

2002 ENGINES

Electric Cooling Fans - Sedona

DESCRIPTION & OPERATION

COOLING SYSTEM FAN

Cooling system fan description and operation information is not available from the manufacturer.

NOTE: For exploded view of cooling system fan components, see Fig. 1 .

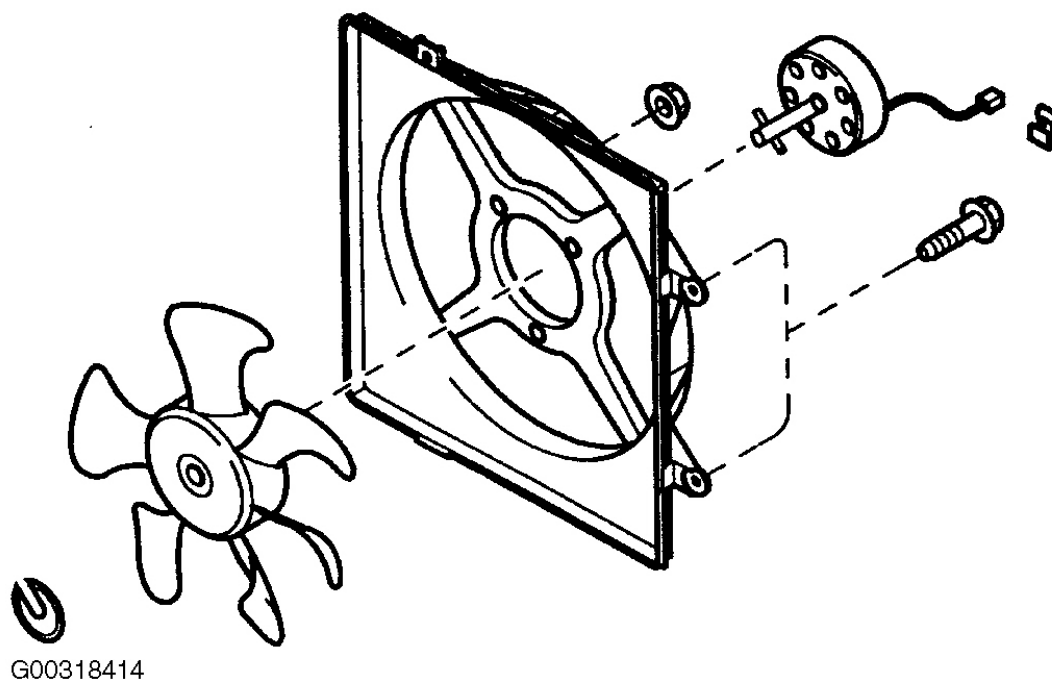


Fig. 1: Exploded View Of Cooling Fan Components
Courtesy of KIA MOTORS AMERICA, INC.

A/C CONDENSER FAN

The condenser fan improves air flow through condenser. Condenser will still have a high volume of air flowing through it even if the vehicle is standing still. It is powered by an electric motor connected to a condenser fan relay. The A/C condenser fan relay is an electrical switching box that closes the circuit to the condenser fan.

COMPONENT LOCATIONS

COOLING SYSTEM FAN

For cooling system fan fuses and relays, see fuse/relay box at left side of engine compartment.

A/C CONDENSER FAN

For A/C condenser system fan fuses and relays, see junction block behind left side of dash.

TROUBLE SHOOTING

COOLING SYSTEM FAN

Cooling system fan trouble shooting information is not available from the manufacturer. See **COOLING SYSTEM FAN** Wiring Diagrams.

A/C CONDENSER FAN

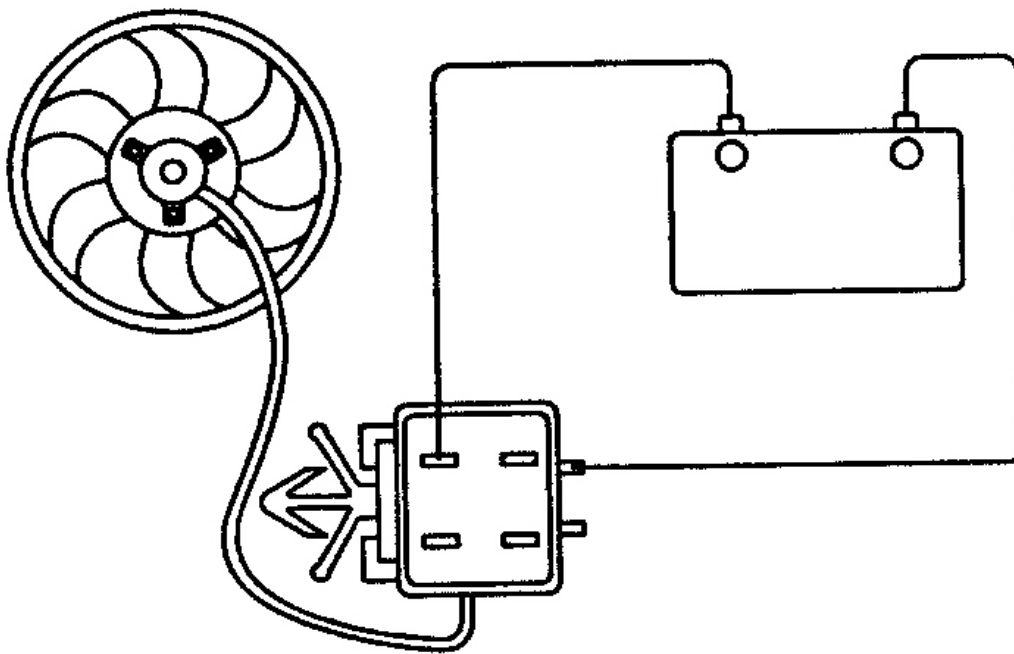
Cooling system fan trouble shooting information is not available from the manufacturer. See **A/C CONDENSER FAN** Wiring Diagrams.

COMPONENT TESTS

COOLING SYSTEM FAN

Cooling Fan Motor

1. Check cooling system fan rotation when the battery voltage is applied to terminal. See **Fig. 2** .
2. If the fan does not rotate, or there is abnormal noise while motor is rotating, replace fan motor.



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Fig. 2: Testing Cooling Fan Motor
 Courtesy of KIA MOTORS AMERICA, INC.

A/C CONDENSER FAN

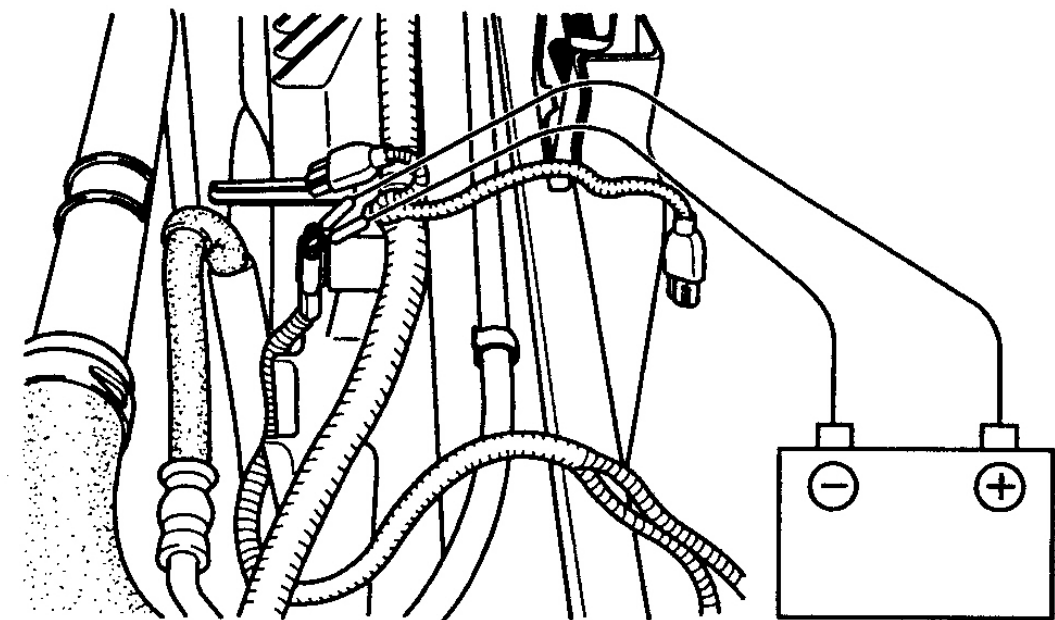
A/C Condenser Fan Motor

1. Check the harness connector.
2. Check the condenser fan motor using battery voltage. See **Fig. 3** .
3. If the fan does not rotate, or there is abnormal noise while motor is rotating, replace fan motor.

A/C Relay

1. Disconnect A/C relay connector.
2. Check continuity between relay terminals. See **Fig. 4** and **Fig. 5** .
3. If not as specified, replace relay.
4. Test relay continuity with voltage applied.
5. Apply 12 volts to terminal "D" and ground terminal "A".
6. Check for continuity between terminals "B" and "C". See **Fig. 6** .

7. If no continuity is present, replace relay.



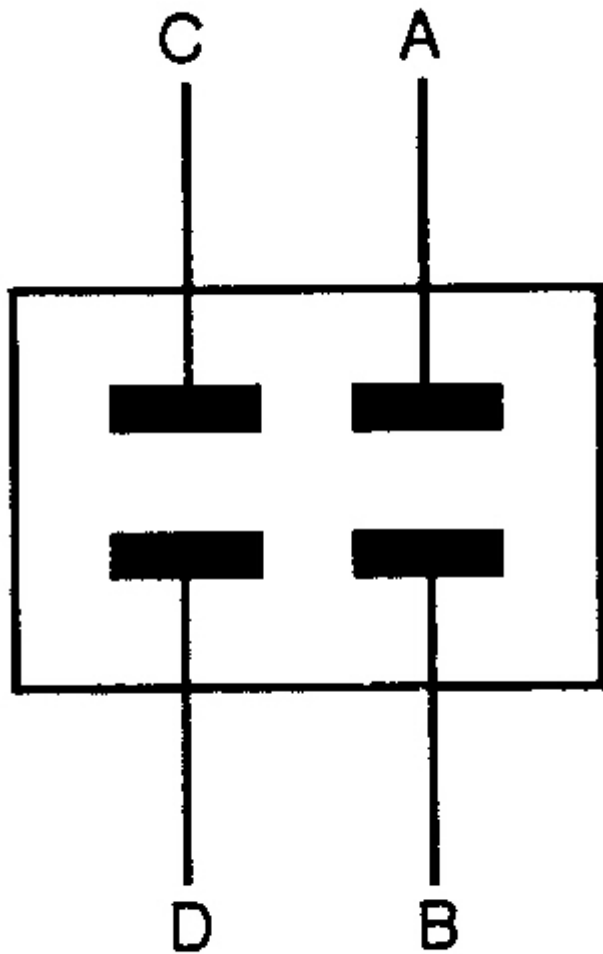
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Fig. 3: Testing A/C Condenser Fan
Courtesy of KIA MOTORS AMERICA, INC.

Terminals		Continuity
Tester probe: +	Tester probe: -	
A	D	Yes
A	C	No
A	B	No
C	D	No
C	B	No

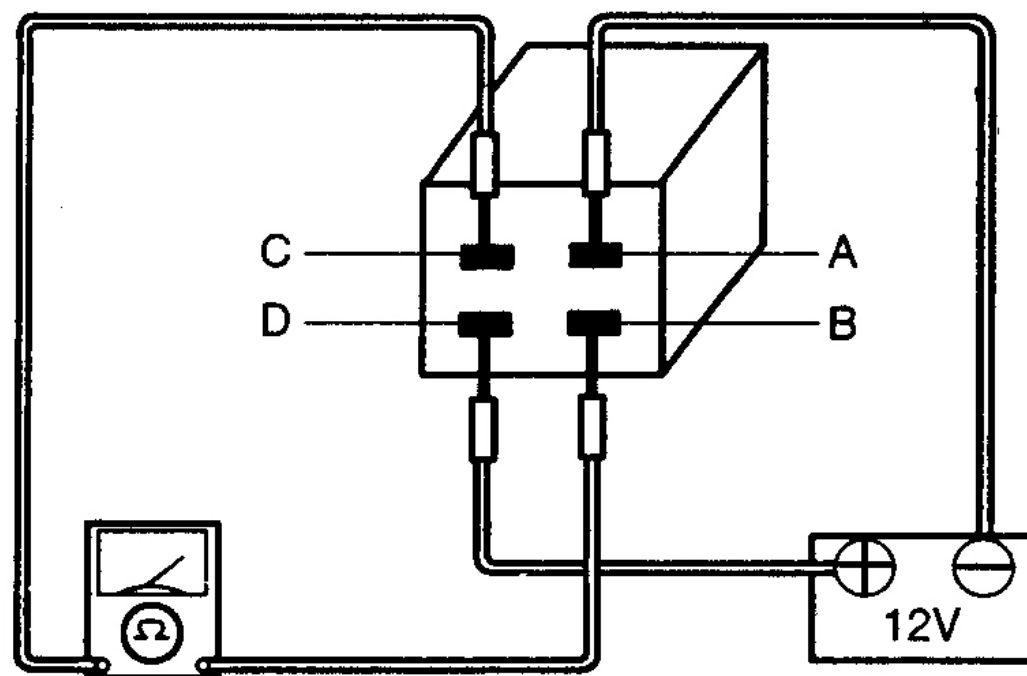
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Fig. 4: Testing A/C Relay Continuity
Courtesy of KIA MOTORS AMERICA, INC.



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Fig. 5: Identifying A/C Relay Terminals
Courtesy of KIA MOTORS AMERICA, INC.



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Fig. 6: Testing Relay Continuity With Voltage Applied
 Courtesy of KIA MOTORS AMERICA, INC.

REMOVAL & INSTALLATION

COOLING SYSTEM FAN

Removal

1. Remove the air duct.
2. Remove the hood locker.
3. Disconnect the horn connector.
4. Remove the shroud upper member.
5. Disconnect the cooling system fan motor connector.
6. Remove the cooling system fan.

Installation

CAUTION: When assembling the shroud, be cautious not to touch the cooling fan.

1. Install the cooling system fan.
2. Connect the cooling system fan motor connector.
3. Install the shroud upper member.
4. Connect the horn connector.
5. Install the hood locker.
6. Install the air duct.
7. After installation, while fan is operating, check for abnormal noise or vibration. If noise or vibration occurs, repair or replace components as necessary.

A/C CONDENSER FAN

Removal

1. Remove the air duct.
2. Remove the hood locker.
3. Disconnect the horn connector.
4. Remove the shroud upper member.
5. Disconnect the cooling system fan motor connector.
6. Remove the cooling system fan.
7. Disconnect A/C condenser fan motor connector.
8. Remove A/C condenser fan bolts and remove fan.

Installation

CAUTION: When assembling the shroud, be cautious not to damage the cooling fan.

1. Install A/C condenser fan and tighten bolts to 35-62 INCH lbs. (4-7 N.m).
2. Connect A/C condenser fan motor connector.
3. Install the cooling system fan.
4. Connect the cooling system fan motor connector.
5. Install the shroud upper member.
6. Connect the horn connector.
7. Install the hood locker.
8. Install the air duct.
9. After installation, while fan is operating, check for abnormal noise or vibration. If noise or vibration occurs, repair or replace components as necessary.

WIRING DIAGRAMS

COOLING SYSTEM FAN

For cooling system fan circuit wiring diagram, see **COOLING FAN** in SYSTEM WIRING DIAGRAMS article.

A/C CONDENSER FAN

For A/C condenser fan circuit wiring diagram, see **AIR CONDITIONING** in SYSTEM WIRING DIAGRAMS article.