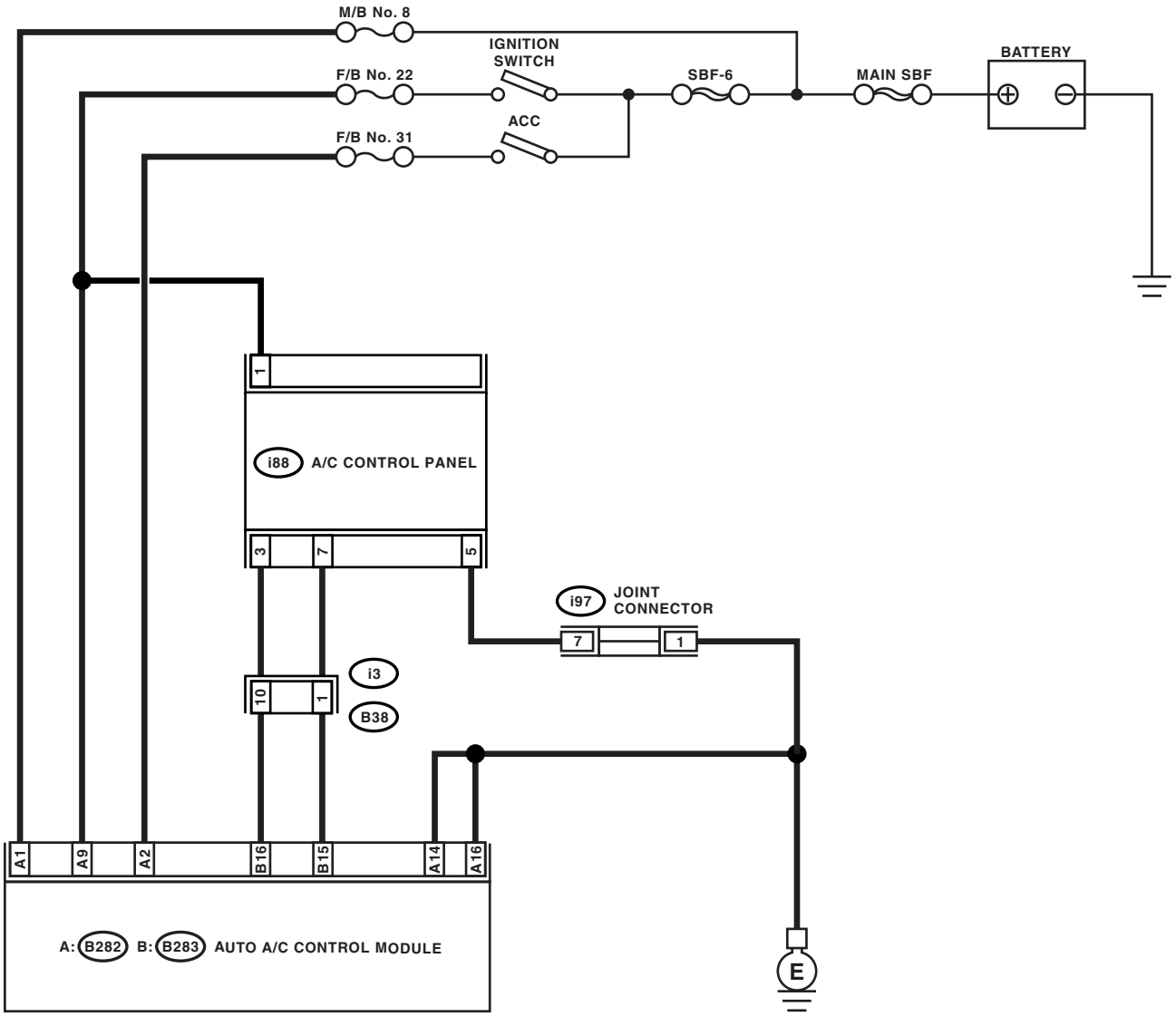
6. Diagnostics for A/C System Malfunction

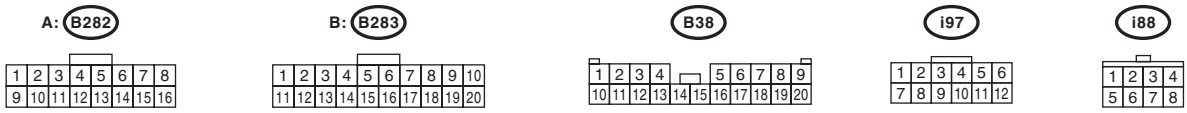
A: A/C OR SELF-DIAGNOSIS SYSTEMS DO NOT OPERATE

TROUBLE SYMPTOM:

- "Set" temperature is not indicated on the display, switch LEDs are faulty and switches do not operate.
- Self-diagnosis system does not operate.

WIRING DIAGRAM:





AC-01167

	Step	Check	Yes	No
1	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Remove the fuse No. 8 from main fuse box. 3) Check the condition of fuse.	Is the fuse blown-out?	Replace the fuse.	Go to step **2.**
2	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Remove the fuse No. 22 and 31 from fuse & relay box. 3) Check the condition of fuse.	Is the fuse blown-out?	Replace the fuse.	Go to step **3.**
3	**CHECK A/C CONTROL PANEL POWER CIRCUIT.** Measure the voltage between A/C control panel harness connector terminal and chassis ground after turning the ignition switch to ON position. ***Connector & terminal*** ***(i88) No. 1 (+) — Chassis ground (−):***	Is the voltage more than 10 V?	Go to step **4.**	Check the harness for open or short circuit between A/C control panel and fuse.
4	**CHECK A/C CONTROL PANEL GROUND POWER CIRCUIT.** Measure the resistance in harness between A/C control panel and chassis ground after turning the ignition switch to OFF position. ***Connector & terminal*** ***(i88) No. 5 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **5.**	Repair the harness for ground line.
5	**CHECK AUTO A/C CONTROL MODULE POWER CIRCUIT.** Measure the voltage between auto A/C control module connector terminal and chassis ground after turning the ignition switch to OFF position. ***Connector & terminal*** ***(B282) No. 1 (+) — Chassis ground (−):***	Is the voltage more than 10 V?	Go to step **6.**	Check the harness for open or short circuit between auto A/C control module and fuse.
6	**CHECK AUTO A/C CONTROL MODULE POWER CIRCUIT.** Measure the voltage between auto A/C control module connector terminal and chassis ground after turning the ignition switch to ACC position. ***Connector & terminal*** ***(B282) No. 2 (+) — Chassis ground (−):***	Is the voltage more than 10 V?	Go to step **7.**	Check the harness for open or short circuit between auto A/C control module and fuse.
7	**CHECK AUTO A/C CONTROL MODULE POWER CIRCUIT.** Measure the voltage between auto A/C control module connector terminal and chassis ground after turning the ignition switch to ON position. ***Connector & terminal*** ***(B282) No. 9 (+) — Chassis ground (−):***	Is the voltage more than 10 V?	Go to step **8.**	Check the harness for open or short circuit between auto A/C control module and fuse.
8	**CHECK AUTO A/C CONTROL MODULE GROUND CIRCUIT.** Measure the resistance in harness between auto A/C control module and chassis ground. ***Connector & terminal*** ***(B282) No. 14, No. 16 — Chassis ground:***	Is the resistance less than 5 Ω?	Go to step **9.**	Repair the harness for ground line.
9	**CHECK COMMUNICATION CIRCUIT.** Measure the resistance in harness between A/C control panel and auto A/C control module. ***Connector & terminal*** ***(i88) No. 3 — (B283) No. 16:*** ***(i88) No. 7 — (B283) No. 15:***	Is the resistance less than1 Ω?	Go to step **10.**	Repair the harness.

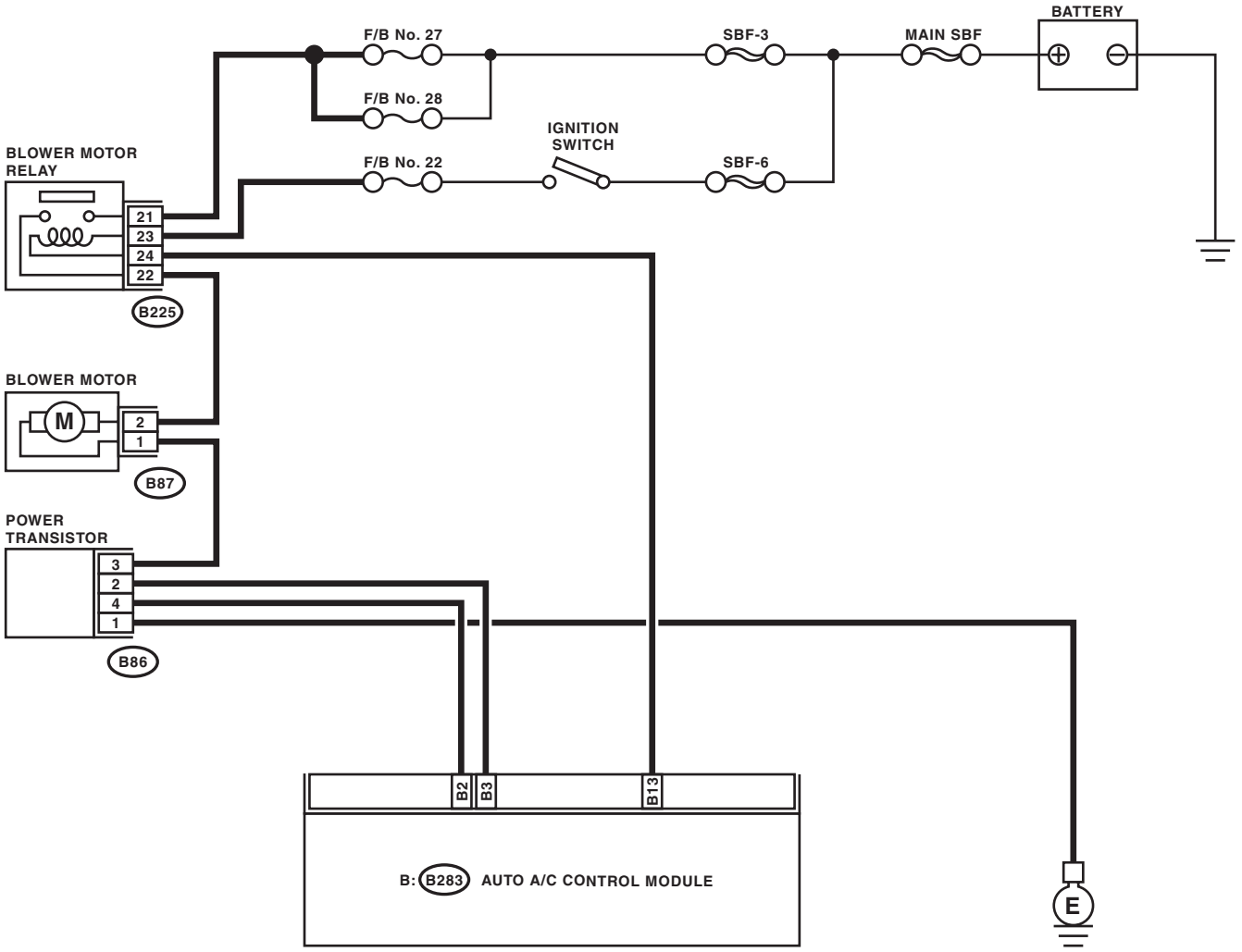
	Step	Check	Yes	No
10	**CHECK POOR CONTACT.** Check poor contact in auto A/C control module connector.	Is there poor contact in connector?	Repair the connector.	Replace the auto A/C control module.

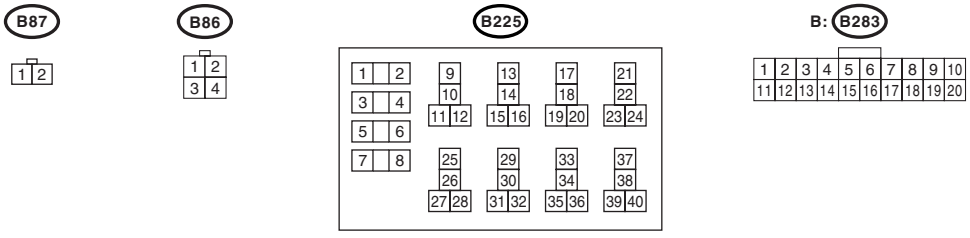
B: BLOWER FAN DOES NOT ROTATE.

TROUBLE SYMPTOM:

- Blower motor does not rotate.
- Blower motor does not rotate in “HI”.

WIRING DIAGRAM:



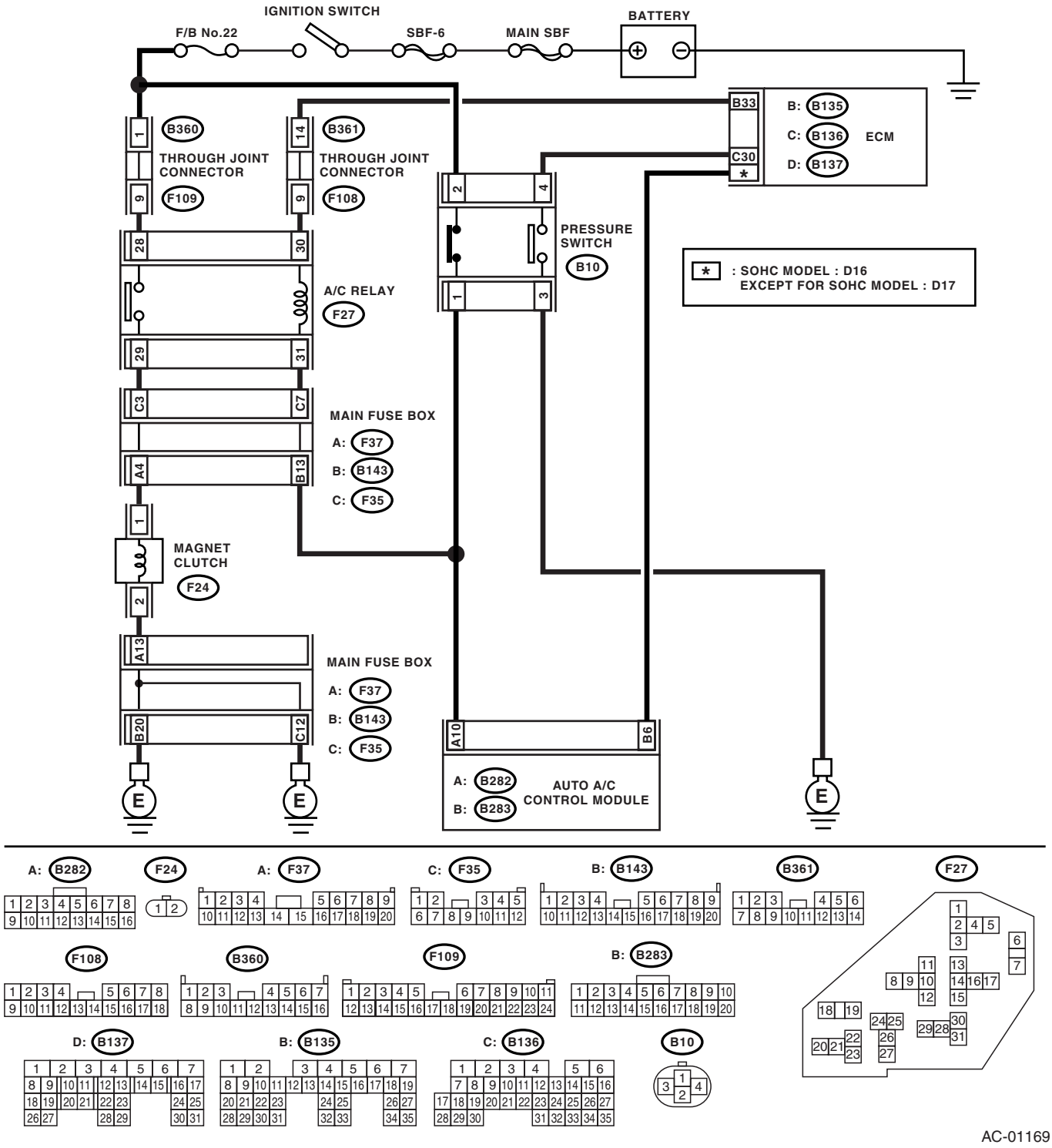


AC-01168

	Step	Check	Yes	No
1	**CHECK FUSE.** 1) Remove the fuse No. 22, 27 and 28 from fuse & relay box. 2) Check the condition of fuse.	Is any fuse blown-out?	Replace the fuse.	Go to step **2.**
2	**CHECK POWER SUPPLY FOR BLOWER MOTOR.** 1) Turn the ignition switch to ON. 2) Turn the blower switch to ON. 3) Measure the voltage between blower motor and chassis ground. ***Connector & terminal*** ***(B87) No. 2 (+) — Chassis ground (–):***	Is the voltage more than 10 V?	Go to step **3.**	Repair the open circuit of blower motor power supply line harness.
3	**CHECK BLOWER MOTOR RELAY.** 1) Turn the ignition switch to OFF. 2) Remove the blower motor relay. 3) Connect the battery positive (+) terminal to terminal No. 23 of blower motor relay, and negative (–) terminal to terminal No. 24. 4) Measure the resistance between terminals No. 21 and 22. ***Terminals*** ***(B225) No. 21 — (B225) No. 22:***	Is the resistance less than 1 Ω?	Go to step **4.**	Replace the blower motor relay.
4	**CHECK BLOWER MOTOR.** 1) Disconnect the connector from blower motor. 2) Connect the battery positive (+) terminal to terminal No. 2 of blower motor connector, and negative (–) terminal to terminal No. 1. 3) Make sure the blower motor runs.	Does the blower motor run?	Go to step **5.**	Replace the blower motor.
5	**CHECK POOR CONTACT.** Check poor contact in auto A/C control module connector.	Is there poor contact in connector?	Repair the connector.	Replace the auto A/C control module.

C: COMPARTMENT TEMPERATURE DOES NOT CHANGE, OR A/C SYSTEM DOES NOT RESPOND PROMPTLY.

WIRING DIAGRAM:



AC-01169

	Step	Check	Yes	No
1	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Remove the fuse No. 22 from fuse & relay box. 3) Check the condition of fuse.	Is the fuse blown-out?	Replace the fuse.	Go to step **2.**
2	**CHECK SIGNAL TO A/C RELAY AND A/C CONTROL MODULE.** 1) Disconnect the A/C relay and auto A/C control module harness connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between A/C relay connector terminal and chassis ground. 4) Measure the voltage between auto A/C control module harness connector terminal and chassis ground. ***Connector & terminal*** ***(F27) No. 31 (+) — Chassis ground (−):*** ***(B282) No. 10 (+) — Chassis ground (−):***	Is the voltage more than 10 V?	Go to step **5.**	Go to step **3.**
3	**CHECK POWER SUPPLY FOR PRESSURE SWITCH.** 1) Turn the ignition switch to OFF. 2) Disconnect the pressure switch harness connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between pressure switch harness connector terminal and chassis ground. ***Connector & terminal*** ***(B10) No. 2 (+) — Chassis ground (−):***	Is the voltage more than 10 V?	Go to step **4.**	Check the harness for open or short circuit between fuse and pressure switch.
4	**CHECK HARNESS BETWEEN PRESSURE SWITCH AND A/C RELAY, AUTO A/C CONTROL MODULE.** 1) Turn the ignition switch to OFF. 2) Measure the resistance in harness between pressure switch connector and A/C relay connector. 3) Measure the resistance in harness between pressure switch connector and auto A/C control module connector. ***Connector & terminal*** ***(B10) No. 1 — (F27) No. 31:*** ***(B10) No. 1 — (B282) No. 10:***	Is the resistance less than 1 Ω?	Check the pressure switch. <Ref. to AC-41, INSPECTION, Pressure Switch (Triple Pressure Switch).>	Repair the harness.
5	**CHECK POWER SUPPLY FOR A/C RELAY.** Measure the voltage between A/C relay connector terminal and chassis ground. ***Connector & terminal*** ***(F27) No. 28 (+) — Chassis ground (−):***	Is the voltage more than 10 V?	Go to step **6.**	Check the harness for open or short circuit between fuse and A/C relay.
6	**CHECK A/C RELAY.** Check the A/C relay. <Ref. to AC-40, INSPECTION, Relay and Fuse.>	Is malfunction found in A/C relay?	Go to step **7.**	Replace the A/C relay.

	Step	Check	Yes	No
7	**CHECK A/C ON SIGNAL.** 1) Turn the ignition switch to OFF. 2) Connect the A/C relay and all disconnected connectors. 3) Start the engine and turn the AUTO switch to ON. 4) Turn the temperature control dial at maximum cool position. 5) Measure the voltage between auto A/C control module harness connector terminal and chassis ground. ***Connector & terminal*** ***(B283) No. 6 (+) — Chassis ground (−):***	Is the voltage more than 5.5 V?	Go to step **9.**	Go to step **8.**
8	**CHECK HARNESS BETWEEN AUTO A/C CONTROL MODULE AND ECM.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector of auto A/C control module and ECM. 3) Measure the resistance in harness between auto A/C control module connector and ECM connector. ***Connector & terminal*** ***Except for 2.5 L Non-turbo model*** ***(B283) No. 6 — (B137) No. 17:*** ***2.5 L Non-turbo model*** ***(B283) No. 6 — (B137) No. 16:***	Is the resistance less than 1 Ω?	Replace the auto A/C control module.	Repair the harness.
9	**CHECK MAGNET CLUTCH ON SIGNAL.** 1) Stop the engine and turn the AUTO switch to OFF. 2) Turn the ignition switch to ON. 3) Measure the voltage between ECM connector terminal and chassis ground. ***Connector & terminal*** ***(B135) No. 33 (+) — Chassis ground (−):***	Is the voltage more than 10 V?	Go to step **10.**	Check the harness for open or short circuit between A/C relay and ECM.
10	**CHECK MAGNET CLUTCH ON SIGNAL.** 1) Start the engine and turn the AUTO switch to ON. 2) Turn the temperature control dial at maximum cool position. 3) Measure the voltage between ECM connector terminal and chassis ground. ***Connector & terminal*** ***(B135) No. 33 (+) — Chassis ground (−):***	Is the voltage 0 V?	Go to step **11.**	Replace the ECM.
11	**CHECK POWER SUPPLY FOR MAGNET CLUTCH.** 1) Stop the engine and turn the AUTO switch to OFF. 2) Disconnect the harness connector of magnet clutch. 3) Start the engine and turn the AUTO switch to ON. 4) Turn the temperature control dial at maximum cool position. 5) Measure the voltage between magnet clutch harness connector terminal and chassis ground. ***Connector & terminal*** ***(F24) No. 1 (+) — Chassis ground (−):***	Is the voltage more than 10 V?	Go to step **12.**	Check the harness for open or short circuit between A/C relay and magnet clutch.

	Step	Check	Yes	No
12	**CHECK HARNESS BETWEEN AUTO A/C CONTROL MODULE AND ECM.** 1) Stop the engine and turn the AUTO switch to OFF. 2) Measure the resistance between magnet clutch harness connector terminal and chassis ground. ***Connector & terminal*** ***(F24) No. 2 — Chassis ground:***	Is the resistance less than 1 Ω?	Check the compressor. <Ref. to AC-34, INSPECTION, Compressor.>	Repair the harness.