

GARDNER MODEL 80 (1927) DELCO-REMY GENERATING, STARTING AND LIGHTING SYSTEM DELCO-REMY IGNITION

BATTERY:—Prest-O-Lite, Type 613-RHK. 6 volt. Starting capacity is 115 amperes for 20 minutes. Lighting capacity is 5 amperes for 20 hours. The positive (+) terminal is grounded. Battery is mounted on the frame at the right under the front floor board.

IGNITION:—Coil Model 550-A. Distributor Model 658-B. Breaker contacts separate .018-.024 inch. They are made of tungsten. Resurface contacts on a medium hard oilstone or with a fine, flat contact file. Distributor is of the semi-automatic type. Manual advance is 15° (engine). Automatic advance begins at 500 R.P.M. and reaches the maximum of 17.5° (engine) at 2000 R.P.M. Double breaker contacts are used. They open at intervals of 45° corresponding to 90° of crankshaft rotation. The second set of contacts must be checked to see that they open at the proper instant (see timing). Ignition current is .6-2.5 amperes with engines running and 4.5 amperes with engine stopped. The tension of the breaker arm spring should be 17-21 ounces.

Oiling:—Fill 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 the rotor and saturate the wick oiler exposed with light engine oil. Place 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 dead center mark for cylinders 1 and 8 on the flywheel is 5° past top dead center. At this point piston No. 1 will be slightly past top dead center entering the power stroke. To set timing, fully retard manual spark control lever and crank engine until piston No. 1 on compression stroke reaches top dead center. This is the upstroke with both valves closed. At this point the dead center mark on the front flywheel will be opposite the mark on the chain case cover. Then crank the engine over 5°. Loosen the lock nut on the breaker cam and rotate the cam until stationary contacts begin to separate. Tighten the locknut. The other set of contacts open 45° after this point. They can be checked by special tool issued by distributor manufacturer.

Valve Timing:—**INLET VALVES:**—Head diameter, 1 3/8 inches; stem diameter, 11/32 inch; stem length, 5 7/8 inches; tappet clearance, .006 inch (hot); spring pressure, 50 pounds (closed); valve lift, 11/32 inch; intake opens at 5° past top dead center and closes 40° past lower dead center.

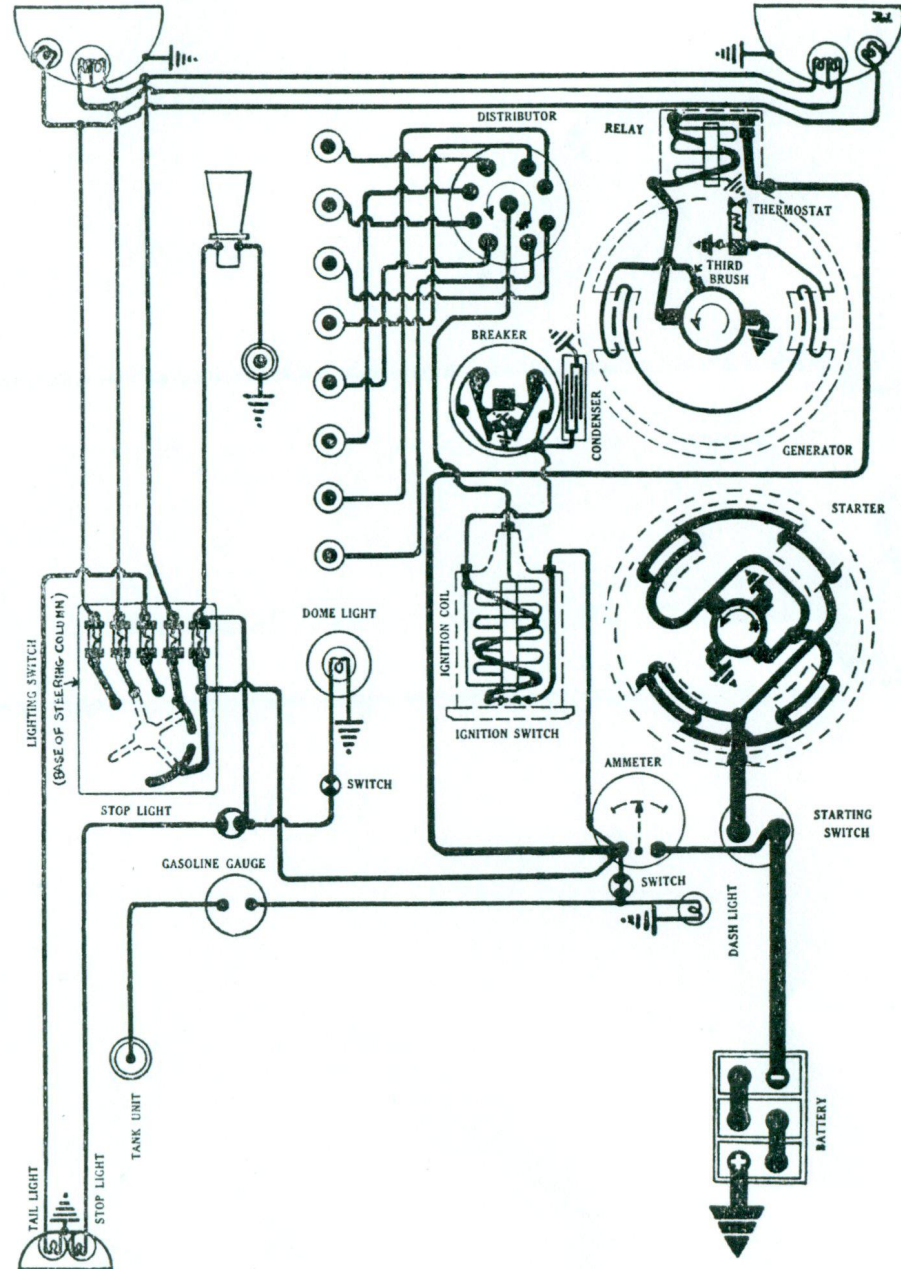
EXHAUST VALVES:—Head diameter, 1 1/4 inches; stem diameter, 11/32 inch; stem length, 5 7/8 inches; tappet clearance, .008 inch (hot); spring pressure, 50 pounds (closed); valve lift, 11/32 inch; exhaust opens at 47° before lower dead center and closes on top dead center. The stem guides are removable. Oversize valve stems are made.

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

Spark Plugs:—Spark plugs are 7/8-18 S.A.E. Standard. Gaps are .030 inch.

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

Starter Data			
Torque	R.P.M.	Volts	Amperes
0 lbs. ft.	6000	5	65
15 "	Lock	3.15	570



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Oiling:—Put 4 or 5 drops of light engine oil in the oiler on the starter every 1000 miles.

GENERATOR:—Model 949-C. The direction of rotation of the generator is counter-clockwise looking at the commutator end. Current regulation is by the third brush system, combined with a thermostat. The thermostat contacts open at 150° F. To adjust the generator output, loosen the screw on generator end plate and shift the third brush mounting plate in a counter-clockwise direction to increase the charging rate and opposite to decrease the charging rate.

Generator Test

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

Shuntfield current is 4 amperes at 6 volts. Generator brush tension is 24-28 ounces.

Oiling:—Put 4 or 5 drops of light engine oil in the generator every 1000 miles.

RELAY:—Model No. 265-B. Relay is mounted on the end of the frame. Relay contacts close at 675 R.P.M. of the generator armature or 6-7 miles per hour with a generator voltage of 6.57 volts. Contacts open with a discharge current of 2.5 amperes. Relay contacts separate .020 inch. Air gap between relay armature and coil core is .014 inch, contacts closed.

LIGHTING:—Remy Lighting Switch Model 420-Q. Head lamps are 6-8 volt 21-21 cp. double filament twin beam D.C. Auxiliary head lights are 6-8 volt 3 cp. S.C. Tail and dash lamps are each 6-8 volt 2 cp. S.C.

FUSES:—Lighting Fuses are 10 amperes.