



Superior Solutions

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Subject: Care of Zep Dyna Clean Parts Washer Systems and Disposal of Filtration Elements

The following is a set of guidelines for system care to reduce the chance of hazardous waste generation and for disposal of spent filtration units.

System Care:

Proper disposal of Zep Dyna Clean Parts Washer Filtration Elements begins with proper care of the Zep Parts Washer System, which includes management of all materials that potentially can be introduced into the machines. Flammable and some combustible materials that can lower the flash point below 140°F, such as hexane, mineral spirits, and d-Limonene products, must be kept out of the parts washers. Mechanics need to drain residual gasoline from fuel system components to prevent its introduction with subsequent lowering of the solvent flash point and contamination by benzene. Mineral spirits type solvents also are a source of benzene, which is another reason to keep them out of the machines.

To extend the life of the filtration elements, pre-cleaning of the parts is suggested. Caked on greases, oils, dirt and other soils should be removed before the parts are cleaned. The more dirt that is put into the machines, the more it costs in filter elements to get them clean.

Chlorinated solvents (1,1,1-trichloroethane, trichloroethylene, perchloroethylene and methylene chloride) can create problems if they are used in and around the parts washers. These solvents are among the EP Characteristic and “F-Listed” materials in the hazardous waste regulations. If they are introduced into the parts washers, they may be absorbed by the filtration elements, especially the Dyna Trap Bag. Waste that would be otherwise non-hazardous can become hazardous. Less than one-percent of the tested filters have been positive for TCLP volatile compounds.

Contamination from heavy metals such as lead, barium, arsenic, cadmium or chromium, (used in some bearing-metal alloys, as antiwear surface coatings or as pigments in some paints) also creates hazardous waste. However, we have found that they are rarely a problem with a well-managed parts washer system. We can make this statement based on the results of 8-years of TCLP testing performed for hundreds of customers. Well over 95% of tested filtration units had no metals contaminants that required disposal as hazardous waste.

Proper care means you never need to remove the solvent from a Zep Dyna Clean Parts Washer System. Solvent does not “wear out”, but becomes dirty with oils, greases, and particulate matter. The filtration elements are designed to remove these contaminants. The manifesting and disposal of liquid wastes becomes practice of the past.

Disposal:

Once the filtration components are spent and removed, they must be drained until no liquid can flow from them. We recommend draining all filtration elements overnight in the parts washer basin with the lid closed. After this initial

draining they may need to be placed for a day or two on top of a bed of clay or similar absorbent in a closed, five or seven-gallon pail to assure they cannot release any free liquid.

The spent filters are then characterized as hazardous or non-hazardous waste. The generator may use his knowledge of the process generating the waste, but most state inspectors will require test data to verify the determination. We suggest having a TCLP test run for heavy metals and volatiles. We perform this testing for \$300 if metals and volatiles are run on the same sample at the same time. Otherwise the separate tests are \$200 each. We recommend testing the Dyna Trap Filter Bag, because the calcined clay absorbent is more likely to accumulate contaminants than the Model 5100 particulate filters.

If the filtration units are classifiable as non-hazardous waste, your company has additional options for disposal. If you have a service picking up used oil filters, this can be acceptable way to dispose of them. However, you need to confirm with the service provider that these parts washer filtration elements are acceptable when combined with the oil filters.

Disposing of spent filtration elements “in the Dumpster” is another option, but we do not recommend it. Landfills are no more than long term storage facilities. Additionally, a state agency must license the landfill to receive even limited amounts of chemical or industrial wastes such as spent filtration elements. Contact the service provider to determine whether the facility can accept the spent filters. Again, regulations do not allow any free flowing liquids.

The environmentally preferable solution is to have the filtration elements destroyed by incineration. Your Zep Sales Representative can give you a list of waste service providers to assist in arranging this type of disposal. We have plastic accumulation drums that are approved for disposal of our filters. If the filtration elements are hazardous waste the only differences in the disposal procedure are the waste profile and the shipping manifest required for hazardous waste. The cost of disposal is the same either way.

All spent filtration elements are sent to permitted service providers, whether hazardous or non-hazardous, and are handled with the care required for hazardous waste. The destruction of the spent filtration units is done under RCRA approved conditions. When incineration is complete, a certificate of destruction is issued to your company. The residual ash is then landfilled at a RCRA permitted facility.

Incineration significantly reduces the risk of environmental contamination because a solid versus a liquid is handled. In addition the amount of waste is reduced by filtration to about 10% by weight in comparison with the amounts of liquid handled through leased-solvent systems. With proper care and management, the Zep Dyna Clean Parts Washer System can provide ease of mind for parts washer waste management, while providing superior cleaning.

If you have any additional questions or should you wish additional service providers, please call Compliance Services.

Sincerely yours,

Compliance Services
Zep Inc.