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Complete Health Environmental and Safety Services

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## What's In Those Brakes?

Asbestos is still legal for use in brakes and clutches. And that's caused some confusion, and could cause some serious health risks for mechanics.

In 1989, the Environmental Protection Agency tried to ban asbestos, setting a phase-out schedule for its use. But in 1991, a court ruling set aside most of the ban. You can't buy paper or flooring felt that contains asbestos anymore, and new uses are prohibited. But automatic transmission components, clutch facings, friction materials, disc brake pads, drum brake linings, brake blocks, and gaskets can still legally contain asbestos. We don't see that much of it these days, because manufacturers are aware of the health risks (and the liability). That doesn't mean it's completely gone.

The major car manufacturers have moved away from using asbestos. Saab removed it from all cars in 1983. Nissan specified all asbestos-free components in 1994 – but until 1999, a supplier kept on using asbestos in a sealed part within air filters and oil coolers. By 1993, Toyota had all asbestos-free brakes and clutches. Asbestos still showed up in a few specialty gaskets – those were removed in 2005. The American manufacturers aren't quite as forthcoming about asbestos use. And there are still quite a few manufacturers of asbestos brakes and clutches in China and India. Do any of their products make it to the U.S.? Yes.

The concern with asbestos is, of course, lung damage. As we hear with the recent reports from miners on the Iron Range, asbestos can cause mesothelioma, a rare and always fatal type of cancer of the lining around the lungs. It can also cause lung cancer and asbestosis, which is severe scarring of the lungs. These diseases develop slowly; mesothelioma can take as long as 30 years. So protection now is critical.

### **What protective measures do you need to take?**

Always assume brake or clutch dust is hazardous. Short of looking at the brake dust under a specialized microscope, you cannot tell whether it contains asbestos. And non-asbestos brakes could be hazardous, too. The materials used in non-asbestos brakes haven't been linked to long term harm, yet. But you're safer treating all brake dust as a concern.

Keep it wet or keep it enclosed. Use a negative pressure enclosure, equipped with a HEPA vacuum to contain and control the dust. Or, easier to use, wet the brake or clutch assembly thoroughly, using a low pressure mist of amended water, water to which a detergent has been added. Catch the runoff in a basin, so it can be disposed of properly. If your shop does fewer than five brake or clutch jobs a week, you can spray the area and wipe it down with rags. Again, spray gently, at low pressure, so you don't put the dust in the air.

Don't blow it. Never, never blow dust off with compressed air. That puts any asbestos dust right into the air you breathe. Wetting it down takes longer, but won't kill you.

Machining brakes? Control the dust. Use parts that don't require machining, if you can. If you need to work the brakes, do so at a low speed. The equipment you use should be equipped with HEPA filters, to contain the dust.

Keep it clean. Clean the shop, using wet mops. Dry sweeping puts dust back in the air. Keep work clothes separate from street clothes. Wash up before you go home.

Read the label. When you put new brakes or clutches onto a car, check the label. Make sure the brakes you put back on are labeled as asbestos-free. Definitely don't use ones labeled as containing asbestos. Ones that don't say anything about asbestos should be asbestos-free, but I wouldn't trust that.

Asbestos is a long term killer. If you breathe it today, you won't notice any problem now. But fifteen, twenty years from today, its effects could surface. Take precautions to avoid it today. Assume it's there, control the dust, and you'll be able to breathe easier today and tomorrow.

*This article is intended to provide general information (not advice) about current safety topics.  
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