

HUDSON

'SUPER SIX' (1928)

AUTO-LITE GENERATING, STARTING SYSTEM AUTO-LITE IGNITION

BATTERY:—Prest-O-Lite, Type 6-15-JFK, 6 volt. Starting capacity (20 minute rate) is 120 amperes for 20 minutes. Lighting capacity (5 ampere rate) is 5 amperes for 20 hours. The negative (—) terminal is grounded.

IGNITION:—Coil Model CE-4001. Distributor Model IGA-4023 and IGA-4024. Breaker contacts separate .020-.024 inch when new. After 1000 miles of operation contact gap should be set at .018-.020 inch. Resurface contacts whenever necessary with a fine flat contact file or on a medium hard oilstone. Distributor is semi-automatic. Manual advance is 25 degrees (engine). Automatic advance begins at 400 R.P.M. (engine). Maximum automatic advance is 50 degrees (engine) at 3200 R.P.M. Breaker arm spring tension is 18-20 ounces. Distributor is fitted with an Electrolock. When distributor is removed for servicing, the Electrolock must be removed with the distributor.

Oiling:—Put 6 or 8 drops of light engine oil in the oiler on the side of the distributor housing every two weeks or each 500 miles if the car is driven more than 500 miles in two weeks. Put one drop of oil in the breaker arm pivot every week or each 250 miles. Place a small bit of vaseline on the face of the breaker cam under the fiber bumper every 5000 miles.

Timing:—Breaker contacts begin to separate when the piston entering power stroke reaches a position $1\frac{1}{4}$ inches (on the flywheel) before top dead center with the spark control lever in the fully advanced position. To set timing, crank engine until piston No. 1 reaches this position. The flywheel mark will then be opposite the indicator visible through crankcase opening.

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

Spark Plugs:—Spark plugs are Metric standard. Gaps are .025 inch.

VALVE TIMING:—Specifications:—Head diameter, 2 $\frac{1}{32}$ inches (inlet) and 1 $\frac{27}{32}$ inches (exhaust). Stem diameter, .373 inch (inlet), .371 (exhaust). Stem length, 6 inches (inlet), 6 $\frac{3}{4}$ inches (exhaust). Spring pressure, 100 pounds (inlet) and 75 pounds (exhaust). Tappet clearance, .004 inch (inlet), .006 inch (exhaust).

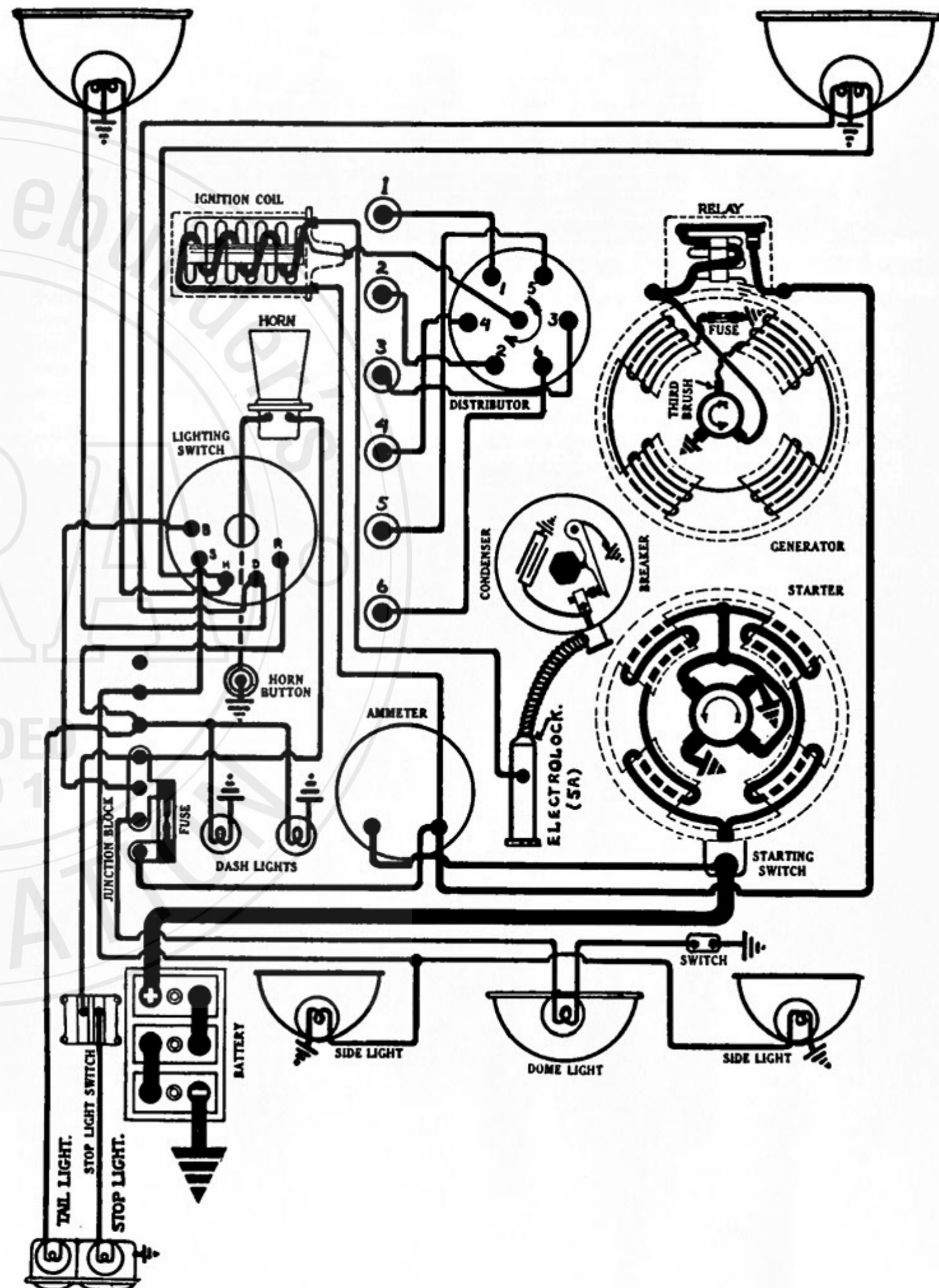
Timing:—Inlet valves open 7 degrees after top dead center and close 42 after lower dead center. Exhaust valves open 55 degrees before lower dead center and close 8 degrees after top dead center.

STARTER:—Model MUA-4002. Starter is connected to the engine through a sliding gear shift built in the starting switch. Pressing down on the starting pedal meshes the gears and closes the starting switch. When the pedal is released a spring reverses these operations. Starter brush tension should be 1 $\frac{3}{4}$ -2 $\frac{1}{4}$ pounds each. Starter cranks the engine at 110 R.P.M. taking 250 amperes at 5.5 volts.

Starter Data

Torque	R.P.M.	Volts	Amperes
0 lb. ft.	4200	6	50
2 lb. ft.	1500	5.3	130
4 lb. ft.	1000	5.0	200
6 lb. ft.	600	4.6	275
8 lb. ft.	450	4.2	340
22 lb. ft.	Lock	3.5	500

Oiling:—Starter has oilless graphite-bronze bearings. They require no attention.



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GENERATOR:—Model GAB-4008. The direction of rotation is counter-clockwise, looking at the commutator end. Generator current regulation is by third brush system. To adjust charging rate, remove commutator cover band and shift the third brush mounting plate by tapping on the mounting lug 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 mounting plate is held in any desired position by the friction between the mounting lug and the generator endplate. Maximum charging rate of 17.5 amperes is reached at 1300 R.P.M. of the generator.

Generator Data

Cold Test (72°F.)			Hot Test (206°F.)		
Amperes	Volts	R.P.M.	Amperes	Volts	R.P.M.
4.....	6.8.....	630	4.....	6.8.....	750
10.....	7.4.....	780	10.....	7.6.....	1000
14.....	7.8.....	950	13.....	8.0.....	1400
17.....	8.0.....	1300	11.....	7.8.....	2000
13.....	7.8.....	1950			

Motoring freely at 355-390 R.P.M. generator draws 4.7-5.2 amperes at 6 volts. Shunt field current is 6.1-6.8 amperes at 6 volts. Tested separately

each coil draws 24.4-27.2 amperes at 6 volts. Generator brush tension should 1.0-1.5 pounds.

Oiling:—Put 4 or 5 drops of light engine oil in each of the generator bearing oilers every two weeks or each 500 miles if the car is driven more than 500 miles in two weeks.

RELAY:—Model CB-4014. Relay is mounted on the generator. Relay contacts close at 545-625 R.P.M. when the generator voltage reaches 7-7.5 volts and open with a discharge current of 0-2.5 amperes. Charging current must not exceed 5 amperes at closing of contacts. Contacts separate .025-.035 inch. Air gap is .010-.030 inch with contacts closed.

LIGHTING:—Clum Switch Model 10717. Soreng Manegold Model 2550-A. Switch is mounted at the base of the steering column. Head lights are 6-8 volt, 21-21 cp. (double filament-double contact), Mazda No. 1110. Stop light is 6-8 volt, 21 cp. S.C. Mazda No. 1129. Side, dash and tail lights are each 6-8 volt, 3 cp. S.C. Mazda No. 63.

FUSES:—Generator field fuse is 7.5 amperes. Lighting fuse on junction block is 20 amperes.

