

HEATER SYSTEM**1994 Heater System****DESCRIPTION & OPERATION**

Heater case, mounted under center of instrument panel, contains airflow mode doors and air-mix (temperature blend) doors. See **Fig. 1**. Blower case, mounted under right side of instrument panel, contains blower motor, blower resistor and fresh/recirculated air door. All doors are controlled manually from control panel by cable. Blower resistors, located on bottom of blower case, determine blower speed.

WARNING: To avoid injury from accidental air bag deployment, read and carefully follow all **SERVICE PRECAUTIONS** and **DISABLING & ACTIVATING AIR BAG SYSTEM** procedures in appropriate **AIR BAG RESTRAINT SYSTEM** article in **ACCESSORIES/SAFETY EQUIPMENT** section.

CAUTION: When battery is disconnected, radio will go into anti-theft protection mode. Obtain radio anti-theft protection code from owner prior to servicing vehicle.

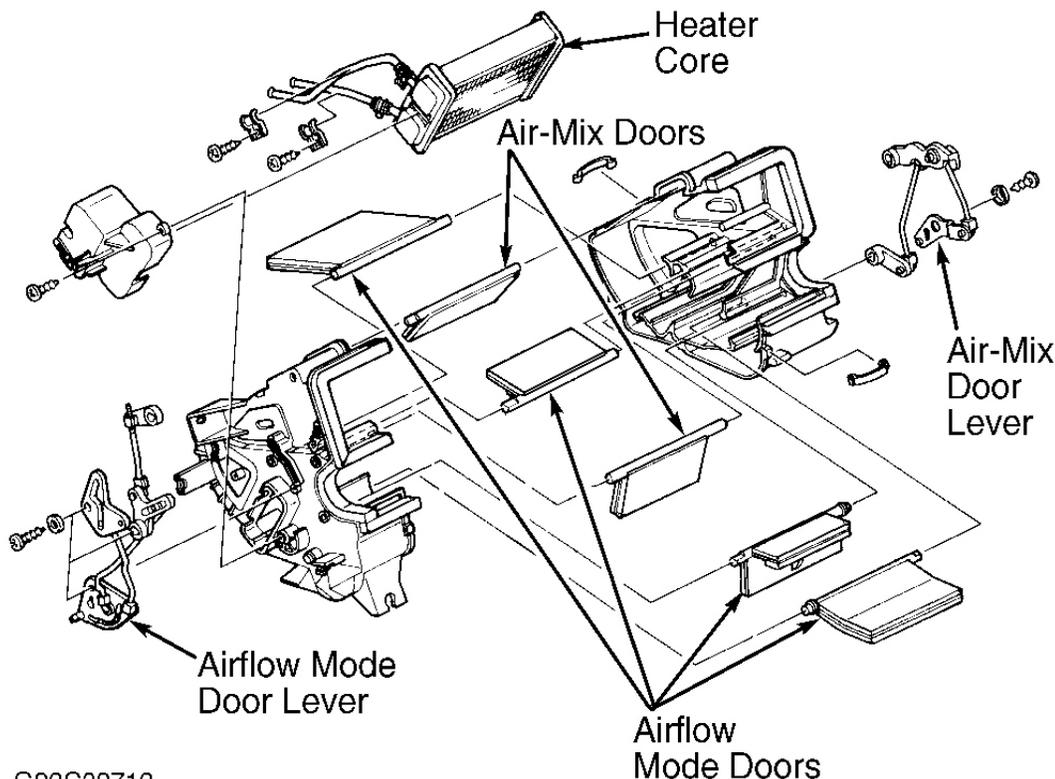


Fig. 1: Exploded View Of Heater Unit
Courtesy of MAZDA MOTORS CORP.

ADJUSTMENTS

AIRFLOW MODE DOOR

Set airflow mode control lever at vent position. Disconnect control cable at airflow mode door lever. See **Fig. 1**. Extend airflow mode door lever until it stops. Attach control cable to door lever. Secure cable using clip. Ensure control lever slides freely between defrost and vent positions.

AIR-MIX (TEMPERATURE BLEND) DOOR

Set temperature control lever at maximum hot setting. Disconnect control cable at air-mix door lever. See **Fig. 1**. Extend air-mix door lever until it stops. Attach control cable to door lever. Secure cable using clip. Ensure control lever slides freely between hot and cold settings.

FRESH/RECIRCULATED AIR DOOR

Set fresh/recirculated air control lever at fresh air setting. Disconnect control cable at fresh/recirculated air door lever. Retract recirculated/fresh air door lever until it stops. Attach control cable to door lever. Secure cable using clip. Ensure control lever slides freely between recirculated air and fresh air settings.

TESTING

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BLOWER MOTOR CIRCUIT

1. Check 30-amp HEATER circuit breaker in passenger compartment fuse block. If Red button has not popped out, go to next step. If Red button has popped out, repair short circuit in wiring harness, then press Red button to reset circuit breaker.
2. Turn ignition on. Turn blower switch to 4th position (high). Using voltmeter, backprobe Blue wire terminal of blower motor connector on bottom of blower case. If battery voltage exists, go to next step. If battery voltage is not present, repair wiring harness between circuit breaker and blower motor.
3. Ensure ignition is on. Backprobe Blue wire terminal of blower resistor 1-pin connector. If battery voltage exists, go to next step. If battery voltage is not present, replace blower motor.
4. Backprobe Blue/White wire terminal of blower resistor 4-pin connector. If battery voltage exists, go to next step. If battery voltage is not present, replace blower resistor.
5. Backprobe Blue/Red wire terminal of blower resistor 4-pin connector. If battery voltage exists, go to next step. If battery voltage is not present, replace blower resistor.
6. Backprobe Blue/Green wire terminal of blower resistor 4-pin connector. If battery voltage exists, go to

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next step. If battery voltage is not present, replace blower resistor.

7. Backprobe Blue/Yellow wire terminal of blower resistor 4-pin connector. If battery voltage exists, go to next step. If battery voltage is not present, replace blower resistor.
8. Turn blower switch to 4th position (high). Backprobe Black wire terminal of blower switch connector. If battery voltage is not present, go to next step. If battery voltage exists, repair Black wire between blower switch and body ground.
9. Turn ignition blower switch off. Backprobe Blue/White wire terminal of blower switch connector. If battery voltage exists, go to next step. If battery voltage is not present, repair Blue/White wire between blower resistor and blower switch.
10. Backprobe Blue/Red wire terminal of blower switch connector. If battery voltage exists, go to next step. If battery voltage is not present, repair Blue/Red wire between blower resistor and blower switch.
11. Backprobe Blue/Green wire terminal of blower switch connector. If battery voltage exists, go to next step. If battery voltage is not present, repair Blue/Green wire between blower resistor and blower switch.
12. Backprobe Blue/Yellow wire terminal of blower switch connector. If battery voltage exists, replace blower switch. If battery voltage is not present, repair Blue/Yellow wire between blower resistor and blower switch.

BLOWER MOTOR

Disconnect blower motor 2-pin connector from bottom of blower case. Apply battery voltage across blower motor terminals. Replace blower motor if it does not operate.

BLOWER RESISTOR

Disconnect blower resistor connectors from blower case. Check continuity, in turn, between Blue wire terminal of 1-pin connector and each terminal of 4-pin connector. Ensure continuity exists. Replace resistor if continuity does not exist.

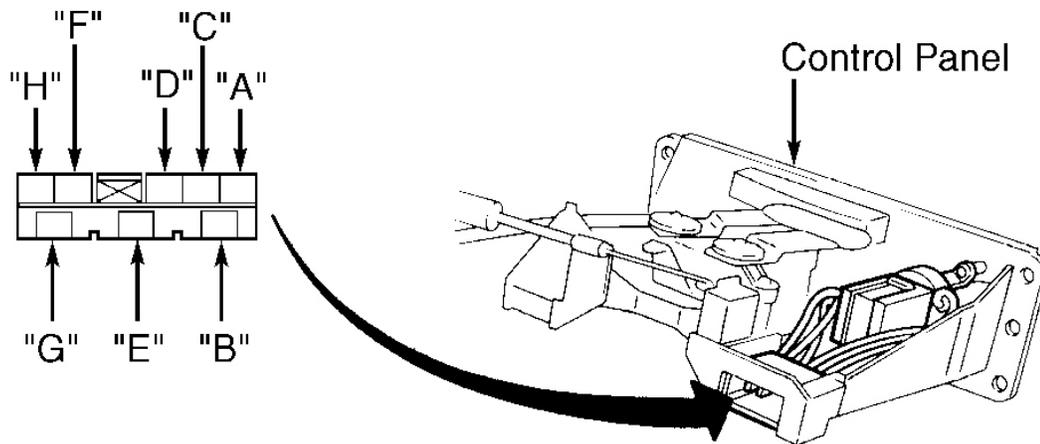
BLOWER SWITCH

Disconnect blower switch connector. Place blower switch in indicated positions, and check continuity between specified blower switch terminals. See **BLOWER SWITCH TEST** table. See **Fig. 2** . If continuity is not as specified, replace blower switch.

BLOWER SWITCH TEST

Switch Position	Continuity Between Terminals
Off	(1)
Low	"A" & "G"
Medium-Low	"C", "G" & "H"
Medium-High	"E", "G" & "H"
High	"B", "G" & "H"

(1) There should not be continuity between any terminals.



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Fig. 2: Identifying Blower Switch Terminals
 Courtesy of MAZDA MOTORS CORP.

REMOVAL & INSTALLATION

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BLOWER UNIT

Removal & Installation

Remove glove box. Disconnect electrical connectors. Loosen seal plate between blower unit and evaporator unit (if equipped). Remove blower unit bolts and blower unit. Disassemble blower unit to remove blower motor and blower resistor. To install, reverse removal procedure.

CONTROL PANEL

Removal & Installation

Remove rear center console. Remove vent outlets from center panel. Remove center panel. Remove control panel screws, and pull control panel from center panel. Disconnect heater control cables. To install, reverse removal procedure.

HEATER CORE

Removal & Installation

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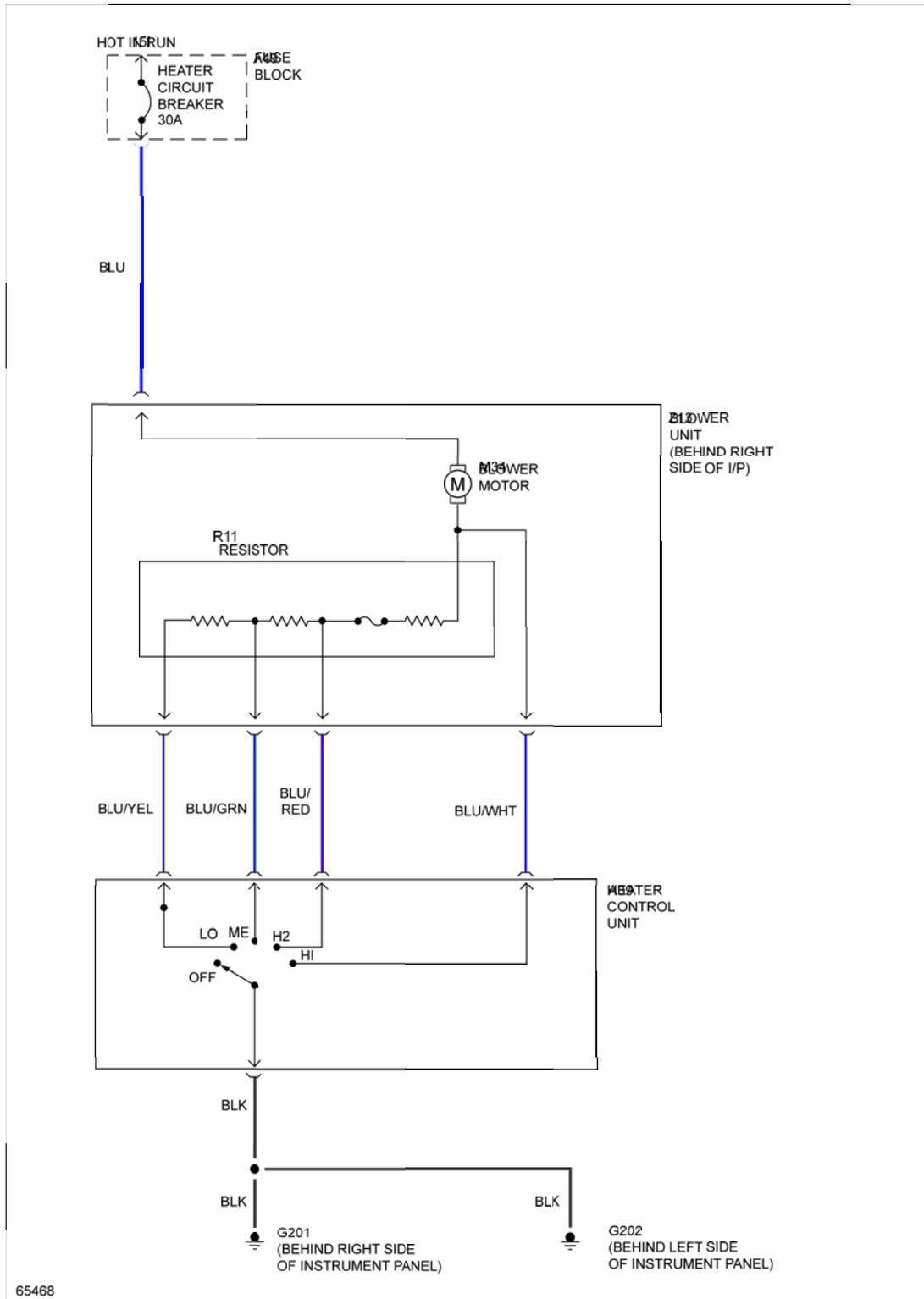
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Drain coolant. Disconnect heater hoses at engine compartment firewall. Remove grommets from holes (if equipped). Remove instrument panel. See REMOVAL & INSTALLATION in **A/C-HEATER SYSTEM - MANUAL** article in the AIR CONDITIONING & HEAT section. Remove heater unit. Disassemble heater unit to remove heater core. See **Fig. 1** . To install, reverse removal procedure. Fill cooling system.

WIRING DIAGRAM

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Fig. 3: Heater System Wiring Diagram