

ELCAR

MODEL 8-82 (1927-28)

DELCO-REMY GENERATING, STARTING AND LIGHTING SYSTEM DELCO-REMY IGNITION

BATTERY:—U.S.L. Type XY-15X, 6 volt. Starting capacity is 119 amperes for 20 minutes. Lighting capacity is 5 amperes for 20.8 hours. The negative (—) terminal is grounded. Battery is mounted under the right front seat.

IGNITION:—Coil Model 525-C. Distributor Model 658-B. Breaker contacts separate .018-.024 inch. They are made of tungsten. Resurface contacts with a fine flat contact file or on a medium hard oilstone. Distributor is semi-automatic. Manual advance is 15°. Automatic advance begins at 600 R.P.M. and reaches a maximum of 17.5° at 2000 R.P.M. Breaker arm spring tension should be 17-21 ounces. Double breaker contacts are used. They operate on a four sided cam and open at intervals of 45° corresponding to 90° of crankshaft rotation. It is very important that the firing interval be correctly set. To check position of second set of breaker contacts (see Timing).

Mounting:—Distributor is mounted on the top of the engine block on the left side. To remove distributor, disconnect breaker leads and remove high tension cables or remove distributor head. Then loosen distributor clamp screw under distributor cup and lift distributor from place.

Oiling:—Refill the grease cup under the distributor head with medium cup grease and turn down one turn every two weeks or each 500 miles. Every 5000 miles remove rotor button and saturate wick oiler with light engine oil. Put a small bit of vaseline on the face of the breaker cam under the fiber bumper of the contact arm.

Timing:—Breaker contacts begin to separate when the piston entering power stroke reaches top dead center with the spark control lever in the fully retarded position. To set timing, crank engine until piston No. 1 reaches top dead center on compression stroke (the upstroke with both valves closed). Make certain that the spark control lever is fully retarded. Loosen distributor clamp screw and rotate distributor until stationary contacts begin to separate. Tighten the clamp screw. To check second set of contact on movable plate, use special tool issued by Delco-Remy Corporation. Contacts can be checked without tool by cranking engine over 90° after setting timing in cylinder No. 1. Piston No. 6 will then be on top dead center entering power stroke. The contacts on movable plate should open at this point.

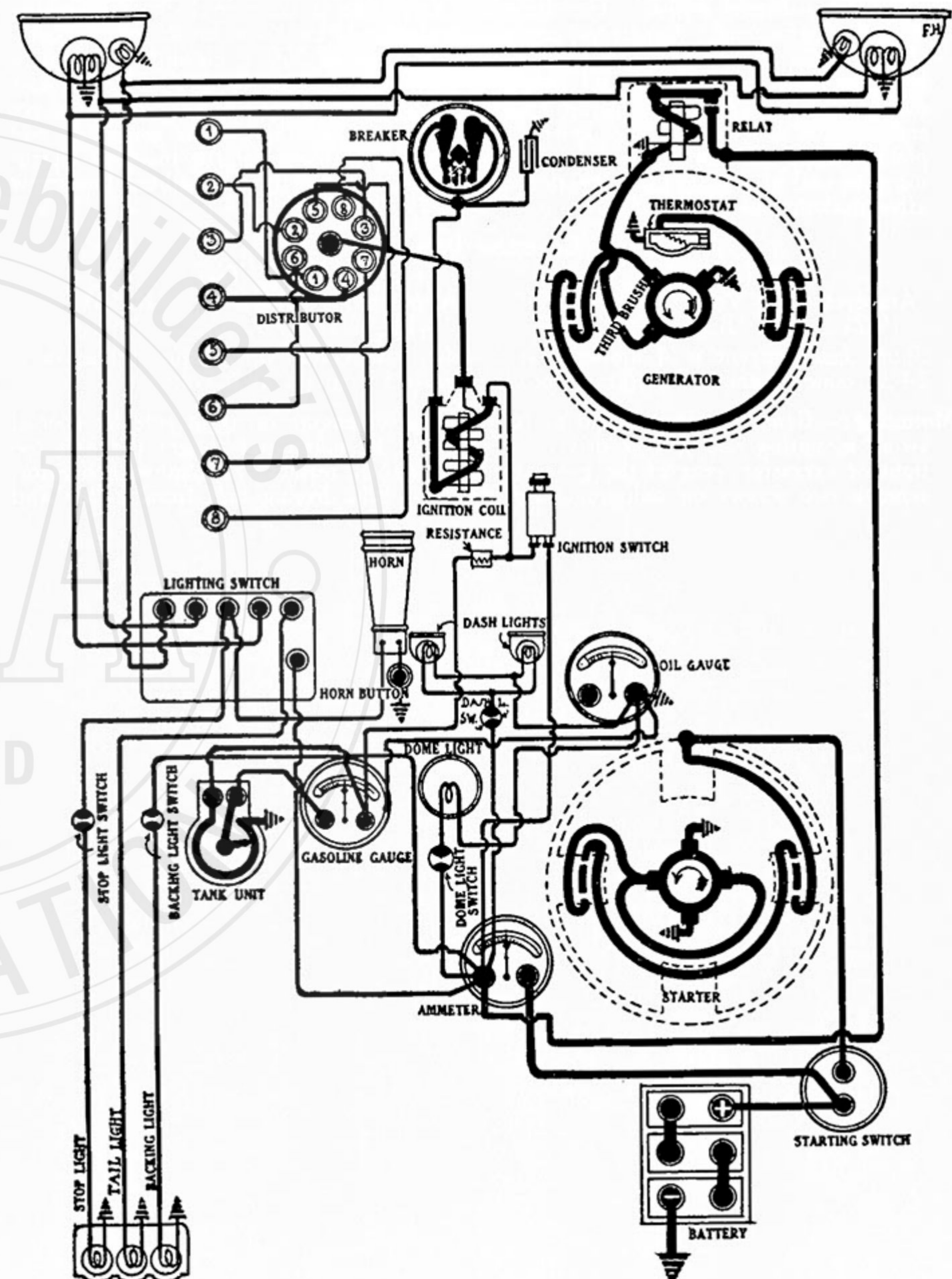
Valve Timing:—**INLET VALVES:**—Head diameter, 1 13/32 inches; stem diameter, .3425-.341 inch; stem length, 5 5/16 inches over head; tappet clearance, .006-.008 inch (hot); spring pressure, 36 pounds; valve lift, 11/32 inch. Inlet opens at top dead center and closes 45° after lower dead center.

EXHAUST VALVES:—Head diameter, 1 13/32 inches; stem diameter, .3425-.341 inch; stem length, 5 5/16 inches over head; tappet clearance, .008 inch (hot); spring pressure, 36 pounds; valve lift, 11/32 inch. Exhaust opens 50° before lower dead center and closes 10° after top dead center. No valve stem guides are used. Oversize valves are made.

Firing Order:—The firing order is 1-6-2-5-8-3-7-4.

Spark Plugs:—Spark plugs are 7/8 S.A.E. 'Short.' Gaps are .027 inch.

STARTER:—Model 716-A. Starter is connected to the engine through a Bendix drive. The direction of rotation is counter-clockwise, looking at commutator end. Starter brush tension is 24-28 ounces. Starting switch is Model 406-A.



Starter Data			
Torque	R.P.M.	Volts	Amperes
0 lb. ft.	6000	5.0	70
15 "	Lock	3.7	450

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Mounting:—Starter is flange mounted on forward side of flywheel housing at right of engine. To remove starter, disconnect starter cable, remove three flange mounting capscrews and slide starter forward from place.

Oiling:—Put 4 or 5 drops of light engine oil in each of the starter bearing oilers every month or each 1000 miles if the car is driven more than 1000 miles in a month.

GENERATOR:—Model 949-C. The direction of rotation is counter-clockwise, looking at the commutator end. Generator current regulation is by third brush shunt field combined with a thermostat. Thermostat contacts open at 150°F. cutting a resistance into shunt field circuit and reducing output approximately 40%. To adjust generator output, remove commutator cover band and loosen small round headed screw on generator end plate. Then shift third brush in a counter-clockwise direction to increase charging rate and in the opposite direction to decrease charging rate. Tighten the screw after making the adjustment.

Generator Data

Cold Test			Hot Test		
Amperes	Volts	R.P.M.	Amperes	Volts	R.P.M.
19-21	8.5	1450	9-12	7.5	2000

Shunt field current is 4 amperes at 6 volts. Generator brush spring tension is 24-28 ounces each. Generator motoring draws 5 amperes at 6 volts.

Mounting:—Generator is mounted at forward end of engine on right side by special swinging base bracket and is belt driven. In adjusting belt tension care must be

taken not to get belt too tight or excessive wear of the generator bearings will result. To remove generator, remove two screws in base bracket and slip off drive belt. Then lift generator from place.

Oiling:—Put 4 or 5 drops of light engine oil in each of the generator bearing oilers every month or each 1000 miles if the car is driven more than 1000 miles in a month.

RELAY:—Model 265-B. Relay is mounted on top of the generator. Relay contacts close at 675 R.P.M. of the generator when the voltage reaches 6.75-7.5 volts and open with a discharge current of 0-2.5 amperes. Charging current at closing of contacts must not exceed 3 amperes. Contacts separate .015-.025 inch. Air gap between relay armature and coil core is .014-.021 inch, contacts closed. Set contact opening by bending brass stop over relay armature. Set air gap by loosening two screws in armature base and inserting feeler between armature and coil core. Then close relay contacts by hand and tighten the two screws.

LIGHTING:—Delco-Remy Lighting Switch Model 420-N. Switch is mounted at lower end of steering column. Head lamps are 6-8 volt, 21 cp. double filament using Tilt-ray principle for dimming. Auxiliary head lamps are 6-8 volt, 3 cp. S.C. Side lamps are 6-8 volt, 4 cp. S.C. Stop and backing lamps are 6-8 volt, 12 cp. S.C. Dome lamp is 6-8 volt, 6 cp. D.C. Dash lamp is 6-8 volt, 3 cp. D.C. Tail lamp is 6-8 volt, 3 cp. S.C.

Ignition Switch:—Model 440-A.

FUSES:—Five fuses are mounted on switch. They are 10 amperes.

