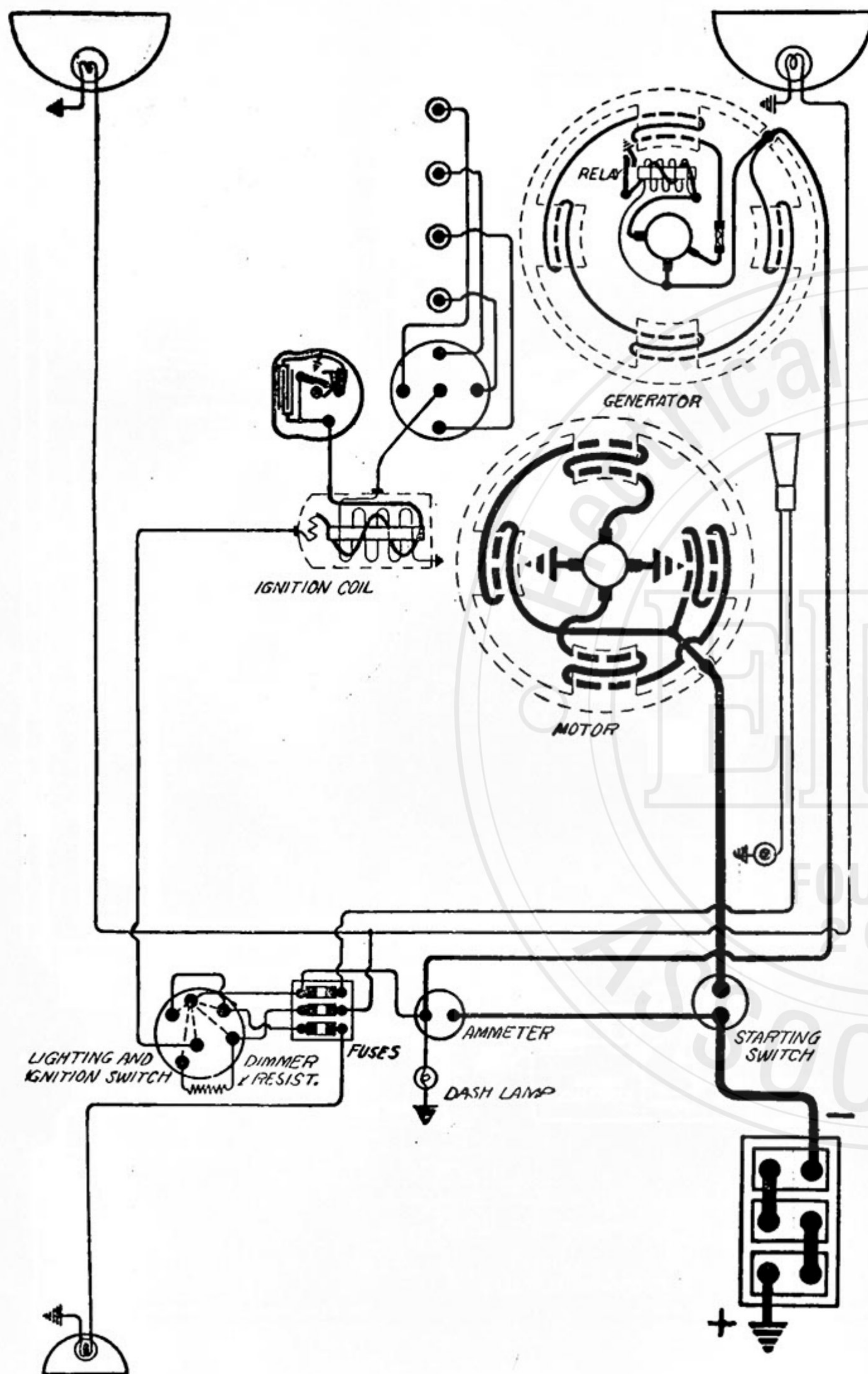




HUPMOBILE

SERIES R-2 (1919) SERIAL NOS. 15000 TO 20000

SERIES R-3 (1920) SERIAL NOS. 20000 TO 30000

SERIES R-4 (1920) SERIAL NOS. 30001 TO 40000

SERIES R-5 (1921) SERIAL NOS. 40,001 TO 55,000

WESTINGHOUSE GENERATING, STARTING AND LIGHTING SYSTEM ATWATER KENT IGNITION

BATTERY:—Willard (1919-20) Type SJRN-3, 6 volt, 90 ampere hour. (1921) Type SJRN-4, 6 volt, 120 ampere hour. The positive (+) terminal is grounded.

IGNITION:—Type CC. Breaker contacts separate .006 inch. They are made of tungsten. When the condition of the contacts affects the ignition remove and resurface with fine emery cloth or against the flat side of an emery wheel, finishing on a hard oil stone. Ignition current is 3.5-4 amperes, engine idle, breaker contacts and ignition switch closed.

OILING:—Remove the distributor cap every two weeks, and put 4 or 5 drops of light engine oil in the oil hole exposed. Apply a small amount of vaseline to the cam, with a toothpick. If the car is driven more than 500 miles in two weeks, these attention must be given every 500 miles.

TIMING:—Breaker contacts begin to separate when the top dead center mark on the fly wheel is 2 inches past the indicator, spark control lever and breaker assembly midway between the fully retarded and fully advanced positions.

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

SPARK PLUG GAPS:—Spark plug gaps are .022 inch.

STARTER:—Frame 100. Starter is connected to the engine through a Bendix drive. Lock torque is 12 pound-feet, current being 475 amperes at 4 volts. Torque at 160 R.P.M. is 1.75 pound-feet. Running freely, armature revolves at 4000 R.P.M., current being 50 amperes. Starter cranks the engine at 125 R.P.M., taking 140 amperes.

OILING:—Put 5 or 6 drops of light engine oil in each of starter bearing oilers every month.

GENERATOR:—Frame 760. Generator current regulation is by third brush system. Maximum current output is 15-17 amperes at 1250 R.P.M., of the armature or 2 miles per hour.

Cold Test		Generator Data		Hot Test	
Amperes	R.P.M.	Amperes		R.P.M.	
0	450	0		500	
8	675	6		725	
12	840	9		850	
15-17	1250	11-13		1250	
10	2000	7-8		2000	

The cold test readings are obtained with a generator temperature under 95°F. The hot test readings are obtained after generator has been operated one hour at 1800 R.P.M., charging a half-charged battery. Shunt field current is 2.8 to 3.25 amperes at 6-6.6 volts.

OILING:—Put 5 or 6 drops of light engine oil in each of the generator bearing oilers every two weeks. If the car is driven more than 500 miles in two weeks, the oiling must be done every 500 miles.

RELAY:—Relay is mounted in generator frame. Relay closes at 450-500 R.P.M. of the armature or 7-9 miles per hour and opens at 400-450 R.P.M. of the armature or 5-7 miles per hour. Charging current is 1-2 amperes at closing, and the discharge current 0-2 amperes at the opening of relay. Contacts separate .013 to .018 inch. Air gap between relay armature (moving member) and coil core is .031 inch, contacts separated. Clean relay contacts by drawing unglazed paper between them. If badly burned or pitted, resurface with well worn No.00 sandpaper. Remove all grit. Adjust before again putting into service.

LAMPS:—Head lamps are 6-8 volt, 15 cp. Dash lamp is 6-8 volt, 2 cp. Tail lamp is 6-8 volt, 2 cp.

FUSES:—Generator field fuse is 5 ampere, short length. Horn and lighting circuit fuses are 10 ampere.