

FLINT

MODEL E-80 (1927-28)

AUTO-LITE GENERATING, STARTING AND LIGHTING SYSTEM AUTO-LITE IGNITION COIL—DE JON DISTRIBUTOR

BATTERY:—U.S.L., Type 3-HVX-6X, 6 volt. Starting capacity is 127 amperes for 20 minutes. Lighting capacity is 5 amperes for 23.4 hours. The negative (—) terminal is grounded.

IGNITION:—Coil Model IG-4062. Distributor Model IA-4001. Breaker contacts separate .015 inch. They are made of tungsten. Resurface contacts whenever necessary with a fine flat contact file or on a medium hard oilstone.

Oiling:—Put 4 or 5 drops of light engine oil in the oiler on the side of the distributor housing every week or each 250 miles. Put a small bit of vaseline on the face of the breaker cam every month.

Timing:—Breaker contacts begin to separate when the piston entering power stroke reaches top dead center with the spark control lever and breaker assembly in the fully retarded position. To set timing, crank engine until piston No. 1 reaches top dead center on compression stroke (the upstroke with both valves closed). Loosen taper screw in center of breaker cam and rotate cam until contacts begin to separate. Tighten the screw. Make certain that the arrow on the cam points in the direction of rotation (clockwise).

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

Spark Plugs:—Spark plug diameters are $\frac{7}{8}$ inch. Gaps are .025 inch.

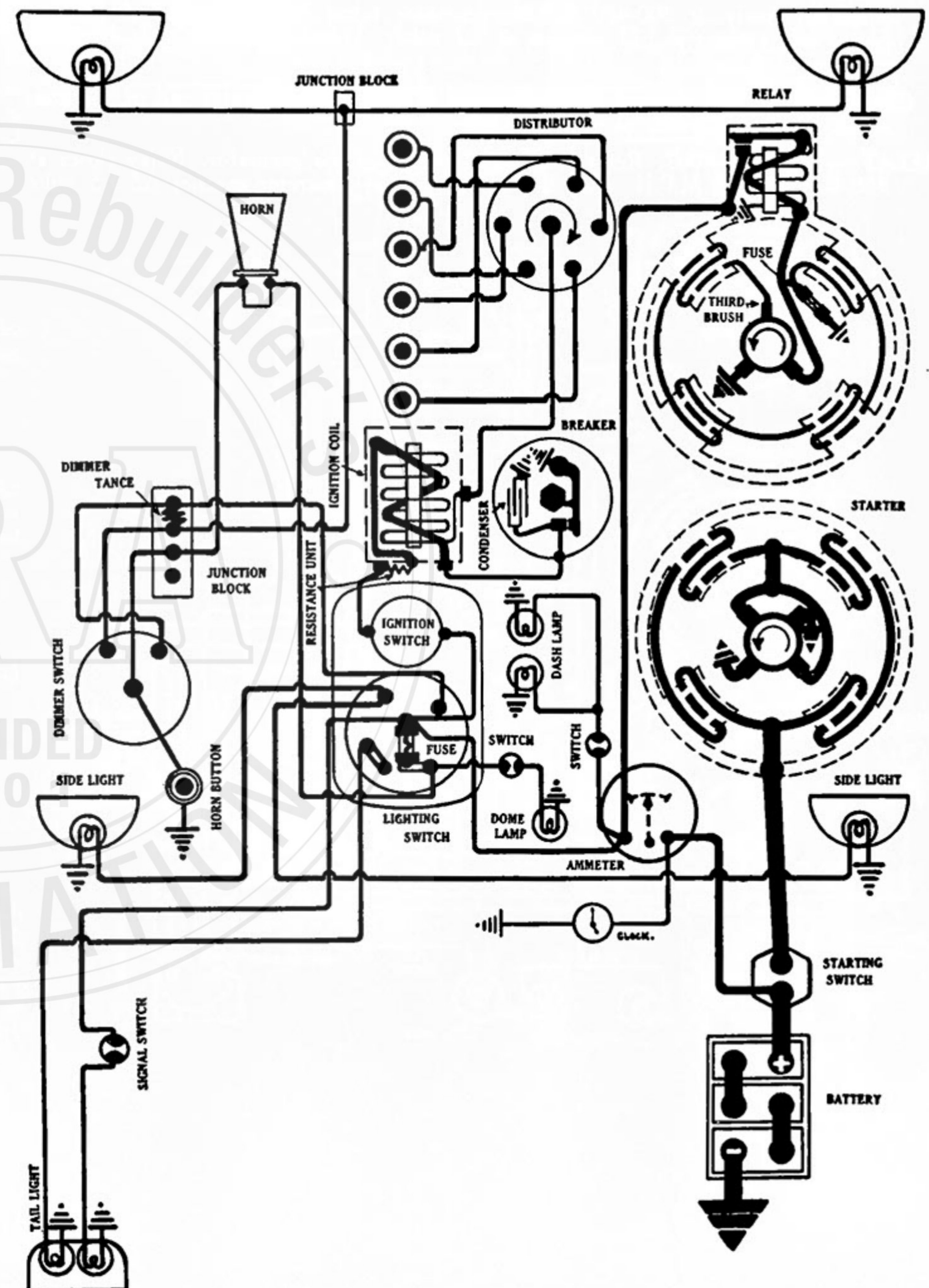
STARTER:—Model MN-4110. Starter is connected to the engine through a Bendix drive. The direction of rotation is counter-clockwise, looking at the commutator end. Starter brush tension should be $1\frac{1}{4}$ - $1\frac{1}{2}$ pounds each. Starter cranks the engine at 160 R.P.M., taking 180 amperes at 5.2 volts.

Starter Data

Torque	R.P.M.	Volts	Amperes
0 lb. ft.	Free	5.5	45 (No Bendix)
0 "	Free	5.5	50 (With Bendix)
0.5 "	2800	5.5	100
1 "	2100	5.2	130
2 "	1600	5.1	180
2.4 "	1450	5	200
4 "	1100	4.6	265
4.8 "	950	4.5	300
7.2 "	650	4	400
13.5 "	Lock	3	540

Oiling:—Put 4 or 5 drops of light engine oil in the oiler on the drive end of the starter every month or each 100 miles.

GENERATOR:—Model GRA-4101. The direction of rotation is counter-clockwise, looking at the commutator end. Generator current regulation is by the third brush system. To adjust charging rate, remove commutator cover band and shift third brush mounting stud by prying with a screwdriver. Shifting the third brush in the direction of armature rotation increases the charging rate and in the opposite direction decreases the charging rate. Maximum charging rate is 16 amperes, reached at 1300 R.P.M. or 24 M.P.H.



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Generator Data

Cold Test			Hot Test		
Amperes	Volts	R.P.M.	Amperes	Volts	R.P.M.
0.....	6.4.....	400	0.....	6.5.....	480
2.....	6.6.....	450	2.....	6.8.....	575
5.....	6.9.....	550	5.....	7.1.....	650
10.....	7.4.....	700	10.....	7.6.....	950
15.....	7.85.....	1100	12.....	7.7.....	1200
16.....	8.....	1300	10.....	7.5.....	2200
10.....	7.6.....	2200			

Motoring freely at 150 R.P.M. generator draws 5 amperes at 6 volts. Shunt field current is 2.5 amperes at 6.2 volts. Tested separately each coil draws 9.6 amperes

at 6 volts. Brush spring tension should be $1\frac{1}{4}$ - $1\frac{1}{2}$ pounds each.

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-4007. Relay is mounted on the generator. Relay contacts close at 7.5 M.P.H. when the voltage of the generator reaches 6.4-7.5 volts and opens with a discharge current of .5-2.5 amperes. Contacts separate .025-.035 inch. Air gap between relay armature and coil core is .010-.030 inch, contacts closed.

LIGHTING:—Clum Switch Model 10549. Head and stop lamps are each 6-8 volt, 21 cp. S.C. Dash, dome, tail and side lamps are each 6-8 volt, 2 cp. S.C.

FUSES:—Generator field fuse is 5 amperes. Lighting fuse is 20 amperes.

