

GARDNER MODEL 90 (1927) DELCO-REMY GENERATING, STARTING AND LIGHTING SYSTEM DELCO-REMY IGNITION

BATTERY:—Prest-O-Lite, Type 617-RHK. 6 volt, 135 ampere hour. The starting capacity is 152 amperes for 20 minutes. The lighting capacity is 5 amperes for 27 hours. The positive (+) terminal is grounded.

IGNITION:—Coil Model 550-A. Distributor Model 658-A. 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 engine 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 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 7/16 inches; stem diameter, 11/32 inch; stem length, 5 1/2 inches; tappet clearance, .006 inch (hot); spring pressure, 36 pounds (closed); valve lift, 5/16 inch; intake opens at top dead center and closes 35° after lower dead center.

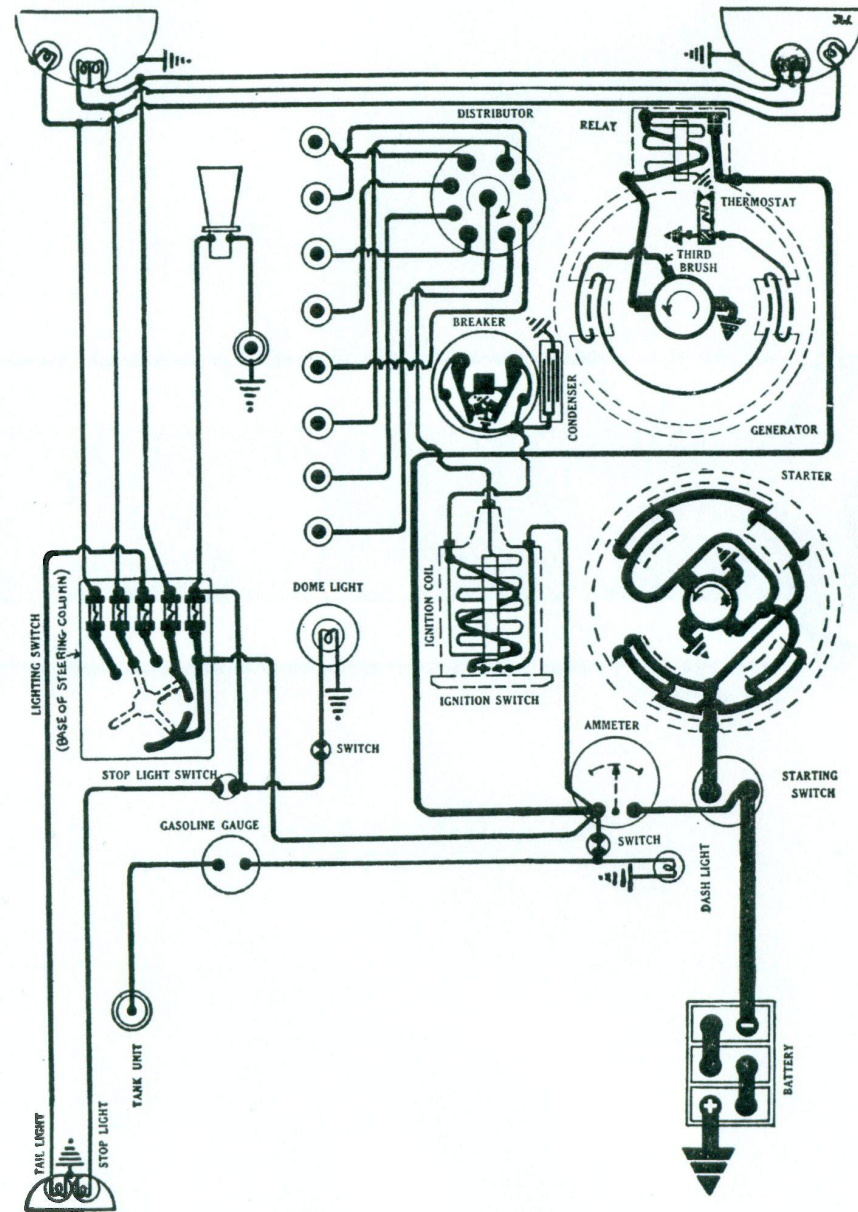
EXHAUST VALVES:—Head diameter, 1 5/16 inches; stem diameter, 11/32 inch; stem length, 5 1/2 inches; tappet clearance, .008 inch (hot); spring pressure, 36 pounds (closed); valve lift, 5/16 inch; exhaust opens 42° before lower dead center and closes 5° after top dead center. The stem guides are removable. Oversize valve stems are made.

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

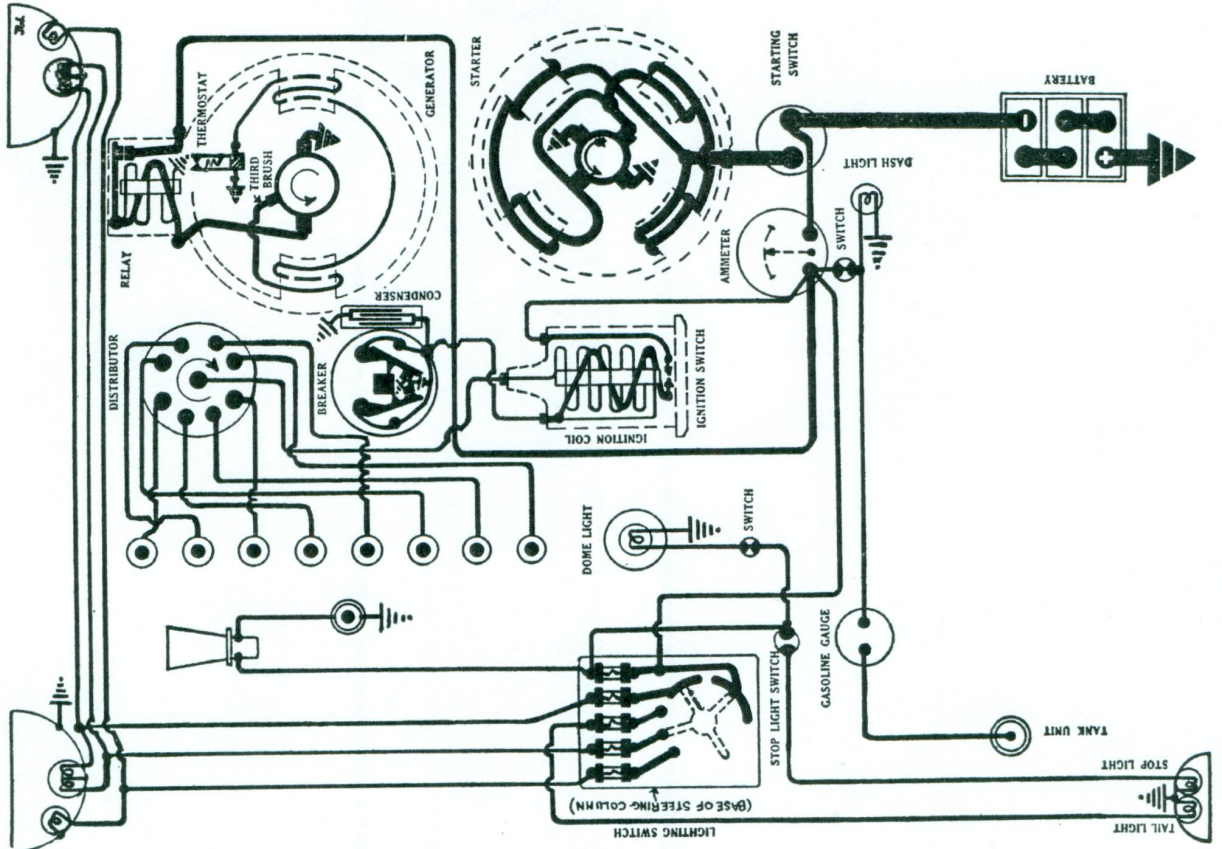
Spark Plugs:—Spark plugs are 7/8-18 S.A.E. Standard. Gaps are .030 inch.

STARTER:—Model 720-Q. 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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