

What to do with your Used Motor Oil

Waste Generation

Activities that contribute to oil waste generation include cleaning engines and parts, replacing engine and transmission fluids, and repairing and maintaining equipment. Some waste oil is generated from spills and leaks that occur while repairing vehicles or from poorly maintained equipment. This waste can and should be reduced.

Contaminants

Used motor oil alone is not regulated as a listed hazardous waste by the Pennsylvania Department of Environmental Protection (DEP). Never mix used motor oil with other substances like gasoline, paint solvents or pesticides; this creates hazardous waste. Used motor oil destined for disposal would be considered a characteristic hazardous waste if tested and found to contain excessive levels of certain contaminants, such as lead, arsenic, cadmium or chromium.

Anyone handling used motor oil should do so carefully, and thoroughly wash it from the skin afterward.

Disposal

Disposing of used motor oil by pouring it into storm or sewer drains, dumping it onto the ground, or placing it with household trash may create risks to public health and the environment.

Public health is threatened if rainwater carries heavy metal contaminated oil into underground streams and contaminates drinking water. It is extremely difficult to clean up groundwater once it has been contaminated. Surface runoff from ground disposal and oil poured down drains often leads to water treatment plants, streams or rivers, which can also affect drinking water supplies. Used motor oil from a single oil change, improperly managed, can impair a million gallons of fresh water.

Used motor oil dumped or drained in surface water also harms wildlife. In addition, oil also depletes the oxygen supply of fish and other aquatic life and hinders the ability of birds to fly. When plants are grown in soil or fed by water contaminated by used motor oil, they absorb (or bioaccumulate) the high concentrations of heavy metals. Plants used for food or fodder should never be grown in soil contaminated with used motor oil. One of the indirect risks of such environmental dangers is the poisoning of the food chain, which ultimately affects human health.

If unable to recycle your used motor oil, place it in a safe, tightly closed container, label it as "Waste Oil" and manage it with other waste destined for municipal trash collection.

Recycling – Reprocessing & Re-refining

Recycling used motor oil preserves the environment, saves energy, and reduces the need to import foreign oil and the risk of oil spills.

The most common method of recycling is reprocessing. Industrial techniques such as adding heat and/or chemicals, the evaporation of water content, filtration, sedimentation, centrifuge separation and vacuum distillation can all be applied to used motor oil to prepare it for blending with virgin oil for use as industrial grade fuel oil.

Only small quantities of the used motor oil generated in Pennsylvania are re-refined. Used motor oil, when re-refined, can be recycled repeatedly without losing its lubricating quality. After re-refining, about 60 to 70 percent of the oil is nearly identical to newly refined oil and can be used as lubricating oil. The remaining oil and the waste byproduct can be used as fuel oil and asphalt extender. To produce 2.5 quarts of lubricating oil, it takes 42 gallons of crude oil, but only one gallon of used motor oil.

Labeling Requirements

Labeling provisions require used motor oil to be labeled as "Waste Oil" in containers and on pipes into storage tanks. Do-it-yourselfer waste oil generators are excluded from these labeling provision requirements, but it is still recommended as a best practice for proper handling and disposal.

Tips for Home Mechanics

If you maintain your own family vehicles, here are some tips for changing and recycling oil:

• Place a drip pan directly under the vehicle's oil pan plug to collect as much of the oil as possible and prevent spills.

- Loosen the old oil filter (use a filter wrench if necessary), then spin it off and drain as much oil as possible out of the filter into your drip pan.
- Pour the used motor oil into a clean, empty, plastic container with a tight lid. DO NOT MIX IT WITH ANY OTHER SUBSTANCES.
- Locate your nearest used motor oil collection site and recycle the used motor oil.

Tips for Commercial Generators

If you maintain commercial vehicles such as farm equipment, buses, taxis, trucks, etc., here are some tips for recycling used motor oil:

- Use a lockable oil storage tank to prevent unauthorized dumping. Avoid leaks and spills and ensure compliance with local fire and safety regulations.
- Used motor oil mixed with other materials (e.g., some degreasers and solvents) may have to be managed as hazardous waste.
- Using absorbent materials, such as sawdust to soak up oil spills and leaks, keeps the repair area clean and helps prevent personal injury. The used materials must be disposed of as residual wastes.
- More information on hazardous waste management can be found by visiting the Department's Hazardous Waste Program home page at https://www.dep.pa.gov/Business/Land/Waste/SolidWaste/HazardousWaste/Pages/default.aspx.
- Practice energy recovery by burning used motor oil in an on-site heating unit that satisfies air quality and ventilation regulations. This can reduce heating costs significantly.
- Research the oil filtration systems available on the market. They keep lubricating oil clean and extend oil change intervals.
- Further information regarding the management of waste oil, the location of Used Motor Oil Collection Sites (UMOCS) and instructions for establishing a UMOCS can be found by visiting the Department's Waste Oil webpage at <u>https://www.dep.pa.gov/Business/Land/Waste/SolidWaste/Residual/WasteOil/Pages/default.aspx</u> An additional resource for identifying USMOCS can be found at <u>http://www.earth911.org/</u>

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