

A/C-HEATER SYSTEM - AUTOMATIC

1992 Subaru SVX

1992 AUTOMATIC A/C-HEATER SYSTEMS
Subaru

SVX

* PLEASE READ THIS FIRST *

CAUTION: When discharging air conditioning system, use only approved refrigerant recovery/recycling equipment. Make every attempt to avoid discharging refrigerant into the atmosphere.

DESCRIPTION

Automatic Climate Control (ACC) system uses a microprocessor located in the auto amplifier to control passenger compartment temperature. To improve driveability, the compressor is controlled by communication between auto amplifier and engine control unit. The auto amplifier has a self-diagnostic capability.

A/C system components include compressor, condenser, evaporator, receiver-drier, control panel (includes auto amplifier), fan control amplifier, water temperature sensor, ambient temperature sensor, pressure switch, evaporator sensor, sunload sensor, in-vehicle sensor, condenser fan, aspirator, related vents, wiring and fuses. See Fig. 1.

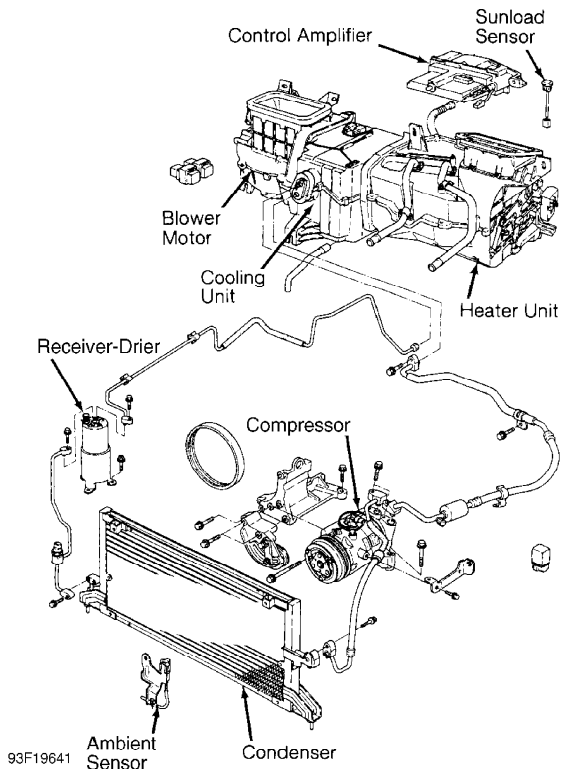


Fig. 1: Locating A/C-Heater System Components
Courtesy of Subaru of America, Inc.

OPERATION

SYSTEM OPERATION

When temperature adjustment switch is set to desired setting, auto amplifier calculates signal inputs sent from various sensors, switches and engine control unit. These calculations are used to operate air mix door, fan speed, mode door, intake door and compressor to reach desired temperature setting.

AUTO AMPLIFIER

The auto amplifier computes signals sent from each switch, sensor and engine control unit. It compares computed results to potentiometer balance resistor signal. It then sends signals to door motors, fan control amplifier and compressor solenoid actuator.

This movement automatically controls air inlet and outlet positions, air outlet temperature, air quantity and compressor operation. To aid in trouble diagnosis, auto amplifier is equipped with self-diagnostic function.

SENSORS

All sensors, except sunload sensor, convert temperature changes into resistance. The sunload sensor converts sun radiation into milliamps, which is then converted into a voltage signal.

In-vehicle sensor is located on left side of control panel. Ambient sensor is located on hood lock brace. Sunload sensor is located on upper top left corner of dash. Refrigerant temperature sensor is located in evaporator case, near expansion valve. Evaporator sensor is located in evaporator housing, on top of evaporator. Water temperature sensor is located in heater case near heater core.

TRINARY PRESSURE SWITCH

The trinary (triple) pressure switch is located in line on high side of system. Pressure switch is activated when system pressure is too low or too high. Switch is also used to activate condenser fan.

FAN CONTROL AMPLIFIER

The fan control amplifier is located on cooling unit. It receives reference current from auto amplifier and controls voltage sent to blower motor.

RELAYS

Max Hi Relay

The max hi (maximum high speed) relay is located on blower motor unit. It is turned on and off by auto amplifier. When max hi relay is turned on, blower motor operates at high speed.

Off Relay

The off relay is located on blower motor unit. When a control panel function is selected, auto amplifier turns off relay on. When off relay is on, power is sent to fan control amplifier for blower motor operation. When off relay is off, power is disconnected from fan control amplifier.

A/C Relay

The A/C relay is in relay box on left side of engine compartment. A/C relay controls compressor clutch operation.

INTAKE DOOR MOTOR

The intake door motor is on the right upper side of blower motor case. It opens and closes the intake air door. Intake motor rotates in one direction only. When CIRC (recirculated air) switch is off and compressor is off, intake door is in fresh air position. When CIRC (recirculated air) switch is on and compressor is on, intake door is positioned in fresh, 20 percent fresh or recirculating position.

AIR MIX DOOR MOTOR

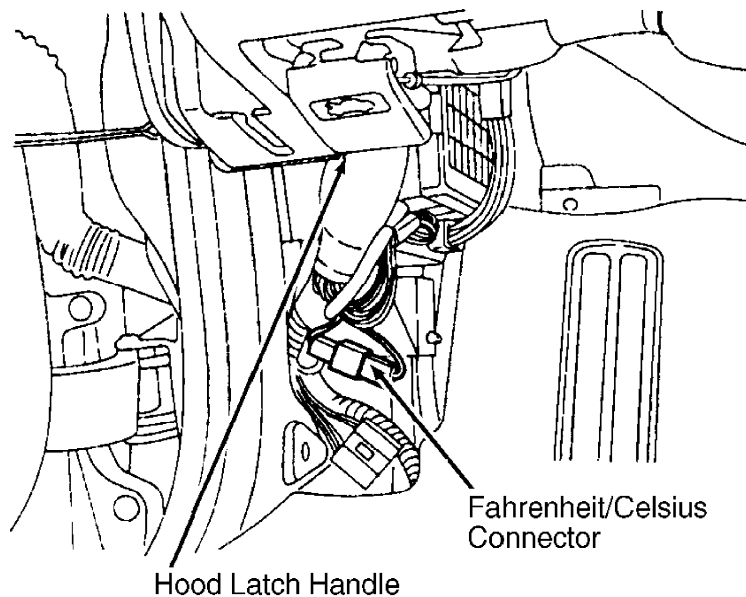
The air mix door is located on bottom of heater unit. The air mix door motor rotates in both directions. A Potentiometric Balance Resistor (PBR) is built into mix door motor. The PBR registers air mix door position and sends signal back to auto amplifier. Along with other inputs, auto amplifier then adjusts air mix door position for temperature adjustment.

MODE DOOR MOTOR

The mode door motor is located on left side of heater unit. Mode door motor actuates defrost door, vent door and heat doors. Mode door motor rotates in both directions. When AUTO position is selected on control panel, auto amplifier uses evaporator sensor and other inputs to drive mode door to vent, defrost or heat position.

FAHRENHEIT/CELSIUS SELECTION

Control panel temperature reading can be displayed in either degrees Fahrenheit (°F) or Celsius (°C). To display temperature in Fahrenheit, connector located behind left front kick panel must be connected. See Fig. 2. Disconnect connector to display temperature in degrees Celsius.



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Fig. 2: Identifying Fahrenheit/Celsius Connector
Courtesy of Subaru of America, Inc.

TROUBLE SHOOTING

PRELIMINARY INSPECTION

Power Supply

Measure battery voltage and specific gravity. Battery voltage must be a minimum of 12 volts and specific gravity must be greater than 1.260. Check condition of A/C, heater and other fuses. Check wiring harness and connectors.

Refrigerant

Check amount of refrigerant through sight glass.

Control Panel Linkage

Check linkage operation of mode door, air mix door and air intake door.

BASIC CHECKS

NOTE: If any BASIC CHECKS fail to function as described, proceed to SELF-DIAGNOSTIC SYSTEM.

Off Mode

With OFF switch in off position, control panel LED and temperature display should go off. Airflow should stop. Air outlet should be in heat position. Air inlet should be in fresh air position. Compressor should be off.

AUTO Mode (Temperature Set At 65°F)

With AUTO switch in on position, AUTO switch LED and temperature display should be on. Outlet air should be cool and coming from front vents. Airflow should be high and automatically controlled. Inlet air and compressor are automatically controlled.

AUTO Mode (Temperature Gradually Changed From 65°F To 85°F)

AUTO switch LED should be on. Outlet air should change from cool to hot. Outlet air should move from front vents to bi-level to heater vents. Airflow and inlet air are automatically controlled. Compressor is off.

AUTO Mode (Temperature Set At 85°F)

AUTO switch LED should be on. Outlet air should be hot and coming from heater vents. Airflow should be high and automatically controlled. Inlet air is fresh and automatically controlled. Compressor is automatically controlled.

ECON Mode (Temperature Set Between 65-85°F)

With ECON switch in on position, ECON switch LED and temperature display should be on. Air temperature, airflow and outlet air location are automatically controlled. Inlet air is fresh and compressor is off.

DEF (Defrost) Mode (Temperature Set Between 65-85°F)

With defrost switch in on position, DEF switch LED and temperature display should be on. Air temperature and airflow are automatically controlled. Inlet air is fresh and compressor is off. Outlet air should come from defrost vents.

VENT Mode

With VENT switch in on position, VENT switch LED should be on. Temperature display should go off. In-vehicle air temperature should be the same as outside temperature. Airflow should be fixed at medium speed. Inlet air is fresh and compressor is off. Outlet air should come from front vents.

CIRC (Recirculated Air) Mode

With CIRC switch in on position, CIRC switch LED should be on. Inlet air is set to recirculate for 10 minutes, then inlet air door will move to fresh position. CIRC LED will go off.

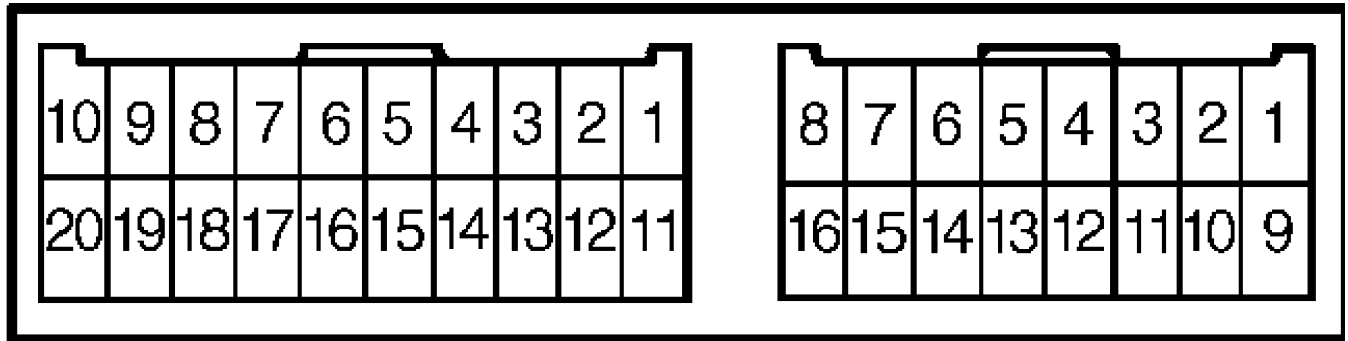
OUT-TEMP (Outside Temperature) Display Function

With OUT-TEMP switch in on position, ambient temperature flashes on temperature display panel. Set temperature reappears on temperature display panel.

A/C SYSTEM OR SELF-DIAGNOSTICS INOPERATIVE

1) Remove auto amplifier to access connectors. See AUTO AMPLIFIER under REMOVAL & INSTALLATION. Leave auto amplifier connected. With ignition off, measure voltage between terminal No. 1 (Blue/Red wire) of auto amplifier 16-pin connector and ground. See Fig. 3.

2) If battery voltage is present, go to next step. If battery voltage is not present, check fuse No. 25 in fuse block. If fuse is blown, replace fuse. If fuse is okay, repair open Blue/Red wire.



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Fig. 3: Identifying Auto Amplifier Connector Terminals
Courtesy of Subaru of America, Inc.

3) With ignition in ACC position, measure voltage between terminal No. 18 (Light Green/Red wire) of auto amplifier 20-pin connector and ground. If battery voltage is present, go to next step. If battery voltage is not present, check fuse No. 3 in fuse block. If fuse is blown, replace fuse. If fuse is okay, repair open Light Green/Red wire.

4) With ignition on, measure voltage between terminal No. 2 (Green/Red wire) of auto amplifier 16-pin connector and ground. If battery voltage is present, go to next step. If battery voltage is not present, check fuse No. 15 in fuse block. If fuse is blown, replace fuse. If fuse is okay, repair open Green/Red wire.

5) Disconnect 16-pin connector from auto amplifier. Check for continuity between terminal No. 16 (Black wire) of auto amplifier 16-pin connector and ground. Continuity should exist. If continuity does not exist, repair open Black wire.

BLOWER MOTOR DOES NOT OPERATE AT ALL OR IN HIGH SPEED

1) With ignition off, measure voltage between terminal No. 2 (Red wire) of off relay connector and ground. Off relay is located on blower motor unit. If battery voltage is present, go to next step. If battery voltage is not present, check fuses No. 20 and 21. Replace fuses as necessary. If fuses are okay, repair open Red wire.

2) With ignition on, measure voltage between terminal No. 1 (White wire) of off relay connector and ground. If battery voltage is present, go to next step. If battery voltage is not present, check fuse No. 15. If fuse is blown, replace fuse. If fuse is okay, repair open White wire.

3) Turn ignition and A/C control panel OFF switch to on position. Measure voltage between terminal No. 3 (Blue wire) of off relay connector and ground. If battery voltage is present, go to next step. If battery voltage is not present, check for open Blue wire between terminal No. 3 of off relay connector and terminal No. 12 of auto amplifier 16-pin connector. Repair wiring as necessary. If Blue wire is okay, replace auto amplifier and retest.

4) Put AUTO switch in on position and fan switch in HI position. Measure voltage between terminal No. 3 (Blue wire) of off relay connector and ground. If approximately one volt is present, go to next step. If approximately one volt is not present, replace auto amplifier and retest.

5) Disconnect 2-pin blower motor connector. Turn ignition on. Put AUTO switch in on position and fan switch in HI position. Measure voltage between terminal No. 1 (Red/Black wire) of blower motor connector and ground. If battery voltage is present, go to step 7).

6) If battery voltage is not present, check Red/Black wire between terminal No. 1 of blower motor connector and terminal No. 4 of off relay connector. Repair wiring as necessary. If Red/Black wire is okay, replace off relay.

7) Remove glove box and disconnect fan control amplifier connector. Fan control amplifier is located on cooling unit. With ignition on and AUTO switch in on position, put fan switch in LO or medium position.

8) Measure voltage between terminal No. 2 (Black/Red wire) of hi relay connector and ground. If battery voltage is not present, check for open Black/Red wire. If Black/Red wire is okay, replace blower motor.

9) If battery voltage is present, measure voltage between terminal No. 1 (White wire) of hi relay connector and ground. If battery voltage is not present, repair open White wire. If voltage is present, disconnect hi relay connector.

10) Check for continuity between terminal No. 4 (Black wire) of hi relay connector and ground. If no continuity exists, repair open Black wire. If continuity exists, reconnect hi relay connector and go to next step.

11) Ensure ignition is on. Put AUTO switch in on position. Put fan switch in HI position. Measure voltage between terminal No. 3 (White/Red wire) of hi relay connector and ground. If one volt is present, go to next step. If one volt is not present, check for an open White/Red wire. If White/Red wire is okay, replace auto amplifier.

12) Put fan switch in medium or LOW speeds. Measure voltage between terminal No. 3 (White/Red wire) of hi relay connector and ground. If battery voltage is present, replace hi relay. If battery voltage is not present, replace auto amplifier.

BLOWER MOTOR OPERATES AT HIGH SPEED ONLY

1) Remove glove box. Disconnect fan control amplifier 3-pin connector. Turn ignition on. Put AUTO switch in on position and fan switch in HI position. Measure voltage between terminal No. 2 (Black/Red wire) of fan control amplifier connector and ground.

2) If one volt is not present, check for open Black/Red wire. Repair wiring as necessary. If one volt is present, put fan switch in LO or medium position. Measure voltage between terminal No. 2 (Black/Red wire) of fan control amplifier connector and ground.

3) If battery voltage is not present, check for open

Black/Red wire. Repair wiring as necessary. If battery voltage is present, reconnect fan control amplifier connector. With ignition on, put AUTO switch in on position and fan switch in HI position.

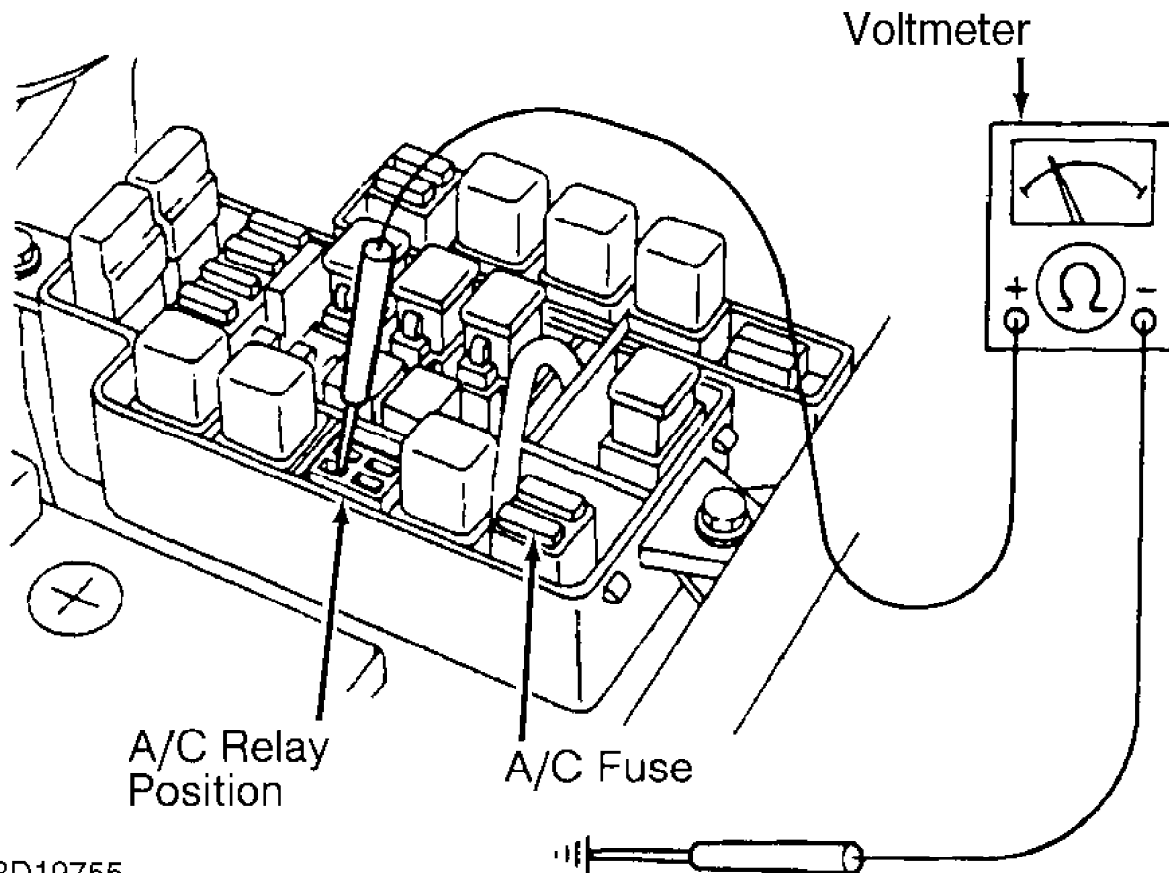
4) Measure voltage between terminal No. 1 (Light Green wire) of fan control amplifier connector and ground. Voltage should not be present. If voltage is present, check for faulty harness and repair as necessary. If harness is okay, replace auto amplifier. If voltage is not present, put fan switch in LO or medium position.

5) Measure voltage between terminal No. 1 (Light Green wire) of fan control amplifier connector and ground. If 1-2 volts are not present, check for faulty harness and repair as necessary. If harness is okay, replace auto amplifier. If 1-2 volts are present, disconnect fan control amplifier connector.

6) Check for continuity between terminal No. 4 (Black wire) of fan control amplifier connector and ground. If continuity does not exist, check for open Black wire. Repair wiring as necessary. If continuity exists, replace fan control amplifier.

COMPRESSOR CLUTCH DOES NOT TURN ON OR OFF

Check for blown A/C fuse. See Fig. 4. If fuse is okay check for defective trinary (triple) pressure switch, faulty A/C relay, defective multipoint injection Electronic Control Unit (ECU), insufficient refrigerant or faulty wiring harness.



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Fig. 4: Locating A/C Relay
Courtesy of Subaru of America, Inc.

Entering Self-Diagnostics

Ensure engine temperature is greater than 104°F (40°C).
Depress auto amplifier OFF and AUTO switches simultaneously and turn ignition on. Auto amplifier will enter DIAGNOSTIC STEP 1. See DIAGNOSTIC STEP 1.

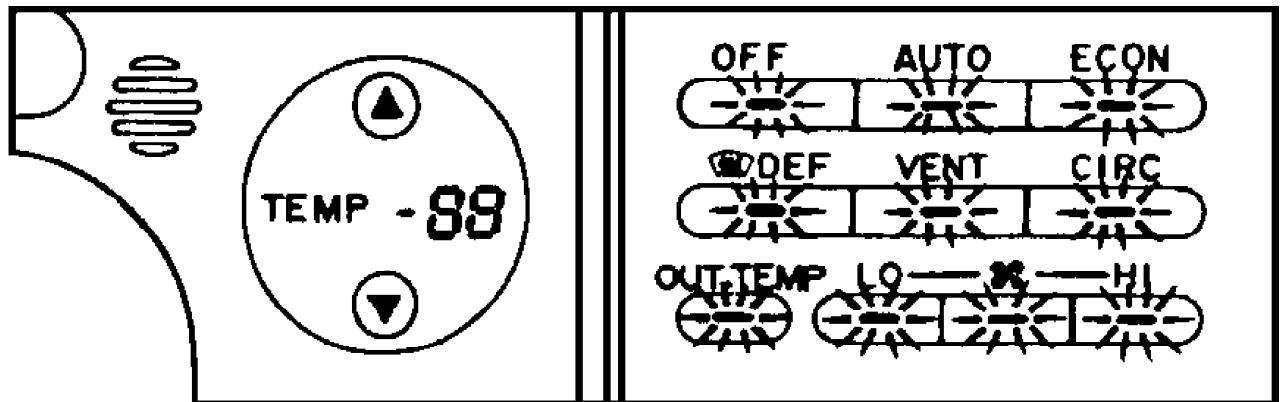
Exiting Self-Diagnostics & Clearing Trouble Codes

To exit self-diagnostics, system must be in DIAGNOSTIC STEP 2. Turn ignition off. To clear trouble codes, depress auto amplifier OFF and DEF switches simultaneously and turn ignition on. AUTO switch LED and -88 in temperature display will flash 3 times. All trouble codes are now cleared and system will exit self-diagnostics.

DIAGNOSTIC STEP 1

Display Indicator Inspection

1) Indicator lights should be on and temperature display should indicate -88 (all segments on). See Fig. 5.
2) If indicators are not on, or temperature display does not indicate -88, check auto amplifier power supply and ground circuits. See A/C SYSTEM OR SELF-DIAGNOSTICS INOPERATIVE. If indicator lights and temperature display segments are okay, after approximately 9 seconds, self-diagnostics will proceed to DIAGNOSTIC STEP 2.



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Fig. 5: Entering Diagnostic Step 1
Courtesy of Subaru of America, Inc.

DIAGNOSTIC STEP 2

Sensor Circuit & Door Motor Inspection

1) If a malfunction has occurred in a monitored circuit, temperature display will indicate a trouble code. If monitored circuits are functioning properly, temperature display will show "00" indicating no system malfunctions. See SENSOR CIRCUIT TROUBLE CODES table.

2) If a trouble code is indicated, proceed to appropriate code testing procedure under TESTING. If all sensors are okay (Code 00 displayed), depress AUTO switch to proceed to DIAGNOSTIC STEP 3 or depress DEF for a minimum of 4 seconds to proceed to DIAGNOSTIC STEP 4. Diagnostic step 3 checks A/C output components. Diagnostic step 4 is used to adjust display temperature.

SENSOR CIRCUIT TROUBLE CODES (1)

| Code No. | Diagnosis |
|----------|--|
| 00 | No Malfunctions |
| 11/21 | Open/Short In In-Vehicle Sensor Circuit |
| 12/22 | Open/Short In Ambient Sensor Circuit |
| 13/23 | Open/Short In Sunload Sensor Circuit |
| 14/24 | Open/Short In Evaporator Sensor Circuit |
| 15/25 | Open/Short In Refrigerant Temp. Sensor Circuit |
| 16/26 | Open/Short In Water Temp. Sensor Circuit |
| 31 | Faulty Air Mix Door Motor Circuit |
| 32 | Faulty Mode Door Motor Circuit |
| 33 | Faulty Air Mix Door Motor Circuit |
| 34 | Faulty Mode Door Motor Circuit |
| 35 | Faulty Intake Door Motor Circuit |

(1) - If malfunction is currently occurring, code will be circled in the display.

DIAGNOSTIC STEP 3

Actuator Inspection

1) Temperature display should read 41. Check compressor and blower operation and positioning of mode door motor, intake door motor and air mix door motor. See ACTUATOR OPERATION SPECIFICATIONS table.

2) To advance to next code, press DEF switch. Ensure all actuators operate as specified. If any actuators do not function as specified, test appropriate circuit under TESTING.

ACTUATOR OPERATION SPECIFICATIONS

| Actuator | Test Results |
|---------------------|---------------------|
| Code 41 | |
| Mode Door | Defrost |
| Intake Door | Fresh/Recirculation |
| Air Mix Door | Full Hot |
| Blower Motor | 5 Volts |
| Compressor | On |
| Compressor Solenoid | Zero Amps |
| Code 42 | |
| Mode Door | Heat |
| Intake Door | Fresh |
| Air Mix Door | Full Hot |
| Blower Motor | 7 Volts |
| Compressor | On |
| Compressor Solenoid | .65 Amps |
| Code 43 | |
| Mode Door | Bi-Level |
| Intake Door | Fresh |
| Air Mix Door | 50% Hot |
| Blower Motor | 11 Volts |
| Compressor | Off |
| Compressor Solenoid | Zero Amps |
| Code 44 | |
| Mode Door | Vent |
| Intake Door | Fresh |
| Air Mix Door | Full Cold |
| Blower Motor | Fan High |
| Compressor | Off |
| Compressor Solenoid | Zero Amps |
| Code 45 | |

| | |
|---------------------------|---------------|
| Mode Door | Vent |
| Intake Door | Recirculation |
| Air Mix Door | Full Cold |
| Blower Motor | Fan High |
| Compressor | Off |
| Compressor Solenoid | Zero Amps |

DIAGNOSTIC STEP 4

Display Temperature Correction

1) This procedure is used to adjust display temperature when small differences between temperature setting and actual temperature felt by passengers exist.

2) Once DIAGNOSTIC STEP 4 has been activated, temperature display will show one of the following. A "10" indicates that temperature has previously been adjusted to read a higher temperature.

3) A "00" indicates that temperature display has previously been adjusted to read a lower temperature. A "05" indicates that temperature has not been previously adjusted and is at the standard (default) position.

4) Press temperature LO or HI switches as necessary to adjust temperature display. Each time LO or HI switch is pressed, temperature setting will change. If vehicle battery is disconnected, temperature setting will default to standard position.

TESTING

A/C AUTO AMPLIFIER PIN VOLTAGE TEST

Remove A/C amplifier to gain access to connectors. See AUTO AMPLIFIER under REMOVAL & INSTALLATION. With wiring harness connected to A/C amplifier, ensure voltages are as specified. Connect voltmeter between specified terminal(s) and/or ground.

See A/C AUTO AMPLIFIER PIN VOLTAGE TEST (16-PIN CONNECTOR) and A/C AUTO AMPLIFIER PIN VOLTAGE TEST (20-PIN CONNECTOR) tables. If voltage is not as specified, check appropriate circuit and input/output device. Repair or replace as necessary. If circuit and input/output device are okay, replace A/C amplifier.

A/C AUTO AMPLIFIER PIN VOLTAGE TEST (16-PIN CONNECTOR)

| Circuit & Test Condition | Voltage |
|---|-------------|
| A/C Relay | |
| Terminal No. 12 (Brown Wire) To Ground | (1) Battery |
| Air Mix Door Motor (PBR) | |
| Terminal No. 5 (Green/Black Wire) To | |
| Terminal No. 6 (Green/Yellow Wire) | (2) Battery |
| Auto Amplifier Ground Circuit | |
| Terminal No. 16 (Black Wire) To Ground | Zero |
| Hi Relay | |
| Terminal No. 12 (Yellow/Green Wire) To Ground | (3) Battery |
| Ignition Power Supply | |
| Terminal No. 2 (Green/Red Wire) To Ground | |
| Ignition On | Battery |
| Engine Running | 13-14 |
| Memory Back-Up (Battery Voltage) | |
| Terminal No. 1 (Blue/Red Wire) To Ground | (4) 13-14 |
| Mode Door Motor | |
| Terminal No. 3 (Green/Red Wire) To | |

Terminal No. 4 (Light Green/Black Wire) (3) Battery
 Off Relay
 Terminal No. 12 (Blue/Black Wire) To Ground (4) Battery

- (1) - Ignition and A/C switches on.
- (2) - With ignition on, voltmeter positive lead at terminal No. 5 and negative lead at terminal No. 6 and temperature set at 65°F (18°C). Battery voltage should also be present with voltmeter positive lead at terminal No. 6 and negative lead at terminal No. 5 and temperature set at 85°F (32°C).
- (3) - With ignition on.
- (4) - Voltage specified is with engine running.
- (5) - With ignition on, voltmeter positive lead at terminal No. 3 and negative lead at terminal No. 4 and VENT switch depressed. Battery voltage should also be present with voltmeter positive lead at terminal No. 4 and negative lead at terminal No. 3 and DEF switch depressed.

A/C AUTO AMPLIFIER PIN VOLTAGE TEST (20-PIN CONNECTOR)

| Circuit & Test Condition | Voltage |
|--|---------------|
| Accessory Power Supply | |
| Terminal No. 18 (Light Green/Red Wire) To Ground | |
| Engine Cranking | Zero |
| Engine Running | Battery |
| Air Mix Door Motor (PBR) | |
| Terminal No. 14 (Black/White Wire) To | |
| Terminal No. 11 (Green/Black Wire) | (1) About .5 |
| Ambient Sensor | |
| Terminal No. 2 (White/Green Wire) To | |
| Terminal No. 11 (Green/Black Wire) | (2) About 5 |
| Evaporator Sensor | |
| Terminal No. 3 (Black/Yellow Wire) To | |
| Terminal No. 11 (Green/Black Wire) | (2) About 5 |
| Illumination Control Signal | |
| Terminal No. 10 (Red Wire) To Ground | (3) Battery |
| Mode Door Motor (Fresh Voltage) | |
| Terminal No. 7 (Green/White Wire) To | |
| Terminal No. 11 (Green/Black Wire) | (4) Battery |
| Mode Door Motor (PBR) | |
| Terminal No. 15 (Light Green/Black Wire) To | |
| Terminal No. 11 (Green/Black Wire) | (5) About 4.5 |
| Mode Door Motor (REC Voltage) | |
| Terminal No. 5 (Green Wire) To | |
| Terminal No. 11 (Green/Black Wire) | (6) Battery |
| Refrigerant Temperature Sensor | |
| Terminal No. 4 (Yellow/Blue Wire) To | |
| Terminal No. 11 (Green/Black Wire) | (2) About 5 |
| Sensor Ground Circuit | |
| Terminal No. 11 (Green/Black Wire) To Ground | Zero |
| Sunload Sensor | |
| Terminal No. 13 (White/Blue Wire) To | |
| Terminal No. 11 (Green/Black Wire) | (2) About 5 |
| Sensor Voltage | |
| Terminal No. 1 (Blue/Red Wire) To Ground | (7) Zero |
| Water Temperature Sensor | |
| Terminal No. 12 (Blue/White Wire) To | |
| Terminal No. 11 (Green/Black Wire) | (2) About 5 |

- (1) - With temperature set at 65°F (18°C) and AUTO switch on.

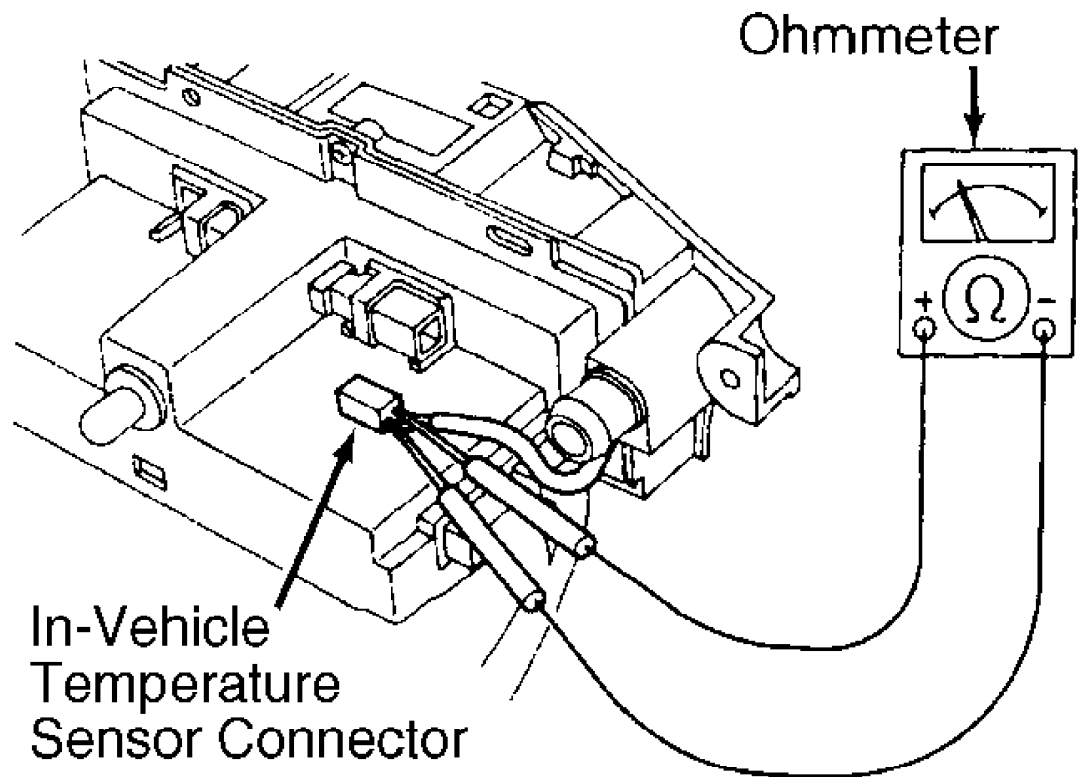
Voltage reading of 4.5 volts with temperature set at 85°F (29°C).

- (2) - With ignition on and sensor connector disconnected.
 - (3) - With ignition and light switches on.
 - (4) - With ignition and DEF switches on.
 - (5) - With ignition and VENT switches on. Voltage reading should be .5 volt with ignition and DEF switches on.
 - (6) - With ignition and CIRC switches on.
 - (7) - With ignition on, voltage reading should be 5 volts.
-

CODE 11/21, IN-VEHICLE TEMPERATURE SENSOR CIRCUIT

In-Vehicle Sensor Resistance

1) Turn ignition off. Remove auto amplifier. See AUTO AMPLIFIER under REMOVAL & INSTALLATION. Disconnect in-vehicle temperature sensor 2-pin connector. See Fig. 6. Check resistance between sensor connector terminals. See IN-VEHICLE TEMPERATURE SENSOR RESISTANCE SPECIFICATIONS table.



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Fig. 6: Testing In-Vehicle Temperature Sensor
Courtesy of Subaru of America, Inc.

2) If resistance reading is not as specified, replace sensor. If resistance reading is okay, turn ignition on. Measure voltage available to in-vehicle sensor. If approximately 5 volts is not available to sensor, check wiring harness between in-vehicle sensor and auto amplifier.

3) Repair wiring harness as necessary. If wiring harness is okay, replace auto amplifier. If approximately 5 volts is available to sensor, an intermittent problem may exist. Ensure auto amplifier connectors are properly connected to auto amplifier.

IN-VEHICLE TEMPERATURE SENSOR RESISTANCE SPECIFICATIONS

| Temperature °F (°C) | Ohms |
|---------------------|--------|
| -4 (-20) | 16,500 |
| 32 (0) | 9930 |
| 50 (10) | 6000 |
| 68 (20) | 3750 |
| 77 (25) | 3000 |
| 86 (30) | 2420 |
| 104 (40) | 1060 |

CODE 12/22, AMBIENT TEMPERATURE SENSOR CIRCUIT

Ambient Temperature Sensor Resistance

1) Turn ignition off. Disconnect ambient temperature sensor 2-pin connector. Sensor is located on hood lock brace.

2) Check resistance between sensor connector terminals. If resistance reading is not as specified, replace sensor. See AMBIENT TEMPERATURE SENSOR RESISTANCE SPECIFICATIONS table. If resistance reading is okay, check ambient temperature sensor harness.

AMBIENT TEMPERATURE SENSOR RESISTANCE SPECIFICATIONS

| Temperature °F (°C) | Ohms |
|---------------------|--------|
| -4 (-20) | 16,500 |
| 32 (0) | 9930 |
| 50 (10) | 6000 |
| 68 (20) | 3750 |
| 77 (25) | 3000 |
| 86 (30) | 2420 |
| 104 (40) | 1060 |

Ambient Temperature Sensor Harness Check

1) Turn ignition on. Measure voltage between terminal No. 2 (White/Green wire) of ambient temperature sensor connector and ground. If voltage reading is approximately 5 volts, go to next step. If voltage reading is not approximately 5 volts, check auto amplifier connectors for proper installation. If connectors are okay, replace auto amplifier.

2) Measure voltage between terminals No. 1 (Green/Black wire) and No. 2 (White/Green wire) of ambient temperature sensor connector. If voltage reading is not approximately 5 volts, check auto amplifier connectors for proper installation. Clean or repair connectors as necessary. If connectors are okay, replace auto amplifier. If voltage reading is approximately 5 volts, check auto amplifier output voltage.

Auto Amplifier Output Voltage Check

1) Remove auto amplifier leaving connectors attached. See AUTO AMPLIFIER under REMOVAL & INSTALLATION. Disconnect ambient sensor connector. Turn ignition on. Measure voltage between terminals No. 2 (White/Green wire) and No. 11 (Green/Black wire) of auto amplifier 16-pin connector. See Fig. 3.

2) If voltage is approximately 5 volts, check and repair wiring harness as necessary. If voltage is not approximately 5 volts, check wiring harness between ambient sensor and auto amplifier. Repair wiring harness as necessary. If wiring is okay, replace auto amplifier.

CODE 13/23, SUNLOAD SENSOR CIRCUIT

Auto Amplifier Output Voltage Check

1) Turn ignition off. Remove auto amplifier leaving connectors attached. See AUTO AMPLIFIER under REMOVAL & INSTALLATION. Place cover over sunload sensor to block sunlight. Sensor is located on top left corner of dash. Measure voltage between terminal No. 11 (Green/Black wire) and terminal No. 13 (White/Black wire) of 20-pin auto amplifier connector. See Fig. 3.

2) If approximately 5 volts is present, go to next step. If approximately 5 volts is not present, check 20-pin auto amplifier connector for proper installation. Clean or repair connector as necessary. If connector is okay, replace auto amplifier.

NOTE: If sunlight is not available, use a 100-watt light bulb to simulate sunlight in the following step.

3) Remove cover from sunload sensor and allow sunlight to shine on sensor. Measure voltage between terminals No. 11 (Green/Black wire) and No. 13 (White/Black wire) of auto amplifier 20-pin connector. If voltage is approximately 3 volts, sensor circuit is okay. Replace auto amplifier.

4) If voltage is not approximately 3 volts, check wiring harness between auto amplifier and sunload sensor. Repair wiring harness as necessary and retest. If wiring harness is okay, replace sensor.

CODE 14/24, EVAPORATOR TEMPERATURE SENSOR CIRCUIT

Evaporator Temperature Sensor Resistance

1) Turn ignition off. Remove glove box. Disconnect evaporator temperature sensor 2-pin connector. Sensor is located below blower motor unit.

2) Check resistance between Yellow/Red and Green/White wires of evaporator sensor connector. If resistance reading is not as specified, replace sensor. See EVAPORATOR TEMPERATURE SENSOR RESISTANCE SPECIFICATIONS table. If resistance is okay, check evaporator temperature sensor harness.

EVAPORATOR TEMPERATURE SENSOR RESISTANCE SPECIFICATIONS

| Temperature °F (°C) | Ohms |
|---------------------|------|
| 32 (0) | 6190 |
| 50 (10) | 4010 |
| 68 (20) | 2670 |
| 77 (25) | 2200 |
| 86 (30) | 1830 |
| 104 (40) | 1280 |

Evaporator Temperature Sensor Harness Check

1) Turn ignition on. Measure voltage between Yellow/Red wire of evaporator temperature sensor connector and ground. If voltage reading is approximately 5 volts, go to next step. If voltage reading is not approximately 5 volts, check auto amplifier connectors for proper installation. Clean or repair connectors as necessary. If connectors are okay, replace auto amplifier.

2) Measure voltage between Yellow/Red and Green/White wires of evaporator temperature sensor connector. If voltage reading is not approximately 5 volts, check auto amplifier connectors for proper installation. If connectors are okay, replace auto amplifier. If voltage reading is approximately 5 volts, check auto amplifier output voltage.

Auto Amplifier Output Voltage Check

1) Remove auto amplifier leaving connectors attached. See AUTO AMPLIFIER under REMOVAL & INSTALLATION. Turn ignition on. Measure voltage between terminals No. 3 (Black/Yellow wire) and No. 11 (Green/Black wire) of auto amplifier 20-pin connector.

2) If voltage reading is approximately 5 volts, an intermittent problem may exist. Ensure auto amplifier connectors are properly connected to auto amplifier. If voltage reading is not approximately 5 volts, check auto amplifier 20-pin connector for proper installation. Clean or repair connector as necessary and retest. If connector is okay, replace auto amplifier.

CODE 15/25, REFRIGERANT TEMPERATURE SENSOR CIRCUIT

Refrigerant Temperature Sensor Resistance

1) Turn ignition off. Remove glove box. Disconnect refrigerant temperature sensor 2-pin connector. Sensor is located below blower motor unit.

2) Check resistance between Brown/White and Green/Black wires of refrigerant sensor connector. If resistance reading is not as specified, replace sensor. See REFRIGERANT TEMPERATURE SENSOR RESISTANCE SPECIFICATIONS table. If resistance is okay, check refrigerant temperature sensor harness.

REFRIGERANT TEMPERATURE SENSOR RESISTANCE SPECIFICATIONS

| Temperature °F (°C) | Ohms |
|---------------------|------|
| 32 (0) | 6190 |
| 50 (10) | 4010 |
| 68 (20) | 2670 |
| 77 (25) | 2200 |
| 86 (30) | 1830 |
| 104 (40) | 1280 |

Refrigerant Temperature Sensor Harness Check

1) Turn ignition on. Measure voltage between Brown/White wire of refrigerant temperature sensor connector and ground. If voltage reading is approximately 5 volts, go to next step. If voltage reading is not approximately 5 volts, check auto amplifier connectors for proper installation. If connectors are okay, replace auto amplifier.

2) Measure voltage between Brown/White and Green/White wires of refrigerant temperature sensor connector. If voltage reading is not approximately 5 volts, check auto amplifier connectors for proper installation. Clean or repair connectors as necessary. If connectors are okay, replace auto amplifier. If voltage reading is approximately 5 volts, check auto amplifier output voltage.

Auto Amplifier Output Voltage Check

1) Remove auto amplifier leaving connectors attached. See AUTO AMPLIFIER under REMOVAL & INSTALLATION. Turn ignition on. Measure voltage between terminals No. 4 (Yellow/Blue wire) and No. 11 (Green/Black wire) of auto amplifier 20-pin connector.

2) If voltage reading is approximately 5 volts, an intermittent problem may exist. Ensure auto amplifier connectors are properly connected to auto amplifier. If voltage reading is not approximately 5 volts, check auto amplifier 20-pin connector for proper installation. Clean or repair connector as necessary and retest. If connector is okay, replace auto amplifier.

CODE 16/26, WATER TEMPERATURE SENSOR CIRCUIT

Water Temperature Sensor Resistance

1) Turn ignition off. Remove glove box. Disconnect water temperature sensor 2-pin connector. Sensor is located in heater case, near heater core.

2) Check resistance between Red and White wires of water sensor connector. If resistance reading is not as specified, replace sensor. See WATER TEMPERATURE SENSOR RESISTANCE SPECIFICATIONS table. If resistance is okay, check water temperature sensor harness.

WATER TEMPERATURE SENSOR RESISTANCE SPECIFICATIONS

| Temperature °F (°C) | Ohms |
|---------------------|------|
| 32 (0) | 6190 |
| 50 (10) | 4010 |
| 68 (20) | 2670 |
| 77 (25) | 2200 |
| 86 (30) | 1830 |
| 104 (40) | 1280 |

Water Temperature Sensor Harness Check

1) Turn ignition on. Measure voltage between Red wire of water temperature sensor connector and ground. If voltage reading is approximately 5 volts, go to next step. If voltage reading is not approximately 5 volts, check auto amplifier connectors for proper installation. Clean or repair connectors as necessary. If connectors are okay, replace auto amplifier.

2) Measure voltage between Red and White wires of water temperature sensor connector. If voltage reading is not approximately 5 volts, check auto amplifier connectors for proper installation. Clean or repair connectors as necessary. If connectors are okay, replace auto amplifier. If voltage reading is approximately 5 volts, check auto amplifier output voltage.

Auto Amplifier Output Voltage Check

1) Remove auto amplifier leaving connectors attached. See AUTO AMPLIFIER under REMOVAL & INSTALLATION. Turn ignition on. Measure voltage between terminals No. 12 (Blue/White wire) and No. 11 (Green/Black wire) at 20-pin connector of auto amplifier.

2) If voltage reading is approximately 5 volts, an intermittent problem may exist. Ensure auto amplifier connectors are properly connected to auto amplifier. If voltage reading is not approximately 5 volts, check auto amplifier 20-pin connector for proper installation. Clean or repair connector as necessary and retest. If connector is okay, replace auto amplifier.

CODE 31, AIR MIX DOOR MOTOR CIRCUIT

1) Remove auto amplifier leaving connectors attached. See AUTO AMPLIFIER under REMOVAL & INSTALLATION. Enter DIAGNOSTIC STEP 3. See ENTERING SELF-DIAGNOSTICS under SELF-DIAGNOSTIC SYSTEM.

2) Measure voltage between terminals No. 14 (Black/White wire) and No. 11 (Green/Black wire) of auto amplifier 20-pin connector. With temperature display at 41 or 42, voltage reading should be 4.5 volts.

3) Depress DEF switch to advance to next temperature display. With temperature display at 43, voltage reading should be 2.5 volts. With temperature display at 44 or 45, voltage reading should be .5 volt.

4) If voltage readings are okay, perform procedures under CODE 33 AIR MIX DOOR MOTOR CIRCUIT. If voltage readings are not as specified, check auto amplifier output voltage.

Auto Amplifier Output Voltage Check

1) Disconnect air mix door motor 7-pin (5 wire) connector. Connector is located near cooling unit. Turn ignition on. Measure voltage between terminals No. 1 (Blue/White wire) and No. 11 (Green/Black wire) of auto amplifier 20-pin connector.

2) If voltage reading is not approximately 5 volts, check auto amplifier connectors for proper installation. Clean or repair connectors as necessary. If connectors are okay, replace auto amplifier. If voltage reading is approximately 5 volts, check air mix door motor wiring harness.

Air Mix Door Motor Wiring Harness Check

1) Disconnect auto amplifier connectors. With air mix door motor connector disconnected, measure resistance between terminal No. 1 (Blue/White wire) of auto amplifier 20-pin connector and terminal No. 3 (Blue wire) of air mix door motor connector. Resistance should be zero ohms.

2) Measure resistance between terminal No. 14 (Black/White wire) of auto amplifier 20-pin connector and terminal No. 6 (Brown wire) of air mix door motor connector. Resistance should be zero ohms.

3) Measure resistance between terminal No. 11 (Green/Black wire) of auto amplifier 20-pin connector and terminal No. 2 (White wire) of air mix door motor connector. Resistance should be zero ohms.

4) If resistance readings are not as specified, check auto amplifier connectors for proper installation. Clean or repair connectors as necessary. If connectors are okay, replace auto amplifier. If resistance readings are okay, go to next step.

5) Measure resistance between ground and terminals No. 11 (Green/Black wire), No. 14 (Black/White wire), and No. 3 (Blue wire) of auto amplifier 20-pin connector. Resistance readings should be infinite. If resistance readings are not as specified, check and repair wiring harness as necessary. If resistance readings are okay, replace air mix door motor.

CODE 32, MODE DOOR MOTOR CIRCUIT

Potentiometric Balance Resistor (PBR) Check

1) Remove auto amplifier leaving connectors attached. See AUTO AMPLIFIER under REMOVAL & INSTALLATION. Enter DIAGNOSTIC STEP 3. See ENTERING SELF-DIAGNOSTICS under SELF-DIAGNOSTIC SYSTEM.

2) Measure voltage between terminals No. 15 (Light Green/Black wire) and No. 11 (Green/Black wire) of auto amplifier 20-pin connector. With temperature display at 41, voltage reading should be .5 volt. With temperature display at 44, voltage reading should be 4.5 volts.

3) If voltage readings are okay, perform procedures under CODE 34 MODE DOOR MOTOR CIRCUIT. If voltage readings are not as specified, check auto amplifier output voltage.

Auto Amplifier Output Voltage Check

1) Disconnect mode door motor 7-pin (5 wire) connector. Connector is located on left side of heater unit. Turn ignition on. Measure voltage between terminals No. 1 (Blue/Red wire) and No. 11 (Green/Black wire) of 20-pin connector.

2) If voltage reading is not approximately 5 volts, check auto amplifier connectors for proper installation. Clean or repair connectors as necessary. If connectors are okay, replace auto amplifier. If voltage reading is approximately 5 volts, check mode door motor wiring harness.

Mode Door Motor Wiring Harness Check

1) Disconnect auto amplifier connectors. With mode door motor connector disconnected, measure resistance between terminal No. 1

(Blue/White wire) of auto amplifier 20-pin connector and terminal No. 3 (Blue wire) of air mix door motor connector. Resistance should be zero ohms.

2) Measure resistance between terminal No. 14 (Black/White wire) of auto amplifier 20-pin connector and terminal No. 6 (Brown wire) of air mix door motor connector. Resistance should be zero ohms.

3) Measure resistance between terminal No. 11 (Green/Black wire) of auto amplifier 20-pin connector and terminal No. 2 (White wire) of air mix door motor connector. Resistance should be zero ohms.

4) If resistance readings are not as specified, check auto amplifier connectors for proper installation. Clean or repair connectors as necessary. If connectors are okay, replace auto amplifier. If resistance readings are okay, go to next step.

5) Measure resistance between ground and terminals No. 11 (Green/Black wire), No. 14 (Black/White wire), and No. 3 (Blue wire) of auto amplifier 20-pin connector. Resistance readings should be infinite. If resistance readings are not as specified, check and repair wiring harness as necessary. If resistance readings are okay, replace air mix door motor.

CODE 33, AIR MIX DOOR MOTOR CIRCUIT

Auto Amplifier Output Voltage Check

1) Remove auto amplifier leaving connectors attached. See AUTO AMPLIFIER under REMOVAL & INSTALLATION. Enter DIAGNOSTIC STEP 3. See ENTERING SELF-DIAGNOSTICS under SELF-DIAGNOSTIC SYSTEM.

2) Using an analog voltmeter, connect voltmeter positive lead to terminal No. 6 (Green/Yellow wire) and negative lead to terminal No. 5 (Green/Black wire) of auto amplifier 16-pin connector. Observe volt-meter and change temperature display from No. 45 to 41. Voltage reading should fluctuate between zero and 5 volts.

NOTE: Voltage is only displayed when air mix door motor is operating.

3) Reverse voltmeter leads and change temperature display from No. 42 to 44. Voltage reading should fluctuate between zero and 5 volts. If voltage readings are not as specified, check auto amplifier connectors for proper installation. Clean or repair connectors as necessary. If connectors are okay, replace auto amplifier. If voltage readings are okay, check air mix door motor wiring harness.

Air Mix Door Motor Wiring Harness Check

1) Disconnect auto amplifier and air mix door motor connectors. Measure resistance between terminal No. 6 (Green/Yellow wire) of auto amplifier 16-pin connector and terminal No. 5 (Green/Black wire) of air mix door motor connector. Resistance should be zero ohms.

2) Measure resistance between terminal No. 5 (Green/Black wire) of auto amplifier 16-pin connector and terminal No. 7 (Yellow wire) of air mix door motor connector. Resistance should be zero ohms. If resistance is not as specified, check and repair wiring harness as necessary. If resistance is okay, go to next step.

3) Measure resistance between ground and terminals No. 6 (Green/Yellow wire) and No. 5 (Green/Black wire) of auto amplifier 16-pin connector. Resistance readings should be infinite. If resistance readings are not as specified, check and repair wiring harness as necessary. If resistance readings are okay, replace air mix door motor.

CODE 34, MODE DOOR MOTOR CIRCUIT

Auto Amplifier Output Voltage Check

1) Remove glove box. Remove auto amplifier leaving connectors attached. See AUTO AMPLIFIER under REMOVAL & INSTALLATION. Enter DIAGNOSTIC STEP 3. See ENTERING SELF-DIAGNOSTICS under SELF-DIAGNOSTIC SYSTEM.

2) Using an analog voltmeter, connect voltmeter positive lead to terminal No. 3 (Green/Red wire) and negative lead to terminal No. 4 (Light Green/Black wire) of auto amplifier 16-pin connector. Observe volt-meter and change temperature display from No. 41 to 45. Voltage reading should fluctuate between zero and 5 volts.

NOTE: Voltage is only displayed when mode door motor is operating.

3) Reverse voltmeter leads and change set display from No. 45 to 41. Voltage reading should fluctuate between zero and 5 volts. If voltage readings are not as specified, check auto amplifier connectors for proper installation.

4) Clean or repair connectors as necessary. If connectors are okay, replace auto amplifier. If voltage readings are okay, check mode door motor wiring harness.

Mode Door Motor Wiring Harness Check

1) Disconnect auto amplifier and mode door motor connectors. Measure resistance between terminal No. 3 (Green/Red wire) of auto amplifier 16-pin connector and terminal No. 5 (Red/White wire) of mode door motor connector. Resistance should be zero ohms.

2) Measure resistance between terminal No. 4 (Light Green/Black wire) of auto amplifier 16-pin connector and terminal No. 7 (White/Red wire) of mode door motor connector. Resistance should be zero ohms. If resistance is not as specified, check and repair wiring harness as necessary. If resistance is okay, go to next step.

3) Measure resistance between ground and terminals No. 3 (Green/Red wire) and No. 4 (Light Green/Black wire) of auto amplifier 16-pin connector. Resistance readings should be infinite. If resistance readings are not as specified, check and repair wiring harness as necessary. If resistance readings are okay, replace mode door motor.

CODE 35, INTAKE MODE DOOR MOTOR CIRCUIT

Intake Door Motor Voltage Check

1) Remove glove box. Disconnect intake door motor 7-pin (6 wire) connector. Connector is located on right side of blower motor unit. Turn ignition on. Measure voltage between terminal No. 4 (White wire) and ground.

2) If battery voltage is not present, check fuse No. 15 in fuse block. If fuse is blown, replace fuse. If fuse is okay, check and repair wiring harness as necessary. If battery voltage is present, check intake door motor.

Intake Door Motor Check

1) Remove auto amplifier, leaving connectors attached. See AUTO AMPLIFIER under REMOVAL & INSTALLATION. Enter DIAGNOSTIC STEP 3. See ENTERING SELF-DIAGNOSTICS under SELF-DIAGNOSTIC SYSTEM.

2) Wait approximately 10 seconds. Measure voltage between terminal No. 5 (Green wire) of auto amplifier 20-pin connector and ground. With temperature display at 45, voltage reading should be approximately 5 volts. With temperature display at any number other than 45, voltage reading should be zero volts.

3) Measure voltage between terminal No. 6 (Green/Yellow wire) of auto amplifier 20-pin connector and ground. With temperature display at 41, voltage reading should be approximately 5 volts. With temperature display at any number other than 41, voltage reading should be zero volts.

4) Measure voltage between terminal No. 7 (Green/White wire) of auto amplifier 20-pin connector and ground. With temperature display at 42, 43 or 44, voltage reading should be approximately 5 volts. With temperature display at 41 or 45, voltage reading should be zero volts.

5) If voltage readings are not as specified, check auto amplifier connectors for proper installation. Clean or repair connectors as necessary. If connectors are okay, replace auto amplifier. If voltage readings are okay, check intake door motor wiring harness.

Intake Door Motor Wiring Harness Check

1) Disconnect auto amplifier connectors. With intake door motor connector disconnected, measure resistance between terminal No. 5 (Green/wire) at 20-pin connector of auto amplifier and terminal No. 6 (Green/Yellow wire) of intake door motor connector. Resistance should be zero ohms.

2) Measure resistance between terminal No. 6 (Green/Yellow wire) at 20-pin connector of auto amplifier and terminal No. 3 (Black/Yellow wire) of intake door motor connector. Resistance should be zero ohms.

3) Measure resistance between terminal No. 7 (Green/White wire) of auto amplifier 20-pin connector and terminal No. 2 (White/Green wire) of intake door motor connector. Resistance should be zero ohms.

4) Measure resistance between terminal No. 11 (Green/Black wire) of auto amplifier 20-pin connector and terminal No. 1 (Blue/White wire) of intake door motor connector. Resistance should be zero ohms.

5) If resistance readings are not as specified, check auto amplifier connectors for proper installation. Clean or repair connectors as necessary. If connectors are okay, replace auto amplifier. If resistance readings are okay, go to next step.

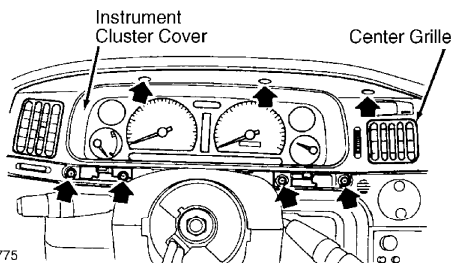
6) Measure resistance between terminal No. 5 (Green wire), No. 6 (Green/Yellow wire), No. 7 (Green/White wire), and No. 11 (Green/Black wire) of auto amplifier 20-pin connector and ground. Resistance readings should be infinite. If resistance readings are not as specified, check and repair wiring harness as necessary. If resistance readings are okay, replace intake door motor.

REMOVAL & INSTALLATION

AUTO AMPLIFIER

Removal & Installation

Remove instrument cluster cover. See Fig. 7. Remove center grille. Remove auto amplifier screws. Disconnect aspirator duct from auto amplifier. Remove auto amplifier from dashboard. To install, reverse removal procedure. Ensure no clearance exists between components.



93H19775

Fig. 7: Removing Instrument Cluster Cover & Center Grille

A/C COMPRESSOR

Removal

1) Disconnect negative battery cable. Discharge A/C system using approved refrigerant recovery/recycling equipment. Remove belt cover. Remove alternator and A/C compressor belt.

2) Disconnect low-pressure and high-pressure hoses from compressor. Remove alternator and A/C compressor connectors. Remove lower compressor bracket. Remove compressor.

Installation

To install, reverse removal procedure. Tighten compressor bolts to 23-29 ft. lbs. (31-39 N.m). Evacuate and charge A/C system. Check A/C system for proper operation.

CONDENSER

Removal

1) Disconnect negative battery cable. Discharge A/C system using approved refrigerant recovery/recycling equipment. Disconnect radiator fan connectors. Remove front grille. Remove upper radiator bracket. Disconnect pipe and hose connections from condenser. Remove radiator fans.

2) Disconnect cooling hose located under radiator fan shroud. Position fuel evaporation canister out of way. Disconnect trinary (triple) pressure switch connector. Raise and support vehicle.

3) Remove splash shield from underneath vehicle. Remove 2 bolts securing oil cooler to condenser. Lower vehicle. Remove condenser bolts. Move radiator forward and remove condenser.

Installation

To install, reverse removal procedure. Ensure guide on lower side of condenser is inserted into hole in radiator panel. Evacuate and charge A/C system. Check A/C system for proper operation.

EVAPORATOR

Removal

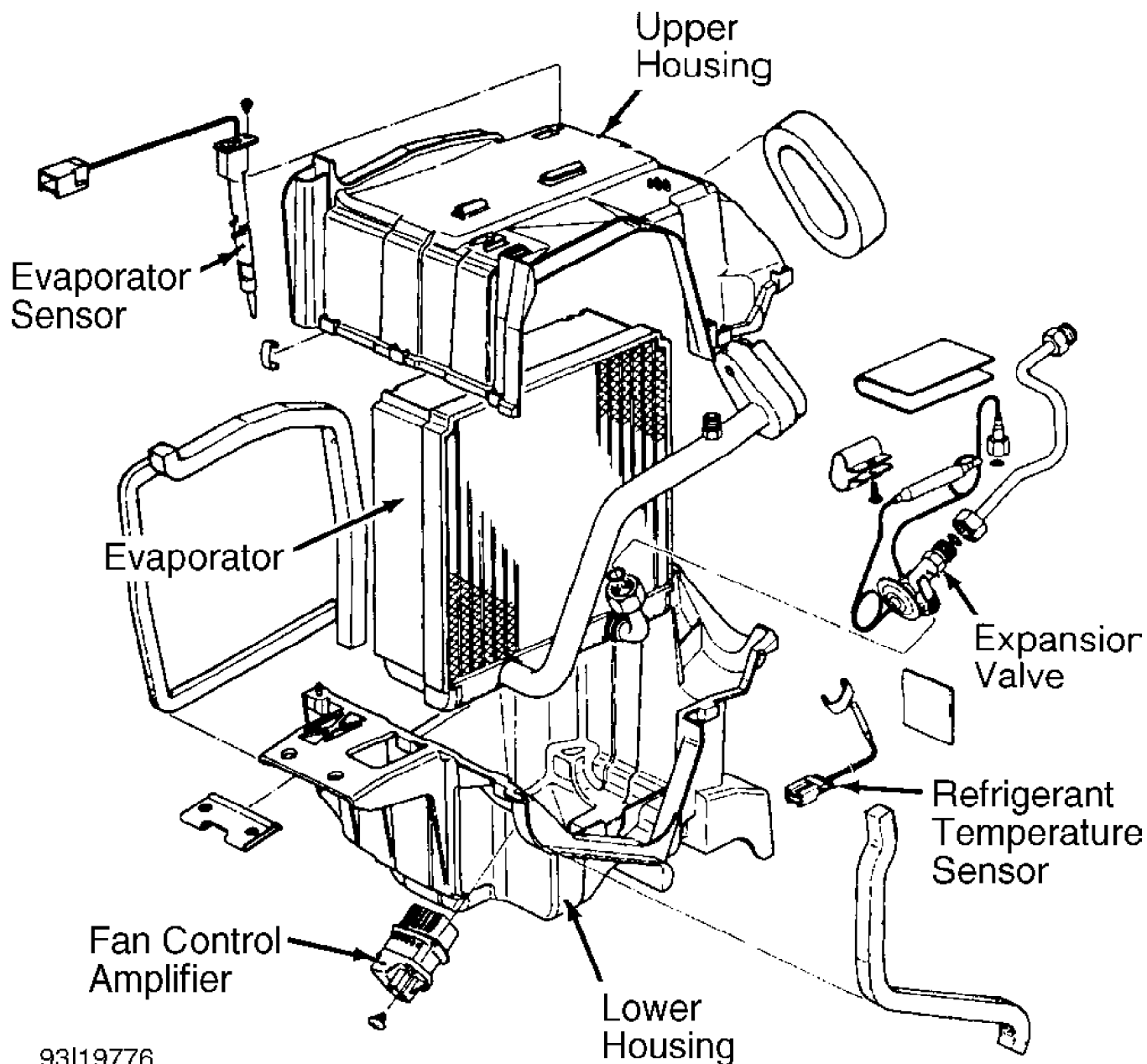
1) Disconnect negative battery cable. Discharge A/C system using approved refrigerant recovery/recycling equipment. Disconnect low and high-pressure hoses from evaporator.

2) Remove glove box. Disconnect fan control amplifier connector. See Fig. 8. Remove time control unit. Time control unit is located above fan amplifier. Disconnect cooling unit drain hose. Remove cooling unit bolts.

3) Remove cooling unit. Remove refrigerant temperature and evaporator sensors from cooling unit. Remove clamps holding cooling unit upper and lower housings. Separate cooling unit housing. Remove evaporator. See Fig. 8

Installation

To install, reverse removal procedure. Evacuate and charge A/C system. Check A/C system for proper operation.



93119776
 Fig. 8: Exploded View Of Cooling Unit

A/C SYSTEM SPECIFICATIONS

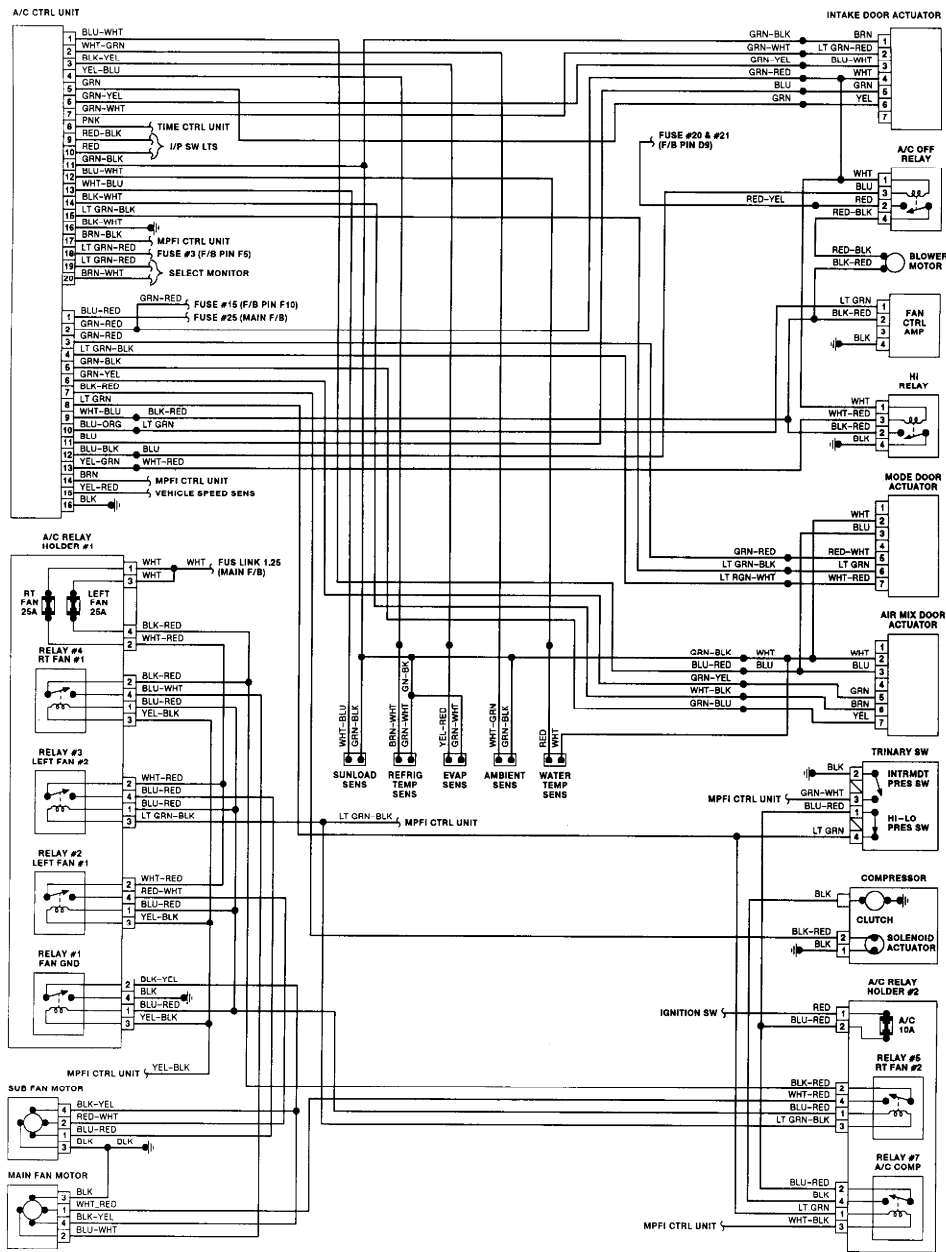
A/C SYSTEM SPECIFICATIONS TABLE

| Application | Specification |
|-----------------------------------|--------------------------|
| Compressor Type | Calsonic V5 5-Cyl. |
| Compressor Belt Deflection (1) | |
| New | 15/64-9/32" (6.0-7.0 mm) |
| Used | 9/32-5/16" (7.0-8.0 mm) |
| Compressor Oil Capacity | 2.4 ozs. |
| Refrigerant (R-12) Capacity | 21-24 ozs. |
| System Operating Pressures (2) | |

High Side 185-213 psi (13-15 kg/cm²)
 Low Side 28 psi (2 kg/cm²)

- (1) - With 22 lbs. (10 kg) applied between pulleys.
- (2) - Pressure readings will vary depending on ambient temperature, humidity and altitude.

WIRING DIAGRAM



93B19845

Fig. 9: Automatic A/C-Heater System Wiring Diagram (SVX)