

HUPMOBILE

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

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

SERIES R-5 (1921) SERIAL NOS. 40001 TO 55000

SERIES R-5 (1922) SERIAL NOS. 55001 UP

SERIES R-6, 7, 8, 9, 10, 11 (1922)

WESTINGHOUSE GENERATING, STARTING AND LIGHTING SYSTEM

ATWATER KENT IGNITION

BATTERY:—Willard. Type SJRG-4. 6 volt, 117½ ampere-hour. The positive (+) terminal is grounded.

IGNITION.—Type CC. Breaker contacts separate .006 to .008 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 oilstone. 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 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 .020 to .022 inch.

STARTER:—Frame No. 33A.B. Style 298,808. The direction of rotation is counter-clockwise, looking at the commutator end. Running free the starter armature revolves at 3700-4100 R.P.M., taking 70 amperes at 5.5 volts. The torque at 1600 R.P.M. is 1.75 pound-feet, the current being 150 amperes at 5.5 volts. The lock torque is 12 pound-feet at 4 volts, the current being 500 amperes. The pressure of the brushes on the commutator is 1 to 1½ pounds.

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

GENERATOR:—Frame 760. Style 275,601. Generator current regulation is by the third brush system. Maximum current output is 10-12 amperes (hot) at 1250 R.P.M. of the armature, or 20-25 miles per hour.

Cold Test		Generator Data		Hot Test	
Amperes	R.P.M.	Amperes	R.P.M.	Amperes	R.P.M.
0	450	0	500		
8	675	6	725		
15-17	1250	10-12	1250		
12	840	9	850		
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 6.0 to 6.6 volts. Operating as a motor the generator takes 5.0 amperes at 6.0 to 6.3 volts.

Oiling:—Put 5 or 6 drops of light engine oil in the commutator end bearing oiler every two weeks. If the car is driven more than 500 miles in two weeks the oiling must be done every 500 miles.

RELAY.—Style 262,982. Relay is mounted in the generator frame. Relay closes at 10 miles per hour or 500 R.P.M. of the armature, or at a voltage of the generator of 6.5 volts, and opens when there is a discharge of from 0 to 3 amperes. The contacts separate .030 to .035 inch. The air gap between the relay armature and the coil core is .005 inch, contacts closed. 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, 21 cp. Dash and tail lamps are 6-8 volts, 2 cp.

FUSES:—Lighting circuit fuses are 10 amperes. Generator field fuse is 5 amperes.

