

GENERATOR CONTROLS

closing voltages will be lower than the cold opening and closing voltages. When checking the opening and closing voltages, cycle the regulator before arriving at a true reading.

To cycle the regulator, increase the speed of the generator until the voltage is reached at which the points just open, then decrease the speed until the points just close. After making this cycle, obtain the true voltage readings at the instant the points open and close.

The cover must be in place when checking voltage readings. In addition, do not overrun the voltages reached at each point. If specified voltages cannot be reached, insert a resistance in the charging circuit. A variable resistance of sufficient current carrying capacity that will make it possible to obtain approximately .25 ohm resistance can be used. The lowest possible resistance to attain voltage should be used to prevent vibrating of contact. Be sure to remove the resistance after setting has been obtained.

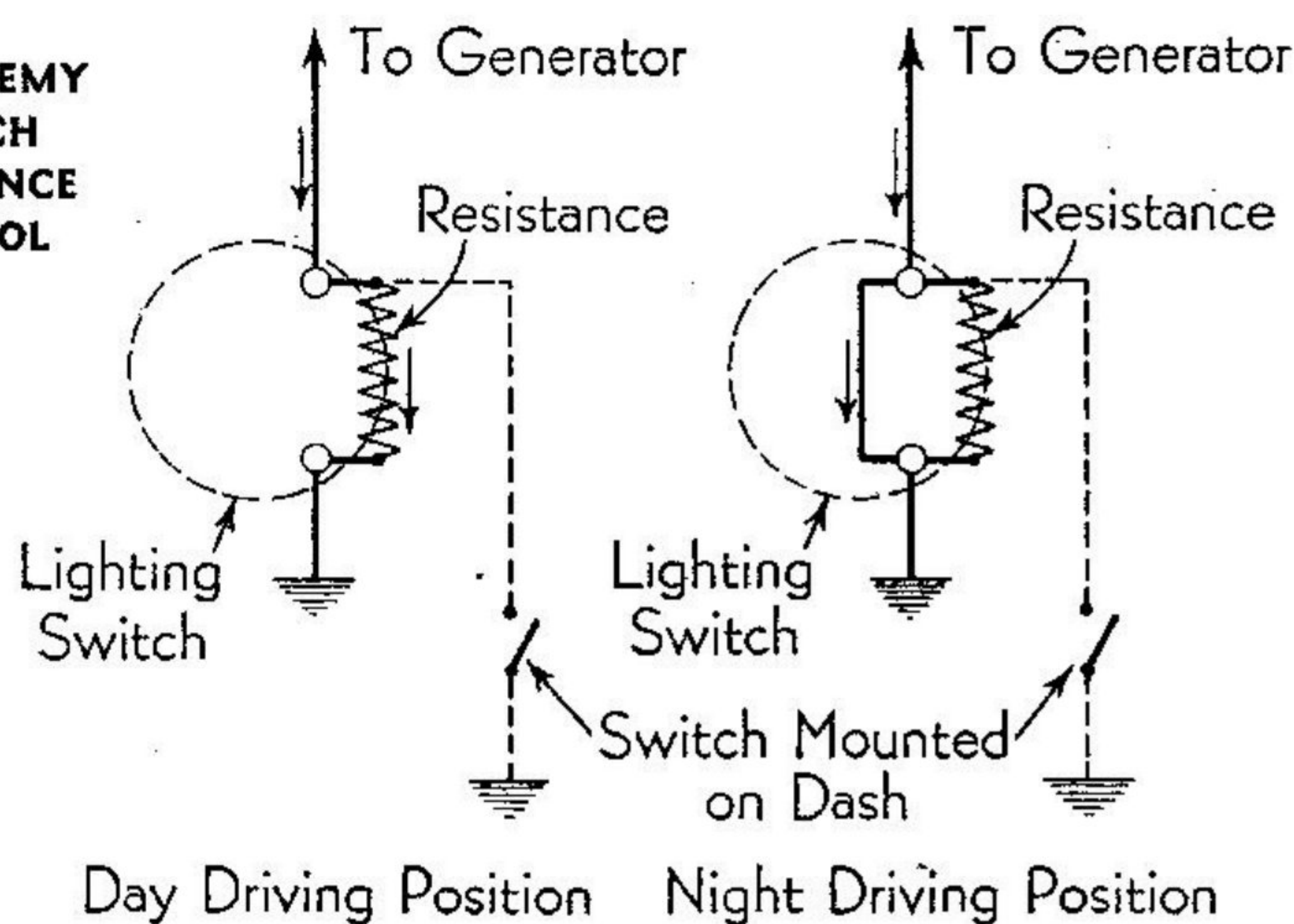
Increase or decrease the opening voltage by increasing or decreasing the armature spring tension. This is done by bending the lower spring hook. Closing voltage is increased by increasing the armature air gap and decreased by decreasing the armature air gap. It is only necessary to turn the lower armature stop slightly to obtain the closing voltage adjustment.

AUTO-LITE VOLTAGE AND CURRENT REGULATOR

Chrysler, DeSoto, Dodge, Hudson, Nash, Ambassador 8, Packard 120, Plymouth Deluxe, Terraplane — 1937. The third brush type of generator is used on the Hudson, Packard 120 and Terraplane, and a two brush shunt type on the others. The generator circuits on these cars are equipped with a cutout relay, and voltage and current regulator.

The conventional cutout relay serves as an automatic switch between the generator and the battery. When the generator terminal voltage rises to exceed the battery terminal voltage, the contact points close, completing the circuit between the generator and the battery. When the generator terminal

DELCO-REMY SWITCH RESISTANCE CONTROL



voltage becomes less than the battery terminal voltage, the relay points open.

When adjusting the cutout relay, the following procedure should be adhered to: Align the points and set the point opening within the specified limits of .015" to .025". The correct point opening can be obtained by bending the armature stop. Adjust the spring post to obtain the correct voltage for closing the contact points. Bending the spring post to increase the tension will increase the voltage at which the contact points close. The points should open when the generator discharge current is not greater than 2½ amperes.

The regulator assembly contains two units, the circuit breaker and the voltage regulator. The circuit breaker is an automatic switch between the generator and battery which closes the charging circuit when the generator is charging and opens the circuit when it is not charging, thus preventing the battery discharging back through the generator.

The voltage regulator unit is used for holding the voltage of the electrical system constant within close limits. Its operation is controlled by the battery voltage. When the voltage rises to a predetermined value the regulator contact points vibrate, thus cutting in and out a resistance in the generator field circuit.

To test the regulator assembly an accurate reading ammeter with heavy, short leads should be connected between the regulator "B" terminal and the lead removed from this terminal; while an accurate reading volt-meter should be connected across the regulator "B" and "GD" terminals.

Check the battery to see that it is fully charged. If the battery is not fully charged replace it temporarily with one that is.

Start the engine and set its speed equal to approximately 30 mph in high gear. Run the engine for several minutes or until the voltage remains constant before taking any meter readings. The ammeter should show a reading below the maximum noted on the nameplate of the regulator and the voltage should show a reading between 7.4 and 7.8 volts. With readings according to the above figures the voltage regulator unit can be passed as functioning correctly. Under cold operating conditions the voltage readings will be near the 7.8 limit while under hot operating conditions the readings will be near the 7.4 limit.

Any regulators which test as inoperative according to the above and which have not had their seal broken can be exchanged. Regulators that are within the warranty will be exchanged at no charge, while those that are outside of the warranty will be exchanged at a nominal cost.