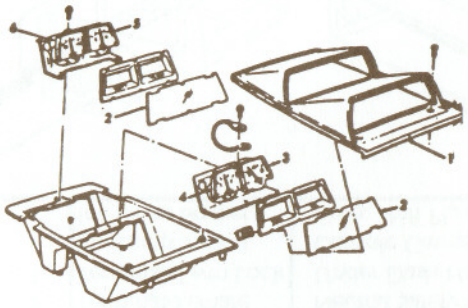
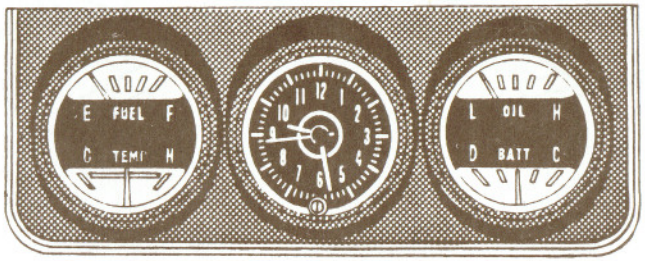
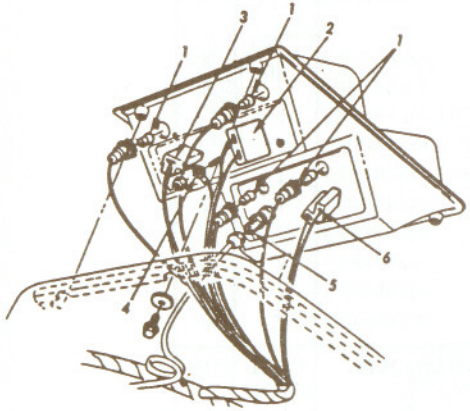


1968-69 CONSOLE GAUGE CLUSTER
FRONT VIEW

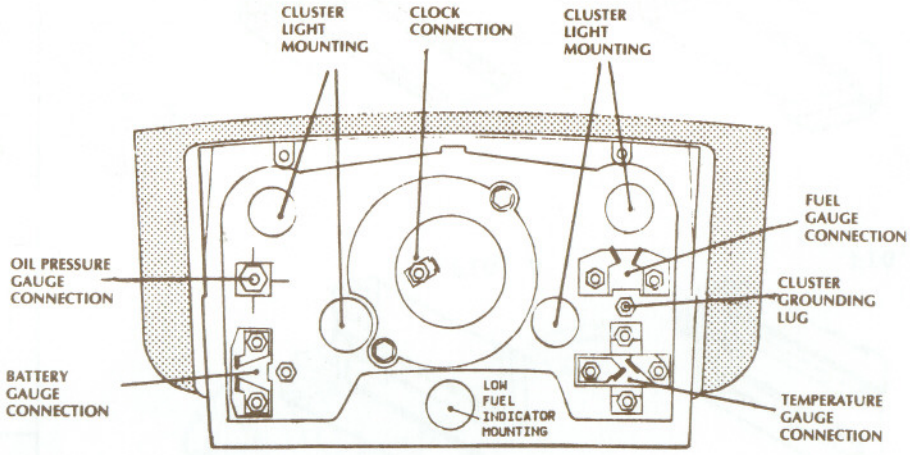


1967 CONSOLE GAUGE CLUSTER
FRONT VIEW



1. CLUSTER LIGHT
2. BATTERY GAUGE CONNECTION
3. TEMPERATURE GAUGE CONNECTION
4. GAUGE CLUSTER GROUND
5. OIL PRESSURE GAUGE CONNECTION
6. FUEL GAUGE CONNECTION

1968-69 CONSOLE GAUGE CLUSTER
REAR VIEW



1967 CONSOLE GAUGE CLUSTER
REAR VIEW

CONNECTOR AND TERMINAL USAGE TABLE

FIG.	NO. OF TERM.	DESCRIPTION	USAGE
A	2	Connector	Fuel Gauge
B	2	Connector	Temperature Gauge
C	2	Connector	Battery Gauge
D	1	Connector	Clock
E	1	Connector-Male	Low Fuel Indicator — Harness Side
F	1	Connector-Female	Low Fuel Indicator — Indicator Side
G	4	Connector-Male	Neutral Safety Switch — '67 Switch Side
H	4	Connector-Female	Neutral Safety Switch — '67 Harness Side
J	2	Connector	Neutral Safety Switch — '68-'69 Ign. Lead
K	1	Connector	Neutral Safety Switch — '68-'69 Power Lead
			Neutral Safety Switch — '68-'69 Backup Lead
L	12	Connector	Under Dash Harness Connector
M	1	Terminal-Male	Low Fuel Indicator Male Connector
			Neutral Safety Switch Male Connector — '67
N	1	Terminal-Female	Fuel Gauge Connector
			Temperature Gauge Connector
			Battery Gauge Connector
			Clock Connector
			Low Fuel Indicator Female Connector
			Neutral Safety Switch Female Connector — '67
			Neutral Safety Switch Connectors — '68-'69
P	1	Terminal-Female	Neutral Safety Switch — '68-'69
R	1	Terminal-Twin Lock	Under Dash Harness Connector
S		Int. Lamp Socket	Console Gauge Cluster, Self Ground to Cluster
T		Int. Lamp Socket	Auto. Shift Plate, Ground Lead to Chassis

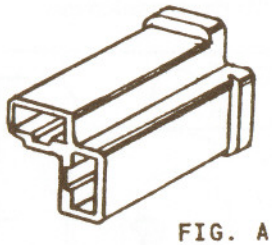


FIG. A

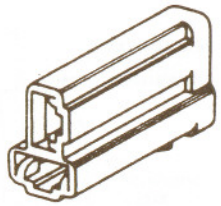


FIG. B

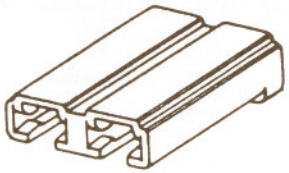


FIG. C

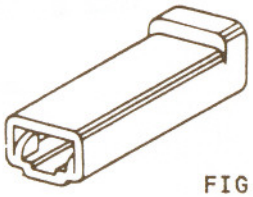


FIG. D

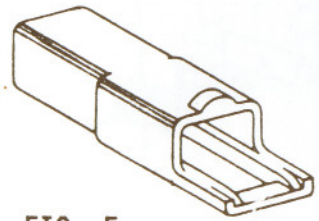


FIG. E

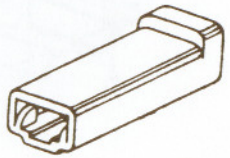


FIG. F

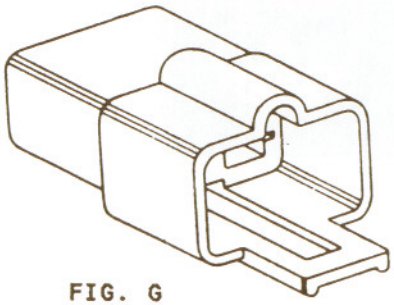


FIG. G

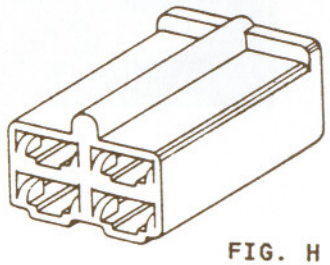


FIG. H

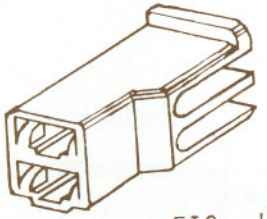


FIG. J

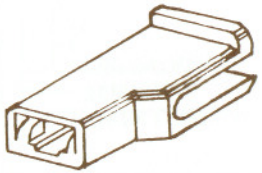


FIG. K

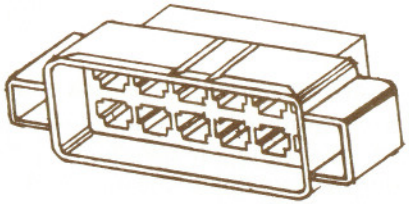


FIG. L

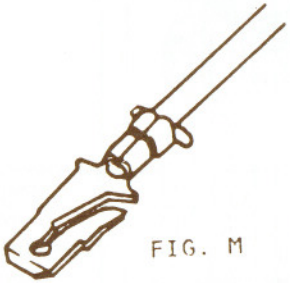


FIG. M

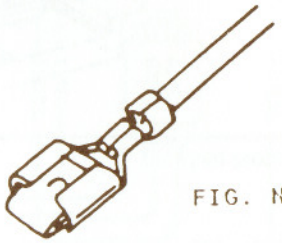


FIG. N

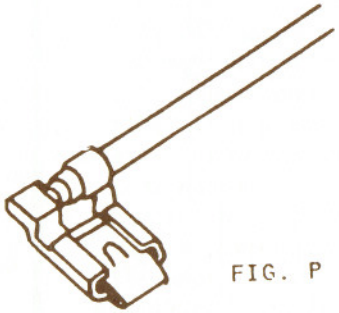


FIG. P

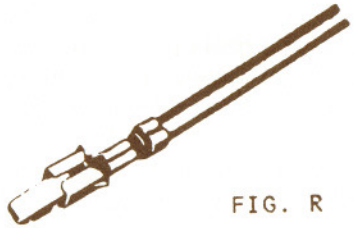


FIG. R

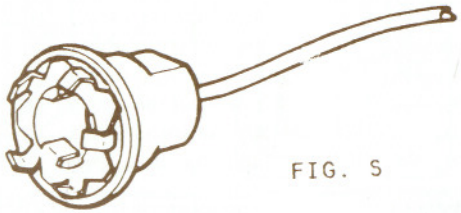


FIG. S

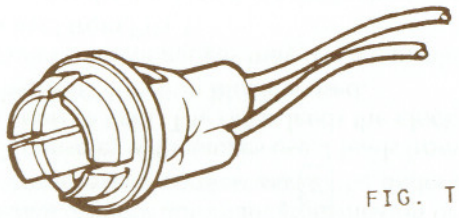
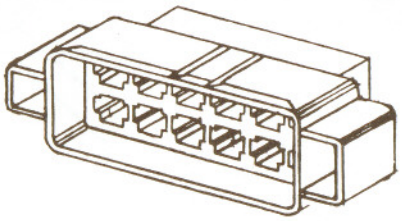


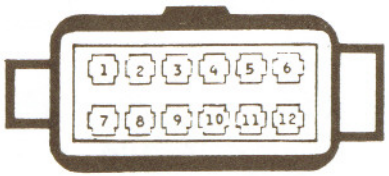
FIG. T

CONSOLE WIRING HARNESS

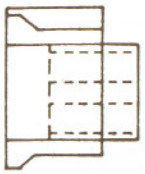
PIN	COLOR	GAUGE	DESTINATION	COMMENTS
1	Orange	20	Rear Console Light	See Note 1
1	Orange	20	Gauge Cluster Clock	See Note 2
2	Yellow	20	Low Fuel Indicator	See Note 3
3	Purple	12	Neutral Safety Switch	See Note 4, 5
4	Purple/White	12	Neutral Safety Switch	See Note 4, 5
5	White	20	Rear Console Light	
6	Light Green	20	Neutral Safety Switch	See Note 4, 5
7	Black	14	Battery Gauge	
8	Black/White	14	Battery Gauge	
9	Pink	20	Neutral Safety Switch	See Note 4, 5
9	Pink	20	Temperature Gauge	See Note 6
		20	Fuel Gauge	
10	Gray	20	All Console Lighting	See Note 7
11	Dark Green	20	Temperature Gauge	
12	Tan	20	Fuel Gauge	
	Black	20	Ground	See Note 8



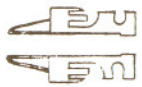
CONSOLE WIRING HARNESS UNDER DASH CONNECTOR



FRONT VIEW



RIGHT SIDE VIEW



TWIN LOCK TERMINAL ORIENTATION

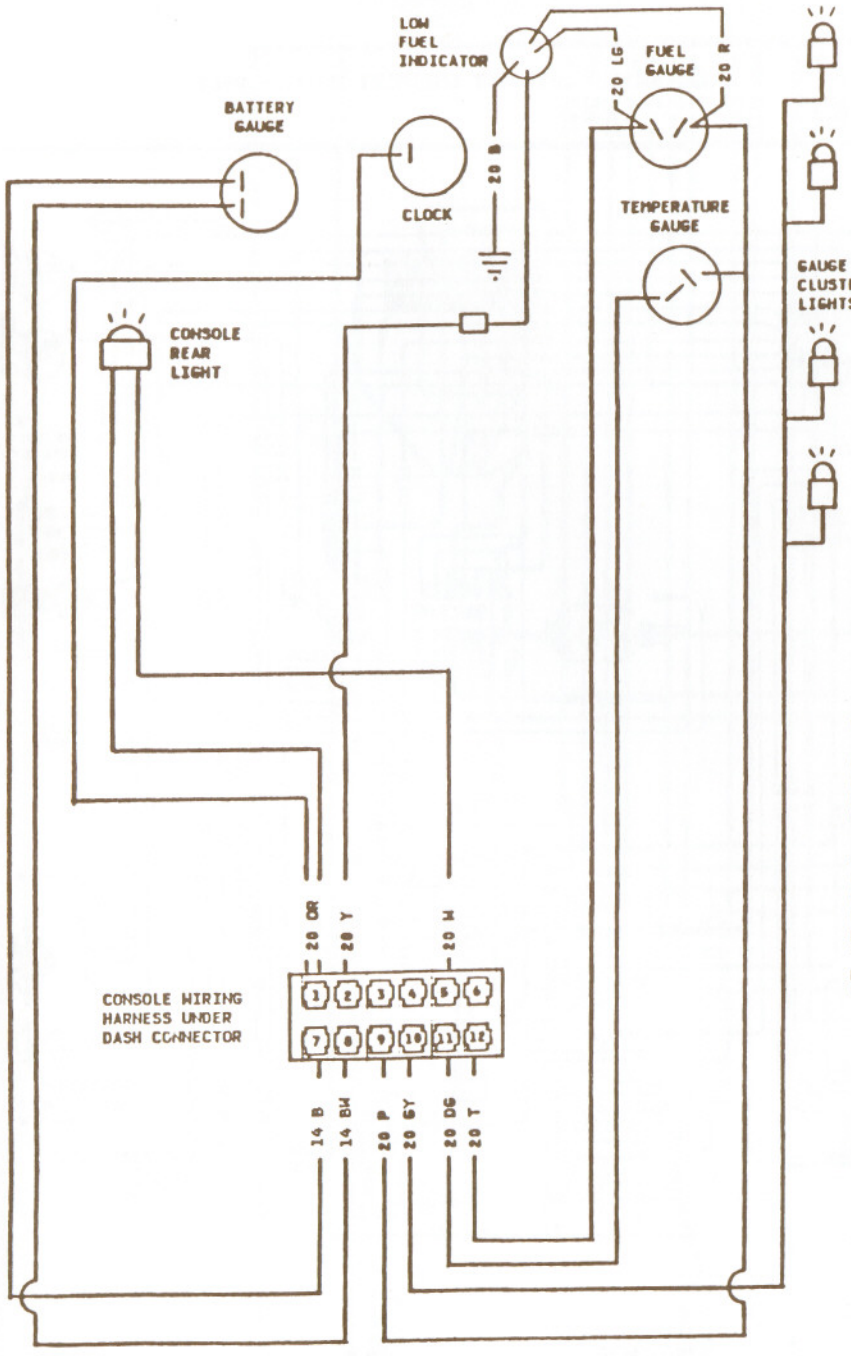
NOTES

1. Consoles without automatic transmission or gauges only have the rear console light connections to the under dash harness.
2. 1967 consoles with gauges use 2 leads from PIN 1. One feeds the rear console light. The other feeds the clock in the gauge cluster. No "in harness" junction block is used.

   Consoles without gauges may use a console mounted clock powered by a lead from PIN 1.
3. Low fuel indicator may not exist in the gauge cluster. If so ignore this lead.
4. For 1967 consoles a 4 PIN connector is used to mate the purple ignition leads (PINS 3 and 4), the pink power lead (PIN 9) and the light green backup light lead (PIN 6) to the neutral safety switch.

   For 1968-1969 consoles a 2 PIN connector is used to mate the purple ignition leads (PINS 3 and 4) to the neutral safety switch. The pink power lead (PIN 9) and the light green backup light lead (PIN 6) each have separate connectors at the neutral safety switch.
5. Manual transmission cars do not use the PIN 3 and 4 purple ignition leads, the light green backup light lead (PIN 6), or a pink power lead (PIN 9) to the neutral safety switch.
6. Consoles with automatic transmission and gauges may use 2 pink leads from PIN 9. One would feed power to the neutral safety switch. The other lead splits at an "in harness" junction to feed power to the temperature gauge and the fuel gauge.
7. Consoles with automatic transmission and no gauges use 2 gray leads from PIN 10. Each routes directly to an automatic shift plate light. No "in harness" junction is used.

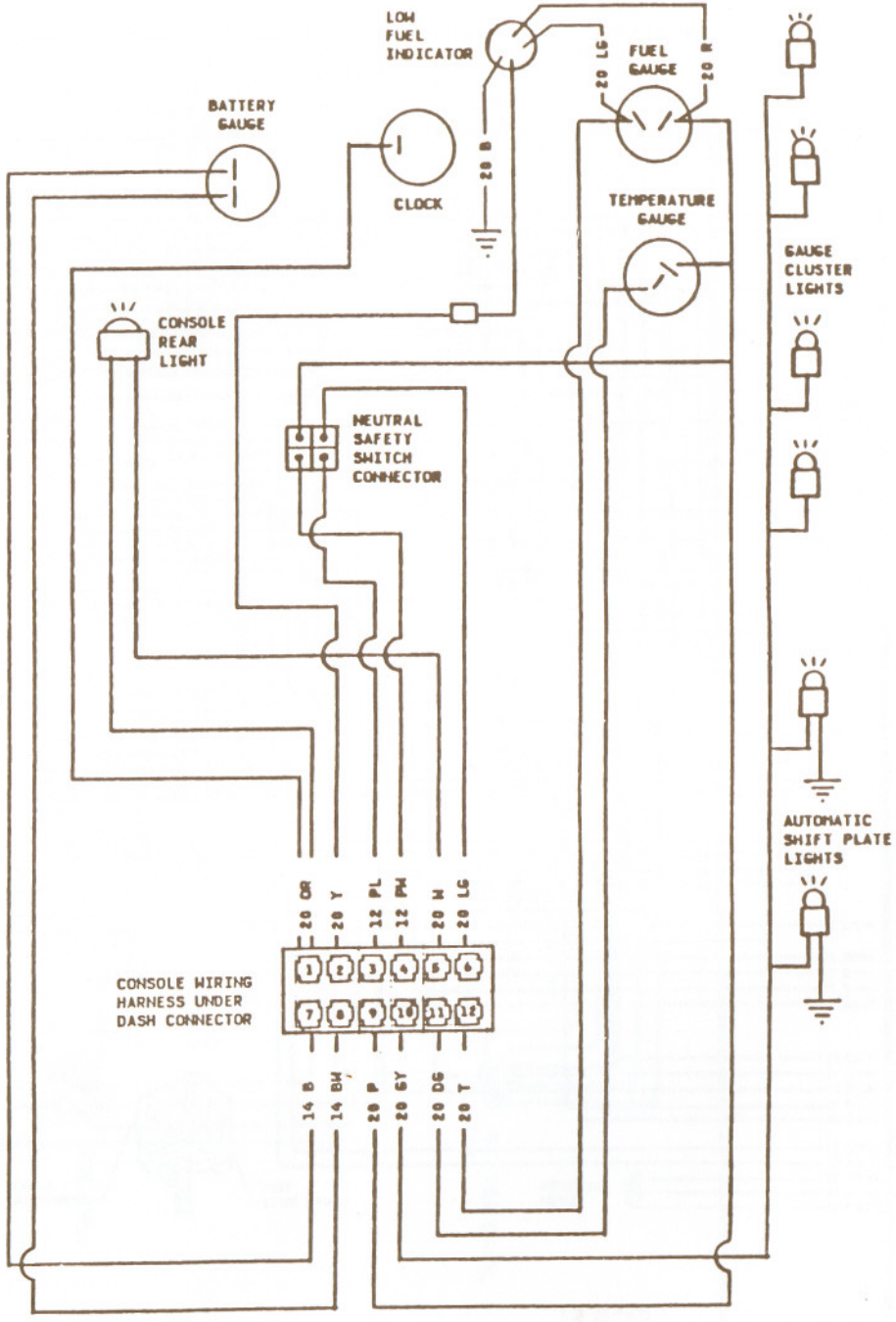
   Consoles with automatic transmission and gauges may use 2 gray leads from PIN 10. One lead splits at an "in harness" junction to feed the automatic shift plate lights. The other lead splits at an "in harness" junction to feed the gauge cluster lights.
8. A ground wire exists in the harness from the console gauge cluster chassis to a body ground. The automatic transmission shift plate lights ground via this lead through an "in harness" junction. Gauge cluster lights ground directly to the gauge cluster chassis.
9. All console gauge cases ground to the console gauge cluster chassis.



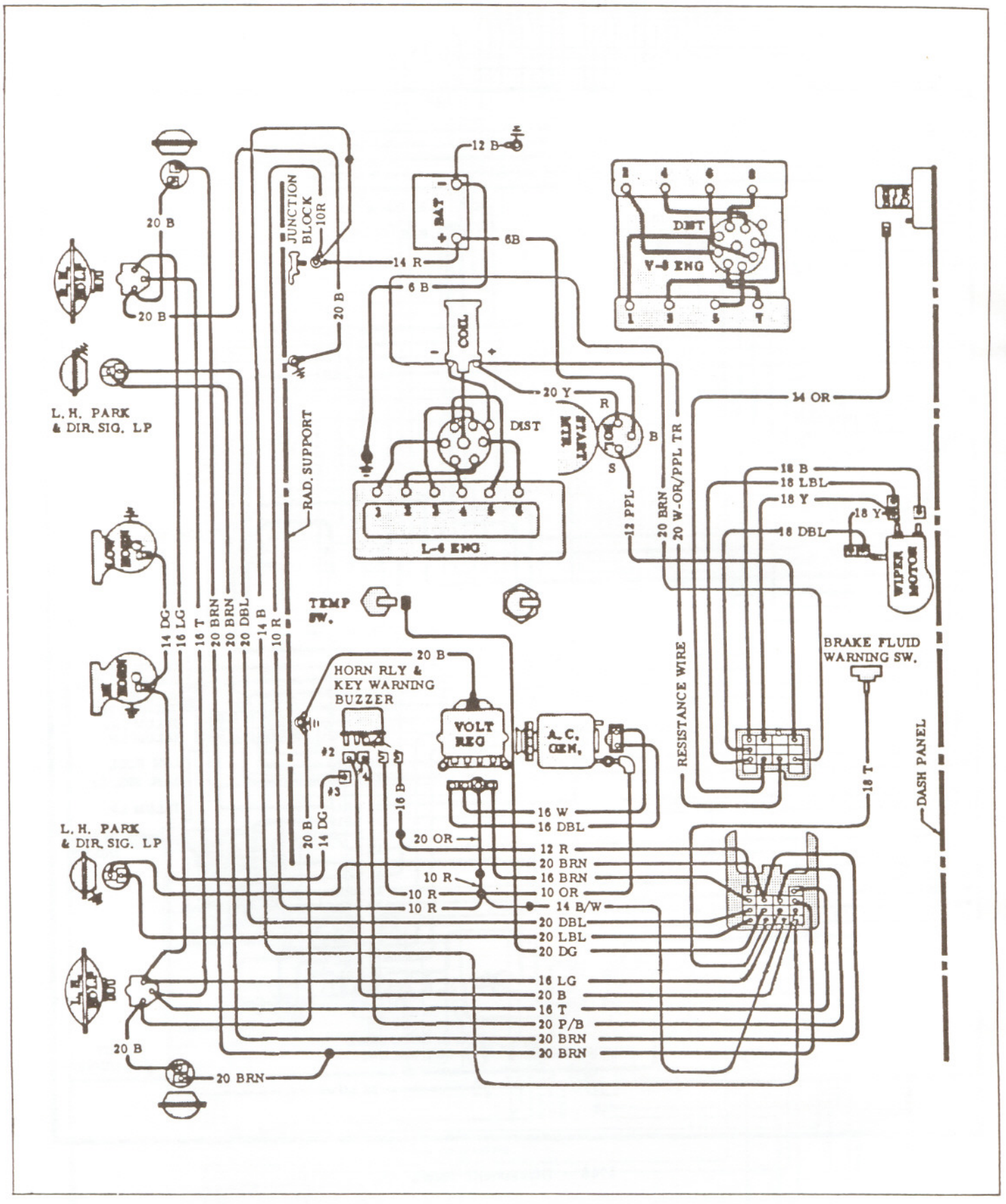
COLOR CODE CHART

B	=	BLACK
BW	=	BLACK/WHITE
DG	=	DARK GREEN
GY	=	GRAY
LG	=	LIGHT GREEN
OR	=	ORANGE
P	=	PINK
PL	=	PURPLE
PW	=	PURPLE/WHITE
R	=	RED
T	=	TAN
W	=	WHITE
Y	=	YELLOW

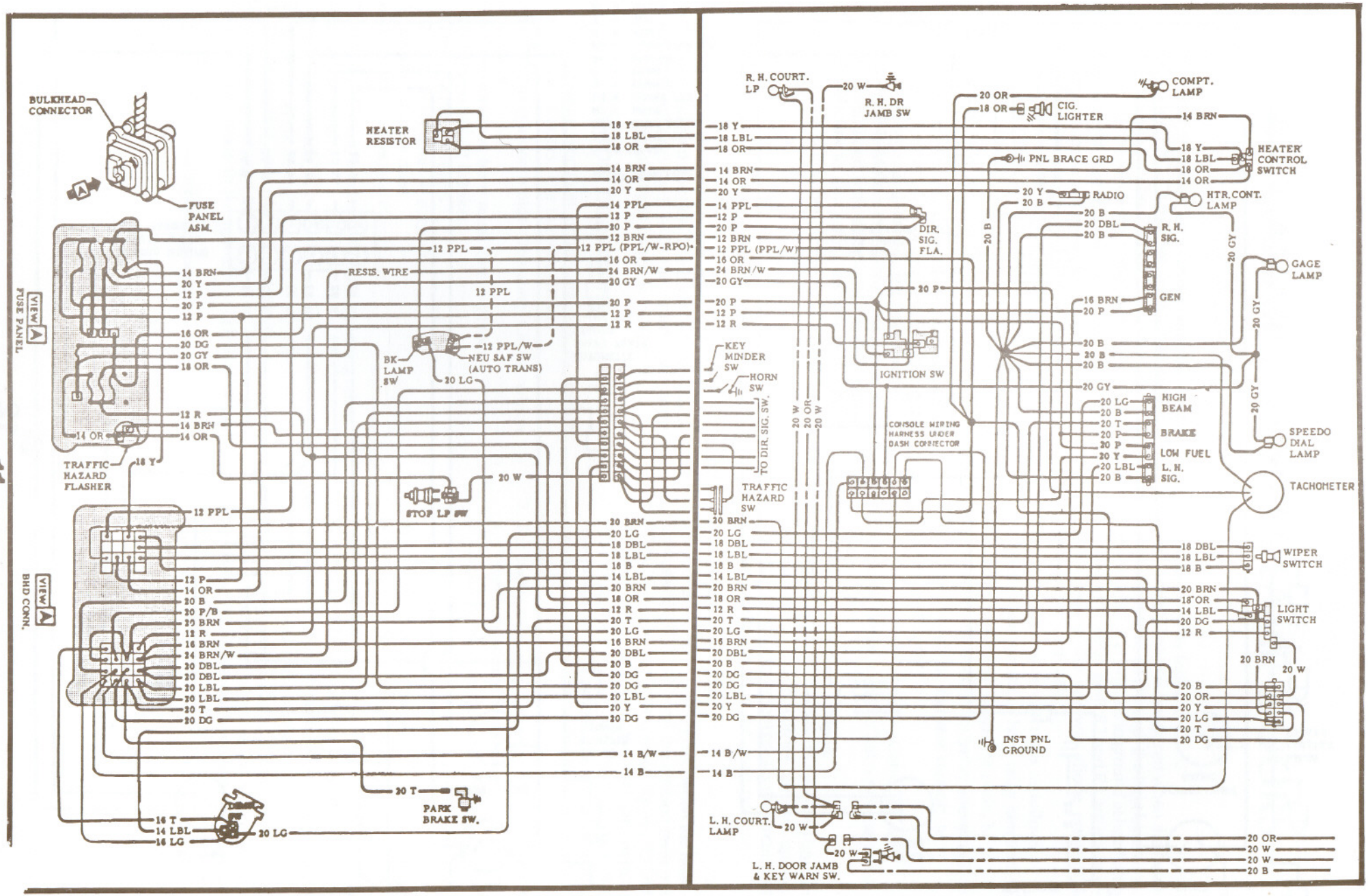
1967 CONSOLE WIRING
MANUAL TRANSMISSION WITH CONSOLE GAUGES



1967 CONSOLE WIRING
AUTOMATIC TRANSMISSION WITH CONSOLE GAUGES

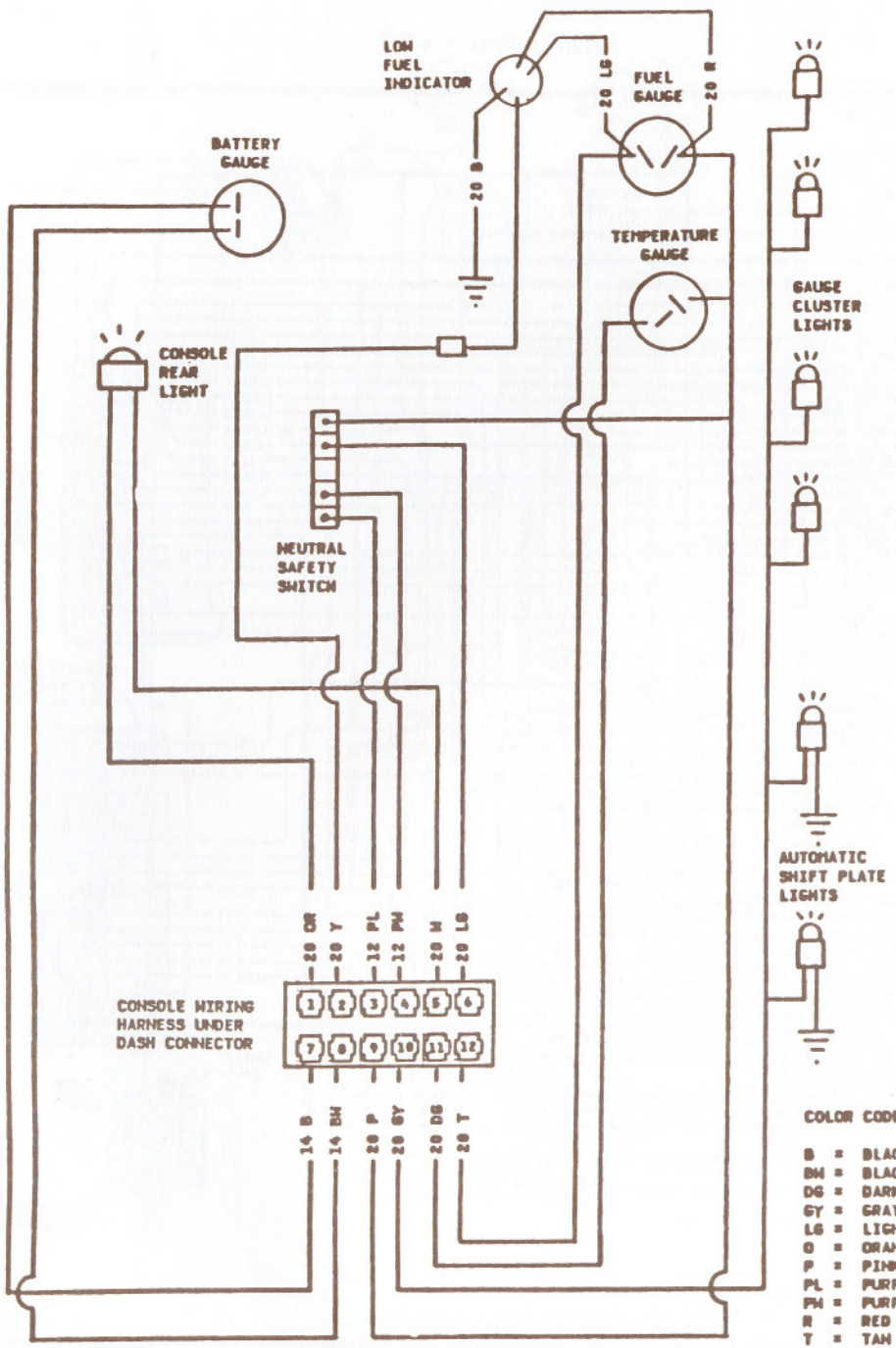


1969 - FRONT LIGHTING & ENGINE COMPARTMENT



1969 - FUSE PANEL

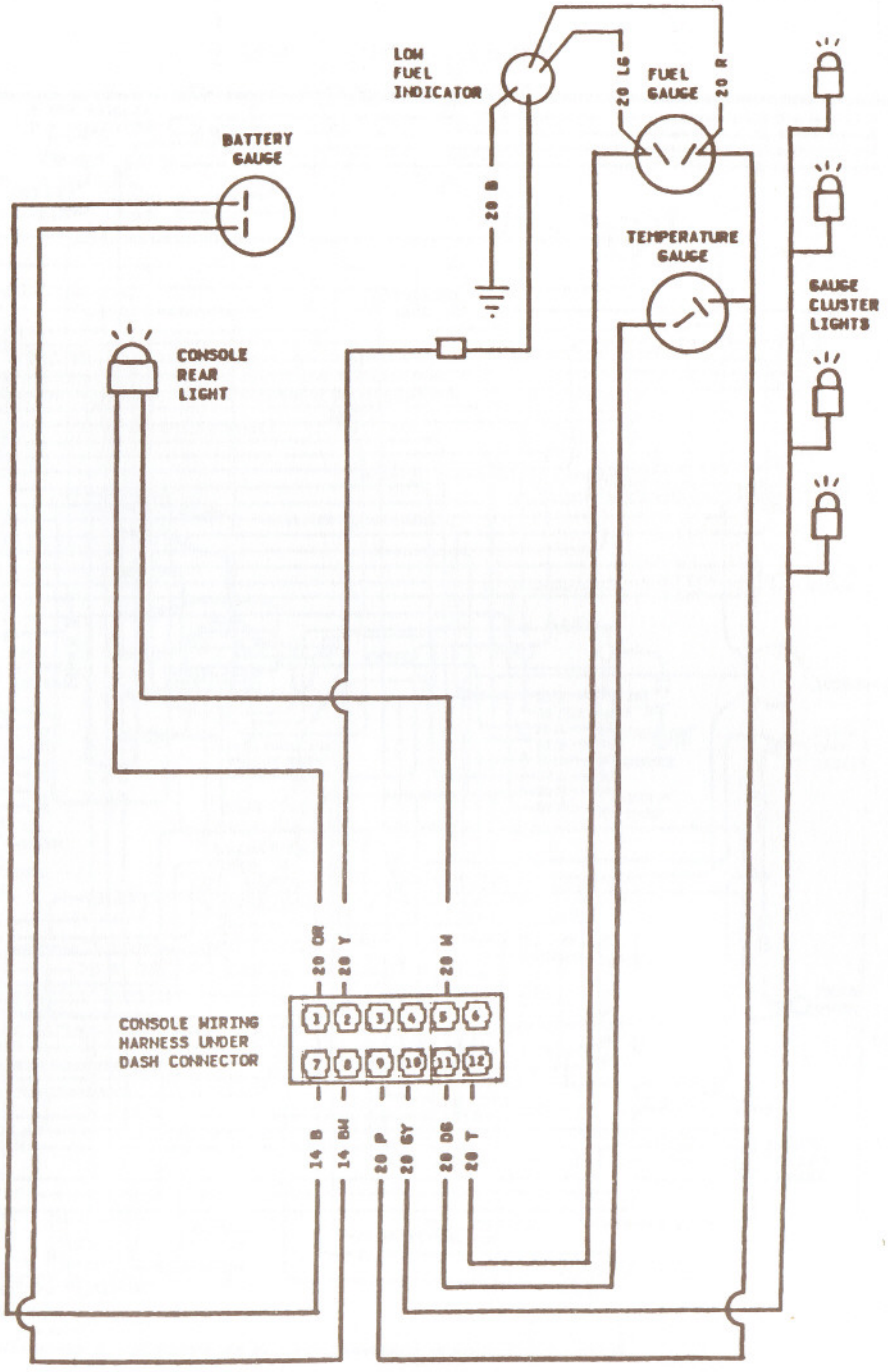
1969 - INSTRUMENT PANEL



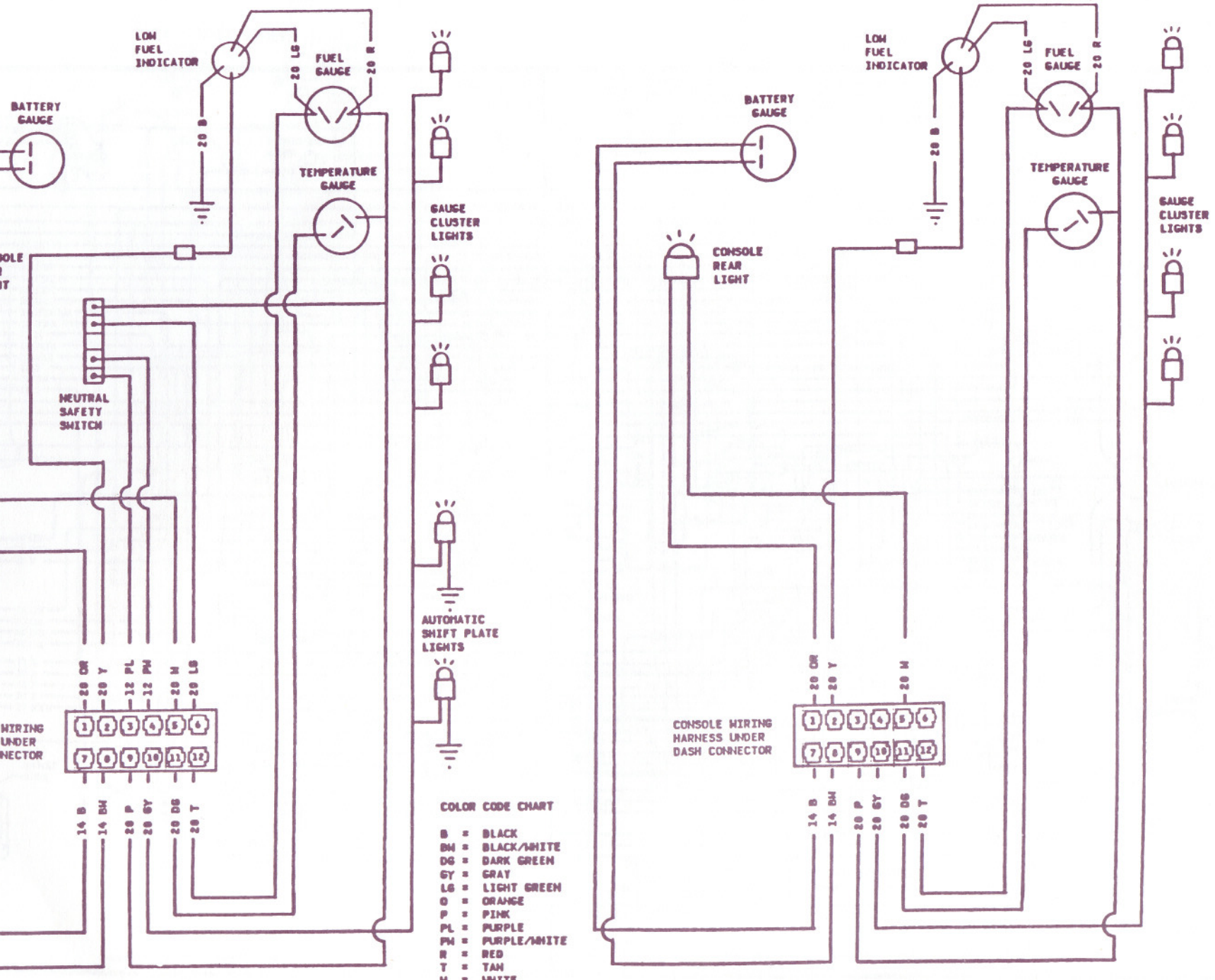
COLOR CODE CHART

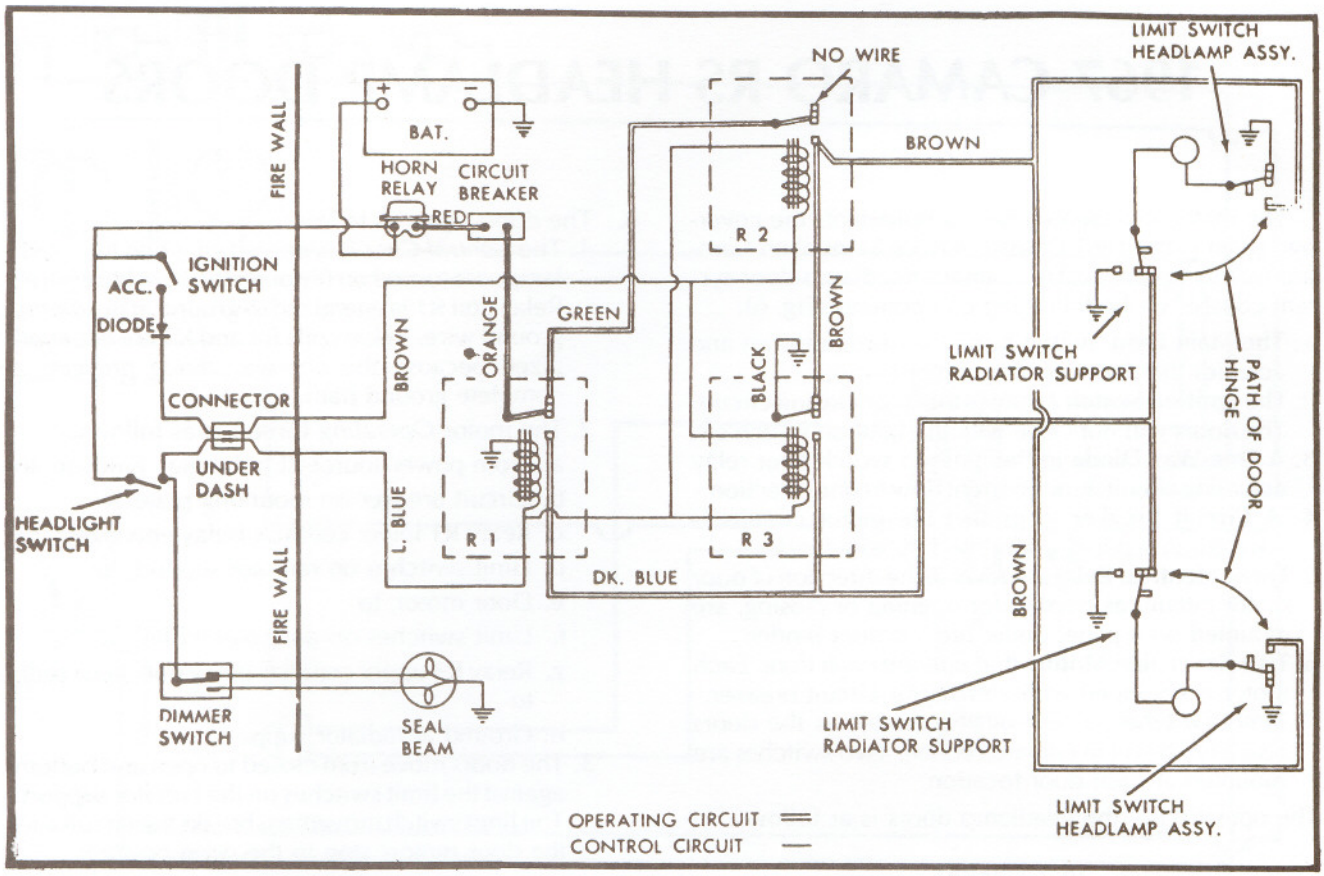
B	= BLACK
BW	= BLACK/WHITE
DG	= DARK GREEN
GY	= GRAY
LG	= LIGHT GREEN
O	= ORANGE
P	= PINK
PL	= PURPLE
PW	= PURPLE/WHITE
R	= RED
T	= TAN
W	= WHITE
Y	= YELLOW

1968-1969 CONSOLE WIRING
AUTOMATIC TRANSMISSION WITH CONSOLE GAUGES



1968-1969 CONSOLE WIRING
MANUAL TRANSMISSION WITH CONSOLE GAUGES


LOW FUEL INDICATOR
20 LG
FUEL GAUGE
20 R
BATTERY GAUGE
20 B
TEMPERATURE GAUGE
GAUGE CLUSTER LIGHTS
NEUTRAL SAFETY SWITCH
AUTOMATIC SHIFT PLATE LIGHTS
20 DR
20 Y
12 PL
12 PK
20 M
20 LG
14 B
14 BK
20 P
20 GY
20 DG
20 T
COLOR CODE CHART
B = BLACK
BK = BLACK/WHITE
DG = DARK GREEN
GY = GRAY
LG = LIGHT GREEN
O = ORANGE
P = PINK
PL = PURPLE
PK = PURPLE/WHITE
R = RED
T = TAN
CONSOLE REAR LIGHT
CONSOLE WIRING HARNESS UNDER DASH CONNECTOR



Camaro Headlamp Door Wiring—System in "Closed" Position

HEADLAMP DOOR DIAGNOSIS

FUNCTIONAL TEST

The following three steps should be performed during new car preparation or before any detailed diagnosis is performed.

I. Start with ignition switch and headlamp switch both "OFF."

II. Pull headlamp switch to headlamp position and check to see that:

A. Headlamps come on. This circuit is needed to close the doors.

B. Headlamp doors open —

1. If they open, one-half of the control circuit is okay — go to step III.
2. If they don't open, the add-on harness for this option may not be connected at:
   a. Double connector under dash.
   b. Main light switch (light blue wire).
3. If they don't open [and step (2) is okay] turn the ignition key to "ON" and observe the doors.
   a. If they open, the one-way diode is shorted or,
   b. There may be a short in the brown wire to the ignition switch or,
   c. The circuit breaker may be defective (possibly caused by shorted diode or low relay voltage).

III. Start the engine and operate the light switch a number of times to test the lamp and door operation. This eliminates a possible marginal voltage condition at the relays if the battery is slightly low. Listen for relay click noise as the headlamp switch is operated from on to off. Also listen for circuit breaker click if the doors fail to function in either direction. A circuit breaker click noise indicates a short in the system.

DETAILED DIAGNOSIS

If the above mentioned steps do not pinpoint the problem, continue diagnosis as follows:

If neither door opens; look for a defect in an area common to both motors:

A. Check black ground wire from relay R3 to ground at radiator support. This is the motor ground path.

B. Check to see that Relay R1 *is* energized by unplugging the two-wire connector. The relay should click as connector contact is broken and made. If not, use a test lamp between the two terminals of the two-wire connector. The lamps should light up if wiring is okay and headlamp switch is on. If it does, replace relay R1.

C. Check to see that relay R3 *is not* energized by unplugging the two-wire connector. The relay should not click when connector contact is broken and made. If the relay does click, there is a possible short in the brown wire to the ignition switch in combination with a broken wire such as might occur in a pinch condition. Check with a test light between ground and each terminal of the two-wire connector. The test light should light both times.

D. Use a test light and check from ground to the following terminals (test light should light up):

Terminal	Problem if test light does not light.
Horn relay junction	Open circuit between battery and horn relay.
Circuit breaker red wire terminal	Bad red wire or connector.
Circuit breaker orange wire terminal	Bad circuit breaker.
Relay R1 orange wire	Bad orange wire.

If neither door closes when lights are turned off, check for voltage at the green wire terminal on relay R1 (use test lamp to ground). Note: Ignition switch must be "ON" to energize system and the engine should be running during checking operation.

A. If there is voltage at green terminal, check for voltage further along the harness towards the motors. If there is no voltage at the brown wire terminal of relay R2, then R2 and R3 (they are wired in parallel) are not actuated. Check for 12 volts across the two-terminal connectors of both relays (use one test light lead at each terminal of connector).
   1. If voltage is present, replace R2.
   2. If no voltage, check wiring back to the ignition switch making sure that the diode is not open or in backwards.

B. If voltage is pulsating, due to action of circuit breaker, then R2 has pulled in but R3 has not. Check for 12 volts across the two-terminal connector of R3 (one test light lead at each terminal of connector). If voltage is present, replace R3. If no voltage, check wiring.

C. If there is no voltage at green wire terminal of relay R1 (use test light to ground), check for voltage at orange wire terminal of R1.
   a. If voltage is present, replace R1.
   b. If voltage is not present, check for open circuit breaker or wiring.

If one door does not operate the same as the other, look for a malfunction in that particular door's motor, switches, or wiring.

Door does not open

A. Check for a mechanical binding. If motor is being prevented from turning, a flashing blue light in its terminal housing will indicate that the motor's thermal overload switch is operating.

B. Check for voltage between limit switch (on radiator support) and motor. Use test light from top limit switch terminal to ground.
   1. If no voltage is present:
      a. Check connections at top and bottom of limit switch.
      b. Check wiring from relay R1 to bottom of limit switch using test light at bottom terminal of limit switch. Test light should light.
      c. Replace limit switch if bad.
   2. If there is voltage present, check for voltage between motor and limit switch on headlamp assembly. If voltage is present:
      a. Check connections at top and bottom of limit switch.
      b. Check wiring between bottom of limit switch and ground at relay R3.
      c. Replace limit switch on headlamp assembly if bad.

Door does not close

A. Check for mechanical binding.

B. Check for voltage between limit switch at headlamp assembly and motor:
   1. If not voltage is present:
      a. Check limit switch connections top and bottom.
      b. Check wiring from relay R2 to bottom of limit switch. Use test lamp from terminal to ground.
      c. Replace switch if bad.
   2. If there is voltage present, check for voltage between motor and limit switch at radiator support. If voltage is present:
      a. Check limit switch connections — top and bottom.
      b. Check wiring from bottom of limit switch to ground at relay R3.
      c. Replace limit switch if bad.

Motor does not stop running at end of door travel.

After a few second of stall, the motor's thermal overload will start flashing in the terminal housing of the motor. Check for sufficient contact between the door mechanism and the appropriate limit switch for proper

switch operation. Push in the switch button to insure operation; if motor continues to flash (operate) replace switch.

Door moves jerkily.

A. Check for loose connection in circuit.
B. Check for mechanical bind in the door mechanism (the motor's thermal overload will probably be flashing).

HEADLIGHT DOOR ADJUSTMENT

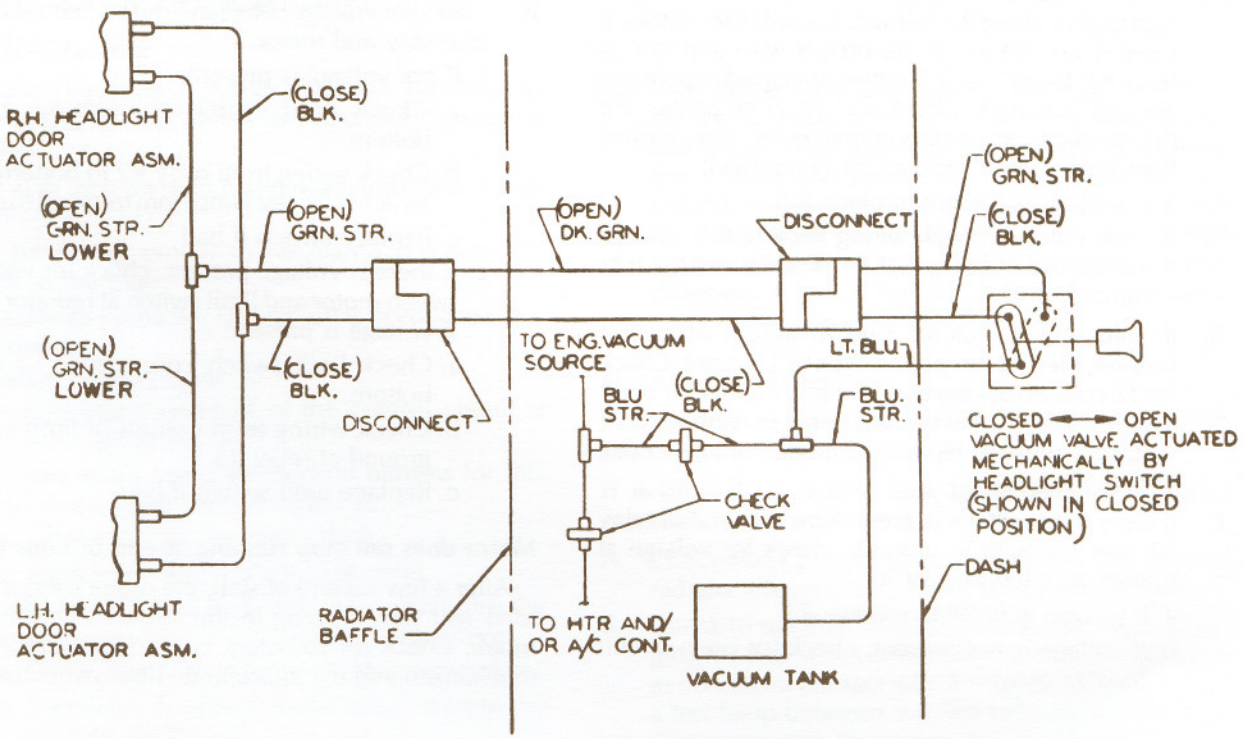
The headlight door adjustment is proper when:

A. There is clearance all the way around the door in the closed position.
B. The limit switch is actuated to shut off the door motor.
C. The door is flush in the opening.

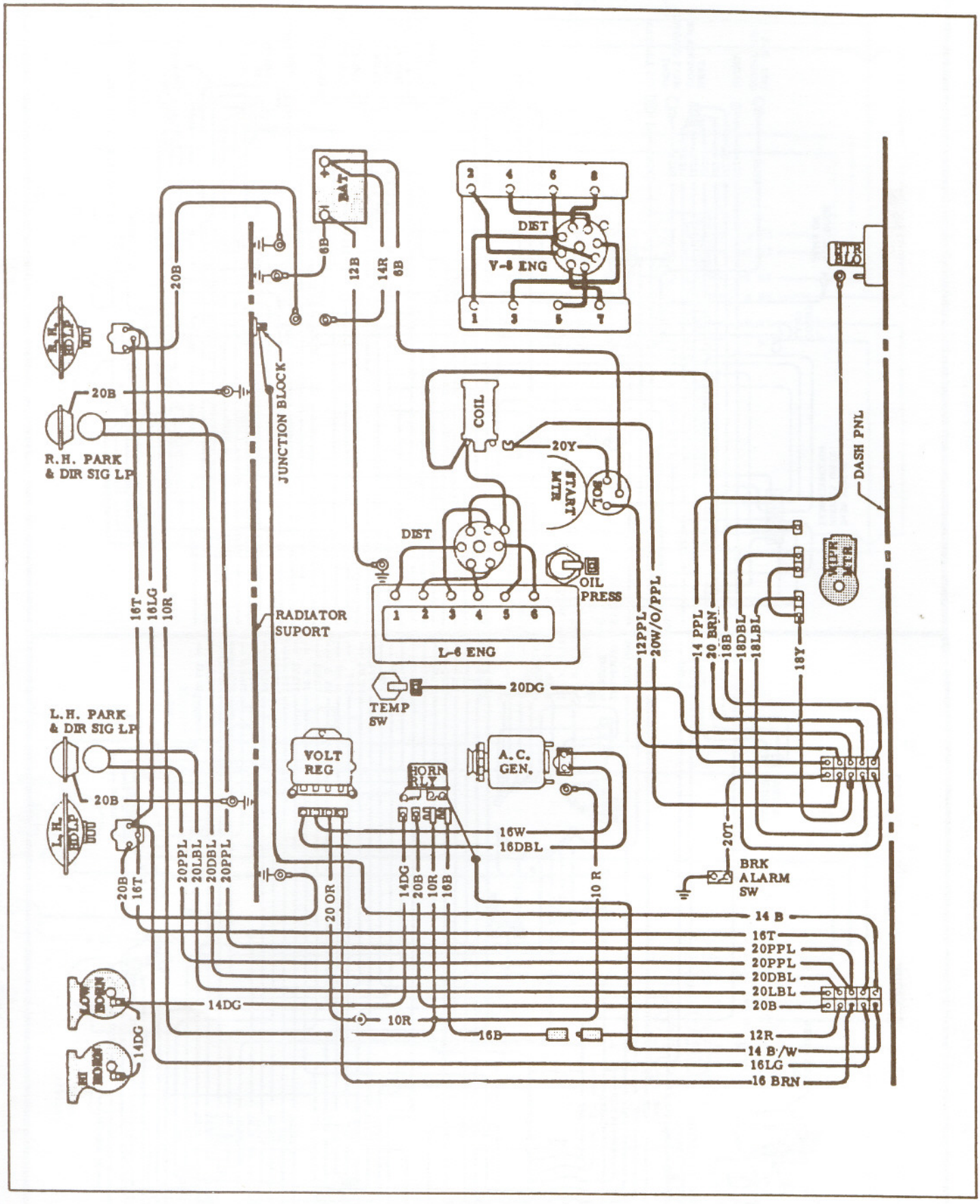
Adjustment can be made as follows:

A. The door cover is retained by 4 screws threaded into caged nuts. These nuts have up to .090" movement for door cover adjustment when the screws are loosened. Use this adjustment to square the door in the opening by measuring clearance (.025" — .050") all the way around.
B. If the door assembly is cocked at an angle (down or up) in the opening, shim the assembly at its radiator support mounting screws.
C. Adjustment of the limit switch, if needed, can be obtained by slotting the mounting bracket holes with a round file. This should be used only when the other adjustments fail to provide better than marginal clearance around the door.

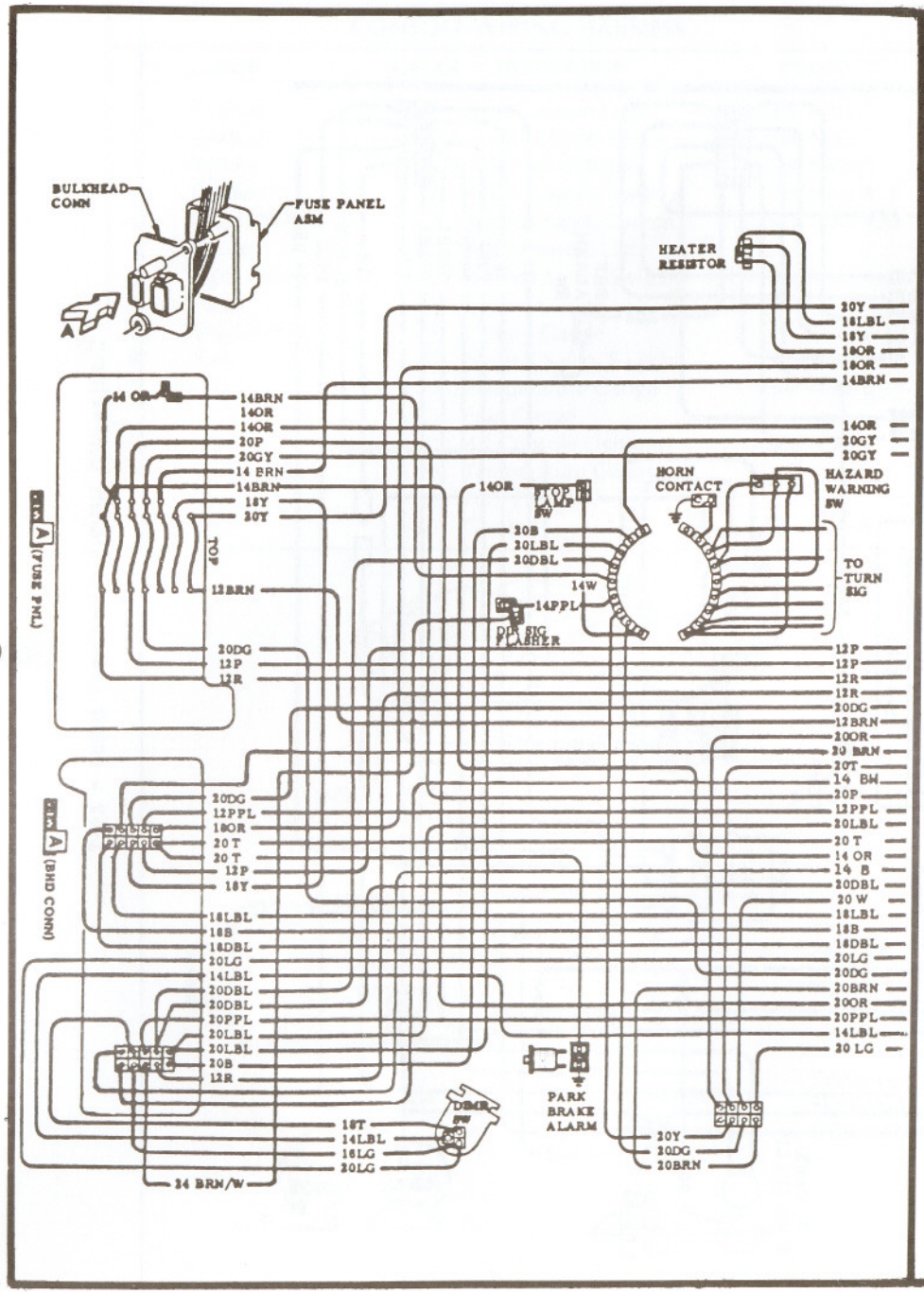
1968-69 CAMARO RS HEADLAMP DOORS



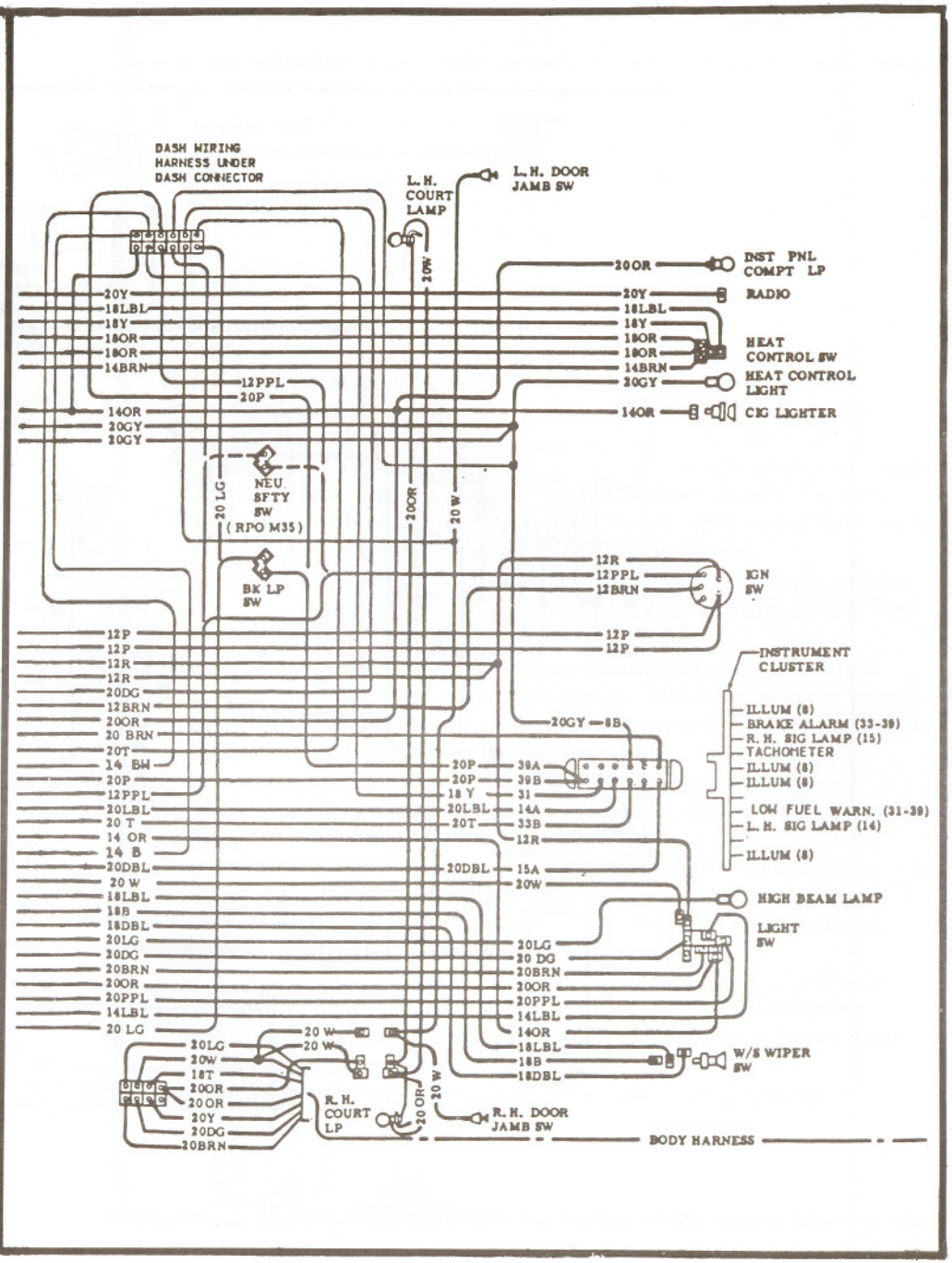
NOTE: VACUUM HOSES ROUTED WITH FRONT END HARNESS



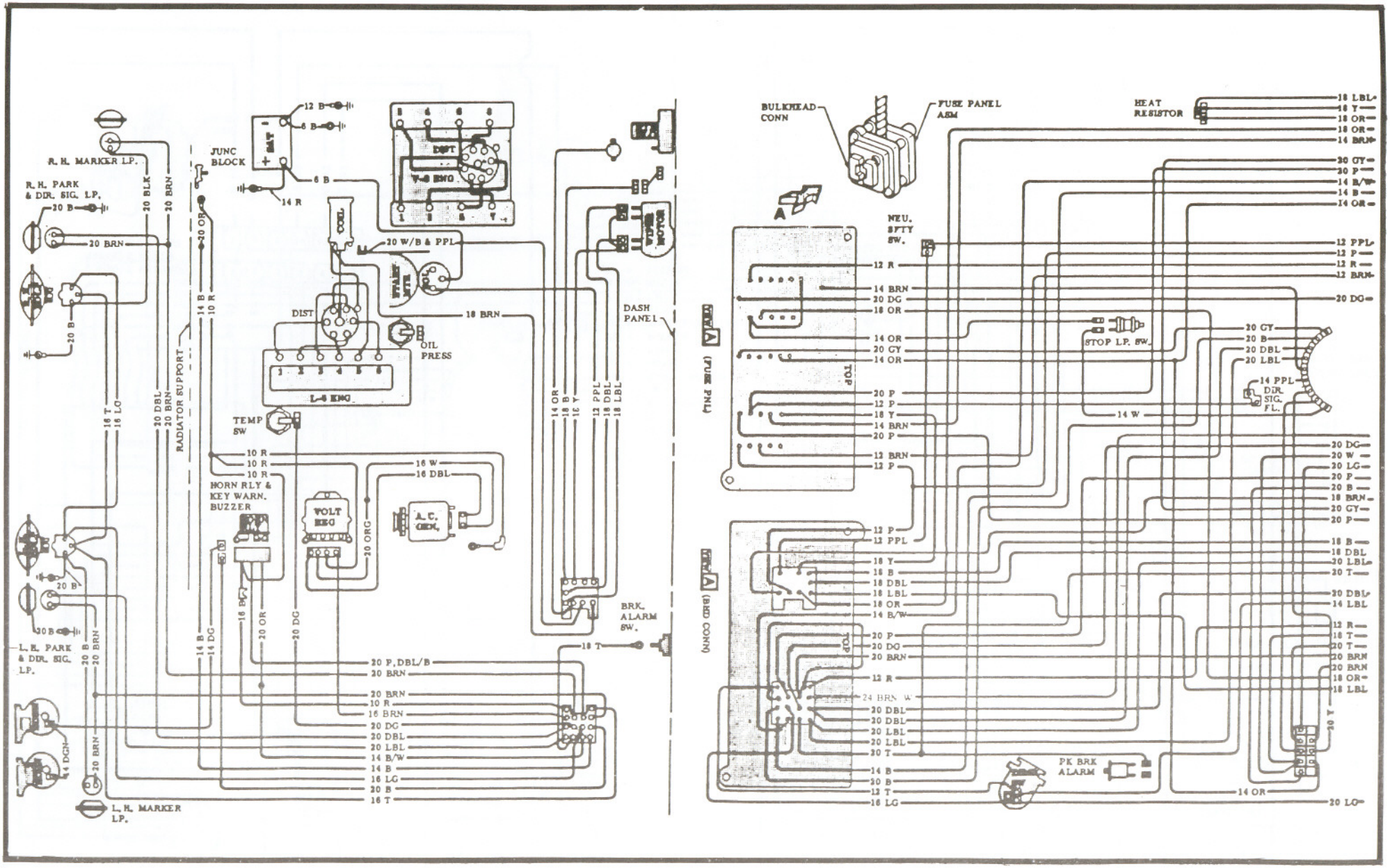
1967 - FRONT LIGHTING & ENGINE COMPARTMENT



1967 - FUSE PANEL

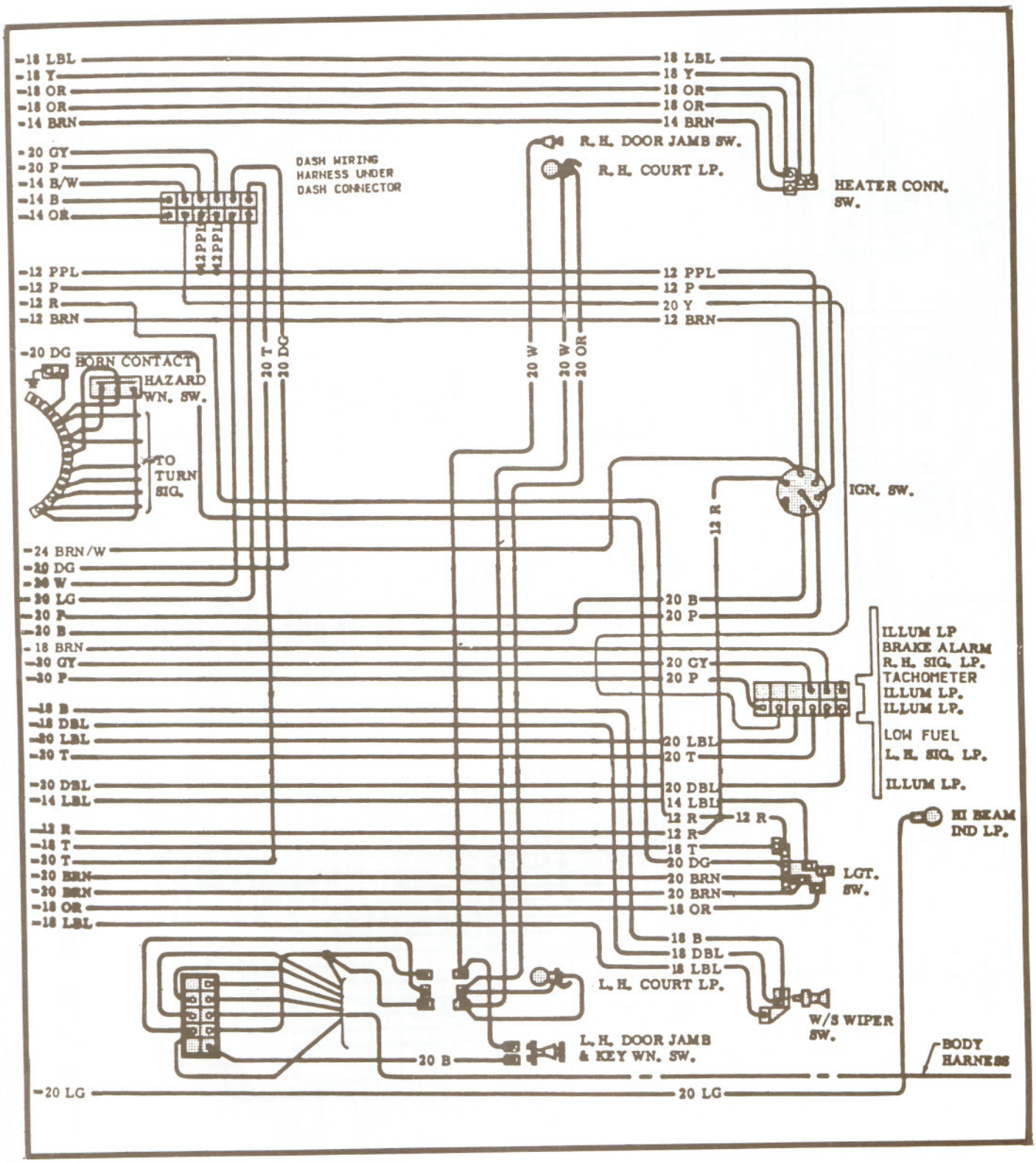


1967 - INSTRUMENT PANEL



1968 - FRONT LIGHTING & ENGINE COMPARTMENT

1968 - FUSE PANEL



1968 - INSTRUMENT PANEL