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Applications	SAE VG	TBN mg KOH/g	ISO Viscosity	NLGI	Product	Product Description
Slow speed engines (cylinder)	50	40			Mobilgard™ 540 AC > M	Mobilgard [™] 540 AC is a cylinder oil specifically formulated by ExxonMobil to meet the advanced cleanliness requirements of MAN Energy Solutions' Category II requirements and is recommended for use with its Mark 9 and newer 2-stroke marine engine designs. Mobilgard 540 AC is for use in slow-speed, two-stroke marine engines operating on LNG, 0.10% sulphur fuels and 0.50% sulphur fuels.
	50	40			Mobilgard™ 540 X > M	Mobilgard [™] 540 X cylinder oil has been specifically formulated to provide outstanding performance in two-stroke marine diesel engines, allowing vessel operators the flexibility to use it with 0.10%, 0.50% sulphur fuels and Liquefied Natural Gas (LNG). It is also the first cylinder oil to be dual fuel gas validated by WinGD.
	50	40			Mobilgard™ 540 > M	Mobilgard™ 540 cylinder oil has been specifically formulated for use in slow-speed, two-stroke marine engines operating on sulphur fuels up to 0.50% that comply with the International Maritime Organization's (IMO) 2020 emission regulations.
	50	100			Mobilgard™ 5100 > M	Mobilgard™ 5100 is an advanced cylinder oil designed for two-stroke marine diesel engines operating on heavy fuel oil. It is engineered to help prevent cold corrosion – and reduce maintenance and operational costs – in modern marine two stroke engines.
	50	70			Mobilgard™ 570 > M	Mobilgard [™] 570 cylinder oil is designed to provide excellent protection for a wide range of slow-speed diesel marine engines, operating with fuels including MGO, VLSFO and HFO. Please follow OEM specific instructions on applicable fuel sulphur levels.
	50	145			Mobilgard™ 5145 > M	Mobilgard [™] 5145 is an advanced cylinder oil designed for two-stroke marine diesel engines operating on heavy fuel oil. It is engineered to help prevent cold corrosion – and reduce maintenance and operational costs – in modern marine two stroke engines. The cylinder oil has been proved to be beneficial in cases where Mobilgard [™] 5100 doesn't provide adequate acid neutralisation to protect the engines from corrosion. There have also been cases where vessel operators have used Mobilgard 5145 to enable feed rate optimisation while operating on high sulphur fuel.
Slow speed engines (system)	30	9			Mobilgard™ 300 C > M	Mobilgard [™] 300 C is a next-generation system oil specially engineered to help improve cleanliness in two-stroke crosshead diesel engines. Its balanced formulation combats deposits and sludge buildup, especially in the most susceptible engine components – such as the piston undercrown and crankcase.

Applications	SAE VG	TBN mg KOH/g	ISO Viscosity	NLGI	Product	Product Description
Medium speed engines (distillate use)	40	10			Mobilgard™ 410 NC > M	Next-generation Mobilgard [™] 410 NC engine oil is formulated specifically for medium-speed GE Transportation (A Wabtec Company) and Progress Rail/EMD engines. This low-ash, phosphorous-free engine oil offersoutstanding wear protection in Tier IV engines and provides excellent protection in existing engines. It delivers enhanced performance for engines using distillate fuels, biodiesel and liquefied natural gas (LNG).
	40	13			Mobilgard™ 450 NC > M	Mobilgard [™] 450 NC is a zinc-free, chlorine-free lubricant specifically formulated to meet requirements of heavily loaded diesel engines manufactured by Progress Rail/EMD used in marine applications. It is suitable for engines using distillate fuels with sulphur content up to 1.5 per cent.
	30, 40	15			Mobilgard™ 12 Series > M	Mobilgard™ 12 Series high-performance diesel oils are designed for use in marine trunk piston engines operating on low sulphur distillate fuels. The oils are compatible with ExxonMobil Premium ECA category fuels. They provide outstanding corrosion and wear protection, as well as helping engine cleanliness and water separation properties.
	30, 40	12			Mobilgard™ ADL Series > M	Mobilgard [™] ADL Series oils have been designed for high Brake Mean Effective Pressure (BMEP) medium- and high-speed diesel engines operating on distillate fuels. Mobilgard [™] ADL 30 and Mobilgard [™] ADL 40 oils each have a balanced formulation which combats lacquer formation and deposits in severe service applications. Superior load carrying properties help to minimise piston ring and liner wear, and also make the lubricants suitable for marine gearing applications.
	5W-40	15			Mobilgard™ 1 SHC > S	Mobilgard 1 SHC by ExxonMobil is a supreme performance, synthetic diesel engine oil specifically formulated to address the needs of high power, distillate fueled diesel engines. It provides unsurpassed lubrication including long drain capability and extended engine life for today's marine diesel engines operating in severe applications.
Medium speed engines (HFO use)	30, 40	20			Mobilgard™ M20 Series > M	ExxonMobil's Mobilgard [™] M20 Series diesel engine oils are specifically formulated for use in medium-speed engines using 0.50% and 0.10% sulphur fuels and liquefied natural gas (LNG) due to their low base number formulation of 20 BN. This formulation helps ensure that deep-sea and coastal vessels with dual-fuel engines can continue using a single lubricant, regardless of their fuel selection. It also helps vessel operators safely and efficiently comply with the International Maritime Organization's global 0.50% sulphur cap.
	30, 40	30			Mobilgard™ M30 Series > M	Mobilgard [™] M30 Series diesel engine oils are recommended for use in medium-speed engines in deep-sea, coastal plus river vessels cruising in the inland waterways and operating on heavy fuel oil (HFO). These extra-high-performance trunk piston engine oils are formulated using the latest additive detergent technology to help protect against deposits in piston undercrowns, crankcases, ring belt and camshaft areas. Their outstanding residual fuel compatibility helps reduce sludge formation and enables excellent engine cleanliness.
	40	40			Mobilgard™ M440 > M	Mobilgard™ M40 Series extra-high-performance, premium 40 TBN engine oils (Mobilgard™ M440) is designed for use in the most severe, residual-fueled, medium-speed diesel applications found in both deep sea and inland and coastal waterways. They are formulated using the latest additive detergent technology.

Applications	SAE VG	TBN mg KOH/g	ISO Viscosity	NLGI	Product	Product Description
Medium speed engines (HFO use)	40	50			Mobilgard™ M50 > M	Mobilgard™ M50 extra-high-performance, premium 50 TBN marine engine oil is designed for use in the most severe residual-fuelled, medium-speed diesel applications found in marine and stationary power industries.
High speed engines	30, 40	10.1			Mobilgard™ DEO > M	Mobilgard™ DEO Series heavy-duty oils are formulated for use in high-speed diesel engines operating in severe-service marine applications. They are especially suitable for tugboats and fishing vessels operating previous-generation engine designs. The high-performance monograde oils are created with high-quality base stocks and a balanced additive system, helping ensure thermal and oxidative stability, good detergency/dispersancy and stay-in-grade shear stability.
	15W-40	10			Mobilgard™ HSD 15W-40 > M	Mobilgard™ HSD 15W-40 engine oil is designed to provide outstanding performance in the most severe-service marine applications of modern, high-speed diesel engines. Outstanding thermal and oxidation stability helps to reduce low-temperature sludge buildup and high-temperature deposits.
	15W-40	9.8			Mobilgard™ HSD+ > M	Mobilgard™ HSD+ 15W-40 is an advanced, multigrade oil formulated for use in severe-service, high-speed diesel engines in marine applications. The lubricant, which can help extend engine life, meets or exceeds many original equipment manufacturer (OEM)requirements and delivers high performance in a range of engine types. Mobilgard HSD+ 15W-40 engine oil delivers exceptional performance in both newer and older heavy-duty engine designs.
	20W-50	8.4			Mobilgard™ HSD 20W-50 > M	Mobilgard™ HSD 20W-50 high-performance, heavy-duty engine oil provides proven protection to diesel engines operating in severe applications.
	5W-30	10			Mobil Delvac Ultra™ 5W-30 Ultimate Protection > S	Mobil Delvac Ultra™ 5W-30 Ultimate Protection fully synthetic diesel engine oil is especially suitable for heavy-duty diesel engines using low sulphur fuels and biodiesel fuel formulations – including main propulsion engines for lifeboats and tugs, as well as generators and winch engines.
	5W-40	12.1			Mobilgard™ 1 HSD 5W-40 > S	Mobilgard 1 HSD is an Advanced Fully Synthetic High Speed Marine Diesel Engine Oil, that helps extend engine life while providing long drain capability and potential fuel economy for modern and latest diesel engine technology operating in severe applications.

Applications	SAE VG	TBN mg KOH/g	ISO Viscosity	NLGI	Product	Product Description
Hydraulic systems			32, 46, 68		Mobil SHC™ Aware™ H Series > € S	The Mobil SHC [™] Aware [™] H Series meets Vessel General Permit (VGP) requirements for environmentally acceptable lubricants* and is engineered to deliver optimal performance. Readily biodegradable, minimally toxic and non-bioaccumulative, these lubricants can be used in hydraulic systems where spills or leakage could result in adverse environmental impact.
			32, 46, 68		Mobil SHC [™] Aware [™] Hy- draulic Series > € S	Mobil SHC [™] Aware [™] Hydraulic Series high performance hydraulic oils meet the Vessel General Permit (VGP) requirements for environmentally acceptable lubricants* and EU EcoLabel regulations. Readily biodegradable, minimally toxic and non-bioaccumulative, these lubricants can be used in hydraulic systems where spills or leakage could result in an adverse environmental impact.
			32, 46, 68		Mobil SHC™ 500 Series > S	Our Mobil SHC 500 Series synthetic hydraulic oils are designed to provide excellent wear protection for high-pressure vane, piston and gear pumps operating in a wide range of temperatures. They are formulated to provide outstanding low- and high-temperature performance and equipment protection up to three times longer than comparable conventional products.
			10, 22, 32, 46, 68, 100		Mobil DTE™ 20 Ultra Series > M	Mobil DTE™ 20 Ultra Series is designed to help you achieve your goals easily and efficiently. These hydraulic oils offer extended oil drain intervals and cut hydraulic oil costs and waste.
			15, 32, 46, 68, 100, 150		Mobil DTE 10 Excel™ Series > M	Our wide range of Mobil DTE 10 Excel [™] Series lubricants are formulated to meet the demands of today's high-pressure hydraulic systems. These zinc-free hydraulic fluids provide advanced antiwear protection and help keep hydraulic systems cleaner, minimising system deposits.
Wire ropes			320	0, 2	Mobil SHC [™] Aware [™] Grease Series > € S	Mobil SHC Aware [™] Grease Series greases are high performance synthetic products designed specifically for applications which are environmentally sensitive 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.
					Mobilarma™ 798 > M	Mobilarma™ 798 oil offers excellent water-displacing properties to support the lubrication and rust protection of wire rope – in extreme temperatures and for both strands and running rope.

Applications	SAE VG	TBN mg KOH/g	ISO Viscosity	NLGI	Product	Product Description
Grease points			320	0.2	Mobil SHC [™] Aware [™] Grease Series >	Mobil SHC Aware [™] Grease Series greases are high performance synthetic products designed specifically for applications which are environmentally sensitive 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.
			007, 100, 220, 460, 1000, 1500	00, 2	Mobilith SHC™ Series > S	Our Mobilith SHC [™] Series high-performance, lithium complex synthetic greases are developed to protect equipment in severe applications operating at extreme temperatures. Their excellent adhesion, structural stability and resistance to water conditions found in marine environments make them suitable for use in a wide variety of machinery and components.
			220	1, 2, 3	Mobilgrease XHP™ Series > M	Mobilgrease XHP™ 220 Series high performance lithium-complex greases offer outstanding performance in marine operating conditions – including high temperature, water contamination and shock loading operations. It is suitable for use in a variety of marine applications including winch, windlass and general greasing applications.
			160	0, 1, 2, 3	Mobilux™ EP series > M	Mobilux™ EP series products are a high performance family of four general-purpose industrial greases. These lithium hydroxystearate greases are formulated to provide extra protection against wear, rusting and water washout. They are available in NLGI grades as per table.
Open gear systems			320	0, 2	Mobil SHC [™] Aware [™] Grease series > € S	Mobil SHC Aware [™] Grease Series greases are high performance synthetic products designed specifically for applications which are environmentally sensitive 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.
			460, 1500		Mobilgear OGL series >	Mobilgear OGL series are high performance advanced technology lubricants which incorporate both extreme pressure additives and finely dispersed graphite for load carrying. They are intended primarily for the lubrication of large, slow to medium speed, heavily loaded gears. In addition to providing outstanding load carrying, they are formulated to have excellent adhesion and resistance to "fling-off" under extreme conditions.
					Mobiltac™ 375 NC > M	Mobiltac [™] 375 NC is a high-performance, non-leaded, diluent-type, heavy-bodied lubricant designed for a wide variety of open gear marine applications. This non-chlorinated lubricant offers easy startup at low temperatures and helps support minimal equipment wear, downtime and maintenance costs. This lubricant strongly adheres to gear teeth and other machine elements to resist excessive throw-off.

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Applications	SAE VG	TBN mg KOH/g	ISO Viscosity	NLGI	Product	Product Description
Thermal oil systems			20.2, 30.4		Mobiltherm [™] Series > M	Mobiltherm 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.
Stern Tubes				100, 220	Mobil SHC™ Aware™ ST Series > € S	Mobil SHC [™] Aware [™] ST Series meet Vessel General Permit (VGP) requirements for environmentally acceptable lubricants* and is engineered to deliver optimal performance in marine stern tube systems, fin stabilisers and controllable pitch propeller (CPP) systems.
		30	9		Mobilgard™ 300 C > M	Mobilgard [™] 300 C is a next-generation system oil specially engineered to help improve cleanliness in two-stroke crosshead diesel engines. Its balanced formulation combats deposits and sludge buildup, especially in the most susceptible engine components – such as the piston undercrown and crankcase.
Air compressors			32, 46, 68		Mobil SHC™ Rarus Series > S	Mobil SHC [™] Rarus 32, Mobil SHC [™] Rarus 46 and Mobil SHC [™] Rarus 68 next-generation synthetic compressor oils have been formulated for use with rotary screw and vane air compressors and turbochargers.
			32, 46, 68		Mobil Rarus™ SHC 1020 Series > S	Our Mobil Rarus SHC [™] 1020 Series synthetic air compressor oils are designed to lubricate severe-duty rotary screw and vane air compressors. These outstanding synthetic air compressor oils are particularly suited for severe service applications where mineral products are not as effective. Mobil Rarus SHC 1020 Series synthetic air compressor oils are formulated for excellent wear protection and resistance to oxidation and thermal degradation.
					Mobil Rarus™ 400 Series > M	Our Mobil Rarus™ 400 Series ashless air compressor oils are recommended for single and multistage air compressors operating under mild to severe conditions. They are formulated with high-quality mineral base oils and a high-performance additive system to provide exceptional equipment protection and reliability for compressors.
			32, 100, 150		Mobil Rarus™ 800 Series > S	Mobil Rarus [™] 800 Series high-performance oils are primarily intended for the lubrication of severeduty main and emergency marine reciprocating air compressors. The lubricants are formulated with synthetic base oils and an additive system designed to provide outstanding resistance to antiwear and corrosion, providing excellent equipment protection and helping enhance equipment life.

Applications	SAE VG	TBN mg KOH/g	ISO Viscosity	NLGI	Product	Product Description
Refrigeration compressors			32, 46, 68		Gargoyle Arctic™ Oil series > M	Mobil Gargoyle™ Arctic 155 and 300 are high-performance mineral oils formulated for refrigeration compressors, primarily intended for use in living space air conditioning and food storage applications.
			46, 68, 100, 220		Gargoyle Arctic SHC™ 200 Series > S	Mobil Gargoyle Arctic SHC [™] 200 Series is a line of synthetic, high-performance lubricants, designed for use in refrigeration compressors and heat pumps. Formulated from wax-free, synthesised hydrocarbon polyalphaolefin (PAO) fluids.
			32, 46, 68, 100, 220		Mobil EAL Arctic™ Series >	Our Mobil EAL Arctic™ Series synthetic refrigerant oils are designed for refrigeration compressors and systems requiring ozone-friendly HFC refrigerants.
			68		Mobil Gargoyle Arctic SHC NH 68 > 3	Mobil Gargoyle Arctic SHC NH 68 is a fully synthetic lubricant, specifically designed to lubricate refrigeration compressors in high performance plants using ammonia as the refrigerating fluid. MobilGargoyle Arctic SHC NH 68 is formulated using wax free, synthesized hydrocarbons of polyalphaolefin (PAO) and synthetic Alkylbenzene base oils, which have demonstrated outstanding resistance to thermal/oxidative degradation.
Circulating and gear systems			68, 100, 150		Mobil SHC [™] Aware [™] Gear Series > € S	Mobil SHC [™] Aware [™] Gear Series gear oils meet Vessel General Permit (VGP) requirements for environmentally acceptable lubricants* and are engineered to deliver outstanding protection for gears and bearings, even under extreme pressure conditions. Mobil SHC [™] Aware [™] Gear 68, Mobil SHC [™] Aware [™] Gear 100 and Mobil SHC [™] Aware [™] Gear 150 oils are suitable for use in marine controllable pitch propeller and thruster applications, enclosed gear drives, and in systems where readily biodegradable and minimally toxic fluids may be required due to potential for water-oil interface. They are also compatible with many common gearbox materials.
			68, 100, 150, 220, 320, 460		Mobilgear [™] 600 XP Series > Mobil DTE [™] Light Mobil DTE [™] Medium Mobil DTE Heavy [™] Medium Mobil DTE [™] Heavy	Mobilgear [™] 600 XP Series advanced technology lubricants are designed to protect gears, bearings and seals in all types of enclosed-gear drives with circulation or splash lubrication systems. Mobilgear 600 XP lubricants are used in a wide range of marine applications, especially main propulsion, centrifuges, and deck machinery such as winches, windlasses, cranes, turning gears, pumps, elevators and rudder carriers.
			32, 46, 68, 100		Mobil DTE™ Named Series > M	The Mobil DTE™ Oil Named Series oils are high quality, rust- and oxidation-inhibited circulating lubricants. They are used widely in steam turbines and hydro turbines, as well as all other continuous circulation methods involving pumps, valves and ancillary equipment.
			150 <i>,</i> 220		Mobil Vacuoline™ 500 Series > M	Mobil Vacuoline™ 500 Series are high-performance, heavy-duty circulating oils available in six viscosity grades. They are recommended for use with marine moderate-duty spur, bevel, helical and herringbone gear units. They are also suitable for use in hydraulic systems employing gear, vane, radial and axial piston pumps, where high viscosity anti-wear hydraulic fluids are required.

Marine Lubricants

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Applications	SAE VG	TBN mg KOH/g	ISO Viscosity	NLGI	Product	Product Description
Circulating and gear systems			68, 150, 220, 320, 460		Mobil SHC™ 600 Series > S	For more than 40 years, Mobil SHC [™] 600 Series synthetic circulating and gear oils have delivered premium performance in gearboxes operating in extreme temperatures or under heavy loads. They continue to be recognised by equipment manufacturers for addressing specific lubrication challenges. Mobil SHC 600 Series lubricants are used in a wide range of marine applications, especially fuel and lubricant centrifuges and purifiers, as well as cranes and other hard-to-service equipment. The series is also suitable for use in a range of deck machinery.
			68		Mobilgear SHC™ MT 68 > S	Mobilgear SHC [™] MT 68 synthetic extreme-pressure marine gear oil is formulated to optimise the performance of equipment operating under extreme operating conditions. The oil was designed especially for marine thruster and azimuth gear drives requiring an ISO 68 viscosity gear oil with extreme-pressure additive protection.
			150, 220, 320, 460, 680, 1000		Mobil SHC™ Gear 220 > S	Mobil SHC [™] Gear Series is a synthetic gear oil that provides excellent protection and oil life in extreme conditions. It offers exceptional oxidation resistance and thermal properties, a high viscosity index (VI) and low-temperature fluidity. The high VI provides a wide operating temperature range and good low temperature start-up. The oil's additive sy stem is designed to provide excellent protection against conventional wear modes, such as scuffing, as well as a high level of resistance against micro-pitting fatigue. Mobil SHC [™] Gear 220 offers exceptional rust and corrosion protection even in the presence of seawater contamination.