

FORD

1921-1922

LIBERTY GENERATING, STARTING AND LIGHTING SYSTEM FORD IGNITION

BATTERY.—Ford, Exide, U. S. L., or Prest-O-Lite, 6 volt, 80 ampere-hour. The negative (—) terminal is grounded.

IGNITION:—The magneto is carried in the flywheel housing. There should be a clearance of .031 inch between the coil cores and the magnet pole pieces. The magneto delivers alternating current to four vibrator ignition coils, one connected to each spark plug, as the timer closes the circuit in the proper sequence. When the vibrator arm is held down, the contacts should separate .030 inch. If the contacts are badly burned or pitted, resurface with a fine, flat jeweler's file or on a medium hard oilstone. Coils should be adjusted to draw 1.3 amperes at 6 volts.

Oiling:—Put several drops of light engine oil in the spring oiler of the timer every two weeks. In cold weather a mixture of $\frac{1}{4}$ kerosene and $\frac{3}{4}$ light engine oil should be used.

Timing:—Timer roller should just make connection with segment connected to Number 1 coil when the piston in Number 1 cylinder is on top dead center of the power stroke, spark control lever and timer housing in the fully retarded position.

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

Spark Plug Gaps:—The spark plug gaps are .030 to .032 inch.

STARTER:—Type F.A. Starter is connected to the engine through a Bendix drive. The direction of rotation is counter-clockwise, looking at the commutator end. Starter cranks the engine at 150 R.P.M., taking 160 amperes at 5 volts.

Starter Data—F.A.			
Torque	R.P.M.	Volts	Amperes
1 lb. ft.	2500	5.5	125
5 lb. ft.	1050	4.4	330
9 lb. ft.	425	3.6	465
13 lb. ft.	Lock	3.0	580

Oiling:—Starter requires no oiling.

GENERATOR:—Type F.A. Generator current regulation is by the third brush system. Direction of rotation is counter-clockwise, looking at the commutator end.

Generator Data—F.A.		
Amperes	Volts	R.P.M.
4.1	6.6	800
9.0	7.4	1100
11.5	7.9	1400
12.5	8.2	1700
11.0	8.1	2000

Charging rate is varied by adjustment of the third brush setting. Loosen the clamp nut holding the third brush holder. Move third brush in the direction of armature rotation to increase the charging rate, or in the opposite direction to decrease the charging rate. Clamp the third brush after position adjustment. The generator fields draw 2.4 amperes at 6 volts.

Oiling:—Put 4 or 5 drops of light engine oil in the rear generator bearing oiler every two weeks. If the car is driven more than 500 miles in 2 weeks, the oiling must be done every 500 miles.

RELAY:—Relay is mounted on the generator frame. Relay closes at 600-650 R.P.M. of armature or 8-10 miles per hour, and opens at 550-600 R.P.M. of armature or 6-8 miles per hour, the discharge current being 0-2 amperes. Relay contacts separate .032 inch. If badly burned or pitted resurface with worn No. 00 sandpaper. Remove all grit. Adjust before again putting into service.

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

