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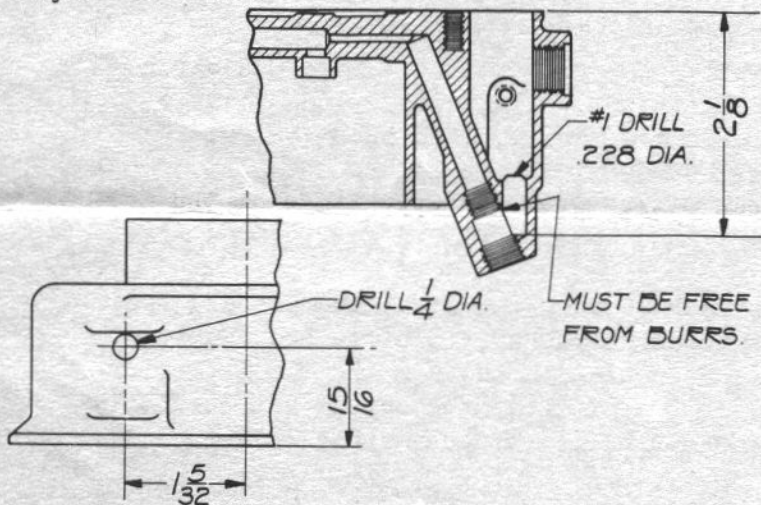
# PACKARD MOTOR CAR COMPANY

DETROIT, MICHIGAN

To PACKARD DISTRIBUTERS AND DEALERS

July 8, 1937

Subject VAPOR LOCK



The terms vapor lock and percolation are generally used to describe the vaporizing of the fuel before it has passed through the carburetor.

In general, percolation is used to cover the premature vaporizing of the fuel in the carburetor itself, while vapor lock may describe a situation in the carburetor or in the fuel pump and the fuel lines. There is no sharp distinction, however, between the two terms.

The condition usually occurs during the first warm days of the late winter or early spring and will be found in those localities where winter gasoline has lasted longer than the cold weather for which it was intended.

When the winter gasoline works out of the picture the vapor lock usually disappears. A second epidemic sometimes follows during the extremely hot mid-summer weather. By that time the winter gasoline is gone but temperatures may be high enough to vaporize even a summer fuel.

When trouble is experienced the first step is to make sure that motor temperatures are not unnecessarily high. The high temperature heater thermostats should be removed from the cylinder heads and heat control valves should be checked in order to make sure that they operate freely. Control valves which stick in the closed position will deliver so much heat to the manifold hot spot that trouble is almost sure to follow.

If cars are driven in hot climates at slow speeds an increase in the air circulation of the fan will also help. Any Packard Six or 120 car may be equipped with the service fan, Pc. #320367. It is not advisable, however, to use an oversize fan unless it is really required. The large fan consumes more power, makes more noise and reduces fan belt life. It should be used for slow speed work.

During the last few months we have found indications of vapor lock or percolation in the Packard Six which have not been evident in the other models, and in addition to the general measures outlined above, special steps may be taken if required.

We suggest the following procedure:

1. Replace the air horn gasket with a new gasket which has been cut out to provide easier disposal of any fumes which may collect in the float chamber.
2. Drill an additional vent hole in the air horn, as shown in the illustration. This is for the same reason.
3. Replace the main metering jet with the latest design. This new design prevents gas from pocketing. While doing this, make sure that the passage supplying the fuel to the main metering jet has no overlapping burrs at the lower end which will enable a gas pocket to form. If necessary the passage should be drilled out with a #1 drill, .228 in diameter, making sure not to drill so deeply as to injure the seat. Do not drill deeper than 2 1/8" from the upper face of the carburetor body.
4. Replace the die cast spacer between the float chamber and the carburetor throat with three of the new throttle body gaskets. These are used to provide insulation between the float chamber and the body. Be very sure that the three screws are perfectly tight, otherwise the gaskets will pound out and air leaks will develop.

The parts required for these replacements are all Chandler-Groves parts. They may be obtained through your nearest Chandler-Groves service station, or may be ordered from us if no service station is conveniently available. The following parts are required:

- 1 22R-1 Main Metering Jet
- 1 8R-16 Air Horn Gasket
- 3 8R-15 Throttle Body Gasket

These parts form an equipment which may be ordered by calling for CG-3A.

In addition to the above, further insulation of the carburetor can be provided by increasing the number of gaskets between the carburetor and the exhaust manifold. Four of the standard gaskets, PC. #316361, may be used instead of one without requiring any change in the studs or in the carburetor adjustment.

The measures outlined above will take care of any vapor lock or percolation unless the fuel used has an unusually high vapor pressure or unless the motor adjustments are not standard.

Yours very truly,

PACKARD MOTOR CAR COMPANY



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