

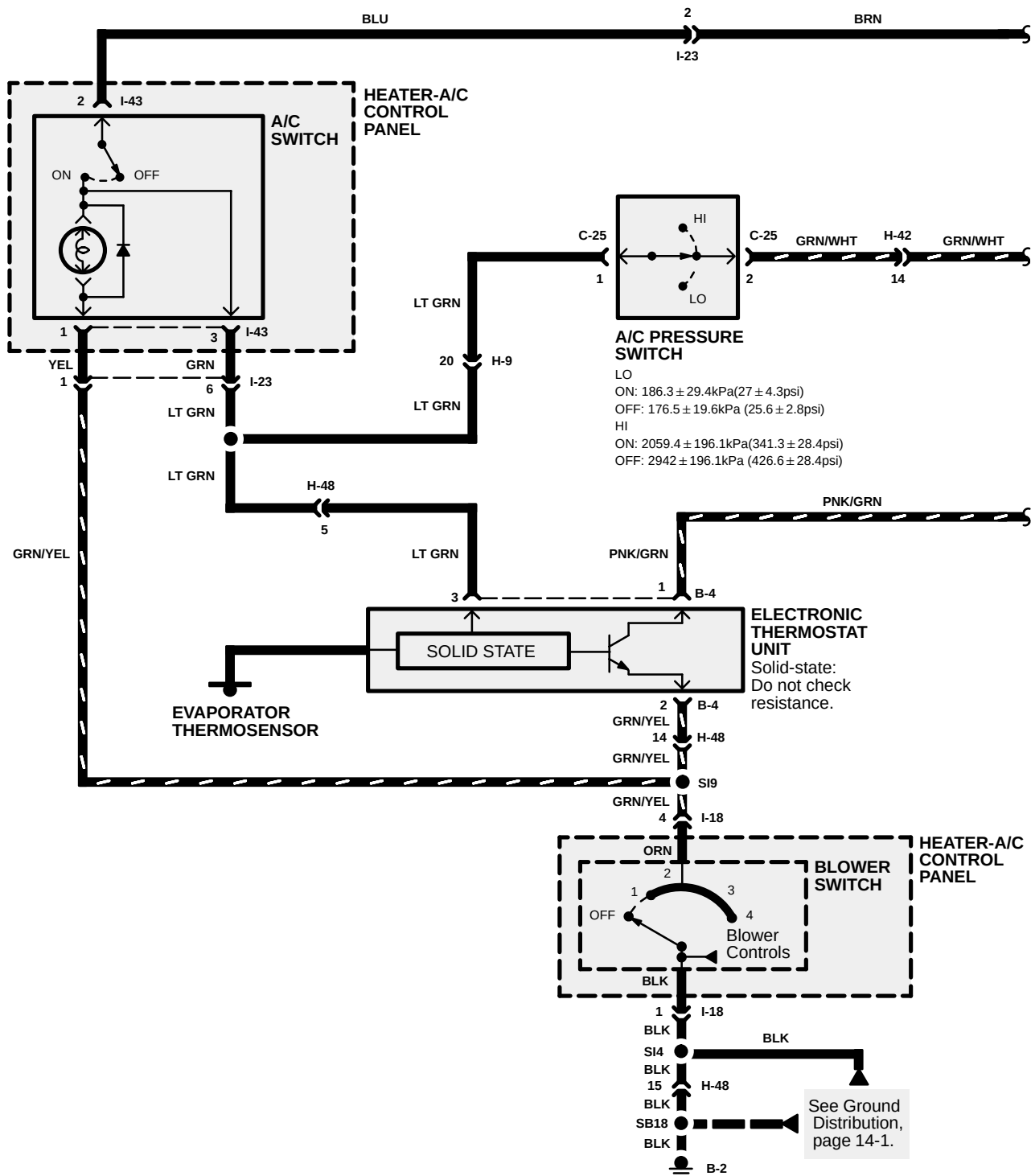
AIR CONDITIONER: COMPRESSOR CONTROLS

Component Index

- A/C Compressor Clutch
- A/C Compressor Relay
- A/C Pressure Switch
- A/C Thermo Sensor
- A/C Thermostat Relay
- Dash Fuse Box
- Electronic Thermostat Unit
- Fuse/Relay Box
- Powertrain Control Module (PCM)

AIR CONDITIONER: COMPRESSOR CONTROLS

Circuit Schematic



AIR CONDITIONER: COMPRESSOR CONTROLS

Component Location Index

(Refer to Section 201 for photographs.)

Component	Photo No.
A/C Compressor Clutch	Lower left front corner of engine 44
A/C Compressor Relay	In fuse/relay box 36
A/C Pressure Switch	Behind left side of radiator grille 2
A/C Thermo Sensor	In A/C compressor 44
A/C Thermostat Relay	In fuse/relay box 36
Dash Fuse Box	Behind left dash side trim panel 51
Electronic Thermostat Unit . . .	Right side of I/P, behind glove box 72
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 33
Powertrain Control Module (PCM)	Behind the lower cluster assembly 62
Connector	
E-3 (1-BLK)	Lower left front corner of engine 44
E-44 (1-CLR)	On A/C compressor 44
H-6 (16-BLU)	Left side of engine compartment 13
H-9 (20-BLK)	Below I/P, above left dash side trim panel, on bracket 53
H-12 (20-WHT)	Below I/P, above right dash side trim panel, on bracket 69
H-16 (22-WHT)	Behind right dash side trim panel 73
H-42 (16-BLK)	Right front of engine compartment 31
H-48 (16-BLK)	Behind right dash side trim panel 73
I-18 (6-WHT)	On rear of heater-A/C control panel 64
I-23 (6-WHT)	On rear of heater-A/C control panel 64
Ground	
B-2	Above right dash side trim panel 71

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Circuit Operation

A/C Compressor Clutch

With the starter switch in START and the transmission control lever in PARK or NEUTRAL (automatic transmission), or the clutch pedal depressed (manual transmission), voltage is applied to the starter relay and the relay energizes. When the starter switch is turned to ON with the engine running, the relay deenergizes and voltage is applied from the generator to the heater and A/C relay through the normally closed contacts of the starter relay. The heater and A/C relay energizes, allowing voltage to be applied from FL-1 (MAIN) fusible link to the A/C switch, the A/C thermostat relay, and the A/C compressor relay through fuse C-20. When the A/C switch is switched on, voltage is applied through the A/C pressure switch to the coil of the A/C thermostat relay. Ground is provided to the coil of this relay through the electronic thermostat unit and the blower switch (provided the blower switch is not in the OFF position).

A/C Thermo Sensor

If the air conditioning compressor's temperature rises above $160 \pm 5^{\circ}\text{C}$ ($320 \pm 9^{\circ}\text{F}$), the A/C thermo sensor will open, disengaging the A/C compressor clutch. The A/C thermo sensor will close when the temperature falls below $135 \pm 5^{\circ}\text{C}$ ($275 \pm 9^{\circ}\text{F}$). Power is reapplied to the A/C compressor clutch and the clutch engages.

A/C Pressure Switch

Air conditioning system pressure below $176.5 \pm 9.6\text{ kPa}$ ($25.6 \pm 2.8\text{ psi}$) indicates a loss of refrigerant or refrigerant oil. The A/C pressure switch opens with low system pressure to prevent compressor damage. Also, with system pressure above $2942 \pm 196.1\text{ kPa}$ ($426.6 \pm 28.4\text{ psi}$), the A/C pressure switch opens to prevent compressor damage.

Electronic Thermostat Unit

The electronic thermostat unit senses the temperature of the cool air from the evaporator and the evaporator fins by means of the evaporator thermo sensor. This information is input by the electronic thermostat unit, which determines whether ground is to be provided to the A/C thermostat relay. When the temperature becomes too low, ground is not provided.