

CADILLAC

MODEL 314 (1927) AFTER ENGINE NUMBER 4-41001 DELCO-REMY GENERATING, STARTING AND LIGHTING SYSTEM DELCO-REMY IGNITION

BATTERY:—Exide, Type 3-LXRV-15-2G, 6 volt, 130 ampere hour. The starting capacity is 137 amperes for 20 minutes. Lighting capacity is 5 amperes for 26 hours. The positive (+) terminal is grounded.

IGNITION:—Coil Model 2195. Distributor Model 4016. Breaker contacts separate .0225-.0275 inch. They are made of tungsten. Resurface contacts on a medium hard oilstone or with a fine, flat contact file. Breaker arm spring tension should be 16-20 ounces. Ignition current is .5-2.75 amperes at 6 volts with engine running and 4.8 amperes (cold) at 6 volts with engine stopped. Distributor is semi-automatic. Manual advance is 20° (engine). Automatic advance begins at 600 R.P.M. and reaches a maximum of 30° at 2800 R.P.M.

Mounting:—Distributor is mounted between the cylinder banks at the front end of the engine, and driven from the camshaft through the spiral gears. The coil is mounted on the side of the distributor housing.

Oiling:—Put 8 or 10 drops of light engine oil in the oiler on the side of the distributor housing every month or each 1000 miles if the car is driven more than 1000 miles in a month.

Timing:—One set of breaker contacts begins to separate when piston No. 1 on compression stroke reaches a position where the flywheel mark "IG/A-1-5" is opposite the indicator on the flywheel case. This point is 1 3/16 inches on the flywheel before top dead center; the manual advance lever must be in the fully advanced position. The breaker has two sets of contacts opening at intervals of 45° corresponding to 90° of crankshaft rotation. The second set of contacts separate when the flywheel mark "IG/A-2-6" is opposite the indicator.

Valve Timing:—INLET VALVES:—Head diameter, 1 11/16 inches; stem diameter, 3/8 inch; valve lift, 21/64 inch; tappet clearance, .004 inch (cold); spring pressure, 95 pounds (compressed to 2 15/64 inches). Inlet valves open 18° before top dead center and close 64° 40' after lower dead center.

EXHAUST VALVES:—Head diameter, 1 9/16 inches; stem diameter, 3/8 inch; valve lift, 21/64 inch. Tappet clearance, .006 inch (cold). Spring pressure, 95 pounds (compressed to 2 15/64 inches). Exhaust valves open 56° 40' before lower dead center and close 10° after top dead center. Valve stem guides are removable. Oversize valve stems are not made.

Firing Order:—The firing order is 1L-4R-4L-2L-3R-3L-2R-1R.

Spark Plugs:—Spark plugs are 7/8-18 S.A.E. Standard. Gaps are .032 inch.

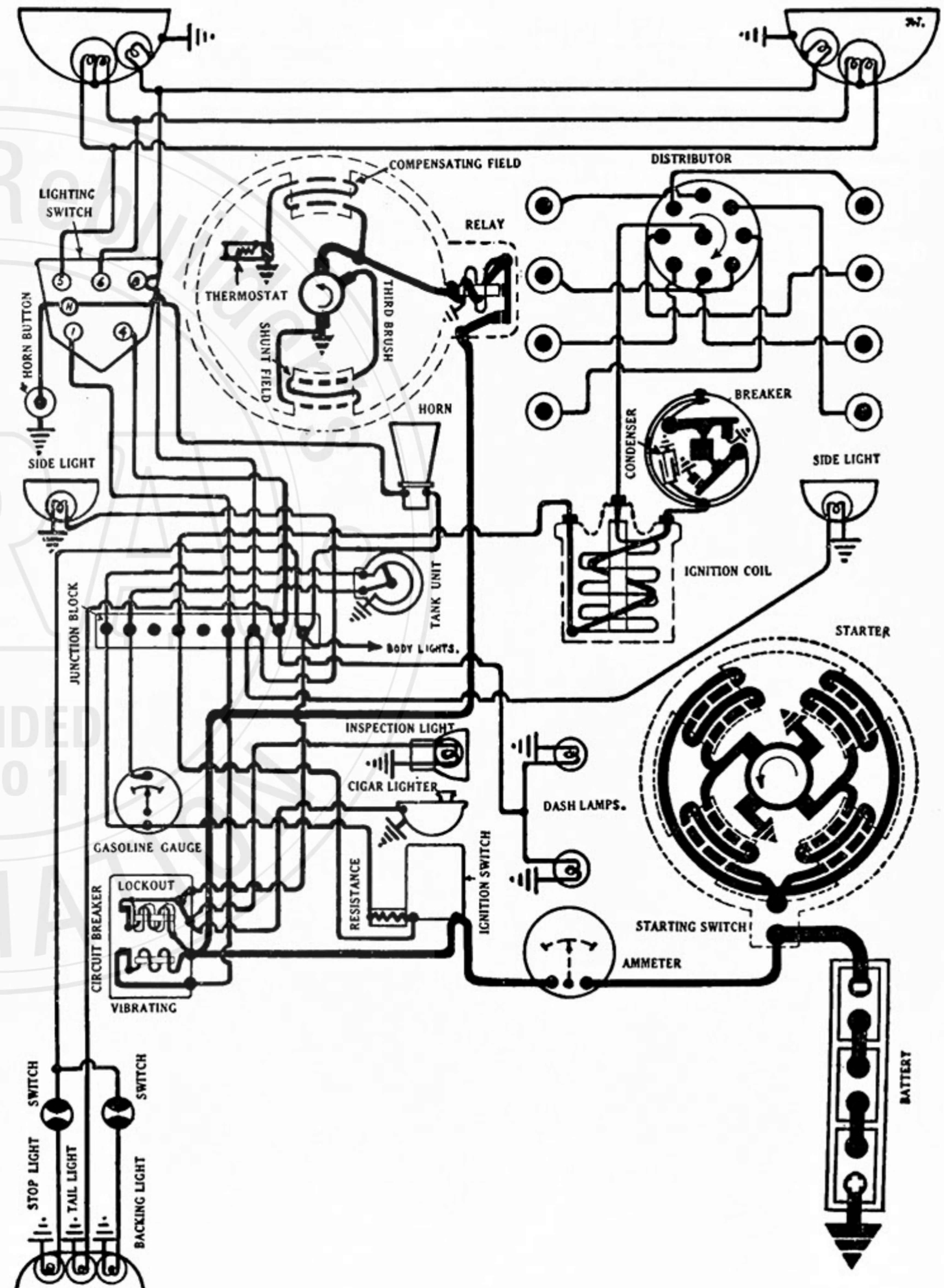
STARTER:—Model 349. Starter is connected to the engine through a mechanical pinion shift. The direction of rotation is clockwise, looking at the commutator end. Starter brush tension is 2 1/4-2 1/2 pounds each. Starter cranks engine at 104 R.P.M., taking 140-150 amperes.

Starter Data

0 lb. ft.	Free	4	60
19 "	Lock	3	450

Mounting:—Starter is mounted vertically at the rear of the engine. To remove, loosen set screw in steering column plate. Remove starting pedal button and accelerator pedal. Then remove toe boards and disconnect hand throttle rod and foot throttle rod. Remove three hold-down screws and lift starter from place.

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



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GENERATOR:—Model 370. The direction of rotation is counter-clockwise, looking at the commutator end. Generator current regulation is by the third brush system. Adjustment of the third brush is secured by removing the strap and moving the third brush by hand. Shifting the third brush in a counter-clockwise direction increases the charging rate and in the opposite direction decreases the charging rate. The third brush is held in any desired position by friction washers. Generator is of the split field type with the third brush shunt field wound on only one field pole. A straight shunt field in series with a thermostat is wound on the other field pole. Thermostat contacts open at 175°F., cutting a resistance in the field circuit and rendering the straight shunt field inoperative. Generator then runs as a third brush machine with reduced output. With maximum setting, generator output is 22 amperes at 8.6 volts reached at 1400-1600 R.P.M. Brush spring tension is 16-20 ounces. Third brush shunt field current is 4.5 amperes at 6.5 volts. Straight shunt field current is .75 amperes at 6.5 volts. Generator motoring draws 5 amperes at 6 volts.

Generator Data

Cold Test. 75°F.			Hot Test. 175°F.		
Amperes	Volts	R.P.M.	Amperes	Volts	R.P.M.
6.....	7.8.....	600	5.....	6.9.....	600
16.....	8.0.....	1000	14.....	7.8.....	1000

Mounting:—Generator is mounted on right of engine and is driven by a silent chain, in tandem with the water pump. To remove generator, remove three screws which

hold the generator to the crankcase.

Oiling:—Put 8 or 10 drops of light engine oil in each of the generator oilers every two weeks. If the car is driven more than 500 miles in two weeks, this oiling must be done every 500 miles.

RELAY:—Model 266-N. Relay is mounted on top of the generator. Relay contacts close when the voltage of the generator reaches 7-7.5 volts and open with a discharge current of 0.2-5 amperes. Contacts separate .015-.025 inch. Air gap between relay armature and coil core is .014-.021 inch, contacts closed.

LIGHTING:—Head lamps are 6-8 volt, 21 cp. double filament using second 21 cp. filament instead of dimmers. Auxiliary head lamps are 6-8 volt, 3 cp. S. C. Dash, dome, tonneau and tail lamps are each 6-8 volt, 3 cp. S. C. Backing and stop lamps are each 6-8 volt, 21 cp. S. C.

SWITCHES:—Lighting switch on foot of steering column is Model 1303. Ignition switch on dash is Model 1285.

CIRCUIT BREAKER:—Model 5767. A combined vibrating and lockout circuit breaker is mounted on the dash. The vibrating unit protects the lighting circuits. A current of 25-30 amperes causes it to operate. While vibrating, the current flow is 10-15 amperes. The lockout circuit breaker protects the horn, inspection lamp, stop and backing lamp and cigar lighting circuits. A current of 25-30 amperes causes it to open the circuit. While operating current flow is less than 1 ampere.

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