

Hose Assembly Cleanliness

Several sources claim that over 70% of hydraulic system failures are due to contamination. Contamination of hydraulics system fluid can come from many sources, including new, unfiltered oil, particles in the tank, abrasion wear of system components in use, and chemical degradation of components. Hose assemblies can also introduce contaminants into a hydraulic system. Below are some practices that can and should be taken to reduce contamination. Oil-Air Products has adopted these practices and uses them for our everyday hose assembly fabrication.

Wet Cutting vs. Dry Cutting Hose

Dry cutting hose generates the most dust and debris and puts debris into motion more than wet cutting. Wet cutting uses water or other liquid lubricant that not only lengthens the service life of the saw blade, but the liquid suppresses dust and debris movement thereby reducing the amount of cutting contamination introduced inside the hose. Oil-Air Products uses specialized automated cut-off saws that not only cut to precise lengths, but wet cuts the hose using a lubricant to reduce debris entering into the hose.

Using the Correct Saw Blade

A sharp blade will cut more quickly and smoothly and generate less debris. Smooth blades generate less cutting debris than scalloped, serrated or abrasive blades. Oil-Air Products uses smooth blades on all automated cut-off saws to reduce debris during the cut.

Removing Contamination in the Hose

Even after concerted efforts to control hose assembly contamination during fabrication, there will still be a certain level of contaminate present inside the hose. Air flush, liquid flush and projectile cleaning are the three most common ways to flush hoses. None of these methods guarantee results under all conditions, which can vary considerable. Success depends highly upon awareness of contamination sources, how much attention is given to detail, and how carefully the cleaning procedure was carried out. Oil-Air Product has had an independent lab verifying the cleanliness of hoses that we fabricate since 2003. The results of these cleanliness tests have shaped the processes and procedures we use to clean hoses. Oil-Air Products uses a combination of air flush and projectile cleaning to ensure contamination is removed from the hose assembly.

Avoiding Contamination Outside of the Fabrication Process

Once the hose assembly fabrication and cleanliness process is complete, it is important to maintain that level of cleanliness until such point that the hose assembly is installed. All Oil-Air Products hose ends are capped and the hose assemblies are either boxed or placed in a returnable container for shipment. This ensures that contaminant is not introduced into the hose prior to installation.

Oil-Air Products understands the significant impact that contamination can have on the life of hydraulics components. Low levels of contamination increase the life of hydraulic components, minimize downtime and reduce warranty costs.

For more information on hose cleanliness or to talk to an Oil-Air Products representative please call 763-478-8744. We can also be reached via e-mail at info@oilair.com.