

FILE NAME: Chrysler (CHRY)

DATE: 1987 Jan

DOC#: CHRY143

DOCUMENT DESCRIPTION: Trade Journal Article - Deadly Dust-Asbestos
Endangers Brake Mechanics

Your Health & Safety

Deadly Dust—Asbestos Endangers Brake Mechanics

Although much attention has been given recently to the dangers of making asbestos in schools and other public buildings, another source of contamination can be even more dangerous. That is the asbestos in automobile brake linings and clutch facings. If these are serviced improperly, millions of microscopic deadly fibers can be released into the air.

Asbestos is a mineral fiber that can cause asbestos-related diseases: mesothelioma, a kind of cancer which is always fatal and usually kills people within two years of diagnosis; plus lung cancer and cancers of the voice box, stomach, and large intestine. Asbestos-related disease usually takes 15 to 30 years or more to show up, so it is easy to ignore the problem.

Studies have shown that nearly one half of mechanics who work for many years without proper control measures can develop asbestosis and many will get lung cancer. Mesothelioma can be caused by very low exposures to asbestos and has also occurred among brake mechanics.

Brake mechanics are not the only ones in danger. The deadly dust can be spread throughout an entire garage, or work area, and asbestos dust can also be taken home on workers' clothes. Mesothelioma has killed spouses and children of brake mechanics.

SAFETY MEASURES

What NOT To Do

• **Compressed Air Hose: DON'T BLOW IT!** The worst thing a brake mechanic can do is to use a compressed air hose to clean drum brakes—16 million fibers per cubic meter of air can be released around the mechanic's face. (The new OSHA standard is 200,000 fibers per

cubic meter). Just hitting a brake drum with a hammer can release over a million asbestos fibers. Disc brakes release smaller, but still dangerous, amounts of dust. These fibers can be scattered around the garage and remain hazardous for months or years.

• **Wet Method:** Using a dry or wet rag or brush also can release millions of fibers into the air. When the wet rag dries or is shaken, asbestos is spread around the garage.

Liquid squirt bottles or solvent sprays can also scatter asbestos fibers. The water or solvent under pressure scatters much of the asbestos and also releases the fibers when it dries. Using a garden hose can prevent some brake dust from becoming airborne, but this can easily contaminate the garage floor.

• **Shop Vacuum:** Using a standard shop vacuum cleaner can spread more asbestos around the garage than a compressed air hose.

Doing It Right

• **Enclosed Vacuum Method:** Equipment is available that makes it possible to enclose a whole brake assembly, using a special box or drum with clear plastic windows and glove bags which fit tightly around the brake assembly. An air hose inside the box and drum is used for cleaning. An exhaust hose goes from the box or drum to a special HEPA (High Efficiency Air Particulate) asbestos filter.

• **Special Areas for Brake Work:** No one should eat, drink, or smoke in an area where brake work is done.

• **Cleanup and Waste Disposal:** Dry sweeping or vacuuming (with a regular shop vac) should never be done where asbestos dust is getting into the air or where it has gotten into the air in the past.



Wet mopping and disposal of the mop head is the only effective way to keep the dust from recirculating into the air. All waste that contains brake dust must be carefully disposed of according to federal and local regulations for asbestos materials.

• **Hygiene:** Workers should wash thoroughly before eating or going home. Showers are recommended. Clothes should always be changed before going home.

• **Respirators:** Respirators with a special HEPA canister filter and other protective clothing should always be used when working with asbestos unless the enclosed vacuum method is used. In addition, when the filters of the enclosed vacuum are being changed, it is recommended that respirators be worn. Before using respirators, workers must be trained, receive medical examinations, and be fit tested for the respirator.

More Information

The Environmental Protection Agency has published a document called *Guidance for Preventing Asbestos Disease Among Auto Mechanics*, a fact sheet, and poster. Single copies of the document, poster, and fact sheet can be obtained by calling EPA at (800) 424-9065. An EPA video, as well as other information, can be obtained from the AFSCME Research Department. □

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JANUARY 1987

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