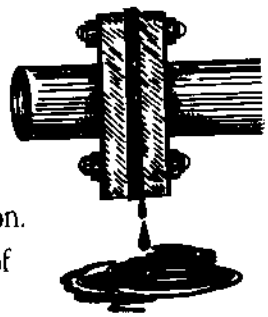
KEEPING SMALL OIL SPILLS FROM BECOMING LARGE PROBLEMS

PREVENTING OIL SPILLS DURING VESSEL REPAIRS AND MAINTENANCE



Hydraulic fluid leaking from a cracked hose; a slosh of gasoline from an open can; a pool of oil from a discarded filter. These persistent drips of oil from your engine and equipment may not seem like pollution. But multiply them by the thousands of boats in state waters and you've got a substantial spill.

Just as many of the spills on land occur when weekend mechanics change oil and repair their cars, much of the oil-based fluids dumped into our waters are spilled during routine boat maintenance and repairs. By following the simple precautionary measures listed below, you can prevent oil spills.

GOOD REASONS TO PREVENT SPILLS

Oil kills marine life. A single gallon of used oil can contaminate over one million gallons of water. Spills from boat and dockyard maintenance are especially damaging because they introduce toxic used oils to fertile shallow waters.

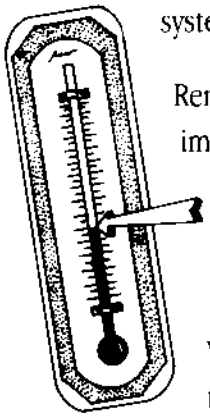
Spilling any amount of oil is illegal. Enforcement and fines are getting stiffer each year and cleanup costs can be astronomical, running into millions of dollars.

Fouling your own marina and fishing grounds can only come back to haunt you, either in diminished water quality, decreased catches or bad publicity.

Providing a spill-free example increases the credibility of recreational and commercial fleets, which often take the rap for runoff pollution generated on land. By running a clean operation you can be part of the solution, not the problem.

BEFORE STARTING REPAIRS

Let machinery components and fluids cool and relieve pressure from all closed fluid systems.



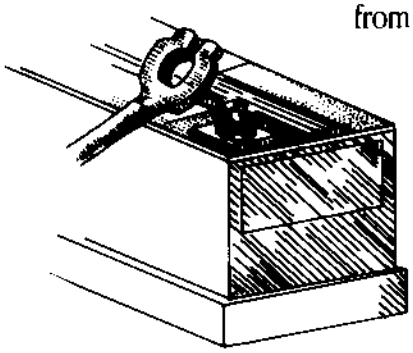
Remove oil, debris and clutter from your immediate work area.

Provide sufficient lighting to inspect all lines and connections.

Ventilate your work space to prevent the accumulation of flammable or noxious fumes.

Prior to vessel haul-outs, clean bilges to prevent seepage of oily water if your hull cracks or planks separate. If possible, drain all fuel and oil tanks.

Since fires can cause catastrophic pollution and injury, extinguish or remove all ignition sources



from the work area. Disconnect equipment-starting batteries or power supplies. Make sure lights are shielded. Keep a fire extinguisher (proper size and type) on hand and service it regularly.

Secure all lines and hoses and protect them from chafing, abrasion or accidental damage which can cause present and future leaks. Hydraulic lines running along open decks or ladders are particularly vulnerable to damage.

Disable automatic bilge pumps during repairs to prevent accidental overboard discharge of oil-contaminated bilge water.

Know your valves. To prevent accidental discharges, post a schematic of all fuel and oil systems. Label or color-code fluid lines and valves.

Learn the location of oil spill response equipment (absorbents and containment boom). Familiarize yourself with its use and capabilities. Know where contaminated oil cleanup supplies can be disposed of legally and properly.

Post emergency oil spill response telephone numbers:

U.S. Coast Guard: 1-800 424-8802

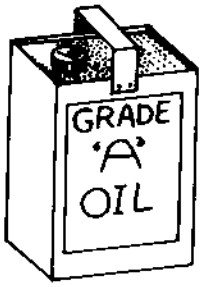
State Response Number: 1-800-OILS-911

Local Oil Spill Contractor: _____

OIL AND EQUIPMENT

Don't skimp on parts. Make sure replacement hoses, flanges, gaskets, seals and fittings meet your equipment and fluid specifications.

Use high quality oil products to maximize the service life of lubricating fluids and equipment and to reduce the amount of waste oil you must dispose of each year.



More isn't always better. **Replacing oil prematurely does not improve engine efficiency or reliability. Instead, it increases your costs and wastes resources.** Log oil changes, including type and length of service and refer to manufacturer's specifications to determine when your engine really needs fresh oil.

If you need to add oil frequently, you may have a leak. Ensure accurate tracking of oil consumption by using a manual gauge (dipstick) to verify readings from your tank gauges.

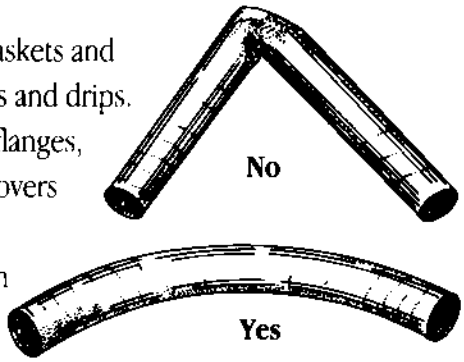
REDUCING THE RISK OF POLLUTION DURING REPAIRS

Don't drain oil into the bilge. Use drip pans and absorbent pads to contain oil drips and spills. If space limitations prohibit the use of a collection pan, replace the oil drain plug with a petcock which will allow you to make quick, pollution-free oil changes. If necessary, a small pump can be used to extract used oil from the fill port.

Avoid using solvents or other toxic chemicals to clean engine parts. Use mechanical means (i.e. scrape caked oil off equipment) or non-toxic solvents instead. If you use solvents for any reason, don't let them run into the bilge.

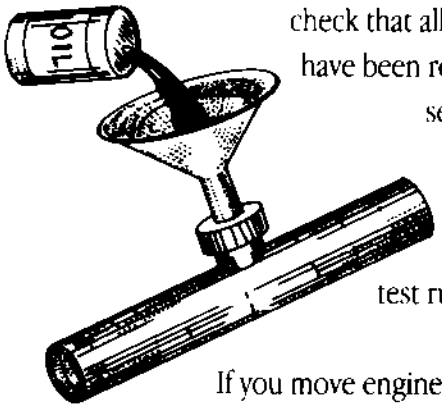
Inspect hoses and other fluid service lines for excessive wear, cracking, swelling, brittleness, stretching, porosity or other signs of deterioration. Replace worn or damaged lines immediately to avoid leaks or catastrophic failure.

Check all oil seals, gaskets and connections for leaks and drips. Tighten connecting flanges, fittings and oil pan covers to specified torque values. Replace worn or brittle gaskets.



When replacing worn or damaged hoses (hydraulic, fuel or oil) ensure that new hose sections are the right length. Hoses that are too long, or stretched to fit, can kink or collapse.

Transfer and remove fluids with care, using the proper equipment. By using funnels or suitable portable pumps you can eliminate drips and keep bilge areas clean.



Before returning equipment to service, check that all hoses and fittings have been reconnected and secure all overboard discharges. Watch carefully for leaks during the initial test run.

If you move engines or other lubricated machinery, plug all oil and fuel lines on the equipment and on the vessel. In addition to protecting end fittings, plugs will keep dirt out of your engine and oil out of the water. Stow equipment containing hydraulic fluids, lubricating oil or grease in a protected area where rain can't wash these fluids into storm drains or open water.

CLEAN UP

When possible, separate waste oil from the oily debris and place it in covered containers for appropriate disposal and recycling. Do not mix gasoline, solvents, anti-freeze or other fluids with the waste oil. **Waste oil contaminated with other materials cannot be readily recycled and must be stored and handled as hazardous waste...a costly and disruptive process.**

Store oily fluids in covered containers. Open containers can spill or fill with rainwater and overflow. Don't fill closed containers to the very top; leave room for vapor expansion.

Clean up or dispose of oily equipment, tools and debris.

Waste oils contain irritants, as well as toxic and carcinogenic substances. Handle, store and dispose of oils and used oil filters with great care. Don't pitch your waste oil or filter in a dumpster. Whenever possible, RECYCLE!

Unfortunately, facilities for recycling are still limited. If you can't find an approved collection site, ask your port manager or fuel supplier for instructions on disposing of oily fluids, filters and clean-up debris.

MAKE A DIFFERENCE

Install drip pans under all equipment that may leak. Periodically drain and clean them.

Install high fluid level alarms and overflow warning or protective devices in fuel and oil tanks where possible.

Trucks, front-end loaders, fork lifts and mobile boat cranes also can leak oil into the water. Inspect them for leaks and install drip pans as necessary.

Many of these procedures are fairly simple, inexpensive and provide common-sense approaches to vessel repairs. Use them to eliminate oil spills and enhance equipment reliability and vessel and crew safety. Help preserve our marine resources.

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