

GROUP 10 ELECTRICAL SYSTEMS

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SECTION 10-A ELECTRICAL SPECIFICATIONS

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SERVICE BULLETIN REFERENCE

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10-1 BATTERY SPECIFICATIONS

Items	Series 40-50	Series 70
Make.....	Delco-Remy	
Number.....	15E6-W	17E6-W
Location.....	Right Side Under Hood	
Voltage.....	6	6
Capacity—Wet Battery (Amp. Hrs. @ 20 Hr. Rate).....	100	120
Number of Plates.....	15	17
Separator Material.....	Wood	Wood
Case Material.....	Buna "S"	Buna "S"
Terminal Grounded.....	Negative	Negative
Electrolyte Level.....	See paragraph 10-18	
Bench Charging Rate—Start.....	1 Amp./Pos. Plate or 7 Amp. for 15 Plate Battery	
Bench Charging Rate—Finish.....	½ Amp./Pos. Plate	1 Amp./Pos. Plate

10-2 GENERATING SYSTEM SPECIFICATIONS

a. Generator

Items	Series 40-50	Series 70
Make.....	Delco-Remy	
Type.....	Shunt	Shunt
Model.....	1102774	
Location.....	L. Side of Engine	Front
Mounting Type.....	Hinged	Hinged
Drive.....	Fan Belt	
Rotation.....	Clockwise—Drive End	

10-2 SPECIFICATIONS**ELECTRICAL SYSTEMS (338)**

Items	Series 40-50	Series 70
Ratio—Generator to Engine.....	2.14 to 1	
Output Regulation.....	Voltage and Current Regulator	
Max. Charge Capacity (Amps.) Hot, @ 8 Volts and 2550 Gen. RPM..	45	45
Amps. Motoring Freely @ 6 Volts and 850 RPM Min.....	6.8 Approx.	
NOTE: With brushes seated and bearings run in.		
Amps. Max. Stall Current @ 6 Volts.....	70	70
Amps. Field Current @ 6 Volts (Room Temp.).....	1.90-2.05	
Brush Spring Tension—Ounces.....	24-32	

b. Generator Regulator

Make.....	Delco-Remy	
Model.....	1118729	
Location.....	L.F. Fender Skirt	
Cutout Relay Closing Voltage, HOT.....	5.9 to 6.7; Adjust to 6.4	
Cutout Relay Opening Current.....	Reverse or Discharge	
Cutout Relay Air Gap, Points Closed.....	.020"	.020"
Cutout Relay Contact Point Opening.....	.020"	.020"
Car Speed When Cutout Relay Closes, Approx. MPH.....	8 to 10	
Current Regulator Air Gap, Points Just Touching.....	.075"	.075"
Current Regulator Setting, Amps., HOT at Approx. 2000 Eng. RPM..	45 to 51; Adjust to 47	
Voltage Regulator Air Gap, Points Just Touching.....	.075"	.075"
Voltage Regulator Setting, Volts @ 8-10 Amps., HOT, at Approx. 1500 Eng. RPM.....	7.2 to 7.7; Adjust to 7.4	

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

Items	Series 40-50	Series 70
Make.....	Delco-Remy	
Model.....	1107110	1107981
Location.....	Right Side of Engine	
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.....	16.22 to 1	17.33 to 1
No. Teeth on Flywheel Ring Gear.....	146	156
No. Teeth on Drive Pinion.....	9	9
Running Torque—Ft. Lbs.....	8 @ 400 RPM	8 @ 625 RPM
Running Torque—Amps.....	425 @ 3.9 V.	380 @ 4.2 V.
No Load Test—		
Amperes.....	70	65
Volts.....	5.65	5.67
R.P.M.....	5500	5500
Lock Torque Test—		
Amperes.....	550	600
Volts.....	3.25	3.0
Torque—Lbs. Ft.....	12	16
Brush Spring Tension—Ounces.....	24 to 28	
Armature End Play.....	.005"-.050"	
Pinion Clearance in Cranking Position.....	$\frac{3}{16}$ "	$\frac{3}{16}$ "
Shift Lever Return Spring Tension—		
Start of Travel.....	9 to 12 Lbs.	
End of Travel.....	28 to 35 Lbs.	

b. Solenoid Switch and Relay

Current Draw of Solenoid Windings @ 80° F.—	
Hold-in Winding.....	14 to 16 Amps. @ 5 Volts
Both Windings in Parallel.....	85 to 90 Amps. @ 5 Volts
Solenoid Relay Adjustments—	
Air Gap—Points Closed.....	.011" Min.
Point Opening.....	.020"-.030"
Closing Voltage.....	1.5 to 2.1 V.
Sealing Voltage.....	Not More Than 0.1 Above Closing V.
Opening Voltage.....	0.35 V. Min.

c. Accelerator Vacuum Switch and Neutral Safety Switch Timing

Carter Vacuum Switch.....	See paragraph 10-32
Stromberg Vacuum Switch.....	See paragraph 10-33
Neutral Safety Switch.....	See paragraph 10-34

10-4 IGNITION SYSTEM SPECIFICATIONS**a. Ignition Switch and Lock**

Items	Series 40-50	Series 70
Switch—Make	Delco-Remy	
Lock—Make	Rochester Prod. or Briggs Stratton	

b. Ignition Coil

Make	Delco-Remy
Model	1115328
Location	Right Side of Engine
Amps. Draw of Coil—	
Engine Stopped	4 1/2
Engine Idling	2 1/2
Coil Pri. Res. Ohms @ 70° F.	1.20 to 1.30
Coil Sec. Res. Ohms @ 70° F.	2900 to 3800

c. Spark Plugs

Make	AC	AC
Model	46-X	46-X
Plug Location	R. Side of Cyl. Head	R. Side of Cyl. Head
Thread Size	14MM	14MM
Shell Hex. Size	13/16"	13/16"
Gap	.023" — .028"	.023" — .028"
Length of Terminal Nut	3/4"	3/4"
Length of Cable Terminal	13/16"	13/16"

d. Distributor

Make	Delco-Remy
Model	1110832
Location	R. Side of Crankcase
Drive	Gears on Cam Shaft and Distrib. Shaft
Rotation	Counterclockwise, Top View
Timing, Before U.D.C., Full Advance	4 Deg.
Spark Control Advance—Flywheel Degrees—	
Centrifugal	24 to 28
Vacuum—Max.	12 to 16
Vacuum Advance Test, Distributor Degrees—	
At 5" to 7" (Hg.) of Vacuum	Start Travel
At 12" to 13 1/2" (Hg.) of Vacuum	6 to 8 Deg.
Centrifugal Advance Test, Distributor Degrees and RPM	
(1/2 Engine RPM)	
At 250 RPM	0 to 2 Deg.
At 400 RPM	5 to 7 Deg.
At 1650 RPM	12 to 14 Deg.
Contact Point Opening	.0125" to .0175"
Breaker Arm Spring Tension, Measured at Side of Point	19 to 23 oz.
Breaker Base Plate Tension Oz.	11 to 18
Shaft End Play	.002" to .007"
Condenser Make	Delco-Remy
Condenser Capacity—Microfarads	.18 to .23

10-5 LIGHTING SYSTEM SPECIFICATIONS**a. Lamps, Switches, Wiring**

Items	Series 40-50	Series 70
Headlamp—Make	Guide	
Headlamp—Type	Sealed Beam	
Headlamp Lens Diameter	6 11/16"	
Parking and Signal Lamp—Make	Guide	
Tail, Stop and Signal Lamp—Make	Guide	
Lighting Switch—Make	Delco-Remy	
Wiring Circuit Type	Single Wire	
Wiring Circuit Protection, for Head, Parking, Tail, License, Map, Instrument Lights	Thermo Circuit Breaker	
Thermo Circuit Breaker Location	On Lighting Switch	
Thermo Circuit Breaker Calibration @ 70° F.—		
Stay Open Indefinitely at	30 Amps.	
Open in 3 Minutes at	42 Amps.	

b. Lighting and Other Circuit Fuses

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

Stop and Direction Signal Light.....	← 14 Amp. SFE (1 $\frac{1}{16}$ x $\frac{1}{4}$) →
Dome Light, Glove Box Light, Luggage Comp. Light.....	← 30 Amp. SFE (1 $\frac{1}{16}$ x $\frac{1}{4}$) →
Heater and Blower.....	← 14 Amp. SFE (1 $\frac{1}{16}$ x $\frac{1}{4}$) →
Electric Clock.....	← 3 Amp. AGA (5 $\frac{5}{8}$ x $\frac{1}{4}$) →
Back-Up Lamp.....	← 14 Amp. SFE (1 $\frac{1}{16}$ x $\frac{1}{4}$) →
Cigar Lighter.....	← Special →
Location, Casco.....	← In Back of Lighter →
Location, Rochester.....	← In Circuit Breaker in Back of Lighter →
Radio.....	← 15 Amp. AGA (1 $\frac{1}{4}$ x $\frac{1}{4}$) →
Location.....	← At End of "A" Lead at Set →
Parking Brake Warning Signal.....	← 6 Amp (5 $\frac{5}{8}$ x $\frac{1}{4}$) →
Location.....	← In Fuse Holder in Lead →

c. Lamp Bulbs

	No. Req.	Mazda No. and Power
Headlamp Sealed Beam Unit.....	2	45-35 Watt
Headlamp Beam Indicator.....	1	51; 1 CP
Parking and Front Dir. Signal.....	2	1154; 21-3 CP
Direction Signal, Rear.....	2	1129; 21 CP
Direction Signal Indicator.....	2	51; 1 CP
License Plate Lamp.....	1	63; 3 CP
Tail and Stop Lamps.....	2	1154; 21-3 CP
Instrument Lights.....	4	55; 2 CP
Map Light.....	2	55; 2 CP
Dome Lamp—Except 56C, 56R, 76C, 76R.....	1	88; 15 CP Dbl. Contact
Models 56C, 56R, 76C, 76R.....	1 (2, 76R)	82; 6 CP Dbl. Contact
Trunk Compartment.....	1	55; 2 CP
Clock Light.....	1	55; 2 CP
Glove Box.....	1	55; 2 CP
Radio Dial Light.....	1	55; 2 CP
Back-Up Light —Series 50-70.....	2	1129; 21 CP
Series 40.....	2	1133; 32 CP
Parking Brake Warning Signal.....	1	210; 15 CP

10-6 SIGNAL SYSTEMS SPECIFICATIONS

Items	Series 40-50	Series 70
Stop Light Switch—Type.....	← Hydraulic →	
Stop Light Switch Location.....	← Brake Pipe Distrib. Fitting Near Master Cyl. →	
Direction Signal Switch—Make.....	← Delco-Remy →	
Direction Signal Flasher—Make.....	← Tungsol →	
Lamp Bulbs—Mazda No. and Power.....	← See paragraph 10-5 →	
Stop and Signal Light Circuit Protection.....	← 14 Amp. Fuse On Fuse Block Under Cowl →	
Horn—Make and Type.....	← Delco-Remy, Vibrator →	
Horn Model, High Note (L.H.).....	← 1999650 →	
Low Note (R.H.).....	← 1999649 →	
Horn Amperage Draw @ 6 Volts—		
High Note (L.H.).....	← 16 to 18 →	
Low Note (R.H.).....	← 17 to 19 →	
Horn Relay—Make and Model.....	← Delco-Remy, 1116775 →	
Horn Relay Adjustment—		
Air Gap.....	← .015" →	
Contact Point Opening.....	← .025" →	
Closing Voltage.....	← 2.75 to 4 →	