

PACKARD MOTOR CAR COMPANY
DETROIT · MICHIGAN

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TO PACKARD DISTRIBUTERS

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TO BE NOTED AND INITIALED BY	

SUBJECT

REPLACEMENT AND ADJUSTMENT OF CAM SHAFT DRIVING CHAIN

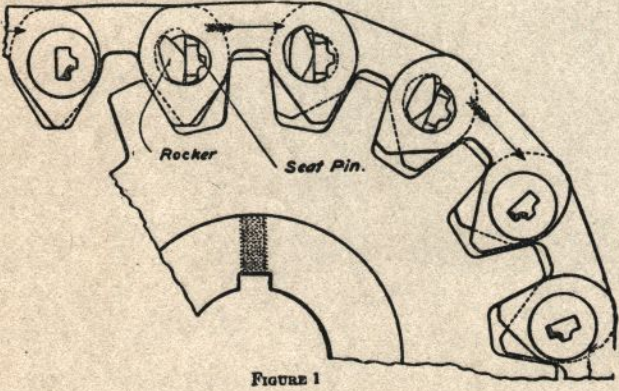
1. It has been brought to our attention that a number of chains are being removed and replaced when the old chain is still in good condition. This has largely been due to a misunderstanding as to what is commonly called the "stretch" of the chain. In order that a chain may operate freely, it is necessary that enough clearance be left on the back face of the link so that the pins will be free to rock against each other, and not bind against the link. For this reason, a clearance of .010" is left at each joint to permit free movement of the pins.

2. Since there is a clearance of .010" at each joint, it is obvious that even in a new chain there is a difference between the maximum and minimum length of approximately $\frac{3}{4}$ ". Owing to the fact that a new chain has not yet been worn in, the joints are somewhat stiff and the clearance is not always evident, but it is there, nevertheless. Since the distance between pin centers is just $\frac{1}{2}$ ", a chain with 78 links should have an extended length of 39" between pin centers, and unless this length exceeds 40", the wear is not sufficient to warrant replacement. It is quite possible that the chain may be compressed to as little as 38", but it is only the elongation over the normal length that needs consideration. If the chain contains only 77 links, the length between pin centers should be $38\frac{1}{2}$ ", and the chain should be replaced if the extended length between centers exceeds $39\frac{1}{2}$ ".

3. After a new car has been driven 2,000 to 3,000 miles, the adjustment of the chain should always be checked, as the first adjustment will be necessary after a much shorter period of operation than any following setting. An adjustment should be made if the upward and downward deflection exceeds $1\frac{1}{4}$ " at a point midway between the camshaft and generator sprockets. The slack should be taken up by means of the eccentric so that the upward and downward movement will be $\frac{5}{8}$ ". After the limit of adjustment of the eccentric has been reached, the front cover should be taken off and the "hunting" link (formerly called the master link) removed. A great many chains have been returned to us in which the hunting link has not been touched, evidently owing to the fact that its purpose was not understood. When, after the removal of the hunting link, the eccentric has again reached the limit of adjustment, the chain should be replaced.

4. If for any reason a chain is removed and replaced, it is essential that it be properly installed. The pins must be inserted as shown in the diagram, as a broken chain may result if their position is altered. The chain must be installed on the sprockets so that the arrows stamped on the links point in the direction of chain travel.

5. Whenever a worn chain is removed, it should be returned to us, as we can have these chains repinned at a charge to you of one-half the net price you pay for a new unit. The life of a repinned chain is at least equal to that of a new unit, and for this reason a worn chain should never be thrown away. The chain is guaranteed for a period of one year, and any units which you believe defective may be returned to us for possible credit.



Yours very truly,
PACKARD MOTOR CAR COMPANY.

H. N. Davock

H. N. Davock,
Manager Technical Service Department.