

| PROBLEM | CAUSES | SOLUTIONS | SEE DETAILS |
|----------------|--|---|-------------|
| Foaming | • Concentration too high | • Adjust concentration | 1 |
| | • Excessive Pressure / Agitation | • Convert current product to coolant with high pressure capabilities | - |
| | • Machine cleaner in sump | • Check pH level | 3 |
| | | • Allow machine to run, cleaner should dissipate | - |
| | • Mechanical (crack in hose, sump level too low, crack in pump, pump pressure too high) Restricted Intake | • Check machinery and repair as required | - |
| | • Soft water | • Sample water, treat if necessary | - |
| | • High tramp oil content | • Skim off oil • Check hydraulic lines for leaks, and repair as required | 4 |
| | • Equipment design | • Check system for point of agitation | - |

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|----------------|---|---|-------------|
| Rusting | • Concentration too low • pH too low | • Adjust concentration | 2 |
| | | • Adjust pH level | 3 |
| | • Poor mixing (soluble oil) | • Add concentrate to water | 1 |
| | • High tramp oil content • High bacteria count | • Skim off oil | 4 |
| | | • Check hydraulic lines for leaks, and repair as required | 4 |
| | | • Dump, clean and recharge system | - |

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|-----------------------|--|---|-------------|
| Poor Tool Life | • Concentration too low | • Adjust concentration | 1 |
| | • Wrong product being used | • Contact ValCOOL, LLC at 800-244-9004 for information | - |
| | • Large amounts of biocide added to sump or system | • Contact ValCOOL, LLC at 800-244-9004 for information | - |
| | • High tramp oil content | • Skim off oil | 4 |
| | | • Check hydraulic lines for leaks, and repair as required | 4 |
| | • Air In coolant | • Check for mechanical problems | - |
| | • Incorrect application | • Make sure coolant is directed at tool | - |

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|-------------|----------------------------|--|-------------|
| Odor | • Low concentration | • Adjust concentration | 1 |
| | • Low pH | • Check pH then contact a ValCOOL, LLC representative for further instructions | 3 |
| | • High tramp oil content | • Skim off oil | 4 |
| | | • Check hydraulic lines for leaks, and repair as required | 4 |
| | • Contamination | • Submit cutting fluid sample to a ValCOOL, LLC representative | - |
| | • Chips and swarf build-up | • Thoroughly clean sump and machine, and fill with fresh fluid | - |

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|------------------------|--|--|-------------|
| Skin Irritation | • High concentration | • Adjust concentration | 1 5 |
| | • High pH | • Check pH then contact a ValCOOL, LLC representative for further instructions | 3 5 |
| | • High tramp oil content | • Skim off oil | 4 5 |
| | | • Check hydraulic lines for leaks, and repair as required | 4 5 |
| | • Dirty shop cloths | • Use only clean cloths | - |
| | • Allergies | • Have workers checked for allergies and contact physician if necessary | - |
| | • Out-of-shop influences | • Check pH then contact a ValCOOL, LLC representative for further instructions | 3 |
| • Material contaminate | • Skim off floating debris and clear chips | - | |

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|----------------------------|---------------------------|--|-------------|
| Residue in Machine | • High concentration | • Adjust concentration | 1 |
| | • High tramp oil content | • Skim off oil | 4 |
| | | • Check hydraulic lines for leaks, and repair as required | 4 |
| | • Incorrect mixing | • Submit cutting fluid sample to a ValCOOL, LLC representative | 1 |
| | • High misting operations | • Check ventilation system | - |
| • Adjust coolant nozzle(s) | | - | |

| SOLUTION DETAILS | | PRODUCTS TO USE |
|------------------|--|---|
| 1 | Efficiently mix coolant concentrates with water <ul style="list-style-type: none"> • Always add concentrate to water, never the other way. Mix by hand, or with a slow speed mechanical agitator. | <ul style="list-style-type: none"> • Use a proportioner for "charging" and "make-up" dilutions • Check pH level • Coolant Mixer |
| 2 | Check fluid concentration <ul style="list-style-type: none"> • Checking concentration is one of the most important maintenance functions. | <ul style="list-style-type: none"> • Refractometer, a hand-held instrument to measure actual mix concentration. |
| 3 | Check fluid mix pH <ul style="list-style-type: none"> • pH control is critical to maximizing fluid life and performance. Optimum pH range - 8.8 to 9.2. | <ul style="list-style-type: none"> • Electronic pH Meter. • pH Test Strips to measure fluids in the 8.0 to 9.7 range. |
| 4 | Control tramp oil <ul style="list-style-type: none"> • Check and maintain your machines on a regular schedule • Use extreme care in lubricating or filling hydraulic systems | <ul style="list-style-type: none"> • Sidewinder Skimmer for access to impaired sumps. • Smart Skimmer with integral gravity separator. • Belt Skimmers • Belt Skimmers Diverter only. • Standard Skimmer |
| 5 | Control bacteria growth <ul style="list-style-type: none"> • Add oxygen to the sump to kill anaerobic bacteria • Keep sumps clean. Maintain proper cutting fluid concentration and pH • Remove tramp oil | <ul style="list-style-type: none"> • Oxygenator • Refractometer |