

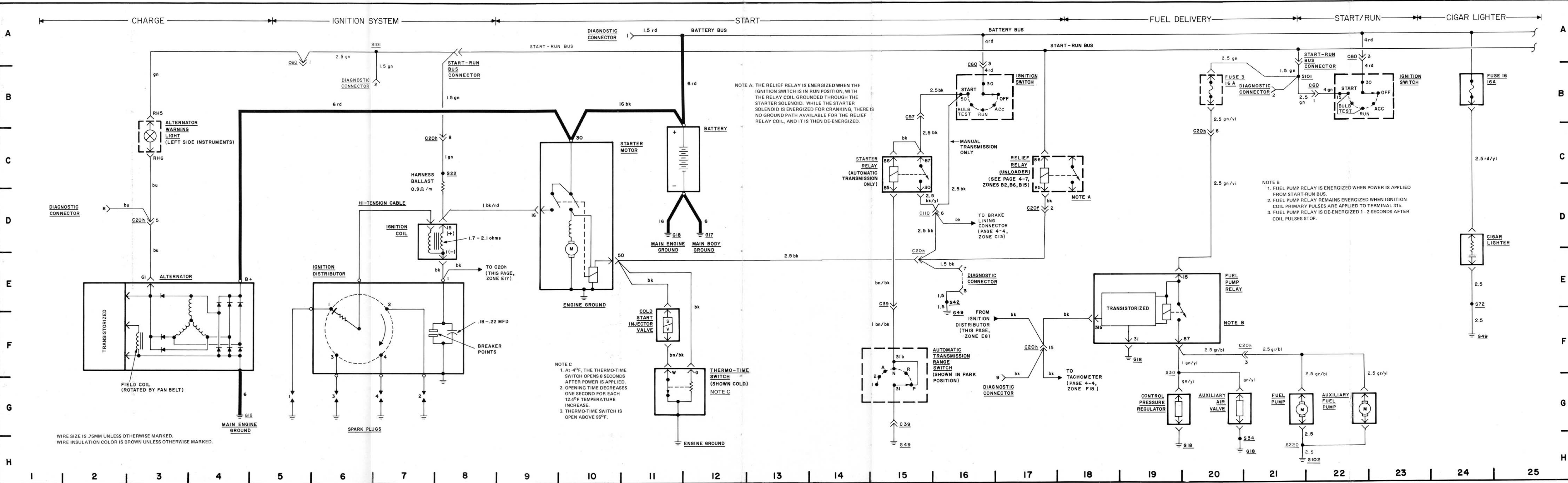
CIRCUIT INDEX

1979 BMW 320i

SECTION 4 1979 SCHEMATIC/WIRING DIAGRAM

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COMPONENT	COMPONENT LOCATION ON VEHICLE	COMPONENT LOCATION PHOTOGRAPH	COMPONENT TERMINAL DETAIL
Charge Alternator Alternator Warning Light	On left side of engine, next to battery RH upper side of instrument panel		
Ignition System Distributor Ignition coil	On engine, right rear On right front fender, to right of distributor	1	
Start Starter Motor Battery Unloader Relay Ignition Switch	On engine, at left rear Left front, behind headlight In distribution/fuse box In steering column (connector on body electrical bracket)	3	
Automatic Transmission Range Switch	On gear select lever mounting plate		
Starter Relay (Automatic Transmission only)	Lower left instrument panel	5	
Cold Start Injector Valve	Right side of engine	1	
Thermo-Time Switch	Coolant connection flange, top front of engine	7	
Fuel Delivery Auxiliary Fuel Pump Fuel Pump Control Pressure Regulator Fuel Pump Relay Auxiliary Air Valve Distributor Vacuum Control	In tank Under rear of car, to right of differential On left side of engine In distribution/fuse box Engine valve cover, rear section Intake manifold, right rear	3 1	
Connectors C20h (15-pin rectangular) C20f (4-pin rectangular) C39 (9-pin rectangular) C57 (1-pin in-line) C60 (6-pin rectangular)	Below distribution/fuse box In distribution/fuse box Lower left instrument panel Lower left instrument panel Ignition switch connector, under left side of dash	4 4 5	8
Diagnostic Connector	In distribution/fuse box	2, 3, 4	
Grounds G17 (Main body ground) G18 (Engine ground) G49 G102	Left side of battery mounting base On engine, just forward of starter Below lower left instrument panel Rear parcel shelf, left side	5	

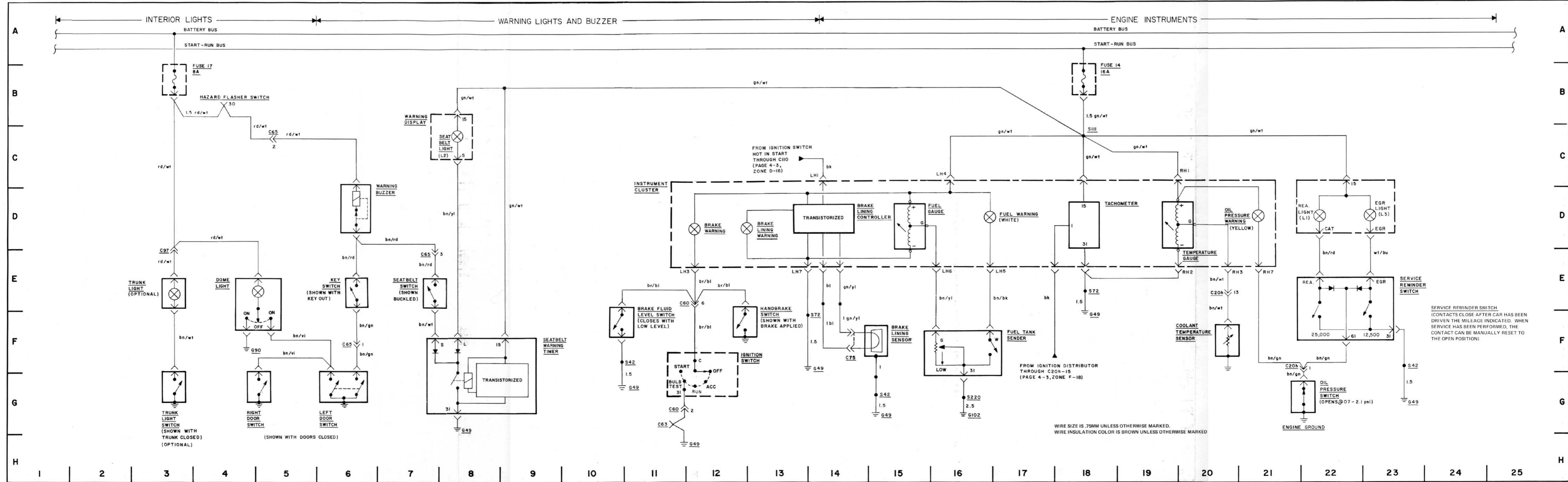


NOTE A: THE RELIEF RELAY IS ENERGIZED WHEN THE IGNITION SWITCH IS IN RUN POSITION, WITH THE RELAY COIL GROUNDED THROUGH THE STARTER SOLENOID. WHILE THE STARTER SOLENOID IS ENERGIZED FOR CRANKING, THERE IS NO GROUND PATH AVAILABLE FOR THE RELIEF RELAY COIL, AND IT IS THEN DE-ENERGIZED.

NOTE B:
 1. FUEL PUMP RELAY IS ENERGIZED WHEN POWER IS APPLIED FROM START-RUN BUS.
 2. FUEL PUMP RELAY REMAINS ENERGIZED WHEN IGNITION COIL PRIMARY PULSES ARE APPLIED TO TERMINAL 31b.
 3. FUEL PUMP RELAY IS DE-ENERGIZED 1 - 2 SECONDS AFTER COIL PULSES STOP.

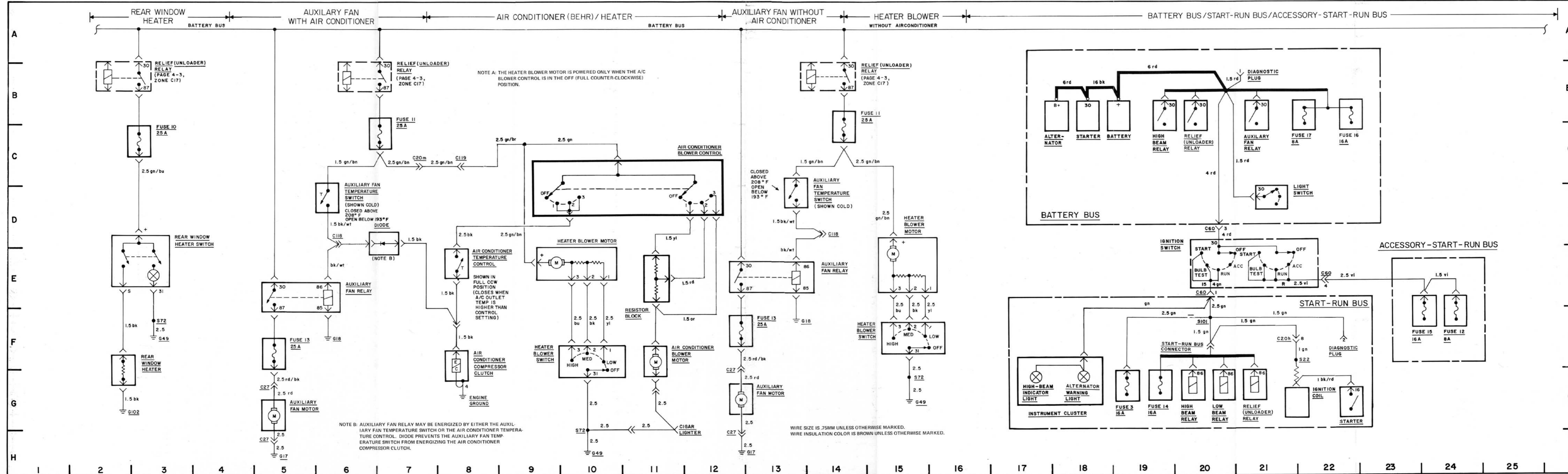
NOTE C:
 1. At -4°F, THE THERMO-TIME SWITCH OPENS 8 SECONDS AFTER POWER IS APPLIED.
 2. OPENING TIME DECREASES ONE SECOND FOR EACH 12.4°F TEMPERATURE INCREASE.
 3. THERMO-TIME SWITCH IS OPEN ABOVE 95°F.

WIRE SIZE IS .75MM UNLESS OTHERWISE MARKED.
 WIRE INSULATION COLOR IS BROWN UNLESS OTHERWISE MARKED.



COMPONENT	COMPONENT LOCATION ON VEHICLE	COMPONENT LOCATION PHOTOGRAPH	COMPONENT TERMINAL PHOTOGRAPH
Interior Lights			
Dome Light	In center of roof		
Trunk Light	In trunk lid, behind latch		
Trunk Light Switch	Next to trunk light		
Engine Instruments			
Fuel Gauge	Left side of instrument cluster		
Fuel Warning	Above fuel gauge		
Fuel Tank Sender	Below cover plate under rear seat		
Tachometer	Center of instrument cluster		
Temperature Gauge	Right side of instrument cluster		
Oil Warning	Above temperature gauge		
Coolant Temperature Sender	Top front of engine, in coolant connection flange	7	
Oil Pressure Switch	Left rear end of cylinder head	2	
Dash Warning Display	Right side of dash		
Service Reminder Switch	Left inner fender well		
Brake Lining Sensor	Left front wheel	10	
Warning Lights and Buzzer			
Warning Buzzer	In steering column		
Ignition Key Switch	Attached to ignition switch, in steering column		
Dash Warning Display	On right side of dash		
Seatbelt Warning Timer	Lower left instrument panel	5	
Brake Fluid Level Switch	On top of brake fluid reservoir, on left front fender wall		
Hand Brake Switch	At rear of hand brake lever under protective boot		
Seat Belt Switch	In seat belt latch assembly		
Connectors			
C20h (15-pin rectangular)	Below distribution/fuse box	4	8
C65 (5-pin rectangular)	Lower left instrument panel	5	
C97 (1-pin rectangular)	Trunk lid		
C75 (2 pin)	At left front wheel	10	
Grounds			
G49	Below lower left instrument panel	5	
G102	Rear parcel shelf, left side		
G90	Dome light ground		

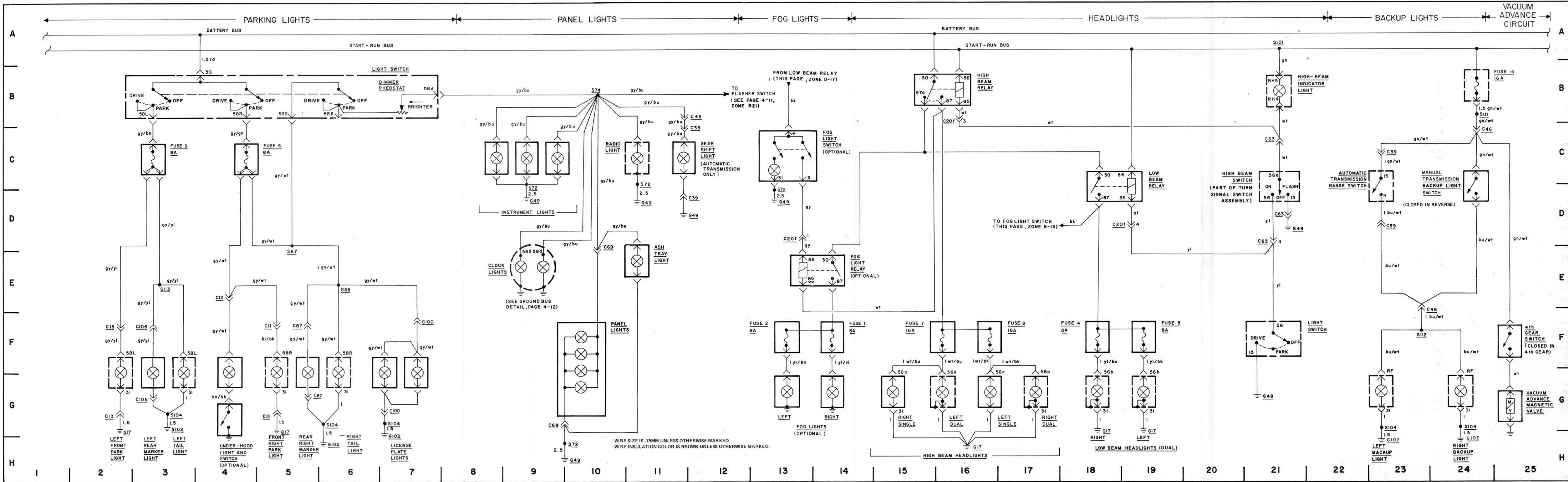
COMPONENT	COMPONENT LOCATION ON VEHICLE	COMPONENT LOCATION PHOTOGRAPH	COMPONENT TERMINAL PHOTOGRAPH
<p>Auxiliary Fan</p> <p>Auxiliary Fan Motor Auxiliary Fan Relay Auxiliary Fan Temperature Switch Relief Relay (Unloader)</p>	<p>Behind center section of radiator grille In distribution/fuse box On bottom left side of radiator In distribution/fuse box</p>	<p>3 3</p>	
<p>Heater</p> <p>Heater Blower Motor Heater Blower Switch Heater Override Relay</p>	<p>In center cowl frame, behind firewall cover panel In center console, below clock In center console, above radio</p>		
<p>Rear Window Heater</p> <p>Rear Window Heater Switch Rear Window Heater</p>	<p>Left side of dash Integral with rear window glass</p>		
<p>Air Conditioner (Factory Installed)</p> <p>Air Conditioner Blower Motor Air Conditioner Blower Control Diode Air Conditioner Temperature Control Resistor Air Conditioner Compressor Clutch</p>	<p>In center console In center console Above A/C compressor In center console In center console On front of Bosch compressor</p>		
<p>Connectors</p> <p>C60 (6-pin rectangular) C20h (15-pin rectangular) C20m (single pin) C119 C118</p>	<p>Ignition switch connector, under left side of dash Below distribution/fuse box In distribution/fuse box In center console behind clock</p>	<p> 4 4</p>	<p> 8</p>
<p>Grounds</p> <p>G17 (Main body ground) G18 (Engine ground) G49 G102</p>	<p>Left side of battery mounting base On engine, just forward of starter Below lower left instrument panel Rear parcel shelf, left side</p>	<p> 5</p>	



NOTE A: THE HEATER BLOWER MOTOR IS POWERED ONLY WHEN THE A/C BLOWER CONTROL IS IN THE OFF (FULL COUNTER-CLOCKWISE) POSITION.

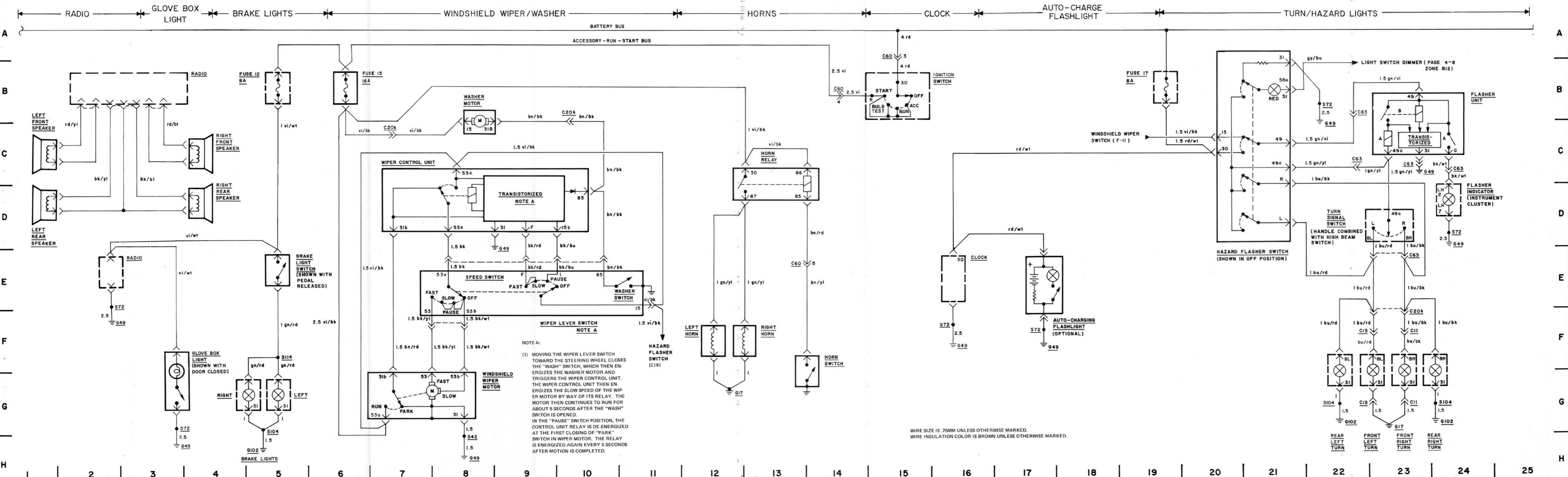
NOTE B: AUXILIARY FAN RELAY MAY BE ENERGIZED BY EITHER THE AUXILIARY FAN TEMPERATURE SWITCH OR THE AIR CONDITIONER TEMPERATURE CONTROL. DIODE PREVENTS THE AUXILIARY FAN TEMPERATURE SWITCH FROM ENERGIZING THE AIR CONDITIONER COMPRESSOR CLUTCH.

WIRE SIZE IS .75MM UNLESS OTHERWISE MARKED. WIRE INSULATION COLOR IS BROWN UNLESS OTHERWISE MARKED.



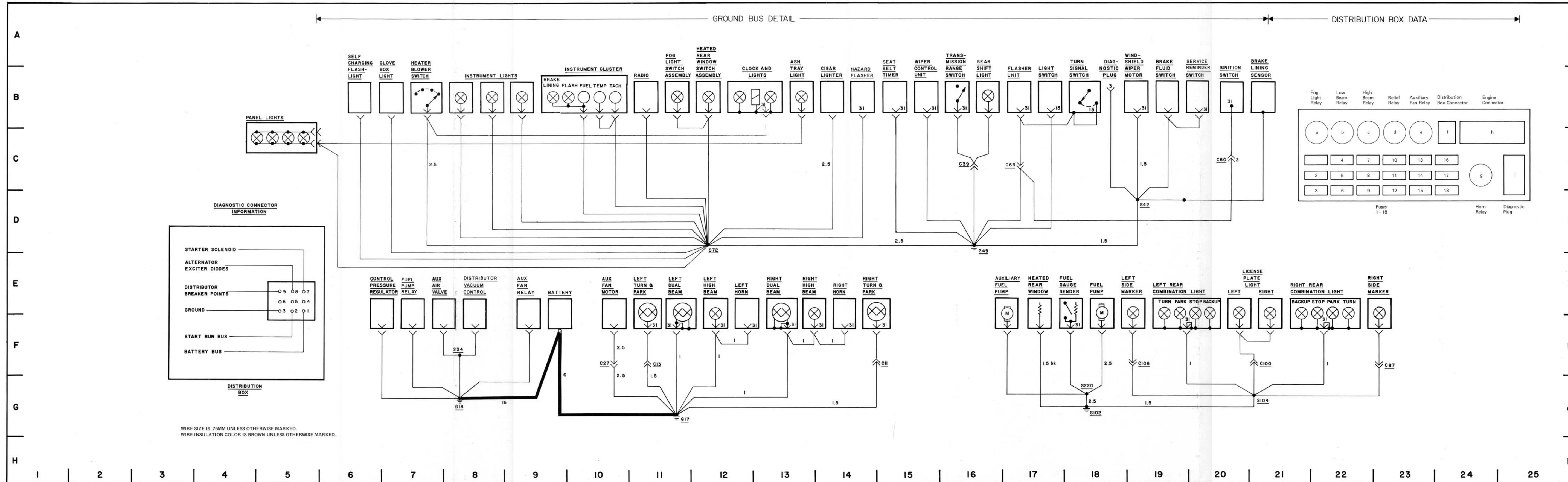
COMPONENT	COMPONENT LOCATION ON VEHICLE	COMPONENT LOCATION PHOTOGRAPH	COMPONENT TERMINAL DETAIL
Headlights Light Switch High Beam Switch High Beam Relay Low Beam Relay High Beam Indicator	On dash, left of steering column On left side of steering column (combined with turn signal switch). Connector mounted on body electrical bracket, above driver's kick panel In distribution/fuse box In distribution/fuse box Right side of instrument cluster	 3 3	
Parking Lights Light Switch Under-hood Light Under-hood Light Switch	On dash, left of steering column Under hood Under right front corner of hood		
Panel Lights Instrument Lights	In dash, above instrument cluster		
Backup Lights Automatic Transmission Range Switch Manual Transmission Backup Light Switch	Gear selector mounting plate Rear of transmission	 6	
*Fog Lights *Fog Light Switch *Fog Light Relay	On lower dash, right of steering column In distribution/fuse box	 3	
Vacuum Advance Circuit 4th Gear Switch Vacuum Advance Magnetic Valve	Mounted on manual transmission Mounted on firewall, to left of distributor		
Connectors C20f (4-pin rectangular) C20h (15-pin, rectangular) C39 (9-pin rectangular) C47 (3-pin rectangular) C69 (2-pin rectangular)	In distribution/fuse box Below distribution/fuse box On gear select mounting plate Below lower left instrument panel Behind heater control panel	 4 4 5	 8
Grounds G17 (Main body ground) G49 G102	Left side of battery mounting base Below lower left instrument panel Rear parcel shelf, left side	 5	
* optional equipment			

COMPONENT	COMPONENT LOCATION ON VEHICLE	COMPONENT LOCATION PHOTOGRAPH	COMPONENT TERMINAL DETAIL
Turn and Hazard Lights Hazard Flasher Switch Flasher Unit Flasher Indicator Turn Signal Switch	On lower dash, right of steering column On body electrical bracket, above driver's kick panel On left side of instrument cluster On left side of steering column, (combined with high beam switch)	5	
Brake Lights Brake Light Switch	At top of brake pedal hanger	5	
Windshield Wiper/Washer Wiper Control Unit Wiper Lever Switch Windshield Wiper Motor Washer Motor	On body electrical bracket, above driver's kick panel On right side of steering column (connector on body electrical bracket) In center cowl frame, behind firewall cover panel On front of washer fluid reservoir, at right front fender wall	5	
Horns Horn Relay Horns Horn Switch	In distribution/fuse box Behind grille below front bumper Center of steering wheel	3	
Auto-Charging Flashlight	On left interior surface of glove box door		
Glove Box Light	In upper left corner of glove box opening		
Radio	Center console		
Connectors C20k (9-pin rectangular) C60 (6-pin rectangular) C63 (8-pin rectangular) C11 (5-pin rectangular) C13 (5-pin rectangular)	Below distribution/fuse panel Below lower left instrument panel Below lower left instrument panel Right front turn/park light Left front turn/park light	4 5 5	
Grounds G17 (Main body ground) G49 G102	Left side of battery mounting base Below lower left instrument panel Rear parcel shelf, left side	5	



NOTE A:
 (1) MOVING THE WIPER LEVER SWITCH TOWARD THE STEERING WHEEL CLOSSES THE "WASH" SWITCH, WHICH THEN ENERGIZES THE WASHER MOTOR AND TRIGGERS THE WIPER CONTROL UNIT. THE WIPER CONTROL UNIT THEN ENERGIZES THE SLOW SPEED OF THE WIPER MOTOR BY WAY OF ITS RELAY. THE MOTOR THEN CONTINUES TO RUN FOR ABOUT 5 SECONDS AFTER THE "WASH" SWITCH IS OPENED. IN THE "PAUSE" SWITCH POSITION, THE CONTROL UNIT RELAY IS DE-ENERGIZED AT THE FIRST CLOSING OF "PAUSE" SWITCH IN WIPER MOTOR. THE RELAY IS ENERGIZED AGAIN EVERY 5 SECONDS AFTER MOTION IS COMPLETED.

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 WIRE INSULATION COLOR IS BROWN UNLESS OTHERWISE MARKED.



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FUSE DESIGNATION

The maximum current carrying capacity of fuses is coded according to the color of the porcelain fuse body as indicated at right:

white – 8 amperes
red – 16 amperes
blue – 25 amperes

Fuse No.	Size	Circuit	Schematic Page
1	8A	Right fog light	4-8
2	8A	Left fog light	4-8
3	16A	Fuel pump	4-3
4	8A	Right low beam	4-8
5	8A	Left low beam	4-8
6	8A	Right front park light	4-8
		Right rear marker and tail lights	4-8
		License plate lights	4-8
		Under-hood light	4-8
		Instrument panel lights (dimmer)	4-8
7	16A	High beam	4-8
8	16A	High beam	4-8
9	8A	Left front park light	4-8
		Left rear marker and tail lights	4-8
10	25A	Heated rear window	4-7
11	25A	Heated blower	4-7, 4-15
		Auxiliary fan control	4-7, 4-15
		A/C blower	4-7, 4-15
12	8A	Brake lights	4-11
		Glove box light	4-11
		Radio	4-11
13	25A	Auxiliary fan motor	4-7
14	16A	Backup lights	4-8
		Warning display	4-4
		Instrument cluster	4-4
		Vacuum advance circuit	4-8
15	16A	Horn	4-11
		Windshield wiper and washer	4-11
16	16A	Cigar lighter	4-3
17	8A	Turn signals	4-11
		Hazard lights	4-11
		Dome light	4-4
		Clock, flashlight	4-11
		Warning buzzer	4-4
18		(Spare)	

COMPONENT	COMPONENT LOCATION ON VEHICLE	COMPONENT LOCATION PHOTOGRAPH	COMPONENT TERMINAL PHOTOGRAPH
Air Conditioner (VPC)			
A/C Blower Motor	In center console		
A/C Blower Switch	In center console		
A/C Compressor Clutch	On front of compressor		
A/C Temperature Control	In center console		
Diode	Above A/C compressor		
Auxiliary Fan			
Auxiliary Fan Motor	Behind center section of radiator grille		
Auxiliary Fan Relay	In distribution/fuse box	3	
Auxiliary Fan Temperature Switch	On bottom left side of radiator		
Relief (Unloader) Relay	In distribution/fuse box	3	
Connectors			
C20m	In distribution/fuse box	4	
C119	In center console behind clock		
Grounds			
G17	Left side of battery mounting base		
G49	Below lower left instrument panel	5	
Heater			
Heater Blower Motor	In center cowl frame, behind firewall cover panel		
Heater Blower Switch	In center console, below clock		
Heater Override Relay	In center console, above radio		

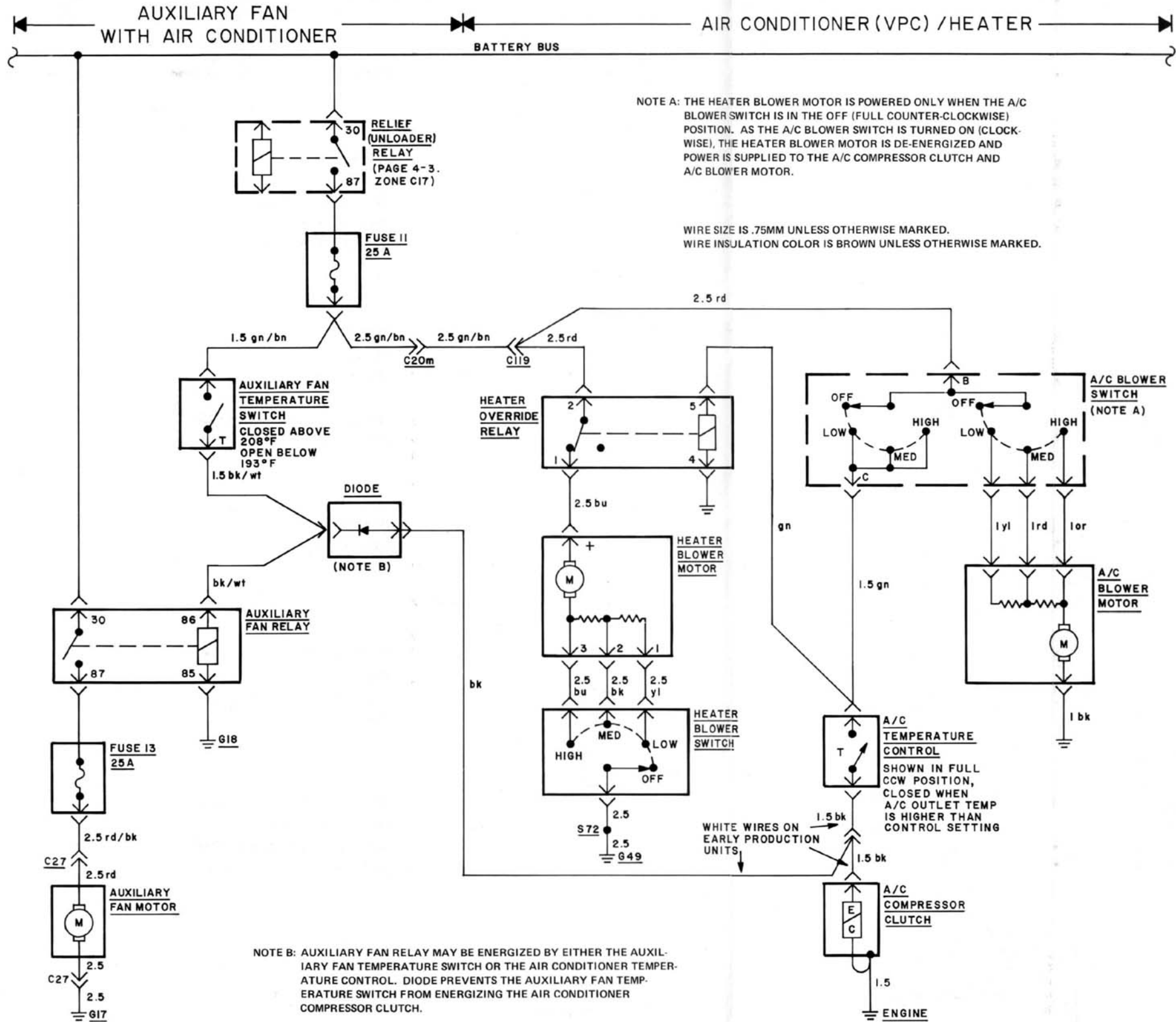
AUXILIARY FAN WITH AIR CONDITIONER

AIR CONDITIONER (VPC) / HEATER

BATTERY BUS

NOTE A: THE HEATER BLOWER MOTOR IS POWERED ONLY WHEN THE A/C BLOWER SWITCH IS IN THE OFF (FULL COUNTER-CLOCKWISE) POSITION. AS THE A/C BLOWER SWITCH IS TURNED ON (CLOCKWISE), THE HEATER BLOWER MOTOR IS DE-ENERGIZED AND POWER IS SUPPLIED TO THE A/C COMPRESSOR CLUTCH AND A/C BLOWER MOTOR.

WIRE SIZE IS .75MM UNLESS OTHERWISE MARKED.
WIRE INSULATION COLOR IS BROWN UNLESS OTHERWISE MARKED.



NOTE B: AUXILIARY FAN RELAY MAY BE ENERGIZED BY EITHER THE AUXILIARY FAN TEMPERATURE SWITCH OR THE AIR CONDITIONER TEMPERATURE CONTROL. DIODE PREVENTS THE AUXILIARY FAN TEMPERATURE SWITCH FROM ENERGIZING THE AIR CONDITIONER COMPRESSOR CLUTCH.