



<i>Environmental Guideline</i> <b>Part Washing and Cleaning</b>	
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<b>Activity Description</b>
<p>Parts Washing and Cleaning: Using water-based, petroleum-based, or synthetic solvent liquid chemicals to remove mineral and organic contaminants from the surface of non-porous solids, specifically steel, other metal alloys and hard plastic equipment, and machine parts and assemblies.</p> <p>This guideline applies to parts washing and cleaning using the following technology and equipment:</p> <ol style="list-style-type: none"><li>1. Warm water/organic solvent (including citrus extracts) emulsion circulated through a free standing sink, filter, and reservoir apparatus;</li><li>2. Warm water/alkaline detergent solution circulated through a free standing sink, filter, and reservoir apparatus;</li><li>3. Hot water/detergent solution sprayed in a free standing cabinet and reservoir apparatus with heating, parts rotation, and high pressure spraying controls.</li><li>4. Organic solvent immersion tank apparatus, agitated or still;</li><li>5. Petroleum (stoddard or naphtha) solvent circulated through a free standing sink and reservoir apparatus;</li><li>6. Synthetic organic (high flash point non-petroleum) solvent circulated through a free standing sink, filter, and reservoir apparatus;</li><li>7. Petroleum (high flash point, paraffinic) solvent circulated through a free standing sink and reservoir apparatus equipped with integral on-board distillation (e.g., Safety Kleen mod. 250); and,</li><li>8. Warm water/surfactant/bacterial enzyme solution circulated through a free standing sink, filter, and reservoir apparatus.</li></ol> <p>Though there are many differences in the way these technologies clean, they all: a) use a liquid cleaning agent that may pose a hazard to worker and environmental health, and b) generate waste-liquids, solids or sludges- in part, composed of the contaminants removed from the surfaces they've cleaned.</p> <p>This guideline provides basic information about what steps should be taken when cleaning parts to minimize risk to the environment, maximize work place safety, and comply with applicable waste management regulations.</p>

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### **Potential Environmental Risks**

The following environmental concerns are associated with this activity:

- Contaminating your workplace
- Creating a mess that is difficult and expensive to clean-up.
- Making yourself sick
- Excessive waste generation
- Improper waste management
- Contaminating the sanitary sewer
- Creating a chronic work place health hazard

Potential consequences from performing the activity incorrectly:

- Damage to the parts cleaning equipment
- Property damage, and impairment of building utilities
- Personal injury, injury to co-workers or members of the public
- Contamination of local eco-systems and environmental pollution
- Legal orders for violation of local, state and federal laws- civil proceedings, financial and other legal penalties.
- Job loss and disruption of the work place

### **Critical Operating Requirements**

#### **A. General Requirements**

#### **Prohibited Activities**

- Do not use a parts washer if you are not familiar with how to operate it, how it cleans, and how it may otherwise affect the part.
- Never pour any parts cleaning related waste liquids or spent cleaning solutions down any drain unless this action is specifically allowed by a facility industrial discharge permit.
- Do not discard any parts cleaning related solids, such as used filters or settled solids in the trash, unless specifically instructed to do so by DEH.
- Never mix parts cleaning solutions or solvents. Use only the product specified by the manufacturer for the specific equipment.
- Don't contaminate parts washers by "spiking" them with other cleaning agents.
- Do not use parts cleaners to store and drain the residual liquids from product cans and bottles and engine and machine parts and assemblies.
- Do not purchase or use parts cleaning products containing Greenprint Denver prohibited chemicals, especially chlorinated solvents, or "chloro-" compounds.
- Never mix or combine parts cleaning wastes, spent solutions or solvents. Manage all wastes separately unless instructed otherwise.

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<b>Critical Operating Requirements</b>	
<b>A. General Requirements</b>	
<b>General Considerations</b>	
<i>Equipment Use:</i>	
<ol style="list-style-type: none"> <li>1. This Environmental Guideline is provided for guidance only and does not supersede any specific work or safety instructions from the manufacturer.</li> <li>2. Wear the correct personal protection equipment- at minimum wear gloves and safety glasses to protect your skin and eyes from contacting strong chemicals.</li> <li>3. Remove loose contamination –soil and grease using rags or a stiff brush before washing the part to prevent rapid contamination of the parts cleaner.</li> <li>4. Pour off any liquids- fuel, oils, etc.- trapped in a part or assembly, and wipe off wet part surfaces before washing the part to prevent premature contamination of the parts cleaner.</li> <li>5. Scrap off gaskets, dope, tape, rubber and soft plastic seals before cleaning a part.</li> <li>6. Use multi-stage cleaning for heavily soiled parts.</li> <li>7. Use parts cleaning equipment wisely: some cleaning technology and chemicals may damage or deteriorate the parts to be cleaned.</li> <li>8. Keep all parts cleaning basins, sinks, cabinets and reservoirs closed when not in use to reduce product loss through evaporation and minimize indoor air pollution, and risk of fire.</li> </ol>	
<i>Waste Disposal:</i>	
<ol style="list-style-type: none"> <li>9. Specific rules and hazardous waste regulations may apply to the disposal of waste liquids and solids from parts cleaning operations and equipment.</li> <li>10. Check with DEH to determine how the disposal of specific parts cleaning wastes must be managed.</li> </ol>	
<b>Training Requirements</b>	
<ul style="list-style-type: none"> <li>• First time users of parts cleaners that employ new or special technology, may need to learn about how to use the equipment safely and without damaging it and without damaging the parts they are cleaning before using the equipment. Check the manufacturer’s instructions.</li> <li>• Use of specialized equipment by untrained workers may void equipment warranties. Check with your supervisor.</li> <li>• Workers using parts cleaning equipment that contains hazardous materials may require basic safety training in using appropriate personal protective equipment (PPE) according to agency policy. Check with your agency’s safety manager.</li> <li>• Workers who service parts cleaners- change filters, empty, clean, and re-fill tanks, etc.- may need specific training in hazardous waste management, as well as training in spill prevention and spill response.</li> </ul>	
<b>Storage &amp; Material Handling Requirements</b>	
<ul style="list-style-type: none"> <li>• Be prepared for leaks or spills from parts cleaning equipment.</li> <li>• Keep spill absorbents on hand that are appropriate for the types of parts cleaning solvents you store and use.</li> <li>• Maintain working certified fire extinguishers where any combustible or flammable parts cleaning solvents are stored or used.</li> <li>• Store petroleum and synthetic parts cleaning solvents so that they are safe from fire and ignition sources.</li> </ul>	
<b>B. Planning Requirements</b>	<i>Responsible: All Staff</i>
B1. Locate a fire extinguisher nearby any parts cleaner which uses petroleum or citrus based solvents.	

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B2. Check with your purchasing agent and review agency or division policy before purchasing parts cleaning products that may be hazardous to determine if there are any prohibitions or restrictions.
B3. Obtain and make available to all workers MSDSs for all parts cleaning chemical products used in your work place.
B4. Do not purchase parts cleaning products containing any chemicals which are prohibited or restricted from use in Denver. When in doubt, contact DEH for a quick answer.
B5. Read through the user manual and any special instructions supplied by the manufacturer before operating parts cleaning equipment with which you are unfamiliar.
B6. Have appropriate PPE on hand and ready to use and wear before operating a parts cleaner.
B7. Determine what wastes will be generated by the parts cleaning process you will use, and determine how they need to be managed and disposed of. Procure and set-up the necessary containers to receive the waste(s) in advance of generating the wastes.

<b>C. Critical Tasks</b>	<i>Responsible: All Staff</i>
C1. Read and make sure you understand all safety and use instructions provided by the manufacturer and your management before operating parts cleaning equipment with which you are unfamiliar.	
C2. Be aware of the location and action of all energized components of the parts cleaning equipment you are using- especially electrical cords and junctions, on/off switches, solenoids, pumps, heating elements, spray nozzles, turntables, etc.	
C3. Don and wear the PPE recommended by the manufacturer and required by your agency before operating parts cleaning equipment. At minimum use gloves when handling a part wet with parts cleaner solvent and wear safety goggles where there is a risk of splashing.	

<b>D. Emergency Response – Spills and Injuries</b>	<i>Responsible: All Staff</i>
D1. If a spill occurs, refer to Environmental Guideline Spill Response. <ul style="list-style-type: none"> <li>• <b>Call 311 immediately (during normal business hours) or at 303-206-0001 after normal business hours for all spills.</b></li> </ul>	
D1. If a parts cleaner leaks or otherwise discharges cleaning solvents, solutions, or sludges act immediately to stop the release, and then work to contain the spilled material.	
D2. Use PPE when responding to a spill. Do not allow spilled liquids, solids and sludges released from parts cleaners to contact your skin, eyes, or any other part of your body. Protect yourself from breathing-in the vapor or gases released from a parts cleaner. These materials may be dangerous to your health and the environment either because the parts cleaning products were inherently hazardous or because they became contaminated with toxic substances in the process of parts cleaning.	
D3. Do not wash spilled material to a floor drain, any other sanitary drain, a storm drain or to the outdoors.	
D4. Consult the emergency spill response plan specific to your facility for the exact actions to take and people to notify in the event of a spill or release of hazardous materials or hazardous wastes.	
D5. If a hazardous material has been released in such quantity and in such manner as to create a significant health hazard or life threatening condition, protect yourself, people around you and request emergency protection by calling 911 or through similar action.	
D6. Contact DEH to report a spill. DEH will assess spill reporting requirements and coordinate all legal notifications.	
D7. Liquids, solids and sludges released from parts cleaners may be regulated hazardous wastes or otherwise prohibited from discharge. Collect and containerize all hazardous material and contaminated media derived from a spill and evaluate the material for correct labeling, storage, and disposal.	

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<b>E. Inspection &amp; Maintenance Requirements</b>	<i>Responsible: Equipment Operators or Supervisors</i>
E1. Service all parts cleaning equipment on the manufacturer’s recommended schedule or more frequently so as to prevent excessive wear and tear on the equipment and attempted parts cleaning with spent, ineffective and contaminated cleaning solutions.	
E2. Keep a log or brief record of equipment use so that required maintenance, cleaning solution and filter replacement may be scheduled.	

<b>Expected Records / Outputs</b>
<u>Record / Output</u>
<ul style="list-style-type: none"> <li>• Monthly log of Equipment use.</li> <li>• Monthly or annual log of Equipment maintenance and replenishment.</li> <li>• Annual Hazardous Materials Inventory System (HMIS) report for the local Fire Department.</li> <li>• Current MSDSs for all parts cleaning chemicals and supplies stored or used at the facility.</li> <li>• Archives of MSDSs for all former parts cleaning products used at the facility.</li> <li>• Training Records for all employees who are required be trained.</li> </ul>

<b>References</b>
<u>Phone Numbers</u>
<ul style="list-style-type: none"> <li>• <b>DEH EQ Emergency Response - during normal business hours ..... 3-1-1</b></li> <li>• <b>DEH EQ Emergency Response - after normal business hours.....(303)206-0001</b></li> <li>• Paul Bedard (Facility Compliance Program Administrator).....(303) 880-9865</li> <li>• Gary Lasswell (Environmental Compliance Supervisor) .....(720) 865-5440</li> </ul>
<u>Guidance Materials (list not limited to the following)</u>
<ul style="list-style-type: none"> <li>• MSDSs</li> <li>• WMD MS4 Permit</li> <li>• DOT Labeling and Placarding Guidance</li> <li>• Facility specific SPCC Plan</li> </ul>
<u>Training Materials (list not limited to the following)</u>
<ul style="list-style-type: none"> <li>• Operating procedures training (On-the-Job)</li> <li>• Operator site specific training materials for handling Hazardous Wastes</li> </ul>
<u>Related Environmental Guidelines (list not limited to the following)</u>
<ul style="list-style-type: none"> <li>• Spill Response</li> <li>• General Regulated Waste Management</li> </ul>
<u>Applicable Regulations (list not limited to the following)</u>
<ul style="list-style-type: none"> <li>• 40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance</li> <li>• 40 CFR 122-124 NPDES Regulations for Storm Water Discharges</li> <li>• 6 CCR 1007-3, Part 261 State RCRA Regulations</li> <li>• CCoD Ordinances</li> <li>• Denver Wastewater Management Division Rules &amp; Regulations</li> <li>• Metro Wastewater Reclamation District Rules &amp; Regulations</li> </ul>
<u>Other Documents</u>
<ul style="list-style-type: none"> <li>• Air Pollution Emission Notification (APEN) forms</li> <li>• DEH Compliance Bulletins</li> <li>• CDPHE and EPA Compliance Bulletins</li> <li>• CCoD Executive Orders</li> </ul>

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