Buick —

Technical Letter No. 1857. Copy.

To: Packard Distributors and Dealers.

SUBJECT: SHOCK ABSORBER ADJUSTMENT

Gentlemen:-

We have hesitated to put an adjustment in the shock absorber, because we have felt that the presence of an adjustment would cause the service station to feel that any desired combination of riding qualities could be obtained by adjusting the shock absorbers. This most emphatically is not the case.

In the first place it will always be found that a new car will ride stiffly, and this condition will continue until the car has been driven long enough so that the spring shackles and spring bolts will be free and the spring leaves will have become lubricated to a point where they will move freely against each other. It is inadvisable to attempt to soften the ride in any car until it has been driven perhaps 2,000 miles.

The shock absorbers are very uniform in their action, and if, for instance a certain car of one model rides more stiffly than the other cars of the same type, it is unlikely that the shock absorbers are at fault. The stiffness is very much more likely to be caused by the springs or the spring shackles.

As the weather becomes colder the shock absorbers will become stiffer owing to the effect of the lower temperature on the oil. Naturally the car will ride more stiffly when it is first started in cold weather. The oil in the shock absorbers will be affected like the oil in the motor, clutch and transmission, and no change should be made in the shock absorber adjustment simply to compensate for the first few minutes of the cars operation.

If, however, it is found that the car rides too stiffly at all times, particularly if it rides more stiffly than when the weather was warmer, a shock absorber adjustment may be in order. In addition to this cars are usually driven more slowly in the winter and a larger percentage of driving is on the pavement so that the winter adjustment of the shock absorbers may be somewhat softer than that which will be best for average summer driving.

We have recently adopted an adjustable metering valve which is now incorporated in all shock absorbers and which enables you to vary the resistance in the shock absorber as required. It will be found that the normal ride will be secured when the adjustment is turned out from the closed position one and one half to two turns depending on the temperature and driving conditions.

In changing the adjustment the lock nut is first loosened. The screw is turned clock-wise, reducing the flow of oil, to stiffen the shock absorbers. Backing off on the screw increases the flow and naturally has the opposite effect. When the valve is closed in order to determine the starting point for adjustment care should be taken not to force it after it strikes bottom, because the mechanism might be permanently injured.

Our Service Stores Division carries in stock the lubricant which is recommended for the shock absorbers. It is selected because the variation in viscosity caused by changes in temperature is less than that of any other oil which we are able to obtain. No other oil should be used at any time. If the shock absorbers appear particularly soft in their action it is well to make sure that they are filled before attempting an adjustment. When adding oil bear in mind that the shock absorber [illegible]

Each car will require:

4-- 169183 Shock Absorber Metering Valve.

These valves will be charged in the regular way, and when the old units are returned a credit will be extended offsetting the charge.

Yours very truly,

THE PACKARD MOTOR CAR COMPANY.

TAS:N

T. A. Stalker.
Manager Technical Department.