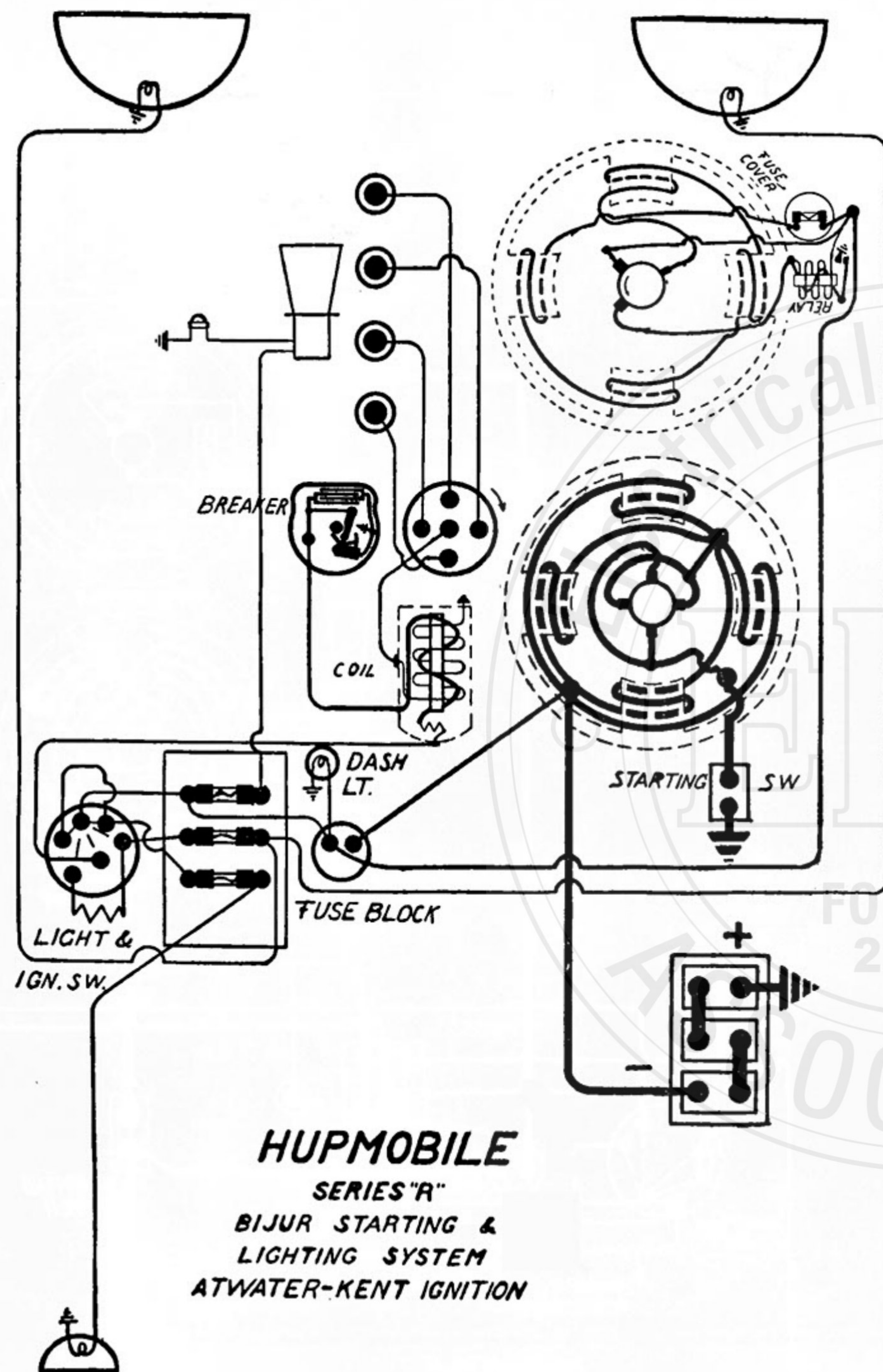




HUPMOBILE

MODEL R-1 (1917-18) R-2 (1918-19)

BIJUR GENERATING, STARTING AND LIGHTING SYSTEM

ATWATER KENT IGNITION

BATTERY.—Battery is 6 volt, 85 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.

OILING.—Every two weeks, remove the distributor head and put 4 or 5 drops of light engine oil in the oil hole exposed. Put a small amount of vaseline on the cam, applying with a toothpick. If the car is driven more than 500 miles in two weeks, these attentions must be given every 500 miles.

TIMING.—Breaker contacts begin to separate when the top dead center mark on the flywheel 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.—Type FD-140, M-993 or M-1197. Starter is connected to the engine through a Bijur automatic pinion shift. Rotation is counter-clockwise, looking at commutator end.

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

GENERATOR.—Type P-210, M-863 or M-1196. Rotation is counter-clockwise, looking at commutator end. Generator current regulation is by third brush system. Maximum current output is 12-15 amperes, reached at 20-25 miles per hour or 1800 R.P.M. of the armature. Charging rate is varied by inserting a special toothed wrench in the adjusting hole in the commutator end plate and moving the third brush assembly through a ratchet engagement. Turn the wrench in a clockwise direction to increase the charging rate, and in a counter-clockwise direction to decrease the charging rate.

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

TO REMOVE GENERATOR.—Remove the hexagonal-headed plug which extends from the front, right-hand, top side of the chain case, viewed from the front of the car. Then screw a $\frac{3}{8}$ by 16 U.S.S. bolt or cap screw into the hole until it bears firmly against the chain in order to prevent any movement of the chain or cam shaft gear. Next remove the circular cover plate at rear of generator on the front side of the chain case. The bolts holding this plate in place extend beyond the chain case and can be reached from above and removed without taking off the dust pan. Loosen the three bolts holding the generator to the crank case. Gently pull the generator away from the crank case but not far enough to allow the driving chain to slip off the pinion on the rear of the shaft. Then run a wire through the opening of the chain and over the top of the case to prevent the chain falling to the bottom of the case. Generator may then be removed. Make sure that the set screw is removed and the plug replaced after the generator is again installed.

RELAY.—Relay closes at 8-10 and opens at 6-8 miles per hour. To adjust relay connect a voltmeter across the main brushes of the generator, and slowly speed up the engine. Insert the special socket wrench in the adjusting hole in the top of the relay cover and vary the spring tension until the relay closes when the voltmeter indicates 6.5 volts. 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 and tail lamps are 6-8 volt, 2 cp.

FUSES.—Lighting circuit fuses are 10 ampere. Generator fuse is 10 ampere.