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LIBERTY MUTUAL

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Ford Dealer Development
Dealership Presidents

Exposure to Asbestos Dust

Brake linings, pads and clutch assemblies are made of asbestos, which has long been recognized as a material producing a hazard to the health of those who inhale its dust in excessive amounts over a long period of time. During the last few years, however, attention has been focused on the development of cancer of the lung and other body areas following exposure to asbestos dust.

An alert concerning the potential health hazard for persons exposed to asbestos during the servicing of motor vehicle brake and clutch assemblies was issued by the National Institute for Occupational Safety and Health on August 8, 1975. It cited four cases of rare mesothelial tumors in persons who were employed in jobs involving brake servicing. This rare type of cancer in the membrane around the lung or stomach causes 1 in 10,000 deaths in the general populace. But one study of 632 asbestos workers found that 32 (1 out of 20) had died of this type of cancer. Asbestos also causes lung cancer; and an asbestos worker who smokes is 50 times more likely to get lung cancer.

The full extent of asbestos-related disease in brake servicing personnel is not known because this group has never before been systematically studied. Excessive dust concentrations measured at operations, such as blow-out of automobile drum brake assemblies, grinding of used truck brake linings, bevelling of new truck brake linings, and arcing of new auto brake linings, together with mesothelial tumors in persons so employed, affirms the necessity for effectively controlling the exposure.

At present we do not have complete information on how much exposure, if any, can be tolerated; and so it is important to eliminate exposures whenever possible and minimize those which cannot be eliminated. Recommended practices are listed below.

Wear Respirator:

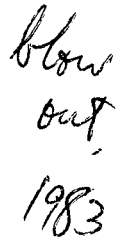
1. During brake servicing, an air purifying respirator, either single use or with replaceable particulate filters(s), as approved by the National Institute for Occupational Safety and Health (NIOSH) should be worn during all procedures starting with the removal of the wheels and including reassembly. During manual clutch servicing, such a respirator should be worn during removal and cleaning of the clutch, pressure plate and housing assembly and during installation of the new clutch assembly. This should also include any arcing or riveting operations.

EXHIBIT
23 Rosynski
4-22-03 SS
PENCAD-Bayonne, N. J.

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INDUSTRIAL HYGIENE AUDIT OF OHIO TRUCK PLANT

6 - 8 June 1983

An industrial hygiene audit was conducted at Ohio Truck Plant on June 6-8, 1983. The purpose of this audit was to evaluate environmental conditions, work practices, and processes in the plant that could adversely affect employee health or contribute to worker discomfort. Mrs. Nancy Lutz, Plant Safety Engineer, very cooperatively assisted during this audit.

Elements of the audit included appraisal of general plant and process ventilation, chemical handling practices, air quality, hearing conservation, respiratory protection, corrosive chemical vision conservation practices, illumination, skin protection practices, sanitation, and heat stress protection.

Overall, the plant's industrial hygiene programs are excellent. Noteworthy are the local exhaust ventilation systems and control of employee exposures to airborne contaminants. Exposures to overspray mist and solvent vapors in paint booths were controlled as was exposure to fine-wire welding fume and gases.

Deficiencies in some industrial hygiene programs were noted, however, and should receive attention.

Ventilation

Whereas overall plant ventilation is excellent, a slight negative pressure condition exists. While insignificant during warm months when large doors are open, this could be a problem during winter leading to breathing zone air quality problems. Plant engineering should assure provision of sufficient makeup air to balance all supply and exhaust systems to within ten percent of each other.

Sodium hydroxide mist was extremely irritating to eyes and respiratory tract on the catwalk in the Caustic Building. The two side draft local exhaust systems were inoperative at the lye tank. These should be repaired and the caustic tank enclosure immediately designated a respiratory protection area. All employees in this enclosure must wear respirators approved for alkaline mists and must be included in a comprehensive respiratory protection program in compliance with OSHA standards and Company guidelines. The enclosure must be appropriately posted.

Asbestos/Silica

Sand blasting of brake drums at the Trailer Maintenance Building presents potential exposures to airborne asbestos fiber and respirable silica dust. Steel shot or glass beads should be considered as substitutes for silica to eliminate risk of silicosis. An air-supplied abrasive blasting helmet must be provided to control exposure to asbestos fiber and dust. A vacuum sweeper approved for asbestos fiber should be purchased to remove residual asbestos from truck trailer brake drums before new brake shoes are installed. This vacuum sweeper should be made available to maintenance personnel who repair and install new brakes in the hi-lo and fork truck vehicle maintenance area. Employees must be instructed not to use compressed air wands to blow residual asbestos dust and fiber off brake shoes and drums. Wet methods, vacuuming, respiratory protection, and ventilation must be used to control exposure to asbestos. Brake maintenance employees should be on the asbestos medical surveillance program.

Illumination

Illumination was marginally acceptable in several areas in the north end of the plant. Much daytime illumination in this area comes from skylights. Illumination is considerably less on the night shift. Steps should be initiated to clean and maintain existing lighting fixtures and to consider installation of additional luminaires.

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The area behind the lye tanks in the Caustic Building was poorly illuminated. Since there are tripping hazards here and employees must periodically enter this area of corrosive and slippery chemicals, better illumination is indicated.

Sanitation

Overall plant sanitation and hygiene is excellent. No deficiencies other than minor housekeeping were noted in cafeterias, food preparation areas, canteens, locker rooms, and washrooms/toilets. The nuisance odor condition associated with cigarette butts, food, waste, and oil discarded into trenches around production equipment should be addressed by a periodic maintenance cleaning schedule. At the least, this condition is visually unaesthetic and is an employee concern as expressed by the UAW Health and Safety Representative. The food storage refrigerator in the Power House should be relocated away from the chemical storage area. Free-standing water in the Trailer Maintenance Building should be controlled to eliminate a slipping hazard and harborage for mosquito and insect larvae. Flying insects in the plant were not a problem, and we see no compelling need for installation of more electronic bug killers.

Hearing Conservation

There was inconsistent use of hearing protectors in designated hearing conservation areas. All employees must consistently wear approved muffs or plugs at these locations. A variety of protectors should be made available including an approved earmuff and at least two types of earplugs. The Power House generator area should be designated a hearing conservation area and appropriately posted. Some metal finishers at F-26, for example, were not wearing protection. They must constantly use hearing protection equipment. The paint pot block house must be made a mandatory hearing conservation area and so posted. Although exposures are brief in this area, the noise intensity is extreme and poses a risk of noise-induced hearing loss. Generally, hearing conservation areas should be more clearly posted and designated.

Respiratory Protection

Employees use appropriate and approved respirators for air contaminants to which they are exposed; however, a serious deficiency exists because many do not use both straps on the half mask respirators. This prevents an effective face-to-mask seal. This should be corrected by management enforcement and education and training sessions. The paint residue removal area at the Caustic Building lye tanks must be designated as "Respiratory Protection Required". Written programs must be established for all respiratory protection areas in compliance with OSHA standards. Paint sprayers leave their respirators on work surfaces adjacent to the booths. This must be corrected by providing an hygienic storage area for each painter's respirator.

Vision Conservation

Employees use inappropriate eye protection when handling or working near corrosive chemicals. Eye protection of choice is the chemical splash goggle which is superior to a face shield for vision conservation. Employees must be instructed to wear goggles where splashing of corrosive chemicals could occur. These areas should be so designated. The chemical eyewash fountain and shower in the Caustic Building must be relocated on the catwalk midway between both lye tanks. Consideration should be given to installing an emergency eyewash fountain near BB-21, A-22 or A-21. It must be emphasized that eyewash fountains are secondary to consistent use of splash goggles in vision conservation areas. Employees who handle strong acids, alkalies, oxidizers, corrosion inhibitors, microbiocides, and scale removers must wear splash goggles. We see little need for face shields in chemical handling areas at Ohio Truck Plant.

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Air Quality

Other than caustic mist at the lye tanks, no obvious air quality problems were noticed. It is advisable, however, to document exposures to solvent vapors in the paint kitchen. Arrangements will be made to have plant personnel conduct this monitoring this winter when doors are closed. Air sampling is also recommended to document solvent vapor exposures of maintenance employees who clean paint sludge filters in the basement at C-37.

Skin Protection

There is no evidence of excessive dermatitis at Ohio Truck Plant in spite of potential contact with a wide variety of dermal irritants and sensitizers. Several paint sprayers complained, however, that even two pairs of green gloves do not prevent paint from penetrating through to their skin. As a result, they wash their hands with paint thinner at the end of the shift. They believe that white cotton gloves which had been provided to them previously are superior to the present gloves. The plant should select a glove to assure that painters do not have to resort to the use of solvents to clean their hands. Non-silicone based barrier creams should also be considered. Although the solvent they use is not appreciably skin absorbed, it can dissolve protective oils and lipids from the skin and pave the way for an industrial dermatosis.

Chemical Storage

Greater attention by means of educating and training lift truck operators is required to assure that incompatible chemicals are not stored together. For example, drums of concentrated sulfuric acid were stored next to drums of aqueous ammonia. Drums of sodium nitrite, a strong oxidizer, were stored next to readily oxidizable materials. Inadvertent drum rupture as might occur during a fire or from impaling by or dropping from a fork truck could produce a chemical emission emergency.

Ergonomics

The BAO ergonomics task force should consider the potential for chronic hand/wrist musculoskeletal and neurological trauma in sealer application employees.

Heat Stress

No significant heat stressful work environmental conditions were observed.

The Industrial Hygiene Services Section will, as requested, assist in implementing these recommended industrial hygiene programs at Ohio Truck Plant.

Roger Wabeke

Roger Wabeke, Supervisor
Industrial Hygiene & Toxicology Department
Employee Health Services

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