

HUPMOBILE

MODEL A-6 'NEW CENTURY SIX' (1928)

AUTO-LITE GENERATING, STARTING AND LIGHTING SYSTEM AUTO-LITE IGNITION

BATTERY:—Willard, Type CRR-15, 6 volt. Starting capacity (20 ampere rate) is 114 amperes for 20 minutes. Lighting capacity (5 ampere rate) is 5 amperes for 20 hours. Battery has 15 plates each $4\frac{3}{4}$ inches high, $5\frac{3}{4}$ inches wide and $\frac{3}{32}$ inch thick. The positive (+) terminal is grounded. Battery is mounted under the front seat on the left side.

IGNITION:—Coil Model IG-4065. Ignition coil is mounted on the dash. Ignition current is 1-3 amperes at 6 volts with engine running and 3.4-5 amperes at 6 volts with engine stopped.

Distributor Model IGC-4001. Breaker contacts separate .020-.024 inch. Resurface contacts with a fine flat contact file or on a medium hard oilstone. Breaker arm spring tension should be 16 ounces. Distributor is semi-automatic. Maximum manual advance is 15° (distributor). Automatic advance begins at 500 R.P.M. (distributor). Maximum automatic advance is 8° reached at 1800 R.P.M.

Mounting:—Distributor is mounted at left of engine by special flange. To remove distributor, disconnect manual advance rod and primary lead and remove distributor head with high tension cables intact. Then remove set screw on side of distributor mounting and lift distributor from place.

Oiling:—Put 4 or 5 drops of light oil in the oiler on the side of the distributor ever 500 miles. Put a small amount of vaseline on the face of the breaker cam every 1000 miles.

Timing:—Breaker contacts begin to separate when the piston entering power stroke reaches top dead center with manual spark lever fully retarded. To set timing, crank engine until piston No. 1 enters compression stroke. This is the upstroke with both valves closed. Fully retard spark lever and continue to crank engine until piston reaches top dead center. Loosen advance arm clamp screw and rotate distributor until contacts begin to separate. Tighten the clamp screw. Make certain that the rotor is opposite the segment connected to spark plug in cylinder No. 1.

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

Spark Plugs:—Spark plugs are $\frac{7}{8}$ -18 S.A.E. Gaps are .022-.025 inch.

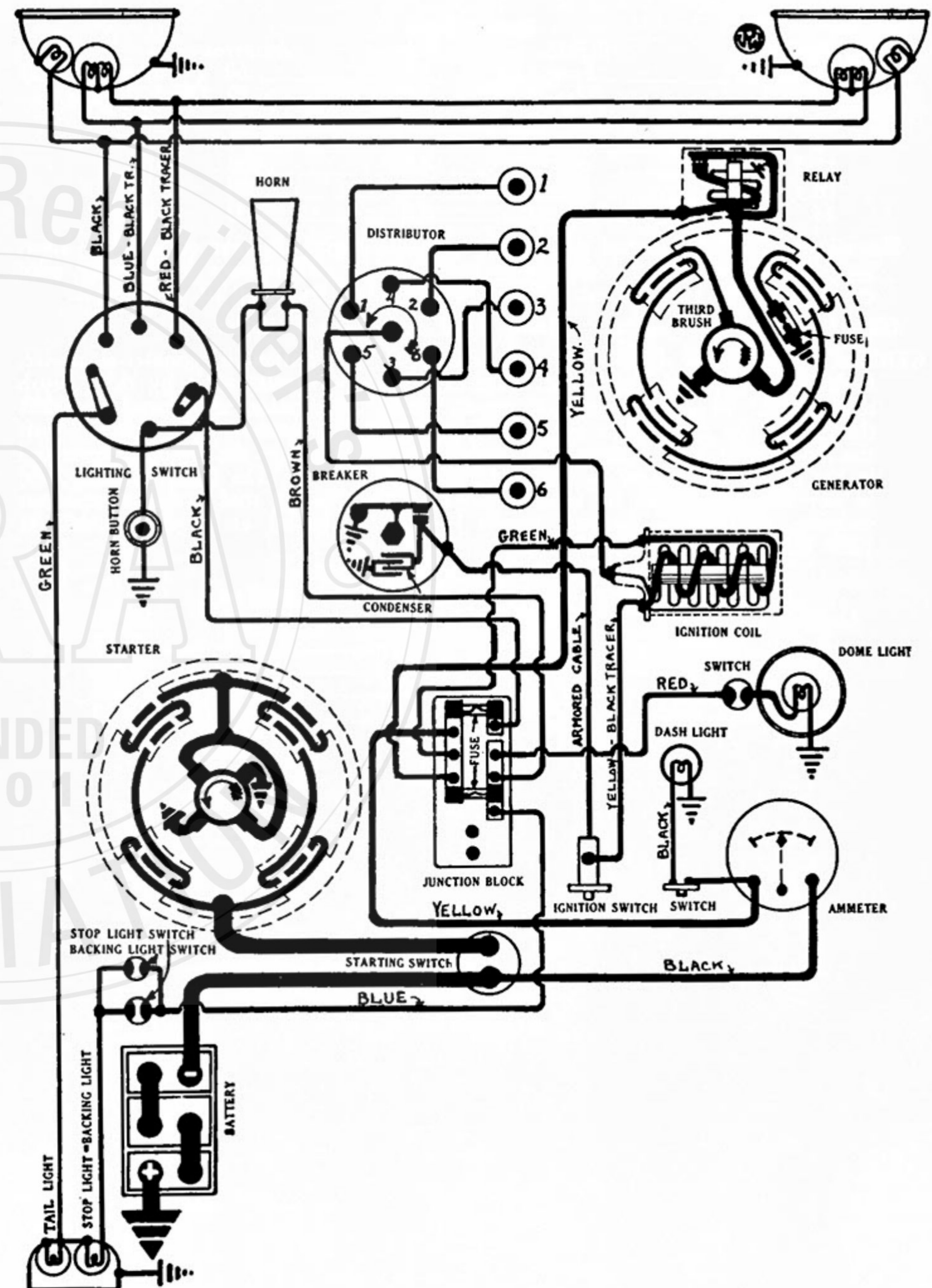
VALVE TIMING:—Specifications:—Head diameter, $1\frac{1}{2}$ inches. Valve lift, $\frac{5}{16}$ inch. Tappet clearance, .005 inch (inlet) and .006 inch (exhaust).

Timing:—Inlet valves open 4 degrees after top dead center and close 51 degrees after lower dead center. Exhaust valves open 47 degrees before lower dead center and close at top dead center.

STARTER:—Model MN-4109. Starter is connected to the engine through an inboard Bendix drive. The direction of rotation is counter-clockwise, looking at the commutator end. Brush spring tension is $1\frac{1}{4}$ - $1\frac{1}{2}$ pounds. Starter switch is Model SW-4002.

Starter Data

Torque	R.P.M.	Volts	Amperes
0 lb. ft.	Free	5.5	45 (No Bendix)
0 "	Free	5.5	50 (With Bendix)
.5 "	2800	5.5	100
2.4 "	1450	5.0	200
4.8 "	950	4.5	300
7.2 "	650	4.0	400
13.6 "	Lock	3.0	620



HUPMOBILE

MODEL A-6 'NEW CENTURY SIX' (1928)

AUTO-LITE GENERATING, STARTING AND LIGHTING SYSTEM AUTO-LITE IGNITION

Mounting:—Starter is mounted at left of engine on forward side of flywheel housing by standard S.A.E. No. 1 flange mounting. To remove starter, disconnect cable and remove three flange mounting cap screws. Then pull starter forward and lift from place.

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

GENERATOR:—Model GAJ-4101. 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, remove cover band and shift third brush by pressure on mounting bracket. 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 position by friction between the mounting bracket and the end plate. Maximum charging rate is 15 amperes (cold) reached at 1600 R.P.M.

Generator Data					
Amperes	Cold Test Volts	R.P.M.	Amperes	Hot Test Volts	R.P.M.
4	6.8	600			
12.8	7.6	1200			
15	8.0	1600	11.9	8.0	1900
13.4	7.8	2000			
11.7	7.5	2400			

Brush spring tension is $2\frac{1}{4}$ - $2\frac{3}{4}$ pounds each. A five ampere field fuse is mounted on the generator.

Mounting:—Generator is mounted at right of engine on rear of timing chain case by standard S.A.E. flange mounting. To remove generator, disconnect generator wire and back off timing chain adjusting set screw. Then remove three flange mounting cap screws and pull generator to rear being careful not to disturb the timing chain.

Timing Chain Adjustment:—The tension of the timing chain is adjusted by shifting the generator around the lower flange mounting cap screw as a pivot. Loosen the flange cap screws and turn up the chain adjusting set screw until the chain begins to hum with the engine running. Then back off the set screw until the chain runs noiselessly. This will give the proper tension. Be careful not to get the chain too tight.

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

RELAY:—Model CB-4012. Relay is mounted on the generator. Contacts close at 650 R.P.M. when the generator voltage reaches 7-7.5 volts and open with a discharge current of .5-2.5 amperes. Charging current at closing of contacts is approximately 2 amperes. Relay contacts separate .025-.035 inch. Air gap is .010-.030 inch with contacts closed.

LIGHTING:—Clum Switch Model 10612. Switch is mounted at lower end of steering column. Head lights are 6-8 volt, 21-21 cp. (double filament-double contact base) Mazda No. 1110. Stop and backing light is 6-8 volt, 15 cp. S.C. Mazda No. 87. Parking lights (in head lamps) and side lights are each 6-8 volt, 3 cp. S.C. Mazda No. 63. Dash, tail and dome lights are each 6-8 volt, 3 cp. S.C. Mazda No. 63.

FUSES:—Generator field fuse is 5 amperes. Lighting fuses on junction block are 15 amperes.

FOUNDED
2001
ASSOCIATION