

# Overland

## Model 90 (1918)

### Auto-Lite Starting and Lighting System Connecticut Ignition

**Battery.**—Battery is 6 volt, 80 ampere-hour. The negative (—) terminal is grounded at the starting motor.

**Ignition.**—Breaker contacts should separate .016 inch to .018 inch. They are made of tungsten. They will operate properly even though quite rough. Should they become badly worn, affecting the ignition, the inner breaker mechanism should be renewed as directed on Page 50. In an emergency, contacts may be resurfaced enough to give service for 300 or 400 miles by drawing a piece of fine emery cloth between them.

**Timing.**—Contacts should begin to separate when the top dead center mark "1-4 U.P" on the flywheel is  $1\frac{1}{4}$  inch past the indicator, spark control lever and breaker assembly in the fully retarded position.

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

**Spark Plug Gaps.**—Spark plug gaps should be about .023 inch.

**Ignition Thermostat.**—There is a thermostat or automatic overload release in the ignition switch. If the ignition switch is left on, with the engine idle, the thermostat will open the circuit after a short time. Cars having serial number below 107,706 are equipped with the device described on Page 41. Cars above this number have the new type switch. In this device, the current flowing through the heavy winding heats the blade sufficiently to cause it to bend, separating the contacts. This causes the current to flow through the other, fine coil, heating it. This causes the blade to bend away, releasing the latch which holds the ignition switch "On". The device should operate within 3 minutes after engine is stopped, contacts closed. With proper adjustment it will act in 10-15 seconds.

**Starter.**—Starter is connected to the engine through a Bendix drive. Cold engine, heavy oil, tight bearings or other obstructions or damp, grounded or short circuited motor windings or commutator bars will cause low speed and excessive current during the cranking operation.

**Oiling.**—Clean and repack starter bearings with soft cup grease every six months. Put in one or two drops of oil every month to keep grease soft.

**Generator.**—Generator current regulation is by third brush system. Relay contacts should close at 550-600 R. P. M., of generator armature. Charging current should be .5 to 1.5 amperes at closing and 0 to 1 ampere at opening of relay contacts.

GENERATOR DATA, MODEL GH

Amperes	R. P. M.
5	760-820
10	1020-1100
12.5	1200-1300
15	1460-1675
15-17	1950-2250

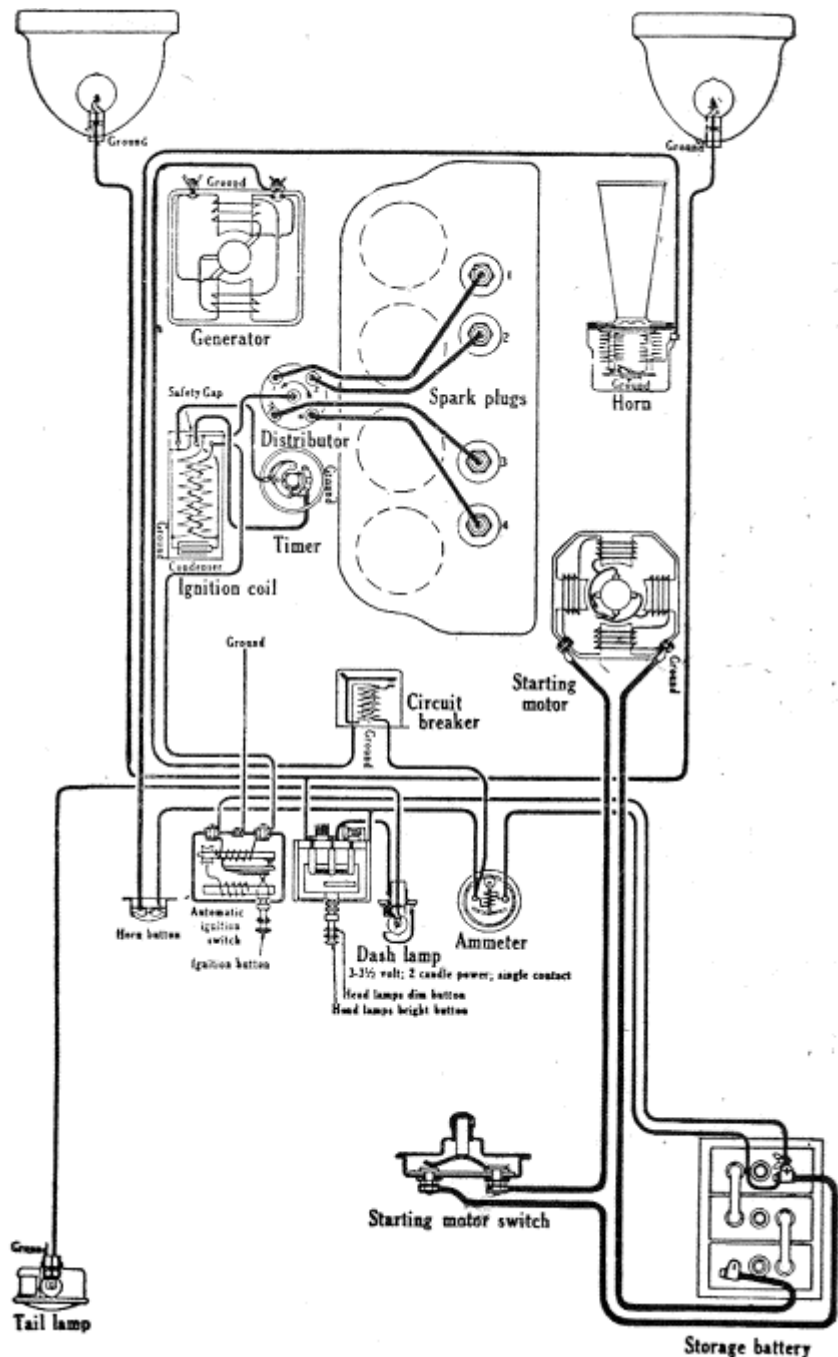
If operated freely as a motor, generator should take 2.7 amperes, armature revolving at 450 R. P. M. Much higher speed indicates damp, grounded or short circuited field coils. Greater current or lower speed indicates tight bearings or damp, grounded or short circuited armature windings or commutator. Periodic swinging of the ammeter needle indicates grounded or short circuited armature coils or commutator bars. Shunt field should take about 1.7 amperes.

**Oiling.**—Put 5 or 6 drops of light engine oil in each of the generator oilers every two weeks. If car is driven more than 500 miles in two weeks, the oiling must be done every 500 miles.

**Lamps.**—Head lamps are 6-7 volts, 16 cp. Dash and tail lamps are in series. They are each 3-3.5 volts, 2 cp.

**Fuses.**—Fuse is 20 ampere.

**Model Numbers.**—Generator is Model GH 1006. Starter is Model MF 1086. Battery is USL CD 311. On some of the early cars, Gould B 7675 or Willard OLBA battery was used.



# Overland Light Four and Country Club

AUTO-LITE STARTING AND LIGHTING SYSTEM. CONNECTICUT IGNITION

Battery is 6-volt, 75 ampere-hour. It will supply current to lights for 18 hours when they are bright, and from 30 to 35 hours when head lights are dim.

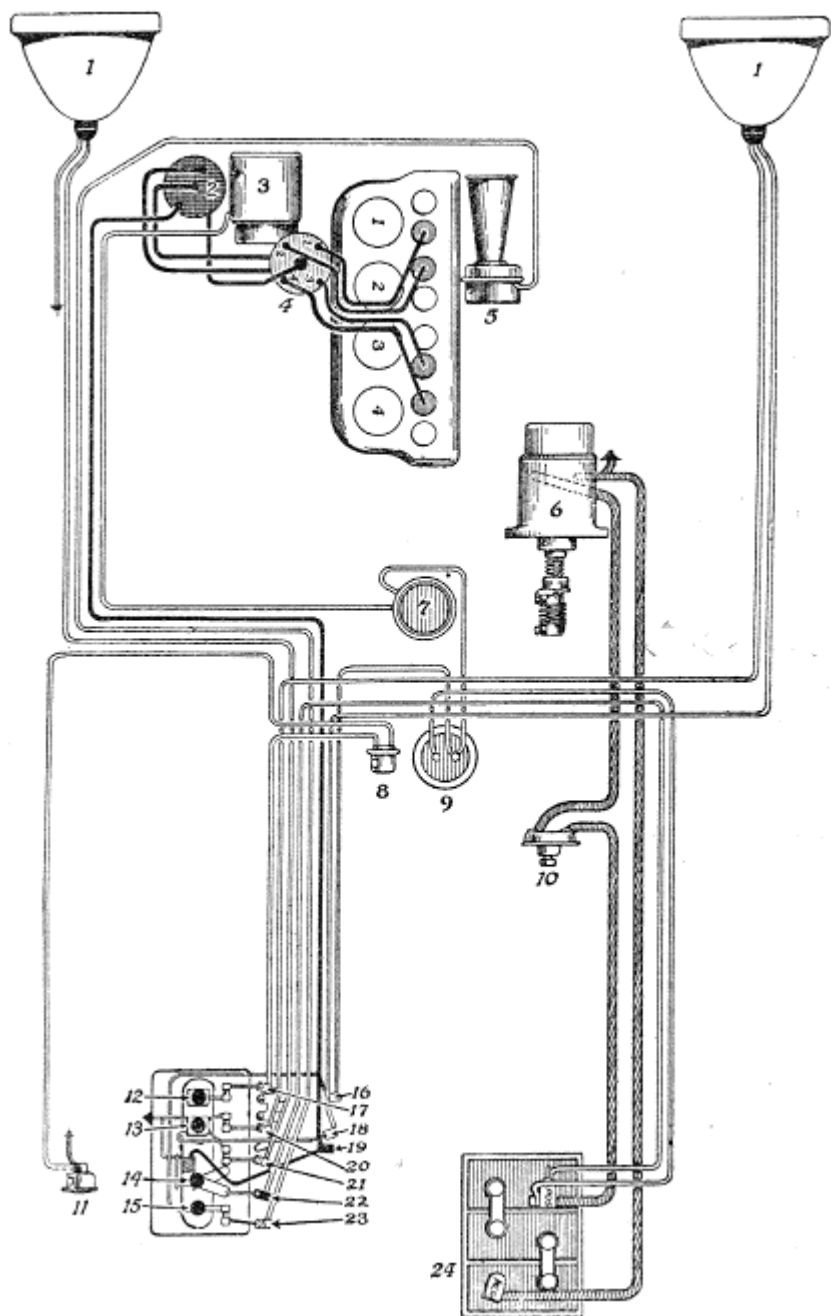
If breaker contacts become so worn as to impair the proper operation of the engine the breaker must be renewed. To do this remove the wire which leads to breaker from coil terminal marked C. Unclasp and remove distributor head, leaving wires on. Lift off distributor rotor. Unscrew the two ring retaining screws which hold the breaker in the case. Then remove the breaker by pulling upward. Then remove the primary wire and keep it to be placed on the new breaker. To install the new breaker reverse the operations given above. Do not file contacts. Break should occur when mark 1-4 U-P is at indicator, spark at full retard. Firing order is 1, 3, 4, 2. Lubricate driving gears well.

Combination ignition and lighting switch is on steering column. There is an automatic release in the box, to open ignition circuit if it has been left on with engine idle.

Starter is connected to flywheel by Bendix gear.

Generator is driven from crank shaft. Oil generator with few drops of oil every 500 miles. Voltage regulation is by third brush. Generator must be shorted if it is to be run with battery disconnected. Relay closes at  $7\frac{1}{2}$  miles per hour. Maximum charging rate of 14 amperes is reached at about 20 miles per hour.

Ammeter shows rate of charge or discharge. All fuses are 20 ampere.



Wiring System