

GROUP 10

ELECTRICAL SYSTEMS

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SECTION 10-A

ELECTRICAL SPECIFICATIONS

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10-1 BATTERY SPECIFICATIONS

Item	45	46-48-49
Make	Delco	Delco
Model	1980558	1980570
Location Under Hood	R.F. Fender Skirt	L.F. Fender Skirt
Terminal Grounded	Negative	Negative
Voltage	12	12
Capacity—Wet (Amps. Hrs.@ 20 Hr. Rate) . . .	61	70
Number of Cells & Plates/Cell.	6, 11	6, 11
Specific Gravity, Full Charge @ 80° F.	1.260 to 1.280	1.260 to 1.280
Bench Charging Rate, Start	5 Amps.	5 Amps.
Bench Charging Rate, Finish	2 Amps.	2 Amps.
Separators	Porous Rubber	Porous Rubber
Case	Hard Rubber	Hard Rubber
Dimensions	10 1/4" x 6 13/16" x 8 27/32" High	12 1/32" x 6 13/16" x 8 13/16" High

10-2 GENERATING SYSTEM SPECIFICATIONS

a. Generator

Make and Type	Delco-Remy, Delcotron
Location, Side of Engine	Upper Right
Drive and Rotation (Viewing Drive End)	Fan Belt, Clockwise

	Standard		Air Condition	
	45	46-48-49	45	46-48-49
Number	1100691	1100708	1100710	1100709
Speed Ratio, Gen. to Engine	2.34 to 1	2.52 to 1	2.67 to 1	2.75 to 1
Field Current Draw (Amps.) @ 80° F. and 12 Volts . . .	2.2 to 2.6	2.2 to 2.6	2.2 to 2.6	2.2 to 2.6
Bench Test at 14 Volts (Amps. Cold @ Gen. RPM) . . .	42 @ 6500	42 @ 6500	55 @ 6500	55 @ 6500
Min. Current Output @ 500 Eng. RPM	10 Amps.	10 Amps.	10 Amps.	10 Amps.
Min. Current Output @ 1500 Eng. RPM	30 Amps.	30 Amps.	40 Amps.	40 Amps.
Belt Tension	80 Lbs.	80 Lbs.	80 Lbs.	110 Lbs.

b. Generator Regulator

Make and Type	Delco-Remy, Double Contact
Number	1119515
Field Relay Air Gap . . . . .	.015"
Field Relay Closing Voltage	2.3 to 3.7
Voltage Regulator Air Gap, Lower Points Just Touching . . . . .	.060"
Voltage Regulator Upper Contact Point Opening . . . . .	.014"
Voltage Regulator Upper Contact Setting @ 2000 Eng. RPM (After 15 Min. Warm-Up @ 1500 Eng. RPM)	See Figure 10-21
Voltage Regulator Lower Contact Setting (Step Voltage) . . . . .	.1 to .3 Below Upper Setting

c. Police Car Generator

Make and Type	Delco-Remy, Delcotron
Number	1117765
Location, Side of Engine	Right
Drive and Rotation (Viewing Drive End)	Fan Belt, Clockwise
Speed Ratio, Generator to Engine	2.62 to 1
Field Current Draw (Amps.) @ 80° F. and 12 Volts	3.7 to 4.4
Bench Test at 14 Volts (Amps. Cold @ Generator RPM)	62 @ 6500
Current Output @ 500 Engine RPM	20 Amps. Min.
Current Output @ 1500 Engine RPM	50 Amps. Min.
Belt Tension	80 lbs.

d. Police Car Generator Regulator

Make and Type	Delco-Remy, Transistor
Number	1116368
Point Gap and Air Gap	None, No Moving Parts
Voltage Setting After 15 Minutes Warm-Up	14 ± .3 Volts

10-3 CRANKING (STARTER) SYSTEM SPECIFICATIONS

a. Cranking Motor

	Series 45	Series 46-48-49
Make	Delco-Remy	Delco-Remy
Number	1107306	1107313
Location, Side of Engine	Right	Left
Type of Shift	Mechanical	Mechanical
Shift Actuation	Solenoid	Solenoid
Shift Operation	Ignition Switch	Ignition Switch
Type of Drive	Overrunning Clutch	Overrunning Clutch
Rotation, Viewing Drive End	Clockwise	Clockwise
Gear Ratio, Motor to Engine	17.8 to 1	18.4 to 1
No. Teeth on Ring Gear and Drive Pinion	160, 9	166, 9
Cranking Speed, Engine RPM (at Operating Temperature)	160 Approx.	160 Approx.
No Load Test		
Amperes	65 to 100	80 to 120
Volts	10.6	10.6
RPM	3600 to 5100	3900 to 5400
Locked Armature Test		
Amperes	300 to 360	290 to 370
Volts	3.5	2.0
Brush Spring Tension - Ounces	35 min.	35 min.
Armature End Play . . . . .	.005" to .050"	.005" to .050"
Pinion Clearance in Cranking Position . . . . .	.010" to .140"	.010" to .140"

b. Solenoid Switch

	Series 45	Series 46-48-49
Make	Delco-Remy	Delco-Remy
Solenoid Switch Number	1114341	1114339
Current Draw of Solenoid Windings @ 80° F.		
Hold-in Winding, Amps. @ 10 Volts	10.5 - 12.5	14.5 - 16.5
Both Windings in Parallel, Amps. @ 10 Volts	42 - 49	41 - 47

10-4 IGNITION SYSTEM SPECIFICATIONS

a. Ignition Coil and Resistor

Make	Delco-Remy
Coil Number (Less Bracket)	1115087
Current Draw, Amperes @ 12.6 Volts	
Engine Stopped	3.8
Engine Idling	2.3
Coil Resistance (Ohms) @ 80° F.	
Primary	1.28 to 1.42
Secondary	7200 to 9500
Resistance Wire	Part of Wiring Harness
Resistance, Ohms @ 80° F.	1.80 ± .05

b. Spark Plugs

Make and Model (for Normal Operation)	AC 44S
Make and Model (for High Speed Operation)	AC 42 COM
Thread and Shell Hex. Sizes	14MM, 13/16"
Gap at Points . . . . .	.035"
Tightening Torque (ft. lbs.)	30

c. Distributor

Make	Delco-Remy
Drive	From Camshaft
Rotation, Top View	Clockwise
Vacuum Control Number	1116210
Firing Order (300 Engine)	1-8-4-3-6-5-7-2
Firing Order (401 and 425 Engines)	1-2-7-8-4-5-6-3
Contact Point Opening . . . . .	.016"
Contact Point Dwell Angle	30° ± 1°
Dwell Variation	3° Max.
Breaker Arm Spring Tension, Ounces	19 to 23
Condenser Make and Capacity, Microfarads	Delco-Remy, .18 to .23

	300 Engine	401 & 425 Engines (Except Dual 4-Bbl. with Auto. Trans.)	425 Engine (Dual 4-Bbl. with Auto. Trans.)
Distributor Number (less Cap)	1111083	1111055	1111058
Timing, Crankshaft Degrees before U.D.C. (with Vacuum Hose Disconnected and Engine Idling)	2 1/2°	2 1/2°	12°
Centrifugal Advance, Crankshaft Degrees and RPM			
Start Advance, @ RPM	550 to 750	600 to 800	550 to 950
Medium Advance, Degrees @ RPM	12° to 16° @ 1400	13° to 17° @ 1400	1/2° to 4 1/2° @ 1000
Maximum Advance, Degrees @ RPM	30° to 34° @ 4600	28° to 32° @ 3900	18° to 22° @ 3800
Vacuum Advance, Crankshaft Degrees and Inches of Vacuum			
Start Advance, @ In. of Vacuum	6 to 8	6 to 8	6 to 8
Maximum Advance, Degrees @ In. of Vacuum	14° to 18° @ 16	14° to 18° @ 16	14° to 18° @ 16

10-5 LIGHTING SYSTEM SPECIFICATIONS

a. Lamps, Switches, Wiring

Headlamp Make and Type	Guide, Dual T-3 Sealed Beam
Headlamp Lens Diameter	5 3/4"
Tail, Stop, Parking, Signal Lamps, Make	Guide
Lighting Switch, Make	Delco-Remy
Wiring Circuit Type	Single Wire
Wiring Circuit Protection for Head and Front Parking Lights	Thermo Circuit Breaker
Thermo Circuit Breaker Location	In Lighting Switch
Thermo Circuit Breaker Calibration @ 75° F.	
Stay Closed Indefinitely @ Amps.	15
Open Within 60 Seconds @ Amps.	26

b. Fuses and Circuit Breakers

Used For	Type	Location
Back-up Lights	10 Amp. 1 1/4"	Fuse Block
Back-up Lights, Riviera	9 Amp. 7/8"	Fuse Block
Blower, Heater-Air Conditioner, and Compressor Clutch	30 Amp. 1 1/4"	Fuse Block
Courtesy and Glove Box Lights, Clock	7.5 Amp. 1 1/4"	Fuse Block
Courtesy and Glove Box Lights, Clock, Riviera	5 Amp. 1 1/4"	Fuse Block
Direction Signal, Signal Indicator and Stop Lights	10 Amp. 1 1/4"	Fuse Block
Dome Light, Trunk Light and Rear Cigar Lighter	20 Amp. 1 1/4"	Fuse Block
Guide-Matic Amplifier	7.5 Amp. 1 1/4"	Fuse Block
Guide-Matic Amplifier, Riviera	5 Amp. 1 1/4"	Fuse Block
Panel Lights and Rheostat	3 Amp. 1 1/4"	Fuse Block
Parking Brake Light, Indicator Lights, Buzzer or Cruise	7.5 Amp. 1 1/4"	Fuse Block
Parking Brake Light, Indicator Lights, Buzzer or Cruise, Riviera	6 Amp. 7/8"	Fuse Block
Power Antenna Motor	10 Amp. 1 1/4"	Fuse Block
Power Antenna Motor, Riviera	9 Amp. 7/8"	Fuse Block
Radio and Dial Light	7.5 Amp. 1 1/4"	Fuse Block
Rear Window Defroster	7.5 Amp. 1 1/4"	Fuse Block
Rear Window Defroster, Riviera	6 Amp. 7/8"	Fuse Block
Tail, License and Cornering Lights, Panel Lights and Fuse	10 Amp. 1 1/4"	Fuse Block
Wiper and Washer Motor, Transmission Solenoids	25 Amp. 1 1/4"	Fuse Block
Cigar Lighter	Special	In Back of Lighter
Headlights, Front Parking Lights	Circuit Breaker	In Light Switch
Power Windows, Vents, Top and Seat	Circuit Breaker	Under Left Kick Pad

c. Lamp Bulbs

Location	Bulb. No.	Candlepower
Ash Tray	1445	.5
Ash Tray, Riviera	53	1
Auto. Trans. Control Dial (Console)	1816	3
Back-Up	1156	32
Clock Dial, Riviera	1816	3
Cornering, Except Riviera	1195	50
Courtesy Lights (Instrument Panel, Console and Rear Seat	90	6
Cruise Control Dial	194	2
Cruise Control Dial, Riviera	53	1
Dome, Center Roof	1004	15
Glove Box, Riviera	1893	2
Headlight High Beam Indicator	194	2
Headlight, 5 3/4" Dia., Type 1 (Inner)	4001	37.5 Watts
Headlight, 5 3/4" Dia., Type 2 (Outer)	4002-L	37.5-55 Watts
Heater-Air Conditioner Control Dial	1893	2
Ignition Switch	53	1
Indicator Lights (Hot, Cold, Oil and Amp.)	194	2
Instrument Cluster Dials	194	2
Instrument Cluster Dials, Riviera	161	1
License	97	4
Parking Brake Warning	194	2
Radio Dial	1892	1
Turn Signal and Parking, Front	1157A (Amber)	32-4
Turn Signal, Tail and Stop, Rear	1157	32-4
Turn Signal Indicator	194	2
Trunk	89	6

10-6 SIGNAL SYSTEMS SPECIFICATIONS

Stop Light Switch, Type	Mechanical
Stop Light Switch, Location	Pedal Mounting Bracket
Direction Signal Switch, Make	Delco-Remy
Direction Signal Flasher, Make	Tung-Sol
Location	Fuse Block
For 2-32 CP Lamp Load	Type 224
For 3-32 CP Lamp Load	Type 323
Flash Rate, Cycles per Min.	60 to 120

10-6 SIGNAL SYSTEMS SPECIFICATIONS (Cont'd.)

Lamp Bulbs - No. and Candle Power	See Par. 10-5, c
Direction Signal and Stop Light Fuse	See Par. 10-5, b
Horn - Make and Type	Delco-Remy, Solenoid
Horn Number, High Note	9000470
Low Note	9000469
Horn Amperage Draw at 12 Volts (Either Horn)	4.5 to 5.5
Horn Relay and Junction Block Number	9779867
Horn Relay Adjustment	
Closing Voltage	3.0 to 9.0
Speed Warning Buzzer Number	1361529
Amperage Draw @ 14.5 Volts	14 Max.