Draining Oil in Your Yard

This should be avoided as much as possible, and always avoided if the yard is not sealed.

If oil must be removed outside a roofed, concreted, bunded area then:

- Ensure the vehicle is on a level surface;
- Use large drip trays beneath the vehicle;
- Do not remove oil near stormwater drains;
- Use oil absorbent matting to form a barrier around the area where the oil is being drained;
- Have oil absorbent material on hand to immediately deal with any spills.

Fluid evacuation units - efficient de-pollution aids

Oil Filters

Oil filters are difficult to completely drain of oil.

If removed from the engine block, they should be drained as far as possible and stored in covered storage drums.

Hydraulic filter crushers have recently become commercially available in Australia. The crushers separate the dirty oil (for collection into waste oil storage drums) from the filter that can then be passed to metal recyclers with a much reduced chance of environmental pollution.

Many oil recyclers also collect oil filters.

Managing Spills

- If you have an oil leak or spill, contain it immediately. Stop the oil from flowing at the source.
- If a leak from a container or tank can't be stopped, catch and/or transfer the oil to another container.
- If the spill is large, contain it immediately and cover all storm and floor drains to prevent oil from entering.

Always have a spill kit close at hand

Four Step Cleanup Method

- Always use a hydrophobic mop (absorbs oil only). Extraction devices (i.e. centrifuges, wringers and compactors) can be used to recover used oil from reusable mops and towels.
- Use oil absorbent matting or rags to dry surface.
- Clean up the oil and recycle it as you would before it was spilled. Maximize the recovery of the used oil. Remove as much of the free flowing oil as possible from rags or mops used to clean up the spill.
- Remove, repair or replace the defective tank or container immediately!

Evaluate your procedures to avoid spills in the future.

Spill Kit

Every auto parts recycler should keep a properly maintained spill kit that contains:

- At a minimum, good quantities of rags;
- Oil absorbent matting - commercially available and preferable to rags;
- A hydrophobic mop (it absorbs oil only);
- Absorbent granules – such as "Fuller's Earth", or sawdust or sand, for larger spills.

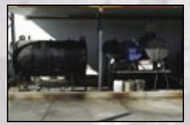
Batteries and Gases

Batteries should be removed and stored under cover in a leak-proof tray for recycling by a metal recycler. Ensure there is no chance of damage to the battery, or for leakage of the acid to occur.

Air conditioning and passenger restraint system gases must be removed by licenced personnel and recycled.

Storing Waste Oil

Transfer oil to 200 litre drums or bulk tanks that are in good condition for storage prior to collection for recycling.



Store fluids in a covered, bunded area

Oil storage drums and tanks should be kept in an area that is:

- Concreted;
- Surrounded by bunding that will contain 10% more than the maximum capacity of stored oil (bunding should be at least 10 cm high);
- Away from stormwater drains or exposed ground; and is
- Covered with a roof (if a roofed area is not available, the bunding should incorporate a valve to drain rain water away from inside the bunded area).

Large amounts of oil pose a major environmental threat if a leak or spill occurs. Always ensure the containers are in good condition, and have suitable quantities of oil absorbent material on hand to manage the worst disaster:

- A simple and effective method is to keep purpose designed granules (eg. Fullers Earth), sawdust or sand nearby, for absorbing larger spills.

Best Practice

Some auto parts recyclers take the ultimate precaution - any spills from their oil storage area are contained and flow to an oil-water separator.

Recycling Waste Oil and Other Fluids

Oil

Oil can be effectively recycled, reducing pollution and saving precious natural resources. Oily rags can also be passed to many oil recyclers for oil extraction and recycling.

Waste oils storage containers should be regularly emptied by licenced oil collectors or recyclers.

The Guide to Waste Oil Collection Services enclosed with this brochure should assist you to find an operator in your area.

Coolant

Coolant can be filtered and recycled (using extra concentrate if necessary). Coolant recycling machines are commercially available.

Coolant usually contains ethylene glycol which is poisonous and must not be released to stormwater drains. If not recycled on site, coolant should be stored and removed by a licenced contractor. Do not discharge coolant to the sewer unless you have obtained approval from your water board or sewerage authority.

Brake and Power Steering Fluids

As a general rule, these fluids should not be mixed with waste oil. They should be stored separately and disposed of by a licenced hazardous waste contractor. There is currently limited scope for recycling brake and clutch fluids. However, some oil recyclers separate these fluids during the refinement process:

- Check with oil recyclers and waste removalists in your area.

Storing and Transporting Recycled Parts

Even with all the best de-pollution procedures, some parts such as engines and power steering units might still leak oil while being transported or stored prior to sale:

- Place oil drip trays under any components that may leak oil in your transport vehicle or parts storage area;
- Where possible, wrap parts in plastic to avoid any leaks.

Place drip trays under stored components that may leak oil

Avoid leaving any greasy or oily parts in your yard, where rain may wash the oil away. At a minimum, greasy parts should be placed inside vehicles in the yard until they can be cleaned properly.

Influence Others

Encourage your suppliers and customers to do the right thing by the environment:

- One auto parts recycler that operates an "engine exchange" service provides drip trays to the courier company that transports the engines.
- Another auto parts recycler refuses to accept components that have not been properly drained.

MESSAGE FROM THE AUTO PARTS RECYCLERS ASSOCIATION OF AUSTRALIA INC (APRAA)

I warmly welcome this opportunity for APRAA to work with the Australian Government to further improve our industry. APRAA has been actively promoting good environmental practice since its inception in 1982.

We know that APRAA members, and most businesses in the industry, are genuinely committed to protecting the environment – after all, our industry is all about re-use and recycling, saving precious resources.

However, I urge even the most conscientious parts recycler to take this opportunity to reassess whether all appropriate environmental safeguards and procedures are in place.

This project exemplifies the excellent working relationship between our industry and the Australian Government. That relationship is now more important than ever as we consider new approaches to end-of-life vehicle management in Australia, and the potentially significant implications for the auto parts recycling industry.

I encourage all businesses to consider the importance of being involved in APRAA, your industry association, as we work with governments for a cleaner industry and a sustainable future.

Alan Marshall
Executive Officer

Disclaimer

This brochure (including any attachment to it) provides general information only. It should not be interpreted as offering advice on the legal, environmental or other requirements relating to the auto parts recycling industry or particular waste management situations. Those requirements may vary from, or extend beyond, the information contained in the brochure. Auto parts recyclers should make their own enquiries to ensure that they fully understand and comply with the special legal, environmental and other requirements that apply in their State, Territory or local area.

MORE INFO?

This brochure provides general information only.

Auto parts recyclers should be aware that specific environmental and other legal requirements exist in each State or Territory, and that those requirements may extend beyond the general guidance contained here.

Any auto parts recycler that is not familiar with those requirements should urgently seek additional information from their local council, sewerage authority and/or State or Territory environmental protection authorities (EPAs).

The EPA in your State or Territory is a good first point of contact if you are unsure of your environmental obligations.

The Auto Parts Recyclers Association of Australia (APRAA), the national industry association for auto parts recyclers, operates an environmental accreditation program and can provide additional information and assistance to its members.

APRAA Contact Details

www.apraa.com
info@apraa.com
(03) 9866 6933 (National Office)

Australian Government

To get more information on used oil and find out where your nearest used oil collection facility is, visit the Product Stewardship for Oil Program website at www.deh.gov.au/oilrecycling, email oilrecycling@deh.gov.au or phone the Department of the Environment and Heritage's Community Information Unit on 1800 803 772.

Australian Government
Department of the Environment and Heritage

AUTO PARTS RECYCLERS APRAA ASSOCIATION OF AUSTRALIA

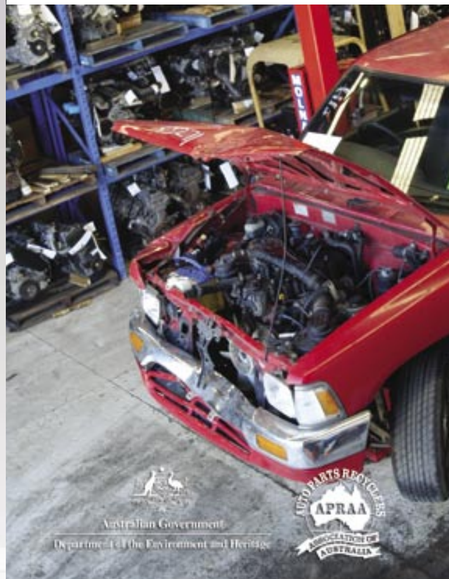
This brochure was prepared on behalf of APRAA and the Australian Government by A.D.Edwards Consulting Pty Ltd, public policy consultants: www.edwardsconsulting.com.au Ph: (02) 6295 0335 Email: info@edwardsconsulting.com.au

Photography by: Blindman Photographics. www.blindmanphotographics.com.au Ph. 0418 607 204

Graphic design by: Encompass Design and Publishing, Marion, South Australia

WASTE OIL MANAGEMENT

A Best Practice Guide for Auto Parts Recyclers



Australian Government
Department of the Environment and Heritage

AUTO PARTS RECYCLERS APRAA ASSOCIATION OF AUSTRALIA

MESSAGE FROM THE FEDERAL MINISTER FOR THE ENVIRONMENT AND HERITAGE

More than 500 million litres of lubricating oil is sold each year in Australia, and over half of this oil is available for collection and recycling. The remaining used oil remains unaccounted for, and poses a threat to our environment. Used oil contains toxic materials and is harmful to the environment when irresponsibly discarded.

This booklet provides a comprehensive guide on appropriate environmental safeguards and procedures for the use and disposal of used oil. All those involved in the oil product life cycle - manufacturers, retailers, users, and recyclers - must share responsibility for reducing the environmental impacts of those products, and this guide will help auto parts recyclers to play their part. It will no doubt become an essential resource for those in the industry.

Australia's future is linked vitally to the achievement of sustainability. The Australian Government is proud of its ongoing partnership role in working with business and industry to achieve sustainability by promoting the adoption of good environmental practice.

I am pleased to be associated with this initiative by the Auto Parts Recyclers Association of Australia Inc (APRAA), and to offer my support in bringing your attention to this important resource for the management of used oil. I would also like to congratulate APRAA for their leadership role in promoting good environmental practice in their industry.

David Kemp
Minister for the Environment and Heritage

THE ENVIRONMENT AND YOU!

Introduction

Industry research indicates that the majority of auto parts recyclers are environmentally responsible.

However, as even a small amount of oil can cause great harm if it enters a stormwater drain, a creek, or seeps into the soil, it is essential that all recyclers are committed to the highest operating standards in managing potential pollutants in damaged and end-of-life vehicles (ELVs).

This Guide helps you check that you have appropriate measures in place to safeguard the environment.

The Role of Auto Parts Recyclers

Auto parts recyclers help protect the environment by:

- Removing oil and other polluting substances from end-of-life vehicles;
- Recycling used vehicle parts and vehicle fluids;
- Providing an easy way for people to dispose of their vehicles – so they aren't abandoned.

3 Point Checklist

- ✓ Are oil and other pollutants always removed from vehicles that enter your business?
- ✓ Is the environment always protected from the oil and the other pollutants that your business handles?
- ✓ Do you recycle as much waste oil as possible?

The Industry's Environmental Performance

About 75% of recyclers do the right thing, but ...

- 1 in 4 businesses does not always de-pollute their ELVs
- 1 in 6 businesses does not remove and store liquids and other hazardous materials appropriately
- 1 in 5 businesses does not have proper environmental safeguards in place.

(A.C.Neilsen survey for A.D.Edwards Consulting Pty Ltd in 2002 of 300 auto parts recyclers chosen at random).

WHAT ARE THE DANGERS?

Pollutants in End-of-Life Vehicles

- **Oils** - from motors, differentials and transmissions, brake and power steering units, and residues in components, hydraulic pipework and transmission lines, oil filters etc
- **Fuel** – petrol and diesel, including residues in fuel tanks, filters and fuel lines
- **Chemically treated water** – including radiator coolant and windscreen washer fluids
- **Batteries** - which may contain acid and lead; and
- **Gases** – from air-conditioning units and airbags.

Oil and Water Don't Mix!

- Accidental oil spills can reach the soil or drains if there aren't protective barriers in place.
- Rain can wash oils, fuel or chemicals off concreted areas and into stormwater drains, or nearby streams or lakes.
- If spilled onto exposed soil, oil and other pollutants can "leach" into waterways, or be washed away into nearby drains or streams.

Why is Oil such a Concern?

- It can take up to twenty years for an aquatic eco-system to recover from an oil spill.
- Half a litre of oil can cause an oil slick the size of a football field if it reaches water.
- The heavy metals found in waste oil can "bio-accumulate" in plants and wildlife, poisoning the food chain.
- Animals poisoned by oil in their food or water can suffer from cancer and damage to the liver, kidney, heart, lungs, and the nervous and circulation systems.

What Should I Do?

- ✓ Make sure there is no chance of oil running off your premises into the soil, drains or waterways.

A SAFE YARD

Your Dismantling Area

End-of-life vehicles ("ELVs") should be de-polluted and dismantled in an area that contains any fluid spills.

The 3 Basic Requirements

- ✓ An impervious floor (eg. sealed concrete);
- ✓ Barriers - to isolate the floor area from the stormwater system and the outside environment – such as "bunding";
- ✓ A roofed area.

What's Bunding?

- Bunding is a raised barrier to catch liquids so they cannot escape from the floor area.
- It is often a concrete lip about 10cm high around the floor of the workshop or parts washing area.
- Many recyclers use flexible bunding strips across workshop entrances – so that forklifts and vehicles can drive over them.

If Not Undercover

... there is a high risk that rain will wash away oil and other pollutants, so:

- Stormwater from the area should be contained using bunding;
- The area should drain to an oil-water separator unit; and
- Oil, grease and other residue from dismantling should be regularly cleaned off the dismantling area, to reduce the chance of stormwater contamination if the area floods during heavy rain.

Best Practice

The best dismantling areas are under cover with workshop floors that drain to oil-water separator units.

Checklist

- ✓ Is my workshop area isolated from stormwater drains and the outside environment?

Your Parts Washing Area

Steam cleaning and washing parts produces oily water and residue that must not be allowed to escape to stormwater drains or the ground.

The Right Way...

You should have a special area for washing parts that has:

- ✓ An impervious floor (eg. concrete);
- ✓ Bunding, so that the oily water and other fluids cannot escape;
- ✓ A drain that flows to an oil trap to catch silt/rubbish;
- ✓ Liquids from the oil trap must be pumped to either:
  - An oil-water separator unit; or
  - A collection tank that is emptied on a regular basis by a licensed trade waste contractor;
- ✓ Walls or splash guards to contain any over spray; and
- ✓ A roof.

Smaller parts are often cleaned in a caustic degreaser bath, or a degreaser trough:

- ✓ The sludge and waste solvents from these units should be collected and securely stored for collection by recycling contractors.

The Wrong Way...

- ✗ Never wash parts on the ground, driveways or roads:

The oily water must not be allowed to reach stormwater drains or soil.

Best Practice

As well as having a properly set up parts cleaning area, the best recyclers:

- Only use cleaning agents that are bio-degradable;
- Clean several parts at once to reduce the amount of waste water that is produced;
- Use parts cleaning systems in which the solvent is filtered and re-used and, when it is no longer re-useable, removed and recycled.

Oil-Water Separator Units

Your separator unit must discharge the treated water to the sewerage system:

- NEVER to stormwater!
- You will need approval from your local council or your local sewerage authority.

Recyclers should ensure that the separator unit they choose is suitable for the purpose:

- Has it been designed for the types of waste generated?; and
- Is it suitable for use with the types of de-greasers and temperatures you employ?

Separators need to be cleaned out regularly to work effectively.

Cleaning Your Workshop Floor

The workshop floor area should only be cleaned using dry absorbents (mops, rags etc) and dry sweeping.

Never hose out the workshop area unless the area has drains that flow to an oil-water separator unit:

- Even then, the hosing out of workshop areas should be kept to a minimum.
- REMEMBER: the less contaminated water we produce the better!

DE-POLLUTING ELVS

First Steps ...

When an ELV arrives at your premises:

- ✓ Receive the vehicle on a concreted area (if possible)
- ✓ Check for any leaking fluids
- ✓ Immediately place drip trays to collect any oil or other fluids leaking from the vehicle:
  - This is especially important if the ELV cannot be moved to a concreted and bunded area on arrival.
- ✓ Avoid removing parts prior to de-pollution – especially those parts containing fluids (gearboxes, diffs etc).
  - If you must work on a vehicle outside the workshop, always ensure that drip trays are used to ensure that fluids do not escape to the ground or stormwater

Ideally, ELVs should be de-polluted as soon as possible after they arrive. However, if this is not practical:

- Ensure no pollutants can leak to the environment prior to de-pollution
- Store ELVs securely, so they cannot tip over and release fluids or gases.

Removing Fluids

The Basics

Catch trays should be the right size for the job

- The vehicle should be level when drained of fluids
- De-pollution is most easily and safely undertaken with the vehicle on a hoist
- Oils should be drained into a container of sufficient capacity that has been designed to receive the oil being collected
- Extra care should be taken with components that do not have a drain plug - the oil will probably fall to a much wider area
- Always have a "spill kit" on hand
- Staff should be aware of the environmental dangers of oil, be properly trained to avoid spills, and know how to deal with them if they do occur.

Best Practice Fluid Removal – "Evac Units"

The simple "gravity draining" method may leave more than 20% of the oil in the vehicle or components.

Standardised de-pollution procedures ensure consistent good practice

Evacuation units, such as those pictured, are much more thorough and efficient. Most businesses find that the productivity benefits far outweigh the initial purchase cost.

As a drain tray, they are effective because they:

- Are connected to an air hose to safely and easily pump the collected oil or other fluids into storage tanks;
- Have a wide lip;
- Can be adjusted to the optimum height;
- Have a large storage capacity;
- Are on wheels, making it easy and secure to move the oil to storage tanks.

Removing brake fluid using an evacuation unit

However, the greatest benefit is that they can be used as a vacuum system to completely remove oil or other fluids from components and throughout the hydraulic lines:

- For example, to remove brake fluid, the unit is connected to the "bleed nipple" on one or all of the callipers to quickly and thoroughly extract the fluid from the entire system.

The best recyclers have separate evacuation units and storage tanks for each ELV fluid.

Ask Yourself

- ✓ Have I investigated the costs and benefits of oil evacuation units for my business?

Aim to remove every last drop

The Last 20%

Even when oil is properly drained from the engine and other components, some oil is usually still left behind:

- Use a small oil "evacuation unit" to suck up any remaining oil (eg. in differential housings);
- Alternatively, use oil absorbent material to soak up oil from components (oily rags should be recycled);
- After the engine or other component is removed, rotate it through as many angles as possible over an oil pan or tray to drain the last of the oil;
- Whenever possible, leave the oil filter attached to the engine block.