Parts Cleaning

Potential Environmental Impacts

Degreasers used to clean metal parts may be solvents (chlorinated or non-chlorinated) or aqueous (water-based) cleaners. Solvent degreasers can be derived from variety of sources ranging from petroleum to orange peels. They usually contain volatile organic compounds (VOCs) that can evaporate quickly and combine with combustion emissions to form ground level ozone, a major component of "smog." Ozone damages lungs and degrades many materials. When solvents are released and reach water, even in very small quantities, they may render the water unfit for human consumption and uninhabitable for aquatic life. Many solvents are also flammable and may pose a fire hazard.



Cold Cleaning Solvent Parts Washer (Lid should be closed when not in use.)

Legal Requirements

- ♦ A hazardous waste determination must be conducted to establish whether or not disposal of waste solvents or parts washer solutions are subject to hazardous waste regulations [40 CFR 262.11; RCSA Section 22a-449(c)-102(a)(2)(A)]. Manage hazardous waste as described in Appendix A.
- See Rags and Absorbents Fact Sheet for more information on managing solventsoaked rags.
- ♦ Any parts washer that uses solvents containing greater than 5 percent VOCs by weight (also referred to as cold cleaning) must follow these equipment design and operating procedures [RCSA Section 22a-174-20(1)]:
 - 1. Use only a solvent that has a vapor pressure of less than or equal to 1.0 mm Hg at 20 degrees C (68 degrees F).
 - 2. The cover must be easily operated with one hand and closed whenever the parts washer is not being used for 2 minutes or more.
 - 3. The parts washer must have an internal rack or equipment for draining cleaned parts so that parts are enclosed under the cover while draining.
 - 4. Waste solvent must be stored in covered containers.
 - 5. Cleaned parts must be drained for at least 15 seconds, or until dripping ceases, whichever is longer.
 - 6. Degreasing solvent must be sprayed as a solid fluid stream (not a fine, atomized, or shower type) and at a pressure which does not exceed 10 psi.
 - 7. Operation must cease at the occurrence of any visible solvent leaks.
 - 8. Post labels on or near each unit summarizing the applicable operating requirements.

- 9. Keep records on the solvent, including name, description and the amount added to each unit on a monthly basis. Records must be kept for a minimum of 5 years.
- 10. Sponges, fabric, wood, leather, paper and other absorbent material shall not be cleaned in a cold cleaning parts washer.

If you have questions on air emissions requirements, contact DEEP's Bureau of Air Management at 860-424-4152.

Legal References

- Criteria for listing hazardous waste 40 CFR 262.11
- Standards Applicable to Generators of Hazardous Wastes RCSA Section 22a-449(c)-102(a)(2)(A)
- Control of Organic Compound Emissions RCSA Section 22a-174-20(1)

Best Management Practices

- ★ Make sure that your parts washer is clearly labeled with the type of cleaner it contains.
- ★ Use aqueous (water-based) cleaners containing no VOCs. Don't use a toxic or flammable solvent if you don't have to. Aqueous spray cabinets and ultrasonic units can clean even difficult-to-clean parts such as wheel bearings.
- ★ Use oil skimming and filtration to extend aqueous solution life. Skimmed oil can be recycled along with used oil. Spent filters can sometimes be recycled along with used oil filters.
- ★ Very heavily soiled parts should be pre-cleaned by scraping off the excess and then wiping with a rag.
- ★ Do not contaminate cleaning solution with other degreasers such as aerosol solvents. Chlorinated solvents and other hazardous chemicals may be included in such products as carburetor cleaners, engine degreasers, and brake cleaners. Always check for hazardous ingredients on the Material Safety Data Sheets (MSDS) provided by the vendor.
- ★ Before purchasing or leasing an aqueous parts washer (1) check with other facilities to learn about the unit's performance and (2) ask vendors for a trial period to test out the unit at your facility. For more information on aqueous parts cleaning, see the Purchasing Environmentally Preferable Products (EPPs) Fact Sheet.
- ★ Never discard any degreasers into sinks, floor drains or onto the ground.

Using an aqueous-based parts washer

Pollution Prevention Checklist

✓ Do you use aqueous (water-based) parts washers, where practical?



Did You Know?

Your greatest cost for parts cleaning is labor. The time spent cleaning parts is time you could otherwise spend servicing vehicles. Aqueous spray cabinets have substantially reduced labor costs for many facilities.

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