

**Committed to  
Serving Your  
Needs**

A complete line of leading edge, high tech cutting, grinding and parts washing fluids to meet the needs of professionals!

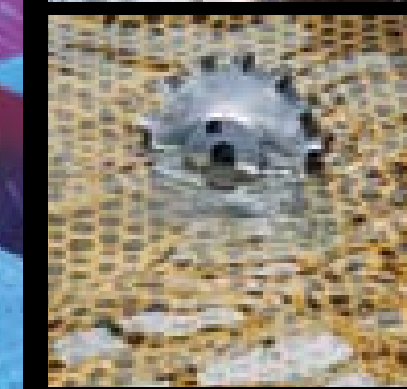
■ High Performance ■ Cost Effective ■ Environmentally Sound



**SPARTAN CHEMICAL  
COMPANY, INC.**  
INDUSTRIAL PRODUCTS  
GROUP DIVISION  
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Machine and  
Sump Cleaners



Soluble Oil Fluids

Synthetics

Parts Washing  
Compounds

Semi Synthetics

Additives

Industrial Degreasers



Aerosols

Hand Cleaners

Dispensing

Support

Distributed by:



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## Machine and Sump Cleaners

### THE CLEANER™

#### Heavy Duty Germicidal Detergent Complex for Sump and Machine Cleaning

Provides quick emulsification of grease and tramp oil. Kills odor-causing bacteria and fungus. Rapidly removes bacterial slime, odor and scum even from hard-to-reach areas such as coolant lines, tool holders, coolant pumps and filters. Registered with the United States Environmental Protection Agency.  
EPA Reg. #5741-19  
#2995



### MAXIM® VHP

#### Maximum Pressure and Performance Cutting and Grinding Fluid

Multi-functional, high pressure, high performance, cutting and grinding fluid designed for high speed, high pressure coolant applications. Low foaming. Extends tool life. Improves surface finish. Contains multi-metal corrosion inhibitor package. Rejects tramp oil. Mild and non-irritating to the skin. Dye and perfume free.  
#2940

### CUTTER EXP® HW

#### Extended Performance Soluble Oil-Based Cutting and Grinding Fluid Fortified with Extreme Pressure Properties Hard Water Dilutable

Multi-functional soluble oil-based product designed to be diluted with hard water to perform heavy, medium and light duty machining and grinding operations. CUTTER EXP HW offers extended long-term in-tank stability providing maximum longevity and machine performance. Extends tool life and improves surface finish on even the most difficult to machine alloys. Contains superior corrosion inhibitors. Assists in reducing haul away costs by up to 90%.  
#2925

### THE CUTTER™

#### Soluble Oil Based Cutting/Grinding Fluid Fortified with EP Properties

Multi-functional for use in most cutting and/or grinding operations. Stable chlorine content provides outstanding tool life and surface finish on stainless steel, hastelloy, inconel, titanium alloys and other space age metals. Good for ferrous and non-ferrous metals. Odor-killing components control odors and eliminate "Monday morning stink". No gummy, sticky build-up to tie up machines or aid bacteria growth.  
#2985



## Soluble Oil Fluids

### SPARCUT NC®

#### Non-Chlorinated Heavy Duty Soluble Oil Based Cutting and Grinding Fluid

A micro-emulsion structured cutting and grinding fluid formulated to provide extreme pressure properties without the use of chlorine, sulfur or phosphorus. Reduces potential for stress cracking and lowers disposal costs due to the absence of chlorine found in most EP type coolants. Ideal for nuclear and aeronautical industry where stress cracking is of concern.  
#2802

### M.O.A.C.®

#### Performance Exceeding Today's High Standards Maximum Pressure and Coolant Velocity

M.O.A.C. handles today's leading edge, high pressure, and performance coolant systems, which deliver coolant to the point of cut under extremely high pressure. Low foaming, M.O.A.C. is ideal for these ultra high pressure and ultra high-flow rate coolant systems.  
#2945



## Synthetics

### SYNSPAR GP®

#### Dye and Perfume Free Synthetic Machining and Grinding Fluid

Medium duty, dye, perfume and oil free, multi-functional synthetic coolant. Use for drilling, reaming, boring, tapping, milling, turning, centerless grinding and Blanchard grinding of ferrous and non-ferrous metals. Foam-free, general purpose fluid formulated without chlorine, sulfur, oil, waxes or fatty materials. Excellent rancidity control.  
#2957

### BLUE SPAR

#### Synthetic Machining and Grinding Fluid

A general purpose synthetic fluid able to handle all your machining needs. Designed to handle light, medium, and heavy duty applications. Formulated with a combination of corrosion inhibitors that work synergistically to provide corrosion protection on ferrous and non-ferrous metals, even in moderately hard water situations. Provides excellent rancidity control which leads to sump longevity and less down time.  
#3113

### THE COOLER™

#### General Purpose Synthetic Cutting Fluid

Multi-duty synthetic coolant for use on cast iron, ductile iron and most other metals. Low foaming, high wetting. Provides a cooler, cleaner, smoke-free operation. Leaves a completely water-resoluble film on the machine parts. Non-corrosive. Non-staining. Non-flammable.  
#2990

### COOLSPAR®

#### Dye and Perfume Free Synthetic Cutting Fluid

Dye, perfume and oil free, multi-purpose synthetic coolant. Formulated for use in heavy duty operations on hard to machine metals such as inconel, hastelloy, titanium alloys and stainless steel. For ferrous and non-ferrous metals. Extends tool life. Improves surface finish. Excellent light to medium duty coolant. Operator friendly, CoolSpar's clear color provides excellent visibility of the workpiece. Odorless. Non-flammable.  
#2987

### THE GRINDER™

#### No-Foam Synthetic Grinding Fluid

Designed for high speed grinding operations on most metals. Eliminates foaming and misting. Extends wheel life. Controls rancidity. No nitrites, nitrates, phenols, creosols, harsh alkalies, phosphates, chlorine, sulfur, heavy metals, MEA, DEA, phosphorus or PCB's. Multi-metal safe. Provides excellent filterability. Non-corrosive. Non-staining. Leaves a completely water-resoluble film on the machine and parts.  
#2992

### GRIND SAFE®

#### Nitrite-free, oil-free synthetic for high-speed grinding operations on most metal.

Safe for the operator and the environment. Mild and non-irritating to the skin. Odorless and non-flammable. Non-foaming eliminates foaming and misting problems in high-speed grinding operations. Grind Safe leaves a completely water resolvable film on the machine and parts for rust control. Controls rancidity.  
#2979

### THE CARBIDE GRINDER™

#### Dye and Perfume Free Synthetic Carbide Grinding Fluid

Dye and perfume free synthetic fluid specifically formulated for grinding cemented carbide materials. Formulated with special non-leaching materials as well as cobalt leaching inhibitors. Insures against the solubilization of cobalt from cemented tungsten

or titanium carbide materials. Reduces operator's risks of dissolved cobalt-induced dermatitis and lung diseases associated with cobalt-laced dust and mist. Reduction of cobalt leaching from the work piece results in a better surface finish, improved structural integrity of the material, longer tool life and improved tolerances of the carbide toolings for the end-user. No nitrites or nitrates, phenols, creosols, phosphates, chlorine, sulfur, heavy metals, PCB's, harsh alkalies, monoethanolamine, diethanolamine or triethanolamine.  
#2788

### GLASS GRINDER™

#### Glass and Plastic Grinding Fluid

Dye and perfume free synthetic grinding fluid formulated specifically for glass, polycarbonate and other plastics. Helps prevent stain and discoloration of glass, polycarbonate and other plastic lenses. Does not affect the "silver" on backside of mirrors. Biodegradable. No oil or solvents to add to trade waste problems and the expense of haul-a-way costs. No highly hazardous or toxic materials. pH balanced. Mild on operator's hands. Free rinsing. Controls rancidity. Excellent filterability.  
#2970



**Parts Washing Compounds**

**Semi Synthetics**

**Additives**

**THE METAL CLEANER™**

**Solvent Free Metal & Parts Washing Compound**

Safe alternative for chlorinated and non-chlorinated solvents. Provides multi-metal corrosion protection. Solvent free, moderately foaming, water dilutable detergent complex formulated to safely remove moderate industrial soils. Removes grease, cosmoline grease, oily carbon, carbon exhaust, coolant residues, baked on hydraulic and lube oils, motor oils. Greatly reduces hazardous waste. Recyclable. Reusable.

**#2823**

**METAL SPRAY LF®**

**Solvent Free Low Foam Parts Spray**

Near neutral pH, solvent free, low foaming compound designed for high pressure, high temperature, spray washing systems. Unique surfactant produces the low foaming characteristic which is required in high pressure applications. Use for cabinet, tumble drum and in-line conveyor type spray washing systems. Replaces high caustic, high pH degreasers. Environmentally safe. Biodegradable. Phosphate free. User friendly. Contains no substance known to be toxic or highly hazardous to individuals or the environment.

**#2824**

**SEMISPAR HD®**

**Heavy Duty Semi-Synthetic Cutting and Grinding Fluid**

Heavy duty, multi-functional, semi-synthetic cutting and grinding fluid. Designed for light, medium and heavy duty machining and/or grinding operations on even hard-to-machine alloys. SemiSpar HD provides multi-metal corrosion protection and excellent longevity in the machine or central system. Leaves a non-sticky, free-flowing, water-resoluble, thin film, corrosion protective residue on the machine and parts. Formulated to be recycled.

**#2870**

**JD-4**

**Semi-Synthetic General Purpose Cutting & Grinding Fluid**

Multi-purpose, multi-metal safe semi-synthetic cutting and grinding fluid. Designed for use in light and medium duty machining or grinding operations. JD-4 is formulated to provide the cleanliness of a synthetic with the lubricity of an oil containing type coolant. The product's raw materials combine to offer multi-metal corrosion protection while at the same time creating superior tool life and surface finish.

**#2905**

**SEMICUT®**

**Semi-Synthetic General Purpose Cutting and Grinding Fluid**

Multi-duty, multi-metal semi-synthetic cutting and grinding fluid. Formulated to provide the cleanliness, cooling and clarity of a synthetic with the lubricity of an extreme pressure soluble oil type coolant. Unique blend of raw materials combines synergistically creating superior tool life and surface finish. Stable. The micro-emulsion of SemiCut remains clear even in 30 grain hardness water.

**#2881**

**GROTAN®**

**Broad Spectrum Bactericide and Fungicide**

GROTAN® is a broad-spectrum bactericide and fungicide. The easy to use tank side additive is a liquid, designed to provide 1500 ppm of actives in end use dilution. GROTAN® prevents microbial contamination through routine treatment of metalworking fluids and has been used for more than 30 years. Both formulators and end users of metalworking use GROTAN® to extend the life of fluids while it helps protect machines, tools and work pieces from corrosion. Use it in individual sumps as well as large central systems. GROTAN® has proven efficacy against a broad range of bacteria and fungi at recommended use levels.

**#2850**

GROTAN® is a EPA Registered product, No. 365-76 and is trademarked to TROY® Corporation.

Please note that this product will be sold under the GROTAN® label and is only offered for sale in North America.

**pH BOOSTER™**

**Corrosion Protection**

When used in metalworking fluids, pH Booster provides superior pH control with good reserve alkalinity. Increased corrosion protection with low foaming characteristics. Spartan's pH Booster is compatible with all Spartan Chemical metal-working fluids. Safe, does not contain any phenols, phosphates, PCB's, nitrates, ethanalamines, nitrosamines, chlorines, sulfur, mineral oil, or silicones.

**#2910**

**IPG® DEFOAMER**

**General Purpose**

Use as a tank side addition for all non-high pressure machining and/or grinding applications. A good general purpose modified silicone defoamer.

**#2915**

**ANTIFOAM HP™**

**Super Concentrated Defoamer**

Use with 1000 plus psi through-spindle coolant or high pressure grinding applications. Antifoam HP is specifically designed for high cavitation rate coolant pumps, and related systems.

**#2900**

**Industrial Degreasers**

**AQUEOUS NB®**

**Non-Butyl Industrial Degreaser**

Aqueous NB incorporates unique bi-polar emulsifiers to safely remove petroleum greases, cutting fluids, grime, soot, polishing compounds and ink found in industrial applications. Aqueous NB is user friendly and environmentally conscious. Non-butyl. Biodegradable. Non-hazardous. SARA Title III compliant. Non-corrosive. Non-toxic. Non-flammable. No VOC's. Versatile, use on most surfaces. Low foaming, use in all kinds of equipment. Dye free. Non-staining. Contains no perfume.

**#2844**

**LUBE-ALL™**

**Enhanced with ZONYL® PTFE Resin**

Maintain lubricity and longer wear and resistance with new and improved Lube All enhanced with ZONYL® PTFE Resin. It cleans and lubricates, restoring smooth operation to sticky or rusty mechanisms without disassembling plus it is VOC compliant for 2003.

Quick penetrating action places lubricant where it is needed and won't dry out. The rich blend of lubricating oil and anti-friction agents, provides a protective barrier against rust and corrosion.

**#6730**

Zonyl® is a Registered Trademark of E.I. duPont de Nemours and Company

**Hand Cleaners**

**GOIN' HOME®**

Industrial strength hand cleaner. Fresh fragrance. Rich lather. pH 7.5 **#2760**

**HAND PATROL®**

Heavy-duty hand cleaner with ultra-fine pumice. pH 10.0 **#2806**

**GRUB SCRUB®**

Heavy-duty, pumpable hand cleaner with d-limonene, pumice and moisturizers. Removes the toughest dirt, grease and grime.

pH 5.5-6.5

**#2809-04, #2810-04 Flat Top**

**SOYSTRONG™ WATERLESS HAND CLEANER**

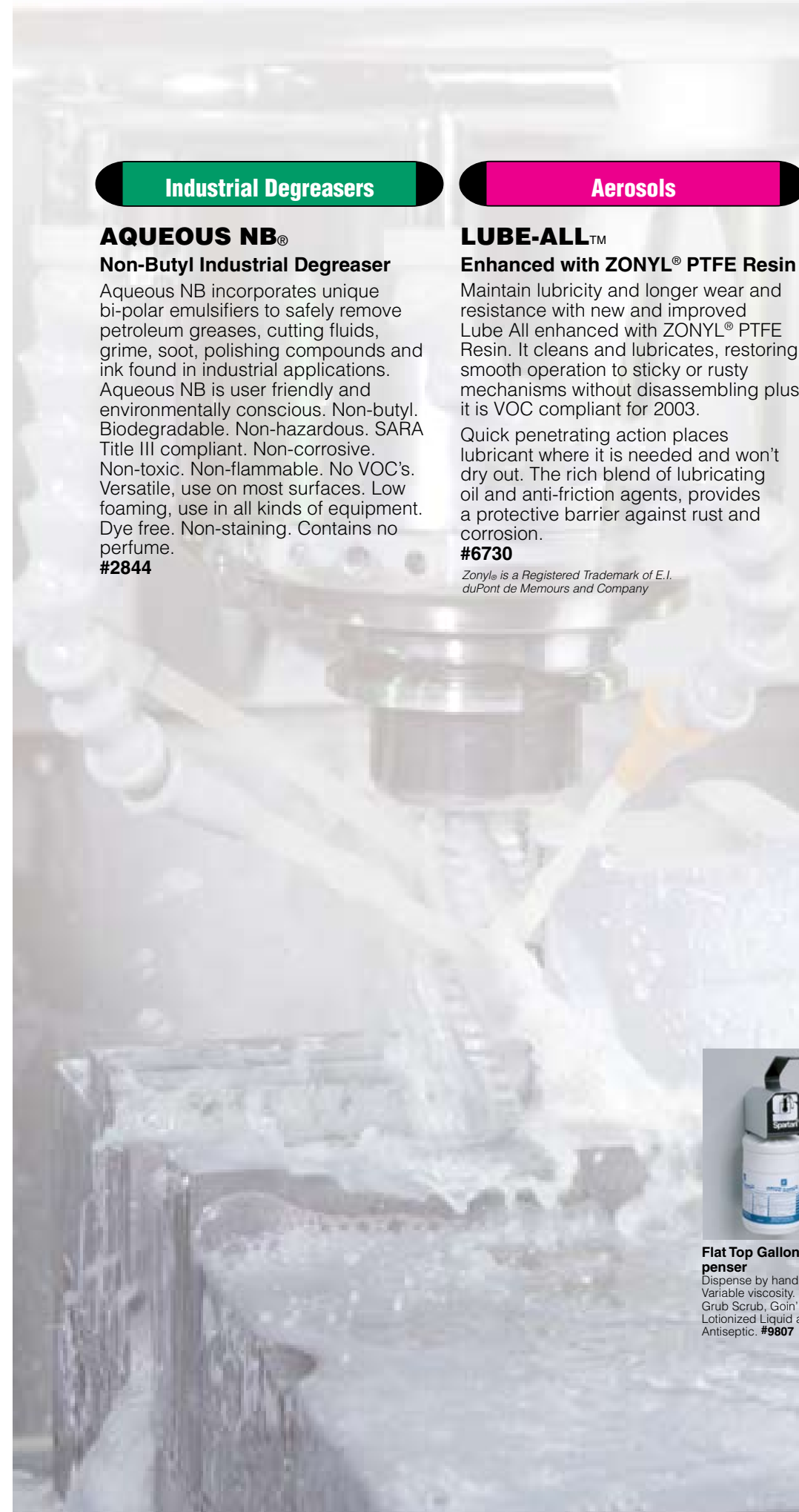
Formulated with a soybean solvent base with a blend of surfactants to emulsify soil. Cold-cream consistency and opaque white color. Fresh, clean smelling, herbal fragrance. Complies with strict, new VOC restrictions.

pH 7.5 **#2960**

**SOYSTRONG™ WATERLESS PLUS**

Heavy-duty waterless hand cleaner with pumice. No rinsing required. Powerful soybean oil solvent and a blend of surfactants, to handle the toughest soils.

pH 7.5 **#2974**



**Flat Top Gallon Dispenser**  
Dispense by hand or elbow. Variable viscosity. Use with Grub Scrub, Goin' Home®, Lotonized Liquid and Antiseptic. **#9807**



**Spartan Crank Dispenser**  
For use with flat top gallons **#9943**



**Hand Patrol Econo Dispenser #9982**



**Spartan Waterless Hand Cleaner Dispenser**  
Durable Plastic dispenser can hold 4 lb containers. **#9955**



**Thick & Thin™ Dispenser** Holds 84 ounces. Elbow, hand or forearm operated. Use with viscous and non-viscous soaps. **#9764**

# Field Guide

## Dispensing

### SPARTAN TOTE DISPENSER SYSTEM™

#### Bulk Chemical Dispensing

Engineered with large volume users in mind, the Spartan Tote Dispenser System is accurate, cost efficient, safe and easy to use.

Enjoy bulk size savings, convenience PLUS insure proper dilutions with the Spartan Tote Dispenser System. Employee safety is increased due to NO CONCENTRATED CHEMICAL CONTACT. The easy to install system, requires only simple tools for assembly... tools already available in most well stocked tool boxes. The complete system comes with an automatic shut off mechanism for added protection from mishap.

Due to the viscosities of our various metal working fluids and the need for accurate proportioning and mixing, Spartan IPG recommends the use of our Dosatron positive displacement mixer for all IPG soluble oil and semi-synthetic formulas. Several synthetic formulas will also require the use of the Dosatron. For the correct application to your manufacturing needs, please consult your authorized Spartan IPG distributor.

Tote retrieval programs are available. Please call the number listed on your tote to verify the minimum quantity required to qualify for pick up, and to coordinate pick up schedule in your area.



The Cooler Titration Kit #9996



Water Hardness Test Kit #9990



Force Flow Model 88C Venturi Style Coolant Mixer  
Drum mountable unit. Ready to use, no assembly required.  
#9333



## Support Items

Refractometer #9993



For determining coolant concentration

Dosatron #9306



Precision Measuring Device

**Where To Buy —** SPARTAN CHEMICAL, INDUSTRIAL PRODUCTS GROUP cutting, grinding and parts washing fluids are available from a global network of authorized distributors. These industrial specialists are knowledgeable consultants who provide prompt local availability of products and cost-effective solutions to difficult manufacturing challenges.

#### Product Safety and Application

**Materials —** For customer convenience, material safety data sheets, individual product brochures, technical bulletins and application tools such as titration kits, refractometers, etc., are available from your local IPG distributor.

**On Line Information —** For immediate printable product information, technical bulletins and MSDS, visit [www.spartanipg.com](http://www.spartanipg.com).

**Packaging:** Spartan/IPG products are available in tankwagons; 330-gallon disposable totes; 275-gallon, DOT-approved totes; recyclable HDPE (High Density Polyethylene); 55-gallon drums and 5-gallon pails; selected items available in gallons, four per case; quarts, 12 per case; and lithographed, 20 oz. aerosol cans, 12 per case.

**Guarantee:** Spartan's modern manufacturing and laboratory control insure uniform quality. If dissatisfied with performance of product, any unused portion may be returned for credit within one year of the date of

## Symptoms

## Causes

## Solutions

<b>Low Concentration</b>	<ul style="list-style-type: none"> <li>Insufficient concentrate</li> <li>Mineral build up (salts)</li> <li>Makeup too low</li> <li>Insufficient monitoring</li> </ul>	<ul style="list-style-type: none"> <li>Increase concentration</li> <li>Add makeup at proper rate</li> <li>Find source of contamination</li> <li>Check concentration daily</li> </ul>
<b>High Concentration</b>	<ul style="list-style-type: none"> <li>Too much concentrate added when machine was charged</li> <li>Too much makeup</li> <li>Water evaporation</li> </ul>	<ul style="list-style-type: none"> <li>Lower concentration by adding a weak makeup solution</li> <li>Lower makeup solution</li> <li>Increase sump capacity or add coolant chiller</li> </ul>
<b>Rancidity</b>	<ul style="list-style-type: none"> <li>Tramp oil contamination, hydraulic leaks</li> <li>Low concentration</li> <li>Bacterial attack</li> <li>Stagnant, quiescent sumps</li> <li>Poor machine cleaning procedures</li> </ul>	<ul style="list-style-type: none"> <li>Fix leaks</li> <li>Raise concentration</li> <li>Skim sumps daily</li> <li>Aerate sumps with air</li> <li>Look for source of all possible contaminants and eliminate</li> </ul>
<b>High Tramp Oil</b>	<ul style="list-style-type: none"> <li>Leaks from hydraulic &amp; way lubes</li> <li>Straight cutting oil carryover from previous operations</li> <li>Rust preventative residue</li> </ul>	<ul style="list-style-type: none"> <li>Fix all leaks at source</li> <li>Install continuous oil skimmers, hydrophobic pads</li> <li>Pre-clean parts</li> </ul>
<b>Rust or Corrosion</b>	<ul style="list-style-type: none"> <li>Low concentration</li> <li>Bacterial attack</li> <li>Humidity</li> <li>Chemical incompatibility</li> <li>Water, deionizer/softener</li> </ul>	<ul style="list-style-type: none"> <li>Adjust concentration to spec</li> <li>Increase concentration to offset humidity</li> <li>Look for sources of contamination in production process &amp; environment. Check DI unit.</li> </ul>
<b>Smoke</b>	<ul style="list-style-type: none"> <li>High tramp oil levels</li> <li>High concentration of soluble oil</li> <li>Feeds &amp; speeds too high</li> </ul>	<ul style="list-style-type: none"> <li>Fix leaks</li> <li>Install skimming devices</li> <li>Check concentration of soluble oil</li> <li>Monitor feed &amp; speed rates</li> </ul>
<b>Dermatitis or Skin irritation</b>	<ul style="list-style-type: none"> <li>High concentration of coolant</li> <li>Coolant contaminated</li> <li>Active sulfurized oil</li> <li>Switching from water based coolant to oil and then back</li> <li>Operators washing hands with solvents, etc.</li> <li>High alkaline parts washing residue</li> </ul>	<ul style="list-style-type: none"> <li>Check concentration</li> <li>Look for contaminants</li> <li>Replace active sulfur with nonsulfurized or wash parts prior to machining. Improve hygiene of area and do not use area as an open sewer.</li> <li>Protective clothing, gloves, apron and boots</li> </ul>
<b>Foaming</b>	<ul style="list-style-type: none"> <li>Outside contamination by alkaline residues</li> <li>Cavitation of coolant in sump</li> <li>Soft water</li> <li>Excessive concentration, low sump capacity</li> <li>Air leaking into coolant line</li> </ul>	<ul style="list-style-type: none"> <li>Find source of contaminates, eliminate</li> <li>Place coolant return line in and under the coolant itself in sump</li> <li>Check and repair coolant hoses for leaks</li> <li>Adjust DI water or take sample, send in</li> <li>Check concentration, raise sump capacity</li> </ul>
<b>Tacky Residue on Chuck, Parts, etc.</b>	<ul style="list-style-type: none"> <li>High coolant concentration</li> <li>Bacterial attack</li> <li>High tramp oil concentration</li> <li>Misting from other oil based operations</li> </ul>	<ul style="list-style-type: none"> <li>Check concentration and adjust if necessary</li> <li>Pull sample from sump and send in</li> <li>Remove tramp oil</li> </ul>
<b>Refractive Index High/ Titration Low (chemical fluid)</b>	<ul style="list-style-type: none"> <li>Soluble oil contamination</li> <li>Contaminated with other high solids material</li> </ul>	<ul style="list-style-type: none"> <li>Locate and eliminate contamination</li> </ul>
<b>Refractive Index Low/ Titration High (chemical fluid)</b>	<ul style="list-style-type: none"> <li>High pH material contaminations</li> </ul>	<ul style="list-style-type: none"> <li>Locate and eliminate contamination</li> </ul>

TO OBTAIN THE FOLLOWING CONCENTRATIONS, USE THE APPROPRIATE DILUTION RATIO:

### Dilution Chart FORMULA FOR DETERMINING TOTAL VOLUME BY GALLONS

$$\frac{\text{Width} \times \text{Length} \times \text{Height (inches)}}{231} = \text{Total Sump Capacity (gallons)}$$

Concentration	Dilution Ratio
10:1 (10%)	13 oz. per gal.
15:1 (7-1/2%)	10 oz. per gal.
20:1 (5%)	7 oz. per gal.
25:1 (4%)	5 oz. per gal.
30:1 (3%)	4 oz. per gal.
40:1 (2-1/2%)	3 oz. per gal.
50:1 (2%)	2 oz. per gal.

