PLAINTIFF'S EXHIBIT
FD-694

Ford Motor Company

Intra-Company Communication

June 13, 1965

TO: Mr. E. D. Marande

cc: Messrs. A. E. Anderson, R. Dickenshied, J. R. Forrester, Jr., R. L. Gealer, B. T. Howes, H. W. Johnson, M. L. Jurosek, R. H. Madison, W. A. McConnell, C. W. Phillips, J. W. Richards, W. K. Skuba

FROM: S. Gratch and T. H. Risk

SUBJECT: Brake Lining Program -- June 1965

Evaluation of Current Brake Lining Materials

A series of FAST runs on American Brake Block ABB 77-80 F were performed at the request of FPEO personnel. This material is under consideration as a temporary replacement for JM 1398 on Lincoln and Thunderbird vehicles. The laboratory tests indicate that ABB 77-60 F is a good replacement with somewhat better performance in all respects except disc wear and scoring. The detailed results of the series of tests on ABB 77-80 F, JM 1398, and JM 2000 B (Mustang disc brake material) have been reported to the interested personnel.

Analysis of a truck brake lining material (Carlisle MMB 62) by pyrolytic gas chromatography has been completed. The results show that this technique can detect the increased concentration of linseed oil in the early production linings. As expected, however, the chromatogram obtained from the material with increased linseed oil was not simply a superposition of the chromatograms of the normal material plus that of cured linseed oil. In order to match the result obtained with the abnormal lining, it was necessary to prepare in the laboratory a modified lining to which excess linseed oil had been added before cure.

Dry-Clutch Facings

Tests of production clutch facings for friction, wear, engagement characteristics, and consistency are in progress. Additional studies are in progress in order to determine the source of contamination of used facings, pressure plates, and flywheels. An attempt is being made to use phosphors of different colors as tracers for various lubricants under suspicion. Efforts to establish feasibility of using pyrolytic gas chromatography as a quality control tool for dry clutch facings are continuing. The main problem is that so far the callibration of the instrument has been changing with use. Deterioration of the chromatographic column is suspected and efforts will be made to find operating conditions which eliminate this deterioration.

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