15.Diagnostic Procedure for No-Diagnostic Trouble Code (DTC)

A: CHECK GEAR POSITION.

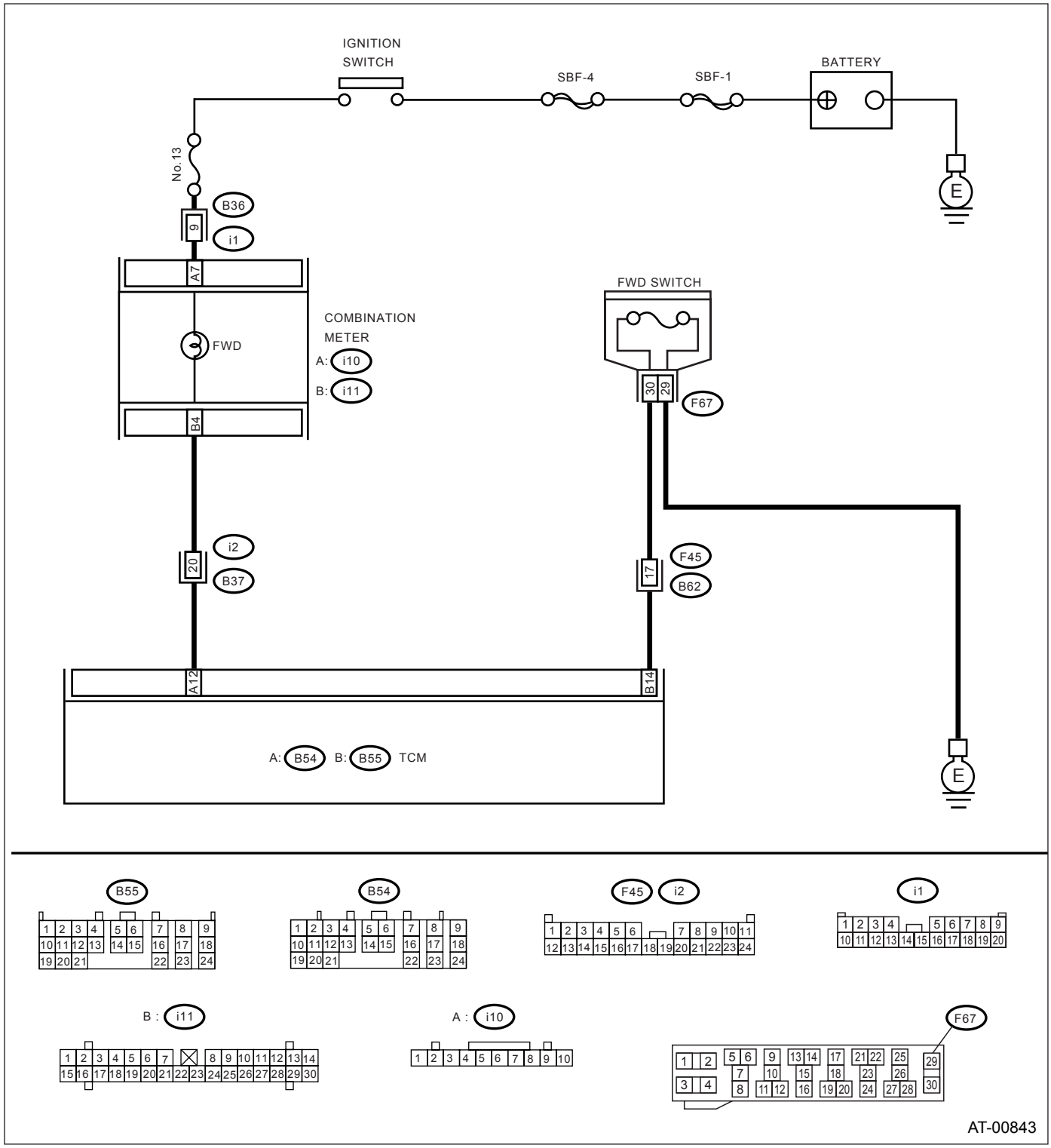
Step		Check	Yes	No
1	**CHECK GEAR POSITION.** 1)Lift-up the vehicle and place safety stand. **CAUTION:** **Raise all wheels off ground.** 2)Start the engine. 3)Move the select lever to “D”, and drive the vehicle. 4)Read the data of gear position using Subaru Select Monitor. •Gear position is indicated. NOTE: The speed difference between front and rear wheels may light the ABS warning light, but this indicates no malfunction. When the AT control diagnosis is finished, perform the ABS memory clearance procedure of on-board diagnostics system. <Ref. to ABS-24, Clear Memory Mode.> Does the transmission gear correspond to the gear which is shown on display?	The gear corresponds with the display.	Go to step **2.**	Check shift solenoid 1 and shift solenoid 2 signal circuit. <Ref. to AT-76, DTC 71 SHIFT SOLENOID 1, Diagnostic Procedure with Diagnostic Trouble Code (DTC).> and <Ref. to AT-80, DTC 72 SHIFT SOLENOID 2, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
2	**CHECK VEHICLE.** Is the target non-turbo model?	Non-turbo model.	Go to step CHECK FWD SWITCH.<Ref. to AT-122, CHECK FWD SWITCH., Diagnostic Procedure for No-Diagnostic Trouble Code (DTC).>	Go to step CHECK BRAKE SWITCH. <Ref. to AT-125, CHECK BRAKE SWITCH., Diagnostic Procedure for No-Diagnostic Trouble Code (DTC).>

B: CHECK FWD SWITCH.

DIAGNOSIS:

- LED does not come on even if FWD switch is ON.
- FWD switch circuit is open or short.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK FWD SWITCH.** When the fuse is inserted to FWD switch, does the LED light up?	The LED lights up.	Go to step CHECK BRAKE SWITCH.<Ref. to AT-125, CHECK BRAKE SWITCH., Diagnostic Procedure for No-Diagnostic Trouble Code (DTC).>	Go to step **2.**
2	**CHECK FWD INDICATOR LIGHT.** 1)Turn the ignition switch to OFF. 2)Remove the combination meter. 3)Remove the FWD indicator light bulb from combination meter. Is the FWD indicator light bulb OK?	The light bulb is OK.	Go to step **3.**	Replace the FWD indicator light bulb. <Ref. to IDI-12, Combination Meter Assembly.>
3	**CHECK HARNESS CONNECTOR BETWEEN TCM AND FWD SWITCH.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from TCM and FWD switch. 3)Measure the resistance of harness between TCM and FWD switch connector. ***Connector & terminal*** ***(B55) No. 14 — (F67) No. 30:*** Is the measured value less than the specified value?	1 Ω	Go to step **4.**	Repair open circuit in harness between TCM and FWD switch connector.
4	**CHECK HARNESS CONNECTOR BETWEEN FWD SWITCH AND CHASSIS GROUND.** Measure the resistance of harness between FWD switch and chassis ground. ***Connector & terminal*** ***(F67) No. 29 — Chassis ground:*** Is the measured value less than the specified value?	1 Ω	Go to step **5.**	Repair open circuit in harness between FWD switch connector and chassis ground.
5	**CHECK HARNESS CONNECTOR BETWEEN TCM AND FWD SWITCH.** Measure the resistance of harness connector between TCM and body to make sure that circuit does not short. ***Connector & terminal*** ***(B55) No. 14 — Chassis ground:*** Is the measured value more than the specified value?	1 MΩ	Go to step **6.**	Repair short circuit in harness between TCM and FWD switch connector.
6	**CHECK INPUT SIGNAL FOR TCM.** 1)Turn the ignition switch to OFF. 2)Connect the connector to TCM and FWD switch. 3)Turn the ignition switch to ON. 4)Measure the signal voltage for TCM while installing the fuse to FWD switch connector. ***Connector & terminal*** ***(B55) No. 14 (+) — Chassis ground (−):*** Is the measured value less than the specified value?	1 V	Go to step **7.**	Go to step **12.**

Step		Check	Yes	No
7	**CHECK INPUT SIGNAL FOR TCM.** Measure the signal voltage for TCM while removing the fuse from FWD switch connector. ***Connector & terminal*** ***(B55) No. 14 (+) — Chassis ground (−):*** Is the measured value more than the specified value?	9 V	Go to step **8.**	Replace the TCM. <Ref. to AT-71, Transmission Control Module (TCM).>
8	**CHECK HARNESS CONNECTOR BETWEEN TCM AND COMBINATION METER.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from TCM and combination meter. 3)Measure the resistance of harness between TCM and diagnosis connector. ***Connector & terminal*** ***(B54) No. 12 — (i11) No. 4:*** Is the measured value less than the specified value?	1 Ω	Go to step **9.**	Repair open circuit in harness between TCM and combination meter and poor contact in coupling connector.
9	**CHECK HARNESS CONNECTOR BETWEEN TCM AND COMBINATION METER.** Measure the resistance of harness connector between TCM and chassis ground to make sure that circuit does not short. ***Connector & terminal*** ***(B54) No. 12 — Chassis ground:*** Is the measured value more than the specified value?	1 MΩ	Go to step **10.**	Repair short circuit in harness between TCM and combination meter connector.
10	**CHECK OUTPUT SIGNAL EMITTED FROM TCM.** 1)Turn the ignition switch to OFF. 2)Connect the connector to TCM and combination meter. 3)Turn the ignition switch to ON. 4)Measure the signal voltage for TCM while installing and removing the fuse to FWD switch connector. ***Connector & terminal*** ***(B54) No. 12 (+) — Chassis ground (−) :*** Is the measured value less than the specified value?	1 V	Go to step **11.**	Go to step **12.**
11	**CHECK OUTPUT SIGNAL EMITTED FROM TCM.** Measure the signal voltage for TCM while removing the fuse from FWD switch connector. ***Connector & terminal*** ***(B54) No. 12 (+) — Chassis ground (−) :*** Is the measured value more than the specified value?	9 V	Go to step **12.**	Replace the TCM. <Ref. to AT-71, Transmission Control Module (TCM).>
12	**CHECK POOR CONTACT.** Is there poor contact in FWD switch circuit?	There is a poor contact.	Repair poor contact.	Replace the TCM. <Ref. to AT-71, Transmission Control Module (TCM).>

C: CHECK BRAKE SWITCH.

	Step	Check	Yes	No
1	**CHECK BRAKE SWITCH.** When the brake pedal is depressed, does the LED light up?	The LED lights up.	Go to step CHECK ABS SWITCH. <Ref. to AT-125, CHECK ABS SWITCH., Diagnostic Procedure for No-Diagnostic Trouble Code (DTC).>	Check the brake switch circuit.

D: CHECK ABS SWITCH.

	Step	Check	Yes	No
1	**CHECK ABS SWITCH.** Does the LED of ABS switch light up?	The LED lights up.	Check the ABS switch circuit. <Ref. to ABS-128, DTC 44 — ABS-AT CONTROL (NON CONTROLLED) —, Diagnostic Chart with Subaru Select Monitor.> and <Ref. to ABS-130, DTC 44 — ABS-AT CONTROL (CONTROLLED) —, Diagnostic Chart with Subaru Select Monitor.>	Go to step CHECK CRUISE CONTROL SWITCH. <Ref. to AT-125, CHECK CRUISE CONTROL SWITCH., Diagnostic Procedure for No-Diagnostic Trouble Code (DTC).>

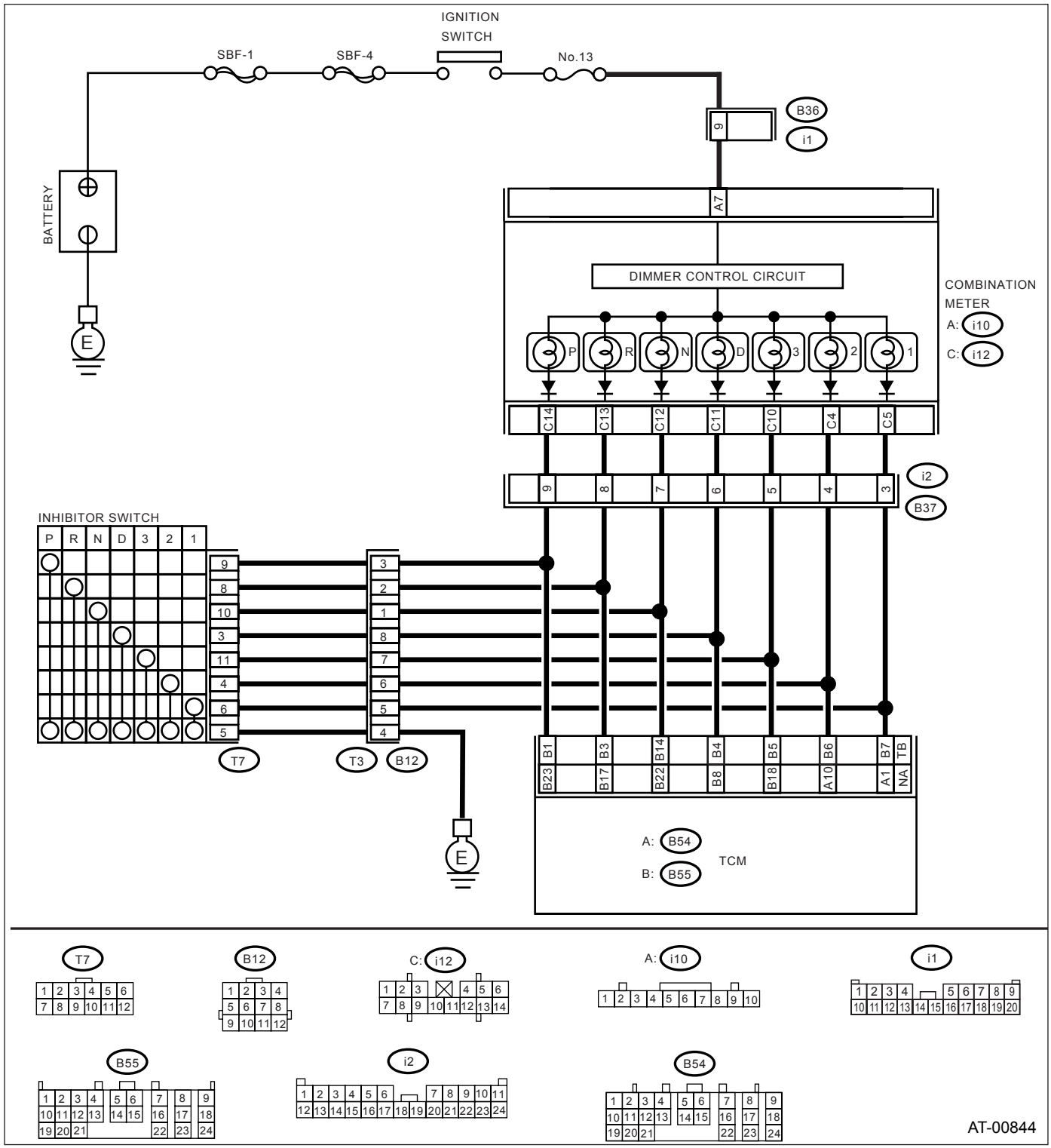
E: CHECK CRUISE CONTROL SWITCH.

	Step	Check	Yes	No
1	**CHECK CRUISE CONTROL SWITCH.** When cruise control is set, does the LED light up?	The LED lights up.	Go to step CHECK INHIBITOR SWITCH. <Ref. to AT-127, CHECK INHIBITOR SWITCH., Diagnostic Procedure for No-Diagnostic Trouble Code (DTC).>	Check the cruise control. <Ref. to CC-30, Diagnostics Chart with Diagnostic Trouble Code.>

F: CHECK INHIBITOR SWITCH.

DIAGNOSIS:
Input signal circuit of inhibitor switch is open or shorted.
TROUBLE SYMPTOM:
- Shift characteristics are erroneous.
- Engine brake is not effected when selector lever is in “3” range.
- Engine brake is not effected when selector lever is in “2” range.
- Engine brake is not effected when selector lever is in “1” range.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK "P" RANGE SWITCH.** When "P" range is selected, does the LED light up?	The LED lights up.	Go to step **2.**	Go to step **22.**
2	**CHECK INDICATOR LIGHT.** Does the combination meter "P" range indicator illuminate?	The indicator illuminates.	Go to step **3.**	Go to step **26.**
3	**CHECK "P" RANGE SWITCH.** When the "R" range is selected, does the "P" range LED light up?	The LED lights up.	Go to step **28.**	Go to step **4.**
4	**CHECK "R" RANGE SWITCH.** When the "R" range is selected, does the LED light up?	The LED lights up.	Go to step **5.**	Go to step **29.**
5	**CHECK INDICATOR LIGHT.** Does the combination meter "R" range indicator illuminate?	The indicator illuminates.	Go to step **6.**	Go to step **32.**
6	**CHECK "R" RANGE SWITCH.** When the "N" range is selected, does the "R" range LED light up?	The LED lights up.	Go to step **34.**	Go to step **7.**
7	**CHECK "N" RANGE SWITCH.** When the "N" range is selected, does the LED light up?	The LED lights up.	Go to step **8.**	Go to step **35.**
8	**CHECK INDICATOR LIGHT.** Does the combination meter "N" range indicator illuminate?	The indicator illuminates.	Go to step **9.**	Go to step **38.**
9	**CHECK "N" RANGE SWITCH.** When the "D" range is selected, does the "N" range LED light up?	The LED lights up.	Go to step **40.**	Go to step **10.**
10	**CHECK "D" RANGE SWITCH.** When the "D" range is selected, does the LED light up?	The LED lights up.	Go to step **11.**	Go to step **41.**
11	**CHECK INDICATOR LIGHT.** Does the combination meter "D" range indicator illuminate?	The indicator illuminates.	Go to step **12.**	Go to step **44.**
12	**CHECK "D" RANGE SWITCH.** When the "3" range is selected, does the "D" range LED light up?	The LED lights up.	Go to step **46.**	Go to step **13.**
13	**CHECK "3" RANGE SWITCH.** When the "3" range is selected, does the LED light up?	The LED lights up.	Go to step **14.**	Go to step **47.**
14	**CHECK INDICATOR LIGHT.** Does the combination meter "3" range indicator illuminate?	The indicator illuminates.	Go to step **15.**	Go to step **50.**
15	**CHECK "3" RANGE SWITCH.** When the "2" range is selected, does the "3" range LED light up?	The LED lights up.	Go to step **52.**	Go to step **16.**
16	**CHECK "2" RANGE SWITCH.** When the "2" range is selected, does the LED light up?	The LED lights up.	Go to step **17.**	Go to step **53.**
17	**CHECK INDICATOR LIGHT.** Does the combination meter "2" range indicator illuminate?	The indicator illuminates.	Go to step **18.**	Go to step **56.**
18	**CHECK "2" RANGE SWITCH.** When the "1" range is selected, does the "2" range LED light up?	The LED lights up.	Go to step **58.**	Go to step **19.**
19	**CHECK "1" RANGE SWITCH.** When the "1" range is selected, does the LED light up?	The LED lights up.	Go to step **20.**	Go to step **59.**

	Step	Check	Yes	No
20	**CHECK INDICATOR LIGHT.** Does the combination meter “1” range indicator illuminate?	The indicator illuminates.	Go to step **21.**	Go to step **62.**
21	**CHECK “1” RANGE SWITCH.** When the “2” range is selected, does the “1” range LED light UP?	The LED lights up.	Go to step **64.**	Go to step Symptom Related Diagnostic. <Ref. to AT-141, Symptom Related Diagnostic.>
22	**CHECK HARNESS CONNECTOR BETWEEN INHIBITOR SWITCH AND CHASSIS GROUND.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from inhibitor switch. 3)Measure the resistance of harness between inhibitor switch and chassis ground. ***Connector & terminal*** ***(T7) No. 5 — Chassis ground:*** Is the measured value less than the specified value?	1 Ω	Go to step **23.**	Repair open circuit in harness between inhibitor switch connector and chassis ground, and poor contact in coupling connector.
23	**CHECK HARNESS CONNECTOR BETWEEN TCM AND INHIBITOR SWITCH.** 1)Turn the ignition switch to OFF. 2)Disconnect the connectors from TCM and inhibitor switch. 3)Measure the resistance of harness between TCM and inhibitor switch connector. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 23 — (T7) No. 9*** ***Turbo model*** ***(B55) No. 1 — (T7) No. 9*** Is the measured value less than the specified value?	1 Ω	Go to step **24.**	Repair open circuit in harness between TCM and inhibitor switch connector, and poor contact in coupling connector.
24	**CHECK INPUT SIGNAL FOR TCM.** 1)Turn the ignition switch to OFF. 2)Connect the connector to TCM and inhibitor switch. 3)Turn the ignition switch to ON. 4)Move the selector lever to "P" range. 5)Measure the voltage between TCM and chassis ground. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 23 (+) — Chassis ground (–):*** ***Turbo model*** ***(B55) No. 1 (+) — Chassis ground (–):*** Is the measured value less than the specified value?	1 V	Go to step **25.**	Go to step **65.**

	Step	Check	Yes	No
25	**CHECK INPUT SIGNAL FOR TCM.** 1)Move the selector lever to other than "P" range. 2)Measure the voltage between TCM and chassis ground. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 23 (+) — Chassis ground (–):*** ***Turbo model*** ***(B55) No. 1 (+) — Chassis ground (–):*** Is the measured value more than the specified value?	8 V	Go to step **65.**	Replace the TCM. <Ref. to AT-71, Transmission Control Module (TCM).>
26	**CHECK "P" RANGE INDICATOR LIGHT BULB.** 1)Turn the ignition switch to OFF. 2)Remove the combination meter. 3)Remove the "P" range indicator light bulb from combination meter. Is the "P" range indicator light bulb OK?	The light bulb is OK.	Go to step **27.**	Replace the "P" range indicator light bulb. <Ref. to IDI-12, Combination Meter Assembly.>
27	**CHECK HARNESS CONNECTOR BETWEEN TCM AND COMBINATION METER.** 1)Disconnect the connectors from TCM and combination meter. 2)Measure the resistance of harness between TCM and combination meter. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 23 — (i12) No. 14:*** ***Turbo model*** ***(B55) No. 1 — (i12) No. 14:*** Is the measured value more than the specified value?	1 Ω	Go to step **65.**	Repair open circuit in harness between TCM connector and combination meter, and poor contact in coupling connector.
28	**CHECK HARNESS CONNECTOR BETWEEN TCM AND INHIBITOR SWITCH.** 1)Turn the ignition switch to OFF. 2)Disconnect the connectors from TCM, inhibitor switch and combination meter. 3)Measure the resistance of harness between TCM and chassis ground. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 23 — Chassis ground:*** ***Turbo model*** ***(B55) No. 1 — Chassis ground:*** Is the measured value less than the specified value?	1 MΩ	Go to step **29.**	Repair ground short circuit in "P" range circuit.

	Step	Check	Yes	No
29	**CHECK HARNESS CONNECTOR BETWEEN TCM AND INHIBITOR SWITCH.** 1)Turn the ignition switch to OFF. 2)Disconnect the connectors from TCM and inhibitor switch. 3)Measure the resistance of harness between TCM and inhibitor switch connector. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 17 — (T7) No. 8:*** ***Turbo model*** ***(B55) No. 3 — (T7) No. 8:*** Is the measured value less than the specified value?	1 Ω	Go to step **30.**	Repair open circuit in harness between TCM and inhibitor switch connector, and poor contact in coupling connector.
30	**CHECK INPUT SIGNAL FOR TCM.** 1)Turn the ignition switch to OFF. 2)Connect the connector to TCM and inhibitor switch. 3)Turn the ignition switch to ON. 4)Move the selector lever to "R" range. 5)Measure the voltage between TCM and chassis ground. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 17 (+) — Chassis ground (–):*** ***Turbo model*** ***(B55) No. 3 (+) — Chassis ground (–):*** Is the measured value less than the specified value?	1 V	Go to step **31.**	Go to step **65.**
31	**CHECK INPUT SIGNAL FOR TCM.** Measure the voltage between TCM and chassis ground. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 17 (+) — Chassis ground (–):*** ***Turbo model*** ***(B55) No. 3 (+) — Chassis ground (–):*** Is the measured value more than the specified value?	8 V	Go to step **65.**	Replace the TCM. <Ref. to AT-71, Transmission Control Module (TCM).>
32	**CHECK "R" RANGE INDICATOR LIGHT BULB.** 1)Turn the ignition switch to OFF. 2)Remove the combination meter. 3)Remove the "R" range indicator light bulb from combination meter. Is the "R" range indicator light bulb OK?	The light bulb is OK.	Go to step **33.**	Replace the "R" range indicator light bulb. <Ref. to IDI-12, Combination Meter Assembly.>
33	**CHECK HARNESS CONNECTOR BETWEEN TCM AND COMBINATION METER.** 1)Disconnect the connectors from TCM and combination meter. 2)Measure the resistance of harness between TCM and combination meter. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 17 — (i12) No. 13:*** ***Turbo model*** ***(B55) No. 3 — (i12) No. 13:*** Is the measured value less than the specified value?	1 Ω	Go to step **65.**	Repair open circuit in harness between TCM connector and combination meter, and poor contact in TCM connector.

	Step	Check	Yes	No
34	**CHECK HARNESS CONNECTOR BETWEEN TCM AND INHIBITOR SWITCH.** 1)Turn the ignition switch to OFF. 2)Disconnect the connectors from TCM, inhibitor switch and combination meter. 3)Measure the resistance of harness between TCM and chassis ground. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 17 — Chassis ground:*** ***Turbo model*** ***(B55) No. 3 — Chassis ground:*** Is the measured value more than the specified value?	1 MΩ	Go to step **35.**	Repair ground short circuit in “R” range circuit.
35	**CHECK HARNESS CONNECTOR BETWEEN TCM AND INHIBITOR SWITCH.** 1)Turn the ignition switch to OFF. 2)Disconnect the connectors from TCM and inhibitor switch. 3)Measure the resistance of harness between TCM and inhibitor switch connector. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 22 — (T7) No. 10:*** ***Turbo model*** ***(B55) No. 14 — (T7) No. 10:*** Is the measured value less than the specified value?	1 Ω	Go to step **36.**	Repair open circuit in harness between TCM and inhibitor switch connector, and poor contact in coupling connector.
36	**CHECK INPUT SIGNAL FOR TCM.** 1)Turn the ignition switch to OFF. 2)Connect the connector to TCM and inhibitor switch. 3)Turn the ignition switch to ON. 4)Move the selector lever to "N" range. 5)Measure the voltage between TCM and chassis ground. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 22 (+) — Chassis ground (–):*** ***Turbo model*** ***(B55) No. 14 (+) — Chassis ground (–):*** Is the measured value less than the specified value?	1 V	Go to step **37.**	Go to step **65.**
37	**CHECK INPUT SIGNAL FOR TCM.** 1)Move the selector lever to other than "N" range. 2)Measure the voltage between TCM and chassis ground. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 22 (+) — Chassis ground (–):*** ***Turbo model*** ***(B55) No. 14 (+) — Chassis ground (–):*** Is the measured value more than the specified value?	8 V	Go to step **65.**	Replace the TCM. <Ref. to AT-71, Transmission Control Module (TCM).>

	Step	Check	Yes	No
38	**CHECK "N" RANGE INDICATOR LIGHT BULB.** 1)Turn the ignition switch to OFF. 2)Remove the combination meter. 3)Remove the "N" range indicator light bulb from combination meter. Is the "N" range indicator light bulb OK?	The light bulb is OK.	Go to step **39.**	Replace the "N" range indicator light bulb. <Ref. to IDI-12, Combination Meter Assembly.>
39	**CHECK HARNESS CONNECTOR BETWEEN TCM AND COMBINATION METER.** 1)Disconnect the connectors from TCM and combination meter. 2)Measure the resistance of harness between TCM and combination meter. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 22 — (i12) No. 12:*** ***Turbo model*** ***(B55) No. 14 — (i12) No. 12:*** Is the measured value less than the specified value?	1 Ω	Go to step **65.**	Repair open circuit in harness between TCM connector and combination meter, and poor contact in TCM connector.
40	**CHECK HARNESS CONNECTOR BETWEEN TCM AND INHIBITOR SWITCH.** 1)Turn the ignition switch to OFF. 2)Disconnect the connectors from TCM, inhibitor switch and combination meter. 3)Measure the resistance of harness between TCM and chassis ground. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 22 — Chassis ground:*** ***Turbo model*** ***(B55) No. 14 — Chassis ground:*** Is the measured value more than the specified value?	1 MΩ	Go to step **41.**	Repair ground short circuit in "N" range circuit.
41	**CHECK HARNESS CONNECTOR BETWEEN TCM AND INHIBITOR SWITCH.** 1)Turn the ignition switch to OFF. 2)Disconnect the connectors from TCM and inhibitor switch. 3)Measure the resistance of harness between TCM and inhibitor switch connector. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 8 — (T7) No. 3:*** ***Turbo model*** ***(B55) No. 4 — (T7) No. 3:*** Is the measured value less than the specified value?	1 Ω	Go to step **42.**	Repair open circuit in harness between TCM and inhibitor switch connector, and poor contact in coupling connector.

	Step	Check	Yes	No
42	**CHECK INPUT SIGNAL FOR TCM.** 1)Turn the ignition switch to OFF. 2)Connect the connector to TCM and inhibitor switch. 3)Turn the ignition switch to ON. 4)Move the selector lever to "D" range. 5)Measure the voltage between TCM and chassis ground. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 8 (+) — Chassis ground (–):*** ***Turbo model*** ***(B55) No. 4 (+) — Chassis ground (–):*** Is the measured value less than the specified value?	1 V	Go to step **43.**	Go to step **65.**
43	**CHECK INPUT SIGNAL FOR TCM.** 1)Move the selector lever to other than "N" range. 2)Measure the voltage between TCM and chassis ground. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 8 (+) — Chassis ground (–):*** ***Turbo model*** ***(B55) No. 4 (+) — Chassis ground (–):*** Is the measured value more than the specified value?	8 V	Go to step **65.**	Replace the TCM. <Ref. to AT-71, Transmission Control Module (TCM).>
44	**CHECK "D" RANGE INDICATOR LIGHT BULB.** 1)Turn the ignition switch to OFF. 2)Remove the combination meter. 3)Remove the "D" range indicator light bulb from combination meter. Is the "D" range indicator light bulb OK?	The light bulb is OK.	Go to step **45.**	Replace the "D" range indicator light bulb. <Ref. to IDI-12, Combination Meter Assembly.>
45	**CHECK HARNESS CONNECTOR BETWEEN TCM AND COMBINATION METER.** 1)Disconnect the connectors from TCM and combination meter. 2)Measure the resistance of harness between TCM and combination meter. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 8 — (i12) No. 11:*** ***Turbo model*** ***(B55) No. 4 — (i12) No. 11:*** Is the measured value less than the specified value?	1 Ω	Go to step **65.**	Repair open circuit in harness between TCM connector and combination meter, and TCM connector.

	Step	Check	Yes	No
46	**CHECK HARNESS CONNECTOR BETWEEN TCM AND INHIBITOR SWITCH.** 1)Turn the ignition switch to OFF. 2)Disconnect the connectors from TCM, inhibitor switch and combination meter. 3)Measure the resistance of harness between TCM and chassis ground. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 8 — Chassis ground:*** ***Turbo model*** ***(B55) No. 4 — Chassis ground:*** Is the measured value more than the specified value?	1 MΩ	Go to step **47.**	Repair ground short circuit in “D” range circuit.
47	**CHECK HARNESS CONNECTOR BETWEEN TCM AND INHIBITOR SWITCH.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from TCM and inhibitor switch. 3)Measure the resistance of harness between TCM and inhibitor switch connector. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 18 — (T7) No. 11:*** ***Turbo model*** ***(B55) No. 5 — (T7) No. 11:*** Is the measured value less than the specified value?	1 Ω	Go to step **48.**	Repair open circuit in harness between TCM and inhibitor switch connector, and poor contact in coupling connector.
48	**CHECK INPUT SIGNAL FOR TCM.** 1)Turn the ignition switch to OFF. 2)Connect the connector to TCM and inhibitor switch. 3)Turn the ignition switch to ON. 4)Move the selector lever to "3" range. 5)Measure the voltage between TCM and chassis ground. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 18 (+) — Chassis ground (–):*** ***Turbo model*** ***(B55) No. 5 (+) — Chassis ground (–):*** Is the measured value less than the specified value?	1 V	Go to step **49.**	Go to step **65.**
49	**CHECK INPUT SIGNAL FOR TCM.** 1)Move the selector lever to other than "3" range. 2)Measure the hvoltage between TCM and chassis ground. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 18 (+) — Chassis ground (–):*** ***Turbo model*** ***(B55) No. 5 (+) — Chassis ground (–):*** Is the measured value more than the specified value?	8 V	Go to step **65.**	Replace the TCM. <Ref. to AT-71, Transmission Control Module (TCM).>

	Step	Check	Yes	No
50	**CHECK "3" RANGE INDICATOR LIGHT BULB.** 1)Turn the ignition switch to OFF. 2)Remove the combination meter. 3)Remove the "3" range indicator light bulb from combination meter. Is the "3" range indicator light bulb OK?	The light bulb is OK.	Go to step **51.**	Replace the "3" range indicator light bulb. <Ref. to IDI-12, Combination Meter Assembly.>
51	**CHECK HARNESS CONNECTOR BETWEEN TCM AND COMBINATION METER.** 1)Disconnect the connectors from TCM and combination meter. 2)Measure the resistance of harness between TCM and combination meter. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 18 — (i12) No. 10:*** ***Turbo model*** ***(B55) No. 5 — (i12) No. 10:*** Is the measured value less than the specified value?	1 Ω	Go to step **65.**	Repair open circuit in harness between TCM connector and combination meter, and poor contact in TCM connector.
52	**CHECK HARNESS CONNECTOR BETWEEN TCM AND INHIBITOR SWITCH.** 1)Turn the ignition switch to OFF. 2)Disconnect the connectors from TCM, inhibitor switch and combination meter. 3)Measure the resistance of harness between TCM and chassis ground. ***Connector & terminal*** ***Non-turbo model*** ***(B55) No. 18 — Chassis ground:*** ***Turbo model*** ***(B55) No. 5 — Chassis ground:*** Is the measured value more than the specified value?	1 MΩ	Go to step **53.**	Repair ground short circuit in "3" range circuit.
53	**CHECK HARNESS CONNECTOR BETWEEN TCM AND INHIBITOR SWITCH.** 1)Turn the ignition switch to OFF. 2)Disconnect the connector from TCM and inhibitor switch. 3)Measure the resistance of harness between TCM and inhibitor switch connector. ***Connector & terminal*** ***Non-turbo model*** ***(B54) No. 10 — (T7) No. 4:*** ***Turbo model*** ***(B55) No. 6 — (T7) No. 4:*** Is the measured value less than the specified value?	1 Ω	Go to step **54.**	Repair open circuit in harness between TCM and inhibitor switch connector, and poor contact in coupling connector.

	Step	Check	Yes	No
54	**CHECK INPUT SIGNAL FOR TCM.** 1)Turn the ignition switch to OFF. 2)Connect the connector to TCM and inhibitor switch. 3)Turn the ignition switch to ON. 4)Move the selector lever to "2" range. 5)Measure the voltage between TCM and chassis ground. ***Connector & terminal*** ***Non-turbo model*** ***(B54) No. 10 (+) — Chassis ground (–):*** ***Turbo model*** ***(B55) No. 6 (+) — Chassis ground (–):*** Is the measured value less than the specified value?	1 V	Go to step **55.**	Go to step **65.**
55	**CHECK INPUT SIGNAL FOR TCM.** 1)Move the selector lever to other than "2" range. 2)Measure the voltage between TCM and chassis ground. ***Connector & terminal*** ***Non-turbo model*** ***(B54) No. 10 (+) — Chassis ground (–):*** ***Turbo model*** ***(B55) No. 6 (+) — Chassis ground (–):*** Is the measured value more than the specified value?	8 V	Go to step **65.**	Replace the TCM. <Ref. to AT-71, Transmission Control Module (TCM).>
56	**CHECK "2" RANGE INDICATOR LIGHT BULB.** 1)Turn the ignition switch to OFF. 2)Remove the combination meter. 3)Remove the "2" range indicator light bulb from combination meter. Is the "2" range indicator light bulb OK?	The light bulb is OK.	Go to step **57.**	Replace the "2" range indicator light bulb. <Ref. to IDI-12, Combination Meter Assembly.>
57	**CHECK HARNESS CONNECTOR BETWEEN TCM AND COMBINATION METER.** 1)Disconnect the connectors from TCM and combination meter. 2)Measure the resistance of harness between TCM and combination meter. ***Connector & terminal*** ***Non-turbo model*** ***(B54) No. 10 — (i12) No. 4:*** ***Turbo model*** ***(B55) No. 6 — (i12) No. 4:*** Is the measured value less than the specified value?	1 Ω	Go to step **65.**	Repair open circuit in harness between TCM and combination meter, and poor contact in TCM connector.

	Step	Check	Yes	No
58	**CHECK HARNESS CONNECTOR BETWEEN TCM AND INHIBITOR SWITCH.** 1)Turn the ignition switch to OFF. 2)Disconnect the connectors from TCM, inhibitor switch and combination meter. 3)Measure the resistance of harness between TCM and chassis ground. ***Connector & terminal*** ***Non-turbo model*** ***(B54) No. 10 — Chassis ground:*** ***Turbo model*** ***(B55) No. 6 — Chassis ground:*** Is the measured value more than the specified value?	1 MΩ	Go to step **59.**	Repair ground short circuit in "2" range circuit.
59	**CHECK HARNESS CONNECTOR BETWEEN TCM AND INHIBITOR SWITCH.** 1)Turn the ignition switch to OFF. 2)Disconnect the connectors from TCM and inhibitor switch. 3)Measure the resistance of harness between TCM and inhibitor switch connector. ***Connector & terminal*** ***Non-turbo model*** ***(B54) No. 1 — (T7) No. 6:*** ***Turbo model*** ***(B55) No. 7 — (T7) No. 6:*** Is the measured value less than the specified value?	1 Ω	Go to step **60.**	Repair open circuit in harness between TCM and inhibitor switch connector, and poor contact in coupling connector.
60	**CHECK INPUT SIGNAL FOR TCM.** 1)Turn the ignition switch to OFF. 2)Connect the connector to TCM and inhibitor switch. 3)Turn the ignition switch to ON. 4)Move the selector lever to "1" range. 5)Measure the voltage between TCM and chassis ground. ***Connector & terminal*** ***Non-turbo model*** ***(B54) No. 1 (+) — Chassis ground (–):*** ***Turbo model*** ***(B55) No. 7 (+) — Chassis ground (–):*** Is the measured value less than the specified value?	1 V	Go to step **61.**	Go to step **65.**
61	**CHECK INPUT SIGNAL FOR TCM.** 1)Move the selector lever to other than "1" range. 2)Measure the voltage between TCM and chassis ground. ***Connector & terminal*** ***Non-turbo model*** ***(B54) No. 1 (+) — Chassis ground (–):*** ***Turbo model*** ***(B55) No. 7 (+) — Chassis ground (–):*** Is the measured value less than the specified value?	8 V	Go to step **65.**	Replace the TCM. <Ref. to AT-71, Transmission Control Module (TCM).>

	Step	Check	Yes	No
62	**CHECK "1" RANGE INDICATOR LIGHT BULB.** 1)Turn the ignition switch to OFF. 2)Remove the combination meter. 3)Remove the "1" range indicator light bulb from combination meter. Is the "1" range indicator light bulb OK?	The light bulb is OK.	Go to step **63.**	Replace the "1" range indicator light bulb. <Ref. to IDI-12, Combination Meter Assembly.>
63	**CHECK HARNESS CONNECTOR BETWEEN TCM AND COMBINATION METER.** 1)Disconnect the connectors from TCM and combination meter. 2)Measure the resistance of harness between TCM and combination meter. ***Connector & terminal*** ***Non-turbo model*** ***(B54) No. 1 — (i12) No. 5:*** ***Turbo model*** ***(B55) No. 7 — (i12) No. 5:*** Is the measured value less than the specified value?	1 Ω	Go to step **65.**	Repair open circuit in harnes between TCM and combination meter, poor contact in TCM connector.
64	**CHECK HARNESS CONNECTOR BETWEEN TCM AND INHIBITOR SWITCH.** 1)Turn the ignition switch to OFF. 2)Disconnect the connectors from TCM, inhibitor switch and combination meter. 3)Measure the resistance of harness between TCM and chassis ground. ***Connector & terminal*** ***Non-turbo model*** ***(B54) No. 1 — Chassis ground:*** ***Turbo model*** ***(B55) No. 7 — Chassis ground:*** Is the measured value more than the specified value?	1 MΩ	Go to step **65.**	Repair ground short circuit in "1" range circuit.
65	**CHECK POOR CONTACT.** Is there poor contact in inhibitor switch circuit?	There is a poor contact.	Repair poor contact.	Adjust the inhibitor switch and select cable. <Ref. to AT-48, ADJUSTMENT, Inhibitor Switch.> and <Ref. to CS-29, Select Cable.>