

# CHASSIS ELECTRICAL

## GENERAL INFORMATION

The speedometer dial has been modified to improve lighting on the speed graduations, resulting in improved readability at night. Figures and letters on the temperature and gasoline gauges are heavier for improved legibility.

A light has been added (on cars above Engine No. 44000 approx.) to illuminate the front ash tray, making it easier for the front seat occupants to locate it in the dark.

The front parking and directional signal lights located in the radiator grille extension molding incorporate a double filament bulb. The double filament bulb consists of a 4 c.p. filament which is operated by the first position of the headlight switch when parking lights are desired, and a 32 c.p. filament which is operated by the directional

signal switch to indicate a right or left turn.

Twin air-tone horns of the "sea shell" type, matched in tone, are used on all series cars. They are mounted between the radiator and radiator grille on brackets on the air deflector and are positioned so that they face each other. In addition, a third horn is mounted on the radiator support on Eldorado series cars. The horn ring, when depressed, permits a small current to pass through a relay mounted on the engine radiator support. This current closes the circuit for the heavier current that operates the horns.

Other adjustments and procedures may be performed as outlined in the 1954 Shop Manual. The new circuit diagram is shown in Fig. 15-1.

## SERVICE INFORMATION

### (1) Replacement of Headlamp Unit

Two types of "Sealed Beam" headlamp units are used. One is made entirely of hard glass, and the other is a composite unit consisting of a metal reflector and a glass lens. Both are completely interchangeable from the standpoint of electrical connections, beam patterns, and physical dimension. Furthermore, they are so designed that they cannot be installed improperly, nor connected incorrectly. The same unit is used in both right and left hand headlamps. To replace a unit:

1. Remove three headlamp door screws, and remove door by pulling out at top.
2. Remove retaining spring from retaining ring.
3. Disengage sealed beam retaining ring from two adjusting screws and remove sealed beam unit with retaining ring and mounting ring.
4. Remove connector plug from sealed beam unit.
5. Remove sealed beam unit mounting ring and retaining ring.
6. Install new unit by reversing above operations.

### (2) Replacement of Bulbs

The complete list of replacement bulbs required for the 1955 series cars is given in the bulb chart, Page 15-5.

### (3) Removal and Disassembly of Directional Signal Switch

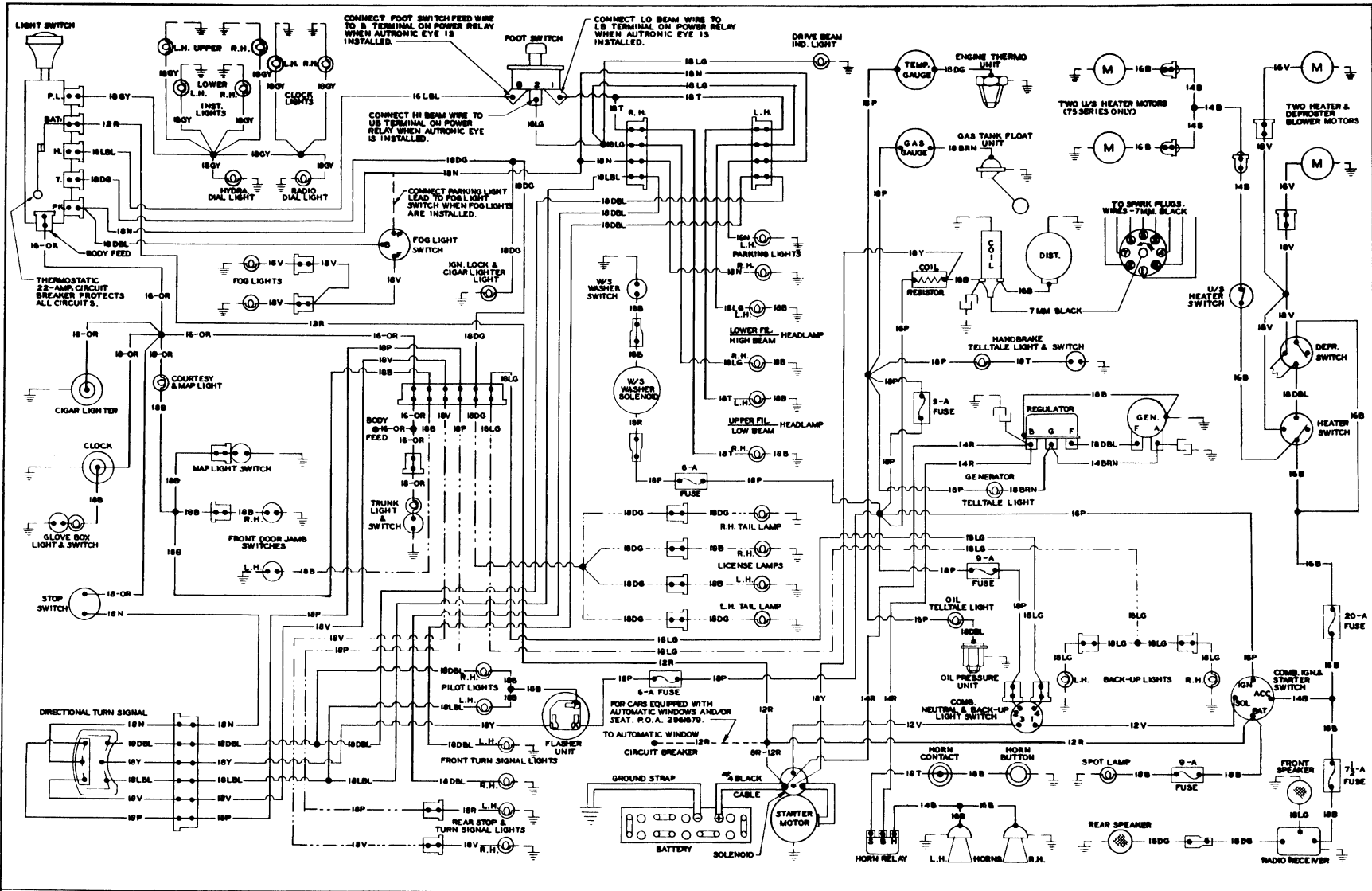
1. Disconnect signal switch wires at connectors under dash.

2. Remove steering column lower cover.
  3. Remove horn contact at lower steering column.
  4. Press down on horn button, turn and remove button and spring.
  5. Remove steering shaft nut and horn ring retainer and remove horn ring.
  6. Remove the steering wheel, using puller, Tool No. J-1859, and remove split ring and steering shaft tensioner spring.
- NOTE: Be sure to mark steering wheel and steering shaft so that the wheel may be installed in the same position.
7. Remove directional switch carrier from upper bearing retainer by removing two screws.
  8. Pull directional switch wires through steering column cover bracket and remove carrier assembly.
  9. Remove switch cable clamp from carrier, remove two switch back screws from carrier and remove switch back and wire assembly.

### (4) Assembly and Installation of Directional Signal Switch

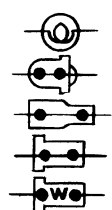
1. Install switch back and wire assembly to carrier with two screws and install switch cable clamp.
2. Insert directional switch wires through steering column cover bracket.

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WIRE IDENTIFICATION

N-NATURAL	V-VIOLET	DBL-DARK BLUE
B-BLACK	Y-YELLOW	LBL-LIGHT BLUE
R-RED	OR-ORANGE	DG-DARK GREEN
T-TAN	GY-GRAY	LG-LIGHT GREEN
P-PINK	BRN-BROWN	



	BULB
	BAYONET TYPE CONNECTOR
	DOUGLAS CONNECTOR
	LOCK-ON TYPE CONNECTOR (PACKARD)
	LOCK-ON TYPE CONNECTOR (WADE)

SYMBOLS

	CAPACITOR
	MULTIPLE CONNECTOR
	BODY WIRING
	P.O.A. PART OF ASSEMBLY
	INTERNAL GROUND

Fig. 15-1 Circuit Diagram

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3. Install directional switch carrier to upper bearing retainer with two screws.

4. Install split ring, steering shaft tensioner spring and steering wheel, aligning mark on steering wheel with mark on steering shaft.

5. Position horn ring over steering wheel, install horn ring retainer and steering shaft nut, tightening nut to 45 to 50 ft-lbs. torque.

6. Install horn button spring and horn button, being sure emblem is in correct position.

7. Install horn contact at lower steering column.

8. Install steering column lower cover.

9. Connect signal switch wires to connector under dash.

### (5) Removal of Instrument Panel Cluster

#### a. Partial Removal

NOTE: Use this procedure for replacement of cluster assembly components where complete removal of cluster assembly is unnecessary.

1. Remove negative terminal from battery.

2. Pull floor carpet away from steering column area.

3. Remove two screws holding triangular steering column cover plate to toe riser and leave third screw in position.

4. Remove five screws holding square cover plate to toe riser.

5. Remove stop light brake switch.

6. Disconnect speedometer cable from speedometer head.

7. Remove lower steering column cover and remove Hydra-Matic dial indicator pointer.

8. Disconnect vent cables from firewall and vent.

9. Remove steering column "U" clamp stud nuts and lower the steering column with "U" clamp.

10. Disconnect trip odometer reset stem.

11. Remove three cluster mounting screws.

12. Place a cloth over the steering column and

pull cluster out far enough for access to defroster and heater control arm brackets.

13. Remove defroster and heater knobs from control arms and remove control arm brackets.

14. Cluster may now be pulled out further for instrument service.

#### b. Complete Removal

NOTE: Use partial removal above with the following steps for complete removal of the cluster assembly.

1. Disconnect cigar lighter wire.

2. Remove ignition lock retaining ring and remove lock assembly.

3. Remove right and left ventilator cables and knobs.

4. Remove windshield wiper control.

5. Remove all bulbs from rear of cluster assembly.

6. Remove all wires from gauge terminals.

7. Cluster may now be removed for disassembly on bench.

### (6) Disassembly and Assembly of Instrument Panel Cluster Assembly

1. Remove three screws which hold temperature gauge base plate to instrument cluster body and remove gauge assembly.

2. Remove screws that hold fuel gauge to cluster body and remove fuel gauge assembly.

3. Remove cigar lighter assembly.

4. Remove ten screws which hold cluster backing plate to cluster body and remove cluster backing plate.

5. Remove three screws which hold speedometer head assembly to cluster backing plate and remove speedometer head assembly.

6. Remove six screws which hold speedometer backing plate to body and remove backing plate.

NOTE: Further disassembly of the speedometer head is not recommended because it involves removal of speedometer pointer, an operation which should be performed by a United Motors Service Station.

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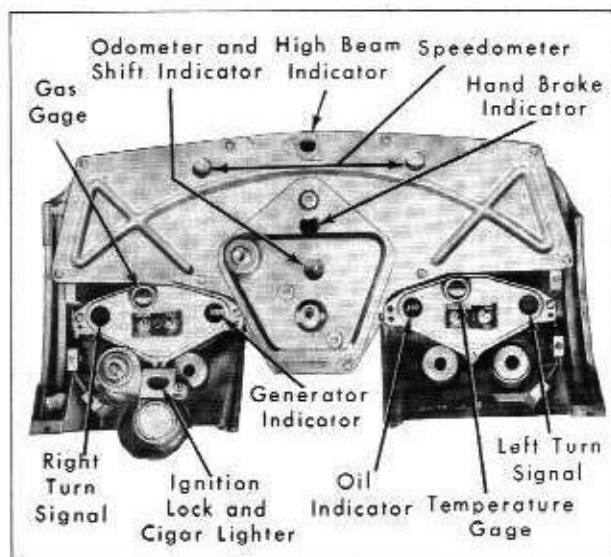


Fig. 15-2 Instrument Bulb Location

7. Remove plastic speed indicator, glass lens, and two rubber insulators from casting.

8. Remove three screws which hold Hydra-Matic indicator backing plate to cluster body and remove backing plate.

9. Remove plastic Hydra-Matic indicator lens and plastic bracket.

10. Assemble instrument panel cluster assembly by reversing the procedure for disassembly.

## (7) Installation of Instrument Panel Cluster Assembly

**NOTE:** When complete removal of cluster assembly has been made, use procedures "a" and "b" as listed below. When cluster assembly has been partially removed, use procedure "b" below.

### a. Complete Installation

1. With a cloth placed over the steering column, place the cluster assembly in position in front of the opening in the instrument panel. Connect gauge wires to gauge terminals according to the wiring code on the gauge plates.

2. Install all bulbs to rear of cluster assembly, making sure lights are in correct holes. Fig. 15-2.

3. Install windshield wiper control.

4. Install right and left ventilator cables and knobs.

5. Install ignition lock assembly and lock retaining ring.

6. Connect cigar lighter wire.

### b. Partial Installation

1. Connect speedometer cable to speedometer head.

2. Install control arm brackets to cluster body and install defroster and heater knobs to control arms.

3. Install cluster assembly in instrument panel opening with three mounting screws.

4. Connect trip odometer reset stem.

5. With rubber insulator in place on cluster assembly, raise steering column into position, guiding "U" clamp over studs and install stud nuts.

6. Connect vent cables to firewall and vents, check for free operation of the cables.

7. Install Hydra-Matic dial indicator pointer and lower steering column cover.

8. Install stop light brake switch, with switch lever positioned above brake pedal.

9. Install square cover plate to toe riser.

10. Position brake grommet bracket between the two plates and install triangular cover plate to toe riser.

11. Install floor carpet as necessary.

12. Install negative terminal to battery.

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## SPECIFICATIONS

## FUSE LOCATIONS

Unit	Type	Location	Unit	Type	Location		
Headlight	22A	Circuit Breaker	Back-Up-Light	9A	Fuse Panel*		
Ash Tray			Automatic Heating	20A	Fuse Panel*		
Cigar Lighter			System				
Clock			Radio (all)	7.5A	Fuse Panel*		
Map and Courtesy			Spotlight	9A	Under Hood, De-		
Glove Box					froster		
Dome Light					Mounting Screw		
Fog Light					Air Conditioner	6A/20A	Under Dash, Above
Inst. Lights					Turn Signal	6A	Fuse Panel*
Parking Light							
Stop Light							
Trunk Light	15A	Circuit Breaker					
Hydro-Lectric	6A	Fuse Panel*					
Windshield Washer							

\*Fuse panel located under instrument panel, on cowl insulation board, just to the left of center of car.

## BULB DATA CHART

Unit	c/p	Contact	No.	Unit	c/p	Contact	No.
Headlamp	Sealed			Bow Dome Lamp			
	Beam Unit			(6267,6267S)	6	Single	90
Parking and Signal	32-4	Double	1034	Rear Door Courtesy			
Glove Compartment	2	Single	57	Lamp (75)	6	Single	90
Clock	2	Single	57	Corner Lamp (75)	6	Single	90
Instrument Lights	2	Single	57	Radio Dial	2	Single	57
Oil Telltale	2	Single	57	Hydra-Matic Shift			
Generator Telltale	2	Single	57	Indicator Dial	2	Single	57
Brake Emergency	2	Single	57	Ash Tray Bulb	1	Single	53
Beam Indicator	2	Single	57	Back-Up Light	32	Single	1073
Direct, Signal Ind.	2	Single	57	Map and Courtesy	6	Double	90
Ignition Lock and				Spotlight	Sealed		
Cigar Lighter	1	Single	53		Beam Unit		
Trunk	6	Single	89				
Tail Lamps	32-4	Double	1034	Fog Lamp	32	Double	1044
License Plate Lamp	3	Single	67	Parking Lamp Bulb			
Dome Lamp (except				in Fog Lamp	3	Single	67
6267,6267S)	15	Single	1004				

## SPEEDOMETER PINION APPLICATION CHART

Car Model	Speedo Pinion Part No.	Axle Ratio	No. of Teeth	Ident. Marking	Tire Size
60-62	1457320	3.36	19	S-1	8.00-15
60-62	1460172	3.07	17	S-8	8.00-15
75	1457322	3.77	21	S-3	8.20-15
					(6 ply)
86	1457324	4.27	23	S-5	8.90-15
					(6 ply)

