

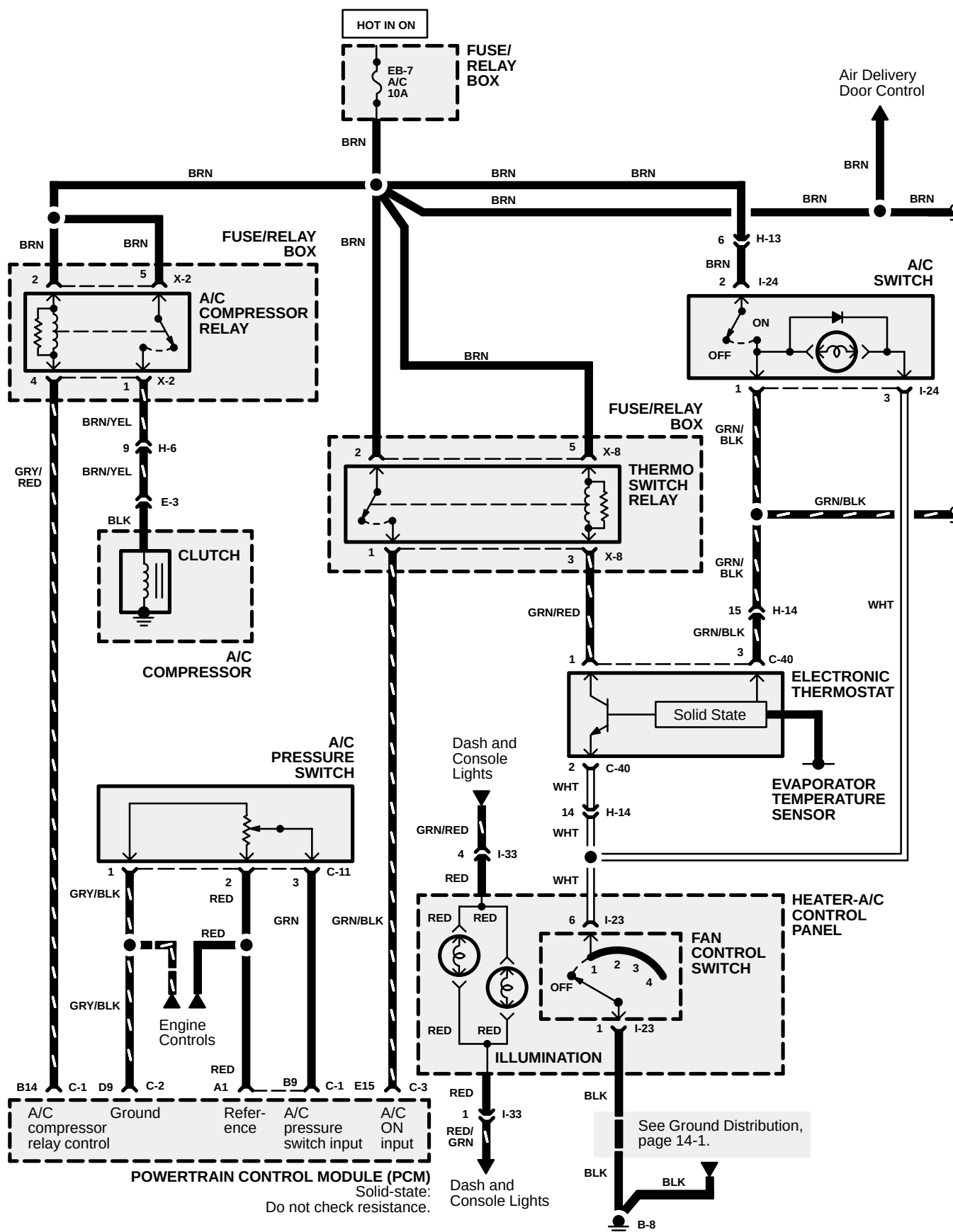
AIR CONDITIONER: COMPRESSOR CONTROL

Component Index

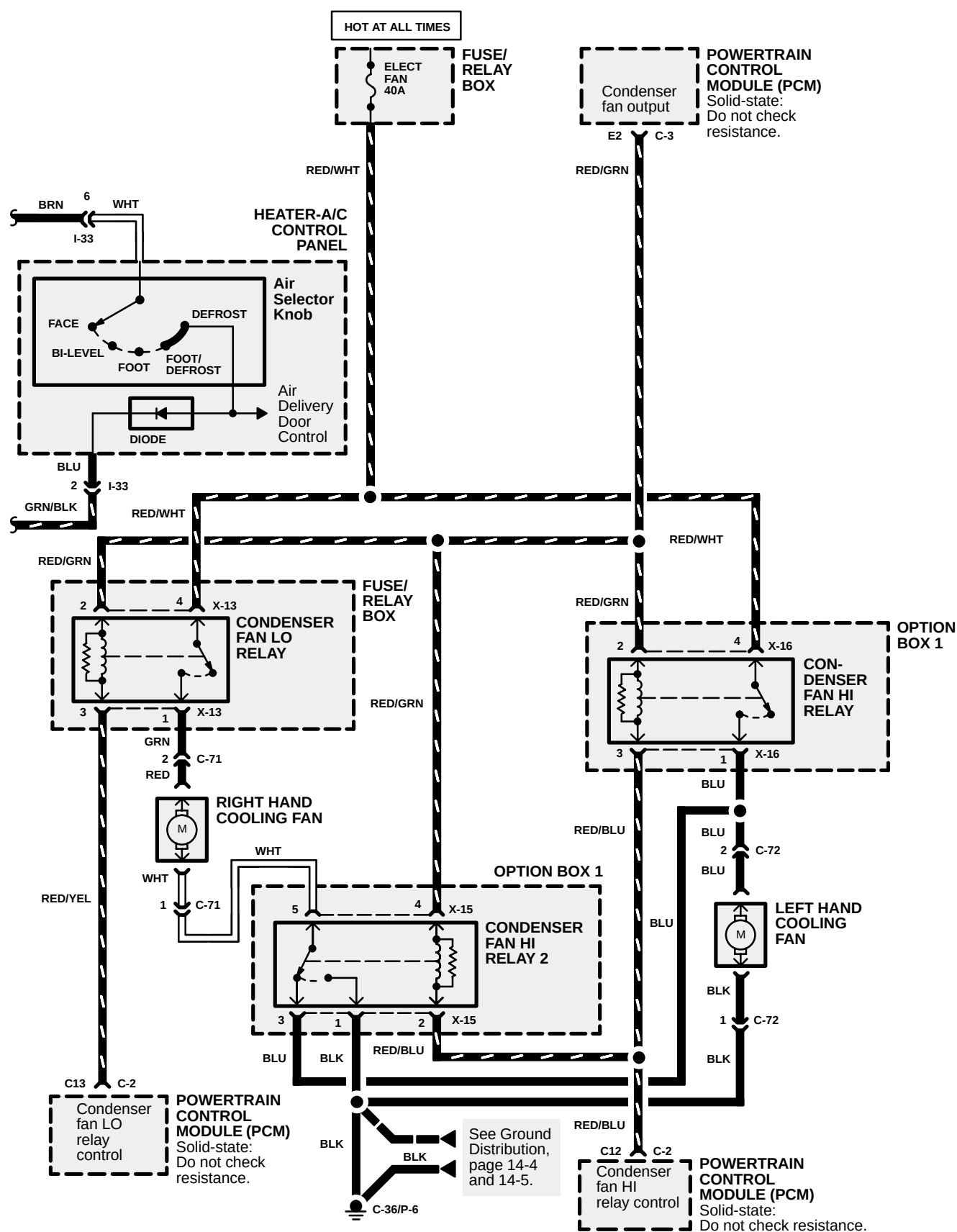
A/C Compressor	Condenser Fan Relay
2.2L A/T	Electronic Thermostat
2.2L M/T	2.2L A/T
3.2L	2.2L M/T
A/C Compressor Relay	3.2L
2.2L A/T	Engine or Powertrain Control Module
2.2L M/T	(ECM or PCM)
3.2L	2.2L A/T
A/C Dual Pressure Switch	3.2L
A/C Pressure Switch	Engine Control Module (ECM) (2.2L M/T)
2.2L A/T	Fuse/Relay Box
2.2L M/T	2.2L A/T
A/C Triple Pressure Switch	2.2L M/T
Condenser Fan	3.2L
2.2L M/T	Option Box 1
3.2L	2.2L A/T
Condenser Fan Hi Relay	2.2L M/T
2.2L A/T	Thermo Switch Relay
2.2L M/T	2.2L A/T
Condenser Fan Lo Relay	2.2L M/T
2.2L A/T	3.2L
2.2L M/T	

AIR CONDITIONER: COMPRESSOR CONTROL: 2.2L A/T

Circuit Schematic

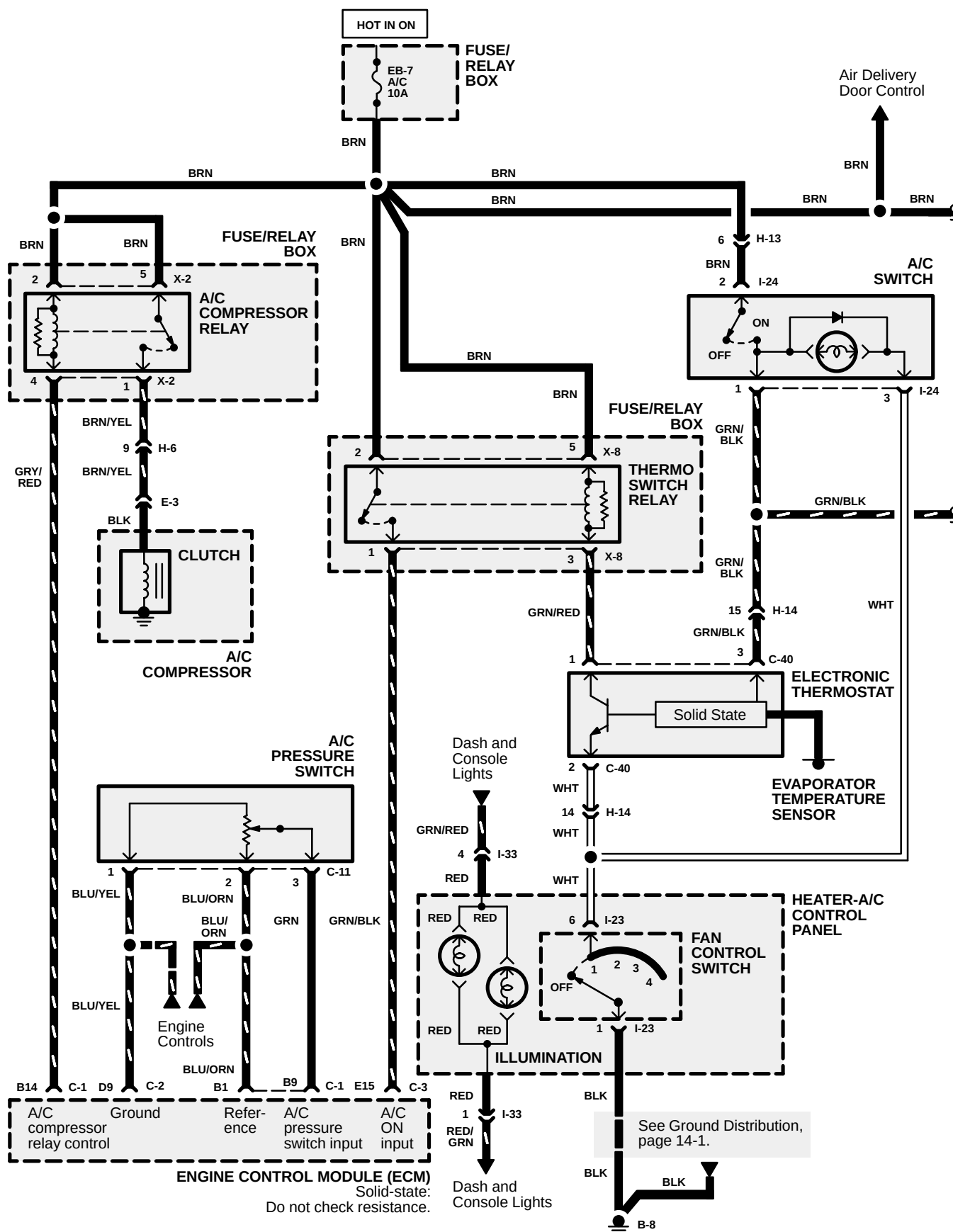


Circuit Schematic



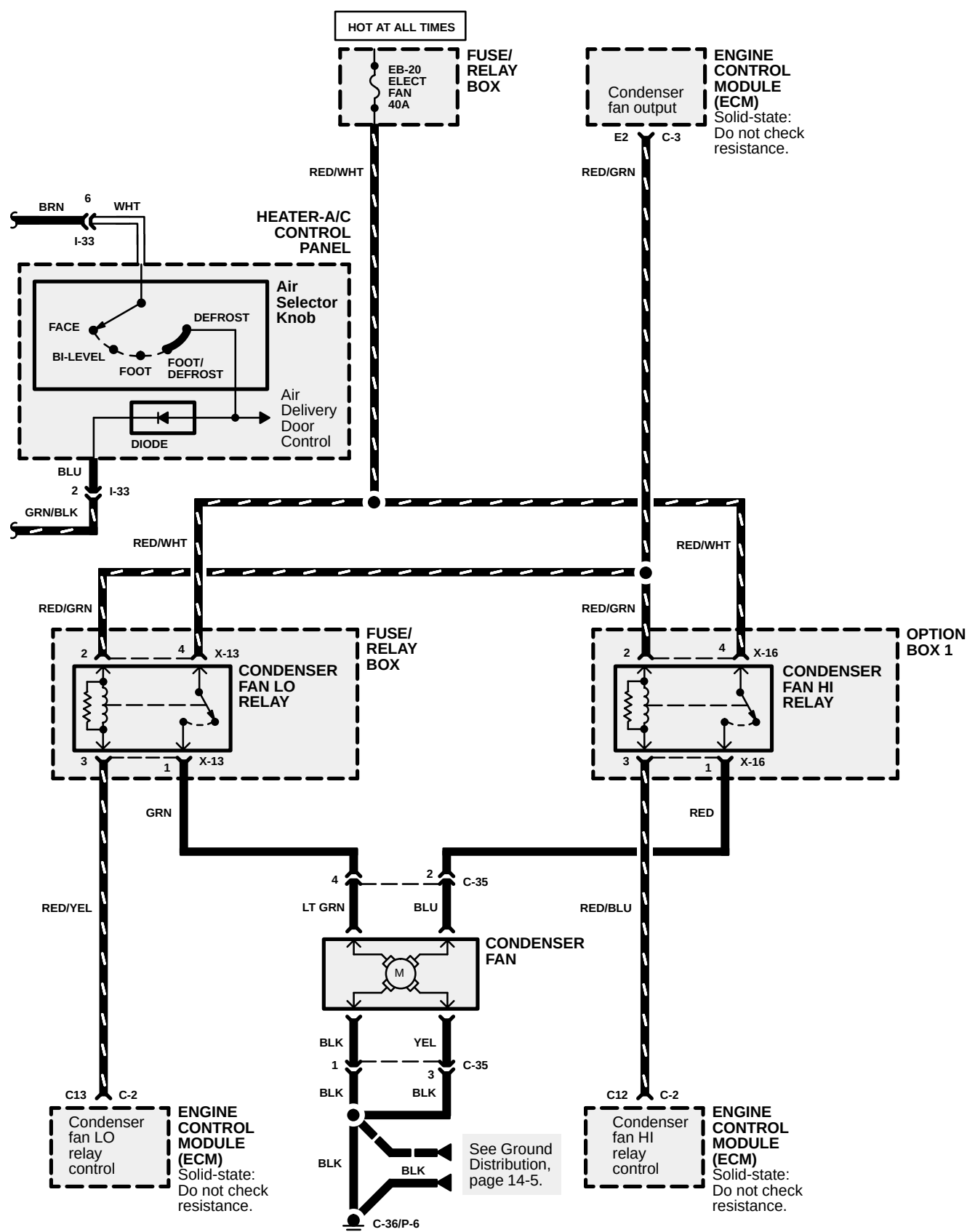
AIR CONDITIONER: COMPRESSOR CONTROL: 2.2L M/T

Circuit Schematic



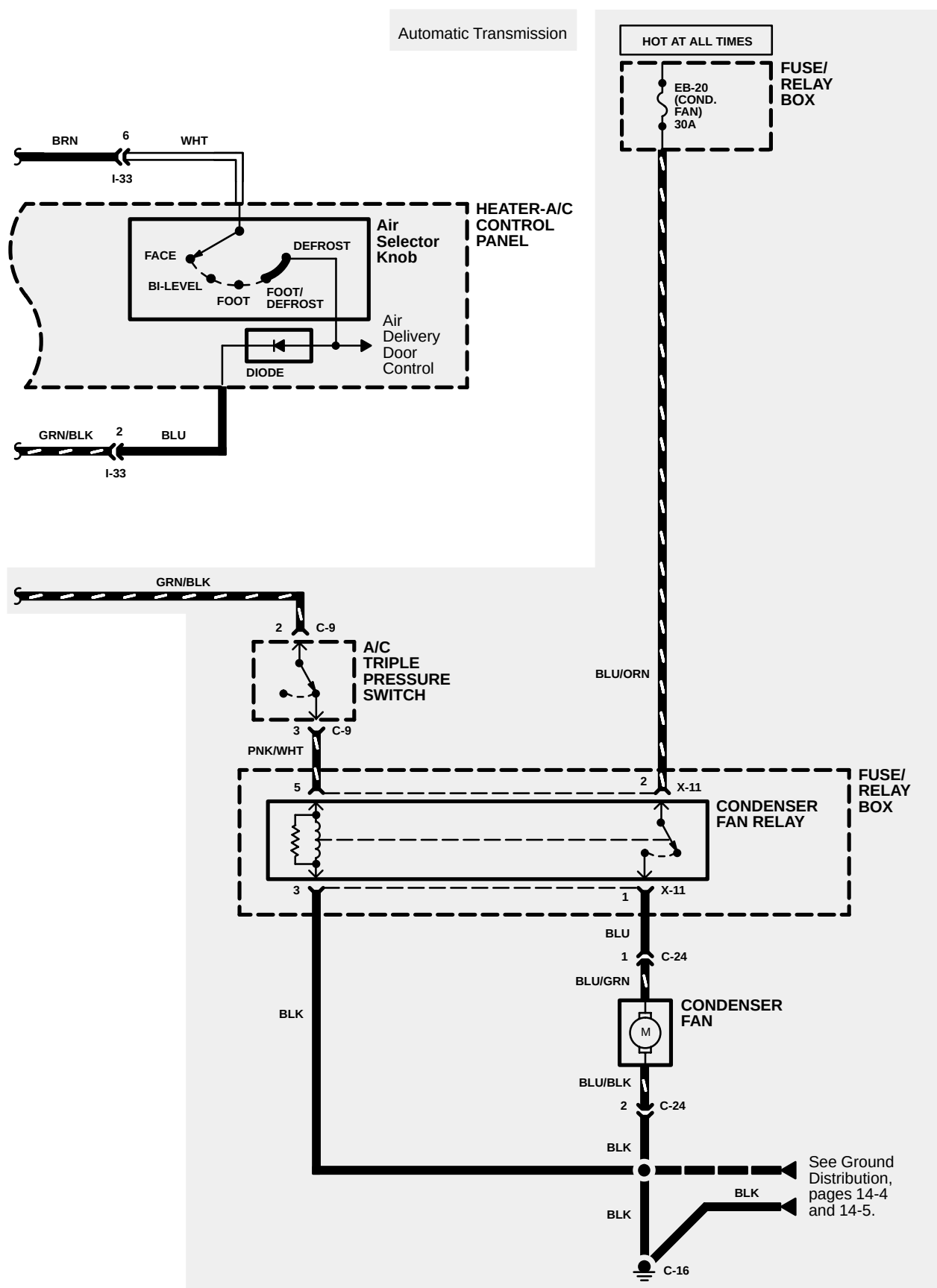
AIR CONDITIONER: COMPRESSOR CONTROL: 2.2L M/T

Circuit Schematic



AIR CONDITIONER: COMPRESSOR CONTROL: 3.2L

Circuit Schematic



AIR CONDITIONER: COMPRESSOR CONTROL

Component Location Index

(Refer to Section 201 for photographs.)

<u>Component</u>	<u>Photo No.</u>
A/C Compressor	Lower left front corner of engine 8
A/C Compressor Relay	Right side of engine compartment, in fuse/relay box 15
A/C Dual Pressure Switch	Behind left side of radiator grille 4
A/C Pressure Switch	Behind left side of radiator grille 4
A/C Triple Pressure Switch ...	Behind left side of radiator grille 4
Condenser Fan	Behind center of radiator grille 28
Condenser Fan Hi Relay	Right side of engine compartment, in option box 1 128
Condenser Fan Lo Relay	Right side of engine compartment, in fuse/relay box 16
Condenser Fan Relay	Right side of engine compartment, in fuse/relay box 19
Dash Fuse Box	Left side of I/P, behind panel 58
Electronic Thermostat	Right side of I/P, behind glove box 138
Engine or Powertrain	
Control Module	
(ECM or PCM) (3.2L)	Left side of engine compartment 44
Engine Control Module	
(ECM) (2.2L)	Below center of I/P 73
Fuse/Relay Box	Right side of engine compartment, on inner fender panel 14
Option Box 1	Right side of engine compartment, on inner fender panel 127
Thermo Switch Relay	Right side of engine compartment, in fuse/relay box 16
<u>Connector</u>	
C-24 (2-GRY)	Left front of engine compartment, behind grille 28
C-35 (4-GRY)	Left front of engine compartment, on fan shroud 5
C-71 (2.2L)	Center front of engine compartment. 139
C-72 (2.2L)	Center front of engine compartment. 139
E-3 (1-BLK)	Left side of engine compartment 8
H-6 (16-BLU)	Left side of engine compartment, below brake fluid reservoir 11
H-7 (16-WHT)	Left side of engine compartment 27
H-13 (19-WHT)	Below right side of I/P, behind kick panel 82
H-14 (19-BLK)	Below right side of I/P, behind kick panel 82
I-33 (8-WHT)	Behind center of I/P, behind heater and A/C control assembly 126
<u>Ground</u>	
B-8	Below center console 81
C-16	Left rear corner of engine compartment, on inner fender panel 43
C-36	Right side of engine compartment, behind battery 13
P-6	Right side of engine compartment, behind battery 13

AIR CONDITIONER: COMPRESSOR CONTROL

Circuit Operation

A/C Compressor Clutch (2.2L)

With the engine starter switch in ON, the A/C compressor clutch relay is energized by the engine control module (ECM). The ECM determines when to activate the compressor clutch based on the information received from the A/C pressure switch.

Electronic Thermostat

The electronic thermostat senses the temperature of cool air from the evaporator by means of the evaporator temperature sensor. This information determines whether the thermostat will provide ground to the thermo switch relay. When the temperature becomes too low, ground is not provided.

OFF: Below $1.0 \pm 0.5^{\circ}\text{C}$ ($33.8 \pm 0.9^{\circ}\text{F}$)
ON: Above $3.5 \pm 0.3^{\circ}\text{C}$ ($38.3 \pm 0.9^{\circ}\text{F}$)

A/C Compressor Clutch (3.2L)

With the engine running, battery voltage is applied to the A/C switch, the A/C triple pressure switch (A/T) or A/C dual pressure switch (M/T), the coil of the A/C compressor relay and the air selector knob. When you press the A/C switch, battery voltage is applied to the electronic thermostat. The solid-state switch in the electronic thermostat closes, providing a path to ground for the thermo switch relay, with the fan control switch in any position except OFF. Voltage is also applied through the A/C triple pressure switch (A/T) or the A/C dual pressure switch (M/T) to the coil of the thermo switch relay. This closes the thermo switch relay contacts, applying battery voltage to the A/C ON input of the engine or powertrain control module (ECM or PCM). The ECM or PCM then provides ground for the A/C compressor relay. The A/C compressor relay contacts close, applying battery voltage to the compressor clutch. If the A/C triple pressure switch (A/T)/dual pressure switch (M/T) opens, the compressor clutch disengages.

A/C Dual Pressure Switch (M/T)

To prevent compressor damage, the dual pressure switch will open if system pressure is too low or too high: below $176.5 \pm 19.6\text{ kPa}$ ($25.6 \pm 2.8\text{ psi}$) or above $2943 \pm 196.2\text{ kPa}$ ($426.7 \pm 28.4\text{ psi}$).

A/C Triple Pressure Switch (A/T)

Low and high switch operation is the same as the dual pressure switch. The medium pressure switch will close when system pressure exceeds $1471.5 \pm 98.1\text{ kPa}$ ($213.3 \pm 14.2\text{ psi}$), turning on the condenser fan.

Condenser Fan (3.2L)

With the engine running, battery voltage is applied to the A/C switch. When the A/C switch is pressed, battery voltage is then applied through the A/C triple pressure switch (A/T only) to the coil side of the condenser fan relay, which is continually grounded. Once the relay is energized, the contacts close, allowing battery voltage from the (COND. FAN) fuse EB-20 to be applied to the condenser fan. The motor, being grounded continually, is energized, and the fan is activated.

Condenser Fan (2.2L)

The engine control module (ECM) receives refrigerant information from the A/C pressure switch, and then controls the condenser fan LO and HI relays in order to energize the condenser fan and control its speed.