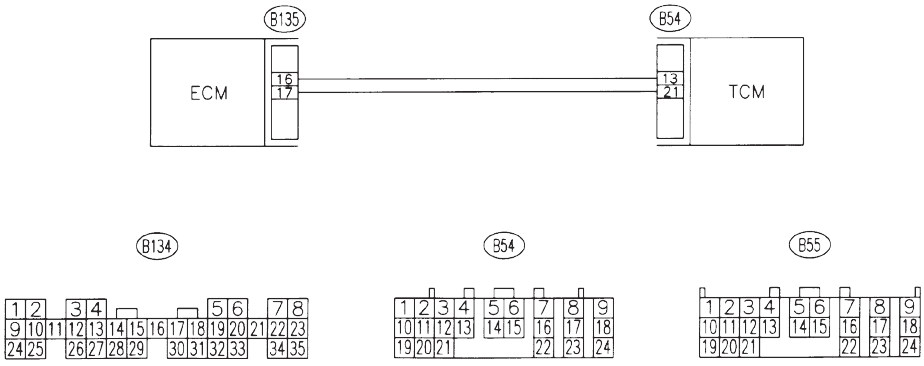
I: TROUBLE CODE 38 — TORQUE CONTROL SIGNAL —

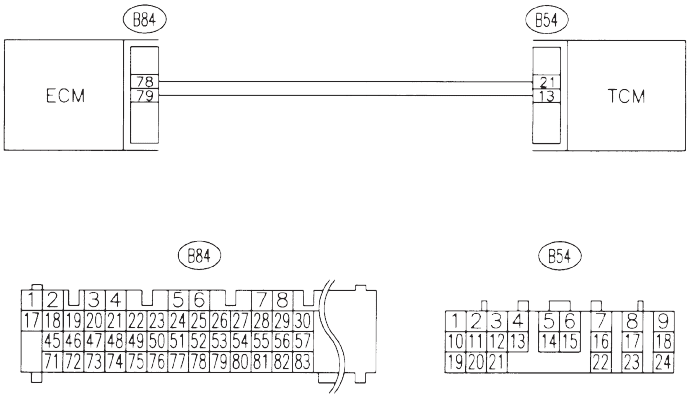
DIAGNOSIS:
The signal circuit is open or shorted.
TROUBLE SYMPTOM:
Excessive shift shock.
WIRING DIAGRAM:

2200 cc



B3M1330

2500 cc



B3M1331

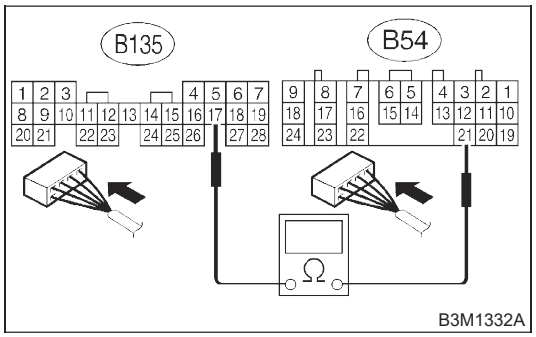
8I1 :	**CHECK DISPLACEMENT OF THE VEHICLE.**

CHECK : ***Is the vehicle 2200 cc engine?***
YES : Go to step **8I2**.
NO : Go to step **8I4**.

8I2 : CHECK HARNESS CONNECTOR BETWEEN TCM AND ECM.

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

Connector & terminal
(B54) No. 21 — (B135) No. 17:

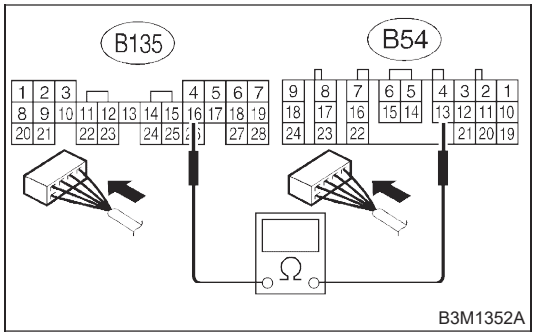


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **8I3**.
NO : Repair open circuit in harness between TCM and ECM connector.

8I3 : CHECK HARNESS CONNECTOR BETWEEN TCM AND ECM.

Measure resistance of harness between TCM and ECM connector.

Connector & terminal
(B54) No. 13 — (B135) No. 16:

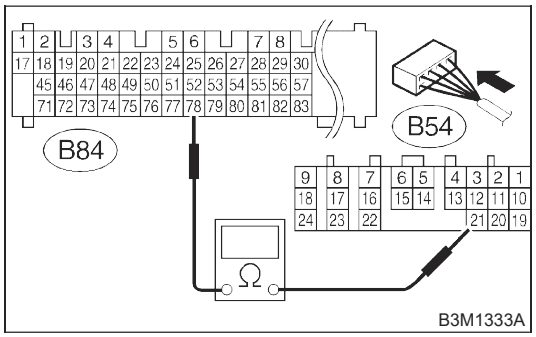


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **8I6**.
NO : Repair open circuit in harness between TCM and ECM connector.

8I4 : CHECK HARNESS CONNECTOR BETWEEN TCM AND ECM.

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

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

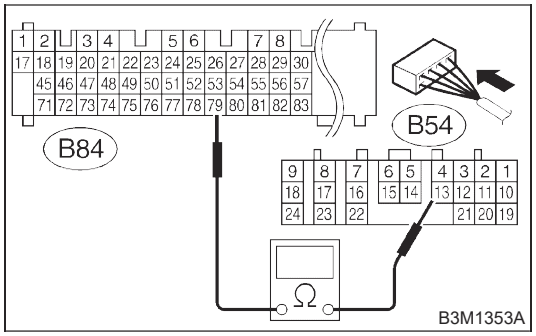


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **8I5**.
NO : Repair open circuit in harness between TCM and ECM connector.

8I5 : CHECK HARNESS CONNECTOR BETWEEN TCM AND ECM.

Measure resistance of harness between TCM and ECM connector.

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

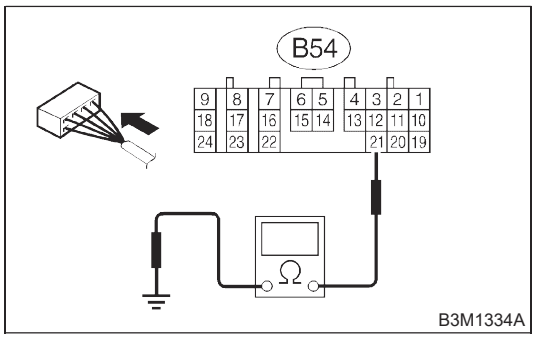


CHECK : ***Is the resistance less than 1 Ω?***
YES : Go to step **8I6**.
NO : Repair open circuit in harness between TCM and ECM connector.

8I6 : CHECK HARNESS CONNECTOR BETWEEN TCM AND ECM.

Measure resistance of harness between TCM connector and chassis ground.

Connector & terminal
(B54) No. 21 — Chassis ground:

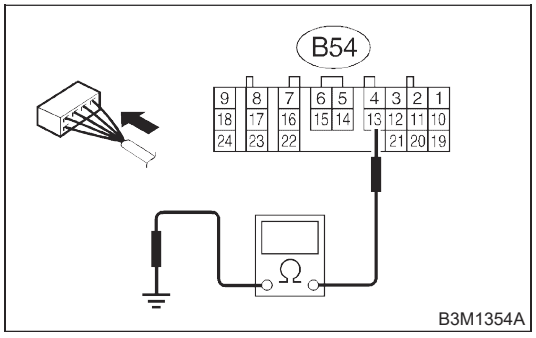


CHECK : ***Is the resistance more than 1 MΩ?***
YES : Go to step **8I7**.
NO : Repair short circuit in harness between TCM and ECM connector.

8I7 : CHECK HARNESS CONNECTOR BETWEEN TCM AND ECM.

Measure resistance of harness between TCM connector and chassis ground.

Connector & terminal
(B54) No. 13 — Chassis ground:

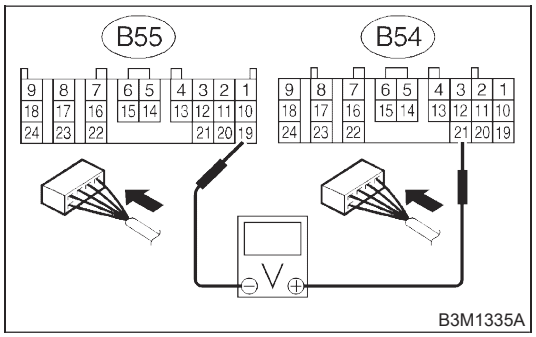


CHECK : ***Is the resistance more than 1 MΩ?***
YES : Go to step **8I8**.
NO : Repair short circuit in harness between TCM and ECM connector.

8I8 : CHECK OUTPUT SIGNAL EMITTED FROM TCM.

1) Connect connectors to TCM and ECM.
2) Turn ignition switch to ON (engine OFF).
3) Measure voltage between TCM connector terminals.

Connector & terminal
(B54) No. 21 (+) — (B55) No. 19:

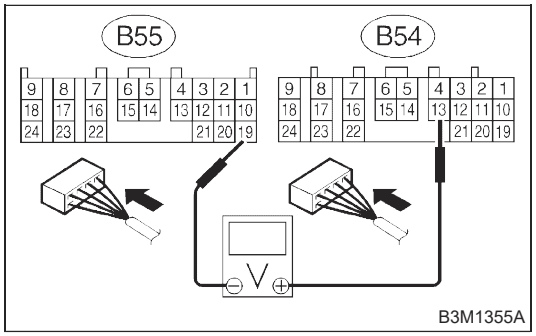


CHECK : ***Is the voltage more than 9 V?***
YES : Even if “AT OIL TEMP” lights up, the circuit has returned to a normal condition at this time. A temporary poor contact of the connector or harness may be the cause. Repair harness or connector in the TCM and ECM.
NO : Go to step **8I9**.

8I9 : CHECK OUTPUT SIGNAL EMITTED FROM TCM.

Measure voltage between TCM connector terminals.

Connector & terminal
(B54) No. 13 (+) — (B55) No. 19 (–):



CHECK : ***Is the voltage more than 9 V?***
YES : Even if “AT OIL TEMP” lights up, the circuit has returned to a normal condition at this time. A temporary poor contact of the connector or harness may be the cause. Repair harness or connector in the TCM and ECM.
NO : Go to step **8I10**.

8I10 : CHECK POOR CONTACT.

CHECK : ***Is there poor contact in torque control signal circuit?***
YES : Repair poor contact.
NO : Go to step **8I11**.

8I11 : CONFIRM TROUBLE CODE 38.

CHECK : ***Replace ECM with a new one. Does the trouble code appear again, after the memory has been cleared?***
YES : Replace TCM. <Ref. to 3-2 [W22A0].>
NO : Replace ECM. <Ref. to 2-7 [W15A0].>