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ENGINEERING ASBESTOS PLAN UPDATE

Purpose

To provide a current evaluation on the asbestos regulation, usage, and future trends to supplement the Vehicle Materials Engineering Asbestos Plan established August 26, 1977.

Background

The Asbestos Plan as delivered to the Advanced Review Committee February 9, 1978 emphasized programs to prepare the Company for a staged tightening of the standard. Progress of these programs and recommendations are detailed below

Programs	Status	Recommendations
- VMD&P and NAAO Purchasing monitoring of supplier compliance and engineering programs.	No current evaluation As of Aug. 26, 1977- • Suppliers reaching compliance to 2 fiber/cc level with active programs to meet lower levels. • Engineering programs in initial stage of development of alternative materials	VMD&P and NAAO Purchasing to monitor suppliers progress of achieving efficient environmental controls. VMD&P and engineering to track R&D efforts and manufacturing feasibility of substitutes.
- NAAO Purchasing monitoring costs of asbestos containing components and engineering conducting comparisons with alternative materials.	Analysis of raw asbestos fiber only undertaken.	NAAO Purchasing to evaluate the cost of the final product on a directional basis of engineering determined substitutes.
-Advanced Engineering Projects funded for 1978 in Chassis and Transmission and Axle to assess substitutes.		
Transmission $83,000	• As of 8/78 $28,000 spent on feasibility programs for non-asbestos clutch facings. Project is continuing with a planned release date of Job 1, 1980 on two models. Current support from two suppliers.	Transmission to continue an active program on non-asbestos replacements. Funding for 1979 will be in excess of $100,000 and incorporated into total budget allocations, for production implementation.
Chassis $114,000	•Funding cancelled for calendar year 1978. Lack of supplier submissions.	Chassis to support transition to non-asbestos friction materials by evaluating supplier R&D submissions.
	•Budget for 1979 recommended at $580,000 for advanced projects or non-asbestos. (Bendix semi-metallic disc with asbestos backing introduced on 2.3 liter turbo-engine, '79 Mustang, as pilot program.)	
-Research Support of Engineering in parallel projects.		
Research $312,000	No additional funding for non-asbestos projects. Funds represented are the yearly allowance for the Machining and Wear Dept. The non-asbestos project does not incorporate the full time effort of one employee.	E&R Staff to re-assess the $ amount budget planned for 1979 to obtain future supplier submissions, lawsuit updates, and ICR requests from engineering.

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To provide a current evaluation on the asbestos regulation, usage and future trends to supplement the Vehicle Materials Engineering Asbestos Plan established August 26, 1977.

Regulation

Although a .5 fiber/cc standard was proposed by OSHA on October 9, 1975, no measures have been taken to lower the present 2 fiber/cc permissible exposure limit. The following pressures are contributing to further regulation in 1979:

- Hearings have concluded after 44 days of testimony on OSHA's Generic Policy to regulate all carcinogens. By law, OSHA must act within 60 days of the close of the record, but that deadline seldom has been met with past standards. Final rules to set guidelines for all carcinogens, e.g., asbestos, could easily be issued before the end of the year.
- Concurrently, extensive media coverage will expedite the asbestos standard below the current 2 fiber/cc level. Medical authorities have taken the position that a safe level cannot be identified.
- The completion of the Cotton Dust Standard set a precedent for protection of employes exposed to airborne carcinogens.
- The British have adopted an approach aimed at reducing asbestos exposure to the lowest attainable level with a 2 fiber/cc maximum ceiling, for excursions. Further action is pending on the standard until reports are published by the Advisory Committee. Compliance is enforced under the Health and Safety at Work Act.

Program Development

The Asbestos Plan, as delivered to the Advanced Review Committee, February 9. 1978. emphasized programs to prepare the Company for a staged tightening of the standard. Progress of these programs and recommendations are detailed below:

Programs	Status	Recommendations
. VMD&P and NAAO Purchasing monitoring supplier compliance and engineering programs.	As of August 26, 1977 - . Suppliers reaching compliance to 2 fiber/cc level with active programs [illegible] meet lower levels. . Engineering programs [illegible] ment of alternate materials. [illegible]-Marketing [illegible] Rev[illegible] '78.	VMD&P and NAAO Purchasing to monitor suppliers progress [illegible] achieving efficient environmental controls. VMD&P and Engineering to [illegible] R&D efforts and manufacturing feasibility of substitutes.

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Programs	Status	Recommendations
. NAAO Purchasing monitoring costs of asbestos containing components and engineering conducting comparisons with alternative materials.	Analysis limited to raw asbestos fiber.	NAAO Purchasing to evaluate the cost of the final product on a directional basis on engineering determined substitutes.
. Advanced Engineering Programs funded for 1978 in Chassis and Transmission and Axle to assess substitutes.		
Transmission $83,000	As of 8/78, $47,700 spent on feasibility programs for non-asbestos clutch facings. Project is continuing with a planned release date of Jan 1. 1980, on two models. Current support from two suppliers.	Transmission to continue an active program on non-asbestos replacements. Funding for 1979 will be in excess of $100,000 and incorporated into total budget allocations, for production implementation.
Chassis $114,000	Funding cancelled for calendar year 1978. Lack of supplier submissions. Budget for 1979 recommended at $40,000 for advanced projects on non-asbestos.	Chassis to support transition to non-asbestos friction materials by evaluating supplier R&D submissions.
. Research support of Engineering in parallel projects.	Yearly allowance for the Machining and Wear Department, $312,000. The non-asbestos project, not separately funded, does not incorporate the full time effort of one employe.	E&R Staff to reassess the flat budget planned for 1979 to sustain future supplier submissions, lawsuit inquiries and ICBA requests from Engineering.

Usage

The transition to non-asbestos substitutes has been associated with the increased cost of asbestos and the pressure to limit employe exposure by utilization of environmental controls with an approaching stricter standard. However, the unique properties of asbestos fiber have slowed efforts towards substitution, particularly in applications receiving heavy duty service, e.g., friction brake components. Supplier submissions in those areas have been limited to evaluation by Scientific Research, with no level of success reported.

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Future Trends

- Selective removal of asbestos as a product constituent appears to be the future trend where asbestos is not critical to product acceptance and performance. This assessment is supported by the reduced demand for asbestos fiber imports, since 1973.

- Products such as friction materials, where there is difficulty in duplicating the attributes of asbestos and where there are no economically feasible alternatives, will continue to be produced.

- High costs of worker protection and environmental control in regulated, industrialized nations like the United States will encourage hazardous and polluting industries to export their factories to non-regulating Third World Nations, e.g., Mexico, Taiwan, Brazil and South Korea. The U. S. Government will initiate monitoring of exporting hazards to other countries and will pressure world financial institutions to restrict funding to such concerns.

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