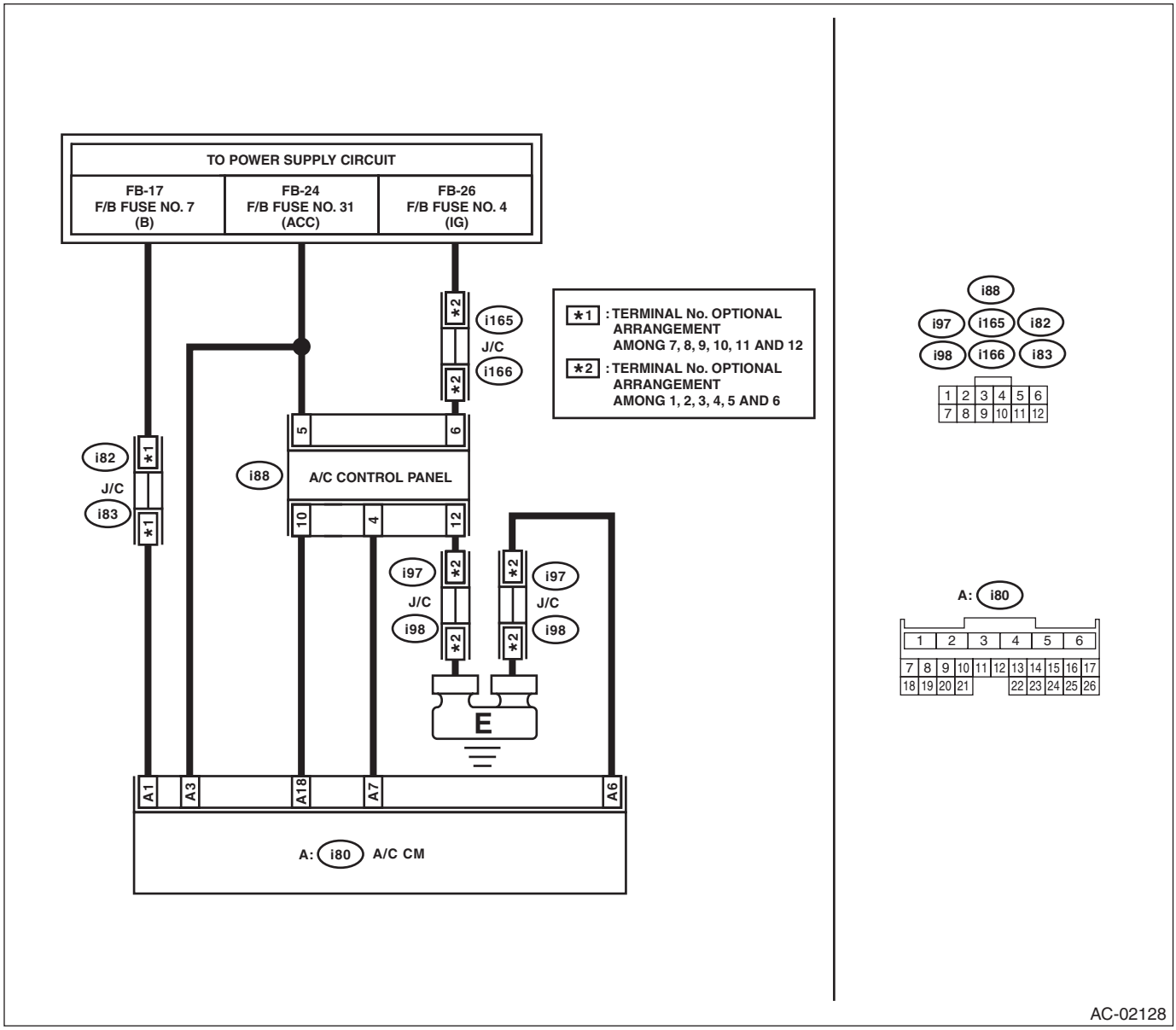
6. Diagnostics for A/C System Malfunction

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-02128

	Step	Check	Yes	No
1	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Remove the fuse No. 7 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. 12 and No. 31 from fuse & relay box. 3) Check the condition of fuse.	Is the fuse blown out?	Replace the fuse.	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK A/C CONTROL PANEL POWER CIRCUIT.** 1) Remove the A/C control panel. 2) Disconnect the A/C control panel harness connector. 3) Turn the ignition switch to ACC, and measure the voltage between A/C control panel harness connector terminal and chassis ground. ***Connector & terminal*** ***(i88) No. 5 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **4**.	Check for open or short circuit in the harness between A/C control panel and fuse.
4	**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. ***Connector & terminal*** ***(i88) No. 6 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **5**.	Check for open or short circuit in the harness between A/C control panel and fuse.
5	**CHECK A/C CONTROL PANEL GROUND POWER CIRCUIT.** Measure the resistance of harness between A/C control panel and chassis ground after turning the ignition switch to OFF. ***Connector & terminal*** ***(i88) No. 12 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **6**.	Repair the harness for ground line.
6	**CHECK A/C CONTROL MODULE POWER CIRCUIT.** Measure the voltage between A/C control module connector terminal and chassis ground after turning the ignition switch to OFF. ***Connector & terminal*** ***(i80) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **7**.	Check for open or short circuit in the harness between A/C control module and fuse.
7	**CHECK A/C CONTROL MODULE POWER CIRCUIT.** Measure the voltage between A/C control module connector terminal and chassis ground after turning the ignition switch to ON. ***Connector & terminal*** ***(i80) No. 3 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **8**.	Check for open or short circuit in the harness between A/C control module and fuse.
8	**CHECK A/C CONTROL MODULE GROUND CIRCUIT.** Measure the resistance of harness between A/C control module and chassis ground. ***Connector & terminal*** ***(i80) No. 6 — 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 of harness between A/C control panel and A/C control module. ***Connector & terminal*** ***(i88) No. 10 — (i80) No. 10:*** ***(i88) No. 4 — (i80) No. 7:***	Is the resistance less than 1 Ω?	Go to step **10**.	Repair the harness.
10	**CHECK COMMUNICATION CIRCUIT HARNESS.** Measure the resistance between communication circuit harness and chassis ground. ***Connector & terminal*** ***(i80) No. 18 — Chassis ground:*** ***(i80) No. 7 — Chassis ground:***	Is the resistance 1 MΩ or more?	Repair or replace the short circuit of the harness.	Go to step **11**.

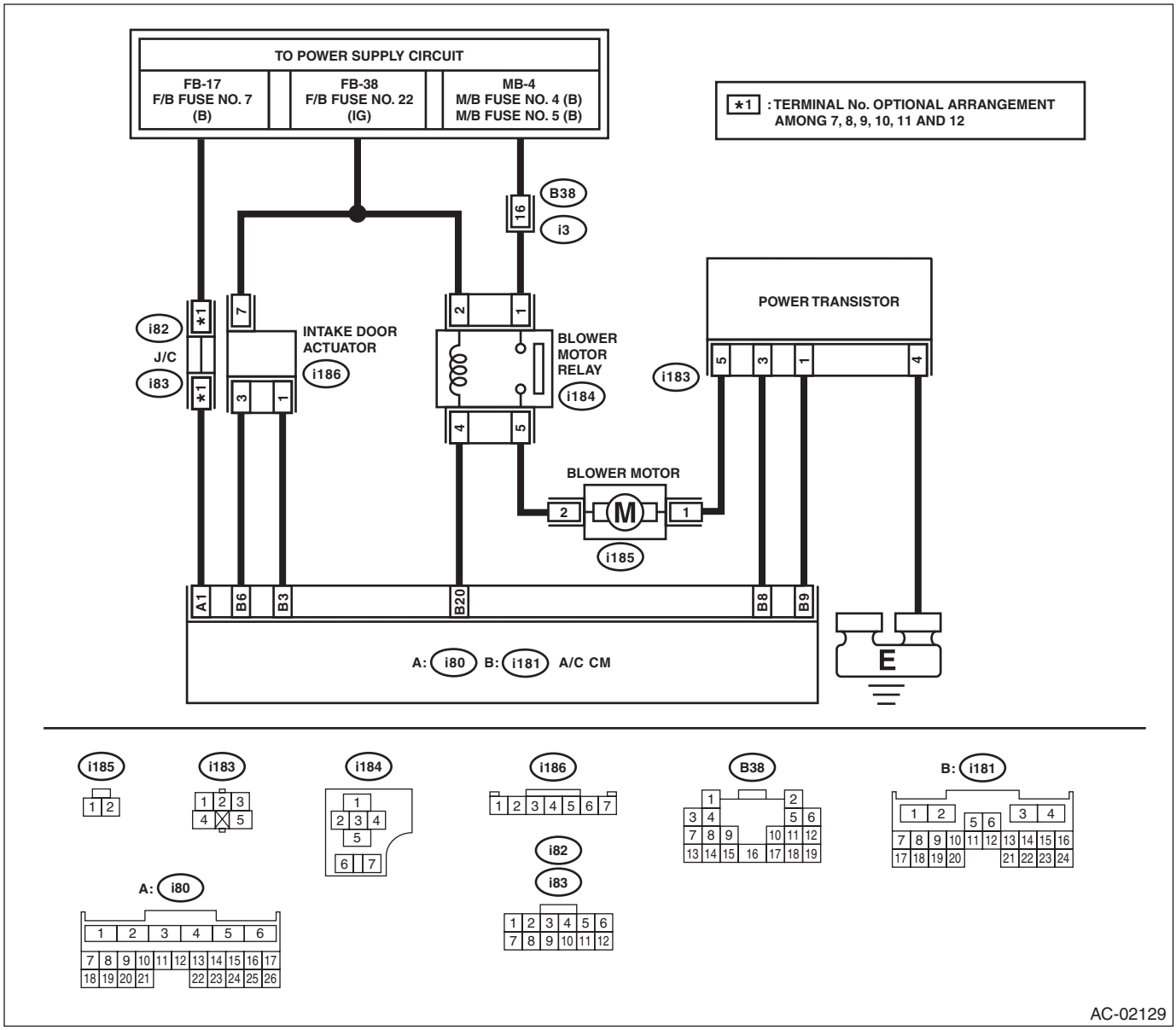
Step		Check	Yes	No
11	**CHECK FOR POOR CONTACT.** Check poor contact of A/C control module connector.	Is there poor contact of connector?	Repair the connector.	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>

B: BLOWER MOTOR DOES NOT ROTATE

TROUBLE SYMPTOM:

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

WIRING DIAGRAM:



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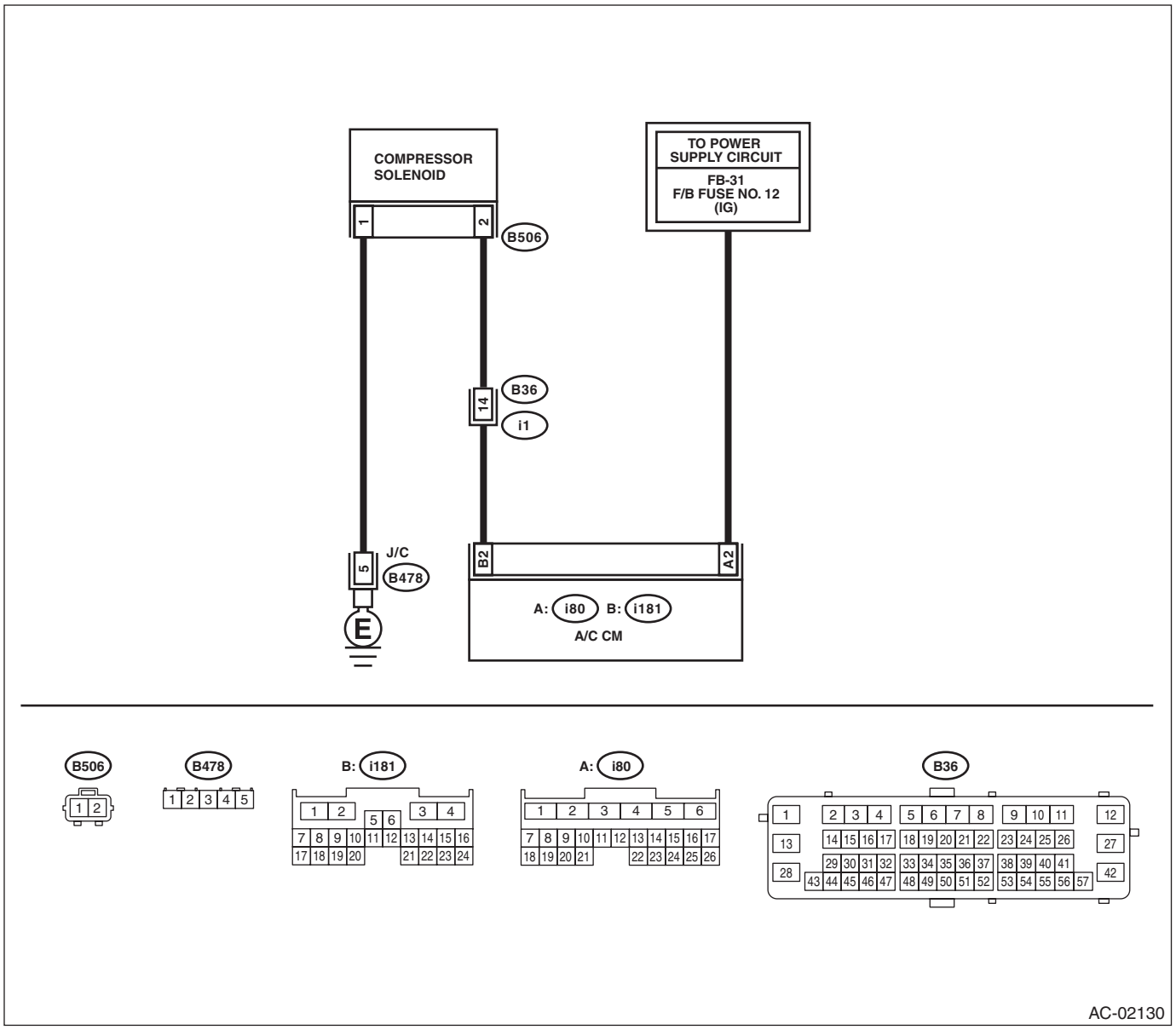
Step		Check	Yes	No
1	**CHECK FUSE.** 1) Remove fuse No. 22 and 7 from fuse & relay box, and fuse No. 4 and 5 from the main fuse box. 2) Check the condition of fuse.	Is any fuse blown out?	Replace the fuse.	Go to step **2**.
2	**CHECK POWER SUPPLY FOR BLOWER MOTOR.** 1) Turn the ignition switch to ON. 2) Turn the blower switch to ON. 3) Measure the voltage between blower motor and chassis ground. ***Connector & terminal*** ***(i185) No. 2 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **3**.	Repair the open circuit of blower motor power supply line harness.

	Step	Check	Yes	No
3	**CHECK BLOWER MOTOR RELAY.** 1) Turn the ignition switch to OFF. 2) Remove the blower motor relay. 3) Connect battery terminals to the blower motor relay. ***Terminals*** ***No. 2 — No. 4:*** 4) Measure the resistance between terminals. ***Terminals*** ***No. 1 — No. 5:***	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 FOR POOR CONTACT.** Check poor contact of A/C control module connector.	Is there poor contact of connector?	Repair the connector.	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>

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

WIRING DIAGRAM:



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Step		Check	Yes	No
1	**CHECK DTC.** 1) Turn the ignition switch to ON. 2) Read the DTC of the A/C system using the Subaru Select Monitor.	Is DTC detected?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK AMOUNT OF REFRIGERANT.** Check the refrigerant pressure. <Ref. to AC-17, PROCEDURE, Refrigerant Pressure with Manifold Gauge Set.>	Is the refrigerant pressure within the standard?	Go to step **3**.	Check and repair the refrigerant leakage.

	Step	Check	Yes	No
3	**CHECK POWER SUPPLY OF CONTROL MODULE.** 1) Disconnect the A/C CM connector. 2) Turn the ignition switch to ON. 3) Using a tester, measure the voltage between the connector terminal and chassis ground. ***Connector & terminal*** ***(i80) No. 2 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **4**.	Repair the defective power supply circuit.
4	**CHECK CONTROL MODULE.** 1) Disconnect the compressor solenoid connector. 2) Turn the ignition switch to ON. 3) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(i81) No. 2 — Chassis ground:***	Is the voltage 10 V or more?	Go to step **5**.	Repair the defective harness.
5	**CHECK HARNESS.** 1) Disconnect the A/C CM connector. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(B506) No. 2 — (i181) No. 2:***	Is there continuity?	Go to step **6**.	Repair or replace the open circuit.
6	**CHECK GROUND.** Using a tester, check the continuity between the connector terminal and chassis ground. ***Connector & terminal*** ***(B506) No. 1 — Chassis ground:***	Is there continuity?	Check the compressor solenoid.	Repair or replace the open circuit.