



Department of Toxic  
Substances Control



# Engine Repair

Marine Vessel Service and Repair (MVSr) Facilities provide engine repair services on-site or contracted out. Engine repair service for small craft or vessels, differs little from the materials and hazardous waste generated by vehicle repair shops. Typical wastes generated include engine oils and lubricants, degreasing and cleaning solvents, batteries and coolants.



## Environmental Concerns:

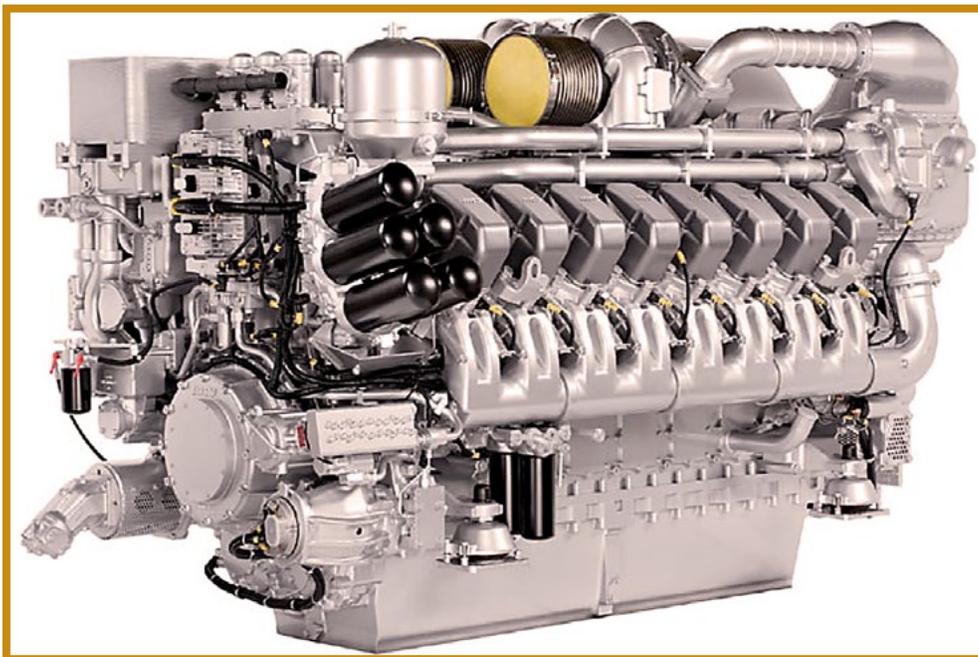
It is more efficient and cost-effective to control pollutants at their source and prevent their wider release than removing them from the ground surface, wastewater, storm water or other media after the fact. Bringing your facility into compliance is easier if you remove or capture contaminants before their release to the air, water or soil media.

## Targeted Pollutants:

- Absorbents/rags (contaminated)
- Antifreeze (coolant)
- Batteries (spent)
- Fuel (diesel and gasoline)
- Metal (anodes)
- Oil/Grease
- Oily water (bilge water)
- PPE (used)
- Solvents (aqueous/  
petroleum based)
- Transmission fluid
- Trash and Debris

## Regulatory Requirements

1. **US EPA Title V Permitting under Clean Air Act** <sup>i</sup> ([Operating permits](#))
  - Local Air Quality Management District's (AQMDs) in California have delegated authority for Title V permitting.
  - Please contact your local air district: <sup>ii</sup> ([California Air Districts](#)).
2. **California State Water Quality Control Board** <sup>iii</sup> ([www.swrcb.ca.gov](http://www.swrcb.ca.gov)):
  - National Pollutant Discharge Elimination System <sup>iv</sup> ([NPDES Permit](#))
  - Vessel General Permit <sup>v</sup> ([VGP](#))
  - <sup>vi</sup> ([POTW](#))
3. **Department of Toxic Substances Control** <sup>vii</sup> ([www.dtsc.ca.gov](http://www.dtsc.ca.gov)):
  - <sup>viii</sup> ([Hazardous waste](#))
  - <sup>ix</sup> ([Treatment Permit](#))
4. **California Division of Occupational Safety and Health** <sup>x</sup> ([CAL/OSHA](#))
  - Personal Protective Equipment <sup>xi</sup> ([PPE](#))
5. **CUPAs**
  - <sup>xii</sup> ([Please contact your local Fire Department](#))



## Recommended Practices (RPs) for Boat Lifts

These basic recommendations will reduce pollution and may also lead to a more efficient operation of your facility.

1. **Parts Washer:** Historically, parts washers use petroleum based solvents, such as mineral spirits. Aqueous cleaners work just as well as petroleum based solvents -

- Use <sup>xiii</sup> [aqueous based](#) cleaning system to reduce the use of solvents and reduce emissions and employee exposures to solvents
- Use Spray cabinets for heavily soiled or large volume parts
- Use Microbial sink top units for quick, light duty cleaning
- Use ultrasonic cleaners for small intricate parts
- Use immersion cleaners for heavily soiled parts
- Use oil skimming and/or filtration to extend the aqueous solution's life
- Use the least amount of cleaning product to accomplish cleaning
- Use less-toxic, biodegradable, non-VOC alternatives such as vegetable and citrus based cleaners
- If petroleum-based solvents are used, collect wash water and treat before discharging to a local waste water treatment facility <sup>xiv</sup> ([Stormwater and Wastewater Management](#))



2. **Shop Maintenance:** Keeping a dry shop can be very beneficial to your facility in minimizing pollutants that could reach the sanitary sewer and storm drains; as well as the nearby surface waters -

- Seal all the floor drains to maintain a dry shop
- Prevent spills from reaching the floor
- Clean up spills immediately, “Stop if there’s a drop”. Mechanics should carry rags so small spills can be wiped clean when they occur
- Use vacuum or broom daily to sweep up the work area at the end of the project and/or end of the shift
- Do not hose down the work area as it creates unnecessary volume of waste water that has to be managed and/or treated
- Seal shop floors with epoxy or other suitable sealant if feasible. A sealed floor will not absorb spills like concrete and it makes spill cleanup easier
- Absorbents such as socks, pads, or pillows should be kept on hand to prevent large spills from spreading
- Used absorbents must be managed as hazardous waste
- Floor sweep should be used for gasoline, solvents, or other hazardous waste; and also when a spill cannot be cleaned with rags or dedicated mops <sup>xv</sup> ([Dry Floor Cleanup Brochure](#))
- Ensure workers have spill prevention kits with them when working at satellite locations away from repair shop
- Ensure used PPE is handled and disposed properly
- Develop and implement a spill response plan.

3. **Fluid Management:** Fluids such as Brake fluids, coolants and Transmission oils used in engine repair activities must be properly managed. Brake fluids can easily become contaminated with regulated solvents used to clean brake lines and pads-

- Hazardous materials such as Transmission oil, coolants, and fuels must be stored away from spent materials or hazardous waste
- Store hazardous fluids in storage areas with secondary containment
- Cover and protect storage areas from weather all times
- Use proper transfer equipment such as funnels and pumps when transferring fluids to and from engines to be repaired
- Nonhazardous fluids should be stored separately with tightly fitting, leak-proof seals and protected from spills or leaks to the environment



4. **Hazardous Waste Management:** Hazardous waste from engine repair include spent solvents and cleaners, used PPE, contaminated absorbents, batteries, used oil, spent fuel (diesel/gasoline), oily bilge water, and metals; including spent anodes and paint removal waste -

- Hazardous wastes must be properly



contained with correct labels and in a proper storage facility <sup>xiv</sup>([Hazardous Waste Management](#))

- Use dry floor clean up method <sup>xv</sup> ([Dry Floor Cleanup Brochure](#)); to help capture used oil from spills which can be recycled
- Properly label recycling drums with their contents “Oil for Recycling” or “Antifreeze for Recycling”
- Ensure recycling drums are not contaminated with other liquids which can reduce recycling potential and rendering them hazardous waste
- Keep spent batteries properly stored with compatible secondary containment and separate from other hazardous waste or materials
- Recycle used oil, used antifreeze, spent solvents and thinners and spent marine batteries.

## References and Other Resources:

- i. <http://www.epa.gov/air/oaqps/permits/>
- ii. <http://www.arb.ca.gov/capcoa/roster.htm>
- iii. [www.swrcb.ca.gov/](http://www.swrcb.ca.gov/)
- iv. [http://www.swrcb.ca.gov/water\\_issues/programs/npdes/](http://www.swrcb.ca.gov/water_issues/programs/npdes/)
- v. [http://cfpub.epa.gov/npdes/home.cfm?program\\_id=350](http://cfpub.epa.gov/npdes/home.cfm?program_id=350)
- vi. [http://www.swrcb.ca.gov/water\\_issues/programs/npdes/pretreat.shtml](http://www.swrcb.ca.gov/water_issues/programs/npdes/pretreat.shtml)
- vii. [www.DTSC.ca.gov](http://www.DTSC.ca.gov)
- viii. [http://www.dtsc.ca.gov/HazardousWaste/upload/HWMP\\_DefiningHW11.pdf](http://www.dtsc.ca.gov/HazardousWaste/upload/HWMP_DefiningHW11.pdf)
- ix. [http://www.dtsc.ca.gov/HazardousWaste/Tiered\\_Permit\\_Guidance.cfm](http://www.dtsc.ca.gov/HazardousWaste/Tiered_Permit_Guidance.cfm)
- x. <http://www.dir.ca.gov/dosh/puborder.asp>
- xi. [http://www.oeha.gov/pls/oeha/webload.pl?show\\_document?p\\_table=STANDARDS&p\\_id=9777](http://www.oeha.gov/pls/oeha/webload.pl?show_document?p_table=STANDARDS&p_id=9777)
- xii. [http://www.dtsc.ca.gov/InformationResources/local\\_contacts.cfm](http://www.dtsc.ca.gov/InformationResources/local_contacts.cfm)
- xiii. <http://www.dtsc.ca.gov/pollutionprevention/vsr/upload/aqueouspartsdeanauto02.pdf>
- xiv. <http://www.dtsc.ca.gov>
- xv. [http://www.dtsc.ca.gov/PollutionPrevention/VSR\\_Training.cfm](http://www.dtsc.ca.gov/PollutionPrevention/VSR_Training.cfm)
- xvi. [http://www.dtsc.ca.gov/PollutionPrevention/VSR\\_Training.cfm](http://www.dtsc.ca.gov/PollutionPrevention/VSR_Training.cfm)



**For additional information on auto body and paint shop pollution prevention practices and a list of available publications contact:**

Department of Toxic Substances Control (DTSC)  
Office of Pollution Prevention and Green Technology  
P.O. Box 806  
Sacramento, CA 95812-0806  
<http://www.dtsc.ca.gov/PollutionPrevention/index.cfm>  
(916) 322-3670  
(800) 700-5854

Environmental Boating Program Coordinator  
California Department of Boating & Waterways  
California Coastal Commission  
45 Fremont Street, Suite 1900  
San Francisco, CA 94105  
[www.BoatingCleanandGreen.com](http://www.BoatingCleanandGreen.com)  
(415) 904-6905

