GROUP 10
ELECTRICAL SYSTEMS

SECTIONS IN GROUP 10

SECTION 10-A
ELECTRICAL SPECIFICATIONS

CONTENTS OF SECTION 10-A

10-1 BATTERY SPECIFICATIONS

	V-6 Engine	V-8 Engine
Make	Delco-Remy	Delco-Remy
Model	1980554	1980558
Cat. No.	1980555	1980559
Location Under Hood	R.F. Fender Skirt	R.F. Fender Skirt
Terminal Grounded	Negative	Negative
Voltage	12	12
Capacity - Wet (Amp. Hrs. @ 20 Hr. Rate)	44	61
Number of Cells & Plates/Cell	6,9	6,11
Specific Gravity, Full Charge @ 80°F	1.260-1.280	1.260 to 1.280
Bench Charging Rate, Start	4 Amps.	4 Amps.
Bench Charging Rate, Finish	2 Amps.	2 Amps.
Separators	Porous Rubber	Porous Rubber
Case	Hard Rubber	Hard Rubber
Dimensions	9 1/2" x 6 27/32" x 8 5/16" High	10 1/4" x 6 13/16" x 8 27/32" High

10-2 GENERATING SYSTEM SPECIFICATIONS

a. Generator

Make and Type	Delco Remy, Delcotron
Number	1100631
Location, Side of Engine	Right
Drive and Rotation (Viewing Drive End)	Fan Belt, Clockwise
Speed Ratio, Generator to Engine	2.34 to 1
Field Current Draw (Amps.) @ 80°F and 12 volts	1.9 to 2.3
Bench Test at 14 Volts (Amps.) Cold @ Generator RPM	37 @ 6500
Current Output at Idle (500 RPM in Drive)	5 Amps. Min.
Current Output at 1500 Engine RPM	25 Amps. Min.
Belt Tension	70 Lbs.

b. Generator Regulator

Make and Type	Delco-Remy, Double Contact
Number	1119512
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 @ 1500 Eng. RPM (After 15 Min. Warm-Up)	See Figure 10-25
Voltage Regulator Lower Contact Setting (Step Voltage)	.1 to .3 Below Upper Setting

10-3 CRANKING (STARTER) SYSTEM SPECIFICATIONS

a. Cranking Motor

	V-6 Engine	V-8 Engine
Make	Delco-Remy	Delco-Remy
Number	1108303	1107266
Location, Side of Engine	Right	Right
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	17.3 to 1	17.3 to 1
No. Teeth on Ring Gear and Drive Pinion	156, 9	156, 9
Cranking Speed, Engine RPM (at Operating Temperature)	160 Approx.	160 Approx.
No Load Test		
Amperes	58 to 80	65 to 100
Volts	10.6	10.6
RPM	6750 to 10500	3600 to 5100
Locked Armature Test		
Amperes	280 to 320	300 to 360
Volt	4.0	3.5
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

Make	Delco-Remy
Solenoid Switch Number	1114266
Current Draw of Solenoid Winding @ 80°F.	
Hold-In Winding, Amps, @ 10 Volts	10.5 - 12.5
Both Windings in Parallel, Amps. @ 10 Volts	42 - 49
Voltage Required for Solenoid Switch Pull-In @ 80°F	7.2 Max.

10-4 IGNITION SYSTEM SPECIFICATIONS

a. Ignition Coil and Resistor

Make	Delco-Remy
Coil Number (Less Bracket)	
V-6 Engine	1115137
V-8 Engine	1115087
Current Draw, Amperes @ 12.6 Volts	
Engine Stopped	3.7
Engine Idling	1.7
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	
2 Bbl. V-8 Engine	AC 45FFS
4 Bbl. V-8 Engine	AC 44FFS
V-6 Engine	AC 44S
Make and Model for High Speed Operation	
V-8 Engine (All)	AC 42FF
V-6 Engine	AC 42COM
Thread and Shell Hex. Sizes	14MM, 13/16"
Gap at Points	.035"
Terminal Nut Length	3/8"
Tightening Torque in ft. lbs., V-8 (Lubricated)	20
Tightening Torque in ft. lbs., V-6	30

c. Distributor

Make	Delco-Remy
Drive	From Camshaft
Rotation, Top View	Clockwise
Timing, Before U.D.C. (With Vacuum Hose Disconnected)	5^{o} at Idle or 7 $1/2^{o}$ at 1050 ERPM
Contact Point Opening	.013" to .019"
Contact Point Dwell Angle	$30^{o} \pm 1^{o}$
Adjust to	30^{o}
Dwell Variation	3^{o} Max.
Breaker Arm Spring Tension, at Side of Point, Ounces	19 to 23
Condenser Make and Capacity (Microfarads)	Delco-Remy, .18 to .23

	V-6	2Bbl. V-8	4Bbl. V-8
Firing Order	1-6-5-4-3-2	1-8-4-3-6-5-7-2	1-8-4-3-6-5-7-2
Number	1110291	1110977	1111007
Spark Advance - Crankshaft Degrees (In Addition to Initial Timing Advance)			
Vacuum, Max.	14-18	14-18	14-18
Centrifugal, Max.	22-26	24-28	22-26
Vacuum Control Number	1116210	1116210	1116210
Vacuum Advance Test, Inches of Vacuum			
Vacuum Needed to Start Advance	6 to 8	6 to 8	6 to 8
Vacuum Needed for Max. Advance	14 to 16	14 to 16	14 to 16
Centrifugal Advance Test, Dist. Degrees and RPM			
Start Advance	375 to 500RPM	325 to 500RPM	400 to 550RPM
Medium Advance - 6 Degrees	775 to 900RPM	850 to 1000RPM	875 to 1100RPM
Maximum Advance	2150RPM	1850RPM	1900RPM

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^{o}F.	
Stay Closed Indefinitely @ Amps.	15
Open Within 60 Seconds @ Amps.	26

b. Fuses and Circuit Breakers

NOTE: Unless otherwise specified, all fuses are mounted on fuse block under left side of instrument panel.

Back-Up Lights	9 Amp. - 7/8"
Clock	2 Amp. - 5/8"
Direction Signal, Signal Indicator and Stop Lights	10 Amp. - 1-1/4"
Heater-Defroster, Air Conditioner Blower and Compressor Clutch	20 Amp. - 1-1/4"
Panel Lights and Rheostat	3 Amp. - 5/8"
Radio	2.5 Amp. - 7/8"
Tail, License, Dome, Panel Lights and Rheostat	9 Amp. - 7/8"
Wiper and Washer Motor	25 Amp. - 1-1/4"
Cigar Lighter	Special
Location	In Back of Lighter
Headlights and Front Parking Lights	15 Amp. Circuit Breaker
Location	In Light Switch

c. Lamp Bulbs

Ash Tray	1445; .5 CP
Automatic Transmission Control Dial	53; 1 CP
Back-Up	1073; 32 CP
Clock Dial	57; 2 CP
Dome	1004; 15 CP
Direction Signal Indicator	158; 2 CP
Glove Box	1816; 3 CP
Headlamp High Beam Indicator	158; 2 CP
Headlamp Sealed Beam Unit, 5-3/4" Dia., Type 1 (Inner)	4001; 37.5 Watt
Headlamp Sealed Beam Unit, 5-3/4" Dia., Type 2 (Outer)	4002; 37.5 - 50 Watt
Heater-Defroster Control Dial	57; 2 CP
Indicator Lights (Hot, Oil, Gen.)	158; 2 CP
Instrument Dial Lights	158; 2 CP
License Plate, Rear	67; 4 CP
Parking and Dir. Signal, Front	1034; 32 - 4 CP
Radio Dial	1893; 1 CP
Tail, Stop and Direction Signal, Rear	1034; 32 - 4 CP
Courtesy Lights, Rear Quarter Panel (Skylark Only)	90; 6 CP

10-6 SIGNAL SYSTEMS SPECIFICATIONS

Stop Light Switch - Type	Hydraulic
Stop Light Switch Location	Master Cylinder
Direction Signal Switch - Make	Delco-Remy
Direction Signal Flasher - Make and Type	Tung-Sol, Type AP273S
Lamp Bulbs - Mazda No. and 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, Low Note (Left Location)	9000399
High Note (Right Location)	9000400
Horn Amperage Draw at 12 volts (Either Horn)	7 to 11
Horn Relay and Junction Block Number	1116946
Horn Relay Adjustment	
Closing Voltage	1.5 to 9.5
Adjust to	6.5