

Supplier Meeting Results (continued)

- **Thiokol:** A non-asbestos organic lining is being developed. Supplier conducted tests on initial phase parts were acceptable for lining noise and wear. Ford conducted FMVSS 105-75 tests, however, indicated that the material is too brittle; the lining fractured due to the extreme temperatures during this test. The lining compound is being revised; timing has not been established for revised parts and supporting test data.
- **Thermoid:** A non-asbestos lining is being developed on a second priority basis. Parts and supporting test data could be provided to Ford within six months if the program is accelerated.
- **Raybestos:** Programs have been initiated to develop non-asbestos drum and disc brake materials, both semi-metallic and non-metallic. Timing for test part availability to Ford with supporting test data is not established.

Competitive Position

In 1977 GM used semi-metallic linings with an asbestos backing on the Vega, Monza, Camaro, Nova and Chevelle station wagon in addition to Police applications. In 1978 semi-metallic usage is extended to include all "A" shell cars (Oldsmobile Cutlass, Pontiac LeMans, Buick Regal and Chevelle Malibu Classic). Delco presented Ford test data showing that their new semi-metallic lining having no asbestos backing released for 1978 on some of the "A" shell cars is much improved for noise and cold wear over existing semi-metallic linings. A letter was sent to Delco Moraine requesting that they initiate testing of their proposed new material on a Ford vehicle to selected Ford test procedures and to provide estimated piece costs for various assumed volumes. Delco Moraine is expected to respond shortly. However, Ford evaluation of this Delco Moraine semi-metallic lining on an Oldsmobile was unacceptable (rated 5) for noise.

In 1977 Chrysler, like Ford, used semi-metallic linings only for heavy duty Police applications. The 1978 semi-metallic usage is extended to include the new "L" car (similar to VW Rabbit).

Conclusions and Recommendations

- Based on past experience with OSHA, if the OSHA requirement is changed, as expected, sufficient time will be given to make an orderly transition to either an asbestos lining complying with the new requirement if determined feasible, or an alternate non-asbestos lining.
- Funding to support 8 man years labor and \$1.5M material and test should be provided to develop a non-asbestos lining for release by 1980 on selected car lines to gain production experience and on all car lines by 1981 if determined advantageous or required. The work plan to accomplish this is as follows:

<u>Item</u>	<u>Estimated Timing</u>
• Review supplier preliminary test data	3-1-78
• Monitor additional Ford requested supplier tests	6-1-78
• Review supplier test data, select best proposals for Ford testing	7-1-78
• Conduct Ford brake tests including Fleet Evaluations, FMVSS 105-75, Durability, City Traffic, Mountain.	6-1-79
• Retest new submissions if required	2-1-80
• Release on selected car lines to gain production experience	Job #1, 1980
• Release all car lines if advantageous or required	Job #1, 1981

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