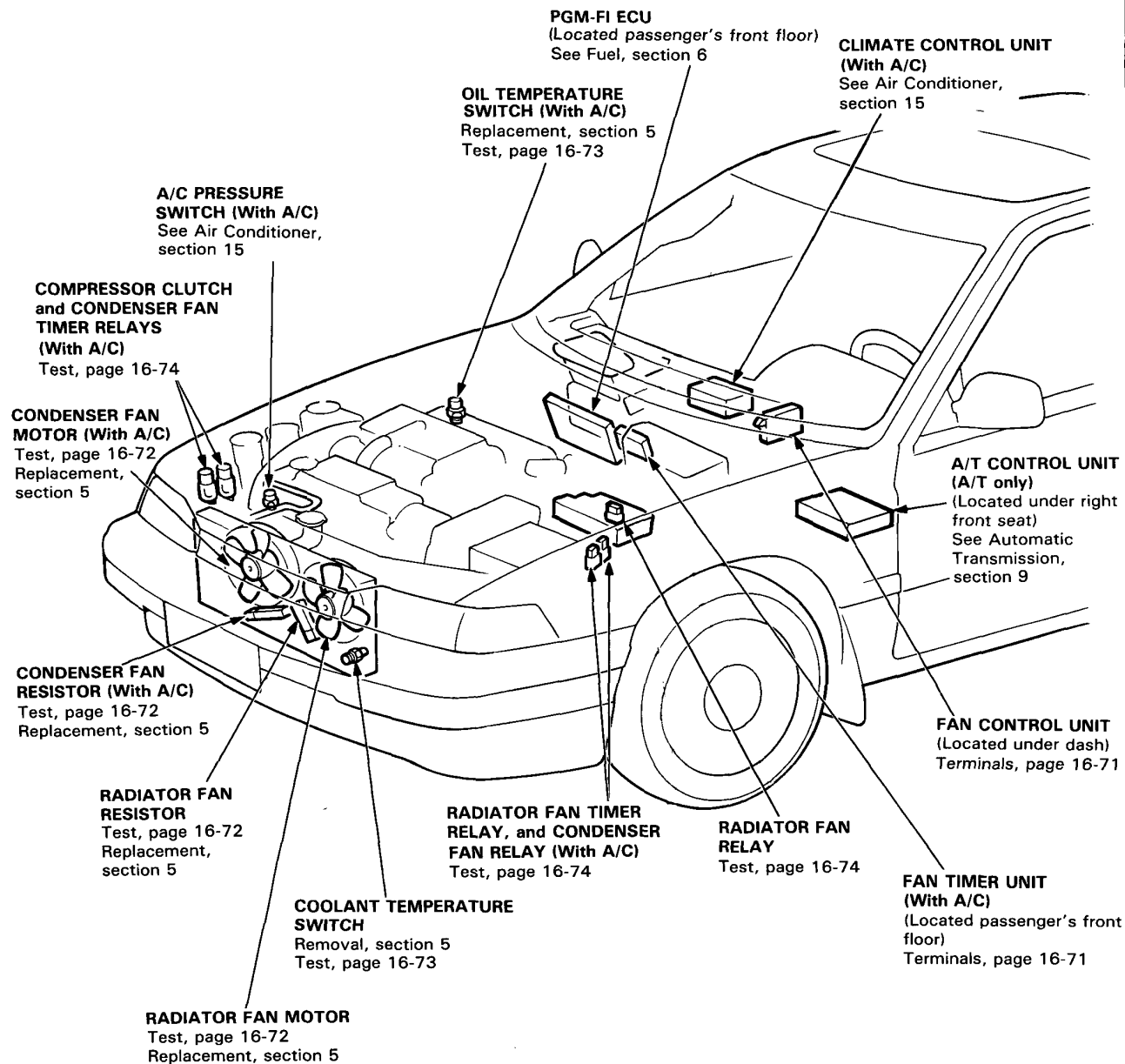


# Cooling Fan Control

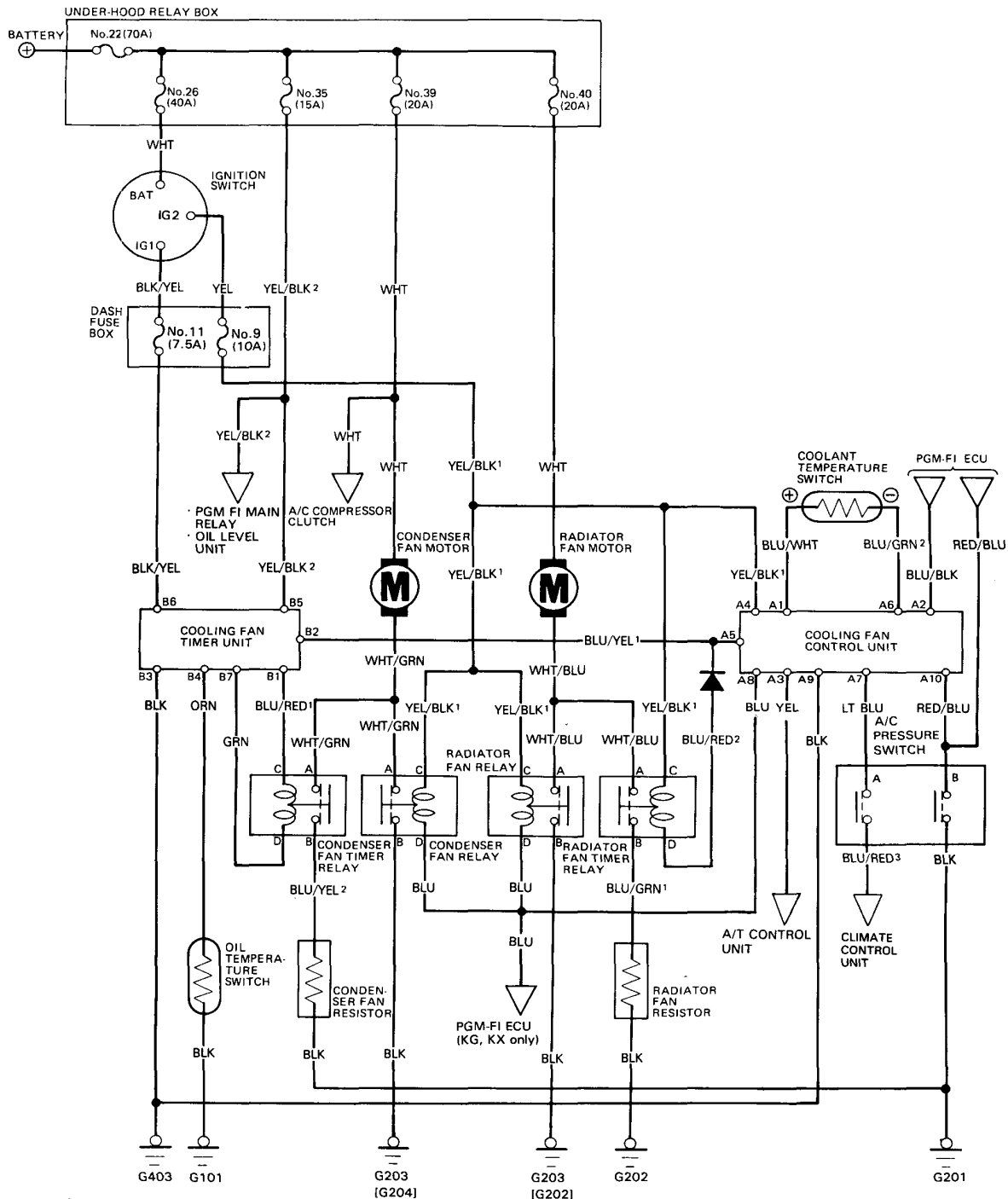
## Component Location Index



# Cooling Fan Control

## Circuit Diagram (With A/C)

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



### A/C PRESSURE SWITCH

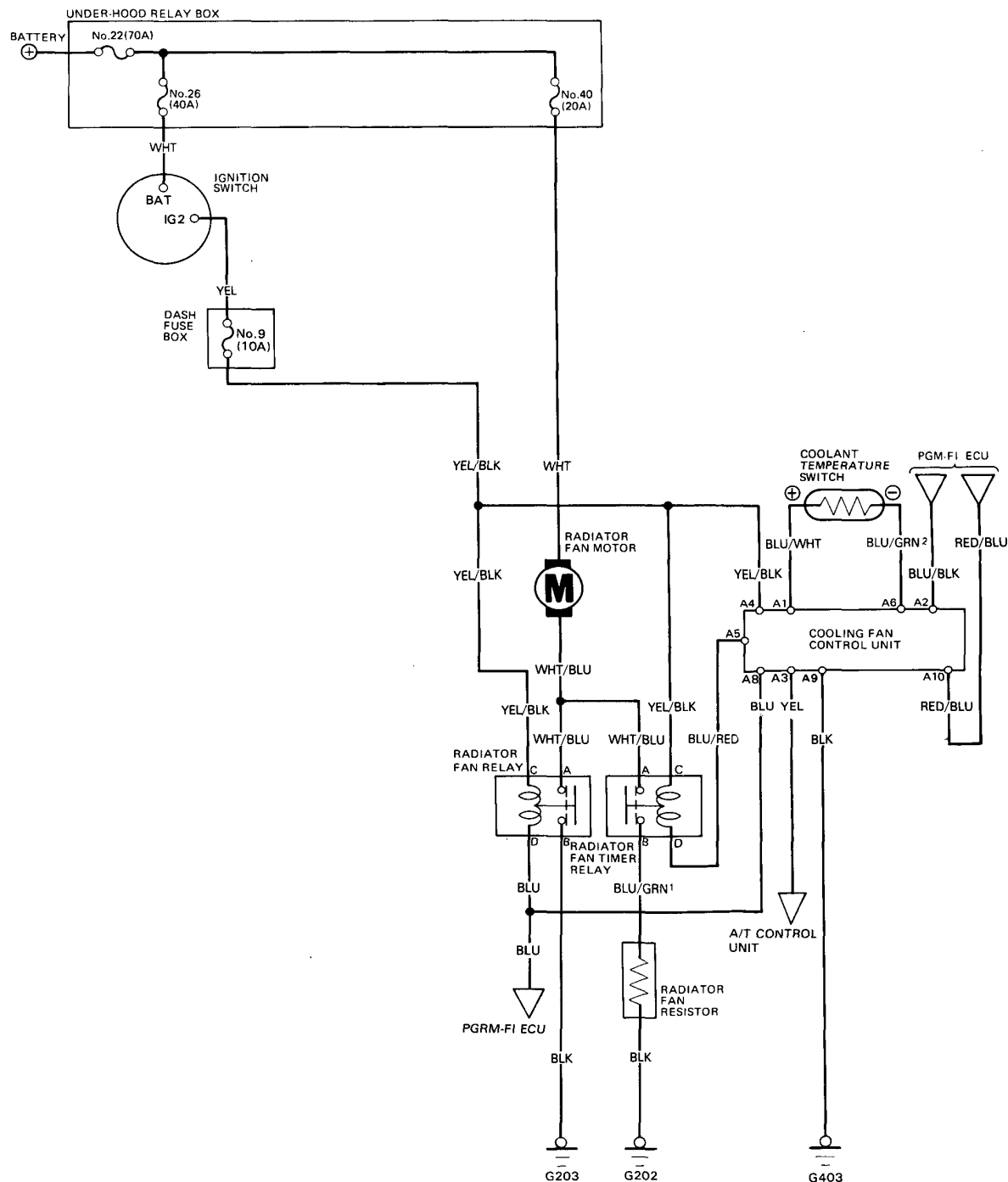
A: ON between 210 kPa (2.1 kg/cm<sup>2</sup>, 30 psi) and 2700 kPa (27 kg/cm<sup>2</sup>, 384 psi)  
B: ON below 1350 kPa (13.5 kg/cm<sup>2</sup>, 192 psi)

[ ]: RHD



(Without A/C)

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



# Cooling Fan Control

## Troubleshooting

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

With A/C:

Item to be inspected		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. 35 (15 A) fuse (in the under-hood relay box)	Resistor	Relay	Faulty fan timer unit	A/C and PGM-FI systems	Blown No. 11 (7.5 A) fuse (in the dash fuse box)	Faulty A/C pressure switch or oil temperature switch	Poor ground	Open circuit in wires or loose or disconnected terminals
Symptom															
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 <sup>1</sup>
	At low speed.					4	2	3	1	5				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 <sup>1</sup> , YEL/BLK <sup>2</sup> , BLU/GRN <sup>1</sup> or GRN
	At high speed.				2	3			1					G203 [G202 or 204]	YEL/BLK <sup>1</sup> 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 falls to function properly.										3		1	2	G101 or G201	ORN or RED/BLU

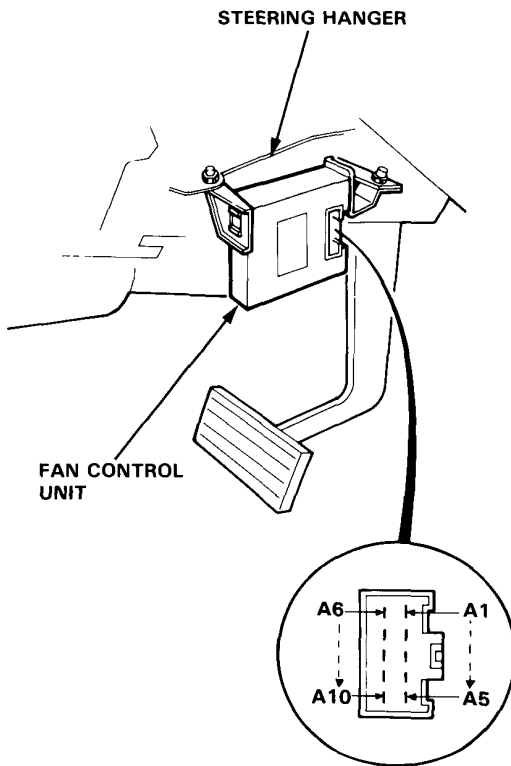
[ ]: RHD

Without A/C:

Fan does not rotate.	Under all conditions.			1	2	3								G403	WHT or WHT/BLU
	At low speed.					3		2	1					G202	BLU/RED, YEL/BLK or BLU/GRN <sup>1</sup>
	At high speed.				2	3			1					G203	YEL/BLK or BLU



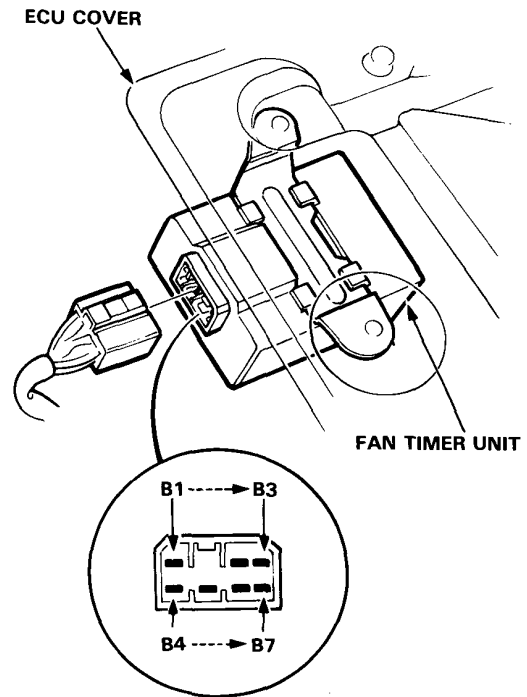
## Control Unit Terminals



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 [BLU/RED]	Condenser [and radiator] fan timer 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

[ ]: LHD

## Timer Unit Terminals



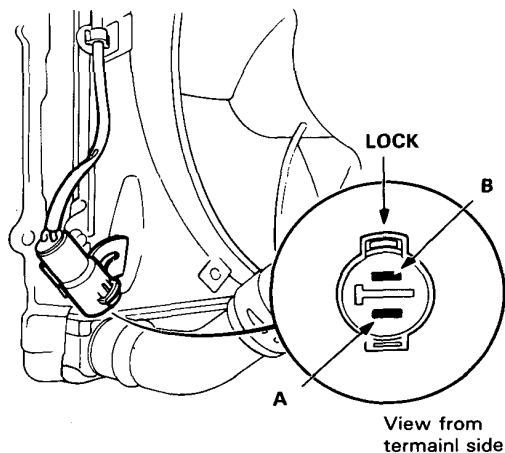
Terminal	Wire	Destination
B1	BLU/RED	Condenser fan timer relay ⊕
B2	BLU/YEL	Power supply (For condenser fan timer relay with ignition switch ON)
B3	BLK	Ground
B4	ORN	Oil temperature switch
B5	YEL/BLK	Power supply (For condenser fan timer relay with ignition switch OFF)
B6	BLK/YEL	IG1 (Timer reset signal)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

# Cooling Fan Control

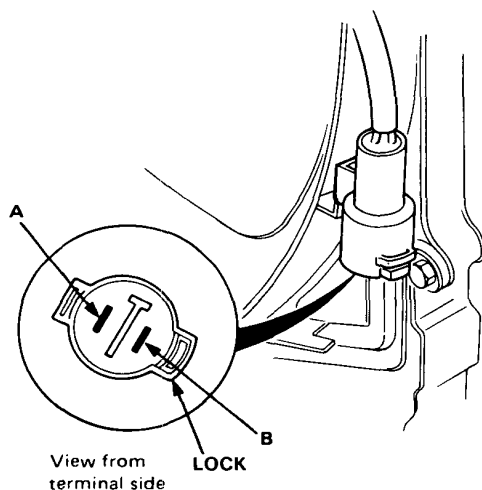
## Fan Motor Test

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:



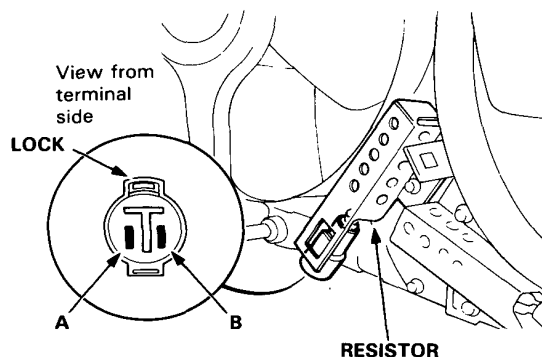
## Resistor Test

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).

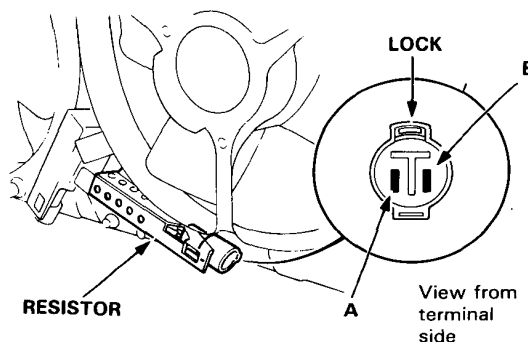
### Radiator Fan Resistor

Resistance: 0.9—1.1 ohms



### Condenser Fan Resistor

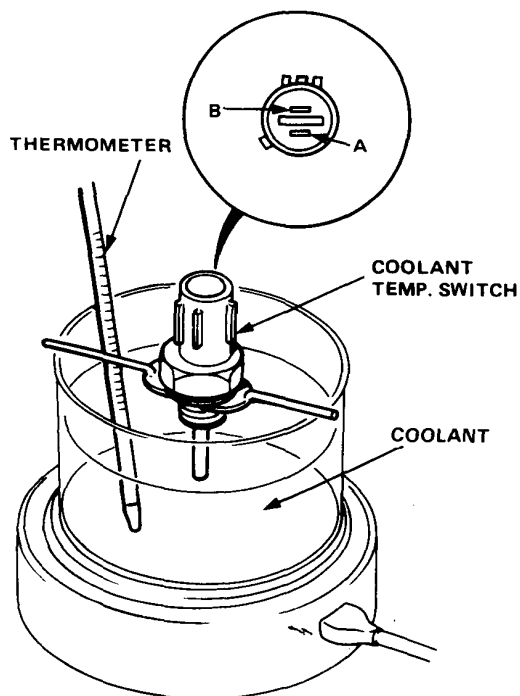
Resistance: 0.5—0.7 ohms





## 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.



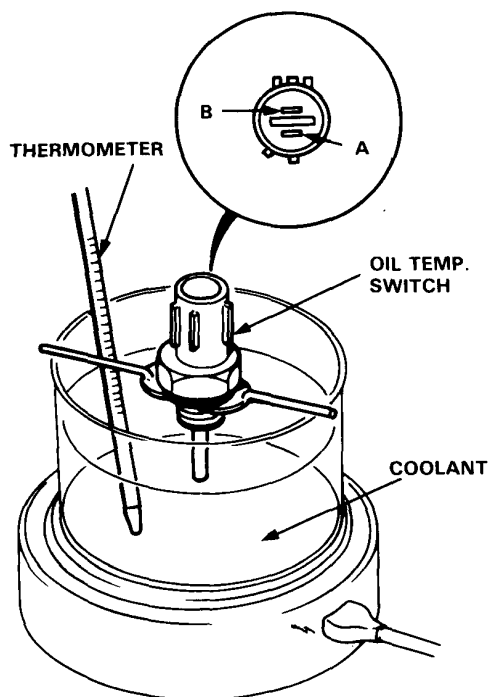
3. Heat the coolant and check coolant temperature with a thermometer (see table below).
4. Measure the resistance between the A and B terminals according to the table.

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.

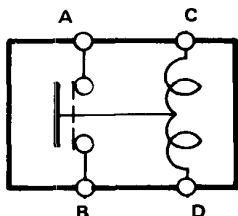
Terminal		A	B
Temperature			
Above	101 – 109°C (214 – 228°F)	○	○
Below	80.5 – 95.5°C (177 – 204°F)		

# Cooling Fan Control

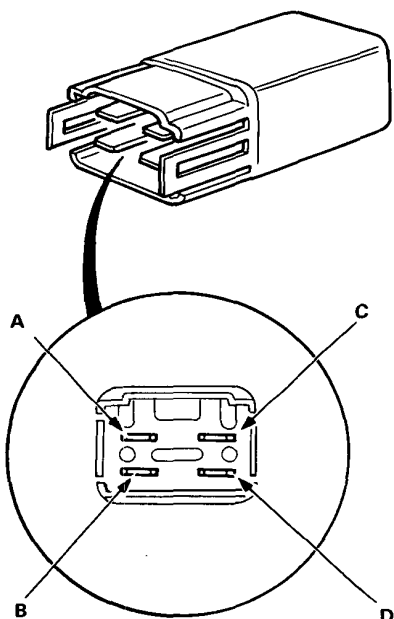
## Relay Test

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

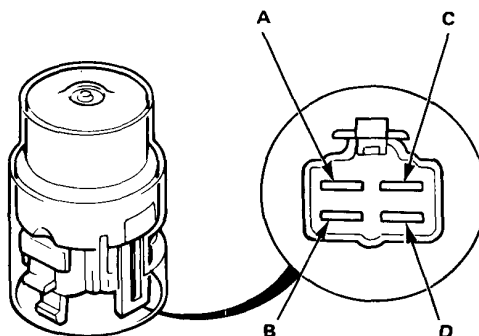
There should be no continuity when the battery is disconnected.



### A-Type:



### B-Type:



### C-Type:

