

# GROUP 10 ELECTRICAL SYSTEMS

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## SECTION 10-A ELECTRICAL SPECIFICATIONS

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### 10-1 BATTERY SPECIFICATIONS

Make . . . . .	Delco-Remy
Model . . . . .	455
Cat. No. . . . .	454
Location Under Hood . . . . .	R.F. Fender Skirt
Terminal Grounded . . . . .	Negative
Voltage . . . . .	12
Capacity - Wet (Amp. Hrs. @ 20 Hr. Rate) . . . . .	40
Number of Cells & Plates/Cell . . . . .	6, 9
Specific Gravity, Full Charge @ 80°F . . . . .	1.260 to 1.280
Bench Charging Rate, Start . . . . .	4 Amps.
Bench Charging Rate, Finish . . . . .	2 Amps.
Separators . . . . .	Porous Rubber
Case . . . . .	Hard Rubber
Dimensions . . . . .	9 1/2" x 6 27/32" x 8 5/16" High

### 10-2 GENERATING SYSTEM SPECIFICATIONS

#### a. Generator

	Standard	Air Condition
Make and Type . . . . .	Delco-Remy, Shunt	
Number . . . . .	1100389	1102235
Location, Side of Engine . . . . .	Right	
Drive and Rotation (Viewing Drive End) . . . . .	Fan Belt, Clockwise	
Speed Ratio, Generator to Engine . . . . .	2.35 to 1	
Brush, Spring Tension, ounces . . . . .	26 - 32	
Field Current Draw (Amps.) @ 80°F at 12 Volts . . . . .	1.69 to 1.79	
Bench Test at 14 Volts (Amps.) Cold @ Generator RPM . . . . .	35 @ 2670	35 @ 2510

**b. Generator Regulator**

Make	Delco-Remy
Number (Including Fuse)	1119277
Fuse Rating, Amperes	40
Cutout Relay Closing Voltage	12 to 13.5
Adjust to	12.8
Cutout Relay Opening Reverse Current	-1 to -6
Cutout Relay Air Gap Points Closed	.020"
Cutout Relay Contact Point Opening	.020"
Current Regulator Air Gap, Points Just Touching	.075"
Current Regulator Setting @ 1500 Eng. RPM (After 15 Min. Warm-Up)	See Figure 10-16
Voltage Regulator Air Gap, Points Just Touching	.075"
Voltage Regulator Upper Contact Point Opening	None
Voltage Regulator Setting @ 1500 Eng. RPM (After 15 Min. Warm-Up)	See Figure 10-16

**10-3 CRANKING (STARTER) SYSTEM SPECIFICATIONS****a. Cranking Motor**

Make	Delco-Remy
Number	1108303
Location, Side of Engine	Right
Type of Shift	Mechanical - Electrically Controlled
Shift Actuation	Solenoid
Shift Operation	Ignition Switch
Type of Drive	Overrunning Clutch
Rotation, Viewing Drive End	Clockwise
Gear Ratio, Motor to Engine	17.3 to 1
No. Teeth on Ring Gear and Drive Pinion	156, 9
Cranking Speed, Engine RPM (at Operating Temperature)	160 Approx.
No Load Test	
Amperes	58 to 80
Volts	10.6
R.P.M.	6750 to 8600
Locked Armature Test	
Amperes	280 to 320
Volt	4.0
Brush Spring Tension - Ounces	35 min.
Armature End Play	.005" to .050"
Pinion Clearance in Cranking Position	.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	1115136
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	AC 45FFS
Thread and Shell Hex. Sizes	14MM, 13/16"
Gap at Points	.035"
Terminal Nut Length	3/8"
Tightening Torque in ft. lbs. (Lubricated)	20

**c. Distributor**

Make	Delco-Remy
Drive	From Camshaft
Rotation, Top View	Clockwise
Firing Order	1-8-4-3-6-5-7-2
Number (Less Cap)	1110977
Timing, Crankshaft Degrees Before U.D.C. At Idle	5
Spark Advance - Crankshaft Degrees (In Addition to Initial Timing Advance)	
Vacuum, Max.	14 - 18
Centrifugal, Max.	24 - 28
Vacuum Control Number	1116182
Vacuum Advance Test, Inches of Vacuum	
Vacuum Needed to Start Advance	6 to 8
Vacuum Needed for Max. Advance	14 to 16
Centrifugal Advance Test, Dist. Degrees and RPM (1/2 Eng. Degrees and RPM)	
Start Advance - 535 RPM	0 to 2
Medium Advance - 1050 RPM	6.5 to 8.5
Maximum Advance - 1850 RPM	12 to 14
Contact Point Opening	.013" to .019"
Contact Point Dwell Angle	28° to 32°
Adjust to	30°
Dwell Variation	3° Max.
Breaker Arm Spring Tension, at Side of Point, Ounces	19 to 23
Condenser Make and Capacity (Microfarads)	Delco-Remy, .18 to .23

**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**

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	20 Amp. - 1 1/4"
Heater-Defroster, Air Conditioner Blower and Compressor Clutch	20 Amp. - 1 1/4"
Panel Lights and Rheostat	3 Amp. - 1 1/4"
Radio	4 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
Generator Regulator	Special 40 Amp.
Location	Regulator Battery Terminal
Headlights and Front Parking Lights	15 Amp. Circuit Breaker
Location	In Light Switch

**c. Lamp Bulbs**

Automatic Transmission Control Dial	53; 1 CP
Back-Up	1073; 32 CP
Clock Dial	57; 2 CP
Dome	211; 15 CP
Direction Signal Indicator	158; 2 CP
Headlamp High Beam Indicator	158; 2 CP
Headlamp Sealed Beam Unit, 5 3/4" Dia., Type 1	4001; 37.5 Watt
Headlamp Sealed Beam Unit, 5 3/4" Dia., Type 2	4002; 37.5 - 50 Watt
Heater-Defroster Control Dial	53; 1 CP
Indicator Lights (Hot, Oil, Gen.)	158; 2 CP
Instrument Dial Lights	1816; 2 CP
License Plate, Rear	67; 3 CP
Parking and Dir. Signal, Front	1034; 32 - 4 CP
Radio Dial	1881; 1 CP
Tail, Stop and Direction Signal, Rear	1034; 32 - 4 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 AP273
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, High Note (Left Location)	9000399
Low 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