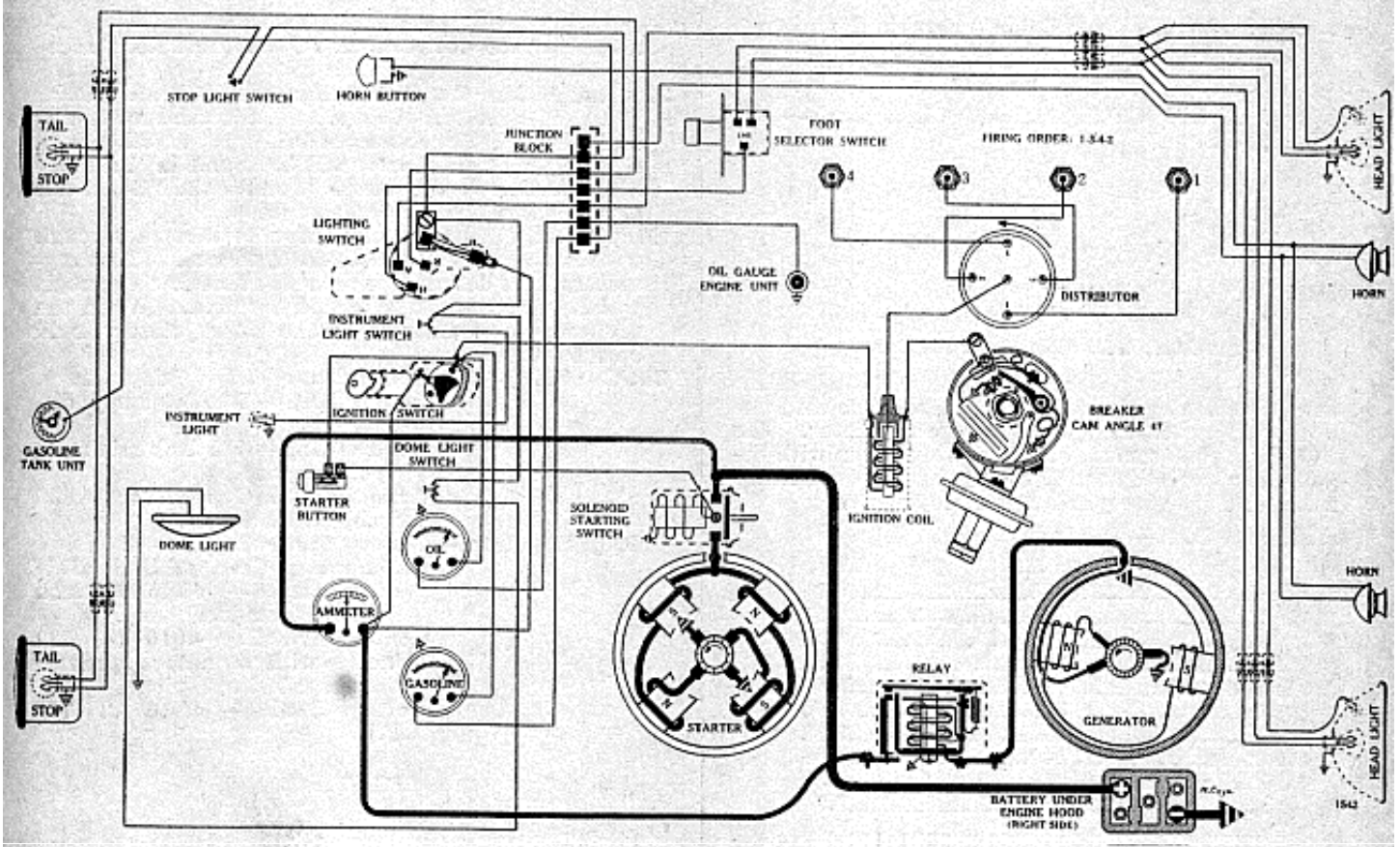
WILLYS

Engine {Bore 3-1/8 / Stroke 4-3/8

Model 37, 4 cyl., (1937)



BATTERY

U.S.L., A-13-A, 6 volts. Negative Terminal Grounded

Starting Capacity—96 amps. for 20 minutes.

Minutes of Discharge at 300 Amps., Zero Degrees F.—1.9

Lighting Capacity—3.9 amps. for 20 hours (78 amp. hour).

Case—Length, 9; width, 7; height, 8⅝ inches.

STARTER

Rotation, L. H., Com. End

Auto-Lite, MZ-4049

Connection to Engine—Bendix Drive, Type RC10HD.

Running Free—70 amps. at 5½ volts, 4300 R.P.M.

Cranking Engine—115 amps. at 5.1 volts.

Engine Cranking Speed—120 R.P.M.

Stall Data (on car)—300 amps. at 2.9 volts.

Lock Torque (for test bench use)—7.8 pound-feet, 420 amps. at 3 volts.

Brush Spring Tension—44 to 56 oz. on each (new brushes).

Push Button Starting Switch—H. A. Douglas Mfg. Co., No. 5617.

Solenoid Starting Switch—Auto-Lite, SS-4001.

Armature—Auto-Lite, MZ-2089.

IGNITION

A-L Test 466

Rotation, L. H., Top View

Auto-Lite, IGS-4007

(Full Automatic Spark Advance in conjunction with Auto-Lite IGT-1028-AS Vacuum Chamber. This chamber controls position of Breaker Plate Assembly No. IGS-2044, which is stamped with the figure 10).

Breaker—Contact separation .020 inch.

Cam Angles—Points closed 47 degrees; open 43 degrees.

Contact Spring Tension—18 to 20 oz.

Timing—5 degrees past top dead center. Loosen screw holding flywheel inspection hole cover, located in left top side of flywheel housing, and swing cover to one side. Slowly turn engine until No. 1 piston comes up on compression stroke and starts down on the power stroke. Stop when the flywheel mark "IGN" (located 5 degrees after T.D.C.) is directly under pointed end of inspection plate screw. With rotor under No. 1 Dist. Cap Terminal, breaker points should just open.

Spark Plugs—18-MM (Champion type C-7); Gap .025 inch.

Firing Order—1-3-4-2.

Vacuum Chamber (Auto-Lite, IGT-1028-AS; Test No. 467)—10 degrees (Dist. advance). Starts with vacuum of from 2½ to 4½ inches of mercury. Requires a vacuum of 15 inches for full travel.

Vacuum Advance Table (Auto-Lite, IGT-1028-AS Vacuum Chamber).

3.5	Start
4.65	1
5.80	2
6.95	3
8.10	4
9.25	5
10.40	6
11.55	7
12.70	8
13.85	9
15.00	10 (Max.)

WILLYS

Model 37, 4 cyl., (1937)

Automatic Advance—14 degrees (Distributor).

500	250	Start
600	300	2
700 (Intermediate)	350	4
1240	620	6
1780	890	8
2320	1160	10
2860	1430	12
3400 (Max.)	1700	14

Condenser—Auto-Lite, IG-2671-K.

Ignition Coil—Auto-Lite, IG-4090.

Lock Ignition Switch—Mitchell Specialty, Type 17.

GENERATOR

Rotation, L. H., Com. End

Auto-Lite, GAM-4504 (Belt Drive)

Performance Data—Gen. Cold.

0	700	6.4
2	785	6.6
6	960	6.9
10	1100	7.2
12	1320	7.4
16	2400 (Max.)	8.

Motoring Freely—4½ to 5 amps. at 6 volts.

Max. Stall Current—18 to 20 amps. at 6 volts.

Field Test—4.2 amps. at 6 volts across field coils in series.

Brush Spring Tension—22 oz. Max. on each (new brushes).

Armature—Auto-Lite, GAM-2055.

Third Brush Adjustment—Loosen cover band. Shift third brush by hand. Mounting plate held in any position by friction clamp washers.

RELAY

Auto-Lite, CB-4008 (Mounted on Sub Frame)

Points Close—6.5 to 7.25 volts.
Points Open—.5 to 3.0 amps. discharge.
Contact Gap—.015 inch minimum (points open).
Armature Air Gap—.034 to .038 inch (points open).

LIGHTING

Switch—H. A. Douglas Mfg. Co., No. 5400-C.
Location—Behind instrument board.
Fuse—Single 20 amp. fuse (type 3A-20) on switch back. Protects all lighting circuits.
Foot Selector Switch—H. A. Douglas Mfg. Co., No. 5530.
Lamps—Refer to "Lamp Data" in Technical Section. HEAD—2320; PARK—55; INSTRUMENT—63; DOME—63; STOP AND TAIL—1158.