

JORDAN

CROSS COUNTRY SIX MODEL RE (1928)

AUTO-LITE GENERATING, STARTING AND LIGHTING SYSTEM AUTO-LITE IGNITION

BATTERY:—Willard, Type WR-13, 6 volt. Starting capacity is 98 amperes for 20 minutes. Lighting capacity is 5 amperes for 17 hours. The negative (—) terminal is grounded. Battery is mounted under the driver's seat.

IGNITION:—Coil Model IG-4065. Ignition current is 1-3 amperes at 6 volts with engine running and 3.4-5 amperes at 6 volts with engine stopped.

Distributor Model IGB-4011. Breaker contacts separate .020-.025 inch. Set contact opening by loosening lock nut on stationary contact stud and turning up stud until proper opening is secured with breaker arm on lobe of cam. Resurface contacts with a fine flat contact file or on a medium hard oilstone. Breaker arm spring tension is 16-20 ounces. Distributor is semi-automatic. Maximum manual advance is 15 degrees. Automatic advance begins at 300 R.P.M. Maximum automatic advance is 15 degrees reached at 2800 R.P.M.

Mounting:—Ignition coil is mounted on the dash. Distributor is mounted on top of the cylinder block and can be removed from the left side. To remove distributor, disconnect primary lead and remove distributor head with high tension cables intact. Then remove screw from manual advance arm and lift distributor from place.

Oiling:—Put 10 drops of light engine oil in the oiler on the side of the distributor housing every month or each 1000 miles. At the same time put 5 drops of oil in the oiler on the end of the breaker cam shaft in the distributor head. Every 3000 miles put a small amount of vaseline on the face of the breaker cam under the fiber bumper of the contact arm.

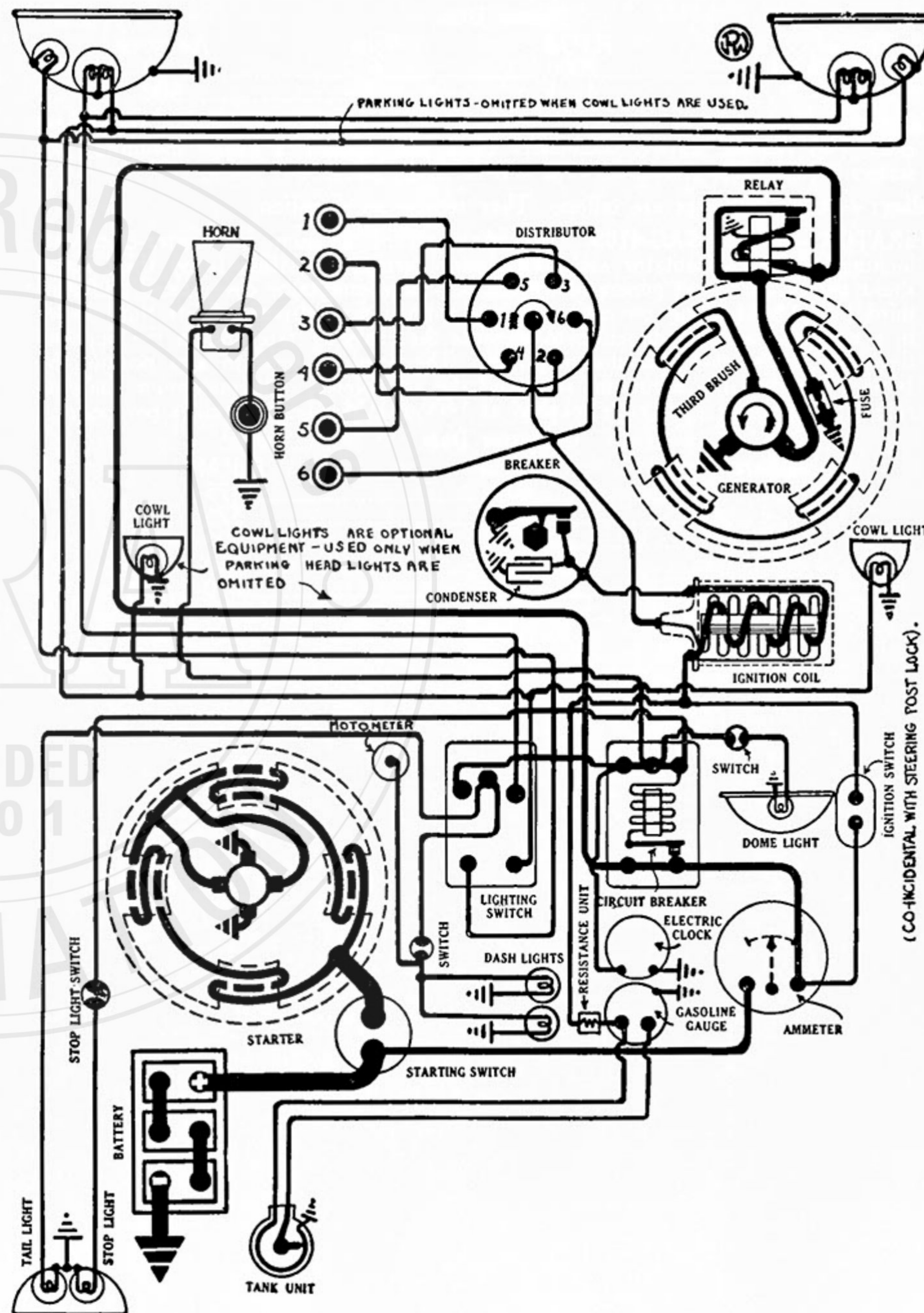
Timing:—Breaker contacts begin to separate when the piston entering power stroke reaches a position $1\frac{3}{8}$ inches before top dead center (on the flywheel) with the spark control lever in the fully advanced position. To set timing crank engine until piston No. 1 enters compression stroke (the upstroke with both valves closed). Make certain that the manual advance lever is in the fully advanced position. Then remove the clutch inspection plate and continue to crank engine until the mark 'IGN' on the flywheel is under the pointer stud in the flywheel case. This mark is $1\frac{3}{8}$ inches before the top dead center mark. The breaker contacts should begin to separate at this point. Loosen the manual advance arm clamp screw and rotate the distributor cup until the contacts begin to separate. Tighten the clamp screw and make certain that the rotor is under the segment connected to the spark plug in cylinder No. 1.

Valve Timing:—**INLET VALVES:**—Head diameter, $1\frac{9}{16}$ inches; stem diameter, .34025-.33925 inch; valve length, $5\frac{11}{32}$ inches (from top of seat to end); valve lift, $\frac{5}{16}$ inch; spring pressure, 103 pounds; tappet clearance, .004-.006 inch (hot); inlet valves open 5° after top dead center and close 45° after lower dead center.

EXHAUST VALVES:—Head diameter, $1\frac{7}{16}$ inches; stem diameter, .34025-.33925 inch; valve length, $5\frac{11}{32}$ inches (from top of seat to end); valve lift, $\frac{5}{16}$ inch; spring pressure, 103 pounds. Exhaust opens 40° before lower dead center and closes 5° after top dead center. This point is marked on the flywheel '1-EX-CL'. Valve stem guides are removable. Oversize valve stems are made on order.

Firing Order:—The firing order is 1-5-3-6-2-4.

Spark Plugs:—Spark plugs are Champion No. 4. Gaps are .030 inch.



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STARTER:—Model MN-4124. Starter is connected to the engine through a Bendix drive. The direction of rotation is counter-clockwise, looking at the commutator end. Starter brush tension is $1\frac{1}{4}$ - $1\frac{1}{2}$ pounds each. Starter switch is Model SW-4002.

Starter Data

Torque	R.P.M.	Volts	Amperes
0 lb. ft.	Free	5.5	45 (Without Bendix)
0 "	Free	5.5	50 (With Bendix)
.5 "	2800	5.5	100
2.4 "	1450	5.0	200
4.8 "	950	4.5	300
7.2 "	650	4.0	400
13.6 "	Lock	3.0	540

Mounting:—Starter is flange mounted at left of engine on forward side of flywheel housing. To remove starter, disconnect starter cable and remove three flange mounting cap screws. Then slide starter forward from place.

Oiling:—Starter bearings are oilless. They require no attention.

GENERATOR:—Model GAG-4110. The direction of rotation is counter-clockwise, looking at the commutator end. Generator current regulation is by third brush shunt field. To adjust generator output, remove the commutator cover band and shift the third brush and mounting plate by tapping on the third brush mounting stud with a screwdriver. Shift the third brush in a counter-clockwise direction to increase the charging rate and in the opposite direction to decrease the charging rate. The mounting plate is held in any position by friction between the mounting stud and the end plate. The maximum charging rate is 16 amperes at 8 volts reached at 1350 R.P.M. or 23 miles per hour.

Generator Data

Amperes	Volts	R.P.M.
2	6.6	525
6	6.9	625
10	7.3	735
14	7.65	900
17	8.0	1350
12	7.45	2125

Brush spring tension is 24-32 ounces. Generator motoring draws 4.75-5.25 amperes at 6 volts. Shunt field current is 3.9-4.4 amperes at 6 volts.

Mounting:—Generator is flange mounted at right of engine at rear of timing chain case. To remove generator, disconnect generator lead and loosen chain adjustment jamb nut and adjusting screw on side of generator flange. Then remove two flange mounting cap screws and slide generator to the rear.

Oiling:—Put 5 or 6 drops of light engine oil in the oiler at each of the generator every 1000 miles.

RELAY:—Model CB-4011. Relay is mounted on top of the generator. Relay closes at 620-690 R.P.M. when the generator voltage reaches 7-7.5 volts, and open with a discharge current of $\frac{1}{2}$ - $2\frac{1}{2}$ amperes each. Charging current is 2 amperes at closing of contacts. Relay contacts separate .025-.035 inch. Air gap between relay armature and coil core is .010-.030 inch, contacts closed.

LIGHTING:—Kellogg Switch Model 409. Head lights are 6-8 volt, 21-21 cp. (double filament-double contact base using second 21 cp. filament instead of dimming) Mazda No. 1110. Auxiliary head lights (or side lights used as optional equipment) are 6-8 volt, 3 cp. S.C. Mazda No. 63. Stop light is 6-8 volt, 15 cp. S.C. Mazda No. 87. Dome light is 6-8 volt, 6 cp. S.C. Mazda No. 81. Dash and tail lights are each 6-8 volt, 3 cp. S.C. Mazda No. 63.

CIRCUIT BREAKER:—A vibrating circuit breaker is mounted on the dash. It protects the lighting circuits.

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