

EXTEND EQUIPMENT LIFE.  
REDUCE MACHINERY DOWNTIME.  
IMPROVE PLANT PROFITABILITY.



Food-Grade

# X-FACTOR

DISCOVER THE X-FACTOR.



Worldwide food and beverage processing is a dynamic and constantly evolving mix of new processes, new equipment and new regulations. JAX has been at the forefront of food and beverage plant lubrication since the inception of true USDA food-grade lubricants nearly 50 years ago. JAX was first with a registered food-grade grease at the birth of commercial food-grade lubricants in our industry, and we continue to be first today with new product offerings for ever more demanding applications.

JAX is a manufacturer and global supplier of the highest quality industrial, synthetic and food-grade lubricants for machinery and processes. As you will discover in this booklet we have been the driving, innovative force in lubrication for food processors for the last half century.

JAX is a wholly-owned American company that has become a global player in food-grade lubrication with international distribution and the most technical expertise and experience in the industry. We are not a major oil company, a satellite division of a multinational owner, or a piece of a venture capital portfolio. As an independent company, we have the freedom and autonomy to compound lubricants without compromising superior performance for price. From formulating new lubricants for unique new processes, to rushing emergency testing through our independent RPM Laboratory, it is hundreds of the little, and not-so-little things that separate JAX from other lubricant companies. Obviously, to enable us to do this, we seek to employ only dedicated people who provide real, hands-on assistance to our customers' businesses, management and machinery on a daily basis.

Why is this important to you? It means we are never distracted from our primary goal of bringing the newest tribology technology to your equipment and production lines, and we are dedicated to providing only America's Finest in terms of lubrication, support service and technical innovation.

Listed below are some recent highlights of state-of-the-art developments in food and beverage plant lubrication from JAX.

- JAX Halo-Guard® FG Series are E.P., food machinery greases that usher in a new era of corrosion protection and remarkable extreme-pressure and antiwear capabilities in a plant-wide, food-grade grease.
- COMPRESYN® by JAX is a completely new line of FG-H1 100% synthetic and partial synthetic compressor and vacuum pump fluids blended with innovative, patent-pending formulation technologies for the food, drug and beverage packaging industries.
- Angel-Guard® Fluids are 100% synthetic, food-grade lubricants developed specifically for extended drain intervals in high-speed beverage can seamers, including those manufactured by Angelus Sanitary Can Machine Company.
- JAX Micronox® Technology is a groundbreaking advance in food-grade technology developed with unsurpassed performance in preserving and protecting food-grade lubricants from microbial contamination in meat and poultry plants worldwide.

If your company is looking for an experienced, hands-on partner to help get control of your lubrication practices, programs and production, talk to us. Nobody knows your equipment, your industry and your applications better than JAX! Nobody!



With a daily blending capacity of nearly 100,000 gallons, we serve a diverse group of food and beverage processors including:

- Bakeries
- Canneries
- Meat Packers
- Poultry Processors
- Beverage Plants
- Freezing Plants
- Dairies
- Pet Food Plants

and dozens more...



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Products are listed separately as Food-Grade (H1) and Industrial-Grade (H2) and further divided into Greases and Fluids. Common application and usage charts are shown in each section.

There are also brief "Technical Highlights" sections, with some of the most useful charts and answers to some of the most commonly asked questions in the lubricant business.





# EXPERIENCE COUNTS

When we say that JAX was there at the inception of food-grade lubricants, it helps to get some perspective on where the industry has been, and where it may be headed in the future.

Recent entries into the field of food plant lubrication may talk a good game, but JAX hands-on development experience for over 50 years in the U.S. and on the international stage is significant. This extensive experience cannot be overcome by competitors' flashy advertising, limited experience and untested product quality.

Until the early 1960's, lubrication of machinery in most food and beverage plant operations was not any different from typical industrial plants. FDA-approved white oils were available for process use, but the limited lubrication value and added expense of these base oils made them unsuitable for all but the simplest machinery lubrication.

At that time, the USDA developed a program which utilized approved products from the developing FDA regulations regarding ingredients for lubricants with possible exposure to processed products. Although the USDA jurisdiction for inspection and control was primarily over meat, poultry and egg plants, the list they were developing would, over the next three decades, become the U.S. and in many instances the worldwide standard for non-food compounds used in processing plants.

The first classifications of lubricants were AA, for use in possible incidental contact situations, and BB for non-food contact areas. There was also a "knock-out" list of chemicals that could not appear in any non-food compounds. The presence of these components would immediately disqualify a product for use in any inspected facility.

The very first branded approval of a USDA food-grade grease, JAX Magna-Plate 8, was developed by us for the prosperous and growing U.S. meatpacking industry.

Although rapid adoption of these lubricants was mandated in USDA-inspected plants of the day, other processing industries outside of the authority of the USDA were not so quick to incorporate these new lubricants. In many cases, there were good reasons. The ingredient and additive technologies were not well equipped to handle applications beyond those that were very basic. Factor in typical sanitation procedures, and it was evident that to gain acceptance of these lubricants, improvements would have to be made in areas of wear protection, corrosion resistance and stability.

Early in the 1970s, the USDA designations were changed from AA to H1 and from BB to H2. The H3 designation was added for soluble oil applications and a 3H designation was later added for release agents, GRAS ingredients and ingestible pharmaceutical-grade white oils.

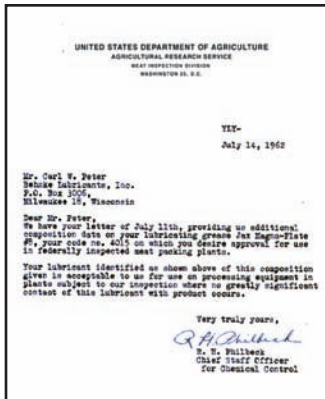
JAX had already researched, pioneered and improved food-grade greases and fluids to address increasingly complicated applications, machinery and processes. An ever-growing group of companies were now using JAX FG lubes to protect their equipment and products with H1-rated lubricants, whether or not their facilities were USDA inspected.

USDA decided to discontinue their formal approval process of non-food compounds in 1998, for reasons not fully explained other than budgetary. The new HACCP requirements for food plants placed the burden of responsibility directly on the processors and their suppliers for ensuring that the products are in conformance with the FDA/USDA guidelines used for the previous 30+ years.

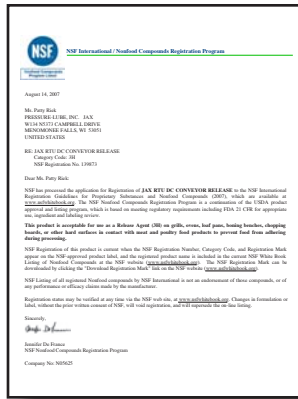
Although the existing approvals would not expire, newly developed products and technologies would need to undergo an approval process as well. JAX immediately incorporated our internal FG approval process and self-certification, which identically followed FDA/USDA ingredient and labeling procedures standardized under the now-defunct testing program of the USDA. JAX classified lubricants as FG those which had and would meet the FDA requirements for USDA H1 approval (FDA 21 CFR 178.3570).

Since then, several independent nongovernmental agencies have offered certification procedures similar to those incorporated by USDA or JAX internal process. NSF has become a readily accessible source for product review and approval, and new ISO standards are being developed to incorporate the review process as well. JAX is consistently staying at the forefront of the regulatory changes that may affect the future of our industry.

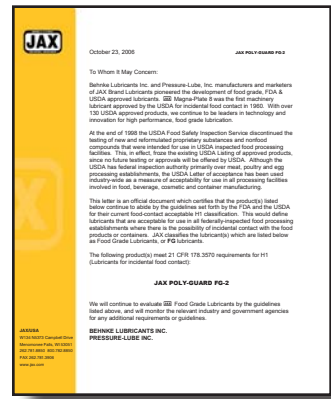
# LETTERS OF APPROVAL



JAX received the first USDA approval in 1962 for Magna-Plate 8



JAX now has over 200 NSF-registered products



JAX provides official certification of food-grade products as FG/H1

# FOOD & BEVERAGE SOLUTIONS

JAX offers a myriad of solutions including turnkey whole-plant services, laboratory proactive maintenance testing, new product research, lube school seminars, innovative packaging solutions and the highest quality, technically proficient distributor network in the lubricants industry. We maintain strong OEM contacts in the processing industry, enabling JAX to understand the technical requirements of this diverse machinery.

Virtually every member of Food Processing's Top 100 is taking advantage of JAX products or services. Many have streamlined and optimized their lubrication programs by converting entire plant operations.

If your company is looking for an experienced, hands-on partner to help get control of your lubrication practices, programs and downtime, talk to us. Nobody knows your equipment, your industry and your applications better than JAX.

- Technical Consulting
- Worldwide Distribution Network
- HACCP Analysis
- USDA, CFIA, NSF, InS Services, Kosher
- JAX FG Cert / FDA and ISO Compliant
- In-Plant Engineering Services
- Complete New Plant Start-Up Programs
- Lube-It Lubrication Software
- RPM Laboratory - Rapid Response
- Xact Fluid - Automated Lubrication Systems
- High Volume Production Capabilities
- Custom Product Application R&D

# OEM RELATIONSHIPS & APPROVALS

JAX has engineered custom lubrication solutions recommended for or approved by today's finest OEMs.

- |                   |                   |                 |             |               |
|-------------------|-------------------|-----------------|-------------|---------------|
| • Angelus         | • Frigoscandia    | • Bosch Rexroth | • Kronen    | • Marlen      |
| • APV®            | • Stewart Systems | • Racine Pump   | • AROL      | • Multivac    |
| • JBT             | • Odenberg        | • Busch         | • Frick®    | • Poly-Clip®  |
| • Tetra-Pak       | • Stork®          | • CPM           | • Vilter®   | • Reiser      |
| • Ferrum          | • Best & Donovan  | • Buhler        | • Mycom     | • Urschel®    |
| • H & K®          | • Jarvis          | • Simonazzi     | • IJ White  | • Alfa Laval  |
| • Barry-Wehmiller | • Beach-Russ      | • Formax®       | • Weiler®   | • Bonfiglioli |
| • Cryovac®        | • Stock           | • Continental   | • Key®      | • Hub City    |
| • Atlas Pacific   | • CCM             | • Magnuson      | • Lyco      | • Eurodrive   |
| • Waukesha        | • Bettcher        | • Leybold       | • Kinney    | • Sumitomo    |
| • Elmar®          | • Andritz         | • Matador       | • BMA       | • Dodge       |
| • Meyn            | • AEW-Thurne      | • Dapps         | • Westfalia | • Falk        |
| • Baloor          | • Boston          |                 |             |               |

# FOOD-GRADE GREASES



## Halo-Guard® FG Series FG-00, FG-LT, FG-2, FG-PM



This series of revolutionary food-grade greases is manufactured with proprietary antiwear chemistry that improves performance over all competitive CSC greases. A newly enhanced calcium sulfonate complex thickener provides exceptional mechanical stability, very high load-carrying (E.P.) ability and remarkable rust and corrosion control. In addition, JAX Halo-Guard FG has excellent water resistance and outstanding high-temperature performance abilities. This technology is combined with a new high viscosity, partial synthetic food-grade base fluid to make JAX Halo-Guard FG the most effective food-grade grease for heavily-loaded applications. This is a true high-performance, plant-wide food-grade grease.

## Poly-Guard FG® Series FG-LT, FG-2



The ultimate in food machinery lubrication where high temperatures coupled with high bearing speeds and loads have caused premature wear to lubricated parts. Poly-Guard FG® provides the highest level of antiwear performance in an NSF H1 grease, and incorporates Micronox® technology. Poly-Guard FG®-LT grade yields excellent performance in automated centralized lubrication systems. Excellent versatility and high-temperature performance make this a true plant-wide grease.

## Magna-Plate® 8



This is a general-purpose NLGI #2 food-grade grease. It has excellent water resistance and lubrication qualities. Good oil bleed characteristics at low ambient temperatures make it ideal for small, high-speed bearings.

## Magna-Plate® 22 Extreme Low Temperature

100% Synthetic 

This unique 100% synthetic grease is formulated for freezers and other applications where temperatures can approach -50°F (-46°C) and lower. It possesses excellent wear and rust protection in an extremely pumpable grease.

## Magna-Plate® 44 Series 44-0, 44-1, 44-2




JAX Magna-Plate 44 series are high-performance food-grade greases formulated for broad use in all food and beverage processing environments. Enhanced antiwear protection and pumpability with low bleed and separation characteristics make 44-0 and 44-1 ideal for all centralized greasing applications requiring food-grade greases. A high degree of water resistance, oxidation stability and antiwear protection allow this food-grade grease to perform in areas thought to be unacceptable for ordinary food-grade greases.

## Clear-Guard FG



This translucent grease is compounded with a special high-temperature polymer that will cling to metal surfaces under the most severe conditions. Water, salts, heat and chemicals will not affect performance, and it resists sling and channeling under high-speed or high-temperature conditions.

## Oven Ice FG-2

100% Synthetic 

A 100% synthetic PAO-based grease with an inorganic thickener system for extreme high-temp and moderate low-temp conditions. Oven Ice FG-2 is crystal clear and meets the requirements of NSF H1 and FDA 21 CFR 178.3570.

## Gear-Guard FG

100% Synthetic 

### Food Plant Open Gears

This is a 100% synthetic, E.P., NSF H1 food-grade open gear grease which provides the adhesion, water resistance and load-carrying properties of the best non-food-grade open gear lubes. Gear-Guard FG provides incredible "stay-put" performance in all food plant open gear applications.

## FOOD-GRADE GREASES USAGE CHART

	General Greasing	Closers & Fillers	Conveyor Bearings	High Temp > 300°F (149°C)	Low Temp < 40°F (4°C)	Freezers to -60°F (-51°C)	Automated Lube System	Meat Saws & Knives	Wet Environments	Corrosive Environments	Open Gears
Halo-Guard FG Series	●	●	●	●	●			●	●	●	●
Poly-Guard FG Series	●	●	●	●	●		LT OO	●	●	●	
Magna-Plate 8					●		LT	●			
Magna-Plate 22					●	●				●	
Magna-Plate 44 Series	●	●	●	●	●			●	●	●	
Clear-Guard FG	●	●	●	●			44-1 44-0	●	●		
Oven Ice FG-2				●							
Gear-Guard FG				●					●	●	●

● Primary Recommendations ● Secondary Recommendations

### Closing Machines/Seamers

- Lower gun pressures will help to remove more contamination since new grease will force out contaminated grease without flowing around it as easily.
- Cover feed cam life can be increased with a small drip feed or spray system using Magna-Plate 78.
- Generally speaking, the higher the bearing speeds or the lower the temperature, the lighter the grease has to be in order to provide proper oil flow or good lubrication.



# FOOD-GRADE FLUIDS



## Magna-Plate® 60, 62, 64, 66



### ISO 32, 46, 68, 100

America's Finest Food-Grade Hydraulic Fluids can be used in a variety of applications where an NSF H1 fluid is required. They are food-grade, Group II white mineral base oils containing rust and oxidation additives and excellent antiwear protection. They are fully tested and OEM-approved for hydraulic systems, and are recommended for compressors and gear systems requiring food-grade oils.

## Magna-Plate® 72, 74



### Food Plant Air Line Lubrication

Magna-Plate 72 and 74 are low viscosity air line oils with rust inhibitor for use in all air-operated equipment. Magna-Plate 74 contains an effective antiwear additive, additional rust inhibitors, and a high percentage of emulsifiers to pick up and exhaust tramp moisture in the air lines. Contains Micronox®.

## Magna-Plate® 78, 78E Fluids



These fluids are heavy, tackified, E.P. food-grade oils for superb wear protection on overhead chains and conveyors, drip systems, can lid cams, or anywhere a positive antiwear NSF H1-approved lubricant film is needed. Magna-Plate 76 is recommended for automatic oiling systems. Magna-Plate 78 and 78E (Emulsified) provide excellent antiwear performance in Angelus Can Seamers.

## Magna-Plate® 80, 86, 88

100% Synthetic



### Extreme Low Temperature

These synthetic fluids are formulated with antiwear, rust inhibitor and "non-drip" additives for freezer chain and conveyor lubrication. The base fluids are food-grade synthetic oils with pour points as low as -90°F (-68°C). These fluids have excellent penetration properties.

## Pyro-Kote® FG Series ISO 68, 220

100% Synthetic



### High-Temp Oven Chains

Formulated for food-grade applications, these synthetic high-temperature lubricating oils provide exceptional antiwear performance while incorporating the highest quality synthetic base fluids to maximize useful life at elevated temperatures. These oils are the first FG-H1, FDA-qualified, super-clean synthetic fluids for bakery oven conveyors and chains, or wherever a lubricant with exceptional high-temperature performance is required.

## Proofer Chain Oil



JAX Proofer Chain Oil is the first and best lubricant of its kind. The unique formulation is specially compounded for lubrication in high humidity environments. It is formulated to provide extremely high performance, eliminating corrosion on bakery proofer chains and other food-processing equipment.



## Angel-Guard® Fluids

100% Synthetic 

State-of-the-art, 100% synthetic, food-grade antiwear fluids compounded to provide the ultimate in wear and corrosion protection. JAX Angel-Guard fluids provide long drain performance in recirculating systems and include JAX complimentary, ongoing RPM Oil Analysis services. Formulated specially for high-speed beverage can seamers including those manufactured by Angelus Sanitary Can Machine Company.

## Flow-Guard Synthetic Fluids

100% Synthetic 

ISO 22, 32, 46, 68, 100

For use in industrial hydraulic, gear drive and other lubricated machinery, this series of hydraulic fluids is compounded to provide superior performance, minimize component wear and eliminate system downtime.

## Magna-Plate® FG ISO Gear Oils



ISO 220FG, 320FG, 460FG

These gear oils are semi-synthetic, white oil-based with shear stable V.I. modifiers. As a result, they can be used in gearbox applications previously thought to be too severe for food-grade lubricants. The superior operating characteristics provide reduced operation temperatures, reduced friction, and minimal gear wear. The high film strength offers excellent lubricity for spur, helical, spiral, bevel, planetary and worm gears. Contains Micronox®.

## Perma-Gear FG Fluids

100% Synthetic 

ISO 150, 220, 320, 460, 680

JAX Perma-Gear FG Fluids incorporate the latest developments in 100% synthetic food plant lubrication technology. The base fluids used are linear polymers of ethylene and propylene oxide, commonly known as Polyalkylene Glycols. These fluids exhibit extremely high viscosity indices, improved lubricity and provide meaningful energy savings in gearbox applications.

## FGH-AW Series Hydraulic Oils



ISO 32, 46, 68, 100

These compounded food-grade hydraulic oils were developed to satisfy several lubrication requirements in modern food-processing environments. These oils contain an effective combination of antiwear agents and rust inhibitors that provide performance advantages over non-compounded white oils. Will extend the life and lubrication intervals of costly equipment.

## FGG-AW Series Gear Oils



ISO 150, 220, 320, 460

These food-grade gear oils are compounded with advanced additive technologies to provide superior performance over competitive food-grade gear oils. They contain proprietary, optimized combinations of antiwear agents, rust inhibitors, and polymeric viscosity improvers that provide outstanding long-term wear advantages, while their robust antioxidant chemistry ensures deposit-free operation.

## Syncomp-FG Fluids

100% Synthetic 

ISO 32, 46, 68, 100, 150

These unique fluids are designed to lubricate flooded screw compressors, vacuum pumps, refrigerant compressors, and other mineral oil-lubricated air compressors. They exhibit excellent low- and high-temperature characteristics, reduced volatility, and good compatibility with mineral oils.





## Cylinder Oil-FG

## Semi-Synthetic

This state-of-the-art worm gear oil incorporates the latest developments in food-grade lubrication technology. With reduced operating temperatures, reduced friction and minimal gear wear, it can be used in gearbox applications previously thought too severe for food-grade lubricants.

## Unitran® FG



Unitran FG is the next generation NSF H1 food-grade hydraulic/power transmission fluid designed for use in a wide range of power-drive, farm and orchard equipment, such as grape and cranberry harvesters. It surpasses OEM standards and performance requirements for wear, chatter, brake capacity, PTO performance and filterability in a variety of transmission and hydraulic applications.

## Magna-Plate® 2000FG



An NSF H1 food-grade lubricating oil for use in FMC continuous cookers and FMC and Odenberg steam peelers. Eliminates rubbery deposits, clogged lines and gummed check valves. A special polymer helps Magna-Plate 2000FG cling to metal surfaces even after shutdown, reducing metal-to-metal contact on start-up.

## Conveyor Glide Series Light, Medium, Heavy



NSF H1, food-grade trolley lubricants formulated to provide the benefits most desired in packing-plant trolley lubrication. Compounded with FDA-approved white oils, polymeric additives and fatty acids, they provide unsurpassed lubricity, rust protection, and non-drip characteristics. Conveyor Glide reacts synergistically with wash-down compounds to aid in removing old oil, dirt, animal hair and fats. These fluids also incorporate Micronox®.

## Magna-Kote® 467 FG



This metal-forming lubricant has exceptional metal-wetting characteristic and provides improved finish, minimizing burning and preventing loading of forming components. Developed specifically for use in can-beading and can-flanging machines, it meets the demanding lubrication requirements of all types of can-manufacturing equipment wherever an NSF-H1 registered lubricant is required.

## Aqua-Guard FG



Aqua-Guard FG is a state-of-the-art metal-forming lubricant incorporating the latest developments in food-grade lubrication technology. It is specially formulated and tested for use in Crown Presses for manufacturing sanitary ends. It also has been used in can-beading and can-flanging machines, and other can-forming equipment.

## Packer Oil 22



JAX Packer Oil 22 is an advanced food plant spray-down oil incorporating JAX exclusive Micronox® technology.

## White Mineral Oil ISO 22, 46, 68, 100



These oxidation-inhibited mineral oils are for use in all areas of lubrication and oil spray-down where direct or incidental contact with a food, drug, cosmetic or beverage product is possible. Use JAX White Mineral Oil ISO 22 for Packer's Tech Oil applications.

## Dry-Glide® Silicone



A food-grade silicone-based lubricant in a rapid-evaporation-rate food-grade carrier. Its primary applications are for chain and conveyor lubrication where the use of an oil-based lubricant is not desired, yet positive lubrication protection is needed.

# FOOD-GRADE FLUIDS USAGE CHART

	General Oiling	Hydraulic Systems	Compressors	Gearboxes	Drip Feed Oilers	Air Lines	Chains < 200°F (93°C)	Chains up to 600°F (316°C)	Freezers to -70°F (-57°C)	Vacuum Pumps	Angelus Seamers	Trolley Systems	Spray-Down Oil	Rotary Cookers & Peelers	Can-Forming	Box Slides
Magna-Plate 60, 62, 64, 66	●	●	●	●	●	●	●			●						
Magna-Plate 72, 74	●				●	●							●			
Magna-Plate 78, 78E	●			●	●		●									
Magna-Plate 80, 86, 88				●	●		●		●							
Pyro-Kote FG Fluids							●									
Proofer Chain Oil	●											●				
Angel-Guard Fluids			●	●						●	●					
Flow-Guard Fluids	●	●	●	●	●	●	●		●	●						
Magna-Plate-FG ISO				●	●		●									
Perma-Gear Oils				●	●		●	●								
FGH-AW Series Hyd. Oils	●	●	●		●	●	●									
FGG-AW Series Gear Oils				●												
Syncomp-FG Fluids			●							●						
Cylinder Oil-FG				●												
Unitran-FG		●		●												
Magna-Plate 2000FG														●		
Conveyor Glide Series												●				
Magna-Kote 467 FG															●	
Aqua-Guard															●	
Packer Oil 22	●					●	●						●			
White Mineral Oils					●	●							●			
Dry-Glide Silicone	●															●

● Primary Recommendations ● Secondary Recommendations

## Hydraulic Systems

- KEEP IT CLEAN, KEEP IT DRY, AND KEEP IT COOL

## Gearboxes

- Typically the most ignored lube point in a plant. Usually they aren't noticed until they fail. Because gearboxes are fairly trouble-free, they should rarely fail if properly maintained.
- Use the proper fluid for the loads, temperatures and gear type, and change the gear oil at regular intervals. Monitor critical boxes using a routine oil analysis program.

# INDUSTRIAL-GRADE GREASES



## Magna-Plate® 300 (with moly)

H2

This high-temperature grease features enhanced oxidation and antiwear properties. It will outperform all conventionally thickened greases that are exposed to high temperatures for extended periods. This dramatically reduces caking and carbonized deposits. The high percentage of suspension-grade moly and graphite in JAX Magna-Plate 300 produces a high degree of solid particle orientation on the lubricated surface, providing a low initial friction and real and constant lubrication.

## Magna-Plate® 500-0, 500-1, 500-2

H2

By applying advances in the technology of water resistance, JAX has formulated one of the world's most water-resistant greases. It is an excellent general plant grease for wear protection, rust and water problems, and multipurpose applications. Magna-Plate 500 is known throughout the industry for outstanding performance. Now available in NLGI #0 grade so that fully automated centralized greasing systems can take advantage of this remarkable technology.

## Magna-Plate® 700, Dredge-Guard 1 and 2

H2

These water-resistant greases have been formulated to address the specific needs of the fresh and saltwater dredging industry. They provide unsurpassed resistance to water wash-out, corrosion protection in saltwater or seawater and high load-carrying protection.

## Magna-Plate® 800-2

These are severe-duty greases with excellent cohesive and adhesive characteristics. Extreme-pressure, extraordinary antiwear properties, and excellent shear stability are the features that have made these greases the best solution to the problem of heavy-duty equipment when loads are over the design limits. They withstand shock loading, large amounts of moisture and many extraneous chemicals better than most other greases.

## Magna-Plate® 1000-1, 1000-2

H2

These are the best multipurpose greases available for plant equipment and vehicles with high temperature requirements. Formulated from the finest raw materials and advanced E.P. additive technology, they will withstand temperatures at or near the drop point without caking or oxidizing for far longer than greases of any other base type.

## Magna-Plate® 1100

H2

High-performance specialized grease for areas of high salt and process chemical contamination. Patented corrosion control formulation defies rust formation while providing excellent antiwear performance. Superior water resistance, an extremely high dropping point, excellent compatibility with other greases and outstanding corrosion control also make it an ideal grease for general plantwide grease lubrication.

## Magna-Plate® 1200

100% Synthetic

A fully synthetic grease for temperatures up to and exceeding 600°F (316°C). This thermally stable product is formulated with costly synthetic esters and a proprietary base soap to provide excellent oxidation stability and lubrication properties for extended periods and at extremely high temperatures.

## Poly-Plate EP

H2

This is a high-temperature, "sealed-for-life" grease made with a non-metallic thickener. Excellent compatibility with most elastomers and other greases. Poly-Plate EP exhibits low oil bleed, high E.P. properties and excellent shear and oxidation stability. Also highly recommended for electric motor bearing applications.

## Pyro-Plate EPN-2

100% Synthetic, H2

This high-temperature, synthetic grease combines 100% high viscosity synthetic base oils with a proven high-temp thickener for outstanding performance in severe applications that may encounter heavy loads and infrequent relubrication. Numerous difficult industrial and automotive applications can be solved with JAX Pyro-Plate EPN-2 grease.

## Hydro-Guard RCG

100% Synthetic

A specially formulated water-resistant grease solubilized in a non-flammable high-evaporation rate solvent. It is formulated for applications where conventional lubricating greases are difficult to apply, and light viscosity liquid is required for proper penetration, such as retort cart wheel bearings.

## Hydro-Chain Grease

H2

JAX Hydro-Chain Grease is a specially formulated water-resistant grease made to withstand the steam, water and high loads found in hydrostatic cooker chain applications.

## Gear-Guard Synthetic

100% Synthetic, H2

100% Synthetic open gear lubricant that provides unsurpassed performance in severe applications. Excellent water resistance, extreme-pressure capabilities, film adhesion and wear protection. Ultimate "stay-put" performance.

# INDUSTRIAL GREASES USAGE CHART

	General Greasing	Closers & Fillers	Conveyor Bearings	High Temp > 300°F (149°C)	Ext. High Temp > 450°F (232°C)	Automated Lube System	Open Gears	Wet Environments	Corrosive Environments	Electric Motor Bearings	Retort Cart Bearings
Magna-Plate 300	●	●	●	●				●	●		
Magna-Plate 500-0, 500-1, 500-2	●	●	●				-1 -0	●	●		
Magna-Plate 700, Dredge-Guard	●							●	●		
Magna-Plate 800-2	●							●	●		
Magna-Plate 1000-1, 1000-2	●	●	●	●	●	-1		●	●	●	
Magna-Plate 1100	●	●	●	●	●			●	●	●	
Magna-Plate 1200				●	●						
Poly-Plate EP-0, EP-2	●		●			-0				●	
Pyro-Plate EPN-2					●			●	●		
Hydro-Guard RCG											●
Hydro-Chain Grease			●					●	●		
Gear-Guard Synthetic							●	●			

● Primary Recommendations ● Secondary Recommendations

### General Greasing

- Always try to do your greasing immediately after washdown. This will force the water and caustic soaps out of the bearing before they get a chance to pit and corrode during shutdown.
- Not all greases are compatible. There may be a temporary phenomenon when switching from one grease to another called incompatibility. The problem can range from a mild softening, to greases literally running out of the bearings. As the old grease is flushed out, the problem will correct itself. Refer to the Compatibility Chart in this book, or contact your JAX representative if in doubt about grease compatibility.

# INDUSTRIAL-GRADE FLUIDS



## GEAR OILS:

Gearboxes come in a wide variety of styles, speeds, and duty levels. We have an industrial gear oil to match any application.

- Multi-Purpose Gear Oils (H2) SAE 85W90, 85W140
- H-P Industrial Gear Oils (H2) ISO Grades 68 through 680
- Magna-Plate® Gear Oils (H2) 90, 140, 90MV, 140MV
- Syngear Industrial Gear Oils (H2, 100% Synthetic) ISO 150, 220, 320, 460, 680
- Synax EP Gear Oils (H2, 100% Synthetic) ISO Grades 22 through 680
- Perma-Gear Synthetic Fluids (H2, 100% Synthetic)
- Syngear-GL Gear Oils (100% Synthetic) SAE 75W90, 80W140

## HYDRAULIC FLUIDS:

Our hydraulic oils are compounded for years of trouble-free hydraulic system performance.

- Premium Hydraulic Oils (H2) ISO 22, 32, 46, 68, 100, 150
- Premium Hydraulic Oil-Type Z (H2) HVI-Multi-Grade
- Hydra-Plate® Fluids (H2) ISO Grades 22 through 460
- Hydra-Plate® Fluid-MV (H2) HVI-Multi-Grade

## CHAIN & CONVEYOR LUBES:

JAX offers a very diverse and complete line of Conveyor Lubes, including E.P. antiwear oils with moly, dry film moly and graphite lubes.

- Magna-Plate® 200 (H2) ISO 46, 150
- Magna-Plate® 200 NM ISO 22, 46, 100
- Conveyor-Guard ISO 68/100
- Magna-Kote® 412, 412 Plus, 530, MLD (H2)
- Super-Cling Chain Oil with PTFE (H2) ISO 680/1000
- Pyro-Kote® Series Oils (H2, 100% Synthetic) ISO 32, 68, 220

## COMPRESSOR FLUIDS:

100% synthetic air compressor fluids for severe operating environments. Syncomp fluids meet the most demanding OEM requirements for extended drain intervals in all industrial compressor applications.

- Syncomp-P Fluids (100% Synthetic PAO) ISO 22, 32, 46, 68, 100
- Syncomp-D Fluids (H2, 100% Synthetic Diester) ISO 32 through 100
- Cryoguard Plus Fluids (H2 Ammonia Refrigeration) ISO 32, 68
- Syntec Ammonia Compressor Oil (H2, 100% Synthetic) ISO 68
- Premium R-P Oil HT (H1)
- Syn-Air PGE Fluid (100% Synthetic PAG/Ester) ISO 32, 46




COMPRESYN® by JAX is a completely new line of FG-H1 100% synthetic and partial synthetic compressor and vacuum pump fluids blended with innovative, patent-pending formulation technologies for the food, drug and beverage packaging industries.

### COMPRESYN® 550

100% Synthetic 

Patent-pending, 100% synthetic PAG-Ester Air Compressor Fluid for simple, drop-in replacement of similar non-food-grade type fluids (ISO 46).

### COMPRESYN® 545 Series Fluids

100% Synthetic 

Patent-pending, revolutionary FG-H1 100% Tri-Synthetic fluids for extended, long drain performance in compressor and vacuum pump applications (ISO 46, 100).

### COMPRESYN® 405 Series Fluids

100% Synthetic 

Food-Grade, 100% synthetic PAO-based compressor/vacuum pump fluids with high temperature and extended drain capabilities (ISO 32 through 150).

### COMPRESYN® 250 Series Fluids



Patent-pending, FG-H1 partial synthetic-based compressor/vacuum pump fluids with new, advanced technology food-grade synthetic component for cleanliness and long drain capabilities (ISO 46, 100).

### COMPRESYN® Clean-FG Fluids



Partial synthetic compressor and vacuum pump flushing fluids for cleaning and changeover flush procedures. Another innovative FG-H1 first for JAX! (ISO 46, 100, 320, Concentrate)

## SPECIALTY LUBES:

### Premium A-P Pitter Oil



This state-of-the-art lubricating oil uses the latest developments in food-grade technology, and provides a protective film on all metal surfaces, even in extreme water wash-down environments. Contains Micronox® to provide antimicrobial protection for the product.

### Premium A-P Peeler Oil

H2

This oil is blended for use in Atlas-Pacific peeler oil reservoirs. A high degree of rust and wear protection combined with good demulsibility properties allows easier draining of water and contaminants. (ISO 40, 100)

### Unitran® Fluid, Unitran® HD

H2

Unitran Fluid is a new-generation, premium hydraulic transmission fluid that meets and exceeds the requirements for farm and industrial tractor power train fluid. It is compatible with all of the known brands of universal tractor fluid so it can be used to top off fluids in service. Over 200,000 hours of field tests have shown that JAX Unitran exceeds OEM's standards for wear, chatter, brake capacity, PTO performance and filterability.

### Magna-Plate® 2000

H2

This is a high viscosity cooker oil with polymer tac additive, emulsifying agent, and a high percentage of antiwear additives. It is specially compounded for FMC continuous cookers/sterilizers and steam peelers with manzel box lubricators.

### Magna-Plate® 2100

H2

The next generation of cooker oils, Magna-Plate 2100 is a high-temperature, non-zinc JBT-approved rotary cooker/sterilizer oil. Benefits include greatly reduced wear and corrosion deposits on bronze packing strips.

#### Continuous Cookers / Sterilizers

• Some oils can cause the pumps, lines and check valves to become clogged. Make sure they are clear. When setting oil flow using Magna-Plate 2000, try starting with the pumps wide open; if oil gets on the cans, dial back until no oil appears. This should provide maximum lubrication protection and extend valve life dramatically.

#### High-Temperature Chains

• At temperatures which can cause oils to flash off, carbon residue can be a real problem. An ashless fluid like JAX Perma-Gear FG or Pyro-Kote Series can help without causing the buildup of graphite dry-film lubes.



## JAX MICRONOX® TECHNOLOGY

JAX USDA/NSF-registered H1 lubricants incorporate our proprietary, registered, antimicrobial preservative, Micronox®, for the protection of lubricants from microbial contamination or degradation. Micronox® is a broad-spectrum antimicrobial that is authorized by FDA under 21 CFR 178.3570 for use in "Lubricants with Incidental Food Contact".

Independently field-tested by JAX, this groundbreaking advance can protect lubricants with Micronox® from being a potential source of microbial contamination.

Micronox® exhibits antimicrobial activity to protect the lubricant against bacteria, yeasts, and molds. Micronox® is stable and retains its antimicrobial activity in acidic, neutral and alkaline media, and in the presence of proteins, fats and oils, protecting the lubricant from contamination by foodborne microorganisms and inhibiting contamination and degradation of the lubricant.

Given the concerns over public health claims being made in the industry today, please understand: while Micronox® provides protection to the lubricant from contamination or degradation by foodborne bacteria, it does not protect users or others against these bacteria.

## RPM LABORATORY DIVISION

JAX/RPM Laboratory Division brings innovation and experience to used oil analysis that few, if any, can rival. Testing is performed to ASTM standards by highly-qualified technicians using our state-of-the-art DCP spectrometer, FTIR Analyzer, Kinematic Viscometers, Karl-Fischer Titrator and particle counter.

Used oil analyses are an invaluable tool for extending your equipment and lubricant life. Our easy-to-read reports make any deviations from machine or lubricant norms easy to spot and can direct maintenance personnel to the source of potential problems. Trial sample kits are available upon request.

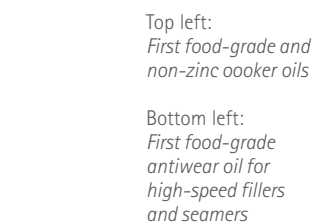




Industry and OEM recognition does not come without JAX having done the groundbreaking development work on advances in food machinery lubrication. Listed here are a few of the innovations that JAX has brought to the industry.



Top left:  
*First food-grade and non-zinc cooker oils*



Bottom left:  
*First food-grade antiwear oil for high-speed fillers and seamers*

Bottom right:  
*Industry-leading synthetic oven chain oils*

## JAX FOOD INDUSTRY FIRSTS

- The first Extreme-Pressure, antiwear, food-grade lubricants for chains and conveyors in meatpacking and other food plants.
- The first 100% synthetic, food-grade grease for use in freezing tunnel bearings and other incidental food-contact areas where extreme cold temperatures are experienced.
- The first high performance antiwear food-grade greases for general plant maintenance.
- The first antiwear, food-grade hydraulic oils meeting pump manufacturers' specifications for use in hydraulic systems where the fluid may be exposed to the processed product.
- A fully synthetic, food-grade gearbox lubricant providing extended drain intervals and excellent antiwear and extreme-pressure characteristics.
- The first fully synthetic, food-grade lubricant for cold-temperature conveyor lubrication in freezing plant applications.
- The first food-grade grease for the high-speed closing machines found in the brewing and beverage industry compatible with the centralized lubrication equipment found on these machines.
- The first food-grade, EP, antiwear fluid for use in high-speed Angelus can seamers.
- The first food-grade universal hydraulic/transmission fluid for use in harvesting equipment in areas where the product may be exposed to the lubricant.
- The food and beverage industry standard for high performance, low volatility vacuum pump oils for use in high oil contamination environments.
- The food industry's highest performing synthetic oven chain lubricants for use in continuous bakery and other process ovens.
- A superior line of food-grade, synthetic compressor fluids for food plant air and refrigerant compression.
- The first retort cart wheel bearing lubricant solubilized with a non-ozone depleting carrier.
- The first food-grade steel can stamping lubricant line providing low VOC content and high metal finish quality for can lid and end manufacturing.
- The first food-grade and non-zinc, antiwear steam peeler and continuous cooker sterilizer lubricating oils.
- The first high-temperature-capable, food-grade, synthetic oven chain lubricants.
- The first to introduce Micronox®, an effective antimicrobial technology that is authorized by FDA under 21 CFR 178.3570 for use in "Lubricants with Incidental Food Contact." Independently field tested by JAX, this groundbreaking advance protects lubricants with Micronox® from microbial contamination.
- The first completely new technology, 100% synthetic, FG-H1 compressor and vacuum pump fluids since 1990. Patent-pending innovations in fluid formulations that provide performance well beyond available food-grade synthetic fluids.



# AEROSOL LUBRICANTS, SEALANTS & COATINGS



Pressure-Lube, a division of JAX, offers premium quality aerosol products for food plant, industrial and fleet maintenance. We put our time and effort into developing the best available for each application. JAX aerosols are not just a sideline to a paint or parts line, and we don't believe in a "one product does all" philosophy.

## FOOD-GRADE LUBRICANTS



### Food-Grade Penetrating Oil

A food-grade oil with the same penetrating and wetting abilities as our America's finest formula. Also makes an excellent spray-down oil. Aerosol, Trigger Spray. JAX109.



### Magna-Plate® 78

An E.P. antiwear food-grade lubricant for the chains and conveyors on equipment in a food-processing environment. Aerosol, Trigger Spray. JAX114.



### Magna-Plate® 86

**100% Synthetic**

A 100% synthetic lubricant for food-plant extreme-temperature use. Range is -70°F to 460°F (-57°C to 238°C). Aerosol, Trigger Spray. JAX110.



### T-Oil Food Plant Machinery Coat

A pure white mineral oil for food plants that need assurance of 3H integrity for their spray-down oil or slide lubricant. Eliminates potential contamination from transferring oil from bulk to secondary container. Aerosol, Trigger Bottle. JAX139.



### Dry-Glide® Silicone with Micronox®

A silicone lubricant authorized for use in all sanitary food plant applications where there is a need to eliminate friction between unlike surfaces. Aerosol, Trigger spray. JAX108.



### Dry-Glide® WB Silicone

A non-flammable, water-based version of our high percent food-grade silicone spray. Aerosol. JAX208.



### BDF Cling-Lube with Micronox®

Formulated with high-performance food-grade oil and food-grade grease designed to eliminate dripping from overhead conveyors. Aerosol. JAX214.



### PürGel Klear USP Petrolatum

A truly unique package for the food, beverage and pharmaceutical processing industries, this is a direct-contact pure USP clear petrolatum. Aerosol, Grease Tube, Squeeze Tube. JAX140.



### Halo-Guard® FG with Micronox®

Cures to a thick coating of white grease to protect against metal-to-metal contact and washout. Very water- and chemical-resistant. Aerosol, Grease Tube. JAX213.



### Food-Grade Mold Release

Formulated to provide efficient food release from molds, grills, loaf pans, boning benches, chopping blocks, and other hard surfaces. Provides enhanced release properties and allows for fine, even coating. Aerosol, Trigger Spray. JAX133.



### Magna-Plate® 74 with Micronox®

Compounded to provide the best air line lubricant performance in all areas requiring NSF H1 food-contact authorization. With a high percentage of emulsifiers and rust inhibitors, it provides trouble-free operation of all air-operated equipment. Drip bottles. 00740.



### DC Conveyor Release WB RTU DC Conveyor Release

Formulated for multiple uses in the food-processing industry, particularly in baking where mesh conveyors are carrying product through 300°F - 550°F (149°C - 288°C) ovens. Used on pizza, tortilla, pita and cracker ovens. RTU DC Conveyor Release is a ready-to-use pre-diluted version of DC Conveyor Release WB. Trigger Spray. 00238, 00338.



### Food-Grade Anti-Seize

With a base of our top-of-the-line food-grade grease, the addition of high-temp non-corrosive H1 solids gives a reliable anti-seize to fight corrosion and galling on fasteners. Brush Bottles, Pails. JAX134.



### Synclear

A high-temperature synthetic grease. Use on rolling elements, plain bearings and joints and linkage areas. Aerosol. JAX144.



### Tef-Stef Dry Film Lubricant

For applications that require a clean, dry non-silicone-based lubricant that will not attract particulates. Aerosol. JAX145.



## FLEET AND MATERIAL HANDLING



### Heavy-Duty Chain & Cable Lube

This is a heavy-duty, dual-purpose penetrating lubricant that reduces internal friction and extends chain and cable life. Aerosol. JAX104.

H2

### Lift Truck & Sliding Tandem Lube

This is a unique combination of two premium greases with Moly and graphite that helps eliminate oil dripping, prevents wear, and reduces friction, rust and freeze-ups to -60°F (-51°C). Leaves a coating that adheres well. Aerosol. JAX106.

H2

### Brake Parts Cleaner Non-Chlorinated

Effective at removing brake fluid, grease, oil, road grime and other contaminants. California low-VOC compliant. Aerosol. JAX229.

### WLTB (White Lift Truck & Boom)

For forklifts that operate in food, beverage or pharmaceutical processing areas. Use on telescoping boom cranes. Aerosol. JAX143.



## INDUSTRIAL LUBRICANTS



### Power-Pen

This high-performance, environmentally-friendly, light-colored lubricant with PTFE prevents rust, displaces water, lubricates, and penetrates. Aerosol. JAX100.

H2



## INDUSTRIAL LUBRICANTS *Continued*

### America's Finest Penetrating Oil H2

A blend of the finest oils, solvents, wetting agents and Moly formulated to penetrate and loosen more effectively than a torch. Excellent wicking action. Aerosol. JAX101.

### Chain Drive Pin and Bushing Lube H2

A foaming, high EP, superb antiwear chain lubricant for areas requiring deep penetrating action in a lighter-colored oil. Aerosol, Trigger Spray. JAX102.

### Tool Life Cutting Oil

A synthetic open gear lubricant formulated to be the most water-resistant, supply the best film adhesion, and provide the most wear protection. Drip Bottle. JAX117.

### Gear-Guard Synthetic Open Gear H2

A synthetic open gear lubricant formulated to be the most water-resistant, supply the best film adhesion, and provide the most wear protection. Aerosol. JAX105.

### Belt Dressing

Contains no resin or asphalts; will absolutely not collect dirt or abrasive materials. Increases belt life and power output and reduces belt slip. Aerosol. JAX107.

### Protecto-Lube H2

A dry-film moly spray for long-term lubrication and rust-proofing. An excellent anti-seize compound and rust preventative. Aerosol. JAX112.

### Heavy-Duty Silicone Spray

High-performance silicone fluid. Low odor, non-staining; great for assembly lines where unlike surfaces need to slide. Aerosol. JAX118.

### Pyro-Kote® 220 100% Synthetic, H2

Synthetic high-temperature lubricating oil with exceptional antiwear performance. Use on dryers, heatsetting machines, tenter frames, and oven conveyors & chains. Aerosol. JAX141.

## SOLVENTS AND CLEANERS



### Peel-Off Degreaser K1

A non-chlorinated degreaser that is compatible with a greater number of metals, plastics and elastomers. Aerosol. JAX211.

### Electrical Contact Cleaner Non-Flammable

A non-flammable cleaner for electrical and electronic components that is odorless, non-staining and will not harm electrical insulation or plastics. Aerosol. JAX124.

### High-Tech Cleaner/Degreaser K2

An extremely effective blend of high-tech chlorinated solvents for surface preparation, electrical motor and contact cleaning and degreasing industrial equipment. Aerosol. JAX111.

### Stainless Steel Cleaner A7

Cleans and polishes high-luster surfaces and removes water stains, finger prints and oils while leaving surface resistant to and free of residue or film. Aerosol. JAX123.

### Green-Clean Cleaner/Degreaser A1

An environmentally-friendly cleaner/degreaser for surface preparation, degreasing and industrial equipment and cleaning/degreasing metal parts. This is a product that can be used without major downstream concerns. Trigger Spray. 00122.

## FULLY-AUTOMATED CENTRALIZED LUBRICATION SYSTEMS

Whether it's a high-temperature oven chain application or an overhead trolley application, XACT Lubrication Systems are customized to meet your needs. They are easily installed and can accommodate multiple lube points, adjustable volumes and precision delivery methods.

These systems use a logic control cabinet to control volume and frequency of all lube points from one central location. With proper lubrication, you can dramatically reduce downtime and extend your equipment life. System features:

- Precisely timed lubrication intervals
- Reduced lubricant consumption
- No missed lubrication points or lube cycles
- Reduced energy costs
- Reduce maintenance and clean-up costs

## SINGLE AND DUAL-POINT LUBRICATORS

XACT offers a variety of single and dual-point lubricators that provide a perfect solution for hard-to-reach applications like ceiling fans and air-handling systems. These lubricators help to ensure there are no missed lube points or cycles and provide a cost-effective alternative to manual oiling. Each system offers:

- Battery-operated power
- 1-, 3-, 6- and 12-month settings
- A clear reservoir to view lubricant level
- Delivery pressures up to 350 psi
- Multiple mounting bracket options and accessories

## LUBE-GUARD – LUBRICANT SAFE STORAGE AND TRANSFER METHODS

The XACT Lube-Guard Program is a multi-faceted approach used to clearly identify each lubricant and its proper application within your plant. Lube-Guard uses color-coding to ensure your plant maintenance team knows the correct lubricant and proper lubrication frequency for each piece of machinery. This color-coded program includes: wall charts, equipment tags, grease gun tubes, zerk fittings, and color-coded caps and labels for Oil Safe® containers.

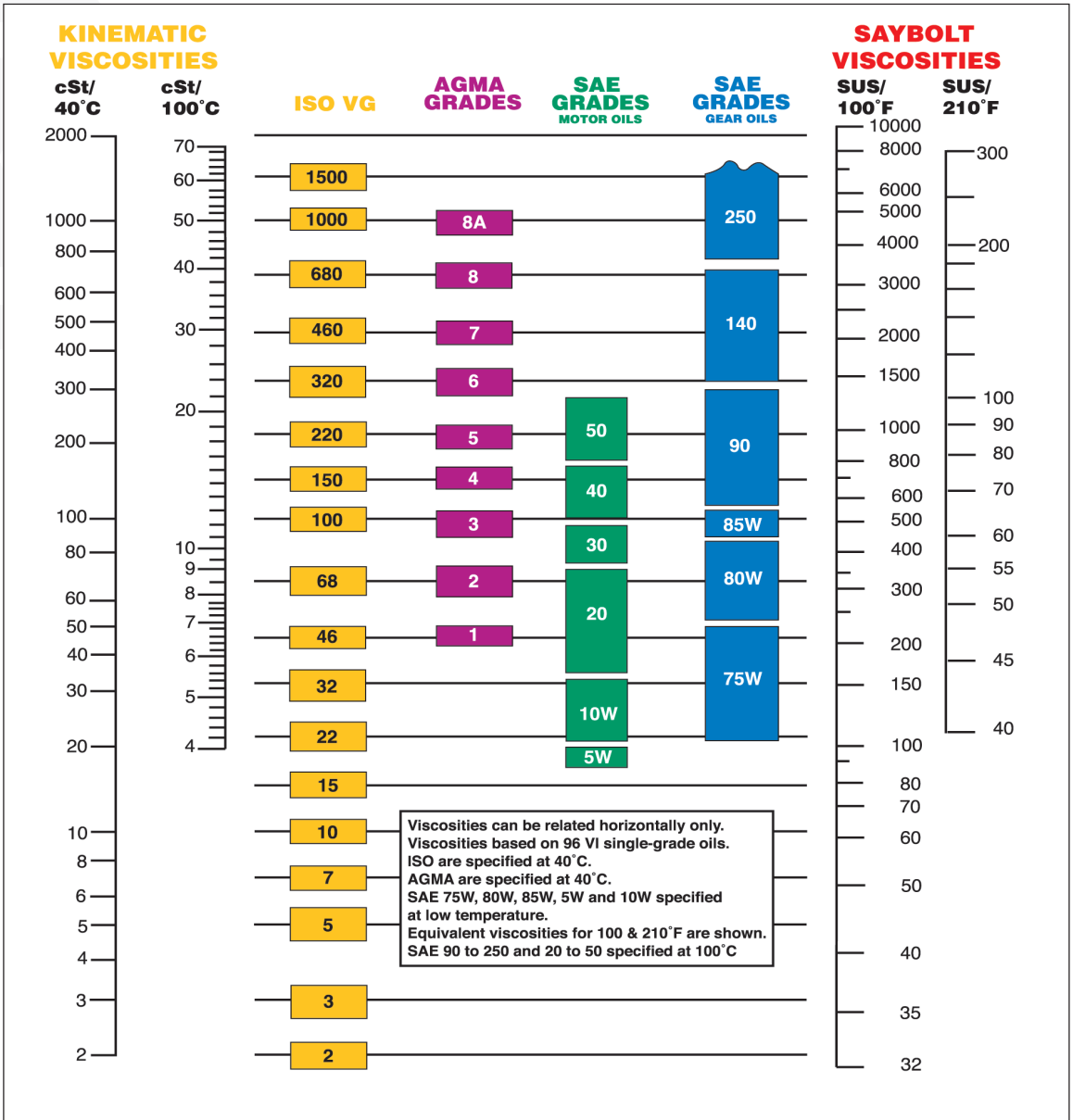
Safe storage and transfer methods are also put into place to reduce the chance of cross contamination. In addition to Oil Safe Containers, other safe storage and transfer solutions include our Tote-A-Lube Bulk Containment Systems and sampling valves to easily obtain oil samples.

- Choice of ten colors for easy identification
- Tanks, totes, drums, grease guns, tags and charts
- Clean transfer and storage
- Plant-wide uniformity
- Low implementation time and cost

XACT Fluid Solutions provides lubricant application and dispensing systems. These systems Xactly control the application of the lubricants and extend the life of industrial and food-plant machinery.



# VISCOSITY REFERENCE CHART



Viscosity is the single most important property of a lubricant. It will be the most critical factor in the performance and life of the lubricated machinery. The reference chart above, showing oil viscosity grades as measured in different standard scales, will help you select the proper viscosity grade for your lubricant.

Viscosity that is too low for the intended application can cause premature wear, loss or rupture of fluid film, more rapid lubricant degradation, higher heat due to wear friction, excessive fluid leakage, and many other serious conditions.

Viscosity that is too high for the intended application can cause increased energy consumption, higher heat due to internal fluid friction, more difficult initial start-up, decreased operating efficiency, poorer demulsibility, and increased air entrainment, among other serious conditions.

Grease is primarily lubricating oil formulated with a thickener agent. The same rules of oil viscosity selection apply to the grease's base oil.

Properly specified and applied, lubricants can be your biggest ally in extending equipment life and eliminating downtime. Contact your JAX Representative or Distributor for the most professional assistance in the lubrication industry.

## GREASE COMPATABILITY CHART

	Aluminum Complex	Barium	Calcium	Calcium 12-Hydroxy	Calcium Complex	Clay	Lithium	Lithium 12-Hydroxy	Lithium Complex	Polyurea	Calcium Sulfonate
Aluminum Complex		●	●	●	●	●	●	●	●	●	●
Barium	●		●	●	●	●	●	●	●	●	●
Calcium	●	●		●	●	●	●	●	●	●	●
Calcium 12-Hydroxy	●	●	●		●	●	●	●	●	●	●
Calcium Complex	●	●	●	●		●	●	●	●	●	●
Clay	●	●	●	●	●		●	●	●	●	●
Lithium	●	●	●	●	●	●		●	●	●	●
Lithium 12-Hydroxy	●	●	●	●	●	●	●		●	●	●
Lithium Complex	●	●	●	●	●	●	●	●		●	●
Polyurea	●	●	●	●	●	●	●	●	●		●
Calcium Sulfonate	●	●	●	●	●	●	●	●	●	●	

● Compatible ● Borderline Compatibility ● Incompatible

## NLGI NUMBERS FOR GREASE

A scale for the classification of consistency of a grease, based on penetration numbers determined by ASTM Method D 217. The scale was originally designed by the National Lubricating Grease Institute (NLGI).

NLGI Consistency Number	ASTM Worked (60 strokes) Penetration at 25°C (77°F), tenths of a millimeter
000	445 to 475
00	400 to 430
0	355 to 385
1	310 to 340
2	265 to 295
3	220 to 250
4	175 to 205
5	130 to 160
6	85 to 115

Although there are no official "half" numbers (e.g. 2 1/2), it has become a tradition to give such "half" numbers to intermediate grades (e.g. a grease with a penetration range of 230-260 is called a 2 1/2 NLGI).



# JAX



JAX INC., based in Menomonee Falls, WI USA, is a manufacturer of high-technology industrial, synthetic and food-grade lubricants.

Founded in 1955, JAX produces conventional and extreme-performance synthetic lubricants for industrial, manufacturing, transportation, construction, food processing and numerous other industry segments. JAX lubrication products are distributed worldwide.



**AMERICA'S FINEST  
INDUSTRIAL LUBRICANTS**

JAX INC.

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