Draining Your Heat Transfer System Properly

Draining The System

Draining the system of the heat transfer fluid is not very difficult but it can be rather messy and time consuming. If you do it right, you can remove almost all the heat transfer fluid from your system so that when you recharge your system with new heat transfer fluid from MultiTherm, your system will operate more efficiently. Here are the general steps to drain the fluid from your system:

1. Shut off your heater or heat source and let your pump continue to circulate the oil through the system. You need to remove all the residual heat from the system as well as let the oil cool down.

2. Once the oil is at a safe temperature to drain from your system, shut off the pump and allow fluid to stop circulating.

3. If you have a nitrogen blanket on the expansion tank, turn it off.

4. If you have high point vents, you can open them.

5. Make note of all positions of closed or partially closed valves or gates. Once you make note of all their positions you can completely open them.

   Note: Remember to open the closed leg to the expansion tank.

6. Attach your hoses to all the low point drains. In most cases, the two low point drains will be at the pump and another at the process/user.

7. Use a secondary pump (NOT THE PRIMARY PUMP) to drain the fluid from your system.

8. When you think you have all the oil out of the system, allow the system to sit for 10 to 15 minutes and try pumping again, sometimes it takes time for the more viscous fluid to settle to the low points.

Now your system has been drained of the heat transfer fluid. If you drain it as hot as you can, you will be able to remove almost all the sludge and particulate in your system. This procedure does not remove caked on or carbonized material. If you are looking to do that, you should consider either a process system cleaner or flushing fluid from MultiTherm. Call for details.
After Draining your system, what do you do with the used heat transfer fluid?

Well, if you are running a MultiTherm heat transfer fluid, disposal is very easy and safe. You would treat MultiTherm heat transfer fluid like used motor oil and can dump it with your used hydraulic oils or lubricants.

If your system size is less than 1,000 gallons, you will need to drain the fluid into empty drums or totes. If you have more than (5) 55-gallon drums of used fluid, most waste disposal companies will pick it up for free. Less than 5 drums, it is up to the individual companies to make that call.

When your system is larger than 1,000 gallons you can contact a disposal company to come in with a tanker to remove the fluid from your system and pay you $.10 to $.17 per gallon. Used heat transfer fluid is burned in many incinerators because of its high BTU value and the fact that it burns clean.

If you are running someone else’s heat transfer fluid that is considered hazardous or toxic, you will need to follow OSHA & EPA regulations for removal and disposal. This can cost you some big bucks!

New Service Announcement

MultiTherm is now offering the service to clean out your system by either providing you with the management of your people during the procedure or simply coordinating a turn-key project that would require minimal resources on your end. Either way, MultiTherm can help you clean out or flush your heat transfer fluid system to get it running back at peak performance. Contact us for more details or a system analysis.

Do you want it Electronically?

These newsletters are also available via e-mail. If you would like to receive them electronically, contact us at 800-225-7440 or drop us an e-mail at TechInfo@MultiTherm.com. Please include your name, company, address, phone numbers and e-mail address.

Thanks and we hope you find these newsletters beneficial!

The MultiTherm LLC has been a leading supplier of efficient, non-hazardous Heat Transfer Fluids since 1977. Within a temperature range of -170°F (-112°C) to 650°F (343°C), the company can successfully and economically accommodate a customer’s heating or cooling requirements however exacting they may be. Further, MultiTherm provides troubleshooting help and a fluid analysis service to determine the physical and chemical condition of the fluid.