Mechanics should assume that all brakes have asbestos-type shoes. Worn non-asbestos-type brake shoes cannot b readily distinguished from asbestos-type shoes. If a mechanic assumes incorrectly that a shoe is a non-asbestos-ty and fails to utilize brake dust control procedures, increased asbestos exposure may result.

Mechanics must be trained in the correct and most effective way to use the control system selected by the facility manager or owner. The danger of increased exposure to asbestos as the result of improper work practices should b explained. Examples of improper work practice include: directing an air nozzle at an enclosure seal, placing the noz of a spray mist too close to the work surface, not placing the vacuum nozzle close enough to the contaminated surface, turning on the vacuum pumps before positioning the vacuum enclosure over the wheel and leaving them o when removing the enclosure, and splashing or spilling contaminated solutions on the floor. A control system must always be used and consistent work procedures are essential.

Use pre-ground, ready-to-install parts when possible. If asbestos-containing friction materials must be drilled, grooved, cut, beveled, or lathe-turned, low speeds should always be used to keep down the amount of dust create All machinery should have an adequate, HEPA equipped local exhaust dust collection system to prevent asbestos exposures and shop contamination. Immediately clean spills of brake dust or contaminated solutions by HEPA vacuuming or wet mopping.

A regular maintenance program for the system used to control brake dust is essential. Maintenance should include checking and replacing seals, nozzles, other hardware, contaminated filters and solutions. Any deficiencies such as ineffective seals, or air nozzles should be repaired. Disposal of asbestos contaminated material, whether it is filters solutions, must be in accordance with federal and state regulations and in compliance with 1910.1001(k)(6). Perioc cleaning will help reduce the possibility of asbestos contamination of workbenches, floors, etc. Mechanics should perform brake and clutch work in an area isolated from other work areas. Signs should be posted informing employ not to eat, drink, or smoke in the brake and clutch work area. Asbestos and other potentially toxic materials can be ingested or inhaled during these activities.

Personal hygiene, such as frequent hand washing with soap or detergent, should be stressed. Changing from soiled work clothes into clean clothes before leaving work provides additional protection against bringing asbestos into the home environment. A laundry service with facilities for cleaning asbestos contaminated clothing must be provided f any asbestos-contaminated work clothes.

Conclusion

Engineering controls and good work practices must be implemented throughout the process of performing brake ar clutch inspection, disassembly, repair, and assembly. The four types of control systems or methods described here effectively reduce employees' asbestos exposure below the OSHA permissible exposure level.

Information about job hazards must be disseminated through a training program that describes how to do properly perform a task, how each work practice reduces potential exposure, and how employees can benefit from these practices. No matter, which control system, is used, employees must be trained in how to properly use it. Employe (and do-it-yourselfers who choose not to have brake and clutch work conducted by professional mechanics) who ca recognize and control hazards are better equipped to protect themselves from asbestos exposure. Training and wor practices should be frequently reinforced. Business owners who are concerned about the cost of professional help c contact the OSHA Consultation Project Office in their state for free consultation service. Priority is given to busines with fewer than 250 employees at a worksite, with further consideration given to the severity of the worksite probl The Consultation Program can help the employer evaluate and prevent hazardous conditions in the workplace that cause injuries and illnesses

[1]Asbestos in Brakes Exposure and Risk of Disease, Richard A. Lemen, PhD, MSPH, American Journal of Industrial Medicine 45: 229-237 (2004)

*Non-employees outside the automotive repair industry who typically repair or replace their own brakes at home. These individuals are not subject to the OSHA requirements in this Safety and Health Information Bulletin.

For more information about EPA's asbestos program, do-it-yourselfers may visit EPA's website or you may call the asbestos ombudsman's hotline/clearing house at 1-800-368-5888.