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# Clean Boating Tip Sheet: Petroleum Control

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## Clean Boating Tip Sheet

# Petroleum Control

Petroleum in or on the water is harmful and, in some cases, fatal to aquatic life. Floating petroleum is particularly bad because it reduces light penetration and the exchange of oxygen at the water's surface. Floating oil also contaminates the *microlayer*. The microlayer refers to the uppermost portion of the water column. It is home to thousands of species of plants, animals, and microbes. The abundance of life in the microlayer attracts predators: seabirds from above and fish from below. Pollution in the microlayer, thus, has the potential to poison much of the aquatic food web.

### Fueling Practices

Gas or diesel may be spilled during the act of fueling: as back splash out the fuel intake or as overflow out the vent fitting. Spills of this sort harm aquatic life, waste money, and can result in stains on the hull and damage to the gel coat and striping. Follow these tips to avoid problems:

- While fueling, keep your hand on the fuel dispenser at all times. Do not insert a clip or other object to hold it open.
- Be aware that an automatic shut off nozzle may not work fast enough to prevent back splash.
- Slow down at the beginning and end of fueling.
- Fill tanks to no more than 90 percent capacity—gas that is drawn from cool storage tanks will expand as it warms up onboard your vessel.
- To determine when the tank is 90 percent full, listen for a gurgle in the filler pipe, use a sounding stick, and/or be aware of your tank's volume.
- Rather than filling your tank upon your return to port, wait and fill it just before leaving on your next trip. By using some fuel immediately, you will reduce the risk of spills due to thermal expansion.
- Use oil absorbent pads to catch all drips.
- For safety, have all passengers get off the boat during gasoline refueling.

#### *Outboard engines:*

- Fill tanks carefully to avoid spilling into boat and wasting fuel.
- Mix oil with fuel according to manufacturer's instructions.
- Wipe up any spills with oil absorbents.
- Fill portable tanks ashore where spills are less likely to occur and easier to clean up.
- Attach a safety nozzle to portable gas cans used to fill outboard engines. These nozzles automatically stop the flow of fuel when the receiving tank is full.
- Store fuel only in approved marine containers.
- Close portable tank fuel vent when boat is not in use to reduce vapor loss.

#### *Boats with built-in fuel tanks:*

- Install a fuel/air separator along your vent line. These devices prevent spills by

- allowing air, but not fuel to escape through a vent opening.
- Use a collection jug that fits over the vent fitting to capture vent-line overflow.

## **Bilge Maintenance**

Engine oil tends to accumulate in bilges. If no precautions are taken, the oil is pumped overboard along with the bilge water. Discharging oily water is illegal [*confirm*]. To avoid fines and to protect water quality, follow these tips:

- Place oil absorbent materials or a bioremediating bilge boom in the bilge.
- Place an oil absorbent pad and/or a drip pan under the engine.
- Replace oil absorbent materials regularly.
- Transfer and remove fluids with care, using funnels, pumps, and absorbents to eliminate drips and spills and to keep bilge area clean.
- Do not treat oily water with detergents. Soaps pollute and make it impossible to clean up petroleum.
- If you notice fuel or lubricant in your bilge, turn the bilge pump off immediately so contaminants are not pumped overboard.
- To prevent oily bilge water from being discharged, install a bilge pump switch that leaves an inch or two of water in the bilge. Alternatively, connect a bilge water filter to your vessel's bilge pump. Filters will remove oil, fuel and other petroleum hydrocarbons from the water.
- For a large oily mess in the bilge, use a steam cleaning service or look for contractors or marinas that offer a bilge pumpout service.
- Never use a sewage pumpout to empty out a bilge.

## **Disposal of Oil Absorbent Materials**

The disposal of used oil absorbent material depends on what type of product it is and how it was used:

- Standard absorbents that are saturated with gasoline may be air dried and reused.
- Standard absorbents saturated with oil or diesel may be wrung out over oil recycling bins (if they are saturated with oil or diesel only!) and reused. Alternatively, they should be double bagged with one plastic bag sealed inside of another and tossed in your regular trash.
- Bioremediating bilge booms may be disposed in your regular trash as long as they are not dripping any liquid. Because the microbes need oxygen to function, do not seal them in plastic bags.

## **Emissions Control**

Marine engines—especially 2-stroke outboard motors—produce the highest average level of hydrocarbon exhaust emissions after lawn and garden equipment. Hydrocarbon emissions contribute to ground level ozone, a known health risk. Follow these tips to help your engine operate as efficiently as possible:

- Use the gas to oil ratio recommended by the engine manufacturer. Too much oil can

foul spark plugs and too little can lead to increased engine wear or even failure.

- Use gasoline with the octane level recommended by the engine manufacturer.
- Use premium two-cycle engine oil. Premium oils improve engine performance and reduce pollution because they burn cleaner, contain more detergents, and prevent formation of carbon deposits.
- When it is time to buy a new engine, select a fuel efficient, low emission model.

### **In Case of a Spill**

- Stop the flow.
- Contact marina staff for assistance.
- Contain the spill with absorbent pads or booms.
- Do not apply soap or detergent to spills in the water.
- Call the Mexican Coast Guard at . . .