

HUPMOBILE

CENTURY "8" (1928)

AUTO-LITE GENERATING, STARTING SYSTEM DELCO-REMY IGNITION

BATTERY:—Willard, Type SJRR-6, 6 volt. The positive (+) terminal is grounded. Starting capacity (20 minute rate) is 160 amperes for 20 minutes. Lighting capacity (5 ampere rate) is 5 amperes for 30 hours. The battery is mounted under the driver's seat.

IGNITION:—Coil Model 2195. Distributor Model 657-C. Breaker contacts separate .022 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 38 degrees (crankshaft). Automatic advance begins at 800 R.P.M. and reaches a maximum of 24-25 degrees at 3400 R.P.M. Breaker arm spring tension is 17-21 ounces on each. Distributor uses two sets of breaker contacts operating on a four sided cam and opening alternately at intervals of 45 degrees corresponding to 90 degrees of crankshaft rotation. This firing interval must be accurately set for correct ignition. See Timing.

Mounting:—Ignition coil is mounted on the engine side of the dash. The distributor is mounted at the right of the engine. To remove distributor, disconnect manual advance rod and remove advance stop screw, then remove Electrolock and distributor as a unit.

Oiling:—Fill the grease cup under the distributor head and turn down two turns every 1000 miles. Every 1000 miles remove head and rotor and saturate the wick oiler in the center of the shaft with light engine oil. Put a small amount of heavy grease on the face of the breaker cam.

Timing:—Synchronization of Contacts:—To synchronize contacts, use Delco-Remy Tool, Part No. 820738, and follow directions given on Page S-24. Contacts can be synchronized without tool after distributor has been timed to engine, by turning over engine 90 degrees from firing position of piston No. 1 when piston No. 6 will reach 15 degrees before top dead center entering firing stroke. Make certain manual spark control is fully advanced. If one set of breaker contacts are not separating, loosen lock screws on breaker plate and turn eccentric adjusting screw until contacts begin to separate. Tighten lock screws and check contact gaps. If breaker gaps are outside the limits of .018-.024 inch, reset at .022 inch and repeat synchronizing operation.

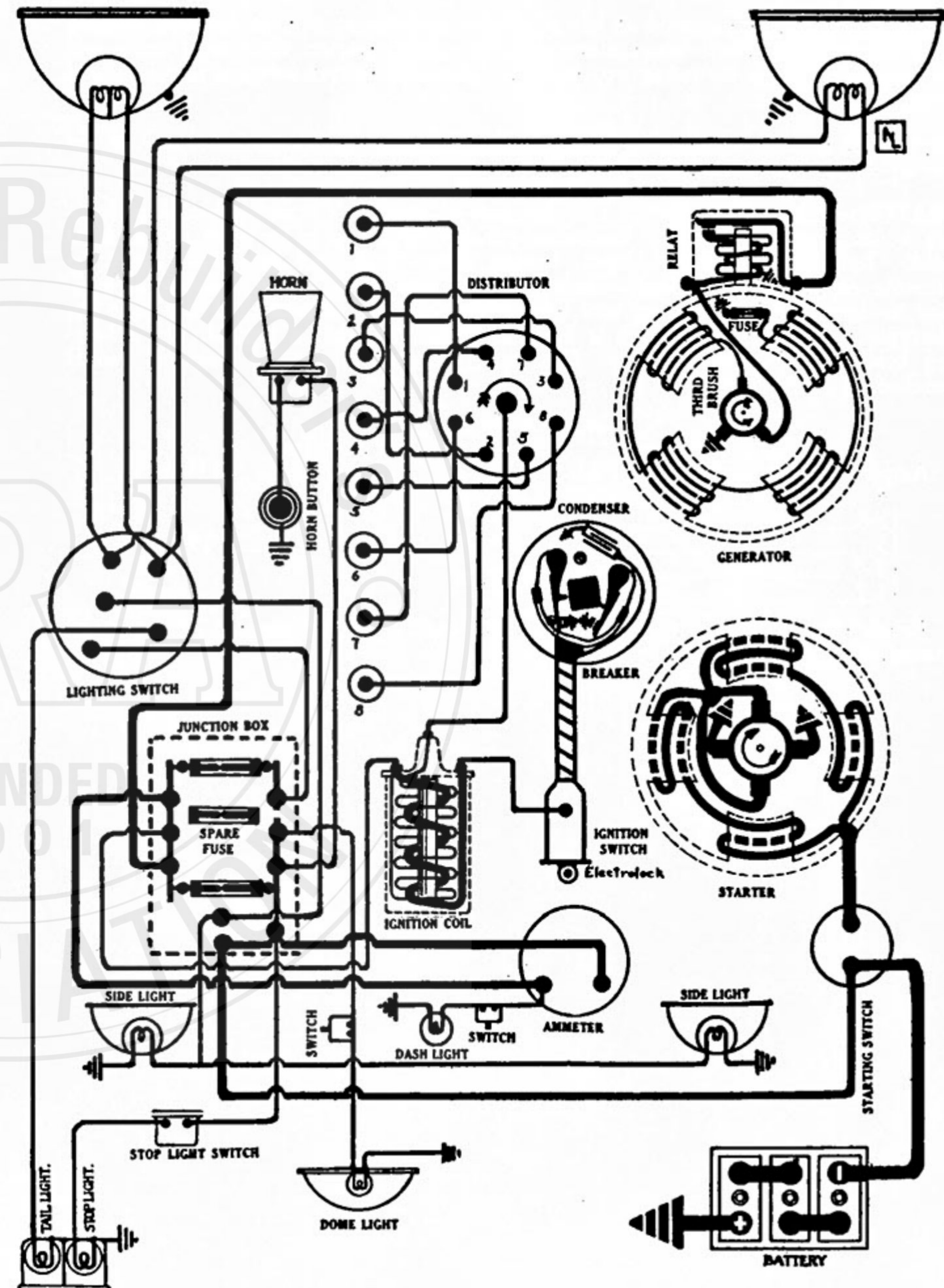
Timing Distributor to Engine:—Breaker contacts begin to separate when the piston entering power stroke reaches a position 15 degrees before top dead center with the spark control lever in the fully advanced position. To set timing, crank engine over until piston No. 1 enters compression stroke (the upstroke with both valves closed). Fully advance spark lever. Continue to crank engine until piston reaches 15 degrees before top dead center when the flywheel mark will be opposite the indicator on the flywheel housing. If one set of contacts is not opening, loosen advance arm clamp screw and rotate distributor until contacts open. Tighten the clamp screw. Connect the segment opposite the rotor to the spark plug in cylinder No. 1 and connect the remaining spark plugs in order 4-7-3-8-5-2-6 clockwise around the distributor head.

VALVE TIMING:—INLET VALVES:—Inlet valves open 4 degrees after top dead center and close 51 degrees after lower dead center.

EXHAUST VALVES:—Exhaust valves open 47 degrees before lower dead center and close at top dead center.

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

Spark Plugs:—Spark plugs are 7/8-18 S.A.E. Standard. Gaps are .025 inch.



HUPMOBILE

CENTURY "8" (1928)

AUTO-LITE GENERATING, STARTING SYSTEM DELCO-REMY IGNITION

STARTER: Model ML-4139. Starter is connected to the engine through a Bendix drive. The direction of rotation is clockwise, looking at the commutator end. Brush spring tension is 1¼-1½ pounds each. Starter cranks the engine at 145 R.P.M. drawing 125 amperes at 5.4 volts.

Starter Data

Torque	R.P.M.	Volts	Amperes
0.....	Free	5.8.....	70
19 lb. ft.....	Lock	2.5.....	425

Mounting:—Starter is sleeve mounted at the right of the engine on rear of flywheel case. To remove starter, take floor boards in front compartment out. Disconnect starter cable and remove large pilot mounting screw directly above starter sleeve. Then pull starter to rear and lift from place.

Oiling:—Starter bearings are oilless. They require no attention.

GENERATOR:—Model GAG-4106. The direction of rotation is counter-clockwise, looking at the commutator end. Generator current regulation is by third brush shunt field. To adjust generator output, loosen commutator cover band and shift third brush by tapping on third brush mounting stud with a screwdriver. Shift the third brush in a counter-clockwise direction to increase the charging rate and in the opposite direction to decrease the charging rate. The third brush is held in any position by friction between the mounting stud and the generator endplate.

Generator Data

Amperes	Volts	R.P.M.
0.....	6.5.....	525
5.....	7	650
10.....	7.3.....	780
17.....	8	1250

Generator, motoring draws 5-5.5 amperes at 6 volts. Shunt field current is 4.3 amperes at 6 volts. Brush spring tension is 1¼ to 1½ pounds each.

Mounting:—Generator is flange mounted at right of engine on rear of timing chain case. To remove, take off oil filler and cover plate on front of chain case. Disconnect drive shaft at rear of generator. Back off chain adjustment nut and remove 3 flange mounting cap screws. Pull generator to rear and tie up chain to prevent it slipping on cam shaft sprocket.

Adjustment of Timing Chain:—To adjust timing chain, loosen generator flange mounting cap screw and take up on the adjustment screw until chain begins to hum with engine running. Then back off set screw until chain runs noiselessly and tighten flange cap screws. The chain must not be run tight. There should be ½ inch up and down play with correct adjustment.

Oiling:—Put 4 or 5 drops of light engine oil in each of the generator oilers every 500 miles.

RELAY:—Model CB-4009. Relay is mounted on the generator. Relay closes at 550 R.P.M. of the generator when the voltage reaches 7-7.5 volts and opens with a discharge current of .5-2.5 amperes. Charging current at closing of contacts is 2 amperes. Relay contacts separate .025-.035 inch. Air gap between relay armature and coil core is .010-.030 inch with contacts closed.

LIGHTING:—Clum Switch Model 10612. Switch is mounted at the base of the steering column. Head lights are 6-8 volt, 21-21 cp. (double filament-double contact) Mazda 1110. Side, dash, dome and tail lights are 6-8 volt, 3 cp. S.C. Mazda 63. Stop and backing lights are 6-8 volt, 15 cp. S.C. Mazda 87.

FUSES:—Lighting fuses are 15 amperes capacity. Generator field fuse is 5 amperes.

FOUNDED
2001
ASSOCIATION