

Mercury in Vehicles: A Sensible Solution to a Serious Problem

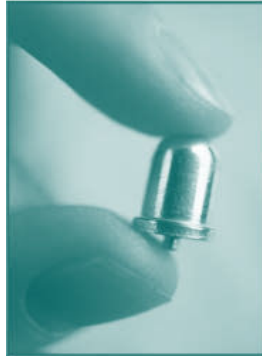
The Problem

Serious environmental and human health effects result from the release of mercury contained in electrical switches used in vehicle lighting and braking systems as well as contained in LED lights and headlamps when vehicles are scrapped and enter the steel recycling infrastructure. Mercury in vehicle switches poses a danger to human health, to the state's environment, and to several important sectors of the state's economy.

Mercury is a persistent and toxic pollutant that bioaccumulates in the environment. Wisconsin and 40 other states have issued fish advisories that warn certain individuals to restrict or avoid consuming fish from bodies of water contaminated with mercury¹. The U.S. Food and Drug Administration has advised pregnant women and women of childbearing age who may become pregnant not to eat shark, swordfish, king mackerel or tilefish due to methyl mercury contamination².

The release of mercury to the state's land and water poses serious potential consequences for the state's commercial and recreational fishing industries, Wisconsin tourism and the state's steel production and recycling industries.

The Wisconsin Department of Natural Resources (DNR) has included mercury switch removal from autos as part of their voluntary Cooperative Compliance Program for salvage yards. While this program has resulted in the collection of many mercury switches, in 2003 only approximately 12-15% of the state's salvage facilities turned in switches.



Mercury in Vehicles

The use of mercury in automobiles can cause the release of more than 22,000 pounds of mercury to the environment each year³. Based on the automobile industry's own data, vehicles currently on the road in the U.S. contain an estimated 220,000 pounds of mercury. In Wisconsin alone, the vehicles currently on the road contain nearly 4,000 pounds of mercury⁴.

In 1995 the American automobile industry pledged to phase out mercury switches starting as early as model year 1997. Although non-mercury switches cost less than 10 cents more than the mercury switches, the industry did not complete its phase-out of mercury switches from new models until 2003. International automakers stopped using mercury switches by 1993, following a ban on such uses in Europe.

The Solution

Protect Wisconsin's public health and the environment by establishing a producer-financed system through legislation or enforceable agreement for:

- Recovery of mercury-containing switches at auto dismantling yards before automobiles are crushed and shredded
- Replacement of the switches from cars currently on the road
- Safe recycling of the switches once they are collected

Installing additional air pollution controls on steel mills and foundries to capture mercury from vehicle switches would be more costly and less effective than recovering mercury switches before they enter the scrap metal recycling chain.

The Goal

Capture 90% of mercury switches by enacting state legislation that establishes a system financed by manufacturers for the removal and safe management of mercury switches from vehicles in Wisconsin.

Legislation

Model legislation developed by the national Partnership for Mercury-Free Vehicles⁵ has been enacted in Maine and introduced in Massachusetts, Rhode Island, New York and New Hampshire. Many other states are also considering the legislation.

The model legislation requires vehicle manufacturers to establish and fund a system for the removal and safe management of mercury switches in vehicles. It prohibits the sale of vehicles containing mercury switches and phases-out the use of other mercury-added vehicle components within a few years.

By requiring vehicle manufacturers to take the primary responsibility for establishing the switch-collection system, the legislation encourages avoidance of potential hazards in future automobile designs. Placing the burden on consumers or governmental agencies would send the opposite message to manufacturers.

National Partners

Steel manufacturers, vehicle dismantling and steel recycling industries and environmental organizations.

Contacts

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For Additional Information Consult the Following References

¹ See <http://www.dnr.state.wi.us/org/caer/ce/mercury/fish.htm> for fish consumption advice for WI

² To view the 2001 Advisory, go to <http://www.cfsan.fda.gov/~acrobot/hgadv1.pdf>

³ National Research Council, "Toxicological Effects of Methyl Mercury," 2001, <http://www.nap.edu/catalog/9899.html>

⁴ Vehicle Inventory/Retirement Rate - ORNLs Transportation Energy Book Edition 21; Lighting Mercury Use - Michigan Mercury Switch Study, 2002 with extrapolation for early model vehicles; ABS Mercury Use - Wards Automotive Sales Data for models known to have mercury ABS switches; State of Vermont Mercury Use Data, 2003; Motor Vehicle Registration Data -US Department of Transportation, Highway Statistic 2000, October 2001.

⁵ http://www.cleancarcampaign.org/pdfs/Hg_legis.pdf