HOUGHTON
Fluid Partnerships Making a World of Difference

Sump Cleaning Procedure

Machine tool and transfer line dump, clean, and recharge procedure for water soluble coolants

Following proven cleaning steps can help control costly manufacturing downtime. Scheduling annual preventive maintenance programs aids in preventing loss of production due to coolant-related problems.

1. Use only approved Houghton water-soluble cleaners. This ensures proper cleaning properties and coolant compatibility, in the event any cleaner residue is left behind. If bacteria and/or fungus are present, it may be necessary to use cleaners with biocide additives to eliminate possible re-inoculation.

2. ***Follow this procedure only if coolant is <u>not</u> going to be recycled***. Approximately 2 – 3 hours prior to pumping out the coolant sump, while the machine is still running add the recommended amount of cleaner concentrate to the machine sump. Your Houghton technical service representative (TSR) can recommend the proper concentration level for your system.

   <u>CAUTION</u> - **Do not** add more than the recommended amount of cleaner concentrate

3. After production has been completed and the machine tool(s) or transfer line is ready to be cleaned:

   Step #1 - Remove all chips, swarf, sludge and coolant from sump or central system.

   Step #2 - Remove all guards, screens and inspection covers from machine tools and sumps. If applicable, this includes centrifuges, coalescers, all in-line filter media, and chip removal systems. Remove all chips, swarf, sludge, and coolant from these areas. ***Do not skip this step.*** If you do not remove all the material left in the machine tools and sumps, the fresh coolant can be affected by bacteria and/or fungus cells that have been left behind.

   Step #3 - Pre-soak machine tools with a 25% concentration of recommended cleaner. After allowing adequate soak time, begin high pressure or steam cleaning with recommended cleaner concentration. Wipe off any remaining heavy residue with clean rags.

   Step #4 - Fill sumps or central system to a safe operating level with fresh water and the recommended concentration of cleaner. Activate all pumps, supply headers, high-pressure coolant systems, supply lines and tooling nozzles. Open and flush out any closed or deadheaded pipes or supply lines. Allow the cleaner solution to circulate for 3 hours. While cleaner is circulating through the machines, clean all guards, screens, and inspection plates/panels that were removed in Step #2.

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Step #5 - Turn off all coolant pumps and drain cleaning solution from sumps or central system. Remove any remaining chips, swarf and sludge. Fill sumps or central system with fresh water and circulate for 2 hours. After 2 hours, turn off pumps. Remove dirty water, any remaining chips, swarf and sludge.

Step #6 - (Final rinse) - Add fresh water to sumps or central system and circulate for 1 hour. Remove water and remaining chips, swarf, and sludge. Replace all guards and screens, and install new filter media.

Step #7 - Fill sumps or central system with water to safe operating level. Add PRE-MIXED coolant to flume, or to area closest to circulating pump, or to an area of heavy agitation - for proper mixing. Check concentration level of coolant.

Note *- If high concentration levels are required (over 6%), raise concentration level slowly. This may help prevent foaming.*

Step #8 - After machining begins, re-check concentration levels of the coolant. Adjust, if necessary, and check concentration

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