PLAINTIFF'S EXHIBIT AIA-75

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November 24, 1976

Mr. R. H. Mereness
Executive Director
Asbestos Information Association/NA
1835 K Street, N.W., Suite 402
Washington D. C. 20006

SUBJECT: Draft for Proposed AIA Pamphlet on Brake and Clutch Service Hazards,

Dear Bob:

Attached is copy of draft of proposed AIA information pamphlet per your request.

Copies also have been forwarded to the other persons listed below. I should like to have them review and approve this or recommend changes before we release this for print or further circulation.

After your review and comment, I'll be glad to forward a copy to Mr. Nerlinger at ASIA if you would like me to handle this, or you may feel free to do so on your own, whichever you prefer. It may also be advisable to obtain comments from Automotive Parts and Accessories Association, who are practically your next door neighbors, at 1730 K Street, as they also have released an Action Bulletin regarding the NIOSH brake service industry alert. A copy of this bulletin also is attached.

Best regards,

I. H. Weaver

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grb
att.
cc: Messrs. J. H. Marsh
E. W. Drislane
E. H. Feierabend
S. K. Christian

DRAFT

# ASBESTOS DUST HAZARDS AND BRAKE LINING AND CLUTCH SERVICE OPERATIONS

Since December 1971, Federal asbestos standards have limited permissible exposure to airborne concentrations of asbestos fibers and have established procedures that must be followed when dust is created in the processing of asbestos containing materials. In 1975 the National Institute for Occupational Safety and Health (NIOSH) released preliminary results of an on going survey that indicated significant asbestos exposures occur during brake and clutch servicing operations. The NIOSH release warned of a potential health hazard for persons exposed to asbestos during servicing of motor vehicle brake and clutch assemblies. Operations studied included blow-out of automobile brake assemblies, grinding of used truck brake linings, and beveling of new truck brake linings.

The full extent of asbestos-related disease in brake servicing personnel is not known at present because this particular occupational group has not been systematically studied up to now. However, a review of the scientific literature on the association between asbestos exposure and mesothelial tumors of the pleura and peritoneium has revealed cases of these rare tumors in persons exposed in jobs involving automobile brake servicing.

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Previous studies of asbestos emissions from automobile brake lining wear showed that only a small fraction of the original asbestos content of the brake lining is found in brake drum dust, (Ref. 1, 2). It was presumed this is due to thermal degradation of the fibers during braking. More recent findings indicate that enough asbestos is preserved to produce significant exposures during certain brake servicing procedures, (Ref. 2).

[redacted]

NIOSH is continuing research in this area and has recommended the following interim procedures designed to reduce asbestos exposure during performance of automotive service operations. The recommended procedures are meant to supplement, not replace, current asbestos regulations administered by the Occupational Safety and Health Administration (OSHA).

## RECOMMENDED PROCEDURES FOR MINIMIZING ASBESTOS DUST DURING BRAKE AND CLUTCH SERVICING OPERATIONS

1. If possible, an area shall be designated for all brake and clutch repairs. Entrances into this area shall be posted with asbestos exposure warning signs as follows:

Asbestos
Dust Hazard
Avoid Breathing Dust.
Wear Assigned Protective Equipment
Do Not Remain in Area Unless Your Work Requires It.
Breathing Asbestos Dust May Cause Asbestosis and Cancer.

2. During brake servicing, an air purifying respirator, either single use or with replaceable particulate filter(s), as approved by the Mining Enforcement and Safety Administration (formerly Bureau of Mines) or NIOSH, shall be worn during all procedures starting with the removal of the wheels and including reassembly. During manual clutch servicing, such a respirator shall be worn during removal and cleaning of the clutch, pressure plate and housing assembly and during installation of the new clutch assembly.

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3. Dust shall first be cleaned from brake drums, brake backing

plates, brake assemblies and clutch assemblies using an industrial type vacuum cleaner equipped with a high efficiency filter system (>99% efficiency for 0.3 um diameter aerosols). After vacuum cleaning, any remaining dust shall be removed using a rag soaked in water and wrung until nearly dry. Under no circumstances shall compressed air or dry brushing be used for cleaning.

4. During arcing and riveting operations, an approved respirator, as described in (2) above, shall be worn. Grinding (arcing) machines shall be provided with local exhaust ventilation such that worker exposures are maintained at least below the 1976 OSHA asbestos standard (Ref. 3). At a minimum, the dust bag of the arcing machine shall be removed and replaced with the hose of a high efficiency industrial vacuum cleaner as described in (3) above.

5. Industrial vacuum cleaner bags containing asbestos dust and cloths used for wiping brake and clutch assemblies shall be sealed in plastic bags and labeled with the following warning label printed in letters of sufficient size and contrast to be readily visible and legible:

Caution
Contains Asbestos Fibers.
Avoid Breathing Dust.
Breathing Asbestos Dust May Cause Asbestosis and Cancer.

All asbestos waste shall be disposed of in accordance with the OSHA asbestos regulation (Ref. 4). During removal of vacuum bags, an approved respirator, as described in (2) above, shall be worn.

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6. All floor cleaning in areas where brakes and clutches are repaired shall be done with a high efficiency industrial vacuum cleaner as described in (3) above. Grinding (arcing) machines shall also be cleaned with such a vacuum cleaner or other suitable local exhaust ventilation system. Any remaining dust shall be wiped with a damp cloth. An approved respirator, as described in (2) above, shall be used during the cleaning.

7. Although adherence to the above procedures should minimize contamination of work clothing, it is required that the appropriate portions of the OSHA regulations on asbestos (Ref. 5) concerning special clothing, change rooms, etc. be followed.

Adherence to the above recommended procedures should minimize asbestos dust exposures to mechanics during brake and clutch servicing. These are interim recommendations and are subject to revision pending results of the on going NIOSH research program.

## REFERENCES

1. "Brake Lining Decomposition Products," by Jeremiah R. Lynch, National Center for Urban and Industrial Health, U.S. Public Health Service, Journal of the Air Pollution Control Association, Volume 18, No. 12, pages 824-826, 1968.

2. "Asbestos Exposure During Brake Lining Maintainence and Repair," by Arthur N. Rohl, Arthur M. Langer, Mary S. Wolff, and Irving Weisman, Environmental Science Laboratory, Mount Sinai School of Medicine, New York, Environmental Research, Volume 12, pages 110-128, 1976.

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3. 29 CFR 1910.1001.

4. 29 CFR 1910.1001 (h).

5. 29 CFR 1910.1001 (d) (3 and 4).

NOTE: Section 1910.1001 of the Code of Federal Regulations was formerly Section 1910.93a. This change was noted in the Federal Register, May 28, 1975.

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