



Current Best Practices For Preventing Asbestos Exposure Among Brake and Clutch Repair Workers



Who can this information help?

This information can help professional automotive technicians and home mechanics who repair and replace brakes and clutches. By law, most professional automotive shops must follow the Occupational Safety and Health Administration's (OSHA) regulations at 29 CFR 1910.1001, specifically paragraph (f)(3) and Appendix F. These are mandatory measures that employers must implement for automotive brake and clutch inspection, disassembly, repair, and assembly operations. State and local governments with employees who perform brake and clutch work in states without OSHA-approved state plans must follow the identical regulations found under the EPA Asbestos Worker Protection Rule (Subpart G of 40 CFR 763).

While home mechanics are not required to follow the OSHA work practices (or the identical requirements under the EPA Asbestos Worker Protection Rule), by using these practices home mechanics can minimize potential exposure to asbestos if it is present and thereby reduce their potential risk of developing any asbestos-related diseases.

What is asbestos and how can it cause health problems?

Asbestos, a naturally occurring mineral fiber that is highly heat resistant, can cause serious health problems when inhaled into the lungs. If products containing asbestos are disturbed, thin, lightweight asbestos fibers can be released into the air. Persons breathing the air may then inhale asbestos fibers. Continued exposure can increase the amount of fibers deposited in the lung. Fibers embedded in the lung tissue over time may result in lung diseases such as asbestosis, lung cancer, or mesothelioma. It can take from 10 to 40 years or more for symptoms of an asbestos-related condition to appear. Smoking increases the risk of developing illness from asbestos exposure.

For more information on the health effects of asbestos exposure, visit the Agency for Toxic Substances and Disease Registry (ATSDR) at <http://www.atsdr.cdc.gov/asbestos/index.html>.

Why should mechanics be concerned about asbestos exposure?

Because some, but not all, automotive brakes and clutches available or in use today may contain asbestos, professional automotive technicians and home mechanics who repair and replace brakes and clutches may be exposed to asbestos dust. Brake and clutch dust can be seen when a brake disk, drum, clutch cover, or the wheel is removed from a car, truck, or other equipment. There are also many small dust particles that cannot be seen with the eye. If the brakes contain asbestos, the dust may contain asbestos fibers, which could be inhaled.

Do not blow dust from brakes and clutches!



Using compressed air, a brush (wet or dry), or a dry rag to clean brake assemblies has the potential to expose you to asbestos fibers.

How do I know if I have asbestos brake or clutch components?

You cannot tell whether brake or clutch components contain asbestos simply by looking at them. For newer vehicles and parts, auto manufacturers, auto parts retailers and packaging information, such as labels or Material Safety Data Sheets, may be able to tell you whether or not your brake or clutch components contain asbestos. For older vehicles, or vehicles that have had brakes replaced, you may not be able to easily find out if the brake or clutch components contain asbestos.

As a best practice, OSHA states that mechanics should assume that all brakes have asbestos-type shoes. Worn non-asbestos-type brake shoes cannot be readily distinguished from asbestos-type shoes. If a mechanic assumes incorrectly that a shoe is a non-asbestos type and fails to utilize brake dust control procedures, increased asbestos exposure may result.

As a professional automotive technician, what work practices must I follow to reduce potential exposures to asbestos?

If you work in a commercial automotive shop that performs work on more than five brake or clutch jobs per week, OSHA regulations require the use of one of the following work practices or an equivalent method such as the spray can/solvent system.

Negative-Pressure Enclosure/HEPA Vacuum System Method This type of enclosure and vacuum system has a special box with clear plastic walls or windows, which fits tightly around a brake or clutch assembly to prevent asbestos exposure.

Low Pressure/Wet Cleaning Method This specially designed low-pressure spray equipment wets down the brake assembly and catches the runoff in a special basin to prevent airborne brake dust from spreading in the work area. (over)

If you work in a commercial automotive shop that performs work on no more than five brake or clutch jobs per week, OSHA regulations allow the following method instead:

Wet Wipe Method This method involves using a spray bottle or other device capable of delivering a fine mist of water, or amended water (water with a detergent), at **low pressure** to wet all brake and clutch parts. The brakes can then be wiped clean with a cloth.

As a home mechanic, what can I do to protect myself from asbestos exposure?

If you are not able to determine whether your brakes or clutch contain asbestos, you may want to consider having your brakes or clutch serviced at a commercial automotive shop. OSHA requires special work practices for professional automotive technicians. If, however, this is not possible and you do not have access to the equipment professional automotive shops use to comply with the OSHA work practices, you may want to consider using the wet wipe method described in this brochure (www.osha.gov/SLTC/asbestos/standards.html). This method has been deemed acceptable by OSHA for shops that service no more than five brake or clutch jobs per week.

Work Practice Don'ts for Home Mechanics: **It is recommended that you:**

- **Do not use compressed air for cleaning.**
Compressed air blows dust into the air.
- **Do not clean brakes or clutches with a dry rag, brush (wet or dry), or garden hose.**
- **Do not use an ordinary wet/dry vac without a high-efficiency particulate air (HEPA) filter to vacuum dust.** Invisible particles of brake or clutch dust can stay in the air and on your clothes long after a job is complete.
- **Avoid taking work clothing inside the home or tracking dust through the house after performing brake and clutch work to prevent exposing your family to dust particles that may contain asbestos.**

Work Practice Do's for Home Mechanics:

It is recommended that you:

- Use pre-ground, ready-to-install parts.
- If a brake or clutch lining must be drilled, grooved, cut, bevelled, or lathe-turned, use low speeds to keep down the amount of dust created.
- Use machinery with a local exhaust dust collection system equipped with HEPA filtration to prevent dust exposures and work area contamination.
- Change into clean clothes before going inside the home and wash soiled clothes separately.
- Minimize exposure to others by keeping bystanders, as well as food and drinks, away from the work area.

How do I dispose of waste that contains asbestos?

Employers of professional automotive technicians must ensure that they or their waste haulers dispose of waste that contains brake or clutch dust, including wet rags used to wipe this dust, in accordance with Federal and local regulations, including the OSHA asbestos waste disposal regulations. OSHA regulations (29 CFR 1910.1001(k)(6) and 29 CFR 1910.1001(j)(4)) require that, before waste containers with brake and clutch dust and other asbestos waste in them are collected, they must be sealed. The containers also must be impermeable and must be appropriately labeled. These regulations do not apply to home mechanics. For home mechanics, EPA recommends that asbestos waste be double-bagged and disposed of following appropriate local regulations to minimize exposure. You may contact your state asbestos representative for more disposal and other information.

<http://www.epa.gov/asbestos/pubs/statecontact.pdf>

Where can I get additional information?

OSHA has issued a Safety and Health Information Bulletin on brake and clutch repair that is available at <http://www.osha.gov/dts/shib/shib072606.html>.

EPA's Asbestos Worker Protection Rule regulations apply to certain state and local government employees (40 CFR Part 763, Subpart G). For more information on EPA's Asbestos Program visit:

<http://www.epa.gov/asbestos/>
or call 202-554-1404.