



GARDNER

MODEL R.T.S. SERIES 5 (1923-24-25)

WESTINGHOUSE GENERATING, STARTING AND LIGHTING SYSTEM

WESTINGHOUSE IGNITION

BATTERY.—Willard, Type SW-4, 6 volt, 94 ampere-hour. The positive (+) terminal is grounded.

IGNITION.—Type S. C. Coil Model No. 288,761. Distributor Model No. 290,356. Breaker contacts separate .008 to .012 inch. They are made of tungsten. When the pitting of the contacts affects the ignition, remove and resurface with a medium oil-stone. The bumper of the contact spring is $\frac{1}{8}$ inch off center from the line through the center of the shaft and terminal screw, this offset being opposite to the direction of rotation of the cam. The above adjustment is made by bending the solid arm at the terminal block. A pull of 20 to 25 ounces, applied to the movable contacts, is required to separate the contacts .020 inch. This spring pressure is adjusted by bending the solid arm at the point of contact with the contact spring. Resistance of the primary winding and ballast of the ignition coil is 1 ohm. Resistance of the secondary winding is 3700-4700 ohms.

Oiling.—Put 4 or 5 drops of light engine oil in the oiler at the side of the breaker box every two weeks. If the car is driven more than 500 miles in two weeks, the oiling must be done every 500 miles.

Timing.—Breaker contacts begin to separate when the piston entering power stroke is 20° after top dead center, spark control lever and breaker assembly in the fully retarded position. Advance, 30° before top dead center.

Firing Order.—The firing order is 1, 3, 4, 2.

Spark Plug Gaps.—Spark plug gaps are .025 inch.

STARTER.—Frame Number 100. Style No. 297,903. Rotation of starter armature, looking at commutator end, is counter-clockwise. Starter is connected to engine through a Bendix drive. Starter cranks engine at 115 R.P.M., developing a torque of 2.2 lb. ft.

Starter Test Data			
Torque	R.P.M.	Volts	Amperes
0 lb. ft.	4100-4700	5.5	35-45
12 lb. ft.	0	4.0	475

Brush tension should be $\frac{1}{4}$ to $\frac{1}{2}$ pounds.

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

GENERATOR.—Frame No. 35-AT. Model 331,328. The direction of rotation, looking at commutator end, is counter-clockwise. Generator current regulation is by the third brush system. Maximum current output is 17 amperes, reached at 1500 R.P.M. of armature. Brush tension at $\frac{1}{4}$ to $\frac{1}{2}$ pounds per brush.

Cold Test			Hot Test		
Amperes	Volts	R.P.M.	Amperes	Volts	R.P.M.
0	6.5	500			
8	8.0	750	10	8.0	1200
15-16	8.0	1600			

To increase the charging rate, shift the third brush in the direction of armature rotation and to decrease charging rate shift the brush in the opposite direction.

Oiling.—Put 5 or 6 drops of light engine oil in 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.—Westinghouse Model 301,210-A. Relay is mounted on generator frame. Relay closes at 500 R.P.M. of the armature or at 0 to 2 amperes. Relay contacts separate .030 inch to .035 inch. Adjust air gap between relay armature and coil core to .005 inch, contacts closed.

LAMPS.—Head lamps are 6-8 volt, 21 cp. Dash and tail lamps are 6-8 volt, 2 cp.

FUSES.—Generator fuse is 5 ampere. Lighting circuit fuses are 20 ampere.

