CAR WASH

CAR WORKSHOPS: A SERIOUS GAME APPROACH TO MANAGING WASTE CONSIDERED HAZARDOUS

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**IO6-BEST PRACTICE:**

“Hazardous waste storage in car workshops”

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1. INTRODUCTION

This best practice provides useful information about procedures to be followed for waste storage in a car workshop and arrangements of the storage area. The information will be useful for car workshop staff, owners, waste managers and all the workers involved in the waste storing process (including administrative staff).

This best practice could be used also by future workers in car workshops, students, trainers, associations or VET Providers.

The best practice shows the procedures needed to handle the hazardous waste in a correct way during the storage process, the containers needed based on the most common hazardous waste produced and the features of the storage area. All these elements can be useful to minimize the risks related to the storage process avoiding contaminations, accidents or danger for people and environment.

2. BASIC CONCEPTS

The car workshops usually produce different hazardous waste. The most common are listed below:

**Used motor oil**: motor oil is a lubricant used in internal combustion engines, which power cars, motorcycles, lawnmowers, engine-generators, and many other machines use when functioning.

**Oil filters**: an oil filter is a filter designed to remove contaminants from engine oil, transmission oil, lubricating oil, or hydraulic oil. It is considered hazardous waste.

**Used batteries**: an automotive battery is a rechargeable battery that supplies electric energy to an automobile. Once a lead acid battery ceases to hold a charge, it is deemed a used lead acid battery (ULAB), which is classified as hazardous waste.

**Cooling fluid**: is a fluid which flows through or around a device to prevent the device from overheating, transferring the heat produced by the device to other devices that either use or dissipate it. An ideal coolant has high thermal capacity, low viscosity, is low-cost, non-toxic, chemically inert, and neither causes nor promotes corrosion of the cooling system.

**Brake fluid**: is a type of hydraulic fluid used in hydraulic brake and hydraulic clutch applications in automobiles, motorcycles, light trucks, and some bicycles. It is used to transfer force into pressure, and to amplify braking force.

**Absorbent materials**: is any type of absorbent material (paper, rags, sepiolite or other materials). All the absorbent materials contaminated with hazardous substances are considered hazardous waste and must be stored following specific procedures.

**Contaminated packaging**: all the packaging contaminated with hazardous substances are considered hazardous waste. They can be containers for oils, brake fluids, fuel or other hazardous substances.

**Not hazardous waste**:

**Used tires**: used tires are not considered a hazardous waste but is one of the most common waste produced by a car workshop. The used tires due to their volume need more space than other waste. They usually are collected by specialised companies to be recycled.
3. CORRECT SET UP OF THE STORAGE AREA AND STORING PROCEDURES

The car workshops must follow some guidelines in the setting up of the storage area and the storage procedures. Some of them are defined by different regulations (national and European) on waste management and other can be implemented by car workshops in order to make the storage process more efficient and safe. Below you can find some procedures and tips:

3.1 The storage area

Based on the European and national regulation the car workshops should set up a storage area in order to temporarily store the waste produced before collection, transport and disposal carried out by an external company. The waste storage should respect strict deadlines defined by the European and national regulations. In general, the car workshops are required to eliminate the stored waste at least once a year. This term varies based on the quantity and the waste produced. Failure to comply with time limits determines the charge of penalties or criminal proceedings.

The storage area must have specific characteristics in order to minimize the risks for the environment and the people working in the workshop:

- it should be separated from the workshop, well delimited and visible with clear signals.
- the signals should clearly indicate the correct handling of the waste during the storage procedures in order to reduce the risks for the workers and the environment
- the storage area, both indoor and outdoor, should have a waterproof pavement in order to avoid soil pollution in case of spillage and support the cleaning of the area.
- the waste stored in outdoor storage areas should be protected from the weather with a roof or closed containers.

3.2 The storage of the different waste produced

Different storage systems should be in place based on the nature and characteristics of the waste:

**Motor oil**

Used motor oils must be stored in properly closed containers with anti overflow (anti spill systems) that are appropriately labelled. The containers must show: EWC code, status of substances, level of danger, description of the product and hazardous waste pictogram.

The containers should be placed in a cool, well-ventilated area, on a containment basin with at least the same capacity of the container. If there are more containers, the containment basin's capacity should be 1/3 of the containers' capacity or at least the same capacity of the biggest container.
Oil filters
Considering that the used oil filters could generate oil spillage, it is necessary to place them in leak proof containers with a liquid collection system. The containers should have accessories and systems to carry out filling and emptying procedures in the safest way. They should have handles to reduce the risks during the handling procedures.

The oil filter should be completely emptied before the storage to avoid accidental spilling and reduce the costs for disposal.

Used Batteries
The containers for the storage of the batteries must be made in materials resistant to the acids’ corrosion. In particular to the sulphuric acid contained in the batteries. Containers should have lids to prevent any possible contamination of other materials that can accidentally get in contact with the waste stored.
The containers must be placed in special storage areas protected from the weather and with impermeable pavements (cement, plastic, etc.). access to the storage area is prohibited to unauthorized people.

**Cooling fluid and brake fluid**

Cooling fluid and brake fluids must be stored in separate containers specific for fluids. It is important not to mix different type of waste (i.e. brake fluid with coolant, with other motor oils or hydraulic oils etc...). Each tank must indicate the type of waste and the level of danger of these substances. The storage tank must be placed above ground, on a containment basin of capacity equal to the third part of maximum volume stored in the different tanks.
Each container should have all the necessary features to perform the filling and emptying procedures in a safest way. The storage area should be protected from the weathering and the pavement must be waterproof to avoid the contamination of the soil. The area should be accessible only to authorised personnel.

Absorbent materials

The absorbent materials must be stored and disposed in different ways depending on if they are contaminated with hazardous waste or not. The non contaminated absorbent materials (EWC Code 15 02 03) should be separated and stored before the disposal process. The materials contaminated with hazardous waste (EWC Code 15 02 02*) must be stored in plastic or metal leak proof containers to avoid contaminations or spilling.

Contaminated packaging

The packaging contaminated with hazardous substances is considered hazardous waste and must follow the same procedures needed for other hazardous materials. The different packaging should be stored in a specific plastic or
metal leak proof container. The containers should have a lid to avoid contamination with other materials or spillage. The container should be labelled with the required information.

**Used tires**

Used tires are not considered hazardous waste. However, considering the environmental impact and the volume of waste produced the producers must follow specific rules for their storage and disposal.

The used tires, inner tubes and rubber parts must be stored in a specific storage area (even outdoor), protected from weathering and should be delimited. The pavement should be made in concrete and should be waterproof. The area should be periodically cleaned removing, rubber powder and other debris.

![Image of metal leak proof container](image.jpg)

**3.3 Data recording**

The producers of dangerous and not dangerous waste are obliged to fill in the loading and unloading registry.

With the loading registry the companies must keep record of each waste produced within 10 days from its production. For each waste produced the responsible person must write down in the loading registry the date of production, the progressive registration number, the description of the waste, the EWC code and the weight of the waste produced.

An unloading registry is filled in when the waste is collected to be transported by an authorised company. Within 10 days from the waste unloading the responsible person must fill in the unloading registry reporting, for each waste the date of production, the progressive registration number, the description of the waste, the EWC code, the weight, if the waste will be disposed or reused and the date and the reference number in the transport form.

One registry can be used for different waste. All the registries must be stored and made available in case of request by the authorities.

**4. RECALL**

- The storage processes are defined by the National and European regulations.

- Different storage systems should be foreseen for each different waste based on its nature and characteristics.
- The batteries must be stored in anticorrosive containers, the oils and oil filters in proof leak containers, the contaminated absorbents, contaminated packaging and other waste in separate containers.

- Each container must be labeled with: EWC code, status of substances, level of danger, description of the product and hazardous waste pictograms.

- Do not mix hazardous waste with other waste (hazardous or not hazardous waste)

- The temporary storage has a specific time limit based on the European and national regulations

- Hazardous waste must be handled avoiding spillage during loading and unloading processes.