Technical Letter No. 1720

REFER TO THIS LETTER BY NUMBER

TO BE NOTED AND INITIALED BY	

PACKARD MOTOR CAR COMPANY

DETROIT MICHIGAN

April 19, 1922

To Packard Distributers.

Subject, Spark Advance on Packard Six and Twin-Six Cars

The fixed spark setting on the Packard Six and Twin-Six can be checked in the usual way, but there is no means of checking the amount of automatic advance unless the motor is running. The following simple method may be used to determine whether the automatic advance is correct.

Remove the cover over the fly wheel, take off No. 6 spark plug wire and connect it with a wire extension about six feet long. The wire is easier to operate if it has an insulated handle with a metal point, altho any piece of insulated high tension wire may be used.

When the motor is started, and the wire pointer is held just over the surface of the fly wheel, the fly wheel, which will be comparatively dark, will be illuminated by the flash of the spark, and since the flash occurs at exactly the same point each time, the fly wheel will have the appearance of remaining stationary, and any marks on the circumference of the wheel will be very clearly shown. After noting the manner in which the fly wheel is illuminated, the motor should be stopped, and the fly wheel marked in the following manner:

Put a short chalk mark ahead (to the left) of No. 6 top dead center to represent the amount of fixed spark advance. This mark will be at the point which is always used in checking the fixed advance, or as follows:

The 116 should have 1½" advance, the 126 should have 2" advance, and the Twin-Six should have either 2⅝" or 1 9-16", depending on the type and mounting of the spark advance bell crank lever mounted at the left front side of the crankcase. (See Technical Letter No. 1718).

After the amount of fixed advance has been established in this way, make another and longer chalk mark across the fly wheel 1 8-10" ahead (to the left) of the short mark. This long mark will indicate the automatic advance in the manner noted below. The same dimension is used for all three models. Next, mark the center line of the motor on the crankcase just over the flywheel.

Now jack up the rear wheels in order that a speedometer reading may be obtained, start the motor, put it in high gear, and run with the throttle approximately closed, holding the wire extension so that it flashes on the fly wheel. The fly wheel will appear stationary, and if the spark is properly set, the short chalk mark, which registers the fixed advance, will appear directly opposite crankcase dead center. If it appears on either side of the crankcase center, the fixed spark is either too early or too late.

Now, check the automatic advance by holding the pointer in its position over the fly wheel and speeding up the motor until the chalk mark appears to move. This means that the automatic is commencing to advance, and should occur at eleven to twelve miles per hour on the Twin-Six, and thirteen miles per hour on the Packard Six.

When the motor is running slowly, the long chalk mark, which is to be used to check the automatic advance, will be noted well to the left of crankcase dead center, but as the motor speeds up, the mark will appear to move to the right. It should reach a position opposite crankcase dead center at a speed of approximately thirty miles per hour.

Our chief reason for giving you this information is that a number of our distributers have been changing the tension of the automatic springs in order to reduce spark hammer, without actually knowing whether the springs were at fault. Our experience has been that a change in these springs is very seldom necessary.

"Spark hammer" may be caused by the presence of excessive carbon, or by unusually high compression, and if it is due to either of these causes, the correction should be made by remedying the real fault, and not by tampering with the spark advance.

Yours very truly,

PACKARD MOTOR CAR COMPANY.

H. N. Davock.

H. N. DAVOCK, Manager,
Technical Service Department.

Any references herein, to future business, are made subject to the continuance of the existing agreement between the Manufacturer and the Distributer