

# SERVICE BULLETIN

CHRYSLER CORPORATION

PLYMOUTH DIVISION

DETROIT



March 15, 1935

No. 33

TO ALL CHRYSLER, DODGE AND DE SOTO DISTRIBUTORS, DIRECT DEALERS, DEALERS AND ASSOCIATE DEALERS:

**SUBJECT:** Generator Output and its Effect Upon the Operation of the Entire Electrical System.

ELECTRICAL

The design of the Auto-Lite generator which is standard equipment on 1935 Plymouth models provides a reserve capacity to be used only in the event of the installation of additional current consuming accessories such as radio, defroster, hot water heater, higher candlepower headlamps or extra lamps, etc.

GENERATOR

AND

It is essential that the generator be adjusted for an output consistent with the individual car owner's requirements. Avoid, if possible, a fully-charged or an over-charged battery. Seasonal adjustments are considered good practice especially in territories where extreme temperature variations exist.

DISTRIBUTOR

Either excessive charging rates or an over-charged battery, or a combination of the two, will produce such conditions as:

PLYMOUTH PJ

Oxidized Ignition Points (Blued Points)  
Shorter Coil Life  
Burnt-Out Lamps  
Shorter Generator Brush Life  
Shorter Battery Life  
Low Battery Electrolyte or Dry Battery.

There are two methods by which generator output can be determined or adjusted:

- (a) By the use of an accurate ammeter and voltmeter inserted in the generator circuit as the more technical way.
- (b) By setting the third or regulating brush a certain distance from the nearest main brush (insulated). This method is the most reliable for dealers who do not have accurate meter equipment. The following table shows the correct spacing between main and regulating brush for recommended output. The term "bars" refers to the copper segments of which the commutator is made up:

Recommend specifications using the so-called commutator bar setting. This means the number of exposed commutator bars between the near faces of the regulating brush (thin) and main brush (insulated) which is located nearest to the third or regulating brush.

GBM (without regulator) 4-1/2 to 4-3/4 bars - 17 amperes at 8.2 volts.  
GAR (with regulator) 4 to 4-1/3 bars - 19 amperes at 8.4 volts.

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**ELECTRICAL**

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**GENERATOR**

**AND**

**DISTRIBUTOR**

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These readings are for a generator cold or at 70° F. temperature. As the unit warms from operation, these readings will be 2 to 3 amperes lower.

Variations to the above may be made to meet individual conditions. In some unusual cases it may be found desirable to maintain a still lower output, while in others, a slightly higher one.

You will note the above readings are given at specified voltages. Generator output varies according to voltage.

Without changing the third brush setting the output will increase when charging against a higher voltage and decrease when charging against a lower voltage.

For some types of operation, where cars are driven almost entirely in the daytime, the GBM generator, which is not equipped with a voltage regulator, will charge too high, even when the third brush is adjusted to the minimum charge position. Such cases are rare, but to take care of them a special high resistance third or regulating brush is available through your established source of supply under Auto-Lite Part No. GBM 1013 - S - our Part No. 648230.

The facilities of Official Auto-Lite Service Stations are available to Plymouth dealers. Adjustments will be made without charge during the warranty period (90 days or 4,000 miles).

While not directly connected with the subject of this bulletin, we wish to advise that along with high charging rate (high voltage), dust, dirt and oil vapor have a deteriorating effect on ignition points and materially affect their operation.

Beginning with car serial No. 2480675, a rubber grommet has been added to the ignition distributor to fill the opening through which the primary terminal passes. This rubber grommet is identified with Auto-Lite part number IGS - 34, our part number 648029.

To eliminate the possibility of oil vapor and dust reaching the inside of the ignition distributors on cars prior to Serial No. 2480675, we would ask that this small part be installed on all such cars which come to you for any attention whatsoever. The time required to make the installation is practically nil.

This part is available from your Chrysler Motors Parts Depot or your local Auto-Lite Service Station.

Installation of this part will also be made by official Auto-Lite Service Stations on all cars coming to their attention.

Enter this Bulletin Number and subject in Plymouth Maintenance Manual under -  
GROUP 7 - ELECTRICAL SYSTEM.

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*J. P. McSwinnon*

Director of Service