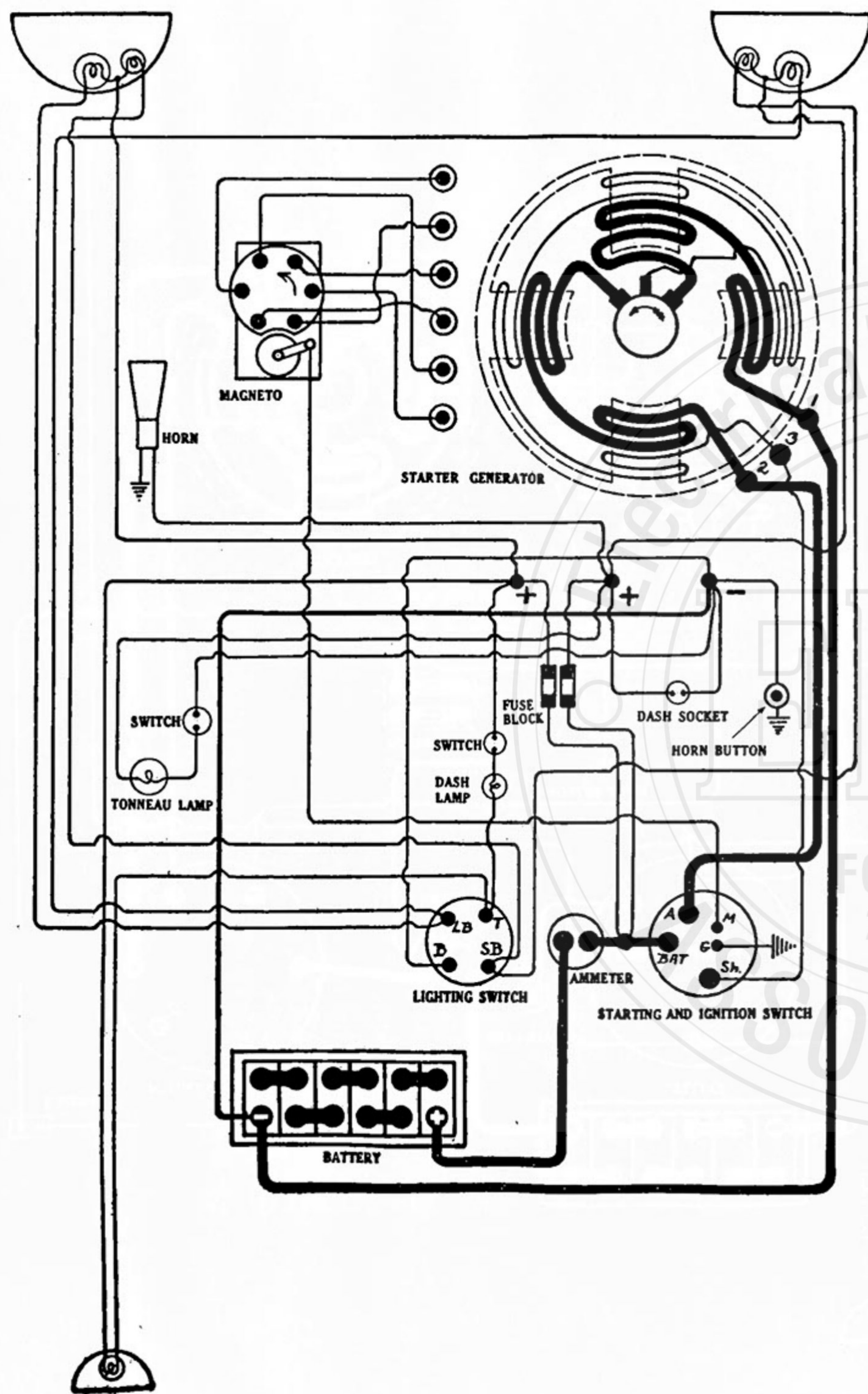




HOLMES

MODELS 1, 2, 3, 4 (1918-19-20-21)

DYNETO GENERATING, STARTING AND LIGHTING SYSTEM EISEMANN MAGNETO IGNITION

BATTERY.—Willard (1918-19). 12 volt, 100 ampere hour. (1920-21) Type SJR-27. 12 volt, 80 ampere hour. The two wire system is used.

IGNITION.—Eisemann, Type GSA-6. Breaker contacts separate .012 to .015 inch. When the condition of the contacts affects the ignition, resurface with a fine, flat jeweler's file or worn No. 00 sandpaper.

OILING.—Put 2 or 3 drops of light engine oil in each of the magneto oilers every month. If the car is driven more than 1000 miles in a month, the oiling must be done every 1000 miles.

TIMING.—Breaker contacts begin to separate when the top dead center mark on the fly-wheel is $1\frac{1}{2}$ inches before the indicator, spark control in the fully retarded position.

FIRING ORDER.—The firing order is 1, 4, 2, 6, 3, 5.

SPARK PLUG GAPS.—Spark plug gaps are .028 inch.

STARTER-GENERATOR.—Model K4R. Starter-generator is connected to the engine through a chain drive. Starter cranks the engine at 200 R.P.M., current being 60 amperes. Lock torque is 40 pound-feet, current being 210 amperes, at 10.5 volts. Torque at 400 R.P.M. is 9 pound-feet, current being 60 amperes at 11 volts. Running freely starter current is 6.5 amperes at 11.5 volts, armature revolving at 700 R.P.M.

GENERATOR.—Generator current regulation is by third brush system. Maximum charging rate is 12 amperes, reached at 1650 R.P.M. of the armature or 18-20 miles per hour. Generator begins to supply current at 850 R.P.M. of the armature or 9-10 miles per hour.

Amperes	Generator Data	R.P.M.
0		850
5		975
12		1650
8		4000

Oiling.—Put 4 or 5 drops of light engine oil in each of the starter-generator oilers every two weeks. If the car is driven more than 500 miles in two weeks, this oiling must be done every 500 miles.

RELAY.—There is no relay. The circuit between the generator and battery is controlled by the starting and ignition switch.

LAMPS.—Head lamps are 12-16 volt, 21 cp. Dimmer lamps are 12-16 volt, 6 cp. Dash and tail lamps are 12-16 volt, 2 cp. On the 1918-19-20 cars head lamps are 12-16 volt, 30 cp.

FUSES.—Fuses are 15 ampere.