

### CLEAN-OUT PROCEDURE

#### Central System and Individual Machine Reservoirs

Clean metalworking fluid performs better and lasts longer than dirty or contaminated fluid. When recharging an individual machine or central system fluid tank, a proper clean-out of the tank is necessary. A thorough cleaning will allow the fresh charge of metalworking fluid to perform with maximum efficiency. If not removed, the metal swarf, oil, mold and bacteria will cause deterioration of the fresh mix. The following clean-out procedure should be used whenever possible.

#### PREFERRED CLEAN-OUT PROCEDURE

1. Drain the central system or individual tank completely.
2. Remove all metal swarf and debris from sumps, return trenches, oil pans, and filtration units.
3. Fill the machine with water and circulate through all lines and machines. Warm water is desirable, but is not absolutely necessary.
4. Add Val-U-Clean-VP cleaner at 3-5% and circulate for 4 to 8 hours. As the cleaner circulates, clean all chip conveyors, screens, pans, and enclosed areas. **DO NOT ADD BLEACH OR OTHER HOUSEHOLD CLEANERS.** This will cause rusting and shorten the life of the coolant. If the coolant has a large amount of bacterial growth, a biocide can be added to the cleaner and flushed through the system.
5. It is suggested to steam clean areas where suspected accumulation of swarf and oil may not have been removed by the cleaner.
6. After the cleaning is complete, drain the Val-U-Clean-VP mix from the system.
7. Refill with fresh water and circulate throughout the system or tank(s) to flush all traces of cleaner and swarf from the system. Drain all lines and sumps. If the rinse water is exceptionally dirty, rinse a second time
8. Charge the system with fresh water.
9. Add enough ValCOOL® concentrate to reach the recommended concentration.
10. Circulate through the system to insure proper mixing.

#### ALTERNATE CLEAN-OUT PROCEDURE

##### With Used Fluid- During Shutdown

After production stops, add one gallon Val-U-Clean-VP to each 50 gallons of dirty fluid in the machine reservoir or central system. Circulate the mixture for 4 hours or longer through all lines and machine tools. Drain, rinse, and recharge with a fresh ValCOOL® mix.

**WARNING! Val-U-Clean-VP is alkaline. Protective gloves and safety glasses should be worn by maintenance personnel during this operation. Prolonged contact with the skin may cause irritation.**