6. Diagnostics with Phenomenon

A: INSPECTION

1. Perform diagnosis according to the diagnosis procedure for the corresponding symptom listed in the symptom table.
2. If there are multiple symptoms, perform the diagnosis in the order of symptom number (1 → 2 → ... → 13).

1. SYMPTOM TABLE

Symptoms		Diagnosis procedure
1	Nothing is displayed on the screen or indicators do not illuminate.	<Ref. to AC(diag)-14, NOTHING IS DISPLAYED ON THE SCREEN OR INDICATORS DO NOT ILLUMINATE, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
2	Air conditioner does not stop even when the OFF switch is pressed. (vehicles with fully automatic air conditioner)	<Ref. to AC(diag)-18, AIR CONDITIONER DOES NOT STOP EVEN WHEN THE OFF SWITCH IS PRESSED (VEHICLES WITH FULLY AUTOMATIC AIR CONDITIONER), DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
3	The windshield glass is not cleared even when the DEF switch is pressed. (vehicles with fully automatic air conditioner)	<Ref. to AC(diag)-19, THE WINDSHIELD GLASS IS NOT CLEARED EVEN WHEN THE DEF SWITCH IS PRESSED (VEHICLES WITH FULLY AUTOMATIC AIR CONDITIONER), DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
4	Cold air not emitted.	<Ref. to AC(diag)-20, COLD AIR NOT EMITTED, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
5	Warm air not emitted.	<Ref. to AC(diag)-22, WARM AIR NOT EMITTED, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
6	Compartment temperature is excessively lower than setting temperature.	<Ref. to AC(diag)-25, COMPARTMENT TEMPERATURE IS EXCESSIVELY LOWER THAN SETTING TEMPERATURE, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
7	Compartment temperature is excessively higher than setting temperature.	<Ref. to AC(diag)-27, COMPARTMENT TEMPERATURE IS EXCESSIVELY HIGHER THAN SETTING TEMPERATURE, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
8	Air does not come out, or airflow capacity is insufficient. (Blower motor does not rotate.)	<Ref. to AC(diag)-29, AIR DOES NOT COME OUT, OR AIRFLOW CAPACITY IS INSUFFICIENT, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
9	Air goes out of control. (Blower motor rotates at high speed.)	<Ref. to AC(diag)-34, AIR GOES OUT OF CONTROL, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
10	Cold air does not come out even when the A/C switch is pressed. The glass cannot be defogged. (Compressor does not operate. (variable))	<Ref. to AC(diag)-37, COLD AIR DOES NOT COME OUT EVEN WHEN THE A/C SWITCH IS PRESSED. THE GLASS CANNOT BE DEFOGGED (COMPRESSOR DOES NOT OPERATE (VARIABLE)), DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
11	Unable to switch suction vents.	<Ref. to AC(diag)-39, UNABLE TO SWITCH SUCTION VENTS, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
12	Unable to switch blow vents.	<Ref. to AC(diag)-41, UNABLE TO SWITCH VENTS, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
13	Illumination does not come on, or cannot dim.	<Ref. to AC(diag)-42, ILLUMINATION DOES NOT COME ON OR CANNOT DIM, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>

B: DIAGNOSTIC PROCEDURE WITH PHENOMENON

1. NOTHING IS DISPLAYED ON THE SCREEN OR INDICATORS DO NOT ILLUMINATE

TROUBLE SYMPTOM:

- When the AUTO button is pressed with IGN ON, nothing is displayed on the screen or indicators do not illuminate.
- Self diagnosis using A/C control panel does not operate.

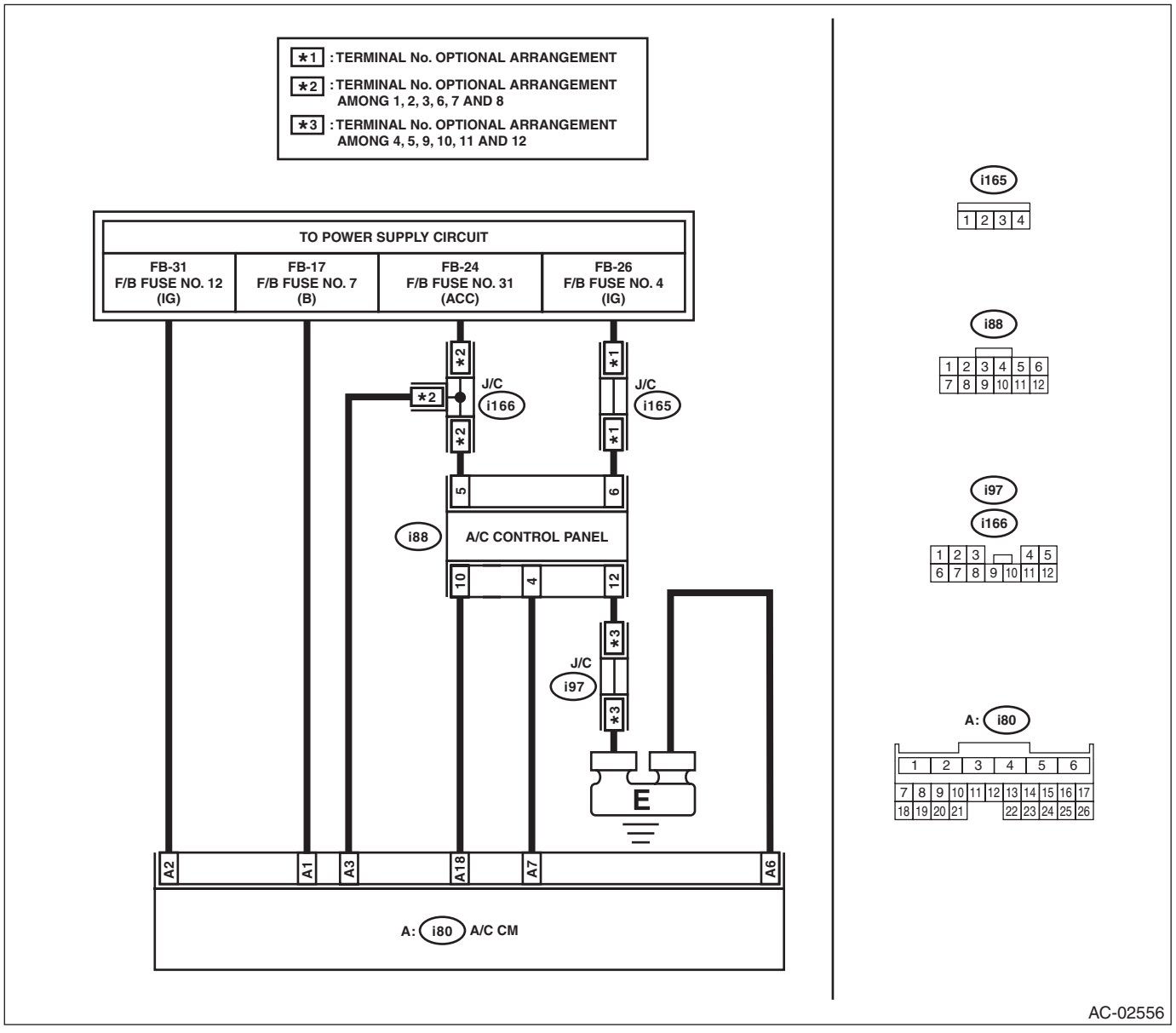
Trouble causes:

- Control module power supply circuit failure
- A/C control panel power supply failure
- UART communication failure

WIRING DIAGRAM:

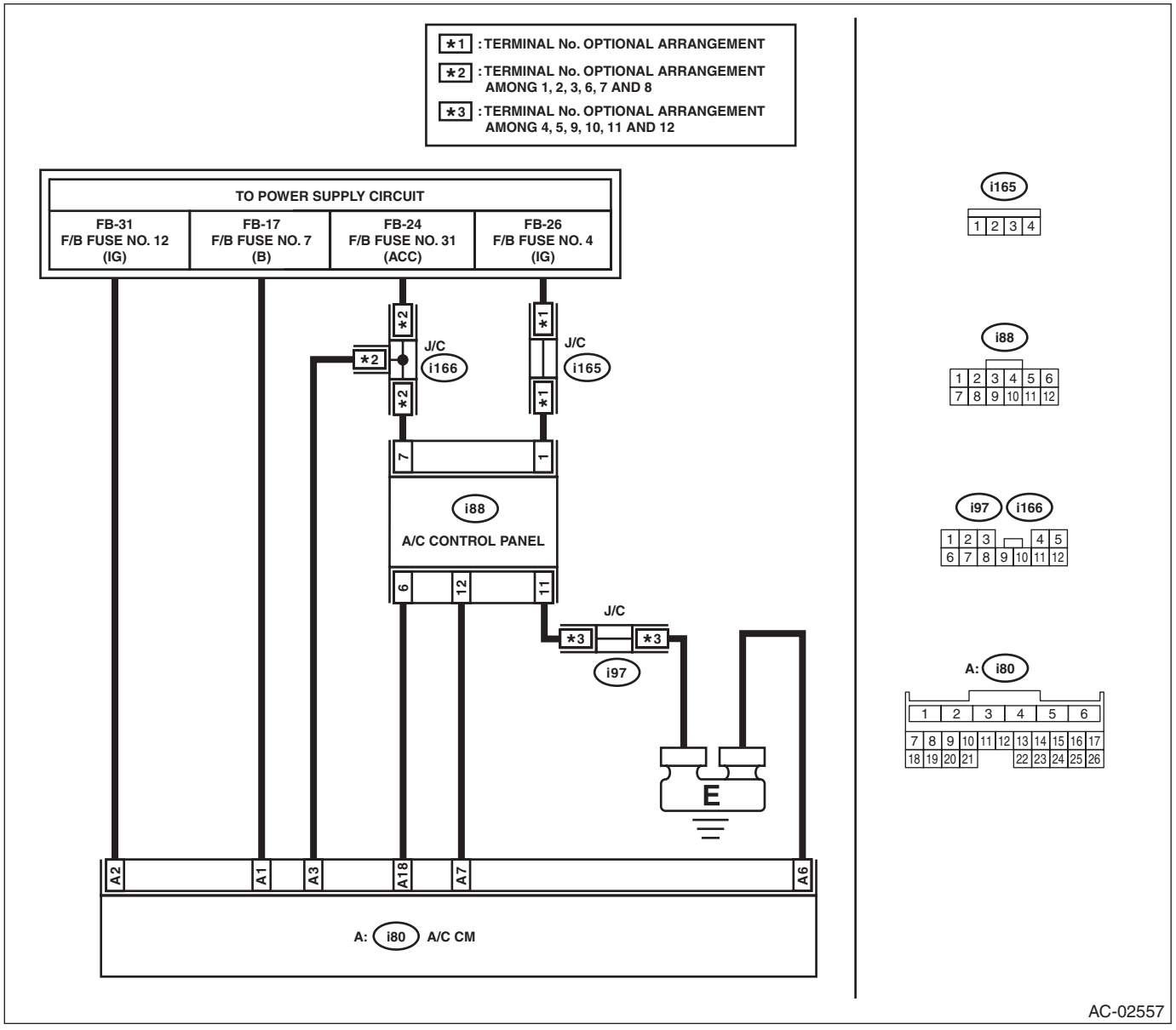
- Auto A/C

Air Conditioning System <Ref. to WI-55, AUTO A/C, WIRING DIAGRAM, Air Conditioning System.>



- Manual A/C

Air Conditioning System <Ref. to WI-51, MANUAL A/C, WIRING DIAGRAM, Air Conditioning System.>



Step		Check	Yes	No
1	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Remove fuse No. 4, 31, 7 and 12 from the fuse & relay box. 3) Check the condition of fuse.	Is the fuse blown out?	Replace the fuse.	Go to step **2**.
2	**CHECK CONNECTOR.** Check the connectors (i166), (i165), (i88), (i97) and (i80) for poor contact.	Is there poor contact of connector?	Repair the connector.	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 connector. 3) Measure the voltage between A/C control panel connector terminal and chassis ground after turning the ignition switch to ON. ***Connector & terminal*** ***Auto A/C*** ***(i88) No. 5 (+) — Chassis ground (–):*** ***(i88) No. 6 (+) — Chassis ground (–):*** ***Manual A/C*** ***(i88) No. 1 (+) — Chassis ground (–):*** ***(i88) No. 7 (+) — 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 GROUND CIRCUIT.** Measure the resistance of harness between A/C control panel and chassis ground after turning the ignition switch to OFF. ***Connector & terminal*** ***Auto A/C*** ***(i88) No. 12 — Chassis ground:*** ***Manual A/C*** ***(i88) No. 11 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **5**.	Repair the harness for ground line.
5	**CHECK A/C CM POWER SUPPLY CIRCUIT.** 1) Install the A/C control panel. 2) Disconnect the A/C CM connector. 3) Measure the voltage between A/C CM connector terminal and chassis ground after turning the ignition switch to ON. ***Connector & terminal*** ***(i80) No. 1 (+) — Chassis ground (–):*** ***(i80) No. 2 (+) — Chassis ground (–):*** ***(i80) No. 3 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **6**.	Check for open or short circuit in the harness between A/C CM and fuse.
6	**CHECK A/C CM GROUND CIRCUIT.** Measure the resistance of harness between A/C CM and chassis ground. ***Connector & terminal*** ***(i80) No. 6 — Chassis ground:***	Is the resistance less than 5 Ω?	Go to step **7**.	Repair the harness for ground line.
7	**CHECK COMMUNICATION CIRCUIT.** Measure the resistance of harness between A/C control panel and air conditioner control module. ***Connector & terminal*** ***Auto A/C*** ***(i88) No. 10 — (i80) No. 18:*** ***(i88) No. 4 — (i80) No. 7:*** ***Manual A/C*** ***(i88) No. 6 — (i80) No. 18:*** ***(i88) No. 12 — (i80) No. 7:***	Is there continuity?	Go to step **8**.	Repair the harness.
8	**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 there continuity?	Repair or replace the short circuit of the harness.	Go to step **9**.

Step		Check	Yes	No
9	**CHECK HARNESS.** Using a tester, check continuity between terminals. ***Connector & terminal (i80) No. 18 — No. 7:***	Is there continuity?	Repair or replace the short circuit of the harness.	Go to step **10**.
10	**CHECK A/C CONTROL PANEL.** 1) Turn the ignition switch to OFF. 2) Replace the A/C control panel with a properly functioning part.	Does the A/C control panel operate normally?	Since the A/C control panel has an internal error, replace A/C control panel with a new one. <Ref. to AC-48, REMOVAL, Control Panel.>	Since the A/C CM has an internal error, replace A/C CM with a new one. <Ref. to AC-56, REMOVAL, Control Unit.>

2. AIR CONDITIONER DOES NOT STOP EVEN WHEN THE OFF SWITCH IS PRESSED (VEHICLES WITH FULLY AUTOMATIC AIR CONDITIONER)

TROUBLE SYMPTOM:
Even when the OFF switch is pressed, the blower fan does not turn off, the inlet opening remains in FRESH mode, and the compressor does not turn off.

Trouble causes:
- UART communication failure
- A/C control panel failure
- Blower motor failure
- Intake door actuator failure
- Compressor failure

	Step	Check	Yes	No
1	**CHECK A/C CONTROL PANEL.** 1) Turn the ignition switch to ON. 2) Press the OFF switch of the A/C control panel. 3) Using Subaru Select Monitor, check the following data in “Read Current Data”. • Blower Fan Level • Variable Flow Change Solenoid Duty (vehicles with variable air conditioner) • Fresh/Recircle Air Door Actuator Position Target	Does “Blower Fan Level” indicate 0, “Variable Flow Change Solenoid Duty” indicate 0% and “Fresh/Recircle Air Door Actuator Position Target” indicate 100% respectively?	Go to step **2**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>
2	**CHECK BLOWER MOTOR.** With the OFF switch pressed, check the blower motor operation.	Is the blower motor stopped?	Go to step **3**.	<Ref. to AC(diag)-34, AIR GOES OUT OF CONTROL, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
3	**CHECK INTAKE DOOR ACTUATOR.** With the OFF switch pressed, check the FRESH/RECIRC door operation.	Does the FRESH/RECIRC door set to FRESH?	Go to step **4**.	<Ref. to AC(diag)-39, UNABLE TO SWITCH SUCTION VENTS, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
4	**CHECK COMPRESSOR.** With the OFF switch pressed, check the compressor operation.	Is the compressor stopped?	System is normal.	<Ref. to AC(diag)-37, COLD AIR DOES NOT COME OUT EVEN WHEN THE A/C SWITCH IS PRESSED. THE GLASS CANNOT BE DEFOGGED (COMPRESSOR DOES NOT OPERATE (VARIABLE)), DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>

3. THE WINDSHIELD GLASS IS NOT CLEARED EVEN WHEN THE DEF SWITCH IS PRESSED (VEHICLES WITH FULLY AUTOMATIC AIR CONDITIONER)

TROUBLE SYMPTOM:

Even when the DEF switch is pressed, the defroster indicator does not illuminate, the outlet opening is not set to DEF, the compressor does not turn on and the outlet opening is not set to FRESH.

Trouble causes:

- UART communication failure
- A/C control panel failure
- Mode door actuator failure
- Compressor failure
- Intake door actuator failure

	Step	Check	Yes	No
1	**CHECK A/C CONTROL PANEL.** 1) Turn the ignition switch to ON. 2) Press the DEF switch of the A/C control panel. 3) Using Subaru Select Monitor, check the following data in “Read Current Data”. • Mode Door Actuator Position Target • Variable Flow Change Solenoid Duty (vehicles with variable air conditioner) • Fresh/Recircle Air Door Actuator Position Target	Does “Mode Door Actuator Position Target” indicate 100%, “Variable Flow Change Solenoid Duty” indicate 0% or more and “Fresh/Recircle Air Door Actuator Position Target” indicate 100% respectively?	Go to step **2**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>
2	**CHECK MODE DOOR ACTUATOR.** With the DEF switch ON, check the mode door operation.	Does the air come out from the DEF outlet opening?	Go to step **3**.	<Ref. to AC(diag)-41, UNABLE TO SWITCH VENTS, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
3	**CHECK INTAKE DOOR ACTUATOR.** With the DEF switch ON, check the FRESH/RECIRC door operation.	Does the FRESH/RECIRC door operate normally?	Go to step **4**.	<Ref. to AC(diag)-39, UNABLE TO SWITCH SUCTION VENTS, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
4	**CHECK COMPRESSOR.** With the DEF switch ON, check the compressor operation.	Does the compressor operate?	System is normal.	<Ref. to AC(diag)-37, COLD AIR DOES NOT COME OUT EVEN WHEN THE A/C SWITCH IS PRESSED. THE GLASS CANNOT BE DEFOGGED (COMPRESSOR DOES NOT OPERATE (VARIABLE)), DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>

4. COLD AIR NOT EMITTED

TROUBLE SYMPTOM:
Cold air not emitted.
Trouble causes:
- Airflow capacity failure
- Refrigerant pressure failure
- Air mix actuator (driver's) failure
- Air mix actuator (passenger's) failure (with left/right independent air conditioner only)
- Rear vent actuator failure (with rear seat air conditioning only)
- Intake door actuator failure
- Evaporator sensor failure (vehicles with automatic air conditioner only)
- In-vehicle sensor failure (vehicles with automatic air conditioner only)
- Ambient sensor failure (vehicles with automatic air conditioner only)
- Sunload sensor failure (vehicles with automatic air conditioner only)

	Step	Check	Yes	No
1	**CHECK MAX COOL.** Set the A/C control panel switch as described below. Temperature control switch: MAX COOL FRESH/RECIRC switch: RECIRC Mode switch: VENT A/C switch: ON	Does no cold air come out?	Go to step **2**.	Go to step **4**.
2	**CHECK AIRFLOW CAPACITY.** Check the airflow capacity. <Ref. to AC(diag)-29, AIR DOES NOT COME OUT, OR AIRFLOW CAPACITY IS INSUFFICIENT, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>	Is the airflow capacity normal?	Go to step **3**.	Perform repair according to inspection procedure.
3	**CHECK AMOUNT OF REFRIGERANT PRESSURE.** Check the refrigerant pressure. <Ref. to AC-22, CHECK REFRIGERANT GAS PRESSURE, PROCEDURE, Refrigerant Pressure with Manifold Gauge Set.>	Is the refrigerant pressure normal?	For vehicles with automatic air conditioner Go to step **4**. For vehicles with manual air conditioner Go to step **6**.	Perform repair according to refrigerant pressure inspection.
4	**CHECK A/C CONTROL PANEL (VEHICLES WITH AUTOMATIC AIR CONDITIONER).** 1) Continue clicking the temperature control switch ▽ (driver's) and (passenger's). 2) Using Subaru Select Monitor, display the following data in "Read Current Data". • Heater Control Panel Setting Value (Driver's) • Heater Control Panel Setting Value (Passenger's) • Rear Vent Actuator Position Target (with rear seat air conditioning only)	Do "Heater Control Panel Setting Value (Driver's)" and "Heater Control Panel Setting Value (Passenger's)" indicate "60"? In addition, does "Rear Vent Actuator Position Target" indicate "74.5"?	Go to step **5**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>
5	**CHECK A/C CONTROL PANEL (VEHICLES WITH AUTOMATIC AIR CONDITIONER).** 1) Continue clicking the temperature control switch △ (driver's). 2) Using Subaru Select Monitor, display the following data in "Read Current Data". • Heater Control Panel Setting Value (Driver's) • Heater Control Panel Setting Value (Passenger's) • Rear Vent Actuator Position Target (with rear seat air conditioning only)	Do "Heater Control Panel Setting Value (Driver's)" and "Heater Control Panel Setting Value (Passenger's)" indicate "90"? In addition, does "Rear Vent Actuator Position Target" indicate "-5.5"?	Go to step **8**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>

	Step	Check	Yes	No
6	**CHECK A/C CONTROL PANEL (VEHICLES WITH MANUAL AIR CONDITIONER).** 1) Set the temperature control switch dial to MAX COOL. 2) Using Subaru Select Monitor, display the following data in “Read Current Data”. • Target air mix door actuator position (driver’s side)	Does “Target air mix door actuator position (driver’s side)” indicate “0%”?	Go to step **7**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>
7	**CHECK A/C CONTROL PANEL (VEHICLES WITH MANUAL AIR CONDITIONER).** 1) Set the temperature control switch dial to MAX HOT. 2) Using Subaru Select Monitor, display the following data in “Read Current Data”. • Target air mix door actuator position (driver’s side)	Does “Target air mix door actuator position (driver’s side)” indicate “100%”?	Go to step **8**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>
8	**CHECK DTC.** 1) Turn the ignition switch to ON. 2) Set the temperature control switch to MAX COOL, and wait for 16 seconds or more. (For vehicles with left/right independent air conditioner, perform setting on both sides.) 3) Read the DTC using Subaru Select Monitor.	Are DTCs B1610, B1611, B1612, B1613, B1614, B1615, B1630, B1631 and B1632 displayed?	Perform the diagnosis according to DTC.	Go to step **9**.
9	**CHECK DTC.** 1) Turn the ignition switch to ON. 2) Set the temperature control switch to MAX HOT, and wait for 16 seconds or more. (For vehicles with left/right independent air conditioner, perform setting on both sides.) 3) Read the DTC using Subaru Select Monitor.	Are DTCs B1610, B1611, B1612, B1613, B1614, B1615, B1630, B1631 and B1632 displayed?	Perform the diagnosis according to DTC.	Go to step **10**.
10	**CHECK INTAKE DOOR ACTUATOR.** Visually check the intake door actuator operation.	Is the intake door actuator normal?	Go to step **11**.	Check the intake door actuator. <Ref. to AC(diag)-39, UNABLE TO SWITCH SUCTION VENTS, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
11	**CHECK EVAPORATOR SENSOR UNIT (VEHICLES WITH AUTOMATIC AIR CONDITIONER ONLY).** Perform the inspection of evaporator sensor unit. <Ref. to AC-91, INSPECTION, Evaporator Sensor.>	Is the evaporator sensor normal?	Go to step **12**.	Replace the evaporator sensor. <Ref. to AC-90, REMOVAL, Evaporator Sensor.>
12	**CHECK IN-VEHICLE SENSOR UNIT (VEHICLES WITH AUTOMATIC AIR CONDITIONER ONLY).** Check in-vehicle sensor. <Ref. to AC-87, INSPECTION, In-Vehicle Sensor (Auto A/C Model).>	Is the in-vehicle sensor normal?	Go to step **13**.	Replace the in-vehicle sensor. <Ref. to AC-86, REMOVAL, In-Vehicle Sensor (Auto A/C Model).>
13	**CHECK AMBIENT SENSOR (VEHICLES WITH AUTOMATIC AIR CONDITIONER ONLY).** Check the ambient sensor. <Ref. to AC-83, INSPECTION, Ambient Sensor.>	Is the ambient sensor normal?	Go to step **14**.	Replace the ambient sensor. <Ref. to AC-82, REMOVAL, Ambient Sensor.>

	Step	Check	Yes	No
14	**CHECK SUNLOAD SENSOR UNIT (VEHICLES WITH AUTOMATIC AIR CONDITIONER ONLY).** Check the sunload sensor unit. <Ref. to AC-85, INSPECTION, Sunload Sensor (Auto A/C Model).>	Is the sunload sensor normal?	System is normal.	Replace the sunload sensor. <Ref. to AC-84, REMOVAL, Sunload Sensor (Auto A/C Model).>

5. WARM AIR NOT EMITTED

TROUBLE SYMPTOM:
Warm air not emitted.
Trouble causes:
- Airflow capacity failure
- Coolant failure
- UART communication failure
- A/C control panel failure
- Air mix actuator (driver's) failure
- Air mix actuator (passenger's) failure (with left/right independent air conditioner only)
- Rear vent actuator failure (with rear seat air conditioning only)
- Intake door actuator failure
- Evaporator sensor failure (vehicles with automatic air conditioner only)
- In-vehicle sensor failure (vehicles with automatic air conditioner only)
- Ambient sensor failure (vehicles with automatic air conditioner only)
- Sunload sensor failure (vehicles with automatic air conditioner only)

	Step	Check	Yes	No
1	**CHECK MAX HOT.** Set the A/C control panel switch as described below. Temperature control switch: MAX HOT FRESH/RECIRC switch: FRESH Mode switch: HEAT A/C switch: OFF	Does no warm air come out?	Go to step **2**.	Go to step **4**.
2	**CHECK AIRFLOW CAPACITY.** Check the airflow capacity. <Ref. to AC(diag)-29, AIR DOES NOT COME OUT, OR AIRFLOW CAPACITY IS INSUFFICIENT, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>	Is the airflow capacity normal?	Go to step **3**.	Perform repair according to inspection procedure.
3	**CHECK ENGINE COOLANT.** Check engine coolant amount.	Is the engine coolant amount normal?	For vehicles with automatic air conditioner Go to step **4**. For vehicles with manual air conditioner Go to step **6**.	Fill engine coolant. If there is coolant leakage, repair the leaks according to Engine Cooling System Trouble in General. <Ref. to CO(H4DO)-42, Engine Cooling System Trouble in General.> <Ref. to CO(H6DO)-27, Engine Cooling System Trouble in General.>

	Step	Check	Yes	No
4	**CHECK A/C CONTROL PANEL (VEHICLES WITH AUTOMATIC AIR CONDITIONER).** 1) Continue clicking the temperature control switch ▽ (driver's) and (passenger's). 2) Using Subaru Select Monitor, display the following data in "Read Current Data". • Heater Control Panel Setting Value (Driver's) • Heater Control Panel Setting Value (Passenger's) • Rear Vent Actuator Position Target (with rear seat air conditioning only)	Do "Heater Control Panel Setting Value (Driver's)" and "Heater Control Panel Setting Value (Passenger's)" indicate "60"? In addition, does "Rear Vent Actuator Position Target" indicate "74.5"?	Go to step **5**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>
5	**CHECK A/C CONTROL PANEL (VEHICLES WITH AUTOMATIC AIR CONDITIONER).** 1) Continue clicking the temperature control switch △ (driver's). 2) Using Subaru Select Monitor, display the following data in "Read Current Data". • Heater Control Panel Setting Value (Driver's) • Heater Control Panel Setting Value (Passenger's) • Rear Vent Actuator Position Target (with rear seat air conditioning only)	Do "Heater Control Panel Setting Value (Driver's)" and "Heater Control Panel Setting Value (Passenger's)" indicate "90"? In addition, does "Rear Vent Actuator Position Target" indicate "-5.5"?	Go to step **8**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>
6	**CHECK A/C CONTROL PANEL (VEHICLES WITH MANUAL AIR CONDITIONER).** 1) Set the temperature control switch dial to MAX COOL. 2) Using Subaru Select Monitor, display the following data in "Read Current Data". • Target air mix door actuator position (driver's side)	Does "Target air mix door actuator position (driver's side)" indicate "0%"?	Go to step **7**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>
7	**CHECK A/C CONTROL PANEL (VEHICLES WITH MANUAL AIR CONDITIONER).** 1) Set the temperature control switch dial to MAX HOT. 2) Using Subaru Select Monitor, display the following data in "Read Current Data". • Target air mix door actuator position (driver's side)	Does "Target air mix door actuator position (driver's side)" indicate "100%"?	Go to step **8**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>
8	**CHECK DTC.** 1) Turn the ignition switch to ON. 2) Set the temperature control switch to MAX COOL, and wait for 16 seconds or more. (For vehicles with left/right independent air conditioner, perform setting on both sides.) 3) Read the DTC using Subaru Select Monitor.	Are DTCs B1610, B1611, B1612, B1613, B1614, B1615, B1630, B1631 and B1632 displayed?	Perform the diagnosis according to DTC.	Go to step **9**.
9	**CHECK DTC.** 1) Turn the ignition switch to ON. 2) Set the temperature control switch to MAX HOT, and wait for 16 seconds or more. (For vehicles with left/right independent air conditioner, perform setting on both sides.) 3) Read the DTC using Subaru Select Monitor.	Are DTCs B1610, B1611, B1612, B1613, B1614, B1615, B1630, B1631 and B1632 displayed?	Perform the diagnosis according to DTC.	Go to step **10**.

	Step	Check	Yes	No
10	**CHECK INTAKE DOOR ACTUATOR.** Visually check the intake door actuator operation.	Is the intake door actuator normal?	Go to step **11**.	Check the intake door actuator. <Ref. to AC(diag)-39, UNABLE TO SWITCH SUCTION VENTS, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
11	**CHECK EVAPORATOR SENSOR UNIT (VEHICLES WITH AUTOMATIC AIR CONDITIONER ONLY).** Perform the inspection of evaporator sensor unit. <Ref. to AC-91, INSPECTION, Evaporator Sensor.>	Is the evaporator sensor normal?	Go to step **12**.	Replace the evaporator sensor. <Ref. to AC-90, REMOVAL, Evaporator Sensor.>
12	**CHECK IN-VEHICLE SENSOR UNIT (VEHICLES WITH AUTOMATIC AIR CONDITIONER ONLY).** Check in-vehicle sensor circuit. <Ref. to AC-87, INSPECTION, In-Vehicle Sensor (Auto A/C Model).>	Is the in-vehicle sensor circuit normal?	Go to step **13**.	Replace the in-vehicle sensor. <Ref. to AC-86, REMOVAL, In-Vehicle Sensor (Auto A/C Model).>
13	**CHECK AMBIENT SENSOR (VEHICLES WITH AUTOMATIC AIR CONDITIONER ONLY).** Check the ambient sensor. <Ref. to AC-83, INSPECTION, Ambient Sensor.>	Is the ambient sensor normal?	Go to step **14**.	Replace the ambient sensor. <Ref. to AC-82, REMOVAL, Ambient Sensor.>
14	**CHECK SUNLOAD SENSOR UNIT (VEHICLES WITH AUTOMATIC AIR CONDITIONER ONLY).** Check the sunload sensor unit. <Ref. to AC-85, INSPECTION, Sunload Sensor (Auto A/C Model).>	Is the sunload sensor normal?	System is normal.	Replace the sunload sensor. <Ref. to AC-84, REMOVAL, Sunload Sensor (Auto A/C Model).>

6. COMPARTMENT TEMPERATURE IS EXCESSIVELY LOWER THAN SETTING TEMPERATURE

TROUBLE SYMPTOM:
Compartment temperature is excessively lower than setting temperature.
Trouble causes:
- Large airflow capacity
- Refrigerant pressure failure
- UART communication failure
- A/C control panel failure
- Air mix actuator (driver's) failure
- Air mix actuator (passenger's) failure (with left/right independent air conditioner only)
- Rear vent actuator failure (with rear seat air conditioning only)
- Evaporator sensor failure (vehicles with automatic air conditioner only)
- In-vehicle sensor failure (vehicles with automatic air conditioner only)
- Ambient sensor failure (vehicles with automatic air conditioner only)
- Sunload sensor failure (vehicles with automatic air conditioner only)

	Step	Check	Yes	No
1	**CHECK AIRFLOW CAPACITY.** Check the airflow capacity. <Ref. to AC(diag)-34, AIR GOES OUT OF CONTROL, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>	Is the airflow capacity normal?	Go to step **2**.	Perform repair according to inspection procedure.
2	**CHECK AMOUNT OF REFRIGERANT PRESSURE.** Check the refrigerant pressure. <Ref. to AC-22, CHECK REFRIGERANT GAS PRESSURE, PROCEDURE, Refrigerant Pressure with Manifold Gauge Set.>	Is the refrigerant pressure normal?	For vehicles with automatic air conditioner Go to step **3**. For vehicles with manual air conditioner Go to step **5**.	Perform repair according to refrigerant pressure inspection.
3	**CHECK A/C CONTROL PANEL (VEHICLES WITH AUTOMATIC AIR CONDITIONER).** 1) Continue clicking the temperature control switch ▽ (driver's) and (passenger's). 2) Using Subaru Select Monitor, display the following data in "Read Current Data". • Heater Control Panel Setting Value (Driver's) • Heater Control Panel Setting Value (Passenger's) • Rear Vent Actuator Position Target (with rear seat air conditioning only)	Do "Heater Control Panel Setting Value (Driver's)" and "Heater Control Panel Setting Value (Passenger's)" indicate "60"? In addition, does "Rear Vent Actuator Position Target" indicate "74.5"?	Go to step **4**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>?
4	**CHECK A/C CONTROL PANEL (VEHICLES WITH AUTOMATIC AIR CONDITIONER).** 1) Continue clicking the temperature control switch △ (driver's). 2) Using Subaru Select Monitor, display the following data in "Read Current Data". • Heater Control Panel Setting Value (Driver's) • Heater Control Panel Setting Value (Passenger's) • Rear Vent Actuator Position Target (with rear seat air conditioning only)	Do "Heater Control Panel Setting Value (Driver's)" and "Heater Control Panel Setting Value (Passenger's)" indicate "90"? In addition, does "Rear Vent Actuator Position Target" indicate "-5.5"?	Go to step **5**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>

	Step	Check	Yes	No
5	**CHECK A/C CONTROL PANEL (VEHICLES WITH MANUAL AIR CONDITIONER).** 1) Set the temperature control switch dial to MAX COOL. 2) Using Subaru Select Monitor, display the following data in "Read Current Data". • Target air mix door actuator position (driver's side)	Does "Target air mix door actuator position (driver's side)" indicate "0%"?	Go to step **6**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>
6	**CHECK A/C CONTROL PANEL (VEHICLES WITH MANUAL AIR CONDITIONER).** 1) Set the temperature control switch dial to MAX HOT. 2) Using Subaru Select Monitor, display the following data in "Read Current Data". • Target air mix door actuator position (driver's side)	Does "Target air mix door actuator position (driver's side)" indicate "100%"?	Go to step **7**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>
7	**CHECK DTC.** 1) Turn the ignition switch to ON. 2) Set the temperature control switch to MAX COOL, and wait for 16 seconds or more. (For vehicles with left/right independent air conditioner, perform setting on both sides.) 3) Read the DTC using Subaru Select Monitor.	Are DTCs B1610, B1611, B1612, B1613, B1614, B1615, B1630, B1631 and B1632 displayed?	Perform the diagnosis according to DTC.	Go to step **8**.
8	**CHECK DTC.** 1) Turn the ignition switch to ON. 2) Set the temperature control switch to MAX HOT, and wait for 16 seconds or more. (For vehicles with left/right independent air conditioner, perform setting on both sides.) 3) Read the DTC using Subaru Select Monitor.	Are DTCs B1610, B1611, B1612, B1613, B1614, B1615, B1630, B1631 and B1632 displayed?	Perform the diagnosis according to DTC.	Go to step **9**.
9	**CHECK EVAPORATOR SENSOR UNIT (VEHICLES WITH AUTOMATIC AIR CONDITIONER ONLY).** Perform the inspection of evaporator sensor unit. <Ref. to AC-91, INSPECTION, Evaporator Sensor.>	Is the evaporator sensor normal?	Go to step **10**.	Replace the evaporator sensor. <Ref. to AC-90, REMOVAL, Evaporator Sensor.>
10	**CHECK IN-VEHICLE SENSOR UNIT (VEHICLES WITH AUTOMATIC AIR CONDITIONER ONLY).** Check in-vehicle sensor circuit. <Ref. to AC-87, INSPECTION, In-Vehicle Sensor (Auto A/C Model).>	Is the in-vehicle sensor circuit normal?	Go to step **11**.	Replace the in-vehicle sensor. <Ref. to AC-86, REMOVAL, In-Vehicle Sensor (Auto A/C Model).>
11	**CHECK AMBIENT SENSOR (VEHICLES WITH AUTOMATIC AIR CONDITIONER ONLY).** Check ambient sensor circuit. <Ref. to AC-83, INSPECTION, Ambient Sensor.>	Is the ambient sensor circuit normal?	Go to step **12**.	Replace the ambient sensor. <Ref. to AC-82, REMOVAL, Ambient Sensor.>
12	**CHECK SUNLOAD SENSOR UNIT (VEHICLES WITH AUTOMATIC AIR CONDITIONER ONLY).** Check the sunload sensor unit. <Ref. to AC-85, INSPECTION, Sunload Sensor (Auto A/C Model).>	Is the sunload sensor normal?	System is normal.	Replace the sunload sensor. <Ref. to AC-84, REMOVAL, Sunload Sensor (Auto A/C Model).>

7. COMPARTMENT TEMPERATURE IS EXCESSIVELY HIGHER THAN SETTING TEMPERATURE

TROUBLE SYMPTOM:
Compartment temperature is excessively higher than setting temperature.
Trouble causes:
- Large airflow capacity
- UART communication failure
- A/C control panel failure
- Air mix actuator (driver's) failure
- Air mix actuator (passenger's) failure (with left/right independent air conditioner only)
- Rear vent actuator failure (with rear seat air conditioning only)
- Intake door actuator failure
- Evaporator sensor failure (vehicles with automatic air conditioner only)
- In-vehicle sensor failure (vehicles with automatic air conditioner only)
- Ambient sensor failure (vehicles with automatic air conditioner only)
- Sunload sensor failure (vehicles with automatic air conditioner only)

	Step	Check	Yes	No
1	**CHECK AIRFLOW CAPACITY.** Check the airflow capacity. <Ref. to AC(diag)-34, AIR GOES OUT OF CONTROL, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>	Is the airflow capacity normal?	For vehicles with automatic air conditioner Go to step **2**. For vehicles with manual air conditioner Go to step **4**.	Perform repair according to inspection procedure.
2	**CHECK A/C CONTROL PANEL (VEHICLES WITH AUTOMATIC AIR CONDITIONER).** 1) Continue clicking the temperature control switch ▽ (driver's) and (passenger's). 2) Using Subaru Select Monitor, display the following data in "Read Current Data". • Heater Control Panel Setting Value (Driver's) • Heater Control Panel Setting Value (Passenger's) • Rear Vent Actuator Position Target (with rear seat air conditioning only)	Do "Heater Control Panel Setting Value (Driver's)" and "Heater Control Panel Setting Value (Passenger's)" indicate "60"? In addition, does "Rear Vent Actuator Position Target" indicate "74.5"?	Go to step **3**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>
3	**CHECK A/C CONTROL PANEL (VEHICLES WITH AUTOMATIC AIR CONDITIONER).** 1) Continue clicking the temperature control switch △ (driver's). 2) Using Subaru Select Monitor, display the following data in "Read Current Data". • Heater Control Panel Setting Value (Driver's) • Heater Control Panel Setting Value (Passenger's) • Rear Vent Actuator Position Target (with rear seat air conditioning only)	Do "Heater Control Panel Setting Value (Driver's)" and "Heater Control Panel Setting Value (Passenger's)" indicate "90"? In addition, does "Rear Vent Actuator Position Target" indicate "-5.5"?	Go to step **4**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>
4	**CHECK A/C CONTROL PANEL (VEHICLES WITH MANUAL AIR CONDITIONER).** 1) Set the temperature control switch dial to MAX COOL. 2) Using Subaru Select Monitor, display the following data in "Read Current Data". • Target air mix door actuator position (driver's side)	Does "Target air mix door actuator position (driver's side)" indicate "0%"?	Go to step **5**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>

	Step	Check	Yes	No
5	**CHECK A/C CONTROL PANEL (VEHICLES WITH MANUAL AIR CONDITIONER).** 1) Set the temperature control switch dial to MAX HOT. 2) Using Subaru Select Monitor, display the following data in "Read Current Data". • Target air mix door actuator position (driver's side)	Does "Target air mix door actuator position (driver's side)" indicate "100%"?	Go to step **6**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>
6	**CHECK DTC.** 1) Turn the ignition switch to ON. 2) Set the temperature control switch to MAX COOL, and wait for 16 seconds or more. (For vehicles with left/right independent air conditioner, perform setting on both sides.) 3) Read the DTC using Subaru Select Monitor.	Are DTCs B1610, B1611, B1612, B1613, B1614, B1615, B1630, B1631 and B1632 displayed?	Perform the diagnosis according to DTC.	Go to step **7**.
7	**CHECK DTC.** 1) Turn the ignition switch to ON. 2) Set the temperature control switch to MAX HOT, and wait for 16 seconds or more. (For vehicles with left/right independent air conditioner, perform setting on both sides.) 3) Read the DTC using Subaru Select Monitor.	Are DTCs B1610, B1611, B1612, B1613, B1614, B1615, B1630, B1631 and B1632 displayed?	Perform the diagnosis according to DTC.	Go to step **8**.
8	**CHECK INTAKE DOOR ACTUATOR.** Visually check the intake door actuator operation.	Is the intake door actuator normal?	Go to step **9**.	Check the intake door actuator. <Ref. to AC(diag)-39, UNABLE TO SWITCH SUCTION VENTS, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
9	**CHECK EVAPORATOR SENSOR UNIT (VEHICLES WITH AUTOMATIC AIR CONDITIONER ONLY).** Perform the inspection of evaporator sensor unit. <Ref. to AC-91, INSPECTION, Evaporator Sensor.>	Is the evaporator sensor normal?	Go to step **10**.	Replace the evaporator sensor. <Ref. to AC-90, REMOVAL, Evaporator Sensor.>
10	**CHECK IN-VEHICLE SENSOR UNIT (VEHICLES WITH AUTOMATIC AIR CONDITIONER ONLY).** Check in-vehicle sensor circuit. <Ref. to AC-87, INSPECTION, In-Vehicle Sensor (Auto A/C Model).>	Is the in-vehicle sensor circuit normal?	Go to step **11**.	Replace the in-vehicle sensor. <Ref. to AC-86, REMOVAL, In-Vehicle Sensor (Auto A/C Model).>
11	**CHECK AMBIENT SENSOR (VEHICLES WITH AUTOMATIC AIR CONDITIONER ONLY).** Check ambient sensor circuit. <Ref. to AC-83, INSPECTION, Ambient Sensor.>	Is the ambient sensor circuit normal?	Go to step **12**.	Replace the ambient sensor. <Ref. to AC-82, REMOVAL, Ambient Sensor.>
12	**CHECK SUNLOAD SENSOR UNIT (VEHICLES WITH AUTOMATIC AIR CONDITIONER ONLY).** Check the sunload sensor unit. <Ref. to AC-85, INSPECTION, Sunload Sensor (Auto A/C Model).>	Is the sunload sensor normal?	System is normal.	Replace the sunload sensor. <Ref. to AC-84, REMOVAL, Sunload Sensor (Auto A/C Model).>

8. AIR DOES NOT COME OUT, OR AIRFLOW CAPACITY IS INSUFFICIENT

TROUBLE SYMPTOM:

- Airflow capacity is insufficient.
- No air comes out even when the fan switch or fan dial is operated.
- There is a fan speed at which no air comes out.

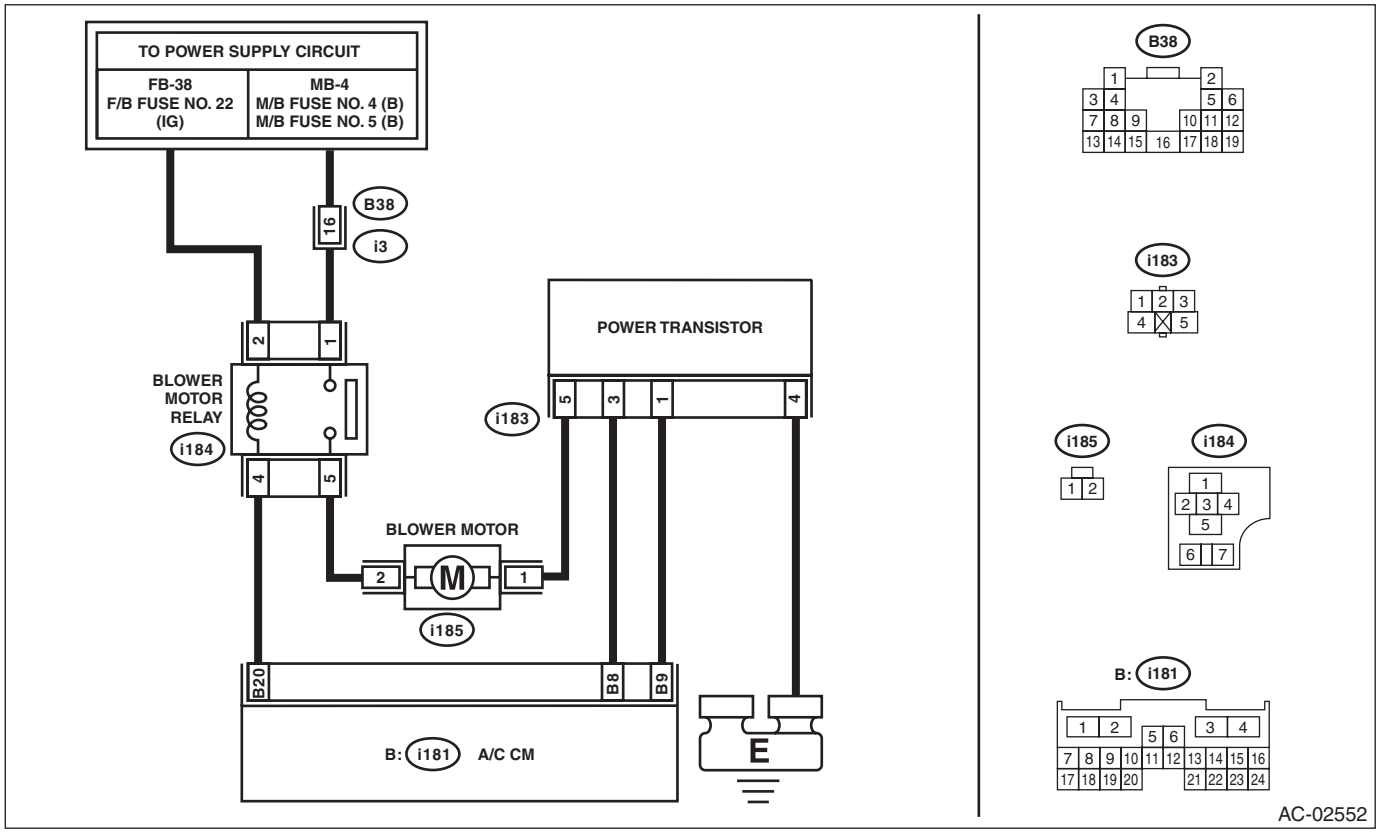
Trouble causes:

- Airflow capacity failure
- UART communication failure
- A/C control panel failure
- Blower motor failure

Auto A/C

WIRING DIAGRAM:

Air Conditioning System <Ref. to WI-55, AUTO A/C, WIRING DIAGRAM, Air Conditioning System.>



Step		Check	Yes	No
1	**CHECK BLOWER OPERATION.** 1) Using Subaru Select Monitor, display the following data in "Read Current Data". • Air mix door actuator position (driver's side) • Air mix door actuator position (passenger's side) (with left/right independent air conditioner) • Blower Fan Level 2) Set the temperature control switch to MAX COOL, and increase or decrease the A/C control panel fan switch. (For vehicles with left/right independent air conditioner, perform setting on both sides.)	Do "Air mix door actuator position (driver's side)" and "Air mix door actuator position (passenger's side)" (with left/right independent air conditioner) indicate "0%"? Does "Blower Fan Level" increase or decrease in accordance with the fan switch operation?	Go to step **2**.	Go to step **5**.

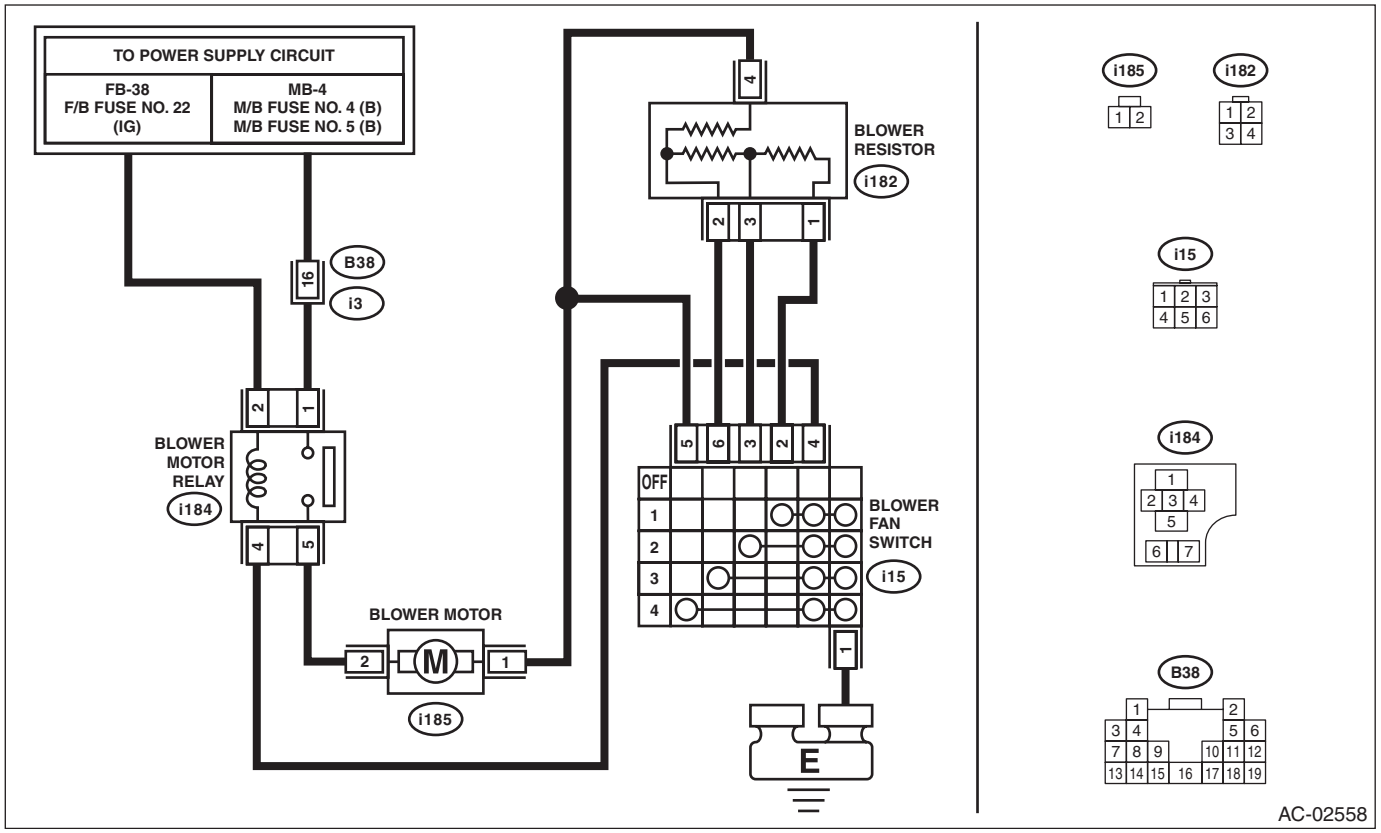
	Step	Check	Yes	No
2	**CHECK AIRFLOW CAPACITY.** Set the temperature control switch to LO (For vehicles with left/right independent air conditioner, perform setting on both seats.), and set the fan switch of the A/C control panel to MAX and set the FRESH/RECIRC switch to RECIRC.	Is the airflow capacity insufficient for the same model?	Go to step **3**.	System is normal.
3	**CHECK A/C FILTER.** Check the A/C filter. <Ref. to AC-113, INSPECTION, A/C Filter.>	Is the A/C filter normal?	Go to step **4**.	Clean or replace the A/C filter.
4	**CHECK EACH DUCT.** Check each duct joint for disconnection or clogging. <Ref. to AC-108, INSPECTION, Air Vent Grille.> <Ref. to AC-110, INSPECTION, Heater Duct.> <Ref. to AC-111, INSPECTION, Heater Vent Duct.>	Is each duct normal?	Go to step **5**.	Repair the faulty duct.
5	**CHECK A/C CONTROL PANEL.** 1) Turn the ignition switch to ON. 2) Set the fan switch to maximum position. 3) Using the Subaru Select Monitor, check "Blower Fan Level" of the current data from the A/C diagnosis.	Does "Blower Fan Level" indicate "31"?	Go to step **6**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>
6	**CHECK A/C CONTROL PANEL.** 1) Set the fan switch to minimum position. 2) Using the Subaru Select Monitor, check "Blower Fan Level" of the current data from the A/C diagnosis.	Does "Blower Fan Level" indicate "1"?	Go to step **7**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>
7	**CHECK CONNECTOR.** Check the connectors (i80) and (i181) for poor contact.	Is there poor contact of connector?	Repair the connector.	Go to step **8**.
8	**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 the fuse blown out?	Replace the fuse.	Go to step **9**.
9	**CHECK BLOWER MOTOR RELAY ON SIGNAL.** 1) Stop the engine. 2) Turn the fan switch to OFF. 3) Turn the ignition switch to ON. 4) Using a tester, measure the voltage between the A/C CM connector (i181) and chassis ground. ***Connector & terminal*** ***(i181) No. 20 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **10**.	• Check for an open or short circuit in the harness between the F/B fuse No. 22 and ECM. • Check the blower relay connector and relay unit. <Ref. to AC-32, CHECK RELAY, INSPECTION, Relay and Fuse.>
10	**CHECK BLOWER MOTOR RELAY ON SIGNAL.** 1) Start the engine. 2) Turn the fan switch to ON. 3) Using a tester, measure the voltage between the A/C CM connector (i181) and chassis ground. ***Connector & terminal*** ***(i181) No. 20 (+) — Chassis ground (–):***	Is the voltage 0 V?	Go to step **11**.	Replace the A/C CM. <Ref. to AC-56, REMOVAL, Control Unit.>

	Step	Check	Yes	No
11	**CHECK BLOWER MOTOR POWER SUPPLY CIRCUIT.** 1) Turn the ignition switch to ON. 2) Turn the fan switch to ON. 3) Use a tester, measure the voltage between the blower motor connector (i185) and chassis ground. ***Connector & terminal*** ***(i185) No. 2 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **12**.	• Check for an open in the blower motor power supply line harness and for disconnection of the connectors (B38) and (i3). • Check the blower relay connector and relay unit. <Ref. to AC-32, CHECK RELAY, INSPECTION, Relay and Fuse.>
12	**CHECK BLOWER MOTOR UNIT.** Check the blower motor. <Ref. to AC-39, INSPECTION, Blower Motor.>	Is the blower motor OK?	Go to step **13**.	Replace the blower motor. <Ref. to AC-38, REMOVAL, Blower Motor.>
13	**CHECK HARNESS.** 1) Disconnect the power transistor and A/C CM connector. 2) Using a tester, measure the resistance between harness terminals. ***Connector & terminal*** ***(i185) No. 1 — (i183) No. 5:*** ***(i183) No. 3 — (i181) No. 8:*** ***(i183) No. 1 — (i181) No. 9:*** ***(i183) No. 4 — Chassis ground:***	Is the resistance less than 1 Ω?	Go to step **14**.	Repair or replace the open circuit of harness.
14	**CHECK HARNESS.** Use a tester to measure the resistance of harness between the power transistor connector (i183) and chassis ground. ***Connector & terminal*** ***(i183) No. 1 — Chassis ground:*** ***(i183) No. 3 — Chassis ground:***	Is the resistance less than 1 Ω?	Repair or replace the short circuit of the harness.	Go to step **15**.
15	**CHECK POWER TRANSISTOR.** Replace the power transistor with a properly functioning part.	Does the blower motor rotate?	Replace the power transistor. <Ref. to AC-40, REMOVAL, Power Transistor (Auto A/C Model).>	Replace the A/C CM <Ref. to AC-56, REMOVAL, Control Unit.>

Manual A/C

WIRING DIAGRAM:

Air Conditioning System <Ref. to WI-51, MANUAL A/C, WIRING DIAGRAM, Air Conditioning System.>



Step		Check	Yes	No
1	**CHECK BLOWER OPERATION.** Set the temperature control dial to MAX COOL, and increase or decrease the fan dial.	Does the airflow capacity increase or decrease in accordance with the dial operation?	Go to step **2**.	Go to step **5**.
2	**CHECK AIRFLOW CAPACITY.** Set the temperature control switch to MAX COOL, set the fan switch to MAX and set the FRESH/RECIRC switch to RECIRC.	Is the airflow capacity insufficient for the same model?	Go to step **3**.	System is normal.
3	**CHECK A/C FILTER.** Check the A/C filter. <Ref. to AC-113, INSPECTION, A/C Filter.>	Is the A/C filter normal?	Go to step **4**.	Clean or replace the A/C filter.
4	**CHECK EACH DUCT.** Check each duct joint for disconnection or clogging. <Ref. to AC-108, INSPECTION, Air Vent Grille.> <Ref. to AC-110, INSPECTION, Heater Duct.> <Ref. to AC-111, INSPECTION, Heater Vent Duct.>	Is each duct normal?	Go to step **5**.	Repair the faulty duct.
5	**CHECK CONNECTOR.** Check the connectors (i184), (i185), (i182), (i15) and (B38) for poor contact.	Is there poor contact of connector?	Repair the connector.	Go to step **6**.
6	**CHECK FUSE.** 1) Remove the fuse No. 22 of the fuse & relay box and the fuses No. 4 and No. 5 of the main fuse box. 2) Check the condition of fuse.	Is the fuse blown out?	Replace the fuse.	Go to step **7**.

	Step	Check	Yes	No
7	**CHECK BLOWER MOTOR RELAY ON SIGNAL.** 1) Stop the engine. 2) Turn the fan switch to OFF. 3) Turn the ignition switch to ON. 4) Use a tester to measure the voltage between the blower fan switch and chassis ground. ***Connector & terminal*** ***(i15) No. 4 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **8**.	• Check for an open or short circuit between the F/B fuse No. 22 and blower fan switch. • Check the blower relay connector and relay unit.
8	**CHECK BLOWER MOTOR RELAY ON SIGNAL.** 1) Start the engine. 2) Turn the fan switch to OFF. 3) Turn the ignition switch to ON. 4) Use a tester to measure the voltage between the blower fan switch and chassis ground. ***Connector & terminal*** ***(i15) No. 4 (+) — Chassis ground (–):***	Is the voltage 0 V?	Go to step **9**.	Replace the A/C control panel. <Ref. to AC-51, MANUAL A/C MODEL, REMOVAL, Control Panel.>
9	**CHECK BLOWER MOTOR POWER SUPPLY.** 1) Turn the ignition switch to ON. 2) Turn the blower switch to ON. 3) Use a tester to measure the voltage between the blower motor connector and chassis ground. ***Connector & terminal*** ***(i185) No. 2 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **10**.	• Check for an open in the blower motor power supply harness, and check the connectors (B38) and (i3). • Check the blower relay connector and relay unit.
10	**CHECK BLOWER MOTOR.** Check the blower motor. <Ref. to AC-39, INSPECTION, Blower Motor.>	Is the blower motor OK?	Go to step **11**.	Replace the blower motor. <Ref. to AC-38, REMOVAL, Blower Motor.>
11	**CHECK HARNESS.** 1) Disconnect the connector from blower motor, blower resistor and blower fan switch. 2) Use a tester to measure the resistance of the harness between terminals. ***Connector & terminal*** ***(i185) No. 1 — (i182) No. 4:*** ***(i185) No. 1 — (i15) No. 4:*** ***(i182) No. 1 — (i15) No. 2:*** ***(i182) No. 2 — (i15) No. 6:*** ***(i182) No. 1 — (i15) No. 3:***	Is the resistance less than 1 Ω?	Go to step **12**.	Repair or replace the open circuit of harness.
12	**CHECK BLOWER RESISTOR.** Check the blower resistor. <Ref. to AC-42, INSPECTION, Blower Resistor (Manual A/C Model).>	Is the blower resistor OK?	Replace the A/C control panel. <Ref. to AC-51, MANUAL A/C MODEL, REMOVAL, Control Panel.>	Replace the blower resistor. <Ref. to AC-41, REMOVAL, Blower Resistor (Manual A/C Model).>

9. AIR GOES OUT OF CONTROL

TROUBLE SYMPTOM:

- The blower rotates even though the blower switch is not turned on.
- The blower motor continues to rotate at high speed. (Not adjustable.)

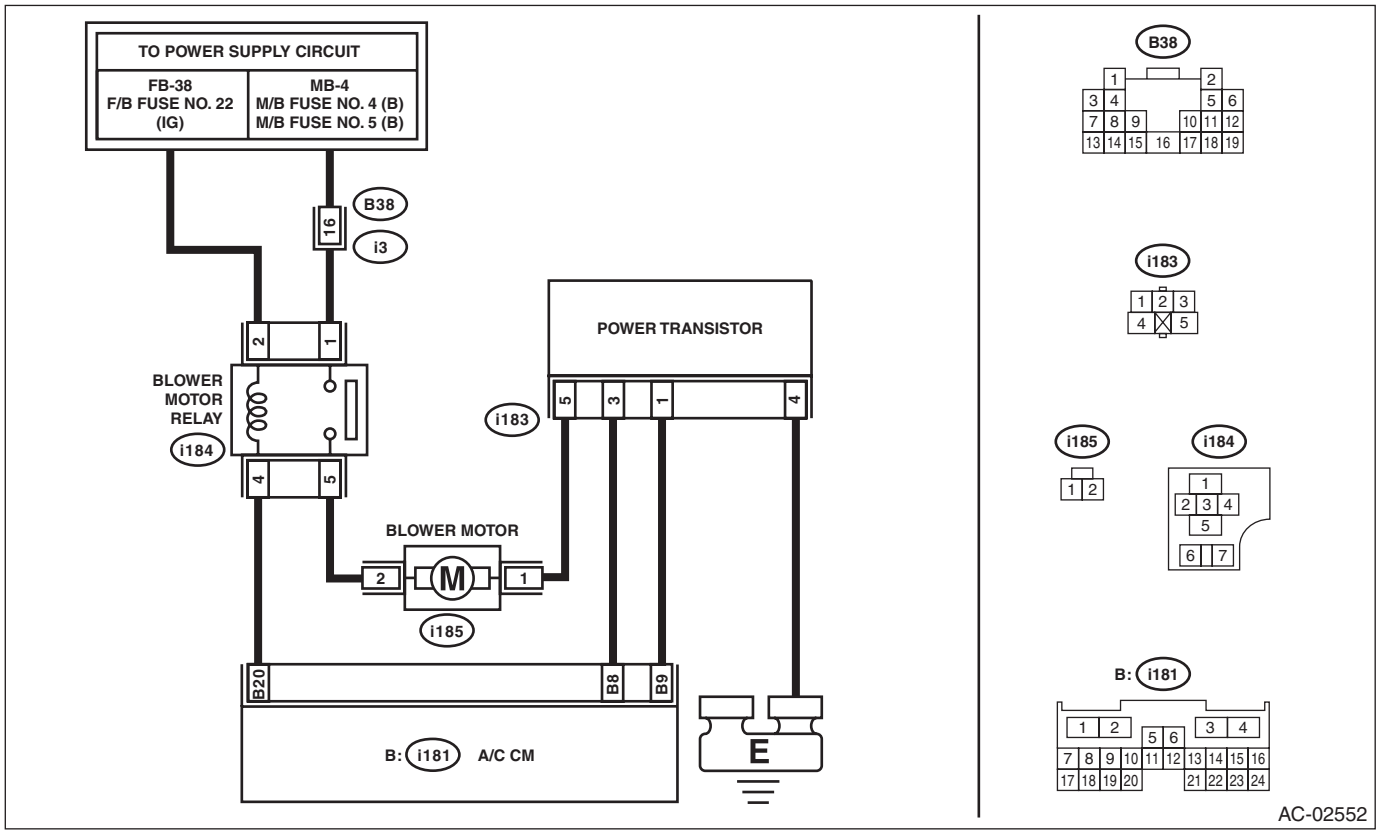
Trouble causes:

- Airflow capacity failure
- UART communication failure
- A/C control panel failure
- Blower motor failure

Auto A/C

WIRING DIAGRAM:

Air Conditioning System <Ref. to WI-55, AUTO A/C, WIRING DIAGRAM, Air Conditioning System.>



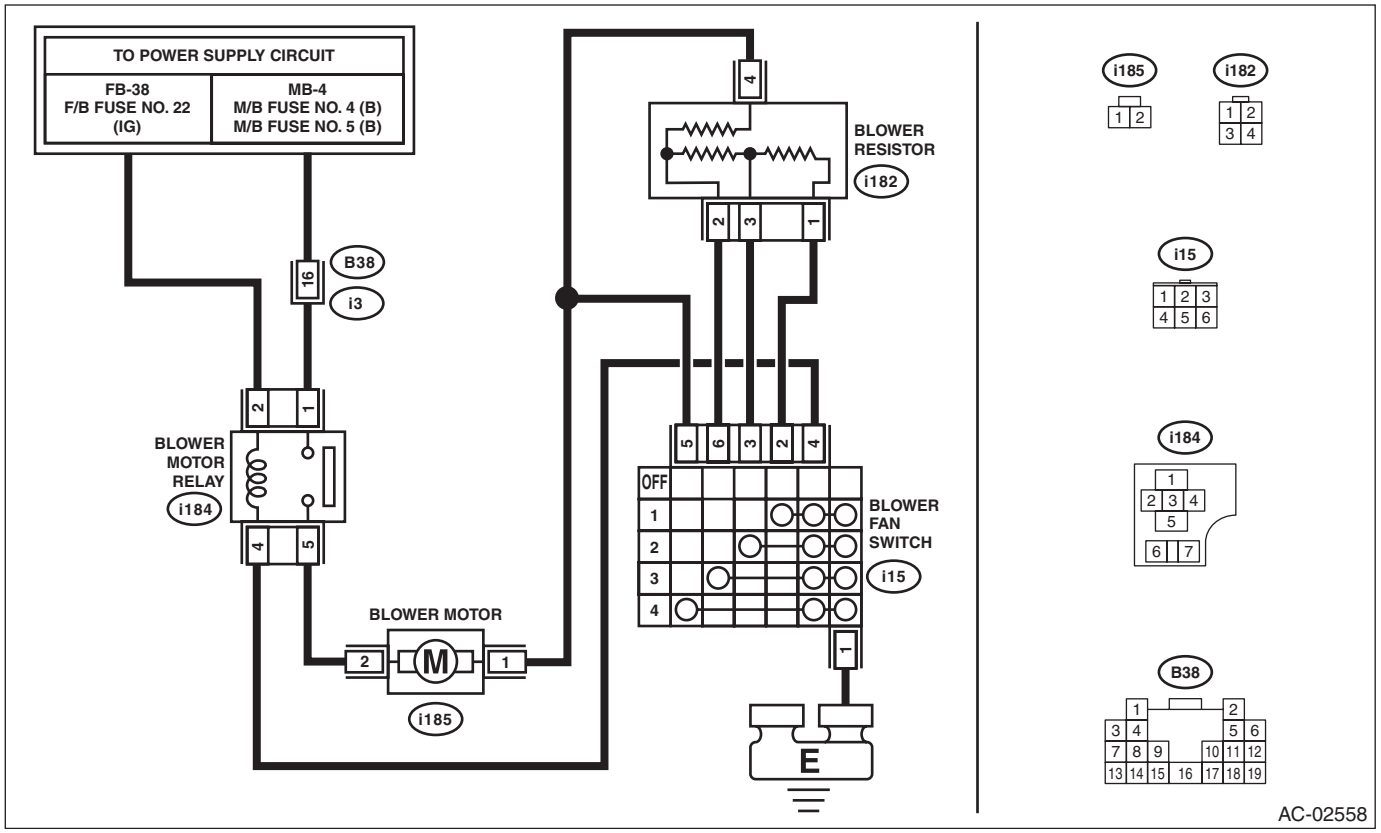
Step		Check	Yes	No
1	**CHECK A/C CONTROL PANEL.** 1) Turn the ignition switch to ON. 2) Set the fan switch to maximum position. 3) Using the Subaru Select Monitor, check "Blower Fan Level" of the current data from the A/C diagnosis.	Does "Blower Fan Level" indicate "31"?	Go to step **2**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>
2	**CHECK A/C CONTROL PANEL.** 1) Set the fan switch to minimum position. 2) Using the Subaru Select Monitor, check "Blower Fan Level" of the current data from the A/C diagnosis.	Does "Blower Fan Level" indicate "1"?	Go to step **3**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>

	Step	Check	Yes	No
3	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the power transistor connector. 3) Use a tester to measure the resistance between the power transistor connector and chassis ground. ***Connector & terminal*** ***(i183) No. 5 — Chassis ground:***	Is the resistance less than 1 Ω?	Repair or replace the short circuit portion of the harness (i183) No. 5 — (i185) No. 1 between blower motor and power transistor.	Go to step **4**.
4	**CHECK HARNESS.** 1) Remove the A/C CM. 2) Turn the ignition switch to ON. 3) Use a tester to measure the resistance between the power transistor connector and chassis ground. ***Connector & terminal*** ***(i183) No. 1 — Chassis ground:***	Is the resistance less than 1 Ω?	Repair or replace the short circuit portion of the harness (i183) No. 1 — (i181) No. 9 between A/C CM and power transistor.	Go to step **5**.
5	**CHECK HARNESS.** 1) Connect the disconnected connectors. 2) Turn the ignition switch to ON. 3) Use a tester to measure the voltage between the power transistor connector and chassis ground. ***Connector & terminal*** ***(i183) No. 1 (+) — Chassis ground (–):***	Is the voltage approx. 10 V when the fan switch is set to 1st, and approx. 1 V when set to 6th?	Replace the power transistor. <Ref. to AC-40, REMOVAL, Power Transistor (Auto A/C Model).>	Go to step **6**.
6	**CHECK A/C CM.** 1) Turn the fan switch to OFF. 2) Disconnect the power transistor connector. 3) Use a tester to measure the resistance between the power transistor connector and chassis ground. ***Connector & terminal*** ***(i183) No. 1 — Chassis ground:***	When the fan switch is OFF and other than OFF, does the resistance change?	Replace the power transistor. <Ref. to AC-40, REMOVAL, Power Transistor (Auto A/C Model).>	Replace the A/C CM. <Ref. to AC-56, REMOVAL, Control Unit.>

Manual A/C

WIRING DIAGRAM:

Air Conditioning System <Ref. to WI-51, MANUAL A/C, WIRING DIAGRAM, Air Conditioning System.>



Step		Check	Yes	No
1	**CHECK BLOWER MOTOR CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the blower fan switch connector and blower resistor connector. 3) Use a tester to measure the resistance between each terminal and chassis ground. ***Connector & terminal*** ***(i182) No. 4 — Chassis ground:*** ***(i15) No. 5 — Chassis ground:*** ***(i15) No. 6 — Chassis ground:*** ***(i15) No. 3 — Chassis ground:*** ***(i15) No. 2 — Chassis ground:***	Is the resistance less than 1 Ω?	Repair or replace the short circuit of the harness.	Go to step **2**.
2	**CHECK BLOWER RESISTOR.** Check the blower resistor. <Ref. to AC-42, INSPECTION, Blower Resistor (Manual A/C Model).>	Is the blower resistor OK?	Replace the A/C control panel. <Ref. to AC-51, MANUAL A/C MODEL, REMOVAL, Control Panel.>	Replace the blower resistor. <Ref. to AC-41, REMOVAL, Blower Resistor (Manual A/C Model).>

10.COLD AIR DOES NOT COME OUT EVEN WHEN THE A/C SWITCH IS PRESSED. THE GLASS CANNOT BE DEFOGGED (COMPRESSOR DOES NOT OPERATE (VARIABLE))

TROUBLE SYMPTOM:

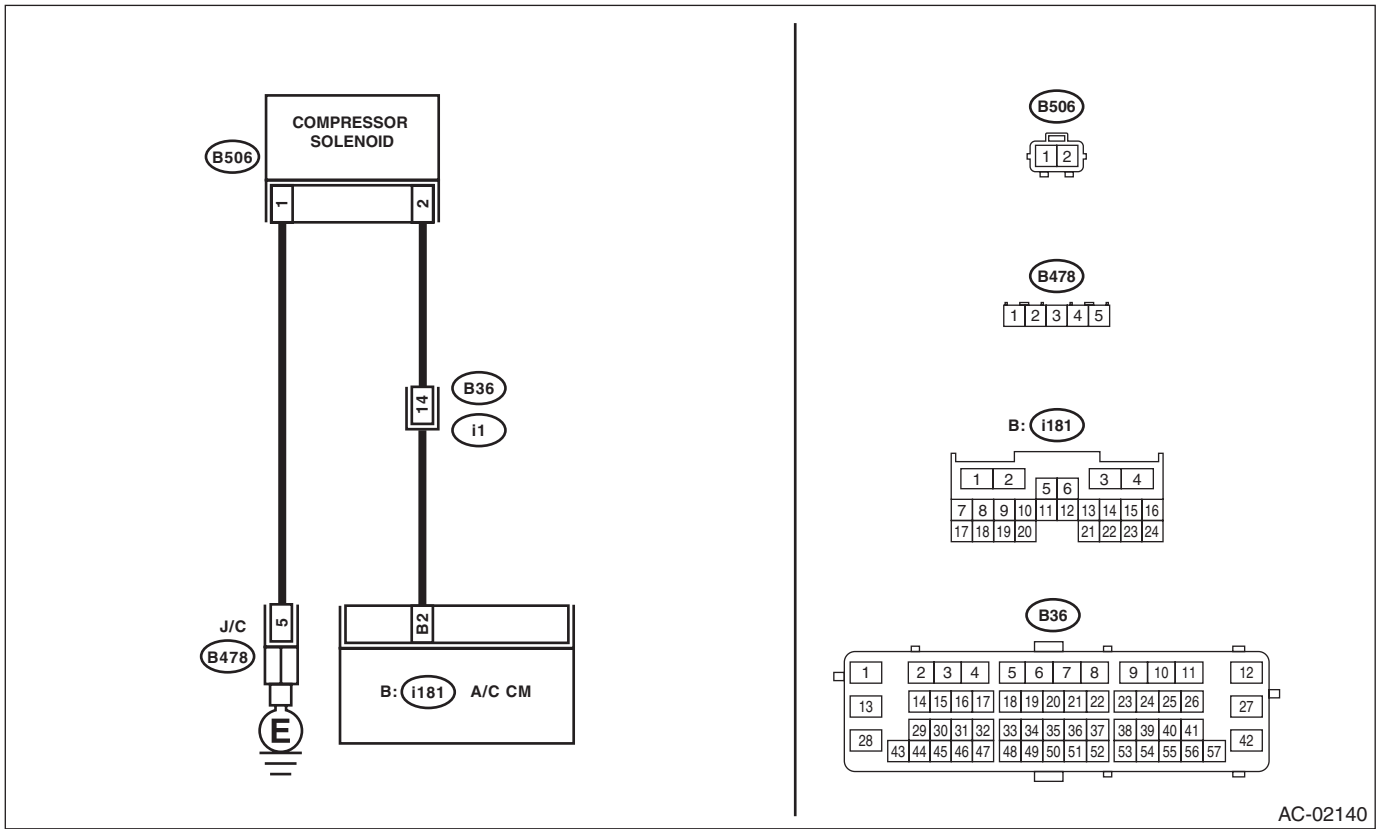
Compressor does not operate even when the A/C switch is turned on and the fan switch is set to LO — HI.

Trouble causes:

Compressor failure

WIRING DIAGRAM:

Air Conditioning System <Ref. to WI-51, WIRING DIAGRAM, Air Conditioning System.>



	Step	Check	Yes	No
1	**CHECK A/C CONTROL PANEL.** 1) Leave the vehicle under the condition at ambient temperature of 15°C (59°F) or more. 2) Turn the ignition switch to ON. 3) Set the fan switch to maximum position. 4) Press the A/C switch.	Is "A/C" displayed on the A/C control panel? Or does the A/C switch indicator illuminate?	Go to step **2**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>
2	**CHECK VARIABLE FLOW CHANGE SOLENOID DUTY VALUE.** Using the Subaru Select Monitor, check "Variable Flow Change Solenoid Duty" of the current data from the A/C diagnosis.	Does the data indicate the value greater than zero?	Go to step **7**.	Go to step **3**.
3	**CHECK EVAPORATOR SENSOR.** Using the Subaru Select Monitor, check "Evaporator Temp." of the current data from the A/C diagnosis.	Does the data indicate -0.5 degree or more?	Go to step **5**.	Go to step **4**.
4	**CHECK EVAPORATOR SENSOR.** Check the evaporator sensor. <Ref. to AC-91, INSPECTION, Evaporator Sensor.>	Is the sensor normal?	Go to step **5**.	Replace the evaporator sensor.

	Step	Check	Yes	No
5	**CHECK REFRIGERANT PRESSURE SENSOR.** Using the Subaru Select Monitor, check “Refrigerant Pressure” of the current data from the A/C diagnosis.	Does the data indicate 0.21 Mpa — 3.03 Mpa?	Go to step **7**.	Go to step **6**.
6	**CHECK AMOUNT OF REFRIGERANT PRESSURE.** Check the refrigerant pressure. <Ref. to AC-22, CHECK REFRIGERANT GAS PRESSURE, PROCEDURE, Refrigerant Pressure with Manifold Gauge Set.>	Is the refrigerant pressure normal?	Go to step **7**.	Perform repair according to refrigerant pressure inspection.
7	**CHECK FLOW SENSOR CIRCUIT.** 1) Turn the ignition switch to ON. 2) Wait at least 1 seconds. 3) Read the DTC using Subaru Select Monitor.	Are B1641 and B1642 displayed?	Perform the diagnosis according to DTC.	Go to step **8**.
8	**CHECK VARIABLE SOLENOID CIRCUIT.** 1) Start the engine. 2) Turn the A/C switch to ON. 3) Set the fan switch to maximum position. 4) Set the temperature control switch to LO, and wait for 30 seconds or more. 5) Read the DTC using Subaru Select Monitor.	Is B1643 displayed?	Perform the diagnosis according to DTC.	Replace the compressor. <Ref. to AC-57, REMOVAL, Compressor.>

11.UNABLE TO SWITCH SUCTION VENTS

TROUBLE SYMPTOM:

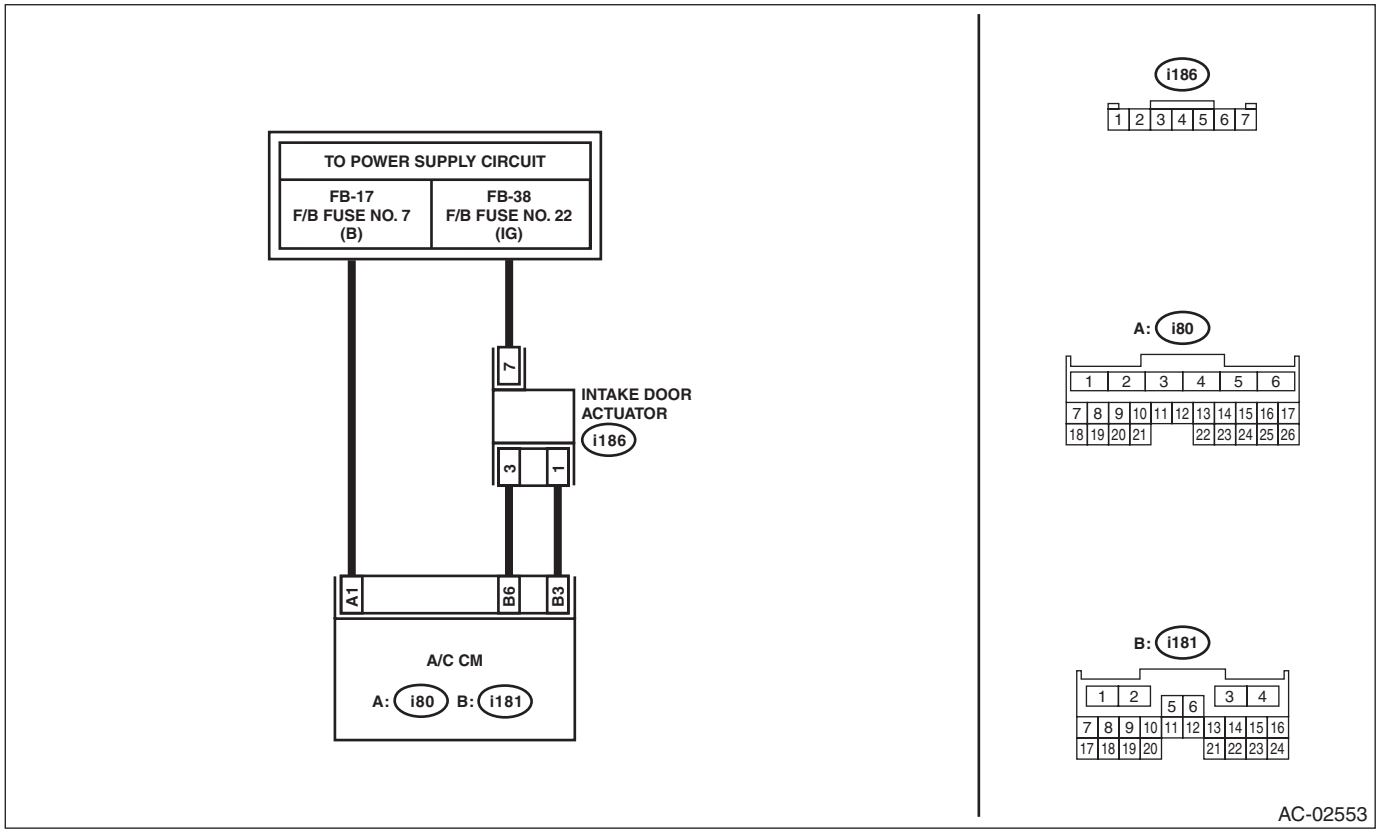
Even when the FRESH/RECIRC switch is pressed, the inlet opening does not switch to RECIRC → FRESH or FRESH → RECIRC.

Trouble causes:

Intake door actuator failure

WIRING DIAGRAM:

Air Conditioning System <Ref. to WI-51, WIRING DIAGRAM, Air Conditioning System.>



	Step	Check	Yes	No
1	**VISUALLY CHECK FRESH/RECIRC DOOR OPERATION.** 1) Remove the glove box. <Ref. to EI-63, REMOVAL, Glove Box.> 2) Operate the FRESH/RECIRC switch, and visually check the intake door operation.	Does the intake door operate normally? Is the position between the intake door and intake door case sealed completely?	System is normal.	Go to step **2**.
2	**CHECK A/C CONTROL PANEL.** 1) Turn the ignition switch to ON. 2) Using the Subaru Select Monitor, check "Fresh/Recircle Air Door Actuator Position Target" of the current data from the A/C diagnosis. 3) Operate the FRESH/RECIRC switch.	Does "Fresh/Recircle Air Door Actuator Position Target" indicate 0 ←→ 100?	Go to step **3**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>
3	**CHECK CONNECTOR.** Check the connecting condition of connectors (i186), (i181) and (i80).	Is there poor contact?	Repair the connector.	Go to step **4**.
4	**CHECK FUSE.** 1) Remove the fuse No. 7 and No. 22 from fuse & relay box. 2) Check the fuse.	Is the fuse OK?	Go to step **5**.	Replace the fuse.

	Step	Check	Yes	No
5	**CHECK POWER SUPPLY FOR INTAKE DOOR ACTUATOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the intake door actuator connector (i186). 3) Turn the ignition switch to ON. 4) Measure the voltage between intake door actuator connector (i186) and chassis ground. ***Connector & terminal*** ***(i186) No. 7 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **6**.	Check for open or short circuit in the harness between intake door actuator and fuse.
6	**CHECK HARNESS BETWEEN A/C CM AND INTAKE DOOR ACTUATOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the A/C CM connector (i181). 3) Measure the resistance between intake door actuator connector (i186) and A/C CM connector (i181). ***Connector & terminal*** ***(i186) No. 1 — (i181) No. 3:*** ***(i186) No. 3 — (i181) No. 6:***	Is the resistance less than 10 Ω?	Go to step **7**.	Repair the open circuit of harness between A/C CM and intake door actuator.
7	**CHECK OPERATION OF INTAKE DOOR ACTUATOR.** 1) Connect the intake door actuator connector (i186). 2) Ground the A/C CM connector (i181) with a suitable wire. 3) Turn the ignition switch to ON, and check the operation of intake door actuator. ***Connector & terminal*** ***(i181) No. 3 — Chassis ground:***	Does the actuator move to the FRESH side?	Go to step **8**.	Replace the intake door actuator. <Ref. to AC-93, REMOVAL, FRESH/RECIRC Door Actuator.>
8	**CHECK OPERATION OF INTAKE DOOR ACTUATOR.** 1) Turn the ignition switch to OFF. 2) Ground the A/C CM connector (i181) with a suitable wire. 3) Turn the ignition switch to ON, and check the operation of intake door actuator. ***Connector & terminal:*** ***(i181) No. 6 — Chassis ground:***	Does the actuator move to the RECIRC side?	Replace the A/C CM. <Ref. to AC-56, REMOVAL, Control Unit.>	Replace the intake door actuator. <Ref. to AC-93, REMOVAL, FRESH/RECIRC Door Actuator.>

12.UNABLE TO SWITCH VENTS

TROUBLE SYMPTOM:

Unable to switch blow vents.

- Auto dual

Even when the mode switch is operated, outlet opening does not switch to FACE → B/L → FOOT → F/D.

- Manual A/C

Selected mode does not work even when each mode switch is operated.

Trouble causes:

Mode door actuator failure

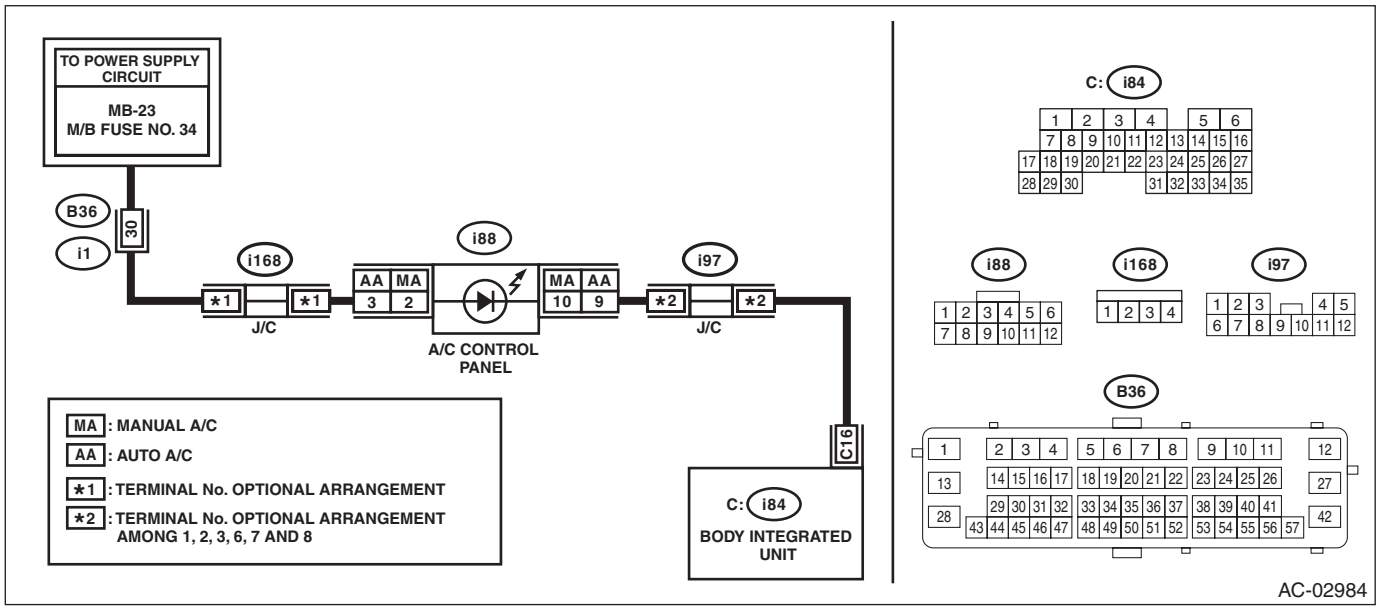
	Step	Check	Yes	No
1	**CHECK A/C CONTROL PANEL.** 1) Turn the ignition switch to ON. 2) Using the Subaru Select Monitor, check "Mode Door Actuator Position Target" of the current data from the A/C diagnosis. 3) Operate the mode change switch.	Does the value for "Mode Door Actuator Position Target" change?	Go to step **2**.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>
2	**CHECK DTC.** 1) Set the mode change switch to DEF, and wait for 16 seconds or more. 2) Read the DTC using Subaru Select Monitor.	Are B1620, B1621 and B1622 displayed?	Perform the diagnosis according to DTC.	Go to step **3**.
3	**CHECK DTC.** 1) Set the mode change switch to VENT, and wait for 16 seconds or more. 2) Using the Subaru Select Monitor, read DTC of A/C CM.	Are B1620, B1621 and B1622 displayed?	Perform the diagnosis according to DTC.	System is normal.

13.ILLUMINATION DOES NOT COME ON OR CANNOT DIM

TROUBLE SYMPTOM:
Even when the lighting switch is operated, the illumination does not come on. Even when the illumination control is operated, the illumination does not dim.

TROUBLE SYMPTOM:
Open circuit in illumination circuit

WIRING DIAGRAM:
Clearance Light and Illumination Light System <Ref. to WI-87, WIRING DIAGRAM, Clearance Light and Illumination Light System.>



	Step	Check	Yes	No
1	**CHECK CONNECTOR.** Check for poor contact of connector.	Is there poor contact?	Repair the connector.	Go to step **2**.
2	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Using a tester, measure the voltage between the A/C control panel connector (i88) and chassis ground. ***Connector & terminal*** ***Auto A/C*** ***(i88) No. 3 (+) — Chassis ground (–):*** ***Manual A/C*** ***(i88) No. 2 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **3**.	Repair or replace the open circuit of harness.
3	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Measure the resistance between A/C control panel connector (i88) and body integrated unit connector (i84). ***Connector & terminal*** ***Auto A/C*** ***(i88) No. 9 — (i84) No. 16:*** ***Manual A/C*** ***(i88) No. 10 — (i84) No. 16:***	Is the resistance less than 10 Ω?	Go to step **4**.	Repair or replace the open circuit of harness.
4	**CHECK A/C CONTROL PANEL UNIT.** Check the A/C control panel. <Ref. to AC-54, INSPECTION, Control Panel.>	Is A/C control panel OK?	A/C control panel illumination circuit is normal.	Replace the A/C control panel. <Ref. to AC-48, REMOVAL, Control Panel.>