

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 | 3EMR70 |
| Cat. No. | 560 |
| Location Under Hood | L.F. Fender Skirt |
| Terminal Grounded | Negative |
| Voltage | 12 |
| Capacity—Wet (Amp. Hrs. @ 20 Hr. Rate) | 70 |
| Number of Cells & Plates/Cell | 6,11 |
| Specific Gravity, Full Charge @ 80° F. | 1.260 to 1.280 |
| Bench Charging Rate, Start | 5 Amps. |
| Bench Charging Rate, Finish | 2 Amps. |
| Separators | Porous Rubber |
| Case | Hard Rubber |

10-2 GENERATING SYSTEM SPECIFICATIONS

a. Generator

| | |
|--|---------------------|
| Make and Type | Delco-Remy, Shunt |
| Number | 1102101 |
| Location, Side of Engine | Right |
| Drive and Rotation (Viewing Drive End) | Fan Belt, Clockwise |
| Speed Ratio, Generator to Engine | 2.82 to 1 |
| Brush Spring Tension, ounces | 26-32 |
| Field Current Draw (Amps.) @ 80°F at 12 Volts | 2.66 to 2.86 |
| Bench Test (Amps) Hot at 14 Volts and 2900 Generator RPM | 45 |

b. Generator Regulator

| | |
|---|-------------------------|
| Make | Delco-Remy |
| Number | |
| Standard | 1119600 |
| Air Conditioned | 1119601 |
| Cutout Relay Closing Voltage | 12 to 13 |
| Adjust to | 12.5 |
| Cutout Relay Opening Current | Reverse or Discharge |
| Cutout Relay Air Gap Points Closed | .020" |
| Cutout Relay Contact Point Opening | .020" |
| Current Regulator Air Gap, Points Just Touching | .075" |
| Current Regulator Setting, Amps. HOT, @ 1500 Eng. RPM | See Chart on Page 10-31 |
| Voltage Regulator Air Gap, Points Just Touching | .067" |
| Voltage Regulator Upper Contact Point Opening | .016" |
| Voltage Regulator Setting, HOT, @ 2000 Eng. RPM | |
| Volts @ 8-10 Amps | See Chart on Page 10-31 |
| Adjust to | See Chart on Page 10-31 |

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

| | |
|---|------------------------------------|
| Make | Delco-Remy |
| Number | 1107667 |
| Location, Side of Engine | Left |
| Type of Shift | Mechanical—Electrically Controlled |
| Shift Actuation | Solenoid |
| Shift Operation | Accelerator Pedal |
| Type of Drive | Overrunning Clutch |
| Rotation, Viewing Drive End | Clockwise |
| Gear Ratio, Motor to Engine | 18.4 to 1 |
| No. Teeth on Ring Gear and Drive Pinion | 166, 9 |
| Cranking Speed, Engine RPM | 160 |
| No Load Test | |
| Amperes | 65 to 100 |
| Volts | 10.6 |
| R.P.M. | 3600 to 5100 |
| Locked Armature Test | |
| Amperes | 300 to 360 |
| Volt | 3.5 |
| Brush Spring Tension—Ounces | 35 min. |
| Armature End Play | .005" to .050" |
| Pinion Clearance in Cranking Position | .010" to .140" |

b. Solenoid Switch and Relay

| | |
|---|-------------|
| Make | Delco-Remy |
| Solenoid Switch Number | 1119919 |
| Current Draw of Solenoid Windings @ 80°F. | |
| Hold-in Winding, Amps. @ 10 Volts | 10-12 |
| Both Windings in Parallel, Amps. @ 10 Volts | 40-45 |
| Voltage Required for Solenoid Switch Pull-In @ 80°F. | 7.2 Max. |
| Relay Number | 1116921 |
| Relay Adjustments | |
| Air Gap—Points Closed | .011" |
| Point Opening | .020"-.030" |
| Closing Voltage | 3.8 to 5.0 |
| Adjust to | 4.4 |
| Sealing Voltage, Max. Above Closing Voltage | .2 |
| Opening Voltage, Min. | .6 |

10-4 IGNITION SYSTEM SPECIFICATIONS**a. Ignition Coil and Resistor**

| | |
|--------------------------------|--------------|
| Make | Delco-Remy |
| Coil Number | 1115100 |
| Coil Resistance (Ohms) @ 80°F. | |
| Primary | 1.28 to 1.42 |
| Secondary | 7200 to 9500 |
| Resistor Number | 1931614 |
| Resistance, Ohms @ 75°F. | 1.40 to 1.62 |

b. Spark Plugs

| | |
|------------------------------------|--|
| Make and Model | AC 44 |
| Thread and Shell Hex. Sizes | 14MM, 1 ³ / ₁₆ " |
| Gap at Points | .030"-.035" |
| Terminal Nut Length | ³ / ₈ " |
| Tightening Torque (ft. lbs.) | 25 |

c. Distributor

| | |
|--|----------------|
| Make | Delco-Remy |
| Number | 1935428 |
| Drive | From Camshaft |
| Rotation, Top View | Clockwise |
| Timing, Before U.D.C. | 5 Degrees |
| Spark Advance—Crankshaft Degrees | |
| Vacuum, Max. | 18-21 |
| Centrifugal, Max. | 24-29 |
| Vacuum Control Number | 1116106 |
| Vacuum Advance Test, Distributor Degrees | |
| At 6.5" to 8.5" of Vacuum | Start Advance |
| At 12" to 14" of Vacuum for Full Advance | 9-10.5 Degrees |

| | |
|---|------------------------|
| Centrifugal Advance Test, Distributor Degrees and RPM ($\frac{1}{2}$ Engine RPM) | |
| At 475 RPM | .5 to 2.0 |
| At 1150 RPM | 6 to 8 |
| At 1875 RPM | 12 to 14.5 |
| Contact Point Opening | .0125" to .0175" |
| Contact Point Dwell Angle | 28° to 32° |
| Adjust to | 30° |
| 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 $\frac{3}{4}$ " |
| Tail, Stop, Parking, Signal Lamps, Make | Guide |
| Lighting Switch, Make | Delco-Remy |
| Wiring Circuit Type | Single Wire |
| Wiring Circuit Protection, for Head, Tail, Parking, License, Instrument Lights | Thermo Circuit Breaker |
| Thermo Circuit Breaker Location | On Lighting Switch |
| Thermo Circuit Breaker Calibration @ 70°F | |
| Stay Closed Indefinitely @ Amps | 22.5 |
| Open in 30 to 60 Seconds @ Amps | 42 |

b. Fuses and Circuit Breakers

NOTE: Unless otherwise specified, all fuses are mounted on fuse block under cowl. Head, tail, parking, license and instrument light circuits are protected by thermal circuit breaker on light switch.

| | |
|---|--|
| Air Conditioner Clutch Control | 5 Amp. AGC |
| Clock | 1 Amp. AGA |
| Direction Signal and Stop Light | 10 Amp. AGC |
| Dome and Trunk Compartment Light | 20 Amp. SFE |
| Heater, Defroster, and Air Conditioner Blower | 20 Amp. SFE |
| Parking Brake Warning and Back-Up Light | 10 Amp. AGC |
| Radio | 7.5 Amp. SFE |
| Speedometer Warning Buzzer | 1 Amp. AGC |
| Antenna Motor | 15 Amp. AGC |
| Location | In Wiring Connector Near Switch |
| Cigar Lighter | Special |
| Location | In Back of Lighter |
| Glove Box and Map Light | 2 Amp. AGA |
| Location | In Wiring Connector |
| Power Top System | Auto. Reset Circuit Breaker on Cowl |
| Power Window and Seat System | Auto. Reset Circuit Breaker on Cowl plus Auto. Reset Circuit Breaker in Each Motor |

c. Lamp Bulbs

| | |
|--|--------------------|
| Back-Up | 1073; 32 CP |
| Clock | 57; 2 CP |
| Dome | 1004; 15 CP |
| Direction Signal Indicator | 57; 2 CP |
| Dynaflow Selector Dial | 53; 1 CP |
| Glove Box | 57X; 2 CP |
| Headlamp High Beam Indicator | 53; 1 CP |
| Headlamp Sealed Beam Unit, Type 1 | 4001; 37.5 Watt |
| Headlamp Sealed Beam Unit, Type 2 | 4002; 37.5-50 Watt |
| Heater or Air Conditioner Control Dial | 57; 2 CP |
| Ignition Switch | 53; 1 CP |
| Instrument Dials | 57; 2 CP |
| License Plate, Rear | 67; 3 CP |
| Light Switch Escutcheon | 57; 2 CP |
| Map Light | 90; 6 CP |
| Parking Brake Warning Signal | 89; 6 CP |
| Parking and Dir. Signal, Front | 1034; 32-4 CP |
| Radio Dial | 1891; 2 CP |
| Side Rail or Arm Rest, Rear | 90; 6 CP |
| Tail, Stop and Direction Signal, Rear | 1073; 32 4 CP |
| Trunk Compartment | 89; 6 CP |

10-6 SIGNAL SYSTEMS SPECIFICATIONS

| | |
|--|----------------------|
| Stop Light Switch—Type | Hydraulic |
| Stop Light Switch Location | Brake Master Cyl. |
| Direction Signal Switch—Make | Delco-Remy |
| Direction Signal Flasher—Make | Tungsol |
| 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, Vibrator |
| Horn Number, High Note (L.H.) | 9000414 |
| Low Note (R.H.) | 9000413 |
| Horn Amperage Draw at 12 Volts | |
| High Note (L.H.) | 7 to 12 |
| Low Note (R.H.) | 7 to 12 |
| Horn Relay Number | 1116920 |
| Horn Relay Adjustment | |
| Closing Voltage | 5.0 to 9.5 |
| Adjust to | 6.5 |
| Speed Warning Buzzer Number | 1116937 |
| Point Opening | .020-.025" |
| Amperage Draw @ 13.5-14.5 Volts | .04-.06 |