

Steamboat Wharf Marina

Standard Operating Procedures

Engine Maintenance

Department:	Service Department	
Procedure:	Engine Maintenance (Oil Changes and Waste Oil Storage)	
Date Issued:	April	2006
Date Revised:	November	2015

Purpose of Procedure: Engine Maintenance requires using hazardous materials such as oil, solvents, and antifreeze. The purpose of this SOP is to outline a procedure when performing engine maintenance, oil changes and proper handling and disposal of waste oil and other materials generated in the process, for protection of personnel, marina facilities and the environment.

Steps of (SOP) Standard Operating Procedure:

Designated Maintenance Areas: Engine maintenance shall be conducted indoors when possible or in designated outdoor area away from the bulkhead.

Proper Waste Disposal: Oil, solvents, anti-freeze, batteries and other materials generated in engine maintenance are classified as hazardous waste and will be handled accordingly. All work areas will be kept clean and clear of clutter that can cause spills or collect pollutants.

Maintenance areas will not be hosed down. Absorbent materials – cloths, pads, or granular materials - will be used to clean up all spills. Any absorbent materials will be disposed of as hazardous waste. Barrels for this purpose are in the Waste Oil shed.

Procedures for Oil Changes –

Vessel Preparation:

- Run engine for approximately 15 minutes to warm the oil making it flow easier
- Place drip pan and oil absorption pads under and in the vicinity of where the work is to take place

Waste Oil Recovery:

- Use spill proof equipment such as vacuum pumps to draw the oil out through the dipstick tube or oil pan if the engine is equipped
- Use drip pans with oil absorption pads inside to catch and soak up any inadvertent spills
- Keep a sufficient supply of oil absorbent pads near all engine work
- Wipe up all drips immediately

Waste Oil Storage:

- Label all waste oil with proper posting labels
- Transfer waste oil into storage drum by reversing the vacuum pump or use drum funnel
- Keep a sufficient supply of oil absorbent pads on hand when transferring waste oil and wipe up all drips immediately
- Close drum bung after you finish transferring oil

Waste Oil Disposal:

- When the drum is full label it with the date
- Move the satellite drum into the accumulation area located on the polyethylene spill pallet within three days of being full
- Contact Western Oil (401-727-8600; P.O. Box 518, Lincoln, RI 02865-0518) when accumulation area is nearing capacity for removal.

Engine Cleaning –**Pre-cleaning Methods:**

- Before using solvents, clean the engine using environmentally friendly alternatives such as a brush and rags.

Proper use of solvents:

- Non-VOC solvents shall be used whenever possible to wash engine parts and tools.
- Catch excess solvents in a pan below the engine and reuse them.
- Keep VOC-based solvents in tightly closed contains to reduce the amount of VOCs that escape into the atmosphere

Engine Removal and Repair –**Engine Removal:**

- All engine removal work shall take place on a designated work area, preferably indoors.
- Before removing engine from boat, prepare area under boat by spreading tarp or shrink wrap to prevent fluids from inadvertently reaching the ground
- Remove the engine and place on a pallet until it can be brought indoors for maintenance
- If engine cannot be moved indoors and worked on the same day it shall be completely covered with shrink wrap or a tarp to prevent water from reaching it and washing hazardous materials off the engine
- Keep a sufficient supply of oil absorbent pads at hand at all times.
- Wipe up all drips immediately

Boat and Engine Winterizing -

Environmentally Friendly Anti-Freeze:

- Less toxic products such as propylene glycol will be used.

Fuel Stabilizers and Storage:

- Stabilizers will be added to fuel to prevent degradation
- Customers will be encouraged to fill tanks to 80 to 90 percent capacity to minimize build up of flammable fumes and reduce condensation which can contribute to corrosion
- Gas caps will be tight to prevent fuels from volatilizing

Drain water systems:

- Water tanks, sanitation systems, and lines will be emptied and treated with non-toxic antifreeze to prevent freezing and breakage
- Holding tanks must be pumped out prior to delivery of boat to marina for winter service; Hull Harbormaster (781-925-0316) provides free pump-out service

Recyclable Shrink Wrap and Fitted Covers:

- Recyclable shrink wrap will be used to cover boats when deemed appropriate
- No shrink wrap will be installed by anyone except Marina staff
- Custom fitted covers may be used with permission of the marina
- No tarps or non-approved covers may be used as improper covers present hazards to stable boat storage
- Excess shrink wrap and used shrink wrap removed from boats in spring will be recycled; call E.O.M.S Recycling Inc. (508-587-9686; P.O. Box 3608, Brockton, MA 02304) to empty on-site single-stream bin or provide dedicated bin in spring.

Materials or Tools Needed:

Oil changing pump, drip pans, oil absorption pads; anti-freeze, solvents, fuel stabilizers, shrink wrap.

Personal Protection Equipment: safety glasses, gloves, long sleeve shirt, pants and/or Tyvek suit

Evaluation of Procedure: The Service Manager schedules and supervises the work. A mechanic will assemble the tools needed complete the work. The mechanic and/or Service Manager will transfer the oil into the satellite drum. The Service Manager will manage the accumulation area making sure the drums are properly labeled and contact Western Oil as needed. This SOP shall be evaluated annually and updated as necessary.