

CHANDLER

MODEL 37-A (1928)—AUGUST 1, 1927 TO JANUARY 1, 1928)
MODEL 137 (1928—AFTER JAN. 3, 1928) SERIAL NOS. 106001 UP
DELCO-REMY GENERATING, STARTING SYSTEM
DELCO-REMY IGNITION

BATTERY:—Prest-O-Lite, Type 613-JFK, 6 volt, 13 plates. The positive (+) terminal is grounded. Starting capacity (20 minute rate) is 102 amperes for 20 minutes. Lighting capacity (5 ampere rate) is 5 amperes for 17 hours. Battery is mounted under front floor boards on the right frame member.

IGNITION:—Coil Model 525-C. Ignition current is 2 amperes at 6 volts with engine running and 5 amperes at 6 volts with engine stopped. Coil is mounted in the right front frame channel.

Distributor Model 658-G (Model 37-A). Breaker contacts separate .022 inch with breaker arm on lobe of cam. Set contact gap by loosening lock screw on stationary contact plate and turning eccentric adjusting screw until proper setting is secured. Resurface contacts with a fine flat contact file or on a medium hard oilstone. Breaker arm spring tension is 17-21 ounces. Breaker uses two sets of contacts on a single four sided cam. Contacts open alternately at intervals of 45 degrees corresponding to 90 degrees of crankshaft rotation. This is the correct firing interval for the Chandler engine and breaker must be accurately set. See Timing. Distributor is semi-automatic. Maximum manual advance is 33 degrees (engine). Automatic advance begins at 400 R.P.M. of engine. Maximum automatic advance is 35 degrees reached at 2400 R.P.M.

Distributor Model 657-A (Model 137). Data identical with Model 658-G.

Mounting:—Distributor is mounted on the front of the generator at the right of the engine. To remove distributor, disconnect primary lead and manual advance rod and remove distributor head with cables intact. Then loosen distributor clamp screw and lift distributor from place.

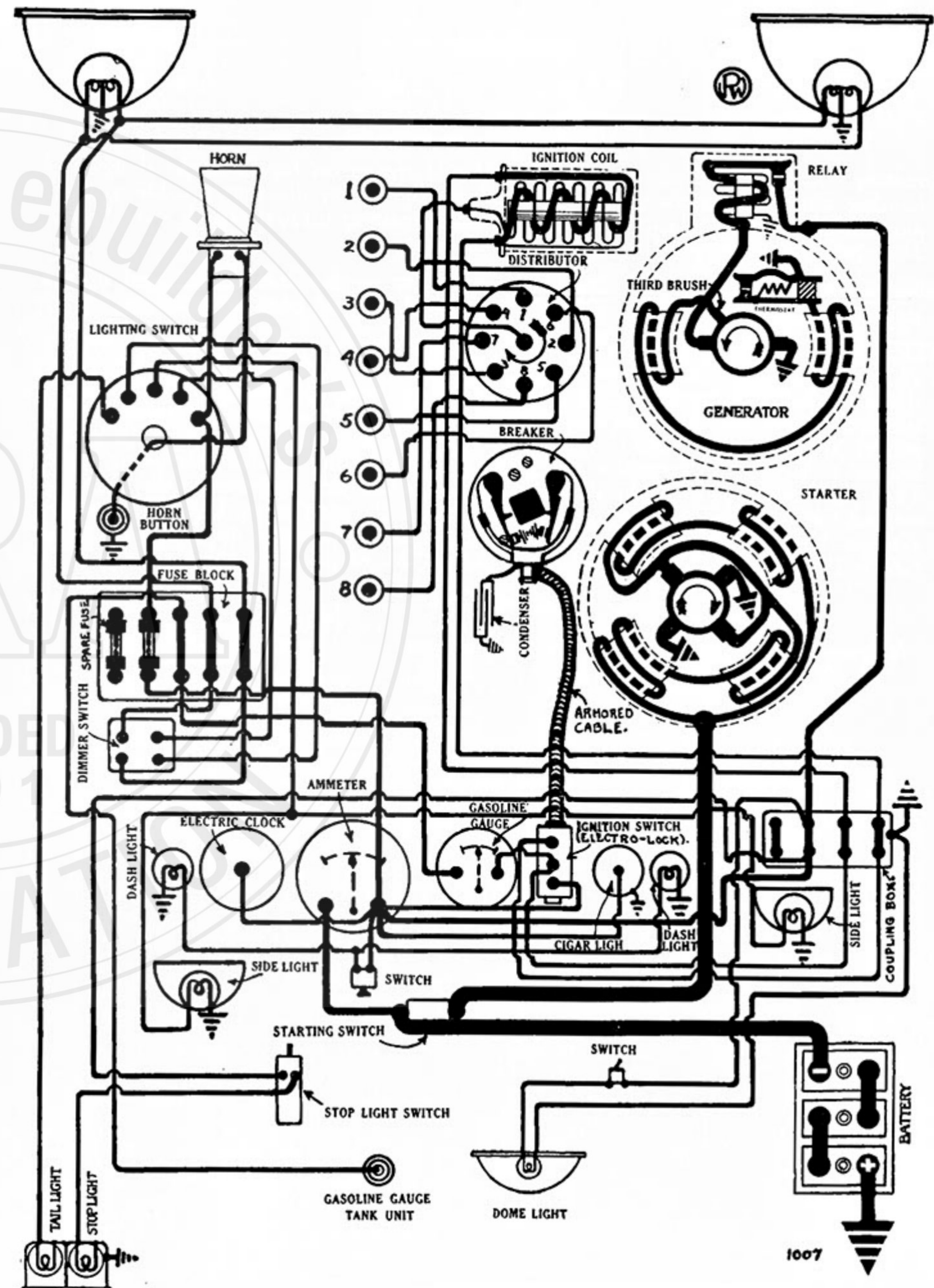
Oiling:—Fill the grease cup on the side of the distributor shaft and turn down one turn every month or each 1000 miles. Every month remove the distributor head and rotor and saturate the wick oiler in the center of the shaft with light oil. Put a small bit of vaseline on the breaker cam.

Timing:—**Synchronization of Contacts:**—Use Delco-Remy Tool, Part No. 820738, and follow directions on Page S-25 of National Manual. Contacts can be synchronized without tool after distributor has been timed to engine by cranking engine over 90 degrees from firing position of piston No. 1 when piston No. 6 will reach top dead center entering power stroke. The second set of contacts should separate at this point. If they do not, loosen lock screws and turn eccentric adjusting screw on breaker plate until contacts begin to open. Tighten the lock screw and check the contact gap with the breaker arm on the lobe of the cam. If it is not within limits of .018-.024 inch reset at .022 inch and repeat synchronizing operation.

Timing Distributor to Engine:—Breaker contacts begin to separate when the piston entering power stroke reaches top dead center with the manual advance lever fully advanced. To set timing, crank engine until piston No. 1 enters compression stroke (the upstroke with both valves closed). Fully advance spark control lever. Continue to crank engine until piston No. 1 reaches top dead center when the flywheel mark 'DC 1&8' will be directly opposite the indicator on the flywheel case. Loosen advance arm clamp screw and turn distributor housing until contacts begin to separate. Tighten the clamp screw. Make certain that the rotor is opposite the segment connected to the spark plug in cylinder No. 1 and connect the remaining spark plugs in order 6-2-5-8-3-7-4 clockwise around the distributor head.

Firing Order:—The firing order is 1-6-2-5-8-3-7-4.

Spark Plugs:—Spark plugs are 7/8-18 S.A.E. Standard. Gaps are .020 inch.



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VALVE TIMING:—INLET VALVES:—Head diameter, 1 23/32 inches; stem diameter, 3/8 inch; stem length, 6 13/32 inches. Valve lift, 5/16 inch. Tappet clearance, .009 inch. Spring pressure, 95 pounds. Inlet valves open 16 degrees before top dead center and close 51 degrees after lower dead center.

EXHAUST VALVES:—Head diameter, 1 19/32 inches; stem diameter, 3/8 inch; stem length, 6 13/32 inches. Valve lift, 5/16 inch. Tappet clearance, .009 inch.

Spring pressure, 95 pounds. Exhaust valves open 64 degrees 30 minutes before lower dead center and close 21 degrees after top dead center. Valve stem guides are removable. Oversize valve stems are not made.

STARTER:—Model 727-A. Starter is connected to the engine through reduction gears and an outboard Bendix drive. The direction of rotation of the armature shaft is clockwise, looking at the commutator end. Starter switch is Model 405-C. Brush spring tension is 24-28 ounces.

Starter Data

Torque	R.P.M.	Volts	Amperes
0 lb. ft.	2500	5	70
28 "	Lock	3	600

Mounting:—Starter is flange mounted at right of engine on forward side of flywheel housing. To remove starter, disconnect cable and remove flange mounting studs. Then pull starter forward and lift from place.

Oiling:—Put 8 or 10 drops of light oil in each of the starter bearing oilers every two weeks or each 500 miles. Every six months remove the grease plug in the reduction gear compartment and repack gears with medium cup grease.

GENERATOR:—Model 944-D. The direction of rotation is counter-clockwise, looking at the commutator end. Generator current regulation is by third brush shunt field and thermostat. Thermostat contacts open at 165°F. cutting the resistance across the thermostat contacts in series with the shunt field and reducing the output approximately 40%. To adjust generator output, loosen the small round headed screw on the generator end plate and remove the commutator cover band. Then shift the third brush in a counter-clockwise direction to increase the charging rate and in the opposite direction to decrease the charging rate. Tighten the screws

after making the adjustment. With standard car setting, maximum charging rate is 19 amperes reached at 1300 R.P.M. or 20 miles per hour.

Generator Data

Cold Test			Hot Test		
Amperes	Volts	R.P.M.	Amperes	Volts	R.P.M.
19	8.5	1300	12	7.65	1500

Motoring generator draws 6 amperes at 6 volts. Shunt field current is 5 amperes at 6 volts. Brush spring tension is 14-18 ounces.

Mounting:—Generator is flange mounted at right of engine on rear of timing chain case. To remove generator, disconnect generator lead and remove distributor. Then remove 3 flange mounting cap screws and slide generator to the rear. Make certain that timing chain does not slip off generator drive sprocket as this will throw off valve timing of engine.

Adjustment of Timing Chain:—Timing chain is adjusted by loosening two upper flange mounting screws and moving generator outward. Make adjustment with engine running and move generator until chain hums. Then slack up on chain tension until the noise disappears. Tighten the cap screws. It is very important not to get too much tension on the chain. With correct setting the chain will operate noiselessly.

Oiling:—Put 8 or 10 drops of light oil in each of the generator bearing oilers every month or each 1000 miles.

RELAY:—Model 265-B. Relay is mounted on the generator. Relay contacts close at 500 R.P.M. when the voltage of the generator reaches 6.75-7.5 volts and open with a discharge current of 0-2.5 amperes. Charging current at closing of contacts is approximately 2 amperes. Relay contacts separate .015-.025 inch. Air gap is .014-.021 inch with contacts closed.

LIGHTING:—Clum Switch Model 10677. Switch is mounted at lower end of steering column. 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. Stop light is 6-8 volt, 3 cp. S.C. Mazda No. 63. Dash, tail, side and corner lights are each 6-8 volt, 3 cp. S.C. Mazda No. 63.

FUSES:—Lighting fuses are 20 amperes capacity.