Mercury Switches in Automobiles

Information for the Auto Services Sector

Overview

Mercury is a toxic metal, often used to activate convenience lighting in the hood or trunk of a car. The mercury in vehicle switches can be released into the environment when a vehicle is crushed or shredded or when scrap metal from a vehicle is recycled by steel mills. Although the amount of mercury used in each switch is small (approximately 1 gram) the potential amount of mercury released into the environment annually from vehicle recycling can amount to hundreds of pounds.

Removal and proper management of mercury switches in vehicles can help keep mercury out of the environment. Auto repair and auto body shops can help keep mercury out of our environment by providing mercury switch replacement programs and ensuring mercury-containing components are recycled or properly disposed.

Which vehicles contain mercury?

Not all vehicles contain mercury switches, and many manufacturers have phased out the use of mercury in convenience lighting. Generally, convenience lighting in American-made cars manufactured before 2001 and foreign cars manufactured before 1992 should be inspected for mercury switches. Some later American models may also contain mercury switches.

Where are mercury switches located?

Mercury light switches are often found in the car's hood and/or trunk. The actual mercury switch is the small, bullet-shaped metal or glass capsule that forms the base of the light socket and is visible once the bulb is removed. Sometimes the mercury switch will be found further along a wire that runs toward the bottom of the hood or trunk.

Are there alternatives to mercury switches?

Luckily, non-mercury replacement switches exist and are easy to install. Most of these alternatives use a ball bearing in place of liquid mercury to trigger the electrical connection.

To remove a mercury switch, follow the vehicle manufacturer recommendations. In general, the process involves removing the lighting fixture by:

- ✓ Cutting the power supply wire attached to the base of the light fixture.
- ✓ Removing any fasteners in order to separate the entire fixture from the vehicle.
- ✓ Placing the entire fixture in a heavy plastic bucket with a lid, or a similar container, for temporary storage.

Mercury containing items must be managed and disposed of properly. Removing the mercury-containing capsule from the light fixture may reduce hazardous waste disposal and recycling costs as many recyclers charge by weight. However, additional safety measures are essential when separating the capsule from the fixture in order to prevent breakage of the mercury capsules. Additional information for switch removal can be found at www.epa.gov/ARD-R5/mercury/autoswitch.htm.

What kinds of regulations apply to the switches?

Once removed from a vehicle, a mercury switch is considered hazardous waste and must be managed accordingly. Management, storage, and disposal options will depend on facility generator status. Small and large quantity generators may choose to manage mercury-containing switches as Universal

Wastes. Under the Universal Waste Rule, facilities that recycle the switches are subject to streamlined requirements regarding this waste.

For information on determining facility generator status or hazardous waste regulations in Idaho, visit http://www.deq.idaho.gov/waste/assist_business/haz_waste/index.cfm or call the closest DEQ regional office at:

Boise	**373-0550**
Coeur D'Alene	**769-1422**
Idaho Falls	**528-2650**
Lewiston	**799-4370**
Pocatello	**236-6160**
Twin Falls	**736-2190**

Where do I recycle or dispose of mercury switches?

Collected mercury switches should be sent to a hazardous waste collection or mercury recycling facility. Many hazardous waste management companies will accept mercury wastes. For a list of Idaho companies that take mercury, visit the Idaho Recycling and Waste Management Directory at www.deq.idaho.gov/waste/recycling/recycle_home.cfm.

What should I do if I break a mercury switch or capsule?

Mercury is a hazardous substance that is harmful if inhaled, ingested, or handled. Precautions should be taken when handling it. All mercury spills should be cleaned up immediately and the materials should be properly disposed.

- Clean small mercury spills on nonporous surfaces by wiping up the mercury and sealing the cloth or towel in a plastic bag. This bag can be placed in a mercury switch storage container and disposed or recycled as hazardous waste.
- Purchase a mercury spill kit, available at laboratory safety supply stores.
- Never use a vacuum to clean up a mercury spill. Mercury readily becomes a vapor, and a vacuum will disperse mercury into the air, where it can be inhaled.
- Never use a broom to sweep the mercury. This will create even smaller beads of mercury, which will be more difficult to collect.

For more detailed guidance on cleaning up a mercury spill, visit the U.S. Environmental Protection Agency's mercury management Web site at www.epa.gov/mercury/disposal.htm.

What can my facility do to help reduce the environmental impact from switches?

Consider participating in a mercury switch replacement program, offering to replace mercury switches for your customers free of charge. Several associations serving Idaho offer assistance in conducting mercury switch-out programs.

Northwest Automotive Trades Association's Mercury Switch-Out Program: The Northwest Automotive Trade Association encourages Idaho shops to participate in its free Mercury Switch-Out Program. Participating shops will be provided with a list of vehicles that contain mercury, mercury-free replacement switches, and a storage container. For more information, visit www.aboutnata.org.

AAA Washington/Inland Mercury Switch-Out: AAA Washington/Inland assists with periodic mercury switch replacement campaigns. For more information, visit http://www.aaawa.com/news_safety/community/battery_roundup.asp.