

RESEARCH LABORATORIES DIVISION

GENERAL MOTORS CORPORATION

485 WEST MILWAUKEE AVE.

DETROIT, MICHIGAN

July 30th, 1937.

Dr. R. A. Kehoe,
College of Medicine,
University of Cincinnati,
Cincinnati, Ohio.

Dear Dr. Kehoe:

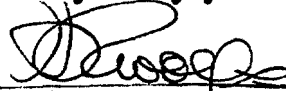
We have received several inquiries as to the possibility of a garage mechanic becoming affected by lead poisoning through the handling of hypoid lubricants.

The hypoid lubricants in question contain from one to four percent of lead calculated as lead oxide (PbO). The lead is present in the lubricant in the form of lead naphthanate or lead oleate. The hypoid lubricants contain in addition from 1.25 to 2.5% added sulphur which is combined by cooking with the mineral oil portion of the lubricant. In addition, some lubricants may contain from 1.0 to 1.5% added chlorine and approximately 25% total saponifiable matter. The chlorine is present as a chlorinated petroleum product or in the form of a chlorine compound which will liberate free chlorine under the conditions of operation in a bearing. Neither the sulphur or the chlorine is combined with the lead in the original lubricant but small quantities of lead sulphide and lead chloride may be formed in storage or in use in an axle.

It is our belief that the lead is present in such a form that it cannot be absorbed through contact of the lubricant with the skin, and that the use of this type of hypoid lubricant offers no particular health hazard providing the mechanic observes the ordinary precautions of washing his hands before handling food.

We shall very greatly appreciate your comments on this subject.

Very truly yours,



H. R. Wolf
Chemical Research Department.

HRW:B

KE 0007653

N 7985