



Fan Timer Input Test

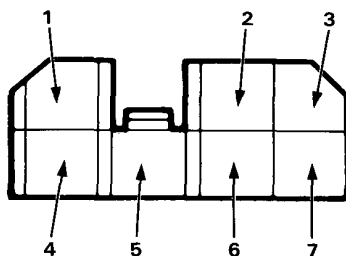
Before performing the fan timer input test do the following:

1. Check fuse No. 26 (40A), 35 (15A), 39 (20A) and 40 (20A) in the under hood relay box and fuse No. 11 (7.5A) and 9 (10A) in the under dash fuse box.
2. Remove the 7P connector from the Fan timer unit and turn the ignition ON.

NOTE:

- Any abnormality found during input test must be corrected before continuing.
- If all tests produce desired result substitute a known good fan timer.

Wire	Position	Test Condition	Desired Results	Corrective action if Desired Results or not obtained
BLK	3	Test for continuity to body ground.	Should have continuity.	Repair open in BLK wire between fan timer unit and body ground.
BLK/YEL	6	Test for Battery Voltage with ignitor switch on.	Should have Battery Voltage	Repair open in BLK/YEL between fan timer unit and fuse.
YEL/BLK	5	Test for Battery Voltage at all times (key on or off)	Should have Battery Voltage	Repair open in YEL/BLK wire between fan timer unit and fuse
BLU/YEL	2	Test for 12 volt	Should have 12 V.	Test for open in BLU/YEL wire between fan timer unit and rad fan control unit or faulty rad fan control unit see input test.
ORN	4	Using an ohmmeter on the 20 k scale test for continuity to body ground	There should be to 105°C (221°F)	Test for open, short to ground or faulty oil temp. sensor.
BLU/RED and GRN	1 7	Test for continuity between BLU/RED and GRN wires.	The should be 90 to 120 Ω.	See flow chart "cooling fan C" on page 15-71.



Troubleshooting

Flow Chart — Cooling Fans "A"

If one fan runs and the other doesn't, switch the relays. If the problem changes with the relays, replace the defective one. If the problem remains unchanged, start the following test.

NOTE: Use the digital circuit tester (07411—0020000) to check.

Cooling fans do not run with BLU wire shorted to ground.

Turn the ignition switch OFF.

Disconnect the 4P connectors from the radiator fan relay and condenser fan relay.

Turn the ignition switch ON.

Measure voltage between YEL/BLK terminals and body ground.

Is there battery voltage?

NO

Repair open in YEL/BLK wire(s) between ignition switch and relay connector(s).

YES

Inspect the radiator and condenser fan relays.

Are the relays OK?

NO

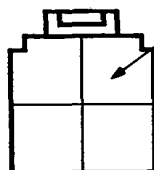
Replace the relay(s) and retest.

YES

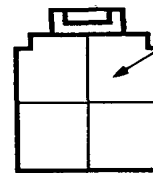
Measure voltage between WHT/BLU, WHT/GRN terminals and body ground.

(To page 15-69)

RADIATOR FAN RELAY



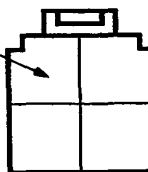
CONDENSER FAN RELAY



View from wire side.

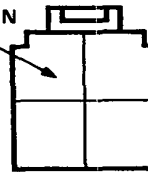
RADIATOR FAN RELAY

WHT/BLU



CONDENSER FAN RELAY

WHT/GRN



View from wire side.



(From page 15-68)

Is there battery voltage?

NO

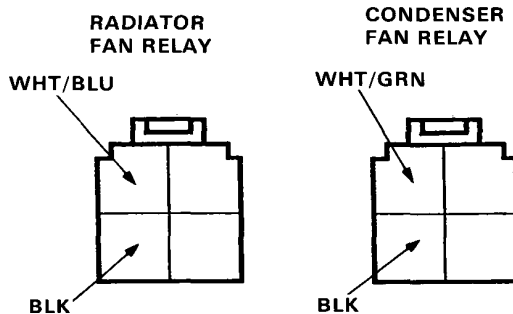
YES

Repair open in WHT/BLU and/or WHT/GRN wire(s) between:

- Radiator fan motor and radiator fan relay.
- Condenser fan motor and condenser fan relay.

Repair open in BLK wire(s) between:

- Condenser fan relay and body ground or poor ground (LHD: G203, RHD: G204)
- Radiator fan relay and body ground or poor ground (G203).



View from wire side.

Troubleshooting

Flow Chart — Cooling Fan "B"

NOTE: Use the digital circuit tester (07411—0020000) to check.

Radiator fan does not run at low speed with BLU shorted to body ground.

Check for continuity between radiator fan timer relay (BLU/RED) and radiator fan control unit (BLU/YEL).

Is there continuity in only one direction?

NO

Repair open in wire between radiator fan control unit (BLU/YEL) and radiator fan timer relay (BLU/RED).

YES

Check for battery voltage on WHT/BLU terminal.

Is there battery voltage?

NO

Repair open in WHT/BLU wire between radiator fan timer relay and radiator fan relay.

YES

Turn ignition switch on.

Check for battery voltage on YEL/BLK wire.

Is there battery voltage?

NO

Repair open in YEL/BLK between radiator fan timer relay and radiator fan control unit.

YES

Using a jumper lead, connect WHT/BLU terminal to BLU/GRN terminal.

Does the radiator fan run at low speed?

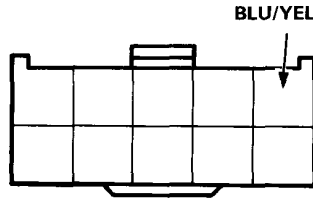
YES

Replace radiator fan timer relay.

NO

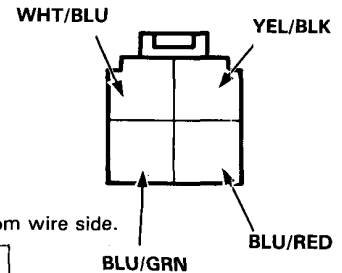
Test for open in BLU/GRN wire between radiator fan timer relay and radiator fan timer relay resistor; faulty resistor or poor ground (G202).

RADIATOR FAN CONTROL UNIT SIDE



View from wire side.

RADIATOR FAN TIMER RELAY SIDE





Flow Chart ——— Cooling Fan "C"

NOTE: Use the digital circuit tester (07411—0020000) to check.

Condensor fan does not run at low speed with the BLU/YEL shorted to YEL/BLK.

Disconnect 7P connector from fan timer unit and 10P connector from rad fan control unit.

Check for continuity on the BLU/YEL wire between the radiator fan control unit and fan timer unit.

Is there continuity?

YES

Check for continuity at the 7P connector between the BLU/RED and GRN wires.

Is there between 100 and 120 ohms?

YES

Check for battery voltage on the WHT/GRN wire terminal.

Is there battery voltage?

NO

Repair poor connection of WHT/GRN wire at condenser fan timer relay.

NO

Repair open in BLU/YEL wire between radiator fan control unit and fan timer unit.

NO

Disconnect condenser fan timer relay.

Check for continuity between fan timer unit and the condenser fan timer relay on the BLU/RED and GRN wires.

Is there continuity?

YES

Replace relay

NO

Repair open in BLU/RED or GRN wire between fan timer unit and condenser fan relay.

YES

Using a jumper lead, connect the WHT/GRN terminal to the BLU/YEL wire terminal.

Does the condenser fan run at low speed?

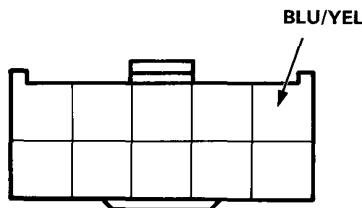
YES

Replace relay.

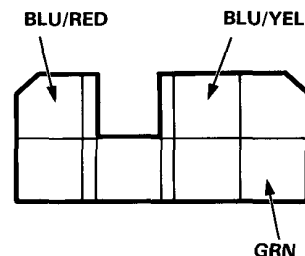
NO

Test for open in the BLU/YEL wire between condenser fan timer relay and condenser fan timer resistor, faulty resistor, or poor ground (G201).

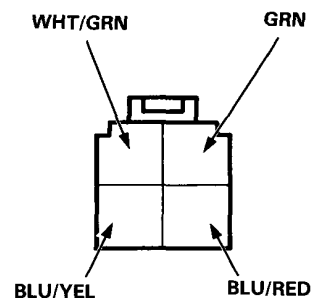
RADIATOR FAN CONTROL UNIT SIDE



FAN TIMER UNIT SIDE



View from wire side.



View from wire side.

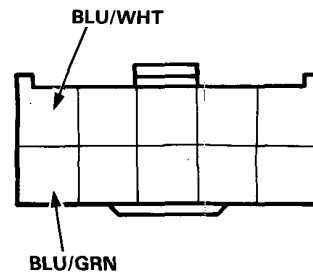
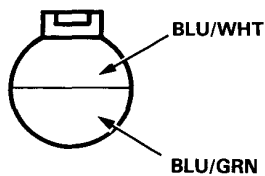
Troubleshooting

Flow Chart — Cooling Fan "D"

NOTE: Use the digital circuit tester (07411-0020000) to check.

COOLANT TEMPERATURE
SENSOR SIDE

RADIATOR FAN CONTROL
UNIT SIDE



View from wire sides.

