

2018

AUTOMOTIVE RECYCLERS ASSOCIATION

Certified Automotive Recyclers Guide



Fluid Evacuation & Storage

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**AUTOMOTIVE
RECYCLERS
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Material presented in this manual is intended for informational purposes to assist automotive recyclers in meeting the Certified Automotive Recycler (CAR) safety requirements. Each automotive recycling facility participating in the CAR program is responsible for complying with applicable local, state, and federal regulations. Meeting the CAR standards does not guarantee compliance with all regulations that apply to the facility, nor does it provide protection against citizen or third party legal actions. These materials should not be construed to be legal advice.

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Environmental Standards



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Fluid Removal & Dismantling Area

Enviro Standard: Fluid Evacuation & Storage

All Designated Fluid Removal & Dismantling Area(s)
with Roof and on Impervious Surface

Fluid removal and dismantling should take place under cover (roof) such as inside the shop and on an impervious surface to minimize potential for accidental release of fluids from drips and spills. New and recyclable fluids should be stored, transported, disposed of, handled, and used in ways that prevent exposure to the environment.

Fluid evacuation should be conducted using telescoping drain trays, collection trays, vacuum extraction, or gravity draining away from floor drains. Floor drains may be covered for protections from spills.

Keep fluids separated

- Recyclable oils (engine, transmission, brake, and power steering fluids) may be stored together
- Antifreeze should be stored separately
- Fuel should be stored separately
- Solvents and degreasers may **not** be mixed with oil or fuel

WHAT TO DO:

1. Store new and recyclable fluids under roof in properly labeled containers (tanks, drums or other containers) that are covered (except when in use); or store outside with secondary containment.
2. Comply with applicable container labeling requirements.



Storage Containers

All Storage Container Contents are Labeled

Storage containers must be compatible with the fluids being stored. *There is concern that re-used totes should not store gasoline due to incompatibility issues over time.*


All storage containers, tanks, totes, drums, cans and bottles should be clearly labeled to identify the container's content, both for safety and compliance reasons.

OSHA's Hazard Communication Standard or HCS has labeling requirements that display the *Globally Harmonized System or GHS of Classification and Labeling of Chemicals* identification of chemicals, signal words, pictograms and precautionary statements. The type of label required in the workplace is called a secondary label (not for transport).

GASOLINE


Danger


NFPA: Flammability





Health Reactivity

Specific Hazard









Hazard Statements: Extremely flammable liquid and vapor. May be fatal if swallowed and enters airways – do not siphon gasoline by mouth. Do not breathe vapors. **Use only outdoors or in a well-ventilated area.**

No smoking. Do not eat, drink or smoke when using this product.

Response: In case of fire: Use dry chemical, CO2, water spray or fire fighting foam to extinguish.

If swallowed: Immediately call a poison center, doctor, hospital emergency room, medical clinic or 911. **Do NOT induce vomiting.**

Storage: Use only approved containers. * See Safety Data Sheet (SDS) for further details *

Spill Supplies & Clean up

All appropriate spill supplies, such as drip pans, absorbent, drain covers, acid neutralizers, etc. are available. No spills or leaks on ground.

Every salvage yard should maintain a spill cleanup kit on-site at the facility in the event of an emergency spill. Spills have a few issues with which to be concerned.

First is the protection of employees (and customers) if the spill contains hazardous material. To accomplish this task the appropriate type of spill cleanup kit must be selected from the many choices available.

The second issue is to make sure that employees are trained on the use and locations of all spill cleanup kits.

Finally, if the quantity of material spilled is sizeable or made of acutely hazardous chemicals the spill may need to be reported to the regulatory agency. These types of spill are infrequent at a well-equipped salvage yard.

WHAT TO DO:

1. Maintain a spill kit(s) that contains appropriate absorbents and/or containment devices to handle the type and volume of fluid that may be released.
2. Place the labeled spill kit(s) where fluids are used or stored.
3. Provide and document training to employees on how to properly manage fluids, prevent spills and leaks, respond and clean up a spill, and dispose of used absorbents.

What is in your Spill Kit?

- General purpose oil absorbent such as granule “kitty litter” floor dry to absorb antifreeze, oil and fuel spills.
- Hydrophobic (oil-only) absorbent mats to absorb oily spills that are mixed with water (like rain or snow) to reduce the volume of waste material.
- Acid neutralizer for battery acid spills. Baking soda can be used. Battery acid is a sulfuric acid solution in water. Baking soda is a mild alkali bicarbonate of soda. Together they become neutral material.

Personal Protective Equipment (PPE)

Acid resistant gloves for responses to battery acid and automotive fluid spills are included in the spill kit. A conveniently placed pair of safety goggles is also included in the spill kit.

Waste Management

If liquid is recovered from the spill, place it in the appropriate waste container such as “USED OIL.”

Spent oil absorbent like used floor dry, absorbent mats and socks that are highly saturated are NOT the same as general purpose absorbent used in daily processes. *Segregate the waste and manage it as a one-time hazardous waste with a Hazardous Waste Management company such as Safety-Kleen.*

Environmental Standards

Used Oil Removal

Used oil including transmission, brake and power steering fluid, is exempt from hazardous waste regulations as long as the product is recycled. All used oil must be recovered for recycling or on-site energy recovery. Used oil must not be mixed with other wastes.

All used oils must be removed from salvage vehicles prior to crushing. It's recommended that used oils be removed prior to storage in the salvage yard. The use of used oil or oily waste for dust suppression purposes is specifically banned.



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Used oil must be labeled **USED OIL** (not waste oil) as well as labeled for OSHA requirements.

Used Oil Storage

On-Site Storage of used oil must meet the following standards:

- 1) Containers and storage tanks must be in good condition.
- 2) Containers must be clearly marked "**Used Oil.**"
- 3) Fill pipes for underground used oil storage must be clearly marked "**Used Oil.**"



Used Oil Disposal

A used oil generator is the original producer of the used oil. Recycling options for generators of used oil include the following:

- 1) Provide used oil to a marketer, in this case the generator is not required to test for used oil fuel specifications.
- 2) Self-transport in quantities of 55 gallons or less to a state-recognized used oil collection center.
- 3) Provide used oil directly to a burner, in this case the generator or the burner becomes a marketer and must test for specification parameters.
- 4) Burn used oil on site in a used oil furnace provided that:
 - a) Oil is generated on site or collected from Do-It-Yourselfers.
 - b) The furnace has a maximum capacity of no more than 0.5 million BTU/hr.
 - c) The furnace is vented to the outside.

Environmental Standards

Antifreeze Removal

All used antifreeze must be recovered for recycling or disposal. Used and/or waste antifreeze must not be mixed with other wastes. Antifreeze must be removed from salvage vehicles prior to crushing. It's recommended that antifreeze is removed prior to storage in the salvage yard.

The main chemical in antifreeze is ethylene glycol, a deadly but sweet-tasting poison. Because of its sweet taste, children, wildlife and pets are attracted to it. As little as two ounces can kill a dog and only two tablespoons is hazardous to a child. Always store used or unused antifreeze out of the reach of children and pets and never store used antifreeze in a container that once held a beverage.

Even though antifreeze is poisonous it actually becomes contaminated during use with toxins potentially high enough in concentrations to deem it hazardous.



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If antifreeze is NOT designated as a waste then the waste management rules do not apply. **Used antifreeze** should continue to be stored in clearly marked storage vessels.

Sales records should be maintained to provide adequate documentation as to the whereabouts of the product after evacuation.

Antifreeze Storage



Antifreeze Disposal

Potentially hazardous waste such as waste antifreeze is subject to a hazardous/non-hazardous waste determination through TCLP methodology. If hazardous, waste antifreeze must be managed on-site in accordance with the applicable generator regulations and disposed off-site by an EPA-permitted hazardous waste management company.

If non-hazardous, used antifreeze may be recycled on or off site without restriction. Used antifreeze may re-used or sold as used antifreeze with good recordkeeping.

Environmental Standards

Fuel Recovery

Safe removal of gasoline & diesel in auto salvage

The CAR Program has clarified the standard for the safe removal of fuels. Fuel removal should only be carried out by a competent person (someone with the necessary skills, knowledge and experience to do the work), who has been shown how to use the equipment and understands the hazards of the operation. Even when using a fuel recovery pump or fuel retriever, the best management practice is **fuel removal *only* in a well-ventilated area, from which all ignition sources are removed**, preferably in open-air and away from floor pits or other openings in the ground.



Best Management Practices

- Do remove all ignition sources prior to removing fuel from a vehicle.
- Do remove fuel via the filler tube where possible.
- Do use a fuel retriever equipment wherever possible, following the manufacturer's instructions on vapor recovery and use of grounding straps.
- Do drain fuel outdoors or in a well-ventilated area.
- Do disconnect the vehicle battery before draining fuel.
- Do remove all combustible materials from the work area.
- Do keep a foam or dry powder extinguisher nearby.
- Do use grounding straps between the vehicle chassis and the metal container to eliminate static electricity.
- Do warn others verbally and/or by warning signs that fuel draining is in progress.
- Do use metal containers with secure caps for holding drained fuel.
- Do use containers large enough to hold the contents of the fuel tank and make sure that the containers cannot easily be knocked over during filling.
- Do soak up any spills immediately using absorbent granules or similar material.
- Do mark fuel containers with hazard labels to show their contents.
- Do follow the same precautions when transferring fuel from one container to another.

Fires and explosions caused by handling of gasoline and diesel during fluid evacuation occur all too easily. Even small leaks and spills of fuel have the potential to escalate into a major incident. Gasoline fires are usually serious and often result in fatalities or major injuries, either to the person doing the work or to other employees and even customers who may be nearby. There is often major property damage as well.

Fuel is a highly flammable liquid and any spillage will evaporate to form a flammable, heavier-than-air vapor that is easily ignited, even at low temperatures.

Common ignition sources are:

- smoking and lighted matches;
- welding and cutting equipment;
- heaters, water heaters;
- **all types of electrical equipment**, *unless these are designed as suitable for use in a flammable atmosphere.* Even low-voltage inspection lamps, if damaged, can ignite gasoline vapor.



As well as the sources listed above, the action of draining gasoline into a container can generate static electricity which, if not controlled, can result in a spark.

When thinking about sources of ignition, remember that fuel vapor does not disperse easily but may spread over a wide area. It tends to sink to a low level and may collect in tanks, cavities, drains, pits or areas where there is little air movement.



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Fuel Storage

What is the safest way to store and handle gasoline?

Gasoline must be stored in an approved container or tank. Gasoline containers must also be provided with an approved label as required by federal and state authorities. Storage in anything other than an approved container is strictly prohibited by fire prevention codes.

Gasoline is a flammable liquid and should be stored at room temperature, away from potential heat sources such as the sun, a hot water heater, space heater or a furnace, and away from ignition sources. Gasoline vapors are heavier than air and can travel along the floor to ignition sources. Therefore, appliance pilot lights or igniters should be kept more than 50 feet from where gasoline is stored or handled, and elevated.

Other precautionary measures include:

- Do not smoke where gasoline is handled or stored.
- Always keep gasoline out of reach from children.
- For better ventilation, it is best to handle gasoline outdoors.
- Keep gasoline containers tightly closed and handle them gently to avoid spills.
- Do not mix even a small amount of gasoline with kerosene or diesel.
- Do not use gasoline in kerosene heaters or lamps.
- Store gasoline in a building separate from the house or place of occupancy, such as a shed or garage.
- Put gasoline in a small engine (like a lawnmower) only when the engine and attachments are cool.

Storage of gasoline requires developing precautions for spill cleanup. Minor spills should be absorbed with sawdust, paper or rags. Larger spills may be contained and collected. Check with your local government or hazardous waste disposal center to determine the proper avenues for disposing of spilled gasoline. Place recovered gasoline and cleanup materials in approved, labeled containers for proper disposal. Never dispose of spilled gasoline or cleaning materials on the ground or into your garbage, drains, toilets or sewers. If you do, it might cause a fire, or seep into streams, bays, lakes or your groundwater.

Under no circumstances should drained petrol be added to the waste-oil tank. Any contaminated petrol or petrol/diesel mixtures should be consigned as a hazardous waste, giving a clear description of the nature of the material to the waste contractor.

Fuel Disposal

Vehicle dismantling can result in spills and leaks as fluid-containing parts are removed. Vehicle crushing may also release any remaining fluids. Proper management includes draining the parts, controlling any leaks and spills, and recycling, reusing, or disposing of the fluids.

WHAT TO DO:

1. Develop appropriate spill prevention and fluid management procedures for dismantling and crushing operations.
2. Prior to dismantling or crushing, drain vehicle fluids including antifreeze, brake fluids, engine oils, and transmission fluids. Fluids must be captured or contained to prevent release to environment. Other fluids which may be drained include windshield washer fluid, power steering fluid, and rear axle housing fluids.
3. Use plugs to prevent leaks from drained engines or store drained engines in a leak-proof container.
4. Provide spill control supplies and spill prevention and fluid management training to all employees who crush vehicles or dismantle or remove parts containing fluids.
5. At "you-pull-it" facilities (where customers may dismantle parts), drain fluids from vehicles before customers are allowed to dismantle parts. Instruct customers on proper procedures to prevent leaks during removal of parts, and provide spill control supplies for convenient customer use.



ECAR has detailed information available for this topic.

<http://www.ecarcenter.org/>

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