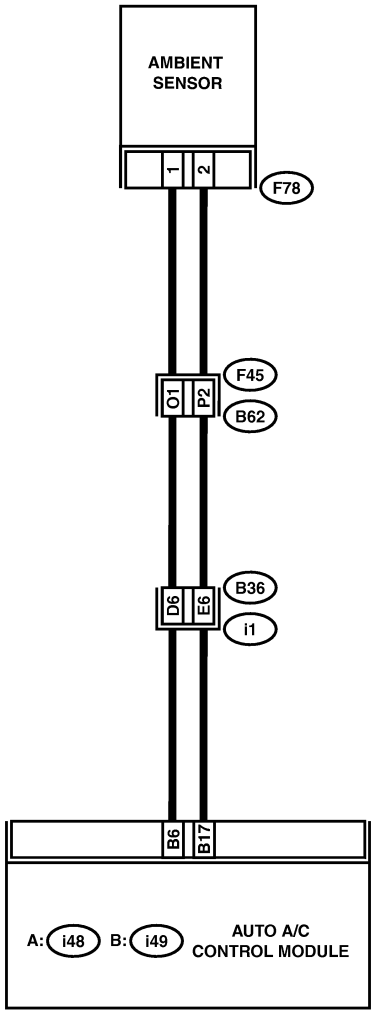
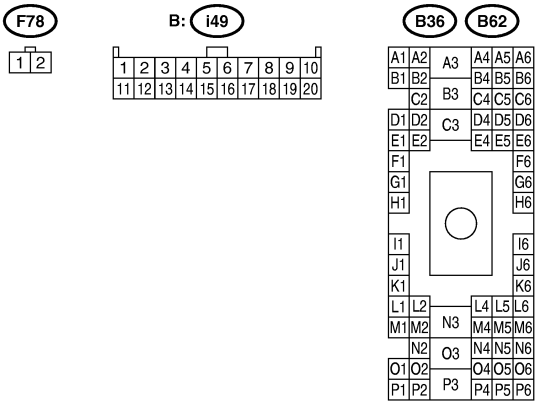
8. Diagnostic Procedure with Trouble Code S001509

A: TROUBLE CODE 21 OR –21 (AMBIENT SENSOR) S001509F41

TROUBLE SYMPTOM:
Fan speed, outlets and inlets are not switched when AUTO or ECON switch is ON.
WIRING DIAGRAM:





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No.	Step	Check	Yes	No
1	**CHECK AMBIENT SENSOR.** 1) Turn ignition switch to OFF. 2) Disconnect connector from ambient sensor. 3) Measure resistance between connector terminals of ambient sensor. ***Terminals:*** ***No. 1 — No. 2***	Is the resistance approx. 2.2 kΩ at 25°C (77°F)?	Go to step **2**.	Replace ambient sensor.
2	**CHECK INPUT SIGNALS FOR AMBIENT SENSOR.** 1) Turn ignition ON. 2) Measure voltage between (F78) connector terminals. ***Connector & terminal:*** ***(F78) No. 1 — No. 2***	Is the voltage approx. 4.5 V?	Go to step **6**.	Go to step **3**.
3	**CHECK OUTPUT SIGNALS FROM A/C CONTROL MODULE.** 1) Turn ignition switch to OFF. 2) Pull out A/C control panel. 3) Disconnect connector from ambient sensor. 4) Turn ignition switch to ON. 5) Measure voltage between connector terminals of A/C control module. ***Connector & terminal:*** ***(i49) No. 6 — No. 17***	Is the voltage approx. 4.5 V?	Go to step **6**.	Go to step **4**.
4	**CHECK HARNESS CONNECTOR BETWEEN A/C CONTROL MODULE AND AMBIENT SENSOR.** 1) Turn ignition switch to OFF. 2) Disconnect connectors from A/C control module. 3) Measure resistance of harness between A/C control module and ambient sensor. ***Connector & terminal:*** ***(F78) No. 1 — (i49) No. 6***	Is the resistance less than 1 Ω?	Go to step **5**.	Repair open circuit in harness between A/C control module and ambient sensor.
5	**CHECK HARNESS CONNECTOR BETWEEN A/C CONTROL MODULE AND AMBIENT SENSOR.** Measure resistance of harness between A/C control module and ambient sensor. ***Connector & terminal:*** ***(F78) No. 2 — (i49) No. 17***	Is the resistance less than 1 Ω?	Go to step **6**.	Repair open circuit in harness between A/C control module and ambient sensor.
6	**CHECK POOR CONTACT.** Check poor contact in A/C control module.	Is there poor contact in A/C control module?	Repair poor contact in A/C control module.	Contact with your Subaru distributor.

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B: TROUBLE CODE 22 OR –22 (IN-VEHICLE SENSOR) S001509F42

TROUBLE SYMPTOM:
When turning AUTO switch to ON, blower fan speed, outlet port and inlet port is not changed.

If trouble code 22 or −22 appears on the display, replace the A/C control module. The in-vehicle sensor is built into the A/C control module and cannot be replaced as a single unit.

MEMO:

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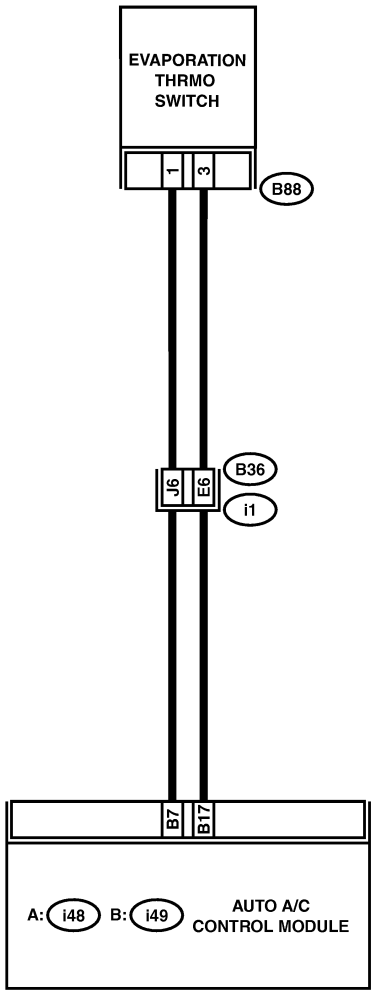
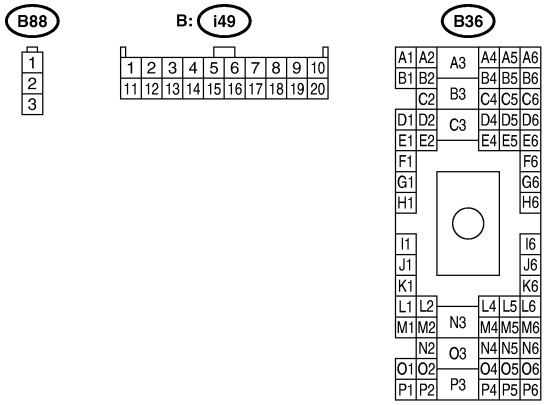
C: TROUBLE CODE 24 OR –24 (EVAPORATOR SENSOR) S001509F43

WIRING DIAGRAM:





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No.	Step	Check	Yes	No
1	**CHECK EVAPORATOR SENSOR.** 1) Turn ignition switch to OFF. 2) Remove glove box. 3) Disconnect connector from evaporator sensor. 4) Measure resistance between connector terminals of evaporator sensor. ***Terminals:*** ***No. 1 — No. 3***	Is the resistance approx. 1.8 — 2.0 kΩ at 20°C (68°F)?	Go to step **2**.	Replace evaporator sensor.
2	**CHECK INPUT SIGNALS FOR EVAPORATOR SENSOR.** 1) Turn ignition switch to "ON". 2) Measure voltage between (B88) connector terminal and chassis ground. ***Connector & terminal*** ***(B88) No. 1 (+) — Chassis ground (−):***	Is the voltage approx. 4.5 V?	Go to step **3**.	Replace evaporator sensor.
3	**CHECK OUTPUT SIGNALS FROM A/C CONTROL MODULE.** 1) Turn ignition switch to OFF. 2) Pull out A/C control module. 3) Turn ignition switch to "ON". 4) Measure voltage between A/C control module connector terminals. ***Connector & terminal:*** ***(i49) No. 7 — No. 17***	Is the voltage approx. 4.5 V?	Go to step **4**.	Go to step **6**.
4	**CHECK HARNESS CONNECTOR BETWEEN A/C CONTROL MODULE AND EVAPORATOR SENSOR.** 1) Turn ignition switch to OFF. 2) Disconnect connectors from A/C control module. 3) Measure resistance of harness between A/C control module and evaporator sensor. ***Connector & terminal:*** ***(B88) No. 1 — (i49) No. 7***	Is the resistance less than 1 Ω?	Go to step **5**.	Repair open circuit in harness between A/C control module and evaporator sensor.
5	**CHECK HARNESS CONNECTOR BETWEEN A/C CONTROL MODULE AND EVAPORATOR SENSOR.** Measure resistance of harness between A/C control module and evaporator sensor. ***Connector & terminal:*** ***(B88) No. 3 — (i49) No. 17***	Is the resistance less than 1 Ω?	Go to step **6**.	Repair open circuit in harness between A/C control module and evaporator sensor.
6	**CHECK POOR CONTACT.** Check poor contact in A/C control module.	Is there poor contact in A/C control module?	Repair poor contact in A/C control module.	Contact with your Subaru distributor.

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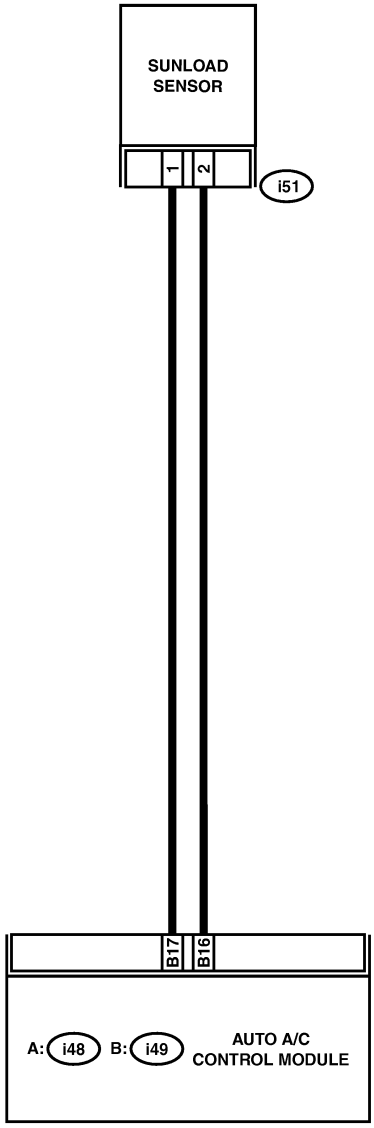
D: TROUBLE CODE 25 OR –25 (SUNLOAD SENSOR) S001509F44

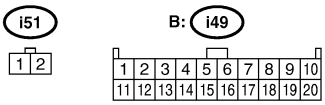
TROUBLE SYMPTOM:

- Sensor identified that sunlight is at maximum. Then, A/C system is controlled to COOL side.
- Sensor identified that sunlight is at minimum. Then, A/C system is controlled to HOT side.

NOTE:
When the sunload sensor is checked inside the passenger compartment or in the shade, code “25” may appear on the indicator. Always check the sunload sensor in a place where it senses direct sunlight.

WIRING DIAGRAM:





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No.	Step	Check	Yes	No
1	**CHECK SUNLOAD SENSOR.** 1) Turn ignition switch to OFF. 2) Remove sunload sensor. <Ref. to AC-43 REMOVAL, Sun-load Sensor (Auto A/C).> 3) Measure resistance between sunload sensor terminals. ***Terminals:*** ***No. 2 — No. 1***	Is the resistance less than 1 Ω?	Go to step **2**.	Replace sunload sensor.
2	**CHECK SUNLOAD SENSOR.** Make sure that there is no resistance in the reverse side terminals. ***Terminals:*** ***No. 1 — No. 2***	Is the resistance more than 1 MΩ?	Go to step **3**.	Replace sunload sensor.
3	**CHECK INPUT VOLTAGE TO SUNLOAD SENSOR.** 1) Turn ignition switch to ON. 2) Measure input voltage to sunload sensor. ***Connector & terminal:*** ***(i51) No. 2 — No. 1***	Is the voltage approx. 4.5 V?	Go to step **6**.	Go to step **4**.
4	**CHECK HARNESS CONNECTOR BETWEEN A/C CONTROL MODULE AND SUNLOAD SENSOR.** 1) Turn ignition switch to OFF. 2) Disconnect connectors from A/C control module. 3) Measure resistance of harness between A/C control module and sunload sensor. ***Connector & terminal:*** ***(i51) No. 2 — (i49) No. 16***	Is the resistance less than 1 Ω?	Go to step **5**.	Repair open circuit in harness between A/C control module and sunload sensor.
5	**CHECK HARNESS CONNECTOR BETWEEN A/C CONTROL MODULE AND SUNLOAD SENSOR.** Measure resistance of harness between A/C control module and sunload sensor. ***Connector & terminal:*** ***(i51) No. 1 — (i49) No. 17***	Is the resistance less than 1 Ω?	Go to step **6**.	Repair open circuit in harness between A/C control module and sunload sensor.
6	**CHECK POOR CONTACT.** Check poor contact in A/C control module.	Is there poor contact in A/C control module?	Repair poor contact in A/C control module.	Contact with your Subaru distributor.