

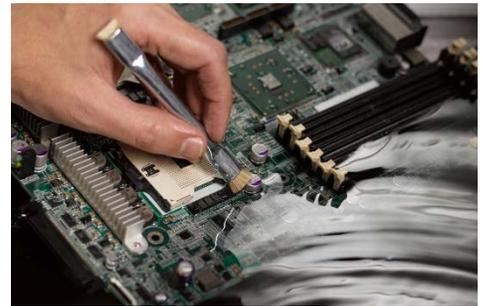
Recovery of Electronic and Electrical Equipment from Catastrophic Water Damage

Overview

Electrical equipment and electronic devices can be recovered from catastrophic water damage due to hurricanes, floods, fire suppression and other severe water impact situations. Water can be removed from electrical motors, electro-mechanical assemblies and electronic devices using cleaning solutions and processes that target water and trapped moisture removal. The assemblies can then be cleaned to remove debris, soot, deposited oil and grease, and other contaminants using a conventional cleaner/degreaser or contact cleaner. While water can cause extensive damage to electronic and electrical equipment, it does not mean that this equipment is lost. When used with the following procedures, Chemtronics® products are an efficient and effective tool in recovery and restoration of water damaged equipment.

Step 1: Rinse Equipment with Clean Water

Electronics and electrical equipment should be flushed well with clean water to remove salt, sediment and particulate matter. Make sure that all equipment is de-energized. Disassemble the equipment to allow access to all interior parts and flush with water until the rinsate is clean. If possible, dip the equipment into a drum or tank of clean water and agitate to dislodge trapped contaminants. After the equipment has been rinsed thoroughly, stand it on end and allow to drain. It must be noted that equipment already damaged by water will not be damaged further by the use of clean water. If clean water is not available, clean assembly with Flux-Off® Water Soluble cleaner (part number ES1530). To speed the drying process, use UltraJet® Duster (part number ES1020). The high pressure of the UltraJet® Duster performs as a "portable compressor" to effectively dry excess moisture and solvent.



Step 1.1: Rinse with clean water

Step 2: Remove Remaining Oil, Grease, Sludge and Other Contaminants

Cleaning will be necessary to remove oxidized oil, grease and other contamination. Most contacts and connectors contain sensitive plastics that will be destroyed using heavy degreasing products. For plastic-safe precision cleaning, remove the remaining contaminants with Electro-Wash® PX (part number ES1210), or for heavy-duty nonflammable degreasing use Electro-Wash® VZ (part number ES6100). Spray the equipment thoroughly or dip the equipment in the solvent and agitate while submerged. Allow the equipment and assemblies to drain and dry completely before returning the equipment to service. Make sure that all contaminated areas have been sprayed and completely cleaned.



Step 1.2: Remove moisture with Flux-Off® Water Soluble cleaner and UltraJet® Duster

Where removal of caked on grease, sludge and other contamination is required, and where there is little concern for plastic safety, Max-Kleen™ Tri-V™ (part number VVV2279) is used to remove debris and contamination. Spray the equipment thoroughly or dip the equipment in the solvent and agitate while submerged. Allow the equipment and assemblies to drain and dry completely before returning the equipment to service.



Step 2: Remove oil, grease and sludge with aerosol cleaner

Recovery of Electronic and Electrical Equipment...

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Step 3: Protect Bare Metal

After performing the previous cleaning processes on electrical equipment, electric motors, generators, power tools and switches, the use of contact lubricant is recommended to help prevent oxidation and corrosion. DPL Deep Penetrating Lubricant (part number ES1626) is a multi-purpose precision contact lubricant ideal for protecting the bare metal found in all electrical and electronic contacts, maximizing contact integrity. Spraying low voltage contacts with DPL will clean and protect the contacts. Electrical contacts that are not embedded in plastics can also be cleaned and protected by using DPL.

Battery terminals and semi-permanent plug connectors can be further protected and electrical conductivity maximized by using CircuitWorks® Silver Conductive Grease (part number CW7100) on all connector surfaces.

Step 4: Test Equipment

Test electrical equipment to ensure correct resistance levels have been achieved prior to operating equipment. If correct levels have not been reached, then it may be necessary to repeat Step 2 and 3 of this procedure. When correct resistance levels have been reached, energize equipment under “no-load” conditions and allow operating for a period of time before returning to normal operations.

Technical and Application Assistance

Chemtronics® provides a technical hotline to answer your technical and application related questions. The toll free number is: 1-800-TECH-401.



Step 3.1: Spray DPL lubricant on exposed metal to prevent oxidation



Step 3.2: Apply conductive grease to connectors

Availability

Flux-Off® Water Soluble Water Remover

ES1530 13.5 oz. aerosol
ES130 1 gallon liquid

Electro-Wash® PX Precision Cleaner

ES810 5 oz. aerosol
ES1210 12.5 oz. aerosol

Max-Kleen™ Tri-V™ Heavy-Duty Cleaner

VVV2279 20 oz. aerosol

UltraJet® Duster

ES1020 10 oz. aerosol
ES1620 8 oz. All-Way Spray aerosol

DPL® Deep Penetrating Lubricant

ES1626 11 oz. aerosol

CircuitWorks® Silver Conductive Grease

CW7100 6.5g syringe