



Massachusetts  
Department  
of  
ENVIRONMENTAL  
PROTECTION

## f a c t s h e e t

### Best Management Practices for Automotive Recyclers: Vehicle Crushing

If not properly managed, fluids and hazardous components in end-of-life vehicles can damage human health and the environment (through soil, groundwater, surface water, and storm water contamination), reduce the salvage value of the crushed vehicle and possibly require a costly site cleanup.

#### Important points to remember...

- Completely drain and contain *all* vehicle fluids *before* crushing.
- *Don't mix* waste oil with gasoline, gas additives, degreasers, antifreeze, or solvents.
- Properly manage and recycle or dispose all waste fluids.
- Crush vehicles on a concrete pad or other impervious surface that is bermed – never on bare ground.
- Ensure that your crusher has a closed fluid containment system and that operators follow best management practices.

Most motor vehicle fluids can be recycled *if each type is kept separately*. If you do not drain the fluids before the vehicle is crushed, these hazardous materials can be released to the environment and you may be required to conduct a costly evaluation and cleanup under the Massachusetts Contingency Plan regulations (310 CMR 40.0000).

#### Know Your Generator Status

Your facility must be registered with MassDEP as a generator of waste oil and obtain a permanent Identification Number. Depending on the quantity you generate each month, you must determine whether you are a Very Small Quantity Generator, Small Quantity Generator, or Large Quantity Generator. Visit the MassDEP web site to find out which category fits your facility, and how to register: <http://www.mass.gov/eea/agencies/massdep/recycle/hazardous/hazardous-waste-generators.html>

#### BEST MANAGEMENT PRACTICES

*Before* crushing a motor vehicle:

- Drain all fluids (fuel, oil, radiator, transmission, power steering fluids, windshield washer fluid, antifreeze, hydraulic fluids etc.) over a concrete pad or other impervious surface without cracks, gaps or floor drains, preferably under cover. Use drip pans to collect the liquids and to avoid spills.
- Do not mix fluids. Recycle and/or reuse them. Store each type in labeled leak tight containers, under cover. Note: Landfills will *not* accept liquids for disposal.
- Mixed fluids must be treated as a hazardous waste.
- Evacuate the air conditioning refrigerant, using a U.S. Environmental Protection Agency (EPA) certified equipment operated by certified technicians.
- Remove and separate recyclable and potentially hazardous components, including the gas tank, radiator, tires, battery, catalytic converter, air bag units, devices containing PCBs (e.g. electrical capacitors in older cars) and mercury (e.g. mercury switches and mercury containing ABS components). Properly manage and label these components until they can be transported to a recycler or disposal facility. Components containing mercury should be handled as “universal wastes”. For more information about these requirements, see: <http://www.mass.gov/eea/docs/dep/toxics/laws/hgbanfaq.pdf>

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- Locate the vehicle crusher (mobile or stationary) on a bermed or self-contained concrete pad (or other impervious surface) without cracks, gaps or floor drains, preferably under a roof to protect it from the weather. To ensure that fluids will not drain through the concrete, the pad can be coated with an epoxy resin. The floor surface should be sloped to contain any fluids accidentally spilled. Position the crusher toward the center of the concrete pad rather than along the edge.
- Do not allow fluids to spill or drip onto the soil or ground.
- Do not pour residual fluids inside the next vehicle to be crushed.
- Make sure the crusher is fitted with a device to capture residual fluids.
- Keep the crusher drain clear so that it does not back up, clog, and overflow onto the ground.
- Clean the crusher regularly by wiping off accumulated oil and grease and removing dirt and debris from the crushing area. Properly dispose of the soiled cleaning materials and debris (See "Answers to Frequently Asked Questions below for more information).
- Clean up any spills immediately, whether they occur on the ground or on the pad.
- If a spill involves more than 10 gallons of waste oil, call MassDEP Emergency Response at **1-888-304-1133** (toll free, 24 hours a day) for directions (see "Answers to Frequently Asked Questions" below for more information).
- Prepare a Storm Water Pollution Prevention Plan and file a Notice of Intent with EPA. See <http://cfpub.epa.gov/npdes/stormwater/msgp.cfm> for additional information.

If you hire a mobile crusher operator to crush your vehicles:

- Make sure best management practices are followed and agree who will be responsible for properly disposing of the fluids and other hazardous wastes generated by crushing activities. See MassDEP's Contractor Policy at <http://www.mass.gov/eea/docs/dep/recycle/laws/hwcontra.pdf> and 310 CMR 30.254(6) for further guidance.
- Keep your disposal receipts from mobile crusher operator for all wastes generated and transported off-site for disposal.

## Frequently Asked Questions

### **Is spent antifreeze (ethylene glycol) a hazardous waste?**

Toxicity tests on drained antifreeze are not conclusive to classify antifreeze as a hazardous waste. However, antifreeze is toxic, is regulated in industrial wastewater, and should *not* be disposed down the drain. Do not dispose on the ground or leave in open containers. Its sweet taste will attract animals if left uncovered. Filter and re-use as much antifreeze as you can at your facility. Any excess amounts should be shipped to a permitted recycling facility. For information about recycling, call MassDEP at 617-292-5898.

### **Why can't other waste be mixed with waste oil?**

Any mixing of a non-hazardous waste with a hazardous waste makes the whole mixture a hazardous waste and changes the composition. Mixing other waste with waste oil will therefore add to the cost of disposing of the oil. Each type of waste should be stored in a separate container and labeled as to its contents. Therefore, never mix waste oil with gasoline, antifreeze, solvents, or other non-oil-based fluids. These mixtures must be managed as a hazardous waste. Used engine oil may be mixed with other types of oil-based fluids, such as uncontaminated transmission fluid, differential oil, brake fluid (non-chlorinated), power-steering fluid and transaxle fluid, and burned in oil-fired space heaters. See <http://www.mass.gov/eea/docs/dep/recycle/laws/spacehtr.pdf> for a fact sheet on "Safe Handling of Waste Oil for Burning in Space Heaters."

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### **Are oily or solvent-soaked rags or wipers a hazardous waste?**

No, if the rags are not saturated. If you squeeze them and do not get more than one drop of liquid, the rags are not considered hazardous waste and can go to an industrial laundry for recycling or in the regular trash. See the following for more information about MassDEP's policy on oil- and solvent-contaminated wipers:

<http://www.mass.gov/eea/docs/dep/recycle/laws/oilwiper.pdf>

<http://www.mass.gov/eea/docs/dep/recycle/laws/solwiper.pdf>

### **What if we have a spill?**

If you spill 10 gallons or more of oil into the environment, you must call MassDEP within two hours: Call **1-888-304-1133** (toll free, 24 hours/day). An oil spill of less than 10 gallons still requires cleanup, but does not need to be reported to MassDEP. There are specific "reportable quantities" for other hazardous materials. When in doubt, call MassDEP.

### **How do I dispose of the oil I've removed from the vehicle?**

Refer to the Waste Oil Fact Sheet for Automotive Recyclers:

<http://www.mass.gov/eea/docs/dep/recycle/hazardous/autowoil.pdf>

### **How do I properly evacuate the air conditioner?**

Remove refrigerants prior to crushing. Use an EPA approved reclaiming unit, employ certified technicians, dispose of filters from CFC recapture as Hazardous Waste. Contact the Environmental Protection Agency at 1-800-296-1996. Also visit EPA's web site <http://www.epa.gov/ozone/title6/609/index.html> for further information.

### **What do I do with air bags?**

- If removed, undeployed air bags can be resold as products. Follow these steps:
  - > Store undeployed air bags indoors, protected from the weather until they can be resold.
  - > If you send air bags off-site to be reclaimed, retain shipping papers that indicate the name of the claimer, the date of transfer, and the quantity of air bags/cartridges shipped.
  - > Air bags being reclaimed or recycled are not managed as hazardous wastes.
- *If you want to dispose of undeployed air bags* that have been removed from vehicles, they must be managed as hazardous waste. Use waste code D003, "Reactive" on your hazardous waste manifest.
- Remove or deploy air bags before the vehicle is crushed, scrapped or sent to a shredder.
- If you deploy the air bags inside the vehicle, follow these steps:
  - > Disconnect cables from the vehicle's battery.
  - > Wait 20 minutes for the unit's internal battery to discharge completely.
  - > Deploy air bags remotely using the jumper harness/wiring system following the manufacturer's recommended method. Do not deploy air bags using methods that do not meet industry approval.
- Leave *deployed* air bag units in vehicles since they do not pose a risk to human health or the environment.

### **For more information:**

- Visit MassDEP's web site:  
<http://www.mass.gov/eea/agencies/massdep/recycle/>
- Visit other web sites with useful information:
  - > <http://www.ecarcenter.org> (sponsored by Automotive Recyclers Association) and
  - > <http://www.epa.gov/region01/assistance/salvageyard/index.html> (sponsored by EPA).