR CIRCUIT MALFUNCTION —

NOTE:
Check camshaft position sensor circuit.
<Ref. to 2-7 [T12AF0].>

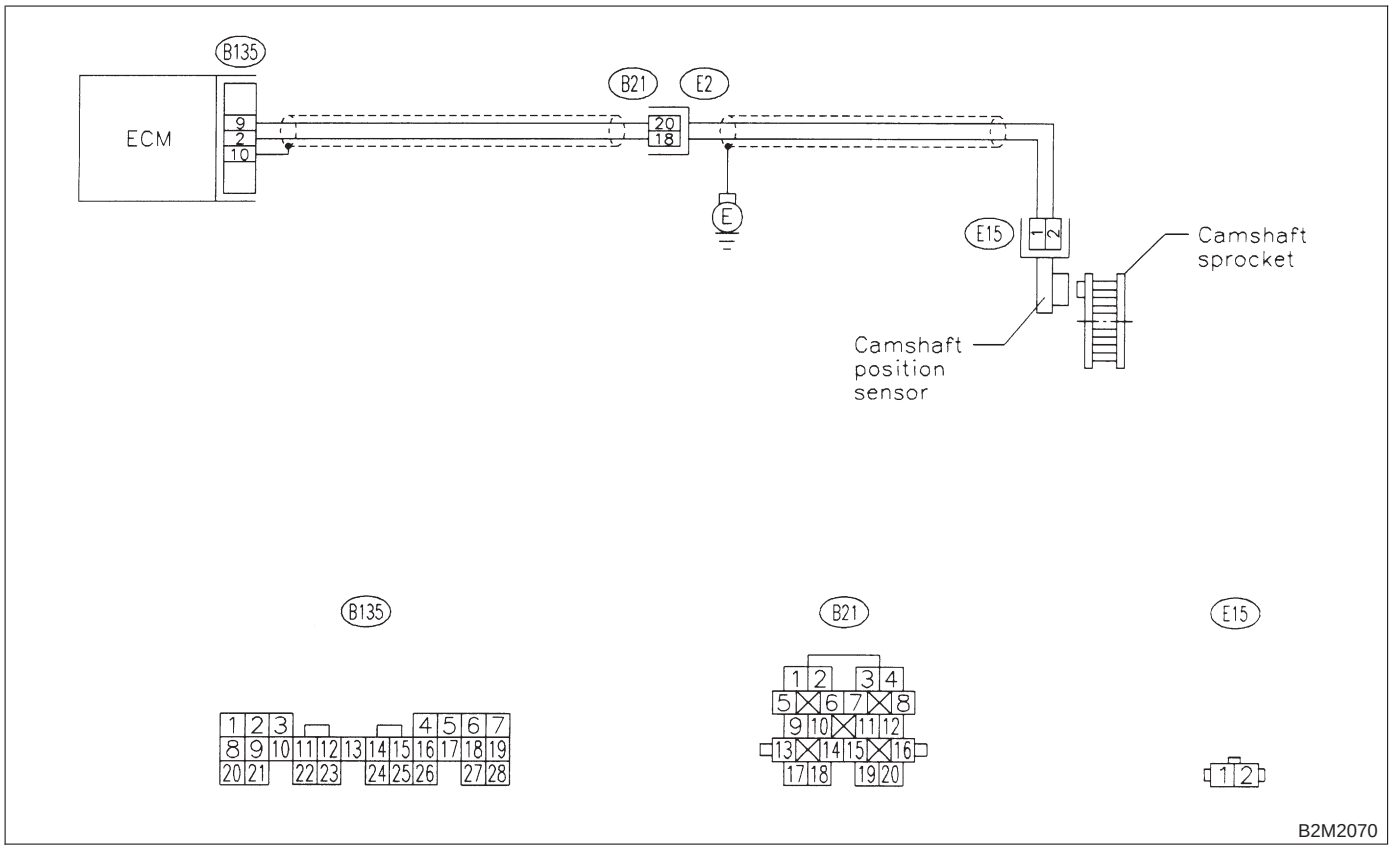
- **WIRING DIAGRAM:**



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

NOTE:
Check camshaft position sensor circuit.
<Ref. to 2-7 [T12AG0].>

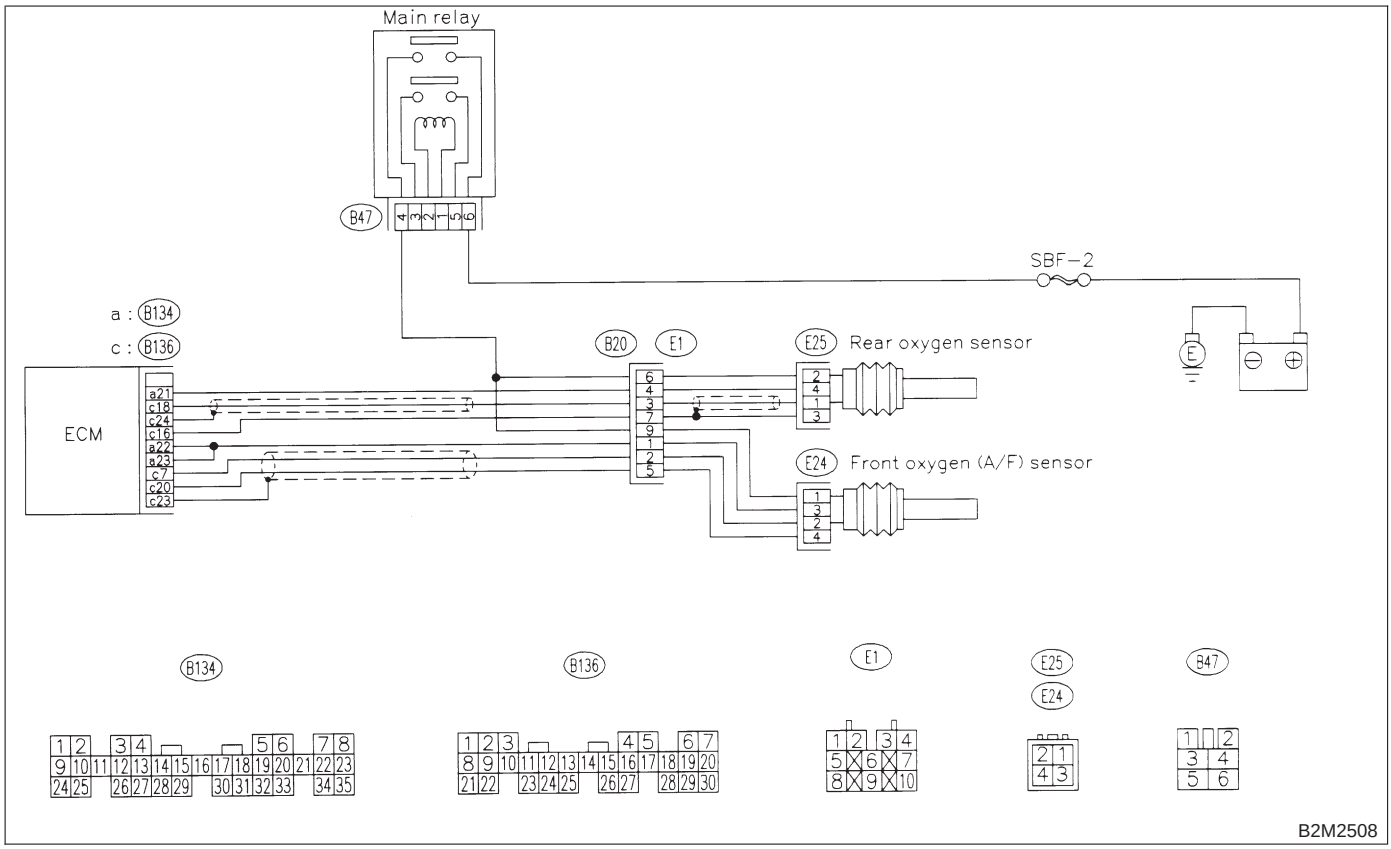
- **WIRING DIAGRAM:**



AH: DTC P0420 — CATALYST SYSTEM EFFICIENCY BELOW THRESHOLD —

NOTE:
Check catalyst system.
<Ref. to 2-7 [T12AH0].>

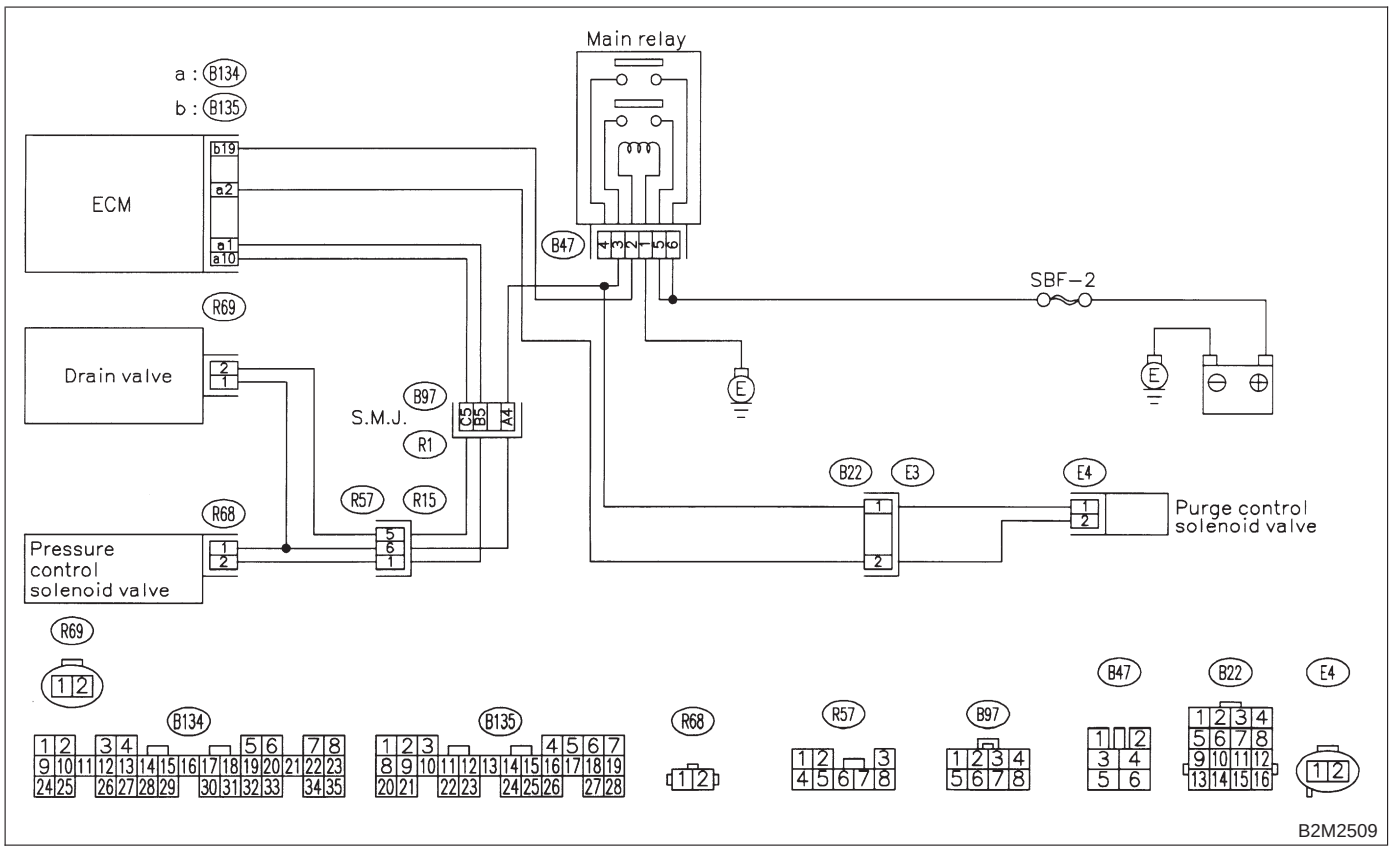
- **WIRING DIAGRAM:**



AI: DTC P0440 — EVAPORATIVE EMISSION CONTROL SYSTEM MALFUNCTION —

NOTE:
Check evaporative emission control system.
<Ref. to 2-7 [T12AI0].>

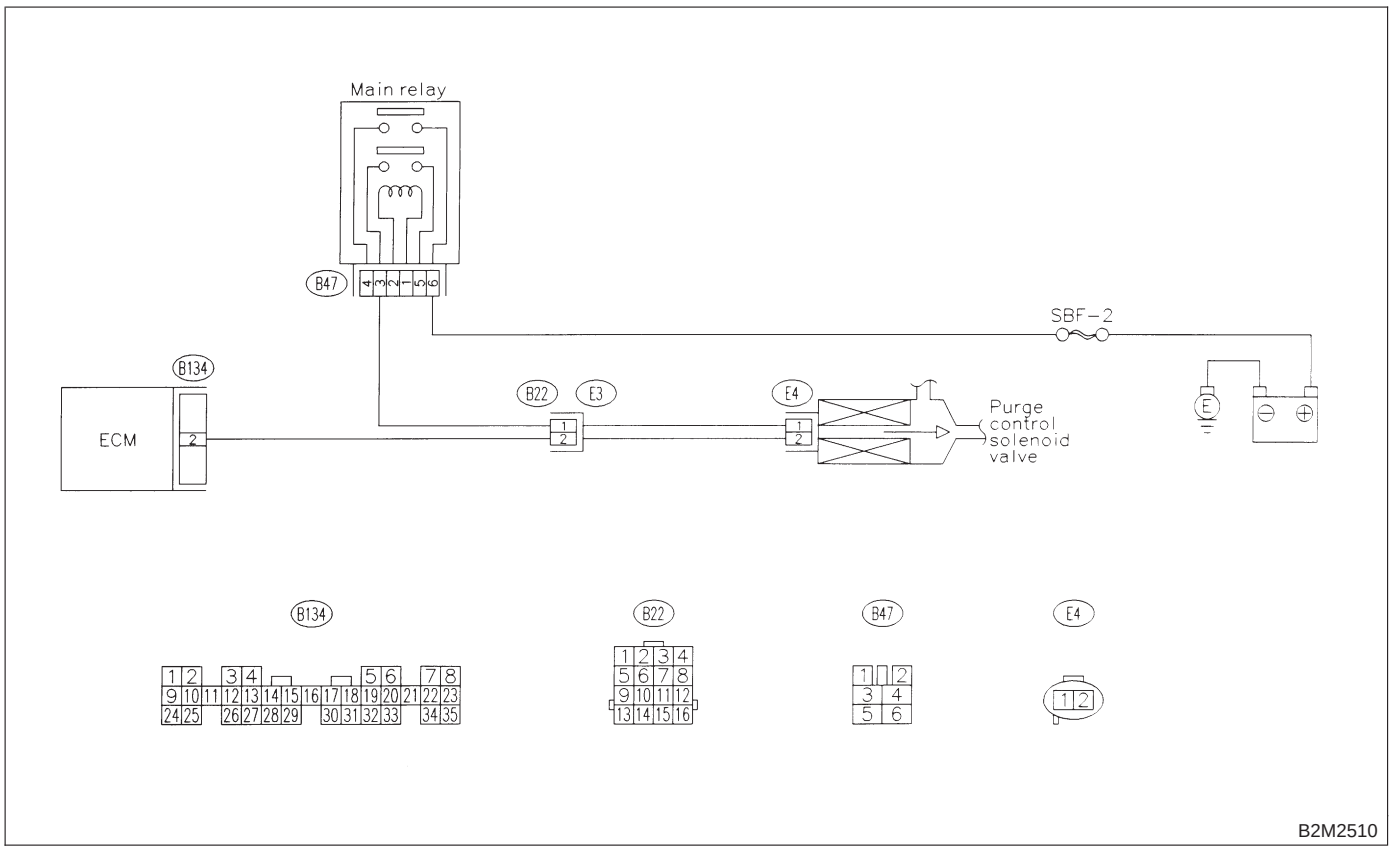
- **WIRING DIAGRAM:**



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

NOTE:
Check purge control solenoid valve circuit.
<Ref. to 2-7 [T12AJ0].>

- **WIRING DIAGRAM:**



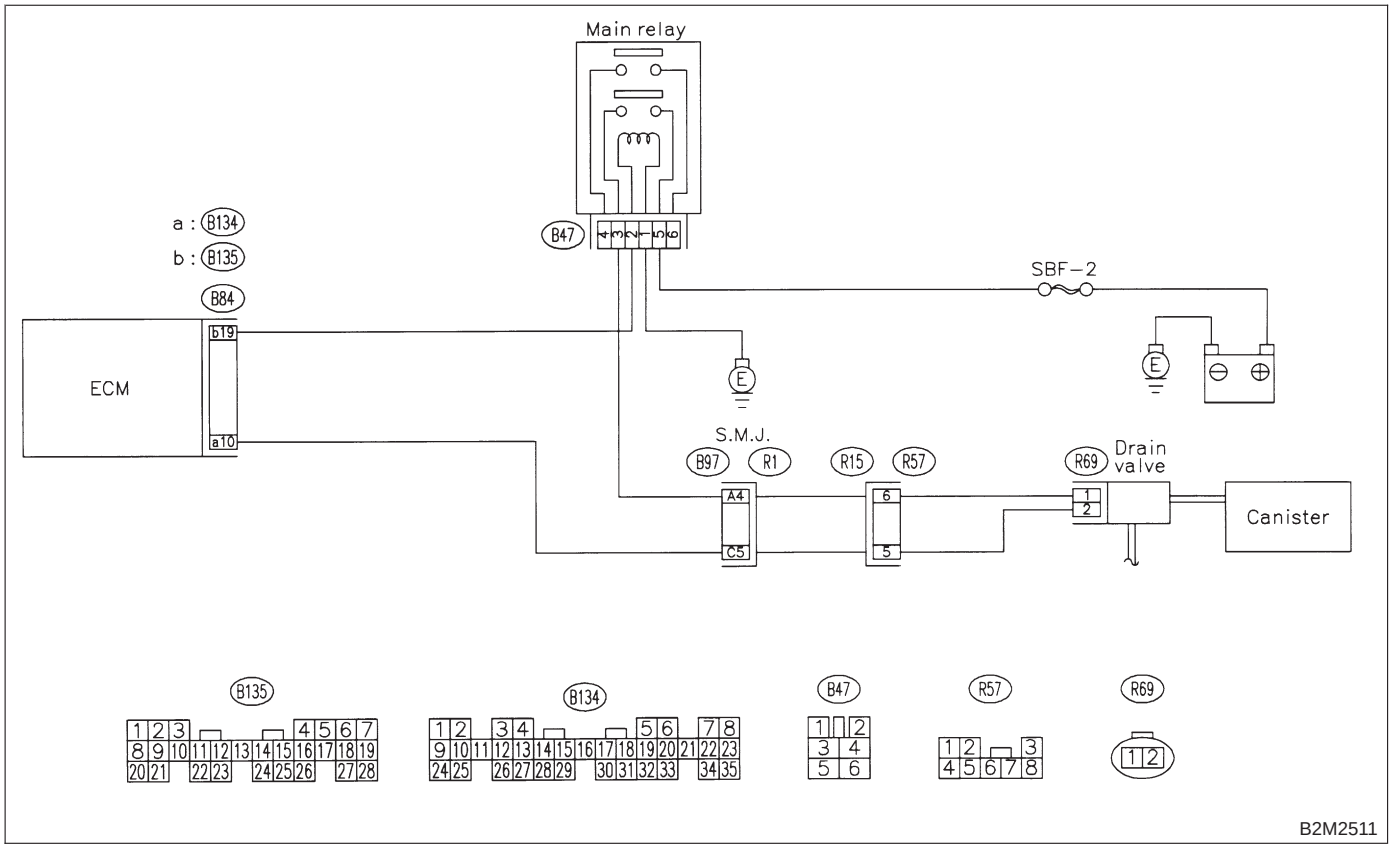
MEMO:

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

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

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

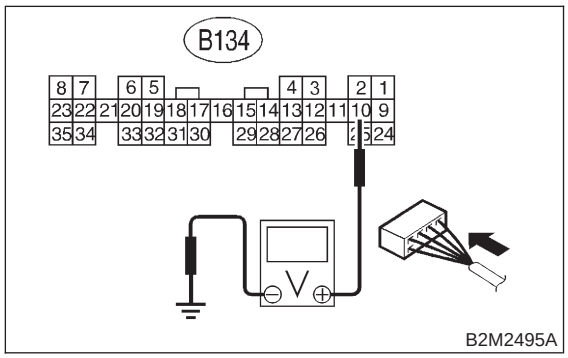
- **WIRING DIAGRAM:**



13AK1 : CHECK OUTPUT SIGNAL FROM ECM.

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

Connector & terminal
(B134) No. 10 (+) — Chassis ground (−):



CHECK : ***Is the voltage more than 10 V?***
YES : Go to step **13AK2**.
NO : Go to step **13AK3**.

13AK2 : CHECK POOR CONTACT.

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

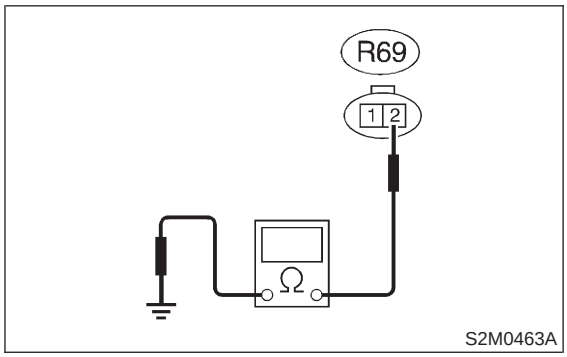
CHECK : ***Is there poor contact in ECM connector?***
YES : Repair poor contact in ECM connector.
NO : Even if MIL lights up, the circuit has returned to a normal condition at this time. (However, the possibility of poor contact still remains.)

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)

13AK3 : 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:

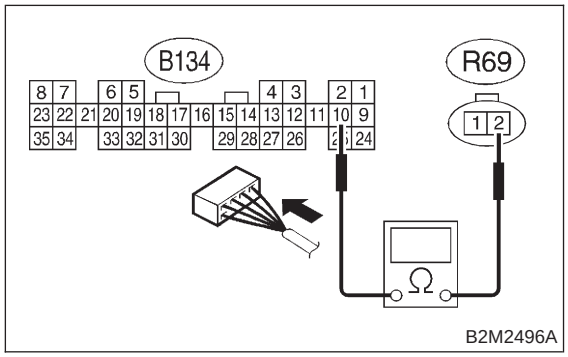


CHECK : ***Is the resistance less than 10 Ω?***
YES : Repair ground short circuit in harness between ECM and drain valve connector.
NO : Go to step **13AK4**.

13AK4 : CHECK HARNESS BETWEEN DRAIN VALVE AND ECM CONNECTOR.

Measure resistance of harness between ECM and drain valve connector.

Connector & terminal
(B134) No. 10 — (R69) No. 2:



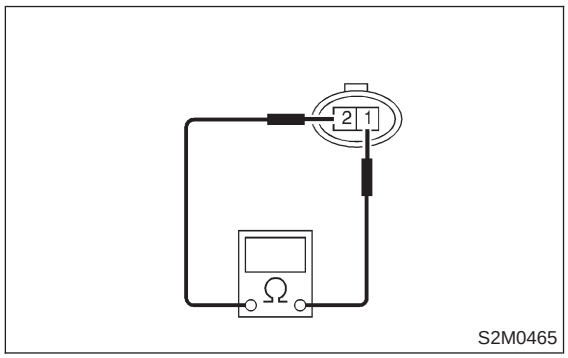
CHECK : ***Is the voltage less than 1 Ω?***
YES : Go to step **13AK5**.
NO : Repair harness and connector.

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)

13AK5 : CHECK DRAIN VALVE.

Measure resistance between drain valve terminals.

Terminals
No. 1 — No. 2:

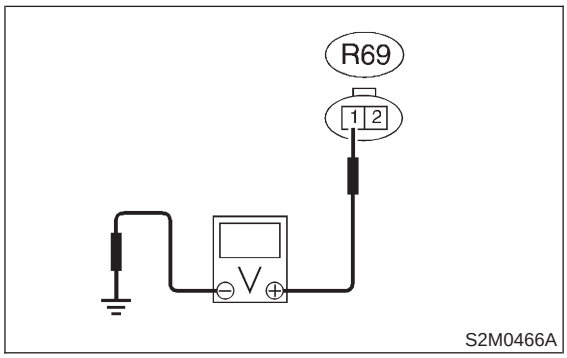


CHECK : ***Is the resistance between 10 and 100 Ω?***
YES : Go to step **13AK6**.
NO : Replace drain valve. <Ref. to 2-1 [W17A0].>

13AK6 : 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 **13AK7**.
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

13AK7 : CHECK POOR CONTACT.

Check poor contact in vent control solenoid valve connector.
<Ref. to FOREWORD [T3C1].>

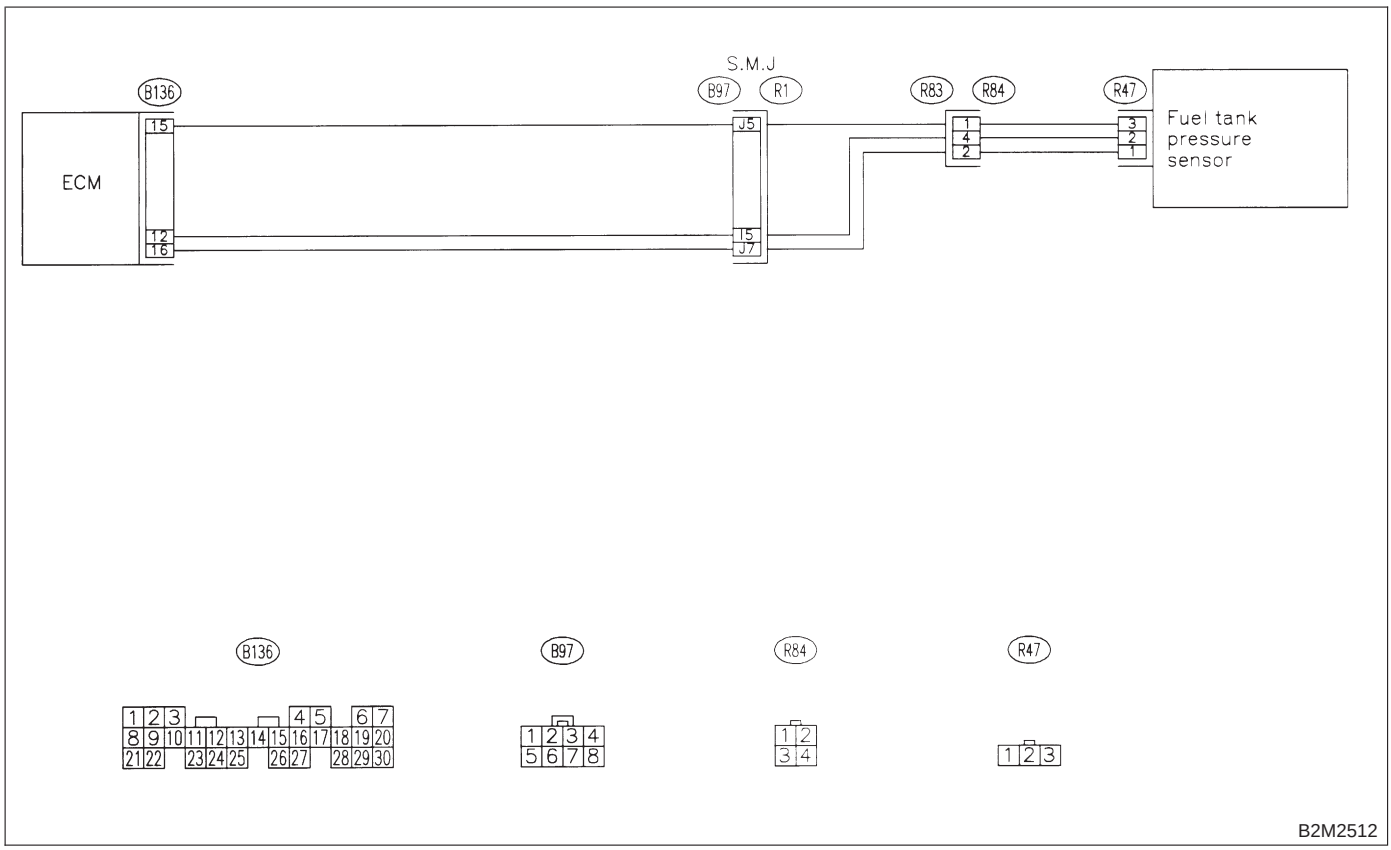
CHECK : ***Is there poor contact in drain valve connector?***
YES : Repair poor contact in drain valve connector.
NO : Contact with SOA service.

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

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

NOTE:
Check fuel tank pressure control system.
<Ref. to 2-7 [T12AL0].>

- **WIRING DIAGRAM:**

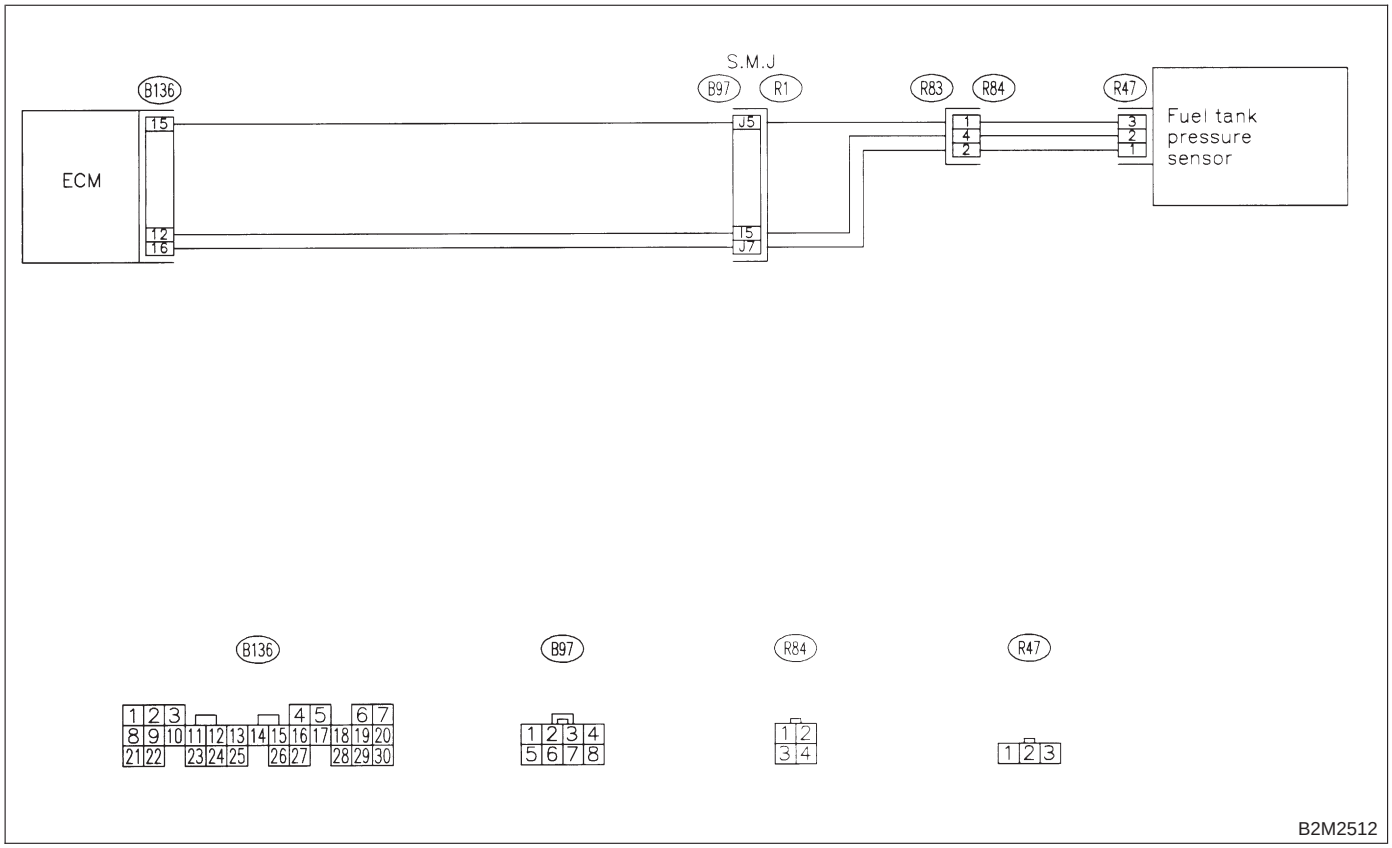


AM: DTC P0452 — EVAPORATIVE EMISSION CONTROL SYSTEM PRESSURE SENSOR LOW INPUT —

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

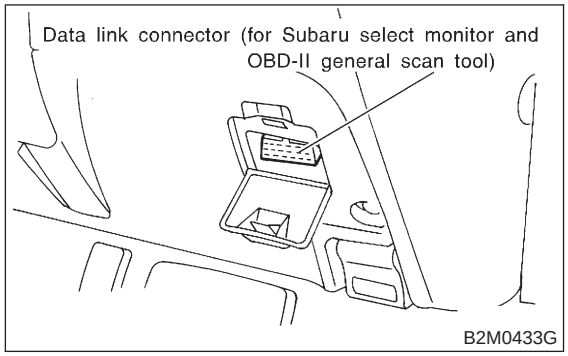
CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



13AM1 : 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.

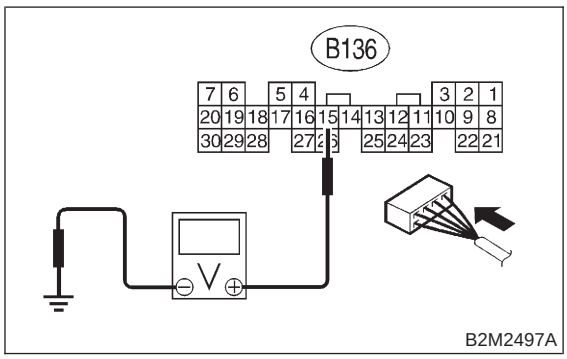
NOTE:
● Subaru Select Monitor
For detailed operation procedure, refer to the "READ CURRENT DATA SHOWN ON DISPLAY FOR ENGINE". <Ref. to 2-7 [T3C4].>
● OBD-II general scan tool
For detailed operation procedures, refer to the OBD-II General Scan Tool Instruction Manual.

CHECK : ***Is the value less than −2.8 kPa (−21.0 mmHg, −0.827 inHg)?***
YES : Go to step **13AM2**.
NO : Even if MIL lights up, the circuit has returned to a normal condition at this time.

13AM2 : CHECK POWER SUPPLY TO FUEL TANK PRESSURE SENSOR.

Measure voltage between ECM connector and chassis ground.

Connector & terminal
(B136) No. 15 (+) — Chassis ground (−):

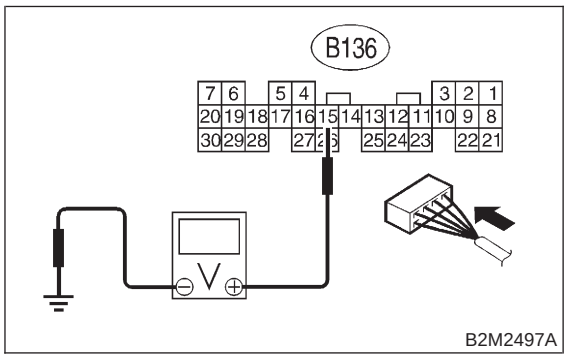


CHECK : ***Is the voltage more than 4.5 V?***
YES : Go to step **13AM4**.
NO : Go to step **13AM3**.

13AM3 : CHECK POWER SUPPLY TO FUEL TANK PRESSURE SENSOR.

Measure voltage between ECM connector and chassis ground.

Connector & terminal
(B136) No. 15 (+) — Chassis ground (−):



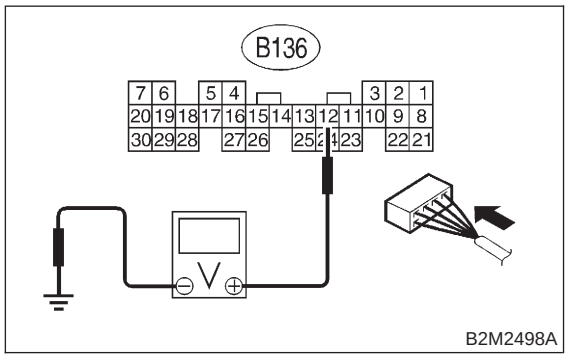
CHECK : ***Does the voltage change more than 4.5 V by shaking harness and connector of ECM while monitoring the value with voltage meter?***
YES : Repair poor contact in ECM connector.
NO : Contact with SOA service.

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

13AM4 : CHECK INPUT SIGNAL FOR ECM.

Measure voltage between ECM and chassis ground.

Connector & terminal
(B136) No. 12 (+) — Chassis ground (−):



CHECK : ***Is the voltage less than 0.2 V?***
YES : Go to step **13AM6**.
NO : Go to step **13AM5**.

13AM5 : CHECK INPUT SIGNAL FOR ECM. (USING SUBARU SELECT MONITOR.)

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

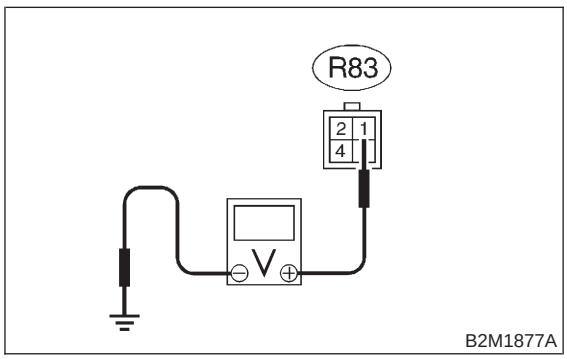
NOTE:
● Subaru Select Monitor
For detailed operation procedure, refer to the “READ CURRENT DATA SHOWN ON DISPLAY FOR ENGINE”. <Ref. to 2-7 [T3C4].>

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 **13AM6**.

13AM6 : CHECK HARNESS BETWEEN ECM AND COUPLING CONNECTOR IN REAR WIRING HARNESS.

1) Turn ignition switch to OFF.
2) Move rear seat cushion.
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 (−):



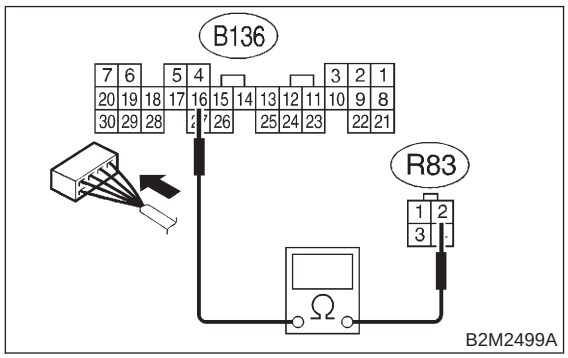
CHECK : ***Is the voltage more than 4.5 V?***
YES : Go to step **13AM7**.
NO : Repair harness and connector.

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)

13AM7 : 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
(B136) No. 16 — (R83) No. 2:



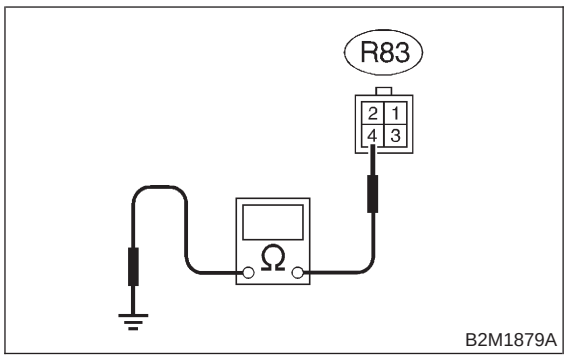
CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **13AM8**.
NO : Repair harness and connector.

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)

13AM8 : 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:

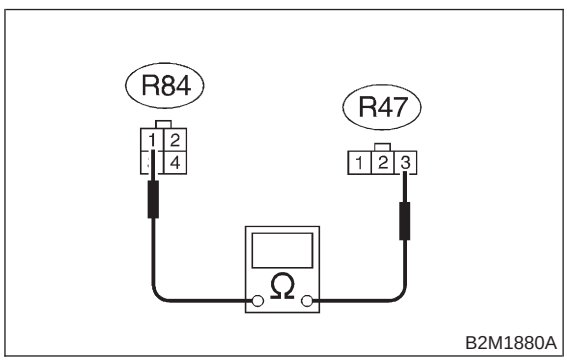


CHECK : ***Is the resistance more than 500 kΩ?***
YES : Go to step **13AM9**.
NO : Repair ground short circuit in harness between ECM and rear wiring harness connector (R83).

13AM9 : 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:

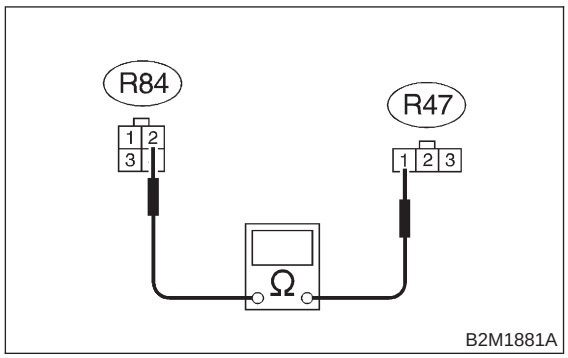


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **13AM10**.
NO : Repair open circuit in fuel tank cord.

13AM10 : CHECK FUEL TANK CORD.

Measure resistance of fuel tank cord.

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

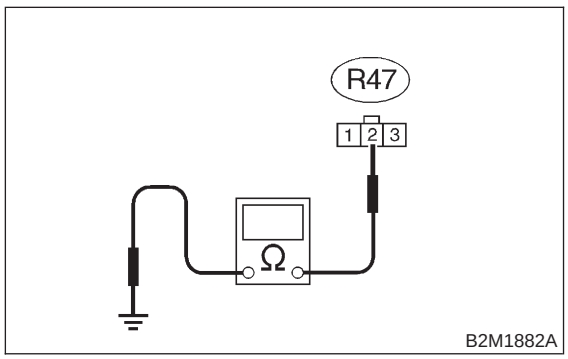


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **13AM11**.
NO : Repair open circuit in fuel tank cord.

13AM11 : 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 **13AM12**.
NO : Repair ground short circuit in fuel tank cord.

13AM12 : CHECK POOR CONTACT.

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

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

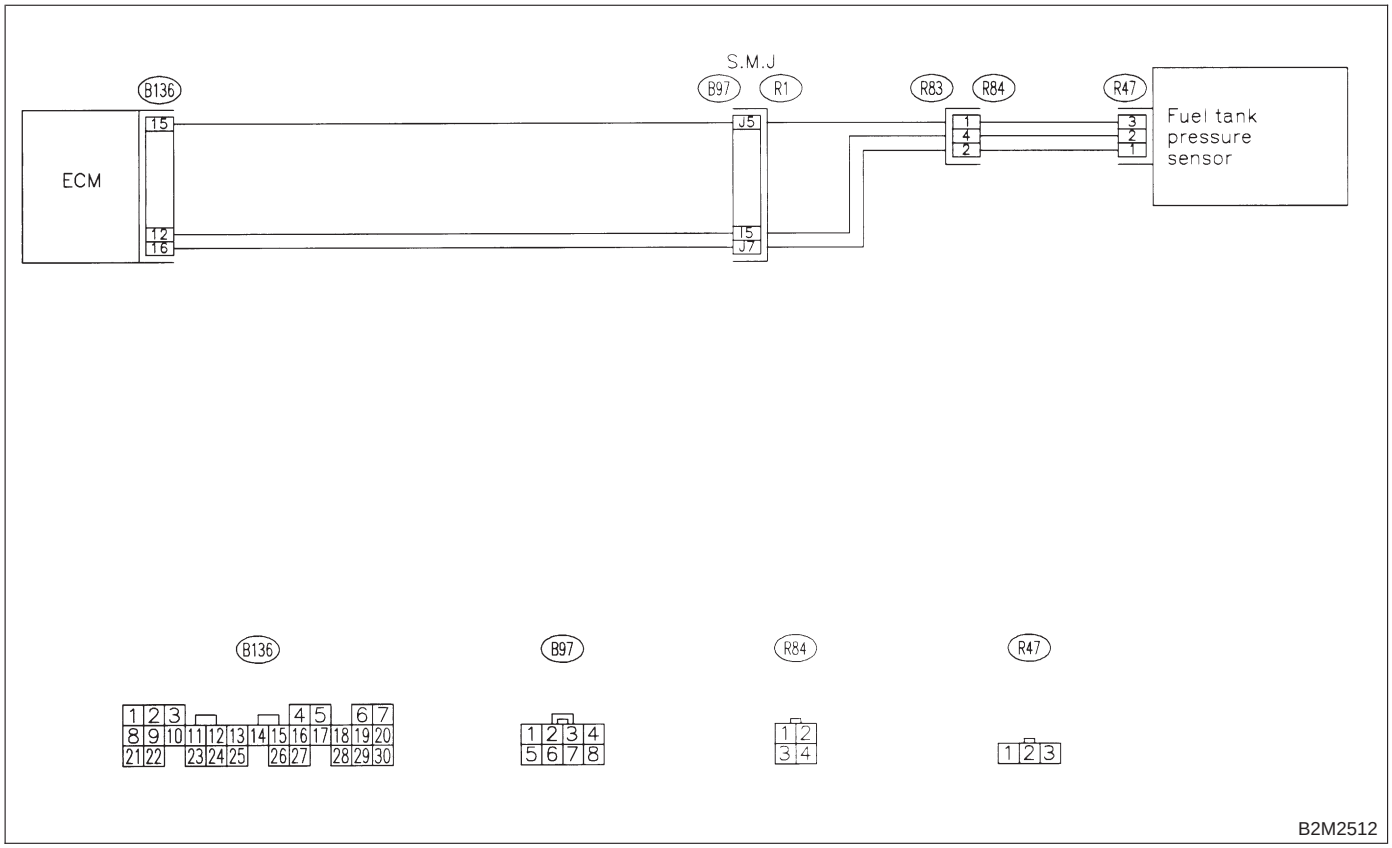
MEMO:

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

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

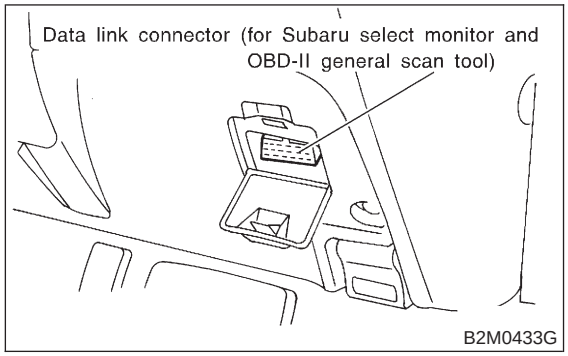
CAUTION:
After repair or replacement of faulty parts, conduct CLEAR MEMORY MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



13AN1 : 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.

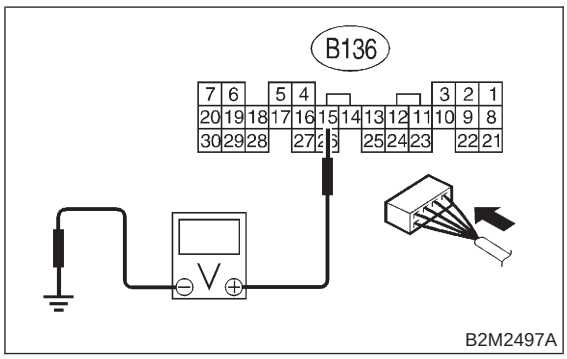
NOTE:
● Subaru Select Monitor
For detailed operation procedure, refer to the "READ CURRENT DATA SHOWN ON DISPLAY FOR ENGINE". <Ref. to 2-7 [T3C4].>
● OBD-II general scan tool
For detailed operation procedures, refer to the OBD-II General Scan Tool Instruction Manual.

CHECK : ***Is the value more than 2.8 kPa (21.0 mmHg, 0.827 inHg)?***
YES : Go to step **13AN12**.
NO : Go to step **13AN2**.

13AN2 : CHECK POWER SUPPLY TO FUEL TANK PRESSURE SENSOR.

Measure voltage between ECM connector and chassis ground.

Connector & terminal
(B136) No. 15 (+) — Chassis ground (−):

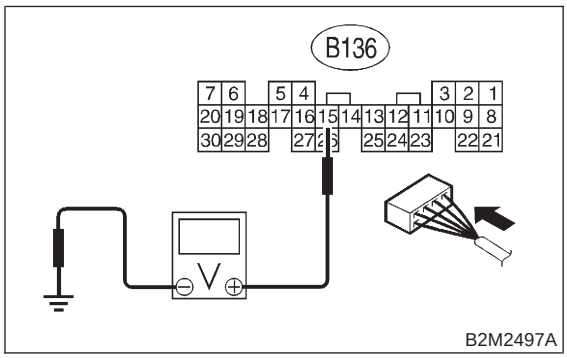


CHECK : ***Is the voltage more than 4.5 V?***
YES : Go to step **13AN4**.
NO : Go to step **13AN3**.

13AN3 : CHECK POWER SUPPLY TO FUEL TANK PRESSURE SENSOR.

Measure voltage between ECM connector and chassis ground.

Connector & terminal
(B136) No. 15 (+) — Chassis ground (−):

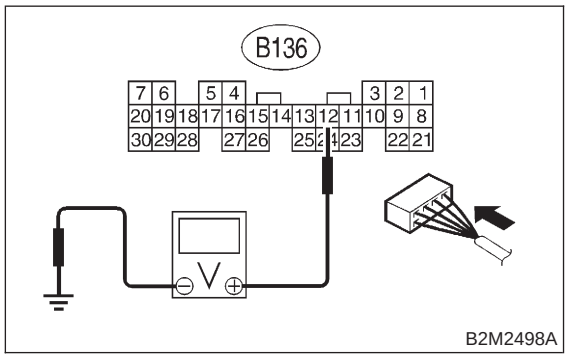


CHECK : ***Does the voltage change more than 4.5 V by shaking harness and connector of ECM while monitoring the value with voltage meter?***
YES : Repair poor contact in ECM connector.
NO : Replace ECM. <Ref. to 2-7 [W15A1].>

13AN4 : CHECK INPUT SIGNAL FOR ECM.

Measure voltage between ECM and chassis ground.

Connector & terminal
(B136) No. 12 (+) — Chassis ground (−):



CHECK : ***Is the voltage less than 0.2 V?***
YES : Go to step **13AN6**.
NO : Go to step **13AN5**.

13AN5 : CHECK INPUT SIGNAL FOR ECM. (USING SUBARU SELECT MONITOR.)

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

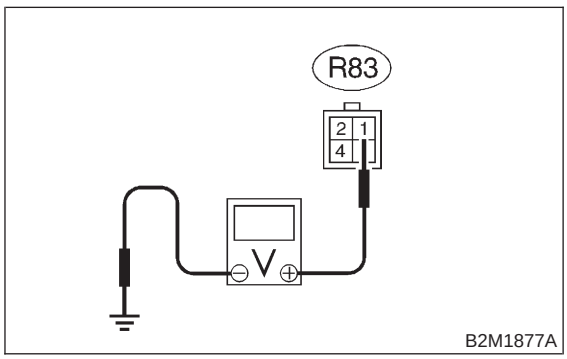
NOTE:
● Subaru Select Monitor
For detailed operation procedure, refer to the “READ CURRENT DATA SHOWN ON DISPLAY FOR ENGINE”. <Ref. to 2-7 [T3C4].>

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 **13AN6**.

13AN6 : CHECK HARNESS BETWEEN ECM AND COUPLING CONNECTOR IN REAR WIRING HARNESS.

1) Turn ignition switch to OFF.
2) 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 (−):



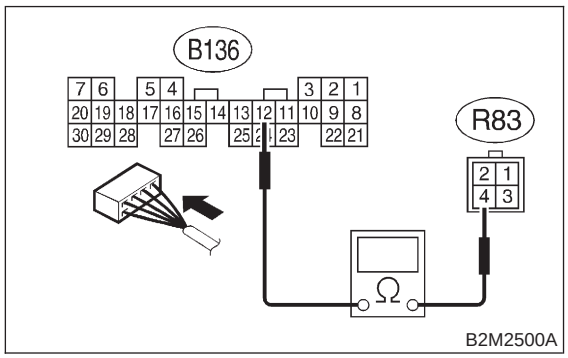
CHECK : ***Is the voltage more than 4.5 V?***
YES : Go to step **13AN7**.
NO : Repair harness and connector.

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)

13AN7 : 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
(B136) No. 12 — (R83) No. 4:



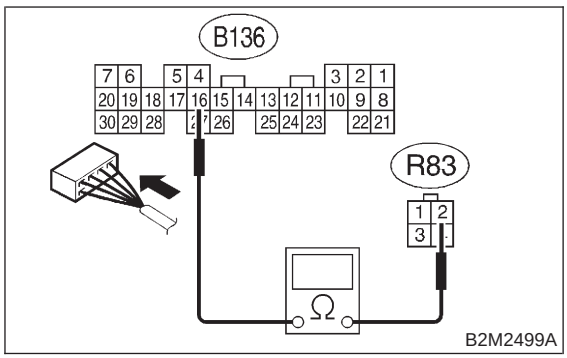
CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **13AN8**.
NO : Repair harness and connector.

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)

13AN8 : 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
(B136) No. 16 — (R83) No. 2:

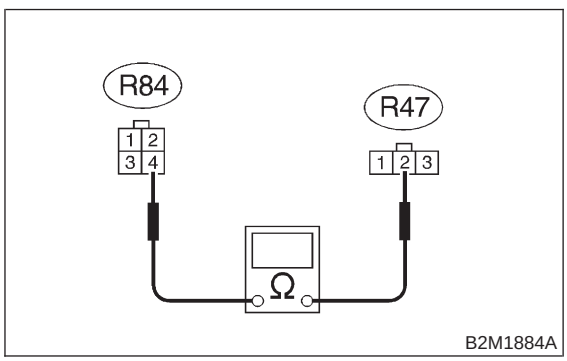


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **13AN9**.
NO : Repair ground short circuit in harness between ECM and rear wiring harness connector (R83).

13AN9 : 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:

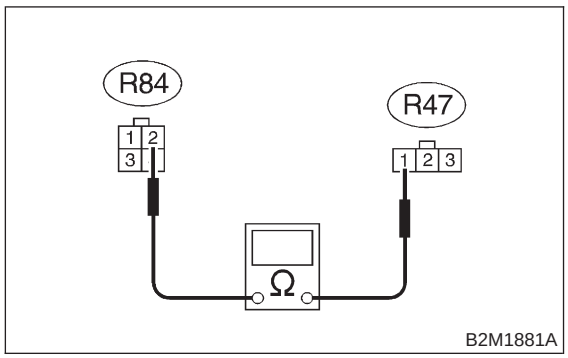


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **13AN10**.
NO : Repair open circuit in fuel tank cord.

13AN10 : 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 **13AN11**.
NO : Repair open circuit in fuel tank cord.

13AN11 : CHECK POOR CONTACT.

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

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

13AN12 : CHECK HARNESS BETWEEN ECM AND FUEL TANK PRESSURE SENSOR CONNECTOR.

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

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

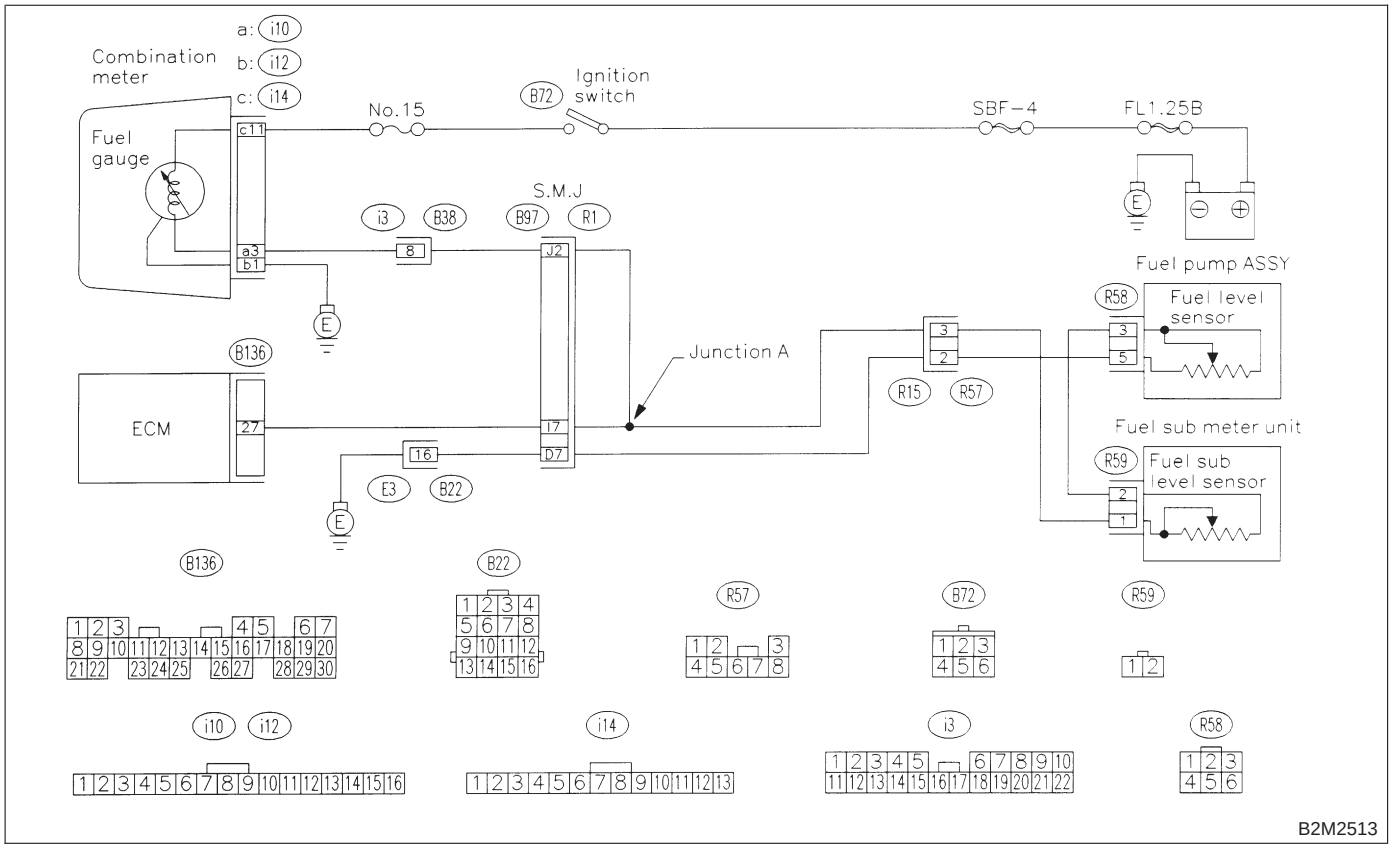
CHECK : ***Is the value more than 2.8 kPa (21.0 mmHg, 0.827 inHg)?***
YES : Repair battery short circuit in harness between ECM and fuel tank pressure sensor connector.
NO : Replace fuel tank pressure sensor. <Ref. to 2-1 [W9A0].>

AO: 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 MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



13AO1 : 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 “13. Diagnostics Chart with Trouble Code for 2200 cc California Spec. RHD Vehicles”. <Ref. to 2-7 [T13A0].>

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

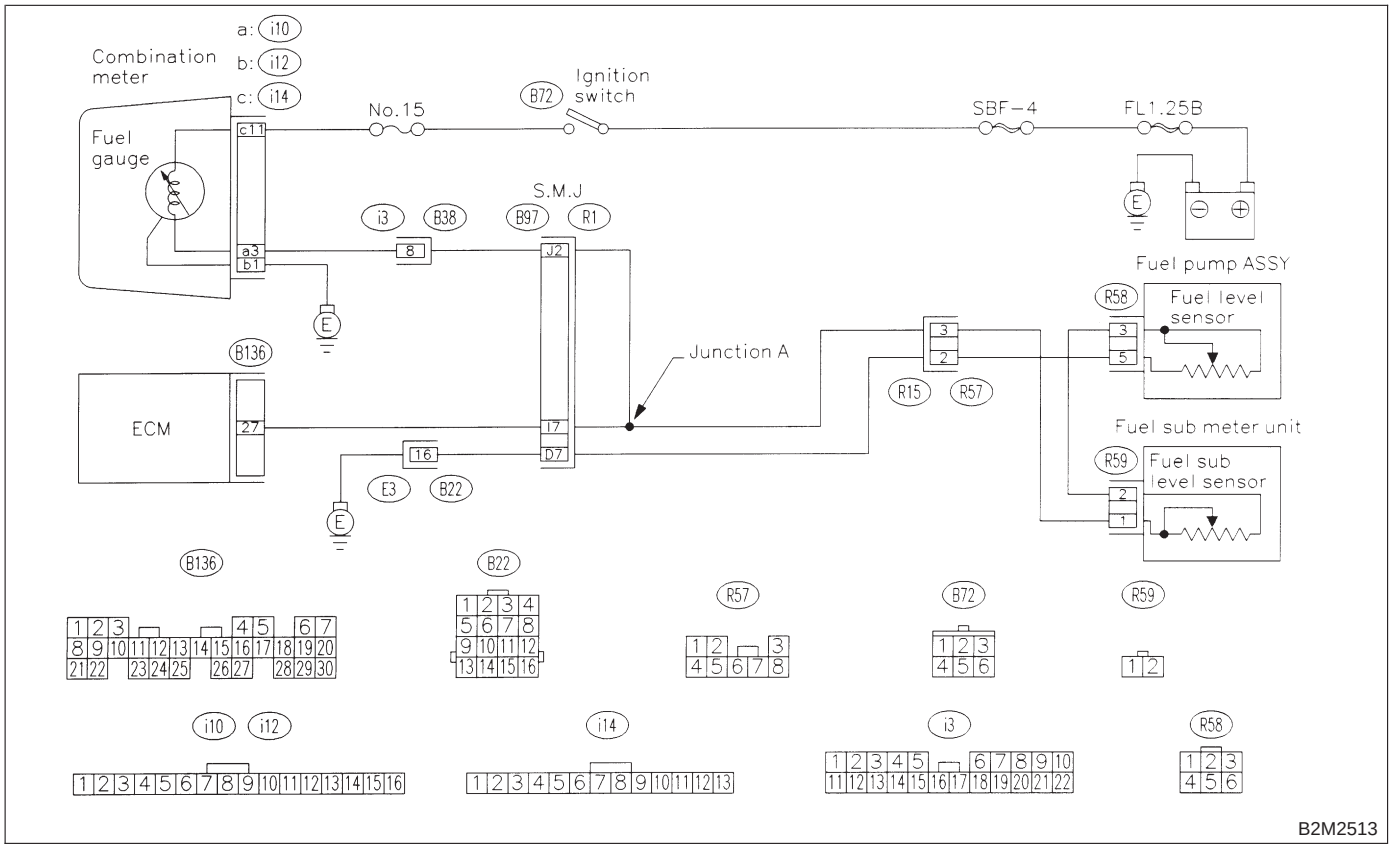
NO : Replace fuel sending unit <Ref. to 2-1 [W12A0].> and fuel sub meter unit <Ref. to 2-1 [W14A0].>.

AP: 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 MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



13AP1 :	CHECK SPEEDOMETER AND TACHOMETER OPERATION IN COMBINATION METER.

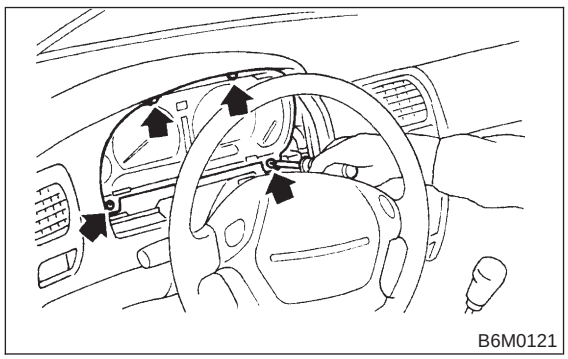
CHECK : ***Does speedometer and tachometer operate normally?***

YES : Go to step **13AP3**.

NO : Go to step **13AP2**.

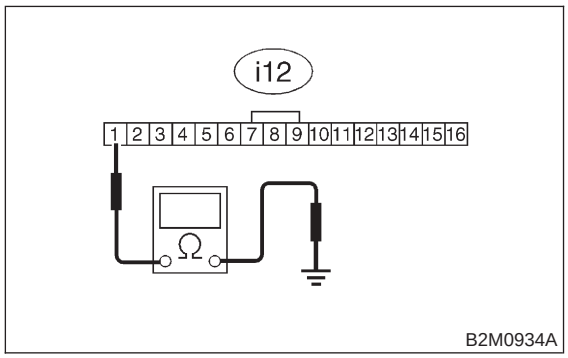
13AP2 : CHECK GROUND CIRCUIT OF COMBINATION METER.

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:



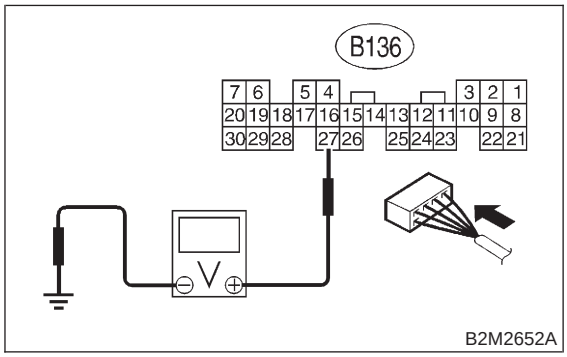
CHECK : ***Is resistance less than 5 Ω?***
YES : Repair or replace combination meter. <Ref. to 6-2 [W14A1].>
NO : Repair harness and connector.

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

13AP3 : CHECK INPUT SIGNAL FOR ECM.

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

Connector & terminal
(B136) No. 27 (+) — Chassis ground (−):



CHECK : ***Is the voltage less than 0.12 V?***
YES : Go to step **13AP5**.
NO : Go to step **13AP4**.

13AP4 : CHECK INPUT SIGNAL FOR ECM. (USING SUBARU SELECT MONITOR.)

Read data of fuel level sensor signal using Subaru Select Monitor.

NOTE:
- Subaru Select Monitor

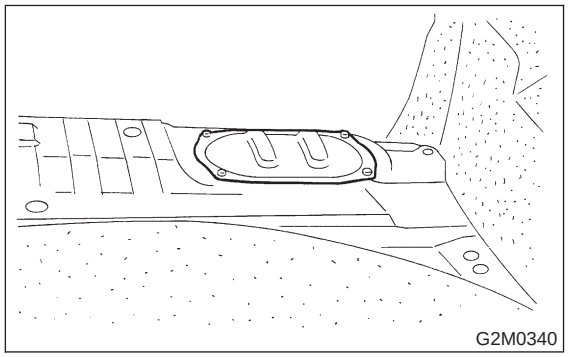
For detailed operation procedure, refer to the "READ CURRENT DATA SHOWN ON DISPLAY FOR ENGINE". <Ref. to 2-7 [T3C4].>

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)

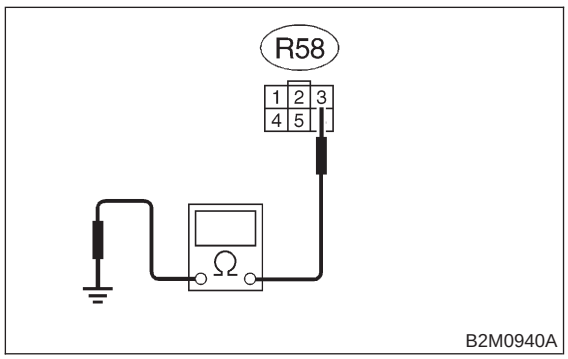
13AP5 : CHECK HARNESS BETWEEN ECM, COMBINATION METER AND FUEL PUMP CONNECTOR.

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.

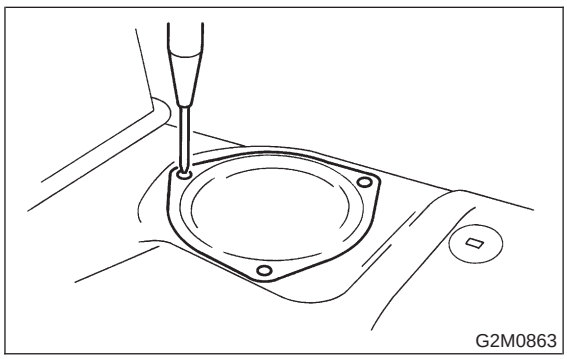
Connector & terminal
(R58) No. 3 — Chassis ground:



CHECK : ***Is the resistance less than 10 Ω?***
YES : Go to step **13AP6**.
NO : Go to step **13AP11**.

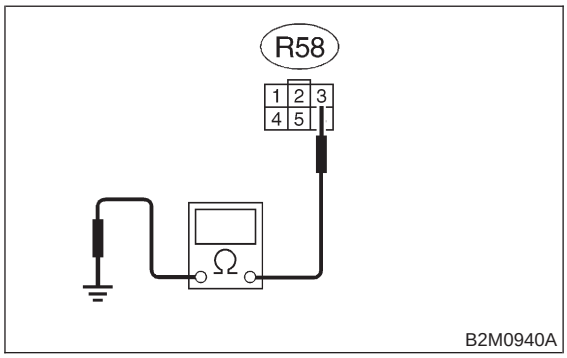
13AP6 : CHECK FUEL TANK CORD.

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:

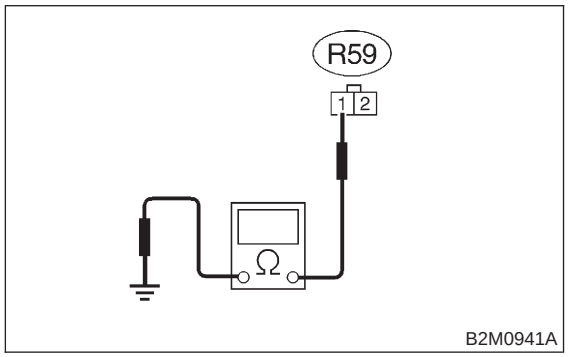


CHECK : ***Is the resistance less than 10 Ω?***
YES : Repair ground short circuit in harness between fuel pump and fuel sub meter unit connector.
NO : Go to step **13AP7**.

13AP7 : 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:

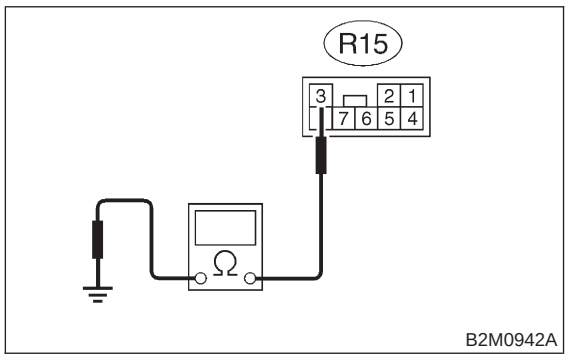


CHECK : ***Is the resistance less than 10 Ω?***
YES : Repair ground short circuit in fuel tank cord.
NO : Go to step **13AP8**.

13AP8 : 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:

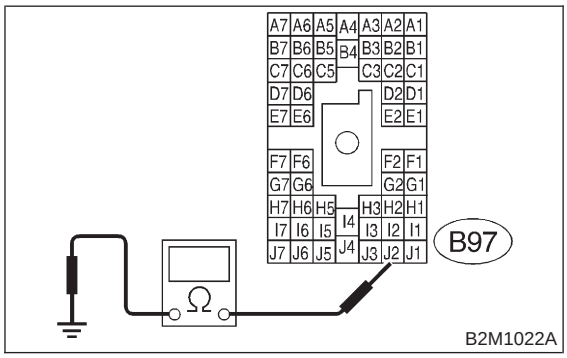


CHECK : ***Is the resistance less than 10 Ω?***
YES : Repair ground short circuit in rear wiring harness.
NO : Go to step **13AP9**.

13AP9 : CHECK REAR WIRING HARNESS.

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

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

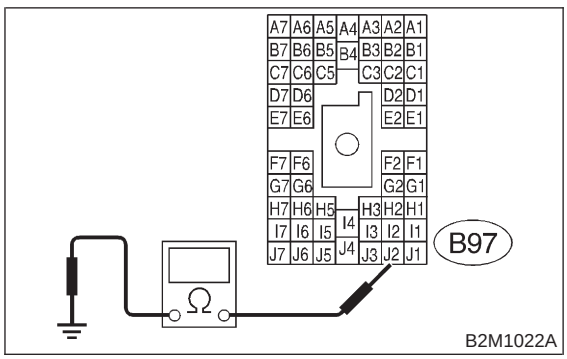


CHECK : ***Is the resistance less than 10 Ω?***
YES : Go to step **13AP10**.
NO : Repair ground short circuit in harness between S.M.J. and ECM connector.

13AP10 : 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.

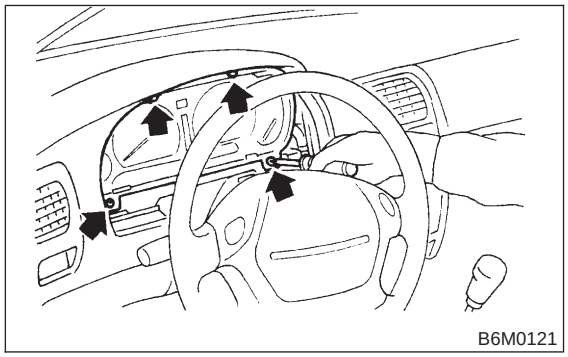
Connector & terminal
(B97) No. J2 — Chassis ground:



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.

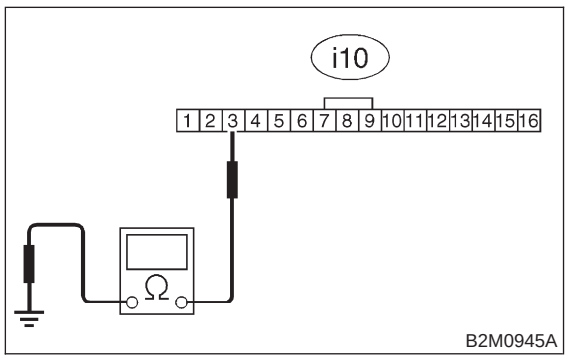
13AP11 : CHECK HARNESS BETWEEN COMBINATION METER AND FUEL PUMP CONNECTOR.

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 **13AP12**.
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)

13AP12 : CHECK COMBINATION METER.

Disconnect connector from combination meter and remove combination meter.

CHECK : ***Is the fuel meter installation screw tightened securely?***
YES : Go to step **13AP13**.
NO : Tighten fuel meter installation screw securely.

13AP13 : 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. <Ref. to 6-2 [W14A1].>

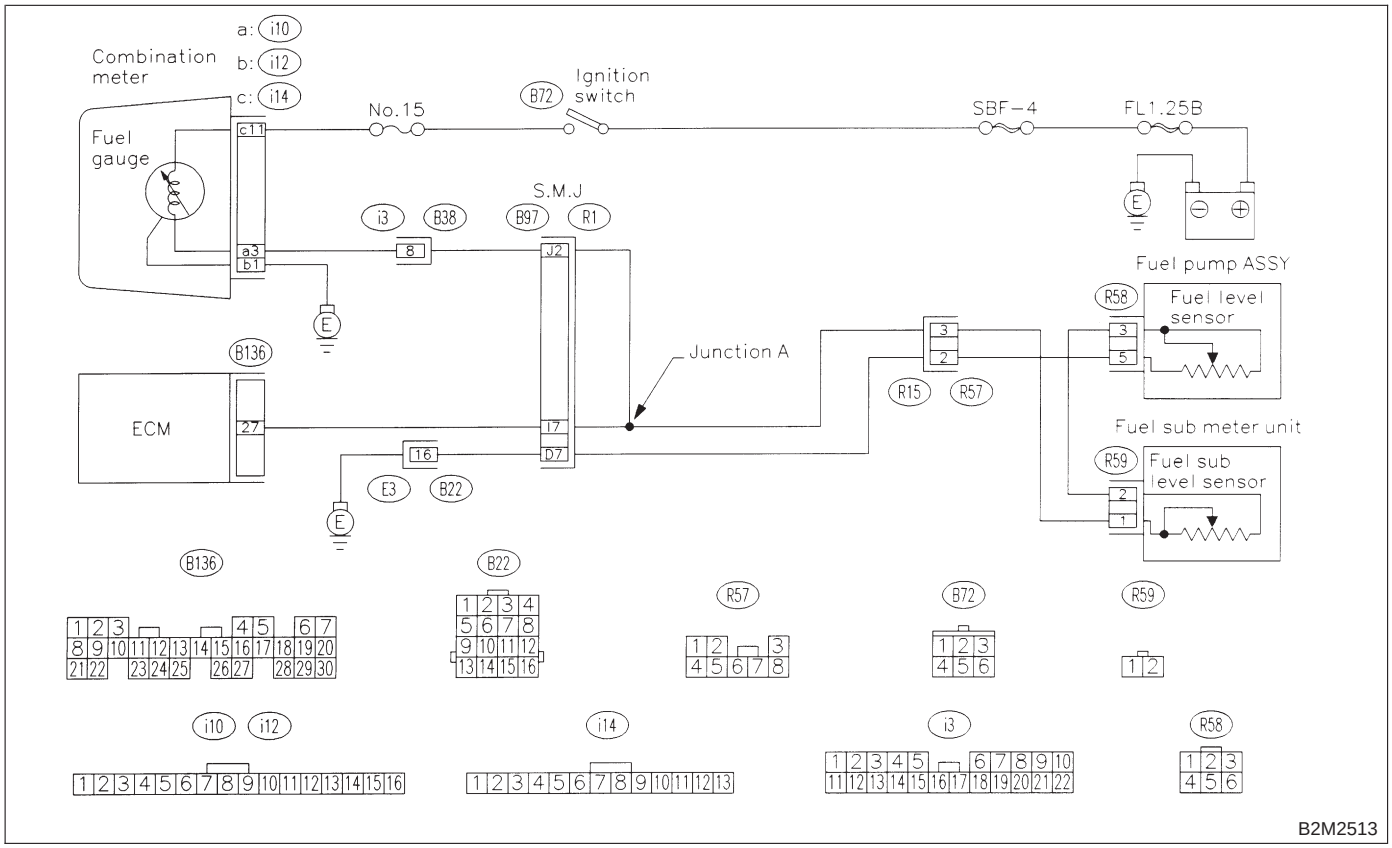
MEMO:

AQ: 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 MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**

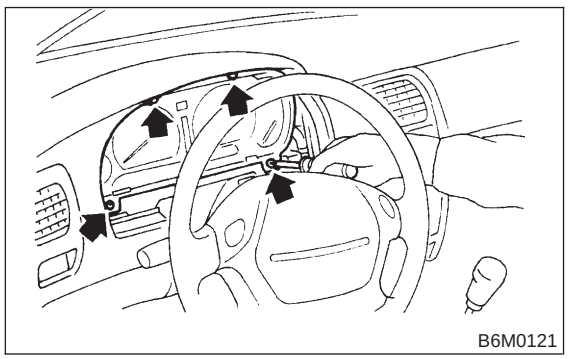


13AQ1 : CHECK SPEEDOMETER AND TACHOMETER OPERATION IN COMBINATION METER.

CHECK : ***Does speedometer and tachometer operate normally?***
YES : Go to step **13AQ3**.
NO : Go to step **13AQ2**.

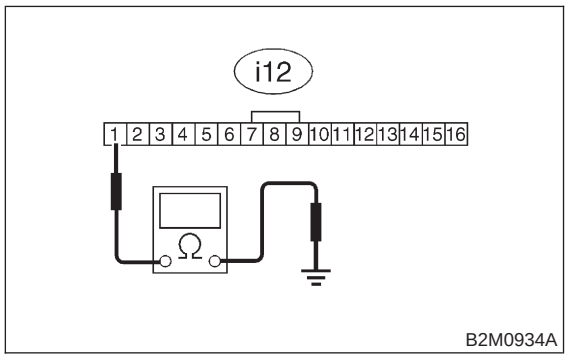
13AQ2 : CHECK GROUND CIRCUIT OF COMBINATION METER.

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:



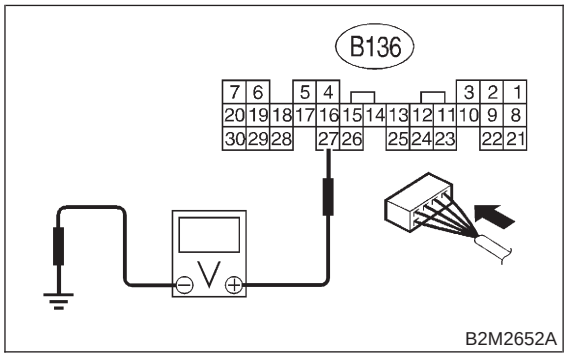
CHECK : ***Is resistance less than 5 Ω?***
YES : Repair or replace combination meter. <Ref. to 6-2 [W14A1].>
NO : Repair harness and connector.

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

13AQ3 : CHECK INPUT SIGNAL FOR ECM.

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

Connector & terminal
(B136) No. 27 (+) — Chassis ground (−):

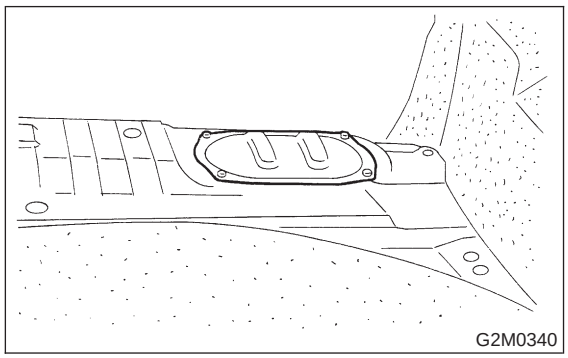


CHECK : ***Is the voltage more than 4.75 V?***
YES : Go to step **13AQ4**.
NO : Even if MIL lights up, the circuit has returned to a normal condition at this time. A temporary poor contact of the connector may be the cause.

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)

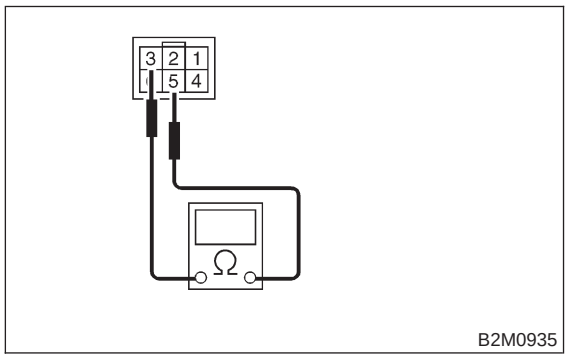
13AQ4 : CHECK FUEL LEVEL SENSOR.

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


G2M0340

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

Terminals
No. 3 — No. 5:

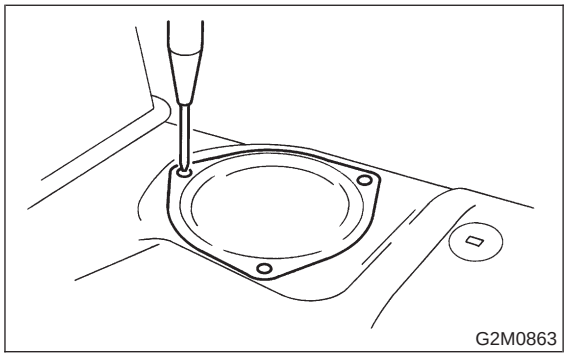


B2M0935

CHECK : ***Is the resistance less than 100 Ω?***
YES : Go to step **13AQ5**.
NO : Replace fuel sending unit. <Ref. to 2-1 [W12A0].>

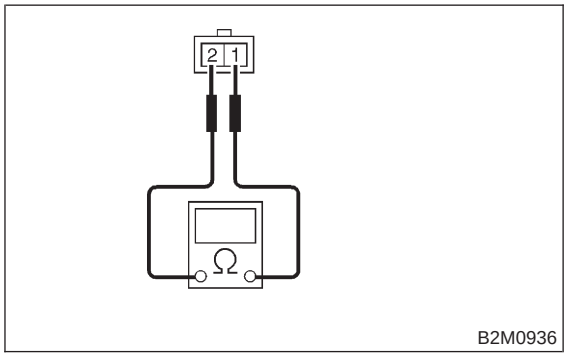
13AQ5 : CHECK FUEL SUB LEVEL SENSOR.

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


G2M0863

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

Terminals
No. 1 — No. 2:



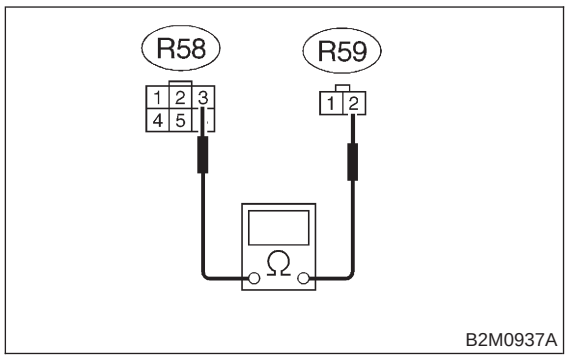
B2M0936

CHECK : ***Is the resistance less than 100 Ω?***
YES : Go to step **13AQ6**.
NO : Replace fuel sub meter unit. <Ref. to 2-1 [W14A0].>

13AQ6 : 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:

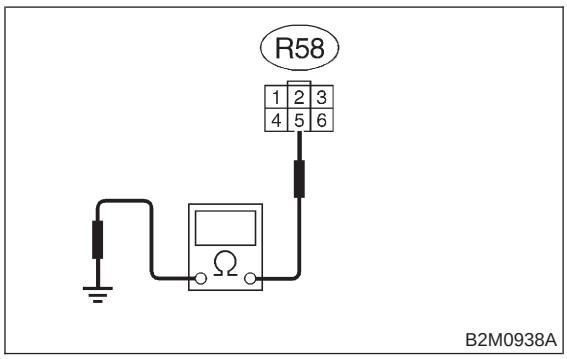


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **13AQ7**.
NO : Repair open circuit in harness between fuel pump and fuel sub meter unit connector.

13AQ7 : 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:



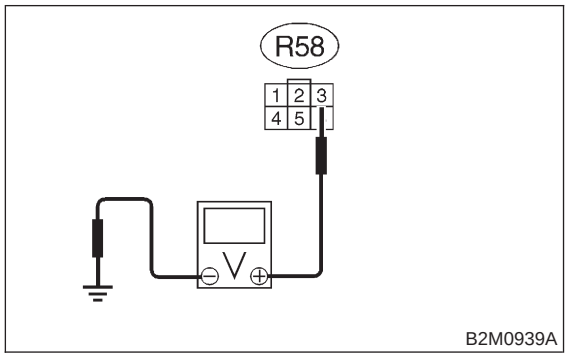
CHECK : ***Is the resistance less than 5 Ω?***
YES : Go to step **13AQ8**.
NO : Repair harness and connector.

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)

13AQ8 : 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 (−):



CHECK : ***Is the voltage less than 1 V?***
YES : Repair harness and connector.

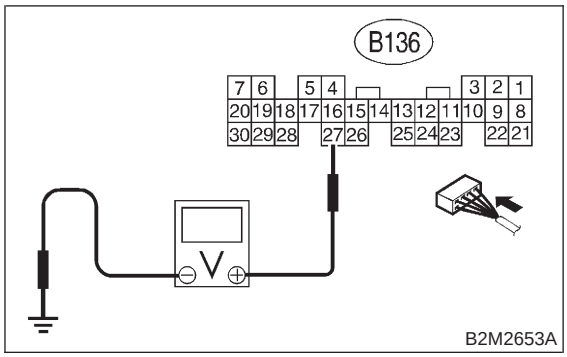
NOTE:
In this case, repair the following:
- Open circuit in harness between fuel pump connector and junction A on rear wiring harness
- Poor contact in fuel sub meter unit connector
- Poor contact in fuel pump connector
- Poor contact in coupling connector (R57)

NO : Go to step **13AQ9**.

13AQ9 : 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
(B136) No. 27 (+) — Chassis ground (−):



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)

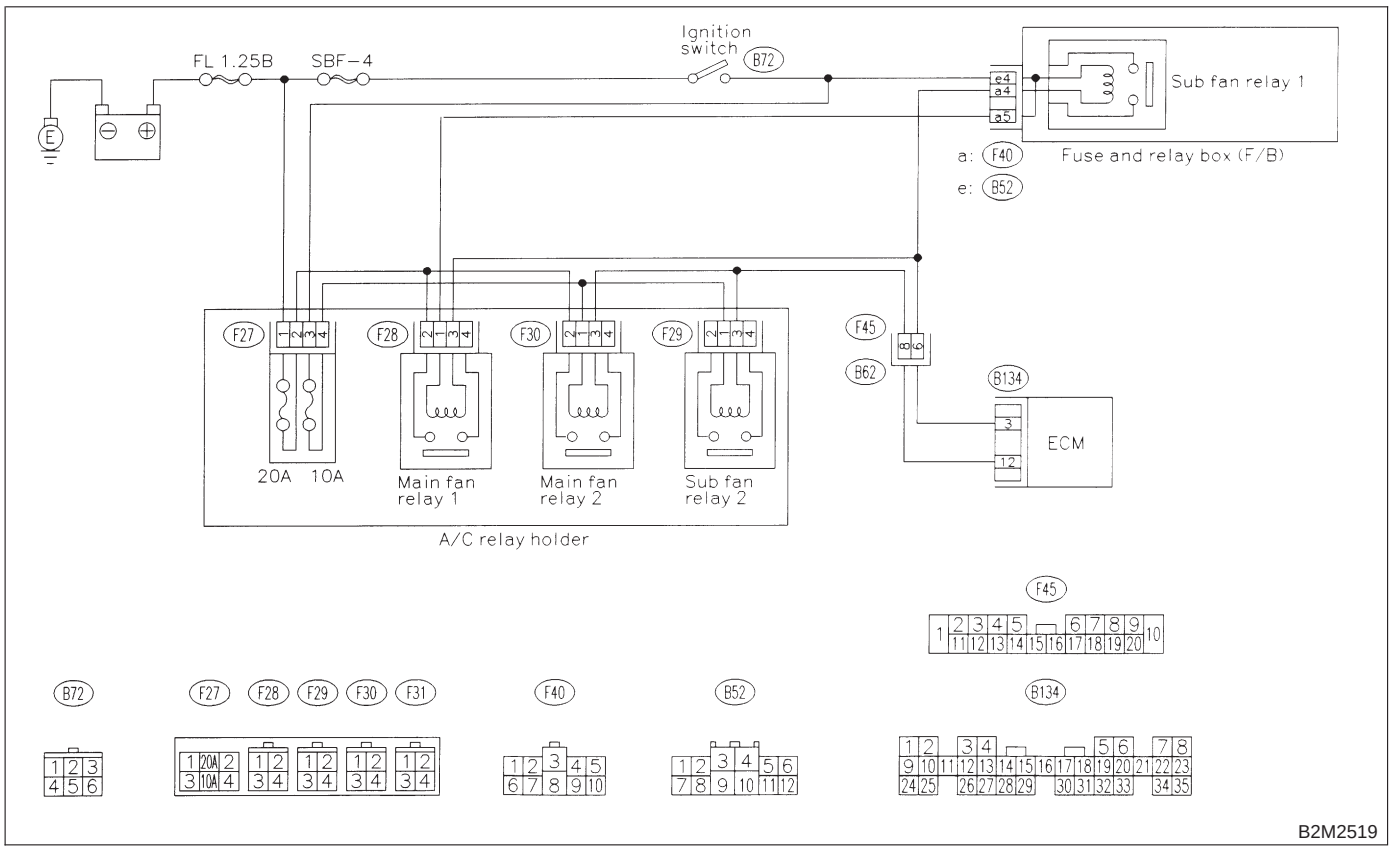
NO : Repair connector.

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

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

NOTE:
Check radiator fan relay 1 circuit.
<Ref. to 2-7 [T12AR0].>

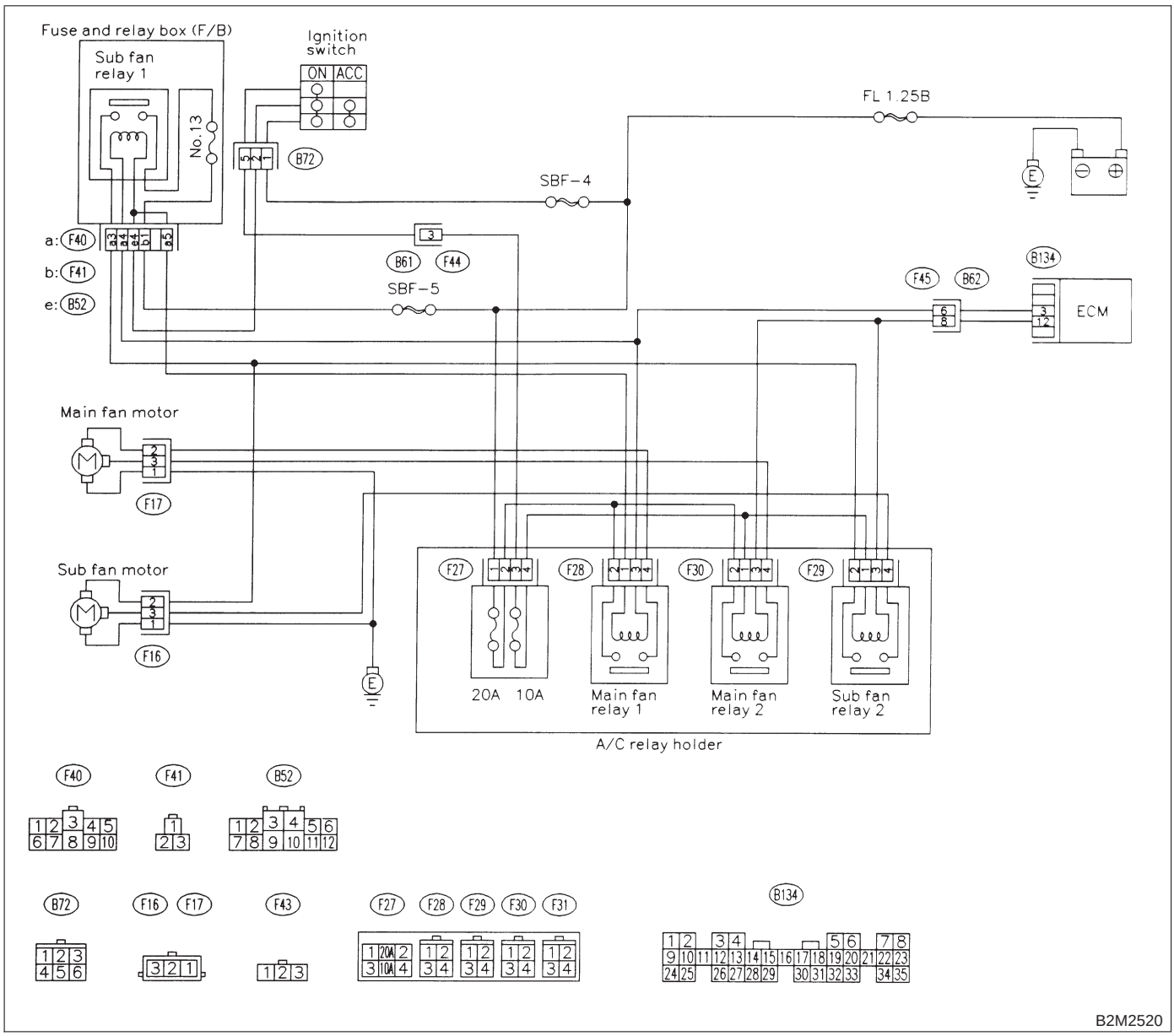
- **WIRING DIAGRAM:**



AS: DTC P0483 — COOLING FAN FUNCTION PROBLEM —

NOTE:
Check radiator fan control system.
<Ref. to 2-7 [T12AS0].>

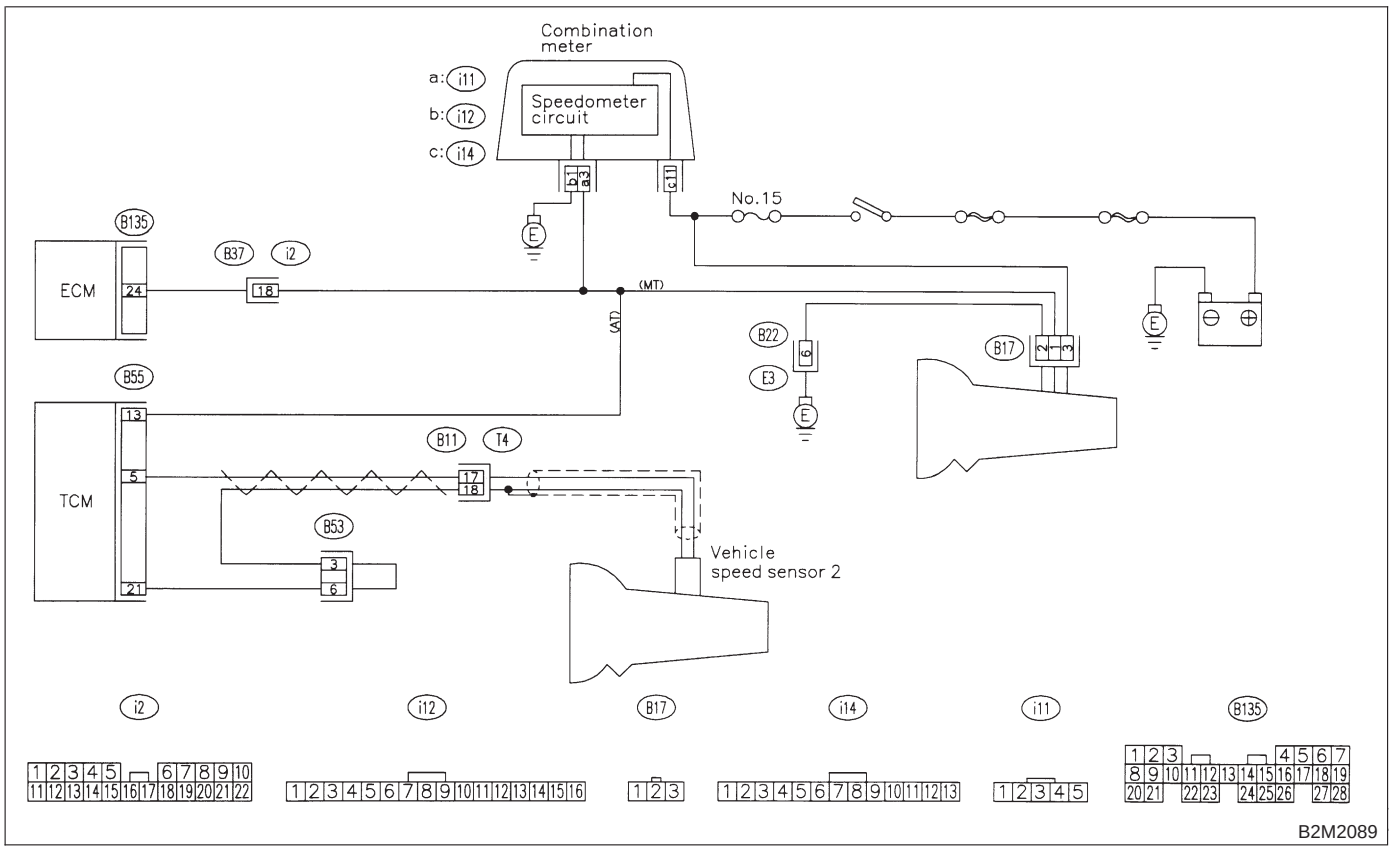
- **WIRING DIAGRAM:**



AT: DTC P0500 — VEHICLE SPEED SENSOR MALFUNCTION —

NOTE:
Check vehicle speed sensor 2 circuit.
<Ref. to 2-7 [T12AT0].>

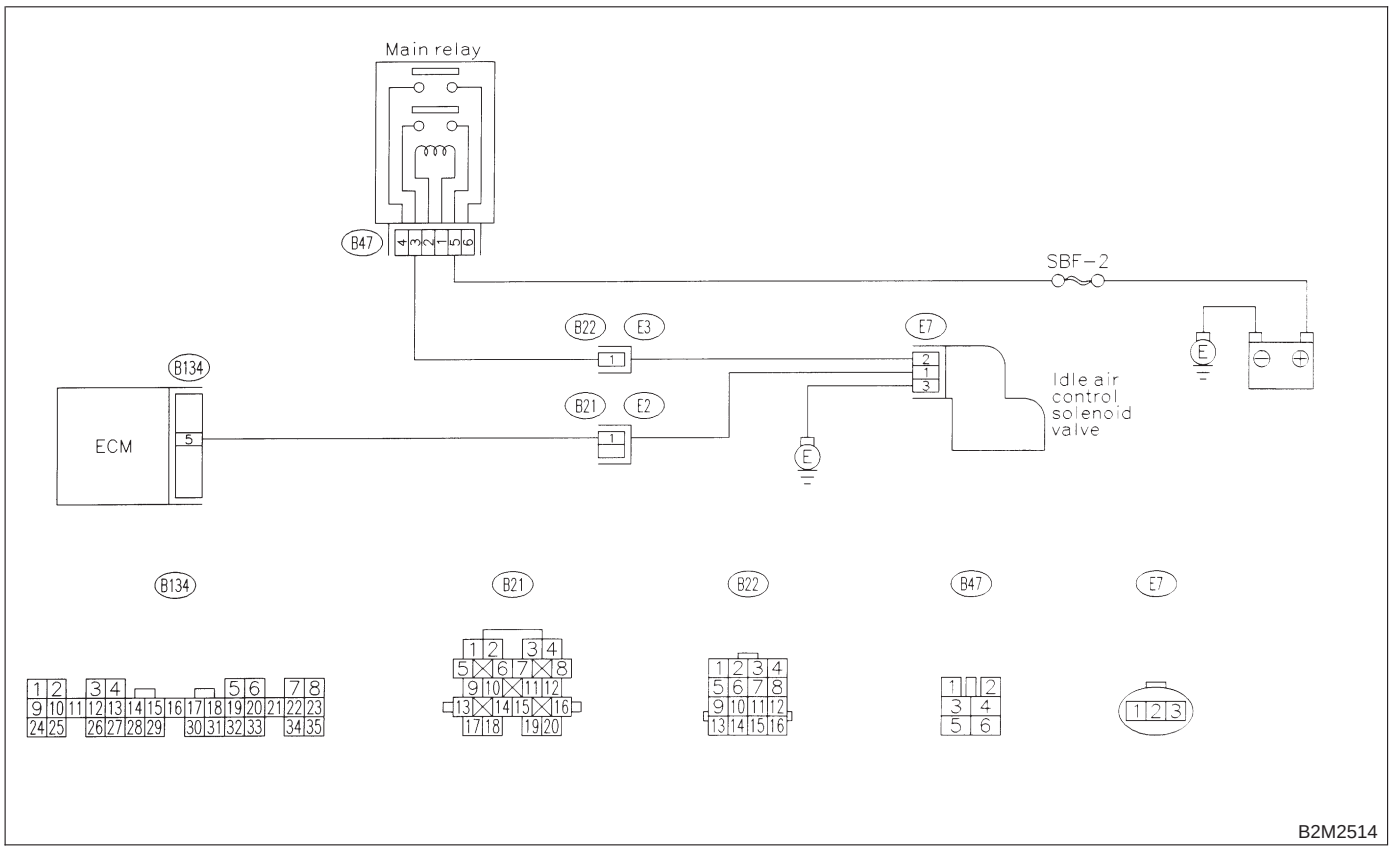
- **WIRING DIAGRAM:**



AU: DTC P0505 — IDLE CONTROL SYSTEM MALFUNCTION —

NOTE:
Check idle air control solenoid valve circuit.
<Ref. to 2-7 [T12AU0].>

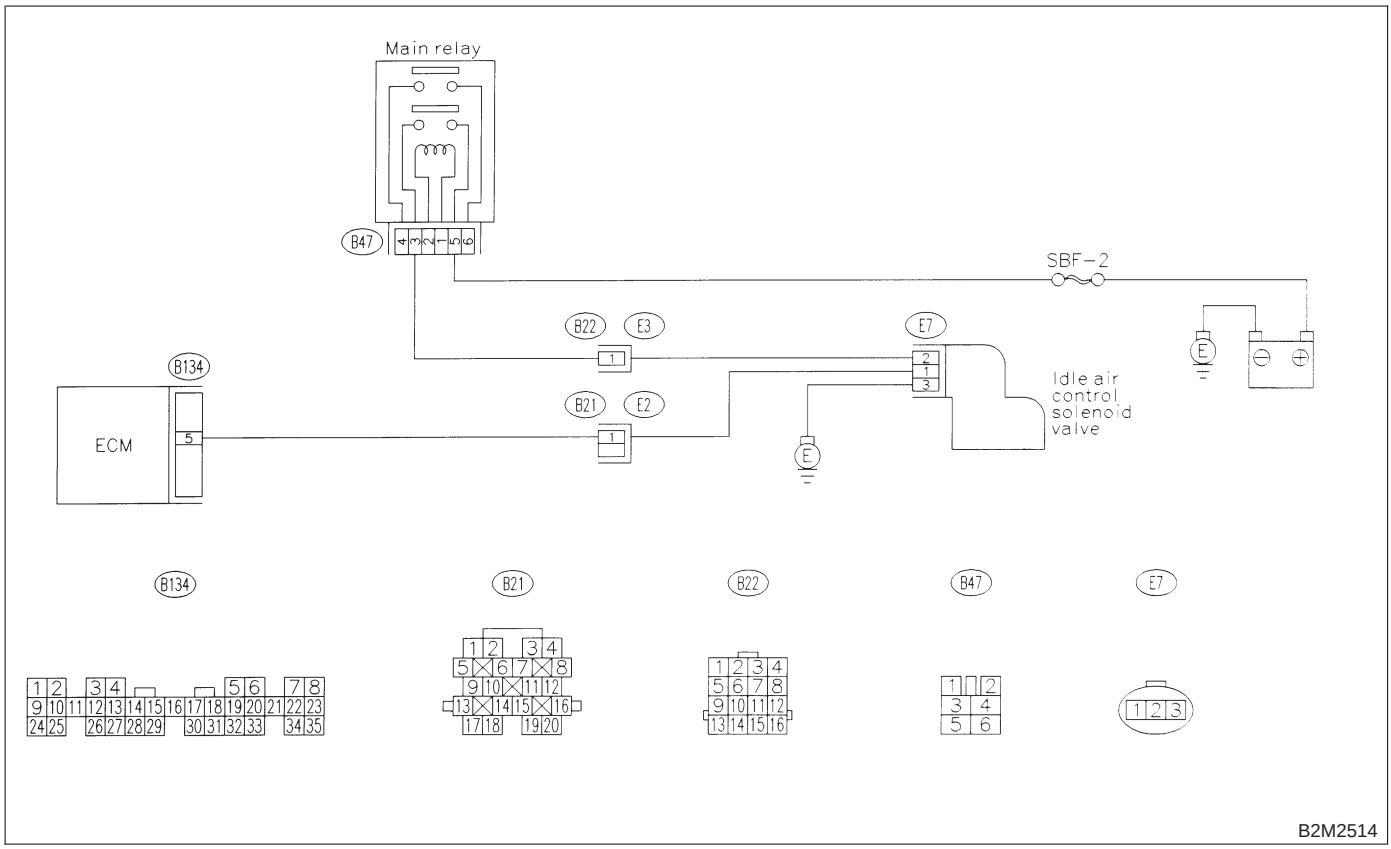
- **WIRING DIAGRAM:**



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

NOTE:
Check idle air control system.
<Ref. to 2-7 [T12AV0].>

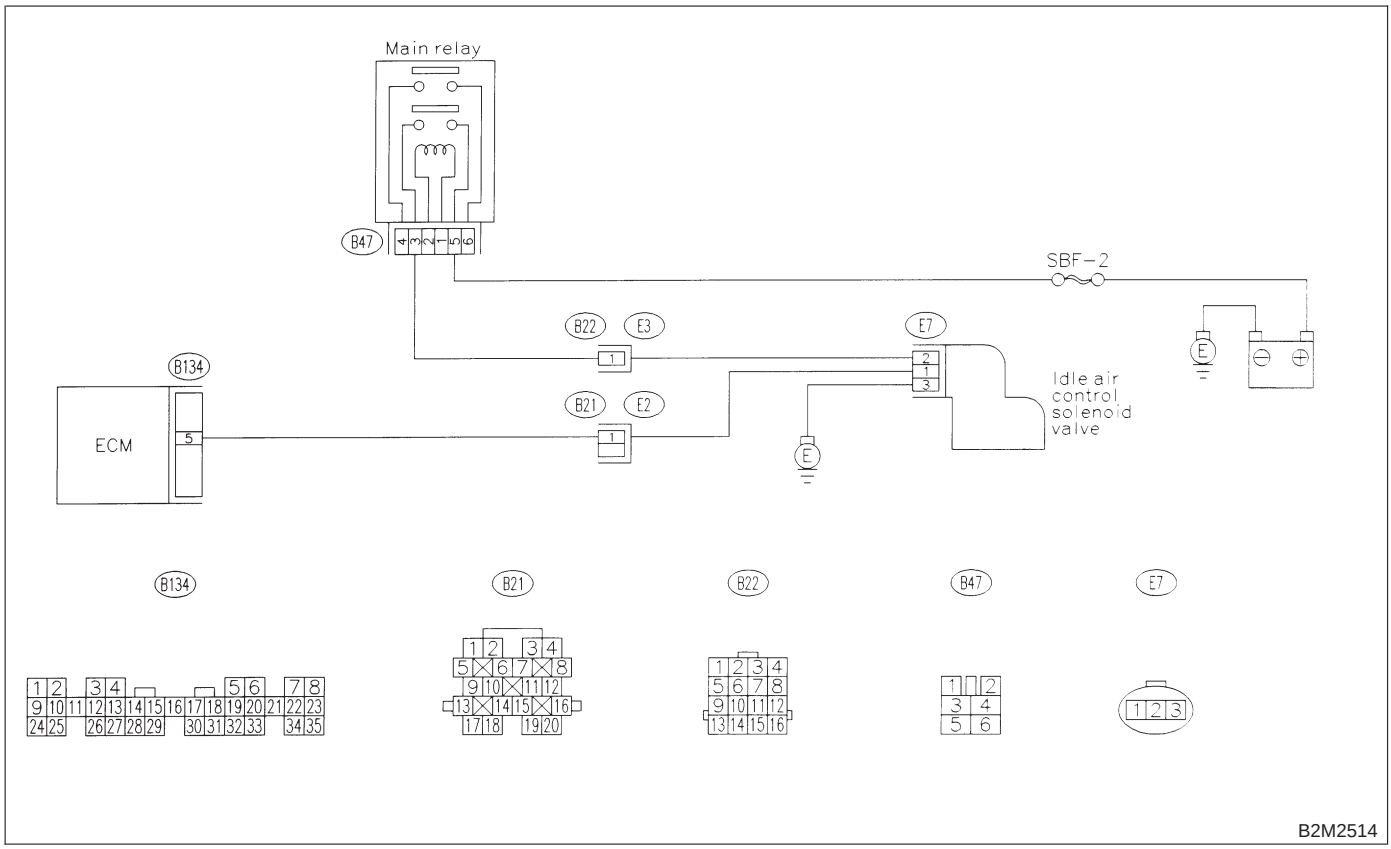
- **WIRING DIAGRAM:**



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

NOTE:
Check idle air control system.
<Ref. to 2-7 [T12AW0].>

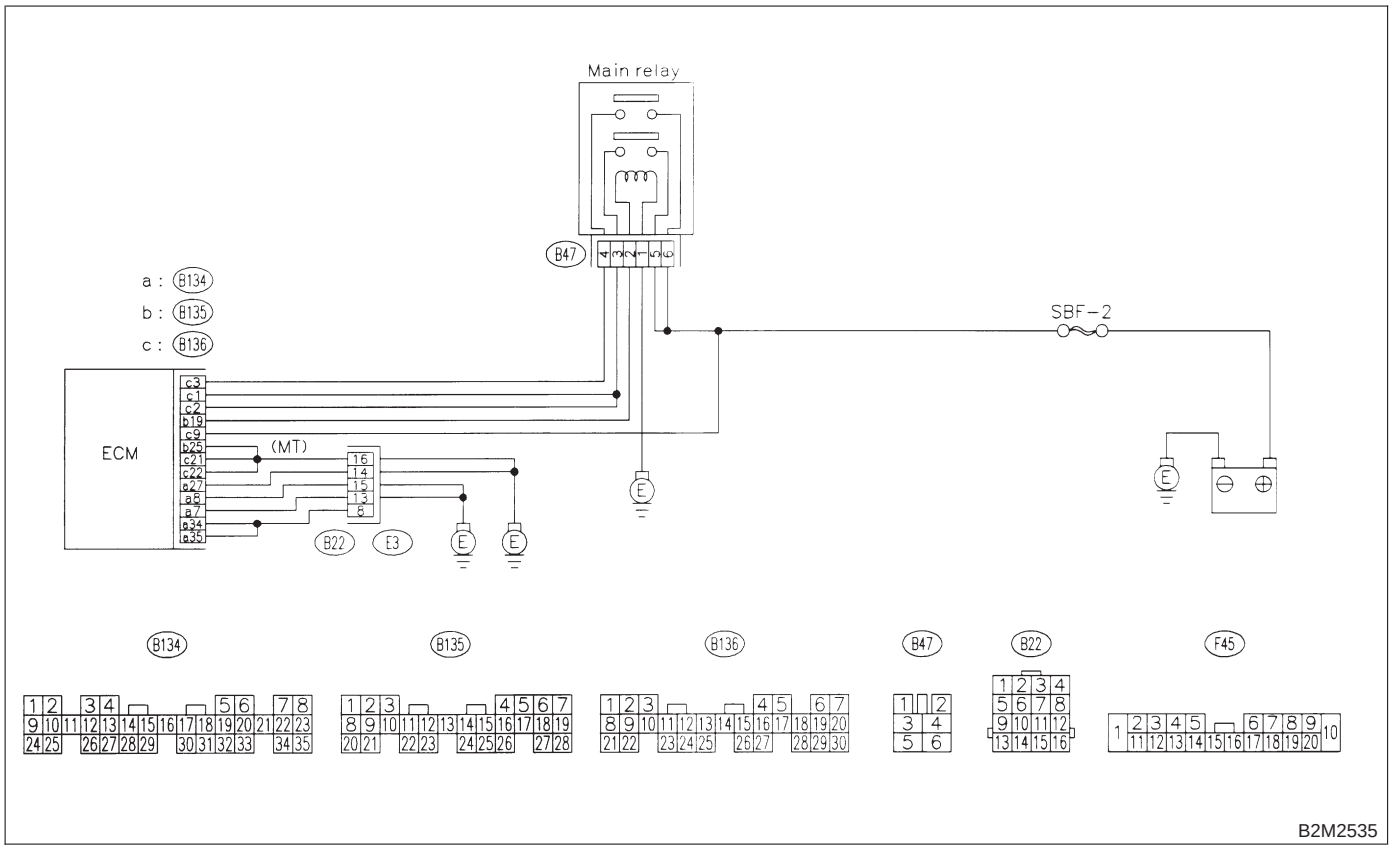
- **WIRING DIAGRAM:**



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

NOTE:
Check internal control module memory.
<Ref. to 2-7 [T12AX0].>

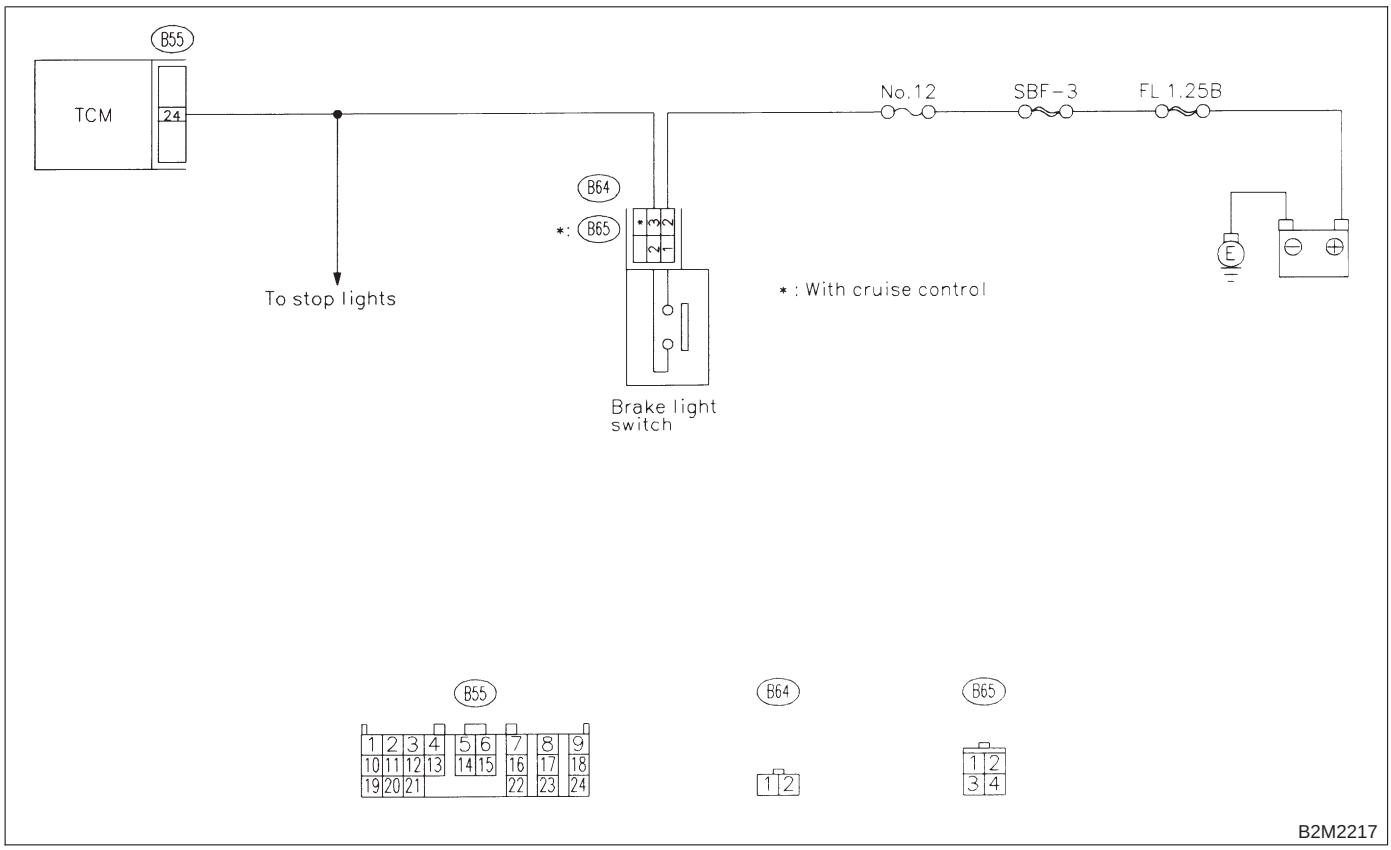
- **WIRING DIAGRAM:**



AY: DTC P0703 — BRAKE SWITCH INPUT MALFUNCTION —

NOTE:
Check brake switch input signal circuit.
<Ref. to 2-7 [T12AY0].>

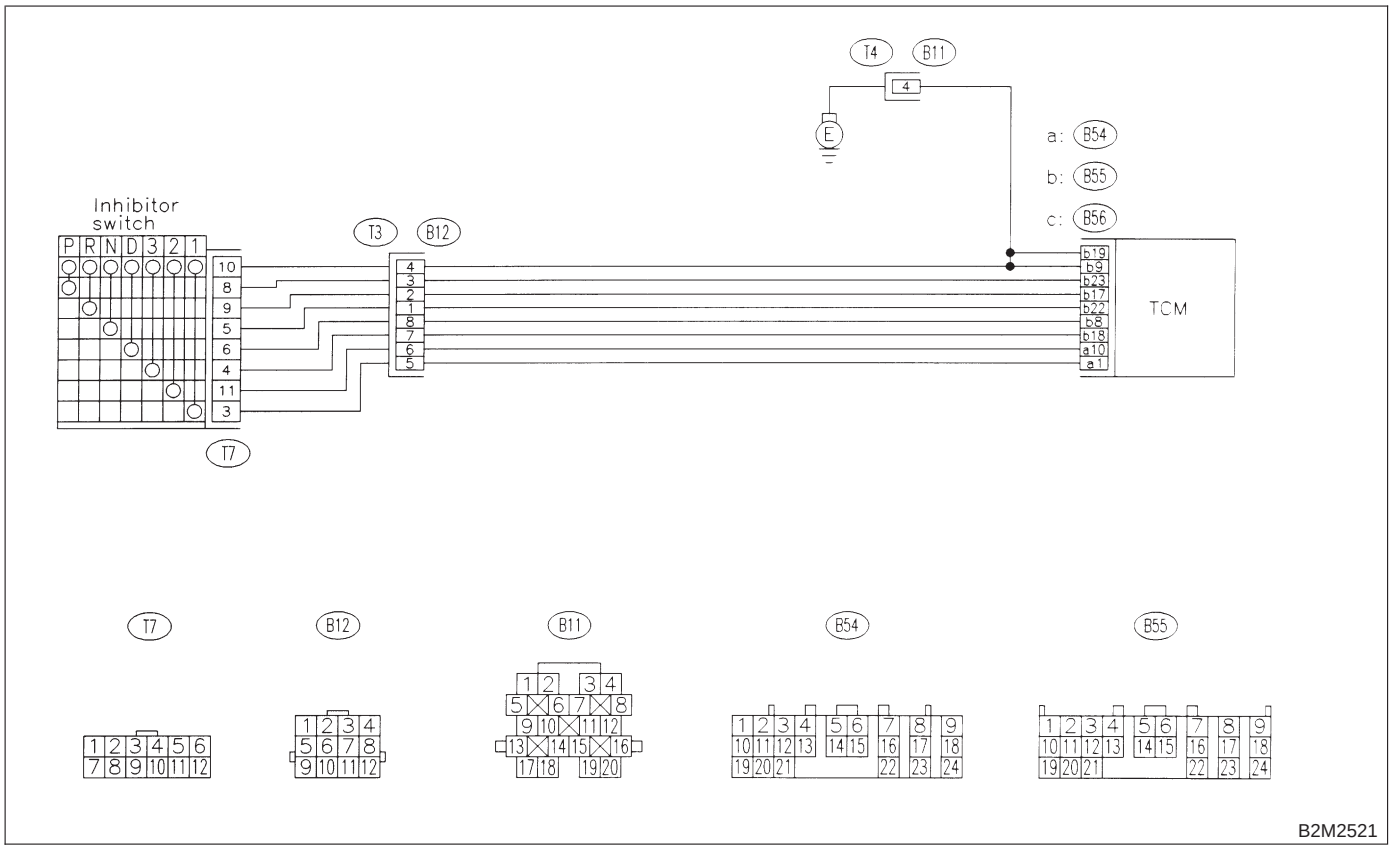
- **WIRING DIAGRAM:**



AZ: DTC P0705 — TRANSMISSION RANGE SENSOR CIRCUIT MALFUNCTION —

NOTE:
Check inhibitor switch circuit.
<Ref. to 2-7 [T12AZ0].>

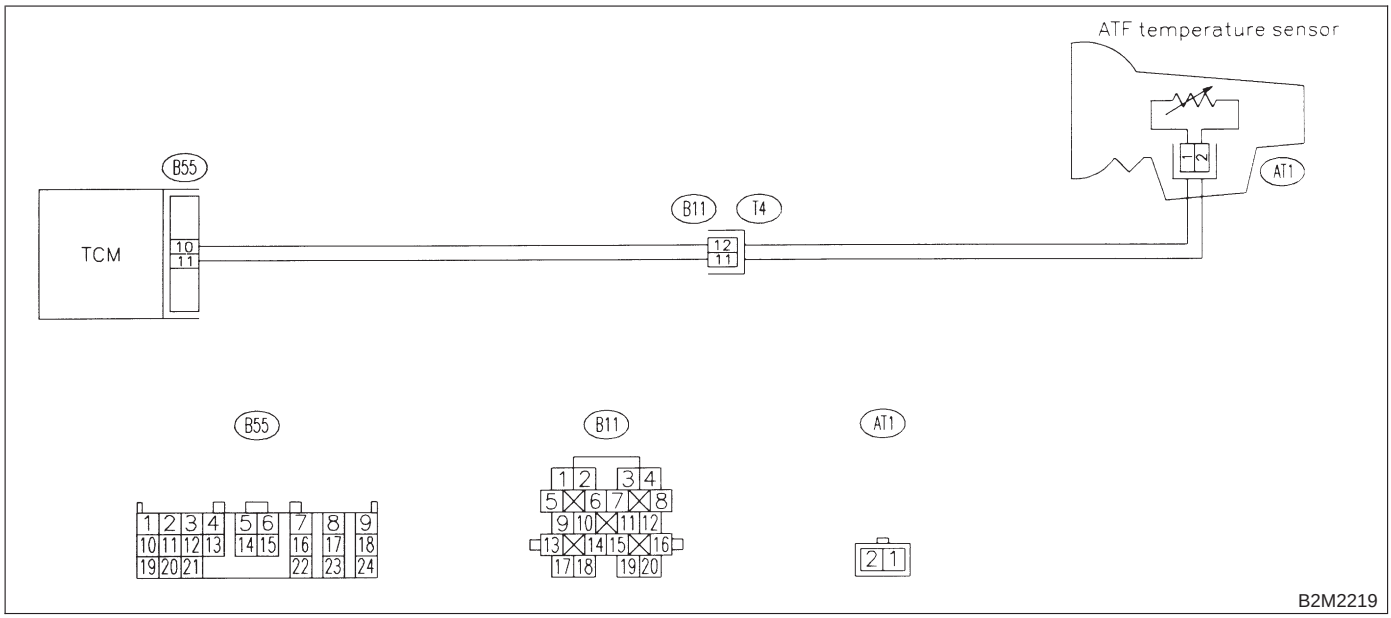
- **WIRING DIAGRAM:**



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

NOTE:
Check automatic transmission fluid temperature sensor circuit.
<Ref. to 2-7 [T12BA0].>

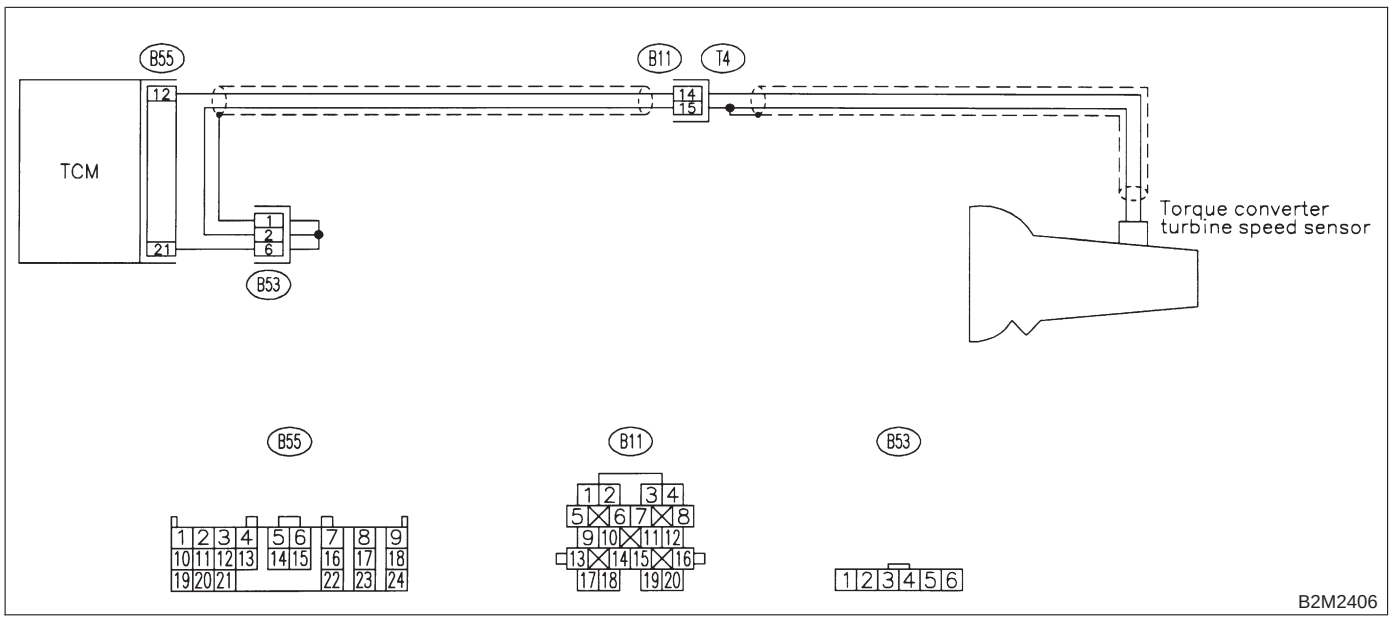
- **WIRING DIAGRAM:**



BB: DTC P0715 — TORQUE CONVERTER TURBINE SPEED SENSOR CIRCUIT MALFUNCTION —

NOTE:
Check torque converter turbine speed sensor circuit.
<Ref. to 2-7 [T12BB0].>

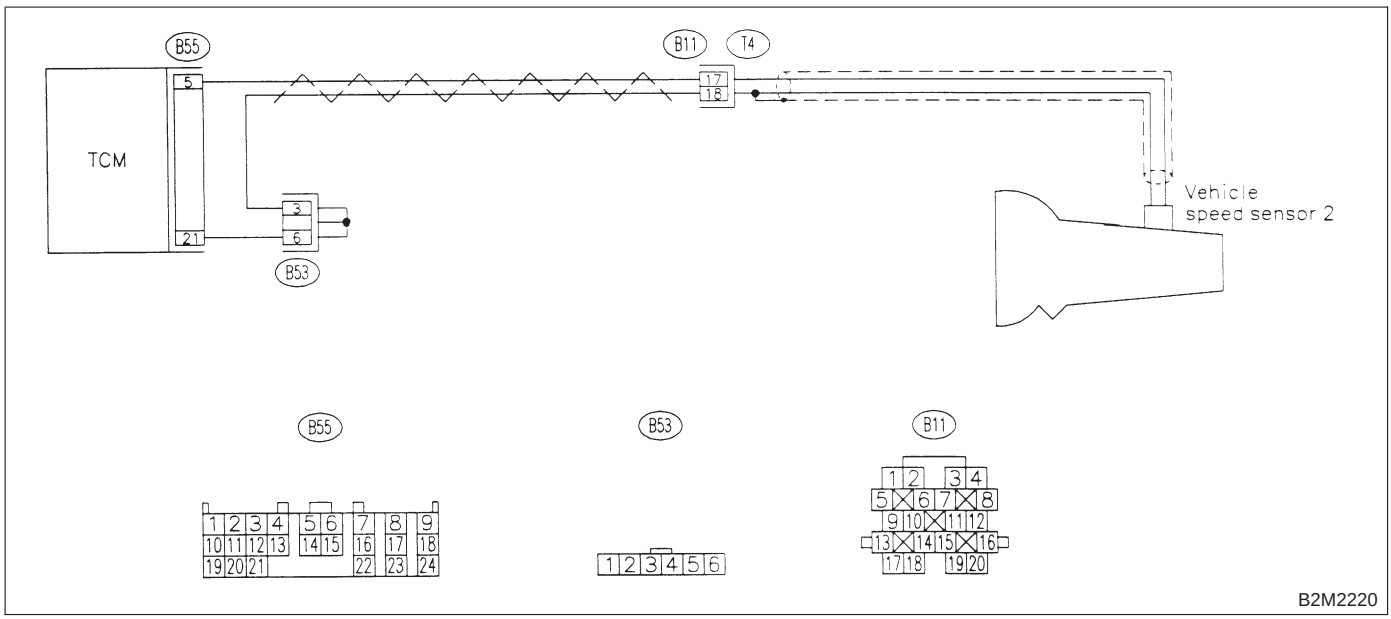
- **WIRING DIAGRAM:**



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

NOTE:
Check vehicle speed sensor 2 circuit.
<Ref. to 2-7 [T12BC0].>

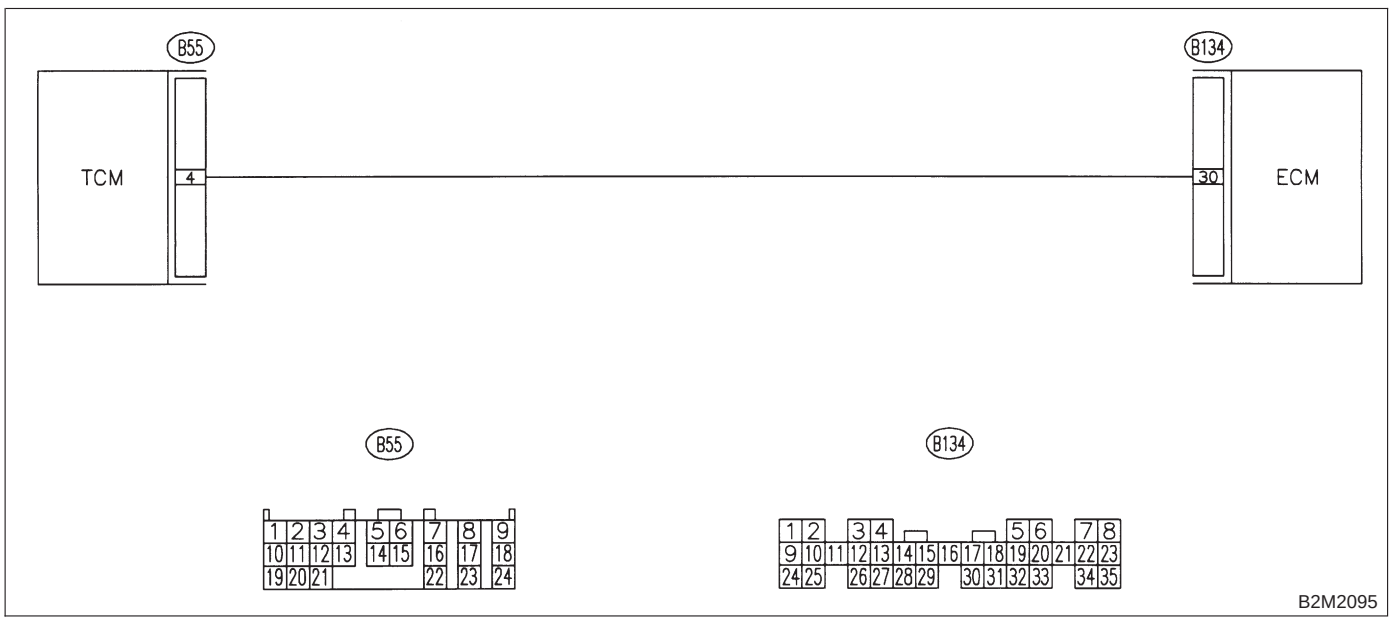
- **WIRING DIAGRAM:**



BD: DTC P0725 — ENGINE SPEED INPUT CIRCUIT MALFUNCTION —

NOTE:
Check engine speed signal input circuit.
<Ref. to 2-7 [T12BD0].>

- **WIRING DIAGRAM:**



BE: DTC P0731 — GEAR 1 INCORRECT RATIO —

NOTE:
For the diagnostic procedure, refer to 2-7 [T13BH0].
<Ref. to 2-7 [T13BH0].>

BF: DTC P0732 — GEAR 2 INCORRECT RATIO —

NOTE:
For the diagnostic procedure, refer to 2-7 [T13BH0].
<Ref. to 2-7 [T13BH0].>

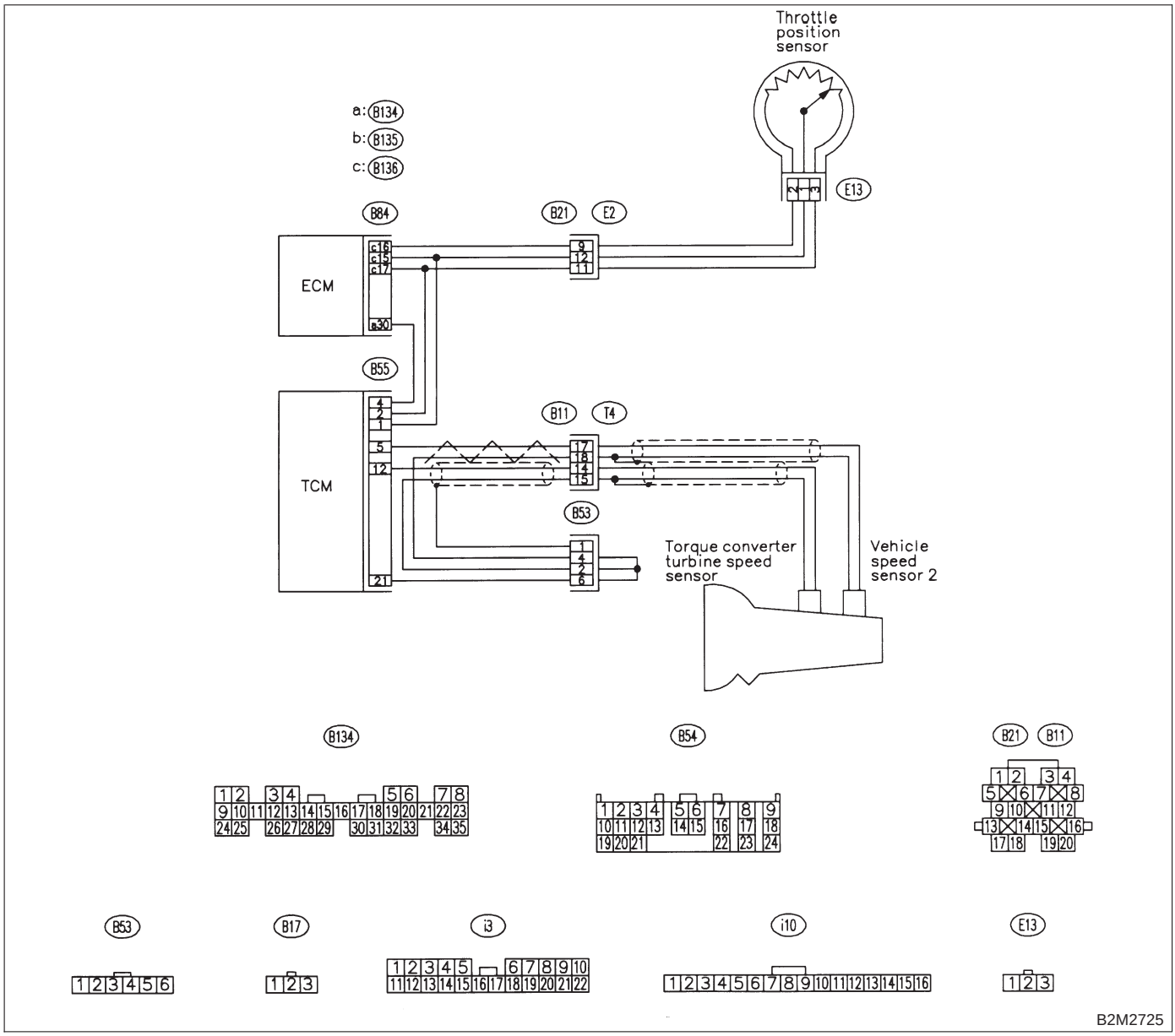
BG: DTC P0733 — GEAR 3 INCORRECT RATIO —

NOTE:
For the diagnostic procedure, refer to 2-7 [T13BH0].
<Ref. to 2-7 [T13BH0].>

BH: DTC P0734 — GEAR 4 INCORRECT RATIO —

NOTE:
Check shift change control system.
<Ref. to 2-7 [T12BH0].>

● **WIRING DIAGRAM:**



BI: DTC P0740 — TORQUE CONVERTER CLUTCH SYSTEM MALFUNCTION —

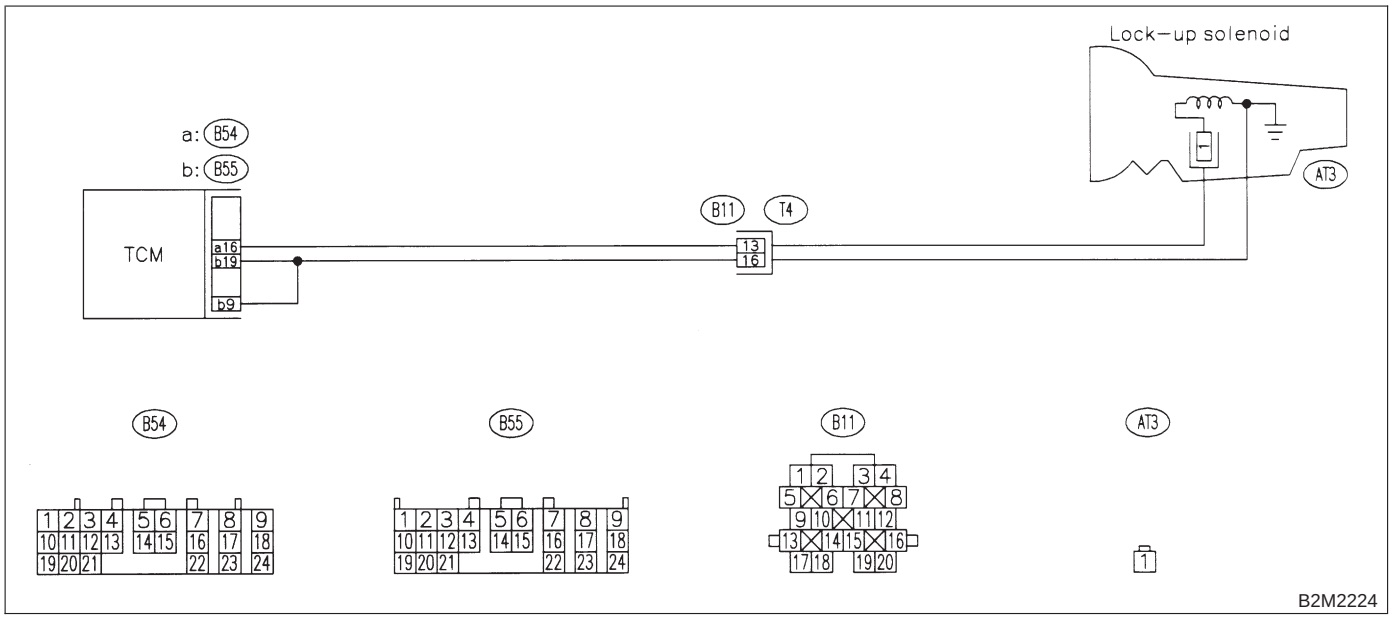
NOTE:
Check torque converter lock-up control system.
<Ref. to 2-7 [T12BI0].>

● **WIRING DIAGRAM:**

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

NOTE:
Check duty solenoid B circuit.
<Ref. to 2-7 [T12BJ0].>

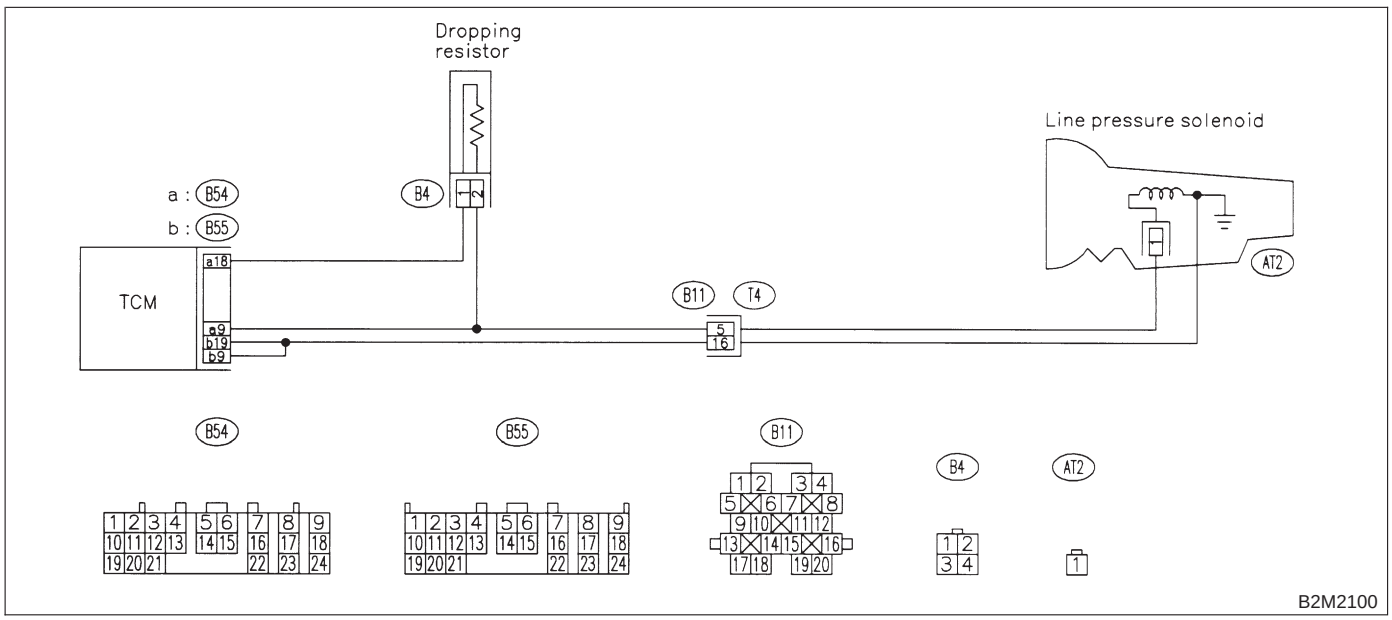
- **WIRING DIAGRAM:**



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

NOTE:
Check duty solenoid A circuit.
<Ref. to 2-7 [T12BK0].>

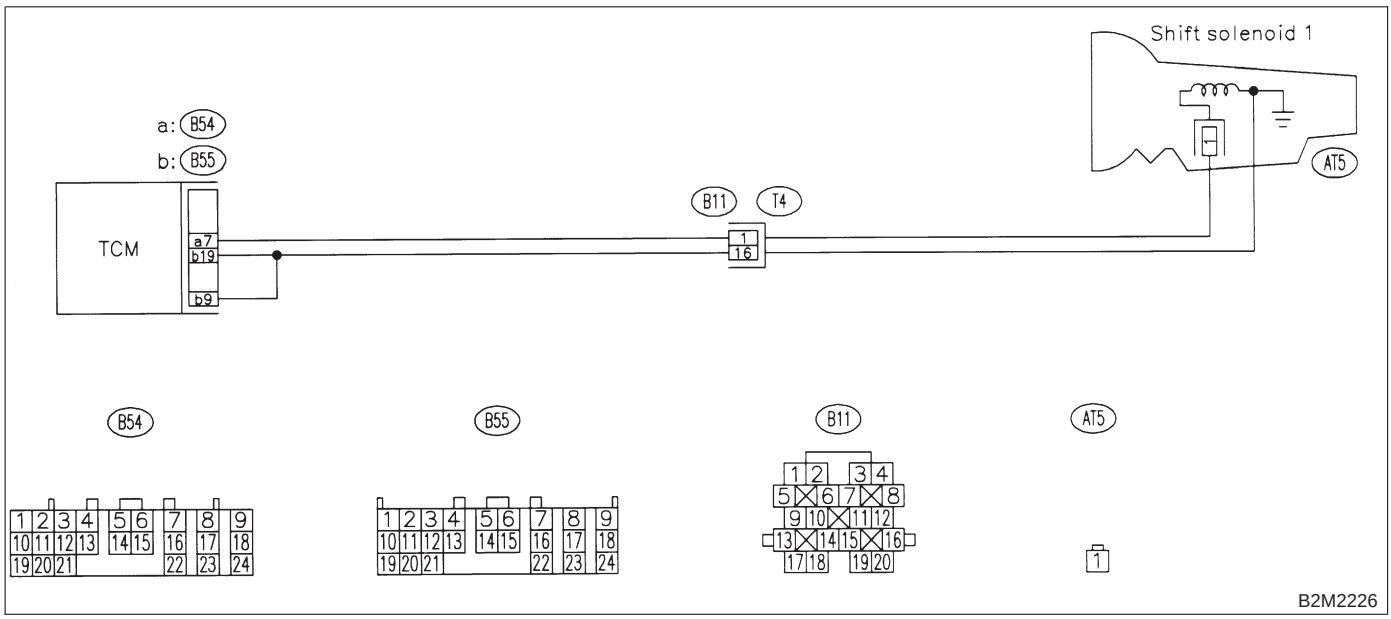
- **WIRING DIAGRAM:**



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

NOTE:
Check shift solenoid 1 circuit.
<Ref. to 2-7 [T12BL0].>

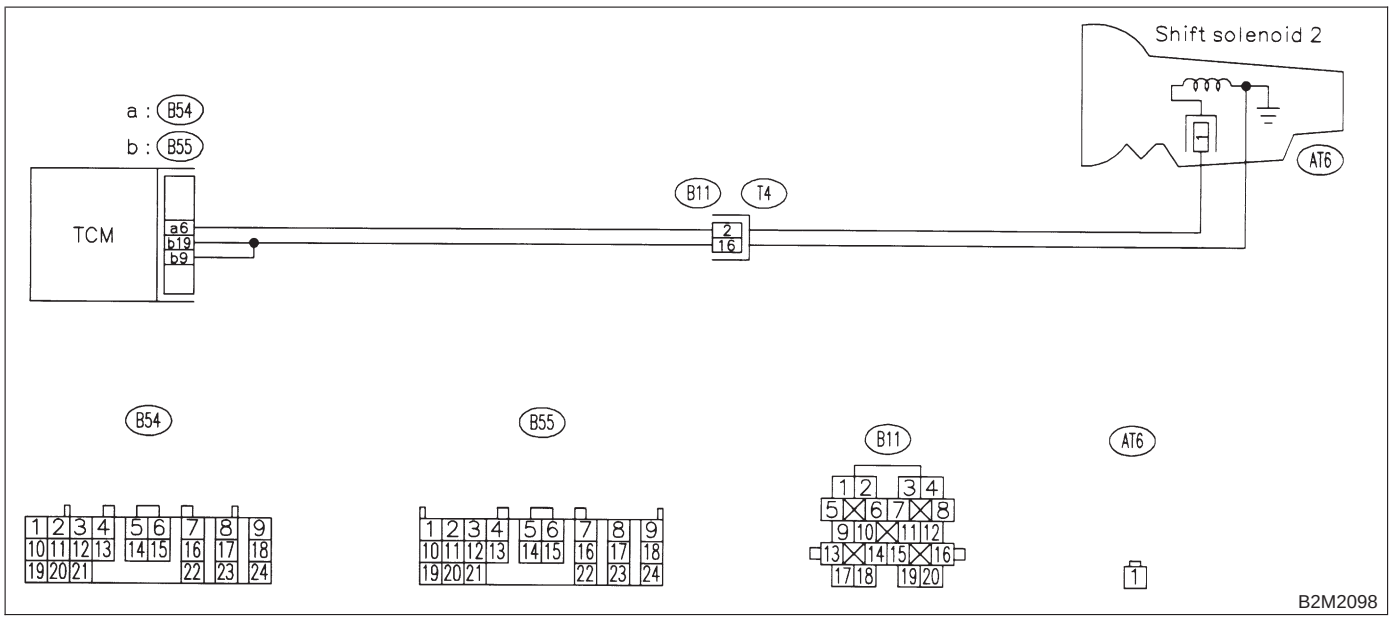
- **WIRING DIAGRAM:**



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

NOTE:
Check shift solenoid 2 circuit.
<Ref. to 2-7 [T12BM0].>

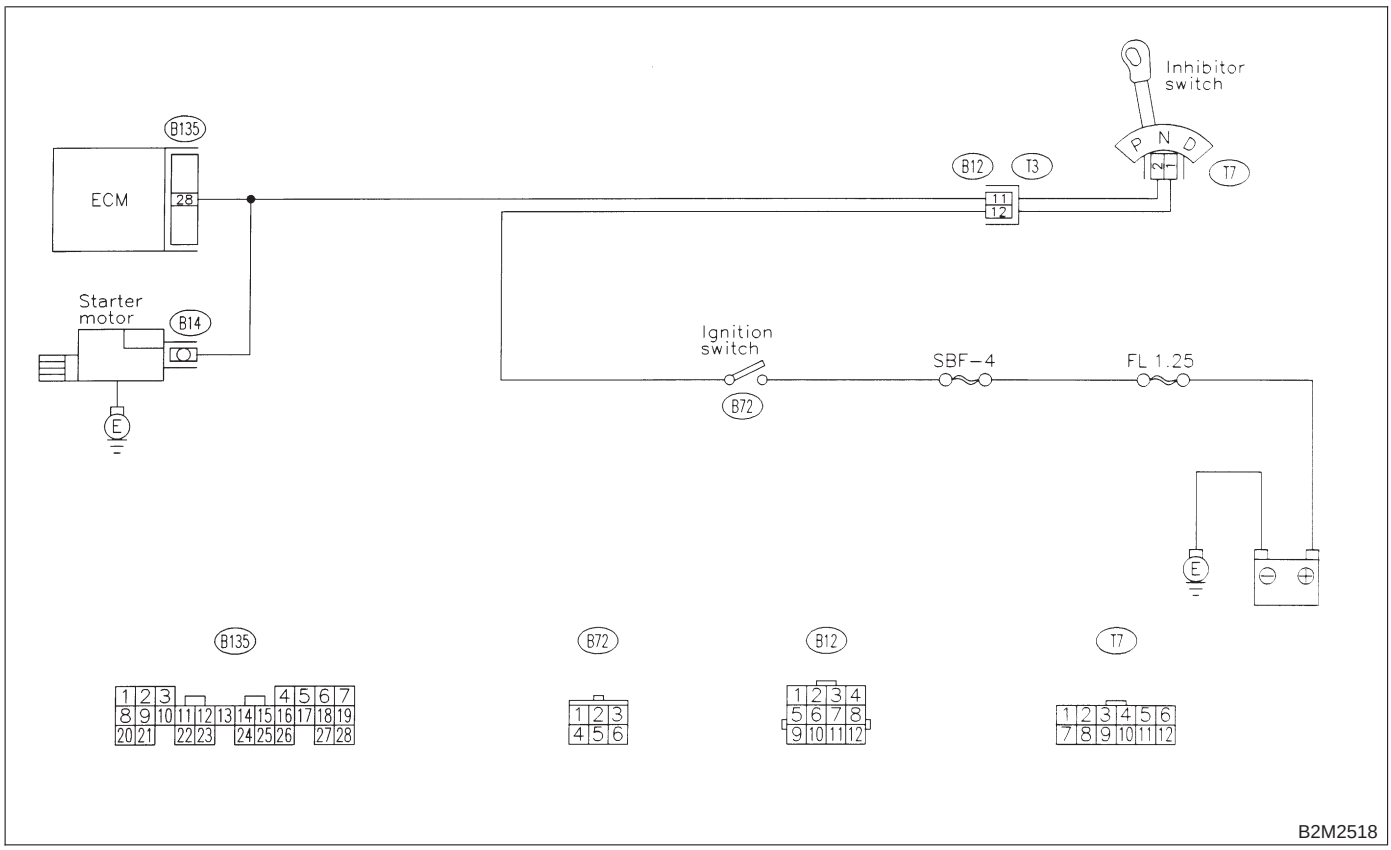
- **WIRING DIAGRAM:**



BN: DTC P1100 — STARTER SWITCH CIRCUIT LOW INPUT —

NOTE:
Check starter switch circuit.
<Ref. to 2-7 [T12BN0].>

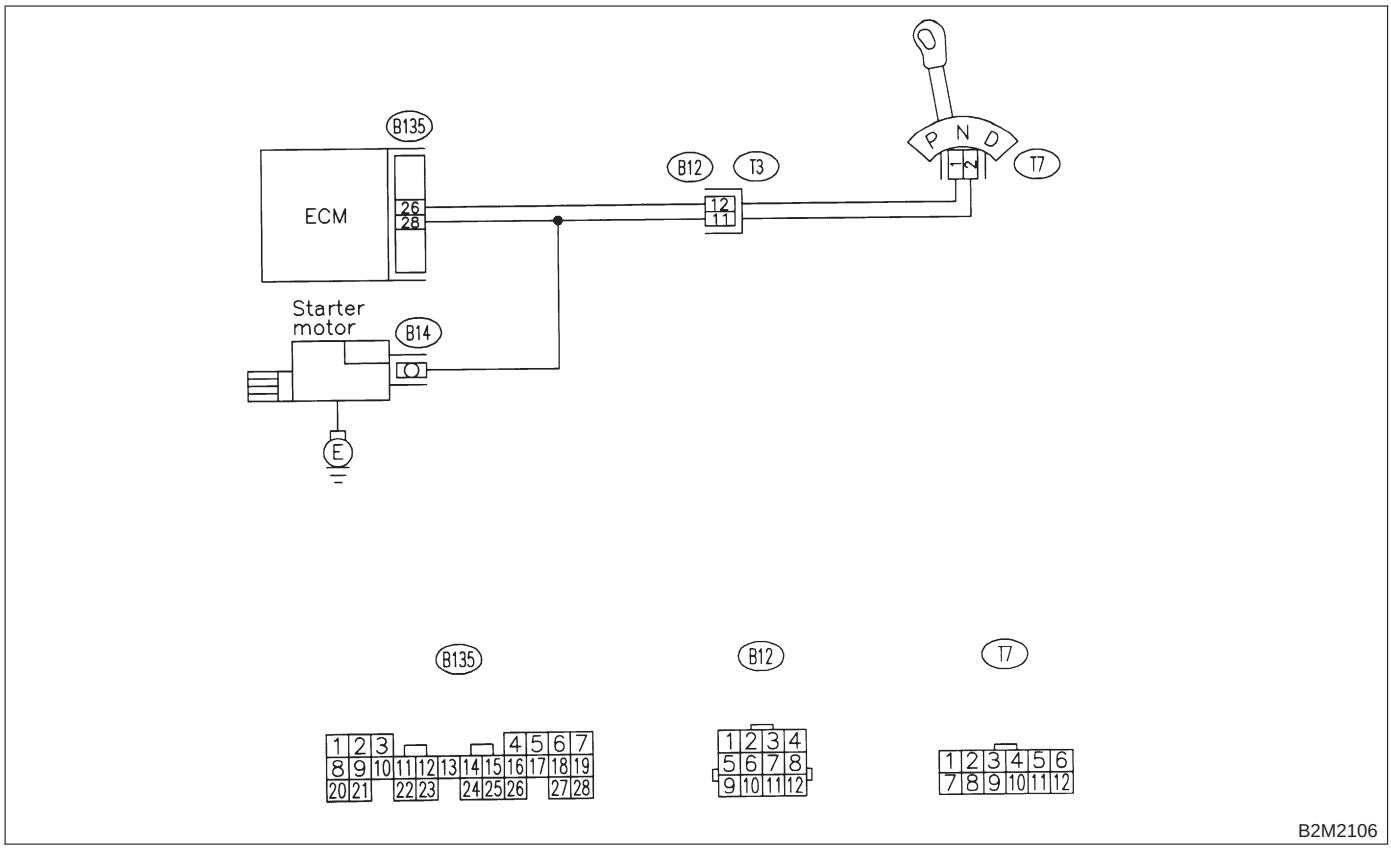
- **WIRING DIAGRAM:**



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

NOTE:
Check neutral position switch circuit.
<Ref. to 2-7 [T12BP0].>

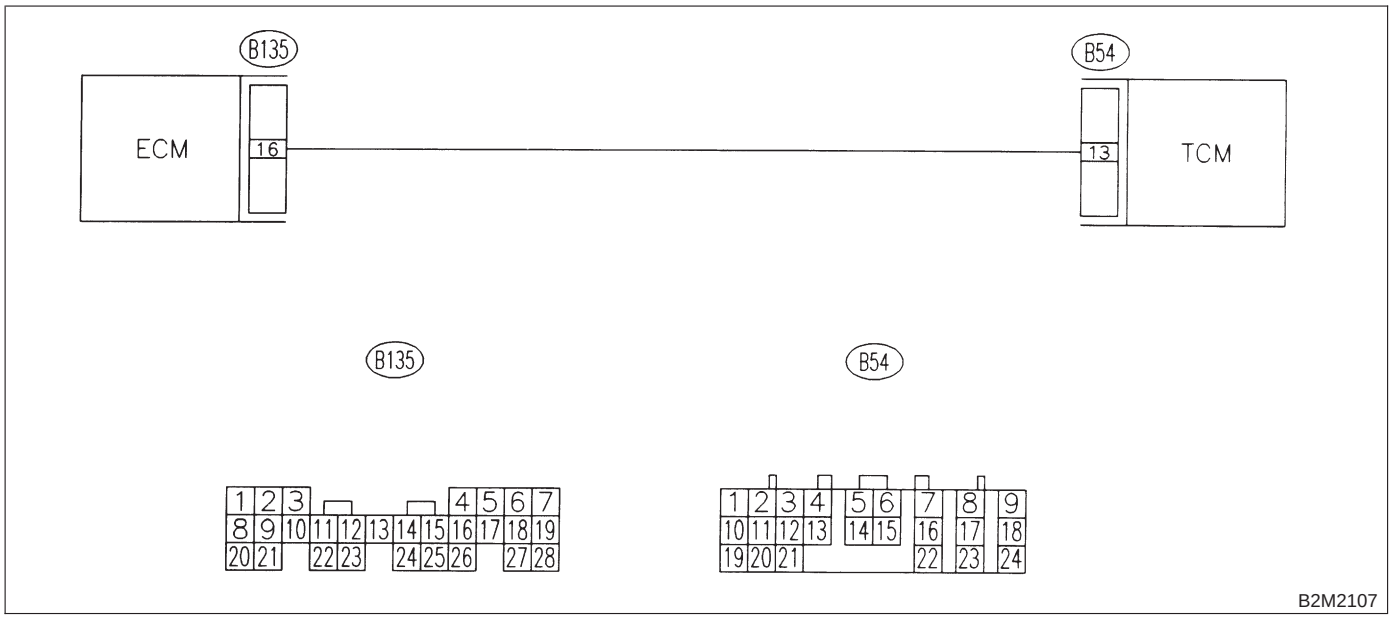
- **WIRING DIAGRAM:**



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

NOTE:
Check engine torque control signal 1 circuit.
<Ref. to 2-7 [T12BQ0].>

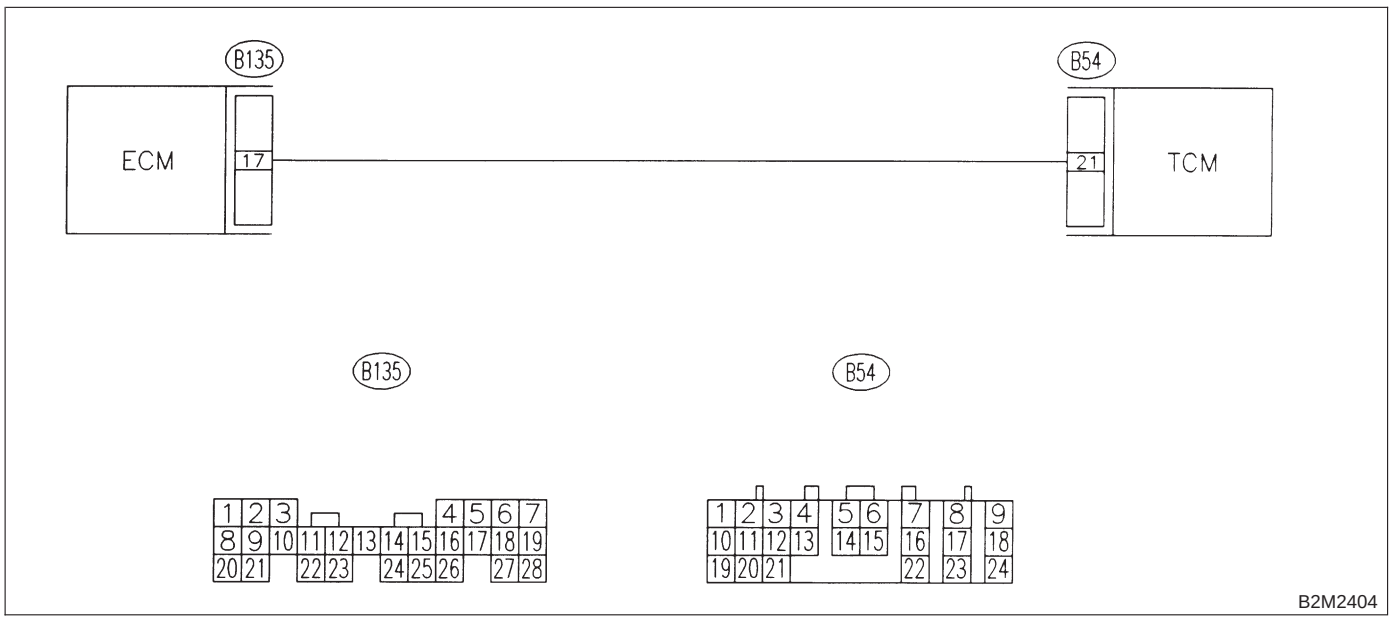
- **WIRING DIAGRAM:**



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

NOTE:
Check engine torque control signal 2 circuit.
<Ref. to 2-7 [T12BR0].>

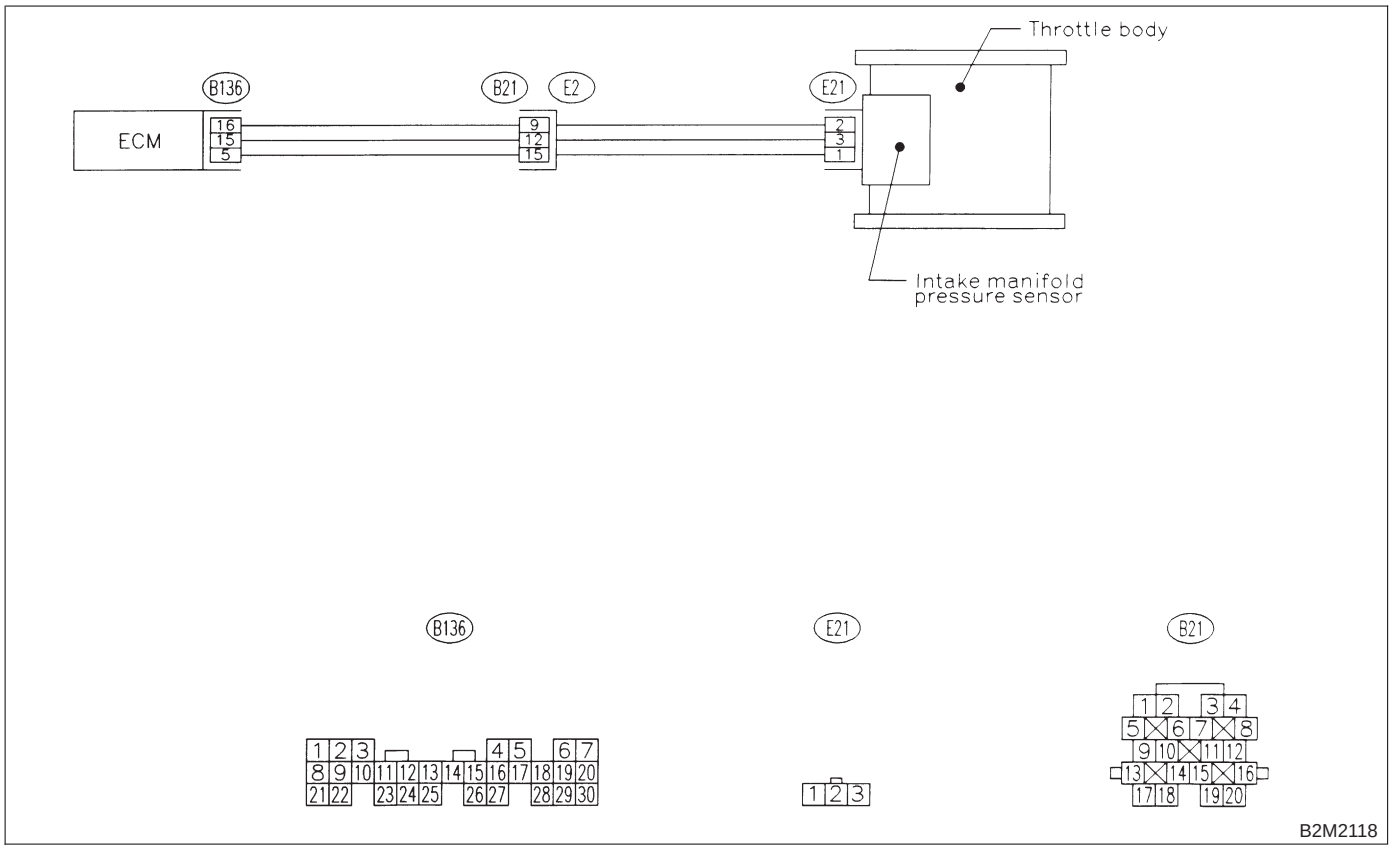
- **WIRING DIAGRAM:**



BR: DTC P1110 — ATMOSPHERIC PRESSURE SENSOR CIRCUIT LOW INPUT —

NOTE:
Check atmospheric pressure sensor circuit.
<Ref. to 2-7 [T12BS0].>

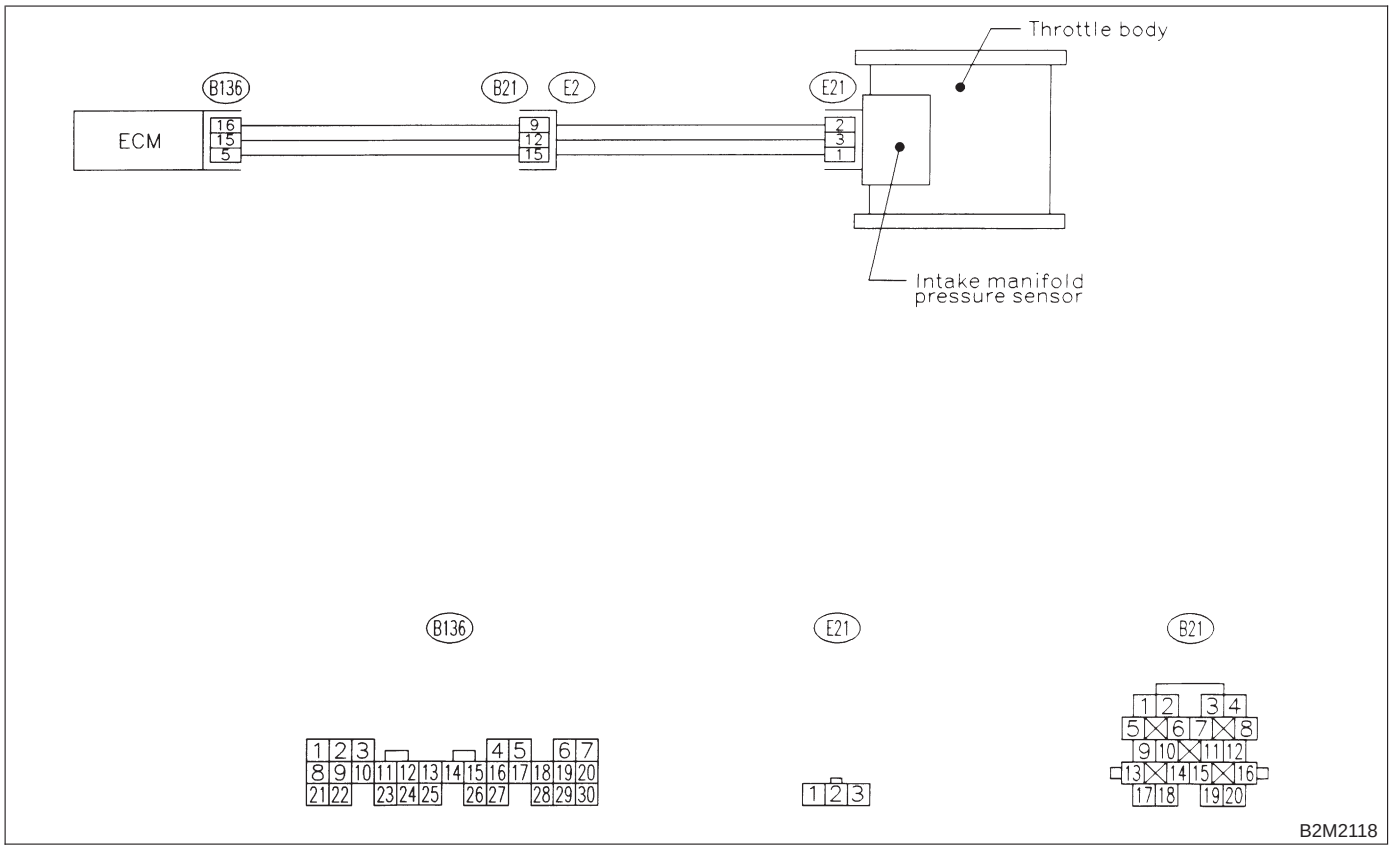
- **WIRING DIAGRAM:**



BS: DTC P1111 — ATMOSPHERIC PRESSURE SENSOR CIRCUIT HIGH INPUT —

NOTE:
Check atmospheric pressure sensor circuit.
<Ref. to 2-7 [T12BT0].>

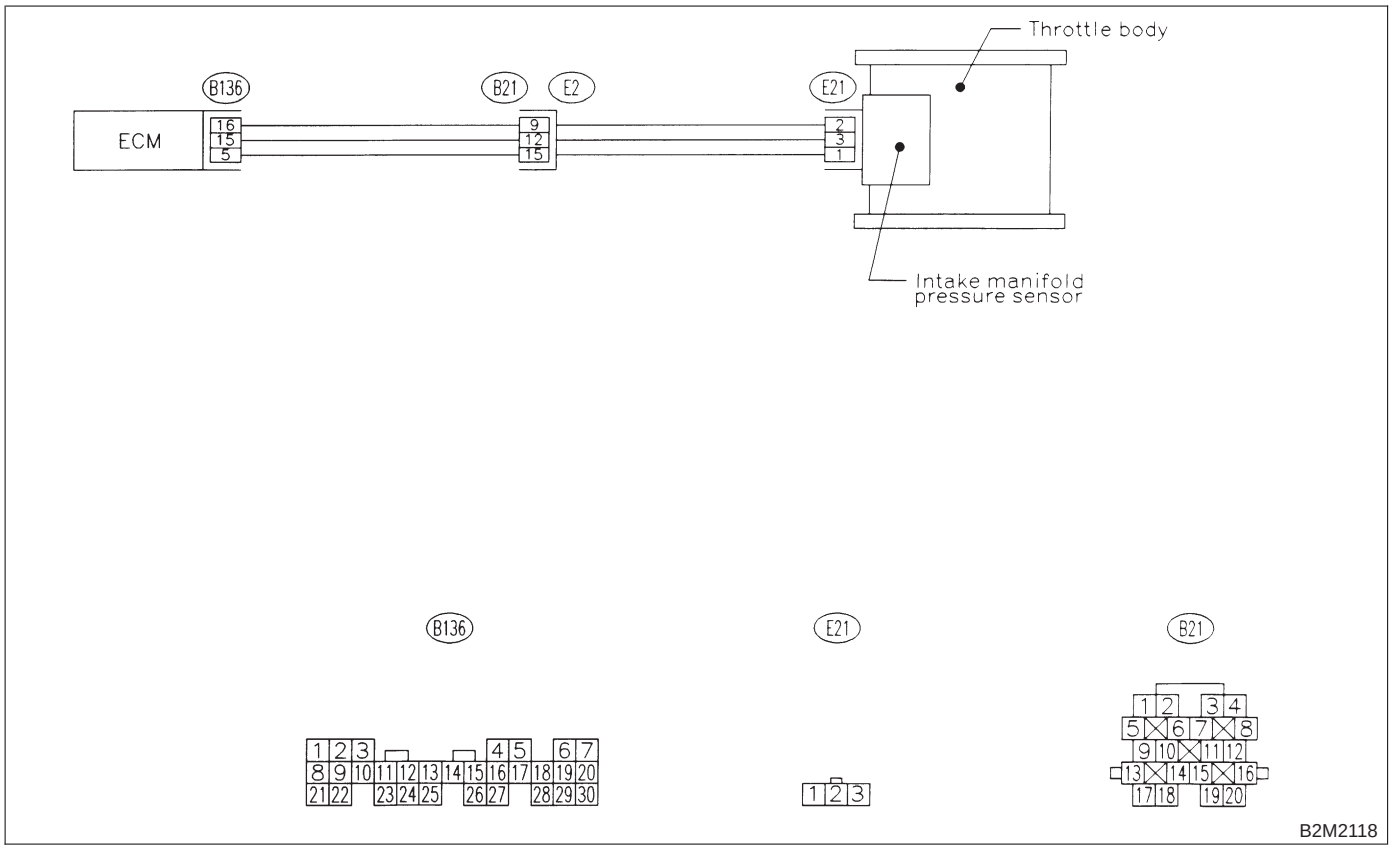
- **WIRING DIAGRAM:**



BT: DTC P1112 — ATMOSPHERIC PRESSURE SENSOR CIRCUIT RANGE/ PERFORMANCE PROBLEM —

NOTE:
Check atmospheric pressure sensor circuit.
<Ref. to 2-7 [T12BU0].>

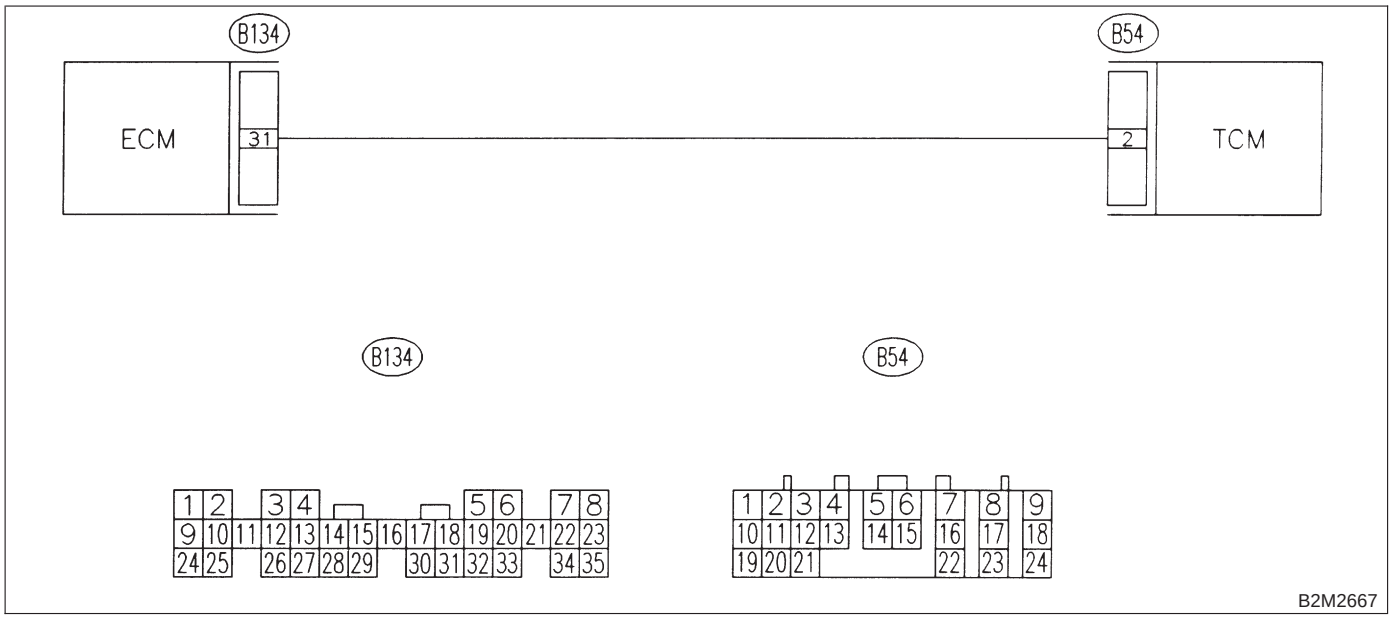
- **WIRING DIAGRAM:**



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

NOTE:
Check engine torque control cut signal circuit.
<Ref. to 2-7 [T12BV0].>

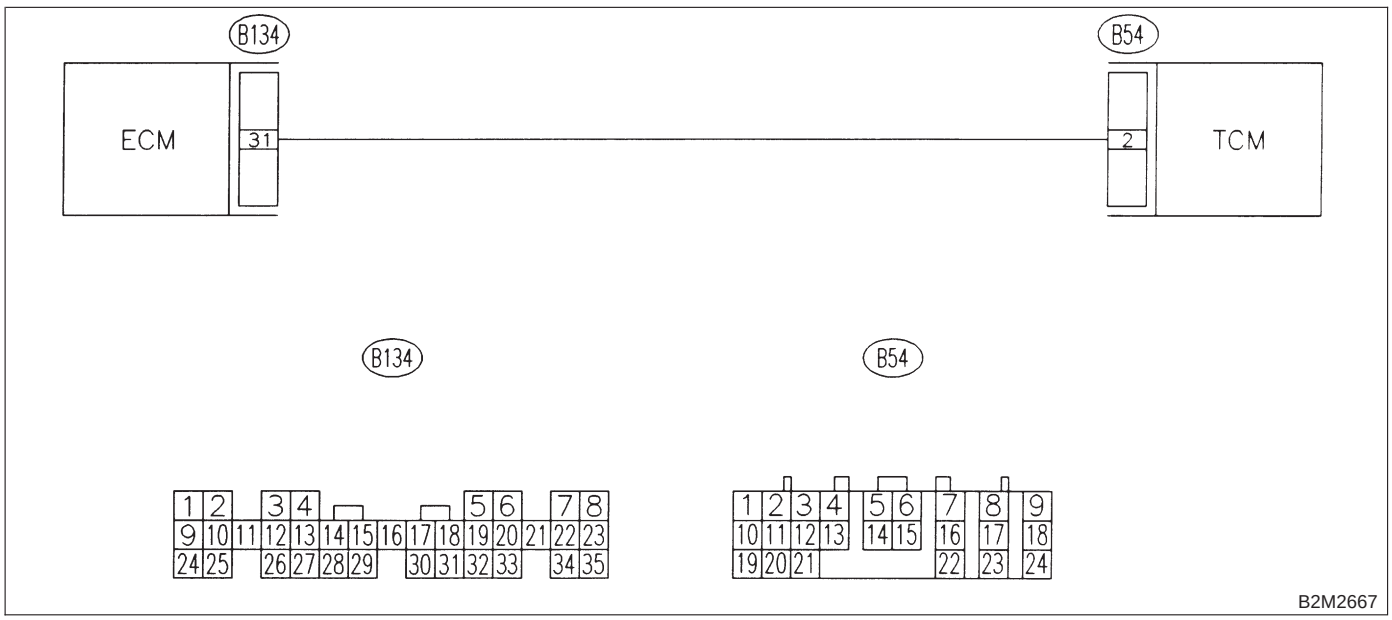
- **WIRING DIAGRAM:**



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

NOTE:
Check engine torque control cut signal circuit.
<Ref. to 2-7 [T12BW0].>

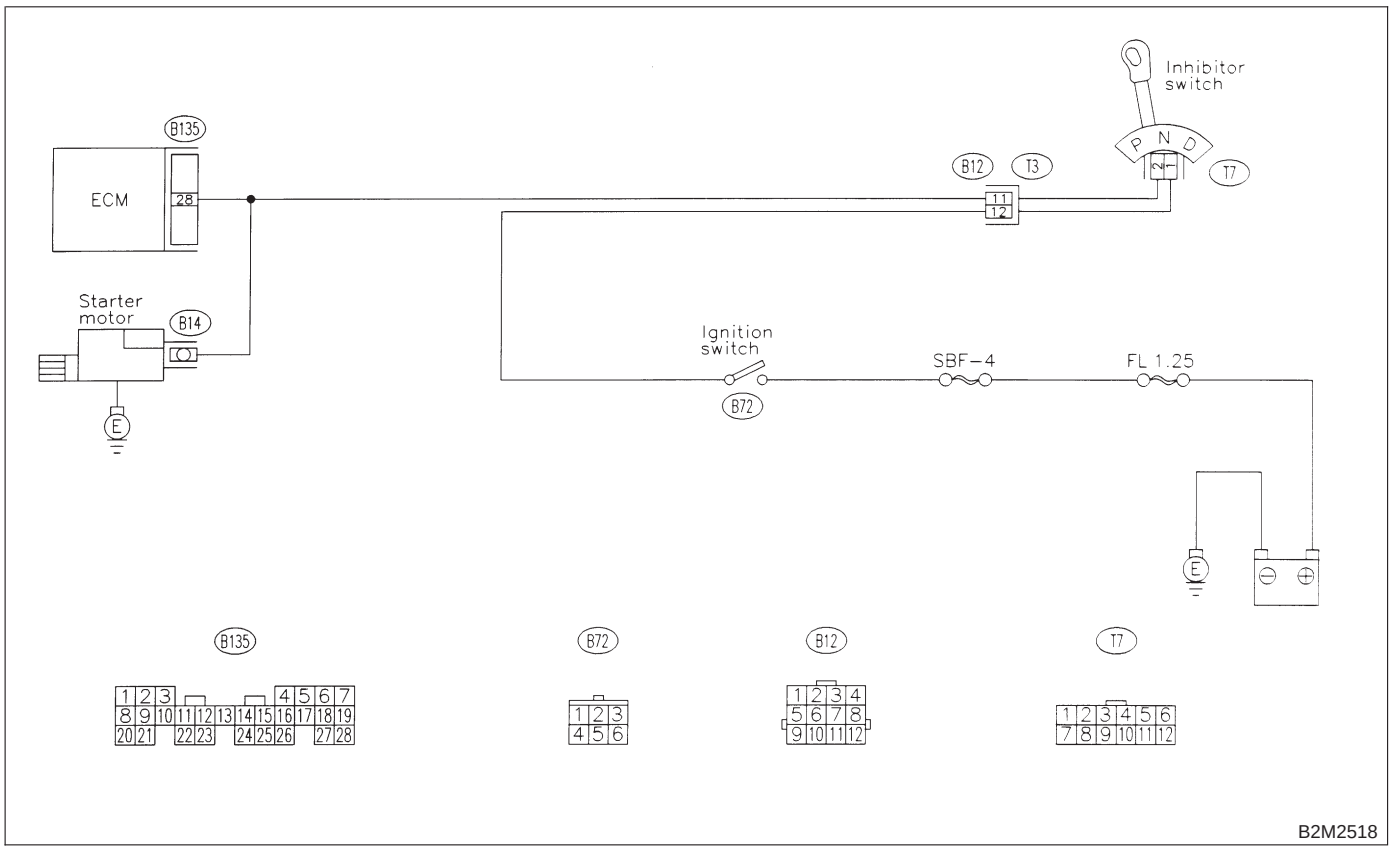
- **WIRING DIAGRAM:**



BW: DTC P1120 — STARTER SWITCH CIRCUIT HIGH INPUT —

NOTE:
Check starter switch circuit.
<Ref. to 2-7 [T12BX0].>

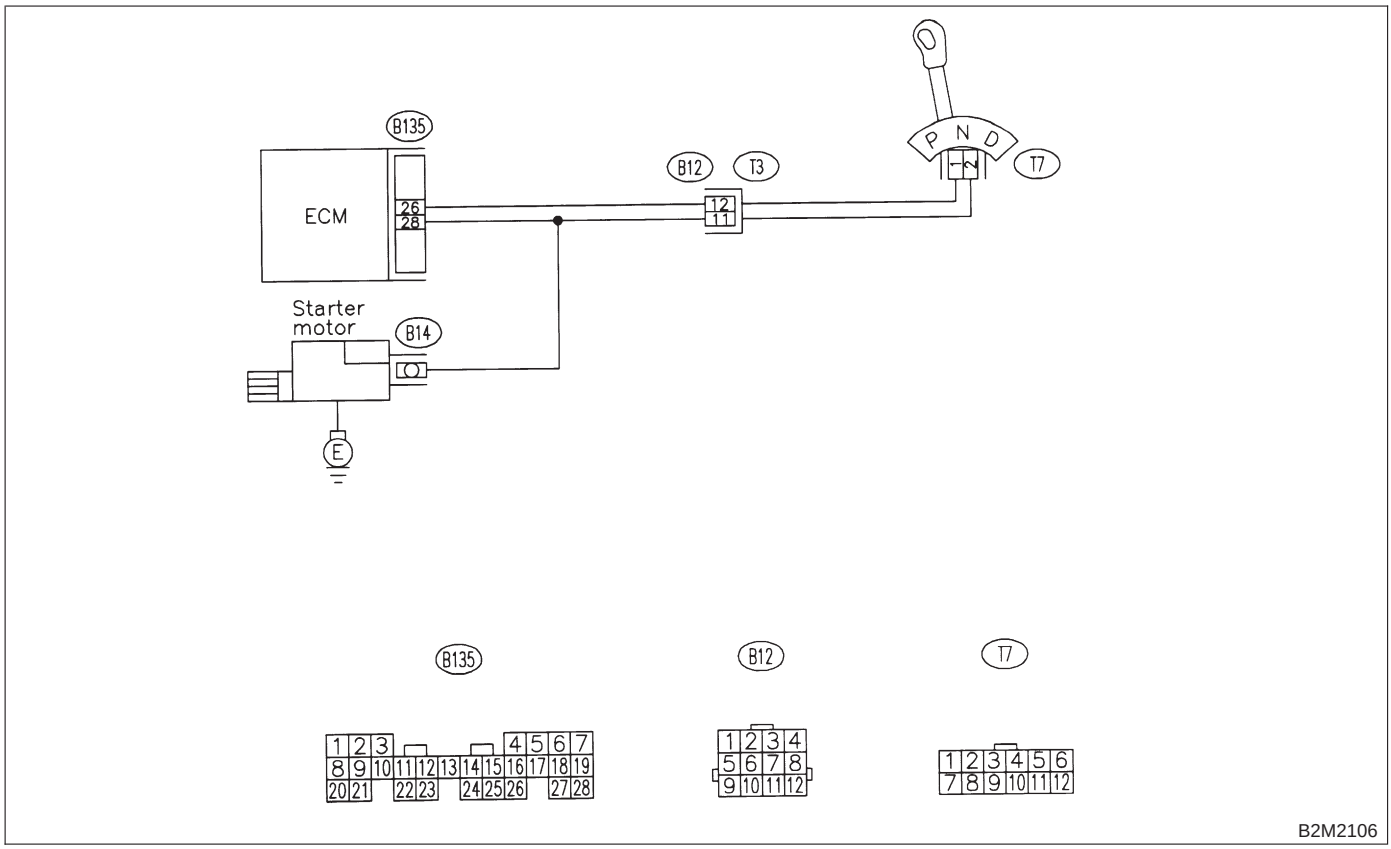
- **WIRING DIAGRAM:**



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

NOTE:
Check neutral position switch circuit.
<Ref. to 2-7 [T12BZ0].>

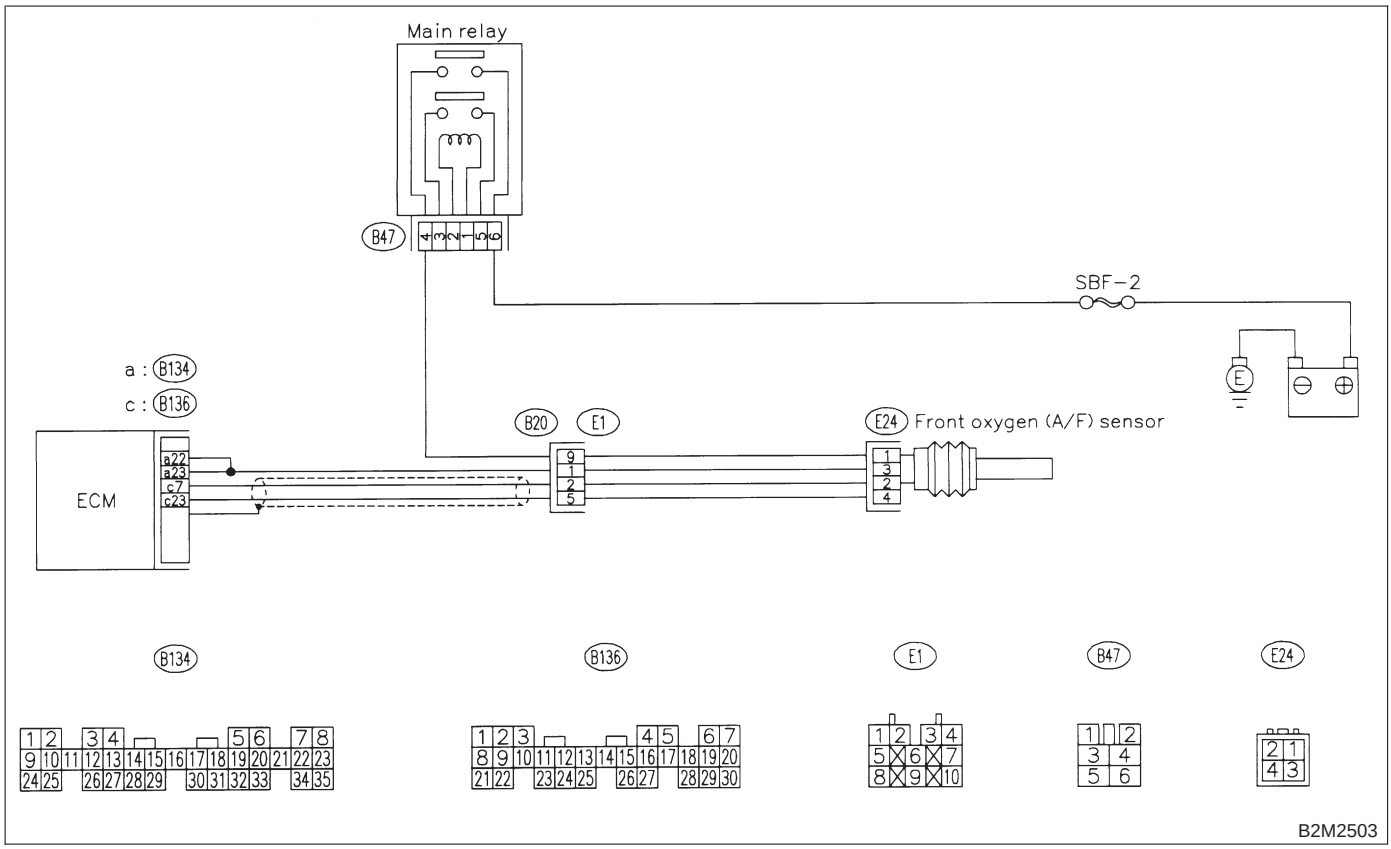
- **WIRING DIAGRAM:**



BY: DTC P1130 — FRONT OXYGEN (A/F) SENSOR CIRCUIT MALFUNCTION (OPEN CIRCUIT) —

NOTE:
Check front oxygen (A/F) sensor circuit.
<Ref. to 2-7 [T12CA0].>

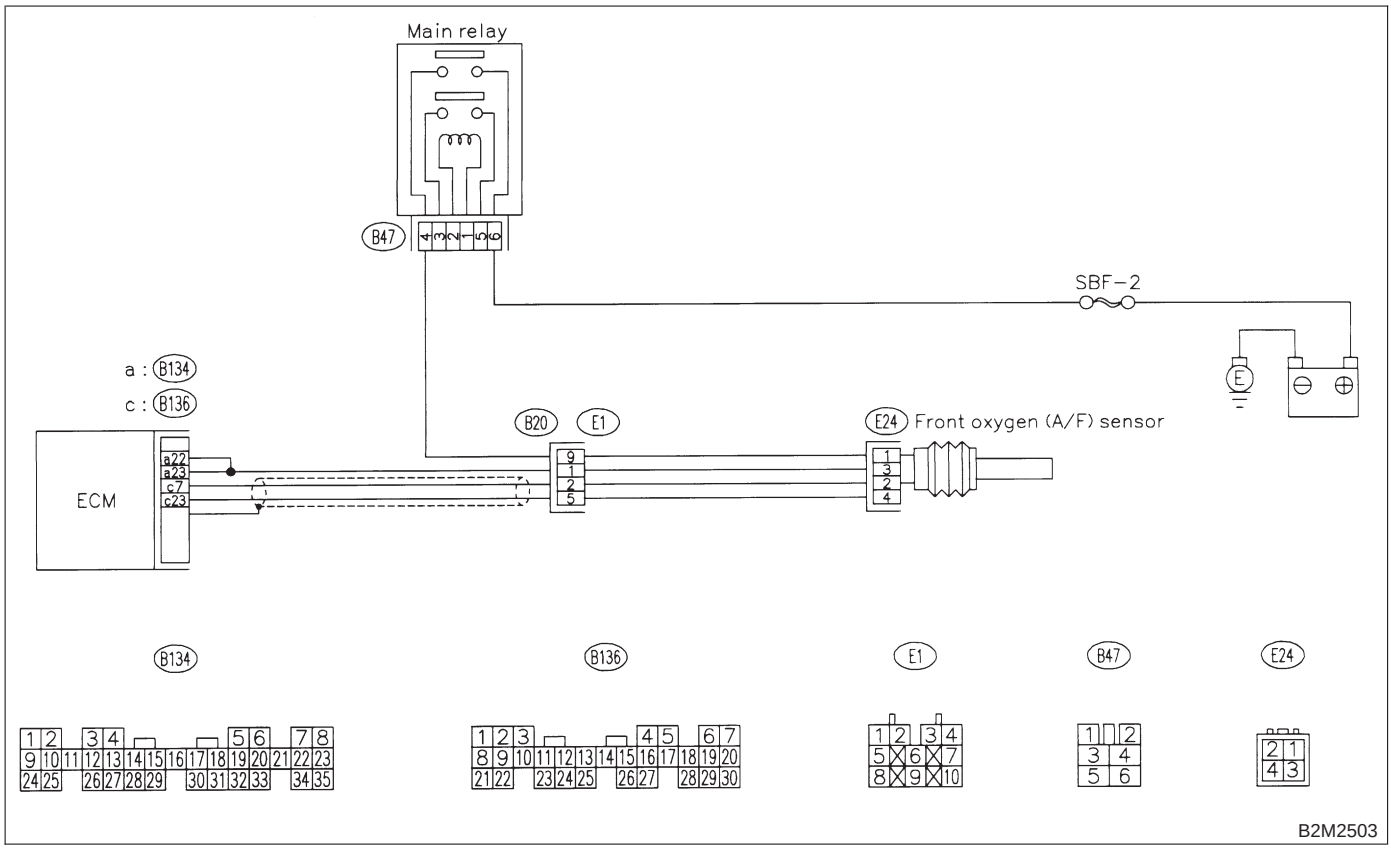
- **WIRING DIAGRAM:**



BZ: DTC P1131 — FRONT OXYGEN (A/F) SENSOR CIRCUIT MALFUNCTION (SHORT CIRCUIT) —

NOTE:
Check front oxygen (A/F) sensor circuit.
<Ref. to 2-7 [T12CB0].>

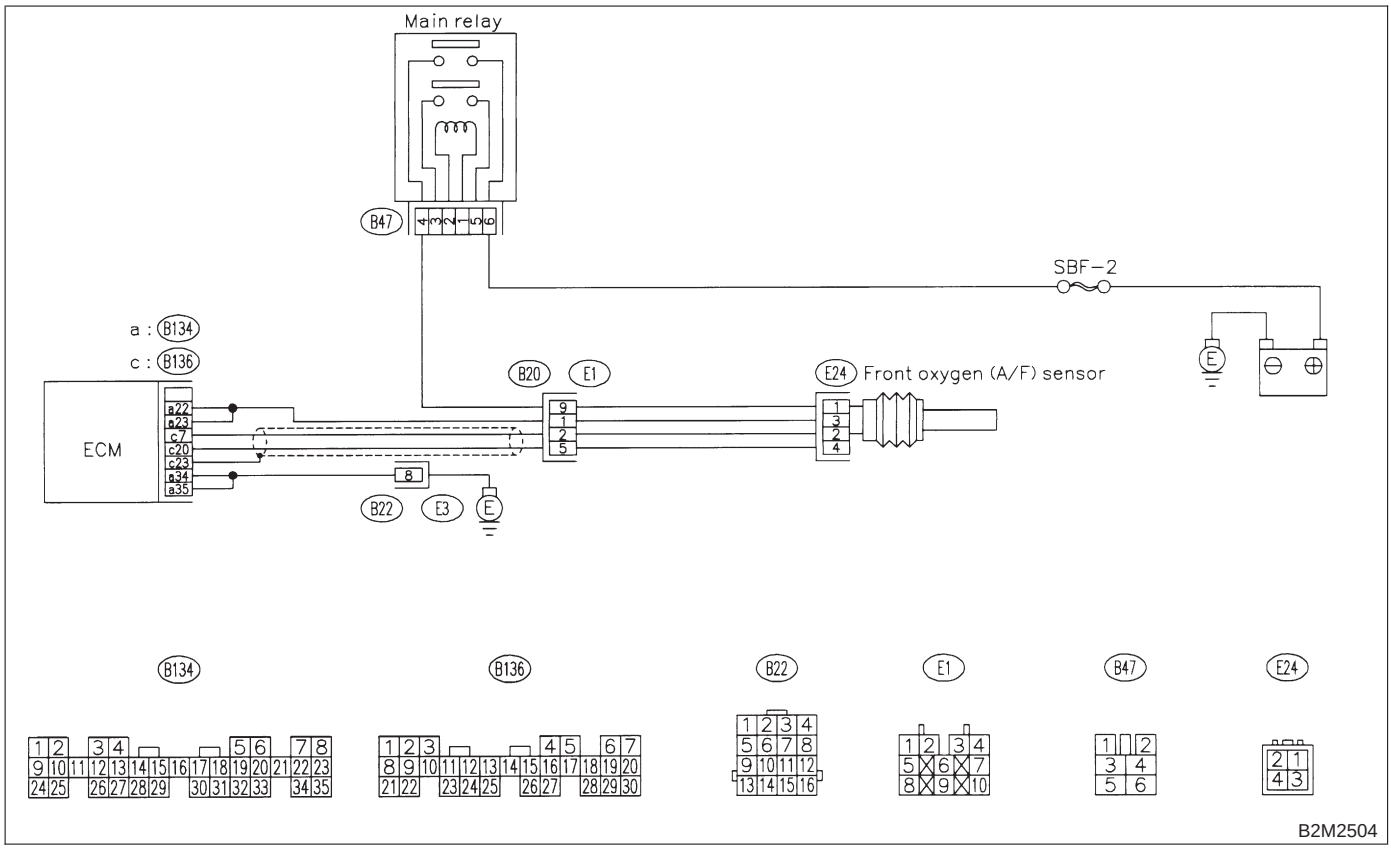
- **WIRING DIAGRAM:**



CA: DTC P1132 — FRONT OXYGEN (A/F) SENSOR HEATER CIRCUIT LOW INPUT —

NOTE:
Check front oxygen (A/F) sensor heater circuit.
<Ref. to 2-7 [T12CC0].>

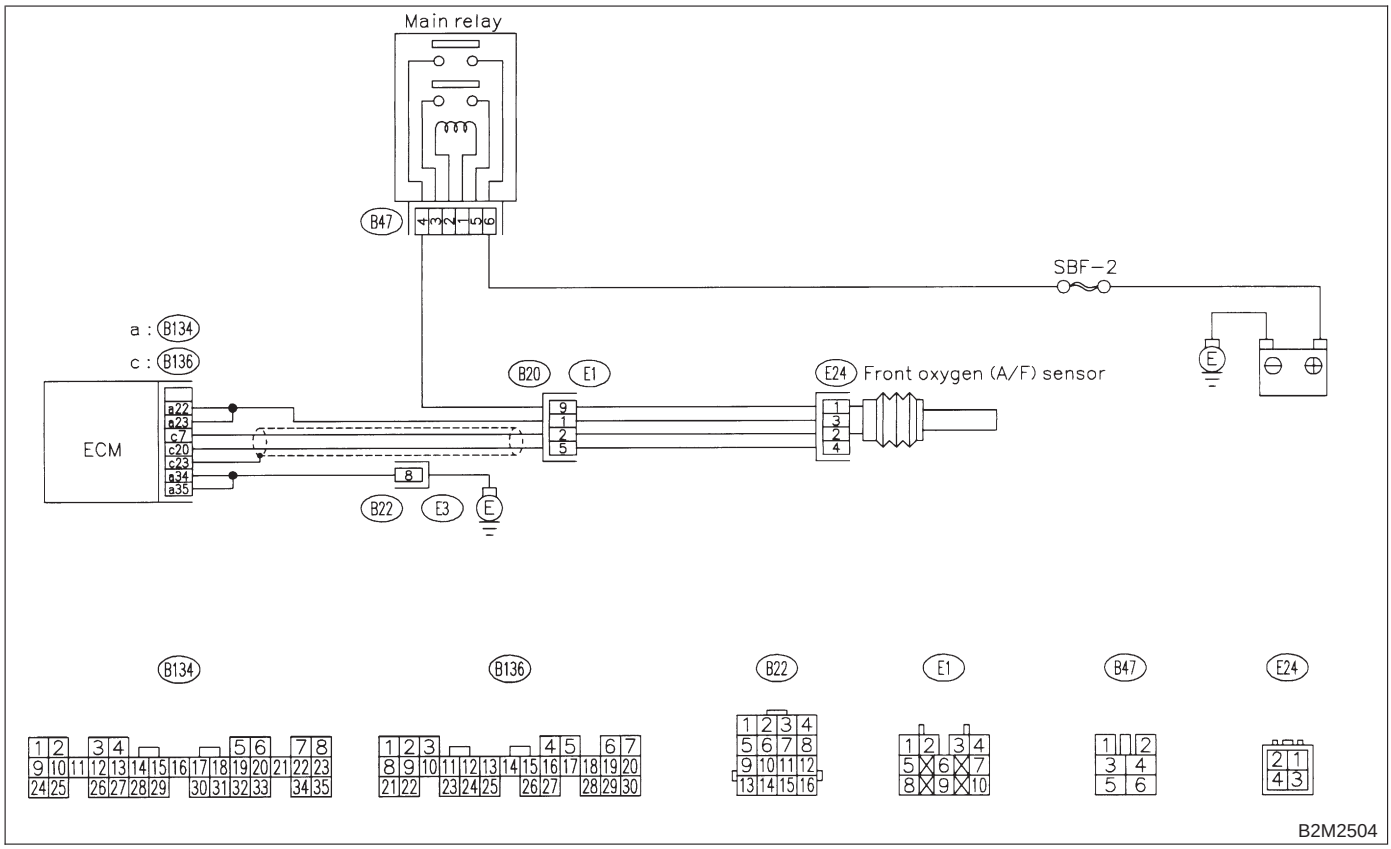
- **WIRING DIAGRAM:**



CB: DTC P1133 — FRONT OXYGEN (A/F) SENSOR HEATER CIRCUIT HIGH INPUT —

NOTE:
Check front oxygen (A/F) sensor heater circuit.
<Ref. to 2-7 [T12CD0].>

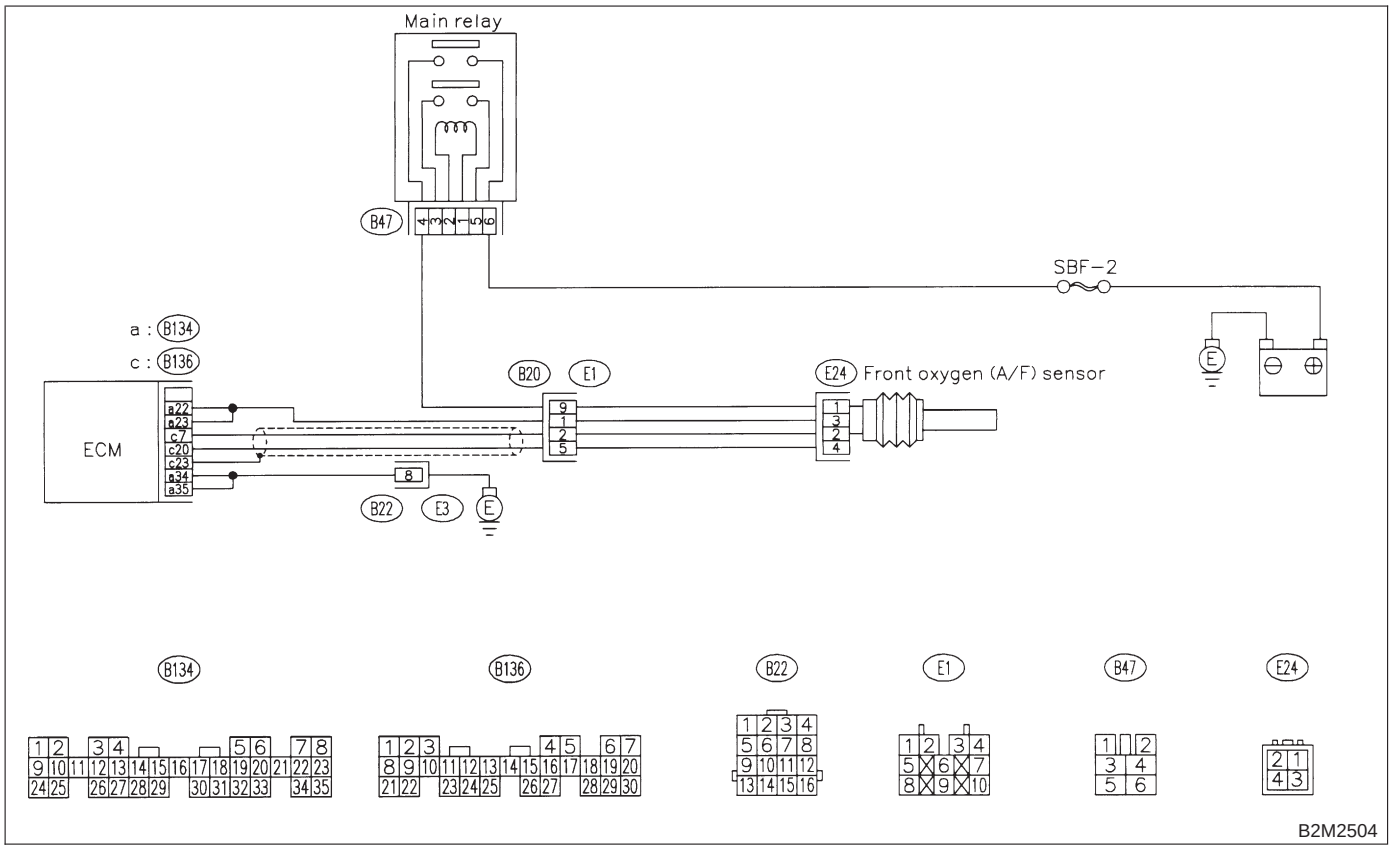
- **WIRING DIAGRAM:**



CC: DTC P1134 — FRONT OXYGEN (A/F) SENSOR MICRO-COMPUTER PROBLEM —

NOTE:
Check front oxygen (A/F) sensor circuit.
<Ref. to 2-7 [T12CE0].>

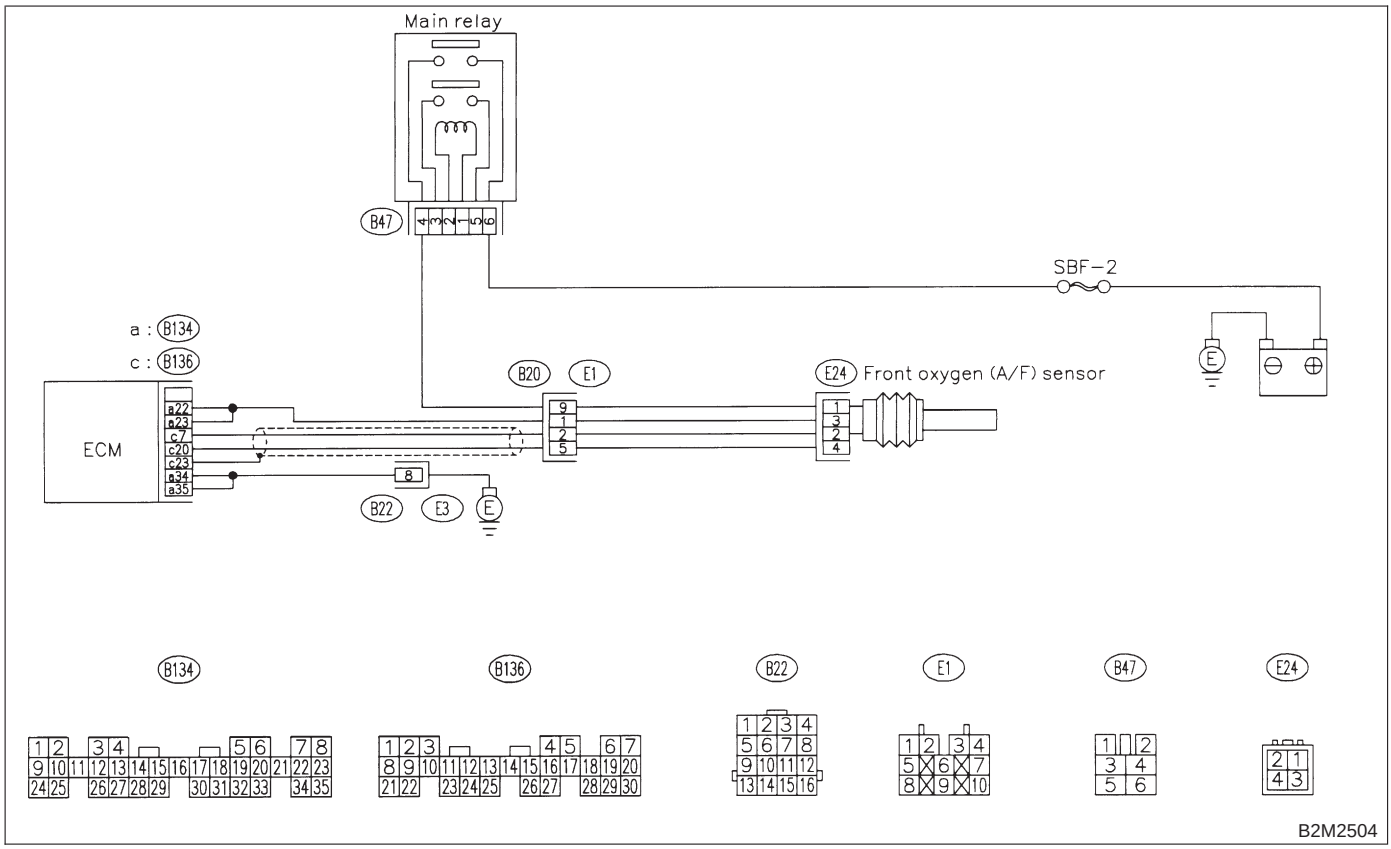
- **WIRING DIAGRAM:**



CD: DTC P1139 — FRONT OXYGEN (A/F) SENSOR #1 HEATER CIRCUIT RANGE/PERFORMANCE PROBLEM —

NOTE:
Check front oxygen (A/F) sensor circuit.
<Ref. to 2-7 [T12CF0].>

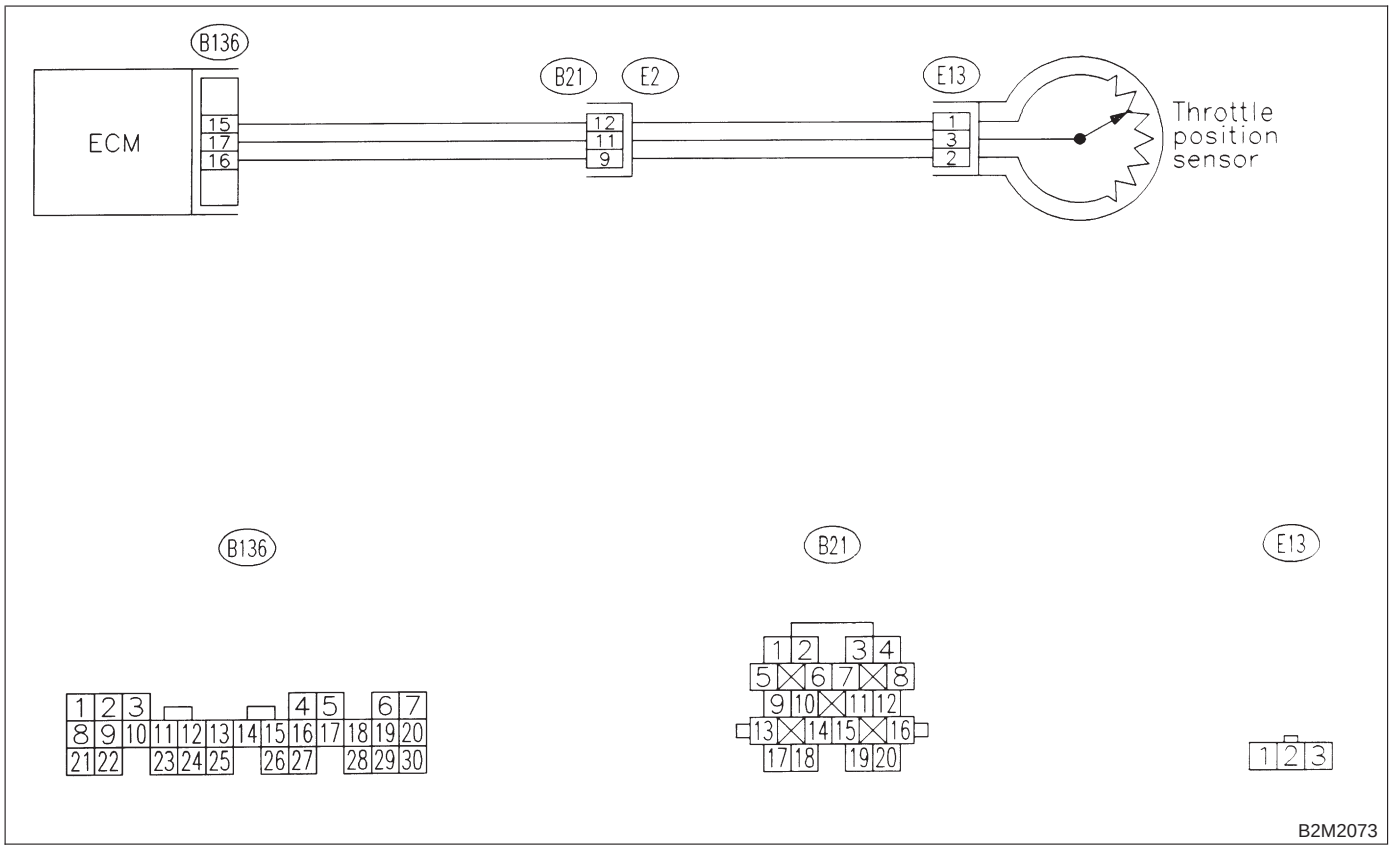
- **WIRING DIAGRAM:**



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

NOTE:
Check throttle position sensor circuit.
<Ref. to 2-7 [T12CG0].>

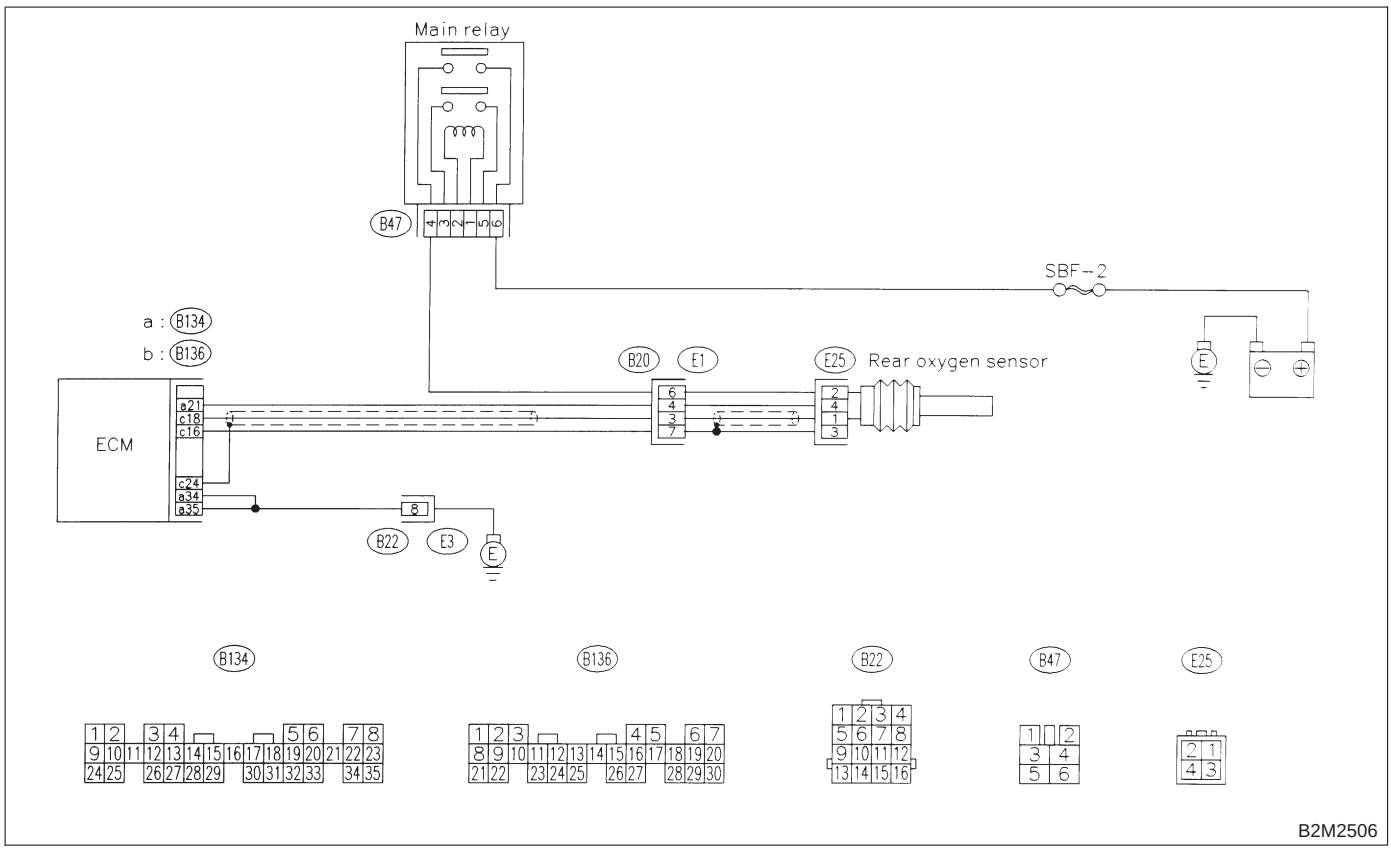
- **WIRING DIAGRAM:**



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

NOTE:
Check rear oxygen (A/F) sensor heater circuit.
<Ref. to 2-7 [T12CH0].>

- **WIRING DIAGRAM:**

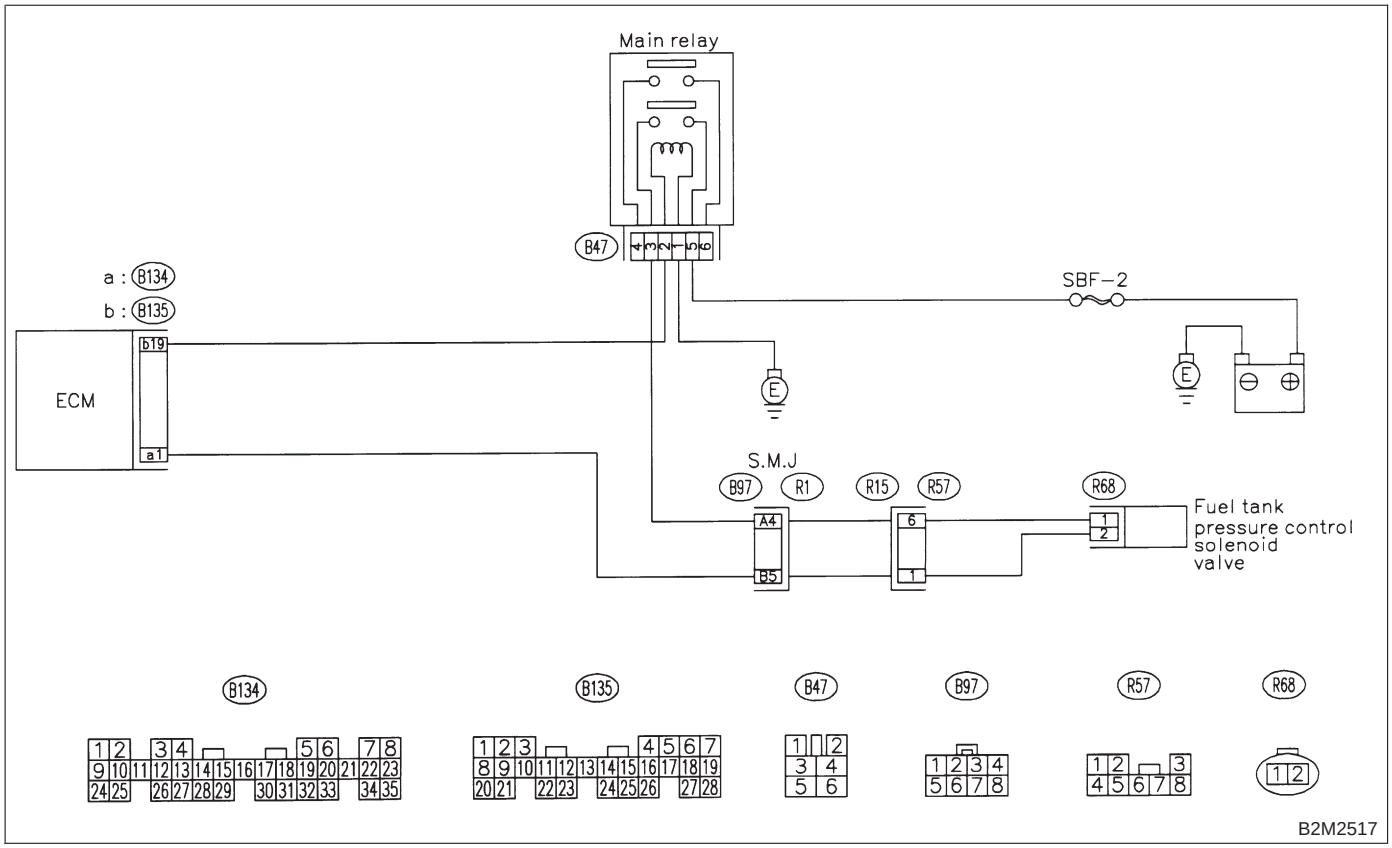


CG: DTC P1400 — FUEL TANK PRESSURE CONTROL SOLENOID VALVE CIRCUIT LOW INPUT —

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

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

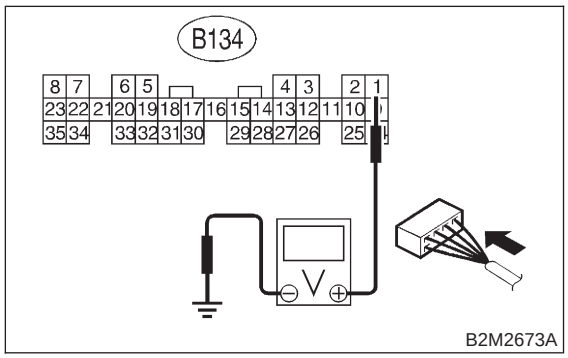
- **WIRING DIAGRAM:**



13CG1 : CHECK OUTPUT SIGNAL FROM ECM.

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

Connector & terminal
(B134) No. 1 (+) — Chassis ground (−):



CHECK : ***Is the voltage more than 10 V?***
YES : Go to step **13CG2**.
NO : Go to step **13CG3**.

13CG2 : CHECK POOR CONTACT.

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

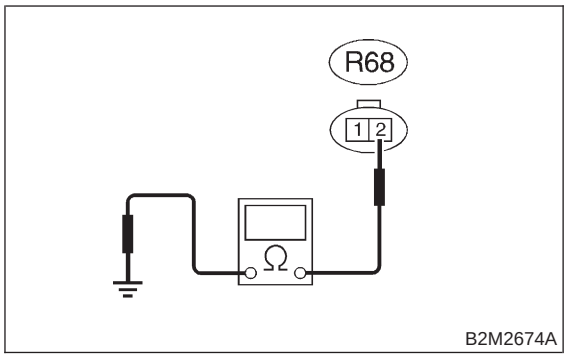
CHECK : ***Is there poor contact in ECM connector?***
YES : Repair poor contact in ECM connector.
NO : Contact with SOA service.

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

13CG3 : 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:

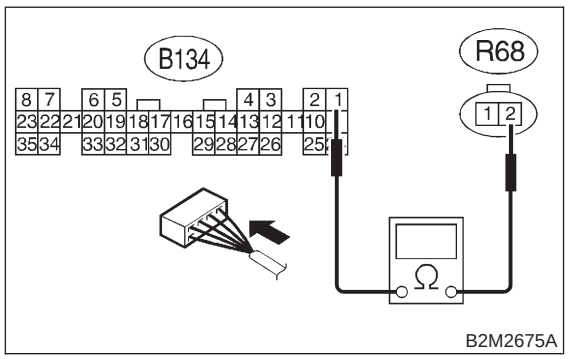


CHECK : ***Is the resistance less than 10 Ω?***
YES : Repair ground short circuit in harness between ECM and fuel tank pressure control solenoid valve connector.
NO : Go to step **13CG4**.

13CG4 : 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
(B134) No. 1 — (R68) No. 2:



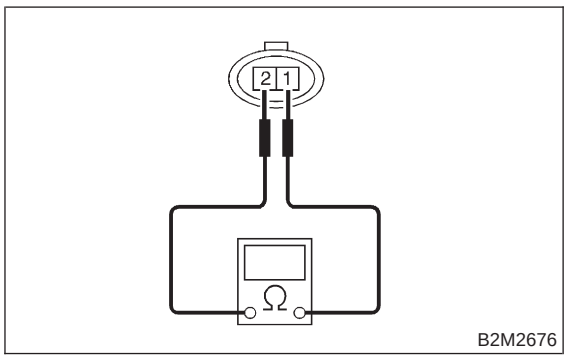
CHECK : ***Is the voltage less than 1 Ω?***
YES : Go to step **13CG5**.
NO : Repair harness and connector.

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)

13CG5 : CHECK FUEL TANK PRESSURE CONTROL SOLENOID VALVE.

Measure resistance between fuel tank pressure control solenoid valve terminals.

Terminals
No. 1 — No. 2:

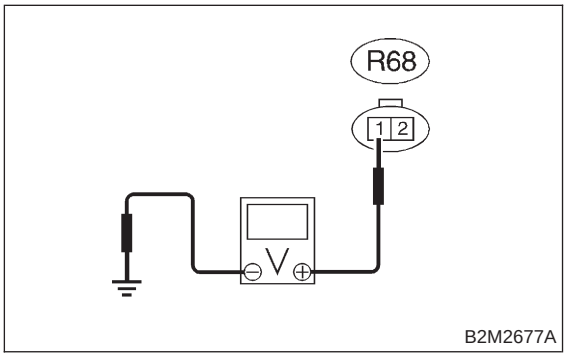


CHECK : ***Is the resistance between 10 and 100 Ω?***
YES : Go to step **13CG6**.
NO : Replace fuel tank pressure control solenoid valve. <Ref. to 2-1 [W10A0].>

13CG6 : 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 **13CG7**.
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

13CG7 : 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.

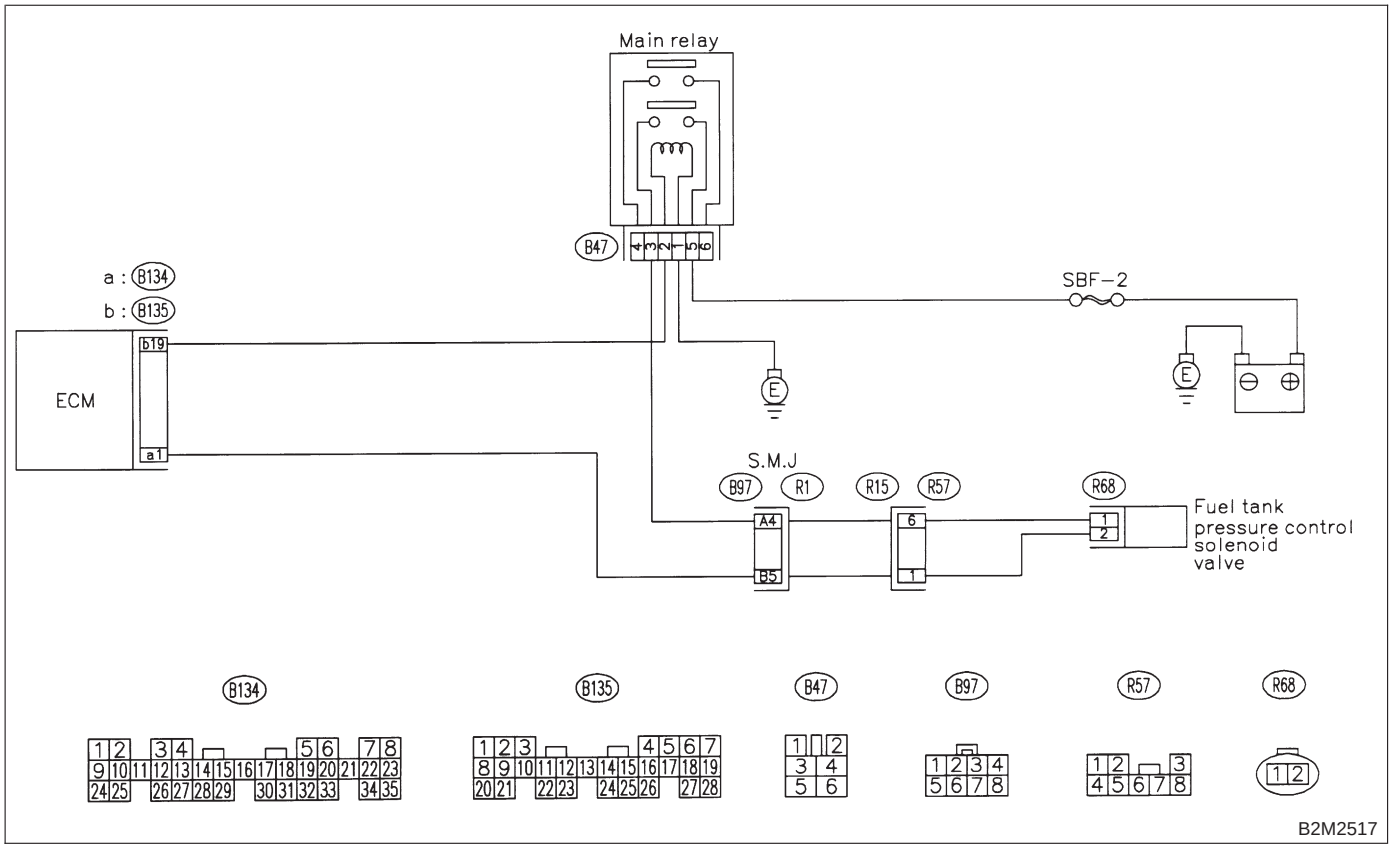
NOTE:
Inspection by DTM is required, because probable cause is deterioration of multiple parts.

CH: 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 MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**

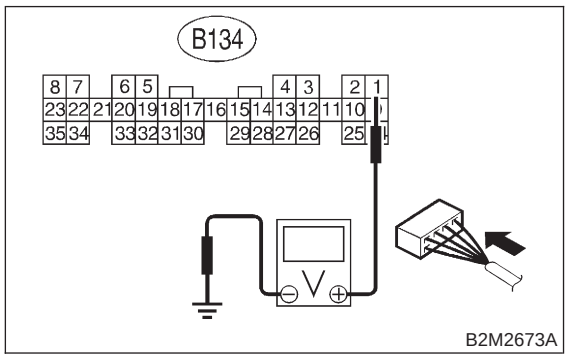


13CH1 : CHECK OUTPUT SIGNAL FROM ECM.

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 and Subaru Select Monitor switch to ON.
4) Measure voltage between ECM and chassis ground.

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

Connector & terminal
(B134) No. 1 (+) — Chassis ground (−):

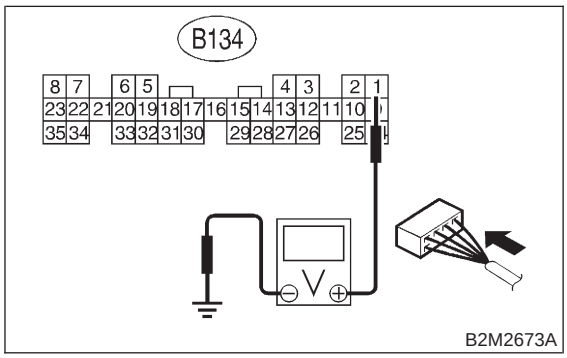


CHECK : ***Does voltage change between 0 and 10 volts?***
YES : Go to step **13CH2**.
NO : Even if MIL lights up, the circuit has returned to a normal condition at this time. In this case, repair poor contact in ECM connector.

13CH2 : CHECK OUTPUT SIGNAL FROM ECM.

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

Connector & terminal
(B134) No. 1 (+) — Chassis ground (−):



CHECK : ***Is the voltage more than 10 V?***
YES : Go to step **13CH4**.
NO : Go to step **13CH3**.

13CH3 : CHECK POOR CONTACT.

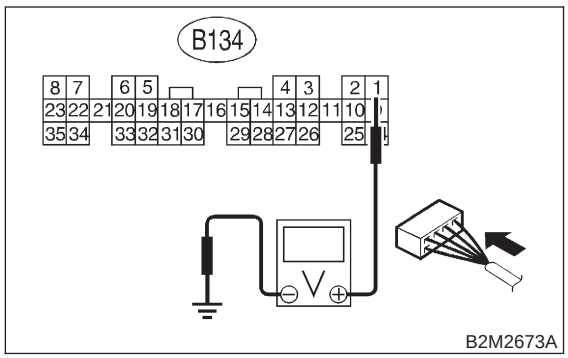
Check poor contact in ECM connector. <Ref. to FOREWORD [T3C1].>

CHECK : ***Is there poor contact in ECM connector?***
YES : Repair poor contact in ECM connector.
NO : Replace ECM. <Ref. to 2-7 [W15A1].>

13CH4 : 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
(B134) No. 1 (+) — Chassis ground (−):

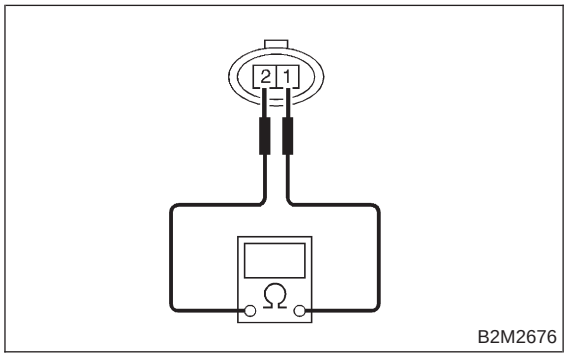


CHECK : ***Is the voltage more than 10 V?***
YES : Repair battery short circuit in harness between ECM and fuel tank pressure control solenoid valve connector. After repair, replace ECM. <Ref. to 2-7 [W15A1].>
NO : Go to step **13CH5**.

13CH5 : 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 <Ref. to 2-1 [W10A0].> and ECM <Ref. to 2-7 [W15A1].>.
NO : Go to step **13CH6**.

13CH6 : CHECK POOR CONTACT.

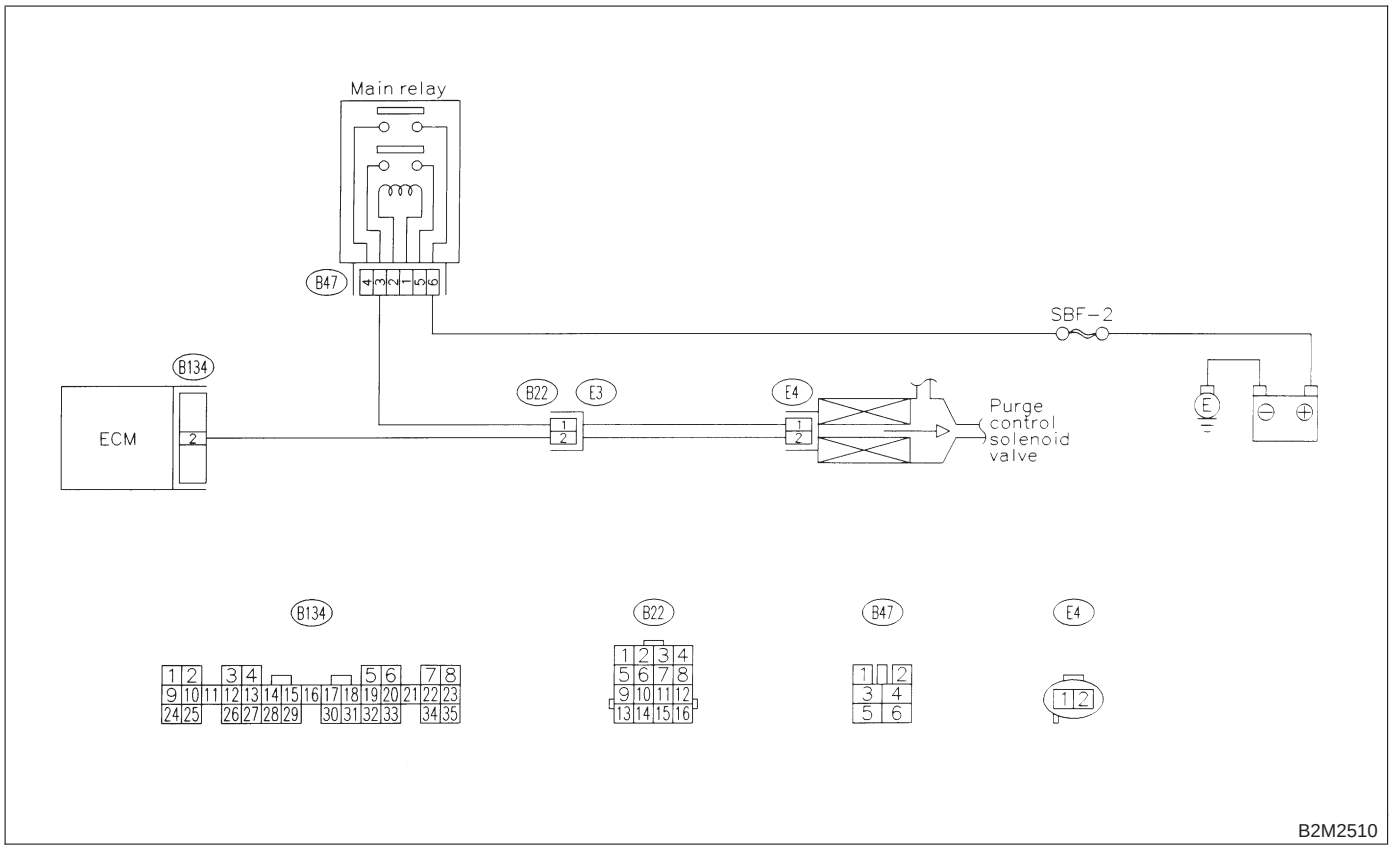
Check poor contact in ECM connector. <Ref. to FOREWORD [T3C1].>

CHECK : ***Is there poor contact in ECM connector?***
YES : Repair poor contact in ECM connector.
NO : Replace ECM. <Ref. to 2-7 [W15A1].>

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

NOTE:
Check canister purge control system.
<Ref. to 2-7 [T12CK0].>

- **WIRING DIAGRAM:**

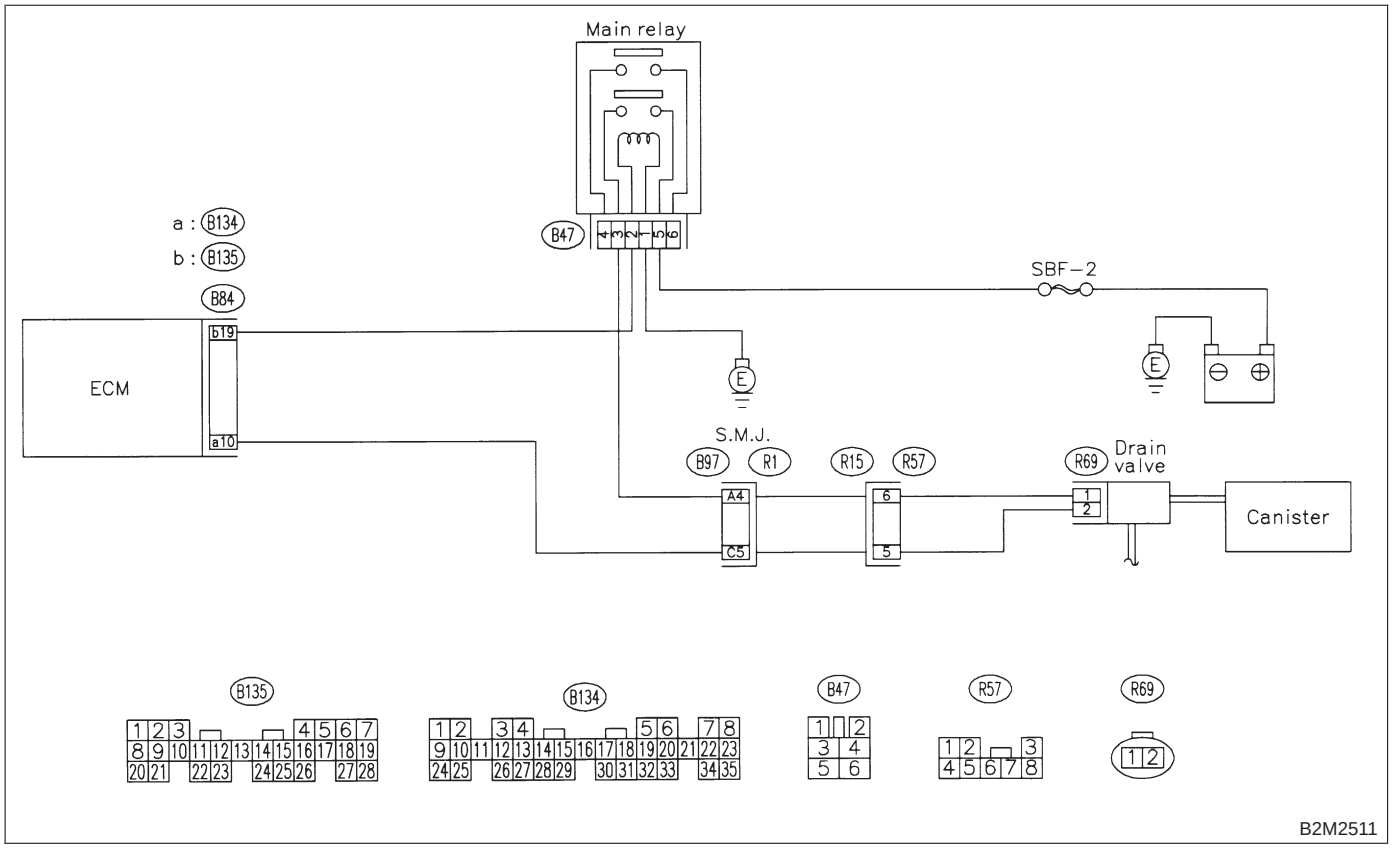


CJ: DTC P1423 — EVAPORATIVE EMISSION CONTROL SYSTEM VENT CONTROL HIGH INPUT —

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

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

- **WIRING DIAGRAM:**

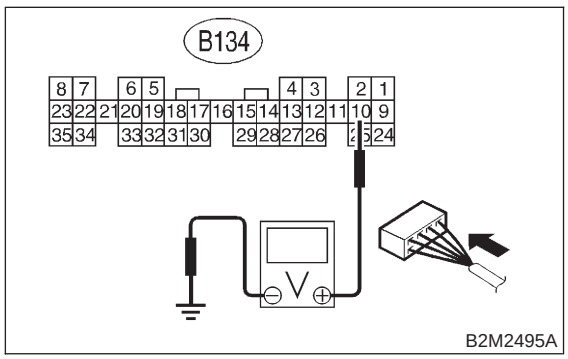


13CJ1 : CHECK OUTPUT SIGNAL FROM ECM.

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 and Subaru Select Monitor switch to ON.
4) Measure voltage between ECM and chassis ground.

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

Connector & terminal
(B134) No. 10 (+) — Chassis ground (−):

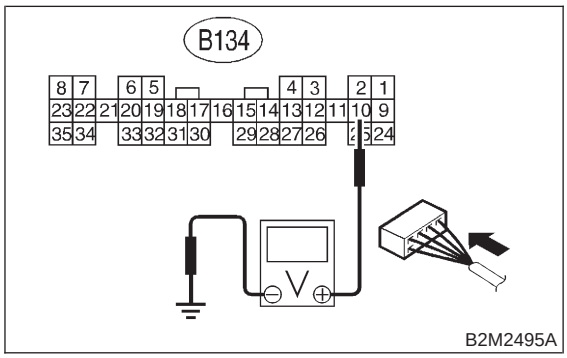


CHECK : ***Does voltage change between 0 and 10 volts?***
YES : Go to step **13CJ2**.
NO : Even if MIL lights up, the circuit has returned to a normal condition at this time. In this case, repair poor contact in ECM connector.

13CJ2 : CHECK OUTPUT SIGNAL FROM ECM.

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

Connector & terminal
(B134) No. 10 (+) — Chassis ground (−):



CHECK : ***Is the voltage more than 10 V?***
YES : Go to step **13CJ4**.
NO : Go to step **13CJ3**.

13CJ3 : CHECK POOR CONTACT.

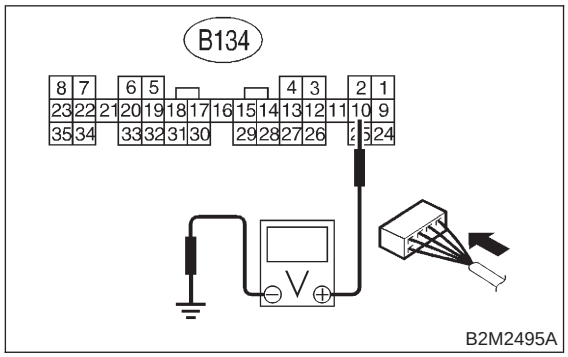
Check poor contact in ECM connector. <Ref. to FOREWORD [T3C1].>

CHECK : ***Is there poor contact in ECM connector?***
YES : Repair poor contact in ECM connector.
NO : Replace ECM. <Ref. to 2-7 [W15A1].>

13CJ4 : 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
(B134) No. 10 (+) — Chassis ground (−):

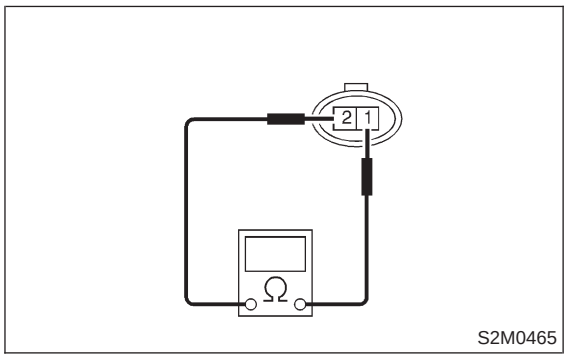


CHECK : ***Is the voltage more than 10 V?***
YES : Repair battery short circuit in harness between ECM and drain valve connector. After repair, replace ECM. <Ref. to 2-7 [W15A1].>
NO : Go to step **13CJ5**.

13CJ5 : CHECK DRAIN VALVE.

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

Terminals
No. 1 — No. 2:



CHECK : ***Is the resistance less than 1 Ω?***
YES : Replace drain valve <Ref. to 2-1 [W17A0].> and ECM. <Ref. to 2-7 [W15A1].>
NO : Go to step **13CJ6**.

13CJ6 : CHECK POOR CONTACT.

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

CHECK : ***Is there poor contact in ECM connector?***
YES : Repair poor contact in ECM connector.
NO : Replace ECM. <Ref. to 2-7 [W15A1].>

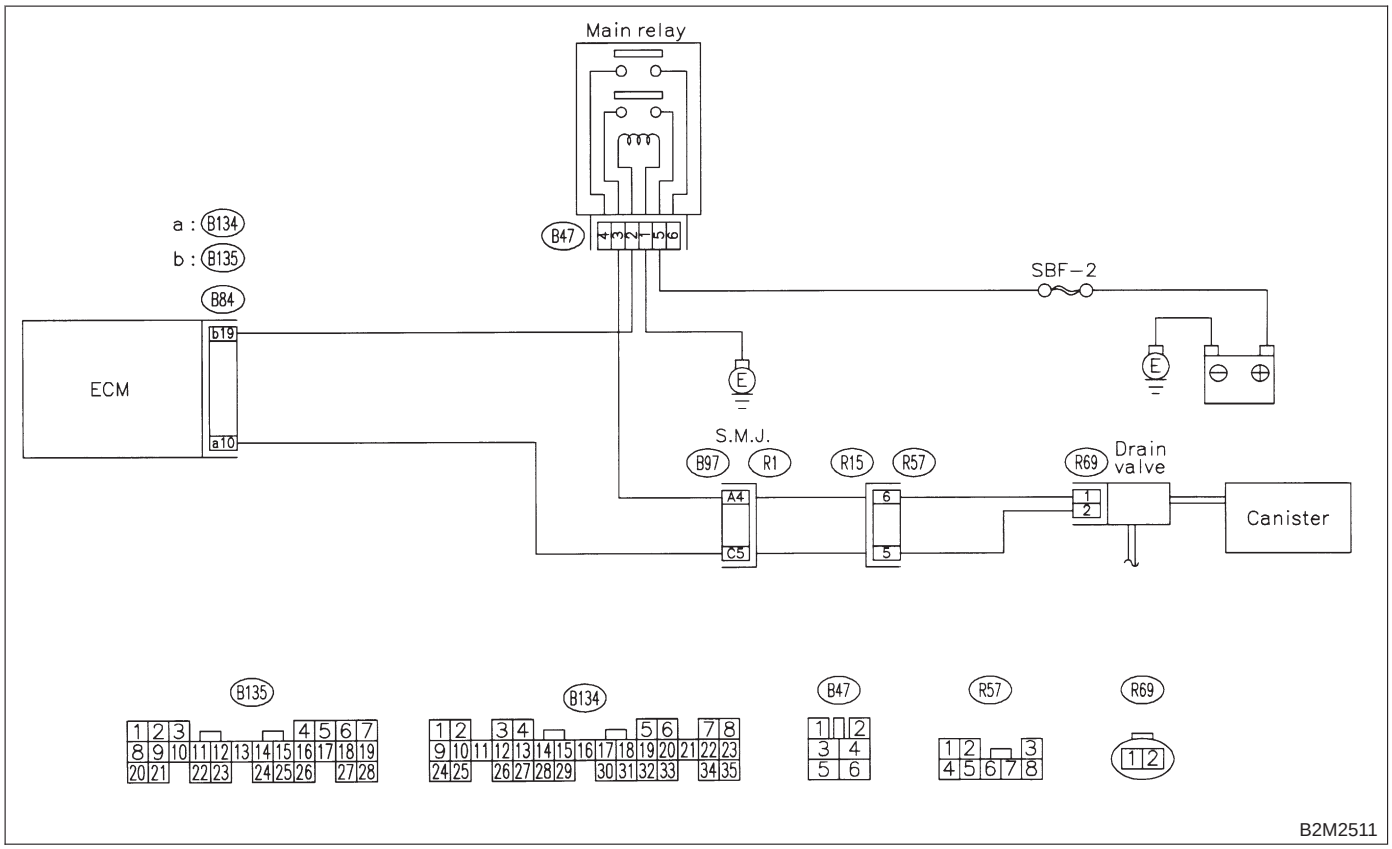
MEMO:

CK: 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 MODE <Ref. to 2-7 [T3D0].> and INSPECTION MODE <Ref. to 2-7 [T3E0].>.

- **WIRING DIAGRAM:**



13CK1 : CHECK ANY OTHER DTC ON DISPLAY.

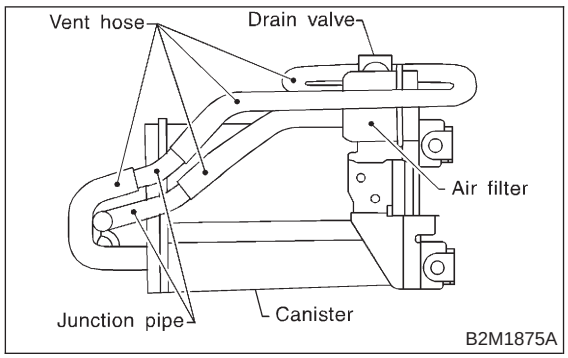
CHECK : ***Is there any other DTC on display?***

YES : Inspect the relevant DTC using “13. Diagnostics Chart with Trouble Code for 2200 cc California Spec. RHD Vehicles”. <Ref. to 2-7 [T13A0].>

NO : Go to step **13CK2**.

13CK2 : 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 **13CK3**.

13CK3 : 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.

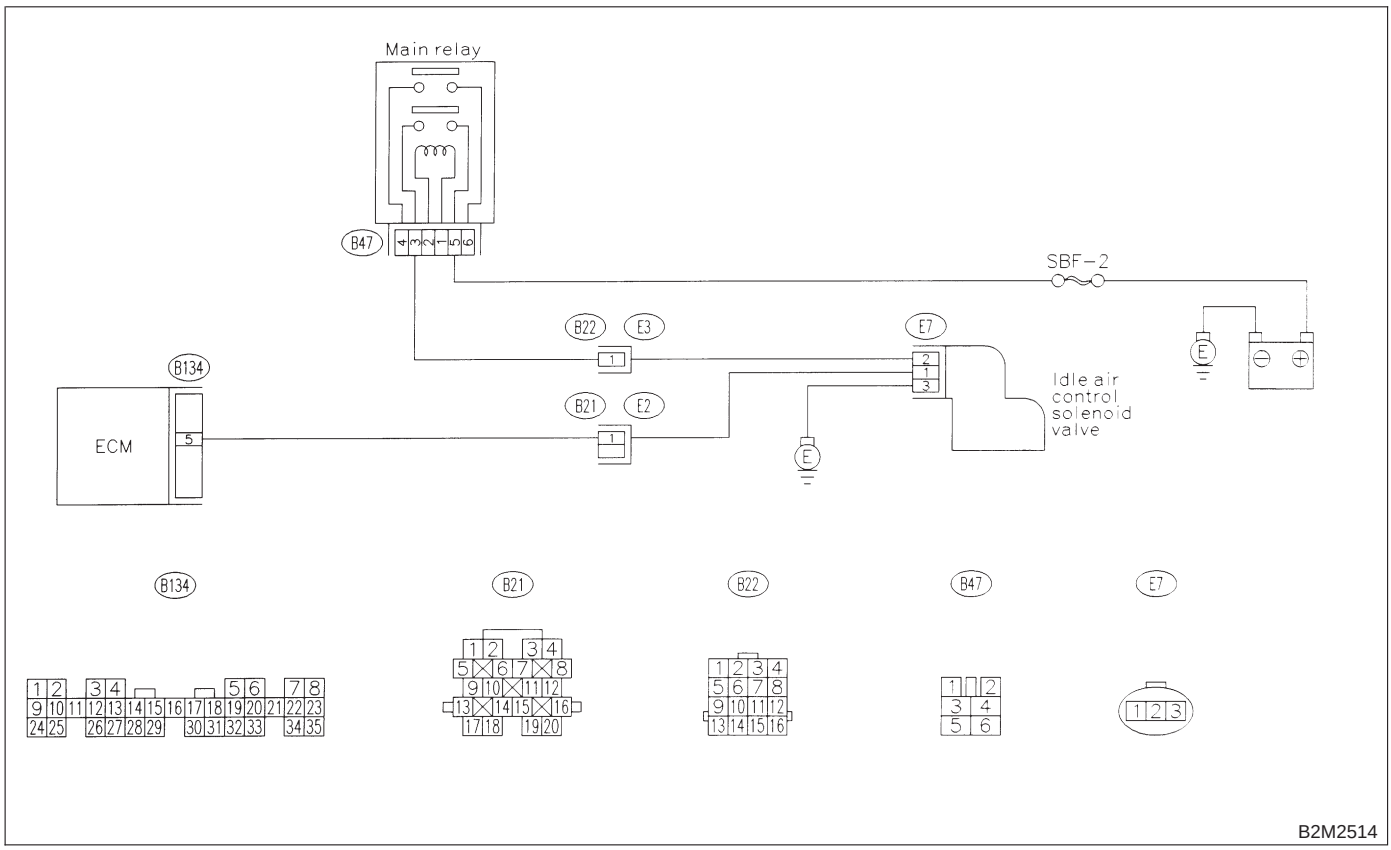
NOTE:
Inspection by DTM is required, because probable cause is deterioration of multiple parts.

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

CL: DTC P1505 — IDLE CONTROL SYSTEM CIRCUIT HIGH INPUT —

NOTE:
Check idle air control system.
<Ref. to 2-7 [T12CN0].>

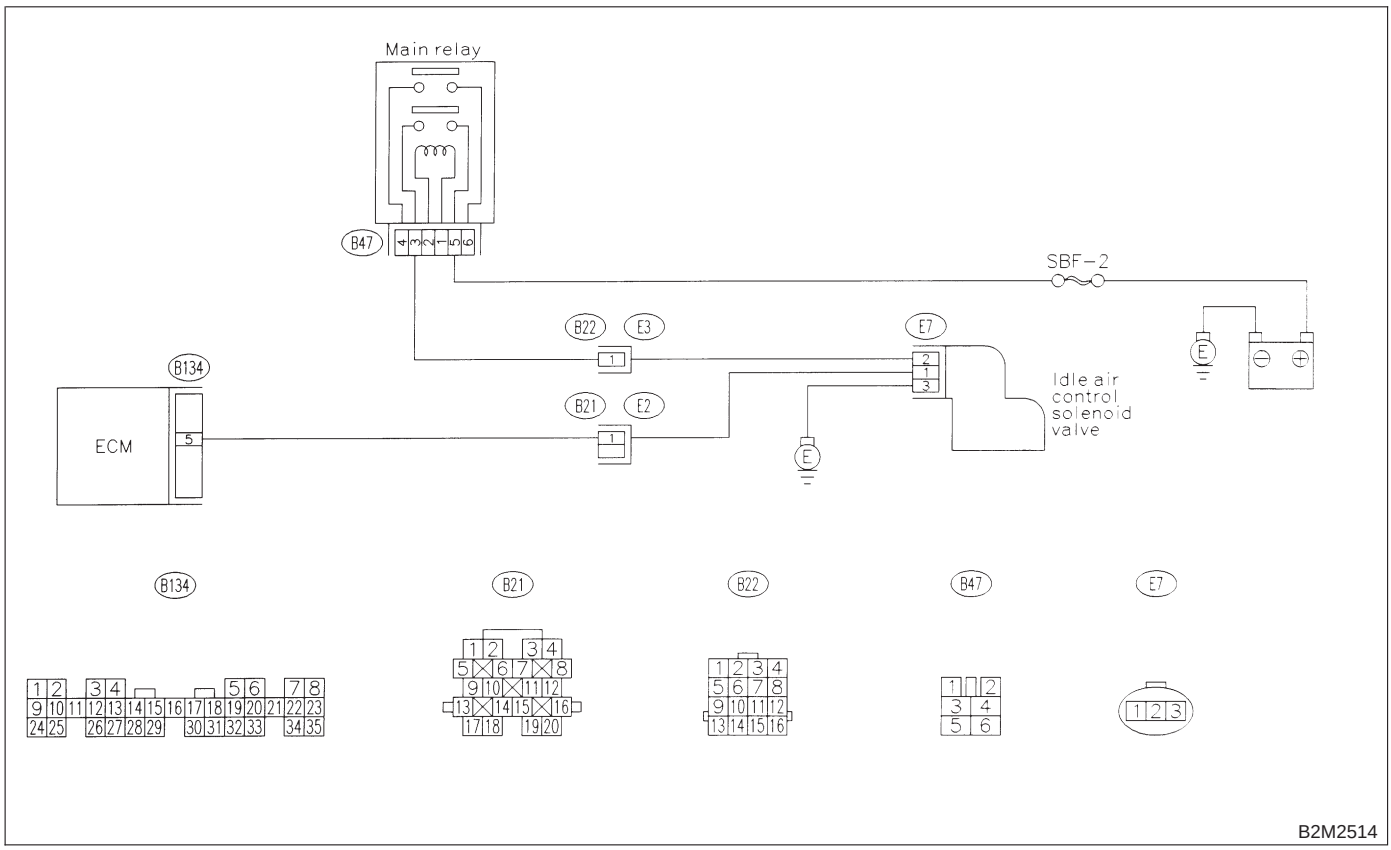
- **WIRING DIAGRAM:**



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

NOTE:
Check idle air control system.
<Ref. to 2-7 [T12CO0].>

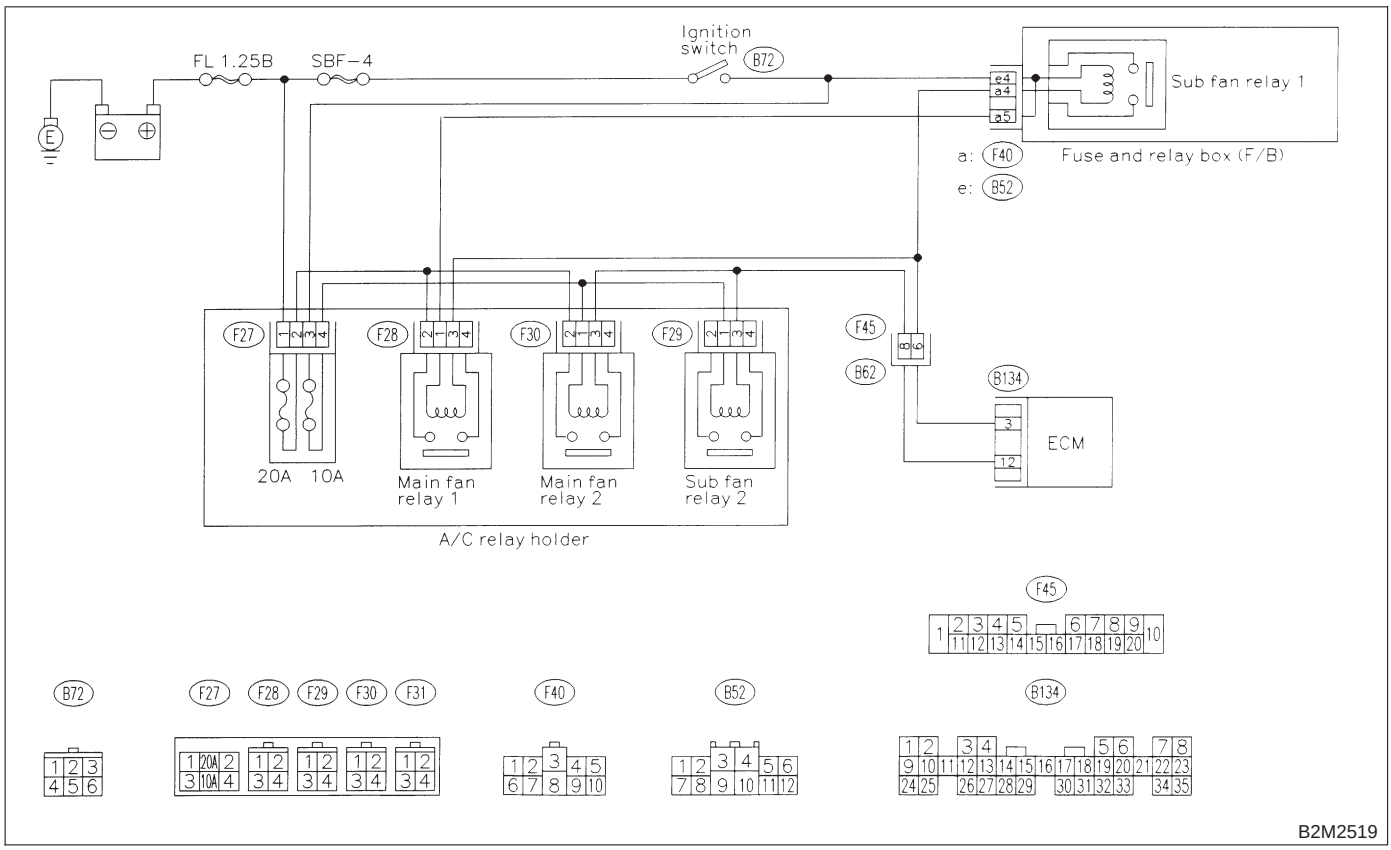
- **WIRING DIAGRAM:**



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

NOTE:
Check radiator fan relay 1 circuit.
<Ref. to 2-7 [T12CP0].>

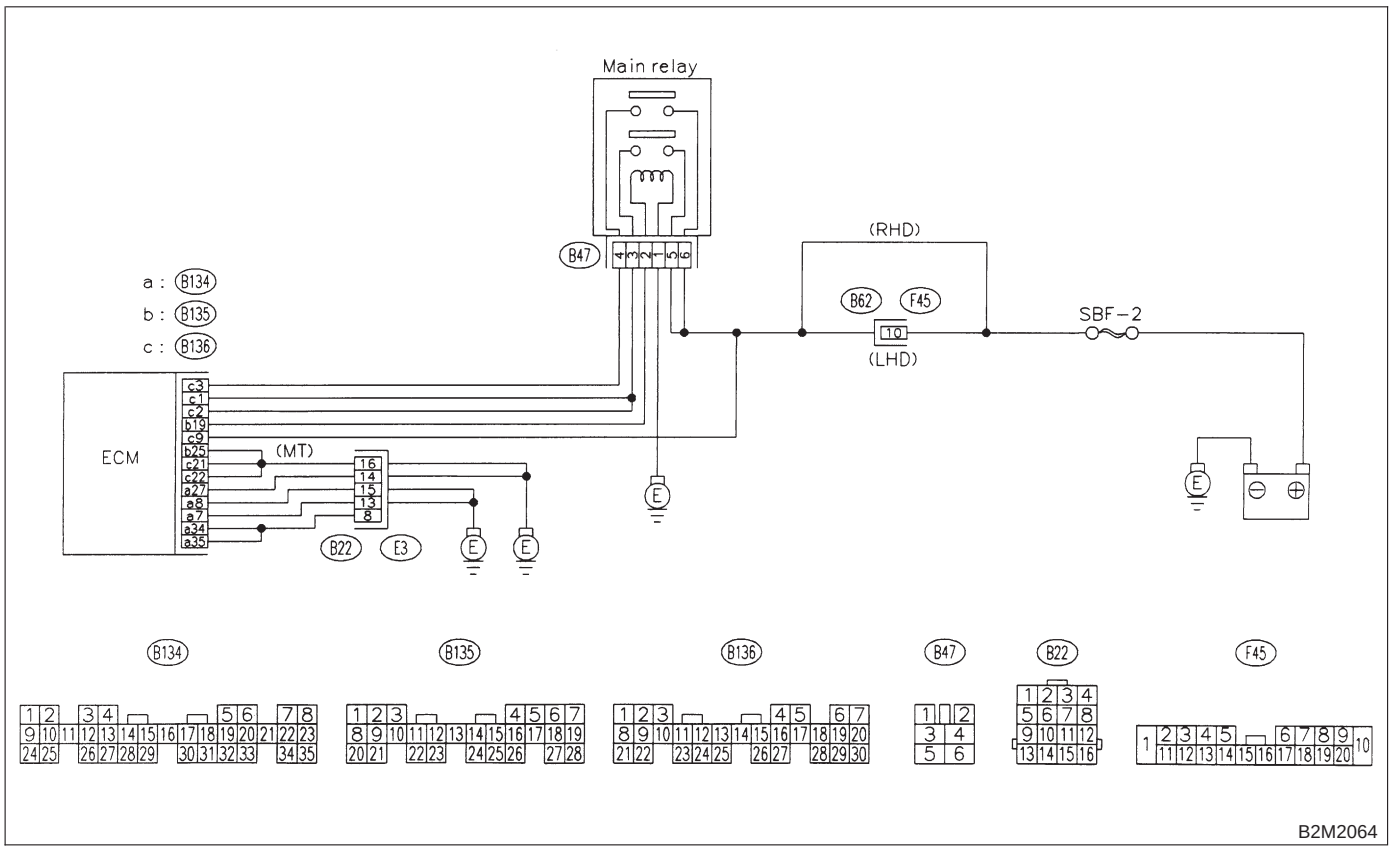
- **WIRING DIAGRAM:**



CO: DTC P1560 — BACK-UP VOLTAGE CIRCUIT MALFUNCTION —

NOTE:
Check back-up voltage circuit.
<Ref. to 2-7 [T12CQ0].>

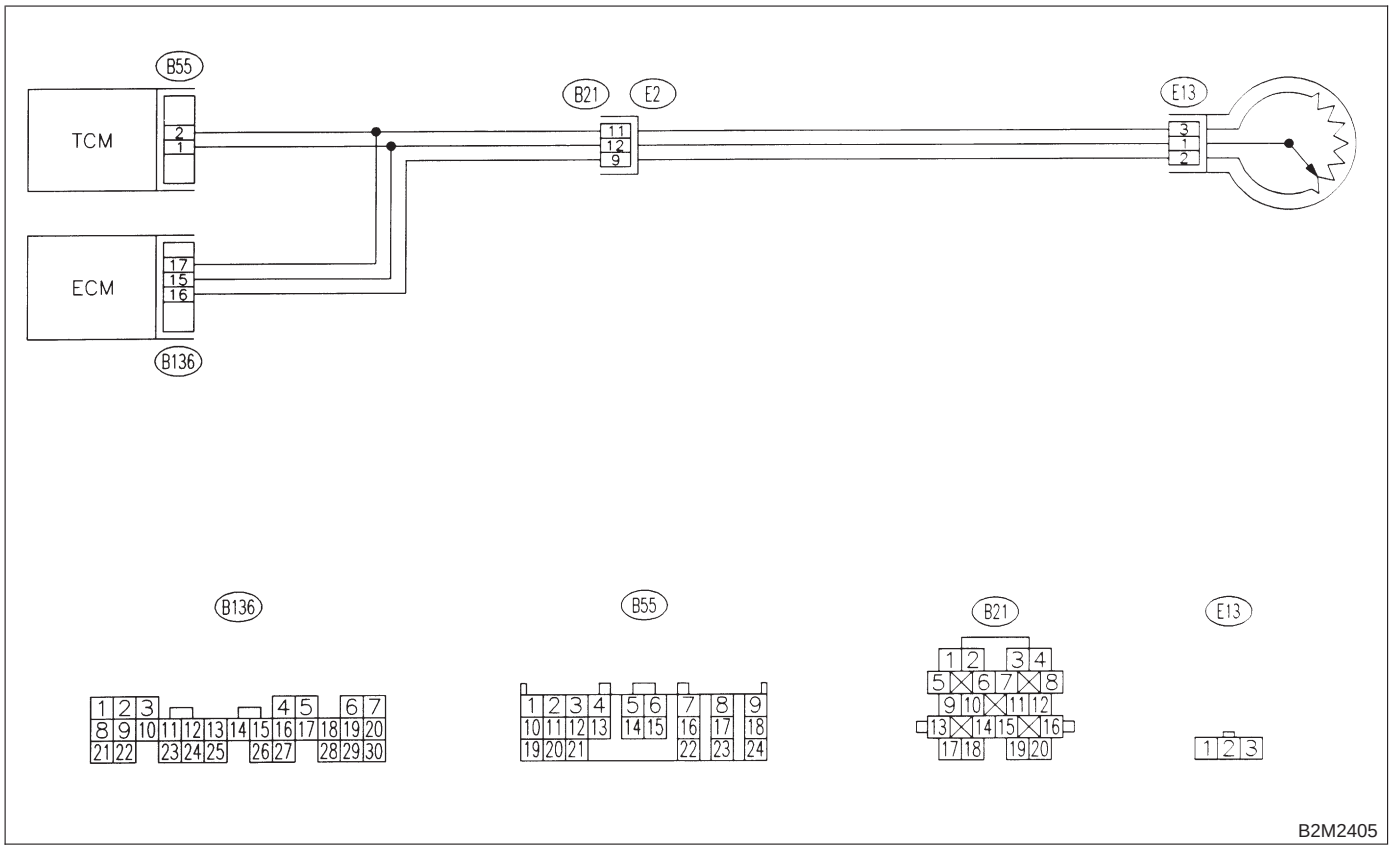
- **WIRING DIAGRAM:**



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

NOTE:
Check throttle position sensor circuit for automatic transmission.
<Ref. to 2-7 [T12CR0].>

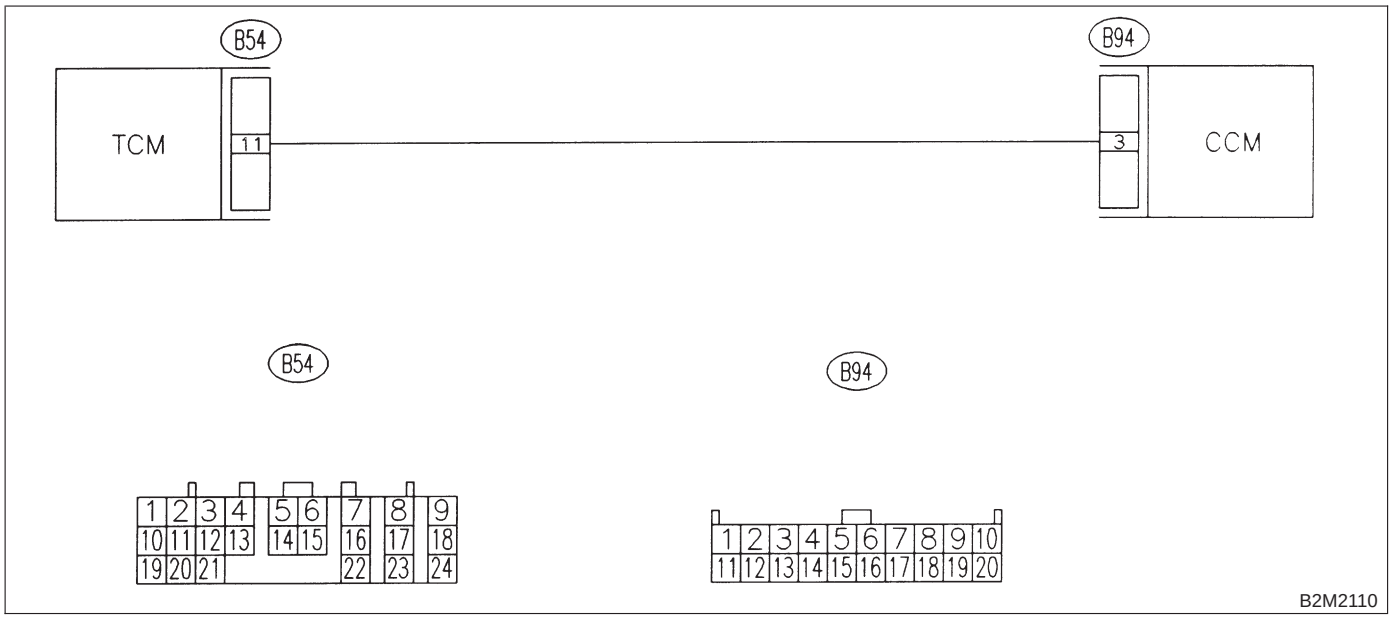
- **WIRING DIAGRAM:**



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

NOTE:
Check cruise control set signal circuit.
<Ref. to 2-7 [T12CS0].>

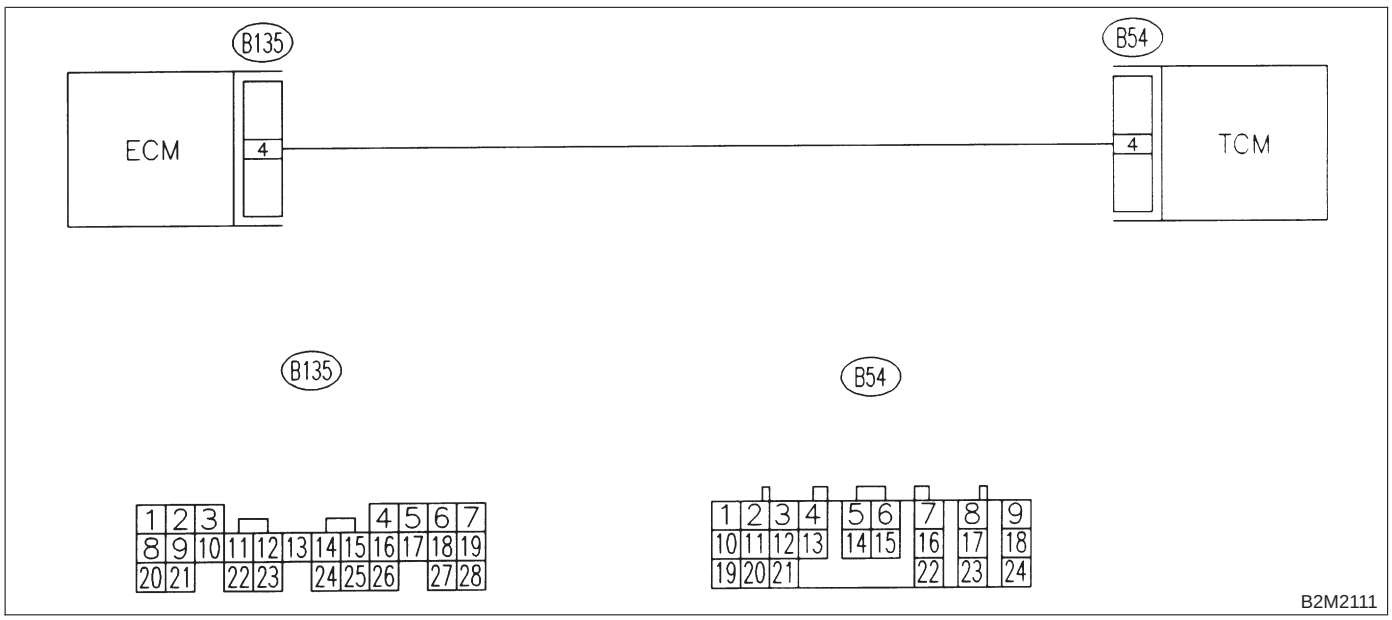
- **WIRING DIAGRAM:**



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

NOTE:
Check automatic transmission diagnosis input signal circuit.
<Ref. to 2-7 [T12CT0].>

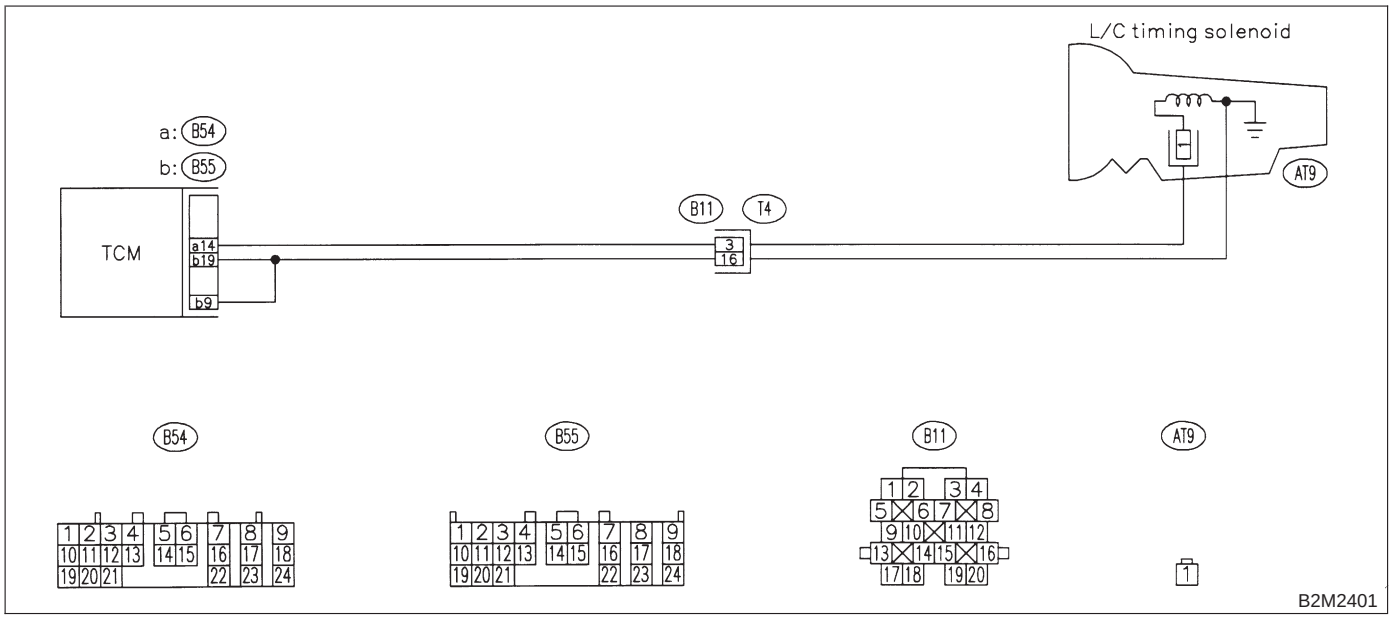
- **WIRING DIAGRAM:**



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

NOTE:
Check low clutch timing control solenoid valve circuit.
<Ref. to 2-7 [T12CU0].>

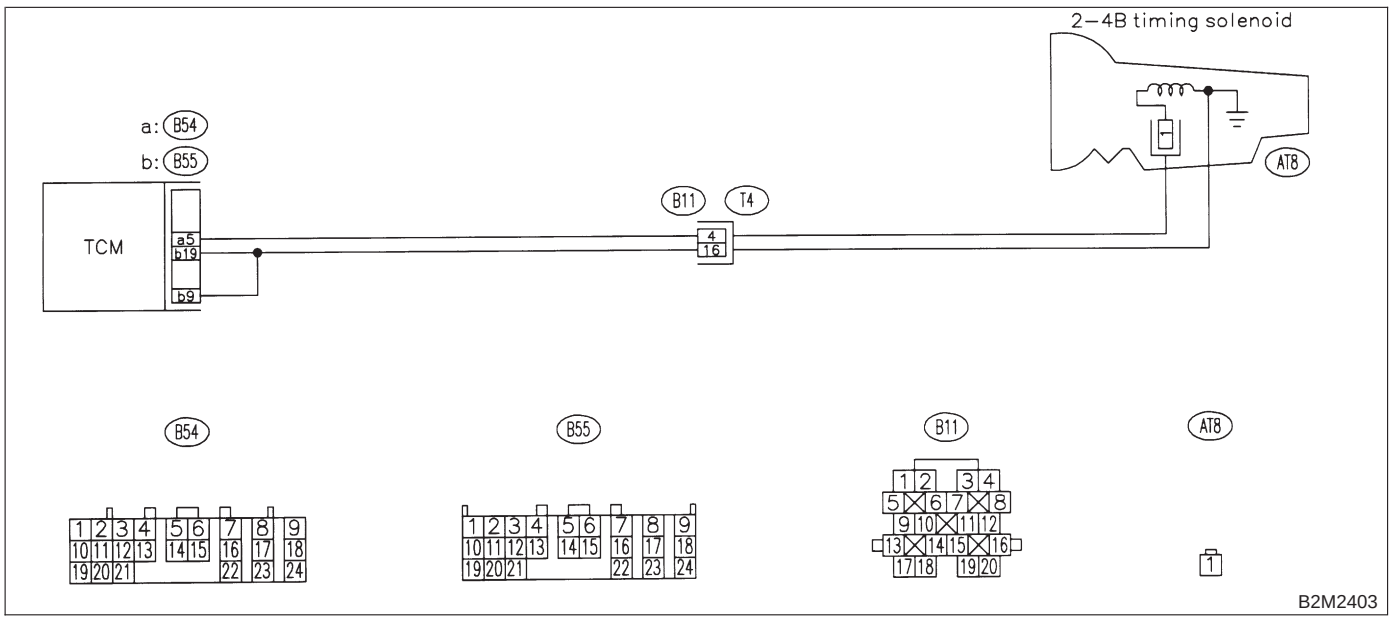
- **WIRING DIAGRAM:**



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

NOTE:
Check 2-4 brake timing control solenoid valve circuit.
<Ref. to 2-7 [T12CV0].>

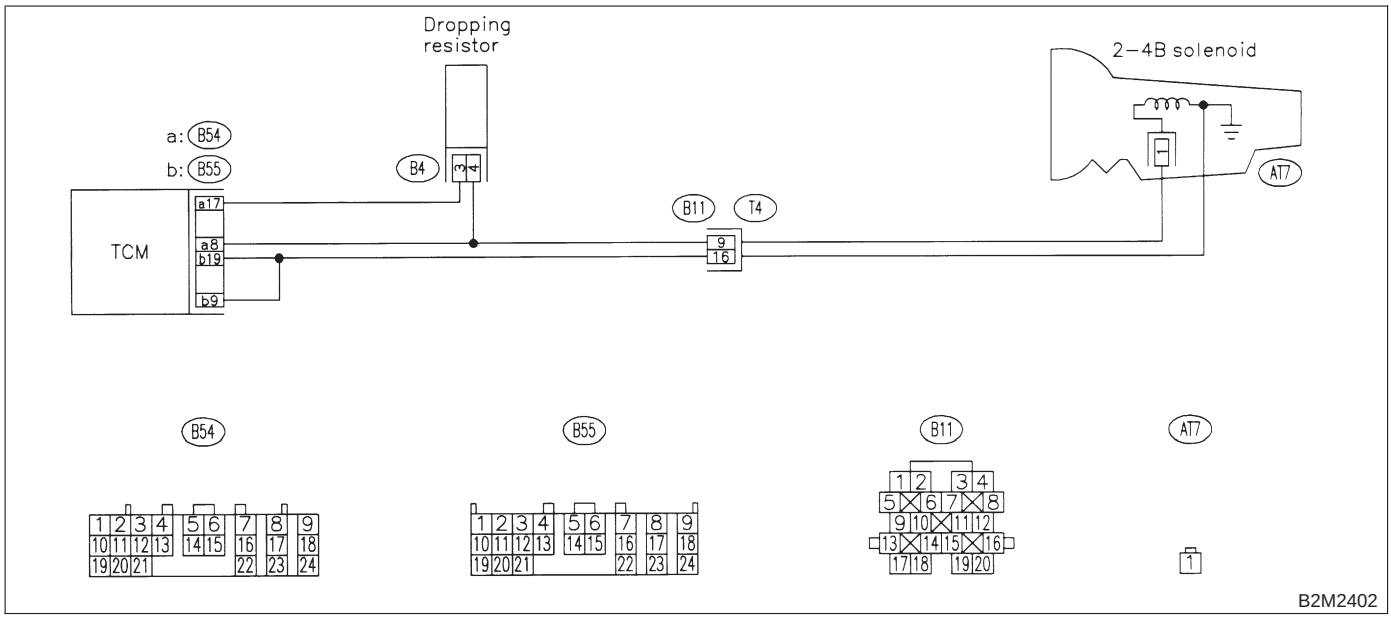
- **WIRING DIAGRAM:**



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

NOTE:
Check 2-4 brake pressure control solenoid valve circuit.
<Ref. to 2-7 [T12CW0].>

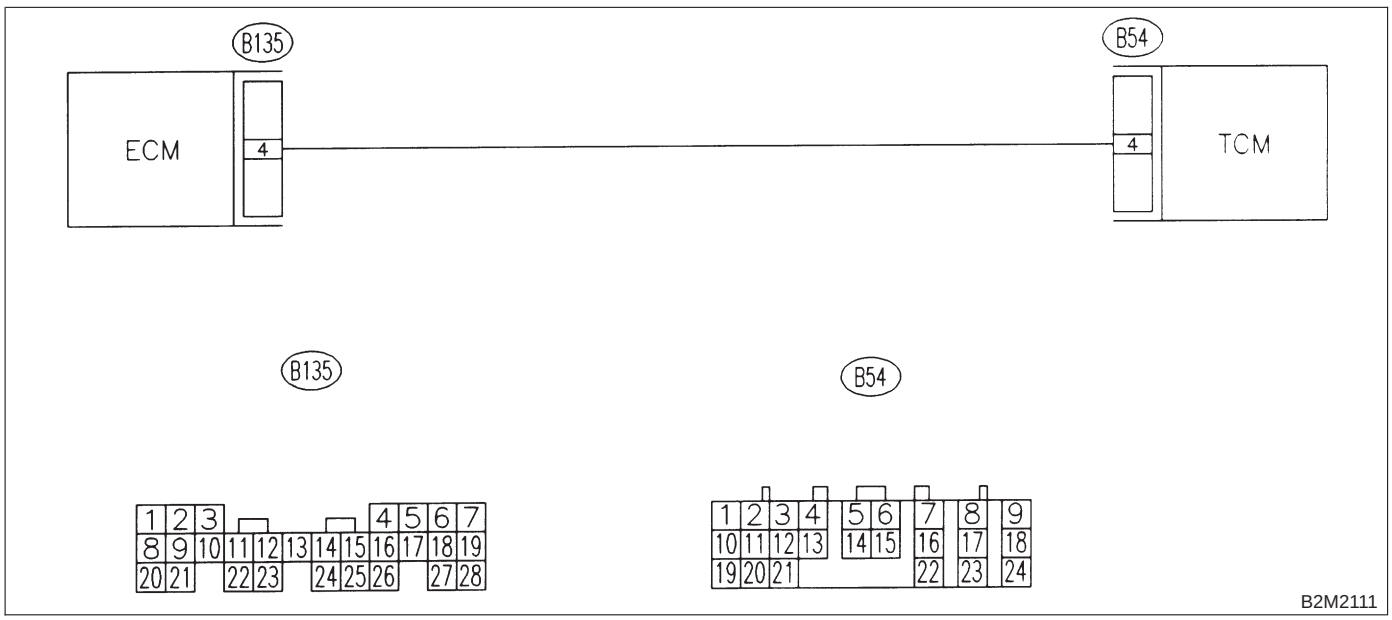
- **WIRING DIAGRAM:**



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

NOTE:
Check automatic transmission diagnosis input signal circuit.
<Ref. to 2-7 [T12CX0].>

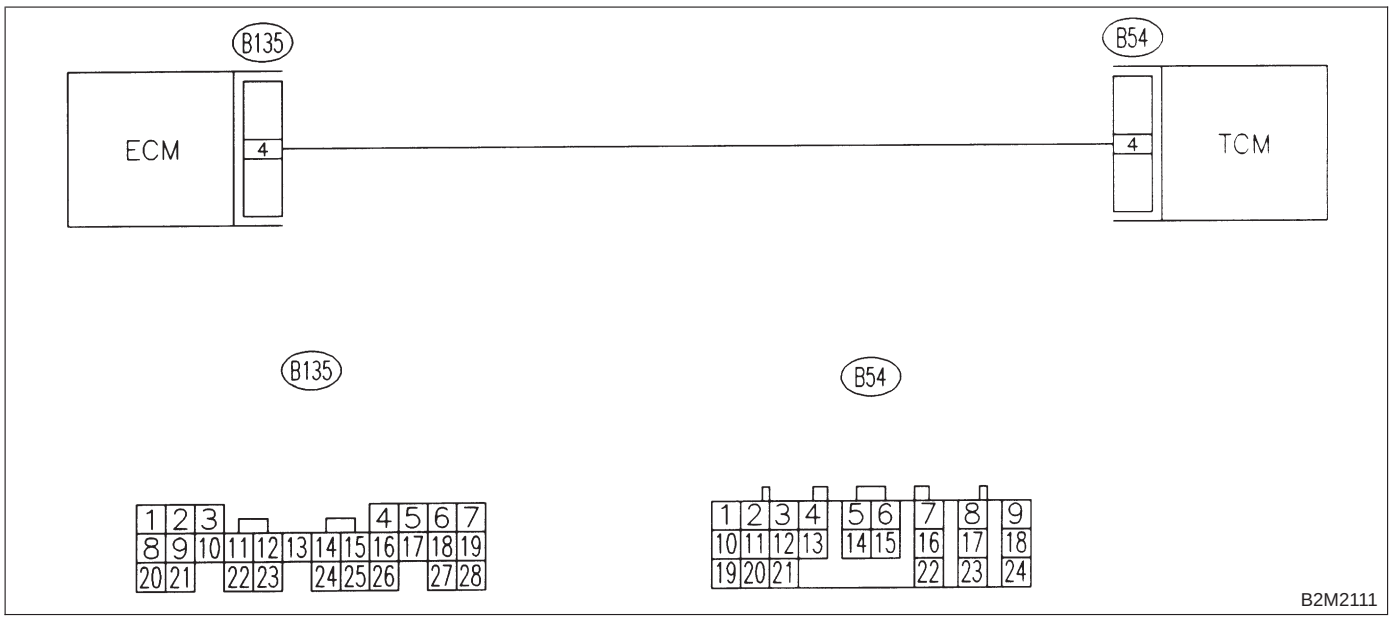
- **WIRING DIAGRAM:**



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

NOTE:
Check automatic transmission diagnosis input signal circuit.
<Ref. to 2-7 [T12CY0].>

- **WIRING DIAGRAM:**



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