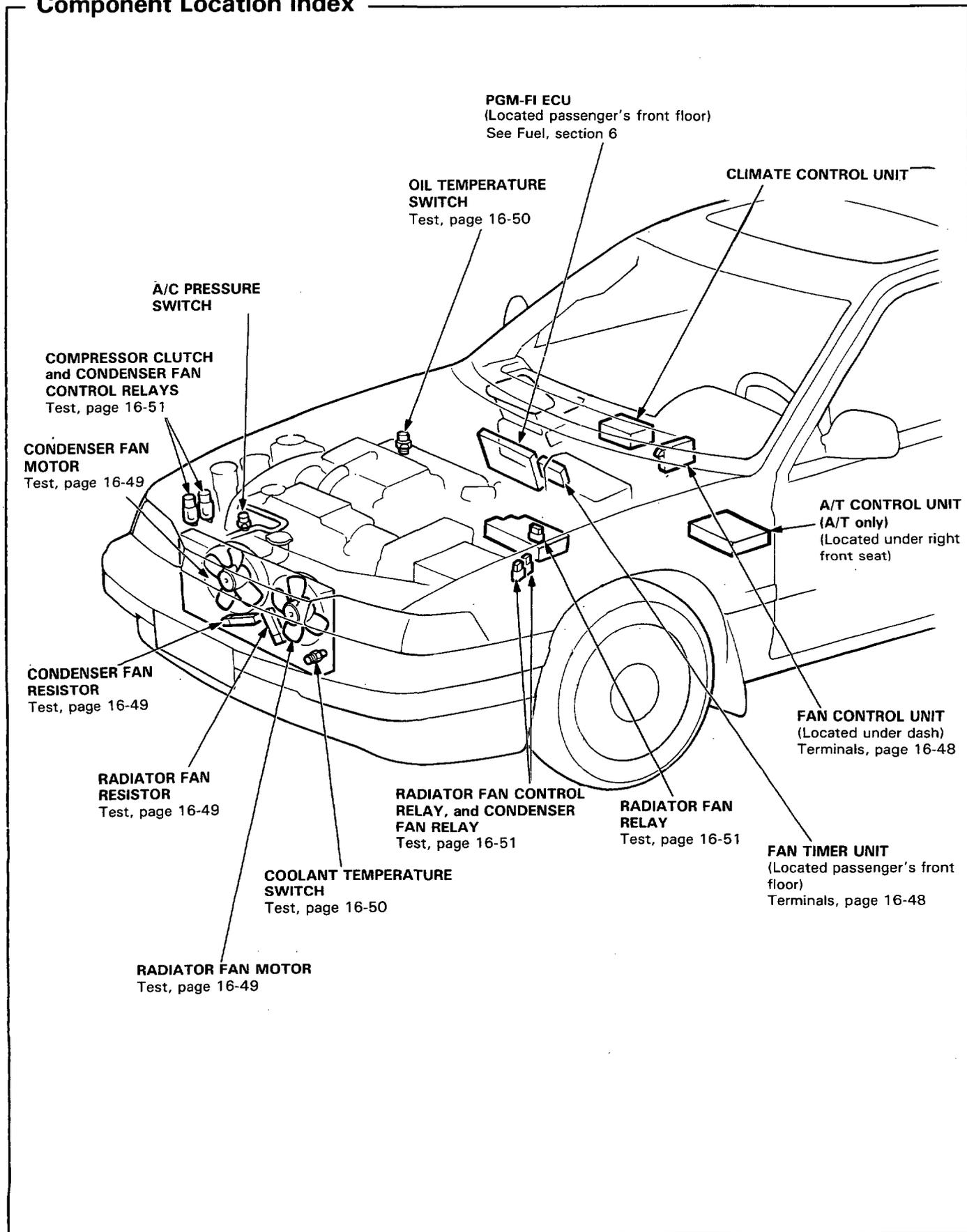




# Cooling Fan Control

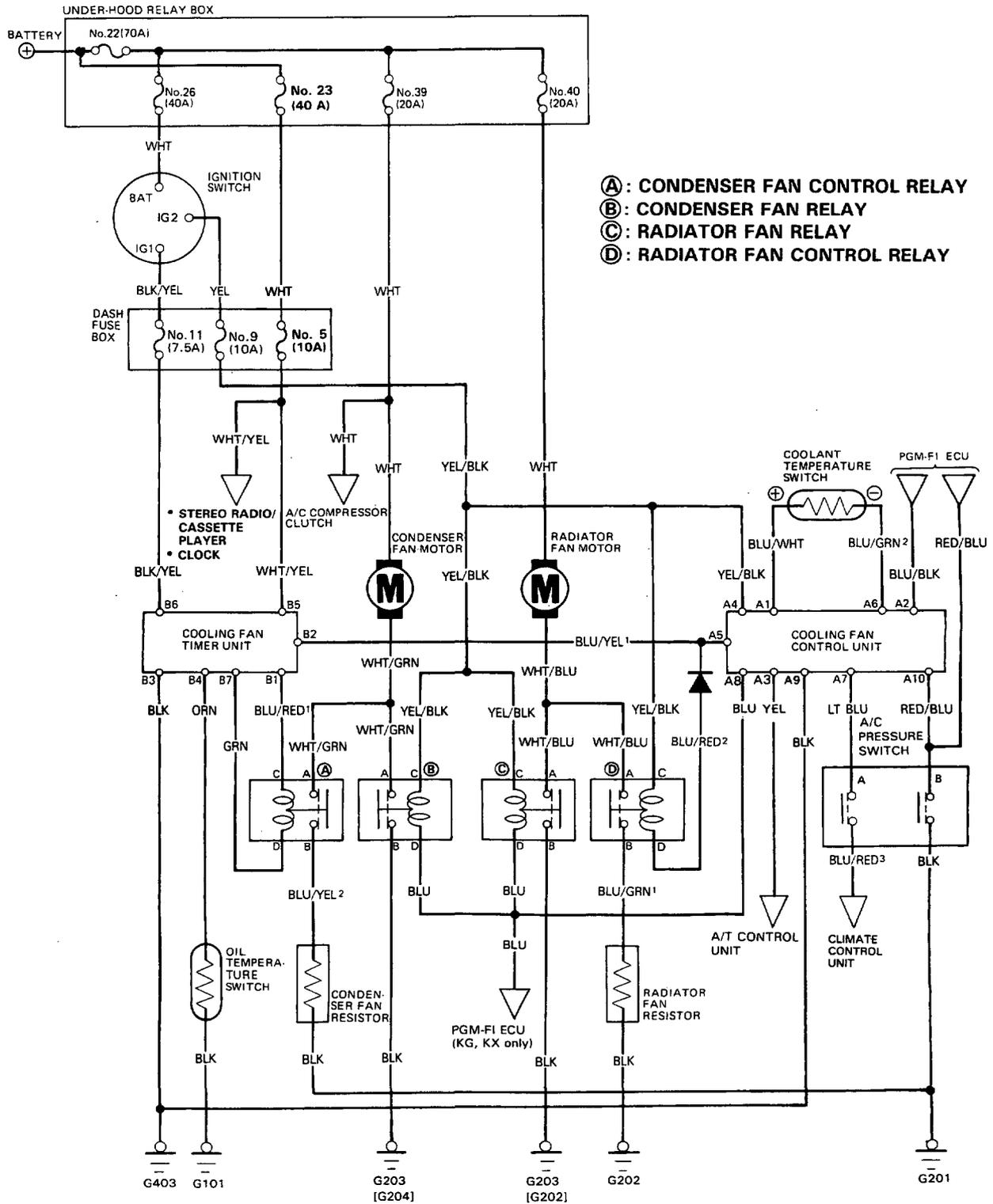
## Component Location Index



# Cooling Fan Control

## Circuit Diagram

NOTE: Several different wires have the same color. They have been given a number suffix to distinguish them (for example BLU/RED<sup>1</sup> and BLU/RED<sup>2</sup> are not the same).



- Ⓐ : CONDENSER FAN CONTROL RELAY
- Ⓑ : CONDENSER FAN RELAY
- Ⓒ : RADIATOR FAN RELAY
- Ⓓ : RADIATOR FAN CONTROL RELAY

### A/C PRESSURE SWITCH

A: ON between 210 kPa (2.1 kg/cm<sup>2</sup>, 30 psi) and 2700 kPa (27 kg/cm<sup>2</sup>, 384 psi)

B: ON below 1350 kPa (13.5 kg/cm<sup>2</sup>, 192 psi)

[ ] : RHD



## Troubleshooting

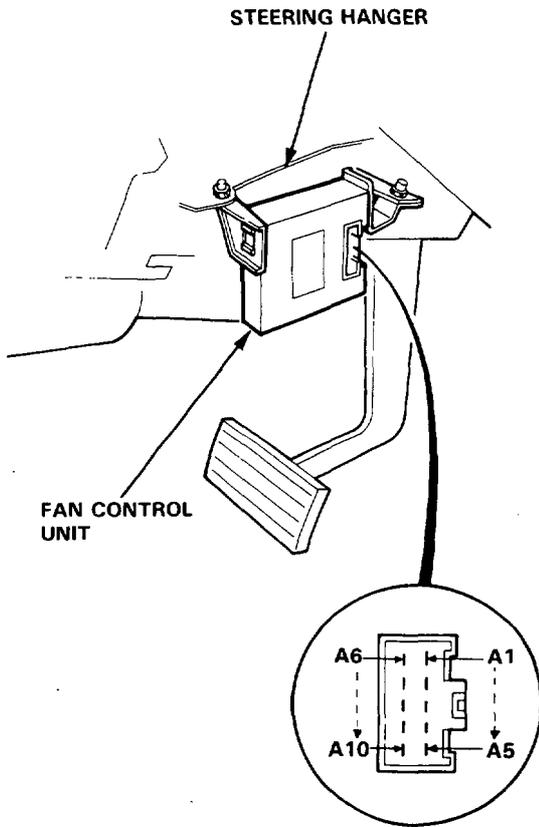
NOTE: The numbers in the table show the troubleshooting sequence.

Symptom		Item to be inspected											Poor ground	Open circuit in wires or loose or disconnected terminals		
		Blown No. 39 (20 A) or No. 40 (20 A) fuse (in the under-hood relay box)	Radiator fan or condenser fan motor	Blown No. 9 (10A) fuse (in the dash fuse box)	Coolant temperature switch	Faulty fan control unit	Blown No. 23 (40 A) (in the under-hood relay box)	Resistor	Relay	Faulty fan timer unit	A/C and PGM-FI systems	Blown No. 11 (7.5 A) or No. 5 (10 A) fuse (in the dash fuse box)			Faulty A/C pressure switch or oil temperature switch	
Only one fan operates (with engine and A/C ON).		1	2													WHT, WHT/GRN or WHT/BLU
Fans do not rotate.	Under all conditions.			1	2	3									G403	BLU/WHT, BLU/GRN <sup>2</sup> or YEL/BLK
	At low speed.					5	3	4	1	6	2			G201,G202 or G403		BLU/YEL <sup>1</sup> , BLU/YEL <sup>2</sup> , BLU/RED <sup>1</sup> , BLU/RED <sup>2</sup> , YEL/BLK, WHT/YEL BLU/GRN <sup>1</sup> or GRN
	At high speed.			2	3				1					G203 [G202 or 204]		YEL/BLK or BLU
Compressor clutch does not engage as necessary.				2	3					1						LT BLU, BLU/RED <sup>3</sup> or BLU/BLK
Fan timer unit fails to function properly.							2		4		1	3	G101 or G201			ORN or RED/BLU

[ ]: RHD

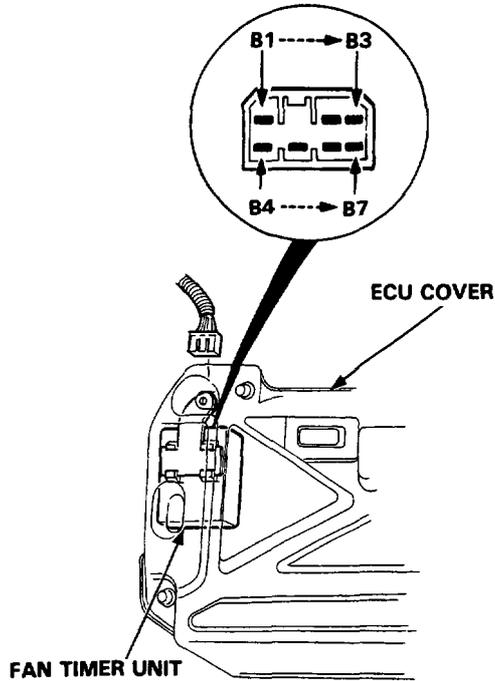
# Cooling Fan Control

## Control Unit Terminals

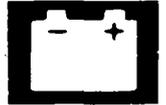


Terminal	Wire	Destination
A1	BLU/WHT	Coolant temperature switch ⊕
A2	BLU/BLK	A/C cut signal (To PGM-FI ECU)
A3	YEL	Lock-up control signal (To A/T control unit)
A4	YEL/BLK	IG2 (Main power supply)
A5	BLU/YEL	Condenser [and radiator] fan control relays ⊖
A6	BLU/GRN	Coolant temperature switch ⊖
A7	LT BLU	A/C pressure switch A
A8	BLU	Radiator and condenser fan relays ⊖
A9	BLK	Ground
A10	RED/BLU	A/C pressure switch B

## Timer Unit Terminals



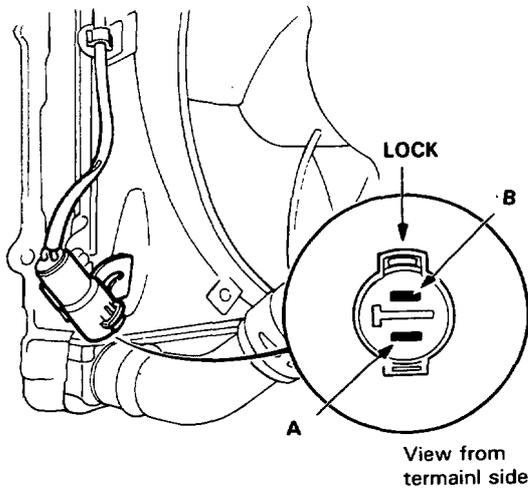
Terminal	Wire	Destination
B1	BLU/RED	Condenser fan timer relay ⊕
B2	BLU/YEL	Power supply (For condenser fan control relay with ignition switch ON)
B3	BLK	Ground
B4	ORN	Oil temperature switch
B5	WHT/YEL	Power supply (For condenser fan control relay with ignition switch OFF)
B6	BLK/YEL	IG1 (Timer reset signal)
B7	GRN	Condenser fan control relay ⊖



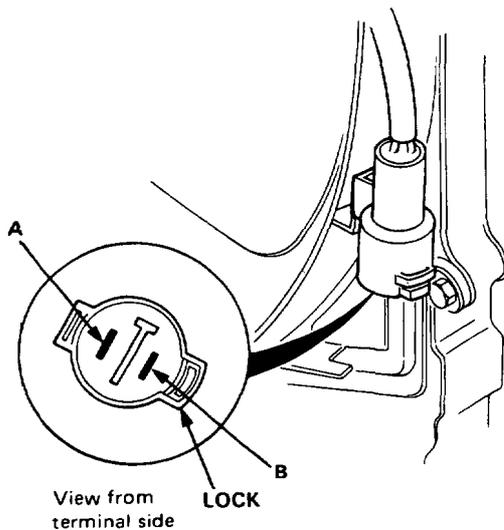
## Fan Motor Test

1. Disconnect the 2-P connector from the fan motor.
2. Test motor operation by connecting battery positive to the A terminal, and negative to the B terminal.
3. If the motor fails to run smoothly, replace it.

### Radiator Fan Motor:



### Condenser Fan Motor:



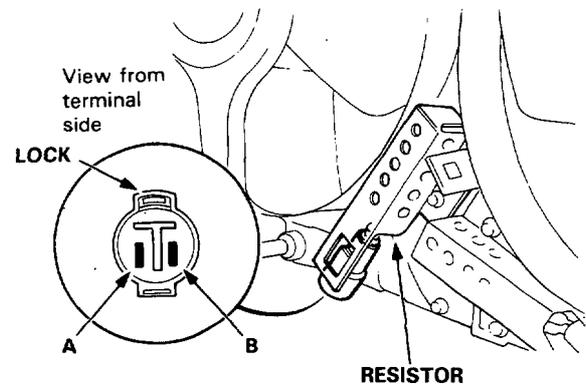
## Resistor Test

1. Disconnect the 2-P connector from the resistor.
2. Using an ohmmeter, measure resistance between the A and B terminals. Replace the resistor if the resistance is not within specifications.

NOTE: Resistance will vary with the resistor temperature; specifications are at 20°C (70°F).

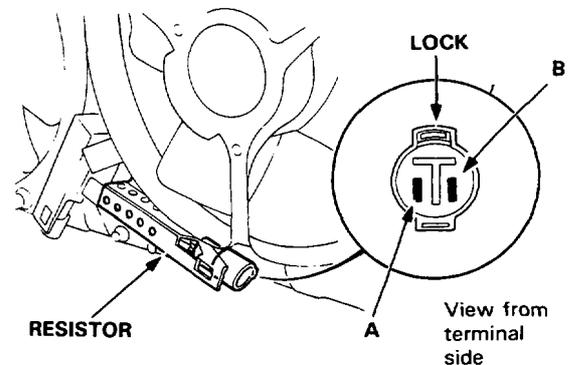
### Radiator Fan Resistor

Resistance: 0.9—1.1 ohms



### Condenser Fan Resistor

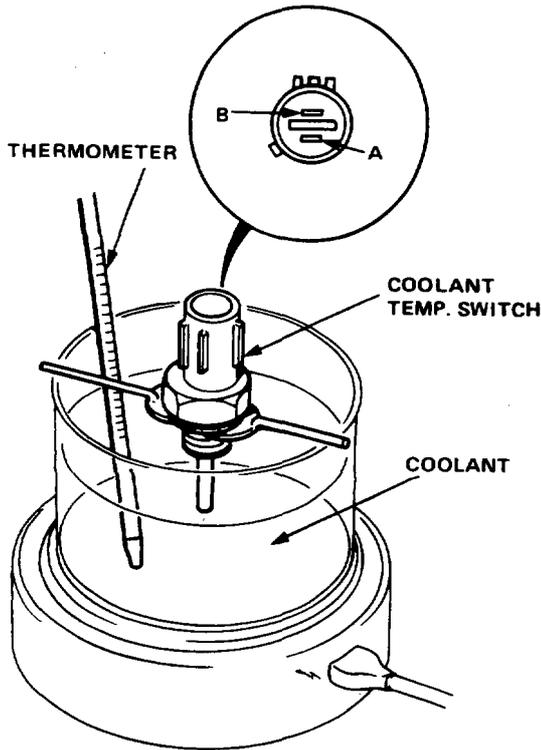
Resistance: 0.5—0.7 ohms



# Cooling Fan Control

## Coolant Temperature Switch Test

1. Remove the coolant temperature switch from the radiator.
2. Suspend the coolant temperature switch in a container of coolant as shown.



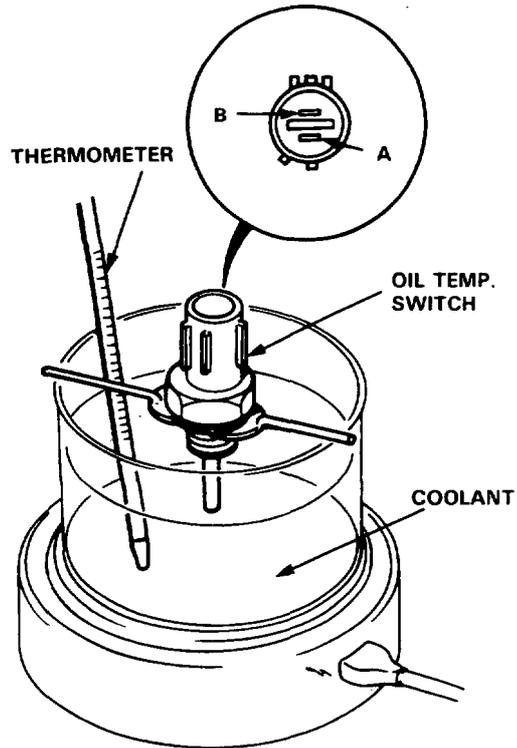
3. Heat the coolant and check coolant temperature with a thermometer (see table below).
4. Measure the resistance between the A and B terminals according to the table.

Temperature	84°C (183°F)	90°C (194°F)	108°C (226°F)	110°C (230°F)
Resistance (kΩ)	1.047 – 1.255	0.872 – 1.024	0.518 – 0.574	0.489 – 0.541

5. If unable to obtain the above readings, replace the temperature switch.

## Oil Temperature Switch Test

1. Remove the oil temperature switch from the cylinder head.
2. Suspend the oil temperature switch in a container of coolant as shown.



3. Heat the coolant and check coolant temperature with a thermometer (see table below).
4. Check for continuity between the A and B terminals according to the table.

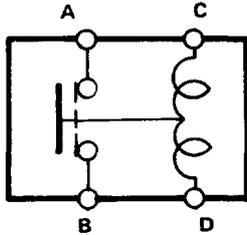
		Terminal	
Temperature		A	B
Above	101 – 109°C (214 – 228°F)	○ — ○	○ — ○
Below	80.5 – 95.5°C (177 – 204°F)		



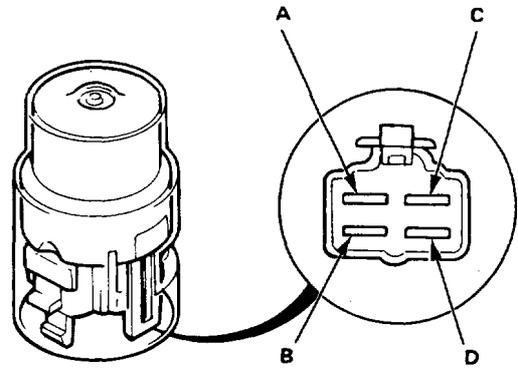
## Relay Test

There should be continuity between the A and B terminals when the battery is connected to the C and D terminals.

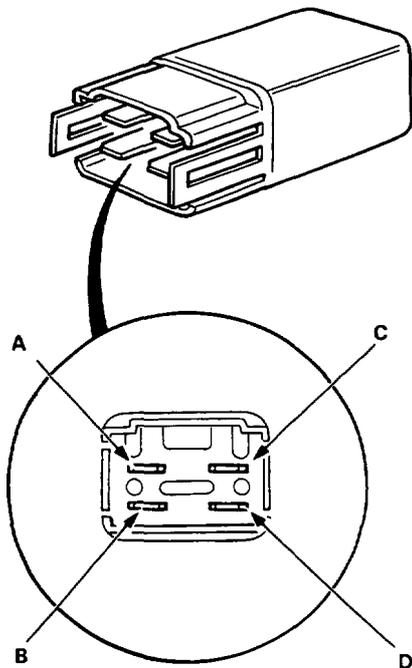
There should be no continuity when the battery is disconnected.



### B-Type:



### A-Type:



### C-Type:

