

# Brief Product Description Book

2025 USA – 2<sup>nd</sup> Edition



**Mobil**<sup>TM</sup>

# Brief Product Description Book

2025 USA – 2<sup>nd</sup> Edition

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## INTRODUCTION

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The primary intent of this publication is to provide a field reference for our core branded product offering of lubricating oils and greases. This guide provides specific product information in a format that is intended to assist in the selection of the right product for your application.

The Brief Product Description Book is organized into six sections— **Industrial Lubricants, Commercial Vehicle Lubricants, Passenger Vehicle Lubricants, Greases, Aviation** and **Marine**. Within each of these six sections, products are divided into application groups, and thickener type in the case of greases. An outline of these groups and their respective products is provided at the beginning of each of the six sections. An alphabetical list of applications is provided up front. An appendix also provides other reference information. **All products may NOT be available locally**, check the current stock plan for availability in your region.

Due to continual product research and development, the information contained herein is subject to change without notification. Typical properties of products displayed in this book are representative values obtained with normal production tolerance and do not constitute a specification. Variations in typical properties that do not impact product performance are to be expected during normal manufacture. The information contained herein is subject to change without notice. For additional and/or more current information about our products, refer to the online product data sheets at [exxonmobil.com/en/pds](https://www.exxonmobil.com/en/pds). Contact the Technical Support Center at 1-800-268-3183 or your local Imperial representative who can also provide assistance.

Many petroleum products pose potential human health, safety, and environmental hazards and this description book can be used as a guide to understand these hazards.

### QUESTIONS?

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## Limited Warranty For Mobil™ Industrial Lubricant Products

### What the warranty covers

Exxon Mobil Corporation ("ExxonMobil") provides this limited warranty to the purchasers who use Mobil-branded industrial lubricants in their equipment, as established by the original equipment manufacturer ("OEM") and industry requirements (for example, the standards set by the American Society for Testing and Materials or other standards). This limited warranty covers the lubricant and critical components lubricated by the lubricant. ExxonMobil warrants its lubricants to be free from defects and that the lubricant you purchased will protect any equipment lubricated by the lubricant, provided that:

- The lubricant is confirmed to be an unadulterated Mobil-branded industrial lubricant product.
- The equipment has been operated within the limits specified by the OEM.

### What the warranty does not cover

This Limited Warranty excludes:

- Mobil-branded industrial lubricants used in mechanically deficient equipment as a result of abnormal operation; negligence, abuse, damage from casualty, shipment or accident; or equipment modification done without written authorization from the OEM.
- Situations where the OEM required lubricant standards do not match those stated by ExxonMobil without the written approval from ExxonMobil.
- Mobil-branded industrial lubricant products that have been used in conjunction with any other product or additive that has not been authorized for use by ExxonMobil.
- Failure of equipment due to a pre-existing condition that is unrelated to the use of the lubricant.
- Repair or replacement of equipment due to normal wear.

### What we will do to correct problems

ExxonMobil will replace any lubricant that is defective. In addition, if there is equipment failure due to the lubricant you purchased, ExxonMobil will repair any equipment damage directly caused by a defect or malfunction of the lubricant, provided that the lubricant was selected and maintained in accordance with specifications of the OEM or the written instructions of an ExxonMobil sales or lubrication engineer employee.

### How you can get service

To file a claim under this limited warranty, you must:

1. Upon discovery of the damage (but no later than one (1) year from the date the damage occurred), contact your ExxonMobil or local distributor representative. You may also call 1-800-MOBIL-25 (662-4525) and press Prompt 4 to inquire about your Sales Engineer's contact information.
2. Allow an ExxonMobil representative to examine the equipment, including its operating and maintenance records to determine the extent of the damage and to confirm that the lubricant was the cause.
3. Allow an ExxonMobil representative to obtain representative new and used lubricant samples for laboratory analysis to assist in determining the cause of the equipment failure.

### How state law relates to the warranty

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

**The remedy provided herein will be your only recovery against ExxonMobil. You will not be able to recover incidental damages (for example, transportation costs to and from the ExxonMobil representative for inspection of the equipment, loss of use, towing charges, bus fare, car rentals or other incidental damages) or consequential damages (the cost of repairing or replacing other property which was damaged when the lubricant was defective). Some states do not allow the exclusion of or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.**

**THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER REMEDIES AND LUBRICANT PRODUCT WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR USE OR OTHERWISE BUT DOES NOT APPLY TO IN-SERVICE WARRANTIES CONVEYED WITH SPECIFIC INDUSTRIAL LUBRICANT PRODUCTS.**



The energy efficiency design is a trademark of Exxon Mobil Oil Corporation.

### About the Energy Efficiency Seal

ExxonMobil Oil Corporation is committed to providing products and services that help deliver tangible performance — as well as material economic advantages — to industry and consumers. As a result, ExxonMobil Oil Corporation offers its consumers and customers an extensive range of high-performance lubricants that can help increase equipment operating efficiency and engine fuel economy. At the same time, these lubricants can help contribute to reduced energy and resource use, and cost savings for industrial equipment.

The energy efficiency seal is the typographic representation for all Mobil™ Industrial Lubricants products that meet the rigorous criteria for outstanding energy efficiency. The criteria for the use of the Energy Efficiency Seal are determined on a case-by-case basis and are dependent on the product category and application. Statistically valid data must be available to substantiate the energy efficiency claim and demonstrate a statistically significant decrease in energy consumption or increase in efficiency when compared with commercially available products designed and intended for the same application.

### Below are the Mobil-branded Industrial Lubricants products in which this technology is available:

#### Mobil DTE™ 10 Excel

Energy efficiency relates solely to the fluid performance when compared with ExxonMobil's standard hydraulic fluids. The technology used allows up to 6 % increase in hydraulic pump efficiency compared with Mobil DTE 20 Series when tested in standard hydraulic applications. The energy efficiency claim for this product is based on test results on the use of the fluid conducted in accordance with applicable industry standards and protocols. Efficiency improvements will vary based on operating conditions and applications.

#### Mobil SHC Pegasus™

The energy efficiency of Mobil SHC Pegasus relates solely to the fluid performance when compared to ExxonMobil's standard SAE 40 natural gas engine oils. The technology used in Mobil SHC Pegasus demonstrated up to a 1.5 % increase in fuel efficiency, as measured by fuel consumed in operation, compared to Mobil Pegasus 1005 and 805 series when tested in standard natural gas engine applications under controlled conditions. The energy efficiency claim for this product is based on test results on the use of the fluid conducted in accordance with applicable industry standards and protocols. Efficiency improvements will vary based on operating conditions and applications.

#### Mobil SHC™ Gear

Energy efficiency relates solely to the fluid performance when compared with conventional reference oils of the same viscosity grade in gear applications. The technology used allows up to 3.6 % efficiency compared with the reference when tested in a worm gearbox under controlled conditions. Efficiency improvements will vary based on operating conditions and applications.

#### Mobil SHC™ 500

Energy efficiency relates solely to the fluid performance when compared with ExxonMobil's standard hydraulic fluids. The technology used allows up to 6 % increase in hydraulic pump efficiency compared with Mobil DTE 20 Series when tested in standard hydraulic applications. The energy efficiency claim for this product is based on test results on the use of the fluid conducted in accordance with applicable industry standards and protocols. Efficiency improvements will vary based on operating conditions and applications.

#### Mobil SHC™ 600

Energy efficiency relates solely to the fluid performance when compared to conventional (mineral) reference oils of the same viscosity grade in circulating and gear applications. The technology used allows up to 3.6 % efficiency compared to the reference when tested in a worm gearbox under controlled conditions. Efficiency improvements will vary based on operating conditions and application.

#### Mobil SHC Cibus™

Energy efficiency relates solely to the fluid performance when compared with conventional reference oils of the same viscosity grade. Under controlled conditions the technology used allows efficiency gains up to 3.6% when tested in a worm gearbox and up to 3.5% compared to Mobil DTE™ 25 when tested in an Eaton 25VMQ hydraulic vane pump. Efficiency improvements will vary based on operating conditions and applications.

# INDUSTRIAL LUBRICANTS

## CIRCULATING OILS

**Mobil SHC™ 600 Series** lubricants are exceptional performance gear and bearing oils designed to provide outstanding service in terms of equipment protection, oil life and problem-free operation helping to enable increased customer productivity. These scientifically engineered oils are formulated using the latest proprietary and Mobil SHC technology to provide outstanding and balanced performance in demanding applications at high and low temperatures. Mobil SHC 600 products feature excellent low temperature properties, as well as improved air release performance in the lower viscosity grades. These products are resistant to mechanical shear, even in heavily loaded gear and high shear bearing applications, so that there is virtually no loss of viscosity. Mobil SHC 600 is less corrosive to yellow metals (bronze) so is appropriate for use in many applications that extreme pressure (EP) oils, containing active sulfur, may not be.

	Kinematic Viscosity, ASTM D445					Flash Point °C, ASTM D92	FZG Scuffing, Fail Load Stage, A/8.3/90, ISO 14635-1(mod)
	ISO VG	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 5950		
MOBIL SHC 624	32	32	6.3	148	-57	236	11
MOBIL SHC 625	46	46	8.5	161	-54	225	12
MOBIL SHC 626	68	68	11.6	165	-54	225	12
MOBIL SHC 627	100	100	15.3	162	-48	235	12
MOBIL SHC 629	150	150	21.1	166	-48	220	13
MOBIL SHC 630	220	220	28.5	169	-48	220	13+
MOBIL SHC 632	320	320	38.5	172	-48	225	13+
MOBIL SHC 634	460	460	50.7	174	-45	228	13+
MOBIL SHC 636	680	680	69	181	-45	225	13+
MOBIL SHC 639	1000	1000	98.8	184	-42	222	13+

**Mobil Glygoyle™ 22 and 30** oils are polyalkylene glycol-based (PAG), water insoluble high performance lubricants that provide outstanding lubrication in higher temperature gear, bearing and circulation system applications in conditions well beyond the capabilities of mineral oils. They are shear-stable and have outstanding resistance to thermal degradation, oxidation and the formation of sludge and deposits. They incorporate a proprietary additive package designed to enhance EP/anti-wear protection, corrosion and rust protection and foam resistance without detracting from the intrinsic attributes of the PAG base oils. They are recommended for use by major plastic calendar, paper machine bearing, compressor and gear manufacturers, and are the products of choice for many severe service applications.

The Mobil Glygoyle Series is not compatible with mineral oils and most other synthetic lubricants. Additionally, depending on the specific type of PAG base fluid, they may not be compatible with other PAG type lubricants. (e. g. Mobil Glygoyle No Series and Mobil Glygoyle ISO VG Series are not miscible). The Mobil Glygoyle Series is not generally recommended for use in systems previously filled with mineral oils or PAO based synthetic lubricants. It is further recommended to check compatibility when topping up or replacing existing PAG fillings with Mobil Glygoyle Series, generally the preference is to avoid mixtures by draining, flushing and refilling. When changing from mineral oil or other synthetic products to Mobil Glygoyle Series, it is critical to clean the system thoroughly and flush with suitable fluids prior to conversion. For further details please contact your Imperial representative.

	Viscosity, ASTM D445		Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	Spec. Gravity at 20° C, ASTM D 1298
	cSt at 40°C	cSt at 100°C			
MOBIL GLYGOYLE 22	177	25.1	-41	229	1.007
MOBIL GLYGOYLE 30*	224	30.9	-41	221	1.006

\*This product is only available in the US.

**Mobil Vacuoline™ 100 Series** range is a series of extra high quality circulating system oils primarily intended for the lubrication of plain bearings in systems designed for full fluid lubrication, particularly those subjected to heavy water contamination, such as may be used for back-up roll bearings in metal rolling mills. Specifically, they meet the requirements for rolling mill bearings including the the Morgan “super demulsibility” specification as defined by Morgan’s Advanced Lubricant Specification, Revision 2.5a. The Mobil Vacuoline 100 Series oils are formulated from high quality base stocks and additives to provide outstanding water separation ability, good resistance to thermal degradation and oxidation, and protection against rust and corrosion. They enjoy strong support of key equipment builders including Primetals Technology, Sutton MA, USA.

	Kinematic Viscosity, ASTM D445					Flash Point °C, ASTM D 97	Spec. Gravity at 15° C kg/l, ASTM D 4052
	ISO VG	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97		
MOBIL VACUOLINE 128	150	150	14.8	96	-9	280	0.9
MOBIL VACUOLINE 133	220	220	18.8	95	-6	288	0.9
MOBIL VACUOLINE 137	320	320	23.9	95	-9	286	0.9
MOBIL VACUOLINE 146	460	460	30.1	95	-6	296	0.9
MOBIL VACUOLINE 148	680	680	36.7	91	-6	318	0.9

**Mobil™ Vacuoline™ 500 Series** family of products provides a versatile lubricant source for a wide range of industrial equipment. The Mobil Vacuoline 500 Series of lubricants are high performance heavy duty circulating oils designed for the demands of No-Twist Rod mills, however their all-round performance makes them an excellent choice for circulation systems lubricating gears and bearings. Mobil Vacuoline 500 Series are designed to meet the critical requirements of the Morgan Vee No-Twist Rod Mills, as well as the circulation oil requirements of Danielli rod mills.

	Kinematic Viscosity, ASTM D445					Flash Point °C, ASTM D 97
	ISO VG	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	
MOBIL VACUOLINE 525	-	89	10.7	99	-24	264
MOBIL VACUOLINE 528	150	146	14.4	96	-21	272
MOBIL VACUOLINE 533	220	215	18.8	96	-15	284
MOBIL VACUOLINE 537	320	309	24.4	96	-12	288
MOBIL VACUOLINE 546	460	453	29.4	95	-12	286

**Teresstic™ Series** is the brand name formulated for long-service-life in circulating lubricants, hydraulic systems that do not require an anti-wear oil, heat transfer system, light duty gear cases, friction clutches and other industrial units for which long, trouble-free service is required.

When Teresstic is used in heat transfer systems, the maximum recommended bulk oil temperature for Teresstic 32 is 185°C for open systems and 285°C for closed systems. For Teresstic 46, the maximum recommended temperature is 200°C for open systems and 300°C for closed systems. Teresstic 68 has a maximum recommended temperature of 210°C for open systems and 310°C for closed systems. Lastly, Teresstic 100 has a maximum recommended temperature of 225°C for open systems and 325°C for closed systems.

	Kinematic Viscosity, ASTM D445				Pour Point °C, ASTM D 97
	ISO VG	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	
TERESSTIC 32	32	32	5.3	96	-21
TERESSTIC 46	46	46	6.6	95	-12
TERESSTIC 68	68	68	8.5	95	-12
TERESSTIC 77	-	77	9.3	95	-12
TERESSTIC 100	100	100	11.1	95	-12
TERESSTIC 150	150	150	14.5	95	-12
TERESSTIC 220	220	220	18.8	95	-12
TERESSTIC 320	320	320	24	95	-12
TERESSTIC 460	460	460	30.4	95	-12

Please refer to [exxonmobil.com/en/pds](http://exxonmobil.com/en/pds) for latest product

# INDUSTRIAL LUBRICANTS

## CIRCULATING OILS

**Mobil™ DTE™ Oil Named Series** of lubricants are premium performance circulating lubricants designed for applications including steam and hydro turbine sets and other systems where long lubricant service life is required. Mobil DTE Oil Named Series lubricants are formulated from highly refined base stocks and an additive system which provide an extremely high level of chemical and thermal stability, rapid separation from water, offering and a high resistance to emulsification. They provide excellent protection against rust and corrosion, and good antiwear properties. These grades have rapid air release and low foam properties which allow entrained air to separate, thus avoiding pump cavitation and erratic operation.

	Kinematic Viscosity, ASTM D445					Flash Point °C, ASTM D92
	ISO VG	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	
MOBIL DTE OIL LIGHT	32	31.0	5.5	102	-18	218
MOBIL DTE OIL MEDIUM	46	44.5	6.9	98	-15	221
MOBIL DTE OIL HEAVY MEDIUM	68	65.1	8.7	95	-15	223
MOBIL DTE OIL HEAVY	100	95.1	10.9	92	-15	237

# INDUSTRIAL LUBRICANTS

## COMPRESSOR LUBRICANTS

**Mobil™ SHC™ Rarus™ Series** oils are supreme performance air compressor lubricants primarily intended for the lubrication of severe duty rotary screw and vane air compressors. They are particularly suited for severe service where synthetic oil-based products are not meeting expectations such as in severe applications subjected to high final compression temperatures or where extended oil drain intervals are desired. Mobil SHC Rarus Series formulation provides the potential to deliver up to 3 times oil drain interval versus a leading synthetic compressor lubricant.

	Kinematic Viscosity, ASTM D445					Flash Point °C, ASTM D92
	ISO VG	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	
MOBIL SHC RARUS 32	32	30.6	5.6	123	-42	204
MOBIL SHC RARUS 46	46	44.1	7.1	122	-45	197
MOBIL SHC RARUS 68	68	65.3	9.7	129	-39	192

**Mobil™ DTE™ Oil Extra Heavy and Double Letter** lubricants are high performance heavy duty circulating oils primarily intended for continuous reuse in circulation lubrication systems for gears and bearings. They are formulated from high quality base stocks and a proprietary additive system to provide superior protection against rust, excellent resistance to oxidation and thermal degradation, and a high level of protection against wear, plus excellent resistance to high temperature corrosion of soft metals. They possess good demulsibility that permits water and other contaminants to separate readily from the oil in the system reservoir.

	Kinematic Viscosity, ASTM D445					Flash Point °C, ASTM D92
	ISO VG	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	
MOBIL DTE OIL EXTRA HEAVY	150	146	14.4	96	-21	272
MOBIL DTE OIL BB	220	218	18.8	96	-18	284

**Mobil™ Rarus™ 800 Series** is a line of supreme performance air compressor lubricants primarily intended for the lubrication of severe duty reciprocating air compressors but not recommended for air compressors used in breathing air applications. They are engineered to meet or exceed the stringent requirements of the major compressor manufacturers. They are formulated with design-specific synthetic base-oils and a high technology additive system that assures exceptional equipment protection and reliability for compressors operating under conditions where mineral-oil based products are not meeting expectations. Mobil Rarus 800 Series is a di-ester oil that provides excellent wear protection and outstanding resistance to oxidation and thermal degradation, greatly superior to mineral oils. Their unique formulation provides the ability to help reduce maintenance costs through minimizing equipment problems and downstream deposits and carryover. They are recommended or approved by many of the leading compressor manufacturers.

	Kinematic Viscosity, ASTM D445					Flash Point °C, ASTM D92
	ISO VG	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	
MOBIL RARUS 824	32	29.5	5.5	127	-54	244
MOBIL RARUS 827	100	107.5	10.12	66	-36	270
MOBIL RARUS 829	150	158	13.2	70	-33	270

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Please refer to [exxonmobil.com/en/pds](http://exxonmobil.com/en/pds) for latest product

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# INDUSTRIAL LUBRICANTS

## COMPRESSOR LUBRICANTS

**Mobil™ Rarus™ 400 Series** is a line of premium performance ashless air compressor lubricants designed to meet the stringent requirements of major compressor manufacturers. They are formulated with high quality mineral base-oils and a high performance additive system designed to provide exceptional equipment protection and reliability for compressors operating under mild to severe conditions. They provide excellent wear protection and the ability to reduce maintenance costs through minimizing equipment problems and downstream deposits and carryover.

	ISO VG	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Flash Point °C, ASTM D92
		cSt at 40°C	cSt at 100°C		
MOBIL RARUS 427	100	104.6	11.6	100	264
MOBIL RARUS 429*	150	147.3	14.7	100	269

\*This product is only available in the US.

**Mobil™ Pegasus™ Compressor Oil Series** are lubricants specifically formulated from highly refined paraffinic base oils and high performance additives to provide excellent performance in reciprocating natural gas compressors. Both ISO viscosity grades are formulated for outstanding cylinder and piston ring lubrication, excellent oxidation resistance, and excellent chemical tolerance.

	ISO VG	Kinematic Viscosity, ASTM D445		Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
		cSt at 40°C	cSt at 100°C		
MOBIL PEGASUS COMPRESSOR OIL 264	-	280	23	-12	280
MOBIL PEGASUS COMPRESSOR OIL 460	460	485	35	-12	280

**Mobil™ Rarus™ R-C 220** is a viscous, colourless oil of ISO viscosity grade 220, specifically designed for the lubrication of very high pressure ethylene compressors. It is based on high purity, saturated hydrocarbon oils (white oils), supplemented with friction reducing and free-radical trap additives at adapted treat levels.

	Kinematic Viscosity, ASTM D445		Flash Point °C, ASTM D92
	cSt at 40°C	Pour Point °C, ASTM D 97	
MOBIL RARUS R-C 220	226	-12	210

**Mobil™ Rarus™ PE KPL 201** is a medium viscosity, colorless oil. It is based on high purity, saturated hydrocarbon oils, supplemented with friction-reducing and free-radical trap additives at adapted treat levels. This oil is only used for low-density polyethylene compression.

	Kinematic Viscosity, ASTM D445		Flash Point °C, ASTM D92
	cSt at 40°C	Pour Point °C, ASTM D 97	
MOBIL RARUS PE KPL 201	117	-12	230

This product is only available in the US.

**Mobil™ Pegasus™ SCF Series** are premium lubricants designed for process and gas rotary screw compressors. Mobil Pegasus SCF are recommended when compressing light hydrocarbons, sour gas, with low water content. Mobil Pegasus SCF Series lubricants are especially effective in combating corrosion and promoting long life in sour hydrocarbon gas compressors. Mobil Pegasus SCF lubricants are compatible with the system elastomers and seals found in most compressors designed to use petroleum based products.

	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
	cSt at 40°C	cSt at 100°C			
MOBIL PEGASUS SCF 100	94	11.8	116	-37	248
MOBIL PEGASUS SCF 150	153	17.1	121	-30	271

These products are only available in Canada.

**Mobil™ Pegasus™ SCF Extra Series** are custom-blended hydro treated mineral oil / polyalphaolefin (PAO) synthetic hydrocarbon oil. The proprietary multi-function silicone additive provides enhancement as a lubricity improver, an anti-foamant to minimize foaming, and a pour point depressant to provide lower temperature operation capability.

	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
	cSt at 40°C	cSt at 100°C			
MOBIL PEGASUS SCF EXTRA 100	101	13.5	135	-33	277
MOBIL PEGASUS SCF EXTRA 150	144	17.6	135	-33	288

These products are only available in Canada.

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[Centrifugal compressor oils are listed under the Turbine Oils section.](#)

# INDUSTRIAL LUBRICANTS

## COMPRESSOR LUBRICANTS

### Mobil SHC™ Rarus Series limited warranty

#### What the warranty covers

ExxonMobil Oil Corporation ("ExxonMobil") provides this limited warranty to the purchasers who use Mobil SHC™ Rarus Series compressor oils in their oil-flooded rotary screw air compressor equipment. This limited warranty covers the Mobil SHC™ Rarus Series compressor oil you purchased and the oil-flooded rotary screw air compressor equipment. ExxonMobil warrants that the lubricant you purchased is free from defects, that it complies with typical specifications as stated on its Product Data Sheet, and that it will protect the oil-flooded rotary screw air compressor equipment lubricated by the lubricant for three (3) years or three times the length of the current oil drain interval (ODI) up to a maximum of 24,000 hours of service starting from the date of installation, whichever is earlier, provided that:

1. The compressor was in good operating condition at the time the lubricant was installed.
2. The lubricant was selected and maintained in accordance with specifications of the original equipment manufacturer ("OEM") for the service and application, or the written instructions (which includes product packaging) of ExxonMobil.
3. Prior to installation of the lubricant, the system was flushed and cleaned per ExxonMobil written instructions.
4. The equipment has been operated within the limits specified by the OEM, not to exceed operating discharge pressure and temperature of 120 psig and 185°F (85°C) respectively.
5. You participate in Mobil™ Lubricant Analysis program for used oil analysis. The lubricant is determined no longer suitable for continued service by two consecutive used oil analysis results from the Mobil™ Lubricant Analysis program that indicate the oil sample does not meet ExxonMobil's acceptability limits.
6. Proper sampling techniques were used to collect used oil samples submitted for Mobil™ Lubricant Analysis quarterly samples (four (4) per year) at a minimum are required.
7. Documentation of oil drain interval immediately prior to installation of Mobil SHC™ Rarus Series oils is documented and provided to ExxonMobil.

#### What the warranty does not cover

This Limited Warranty excludes:

- Mobil SHC™ Rarus Series lubricants used in mechanically deficient equipment as a result of abnormal operation; negligence; abuse; damage from casualty, shipment or accident; or equipment modification done without written authorization from the OEM.
- Situations where the OEM-required lubricant standards do not match those stated by ExxonMobil without prior written approval from ExxonMobil.
- Mobil SHC™ Rarus Series lubricants that have been used in conjunction with any other product or additive that has not been authorized, in writing, for use by ExxonMobil.

- Failure of equipment due to a pre-existing condition that is unrelated to the use of the lubricant.
- Repair or replacement of equipment due to normal wear.
- Failure of equipment or lubricant due to contamination or water.

#### What we will do to correct problems

ExxonMobil will replace any lubricant that is defective. In addition, if there is an equipment failure due to the lubricant, ExxonMobil will repair any equipment damage directly caused by a defect or malfunction of the lubricant.

#### How you can get service

To file a claim under this limited in-service warranty, you must:

1. Upon discovery of the damage (but no later than two (2) months from the date the damage occurred), contact your ExxonMobil or local distributor representative. You may also call 1-800-MOBIL-25 (662-4525) and press Prompt 4 to inquire about your Sales Engineer's contact information.
2. Allow an ExxonMobil representative to examine the equipment and maintenance records, and provide proof of purchase, to determine the extent of the damage and to confirm that the lubricant was the cause.
3. Provide an oil sample from the failed equipment for laboratory analysis at no cost to you to assist in determining the cause of the equipment failure.

#### How state law relates to the warranty

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

The remedy provided herein will be your only recovery against ExxonMobil. You will not be able to recover incidental damages (for example, transportation costs to and from the ExxonMobil representative for inspection of the equipment, loss of use, towing charges, bus fare, car rentals or other incidental damages) or consequential damages (the cost of repairing or replacing other property which was damaged when the lubricant was defective). Some states do not allow the exclusion of or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

THIS LIMITED WARRANTY IS OFFERED IN ADDITION TO THE MOBIL™ INDUSTRIAL LUBRICANT PRODUCT LIMITED WARRANTY.

# INDUSTRIAL LUBRICANTS

## ENVIRONMENTALLY ACCEPTABLE

The Mobil™ SHC™ Aware™ HS Series (hydraulic system) meets US Vessel General Permit (VGP) 2013 for environmentally acceptable lubricants and EU Ecolabel requirements, while offering excellent protection in hydraulic systems. Biodegradable, minimally toxic and non-bioaccumulative, these lubricants can be used in hydraulic systems where spills or leakage could result in adverse environmental impact.

	ISO VG	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
		cSt at 40°C	cSt at 100°C			
MOBIL SHC AWARE HS 32	32	32	6.5	167	-48	185
MOBIL SHC AWARE HS 46*	46	46	8.7	176	-48	185
MOBIL SHC AWARE HS 68*	68	68	11.8	174	-48	185

\*These products are only available in the US.

Mobil™ SHC™ Aware™ Gear Series are a range of high performance, anti-wear gear oils for use in marine applications and meet the U.S. Environmental Protection Agency (EPA) 2013 Vessel General Permit (VGP) guidelines for environmentally acceptable lubricants. They provide excellent wear protection for gears and bearings and safeguard equipment from rust and corrosion. They also possess outstanding oxidation properties, which help to extend oil life, and offer a wide operating temperature range and excellent low temperature start-up. Mobil SHC Aware Gear Series demonstrate excellent air release properties versus typical mineral gear oils, resulting in less air entrainment and protection from cavitation. Furthermore, their excellent seal compatibility helps to minimize leaks.

	ISO VG	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
		cSt at 40°C	cSt at 100°C			
MOBIL SHC AWARE GEAR 68	68	68	10.7	141	-36	273
MOBIL SHC AWARE GEAR 100	100	100	13.3	137	-36	287
MOBIL SHC AWARE GEAR 150	150	150	17.8	135	-30	281

Mobil™ EAL™ 224H is a premium performance environmentally acceptable hydraulic fluid designed to provide outstanding performance in hydraulic and circulation systems operating at moderate conditions. It provides excellent anti-wear and film strength characteristics necessary for hydraulic systems operating under high load and high pressures. Its 12-stage rating in the FZG Gear Load test demonstrates a high level of protection against wear and scuffing and the suitability of this product to protect gears and bearings used in conjunction with hydraulic systems. Mobil EAL 224H provides excellent protection against corrosion and ensures very good multi-metal compatibility allowing its use in systems employing various metallurgy that may be used in pump and component designs. It also provides very good thin oil film protection against rusting.

	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Pour Point °C, ASTM D 97
	cSt at 40°C	cSt at 100°C		
MOBIL EAL 224H	36.78	8.3	212	-34

# INDUSTRIAL LUBRICANTS

## FOOD INDUSTRY LUBRICANTS

Mobil™ SHC™ Cibus™ Series lubricants are outstanding performance hydraulic, compressor, gear and bearing oils designed to provide outstanding equipment protection, long oil life and problem-free operation in the food and beverage processing and packaging industries. They are formulated from FDA and NSF registered hydrocarbon base fluids and additives. The combination of the naturally high viscosity index and the proprietary additive system enables the Mobil SHC Cibus series lubricants to provide outstanding performance in a wide range of service applications at high and low temperatures, high loading and in areas of high washdown well beyond the capabilities of typical mineral oils. Mobil SHC Cibus lubricants are NSF H1 registered lubricants and also comply with Title 21 CFR 178.3570 by the Food and Drug Administration (USA) for lubricants with incidental food contact. Also, the Mobil SHC Cibus Lubricants are manufactured at ISO 22000 certified facilities that also meet the requirements of ISO 21469 helping to ensure that the highest levels of product integrity are maintained. They are also suitable for Kosher and Halal food preparation for multi faith applications and to offer processing engineers maximum flexibility during operations. The products meet the most rigorous performance requirements of a range of component manufacturers using various multi-metallurgy designs that help allow a single product series to lubricate effectively. Because they offer productivity and NSF H1 registration benefits, the Mobil SHC Cibus products can be used both above and below the processing line to reduce inventory costs and reduce the risks of non H1 registered lubricants being dispensed in high contamination risk areas. Mobil SHC Cibus 150-460 will not contribute to MOAH content in food when used in accordance with FDA 21CFR178.3570 limitations.

	ISO VG	Kinematic Viscosity, ASTM D445			Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	Spec. Gravity at 15° C, ASTM D 4052
		cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270			
MOBIL CIBUS 32	32	30.7	5.8	134	-51	244	0.84
MOBIL CIBUS 46	46	46.4	7.9	140	-50	244	0.85
MOBIL CIBUS 68	68	67.5	10.4	140	-47	258	0.85
MOBIL CIBUS 100	100	100	14.6	143	-45	270	0.84
MOBIL CIBUS 150	150	162	20.7	150	-21	226	0.84
MOBIL CIBUS 220	220	222	24.5	139	-24	274	0.84
MOBIL CIBUS 320	320	311	32.7	147	-42	284	0.85
MOBIL CIBUS 460	460	458	43.6	148	-42	294	0.86

Mobil™ SHC Cibus™ 32 HT is a fully synthetic high performance heat transfer oil intended for use in closed, indirect heating installations where NSF H1 registered lubricants are required. It is formulated to resist thermal cracking and chemical oxidation which in turn can mean a longer service life and lower propensity for deposit and sludge formation. Mobil SHC Cibus 32 HT is NSF H1 and HT registered and accepted by the Canadian Food Inspection Agency and is therefore suitable for applications where incidental food contact may occur. Also, the Mobil SHC Cibus 32 HT is manufactured at ISO 22000 certified facilities that also meet the requirements of ISO 21469 helping to ensure that the highest levels product integrity are maintained. It is also suitable under Kosher (Parve) and Halal dietary law and is formulated to be free from nuts, gluten, wheat and animal products. It meets DIN 51522 heat transfer fluids requirements and testing.

	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
	cSt at 40°C	cSt at 100°C			
MOBIL SHC CIBUS 32 HT	30.4	5.91	135	-54	234

Mobil™ Glygoyle™ Series.....	26
Mobil™ Gargoyle Arctic SHC™ 200 Series.....	35
Mobil™ Synturion™ Series.....	32

Mobil™ DTE™ FM Series oils are high performance lubricants designed to satisfy a wide range of multi-use equipment requirements for the food processing and packaging industry. These lubricants are qualified as NSF H1 type lubricants and also comply with Title 21 CFR 178.3570 by the Food and Drug Administration (USA) for use where there is the potential for incidental food contact. Mobil DTE FM Series are manufactured at ISO 22000 certified facilities that also meet the requirements of ISO 21469 helping to ensure that the highest levels of product integrity are maintained. The lubricants are tasteless, odorless, premium quality lubricants formulated with non-toxic NSF/FDA food grade additives and base oils. These products meet the most rigorous performance requirements of a wide range of system and component manufacturers using various multi-metallurgy designs allowing a single product with outstanding performance characteristics.

Mobil DTE FM Series will not contribute to MOAH content in food when used in accordance with FDA 21CFR178.3570 limitations.

	ISO VG	Kinematic Viscosity, ASTM D445			Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	Spec. Gravity at 15.6° C/15.6° C, ASTM D 4052
		cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270			
MOBIL DTE FM 32	32	31.9	5.5	106	-12	212	0.862
MOBIL DTE FM 46	46	45.5	6.8	105	-9	226	0.868
MOBIL DTE FM 68*	68	68.5	8.7	101	-12	228	0.873

\*This product is only available in the US.

Please refer to the Greases chapter for detailed information on greases designed for the food industry.....64

# INDUSTRIAL LUBRICANTS

## FOOD INDUSTRY LUBRICANTS

### Food & Beverage Industry

The food and beverage processing industry faces unique challenges. Not only must you strive for maximum productivity, you must also guard against the possibility of food contamination, including contamination from lubricating oils and greases. This comprehensive suite of high-performance oils are NSF H1 registered, which is increasingly being requested by major food retailers and government agencies.

Product	DIN Performance Claim	NSF Registered Number	NSF H1	Kosher Approval	Halal Approval	CFIA* Accepted	Comments
Mobil SHC Cibus™ 32	51524-HLP	141500	•	•	•	•	Multi-purpose hydraulic and compressor oils for the optimum lubrication solution. Long life, excellent equipment protection to help maximize productivity. Long drain intervals.
Mobil SHC Cibus™ 46	51524-HLP 51506-VDL	141498	•	•	•	•	
Mobil SHC Cibus™ 68	51524-HLP 51506-VDL	141499	•	•	•	•	
Mobil SHC Cibus™ 100	51506-VDL 51517-CLP 51524-HLP	145255	•	•	•	•	
Mobil SHC Cibus™ 150	51517-CLP	141502	•	•	•	•	Designed to help optimize maintenance costs and unleash productivity improvements in circulation and gear box applications. Long oil life. Potential energy savings.
Mobil SHC Cibus™ 220	51517-CLP	141503	•	•	•	•	
Mobil SHC Cibus™ 320	51517-CLP	141505	•	•	•	•	
Mobil SHC Cibus™ 460	51517-CLP	141501	•	•	•	•	
Mobil SHC Cibus™ 32 HT		141504	•	•	•	•	Synthetic heat transfer oil. Outstanding thermal and oxidative stability for long service life.
Mobil Glygoyle™ Series (220, 320, 460)		Varies	•				Low traction synthetic worm gear oil. Potential energy savings. Easy low temperature start-up.
Mobil Gargoyl™ Arctic SHC Series		Varies	•				Long life, fully synthetic refrigeration oil for use with ammonia as refrigerant.
Mobilgrease™ FM Series (101, 222)	KP1K-20	Varies	•	•	•	•	Multi-purpose greases (NLGI 1, 2). Excellent resistance to water wash-off. Long re-lubrication intervals.
Mobil SHC Polyrex™ Series (005, 221, 222, 462)	Varies	Varies	•	•			High temperature grease designed for tough operating conditions (up to 170°C) and moist environments.

### Other Food Industry Lubricants

- Mobil SHC Cibus™ 32 HT: synthetic heat transfer fluid
- Mobil DTE™ FM (32, 46, 68) - premium mineral oils
- Mobil Synturion™ 6 and 18: synthetic mechanical seal fluid
- Mobil Gargoyl™ Arctic SHC™ Series: synthetic refrigeration lubricants

# INDUSTRIAL LUBRICANTS

## GAS ENGINE OILS

**Mobil™ SHC Pegasus™ 30** is a new category of advanced technology natural gas engine oil designed to provide today's high output, low-emission four-cycle gas engines with the highest levels of protection. Mobil SHC Pegasus 30 uses a patented combination of high quality base stocks and advanced additive technology to deliver exceptional oxidation stability, nitration resistance and thermal stability. Its formulation has been carefully balanced to provide outstanding anti-wear characteristics and to control the formation of carbon and varnish deposits.

SAE Grade	Kinematic Viscosity, ASTM D445			V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	TBNmg KOH/g	Sulfated Ash, wt% ASTM D 874
	cSt at 40°C	cSt at 100°C	cSt at 100°C					
MOBIL SHC PEGASUS 30	30	60	10.1	154	-54	260	6.5	0.54

**Mobil™ SHC Pegasus™ 40** is a new category of advanced technology natural gas engine oil designed to provide today's high output, low-emission four-cycle gas engines with the highest levels of protection. Mobil SHC Pegasus 40 uses a patented combination of high quality base stocks and advanced additive technology to deliver exceptional oxidation stability, nitration resistance and thermal stability. Its formulation has been carefully balanced to provide outstanding anti-wear characteristics and to control the formation of carbon and varnish deposits.

SAE Grade	Kinematic Viscosity, ASTM D445			V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	TBNmg KOH/g	Sulfated Ash, wt% ASTM D 874
	cSt at 40°C	cSt at 100°C	cSt at 100°C					
MOBIL SHC PEGASUS 40	40	82	13.7	150	-18	210	5.6	0.56

**Mobil™ Pegasus™ 1** is a high performance synthetic gas engine oil designed to meet the highest performance requirements of the most demanding naturally aspirated and turbocharged stoichiometric and lean-burn gas engines. It is formulated from wax-free synthetic base oils and a balanced additive system to provide performance that is unattainable with conventional mineral oil-based gas engine oils. The potential benefit is an improved bottom line through improved engine and oil life, reduced maintenance costs and lower fuel costs.

SAE Grade	Kinematic Viscosity, ASTM D445			V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	TBNmg KOH/g	Sulfated Ash, wt% ASTM D 874
	cSt at 40°C	cSt at 100°C	cSt at 100°C					
MOBIL PEGASUS 1	15W-40	93.8	13.0	137	-48	238	6.8	0.5

**Mobil™ Pegasus™ 1107** is a high performance gas engine oil designed to provide today's high output, low-emission four-cycle gas engines with the highest levels of protection while maintaining superior performance in earlier model engines. Mobil Pegasus 1107 has extraordinary oxidation stability, nitration resistance, TBN (Total Base Number) retention and thermal stability which result in extended oil life. The formulation is balanced to provide extended oil life, outstanding anti-wear characteristics and to control the formation of carbon and varnish deposits.

SAE Grade	Kinematic Viscosity, ASTM D445			V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	TBNmg KOH/g	Sulfated Ash, wt% ASTM D 874
	cSt at 40°C	cSt at 100°C	cSt at 100°C					
MOBIL PEGASUS 1107	40	113	13.1	112	-18			0.65

*This product is only available in the US.*

Please refer to [exxonmobil.com/en/pds](http://exxonmobil.com/en/pds) for latest product

**Mobil™ Pegasus™ 1005** is a high performance gas engine oil designed to provide today's high output, low-emission four-cycle gas engines with the highest levels of protection while maintaining superior performance in earlier model engines. Mobil Pegasus 1005 uses high quality base stocks and advanced additive technology to deliver exceptional oxidation stability, nitration resistance and thermal stability.

SAE Grade	Kinematic Viscosity, ASTM D445			V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	TBNmg KOH/g	Sulfated Ash, wt% ASTM D 874
	cSt at 40°C	cSt at 100°C	cSt at 100°C					
MOBIL PEGASUS 1005	40	121	13.4	106	-33	265	5.4	0.5

**Mobil™ Pegasus™ 805 Ultra** is a high performance gas engine oil engineered to meet the rigorous demands of today's high output four-cycle engines designed to reduce emissions and improve oil consumption. It meets a wide range of OEM requirements making it a great choice where high-speed four-cycle engines from various OEMs are used.

Mobil Pegasus 805 Ultra is designed to provide very good protection against piston scuffing, scoring and ring and liner wear. It also exhibits excellent resistance to foaming, good demulsibility and high-level corrosion protection. It is formulated with low levels of zinc and phosphorus making it compatible with engines equipped with catalytic converters.

SAE Grade	Kinematic Viscosity, ASTM D445			V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	TBNmg KOH/g	Sulfated Ash, wt% ASTM D 874
	cSt at 40°C	cSt at 100°C	cSt at 100°C					
MOBIL PEGASUS 805 ULTRA	40	129	13.8	104	-30			0.5

**Mobil™ Pegasus™ 805 Super** is a premium performance gas engine oil developed to meet the rigorous demands of today's high output four-cycle engines which have been designed to reduce emissions and improve fuel-efficiency. These gas engines generally operate under high load and high temperature conditions and are subjected to a wide range of startup temperatures. Its high viscosity index and low temperature properties provide excellent cold start performance as well as exceptional high temperature lubrication characteristics. The use of the high quality mineral oil base stocks and an advanced low-ash additive technology provides exceptional oxidation stability, nitration resistance and thermal stability. It is a low ash formulation that exhibits medium ash performance characteristics. Mobil Pegasus 805 Super, therefore, offers outstanding valve face, seat and guide protection. Its detergent and dispersant performance controls the formation of carbon deposits, lacquer and sludge resulting in cleaner engines, longer oil life; and reduced filter costs.

SAE Grade	Kinematic Viscosity, ASTM D445			V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	TBNmg KOH/g	Sulfated Ash, wt% ASTM D 874
	cSt at 40°C	cSt at 100°C	cSt at 100°C					
MOBIL PEGASUS 805 SUPER	15W-40	115	14.5	128	-30			0.5

**Mobil™ Pegasus™ 505** is a natural gas engine oil formulated exclusively from specially selected base stocks of high stability. This lubricant provides the excellent performance and economy for a wide variety of engine types, service severity and fuel qualities.

SAE Grade	Kinematic Viscosity, ASTM D445			V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	TBNmg KOH/g	Sulfated Ash, wt% ASTM D 874
	cSt at 40°C	cSt at 100°C	cSt at 100°C					
MOBIL PEGASUS 505	40	126	13.1	97	-24	238	2.7	0.5

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# INDUSTRIAL LUBRICANTS

## GAS ENGINE OILS

### Mobil Pegasus™ Natural Gas Engine Oil Recommendation

Engine Manufacturer	Fuel	Models	Recommendation
Arrow Engines	CG	C66, C96, C106	Mobil GEO 10W-40, Mobil Delvac 1300 Super 15W-40, Mobil Full Synthetic high mileage 5W-30 (temperature consideration)
	CG	A-32, A-42, A-54, A-62, A-90, VRG310, VRG330	Mobil Pegasus 505 805 1005, Mobil Pegasus 1
Ajax (Cooper Cameron)	CG	2-Cycle	Mobil Pegasus Special CF, Mobil Pegasus 801
Caterpillar	CG	398/399	Mobil Pegasus Special CF, Mobil Pegasus 801
	CG	3300, 3400, 3500, 3600, GCM	Mobil SHC Pegasus 30, Mobil Pegasus 805 Ultra, 1005, 505, Pegasus 1
Cooper Bessemer	LFG	All	Mobil Pegasus 605 Ultra
	CG	2-Cycle	Mobil Pegasus Special CF, Mobil Pegasus 801
CSI Gasjacks / Stationary Automotive Engines	CG	4-Cycle	Mobil Pegasus 805 Ultra, 1005, 505, Mobil Pegasus 1
	CG	GM / Ford Engines	Mobil GEO 10W-40, Mobil Delvac 1300 Super 15W-40, Mobil Full Synthetic High Mileage 5W-30 (temperature consideration)
Cummins	CG	L10G and QSK19G, K19G, G19, G38, G50, G28, G855, and G14	Mobil Pegasus 805 Super, Mobil Pegasus 805 Ultra, Mobil Pegasus 1005
	CG	All Cummins on-highway natural gas engines* and show CES 20092	Mobil GEO 10W-40
	CG	QSK45G, QSK60G, QSV81G, and QSV91G	Mobil Pegasus 805 Ultra, 1005, 505, Mobil Pegasus 1
Dresser Rand - Ingersoll Rand Clark	CG	Category I	Mobil Pegasus 801/30, 505/30
	CG	Category II	Mobil Pegasus 801/30, 505/30
	CG	Category III	Mobil Pegasus 805 Ultra, 505/30, 801/30
	CG	2-Cycle	Mobil Pegasus 801, Mobil Pegasus 701
Enterprise	CG	All	Mobil Pegasus 805 Ultra, 505, 1005, Mobil Pegasus 1
Fairbanks-Morse (MEP)	CG	2-Cycle	Mobil Pegasus 805 Ultra, 505/30, 505, 710
Jenbacher	CG	Type 6/G, H, K	Mobil Pegasus 1107
	CG	Type 6/F, J	Mobil Pegasus 705, 805, 1107
	CG	Type 6/C, E Type 4/C, E, B, D,	Mobil Pegasus 1107, 1105, 1005, 605 Ultra, 705, 805 Ultra
	CG	Type 4/A	Mobil Pegasus 1105, 1005, 605 Ultra, 705, 805 Ultra
	CG	Type 3/F	Mobil Pegasus 605 Ultra
	CG	Type 2,3	Mobil Pegasus 1107, 1105, 1005, 605 Ultra, 705, 805 Ultra, 610, 710
Nordberg (Hatch and Kirk)	CG	All	Mobil Pegasus 505
Superior (Cooper Cameron) White (Cooper Cameron)	CG	G, GT, GST, GTLA, GTLB	Mobil Pegasus 710
	CG	1700, 2400	Mobil Pegasus 805 Ultra
	LFG	G, GT, GST	Mobil Pegasus 610
	LFG	1700, 2400	Mobil Pegasus 605 Ultra
Wärtsilä	CG	All	Mobil Pegasus 1, 805 Ultra, 1005
Waukesha	CG	VHP - F2895, F3521, L5796, L7042, P9390 G, GSI, GL	Mobil Pegasus 805 Ultra, 1005, 710, 505, Mobil Pegasus 1
	CG	VHP - F3524, L5794, L7044 GSI	Mobil Pegasus 805 Ultra, 1005, 505, Mobil Pegasus 1
	CG	- L5774, L5794 LT	Mobil Pegasus 805 Ultra, 1005, 505, Mobil Pegasus 1
	CG	VSG - F11G, GSI, GSID	Mobil Pegasus 805 Ultra, 1005, Mobil Pegasus 1
	CG	VGF - F18, H24, L36, P48 G, GL, GLD, GSID	Mobil Pegasus 805 Ultra, 1005, 505, Mobil Pegasus 1
	CG	AT 25/27, 8L, 12V, 16V, GL	Mobil Pegasus 805 Ultra, 1005, Mobil Pegasus 1
	LFG	VHP, AT	Mobil Pegasus 605 Ultra, 610
	BMG	VHP, AT	Mobil Pegasus 605 Ultra
	DG	All	Mobil Pegasus 610
Worthington (Dresser Rand)	CG	2-Cycle / 2-Cycle TC	Mobil Pegasus 701, 801
	CG	4-Cycle	Mobil Pegasus 505, 805 Ultra, 1005, Pegasus 1

# INDUSTRIAL LUBRICANTS

## GAS ENGINE OILS

**Mobil™ Pegasus™ 610** is a high performance natural gas engine oil primarily intended for the lubrication of modern medium and high speed four-cycle engines operating on fuel that contains corrosive materials such as hydrogen sulphide or halogens (compounds containing chlorine, fluorine, etc.). These engines are generally of the lean-burn design where increased manifold pressures prevent sufficient lubricant from reaching the valve guide areas resulting in low oil consumption which can lead to accelerated valve guide and valve recession. This effect also increases the potential for wear and acid attack of upper cylinder components from the acidic materials generated during combustion. Mobil Pegasus 610 is a high TBN gas engine oil with exceptional reserve alkalinity designed to offset the negative effects of these corrosive materials on engine components. The excellent corrosion protection properties help to prevent wear in cylinders, valve areas and bearings which can result in longer engine life and lower maintenance costs. Mobil Pegasus 610 provides excellent anti-wear and anti-scuff performance assuring minimal piston scuffing, scoring and cylinder and ring wear.

This oil can also be used for the lubrication of the reciprocating compressors in landfill and biomass gas applications.

**Mobil™ Pegasus™ 605 Ultra 40** is a gas engine oil primarily intended for the lubrication of modern medium and high-speed four-cycle engines operating on landfill gas that contains contaminants such as hydrogen sulphide, halides or siloxane. Its formulation has been carefully balanced to provide extended oil drain intervals, control the formation of carbon and varnish deposits, with very good anti-wear and anti-scuff performance.

	Kinematic Viscosity, ASTM D445				V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	TBNmg KOH/g	Sulfated Ash,wt% ASTM D 874
	SAE Grade	cSt at 40°C	cSt at 100°C	ASTM D 2270					
MOBIL PEGASUS 610	40	130	13.8	102	-18	264	7.3	1	
MOBIL PEGASUS 605 ULTRA 40	40	138	15	110	-21	268	5.7	0.6	

**Mobil™ Pegasus™ 701 Series** are premium natural gas engine oils formulated exclusively from specially selected base stocks of high stability. These lubricants provide the excellent performance and economy for a wide variety of engine types, service severity and fuel quality. Mobil Pegasus 701 and 701 SAE 30 are formulated with ashless dispersants, effective oxidation and corrosion inhibitors, and antiwear agents. They provide excellent dispersancy, and good high-temperature stability. The formulation approach is very effective for controlling carbon and ash deposits in gas engines. Port carbon cleaning intervals in two-cycle, naturally aspirated and turbocharged gas engines may be extended by using Pegasus 701 Series oils.

	Kinematic Viscosity, ASTM D445				V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	TBNmg KOH/g	Sulfated Ash,wt% ASTM D 874
	SAE Grade	cSt at 40°C	cSt at 100°C	ASTM D 2270					
MOBIL PEGASUS 701	40	132	13.5	97	-15	249	2.2	<0.1	
MOBIL PEGASUS 701 SAE 30*	30	85	10	97	-18	238	1.7	<0.1	

\*This product is only available in the US.

**Mobil™ Pegasus™ 710** is a premium performance gas engine oil primarily intended for the lubrication of modern high-speed fourcycle engines where oil consumption is very low. These engines are generally of the lean-burn design where increased manifold pressures prevent sufficient lubricant from getting into the valve guide areas. This oil is also recommended for the lubrication of gas compressors. It is formulated from high quality mineral base oils and an advanced medium ash additive system designed to provide excellent protection of engine and compressor components. It exhibits a high level of chemical stability and resistance to oxidation and nitration. Pegasus 710 offers outstanding resistance to valve train wear and protection against deposit formation. These performance advantages combined with its very effective detergency and dispersancy system control the formation of ash and carbon deposits that could result in poor engine performance and detonation.

	Kinematic Viscosity, ASTM D445				V.I. ASTM D 2270	TBNmg KOH/g	Sulfated Ash,wt% ASTM D 874
	SAE Grade	cSt at 40°C	cSt at 100°C	ASTM D 2270			
MOBIL PEGASUS 710	40	121	13.2	98	6.8	1.0	

**Mobil™ Pegasus™ 801 Series** are premium performance gas engine oils intended for the lubrication of all classes of gas engines operating at low, medium and high speeds where low ash or ashless oils are recommended. They provide outstanding engine cleanliness and performance by helping to prevent the formation of carbon and ash deposits on pistons, in ring belt areas, on exhaust and intake ports, on valves and valve stems and in combustion chambers. Mobil Pegasus 801 Series also reduce the potential for port carboning of two-cycle gas engines. They minimize engine wear and protect valve faces, seats and guides of turbocharged, four-cycle engines. Both products provide exceptional protection against scuffing in demanding engine applications and also provides excellent protection against corrosion of internal engine components. Filter and oil life can be extended and the high performance capability of the Mobil Pegasus 801 Series can also help to extend the time between engine maintenance and overhaul periods.

	Kinematic Viscosity, ASTM D445				V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D27	TBNmg KOH/g	Sulfated Ash,wt% ASTM D 874
	SAE Grade	cSt at 40°C	cSt at 100°C	ASTM D 2270					
MOBIL PEGASUS 801	30	85	10.0	97	-15	238	2.2	0.13	
MOBIL PEGASUS 801 SAE 30	40	125	13.2	97	-15	249	2.2	0.13	

# INDUSTRIAL LUBRICANTS

## GAS ENGINE OILS

**Mobil™ Pegasus™ 803 Ultra** is a high-performance gas engine oil formulated exclusively from specially selected base stocks and additives of high stability. This gas engine oil is designed to provide excellent performance against wear while minimizing ash build-up and minimizing economy for engines running at lower-than-normal loads. Mobil Pegasus 803 Ultra is formulated with dispersants, effective oxidation and corrosion inhibitors, and anti-wear agents. These characteristics provide excellent dispersancy, and good hightemperature stability. It also exhibits high effectiveness in controlling carbon and ash deposits in gas engines under low load.

	Kinematic Viscosity, ASTM D445				V.I.	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	Sulfated Ash,wt% ASTM D 874
	SAE Grade	cSt at 40°C	cSt at 100°C	ASTM D 2270				
MOBIL PEGASUS 803 ULTRA	40	115	13.3	108	-33	282	0.21	

*This product is only available in the US.*

**Jenbacher™ N Oil 40** is a high performance gas engine oil formulated for current & next generation of Jenbacher natural gas engines. It has been designed as a major component of the engine, in close cooperation between INNIO Jenbacher and ExxonMobil engineers.

	Kinematic Viscosity, ASTM D445				V.I.	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	TBNmg KOH/g	Sulfated Ash,wt% ASTM D 874
	SAE Grade	cSt at 40°C	cSt at 100°C	ASTM D 2270					
JENBACHER N OIL 40	40	114	13.2	111	-18	269	7.4	0.6	

**Mobil GEO 10W-40™ Series.....49**

# INDUSTRIAL LUBRICANTS

## GEAR LUBRICANTS – OPEN GEARS

**Mobil SHC Gear™ 1500, 3200 and 6800** lubricants are supreme performance heavy-duty gear oils primarily designed for open gears, all kinds of enclosed gearing as well as plain and rolling element bearings. They are designed to provide outstanding service in terms of equipment protection, oil life, and problemfree operation enabling increased customer productivity. These scientifically engineered synthetic lubricants are formulated from synthetic base fluids that have exceptional oxidation and thermal properties and excellent low temperature fluidity. The combination of a naturally high viscosity index and a unique additive system enables these products to provide outstanding performance under severe high and low temperature operating conditions. The nature of the synthetic base fluids also contributes to the products' excellent low temperature performance. They have excellent protection against gear scuffing and resistance to shock loading. The synthetic base stocks have inherently low traction properties that result in low fluid friction in the load zone of non-conforming surfaces such as gears and rolling element bearings. Reduced fluid friction produces lower operating temperatures and improved gear efficiency.

	Kinematic Viscosity, ASTM D445				V.I.	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	FZG test, ISO 14635-1 mod., Failure Stage
	ISO VG	cSt at 40°C	cSt at 100°C	ASTM D 2270				
MOBIL SHC GEAR 1500	1500	1500	113	165	-18	230	13+	
MOBIL SHC GEAR 3200	3200	3200	183	165	-9	230	13+	
MOBIL SHC GEAR 6800	-	8200	365	180	-6	230	13+	

**Jenbacher™ NX Oil 40** is a high performance gas engine oil formulated for the next generation of Jenbacher natural gas engines. It has been designed as a major component of the engine, in close cooperation between INNIO Jenbacher (1) and ExxonMobil (2) engineers. Jenbacher NX Oil 40 represents a major advancement in gas engine lubrication. Meticulously designed to closely align with the Jenbacher engine platform and its hardware development, it can meet the evolving design and application requirements of next-generation Jenbacher Type 2, 3, 4, and 6 engines operating on 100% pipeline gas as well as on mixtures with up to 60% hydrogen content.

(1) INNIO and Jenbacher indicate a trademark.  
(2) ExxonMobil is comprised of numerous affiliates and subsidiaries, including Imperial Oil licensee.

	Kinematic Viscosity, ASTM D445				V.I.	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	TBNmg KOH/g	Sulfated Ash,wt% ASTM D 874
	SAE Grade	cSt at 40°C	cSt at 100°C	ASTM D 2270					
JENBACHER N OIL 40	40	114	13.2	111	-18	269	7.4	0.6	

**Mobil™ Pegasus™ Special CF** is a high quality SAE 15W-40 gas engine oil primarily intended for the lubrication of crankcases and power cylinders of spark-ignited two- and four-cycle gas-fueled engines. It is ideally suited for engines subjected to a wide range of ambient temperatures during startup and operation. This oil is uniquely formulated to be "Catalyst Friendly" and to meet the needs of engines with catalytic exhaust systems and stringent air emission requirements.

	Kinematic Viscosity, ASTM D445				V.I.	ASTM D 2270	TBNmg KOH/g	Sulfated Ash,wt% ASTM D 874
	SAE Grade	cSt at 40°C	cSt at 100°C	ASTM D 2270				
MOBIL PEGASUS SPECIAL CF	15W-40	104	13.7	132	2.4	<0.1		

*This product is only available in the US.*

**Mobil SHC Gear™ 22M and 46M** are supreme performance ultra high viscosity synthetic lubricants designed specifically for use in heavily loaded, low speed open gears where boundary lubrication conditions often prevail. They are formulated from synthetic base stocks, which have remarkable low-temperature fluidity, even at such high viscosity grades. These ultra high viscosity products can be pumped over relatively long distances and use standard spray application equipment. The combination of a naturally high viscosity index and a unique additive system gives the products exceptional thermal/oxidative properties and provides outstanding performance under severe high and low temperature operating conditions even with very slow moving gears. The additive formulation also provides excellent gear scuffing protection, antiwear performance and rust and corrosion inhibition.

	Kinematic Viscosity, ASTM D445		V.I.	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
	cSt at 40°C	cSt at 100°C			
MOBIL SHC GEAR 22M	22000	700	180	6	240
MOBIL SHC GEAR 46M	46000	1375	180	15	240

# INDUSTRIAL LUBRICANTS

## GEAR LUBRICANTS – OPEN GEARS

**Georgard™ HVS** is an ultra-high viscosity lubricant, primarily intended for use in heavily loaded, low and medium speed open gears that may operate in boundary lubrication conditions. It is formulated with an ultra-high viscosity synthetic fluid and extreme pressure additives that provide outstanding performance under severe high and low temperature conditions. Georgard HVS is formulated to disperse very well in cold ambient temperatures as low as -10°C, while also providing excellent protection for gears operating in hot ambient conditions.

	Kinematic Viscosity, ASTM D445		Flash Point °C, ASTM D92
	cSt at 40°C without diluent	cSt at 100°C without diluent	
GEARGARD HVS	44000	1350	110

**Mobiltac™ 375 NC, 325 NC and 275 NC** extra high performance non-leaded, diluent-type, heavy-bodied open gear lubricants designed for a wide variety of open gear and mining applications. They contain a non-chlorinated, volatile solvent that ensures fluidity during application, even at low temperatures. Once applied, the diluent evaporates and the lubricants take on a flexible, adhesive, high-strength consistency that is maintained throughout their service life. Mobiltac 375 NC, 325 NC and 275NC adhere strongly to gear teeth and other machine elements to resist excessive throw-off, thereby providing a wear-resistant, viscous, continuous film that lubricates well under boundary conditions. Mobiltac 275 NC also contains solid phase EP/anti-wear additive for added equipment protection.

	Kinematic Viscosity, ASTM D445			Flash Point °C, ASTM D92
	cSt at 40°C (Diluted)	cSt at 100°C (Undiluted)	Flash Point °C, ASTM D92	
MOBILTAC 275 NC*	-	-	150	
MOBILTAC 325 NC	-	1000	110	
MOBILTAC 375 NC	5000	1260	135	

*\*This product is only available in the US.*

**Mobiltac™ 50M Series** of premium performance open gear lubricants is designed to provide outstanding protection of heavily loaded open gears exposed to severe operating conditions. Mobiltac 50M is a semi-synthetic open gear lubricant containing high performance additives designed to provide an adhesive film and excellent load carrying capability particularly for open gears on shovels, draglines, and associated mining equipment.

	Base Oil Viscosity, ASTM D445, cSt at 40°C	Flash Point °C, ASTM D92	Ventmeter, 600, psi, Lincoln VE-1
MOBILTAC 50M HEAVY	50,000	149	20°F @ <30 sec
MOBILTAC 50M LIGHT	50,000	140	-15°F @ <150 sec
MOBILTAC 50M ARTIC	50,000	143	-30°F @ <150 sec

*These products are only available in Canada.*

**Mobil™ Dynagear™** Series are premium performance open gear lubricants are designed to provide outstanding protection of heavily loaded open gear sets exposed to a wide range of operating conditions. The Mobil Dynagear Series are based on lithium thickener technology, carefully chosen high performance additives and high viscosity semi-synthetic base fluids. These components synergistically provide a lubricant film that firmly adheres to lubricated surfaces. All members of the Mobil Dynagear Series are formulated solvent free and provide excellent dispensability without the use of chlorinated or hydrocarbon solvents.

The Mobil Dynagear Series' solvent free technology can help to significantly reduce run-off that can occur during lubricant application. Reduced run-off can help to establish a cohesive lubricating film quickly and enable optimization of the lubricant dispensing systems. A properly set-up dispensing system helps produce less waste while delivering the optimum lubricant film required to protect the gear set. The Mobil Dynagear Series can help reduce handling and waste disposal costs and the impact of fugitive emissions on the conditions associated with the use of hydrocarbon solvents. The Mobil Dynagear Series does not contain carbon black or asphalt. Additionally, the Mobil Dynagear Series does not form hardened tar like materials in the gear tooth root, does not flake off at low temperatures, can help keep spray injectors from plugging and has excellent low temperature pumpability. The Mobil Dynagear Series premium performance technology enables simpler and potentially less expensive clean-up of the gear teeth and guard, helping to reduce the amount of maintenance and inspection work necessary on critical open gear systems.

	Base Oil Viscosity, ASTM D445			Flash Point °C, ASTM D92
	cSt at 40°C	cSt at 100°C	Flash Point °C, ASTM D92	
MOBIL DYNAGEAR 600 SL	620	60	204	
MOBIL DYNAGEAR 800 EXTRA	680	60	158	
MOBIL DYNAGEAR 2000	2000	120	243	

**To learn more about the application of these products, go to Grease section.....64**

**Mobiltac™ Double Letter** product is a high performance, nondiluent type, heavy-bodied products intended for the lubrication of open gears over a wide range of weather conditions and machine requirements. It incorporates extreme pressure additives for the protection of gear teeth and metal surfaces subject to extremely heavy loads. It forms a cohesive and adhesive lubricating film that resists wear, water wash and excessive "throw off". It lubricates properly under boundary conditions.

	Kinematic Viscosity, ASTM D445		
	cSt at 40°C (Diluted)	cSt at 100°C (Undiluted)	Flash Point °C, ASTM D92
MOBILTAC MM	3900	126	182

*This product is only available in the US.*

# INDUSTRIAL LUBRICANTS

## GEAR OILS – ENCLOSED GEARS

**Mobil SHC Gear™ 320 WT** advanced wind turbine gear lubricant is a fully synthetic industrial gear lubricant designed to provide optimum equipment protection for wind turbine gearboxes and extended lubricant life even under extreme conditions. Mobil SHC Gear 320 WT offers a high level of resistance against micropitting fatigue and outstanding rust and corrosion protection. Mobil SHC Gear 320 WT advanced wind turbine gear lubricant has been approved by major Original Equipment Manufacturers (OEM) for use in their equipment and meets the main industry requirements, including the cleanliness level required by IEC 61400-4 (Design requirements for wind turbine gearboxes).

	ISO VG	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
		cSt at 40°C	cSt at 100°C			
MOBIL SHC GEAR 320 WT	320	343	44.7	189	-45	256

**Mobilgear™ SHC™ XMP 320** high performance, synthetic industrial gear oil is designed to provide optimum equipment protection and oil life even under extreme conditions. Mobil's polyalphaolefin (PAO) technology has been selected for its exceptional oxidation resistance and thermal properties, naturally high viscosity index, excellent low temperature fluidity and absence of undesirable compounds that are often found in mineral oils. The high viscosity index and low traction coefficient of this oil combines to help provide significant reduction in power consumption in many gear drives. Mobilgear SHC XMP 320 lubricant contains an advanced and carefully blended proprietary additive system designed to provide excellent protection against conventional wear modes such as scuffing and provide a high level of resistance against micropitting fatigue. In addition, compared to conventional gear oil chemistries, it offers the potential for improved lubrication of gearbox rolling element bearings. Mobilgear SHC XMP 320 product offers outstanding rust and corrosion protection in applications where salt water and acidic water protection are required. This product provides outstanding filter life even when moderately wet and have excellent compatibility with ferrous and non-ferrous metals even at elevated temperatures.

	ISO VG	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
		cSt at 40°C	cSt at 100°C			
MOBILGEAR SHC XMP 320	320	335	38.3	164	-38	242

**Mobil SHC Gear™ Series** is a line of exceptional performance, synthetic industrial gear oils designed to provide outstanding protection of gears and bearings, extended oil life even under extreme conditions, helping to enable problem-free operation of equipment and increased customer productivity. These scientifically engineered synthetic lubricants are formulated from synthetic base fluids that have exceptional oxidation and thermal properties and excellent low temperature fluidity.

	ISO VG	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	FZG scuffing, DIN 51534 (mod), A/8.3/90, Fail Stage	FZG Micropitting, Rating, FVA 54
		cSt at 40°C	cSt at 100°C					
MOBIL SHC GEAR 150	150	150	22.2	176	-54	233	14	10
MOBIL SHC GEAR 220	220	220	30.4	180	-45	233	14	10
MOBIL SHC GEAR 320	320	320	40.6	181	-48	233	14	10
MOBIL SHC GEAR 460	460	460	54.1	184	-48	234	14	10
MOBIL SHC GEAR 680	680	680	75.5	192	-42	234	14	10
MOBIL SHC GEAR 1000	1000	1000	99.4	192	-33	234	14	10

### Mobil™ SHC™ 600 Series.....12

**Mobilgear™ 600 XP Series** are extra high performance gear oils having outstanding extreme pressure characteristics and load-carrying properties, intended for use in all types of enclosed gear drives with circulation or splash lubrication systems. Mobilgear 600 XP Series are designed to stay ahead of the changing needs of gearbox technology. Gearbox technology design trends are towards smaller units with similar power throughput. This increase in power density places increased demands on gear oils. Mobilgear 600 XP Series oils are formulated to meet the stress by providing extra protection for gears, bearings and seals.

	Kinematic Viscosity, ASTM D445			Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	FZG scuffing, DIN 51534 (mod), A/8.3/90, Fail Stage	FZG Micropitting, Rating, FVA 54
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270				
MOBILGEAR 600 XP 68	68	8.8	101	-27	230	12+	-
MOBILGEAR 600 XP 100	100	11.2	97	-24	230	12+	10
MOBILGEAR 600 XP 150	150	14.7	97	-24	230	12+	10
MOBILGEAR 600 XP 220	220	19.0	97	-24	240	12+	10
MOBILGEAR 600 XP 320	320	24.1	97	-24	240	12+	10
MOBILGEAR 600 XP 460	460	30.6	96	-15	240	12+	10
MOBILGEAR 600 XP 680	680	39.2	90	-9	285	12+	10

**Spartan™ EP Series** are extra high performance gear oils having outstanding extreme pressure characteristics and load-carrying properties, intended for use in all types of enclosed gear drives with circulation or splash lubrication systems.

	Kinematic Viscosity, ASTM D445			V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	FZG Scuffing, A/8.3/90, Fail Stage, Rating, DIN 51354
	ISO VG	cSt at 40°C	cSt at 100°C				
SPARTAN EP 150	150	150	14.7	97	-24	230	12+
SPARTAN EP 220	220	220	19.0	97	-24	240	12+
SPARTAN EP 320	320	320	24.1	97	-24	240	12+
SPARTAN EP 460	460	460	30.6	96	-15	240	12+

**Mobil SHC Gear™ Hi-Shock 150** is a synthetic gear oil specifically designed and uniquely formulated for high shock load applications such as cycloidal drives. Mobil SHC Gear Hi-Shock 150 is the first and only synthetic oil approved by Sumitomo Drive Technologies.

	Kinematic Viscosity, ASTM D445			V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
	ISO VG	cSt at 40°C	cSt at 100°C			
MOBIL SHC GEAR HISHOCK 150	150	150	16.3	115	-36	240

**logear™ EP 100** is an extreme-pressure gear oil that is specially designed for oil field pump jack gear drives. It is specifically formulated to operate at both low and high ambient temperatures to give year round performance capabilities. It is also well suited for other low-temperature gear applications, where excellent low temperature performance is required.

	Kinematic Viscosity, ASTM D445			V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
	ISO VG	cSt at 40°C	cSt at 100°C			
IOGEAR EP 100	100	99.5	14.96	157	-40	170

# INDUSTRIAL LUBRICANTS

## GEAR OILS – ENCLOSED GEARS

# Limited Warranty For Mobilgear SHC™ XMP 320 in Wind Turbine Gear Reducers

### What The Warranty Covers

ExxonMobil Oil Corporation ("ExxonMobil") provides this limited warranty to the purchasers who use Mobilgear SHC™ XMP 320 in their wind turbine (WT) gear reducers, as established by the original equipment manufacturer ("OEM") and industry requirements. This limited warranty covers the lubricant and critical components lubricated by the oil. ExxonMobil warrants Mobilgear SHC™ XMP 320 to be free from defects and that it will adequately protect WT gearbox components provided that:

- The lubricant is confirmed to be an unadulterated Mobilgear SHC XMP 320.
- The wind turbine has been operated within the limits specified by the OEM.

### What The Warranty Does Not Cover

This Limited Warranty excludes:

- Mobilgear SHC™ XMP 320 used in mechanically deficient equipment as a result of abnormal operation; negligence, abuse, damage from casualty, shipment or accident; or equipment modification done without written authorization from the OEM.
- Situations where the OEM required lubricant standards do not match those stated by ExxonMobil without prior the written authorization from ExxonMobil.
- Mobilgear SHC™ XMP 320 that has been used in conjunction with any other product or additive that has not been authorized for use by ExxonMobil.
- Failure of equipment due to a pre-existing condition that is unrelated to the use of the lubricant.
- Repair or replacement of equipment due to normal wear.

### What the Period of Coverage Is

This limited warranty is valid for a period of 5 years from the date of installation.

### What We Will Do To Correct Problems

ExxonMobil will replace any lubricant that is defective. In addition, if there is equipment failure due to the lubricant you purchased, ExxonMobil will repair any equipment damage directly caused by a defect or malfunction of the lubricant, provided that the lubricant was selected and maintained in accordance with specifications of the OEM or the written instructions of an ExxonMobil employee.

### How You Can Get Service

To file a claim under this limited warranty, you must:

- Upon discovery of the damage (but no later than one (1) year from the date the damage occurred), contact your ExxonMobil or local distributor representative in writing. You may call 1-800-MOBIL-25 (662-4525) and press Prompt 4 to inquire about your Sales Engineer's contact information.
- Allow an ExxonMobil representative to examine the equipment, including its operating and maintenance records to determine the extent of the damage and to confirm that the lubricant was the cause.
- Permit an ExxonMobil representative to obtain representative new and used lubricant samples for laboratory analysis to assist in determining the cause of the equipment failure.

### How State Law Relates To The Warranty

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

- The remedy provided herein will be your only recovery against ExxonMobil. You will not be able to recover incidental damages (for example, labor and or downtime costs to replace affected equipment) or consequential damages (the cost of repairing or replacing other property which was damaged when the lubricant was defective).
- Some states do not allow the exclusion of or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

**THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER REMEDIES AND LUBRICANT PRODUCT WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR USE OR OTHERWISE BUT DOES NOT APPLY TO IN-SERVICE WARRANTIES CONVEYED WITH SPECIFIC INDUSTRIAL LUBRICANT PRODUCTS.**

# INDUSTRIAL LUBRICANTS

## GEAR OILS – ENCLOSED GEARS

**Mobil™ Glygoyle™ Series** lubricants are superior performance gear, bearing and compressor oils designed to provide outstanding benefits in terms of efficiency, long oil life, and equipment protection. These fully synthetic, polyalkylene glycol (PAG) lubricants were developed for use under operating conditions beyond the capabilities of other synthetic lubricants and mineral oils. Their low pour points ensure excellent low-temperature fluidity. The ISO 150 to 1000 grades are NSF H1 registered lubricants and also comply with Title 21 CFR 178.3570 by the Food and Drug Administration (USA) for lubricants with incidental food contact.

	Kinematic Viscosity, ASTM D445				Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	FZG test, ISO, Fail Load Stage
	ISO VG	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270			
MOBIL GLYGOYLE 68	68	68	11.8	170	-30	265	10
MOBIL GLYGOYLE 100	100	100	17.3	190	-30	265	12+
MOBIL GLYGOYLE 150*	150	150	26.1	210	-33	265	12+
MOBIL GLYGOYLE 220	220	220	38.1	225	-33	265	12+
MOBIL GLYGOYLE 320	320	320	55.2	240	-33	265	12+
MOBIL GLYGOYLE 460	460	460	77.2	250	-33	265	12+
MOBIL GLYGOYLE 680	680	680	112	265	-33	265	12+
MOBIL GLYGOYLE 1000*	1000	1000	165	285	-33	260	12+

\*These products are only available in the US.

[Mobil SHC Gear™ 1500, 3200 and 6800.....22](#)  
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# INDUSTRIAL LUBRICANTS

## HEAT TRANSFER FLUIDS

[Mobil™ SHC Cibus™ 32HT.....17](#)  
[Mobil™ Gargoyle Arctic SHC™ 224.....35](#)

**Mobiltherm™ 43** is a formulated paraffinic type fluid designed for closed heat transfer systems operating at higher bulk temperatures including demanding open systems. It has a high specific heat and thermal conductivity to provide more rapid heating and greater flexibility in a system. Suitable up to 600 F° (315.5° C) in closed systems.

	Kinematic Viscosity, ASTM D445				Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
	cSt at 40°C	cSt at 100°C				
MOBILTHERM 43	30.6	5.1	-12	198		

**Mobiltherm™ Series** heat transfer oils are high performance products intended for use in closed indirect heating installations. They are recommended for use in cold-oil sealed, indirect heating and cooling systems in all kinds of industrial processes. Mobiltherm heat transfer oils are formulated from highly refined base stocks that are resistant to thermal cracking and chemical oxidation. They are very thermally stable and are capable of an extremely long service life without deposit formation or viscosity increase.

	Kinematic Viscosity, ASTM D445				Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
	cSt at 40°C	cSt at 100°C				
MOBILTHERM 603	20.2	4.2	-15	194		
MOBILTHERM 610	113	11.5	-6	250		

[Teresstic™ Series.....12](#)

# INDUSTRIAL LUBRICANTS

## HYDRAULIC FLUIDS

**Mobil™ SHC™ 500 Series** oils are exceptional performance hydraulic oils formulated from synthesised, wax-free hydrocarbon base fluids combined with a carefully engineered super-stabilised additive system. They are exceptionally high quality, wide-temperature, shear-stable hydraulic oils with controlled low-temperature pumpability properties and maximised anti-wear protection for high-pressure vane, piston and gear pumps. The products exhibit very high viscosity indexes contributing to their excellent low and high temperature performance making them an excellent choice for equipment that is subjected to a wide range of start-up and operating temperatures. The Mobil SHC 500 Series oils exhibit outstanding shear stability allowing their use in high-pressure, high-temperature operating conditions for extended periods of time without the loss of critical lubrication characteristics. They were developed in conjunction with the major OEMs to meet the stringent requirements of severe hydraulic systems using high pressure, high output pumps as well as handling the critical requirements of other hydraulic system components such as close clearance servo-valves and the high accuracy numerically controlled (NC) machine tools. The technology used allows up to 6 percent increase in hydraulic pump efficiency compared with Mobil DTE 20 Series when tested in standard hydraulic applications.

	Kinematic Viscosity, ASTM D445					
	ISO VG	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
MOBIL SHC 524	32	32	6.4	144	-56	234
MOBIL SHC 525	46	46	8.54	154	-54	238
MOBIL SHC 526	68	68	11.52	158	-53	240
MOBIL SHC 527	100	100	15.94	160	-52	243

**Mobil™ Aero HF Series** are formulated for aircraft systems where use of hydrocarbon-based hydraulic fluids is required. They are low viscosity products, high VI (viscosity index) fluid with excellent low temperature properties, good anti-wear performance, and good chemical stability. Mobil Aero HFA and HF are composed of mineral base oil stock and contain shear-stable VI improvers.

	Kinematic Viscosity, ASTM D445				
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
MOBIL AERO HF	14.0	5.2	370	-62	107
MOBIL AERO HFA	14.0	5.2	370	-64	107

**Mobil™ DTE™ 10 Excel™ Series** are high performance anti-wear hydraulic oils specifically designed to meet the needs of modern, high pressure, industrial and mobile equipment hydraulic systems. The products demonstrate outstanding oxidation and thermal stability allowing for long oil life and minimized deposit formation in severe hydraulic systems using high pressure, high output pumps.

	Kinematic Viscosity, ASTM D445				V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	Brooksfield		
	ISO VG	cSt at 40°C	cSt at 100°C					Viscosity, cP at -20°C	ASTM D 2983	Dielectric Strength, kV, ASTM D877
MOBIL DTE 10 EXCEL 15	15	15.0	3.9	164	-57	210	-	-	2490	39.3
MOBIL DTE 10 EXCEL 22	22	22.0	5.0	164	-54	215	-	1660	7120	38.3
MOBIL DTE 10 EXCEL 32	32	31.5	6.5	164	-48	225	1070	3390	20000	39.3
MOBIL DTE 10 EXCEL 46	46	45.7	8.4	163	-45	230	1900	6790	125000	38.2
MOBIL DTE 10 EXCEL 68	68	66.9	10.9	155	-42	260	4050	16780	-	39.2
MOBIL DTE 10 EXCEL 100	100	97.0	13.0	132	-40	260	10360	71400	-	37.2
MOBIL DTE 10 EXCEL 150	150	148.0	17.2	121	-38	270	32600	445000	-	37.4

**Mobil™ DTE™ 20 Ultra Series** oils are high performance antiwear hydraulic oils with extended oil life capabilities and have demonstrated up to 2 times longer oil drain intervals versus similar competitive oils (\*).  
 (\*) with a viscosity index around 100 and a zinc-based anti-wear system - meeting at least ISO 11158 (L-HM) and/or DIN 51524-2 (HLP type) requirements.

	Kinematic Viscosity, ASTM D445				Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
	ISO VG	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270		
MOBIL DTE 21 ULTRA	10	10.7	2.8	106	-45	174
MOBIL DTE 24 ULTRA	32	33.4	5.8	115	-36	231
MOBIL DTE 25 ULTRA	46	46.2	7.1	110	-33	238
MOBIL DTE 26 ULTRA	68	68.6	8.9	104	-30	252

**Univis™ HVI Series** is a line of premium performance anti-wear hydraulic oils characterised by their unusually high viscosity indexes. They are engineered to maintain close viscosity control over wide temperature range applications. Because of their resistance to viscosity change, Univis HVI oils are recommended for hydraulic systems that are subject to wide temperature variations. Many of these systems are sensitive to changes in viscosity of the hydraulic oil, since they depend on uniform viscosity for hydraulic accuracy. They exhibit optimum flow characteristics at sub-zero temperatures and the oils are resistant to shearing and viscosity loss so that system efficiency is maintained and internal pump leakage is minimised at high operating temperatures and pressures. These high quality hydraulic oils also provide very good anti-wear protection for high-pressure vane, piston and gear pumps. The Univis HVI oils are designed with excellent oxidation stability reducing deposit formation and improving pump and valve performance. They were developed in conjunction with the major OEM's to meet the stringent requirements of severe hydraulic systems using high pressure, high output pumps as well as handling the critical requirements of other hydraulic system components.

	Kinematic Viscosity, ASTM D445				Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270			
UNIVIS HVI 13	13.5	5.3	404	-60	>100	
UNIVIS HVI 26	25.8	9.3	376	-60	>100	

**Univis™ Ultra & Extra** are premium all season, multi-grade hydraulic fluids, formulated to provide excellent performance over a very wide operating temperature range. Univis Ultra and Extra combines the high temperature viscosity characteristics of all season ISO VG 46 hydraulic oils with the outstanding low temperature fluidity of ISO VG 22. Univis™ Extra takes All Season performance to a new level of quality and performance, by offering the operating range of a Multi-Grade ISO 22/32 lubricant in a shear stable, high performance hydraulic oil; the resulting very wide operating temperature range makes Univis Ultra the ideal choice for severe service in stationary and mobile hydraulic equipment in many applications including; oil field operations, mining, forestry, logging and construction.

	Kinematic Viscosity, ASTM D445				Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270			
UNIVIS EXTRA*	32.8	7.6	213	-50	170	
UNIVIS ULTRA	43.13	10.44	242	-54	196	

\*This product is only available in Canada.

# Mobil DTE™ 20 Ultra Series Limited Warranty

## What the warranty covers

Exxon Mobil Corporation ("ExxonMobil") provides this limited warranty to the purchasers who use Mobil DTE™ 20 Ultra Series hydraulic oil in their hydraulic equipment. This limited warranty covers the lubricant and critical hydraulic equipment parts lubricated by the lubricant.

ExxonMobil warrants its lubricants to be free from defects and that the lubricant you purchased will protect hydraulic equipment or the equipment's lubrication-related parts (valves, pumps, actuators) from oil-related failure for six (6) years, provided that:

- The hydraulic equipment was in good operating condition at the time the lubricant was installed.
- The lubricant was selected and maintained in accordance with specifications of the original equipment manufacturer ("OEM") for the service and application, or the written instructions (which include product packaging) of ExxonMobil.
- The equipment has been operated within the limits specified by the OEM.
- You participate in the Mobil Serv™ Lubricant Analysis program for used-oil analysis.
- Lubricant life is determined by two (2) consecutive used oil analysis results from the Mobil Serv™ Lubricant Analysis program that indicate that the oil sample does not meet ExxonMobil's acceptability limits.
- Proper sampling techniques were used to collect used oil samples submitted for Mobil Serv™ Lubricant Analysis.

## What the warranty does not cover

The limited warranty excludes:

- Mobil DTE™ 20 Ultra Series lubricants used in mechanically deficient equipment as a result of abnormal operation; negligence; abuse; damage from casualty, shipment or accident; or equipment modification done without written authorization from the OEM.
- Situations where the OEM-required lubricant standards do not match those stated by ExxonMobil without prior written approval from ExxonMobil.
- Mobil DTE™ 20 Ultra Series lubricants that have been used in conjunction with any other product or additive that has not been authorized for use by ExxonMobil.
- Failure of equipment due to a preexisting condition that is unrelated to the use of the lubricants.
- Repair or replacement of equipment due to normal wear.
- Failure of equipment due to non-lubricant-related conditions, such as contamination by water, dirt, etc.

## What the period of coverage is

This limited in-service warranty is valid for six (6) years from the date of purchase or installation, whichever comes first.

## What we will do to correct problems

ExxonMobil will replace any lubricant that is defective. In addition, if there is an equipment failure due to the lubricant, ExxonMobil will repair any equipment damage directly caused by a defect or malfunction of the lubricant.

## How you can get service

To file a claim under this limited in-service warranty, you must:

1. Upon discovery of the damage (but no later than six [6] months from the date the damage occurred), contact your ExxonMobil or local distributor representative. You may also call 800-MOBIL-25 (662-4525) and press prompt 4 to inquire about your sales engineer's contact information.
2. Allow an ExxonMobil representative to examine the equipment and maintenance records, if available, and provide proof of purchase, to determine the extent of the damage and to confirm that the lubricant was the cause.
3. Provide an oil sample from the failed equipment, if available, for oil analysis at no cost to you to assist in determining the cause of the equipment failure.

## How state law relates to the warranty

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

**The remedy provided here will be your only recovery against ExxonMobil. You will not be able to recover incidental damages (for example, transportation costs to and from the ExxonMobil representative for inspection of the equipment, loss of use, towing charges, bus fare, car rentals or other incidental damages) or consequential damages (the cost of repairing or replacing other property that was damaged when the lubricant was defective). Some states do not allow the exclusion of or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.**

**THIS LIMITED WARRANTY IS OFFERED IN ADDITION TO THE MOBIL™ INDUSTRIAL LUBRICANT PRODUCT LIMITED WARRANTY BY:**

Exxon Mobil Corporation  
22777 Springwoods Village Parkway  
Spring TX 77389

- Repair or replacement of equipment due to normal wear.
- Failure of equipment due to non-lubricant related conditions, such as contamination by water, dirt, etc.

## What the period of coverage is

The limited in-service warranty is valid for six (6) years from the date of purchase or installation, whichever comes first.

## What we will do to correct problems

ExxonMobil will replace any lubricant that is defective. In addition, if there is an equipment failure due to the lubricant, ExxonMobil will repair any equipment damage directly caused by a defect or malfunction of the lubricant.

## How you can get service

To file a claim under this limited in-service warranty, you must:

1. Upon discovery of the damage (but no later than six [6] months from the date the damage occurred), contact your ExxonMobil or local distributor representative. You may also call 1-800-MOBIL-25 (662-4525) and press prompt 4 to inquire about your sales engineer's contact information.
2. Allow an ExxonMobil representative to examine the equipment and maintenance records, and provide proof of purchase, to determine the extent of the damage and to confirm that the lubricant was the cause.
3. Provide an oil sample from the failed equipment, if available, for oil analysis at no cost to you to assist in determining the cause of the equipment failure.

## How state law relates to the warranty

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

**The remedy provided here will be your only recovery against ExxonMobil. You will not be able to recover incidental damages (for example, transportation costs to and from the ExxonMobil representative for inspection of the equipment, loss of use, towing charges, bus fare, car rentals, or other incidental damages) or consequential damages (the cost of repairing or replacing other property which was damaged when the lubricant was defective). Some states do not allow the exclusion of or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.**

**THIS LIMITED WARRANTY IS OFFERED IN ADDITION TO THE MOBIL INDUSTRIAL LUBRICANT PRODUCT LIMITED WARRANTY.**

Please refer to [exxonmobil.com/en/pds](http://exxonmobil.com/en/pds) for latest product

# INDUSTRIAL LUBRICANTS

## HYDRAULIC FLUIDS

**Univis™ N Series** oils are premium high performance anti-wear hydraulic oils designed to satisfy a wide range of hydraulic equipment requirements. The products exhibit high viscosity indexes contributing to their excellent low and high temperature properties making them an excellent choice for equipment that is subjected to a wide range of start-up and operating temperatures. They are designed to work with systems operating under moderate conditions where high levels of anti-wear protection are needed.

	Kinematic Viscosity, ASTM D445					
	ISO VG	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
<b>UNIVIS N 22</b>	22	21	4.79	156	-60	185
<b>UNIVIS N 32</b>	32	32	6.39	151	-48	208
<b>UNIVIS N 46</b>	46	46	8.19	152	-48	216
<b>UNIVIS N 68</b>	68	68	11	151	-42	222

**Nuto™ H Series** oils are good quality anti-wear hydraulic oils intended for industrial and mobile service applications, subjected to moderate operating conditions and requiring anti-wear lubricants.

	Kinematic Viscosity, ASTM D445					
	ISO VG	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
<b>NUTO H 32</b>	32	31.4	5.3	98	-24	212
<b>NUTO H 46</b>	46	44.0	6.6	98	-24	226
<b>NUTO H 68</b>	68	63.3	8.3	98	-18	234
<b>NUTO H 100</b>	100	96.0	11.0	98	-18	242

**Humble™ Hydraulic H Series** oils are good quality anti-wear hydraulic oils intended for industrial and mobile service applications where anti-wear lubricants are required. They are formulated to deliver good performance in a range of hydraulic components used in systems subjected to moderate operating conditions.

	Kinematic Viscosity, ASTM D445					
	ISO VG	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
<b>HUMBLE HYDRAULIC H 22</b>	22	22.0	4.3	101	-36	202
<b>HUMBLE HYDRAULIC H 32</b>	32	32.0	5.4	102	-33	206
<b>HUMBLE HYDRAULIC H 46</b>	46	46.0	6.7	100	-30	218
<b>HUMBLE HYDRAULIC H 68</b>	68	68.0	8.6	99	-27	222

**Mobil SHC Cibus™ Series.....14**

# INDUSTRIAL LUBRICANTS

## HYDRAULIC FLUIDS – FOOD INDUSTRY

**Mobil SHC Cibus™ Series.....14**

**Mobil™ DTE™ FM Series.....14**

# INDUSTRIAL LUBRICANTS

## HYDRAULIC FLUIDS –LESS FLAMMABLE

**Mobil™ Nyvac™ FR 200D** is an extra high performance water-glycol type fire-resistant hydraulic fluid. It is formulated with diethylene glycol as the main glycol component. The product does not contain ethylene glycol. Mobil Nyvac FR 200D provides excellent protection against rust and against vapour phase corrosion. In hydraulic pump tests, it has shown a high level of antiwear performance. A high viscosity index makes Mobil Nyvac FR 200D effective over a wide range of operating temperatures. Its foam resistance, low temperature flow and storage stability are also excellent.

	Kinematic Viscosity, ASTM D445 cSt at 40°C		V.I. ASTM D 2270	Pour Point, °F (°C), ASTM D 97
	<b>MOBIL NYVAC FR 200D</b>	41.5		175

# INDUSTRIAL LUBRICANTS

## METALWORKING FLUIDS – AQUEOUS SOLUBLE

**Mobilcut™** is the trademark for Mobil Industrial lubricants line of high performance water miscible metal removal fluids. Formulated with leading edge base oils, additives, and emulsifiers, Mobilcut of non-chlorinated product provides dependable performance in a wide array of metal removal processes. The product is designed to work in a variety of hard and soft water qualities and offers low foam potential and long-term corrosion protection for machine and components.

**QUINTOLUBRIC® 888 46** was designed to replace anti-wear, mineral oil-based hydraulic fluids used in applications where fire hazards exist.

	Kinematic Viscosity, ASTM D445 cSt at 40°C		V.I. ASTM D 2270	Pour Point °C, ASTM D 97
	<b>QUINTOLUBRIC 888 46</b>	47.5		190

Low maintenance and inherently stable, Mobilcut product is designed for the modern machine shop where long service life, excellent machining performance and health and environmental concerns are important factors for increased productivity. This product is supplied in concentrated form and require mixing with water at the point of use. Mobilcut™ 100 is a conventional milky soluble oil that readily mixes with different waters to form stable emulsions.

	Viscosity, cSt at 40°C	pH @ 10% Emulsion	Spec. Gravity @15.6 °C
	<b>MOBILCUT 100</b>	32	10

*\*This product is only available in the US.*

Please refer to [exxonmobil.com/en/pds](http://exxonmobil.com/en/pds) for latest product

Return to the [Product Application Index](#)

# INDUSTRIAL LUBRICANTS

## METALWORKING FLUIDS – NEAT

**Mobilmet™ 110** is a light viscosity metalworking fluid, designed for honing operations and high speed grinding. It has been formulated to provide the machined part with a smooth surface finish and polish. The formula has been designed to be chlorine free.

	Kinematic Viscosity, ASTM D445 cSt at 40°C	Flash Point °C, ASTM D 92 Emulsion
MOBILMET 110	10	156

**Mobilmet™ 420 Series** products are high-performance multipurpose cutting oils. They are chlorine-free, non-staining and noncorrosive. They are designed for light to moderate duty cutting operations and they are also suitable as machine tool lubricants and for use in light duty hydraulic systems. They are formulated from high quality base oils and select additives to provide effective machining performance in a wide variety of operations of both ferrous and non-ferrous metals. The oils are light-colored and transparent so that the work area can be clearly seen at all times. The Mobilmet 420s are formulated to prevent the formation of oil mist in the vicinity of the machine tool.

	Kinematic Viscosity, ASTM D445		Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
	cSt at 40°C	cSt at 100°C		
MOBILMET 423	15	3.5	-15	182
MOBILMET 424*	23	-	-15	200
MOBILMET 426	32	5.7	-15	210
MOBILMET 427	46	6.9	-12	212

\*This product is only available in the US.

**Mobilmet™ 447** fluid is a high performance, multi-service, non-corrosive straight cutting fluids. It is designed for moderate to heavy duty cutting operations. It is also suitable for machine tool lubrication and use as hydraulic fluids in specific applications. It is formulated from high quality base oils and chlorine-free additives to provide effective machine performance in a wide variety of moderate to severe operations. It is non-staining to both ferrous and non-ferrous metals during machining. Mobilmet 447 fluid is formulated to prevent the formation of oil mist in the vicinity of the machine tool, thus contributing to a safer and more pleasant working conditions.

	Kinematic Viscosity, ASTM D445		Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
	cSt at 40°C	cSt at 100°C		
MOBILMET 447	45.9	7.4	-33	220

This product is only available in the US.

**Mobilmet™ 760 Series** are extra high performance neat cutting oils. They are chlorine-free and are intended for severe cutting operations especially on difficult to machine steels. Mobilmet 760 Series oils are not recommended for use with copper and it's alloys due to its aggressiveness towards these softer yellow metals. In comparison with other leading premium cutting oils, Mobilmet 760 Series oils have demonstrated superior surface finish, extended tool life and control of built-up edge. Their light colour enables the work area to be seen during machining operations. Closer tolerances are consistently achieved. The oils are formulated to prevent the formation of oil mist in the vicinity of the machine tool, thus contributing to a safer and more pleasant working conditions.

	Kinematic Viscosity, ASTM D445		Flash Point °C, ASTM D92
	cSt at 40°C	cSt at 100°C	
MOBILMET 762*	10	3.0	160
MOBILMET 763	18	4.0	180
MOBILMET 766	36	6.0	205

\*This product is only available in the US.

**Mobilgrind™ Series** of products are non-staining mineral oils intended for conventional and high speed grinding and honing applications across a wide range of materials and operations. The high quality base oils and select additive systems offer clear, low misting and low odor lubrication. Mobilgrind products are designed to prevent staining of non ferrous alloys and copper tubing that are often found in grinding oil circulation systems. Mobilgrind oils separate readily from grinding swarf and components which helps to reduce drag off and waste generation. The products are readily filterable to help increase surface finish accuracy. The Mobilgrind series is not formulated with any added zinc, chlorine or other materials that may require special disposal procedures.

	Kinematic Viscosity, ASTM D445		Flash Point, COC °C, ASTM D 92
	cSt at 40°C	cSt at 100°C	
MOBILGRIND 13*	4	-	120
MOBILGRIND 24	7	2.5	130

\*This product is only available in the US.

# INDUSTRIAL LUBRICANTS

## MIST OILS

**Mobil™ DTE™ 10 Excel™ Series.....27**

**Mobilgear™ MS Series** are extra high performance oils designed for the oil-fog or mist-lubrication of machine components such as slideways, bearings, gears, chains etc. They are formulated from high quality, solvent refined base stocks and a unique additive system designed for optimum reclassifying properties. They have a high resistance to oxidation and good extreme pressure and anti-wear properties. The products have enhanced surface wetting capabilities and they reclassify (or agglomerate) readily from a mist to a liquid when the mist is subjected to extreme turbulence or is impinged onto a surface at high velocity. This allows a lubricating film to form on bearings and gears and prevents stray mist from escaping through narrow apertures into the atmosphere.

	Kinematic Viscosity, ASTM D445				Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	FZG Scuffing, Fail Load Stage, A/8.3/90, ISO 14635-1
	ISO VG	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270			
MOBILGEAR MS 32	32	32	5.3	110	-12	210	12+
MOBILGEAR MS 100	100	100	6.6	95	-12	234	12+
MOBILGEAR MS 320	320	320	8.3	100	-9	230	12+
MOBILGEAR MS 460	460	460	11.0	100	-6	238	12+

# INDUSTRIAL LUBRICANTS

## OTHER INDUSTRIAL OILS

**Mobil™ Synthetic Oven Lube 1090** is a supreme performance synthetic high temperature lubricant designed specifically for lubrication of hot conveyor chains in drying ovens and similar severe applications. This product is formulated using a carefully balanced blend of high-molecular-weight synthetic hydrocarbons and a synthetic ester base fluid plus very effective anti-wear additives. It does not contain silicone. Compared to mineral oil and conventional chain lubricants, Mobil Synthetic Oven Lube 1090 reduces carbon build-up and extends cleaning intervals.

	Kinematic Viscosity, ASTM D445			
	ISO VG	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270
MOBIL SYNTHETIC OVEN LUBE 1090	220	210	22	126

**Socony™ Oven Conveyor Lubricant** is a high performance product designed specifically for the lubrication of oven conveyor chains at temperatures up to 200 degrees celsius. It is formulated from a low viscosity oil and colloidal graphite. The oil acts as a carrier for the graphite and can penetrate between the moving parts. The oil is sufficiently volatile at the working temperature to evaporate without leaving residues that might cause sticking.

	Kinematic Viscosity, ASTM D445		
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270
SOCONY OVEN CONVEYER	13.3	3.7	265

This product is only available in the US.

**Mobil™ Sawguide Oil Series** are specifically formulated to lubricate the thin saw blades of modern gang saws and edgers.

	Kinematic Viscosity, ASTM D445			
	ISO VG	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270
MOBIL SAWGUIDE OIL 68	68	68	9.6	121
MOBIL SAWGUIDE OIL 100	100	100	11.8	107
MOBIL SAWGUIDE OIL 150	150	150	16.2	113

**Mobil™ Cylinder Oils Series** are high performance high viscosity oils designed for use in enclosed worm gears operating at moderate to high speeds and temperatures, and where heavy loads, slow speeds or high temperatures demand high viscosity oils. They are also intended for use in steam engine cylinder applications. They protect against rust and corrosion and provide good film strength and excellent lubricity and they are resistant to water washout.

	Kinematic Viscosity, ASTM D445					
	ISO VG	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
MOBIL 600W CYLINDER OIL*	-	375	28.0	95	-9	282
MOBIL 600W SUPER OIL CYLINDER OIL	460	460	30.5	95	-6	282
MOBIL EXTRA HECLA SUPER CYLINDER	680	680	35.8	85	0	282
MOBIL EXTRA HECLA SUPER CYLINDER OIL MINERAL**	1000	1000	42.0	80	3	288

\*This product is only available in Canada.

\*\*This product is only available in the US.

# INDUSTRIAL LUBRICANTS

## OTHER INDUSTRIAL OILS

**Mobil™ Chain Oil Series** has been engineered to provide excellent lubrication for the chain and bar on industrial and residential use chain saws. Chain Oil helps to extend bar and chain life by providing a tacky stay-in-place film of oil that lubricates, cleans and cools the moving parts.

Chain Oils can also be used in industrial applications where tacky anti-wear oil is preferred. This includes chain drives and plain bearings.

	Kinematic Viscosity, ASTM D445 cSt at 40°C	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
MOBIL CHAIN OIL LIGHT	40	-33	180
MOBIL CHAIN OIL HEAVY	150	-20	190

**Faxam™ 32** is paraffinic process oil that can be used in a wide variety of industrial and process oil applications. Faxam 32 can be used as a lubricant in non-critical applications, where oil operating conditions are moderate and there are no requirements for antiwear or extreme pressure additives. As process oils, their physical characteristics make them suitable for use as a diluent or carrier oil in the manufacture of products such as lubricating oil additives, paper defoamants, seals, carbon paper, and other chemical formulations. Faxam 32 can be used as a flushing oil for cleaning lubrication systems.

	Kinematic Viscosity, ASTM D445			V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
	ISO VG	cSt at 40°C	cSt at 100°C			
MOBILMET 447	32	32	5.36	100	-12	210

**Mobil™ Solvancer** is an oil-soluble cleaner blended from Group V base stock, and is compatible with most lubricants formulated with API Group I – Group IV base stocks. A concentration of 3-5% of Mobil Solvancer in the system oil is typically recommended. It can be added to in-service oil without adverse impact to performance, unlike water based chemical cleaners or some aggressive oil soluble cleaners. Use of Mobil Solvancer typically does not require a secondary displacement flush. It is recommended for use during 1) oil conversions; 2) to alleviate operational issues due to varnish, such as elevated bearing temperatures or sticking valves; or 3) to support oil life extension. Mobil Solvancer is a solubilizing agent that quickly dissolves deposits and varnish to help maintain cleanliness of turbine bearings, seals and hydraulic systems. When cooled, Mobil Solvancer maintains residual deposits keeping them in solution to avoid re-adhesion, transfer of deposits, filter plugging and oil line flow blockage events. It can be used with seals, paints and other coatings commonly used in industrial equipment.

Siemens Energy has tested the compatibility and effectiveness of Mobil Solvancer and concludes that it may be beneficial to add this product to the oil to stop and even reverse the varnish effect. If the customer wants to use Mobil Solvancer, an oil analysis must be carried out to check whether the used oil meets the requirements for an operating oil. If this is the case, Mobil Solvancer can be added. In addition, Mobil Solvancer is approved for use in lube oil systems of Everlence/MAN-ES turbomachinery.

Follow recommended dosing and maintain the viscosity classes recommended in the machine's operating manual.

	Viscosity, ASTM D 445, cSt at 40°C	Flash Point °C, ASTM D92
MOBIL SOLVANCER	51	422

**Mobil™ System Cleaner** is an oil-soluble, solvent-free cleaner that contains emulsifiers, dispersants, and rust inhibitors. It is safe for use with all ferrous and non-ferrous metals used in industrial equipment. A 5% concentration of Mobil System Cleaner in the system oil is typically recommended. The product is compatible with common seals up to 20% maximum concentration in the oil. Because of the viscosity and high flash point of Mobil System Cleaner, equipment can be operated normally during the cleaning process.

	Kinematic Viscosity, ASTM D445, cSt at 40°C	Flash Point °C, ASTM D92
MOBIL SYSTEM CLEANER	55	138

**Mobil™ Synturion™ Series** are premium-quality, synthetic-base fluids specially formulated to meet the demanding lubrication and cooling requirements of mechanical seals and to help maximize seal life. The inherent properties of the polyalphaolefin synthetic base oil, enhanced by a proprietary additive package, are ideally suited to the special requirements of mechanical seal operation.

	Kinematic Viscosity, ASTM D445, cSt at 40°C	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	ASTM Color, ASTM D1500	Spec. Gravity at 15 °C
MOBIL SYNTURION 6	5.2	-63	168	1	0.799
MOBIL SYNTURION 18	18	-66	218	L0.5	0.818

# Mobil™ Solvancer®

High-performance oil-soluble cleaner for gas or steam turbines, compressors and hydraulic systems to improve reliability and reduce overall cost of operation

Features	Potential Benefits
Works quickly to dissolve varnish and sludge from circulating lubrication systems, bearings, hydraulic systems, etc.; resists deposit re-adhesion when cooled	<ul style="list-style-type: none"> <li>Improves equipment reliability</li> <li>Enables conversions</li> <li>Helps with elevated bearing temperature troubleshooting</li> <li>Supports oil life extension</li> <li>Helps reduce operating costs</li> </ul>
Low treat rate of 3-5%, compared to 10-15% for most competitive products	<ul style="list-style-type: none"> <li>May provide cost effective alternatives to costly flushing and system cleaning</li> <li>Elimination of flushing, less product needed to deliver the same performance</li> </ul>
Extended protection of up to one year, exceeding the longevity of most competitive products	<ul style="list-style-type: none"> <li>Helps operators achieve extended overhaul-to-overhaul goals</li> <li>Does not require system flushing after use</li> <li>Can be used safely for extended use with no adverse effects to in-service oils</li> <li>Affords operator improved flexibility</li> </ul>
Compatible with lubricants and hydraulic oils formulated with API group I to IV base stocks	<ul style="list-style-type: none"> <li>Does not adversely impact lubricant performance including oxidation stability, anti-wear, gear loading, demulsibility, foam and air release</li> <li>Does not adversely impact testing on OEM and/or Industry specifications/approvals</li> </ul>
Benign towards in-service oils, seals, paints and coatings commonly used in systems	<ul style="list-style-type: none"> <li>Gentle on systems</li> </ul>

Property	
Appearance	Clear and bright, water white
Flash Point, Cleveland Open Cup, °F, ASTM D92	217°C / 422°F
Kinematic Viscosity @ 40 cSt, mm2/s, ASTM D445	51
Specific Gravity, 25 cSt/25 cSt, ASTM D1298	0.846

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# INDUSTRIAL LUBRICANTS

## PAPER MACHINE OILS

**Mobil™ SHC™ PM Series** products are superior performance synthetic lubricants specifically designed for the most demanding industrial paper machine circulating systems. The Mobil SHC PM Series oils are formulated to provide outstanding protection of gears and bearings operating under the most severe conditions. They have very low pour points and a naturally high viscosity index (VI) which helps ensure good low temperature start-up while maintaining excellent viscosity characteristics at very high temperatures. The fluids are very shear stable and maintain viscosity control even when subjected to severe mechanical shear in heavily loaded bearings and gears. Their low traction coefficient and high viscosity index can help result in lower energy consumption and reduced component operating temperatures.

	Kinematic Viscosity, ASTM D445					Flash Point °C, ASTM D92
	ISO VG	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	
MOBIL SHC PM 220	220	225	25.6	127	-36	220
MOBIL SHC PM 320	320	325	34.7	130	-33	220

**Mobil™ DTE™ PMExcel Series** are multi-functional paper machine oils for use in wet end, dry end, press sections and calender circulation oil systems, compatible with Voith (VS108) and Metso/Valmet machines.

	Kinematic Viscosity, ASTM D445					Flash Point °C, ASTM D92
	ISO VG	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	
MOBIL DTE PM EXCEL 150	150	145	14.5	96	-18	264
MOBIL DTE PM EXCEL 220	220	214	18.7	97	-15	278

# INDUSTRIAL LUBRICANTS

## QUENCH OILS

**Thermrex™ Series** is a family of three quench oils for the heat treatment of steel and alloy steels. They are comprised of selected solvent-refined base stocks and additives to provide optimum demulsibility and chemical and thermal stability. The use of such ingredients results in quench oils that provide uniform steel hardness, long batch life, resistance to sludge formation, and minimum deformation.

	Kinematic Viscosity, ASTM D445		Flash Point °C, ASTM D92	Max. Cooling Rate, ISO 9950, °C/SecMax		Temperature Max Cooling Rate °C
	cSt at 40°C	Pour Point °C, ASTM D 97		ISO 9950, °C/SecMax	Temperature Max Cooling Rate °C	
THERMREX D-10	20.2	-18	194	54.4	513	
THERMREX R-21	21.0	-12	172	64.6	587	
THERMREX V-32	15.3	-3	176	72.2	609	

*These products are only available in the US.*

**Mobil™ DTE™ PM Series** products are high-quality, highperformance lubricants specifically designed for demanding industrial paper machine circulating systems. They are engineered to provide exceptional lubrication qualities while protecting system components from rust and corrosion. This is particularly important in the wet-end where water and chemical contaminants can enter the lubrication system. They exhibit good viscosity characteristics allowing reduced start-up to production times while maintaining excellent viscosity characteristics at high temperatures. The Mobil DTE PM Series oils provide excellent resistance to oxidation and thermal degradation, exceptional protection against rust and corrosion, and a high level of anti-wear performance.

	Kinematic Viscosity, ASTM D445					Flash Point °C, ASTM D92
	ISO VG	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	
MOBIL DTE PM 100	100	100	11.4	95	-6	240
MOBIL DTE PM 150	150	150	14.7	95	-6	250
MOBIL DTE PM 220	220	220	19	95	-6	260
MOBIL DTE PM 320	320	320	25.4	95	-6	250

**Fenso™ Series** products were developed to provide excellent long life performance in quenching operations. These products are dual-purpose oils designed for both conventional quenching and marquenching. The oil has exceptional oxidation stability helping extend oil life and reduce residue on parts and is readily removed from quenched parts with a mild alkali wash.

	Kinematic Viscosity, ASTM D445 cSt at 40°C	Flash Point °C, ASTM D92
FENSO 51	48.4	200
FENSO 150*	25.1	205

*\*This product is only available in Canada.*

# INDUSTRIAL LUBRICANTS

## REFRIGERATION OILS

**Mobil™ Gargoyle Arctic SHC™ 200 Series** are fully synthetic, superior performance lubricants, specifically designed for use in refrigeration compressors and heat pumps. They are formulated from wax-free, synthesised hydrocarbon polyalphaolefin (PAO) fluids, which have outstanding resistance to thermal/oxidative degradation. With their naturally high shear stable viscosity indexes and low temperature fluidity, they are able to perform in severe service conditions that are beyond the capabilities of many conventional mineral oils. Mobil Gargoyle Arctic SHC Series are NSF H1 and Mobil Gargoyle Arctic SHC 224 is HT1 registered (Heat Transfer).

	Kinematic Viscosity, ASTM D445					Spec. Gravity at 20° C, ASTM D 1298
	ISO VG	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	
MOBIL GARGOYLE ARCTIC SHC 224*	32	29.0	5.6	132	<-54	0.82
MOBIL GARGOYLE ARCTIC SHC 226	68	68.0	10.4	145	-45	0.83
MOBIL GARGOYLE ARCTIC SHC 226E*	68	69.0	10.1	136	-45	0.83
MOBIL GARGOYLE ARCTIC SHC 230	220	220	25.0	149	-39	0.85
MOBIL GARGOYLE ARCTIC SHC 234*	-	399	40.0	150	-39	0.85

*These products are only available in the US.*

**Mobil™ Gargoyle™ Arctic Oil C Heavy, 155 and 300 products** are high performance naphthenic mineral oils primarily intended for use in refrigeration compressors. They have low pour points and excellent fluidity at very low temperatures by virtue of being almost wax-free. Consequently, use of these Mobil Gargoyle Arctic oils helps to ensure that evaporator tubes are kept clean to improve heat transfer and to reduce downtime for maintenance. They have good chemical stability and are suitable both for cylinder and bearing lubrication.

	Kinematic Viscosity, ASTM D445			Flash Point °C, ASTM D92
	ISO VG	cSt at 40°C	Pour Point °C, ASTM D 97	
MOBIL GARGOYLE ARCTIC C HEAVY	46	46.0	-39	195
MOBIL GARGOYLE ARCTIC OIL 155	32	32.0	-42	190
MOBIL GARGOYLE ARCTIC OIL 300	68	68.0	-36	200

**Mobil™ EAL™ Arctic Series** are high performance fully synthetic lubricants specifically designed for the lubrication of refrigeration compressors and systems using ozone-friendly synthetic HFC refrigerants as well as recently developed HFO refrigerants and HFO/HFC blends with lower Global Warming Potential than HFC's, including A1 and A2L refrigerants as per ASHRAE 34/ISO 817 safety classification. Mobil EAL Arctic Series oils are formulated with proprietary synthesized Polyol Esters (POEs) and a unique additive system to provide outstanding lubricity, wear protection, chemical and thermal stability, and hydrolytic stability.

	Kinematic Viscosity, ASTM D445					Flash Point, °F (°C), ASTM D92
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D5950		
MOBIL EAL ARCTIC 22CC	22	23.6	4.9	134	-58	259
MOBIL EAL ARCTIC 22	22	23.5	4.7	114	-59	252
MOBIL EAL ARCTIC 32	32	31.6	5.6	115	-55	250
MOBIL EAL ARCTIC 46	46	46.2	6.9	104	-46	258
MOBIL EAL ARCTIC 68	68	65	8.3	96	-40	256
MOBIL EAL ARCTIC 100	100	96	10.6	93	-34	271
MOBIL EAL ARCTIC 220	220	221	18.1	88	-28	285

**Mobil™ Zerice™ S Oils** are premium quality synthetic refrigeration compressor lubricants based on alkyl benzenes, which due to their nature, have superior miscibility with hydrochlorofluorocarbon (R22). This allows them to be used in very low temperature applications, down to -60°C. In certain circumstances, they can also be used in compressors where ammonia acts as the refrigerating fluid.

	Kinematic Viscosity, ASTM D445			Flash Point °C, ASTM D92
	ISO VG	cSt at 40°C	Pour Point °C, ASTM D 97	
MOBIL ZERICE S 32*	32	32	-33	154
MOBIL ZERICE S 68	68	68	-27	174
MOBIL ZERICE S 100*	100	100	-27	186

*These products are only available in the US.*

**Mobil™ Glygoyle™ 22 and 30 oils** are polyalkylene glycol-based (PAG), water insoluble high performance lubricants that provide outstanding lubrication in higher temperature gear, bearing and circulation system applications in conditions well beyond the capabilities of mineral oils. They are shear-stable and have outstanding resistance to thermal degradation, oxidation and the formation of sludge and deposits. They incorporate a proprietary additive package designed to enhance EP/anti-wear protection, corrosion and rust protection and foam resistance without detracting from the intrinsic attributes of the PAG base oils. They are recommended for use by major plastic calendar, paper machine bearing, compressor and gear manufacturers, and are the products of choice for many severe service applications. The Mobil Glygoyle Series is not compatible with mineral oils and most other synthetic lubricants. Additionally, depending on the specific type of PAG base fluid, they may not be compatible with other PAG type lubricants. (e. g. Mobil Glygoyle No Series and Mobil Glygoyle ISO VG Series are not miscible). The Mobil Glygoyle Series is not generally recommended for use in systems previously filled with mineral oils or PAO based synthetic lubricants. It is further recommended to check compatibility when topping up or replacing existing PAG fillings with Mobil Glygoyle Series, generally the preference is to avoid mixtures by draining, flushing and refilling. When changing from mineral oil or other synthetic products to Mobil Glygoyle Series, it is critical to clean the system thoroughly and flush with suitable fluids prior to conversion. For further details please contact your ExxonMobil representative.

	Kinematic Viscosity, ASTM D445			Flash Point °C, ASTM D92	Spec. Gravity at 20°C, ASTM D 1298
	cSt at 40°C	cSt at 100°C	Pour Point °C, ASTM D 97		
MOBIL GLYGOYLE 22	177	25.1	-41	229	1.007
MOBIL GLYGOYLE 30*	224	30.9	-41	221	1.006

*This product is only available in the US.*

# INDUSTRIAL LUBRICANTS

## ROCK DRILL & PNEUMATIC TOOL OILS

**Mobil™ Almo™ 500 Series** lubricants are premium quality highperformance products primarily intended for the lubrication of pneumatically operated rock drills in underground and surface mining operations. The Mobil Almo Series oils are formulated from high quality base stocks and additives, which provide excellent chemical stability and good protection against wear and corrosion. They offer an optimum balance of adhesiveness, yet are emulsifiable enough to pick up moisture carried in the air stream reducing the negative effects of water on wear and corrosion. They do not form gummy deposits that could cause sluggish valve action. Even in the presence of water, the Mobil Almo 500 Series oils have good preferential metal-wetting properties that maintain continuous oil films. These properties in combination with high EP characteristics help provide excellent lubrication resulting in long equipment life.

	Kinematic Viscosity, ASTM D445					Flash Point °C, ASTM D92
	ISO VG	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D5950	
MOBIL ALMO 525	46	46	7.3	105	-30	188
MOBIL ALMO 527	100	100	11.5	100	-27	220
MOBIL ALMO 529	-	172	16.5	102	-24	220
MOBIL ALMO 530	220	220	19.7	100	-24	220
MOBIL ALMO 532	320	320	24.9	99	-21	232

**Arox™ EP Series** rock drill oils are premium quality high performance products primarily intended for the lubrication of pneumatically operated rock drills in underground and surface mining operations. Arox EP Series rock drill oils are formulated from high quality base stocks and carefully selected additives that are designed to provide excellent chemical stability and outstanding protection against wear and corrosion. They are also designed to offer an optimum balance between adhesiveness and emulsibility. This feature allows the lubricant to absorb moisture carried in the wet mine air system, while maintaining a protective oil film on the drill components. The potent EP characteristics of Arox EP Series rock drill oils provide excellent protection for the drill components that are subjected to percussive contact, thereby helping to improve equipment life in heavily loaded mining equipment.

	Kinematic Viscosity, ASTM D445					Flash Point °C, ASTM D92
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D5950	Flash Point °C, ASTM D92	
AROX EP 22	22	4.6	127	-45	168	
AROX EP 32	32	5.7	119	-33	219	
AROX EP 100	100	11.7	105	-21	252	
AROX EP 150	150	15.5	106	-15	268	
AROX EP 220	220	19.5	101	-21	288	

### Pneumatic Tool Oils:

[Mobil™ DTE 10 Excel™ Series.....27](#)

[Mobil™ DTE™ Oil Light.....13](#)

[Mobil™ Velocite™ Oil Numbered Series .....38](#)

# INDUSTRIAL LUBRICANTS

## RUST PREVENTIVES

**Mobilarma™ 200 Series** products are premium quality rust preventive materials designed to protect metal surfaces from rust and corrosion. They are formulated using light-bodied petroleum solvents with polar rust preventive, water displacement and fingerprint neutralising additives. These rust preventives are easy to apply and easy to remove making their application less labor force intensive. Mobilarma 245 is suited for the thin-film protection of finely finished parts between machining operations, including operations where water-soluble cutting and grinding fluids have been used. It is also suitable for use just before parts are packaged for storage or shipment, or to “dry” parts as a temporary protection until a heavier rust preventive can be applied. Mobilarma 247 is the heavier duty rust preventive designed to provide long term protection under more adverse conditions.

	Kinematic Viscosity, ASTM D445		Flash Point °C, ASTM D92
	cSt at 40°C	cSt at 100°C	
MOBILARMA 245	2.6	38	
MOBILARMA 247*	3.0	71	

\*This product is only available in the US.

**Mobilarma™ 798** contains three premium performance rust preventives that covers a range of applications including storage and inter-operational activities. Mobilarma 798 is intended for the lubrication and rust protection of wire rope in industrial, construction, mining and marine applications. This product exhibits excellent water displacing properties and forms thin tenacious films that protect surfaces even under severe conditions that include high moisture levels and exposure to acid or corrosive fumes. The Mobilarma 778 forms wet, oily and extremely thin barrier films that are not tacky so that it will not attract dirt or other foreign matter. It will protect sheet and coiled steel for up to twelve months, even under severe conditions that include variations in humidity and exposure to acid fumes that might be found in the vicinity of pickling operations.

	Kinematic Viscosity, ASTM D445		Flash Point °C, ASTM D92
	cSt at 40°C	cSt at 100°C	
MOBILARMA 798	23.1	238	

**Mobilarma™ 500 Series** oils are premium performance products primarily intended as run-in or lay-up lubricants, which provide effective rust preventive films on the internal surfaces of machinery. They are particularly suitable as run-in lubricants for diesel and gasoline engines. The oils displace water from metal surfaces and form strong water-resistant films on the metal surfaces to prevent rust and corrosion. The Mobilarma Series oils absorb the water in systems into a water-in-oil emulsion so that the contact surfaces of the machinery still get satisfactory lubrication. Their high level of chemical stability and their anti-wear and detergent properties make them suitable as high quality short-term lubricants.

	Kinematic Viscosity, ASTM D445			Pour Point °C, ASTM D5950	Flash Point °C, ASTM D92
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270		
MOBILARMA 522*	28.8	5.0	95	-24	182
MOBILARMA 524	88.4	10.5	95	-18	218

**Mobil™ Vaprotec™ Light** is an ISO Viscosity Grade 32, turbinequality circulation oil containing anti-oxidants and defoamants. It is enhanced with a three-phase rust inhibitor to protect surfaces lightly coated with oil; a liquid phase inhibitor to protect surfaces submerged in oil; and vapor space inhibitors to protect surfaces exposed to oil vapors.

	Kinematic Viscosity, ASTM D445			Pour Point °C, ASTM D5950	Flash Point °C, ASTM D92
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270		
MOBIL VAPROTEC LIGHT	30	5.3	95	-7	193

## INDUSTRIAL LUBRICANTS

### TRANSFORMER OIL

**Univolt™ N 61B** is a good quality, fully inhibited transformer oil designed to meet the operating requirements of transformers and other oil filled electrical equipment. It meets the requirements of ASTM D 3487 Type II fluid, providing good performance in transformers, circuit breakers, switches, and capacitors.

UNIVOLT N 61B	Kinematic Viscosity, ASTM D445		Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	Spec. Gravity D 1298
	cSt at 40°C	cSt at 100°C			
	9.2	2.3	-50	151	0.91

*This product is only available in the US.*

**Voltesso™ 35** brand insulating oils are formulated from high quality basestocks and select additives that provide excellent low temperature performance and resistance to oxidation and sludge formation in electrical service. These high quality electrical insulating oils are designed and manufactured to provide cooling and to help insulate transformer components against electrical corona and arcing. Voltesso 35 is recommended for use in power transformers, especially those subject to cold start-up, or have forced oil cooling, including associated load tap changers, switches and circuit breakers that operate at ambient temperatures below -25°C. Voltesso meets Canadian Standards Association C50-08 specifications for Class A, Type I oils.

VOLTESSO 35	ISO VG	Kinematic Viscosity, ASTM D445		Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
		cSt at 40°C	cSt at 100°C		
	35	7.6	2.1	-46	145

## INDUSTRIAL LUBRICANTS

### SPINDLE OILS

**Mobil™ Velocite™ Oil Numbered Series** oils are premium performance products primarily designed for the lubrication of high-speed spindles in machine tools. They are also used in some critical hydraulic, circulation systems and air line oilers where the appropriate viscosity grade is selected. They are formulated from select high-quality, low viscosity base oils and additives that impart good resistance to oxidation and protection from rust and corrosion. They possess very good resistance to foaming and separate readily from water.

	ISO VG	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
		cSt at 40°C	cSt at 100°C			
MOBIL VELOCITE OIL NO 3	2	2.1	-	-	-36	84
MOBIL VELOCITE OIL NO 6	10	10	2.65	98	-15	180
MOBIL VELOCITE OIL NO 8	15	15	3.39	97	-9	194
MOBIL VELOCITE OIL NO 10	22	22	4.25	95	-30	212

## INDUSTRIAL LUBRICANTS

### WAY OILS

**Mobil™ Vactra™ Oil Numbered Series** are premium-quality slideway lubricants specifically designed to meet the requirements for accuracy, aqueous coolant separability, and equipment protection of precision machine tools.

	ISO VG	Kinematic Viscosity, ASTM D445		Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
		cSt at 40°C	cSt at 100°C		
MOBIL VACTRA NO 1	32	32	-30	216	
MOBIL VACTRA NO 2	68	68	-9	228	
MOBIL VACTRA NO 3	150	156	-6	248	
MOBIL VACTRA NO 4	220	221	-6	240	

**Mobil™ Vacuoline™ 1400 Series** oils are extra high performance lubricants specifically designed to satisfy the requirements of machine tools that use one oil for both hydraulic systems and way lubrication. They are formulated using high quality mineral base oils and a unique additive technology that provides excellent lubricity properties to eliminate stick-slip and chatter of heavily loaded and vertical box ways.

	ISO VG	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
		cSt at 40°C	cSt at 100°C			
MOBIL VACUOLINE 1405	32	32	5.3	96	-12	210
MOBIL VACUOLINE 1409	68	68	8.57	96	-6	218
MOBIL VACUOLINE 1419	220	215	19.0	96	-6	257

## INDUSTRIAL LUBRICANTS

### TURBINE OILS

**Mobil™ SHC™ 800 Series** turbine oils are designed specifically to meet the needs of the most severe industrial gas turbine applications with a nominal 10,000 hour TOST life. They are recommended for the lubrication of land-based gas turbines, particularly units under 3,000 hp used as standby power units, and in some types of total energy and combined cycle (gas/steam) systems. This product family is formulated with synthesized hydrocarbons and a unique additive system. This formula provides outstanding low temperature fluidity and exceptional resistance to degradation at high temperatures. Mobil SHC 800 Series lubricants also provide excellent antiwear properties as well as protection against rust and corrosion plus good air release performance and resistance to foaming.

	ISO VG	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
		cSt at 40°C	cSt at 100°C			
MOBIL SHC 824	32	31.5	5.9	135	<-54	248
MOBIL SHC 825	46	43.9	7.9	145	-45	248

**Mobil™ SHC™ 918 EE** is a turbine oil that was designed to provide energy efficient benefits in certain GE gas turbine models. This product was developed together by ExxonMobil and GE. GE gas turbines operate at high power output that can thermally stress a lubricant resulting in filter plugging and valve sticking, shorter oil life, and reduced reliability.

	ISO VG	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
		cSt at 40°C	cSt at 100°C			
MOBIL SHC 918 EE	18.9	4.2	125	-33	-33	

**Mobil™ DTE™ 800 Series** are superior performance turbine oils designed for use in steam turbines, gas turbines and combined cycle gas turbine (CCGT) applications under the most severe operating conditions. These progressive products are based on high quality hydrotreated basestocks for exceptional thermal/oxidation resistance along with specially chosen additives engineered to provide the deposit control and "keep-clean" performance required by severe duty gas turbines as well as excellent water separability needed for steam turbine operation. The formulations also include a non-zinc antiwear system to meet the load carrying requirements of geared turbines.

	ISO VG	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	FZG Scuffing, Fail Load Stage, A/8.3/90, ISO 14635-1
		cSt at 40°C	cSt at 100°C				
MOBIL DTE 832	29.6	5.4	110	-30	224	8	
MOBIL DTE 846	42.4	6.2	106	-30	244	8	

**Mobil™ DTE™ 700 Series** are Zinc-Free turbine lubricants specifically designed for use in gas and steam turbine applications. Mobil DTE 700 Series lubricants are formulated with carefully selected basestocks and additives, including antioxidants, rust and corrosion inhibitors and anti-foam agents. These components provide outstanding resistance to oxidation and chemical degradation over time. Mobil DTE 700 lubricants exhibit excellent water separability, resistance to emulsion formation and anti-foaming characteristics which provide reliable operation. Their enhanced air release properties are critical for turbine hydraulic control mechanisms.

	ISO VG	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
		cSt at 40°C	cSt at 100°C			
MOBIL DTE 732	32	30	5.5	117	-30	228
MOBIL DTE 746	46	44	6.8	113	-30	230

Please refer to [exxonmobil.com/en/pds](http://exxonmobil.com/en/pds) for latest product

**Teresstic™ AC 32** is a rust and oxidation inhibited ammonia compatible compressor and circulating oil. It is formulated primarily for equipment in ammonia production or service such as centrifugal compressors in chemical plants. Teresstic AC 32 can be used in hydraulic systems where the pump manufacturer requires a mineral type oil that does not meet antiwear additives such as those containing silver plated components.

TERESSTIC AC 32	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
	cSt at 40°C	cSt at 100°C			
	32.0	5.52	109	-40	204

**Mobil™ DTE™ 932 GT** is a next generation high performance turbine oil designed for use in large frame turbines under severe operating conditions. This product is based on selected high quality base oils carefully balanced with a proprietary additive system to provide long oil life in combination with industry leading "keep clean" performance. The formulations also include a non-zinc antiwear system to meet the load carrying requirements of geared turbines.

MOBIL DTE 932 GT	ISO VG	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
		cSt at 40°C	cSt at 100°C			
	32	31.5	6.1	141	-18	240

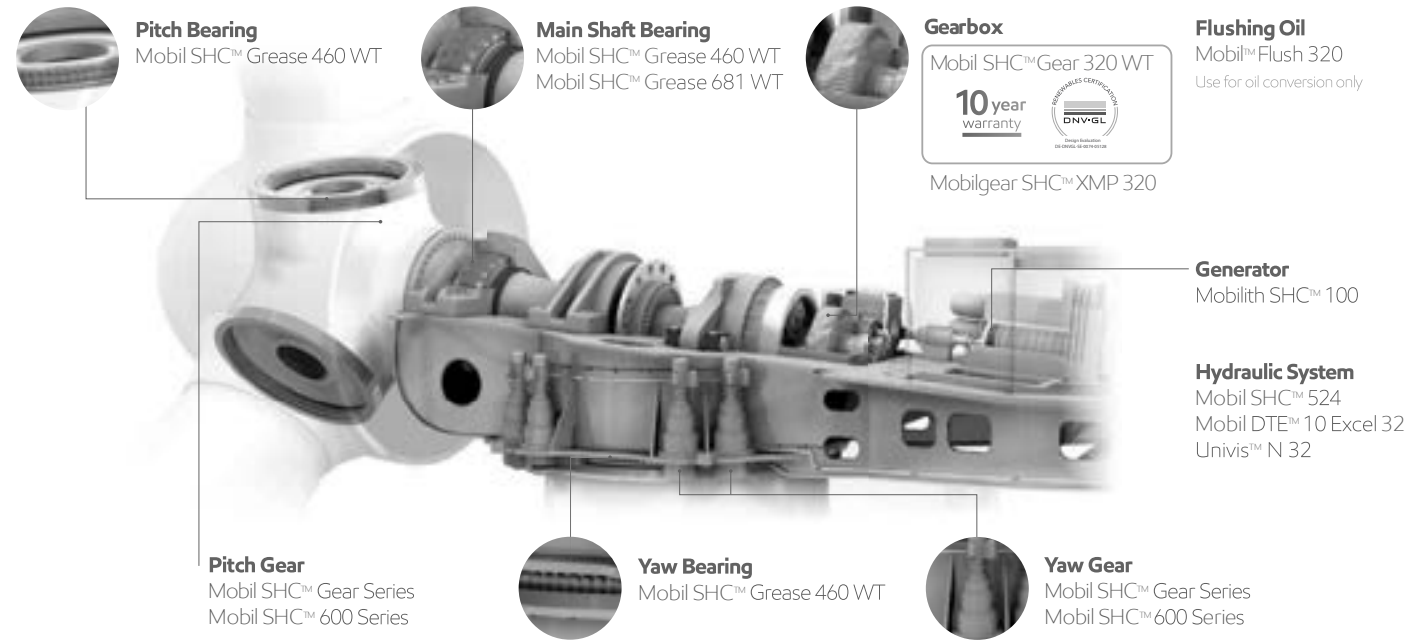
**Mobil™ DTE™ 732 M2** is next generation high performance turbine oil designed for use in Mitsubishi Heavy Industry (MHI) non-geared Single Shaft Heavy Duty Gas & Steam Turbines and Multi Shaft Gas Turbines, including turbines equipped with PEEK bearings. This product meets MHI's requirements for long life – high temperature turbine applications, MS04-MA-CL005 (Rev. 2), through high quality base oils and additive system designed to provide long oil life. Mobil DTE 732 M2 also meets the requirements of MS04-MACL001 and CL002.

MOBIL DTE 732 M2	ISO VG	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
		cSt at 40°C	cSt at 100°C			
	32	31.0	5.8	131	-15	233

*This product is only available in the US.*

**Mobil™ DTE™ Oil Named Series.....13**  
**Teresstic™ Series.....12**

# High performance lubrication for wind turbines



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 Note: Please consult your OEM manual for specific lubricant recommendations.

**QUESTIONS?**  
 CALL EXXONMOBIL  
 TECHNICAL SUPPORT CENTER AT  
**1-800-662-4525**  
[tsc.americas@exxonmobil.com](mailto:tsc.americas@exxonmobil.com)

[mobil.com/industrial](http://mobil.com/industrial) | [mobildelvac.com](http://mobildelvac.com) | [mobil.com](http://mobil.com)

# COMMERCIAL VEHICLE PRODUCT LISTING BY APPLICATION

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# Mobil™ Commercial Vehicle Lubricants Limited Warranty

## What the warranty covers

ExxonMobil Oil Corporation ("ExxonMobil") provides this limited warranty to purchasers who use Mobil-branded commercial equipment lubricants in their equipment, as established by the original equipment manufacturer ("OEM") and industry requirements (for example, the standards set by the American Petroleum Institute (API)). This limited warranty covers the lubricant you purchased and the equipment's critical equipment parts lubricated by the lubricant.

ExxonMobil warrants that its lubricants are free from defects, and that the lubricant you purchased will protect your equipment's critical parts from oil-related failure. The lubricant must have been put into service no later than five (5) years from the date of purchase.

Be advised that if your equipment is covered by a warranty, you should follow the equipment's oil-life sensor or the oil change interval recommended in your owner's manual to avoid a disruption in your warranty. Follow your owner's manual if the equipment is operated in any of the following severe services: commercial applications; frequent towing or hauling; extremely dusty or dirty conditions; or excessive idling conditions.

## What the warranty covers

This limited warranty excludes:

- Mobil-branded commercial equipment lubricants used in mechanically deficient equipment as a result of abnormal operation; negligence; abuse; damage from casualty, shipment or accident; or equipment modification done without written authorization from the OEM.
- Situations where the OEM-required lubricant standards do not match those stated by ExxonMobil without the written approval of ExxonMobil.
- Mobil-branded commercial equipment lubricants used in conjunction with any other product or additive that has not been authorized for use by ExxonMobil.
- Failure of equipment due to a preexisting condition that is unrelated to the use of the lubricant.
- Repair or replacement of equipment due to normal wear.
- Failure of the vehicle or lubricant due to contamination or water.

## What the period of coverage is

This limited warranty is valid for your equipment's OEM-recommended oil change interval or an extended oil drain interval as approved in writing by your OEM and/or ExxonMobil, whichever is longer, regardless of equipment's age. Additional requirements include:

- Oils must be put into service no later than five (5) years from the date of purchase.
- Oil changes must be completed in accordance with the equipment's owner's manual or by written guidance from your OEM and/or ExxonMobil.

## What we will do to correct problems

ExxonMobil will replace any lubricant that is defective. In addition, if there is equipment failure due to the lubricant you purchased and the equipment was serviceable at the time the lubricant was installed, and subject to the requirements and limitations stated herein, ExxonMobil will pay for parts and labor deemed reasonably necessary to repair any equipment damage, at no cost to you, if it can be demonstrated that the damage was caused solely and directly by a defect or malfunction of the lubricant.

## How you can get service

1. Upon discovery of the damage (but not later than two [2] months from the date the damage occurred), contact your ExxonMobil representative or local distributor representative or write to ExxonMobil Fuels, Lubricants & Specialties Marketing Company, Technical Support Manager, 22777 Springwoods Village Pkwy., Spring, TX 77389. You may also call 1-800-966-2910.
2. Allow an ExxonMobil representative to examine a proof of purchase of the ExxonMobil lubricant; the equipment, including its operating and maintenance records; and a historical record of lubricant brands and types used during the life of the engine or equipment in order to determine the extent of the damage and to confirm that the lubricant was the cause.
3. Allow an ExxonMobil representative to obtain representative new and used lubricant samples for laboratory analysis to assist in determining the cause of the equipment failure.

## How state law relates to the warranty

This warranty gives you specific legal rights, and you may also have other rights, which can vary from state to state.

The remedy provided herein will be your only recovery against ExxonMobil. You will not be able to recover (and ExxonMobil hereby disclaims all liability for) special, incidental damages (for example, transportation costs to and from the ExxonMobil representative for inspection of the equipment, loss of use, towing charges, bus fare, car rentals, or other incidental damages) or indirect or consequential damages (the cost of repairing or replacing other property that was damaged when the lubricant was defective). Some states do not allow the exclusion of or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER REMEDIES AND LUBRICANT PRODUCT WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE.

# BOOST ENGINE PERFORMANCE AND IMPROVE UPTIME

Many fleets have individual needs. Mobil Delvac™ products can help increase uptime, help optimize costs effectively, and protect the life of the vehicle by:



## Extending equipment life:

Our products can help reduce wear and minimize deposit and sludge formation, which can help reduce engine wear and extend life of equipment.



## Optimize oil drain intervals:

There's more to extending drain intervals than just additional miles, it's about increasing uptime and lowering overall oil consumption. Mobil Delvac™ products can help optimize these drain intervals, helping to produce real savings of both overall costs and equipment downtime.



## Providing better fuel economy:

Mobil Delvac™ products can help improve engine performance and fuel economy savings.<sup>1</sup>

<sup>1</sup>Fuel economy improvements are dependent on vehicle/equipment type, outside temperature, driving conditions and current fluid viscosities

\*Based on US engine manufacturers' (OEM) average oil drain intervals (ODI) API CK-4 / API FA-4 recommendation. Results vary based on vehicle/engine condition, driving and environmental conditions. Consult OEM before implementing extended ODIs, especially if the equipment/vehicle is under warranty.



# CHOOSE THE RIGHT OIL FOR YOUR OPERATION CK-4

Product Name	Mobil Delvac™ 1	Mobil Delvac™ Extreme	Mobil Delvac™ 1300 Super	Mobil Delvac™ HDEO
Oil Type	Advanced Full Synthetic	Synthetic	Premium Synthetic Blend	Synthetic Blend
API Category	CK-4	CK-4	CK-4	CK-4
Viscosity Grades	ESP 0W-40, ESP 5W-40, 5W-30 Adv Syn	15W-40, 10W-30	15W-40, 10W-30	15W-40, 10W-30
Advanced Wear Protection	 <p>Outstanding performance at extreme temperatures Step out wear protection</p>	 <p>Exceptional performance in extreme conditions and extended ODI service Long life of critical wear surfaces</p>	 <p>Excellent anti-wear performance Up to 50% more wear protection compared to API CK-4 requirements</p>	 <p>Up to 30% more wear protection compared to API CK-4 requirements</p>
Oil Drain Intervals	 <p>Up to 3X OEM recommended ODI*</p>	 <p>Up to 2X OEM recommended ODI*</p>	 <p>Up to 1.5X OEM recommended ODI*</p>	 <p>Standard ODI</p>
Fuel Economy Potential	<p>5W-30 Adv Syn:</p>  <p>ESP 0W-40, ESP 5W-40:</p> 	<p>10W-30:</p>  <p>15W-40:</p> 	<p>10W-30:</p>  <p>15W-40:</p> 	<p>10W-30:</p>  <p>15W-40:</p> 
Fuel Type	Diesel, Renewable diesel, gasoline	Diesel, Renewable diesel, gasoline (15W-40 only)	Diesel, Renewable diesel, gasoline	Diesel, Renewable diesel

\*Based on US engine manufacturers' (OEM) average oil drain intervals (ODI) API CK-4 / API FA-4 recommendation. Results vary based on vehicle/engine condition, driving and environmental conditions. Consult OEM or Imperial Oil before implementing extended ODIs, especially if the equipment/vehicle is under warranty.

# CHOOSE THE RIGHT OIL FOR YOUR OPERATION

## FA-4

Product Name	 Mobil Delvac™ 1 Advanced Fuel Economy	 Mobil Delvac™ Extreme FE	 Mobil Delvac™ Super FE
Oil Type	Advanced Full Synthetic	Synthetic	Premium Synthetic Blend
API Category	FA-4	FA-4	FA-4
Viscosity Grades	5W-30	10W-30	10W-30
Advanced Wear Protection	 Outstanding performance at extreme temperatures Step out wear protection	 Exceptional performance in extreme conditions and extended ODI service Long life of critical wear surfaces	 Excellent anti-wear performance Up to 50% more wear protection compared to API CK-4 requirements
Oil Drain Intervals	 Up to 3X OEM recommended ODI*	 Up to 2X OEM recommended ODI*	 Up to 1.5X OEM recommended ODI*
Fuel Economy Potential	5W-30: 	10W-30: 	10W-30: 
Fuel Type	Diesel, Renewable diesel, gasoline	Diesel, Renewable diesel	Diesel, Renewable diesel, gasoline

\*Based on US engine manufacturers' (OEM) average oil drain intervals (ODI) API CK-4 / API FA-4 recommendation. Results vary based on vehicle/engine condition, driving and environmental conditions. Consult OEM before implementing extended ODIs, especially if the equipment/vehicle is under warranty.

## COMMERCIAL VEHICLE LUBRICANTS

### HEAVY DUTY DIESEL ENGINE OILS

**Mobil Delvac 1™ ESP 5W-40** is an advanced full synthetic, highperformance diesel engine oil that helps to extend engine life for modern diesel engines operating in severe conditions. Mobil Delvac 1 ESP 5W-40 diesel engine oil is formulated to deliver exceptional performance in newer and older engine designs, including those with emission control systems. Its formulation meets or exceeds the requirements of original equipment manufacturers (OEMs) with state-of-the-art technology that provides outstanding performance at extreme, temperatures, our best protection for drivers with extended oil drain intervals and enhanced emission system protection in a variety of severe conditions.

**Mobil Delvac 1™ ESP 0W-40** is an advanced full synthetic heavyduty diesel engine oil that was designed to protect modern diesel engines operating in severe on- and off-highway application. Mobil Delvac 1 ESP 0W-40 is recommended for use in a wide range of heavy-duty applications and operating environments found in the on-road transport and off-road, mining, forestry, construction, and agricultural industries. It can also be used in refrigeration units and older, well-maintained engines.

**Mobil Delvac 1™ 5W-30 Advanced Synthetic** is an advanced full synthetic, high-performance diesel engine oil that delivers long drain capability up to 3 times the average OEM recommendation and fuel economy potential while helping to extend engine life for modern diesel engines operating in severe conditions. It is an outstanding lubricant solution for modern and latest engine technologies equipped with after treatment devices. It was developed to maintain unsurpassed oxidation stability performance to meet long oil drain intervals and support low maintenance efforts. This product meets or exceeds the requirements of the latest API and ACEA industry specifications for diesel engine oils, as well as the requirements of many major American, and European engine manufacturers.

	Kinematic Viscosity, ASTM D445			Sulfated Ash, wt%, ASTM D 874	Total Base #, mg KOH/g, ASTM D2896	Pour Point °C, ASTM D 97
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270			
MOBIL DELVAC 1 ESP 5W-40	84	13.8	169	1	12	-48
MOBIL DELVAC 1 ESP 0W-40	90	14.6	176	1	11	-48
MOBIL DELVAC 1 5W-30 ADVANCED SYNTHETIC	73.2	11.95	160	0.95	8.3	-42

**Mobil Delvac Modern™ 10W-40 Advanced Protection** is a synthetic extra high performance diesel engine oil engineered to provide lubrication to modern, high performance, low emissions engines used in severe applications. This engine oil is designed using high performance base oils which provide excellent low temperature fluidity, high temperature viscosity retention and volatility control. Its specifications and approvals allow Mobil Delvac XHP ESP 10W-40 to target mixed fleet applications.

	Kinematic Viscosity, ASTM D445			Pour Point °C, ASTM D 97	Total Base #, mg KOH/g, ASTM D2896
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270		
MOBIL DELVAC MODERN 10W-40	91	13.7	153	-30	13.2

Please refer to [exxonmobil.com/en/pds](http://exxonmobil.com/en/pds) for latest product

**Mobil Delvac 1™ Advanced Fuel Economy 5W-30** is our most sophisticated synthetic heavy-duty diesel engine oil, developed to meet API FA-4 Industry and many OEM fuel economy specifications. Mobil Delvac 1™ Advanced Fuel Economy 5W-30 is the most advanced lubricant solution for latest, fuel-efficient engine technology equipped with emission after-treatment devices. It was developed by ExxonMobil to provide fuel savings while maintaining outstanding wear performance. Mobil Delvac 1™ Advanced Fuel Economy 5W-30 also provides unsurpassed oxidation stability performance, providing long oil drain intervals up to 3 times the average OEM recommendation. The low ash formulation protects at the same time all exhaust after-treatment parts required to meet emissions regulations.

	Kinematic Viscosity, ASTM D445			Sulfated Ash, wt%, ASTM D 874	Total Base #, mg KOH/g, ASTM D2896	Pour Point °C, ASTM D 97
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270			
MOBIL DELVAC 1 ADVANCED FUEL ECONOMY 5W-30	61.78	10.2	153	0.95	10.8	-42

**Mobil™ Delvac™ Extreme 10W-30 and 15W-40** are premium synthetic, high performance, diesel engine oils that help extend engine life while providing long drain capability for modern diesel engines operating in extreme conditions. They are recommended for use in a wide range of heavy-duty applications and operating environments found on- and off-highway, including engines operating under heavy loads. Mobil Delvac Extreme is formulated with synthetic base stocks and a boosted additive system tailored to deliver extended performance for up to 2 times the average OEM recommended oil drain intervals. The proprietary formulation delivers excellent wear protection, exceptional oxidation stability, and outstanding TBN retention. Mobil Delvac Extreme also provides outstanding resistance to oil consumption, oxidation, corrosive and abrasive wear, and high temperature deposits.

	Kinematic Viscosity, ASTM D445			Sulfated Ash, wt%, ASTM D 874	Total Base #, mg KOH/g, ASTM D2896	Pour Point °C, ASTM D 97
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270			
MOBIL DELVAC EXTREME 10W-30	81.1	11.8	140	1	9.6	-42
MOBIL DELVAC EXTREME 15W-30	107.4	14.3	133	1	10.3	-33

**Mobil Delvac™ Super FE 10W-30** is an advanced, synthetic blend, diesel engine oil that helps extend engine life. It meets or exceeds the new API FA-4 specification for fuel efficient engine oils as well as key original equipment manufacturer (OEM) requirements.

	Kinematic Viscosity, ASTM D445			Sulfated Ash, wt%, ASTM D 874	Total Base #, mg KOH/g, ASTM D2896	Pour Point °C, ASTM D 97
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270			
MOBIL DELVAC SUPER FE 10W-30	64.1	9.8	140	0.9	9.8	-36

Return to the [Product Application Index](#)

# COMMERCIAL VEHICLE LUBRICANTS

## HEAVY-DUTY DIESEL - ENGINE OILS

**Mobil™ Delvac™ Extreme FE 10W-30** is a premium synthetic, high performance, diesel engine oil that helps extend engine life while providing long drain capability for modern diesel engines operating in extreme conditions. It meets or exceeds the new API FA-4 specification for fuel efficient engines oils as well as key original equipment manufacturer (OEM) requirements.

	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Sulfated Ash, wt%, ASTM D 874	Total Base #, mg KOH/g, ASTM D2896	Pour Point °C, ASTM D 97
	cSt at 40°C	cSt at 100°C				
	MOBIL DELVAC EXTREME FE 10W-30	63.8				

**Mobil™ Delvac™ 1300 Super 10W-30 and 15W-40** are advanced, premium synthetic-blend, diesel engine oils that help extend engine life, allowing you to run your business with confidence. These products meet or exceed original equipment manufacturer (OEM) requirements and deliver high performance in both on and offhighway applications. Fully backward compatible, Mobil Delvac 1300 Super delivers exceptional performance in both newer and older heavy-duty engine designs. Accordingly, these oils meet or exceed the requirements of API CK-4, CJ-4, CI-4 PLUS, CI-4 and CH-4 service categories, as well as key OEM requirements. Mobil Delvac 1300 Super oils are universal, meaning they may also be used in gasoline engines requiring the API SP specification. Mobil Delvac 1300 Super is a tailored formulation that delivers excellent wear and engine protection, extended drain capability of up to 1.5 times the average ODI recommendation, outstanding high temperature performance and engine cleanliness.

	Kinematic Viscosity, ASTM D445		Sulfated Ash, wt%, ASTM D 874	Total Base #, mg KOH/g, ASTM D2896	Pour Point °C, ASTM D 97
	cSt at 40°C	cSt at 100°C			
	MOBIL DELVAC 1300 SUPER 10W-30	-			
MOBIL DELVAC 1300 SUPER 15W-40	109	14	0.9	9.4	-33

**Mobil™ Delvac™ HDEO 10W-30 and 15W-40** are synthetic blend diesel engine oils designed to meet warranty requirements for high-speed, four-stroke heavy-duty diesel engines. These products are formulated to maintain the durability of emission control systems, including diesel particulate filters and other advanced after treatment systems. Mobil Delvac HDEO meets or exceeds the requirements of API service classifications CK-4, CJ-4, CI-4 PLUS, CI-4 and CH-4. These products are also approved by major original equipment manufacturers (OEM).

	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Sulfated Ash, wt%, ASTM D 874	Total Base #, mg KOH/g, ASTM D2896	Pour Point °C, ASTM D 97
	cSt at 40°C	cSt at 100°C				
	MOBIL DELVAC HDEO 10W-30	82				
MOBIL DELVAC HDEO 15W-40	112	14.2	132	1	10	-27

**Mobil™ Delvac™ 1630, 1640 and 1650** are high performance monograde diesel engine oils formulated from advanced technology base oils and a balanced additive system. They are recommended for use in intercooled, turbo-charged engines operating under severe on and off-highway conditions as well as a wide range of applications where a monograde lubricant is recommended.

	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Sulfated Ash, wt%, ASTM D 874	Total Base #, mg KOH/g, ASTM D2896	Pour Point °C, ASTM D 97
	cSt at 40°C	cSt at 100°C				
	MOBIL DELVAC 1630	90				
MOBIL DELVAC 1640	132	14.7	112	1.4	12	-21
MOBIL DELVAC 1650	202	19.5	110	1.4	12	-18

**Mobil™ Delvac™ 1220, 1230, 1240 and 1250** are heavy-duty high performance monograde diesel engine oils formulated from high performance base oils and a balanced additive system of ashless dispersants, metallic detergents, and inhibitors to control oxidation, wear, corrosion, and rust. They are used in a wide range of applications where a monograde lubricant is recommended including 2-cycle diesel applications.

	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Sulfated Ash, wt%, ASTM D 874	Total Base #, mg KOH/g, ASTM D2896	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
	cSt at 40°C	cSt at 100°C					
	MOBIL DELVAC 1220*	66					
MOBIL DELVAC 1230	104.7	11.9	102	0.82	7	-27	238
MOBIL DELVAC 1240	157.6	15.5	99	0.82	7.1	-21	247
MOBIL DELVAC 1250*	215.5	19.6	99	0.82	7.1	-21	241

\*These products are only available in USA

**Mobil Delvac Modern™ 15W-40 Extended Performance** is a premium semi-synthetic, high-performance diesel engine oil that provides extended ODI potential up to 2 times the average OEM ODI recommendation or up to 1,000 hours while helping to extend engine life for most high- performance diesel engines in off-highway applications. Mobil Delvac Modern™ 15W-40 Extended Performance is specifically formulated with a reinforced additive system designed for use in a wide variety of heavy-duty applications in off-highway environments, including engines found in the mining and construction sectors.

	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Total Base #, mg KOH/g, ASTM D2896	Pour Point °C, ASTM D 97
	cSt at 40°C	cSt at 100°C			
	MOBIL DELVAC MODERN15W-40 EXTENDED PERFORMANCE	118			

**Mobil Delvac Ultra™ 5W-40 Extended Performance** is an advanced full synthetic, high-performance diesel engine oil that provides extended ODI potential up to 4 times the average OEM ODI recommendation or up to 2000 hours while helping to extend engine life for most high-performance diesel engines in off-highway applications. Mobil Delvac Ultra 5W-40 Extended Performance is recommended for use in a wide range of heavy-duty applications and operating environments found in the off-road mining, forestry, construction, and agricultural industries. This product meets or exceeds the requirements of the latest API industry specifications for diesel engine oils, as well as the requirements of several offhighway major American engine manufacturers.

	Kinematic Viscosity, ASTM D445		Total Base #, mg KOH/g, ASTM D2896	Pour Point °C, ASTM D 97
	cSt at 40°C	cSt at 100°C		
	MOBIL DELVAC ULTRA 5W-40 EXTENDED PERFORMANCE	92.3		

# COMMERCIAL VEHICLE LUBRICANTS

## GAS ENGINE OILS

**Mobil™ Delvac™ Modern 15W-40 CNG/LNG** engine oil provides excellent performance in the challenging operating environments presented by Compressed Natural Gas (CNG) and Liquefied Natural Gas (LNG) and offers extended drain interval capability. It is a highperformance, heavy-duty engine oil formulated for diesel engines and spark-ignited, CNG- and LNG-fueled truck and bus engines. The product has approvals for Cummins CES 20092 and API CK-4 specifications.

	Kinematic Viscosity, ASTM D445		Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	Total Base #, mg KOH/g, ASTM D2896
	cSt at 40°C	cSt at 100°C			
	MOBIL DELVAC MODERN 15W-40 CNG/LNG	15			

**Mobil™ GEO™ 10W-40** is a synthetic blend engine oil specifically formulated to provide reliable protection for engines using natural gas fuel, including Compressed Natural Gas (CNG) or Liquefied Natural Gas (LNG). This advanced low ash formulation provides excellent oxidation, nitration, and thermal stability to reduce combustion chamber ash deposits and minimize low spark plug fouling. Additionally, this engine oil was designed to operate over a wide range of operating temperatures, including cold start capabilities, helping operators run equipment longer and more reliably. Lastly, Mobil GEO 10W-40 was formulated with a robust anti-wear package, designed to extend the life of critical engine components, such as cams, lifters, and rockers.

**Mobil™ GEO™ 15W-40** is a premium fleet engine oil specifically formulated to provide reliable protection for trucks and buses using Compressed Natural Gas (CNG) or Liquefied Natural Gas (LNG). Mobil GEO 15W-40 is formulated from high quality base stocks and a balanced additive system. This advanced medium ash formulation provides excellent oxidation, nitration, and thermal stability to minimize combustion chamber ash deposits. Mobil GEO 15W-40 lubricates with less varnish, sludge, and carbon build-up under the most severe operating conditions.

	Kinematic Viscosity, ASTM D445		V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
	cSt at 40°C	cSt at 100°C			
	MOBIL GEO 10W-40	105			
MOBIL GEO 15W-40	110	14.4	130	-27	210

These products are only available in Canada.

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# COMMERCIAL VEHICLE LUBRICANTS

## HEAVY-DUTY DIESEL - TRANSMISSION AND DRIVETRAIN FLUIDS

**Mobil Delvac 1™ ATF** is a fully synthetic fluid recommended by Allison Transmission, Inc. approved against the Allison TES-295® and TES-468® Specifications. The fluid is designed to meet the demanding requirements of modern heavy-duty automatic transmissions. The synthetic base oil composition enables excellent performance even in some of the harshest of operating conditions. It offers outstanding gear shifting and power transfer performance versus conventional ATF fluids, the inherently high viscosity index and stability of Mobil Delvac 1 ATF protects against thermal breakdown at high operating temperatures, while still providing outstanding performance at sub-zero temperatures.

**Mobil Delvac 1™ ATF 668** is a fully synthetic transmission fluid recommended by Allison Transmission, Inc. that is approved against the Allison TES-668® specification, and is backwards compatible for applications recommending Allison TES-295®. The fluid is designed to meet the demanding requirements of modern heavy-duty automatic transmissions.

	Kinematic Viscosity, ASTM D445				
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
MOBIL DELVAC 1 ATF	39	7.3	168	-54	236
MOBIL DELVAC 1 ATF 668	36.5	6.85	154	-54	233

**Mobil Delvac 1™ Transmission Fluid V50** is a fully synthetic, heavy-duty manual transmission lubricant. Recommended for year-round lubrication of manual transmissions in light to severe duty on- and off-highway equipment operating in a wide range of environments.

	Kinematic Viscosity, ASTM D445				
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
MOBIL DELVAC 1 TRANSMISSION FLUID V50	115	17.8	172	-42	252

**Mobil Delvac Modern™ All Season Trans Fluid 20, 30 and 40** are high performance drivetrain lubricants engineered to meet or exceeds the requirements of Caterpillar's new TO-4M performance specifications for off-highway transmissions, drive trains, and hydraulic systems. These advanced technology lubricants provides clutch and brake compatibility and extended life that has not been possible with previous formulations. Mobil Delvac Modern™ All Season Trans Fluid incorporates a blend of semi-synthetic base oils with an advanced additive system. The product is recommended for all-season lubrication all drivetrain components in light to severe duty off-highway equipment operating in a wide range of environments.

	Kinematic Viscosity, ASTM D445				
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
MOBIL DELVAC MODERN ALL SEASON TRANS FLUID 20	30.7	7.36	221	-54	190
MOBIL DELVAC MODERN ALL SEASON TRANS FLUID 30	57.6	10.5	173	-45	190
MOBIL DELVAC MODERN ALL SEASON TRANS FLUID 40	107	14.2	134	-39	222

**Mobil Delvac 1™ Transmission Fluid MBT** is an SAE 75W-90, fully synthetic manual transmission oil. Mobil Delvac 1 Transmission Fluid MBT 75W-90 has excellent viscosity/temperature characteristics.

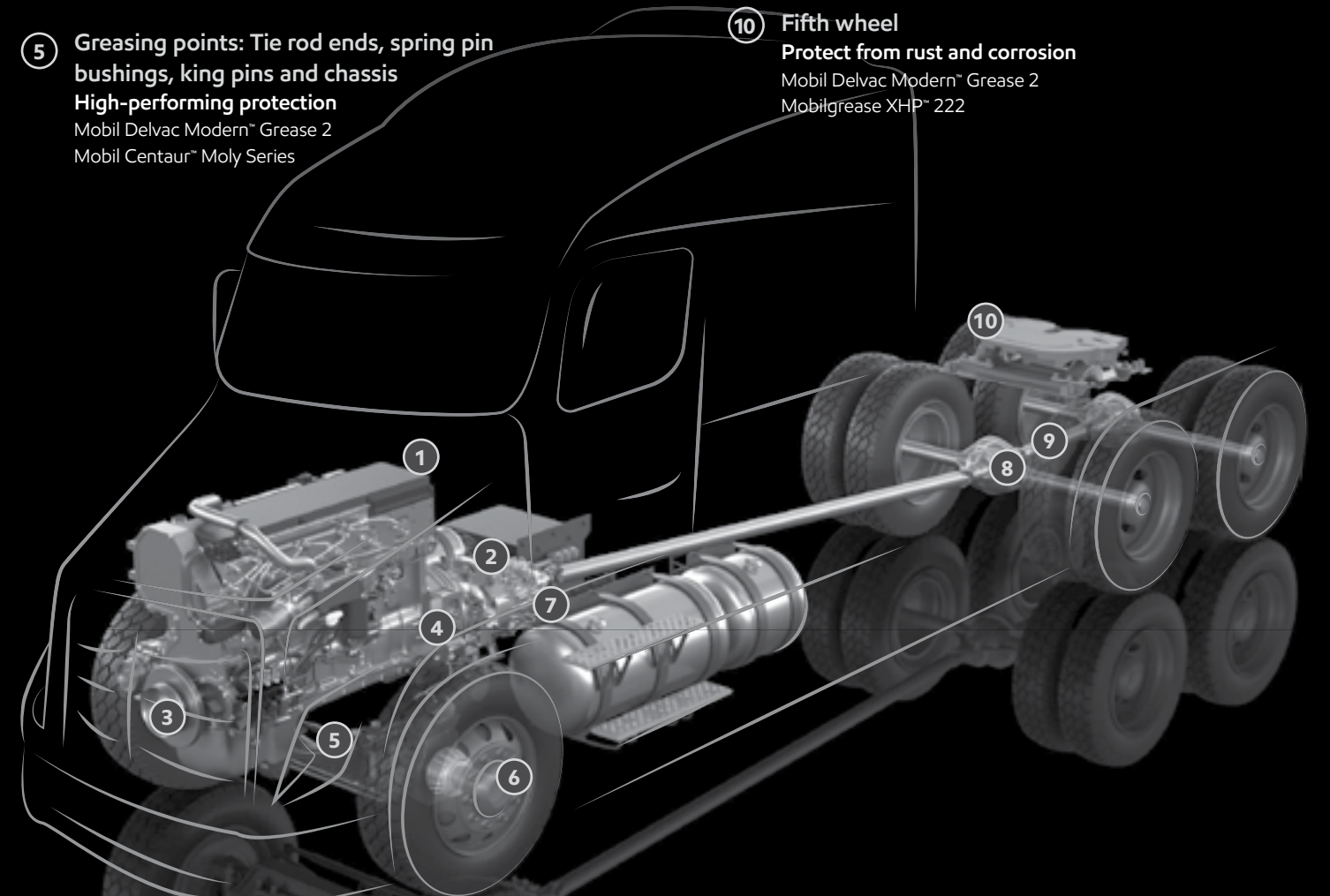
	Kinematic Viscosity, ASTM D445				
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
MOBIL DELVAC TRANSMISSION FLUID MBT 75W-90	96.3	14.7	159	-45	179

**Mobil Delvac 1™ Transmission Fluid Arctic** is a supreme performance, synthetic drivetrain lubricant engineered to meet the demanding requirements of major manufacturers of heavy-duty commercial equipment in extremely cold climate applications. It is recommended for use in truck and other commercial transmissions where Caterpillar TO-4 and Allison C-4 performance specifications are required. Mobil Delvac 1 Transmission Fluid Arctic provides outstanding clutch and brake compatibility, and friction control along the widest temperature range performance.

	Kinematic Viscosity, ASTM D445				
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
MOBIL DELVAC 1 TRANSMISSION FLUID ARCTIC	81	12.2	146	-51	228

# Mobil Delvac™

- Engine**  
**Extend your engine life**  
Mobil Delvac 1™ Advanced Fuel Economy 5W-30 (FA-4)  
Mobil Delvac 1™ 5W-30 Advanced Synthetic (CK-4)  
Mobil Delvac 1™ ESP 5W-40 (CK-4)  
Mobil Delvac™ Extreme FE 10W-30 FA-4  
Mobil Delvac™ Extreme 10W-30 CK-4  
Mobil Delvac™ Extreme 15W-40 CK-4  
Mobil Delvac™ 1300 Super 10W-30 CK-4  
Mobil Delvac™ 1300 Super 15W-40 CK-4  
Mobil Delvac™ Super FE 10W-30 FA-4  
Mobil Delvac™ Modern™ 15W-40 CNG/LNG
- Clutch throw-out bearings**  
**Protect from rust and corrosion**  
Mobil Delvac Modern™ Grease 2  
Mobilgrease™ XHP™ 222
- Engine radiator**  
**Extend your engine life**  
Mobil Delvac™ Extended Life Coolant/Antifreeze
- Manual steering gear**  
**Excellent thermal stability and oxidation resistance**  
Mobil ATF™ D/M  
Mobilith SHC™ 007
- Greasing points: Tie rod ends, spring pin bushings, king pins and chassis**  
**High-performing protection**  
Mobil Delvac Modern™ Grease 2  
Mobil Centaur™ Moly Series
- Steer axle wheel bearings**  
**Excellent thermal stability and oxidation resistance**  
Mobil Delvac 1™ Gear Oil 75W-90  
Mobil Delvac 1™ Transmission Fluid 40  
Mobilith SHC™ 007
- Transmission**  
**Smooth-running transmission**  
Mobil Delvac 1™ ATF (Allison TES 295)  
Mobil Delvac 1™ ATF 668 (Allison TES 668)  
Mobil Delvac 1™ Transmission Fluid 40 (Eaton PS-386)  
Mobil Delvac 1™ Transmission Fluid MBT 75W-90 (Detroit DT-12)  
Mobil Delvac 1™ Transmission Fluid V30 (Volvo 97318)  
Mobil Delvac 1™ Transmission Fluid V50 (Volvo 97319)
- Differential/Final drive**  
**Performance under pressure**  
Mobil Delvac 1™ Gear Oil 75W-90
- Universal joints**  
**Protect from rust and corrosion**  
Mobil Delvac Modern™ Grease 2  
Mobilgrease XHP™ 222
- Fifth wheel**  
**Protect from rust and corrosion**  
Mobil Delvac Modern™ Grease 2  
Mobilgrease XHP™ 222



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Trust Mobil lubricants to help minimize downtime and maximize productivity.

#### Greases

Mobil Epic™  
Mobil Centaur™ Series  
Mobilgrease XHP™ Mine Series  
Mobil Delvac Modern™ Grease 2  
Mobil Unirex™ EP

#### Engine

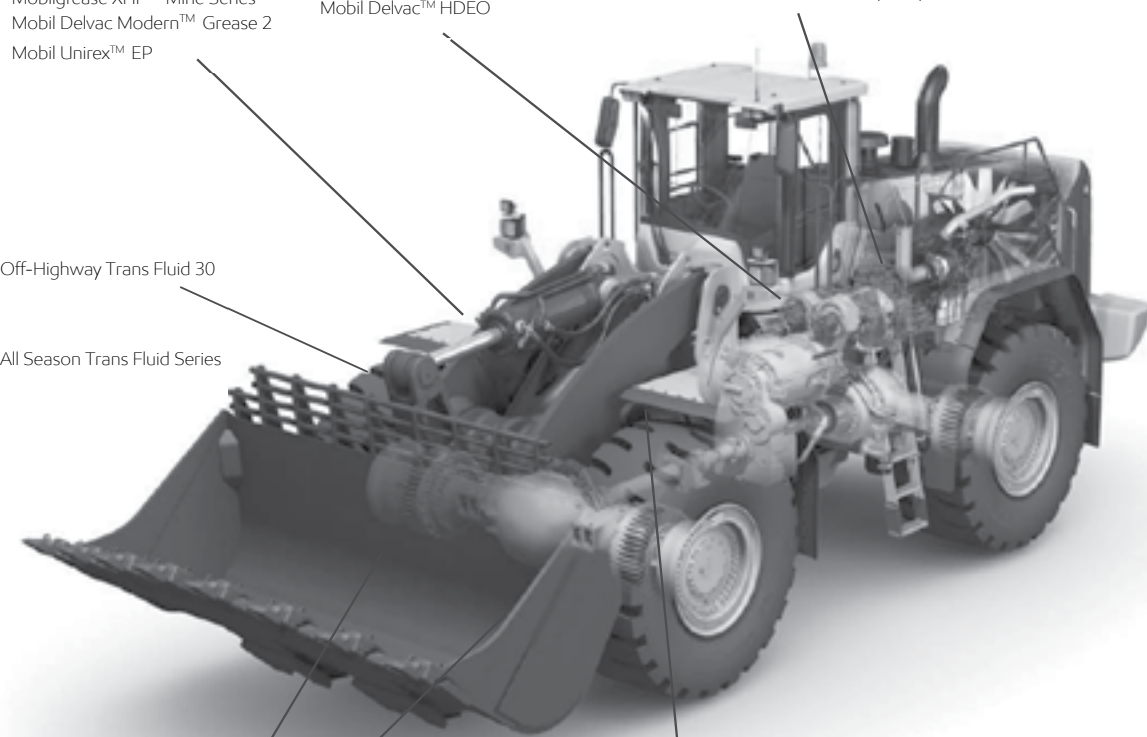
Mobil Delvac™ 1 ESP  
Mobil Delvac Ultra™ 5W-40 Extended Performance  
Mobil Delvac Modern™ 15W-40 Extended Performance  
Mobil Delvac™ HDEO

#### Engine cooling system

Mobil Delvac™ Extended Life Coolant/Antifreeze  
Mobil™ Heavy Duty Coolant/Antifreeze

#### Hydraulic system

Mobil SHC™ 500 Series  
Mobil DTE 10 Excel™  
Mobil Delvac Modern™ Off-Highway Trans Fluid 30  
Mobil Nuto™ H Series  
Mobil Unavis™ Series  
Mobil Delvac Modern™ All Season Trans Fluid Series



#### Transmission

Mobil Delvac™ Synthetic Transmission Fluid Series  
Mobil Delvac Modern™ All Season Trans Fluid Series  
Mobil Delvac Modern™ Off-Highway Trans Fluid 30  
Mobil Hydraul™

#### Differentials and final drives

Mobil Delvac™ Synthetic Transmission Fluid Series  
Mobil Delvac™ Synthetic Final Drive and Axle Oil  
Mobil Delvac™ 1 Gear Oil 75W-90; 80W-140  
Mobil Delvac Modern™ Off-Highway Trans Fluid 30;50  
Mobil Delvac Modern™ Axle Oil

#### Hydraulic system

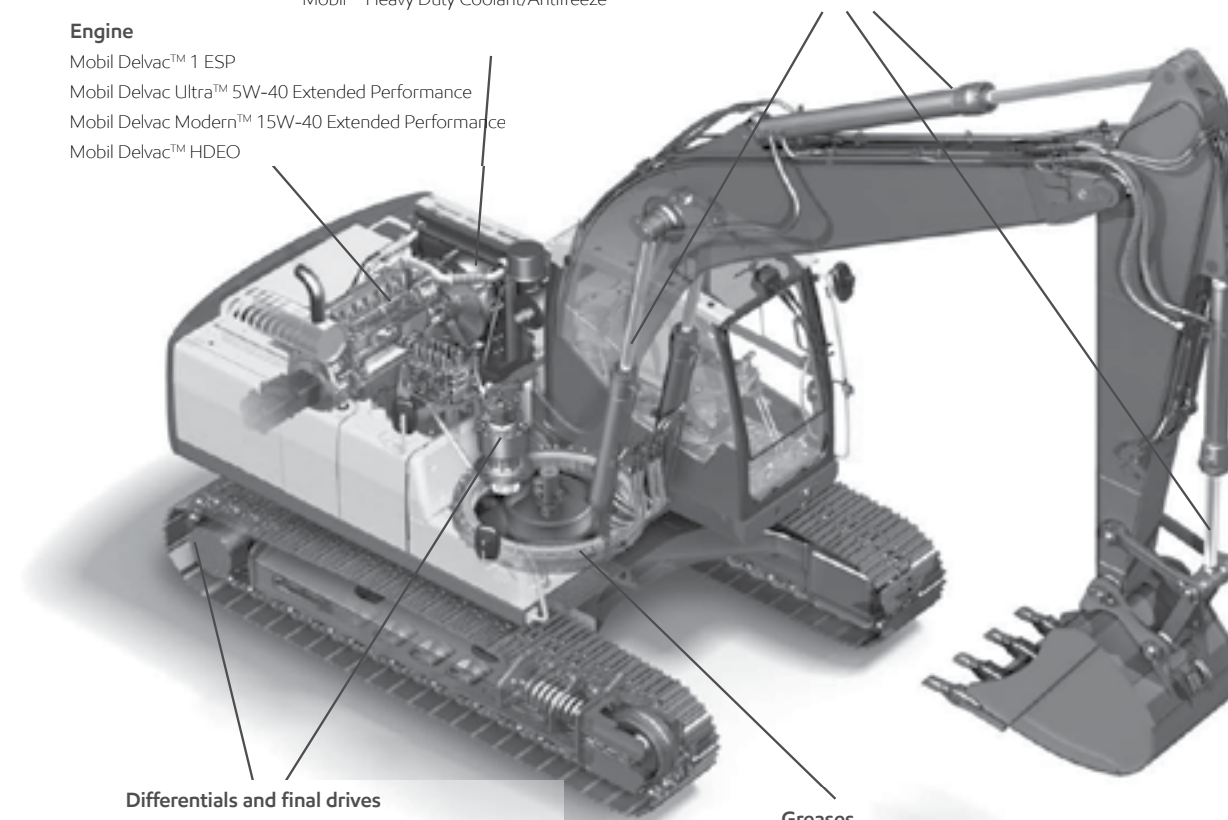
Mobil SHC™ 500 Series  
Mobil DTE 10 Excel™  
Mobil Delvac Modern™ Off-Highway Trans Fluid 10W  
Mobil Nuto™ H Series  
Mobil Unavis™ Series  
Mobil Delvac Modern™ All Season Trans Fluid Series

#### Engine cooling system

Mobil Delvac™ Extended Life Coolant/Antifreeze  
Mobil™ Heavy Duty Coolant/Antifreeze

#### Engine

Mobil Delvac™ 1 ESP  
Mobil Delvac Ultra™ 5W-40 Extended Performance  
Mobil Delvac Modern™ 15W-40 Extended Performance  
Mobil Delvac™ HDEO



#### Differentials and final drives

Mobil Delvac™ Synthetic Transmission Fluid Series  
Mobil Delvac™ Synthetic Final Drive and Axle Oil  
Mobil Delvac™ 1 Gear Oil 75W-90; 80W-140  
Mobil Delvac Modern™ Off-Highway Trans Fluid 30;50  
Mobil Delvac Modern™ Axle Oil

#### Greases

Mobil Epic™  
Mobil Centaur™ Series  
Mobilgrease XHP™ Mine  
Mobilgrease XHP™ Mine Series  
Mobil Unirex™ EP

This is a general illustration to identify some of the key components and applications; the list of products is not intended as a specific recommendation for any particular OEM model. Off-highway applications are different from model to model and OEM to OEM. For specific OEM model recommendations, please contact your Imperial Sales Advisor.

**Mobil™**

## COMMERCIAL VEHICLE LUBRICANTS

### HEAVY-DUTY DIESEL - TRANSMISSION AND DRIVETRAIN FLUIDS

**Mobil Delvac Modern™ Final Drive 50 and 60** are extra high performance drivetrain lubricants engineered specifically to provide optimum component life when used as recommended in Caterpillar final drives and axles. They are formulated from advanced base oils and the latest additive technology to protect bearings and gears from premature failure due to fatigue. These lubricants deliver excellent performance in heavy-duty commercial axles and final drives where extreme pressures and shock loading are expected. They provide exceptional chemical and thermal stability at elevated bulk oil temperatures generated under heavy loads and/or high ambient temperatures.

	Kinematic Viscosity, ASTM D445				
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
MOBIL DELVAC MODERN FINAL DRIVE 50	206	18.4	97	-24	250
MOBIL DELVAC MODERN FINAL DRIVE 60	334	25.2	97	-15	255

**Mobil Delvac Modern™ Axle Oil 80W-90** is an extra high performance, automotive lubricant formulated from select base oils and an advanced additive system specifically for limited-slip differentials. This lubricant is engineered for performance in heavy duty limited-slip differentials, axles, and final drives where extreme pressures and shock loading are expected providing API GL-5 level performance.

	Kinematic Viscosity, ASTM D445				
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
MOBIL DELVAC MODERN AXLE OIL 80W-90	141	14.8	105	-30	230

## COMMERCIAL VEHICLE LUBRICANTS

### HEAVY-DUTY DIESEL - HYDRAULIC OILS

**DIOL™ Series** oils are premium heavy-duty crankcase lubricants for locomotive diesel engines. These products were developed to meet the stringent performance requirements of Tier 4 locomotives from Progress Rail (EMD engines) and GE Transportation.

	Kinematic Viscosity, ASTM D445				Total Base #, mg KOH/g, ASTM D2896
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	
DIOL 40	137.7	14.2	100	-24	10
DIOL 20W-40	132.9	15.4	120	-33	-

**Mobil Delvac Modern™ Off-Highway Trans Fluid 10W, 30, 50 and 60** are extra high performance, heavy duty transmission and drivetrain lubricants engineered to meet or exceed the requirements of the rigorous Caterpillar TO-4 specification. This product line is uniquely designed to optimize the performance of powershift transmissions, gearboxes, and final drives. In hydraulic applications, they provide maximum protection even in high pressure systems.

	Kinematic Viscosity, ASTM D445				
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
MOBIL DELVAC MODERN OFF-HIGHWAY TRANS FLUID 10W	42	6.3	96	-33	202
MOBIL DELVAC MODERN OFF-HIGHWAY TRANS FLUID 30	100	11.2	97	-18	224
MOBIL DELVAC MODERN OFF-HIGHWAY TRANS FLUID 50	195	18	100	-15	240
MOBIL DELVAC MODERN OFF-HIGHWAY TRANS FLUID 60	340	25.2	96	-12	244

**Mobil™ Hydraulic 10W** is a high performance hydraulic oil formulated from advanced base oils and a balanced additive system designed to satisfy a wide range of heavy-duty hydraulic equipment requirements.

	Kinematic Viscosity, ASTM D445				Total Base #, mg KOH/g, ASTM D2896
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	
MOBIL HYDRAULIC 10W	37.7	6.1	107	-30	232

## COMMERCIAL VEHICLE LUBRICANTS

### HEAVY-DUTY DIESEL - GEAR OILS

**Mobil Delvac 1™ Gear Oil 75W-90 and 80W-140** are fully synthetic drivetrain lubricants engineered to meet very demanding extended drain and warranty requirements. These products are designed for use in heavy-duty drivetrains that require gear lubricants with excellent load-carrying capability and where extreme pressures and shock loading are expected.

	Kinematic Viscosity, ASTM D445				
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
MOBIL DELVAC 1 GEAR OIL 75W-90	120	15	140	-48	205
MOBIL DELVAC 1 GEAR OIL 80W-140	244	27.9	150	-47	210

**Mobil Delvac Modern™ Axle Oil 75W, Limited Slip Axle Oil 80W-90 and Axle Oil 85W-140** are extra high performance commercial gear lubricants formulated from select base oils and an advanced additive system. These lubricants are engineered for performance in heavy-duty commercial transmissions, axles, and final drives where extreme pressures and shock loading are expected. They provide excellent chemical and thermal stability at elevated bulk oil temperatures, good performance at low temperatures, and have demonstrated good rust protection resulting from water contamination and wet conditions. They are recommended by ExxonMobil for applications where API GL-5 and MT-1 service is required.

	Kinematic Viscosity, ASTM D445				
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
MOBIL DELVAC MODERN AXLE OIL 75W	92	15.8	184	-45	150
MOBIL DELVAC MODERN LIMITED SLIP AXLE OIL 80W-90	146	15.8	111	-27	165
MOBIL DELVAC MODERN LIMITED SLIP AXLE OIL 85W-140	347	27.4	105	-15	200

## COMMERCIAL VEHICLE LUBRICANTS

### EV

**Mobil EV™ Drive 201** is a high performance powertrain fluid for electric vehicle reduction gearboxes.

It provides extended fluid life through superior thermal-oxidative stability and outstanding resistance against sludge and deposit formation; excellent low temperature performance to help maintain equipment efficiency during cold temperature start up and driving, enabling further distances between recharging; and excellent lubrication protection to ensure the reliability of EV componentry throughout the expected life cycle.

Formulated to provide outstanding corrosion protection and thermal-oxidative stability to maintain system cleanliness, even under the higher thermal stresses in EV powertrains.

	Kinematic Viscosity, ASTM D445			
	cSt at 40°C	cSt at 100°C	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
MOBIL EV DRIVE 201	29.6	5.9	-55	215

# COMMERCIAL VEHICLE LUBRICANTS

## TRACTOR HYDRAULIC FLUIDS

**Mobil Delvac™ Tractor Hydraulic Fluid** is an extra high performance multipurpose tractor lubricant engineered to meet or exceed transmission and hydraulic fluid requirements. The advanced technology in Mobil Delvac Tractor Hydraulic Fluid is designed to optimize the performance of agricultural and commercial tractors operating in a wide range of environments and conditions.

	Kinematic Viscosity, ASTM D445				
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
MOBIL DELVAC TRACTOR HYDRAULIC FLUID	55	9.3	145	-42	198

*This product is only available in the US.*

**Mobilfluid™ LT** is an extra high performance multipurpose tractor lubricant engineered to meet or exceed tractor transmission, drivetrain, and hydraulic fluid requirements. This product is designed to optimize the performance of agricultural and industrial tractors operating in a wide range of environments and especially in low ambient temperature applications.

	Kinematic Viscosity, ASTM D445				
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
MOBILFLUID LT	34	7.2	180	-45	198

*This product is only available in the US.*

**Mobil Hydraul™** products are high performance multipurpose tractor lubricants developed for use in agriculture, forestry, mining and construction equipment where a common oil sump is used for the transmission, differential, final drive, wet brake, wet clutch and hydraulic components. The advanced technology in Mobil HYDRAUL products is designed to optimize the performance of agriculture, forestry, mining and construction equipment operating in a wide range of environments and conditions.

	Kinematic Viscosity, ASTM D445			
	cSt at 40°C	cSt at 100°C	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
MOBIL HYDRAUL 50	34	7.25	-45	196
MOBIL HYDRAUL 56	55	9.3	-42	192
MOBIL HYDRAULIC EXTRA	43	9.6	-48	170

*This product is only available in the US.*

**Mobilfluid™ 424** is an extra high performance multipurpose tractor lubricant engineered to meet or exceed transmission and hydraulic fluid requirements. The advanced technology in Mobilfluid 424 is designed to optimize the performance of agricultural and commercial tractors operating in a wide range of environments and conditions. Mobilfluid 424 combines select base oils and an advanced additive package to deliver the varied lubricant performance properties required in severe duty applications of agricultural and construction equipment drive trains. It is particularly well suited for reducing wet brake and Power Take-Off (PTO) chatter.

	Kinematic Viscosity, ASTM D445				
	cSt at 40°C	cSt at 100°C	V.I. ASTM D 2270	Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
MOBILFLUID 424	55	9.3	145	-42	198

*This product is only available in the US.*

### QUESTIONS?

CALL EXXONMOBIL  
TECHNICAL SUPPORT CENTER AT  
**1-800-662-4525**  
[tsc.americas@exxonmobil.com](mailto:tsc.americas@exxonmobil.com)

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# PASSENGER VEHICLE PRODUCT LISTING BY APPLICATION

## PASSENGER VEHICLE ENGINE OILS

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## OIL FILTERS

# PASSENGER VEHICLE LUBRICANTS

## PASSENGER VEHICLE ENGINE OILS

Mobil 1™ 5W-20, 5W-30, 10W-30 and 15W-50 are advanced full synthetic engine oils, formulated to keep your engine running like new and protect critical engine parts for 15,000 miles between oil changes - guaranteed.\* These oils help extend engine life, even in severe conditions and contain additives to help fight sludge.\*\*

\*Protects for 15,000 miles or one year - whichever comes first.  
\*\*Compared to Mobil 1™ (API SN+) motor oil.

	Kinematic Viscosity, ASTM D445		Pour Point, °C, ASTM D97	Flash Point, °C, ASTM D92
	cST at 40°C	cST at 100°C		
MOBIL 1 5W-20	47.13	8.2	-39	243
MOBIL 1 5W-30	63.4	10.7	-42	235
MOBIL 1 10W-30	62.78	10.2	-36	231
MOBIL 1 15W-50	134	18.9	-45	235

Mobil 1™ Advanced Fuel Economy 0W-8, 0W-16, 0W-20 and 0W-30 are advanced full synthetic engine oils designed to provide excellent engine protection and help improve fuel economy.\* These formulas help to increase engine efficiency and protect for 15,000 miles between oil changes - guaranteed.\*\*

\*Potential fuel economy improvement obtained by switching from higher-viscosity oils to a lower-viscosity grade. Actual savings are dependent upon vehicle/engine type, outside temperature, driving conditions, and your current engine oil viscosity.  
\*\*Protects for 15,000 miles or one year - whichever comes first.

	Kinematic Viscosity, ASTM D445		Pour Point, °C, ASTM D97	Flash Point, °C, ASTM D92
	cST at 40°C	cST at 100°C		
MOBIL 1 ADVANCED FUEL ECONOMY 0W-8	23.0	5.0	<-60	232
MOBIL 1 ADVANCED FUEL ECONOMY 0W-16	36.6	7.1	-36	226
MOBIL 1 ADVANCED FUEL ECONOMY 0W-20	44.1	8.3	-42	231
MOBIL 1 ADVANCED FUEL ECONOMY 0W-30	56.8	10.5	-42	227

Mobil 1™ High Mileage 0W-20, 5W-20, 5W-30, 10W-30 and 10W-40 are advanced full synthetic engine oils formulated to provide outstanding engine protection for vehicles with over 75,000 miles for 15,000 miles between oil changes, guaranteed.\* These engine oils are specially formulated to help protect critical engine parts and prevent leaks.

\*Protects for 15,000 miles or one year - whichever comes first.

	Kinematic Viscosity, ASTM D445		Pour Point, °C, ASTM D97	Flash Point, °C, ASTM D92
	cST at 40°C	cST at 100°C		
MOBIL 1 HIGH MILEAGE 0W-20	43.08	8.08	-51	231
MOBIL 1 HIGH MILEAGE 5W-20	46.44	8.422	-45	230
MOBIL 1 HIGH MILEAGE 5W-30	61.93	10.62	-48	233
MOBIL 1 HIGH MILEAGE 10W-30	68.22	10.72	-45	240
MOBIL 1 HIGH MILEAGE 10W-40	89.75	13.92	-42	231

Mobil 1™ Hybrid 0W-20 is an advanced full synthetic engine oil specially formulated for the unique technical needs of hybrid engines and designed to protect for 20,000 miles between oil changes - guaranteed.\*

\*Protects for 20,000 miles or one year - whichever comes first.

	Kinematic Viscosity, ASTM D445		Pour Point, °C, ASTM D97	Flash Point, °C, ASTM D92
	cST at 40°C	cST at 100°C		
MOBIL 1 HYBRID 0W-20	42.83	8.24	-42	227

Mobil 1™ Extended Performance 0W-20, 5W-20, 5W-30 and 10W-30 are advanced full synthetic engine oils, engineered to deliver ultimate engine performance even in severe conditions. This top tier formulation protects for 25,000 miles between oil changes - guaranteed.\*

\*Protects for 25,000 miles or one year - whichever comes first.

	Kinematic Viscosity, ASTM D445		Pour Point, °C, ASTM D97	Flash Point, °C, ASTM D92
	cST at 40°C	cST at 100°C		
MOBIL 1 EXTENDED PERFORMANCE 0W-20	45.4	8.6	-45	238
MOBIL 1 EXTENDED PERFORMANCE 5W-20	48.29	8.8	-45	-
MOBIL 1 EXTENDED PERFORMANCE 5W-30	59.9	10.48	-42	242
MOBIL 1 EXTENDED PERFORMANCE 10W-30	63.17	10.9	-	-

Mobil 1™ Extended Performance High Mileage 0W-20, 5W-20, 5W-30 and 10W-30 are advanced full synthetic engine oils designed for engines with over 75,000 miles and engineered to deliver ultimate engine performance even in severe conditions. This top tier formulation protects for 25,000 miles between oil changes - guaranteed.\*

\*Protects for 25,000 miles or one year - whichever comes first.

	Kinematic Viscosity, ASTM D445		Pour Point, °C, ASTM D97	Flash Point, °C, ASTM D92
	cST at 40°C	cST at 100°C		
MOBIL 1 EXTENDED PERFORMANCE HIGH MILEAGE 0W-20	45.7	8.5	-42	235
MOBIL 1 EXTENDED PERFORMANCE HIGH MILEAGE 5W-20	44.1	8.1	-51	237
MOBIL 1 EXTENDED PERFORMANCE HIGH MILEAGE 5W-30	59.7	10	-54	249
MOBIL 1 EXTENDED PERFORMANCE HIGH MILEAGE 10W-30	62.91	10.2	-36	235

Mobil 1™ FS 0W-40, 5W-30, 5W-40 and Mobil 1™ FS X2 5W-50 are advanced full synthetic engine oils formulated to deliver excellent overall performance for the latest gasoline engines and those diesel engines without diesel particulate filters (DPFs). These engine oils meet a wide variety of OEM specifications and are guaranteed to protect for 15,000 miles between oil changes.\*

\*Protects for 15,000 miles or one year - whichever comes first.

	Kinematic Viscosity, ASTM D445		Pour Point, °C, ASTM D97	Flash Point, °C, ASTM D92
	cST at 40°C	cST at 100°C		
MOBIL 1 FS 0W-40*	78.3	13.8	-42	230
MOBIL 1 FS 5W-30*	71.8	12.2	-39	237
MOBIL 1 FS 5W-40	81	13.2	-40	241
MOBIL 1 FS X2 5W-50*	112.5	18.6	-37	225

\*These products are only available in the US.

Mobil 1™ ESP 0W-30, 5W-30, Mobil 1™ ESP X2 0W-20 and Mobil 1™ ESP X4 0W-40 are advanced full synthetic engine oils designed to help prolong the life and maintain the efficiency of emission systems in new, emerging diesel and gasoline powered European vehicles. These engine oils are designed to keep your engine running like new, providing outstanding engine cleanliness and wear protection.

	Kinematic Viscosity, ASTM D445		Pour Point, °C, ASTM D97	Flash Point, °C, ASTM D92
	cST at 40°C	cST at 100°C		
MOBIL 1 ESP 0W-30	63	12	-51	-
MOBIL 1 ESP 5W-30	67.1	11.9	-42	234
MOBIL 1 ESP X2 0W-20	-	7.9	-51	235
MOBIL 1 ESP X4 0W-40	72	13.9	-54	230

# PASSENGER VEHICLE LUBRICANTS

## PASSENGER VEHICLE ENGINE OILS

**Mobil 1™ Advanced Clean 0W-20, 5W-20, 5W-30** utilizes our signature Triple Action Formula to deliver outstanding engine performance, protection, and cleanliness to vehicles of all ages. Specialty components in synthetic oil extend engine life by reducing the friction that causes deposits and sludge buildup—keeping critical engine parts clean and protected for up to 20,000 miles between oil changes.<sup>1</sup> Mobil 1 Advanced Clean motor oil meets ILSAC GF-7 standards, offering superior oxidation control, enhanced protection against pre-ignition and timing chain wear, and excellent cold-start and low-temperature performance. Mobil 1 is the #1 selling motor oil in America at retail,<sup>2</sup> trusted and recommended by car builders and experienced mechanics, and is the Official Motor Oil of NASCAR®.

<sup>1</sup>Protects for 20,000 miles or 1 year, whichever comes first

<sup>2</sup>Source: Circana/ Retail Tracking Service/ Dollar Sales/ 52 weeks ending February 1, 2025

	Kinematic Viscosity, ASTM D445		Pour Point, °C, ASTM D97	Flash Point, °C, ASTM D92
	cST at 40°C	cST at 100°C		
MOBIL 1 ADVANCED CLEAN 0W-20	43.7	8.2	-54	244
MOBIL 1 ADVANCED CLEAN 5W-20	44.3	8.1	-54	244
MOBIL 1 ADVANCED CLEAN 5W-30	57.1	10.1	-48	244

**Mobil 1™ C40 GT 0W-40** is an advanced full synthetic engine oil specifically engineered for high performing Porsche GT Engines. Mobil 1 C40 GT 0W-40 has been designed to protect the engine from wear in high temperature conditions and prevents deposits and sludge formation. It is the latest technology developed within the framework of the collaboration established with Porsche AG for over the last 30 years.

	Kinematic Viscosity, ASTM D445		Pour Point, °C, ASTM D97	Flash Point, °C, ASTM D92
	cST at 40°C	cST at 100°C		
MOBIL 1 GT 0W-40	199	72	-48	230

**Mobil 1™ Supercar 0W-40 and 5W-50** are advanced full synthetic engine oils designed for high performance cars to provide exceptional cleaning power and wear protection, and deliver outstanding overall performance. Mobil 1 Supercar engine oils are proven in high performance North American sports cars and suitable for use in everyday driving and high performance track events.

	Kinematic Viscosity, ASTM D445		Pour Point, °C, ASTM D97	Flash Point, °C, ASTM D92
	cST at 40°C	cST at 100°C		
MOBIL 1 SUPERCAR 0W-40	69	12.9	-51	232
MOBIL 1 SUPERCAR 5W-50	111.8	18.1	-48	230

**Mobil 1™ Turbo Diesel Truck 5W-40** is an advanced full synthetic diesel engine oil designed to provide exceptional performance in light- and heavy-duty diesel truck engines. This product is recommended for use in all super-high-performance diesel applications, including modern low-emission engine designs with Exhaust Gas Recirculation (EGR) and helps maintain outstanding performance at significantly higher temperatures than other high-performance diesel engine oils. Fully compatible with conventional oils.

	Kinematic Viscosity, ASTM D445		Pour Point, °C, ASTM D97	Flash Point, °C, ASTM D92
	cST at 40°C	cST at 100°C		
MOBIL 1 TURBO DIESEL TRUCK 5W-40	83	13.7	-48	234

**Mobil 1 Racing™ 0W-30 and 0W-50** are advanced full synthetic formulas specifically designed to maximize horsepower under race conditions. The oils are developed specifically for racing engines and are not recommended for street use. These high performance, fully synthetic formulas are specially balanced for friction reduction and optimum horsepower with outstanding wear protection.

	Kinematic Viscosity, ASTM D445		Pour Point, °C, ASTM D97
	cST at 40°C	cST at 100°C	
MOBIL 1 RACING 0W-30	58	10.8	-57
MOBIL 1 RACING 0W-50	110	19.5	-57

**Mobil 1™ Truck & SUV 0W-20, 5W-20 and 5W-30** are advanced full synthetic engine oils specially formulated for hardworking Trucks and SUVs that operate in tough conditions like towing and hauling. With proven performance in a 10,000 lb towing test\*, these oils provide the extra protection needed to transfer heat away from critical engine parts. Proven to protect for 20,000 miles between oil changes - guaranteed.\*\*

\*Reference your vehicle owner's manual for information on your engine's maximum towing/hauling capacity.

\*\*Protects for 20,000 miles or one year - whichever comes first.

	Kinematic Viscosity, ASTM D445		Pour Point, °C, ASTM D97	Flash Point, °C, ASTM D92
	cST at 40°C	cST at 100°C		
MOBIL 1 TRUCK & SUV 0W-20	43.11	8.2	-42	227
MOBIL 1 TRUCK & SUV 5W-20	47	8.6	-36	229
MOBIL 1 TRUCK & SUV 5W-30	56.8	10	-48	250

**Mobil 1™ Classic Car 10W-30** is a full synthetic motor oil formulated with high zinc for flathead or overhead valve engine designs. This product uses our trusted formulation chemistry perfect for your classic, collectable, or older vehicle from years 1951 through 1996.

This oil is not suitable for use in most gasoline powered automotive engines built after 1996. This oil may not provide adequate protection for vehicles with catalytic converters requiring API service category oils. Newer API service categories are suitable or preferred for recently produced automotive engines.

	Kinematic Viscosity, ASTM D445		Flash Point, °C, ASTM D92
	cST at 40°C	cST at 100°C	
MOBIL 1 CLASSIC 10W-30	72.4	11.1	237

**Mobil™ Full Synthetic 0W-20, 5W-20, 5W-30 and 10W-30** are full synthetic engine oils are formulated for vehicles that require a full synthetic motor oil and vehicles that are upgrading from conventional and synthetic blend oils. These oils provide guaranteed protection for 1.5X longer than our conventional and synthetic blends\* and are tested and proven to provide long-lasting protection to help extend engine life.

\*Guaranteed protection for 7,500 miles between oil changes compared to a guarantee of 5,000 miles or less on Mobil™-branded conventional and synthetic blend motor oils.

	Kinematic Viscosity, ASTM D445		Pour Point, °C, ASTM D97	Flash Point, °C, ASTM D92
	cST at 40°C	cST at 100°C		
MOBIL 1 FULL SYNTHETIC 0W-20	44.8	8.3	-45	-
MOBIL 1 FULL SYNTHETIC 5W-20	46	8.4	-42	-
MOBIL 1 FULL SYNTHETIC 5W-30	64.6	10.7	-45	229
MOBIL 1 FULL SYNTHETIC 10W-30	68.41	11.07	-39	239

# PASSENGER VEHICLE LUBRICANTS

## PASSENGER VEHICLE ENGINE OILS

**Mobil™ Full Synthetic High Mileage 0W-20, 5W-20 and 5W-30** are full synthetic engine oils formulated for vehicles with over 75,000 miles that require a full synthetic motor oil and vehicles that are upgrading from conventional and synthetic blend oils. These oils provide guaranteed protection for 1.5X longer than our conventional and synthetic blends\* and are tested and proven to provide long-lasting protection to help extend engine life.

\*Guaranteed protection for 7,500 miles between oil changes compared to a guarantee of 5,000 miles or less on Mobil™-branded conventional and synthetic blend motor oils.

	Kinematic Viscosity, ASTM D445				Flash Point, °C, ASTM D92
	cST at 40°C		Pour Point, °C, ASTM D97	Flash Point, °C, ASTM D92	
	cST	cST			
MOBIL FULL SYNTHETIC HIGH MILEAGE 0W-20	45.99	8.69	-42	235	
MOBIL FULL SYNTHETIC HIGH MILEAGE 5W-20	49.8	8.81	-42	237	
MOBIL FULL SYNTHETIC HIGH MILEAGE 5W-30	60.5	10.45	-42	239	

These products are only available in the US.

# PASSENGER VEHICLE LUBRICANTS

## PASSENGER VEHICLE GEAR LUBRICANTS

**Mobil 1™ Synthetic Gear Lube LS 75W-90** is a supreme performance, synthetic, multi-purpose, SAE 75W-90 automotive gear lubricant designed to help meet the highest-level performance requirements of modern passenger vehicles in all types of operating conditions including limited slip applications, as well as, deliver outstanding power transfer performance. Compared to conventional hypoid gear lubricants, Mobil 1 Syn Gear Lube LS 75W-90 performs exceptionally over a wide range of temperatures.

	Kinematic Viscosity, ASTM D445		Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	V.I. ASTM D 2270
	cSt at 40°C	cSt at 100°C			
MOBIL 1 SYNTHETIC GEAR LUBE LS 75W-90	103	14.6	-39	150	146

**Mobil Special™ 5W-20, 5W-30, 10W-30, 10W-40 and 20W-50** motor oils are formulated from quality base stocks combined with modern performance additives to provide the engine protection and performance you expect under a wide variety of operating conditions. Mobil Special motor oils come with the Mobil Limited Warranty\*. Mobil Special oils meet warranty requirements where an American Petroleum Institute (API) certified oil is specified.

\*To learn more about the Mobil Special Limited Warranty, visit us at Mobil.us

	Kinematic Viscosity, ASTM D445		Pour Point, °C, ASTM D97	Flash Point, °C, ASTM D92
	cST at 40°C	cST at 100°C		
MOBIL SPECIAL 5W-20	49	8.3	-42	216
MOBIL SPECIAL 5W-30	63	10.3	-39	228
MOBIL SPECIAL 10W-30	64	10.3	-39	226
MOBIL SPECIAL 10W-40	113	15.7	-39	-
MOBIL SPECIAL 20W-50	167	19.5	-27	252

# PASSENGER VEHICLE LUBRICANTS

## PASSENGER VEHICLE GEAR LUBRICANTS

**Mobil 1™ Synthetic Gear Lube LS 75W-140** is a high performance, synthetic, multi-purpose, automotive gear lubricant designed to help meet the highest-level performance requirements of many modern passenger vehicles in all types of operating conditions, from mild to severe, including limited slip applications, as well as deliver outstanding power transfer performance. Compared to conventional hypoid gear lubricants, Mobil 1™ Syn Gear Lube LS 75W-140 performs exceptionally over a wide range of temperatures. It also helps to protect against thermal and oxidative degradation, wear and corrosion, viscosity loss associated with premature shearing.

	Kinematic Viscosity, ASTM D445		Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	V.I. ASTM D 2270
	cSt at 40°C	cSt at 100°C			
MOBIL 1 SYNTHETIC GEAR LUBE LS 75W-140	170	24.4	-48	207	175

# PASSENGER VEHICLE LUBRICANTS

## PASSENGER VEHICLE TRANSMISSION FLUID

**Mobil™ Multi-Vehicle ATF** is a premium full synthetic automatic transmission fluid formulated for use in a wide variety of vehicles.

	Kinematic Viscosity, ASTM D445			Flash Point °C, ASTM D92
	cSt at 40°C		Flash Point °C, ASTM D92	
	cSt	cSt		
MOBIL DEXRON-VI ATF	29.5	5.83	220	

**Mobil™ ATF D/M** provides excellent oxidation and friction stability, anti-wear properties, and low-temperature fluidity desired for most automatic transmissions.

	Kinematic Viscosity, ASTM D445			
	cSt at 40°C		Flash Point °C, ASTM D92	
	cSt	cSt	Flash Point °C, ASTM D92	V.I. ASTM D 2270
MOBIL ATF D/M	35.3	7.4	180	183

**Mobil™ DEXRON-VI ATF** is a high performance, synthetic blend formulation that meets or exceeds the stringent requirements of GM's DEXRON-VI specification and provides warranty protection for 2006 and newer GM vehicles. It also provides improved performance in older GM vehicles, wherever DEXRON is specified.

	Kinematic Viscosity, ASTM D445		Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92
	cSt at 40°C	cSt at 100°C		
MOBIL MULTI-VEHICLE ATF	33	6.4	-48	218

**Mobil™ ATF +4** is specially formulated to ensure optimal performance in Chrysler automatic transmissions. Its unique additive package provides the proper frictional properties, excellent low-temperature fluidity and dependable wear protection required in applications where a Chrysler MS-9602 type fluid is recommended.

	Kinematic Viscosity, ASTM D445		Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	V.I. ASTM D 2270
	cSt at 40°C	cSt at 100°C			
MOBIL ATF +4	34.4	7.5	-50	200	194

## PASSENGER VEHICLE LUBRICANTS

### PASSENGER VEHICLE TRANSMISSION FLUID

**Mobil™ ATF 3309** is specially formulated to ensure optimal performance in Chrysler automatic transmissions. Its unique additive package provides the proper frictional properties, excellent low-temperature fluidity and dependable wear protection required in applications where a Chrysler MS-9602 type fluid is recommended.

	Kinematic Viscosity, ASTM D445		Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	V.I. ASTM D 2270
	cSt at 40°C	cSt at 100°C			
MOBIL ATF 3309	33	7.1	<-45	>185	181

**Mobil 1™ Synthetic ATF** is a multi-vehicle, fully synthetic fluid designed to meet the demanding requirements of modern passenger vehicles.

	Kinematic Viscosity, ASTM D445		Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	V.I. ASTM D2270
	cSt at 40°C	cSt at 100°C			
MOBIL 1 SYNTHETIC ATF	36.3	7.4	-51	220	176

**Mobil 1™ Synthetic LV ATF HP** is an advanced full synthetic Automatic Transmission Fluid formulated from synthetic base oils and an advanced additive system.

	Kinematic Viscosity, ASTM D445		Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	V.I. ASTM D 2270
	cSt at 40°C	cSt at 100°C			
MOBIL 1 SYNTHETIC LV ATF HP	27	5.7	-54	-	152

## PASSENGER VEHICLE LUBRICANTS

### PASSENGER VEHICLE INSTALLER GREASES

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## PASSENGER VEHICLE LUBRICANTS

### MOTORCYCLE OILS

**Mobil 1 Racing™ 4T** is an advanced full synthetic formula designed specifically for motorcycles where clutch lubrication is also important. Mobil 1™ Racing 4T is designed for four-stroke motorcycle engines. This product helps to provide an excellent level of performance in today's high-performance motorcycles. It will help keep 4-stroke engines running clean protecting even under some of the most severe conditions.

	Kinematic Viscosity, ASTM D445		Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	V.I. ASTM D 2270
	cSt at 40°C	cSt at 100°C			
MOBIL 1 RACING 4T 10W-40	85.9	13.4	-48	-	159

**Mobil 1™ V-Twin 20W-50** is an advanced full synthetic formula designed specifically for motorcycles where clutch lubrication is also important.

	Kinematic Viscosity, ASTM D445		Pour Point °C, ASTM D 97	Flash Point °C, ASTM D92	V.I. ASTM D 2270
	cSt at 40°C	cSt at 100°C			
MOBIL 1 V-TWIN 20W-50	172	20.8	-42	214	142

*This product is only available in the US.*

## PASSENGER VEHICLE LUBRICANTS

### OIL FILTERS

Part Number	Top Vehicle
M1-101A	2004 Chevrolet Impala
M1-102A	2017 Ford Escape
M1-103A	2021 Toyota RAV4
M1-104A	2013 Hyundai Elantra
M1-107A	2004 Chevrolet Silverado 1500
M1-108A	2015 Nissan Altima
M1-110A	2018 Honda CR-V
M1-111A	1977 Chevrolet Corvette
M1-113A	2019 Ram 1500
M1-114A	2018 Chevrolet Equinox
M1-115A	2024 Chevrolet Silverado 1500
M1-201A	1998 Chevrolet K1500
M1-204A	2004 Dodge Ram 1500
M1-205A	2014 Volkswagen Jetta
M1-206A	2008 Chevrolet Impala
M1-208A	1997 Nissan Pickup
M1-209A	2004 Chevrolet Impala
M1-210A	2010 Ford F-150
M1-212A	2013 Ford F-150
M1-301A	1995 Ford F-150
M1-302A	1997 Chevrolet C1500
M1-303A	2021 Chevrolet Silverado 2500 HD
M1-403A	2018 Ram 2500
M1-404A	2016 Volkswagen Tiguan
M1-405A	2019 Ford F-250 Super Duty
M1-601A	1999 Ford F-250 Super Duty
M1C-151A	2015 Chevrolet Equinox
M1C-152A	2006 Volvo XC90
M1C-153A	2008 Ford Escape

*These products are only available in the US*

Part Number	Top Vehicle
M1C-154A	2016 Toyota Corolla
M1C-155A	2017 BMW X3
M1C-156A	2024 Kia Telluride
M1C-157A	2022 Mercedes-Benz GLC300
M1C-158A	2022 Hyundai Tucson
M1C-159A	2022 Kia K5*
M1C-251A	2018 Toyota RAV4
M1C-252A	2003 BMW Z4
M1C-253A	2011 Mercedes-Benz E350
M1C-254A	2016 Chevrolet Colorado
M1C-255A	2009 Hyundai Santa Fe
M1C-256A	2016 Toyota 4Runner
M1C-257A	2014 Chevrolet Cruze
M1C-258A	2024 Volkswagen Tiguan
M1C-259A	2016 Kia Sorento
M1C-260A	2021 Volvo XC60
M1C-261A	2019 Volkswagen Atlas
M1C-262A	2018 BMW X1
M1C-351A	2018 Ford F-150
M1C-352A	2014 Mercedes-Benz E350
M1C-353A	2016 Land Rover Range Rover Sport
M1C-354A	2024 BMW X3
M1C-451A	2012 Volkswagen Jetta
M1C-453A	2014 Toyota Tundra
M1C-454A	2006 Hyundai Sonata
M1C-455A	2013 Jeep Wrangler
M1C-456A	2015 Jeep Grand Cherokee
M1C-457A	2024 BMW X5
M1C-651A	2006 Ford F-250 Super Duty

*\*NPI - Q4/Q1*

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### Decoding Many Mobil Grease Product Names

Mobil	grease	XHP	222	Special
<b>Master Brand</b>	<b>Product Brand</b>	<b>Product Family</b>	<b>ISO / NLGI</b>	<b>Identifier (Moly / Application)</b>

<b>Product Brands vs Thickener Type</b>	Lith	- Lithium Complex	Temp	- Clay
	Polyrex	- Polyurea	Lux	- Lithium
	Centaur	- Calcium Sulfonate	Grease	- Multiple technologies

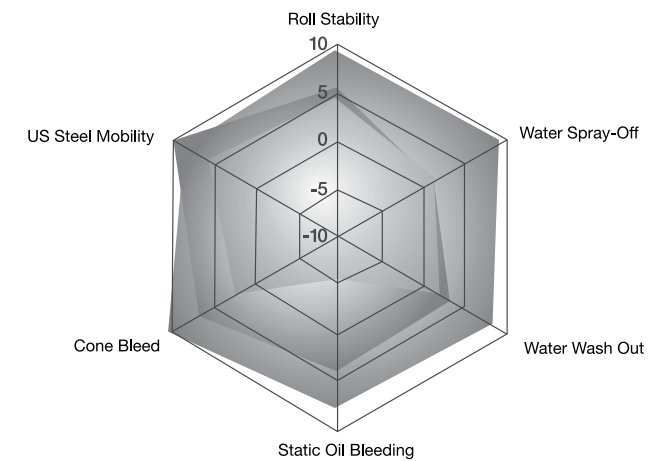
**ISO / NLGI** The first two numbers correspond to the first two numbers of the base oil *ISO Viscosity Grade* (e.g. 220). The last number corresponds to the *NLGI grade*.

**Identifier** Moly content: Special – 0.75 or 1%; Moly – 3%; Mine – 5%

### Mobil Grease Product Families

Core Industrial Application Product Families:	Mobilith SHC, Mobilgrease XHP
Select Specialty Industrial Application Product Families:	Mobil SHC Polyrex, Mobil Polyrex, Mobil Centaur XHP
Core Commercial Vehicle Application (On/Off Highway) Product Families:	Mobil Delvac Xtreme, Mobilgrease XHP, Mobil Centaur
Core Personal Vehicle Installer Greases:	Mobil 1 Synthetic Grease, Mobilgrease XHP 222

### Mobil Grease Balanced Performance



Mobilgrease XHP 222 Grease A Grease S  
**10 = Excellent Performance**  
**-10 = Poor Performance**

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# GREASES

## AVIATION GREASE

**Mobilgrease™ 28** is a supreme performance, wide-temperature, antiwear grease designed to combine the unique features of a polyalphaolefin (PAO) synthetic base fluid with an organo-clay (non-soap) thickener. Its consistency is between an NLGI No. 1 and No. 2 grease. It offers outstanding performance over a wide temperature range. The wax-free nature of the synthetic base fluid, together with its high viscosity index compared to mineral oils, provide excellent low temperature pumpability, very low starting and running torque, and can help reduce operating temperatures in the load zone of rolling element bearings.

Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, AMS D1697 at 40°C		Dropping Point °C, ASTM D 2265	Water Washout, ASTM D 1264, 41°C, % Loss
			29.3	307		
MOBILGREASE 28	Dark Red	1.5	Clay			1

**Mobilgrease™ 33** is a high-performance lithium-complex grease designed for general-purpose aircraft use. Its consistency is between the NLGI grades 1 and 2. Mobilgrease 33 utilizes a 100% polyalphaolefin base oil and premium additives which ensure outstanding lubrication performance over a wide temperature range and operating conditions.

Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, Grease at 40°C		Dropping Point °C, ASTM D 2265	Water Washout, 1 Hr at 38 °C, wt%		Water Washout, 1 Hr at 79 °C, wt%	
			3.2	12.5		255	3	6	
MOBILGREASE 33	Blue Green	1.5	Lithium Complex						

**Mobil™ Aviation Grease SHC™ 100** is a supreme performance synthetic grease which combines the unique features of a polyalphaolefin (PAO) synthetic base fluid with those of a high quality lithium complex soap thickener. The thickener system provides a high dropping point, excellent resistance to water wash, and a tenacious structural stability. The unique physical properties of the synthetic base oil, combined with selected additives, provide outstanding protection against wear, rust, corrosion, and high temperature degradation. The wax-free feature of the synthetic base oil allows for low-temperature mobility/pumpability and low starting and running torque values. Mobil Aviation Grease SHC 100 is the product of choice for aircraft wheel bearing applications.

Color, Visual	NLGI Grade	Thickener Type	Viscosity Base Oil, cSt at 40°C		V.I. ASTM D2270
			100	14.5	
MOBIL AVIATION GREASE SHC 100	Red	2	Lithium Complex		144

# GREASES

## COMMERCIAL & INDUSTRIAL GREASES - CALCIUM SULFONATE

**Mobil™ SHC Centaur™ Series** multipurpose greases are designed to provide rust protection in water-saturated environments. With a balanced combination of water washout and water spray-off resistance, as well as excellent corrosion protection, these calcium sulfonate greases are particularly well-suited for the demanding requirements of steel mill, paper machine, and mining equipment.

Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, AMS D1697 at 40°C		Dropping Point °C, ASTM D 2265	Water Washout, ASTM D 1264, 79 °C, % Loss
			220	301		
MOBIL SHC CENTAUR 221	Tan	1	Calcium Sulfonate			2
MOBIL SHC CENTAUR 222	Tan	2	Calcium Sulfonate			-
MOBIL SHC CENTAUR 461	Tan	1.5	Calcium Sulfonate	460	>308	-
MOBIL SHC CENTAUR 1500	Tan	1.5	Calcium Sulfonate	1500	>308	2

**Mobil™ SHC Centaur™ 101 Moly** is a synthetic all-weather grease that offers excellent lubrication performance over a very wide operating temperature range. This product combines synthetic base oils with a calcium sulfonate thickener and molybdenum disulfide to provide outstanding protection in mining and construction equipment.

Color, Visual	NLGI Grade	Thickener Type	Molybdenum Disulfide, Wt. %	Base Oil Viscosity, AMS D1697 at 40°C		Dropping Point °C, ASTM D 2265	Water Washout, ASTM D 1264, 79 °C, % Loss
				100	305		
MOBIL SHC CENTAUR 101 MOLY	Gray-Black	1	Calcium Sulfonate	5	100	305	10

**Mobil Centaur XHP™ Series** greases are a premium family of greases formulated with advanced calcium sulfonate thickener technology. Mobil Centaur XHP 460 Series are calcium sulfonate thickener which carries both inherent rust protection and extreme pressure (EP) properties. Compared to conventional soap-base thickeners (i.e. lithium, aluminum, calcium soaps), the calcium sulfonate thickener used in Mobil Centaur XHP 460 Series excels in water saturated environments, providing rust protection between long re-lubrication intervals. The inherent EP properties exhibit great stability in the presence of water, allowing a balance between wear protection and resistance to corrosion. Mobil Centaur™ XHP 221 is a premium multipurpose grease formulated to lubricate rolling element bearings in industrial machinery operating at high temperatures under wet, heavily loaded conditions.

Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, Grease at 40°C		Dropping Point °C, ASTM D 2265	Water Washout, 1 Hr at 79 °C, wt%	V.I. ASTM D 2270
			220	18.7			
MOBIL CENTAUR XHP 221	Brown	1.5	Calcium Sulfonate			>308	94
MOBIL CENTAUR XHP 461	Brown	1	Calcium Sulfonate	460	30.8	275	1.0
MOBIL CENTAUR XHP 462	Brown	2	Calcium Sulfonate	460	30.8	275	0.5

# GREASES

## COMMERCIAL & INDUSTRIAL GREASES - CALCIUM SULFONATE

**Mobil™ Centaur™ Moly Series** is an advanced calcium sulfonate thickener technology. Unlike conventional soap-base thickeners (i.e. lithium, aluminum, and calcium soaps), the calcium sulfonate thickener does much more than simply impart consistency. It imparts excellent corrosion and water-resistance properties to the grease and has inherent extreme-pressure protection properties that enhance load-carrying ability.

Color, Visual	NLGI Grade	Thickener Type	Molybdenum Disulfide, Wt. %	Base Oil Viscosity, AMS D1697 at 40°C	Dropping Point °C, ASTM D 2265	Water Washout, ASTM D 1264, 79 °C, % Loss	Water Sprayoff, ASTM D 4049, 79 °C, % Loss
MOBIL CENTAUR MOLY 2	Gray-Black	2	Calcium Sulfonate	3	320	308	20

**Mobil™ Centaur™ XHP 150 Mine Series** greases are a premium family of greases formulated with advanced calcium sulfonate thickener technology and 5% molybdenum disulfide. The series is specifically designed for the lubrication of extra heavy-duty off-highway and mining equipment. The calcium sulfonate thickener carries both inherent rust protection and extreme pressure (EP) properties.

Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, cSt at 40°C	Molybdenum Disulfide, Wt. %	Dropping Point °C, ASTM D 2265	Dropping Point °C, ASTM D 2265	Water Washout, ASTM D 1264, 79 °C, % Loss	
								MOBIL CENTAUR MOLY 1
MOBIL CENTAUR MOLY 2	Gray-Black	2	Calcium Sulfonate	150	320	5	300	1

# GREASES

## COMMERCIAL & INDUSTRIAL GREASES - LITHIUM

**Mobil™ Dynagear™ Series** are premium performance open gear lubricants designed to provide outstanding protection of heavily loaded open gear sets exposed to a wide range of operating conditions. The Mobil Dynagear Series is based on lithium thickener technology, carefully chosen high performance additives and high viscosity semi-synthetic base fluids. These components synergistically provide a lubricant film that firmly adheres to lubricated surfaces. All members of the Mobil Dynagear Series are formulated solvent free and provide excellent dispensability without the use of chlorinated or hydrocarbon solvents.

Color, Visual	NLGI Grade	Thickener Type	Molybdenum Disulfide, Wt. %	Base Oil Viscosity, AMS D1697 at 40°C	Dropping Point °C, ASTM D 2265	
						MOBIL DYNAGEAR 600 SL
MOBIL DYNAGEAR 800 EXTRA	Gray Black	00.5	Lithium	3	680	175
MOBIL DYNAGEAR 2000	Gray Black	00.5	Lithium	3	2000	193

[To learn more about the application of these products, go to Industrial Gear Oils - Enclosed Gears chapter.....24](#)

**Mobil™ Centaur™ XHP 462 Mine** is a premium family of grease formulated with advanced calcium sulfonate thickener technology and 5% molybdenum disulfide. This product is specifically designed for the lubrication of extra heavy-duty off-highway and mining equipment. The calcium sulfonate thickener carries both inherent rust protection and extreme pressure (EP) properties. Compared to conventional soap-base thickeners (i.e. lithium, aluminum, calcium soaps), the calcium sulfonate thickener used in Mobil Centaur XHP 462 Mine excels in water saturated environments, providing longer re-lubrication intervals. The inherent EP properties exhibit great stability in the presence of water, allowing a balance between wear protection and resistance to corrosion.

Color, Visual	NLGI Grade	Thickener Type	Molybdenum Disulfide, Wt. %	Base Oil Viscosity, AMS D1697 at 40°C	Dropping Point °C, ASTM D 2265	Water Washout, ASTM D 1264, 79 °C, % Loss	
							MOBIL CENTAUR XHP 462 MINE

**Mobilux™ EP Series** are a high performance family of four general purpose industrial greases and two special-duty semi-fluid greases. These lithium hydroxystearate greases are formulated to provide extra protection against wear, rusting and water washout.

Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, AMS D1697 at 40°C	Dropping Point °C, ASTM D 2265	
					MOBILUX EP 0
MOBILUX EP 1	Beige	1	Lithium	150	190
MOBILUX EP 2	Beige	2	Lithium	150	190
MOBILUX EP 023	Beige	000	Lithium	320	-

**Beacon™ 325** is a high performance grease specifically formulated for the lubrication of precision equipment operating at moderate and low temperatures. It is made with a synthetic base oil of extremely low viscosity and low volatility plus a lithium soap. Beacon 325 is characterised by good mechanical stability, a high degree of resistance to water and extremely high oxidation stability. As its base oil viscosity is low and the viscosity index of the fluid is high, the grease has excellent low temperature properties including low starting and running torque at very cold temperatures and good pumpability.

Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, AMS D1697 at 40°C	Dropping Point °C, ASTM D 2265	
					BEACON 325

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# GREASES

## COMMERCIAL & INDUSTRIAL GREASES - LITHIUM COMPLEX

**Mobil<sup>™</sup> SHC<sup>™</sup> Grease 461 WT and 681 WT** are specially formulated to lubricate yaw, pitch and main bearings of wind turbines. They are high performance synthetic lithium complex greases specially designed to exceed the demanding requirements of wind turbine applications at extreme temperatures. The advanced synthetic base fluid with its low traction coefficient provides excellent low temperature pumpability and very low starting and running torque.

	Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, AMS D1697 at 40°C	Dropping Point °C, ASTM D 2265	Water Washout, ASTM D 1264, 79 °C, % Loss
MOBIL SHC GREASE 461 WT	Beige	1.5	Lithium Complex	460	260	5
MOBIL SHC GREASE 681 WT	Beige	1.5	Lithium Complex	680	260	8

**Mobil<sup>™</sup> SHC<sup>™</sup> Grease 460 WT** is a superior performance lubricant especially suited to exceed the demanding requirements of wind turbine applications at extremes of temperature. The unique features of synthetic base fluids are combined with those of a high quality lithium complex thickener. The wax-free nature of synthetic fluids and the low coefficient of traction provide excellent low temperature pumpability and very low starting and running torque. The lithium complex thickener contributes excellent adhesion, structural stability and resistance to water. The grease has a high level of chemical stability and is formulated with special additive combinations to provide excellent protection against wear, rust and corrosion at high and low temperatures.

	Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, AMS D1697 at 40°C	Dropping Point °C, ASTM D 2265	Water Washout, ASTM D 1264, 79 °C, % Loss
MOBIL SHC GREASE 460 WT	Red	1.5	Lithium Complex	460	255	10

**Mobil<sup>™</sup> SHC<sup>™</sup> Grease 68 Moly** is a synthetic all-weather grease that offers excellent lubrication performance over a very wide operating temperature range. The lithium complex soap technology used in Mobil SHC Grease 68 Moly contributes to long life through excellent oxidation stability, good shear stability, and high temperature protection. Mobil SHC Grease 68 Moly is designed for use in central systems on heavy-duty mobile equipment. It is fortified with 5% Molybdenum disulphide, which is required by several major OEM's for their equipment. Mobil SHC Grease 68 Moly is designed to be dispensable in central grease systems at temperatures as low as -50°C (-58°F).

	Color, Visual	NLGI Grade	Base Oil Viscosity, AMS D1697 at 40°C	Molybdenum Disulfide, Wt. %	Dropping Point °C, ASTM D 2265	Lincoln Ventmeter, psi at -30°F	US Steel Mobility, g/min at -30°F
MOBIL SHC GREASE 68 MOLY	Gray-Black	0	68	5	223	331	25.8

**Mobilith<sup>™</sup> SHC<sup>™</sup> Series** greases are superior performance products designed for a wide variety of applications at extremes of temperature. They combine the unique features of synthetic base fluids with those of a high quality lithium complex thickener. The wax-free nature of synthetic fluids and the low coefficient of traction (compared with mineral oils), provide excellent low temperature pumpability and very low starting and running torque. These products offer the potential for energy savings and can reduce operating temperatures in the load zone of spherical roller and ball bearings. The lithium complex thickener contributes excellent adhesion, structural stability and resistance to water.

	Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, AMS D 445 at 40°C	Dropping Point °C, ASTM D 2265
MOBILITH SHC 007	Red	00	Lithium Complex	460	-
MOBILITH SHC 100	Red	2	Lithium Complex	100	265
MOBILITH SHC 220	Red	2	Lithium Complex	220	265
MOBILITH SHC 221	Light Tan	1	Lithium Complex	220	265
MOBILITH SHC 460	Red	1.5	Lithium Complex	460	265
MOBILITH SHC 1500	Red	1.5	Lithium Complex	1500	265

**Mobilith<sup>™</sup> SHC<sup>™</sup> PM** greases are superior performance products designed specifically for severe paper machine applications, including extreme temperature environments and exposure to different qualities of water. Mobilith SHC PM greases combine the unique features of a synthetic base fluid with those of a high quality lithium complex thickener. The wax-free nature of the synthetic base fluid provides excellent low temperature pumpability and low starting and running torque compared to other nonsynthetic oil products of the same viscosity. The high viscosity index of the synthetic base fluid ensures excellent film protection at high temperatures. The lithium complex thickener contributes excellent adhesion, structural stability and resistance to water. These properties are complemented by a special additive system to provide rust and corrosion resistance, wear protection, thermal/oxidative resistance and to enhance water resistance properties.

	Color, Visual	NLGI Grade	Thickener Type	Kinematic Viscosity, ASTM D445 at 40°C	Dropping Point °C, ASTM D 2265	Water Washout, ASTM D 1264, 79 °C, % Loss
MOBILITH SHC PM 220	Off-White	1.5	Lithium Complex	220	275	1
MOBILITH SHC PM 460	Off-White	1.5	Lithium Complex	460	275	7

# GREASES

## COMMERCIAL & INDUSTRIAL GREASES - LITHIUM COMPLEX

**Mobil Epic<sup>™</sup> EP 102 and Mobil Epic<sup>™</sup> EP Moly** are premium quality, semi-synthetic all-weather greases that offer excellent lubrication performance over a very wide operating temperature range. The lithium complex soap technology used in Mobil Epic brand greases contributes to long life through excellent oxidation stability, good shear stability, high temperature protection and water resistance. The additives in Mobil Epic greases provide excellent corrosion protection, potent wear protection and very high load carrying capacity. Mobil Epic greases are recommended for multi-service application in plain and anti-friction bearings, gears, slides and other applications where friction reduction and low wear are required. Mobil Epic greases have a long history of excellent performance in the toughest applications and under extreme temperature conditions.

	Color, Visual	NLGI Grade	Thickener Type	Molybdenum Disulfide, Wt. %	Dropping Point °C, ASTM D 2265
MOBIL EPIC EP 102	Red	1.5	Lithium Complex	130	260
MOBIL EPIC EP MOLY	Gray-Black	1.5	Lithium Complex	130	260

**Mobilgrease XHP<sup>™</sup> 220 Series** are extended service lithium complex greases intended for a wide variety of applications and severe operating conditions. These greases were designed to outperform conventional products by applying cutting edge, proprietary, lithium complex manufacturing technology. They are formulated to provide excellent high temperature performance with superb adhesion, structural stability and resistance to water contamination. These greases have a high level of chemical stability and offer excellent protection against rust and corrosion. These greases feature high dropping points and maximum recommended operating temperature of 140° C (284°F). Mobilgrease XHP 222 meets or exceeds the requirements of NLGI HPM+WR claim.

	Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, AMS D445 at 40°C	Molybdenum Disulfide, Wt. %	Dropping Point °C, ASTM D 2265
MOBILGREASE XHP 005	Dark blue	00	Lithium Complex	220	-	-
MOBILGREASE XHP 220	Dark blue	0	Lithium Complex	220	-	260
MOBILGREASE XHP 221	Dark blue	1	Lithium Complex	220	-	275
MOBILGREASE XHP 222	Dark blue	2	Lithium Complex	220	-	290
MOBILGREASE XHP 222 SPECIAL	Gray-black	2	Lithium Complex	220	0.75	290
MOBILGREASE XHP 223	Dark blue	3	Lithium Complex	220	-	290

**Mobilgrease XHP<sup>™</sup> 460 Series** are extended service lithium complex greases intended for a wide variety of heavy duty applications and operating conditions. These greases were designed to outperform conventional products by applying high performance proprietary lithium complex manufacturing technology. They are formulated to provide excellent high temperature performance with excellent adhesion, structural stability and resistance to water contamination. These greases have a high level of chemical stability and offer excellent protection against rust and corrosion.

	Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, Molybdenum Disulfide, Wt. %		Dropping Point °C, ASTM D 2265	V.I. ASTM D2270
				40°C	100°C		
MOBILGREASE XHP 461	Dark Blue	1	Lithium Complex	460	30.8	-	96
MOBILGREASE XHP 462	Blue	2	Lithium Complex	460	30.8	-	96
MOBILGREASE XHP 461 MOLY	Grey-Black	2	Lithium Complex	460	30.8	3	96

**Mobilgrease XHP<sup>™</sup> Mine Series** products are specifically designed for the lubrication of extra heavy-duty off-highway and mining equipment. With a complete range of NLGI Grades, this series of lithium complex greases, which contain 5% molybdenum disulfide, can be utilized over a wide range of operating conditions and temperatures to improve productivity. The Mobilgrease XHP Mine series has excellent extreme pressure and anti-wear properties in addition to exceptional staying power, very good water wash-out, water spray-off, and extended service capabilities under harsh operating conditions. These extra heavy-duty service greases exhibit excellent structural stability. They will not corrode steel or copper bearing alloys and are compatible with conventional sealing materials.

	Color, Visual	NLGI Grade	Thickener Type	Kinematic Viscosity, ASTM D445 at 40°C	Disulfide, Wt. %	Dropping Point °C, ASTM D 2265
MOBILGREASE 100 MINE	Gray-Black	0	Lithium Complex	100	5	200
MOBILGREASE 320 MINE	Gray-Black	0	Lithium Complex	320	5	270
MOBILGREASE 321 MINE	Gray-Black	1	Lithium Complex	320	5	270
MOBILGREASE 322 MINE	Gray-Black	2	Lithium Complex	320	5	270

**Mobil Delvac<sup>™</sup> Modern Grease Series** are multi-purpose commercial vehicle greases family designed for high performance extreme pressure protection. These products are formulated with an advanced thickener formulation for extended service capabilities, helping give peace of mind especially when re-application is difficult or limited.

	Color, Visual	NLGI Grade	Thickener Type	Kinematic Viscosity, ASTM D445 at 40°C	Dropping Point °C, ASTM D 2265	Water Washout, ASTM D 1264, 79 °C, % Loss	Molybdenum Disulfide, Wt. %
MOBIL DELVAC MODERN GREASE	Orange	2	Lithium Complex	320	305	6	-
MOBIL DELVAC MODERN GREASE MOLY 1	Gray-Black	1	Lithium Complex	150	270	12	3
MOBIL DELVAC MODERN GREASE MOLY 2	Gray-Black	2	Lithium Complex	320	295	6	3

**Unirex<sup>™</sup> EP Series** family of greases are high performance and extremely versatile long-life premium performance greases. Unirex grades have been formulated with high quality basestocks, proprietary high performance lithium complex thickener technology and an additive package designed to provide outstanding wear protection, excellent rust and corrosion protection and very good resistance to thermal, oxidative and structural degradation in high temperature applications. Unirex meets the challenges in demanding applications in many industries including transportation, manufacturing, construction, mining, logging, cement, marine and paper-making, where a grease must perform well in a multitude of different severe applications.

	Color, Visual	NLGI Grade	Thickener Type	Dropping Point °C, ASTM D 2265	Molybdenum Disulfide, Wt. %	Base Oil Viscosity, AMS D1697 at 40°C
UNIREX EP 0	Green	0.5	Lithium Complex	190	-	68
UNIREX EP 0 MOLY	Gray-Black	0.5	Lithium Complex	190	3	68
UNIREX EP 1	Green	1	Lithium Complex	220	-	220
UNIREX EP 1 MOLY	Gray-Black	1	Lithium Complex	280	3	220
UNIREX EP 2	Green	2	Lithium Complex	220	-	220
UNIREX LOTEMP EP	Green	1.5	Lithium Complex	260	-	10
UNIREX LOTEMP MOLY	Gray-Black	1.5	Lithium Complex	260	3	10

## GREASES

### COMMERCIAL & INDUSTRIAL GREASES - LITHIUM COMPLEX

**Mobilgrease™ XTC** is a high performance premium product designed for use in high-speed coupling applications. Mobilgrease XTC is formulated to provide low-bleed as well as high-temperature stability, properties critical to modern coupling lubrication and protection. The base oil and heavy duty additive package work to reduce friction wear from sliding tooth contact, providing rust and corrosion protection, as well as high temperature stability for this leading edge product.

Mobilgrease XTC meet or exceed the requirements of modern high-speed gear and grid design couplings including the AGMA CG-3, CG-2, and CG-1 specifications.

	Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, ASTM D445 at 40°C	Dropping Point °C, ASTM D 2265
MOBILGREASE XTC	Dark Brown	1	Lithium Complex	680	279

**Unirex™ N Series** greases are premium-quality, lithium-complex products suitable for high-temperature service in rolling-element bearings. These versatile greases can be used in a wide range of industrial applications and are particularly recommended for electric-motor lubrication.

	Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, ASTM D445 at 40°C	V.I. ASTM D2270	Dropping Point °C, ASTM D 2265	Water Washout, ASTM D 1264, 79 °C, % Loss
UNIREX N 2	Green	2	Lithium Complex	115	95	210	3.7
UNIREX N 3	Green	3	Lithium Complex	115	95	210	3.5

**Ronex™ MP** is a lithium complex, mineral oil based multipurpose grease that can be used in a wide range of automotive and industrial applications. RONEX MP grease has good performance over a wide temperature range, and provides moderate load carrying, extreme pressure properties, water resistance, oxidation stability, and rust and corrosion protection. It is NLGI GC-LB qualified for use as a wheel bearing and chassis grease.

	Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, AMS 1697 at 40°C	Dropping Point °C, ASTM D 2265
RONEX MP	Green	2	Lithium Complex	115	280

**Mobilgrease™ HT Series** are high performance Extreme Pressure greases with exceptional resistance to the water contamination conditions typical of steel mill, surface mining, and off-highway conditions. Additionally, Mobilgrease HTR, HTM and HTS are formulated with superior corrosion resistance. Mobilgrease HTM and HTR provide good water and corrosion resistance along with formulations more capable of providing good dispensing characteristics in central systems. The combination of the lithium complex soap with an advanced additive system provide high temperature performance properties.

	Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, AMS 1697 at 40°C	Dropping Point °C, ASTM D 2265	Water Washout, ASTM D 1264, 79 °C, % Loss
MOBILGREASE HTR	Black	0.5	Lithium Complex	320	280	-
MOBILGREASE HTM	Black	1.5	Lithium Complex	320	280	5.5
MOBILGREASE HTS	Black	2	Lithium Complex	680	295	5.5

**Mobilgrease™ CM Series** products are a family of extra high performance extreme-pressure greases. Both products are manufactured with a proprietary high-temperature, lithium complex thickener system. They exhibit excellent resistance to softening under severe working, and provide good adhesion and cohesion. An extreme-pressure additive provides exceptional protection against wear, while additional additives enhance resistance to high temperature oxidation and protection against rust.

	Color, Visual	NLGI Grade	Thickener Type	Kinematic Viscosity, ASTM D445 cSt at 40°C	Dropping Point °C, ASTM D 2265	Water Washout, ASTM D 1264, 79 °C, % Loss
MOBILGREASE CM-S	Orange	2	Lithium Complex	320	260	6
MOBILGREASE CM-W	Orange	1	Lithium Complex	150	260	12

## GREASES

### COMMERCIAL & INDUSTRIAL GREASES - OTHER THICKENER

**Mobilgrease™ FM 101 and FM 222** are high performance multipurpose products designed specifically for the lubrication of food processing machinery. Mobilgrease FM 101 and FM 222 are formulated with components meeting the requirements of CFR 178.3570, Chapter 21, and are NSF registered as H1 classified lubricants. The Mobilgrease FM 101 and FM222 are manufactured at ISO 22000 certified facilities that also meet the requirements of ISO 21469 helping to ensure that the highest levels product integrity are maintained.

	Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, at 40°C	Dropping Point °C, ASTM D 2265
MOBILGREASE FM 101	White	1	Aluminium Complex	100	260
MOBILGREASE FM 222	White	2	Aluminium Complex	220	260

**Mobiltemp SHC™ 32** is a supreme performance antiwear grease primarily intended for high temperature applications. It combine the unique features of polyalphaolefin (PAO) synthetic base fluids with those of an organo-clay, non-soap thickener. The excellent resistance to thermal/oxidative degradation provided by the PAO base, coupled with the excellent high temperature structural stability and high dropping point of the clay thickener result in outstanding high temperature grease. The wax-free nature of the synthetic base fluid and its high viscosity index also provide superior low temperature lubrication as well as excellent film protection at high temperatures.

	Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, at 40°C	Dropping Point °C, ASTM D 2265
MOBILTEMP SHC 32	Red	1.5	Clay	32	308

## GREASES

### COMMERCIAL & INDUSTRIAL GREASES - POLYUREA

**Mobil™ SHC™ Polyrex EM Series** high performance greases are specially formulated for electric-motor bearings. The advanced thickener formulation and proprietary manufacturing techniques provide improved bearing performance and protection for long electric motor life.

Mobil SHC Polyrex 102 EM Series has demonstrated up to 40% improvement in bearing torque reduction in controlled laboratory testing(\*).

The energy efficiency design is a trademark of Exxon Mobil Corporation.

(\* Torque reduction relates solely to the performance of Mobil SHC Polyrex 102 EM when compared to conventional (mineral) reference grease of a similar viscosity grade in a deep groove ball bearing. The technology used allows up to 40 % torque reduction compared to the reference when tested in a bearing under controlled conditions. Efficiency improvements will vary based on operating conditions and equipment.

	Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, at 40°C	Dropping Point °C, ASTM D 2265
MOBIL SHC POLYREX 102 EM	Green	2	Polyurea	85	253
MOBIL SHC POLYREX 103 EM	Green	3	Polyurea	85	269

**Mobil™ Arox™ NM 000** is an extreme pressure, semi-fluid grease designed specifically to provide a mist-free, non-toxic condition for air-line lubricated pneumatic tools, including rock drills, jackhammers, drifters, wagon drills, chippers, tampers, riveters, impact tools and pavement breakers. Low-odour, friction-andwear- reducing additives also have emulsifying properties and help protect metal surfaces from corrosion and rust.

	Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, at 40°C
MOBIL AROX NM 000	Amber	000	Calcium	140

**Mobil™ Arapen RB 320** is a high performance long-life grease developed for the roller bearings of railroad car journals where no provision is provided for in-service re-lubrication. It is formulated with a mineral base fluid and a mixed lithium / calcium soap thickener. Mobil Arapen RB 320 grease has the high oxidation stability required to maintain good lubrication throughout extended periods of service or storage. It is highly resistant to chemical deterioration that might otherwise produce acids or deposits that are detrimental to long bearing life. Mobil Arapen RB 320 grease has exceptional ability to withstand shear, i.e. retain consistency after prolonged working, as in the churning action of an antifriction bearing. This grease has been shown to have little effect on seal materials. Largely because of its special calcium-lithiumsoap base, Mobil Arapen RB 320 grease has a high resistance to structural change in the presence of water. It is also inhibited to give protection against rusting.

	Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, at 40°C	Dropping Point °C, ASTM D 2265
MOBIL ARPEN RB 320	Light Amber	1.5	Lithium Calcium	150	180

**Mobil™ SHC™ Polyrex Series** of greases are specifically designed to improve your productivity by solving high temperature lubrication problems in both general industry and food processing applications. Developed using advanced Polyurea technology, these synthetic, polymer-enhanced greases bring a high temperature solution to the market while carrying a full NSF H1 registration.

	Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, 40°C	Base Oil Viscosity, 100°C	Dropping Point °C, ASTM D 2265	Water Wash-out, ASTM D 1264, 79 °C, % Loss	Water Sprayoff, ASTM D 4049, 79 °C, % Loss
MOBIL SHC POLYREX 005	White	00	Polyurea	220	30	260	37	-
MOBIL SHC POLYREX 221	White	1	Polyurea	220	30	270	7	-
MOBIL SHC POLYREX 222	White	2	Polyurea	220	30	260	7	28
MOBIL SHC POLYREX 462	White	2	Polyurea	460	40	270	5	30

**Mobil Polyrex™ EM Series** super premium greases are specially formulated for electric-motor bearings. The advanced thickener formulation and proprietary manufacturing techniques provide improved bearing performance and protection for long electric motor life.

	Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, at 40°C	Dropping Point °C, ASTM D 2265	Water Washout, ASTM D 1264, 79 °C, % Loss
MOBIL POLYREX EM	Blue	2	Polyurea	115	260	1.9
MOBIL POLYREX EM 103	Blue	3	Polyurea	115	270	0.8

IND

CV

PV

GREASES

A&amp;M

IND

CV

PV

GREASES

A&amp;M

# GREASES

## COMMERCIAL & INDUSTRIAL GREASES - POLYUREA

**Mobil Polyrex™ EP 2** is a shear-stable polyurea grease with excellent extreme-pressure (EP) and load-carrying characteristics. The proprietary polyurea thickener system exhibits excellent resistance to oxidation and oil separation at operating temperatures as high as 160°C (320°F). With its outstanding high-temperature oxidation stability, load-carrying capability, shear stability, water resistance and wide operating temperature range, Mobil Polyrex EP 2 is an excellent multi-purpose grease for a wide array of industrial and construction applications.

MOBIL POLYREX EP 2	Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, Grease		Dropping Point °C, ASTM D 2265	Water Washout, ASTM D 1264, 79 °C, % Loss	Water Sprayoff, Loss, %, ASTM D4049
				40°C	100°C			
	Green	2	Polyurea	235	18.4	280	2.7	15

# GREASES

## COMMERCIAL & INDUSTRIAL GREASES - POLYUREA

**Mobil SHC Aware™ Grease Series** are high performance synthetic products designed specifically for applications which are in sensitive environments and meet the U.S. Environmental Protection Agency (EPA) 2013 Vessel General Permit (VGP) and the EU Ecolabel requirements. These leading products are readily biodegradable and virtually non-toxic as they are formulated based on biodegradable saturated ester base oils and a lithium/calcium soap thickener. They do not emulsify and have excellent water wash and salt water corrosion resistance.

MOBIL SHC AWARE GREASE EP 0 MOBIL SHC AWARE GREASE EP 2	NLGI Grade	Thickener Type	Viscosity of Oil, AMS 1697 cSt at 40°C	Dropping Point °C, ASTM D 2265	Water Washout, ASTM D 1264, 79 °C, % Loss
2	Lithium Calcium	320	150	3	

# GREASES

## PASSENGER VEHICLE GREASE

**Mobil 1™ Synthetic Grease** is an advanced full synthetic grease formulated with a proprietary blend of high-performance synthetic base stocks and a lithium complex soap thickener. The thickener system provides a high dropping point, while additives impart excellent extreme-pressure properties and resistance to water wash, rust and corrosion. The proprietary blend of high-performance synthetic base stocks used in Mobil 1 Synthetic Grease gives reliable lubrication over wide temperature ranges -50 C (-58 F) to 246 C (475 F). Mobil 1 Synthetic Grease meets the requirements of the National Lubricating Grease institute (NLGI) performance classification GC-LB. It is recommended for automotive applications at both high and low temperatures.

MOBIL 1 SYNTHETIC GREASE	Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, ASTM D445 at 40°C	Dropping Point °C, ASTM D 2265	Water Washout, ASTM D 1264, 79 °C, % Loss

**Mobil™ Infintec 152** super-long-life grease, recommended for a wide range of automotive and industrial applications, represents a major advance in lithium-complex grease technology. The proprietary technology of Mobil Infintec 152 has set a new standard for lithium-complex grease high-temperature performance. Mobil Infintec 152 dramatically out-performs conventional lithium-complex greases in high-temperature durability tests. The exceptional lubricating properties of Mobil Infintec 152 have also been proven in extensive tests conducted by major bearing manufacturers. Mobil Infintec 152 far exceeds the requirements of the ASTM D 4950 GC-LB grease classification for automotive wheel bearing and chassis applications.

MOBIL INFINITEC 152	Color, Visual	NLGI Grade	Thickener Type	Base Oil Viscosity, AMS1967 cSt at 40°C	Dropping Point °C, ASTM D 2265

# GREASES

Find a Mobil™ Grease for your every lubrication need.

Name	Color	Base Oil	Thickener	MoL %	Base Oil Viscosity at 40°C	NLGI Grade	Recommended Operating Temperature (Limit)		Claims	Typical Applications
							Lower, C	Upper, C		
<b>Flagship Greases</b>										
Mobil SHC Centaur™ 101Wdy	Grey/Black	Synthetic	Calcium Sulfonate	5	180	1	-40	220		Wide operating range, heavy-duty mining grease with molybdenum disulfide. Exceptional water handling characteristics, high temperature resistance and corrosion protection.
Mobil SHC Centaur™ 221	Tan	Synthetic	Calcium Sulfonate	220	1	-40	220			Wide operating temperature range, multipurpose grease with exceptional water handling characteristics, high temperature resistance and corrosion protection.
Mobil SHC Centaur™ 222	Tan	Synthetic	Calcium Sulfonate	220	2	-40	220			Wide operating temperature range, multipurpose grease with exceptional water handling characteristics, high temperature resistance and corrosion protection.
Mobil SHC Centaur™ 461	Tan	Synthetic	Calcium Sulfonate	460	1.5	-40	220			Wide operating temperature range, multipurpose grease with exceptional water handling characteristics, high temperature resistance and corrosion protection.
Mobil SHC Centaur™ 1000	Tan	Synthetic	Calcium Sulfonate	1000	1.5	-30	220			Extreme heavy-duty service for slow, highly loaded bearings at high and low temperatures and wet environments.
Mobil SHC 102	Dark Red	Synthetic	Clay	50	1.5	-50	180	EPN-C-28-50		High-speed spindle bearings, rollers, screws, and machine tool operating in a wide temperature range.
Mobil 1™ Synthetic Grease	Red	Synthetic	Lithium Complex	150	2	-40	150	NSDGC-LB		High performance, automotive wheel bearing, joint and chassis greases.
Mobil SHC Grease 460WT	Red	Synthetic	Lithium Complex	460	1.5	-30	150	EPN-C-26-30		Wind turbine pitch, main, and yaw bearings.
Mobil SHC Grease 461 WT	Yellow	Synthetic	Lithium Complex	460	1.5	-30	120	EPN-C-26-30		Wind turbine pitch, main, and yaw bearings. Improved low temperature performance with low starting torque.
Mobil SHC Grease 681 WT	Yellow	Synthetic	Lithium Complex	680	1.5	-30	120	EPN-C-26-30		Wind turbine pitch, main, and yaw bearings. Improved low temperature performance with low starting torque. High fiber content.
Mobil SHC Grease 681Wdy	Grey/Black	Synthetic	Lithium Complex	5	68	0	-50	120		Exceptional mobility at very low temperatures. Designed for central lubrication systems on mining equipment in arctic conditions. Equipment protection in high sliding mechanisms and heavy loads.
Mobil SHC Aware Grease EP 0	Amber	Synthetic	Lithium/Calcium	150	0	-25	125		USON VGP 2015, AFNOR ECOLABEL	Multipurpose grease with improved mobility meeting VGP requirements for use on ships, waterways or other environmentally sensitive areas.
Mobil SHC Aware Grease EP 2	Amber	Synthetic	Lithium/Calcium	150	2	-25	125		USON VGP 2015, AFNOR ECOLABEL	Multipurpose grease meeting VGP requirements for use on ships, waterways or other environmentally sensitive areas.
Mobil SHC 107	Red	Synthetic	Lithium Complex	460	00	-30	150	EPN-CB-30		Slow speed gear boxes, poorly sealed gear cases. Same as Mobil SHC 100 but with a different base oil.
Mobil SHC 108	Red	Synthetic	Lithium Complex	150	2	-40	150	EPN-C26-40	AMB-EPN-C	High-speed bearings. Electric motors. Wind turbine generators.
Mobil SHC 220	Red	Synthetic	Lithium Complex	220	2	-40	150	EPN-C26-30		Multipurpose, wide temperature range.
Mobil SHC 221	White	Synthetic	Lithium Complex	220	1	-40	150		AMB-EPN-C	Multipurpose, centralized grease systems. Wide temperature range. Rail applications (by approval).
Mobil SHC 460	Red	Synthetic	Lithium Complex	460	1.5	-40	150	EPN-C-26-40		Heavy-duty applications experiencing slow speeds and heavy loads. Wide temperature range.
Mobil SHC 1000	Red	Synthetic	Lithium Complex	1000	1.5	-30	150	EPN-C-26-30		Extreme heavy-duty service for slow, highly loaded bearings. High temperatures.
Mobil SHC™ PM 120	White	Synthetic	Lithium Complex	220	1.5	-40	150	EPN-C-26-40		High-speed paper machines. Excellent wear and water protection. High temperatures.
Mobil SHC™ PM 460	White	Synthetic	Lithium Complex	460	1.5	-40	150	EPN-C-26-40		High-speed paper machines. Excellent wear and water protection. High temperatures.
Mobil SHC Polymer 1020M	Green	Synthetic	Polyurea	85	2	-30	180	EPN-CB-30		High temperatures and speeds. Especially electric motor bearings in field for the applications.
Mobil SHC Polymer 1010M	Green	Synthetic	Polyurea	85	3	-30	180	EPN-CB-30		High temperatures and speeds. Especially electric motor bearings in field for the applications. For applications where anti-leak performance is needed such as vertically mounted motors.
Mobil SHC Polymer 205	White	Synthetic	Polyurea	220	00	-30	170	EPN-CB-30	NSF H1, Acheson 6-Pave, FDA 21 CFR 178.3570	Food processing. Wide temperature range, long grease life, central distribution systems, gearboxes designed for semi-flood grease.
Mobil SHC Polymer 221	White	Synthetic	Polyurea	220	1	-30	170	EPN-CB-30	NSF H1, Acheson 6-Pave, FDA 21 CFR 178.3570	Food processing. Wide temperature range, long grease life, multipurpose, central distribution systems.
Mobil SHC Polymer 223	White	Synthetic	Polyurea	220	2	-30	170	EPN-CB-30	NSF H1, Acheson 6-Pave, FDA 21 CFR 178.3570	Food processing. Wide temperature range, long grease life, multipurpose.
Mobil SHC Polymer 462	White	Synthetic	Polyurea	460	2	-30	170	EPN-FC-20	NSF H1, Acheson 6-Pave, FDA 21 CFR 178.3570	Food processing, very high temperatures, long grease life for high loads.
<b>Premium Greases</b>										
Mobilgrease™ PM 101	White	Mineral	Aluminum Complex	150	1	-20	120	EPN-20	NSF H1, Acheson 6-Pave, EPN-CM101, FDA 21 CFR 178.3570	Multipurpose NSF H1 Grease, good resistance to water wash, good low temperature mobility. Central grease systems.
Mobilgrease™ PM 222	White	Mineral	Aluminum Complex	220	2	-20	120	EPN-20	NSF H1, Acheson 6-Pave, EPN-CM101, FDA 21 CFR 178.3570	Multipurpose NSF H1 Grease, good resistance to water wash, good low temperature mobility.
Mobil Centaur WHP 221	Brown	Mineral	Calcium Sulfonate	220	1.5	-30	220	EPN-25-20		Multipurpose grease with exceptional water handling characteristics, high temperature resistance and corrosion protection.
Mobil Centaur WHP 461	Brown	Mineral	Calcium Sulfonate	460	1	-20	220	EPN-20		Heavy-duty grease with exceptional water handling characteristics, high temperature resistance and corrosion protection.
Mobil Centaur WHP 462	Brown	Mineral	Calcium Sulfonate	460	2	-30	220			Heavy-duty grease with exceptional water handling characteristics, high temperature resistance and corrosion protection.
Mobil Centaur Wdy 1	Grey/Black	Mineral	Calcium Sulfonate	3	300	1	-20	220		Heavy-duty mining grease fortified with molybdenum disulfide. Exceptional water handling characteristics and high temperature resistance.
Mobil Centaur Wdy 2	Grey/Black	Mineral	Calcium Sulfonate	3	300	2	-30	220		Heavy-duty mining grease fortified with molybdenum disulfide. Exceptional water handling characteristics and high temperature resistance.
Mobil Centaur WHP 151Wdy	Grey/Black	Mineral	Calcium Sulfonate	5	150	1	-20	220		Heavy-duty mining grease fortified with molybdenum disulfide. Exceptional water handling characteristics, high temperature resistance and corrosion protection.
Mobil Centaur WHP 152Wdy	Grey/Black	Mineral	Calcium Sulfonate	5	150	2	-30	220		Heavy-duty mining grease fortified with molybdenum disulfide. Exceptional water handling characteristics, high temperature resistance and corrosion protection.
Mobil Centaur WHP 462Wdy	Grey/Black	Mineral	Calcium Sulfonate	5	460	2	-30	220		Heavy-duty mining grease fortified with molybdenum disulfide. Exceptional water handling characteristics, high temperature resistance and corrosion protection.
Mobil Dynagard™ 400 SL	Grey/Black	Semi-Syn	Lithium	3	620	0.5	-35			Heavily loaded gear sets found in the mining industry. Excellent pumpability and structure film over a wide temperature range. Substant film.
Mobil Dynagard™ 800 Extra	Grey/Black	Semi-Syn	Lithium	3	840	0.5	-40			Heavily loaded gear sets found in the mining industry. Improved low temperature performance. Substant film.
Mobil Dynagard™ 2000	Grey/Black	Semi-Syn	Lithium	3	2000	0.5	-20			Heavily loaded gear sets found in the mining industry. Higher viscosity for extreme traction film in warmer temperatures. Substant film.
Mobil Eye EP Wdy	Grey/Black	Semi-Syn	Lithium Complex	3	120	1.5	-35	140		Wide temperature range mining grease fortified with molybdenum disulfide.
Mobilgrease WHP 005	Dark Blue	Mineral	Lithium Complex	220	00	-20	140			For centralized grease systems. Good low temperature mobility. Poorly sealed gear cases.
Mobilgrease WHP 120	Dark Blue	Mineral	Lithium Complex	220	0	-20	140			For centralized grease systems. Good low temperature mobility.
Mobilgrease WHP 221	Dark Blue	Mineral	Lithium Complex	220	1	-20	140	EPN-20		Multipurpose. Excellent water resistance.
Mobilgrease WHP 222	Dark Blue	Mineral	Lithium Complex	220	2	-20	140	EPN-20	NSG/EPN-408	Multipurpose. Excellent water resistance.
Mobilgrease WHP 223 Special	Grey/Black	Mineral	Lithium Complex	0.75	220	3	-20	140		Multipurpose. Excellent water resistance. Molybdenum disulfide for enhanced sliding wear protection.
Mobilgrease WHP 223	Dark Blue	Mineral	Lithium Complex	220	3	-30	140			For severe applications where anti-leakage properties are needed.
Mobilgrease WHP 461	Dark Blue	Mineral	Lithium Complex	460	1	-20	140	EPN-20L		Multipurpose applications with heavier loads and slower speeds. Excellent water tolerance.
Mobilgrease WHP 462	Dark Blue	Mineral	Lithium Complex	460	2	-20	140	EPN-20L		Multipurpose applications with heavier loads and slower speeds. Excellent water tolerance.
Mobilgrease WHP 462Wdy	Grey/Black	Mineral	Lithium Complex	3	460	2	-20	140		Heavy-duty industrial applications, especially with sliding contacts.
Mobilgrease WHP 681Wdy	Grey/Black	Semi-Syn	Lithium Complex	5	100	0	-40	140		Excellent mobility at very low temperatures, tacky and adhesive. Equipment protection in high sliding mechanisms and heavy loads.
Mobilgrease WHP 121Wdy	Grey/Black	Mineral	Lithium Complex	5	320	0	-20	140		Good mobility at low temperatures, tacky and adhesive. Equipment protection in high sliding mechanisms and heavy loads.
Mobilgrease WHP 122Wdy	Grey/Black	Mineral	Lithium Complex	5	320	1	-20	140		Good mobility, tacky and adhesive. Good water resistance. Equipment protection in high sliding mechanisms and heavy loads.
Mobilgrease WHP 123Wdy	Grey/Black	Mineral	Lithium Complex	5	320	2	-20	140		Tacky and adhesive. Excellent water resistance. Equipment protection in high sliding mechanisms and heavy loads.
Mobil Grease Modern Grease 2	Orange	Mineral	Lithium Complex	320	2	-20	140			Heavy-duty, water-resistant grease for use in construction and mining applications.
Mobil Grease Modern Grease Heavy 1	Grey/Black	Mineral	Lithium Complex	3	150	1	-20	140		Heavy-duty, water-resistant grease for use in construction and mining applications. Fortified with molybdenum disulfide for gear and bearing protection.
Mobil Grease Modern Grease Heavy 2	Grey/Black	Mineral	Lithium Complex	3	320	2	-20	140	EPN-20L	Heavy-duty, water-resistant grease for use in construction and mining applications. Fortified with molybdenum disulfide for gear and bearing protection. Improved pumpability in low temperatures.

Name	Color	Base Oil	Thickener	Moly %	Recommended Operating Temperature Limits*		NLGI Grade	Lower, C	Upper, C	DIN**	Claims	Typical Applications
					Min. Oil Viscosity @ 40°C	Max. Oil Viscosity @ 100°C						
<b>Premium Greases</b>												
Grease SP1	Green	Mineral	Lithium-Complex	220	1	-20	140					High performance, multipurpose industrial and automotive applications.
Grease SP2	Green	Mineral	Lithium-Complex	220	2	-20	140					High performance, multipurpose industrial and automotive applications.
Mobilgrease XTC	Dark Brown	Mineral	Lithium-Complex	480	1	-20	140			AGMA 15-1, 15-2, 15-3		Gear and gear meshing. Excellent resistance to centrifugal separation.
MobilPolyer SP	Blue	Mineral	Polyurea	195	2	-20	140					High temperatures and speeds. Long life. Provides low noise performance, light loads.
MobilPolyer SP 100	Blue	Mineral	Polyurea	195	3	-20	140	12P-20				High temperatures and speeds. Long life. For applications where anti-leak performance is needed such as vertically mounted motors.
MobilPolyer SP2	Green	Mineral	Polyurea	205	2	-20	140					High performance multipurpose grease with wide operating temperature range.
<b>Standard Greases</b>												
Mobilur SP103	Beige	Mineral	Lithium	320	000	-20	120	UP100-20				Enclosed gears and bearings in poorly sealed gear cases.
Mobilur SP1	Beige	Mineral	Lithium	150	0	-20	120	UP10-10				General purpose industrial grease.
Mobilur SP1	Beige	Mineral	Lithium	150	1	-20	120	4P10-20				General purpose industrial grease.
Mobilur SP2	Beige	Mineral	Lithium	150	2	-20	120	4P20-20				General purpose industrial grease.
MobilGrease WB 100	Light amber	Mineral	Lithium-Complex	150	1.5					AGM-WHC		Rolling and bearing greases.
Grease NL2	Green	Mineral	Lithium-Complex	195	2	-20	140	12N-20				High temperatures and speeds, including electric motors.
Grease NL3	Green	Mineral	Lithium-Complex	195	3	-20	140	13N-20				High temperatures and speeds including electric motors. For applications where anti-leak performance is needed such as vertically mounted motors.
Grease SP	Green	Mineral	Lithium-Complex	195	2	-20	120	4P20-20			MD-10-10	Multipurpose industrial and automotive applications.
Mobilgrease XTB	Black	Mineral	Lithium-Complex	320	1.5							Heavy-duty water resistant grease for steel mill service. Good mobility for use in large central grease systems.
Mobilgrease XTS	Black	Mineral	Lithium-Complex	320	0.5							Heavy-duty water resistant grease for steel mill service. Improved mobility for use in large central grease systems at lower temperatures.
Mobilgrease XTS	Black	Mineral	Lithium-Complex	480	2							Extra-heavy-duty water resistant grease for steel mill service and off-highway mobile equipment.
MobilDela Modern Grease 2	Black	Mineral	Lithium-Complex	320	2	-20	140					Heavy-duty water resistant grease for use in construction and mining applications.
Mobilgrease XBP 201	Dark Blue	Mineral	Lithium-Complex	195	1	-20	140					Heavy-duty water resistant grease for use in construction and mining applications. Improved pumpability in low temperatures.

For specific application/operating conditions and recommendations, go to [mobil.com/industrial](http://mobil.com/industrial).

The list above is intended as a general guide only. Our experienced technical advisors can recommend the optimum use of all grease products. Full details about these and other Mobil™ greases can be obtained in Product Data Sheets ([www.mobil.com/en/pds](http://www.mobil.com/en/pds)) and Material Safety Data Sheets ([ds.mobil.com](http://ds.mobil.com)).

\*Operating temperature ranges provided as a guide only. Actual performance is dependent on the specific application, ambient conditions, re-lubrication frequency and lubrication method. This may result in limits that are significantly different than those reported.

\*\*NLGI 1-3 grades classified in accordance to DIN 51825:2004-06. NLGI 0 and lower grades classified in accordance with DIN 51825:2005-01.

For more information on Mobil Industrial Greases and other Mobil Industrial Lubricants and services, call your local company representative or the Mobil Technical Helpline at 1-888-968-3776. Also visit [mobil.com/industrial](http://mobil.com/industrial).

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# Understanding compatibility and conversion

Making a change can be easier than you think

## Considering changing greases?

As you think about appropriate greases for the needs of your operation today, you may decide to make some changes. To do this, you need to understand the issue of compatibility and its implications for conversion. For many greases, it's easier than you think! Compatibility is not necessarily an indication of whether a conversion can be done; it's often a tool to identify how it should be done.

## Compatibility charts are just part of the equation

Compatibility charts like the one below can be a good tool to identify which thickeners generally play well with others. They can be helpful as long as you don't consider them a hard and fast rule. The chart shows general likelihood of compatibility, but it doesn't account for specific product formulations or the effect of certain conditions, such as temperature, shear rates, and the ratio of the greases in the mixture.



	Aluminum complex	Calcium complex	Calcium sulfonate	Lithium 12-hydroxy	Lithium complex	Polyurea	Clay
Aluminum complex	TC	TI	TMC	TI	TI	TMC	TI
Calcium complex	TI	TC	TMC	TI	TMC	TC	TI
Calcium sulfonate	TMC	TMC	TC	TMC	TC	TI	TI
Lithium 12-hydroxy	TI	TI	TMC	TC	TC	TMC	TI
Lithium complex	TI	TMC	TC	TC	TC	TMC	TI
Polyurea	TMC	TC	TI	TMC	TMC	TC	TMC
Clay	TI	TI	TI	TI	TI	TMC	TC

**References:**  
 Typically compatible... TC  
 Typically moderately compatible... TMC  
 Typically incompatible... TI

**Interaction matters**

It's best to get as much information as you can about compatibility. Knowing the type of interaction between two greases can allow you to make a better decision, rather than just knowing if they are compatible or not. Some incompatibilities simply result in a slightly lower dropping point, which is the temperature where the structure breaks down and the grease becomes liquid. If your machinery doesn't run extremely hot, the lower

dropping point won't be an issue. Another incompatible test result is softening. But softening can sometimes be a benefit—if the bearings run at moderate to low speeds, softening can help excess grease escape the housing and purge out the old grease faster. The following table highlights important compatibility factors to keep in mind:

Approach with confidence
Compatible thickeners in chart
Dropping-point incompatibility in bearings operating below 150°F
Softening incompatibility in low-speed bearings that can be greased more frequently

Approach with care
Potentially incompatible thickeners in chart
Dropping-point incompatibility in high-heat applications
Softening incompatibility in high-speed bearings
Hardening (very rare)

**Operating conditions are critical**

In addition to how well two greases interact, equipment operating conditions may change the risk associated with incompatibility. Below are some additional factors to consider when evaluating a conversion plan.

**Low-concern conditions**

- Moderate operating temperatures and climate
- High purge rate, or frequent lubrication cycles, meaning grease is not in the equipment for very long
- Less-critical or less-expensive machinery
- Equipment that is easy to clean or replace

= **Low likelihood of compatibility issues**

**Higher-concern conditions**

- Extreme hot or cold operating temperatures and climate
- Low purge rate, or infrequent lubrication cycles, meaning grease mixture must perform for an extended period of time
- Expensive or process-critical machinery
- Equipment that is difficult (or impossible) to clean or replace, such as electric motors or sealed bearings

= **Higher likelihood of compatibility issues**

When you are ready to discuss a change, speak with your ExxonMobil representative or Authorized Distributor to develop a safe and effective grease conversion plan.

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# AVIATION

## HYDRAULIC FLUIDS

**Mobil™ HyJet IV-A<sup>plus</sup>** is a fire-resistant phosphate ester hydraulic fluid designed for use in commercial aircraft. It is the best-performing Type IV fluid and approaches to a great extent many of the performance capabilities of Type V fluids, including high temperature stability, long fluid life, density, and rust protection. It is superior to all other Type IV fluids in these respects. Mobil HyJet IV-A plus meets the specifications of all major aircraft manufacturers and SAE AS1241.

MOBIL HYJET IV-A <sup>plus</sup>	Shear Stability, %	Kinematic Viscosity	Pour Point, °F,	Flash Point °C,
	Loss, 40 C, %, ASTM D5621	ASTM D97 / ASTM D5950	ASTM D97 / ASTM D5950	ASTM D92
	22		-80	349

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# AVIATION

## JET OILS

**Mobil Jet™ Oil II** is a high performance aircraft-type gas turbine lubricant formulated with a combination of a highly stable synthetic base fluid and a unique chemical additive package. The combination provides outstanding thermal and oxidative stability to resist deterioration and deposit formation in both the liquid and vapour phases, as well as excellent resistance to foaming. The effective operating range of Mobil Jet Oil II is between -40°C (-40 °F) and 204 °C (400°F).

MOBIL JET OIL II	Kinematic Viscosity, ASTM D445		Pour Point °C,	Flash Point °C,
	cSt at 40°C	cSt at 100°C	ASTM D 97	ASTM D92
	27.6	5.1	-74.2	518

**Mobil Jet™ Oil 387** has been developed to meet the performance requirements of both current and future, advanced gas turbine engines used in commercial and military service. Made from a specially prepared, ester base stock, Mobil Jet Oil 387 is fortified with a unique chemical additive package. The resulting lubricant has outstanding thermal and oxidation stability that resists deterioration and deposit formation. The physical properties of Mobil Jet Oil 387 conform to required builder and military specifications.

MOBIL JET OIL 387	Kinematic Viscosity, ASTM D445		Pour Point °C,	Flash Point °C,
	cSt at 40°C	cSt at 100°C	ASTM D 97	ASTM D92
	25.9	5.2	-70.6	532.4

**Mobil Jet™ Oil 254** is a third-generation, extra high performance, synthetic aircraft-type gas turbine lubricant engineered to meet the performance requirements for gas turbine engines used in commercial and military aircraft. This product is formulated from a specially prepared, hindered-ester base stock and fortified with a unique chemical additive package. The result is a product having outstanding thermal and oxidation stability that resists deterioration and deposit formation while maintaining the physical characteristics required by builder and military specifications. The physical properties of Mobil Jet Oil 254 are similar to those currently available, earlier-generation gas turbine lubricants. The effective operating range of the lubricant is between -40°C (-40 °F) and 232°C (450°F).

MOBIL JET OIL 254	Kinematic Viscosity, ASTM D445		Pour Point °C,	Flash Point °C,
	cSt at 40°C	cSt at 100°C	ASTM D 97	ASTM D92
	26.4	5.3	-79.6	489.2

**Mobil Jet™ Oil CI** is based upon the proven Mobil Jet™ Oil II formulation technology and has been updated to include robust additives for improved protection against rust and corrosion in severe operating environments. Fully qualified against the Corrosion Inhibited (CI) classification of U.S. Military Specification MIL-PRF-23699, Mobil Jet Oil CI is approved for use in both military and commercial applications that require an enhanced level of performance.

MOBIL JET OIL CI	Kinematic Viscosity, ASTM D445		Pour Point °C,	Flash Point °C,
	cSt at 40°C	cSt at 100°C	ASTM D 97	ASTM D92
	25	5	-63	270

# MARINE PRODUCT LISTING BY APPLICATION

## CROSSHEAD ENGINE OILS

Mobilgard™ 540.....	80
Mobilgard™ 540 AC .....	80
Mobilgard™ 570 .....	80
Mobilgard™ 300 C .....	80

## TRUNK PISTON ENGINE OILS

Mobilgard™ 410 NC.....	80
Mobilgard™ 12 Series.....	80
Mobilgard™ M30 Series.....	80

## MARINE

### CROSSHEAD ENGINE OILS

**Mobilgard™ 540** is a high quality marine diesel engine cylinder oil for slow-speed crosshead engines and is specifically formulated for engines running on 0.50 percent sulphur fuels and is suitable for Ultra Low (<0.10%S) sulphur fuel operation in conjunction with Original Equipment Manufacturer (OEM) guidance. Designed to maximise all-round performance through use of a balanced formulation, Mobilgard 540 has a BN level of 40mg/KOH/g to sufficiently neutralise acid formulation whilst also keeping engines clean to minimise maintenance requirements. To ensure optimum lubricant distribution and oil film retention to help protect engine parts, Mobilgard 540 has an optimum viscosity of 20cSt at 100C.

	Kinematic Viscosity,		Pour Point °C,	Flash Point °C,	TBNmg
	ASTM D445 cSt at 100°C	V.I. ASTM D 2270			
MOBILGARD 540	20	98	-21	248	40

**Mobilgard™ 540 AC** is an MAN ES Category II and WinGD Dual Fuel/ LNG validated, premium quality, high-performance two-stroke marine diesel engine cylinder oil designed to effectively lubricate and deliver advanced cleanliness through effective deposit control across wide-ranging fuel and engine conditions. Through the use of advanced formulation and detergency technologies in conjunction with a low Base Number (BN), Mobilgard 540 AC has demonstrated the ability to deliver advanced cleanliness and wear protection, whilst optimising cylinder oil feedrates and effectively managing acid neutralisation in a range of engines and fuel applications.

	Kinematic Viscosity,		Pour Point °C,	Flash Point °C,	TBNmg
	ASTM D445 cSt at 100°C	V.I. ASTM D 2270			
MOBILGARD 540 AC	19	99	-30	207	40

**Mobilgard™ 570** is a premium quality, high-performance marine diesel engine cylinder oil. The outstanding performance of Mobilgard 570 has been demonstrated at the elevated peak firing pressures and liner temperatures found in modern marine two stroke engines. It has an optimum viscosity of over 20 cSt. at 100°C and low volatility to ensure excellent lubricant distribution and oil film retention. Through the use of a balanced formulation for allround performance, Mobilgard 570 has demonstrated the ability to minimise cylinder oil feed-rates whilst showcasing excellent cleanliness under sustained operation with fuel Sulphur levels down to 1.5%.

	Kinematic Viscosity,		Pour Point °C,	Flash Point °C,	TBNmg
	ASTM D445 cSt at 100°C	V.I. ASTM D 2270			
MOBILGARD 570	20	104	-9	256	70

**Mobilgard™ 300 C** is a premium quality system oil specially formulated to provide superior engine cleanliness, better wear protection and longer oil life when compared with conventional system oils. It is designed for use in two-stroke, crosshead marine diesel engines operating under severe conditions. This product has sufficient alkalinity to protect against strong acids which may find their way into the crankcase from the combustion of fuel sulphur, and it has enhanced load carrying ability in order to reduce wear in heavily loaded bearings and gears.

	Kinematic Viscosity,		Pour Point °C,	Flash Point °C,	Spec. Gravity	TBNmg
	ASTM D445 cSt at 100°C	V.I. ASTM D 2270				
MOBILGARD 300 C	11.9	98	-24	245	15.6C/15.6C	70

## MARINE

### CROSSHEAD ENGINE OILS

**Mobilgard™ 410 NC** (No Chlorine) engine oil is a non-zinc and non-chlorine lubricant specifically formulated with a Progress Rail (EMD) and General Electric (GE) endorsed additive technology to meet requirements of heavily loaded diesel engines manufactured by EMD and used in marine applications.

	Kinematic Viscosity,		Pour Point °C,	Flash Point °C,	TBNmg
	ASTM D445 cSt at 100°C	V.I. ASTM D 2270			
MOBILGARD 410 NC	15.2	104	-24	266	11

**Mobilgard™ 12 Series** oils are high performance diesel engine oils developed for use in trunk piston engines operating on low sulphur distillate fuels in marine and industrial applications. They are formulated to have excellent resistance to oxidation and viscosity increase over a long period of service. They have outstanding water separating properties and provide excellent corrosion protection.

	Kinematic Viscosity,		Pour Point °C,	Flash Point °C,	Spec. Gravity	TBNmg
	ASTM D445 cSt at 100°C	V.I. ASTM D 2270				
MOBILGARD 312	12.0	100	-15.8	510.8	0.896	15
MOBILGARD 412	14.5	100	-15.8	521.6	0.899	15
MOBILGARD 512	19.4	100	-15.8	539.6	0.903	15

**Mobilgard™ M30 Series** oils are premium, extra high performance 30 TBN engine oils designed for use in some of the most severe residual-fuelled medium-speed diesel applications found in marine and stationary power industries. These market leading trunk piston engine oils are formulated utilizing the latest in additive detergent technology and provide outstanding residual fuel compatibility characteristics for excellent engine cleanliness, especially in crankcase, camshaft areas, ring belt and piston undercrowns. They also demonstrate excellent high temperature oxidation and thermal stability, low volatility, and high load carrying properties and corrosion protection.

	Kinematic Viscosity,		Pour Point °C,	Flash Point °C,	Spec. Gravity	TBNmg
	ASTM D445 cSt at 100°C	V.I. ASTM D 2270				
MOBILGARD M330	12.0	100	21.2	471.2	0.907	30
MOBILGARD M430	14.0	100	21.2	482	0.907	30

## DEFINITIONS & REGULATIONS

### Industrial Lubricants and Greases

Certain products within this chapter are subject to the following adhere to the definitions and regulations provided below.

**Environmentally Acceptable Lubricants (EALs) definition:** The term environmentally acceptable lubricant (EAL) is used to describe those lubricants that have been demonstrated to meet standards for biodegradability, toxicity and bioaccumulation potential that minimize their likely adverse consequences in the aquatic environment, compared to conventional lubricants. To read more please visit - [https://www3.epa.gov/npdes/pubs/vgp\\_environmentally\\_acceptable\\_lubricants.pdf](https://www3.epa.gov/npdes/pubs/vgp_environmentally_acceptable_lubricants.pdf)

### U.S. Environmental Protection Agency (EPA) requirements

The Environmental Protection Agency (EPA) protects people and the environment from significant health risks, sponsors and conducts research, and develops and enforces environmental regulations.

To read more please visit EPA website - <https://epa.gov/>

### 2013 Vessel General Permit (VGP)

The VGP provided National Pollutant Discharge Elimination System (NPDES) permit coverage nationwide for discharges incidental to the normal operation of commercial vessels greater than 79 feet in length.

To read more please visit - <https://www.epa.gov/vessels-marinas-and-ports/vessels-vgp>

### EU EcoLabel regulations

With both markets and consumers favouring eco-friendly products, being awarded the right to bear the EU Ecolabel gives manufacturers with proven sustainable actions (waste and emissions reductions, eco-friendly sourcing and supply chains, etc.) an edge over competitors.

Website for Eco- Label says the following:

An ecolabel is a voluntary environmental label for goods and/or services (generally referred to as “products”). These products must meet specific criteria related to a reduction in the overall environmental impact. The criteria depend on the product group. The EU Ecolabel is ruled by Regulation (EC) NO 66/2010 and fits the International Organisation for Standardization (ISO) definition for a Type 1 Ecolabel. This means the EU Ecolabel is awarded on a voluntary basis, based on multiple criteria, by an independent third party to indicate overall environmental preferability within a specific product category based on a life-cycle assessment.

See: About the EU Ecolabel

### QUESTIONS?

CALL EXXONMOBIL  
TECHNICAL SUPPORT CENTER AT  
**1-800-662-4525**  
[tsc.americas@exxonmobil.com](mailto:tsc.americas@exxonmobil.com)

[mobil.com/industrial](http://mobil.com/industrial) | [mobildelvac.com](http://mobildelvac.com) | [mobil.com](http://mobil.com)

VISCOSITY CONVERSION TABLE

Kinematic cSt 40 C	SUS	Engler	Redwood No. 1 Sec.	Kinematic cSt 40 C	SUS	Engler	Redwood No. 1 Sec.	Kinematic cSt 40 C	SUS	Engler	Redwood No. 1 Sec.
2	32.6	1.14	30.8	46	214	6.15	190	240	1112	32	990
3	36.0	1.22	33.2	50	233	6.65	207	250	1159	33	1030
4	39.1	1.31	35.8	55	256	7.25	228	260	1205	34	1070
5	42.5	1.40	38.4	60	279	7.9	248	270	1251	36	1110
6	45.7	1.48	41.0	65	302	8.6	268	280	1297	37	1150
7	49.0	1.56	43.7	70	325	9.25	286	290	1344	38	1190
8	52.0	1.65	46.5	75	349	9.85	307	300	1390	40	1230
9	55.7	1.74	49.2	80	372	10.5	329	315	1460	41	1300
10	59.0	1.83	52.1	85	395	11.2	349	330	1529	43	1350
11	62.5	1.92	55.2	90	418	11.8	370	350	1622	46	1440
12	66.2	2.02	58.4	95	442	12.5	390	370	1715	49	1520
13	70.0	2.12	61.6	100	465	13.2	410	390	1807	51	1600
15	77.5	2.32	68.2	110	511	14.5	450	410	1900	54	1690
17	85.5	2.55	75.2	120	558	15.8	490	430	1990	57	1770
19	94	2.77	82.8	130	605	17.1	530	450	2090	59	1850
21	100	3.00	90.4	140	649	18.4	570	470	2180	62	1930
23	111	3.23	98	150	695	19.7	620	490	2270	64	2010
25	120	3.46	106	160	742	21.0	660	500	2320	66	2050
28	133	3.83	117	170	788	22.5	700	550	2540	72	2260
30	142	4.09	125	180	834	24.0	740	600	2780	79	2460
33	155	4.46	137	190	881	25.0	780	650	3010	86	2670
35	164	4.71	145	200	927	26.0	820	700	3240	92	2880
38	178	5.10	157	210	973	28.0	860	750	3470	99	3080
40	187	5.35	166	220	1020	29.0	900	800	3700	105	3280
43	200	5.75	178	230	1066	30.0	940				

DEGREES API CORRESPONDING TO SPECIFIC GRAVITIES AT 60/60°F AND POUNDS PER GALLON

Degrees API	Specific Gravity (S.G.)	Pounds Gallons	Degrees API	Specific Gravity (S.G.)	Pounds Gallons	Degrees API	Specific Gravity (S.G.)	Pounds Gallons
1.36	1.065	8.870	14.4	0.970	8.078	30.2	0.875	7.286
1.99	1.060	8.829	15.5	0.965	8.036	31.1	0.870	7.244
2.62	1.055	8.787	15.9	0.960	7.995	32.1	0.865	7.203
3.26	1.050	8.745	16.7	0.955	7.953	33.0	0.860	7.161
3.91	1.045	8.704	17.5	0.950	7.911	34.0	0.855	7.119
4.56	1.040	8.662	18.2	0.945	7.870	35.0	0.850	7.078
5.21	1.035	8.620	19.0	0.940	7.828	36.0	0.845	7.036
5.88	1.030	8.578	19.8	0.935	7.786	36.9	0.840	6.994
6.55	1.025	8.537	20.6	0.930	7.745	38.0	0.835	6.952
7.23	1.020	8.495	21.5	0.925	7.703	39.0	0.830	6.911
7.91	1.015	8.453	22.3	0.920	7.661	40.0	0.825	6.869
8.60	1.010	8.412	23.1	0.915	7.620	41.0	0.820	6.827
9.30	1.005	8.370	24.0	0.910	7.578	42.1	0.815	6.786
10.00	1.000	8.328	24.8	0.905	7.536	43.2	0.810	6.744
10.70	0.995	8.287	25.7	0.900	7.494	44.3	0.805	6.702
11.4	0.990	8.245	26.6	0.895	7.453	45.4	0.800	6.661
12.2	0.985	8.203	27.5	0.890	7.411			
12.9	0.980	8.162	28.4	0.885	7.369			
13.6	0.975	8.120	29.3	0.880	7.328			

ISO VISCOSITY CLASSIFICATION SYSTEM

ISO Viscosity Grades	Mid-Point cSt @ 40°C	Viscosity Ranges cSt @ 40°C	
		Minimum	Maximum
2	2.2	1.98	2.42
3	3.2	2.88	3.52
5	4.6	4.14	5.06
7	6.8	6.12	7.48
10	10	9.00	11.0
15	15	13.5	16.5
22	22	19.8	24.2
32	32	28.8	35.2
46	46	41.4	50.6
68	68	61.2	74.8
100	100	90.0	110
150	150	135	165
220	220	198	242
320	320	288	352
460	460	414	506
680	680	612	748
1000	1000	900	1100
1500	1500	1350	1650

GREASE CONSISTENCY CLASSIFICATION: NATIONAL LUBRICATING GREASE INSTITUTE (NLGI) AMERICAN STANDARD LUBRICATING GREASE CLASSIFICATION

GRADE	60-STROKE WORKED PENETRATION AT 77°F (25°C)
NLGI No. 000	445-475
NLGI No. 00	400-430
NLGI No. 0	355-385
NLGI No. 1	310-340
NLGI No. 2	265-295
NLGI No. 3	220-250
NLGI No. 4	175-205
NLGI No. 5	130-160
NLGI No. 6	85-115

The grades are defined as ranges of the values of the 60-stroke worked penetration, in tenths of millimeters, as determined by the ASTM Designation D 217, "Cone Penetration of Lubricating Grease."

ISO 4406 – OIL CLEANLINESS BY PARTICLE COUNTING

Cleanliness Code	Particles/ml	
	More Than	Up To
> 28	2500000	
28	1300000	2500000
27	640000	130000
26	320000	640000
25	160000	320000
24	80000	160000
23	40000	80000
22	20000	40000
21	10000	20000
20	5000	10000
19	2500	5000
18	1300	2500
17	640	1300
16	320	640
15	160	320
14	80	160
13	40	80
12	20	40
11	10	20
10	5	10
9	2,5	5
8	1,3	2,5
7	0,64	1,3
6	0,32	0,64
5	0,16	0,32
4	0,08	0,16
3	0,04	0,08
2	0,02	0,04
1	0,01	0,02
0	0	0,01

SAE VISCOSITY GRADES FOR ENGINE OILS

SAE Viscosity Grade	Low-Temperature (C°) Cranking Viscosity <sup>(3)</sup> (cP) Max	Low-Temperature (C°) Pumping Viscosity <sup>(4)</sup> (cP) Max with No Yield Stress <sup>(4)</sup>	Low-Shear-Rate Kinematic Viscosity <sup>(5)</sup> (cSt) at 100°C Min	Low-Shear-Rate Kinematic Viscosity <sup>(5)</sup> (cSt) at 100°C Max	High-Shear-Rate Viscosity <sup>(6)</sup> (cP) at 150°C Min
0W	6,200 at -35	60,000 at -40	3.8	—	—
5W	6,600 at -30	60,000 at -35	3.8	—	—
10W	7,000 at -25	60,000 at -30	4.1	—	—
15W	7,000 at -20	60,000 at -25	5.6	—	—
20W	9,500 at -15	60,000 at -20	5.6	—	—
25W	13,000 at -10	60,000 at -15	9.3	—	—
20	—	—	5.6	< 9.3	2.6
30	—	—	9.3	< 12.5	2.9
40	—	—	12.5	< 16.3	2.9 <sup>(7)</sup>
40	—	—	12.5	< 16.3	3.7 <sup>(8)</sup>
50	—	—	16.3	< 21.9	3.7
60	—	—	21.9	< 26.1	3.7

- (1) Note: 1cP = 1mPa\*s; 1cSt = 1mm²/s
- (2) All values are critical specifications as defined by ASTM D 3244
- (3) ASTM D 5293
- (4) ASTM D 4684; note that the presence of any yield stress detectable by this method constitutes a failure regardless of viscosity
- (5) ASTM D 445
- (6) ASTM D 4683, CEC L-36-A-90 (ASTM D 4741), or ASTM D 5481
- (7) 0W-40, 5W-40, and 10W-40
- (8) 15W-40, 20W-40, 25W-40, and 40

SAE J306 VISCOSITY GRADES FOR GEAR OILS

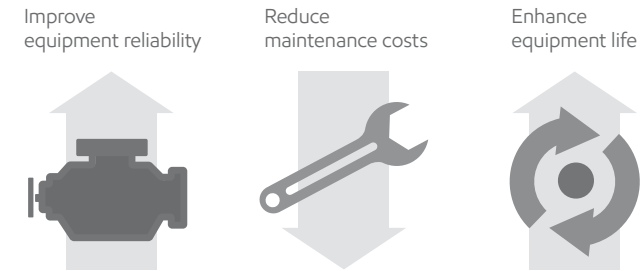
SAE Viscosity Grade	Maximum Temperature for BF Viscosity 150,000 cP	Kin Viscosity, 100°C	
		min. <sup>(1)</sup>	max.
70W	-55 C	4.1	—
75W	-40 C	4.1	—
80W	-26 C	7.0	—
85W	-12 C	11.0	—
80	—	7.0	<11.0
85	—	11.0	<13.5
90	—	13.5	<18.5
110	—	18.5	<24.0
140	—	24.0	<32.5
190	—	32.5	<41.0
250	—	41.0	—

<sup>(1)</sup>Limits must also be met after testing in CEC L-45-T-93 Method C (20 hours)

°C = (°F-32) * (5/9)		°F = °C (9/5) + 32		°C = (°F-32) * (5/9)		°F = °C (9/5) + 32		°C = (°F-32) * (5/9)		°F = °C (9/5) + 32	
°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
-100	-148.0	22	71.6	210	410	510	950	815	1499		
-98	-144.4	24	75.2	215	419	515	959	820	1508		
-96	-140.8	26	78.8	220	428	520	968	825	1517		
-94	-137.2	28	82.4	225	437	525	977	830	1526		
-92	-133.6	30	86.0	230	446	530	986	835	1535		
-90	-130.0	32	89.6	235	455	535	995	840	1544		
-88	-126.4	34	93.2	240	464	540	1004	845	1553		
-86	-122.8	36	96.8	245	473	545	1013	850	1562		
-84	-119.2	38	100.4	250	482	550	1022	855	1571		
-82	-115.6	40	104.0	255	491	555	1031	860	1580		
-80	-112.0	42	107.6	260	500	560	1040	865	1589		
-78	-108.4	44	111.2	265	509	565	1049	870	1598		
-76	-104.8	46	114.8	270	518	570	1058	875	1607		
-74	-101.2	48	118.4	275	527	575	1067	880	1616		
-72	-97.6	50	122.0	280	536	580	1076	885	1625		
-70	-94.0	52	125.6	285	545	585	1085	890	1634		
-68	-90.4	54	129.2	290	554	590	1094	895	1643		
-66	-86.8	56	132.8	295	563	595	1103	900	1652		
-64	-83.2	58	136.4	300	572	600	1112	905	1661		
-62	-79.6	60	140.0	305	581	605	1121	910	1670		
-60	-76.0	62	143.6	310	590	610	1130	915	1679		
-58	-72.4	64	147.2	315	599	615	1139				
-56	-68.8	66	150.8	320	608	620	1148				
-54	-65.2	68	154.4	325	617	625	1157				
-52	-61.6	70	158.0	330	626	630	1166				
-50	-58.0	72	161.6	335	635	635	1175				
-48	-54.4	74	165.2	340	644	640	1184				
-46	-50.8	76	168.8	345	653	645	1193				
-44	-47.2	78	172.4	350	662	650	1202				
-42	-43.6	80	176.0	355	671	655	1211				
-40	-40.0	82	179.6	360	680	660	1220				
-38	-36.4	84	183.2	365	689	665	1229				
-36	-32.8	86	186.8	370	698	670	1238				
-34	-29.2	88	190.4	375	707	675	1247				
-32	-25.6	90	194.0	380	716	680	1256				
-30	-22.0	92	197.6	385	725	685	1265				
-28	-18.4	94	201.2	390	734	690	1274				
-26	-14.8	96	204.8	395	743	695	1283				
-24	-11.2	98	208.4	400	752	700	1292				
-22	-7.6	100	212	405	761	705	1301				
-20	-4.0	105	221	410	770	710	1310				
-18	-0.4	110	230	415	779	715	1319				
-16	3.2	115	239	420	788	720	1328				
-14	6.8	120	248	425	797	725	1337				
-12	10.4	125	257	430	806	730	1346				
-10	14.0	130	266	435	815	735	1355				
-8	17.6	135	275	440	824	740	1364				
-6	21.2	140	284	445	833	745	1373				
-4	24.8	145	293	450	842	750	1382				
-2	28.4	150	302	455	851	755	1391				
0	32.0	155	311	460	860	760	1400				
2	35.6	160	320	465	869	765	1409				
4	39.2	165	329	470	878	770	1418				
6	42.8	170	338	475	887	775	1427				
8	46.4	175	347	480	896	780	1436				
10	50.0	180	356	485	905	785	1445				
12	53.6	185	365	490	914	790	1454				
14	57.2	190	374	495	923	795	1463				
16	60.8	195	383	500	932	800	1472				
18	64.4	200	392	505	941	805	1481				
20	68.0	205	401	510	950	810	1490				

## Mobil<sup>SM</sup> Lubricant Analysis condition-monitoring fundamentals

In today's industry, condition-based maintenance practices have gained widespread acceptance. Key industry leaders increasingly realize that oil analysis is a critical component in any equipment monitoring program. A successful oil analysis program can help:



Mobil<sup>SM</sup> Lubricant Analysis simplifies the lubrication monitoring process while producing reliable results that help guide maintenance professionals to the best decisions for their operations.

Mobil Lubricant Analysis provides informative reports on the condition of your equipment and lubricant, backed by the unmatched flexibility, expertise, and quality assurance of ExxonMobil.

- **Flexibility** — Perform many tasks more efficiently with Mobil Lubricant Analysis online capabilities.
- **Expertise** — Through global Original Equipment Manufacturer (OEM) relationships and hands-on lubrication experience, ExxonMobil supports your maintenance activities.
- **Quality** — Make decisions with confidence by leveraging the quality assurance offered by ExxonMobil.



### Points to consider Oil analysis

Oil analysis is an effective condition-monitoring tool. Additional equipment monitoring practices (inspections, vibration, operator logs, etc.) can be implemented to further enhance the value of your overall equipment reliability program.

Oil analysis is most effective as a diagnostic tool when samples are taken from the appropriate equipment at scheduled intervals.



**1. Determine what to sample** — Consider the five general factors listed below when selecting equipment for the program, and refer to your OEM manual for guidance on recommended sample frequency.

Operating condition	Fluid age factor	Equipment age factor	Target sample results	Economic impact of failure
<ul style="list-style-type: none"> <li>• High dirt/dust condition</li> <li>• High loads/pressures/speeds</li> <li>• High temperatures</li> <li>• Low temperatures</li> <li>• Chemical contamination</li> <li>• Wet condition</li> </ul>	<ul style="list-style-type: none"> <li>• Hours/miles/kilometers since last change</li> <li>• Oxidation, contamination</li> <li>• Synthetic, premium, mineral</li> </ul>	<ul style="list-style-type: none"> <li>• Hours/miles/kilometers</li> <li>• Rated life expectancy</li> <li>• Make and model number</li> </ul>	<ul style="list-style-type: none"> <li>• Above control limits</li> <li>• Within control limits</li> </ul>	<ul style="list-style-type: none"> <li>• Safety risk</li> <li>• Operational criticality</li> <li>• Repair costs</li> <li>• Downtime cost</li> <li>• Lost production</li> <li>• Spared unit</li> </ul>



**2. Determine when to sample** — A regular pattern of sampling will establish a credible historical trend of equipment performance. If you don't have OEM-recommended sample interval guidelines, refer to the table below for general guidance in establishing initial sample frequency.

Industrial/plant equipment		Off-highway equipment		On-highway equipment	
Application	Frequency	Application	Frequency	Application	Frequency
Landfill gas engine	250 hours	Diesel engine	250 hours	Diesel engine	25,000 km or 15,000 mi
Generator engine	500 hours	Wheel motor	250 hours	Transmission	500 hrs, 40,000 km, or 25,000 mi
Natural gas engine	500 hours	Differential/gear	500 hours	Hydraulic system	500 hrs, 40,000 km, or 25,000 mi
Paper machine lube system	Monthly	Hydraulic system	500 hours		
Turbine	Monthly	Transmission	500 hours		
Compressor	3 months	Final drive	1,000 hours		
Gear drive	3 months				
Hydraulic system	3 months				

# Grease analysis

Using an innovative sampling tool, this test program provides accurate, streamlined analysis to help improve the reliability of equipment that cannot easily be monitored through standard fluid analysis.

### Description

The program is designed to provide valuable insights on in-service grease and equipment performance in four critical areas:

- **Wear** - Detects ferrous debris and wear metals in the grease
- **Consistency** - Evaluates changes in consistency compared to the baseline grease
- **Contamination** - Determines if the grease has been contaminated with another grease or foreign materials
- **Quality** - Assesses the overall grease quality and determines if regreasing adjustments are needed

Repeatable and representative samples are easily extracted and sent to our lab, where reliable tests can be performed at a fraction of standard grease analysis costs. From a single one-gram sample, the lab can perform up to seven tests.

### Analysis trace slate

- Trace metals
- Colorimetry
- Stress index
- Infrared spectroscopy
- Ferrous debris
- Water content

### Key Benefits



Increases productivity by minimizing unscheduled downtime



Saves time and money by limiting parts replacement and labor costs



Enhances equipment life and reliability by identifying problems before they occur



Makes grease sampling easy and convenient while enabling consistent, accurate analysis



**Mobil™ Lubricant Analysis - Grease analysis**

Test	Purpose	Importance of test
Trace metals	Determine presence and levels of metallic content in the grease, including contaminants and wear particles	Helps detect equipment component wear and harmful contamination in the grease. Can assist in identifying early issues and in improving long-term equipment performance
Colorimetry	Detect grease aging, overheating or environmental contamination	Helps validate changes in grease appearance, track trends such as darkening due to aging or overheating, indicate contamination, and qualify if environmental contaminants are accumulating in the grease
Stress index	Determine grease consistency as an alternate method to NLGI grade	Indicates grease softening or hardening. Changes in stress index provide a screening tool to assess grease performance in equipment
Infrared spectroscopy	Provide a fingerprint of grease composition by analyzing the molecular bonds within it	Identifies possible grease breakdown or contamination
Ferrous debris	Can be used as an early indicator to identify ferrous wear particles in grease samples	Early identification of wear particles can help address potential performance issues and extend equipment life
Water content	Detect presence of water contamination on the bearing	Can help with early intervention to prevent rust or adjust operating conditions to minimize water ingress

Analysis	Service Level – ◆ Essential	Service Level – ◆◆ Enhanced
Metals	●	●
Water ppm Karl Fischer	●	●
Ferrous Debris	●	●
Color		●
IR Correlation		●
Stress Index		●

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Beacon™ 325	66
DIOL™ Series	45
Faxam™ 32	32
Fenso™ Series	34
Geargard™ HVS	23
Humble™ Hydraulic H	29
logear™ EP 100	24
Jenbacher™ N Oil 40	22
Jenbacher™ NX Oil 40	22
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Mobil 1 Racing™ 4T	62
Mobil 1™ 5W-20, 5W-30, 10W-30 and 15W-50	59
Mobil 1™ Advanced Clean 0W-20, 5W-20, 5W-30	60
Mobil 1™ Advanced Fuel Economy 0W-8, 0W-16, 0W-20 and 0W-30	59
Mobil 1™ C40 GT 0W-40	60
Mobil 1™ Classic Car 10W-30	60
Mobil 1™ ESP 0W-30, 5W-30, Mobil 1™ ESP X2 0W-20 and Mobil 1™ ESP X4 0W-40	59
Mobil 1™ ESP X2 0W-20	50
Mobil 1™ Extended Performance 0W-20, 5W-20, 5W-30 and 10W-30	59
Mobil 1™ Extended Performance High Mileage 0W-20, 5W-20, 5W-30 and 10W-30	59
Mobil 1™ FS 0W-40, 5W-30, 5W-40 and Mobil 1™ FS X2 5W-50	59
Mobil 1™ High Mileage 0W-20, 5W-20, 5W-30, 10W-30 and 10W-40	59
Mobil 1™ Hybrid 0W-20	59
Mobil 1™ Supercar 0W-40 and 5W-50	60
Mobil 1™ Syn Gear Lube LS 75W-140	60
Mobil 1™ Syn Gear Lube LS 75W-90	60
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Mobil 1™ Synthetic Grease	72
Mobil 1™ Synthetic LV ATF HP	62
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