H Hargrave

## PACKARD MOTOR CAR COMPANY

## DETROIT, MICHIGAN

September 18, 1935

To PACKARD DISTRIBUTERS AND DEALERS

TO BE NOTED AND INITIALED BY	
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Subject

RUN-DOWN BATTERIES - PACKARD 120

Gentlemen:

During recent years the addition of various electrically operated units has greatly increased the current consumption of a considerable percentage of cars.

Run-down batteries may be encountered in cases where the electrical demands are high, and where the nature of the car's operation is such that the generator does not have the opportunity to replenish the battery.

The generator of the new Packard 120 will be equipped with a pulley of reduced diameter, so that the generator will cut in at a lower speed, and reach its maximum output at a lower speed. This pulley can be installed on the generator of any car of the first model, and this action should be taken in those cases where run-down batteries are encountered.

In handling a run-down battery complaint, it is first necessary to analyze the situation and to determine whether the current comsumption is unnecessarily high. It may also be necessary to point out to the customer that his operating speeds are so low, and his stops so frequent, that it would be impossible to keep the battery charged, unless current is supplied from an outside source. In such cases a small battery charging equipment will meet the situation.

In general, however, the complaint may be handled by the installation of the smaller pulley. It is covered by piece #304924 and may be ordered from us in whatever quantity may be required to meet your demands. The old pulleys may be returned for credit.

Particular attention must always be paid to the batteries in new cars. The cars must be delivered with the batteries fully charged, because the capacity of an unused battery is considerably less than one which has been in use for a few weeks and has undergone the natural "cycling" process which takes place during that time.

Generators as they leave the factory are set to develop approximately 22 amperes cold at 8 volts which would mean that the output of a hot generator at the same voltage would be about 18 1/2 amperes. It must be emphasized that it is impossible to check the generator output, except at a given voltage, and it is impossible to check the generator output, except at a given voltage, and unless you have the equipment which can introduce the necessary resistance

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into the line, the generator check should be made by an established Electric Auto-Lite service station. If the generator output is less than standard, its correction is in the hands of Electric Auto-Lite.

In those cases where current consumption is abnormal, the third brush may be advanced, and the output increased to a maximum of 22 amperes hot at 8 volts. This change, however, should not be made unless it is required, because an unnecessarily high output causes more rapid wear of the commutator and brushes, as well as quicker depreciation of the lamps and breaker points.

Yours very truly,

PACKARD MOTOR CAR COMPANY

Tastalker

T. A. Stalker

Mgr. Technical Department

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