

CADILLAC

SERIES 341-B, BEGINNING ENGINE NO. 322501
PRODUCTION STARTED AUGUST, 1928
DELCO-REMY GENERATING, STARTING SYSTEM
DELCO-REMY IGNITION

BATTERY:—Exide. Type 3-LXRV-15-2G. 6 volt. Rated capacity is 130 ampere hours. Starting capacity is 137 amperes for 20 minutes (20 minute rate). Lighting capacity (5 ampere rate) is 5 amperes for 26 hours. The positive (+) terminal is grounded. Battery is mounted on right frame member under dust shield. The battery is not interchangeable with the Series 314 battery because the filler plugs are located on the opposite side of the cap.

IGNITION:—Coil Model 2195. Distributor Model 4041. Breaker contacts separate .022-.027 inch. They are made of tungsten. Resurface contacts whenever necessary with fine flat contact file or on medium hard oilstone. Distributor is semi-automatic. Maximum manual advance is 38 degrees (engine). Automatic advance begins at approximately 1100 R.P.M. Maximum automatic advance is 21 degrees (engine). Breaker arm spring tension is 16-20 ounces. There are two sets of breaker contacts set at an angle of 135 degrees and operating on a four lobed cam. Contacts open alternately at intervals of 45 degrees, corresponding to 90 degrees of crankshaft rotation. This is the correct firing interval for the Cadillac engine and must be accurately set. (See Timing).

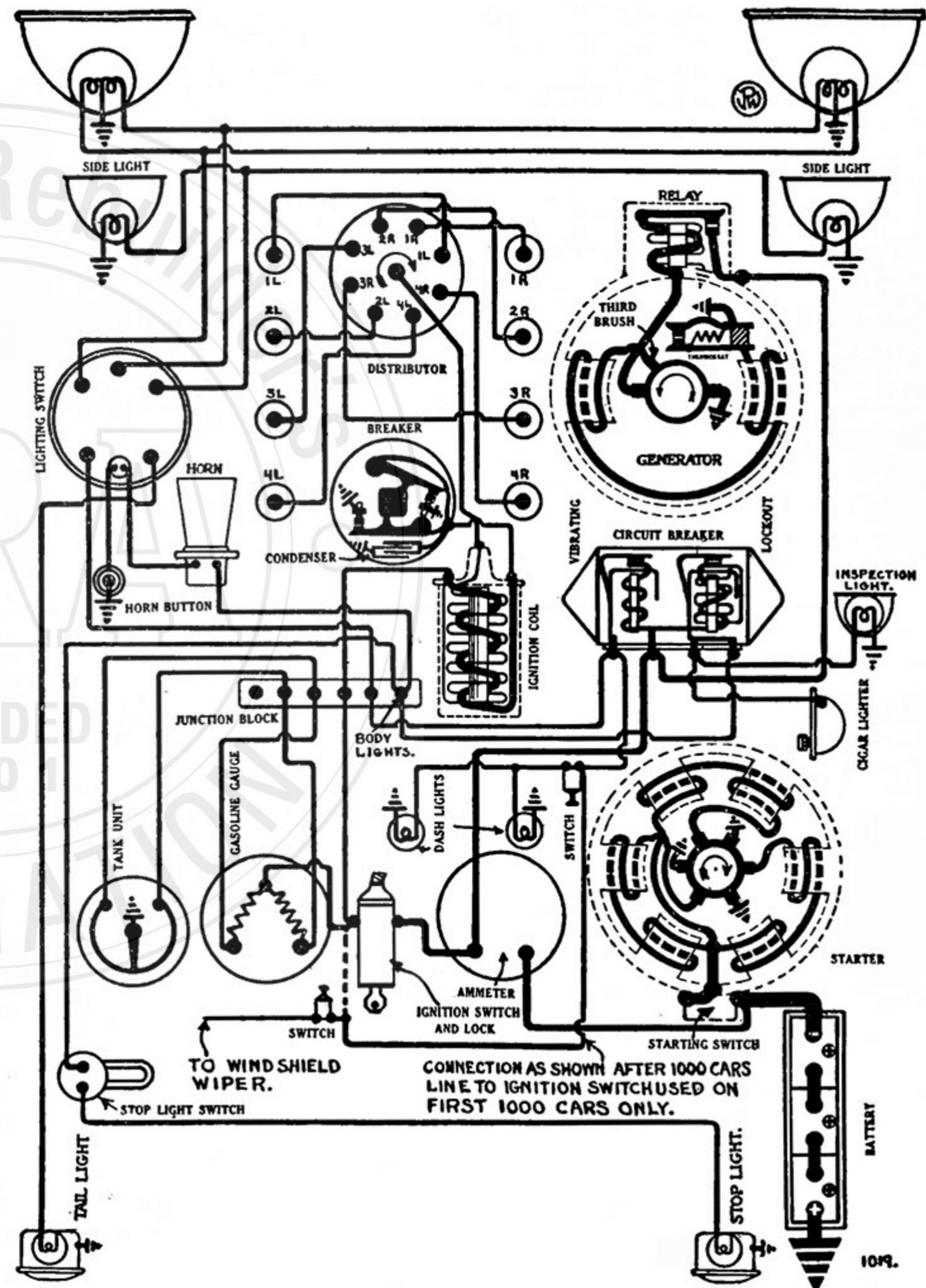
Mounting:—Ignition coil is mounted on side of distributor support. Distributor is mounted at front of engine between cylinder banks. A Blossom Co-incidental ignition switch is used. To remove the distributor, disconnect the primary feed wire, manual advance rod and remove the distributor cap with the high tension cables attached. Then remove the hold-down screw and lift the distributor from place. (NOTE:—The lower end of the distributor shaft has an offset tongue which fits a groove in the top of the driving shaft. Do not try to force the distributor into place as the tongue may be turned 180 degrees from its correct position.)

Oiling:—Put 8 or 10 drops of light engine oil in the oiler on the side of the distributor housing every month or 1000 miles.

Timing:—Synchronization of Contacts:—Use Delco-Remy Tool, Part No. 822572 and follow directions on Page S-24. This is important and contacts must be synchronized when distributor timing is checked.

Timing Distributor to Engine:—One set of breaker contacts begin to separate when the piston entering power stroke reaches a position $\frac{7}{8}$ inch on the flywheel before top dead center with the spark lever fully advanced. With piston No. 1R in firing position the flywheel mark "IG/A-1-5" will be opposite the indicator on the flywheel case. This mark is $\frac{7}{8}$ inch before top dead center. To set timing, crank engine over until piston No. 1 enters compression stroke (the up stroke with both valves closed). Fully advance spark lever. Then continue to crank engine until flywheel mark "IG/A-1-5" is opposite the indicator on the case. If contacts are not beginning to separate, loosen the taper screw in the center of the cam and rotate cam until one set of contacts open. The other set will be open but just closing. Tighten the screw. The second set of contacts open 45 degrees (distributor) after this point with the flywheel mark "IG/A-2-6" opposite the indicator. Beginning with Series 341-B, engine unit 322501, high compression heads are standard equipment. The flywheel setting remains the same as for former low compression heads ($\frac{7}{8}$ of an inch before top dead center). The reason for this same setting is that the new distributor 4041 has different advance characteristics which take care of the high compression heads.

VALVE TIMING:—INLET VALVES:—Head diameter, $1\frac{1}{2}$ inch; stem diameter, $\frac{3}{8}$ inch; stem length, $6\frac{17}{64}$ inches. Valve lift, $\frac{23}{64}$ inch. Spring pressure



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156-164 pounds compressed to 2 5/32 inch. Tappet clearance is .004 inch (cold). Inlet valves open 9 1/2 degrees before top dead center and close 58 1/2 degrees after lower dead center. Width of valve seat on cylinder block 1/16 inch.

EXHAUST VALVES:—Head diameter, 1 1/2 inch; stem diameter, 3/8 inch; stem length, 6 1/4 inches. Valve lift, 23/64 inch. Spring pressure 156-164 pounds compressed to 2 5/32 inch. Tappet clearance is .006 inch (cold). Exhaust valves open 46 degrees before lower dead center and close 5 degrees after top dead center. Width of valve seat on cylinder block 5/64 inch. All valve stem guides are removable. No oversize valve stems are supplied.

Firing Order:—The firing order is IL-4R-4L-2L-3R-3L-2R-1R. The right hand cylinder bank is right viewed from the driver's seat. Number one cylinder is nearest the radiator.

Spark Plugs:—Spark plugs are 7/8-18 S.A.E. Standard. All engines are equipped with A.C. type Y special high compression or semi-aircraft type plugs. Gaps are set at .025-.028 inch.

STARTER:—Model 382. Starter is connected to the engine through a mechanical pinion shift interconnected with the starting pedal. The direction of rotation is clockwise, looking at the commutator end. Starter brush spring tension is 24-28 ounces.

Starter Data			
Torque	R.P.M.	Volts	Amperes
4.5 lb. ft.	750	5	200
19.0 "	Lock	3	600

Mounting:—Starter is mounted at right of engine on rear of flywheel case. To remove starter, disconnect cable and starter pedal linkage and remove three flange mounting capscrews. Then pull starter to rear and lift from place.

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

GENERATOR:—Model 384. The direction of rotation is counter-clockwise, looking at the commutator end. Generator current regulation is by third brush shunt field combined with a thermostat. Thermostat contacts open at 165 degrees F. inserting a resistance in the field circuit and reducing the out-

put approximately 2.5 amperes. Generator output is adjusted by shifting third brush. Remove commutator cover band and shift third brush mounting plate in a counter-clockwise direction to increase the charging rate and in the opposite direction to decrease the charging rate. The third brush is held in any position by friction washers. The maximum charging rate of 18-20 amperes at 8.6 volts is reached at 1400-1600 R.P.M. or 22-25 M.P.H.

Generator Data					
Cold Test 75° F.			Hot Test 175° F.		
Amperes	Volts	R.P.M.	Amperes	Volts	R.P.M.
18-20	8.2-8.62	1450	10-12	7.3-7.7	1600

Shunt field current is 1.8-2.3 amperes at 6 volts. Generator brush spring tension is 16-20 ounces.

Mounting:—Generator is mounted at right of engine and is driven by silent chain in tandem with the water pump. To remove generator, disconnect wire and remove three mounting nuts. Then pull generator to rear and lift from place.

Oiling:—Put 8 or 10 drops of light engine oil in each of the generator bearing oilers every two weeks or each 500 miles.

RELAY:—Model 266-N. Relay is mounted on the generator. Relay closes at 8-10 M.P.H. when generator voltage reaches 7.75 volts and opens with a discharge current of 0-2.5 amperes. Relay contacts separate .015-.025 inch. Air gap is .014-.021 inch with contacts closed.

LIGHTING:—Switch Model 486-D. Lighting switch is mounted at the lower end of the steering column. Head lights are 6-8 volt, 21-21 cp. (double filament-double contact). Stop light is 6-8 volt, 15 cp. S.C. Inspection light is 6-8 volt, 21 cp. S.C. Side, dash, tail, tonneau, dome, corner and step lights are each 6-8 volt, 3 cp. S.C.

CIRCUIT BREAKER:—Model 5759. A combination vibrating and lockout circuit breaker is mounted on the dash. The vibrating unit protects the lighting circuits. It begins to operate at 25-30 amperes limiting the current flow to 10-15 amperes. The lockout circuit breaker protects the horn, stop light, inspection light, cigar lighter and body lights. It opens the circuit when the current reaches 25-30 amperes and operates with a discharge current of less than 1 ampere.