

Willys-Knight

Model 84 (1916)

Auto-Light Starting and Lighting System.
Dixie Magneto Ignition.

Battery.—Battery is 6 volt, 115 ampere-hour. The positive (+) terminal is grounded at the starting motor.

Ignition.—Instructions for the care of the magneto are given on Page No. 189.

Timing.—Contacts should open .020 inch. Magneto should be timed so that when the mark $\frac{1+4}{T.C.}$ on the flywheel is $2\frac{1}{4}$ inches past the indicator, spark control lever and breaker assembly in the fully retarded position, breaker contacts will be just beginning to separate.

Care.—Should they become badly burned or pitted, resurface them with a very fine flat jeweler's file, or a small strip of worn No. 00 sand paper.

Spark Plug Gaps.—Spark plug gap should be .020 inch.

Firing Order.—The firing order is 1, 3, 4, 2. A simple change to aid starting is described on Page No. 51.

Oiling.—Put 3 or 4 drops of light machine oil in each of the magneto oilers once every two weeks or 500 miles. Put one or two drops of oil on the contact lever pivot at the same time. Apply this oil with a toothpick so as not to get on too much.

Starter.—The starter is connected to the engine through a Bendix drive. Motor bearings are packed with a soft cup grease. The bearings should be cleaned and repacked with grease once every season. Should the pinion jam and remain meshed with the flywheel gear, close starting switch for an instant and then turn engine quickly by hand crank. This method will nearly always loosen pinion after several trials. Use only the special copper-carbon composition brushes furnished by the manufacturers. Ordinary carbon brushes will cause trouble.

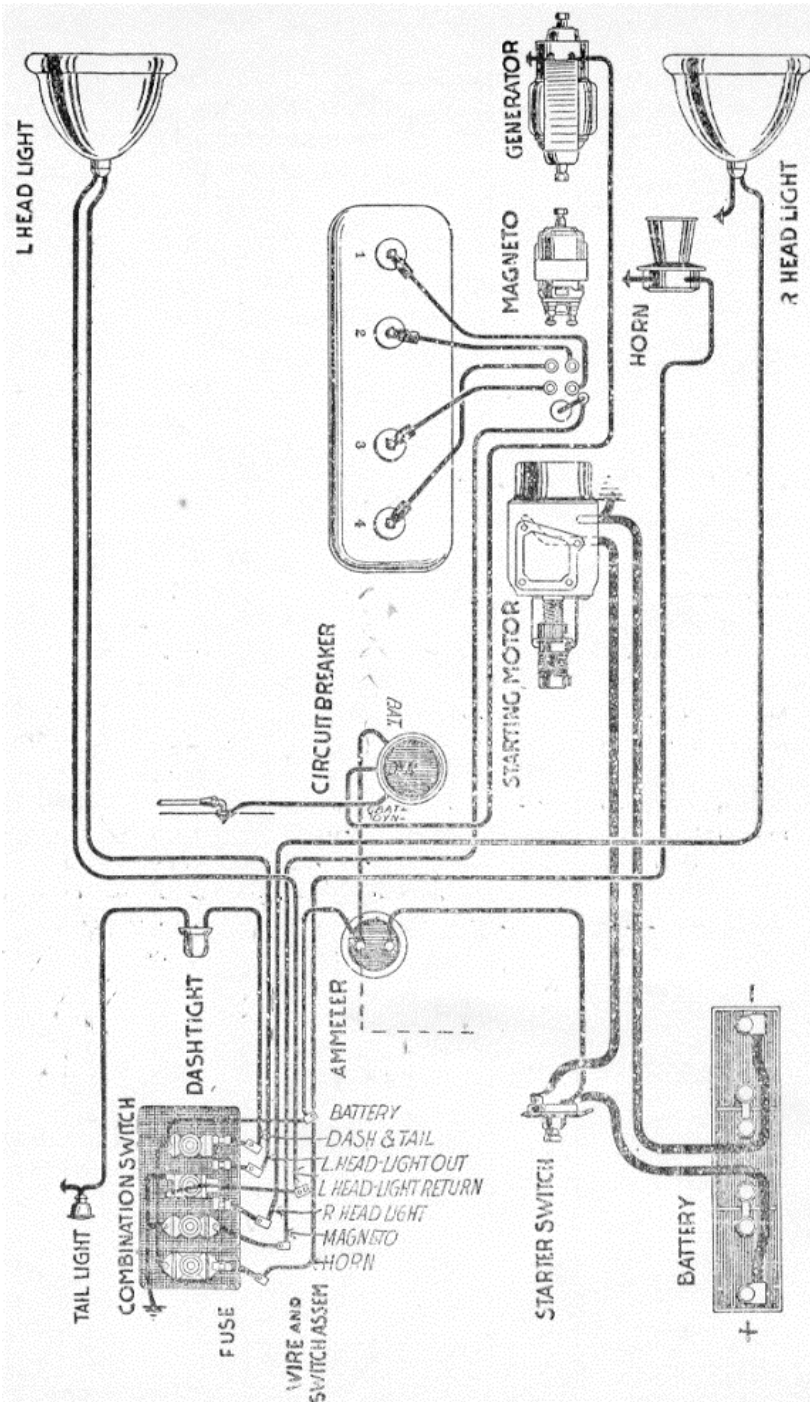
Generator.—Generator voltage regulation is by reverse series winding. Relay should close at $7\frac{1}{2}$ miles per hour.

Output.—The maximum generator output should be about 14 amperes reached at 20 miles per hour. The output should be about 10 amperes at 15 miles per hour.

Oiling.—Generator bearings are packed with soft cup grease. The bearings should be thoroughly cleaned and repacked with grease at least once a season. Every two weeks or 1000 miles put a drop of oil in each of the bearings to keep the grease soft. Use only the special copper-carbon composition brushes furnished by the manufacturer. Ordinary carbon brushes will cause trouble. Spring should have just enough tension on brushes to ensure a good contact with the commutator. Generator terminals must be connected if generator is to be operated with battery disconnected.

Lamps.—Head lamps are 6-8 volts, 15 cp. Side lamps are 6-8 volts, 4 cp. Dash and tail lamps are in series. They are each 3-4 volts, 2 cp. All other lamps are 6-8 volts, 4 cp.

Fuses.—Fuses are of 20 amperes capacity.



The dotted line leading from the ammeter leads to body lighting circuit