

ESSEX

AFTER MOTOR NO. 901906

Production Started June 1st, 1928

AUTO-LITE GENERATING, STARTING SYSTEM AUTO-LITE IGNITION

BATTERY:—Prest-O-Lite. Type 6-13-JFK. Starting capacity (20 minute rate) is 102 amperes for 20 minutes. Lighting capacity (5 ampere rate) is 5 amperes for 17 hours. The negative (—) terminal is grounded.

IGNITION:—Coil Model CE-4001. Distributor Model IGB-4014. Breaker contacts separate .018-.022 inch. They are made of tungsten. Resurface contacts with a fine flat jeweler's file or on a medium hard oilstone. Distributor is of the full automatic type. No manual advance is provided. Automatic advance begins at 400 R.P.M. (engine). Advance at 2800 R.P.M. (engine) is 10 degrees (engine) increasing to 12 degrees at 4000 R.P.M. Breaker arm spring tension is 24 ounces.

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 light engine oil on the breaker arm pivot pin every week or each 250 miles and 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 top dead center. To set timing, crank engine until piston No. 1 reaches this position. The D.C. mark on the flywheel will be opposite the lower edge of the motor support.

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

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

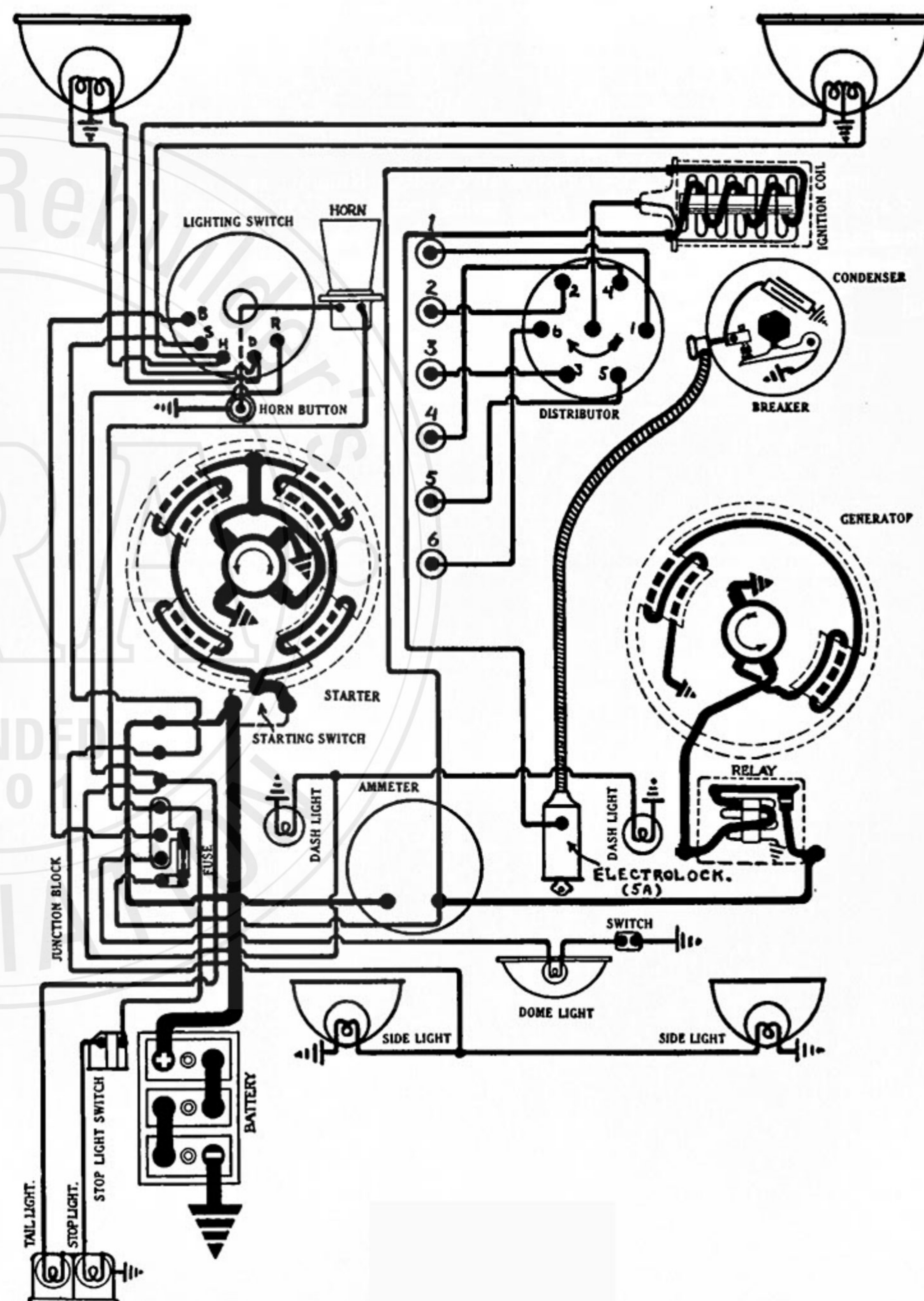
STARTER:—Model MZ-4005. Starter is connected to the engine through an inboard Bendix drive. The direction of rotation is counter-clockwise, looking at the commutator end. Brush spring tension is 2½-3 pounds each.

Starter Data			
Torque	R.P.M.	Volts	Amperes
0 lb. ft.	Free	6	
1.5 "	1800	5.2	150
2.5 "	1325	5.0	200
5.0 "	740	4.5	300
7.6 "	220	4.0	400
12.2 "	Lock	4.0	550

Mounting:—Starter is mounted by special flange at left of engine on forward side of flywheel case. To remove starter, disconnect starter cable and wire to junction block. Then remove three flange mounting screws and pull starter forward from place.

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

GENERATOR:—Model GAM-4101. The direction of rotation is counter-clockwise, looking at the commutator end. Generator current regulation is by third brush shunt field. To adjust the charging rate, remove the commutator cover band and shift the third brush by tapping on the 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 mounting bracket is held in any position by friction between the mounting lug and the endplate. The maximum charging rate is 17 amperes at 8 volts which is reached at 1350 R.P.M. or 25 miles per hour.



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Amperes	Volts	R.P.M.
0.....	6.5.....	550
2.....	6.9.....	600
5.....	7.1.....	650
10.....	7.8.....	800
14.....	7.9.....	950
17.....	8.0.....	1350

Motoring generator draws 5.5 amperes at 6 volts. Shunt field current is 6.5 amperes at 6 volts. Brush spring tension is $1\frac{1}{4}$ - $1\frac{1}{2}$ pounds each.

Mounting:—Generator is cradle mounted at right of engine. To remove generator, disconnect generator wire and loosen mounting strap. Then disconnect flexible coupling and lift generator from place.

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

RELAY:—Model CB-4015. Relay is mounted on the generator endplate. Relay closes at 550 R.P.M. when the generator voltage reaches 7-7.5 volts and opens with a discharge current of 0-2.5 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 10717. Soreng Manegold Switch Model 2550-A. The lighting switch is mounted at the base of the steering column. Head lights are 6-8 volt, 21-21 cp. (double filament-double contact). Side, dash and tail lights are 6-8 volt, 3 cp. S.C. Stop light is 6-8 volt, 21 cp. S.C.

FUSES:—Lighting fuse on the junction block is 20 amperes.

