

HUPMOBILE

SERIES N (1917) SERIAL NOS. 75,001 TO 87,519
SERIES R (1918) FIRST CARS
WESTINGHOUSE GENERATING, STARTING AND LIGHTING SYSTEM
ATWATER KENT IGNITION

BATTERY.—Battery is 6 volt, 100 ampere-hour. The positive (+) terminal is grounded.

IGNITION.—Type K2. Breaker contacts separate .010 to .012 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.—Put a drop of light engine oil on each of the wearing parts of the breaker and 4 or 5 drops in the oil hole beside the notched shaft every two weeks. 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 attentions must be given every 500 miles.

TIMING.—Breaker contacts 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.—Frame 700. Starter is connected to the flywheel through a pinion shifted by the operator. Lock torque is 12.5 pound-feet, current being 400 amperes. Torque at 1200 R.P.M. is 2.5 pound-feet.

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

GENERATOR.—Frame 400-R. Generator voltage regulation is by vibrating regulator. Maximum charging rate is 16-20 amperes, decreasing to 5-6 amperes as battery becomes fully charged.

Generator Data

Battery Charging Current without Lamp Load			Battery Charging Current with 7 ampere lamp load		
Amperes	Volts	M.P.H.	Amperes	Volts	M.P.H.
2	6.5	10	0	6.3	12.5
8	6.5	15	4	6.5	15.0
12	7.0	20	6	6.6	20.0
12	7.0	25	7	6.7	25.0

Above tests are obtained with the generator charging a battery of 1.250 solution. The difference between the voltage of the generator at 1200 R.P.M. with a 15 ampere load, and at 1200 R.P.M. with no load, must be not less than .7 volt or greater than 1 volt. If a greater variation is obtained the regulator air gaps are incorrect or clogged.

OILING.—Put 4 or 5 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.

RELAY-REGULATOR.—Relay and regulator are combined into one unit. Relay closes at 8-10 miles per hour or 575 R.P.M. of the armature and opens at 7-9 miles per hour or 500-525 R.P.M. of the armature. The charging current is .5 to 1 ampere at closing and the discharge current is 1-3 amperes at the opening of relay contacts. Air gap between relay armature (moving member) and coil core is .055 to .060 inch. Air gap between regulator armature and coil core is .045 to .055 inch. Adjust relay by bending the two prongs at the end of the moving member. Adjust regulator by turning thumb screw. Regulator must be adjusted to give the results specified above under "Generator". Clean relay and regulator 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.—Fuses are 10 ampere.

