



Lubricant



**MARINE
OILS**

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INTRODUCTION

We provide a complete range of high quality marine lubricants that are designed to protect and enhance the efficiency of engines and equipment. All of our products are backed by our industry-leading technical support services and used oil testing services that enable optimal maritime operation.

Johnson Marine delivers the latest technology and state of oil Marine Grade Range. It covers main and minor grades of proven quality.

QUALITY ASSURANCE

Our Engines oils have excellent deposits and wear control and meets the demand of latest and highly rated engines designs as well as all other applications.

Our Two-Stroke engine oils range consist of system oil and known for low sulphur application

Our Four-Stroke engine oil offers different level of alkalinity-reserve and covers highly loaded engines at low lube oil consumption from distillate to heavy fuel operations.

We offer very high quality product range for ancillary machinery application a cooperation with one leading marine additive manufacturing, that is covering Hydraulic / Gear / Compressor / Turbine / Refrigeration / Grease, exclusive from Johnson.



SECTOR CHALLENGE

At Virgin we have developed a wide range of lubricants that cover all the lubrication needs in the marine world, both for engines and the rest of machinery on board. We provide our clients with marine oils for 2-stroke and 4-stroke technology propulsion engines, as well as all the other lubricants and greases used in the vessel's diverse machinery. We also supply biodegradable oils (EALs) for equipment that may pollute its environment, as well as for vessels sailing in waters where international VGP standards must be complied with. You'll find them differentiated as follows:

BIODEGRADABLE LUBRICANTS

Today marine equipment faces ever-increasing challenges that are presented in different ways, partly due to the demand for the full availability of the equipment frequently used at full load, but mainly due to the extreme environments in which they operate.

In these extreme operating conditions, lubricants must provide, in addition to their standard function, extra protection in order to maintain or increase equipment reliability and availability, as well as facilitate maintenance management.

VIRGIN Lubricants, with their extensive experience in this type of applications, have demonstrated their high performance and response capacity, ensuring customers full equipment availability.

The VIRGIN Lubricants range is designed to respond to extremely demanding operating conditions: greater resistance to oxidation (higher working temperatures), lower viscosity loss (use of top-quality bases), greater anti-wear capacity (developments), etc., offering high resistance in this operating environment.

In addition to the cutting-edge technology used by VIRGIN to manufacture its lubricants, its extensive experience in the field and the data obtained from the analysis of thousands of samples provide valuable information that is taken into account in the development and adaptation of its range of lubricating oils, to a great extent contributing to the excellence of its products.

In line with our philosophy of ongoing innovation and improvement, we present our Marine Lubricants Catalogue in which we have selected the most widely-used products in the sector, of which VIRGIN offers you a wide range of products. In this selection you will find two categories based on their geographic availability differentiated as follows:





1. ENGINES

SLOW-SPEED ENGINES

Virgin Marine have full series of slow speed diesel engine oils, which is developed with heavy base stock and specially designed additive control. Two segments of this series are formulated for two very different applications, first is the VITESSA LENTE and the second is the VITESSA UNIVERSAL. Both are termed high performance lubricants and provide enhanced protection from mechanical wear as well as mitigation of cold corrosion. They are fully capable to optimize feed rates and reduce operating cost.

LEISURE 50-22

VIRGIN LEISURE 50-22 marine cylinder oil for slow-speed 2-stroke engines running on ECA fuels below 0,1% sulfur, is a highly reliable low alkaline lubricant, ensuring reliable operations with ECA compliant ultra low sulphur fuels, provides excellent cleanliness and outstanding deposit control, its low-ash content are protected against deposit formation which can lead to scuffing issues. **VIRGIN LEISURE 50-22** meets the requirements of Japan Engine Corporation, MAN ES, and WinGD.

SAE Grade: 50 TBN 25

Meets & Exceeds:

MAN Diesel & Turbo
and Wärtsilä 2-stroke

LEISURE 50-40

VIRGIN LEISURE 50-40 marine cylinder oil for slow-speed 2-stroke engines running on ECA fuels using low sulfur residual fuels below (1.0% sulfur), It's special formulation to maintains engine cylinder cleanliness and minimizes deposit build-up on piston crowns, rings and liners, With its low BN and its conventional calcium carbonate chemistry, it is optimized to efficiently lubricate engines. **VIRGIN LEISURE 50-40** meets the requirements of Japan Engine Corporation, MAN ES, and WinGD.

SAE Grade: 50 TBN 40

Meets & Exceeds:

MAN Diesel & Turbo
and Wärtsilä 2-stroke

LEISURE UNIVERSAL 50-57

JOHNSON VITESSA LENTE UNIVERSAL 50-57 marine cylinder oil for all 2-stroke engines using fuels and Dual Fuel with a sulfur range of 0.0 to 1.5%. the single oil solution, designed to lubricate engines using a wide range of fuels. Chemistry ensures optimum engine cleanliness and efficient acid neutralization. **JOHNSON VITESSA LENTE UNIVERSAL 50-57** meets the requirements of Japan Engine Corporation, MAN ES, and WinGD.

SAE Grade: 50 TBN 57

Meets & Exceeds:

MAN Diesel & Turbo
and Wärtsilä 2-stroke

LEISURE UNIVERSAL 50-70

VIRGIN LEISURE 50-70 marine cylinder oil for slow-speed 2-stroke engines running on high sulfur fuel oils, Using conventional mineral chemistry, its high BN efficiently neutralises sulphuric acid formed during combustion of high sulphur residual fuels, this prevents corrosion, cylinder wear and scuffing, and can extend the length of time between engine overhauls, it can work in various operating conditions. **VIRGIN LEISURE 50-70** meets the requirements of Japan Engine Corporation, MAN ES, and WinGD.

SAE Grade: 50 TBN 70

Meets & Exceeds:

MAN Diesel & Turbo
and Wärtsilä 2-stroke

LEISURE UNIVERSAL 50-100

VIRGIN LEISURE 50-100 is designed exclusively for modern Tier II and Tier III engines using high sulphur residual fuel oil, and has a high BN of 100, allowing for the most stringent and corrosive service conditions. It is capable of keeping engine cylinders clean and preventing engine damage when high sulphur heavy fuel oils (HSHFOs) are used, as well as when the engine is operated over extended periods of intense operation. **VIRGIN LEISURE 50-100** meets the requirements of Japan Engine Corporation, MAN ES, and WinGD.

SAE Grade: 50 TBN 100

Meets & Exceeds:

MAN Diesel & Turbo
and Wärtsilä 2-stroke

LEISURE 50-100

VIRGIN LEISURE 50-100 marine cylinder oil BN 100 for slow-speed 2-stroke engines running on any fuel oils in the range 0,0% to 3,5% sulfur, the innovative formulation using Ashfree Neutralizing Molecules provides superior acid neutralization and outstanding cylinder cleanliness, exceeding the capability of conventional oil. **VIRGIN LEISURE 50-100** meets the requirements of Japan Engine Corporation, MAN ES, and WinGD.

SAE Grade: 50 TBN 100

Meets & Exceeds:

MAN Diesel & Turbo
and Wärtsilä 2-stroke

LEISURE 50-140

VIRGIN LEISURE 50-140 marine cylinder oil for slow-speed 2-stroke engines especially suitable for those known to be susceptible to the cold corrosion phenomenon. **VIRGIN LEISURE 50-140** is able to efficiently neutralise sulphuric acid formed during combustion of high sulphur residual fuels whilst ensuring optimum engine cleanliness and minimising component wear. It is also suitable for use in on-board Mixing Systems when used in conjunction. **VIRGIN LEISURE 50-140** meets the requirements of Japan Engine Corporation, MAN ES, and WinGD.

SAE Grade: 50 TBN 140

Meets & Exceeds:

MAN Diesel & Turbo
and Wärtsilä 2-stroke

SYSTEM 30-5

VIRGIN SYSTEM 30-5 system oil has been specifically designed for the lubrication of slow speed 2-stroke crosshead diesel engines. offers excellent detergency, thermal stability and resistance to foaming, anti-oxidant properties enable superb antirust and anti-corrosive capability, Developed in close collaboration with major OEMs, **VIRGIN SYSTEM 30-5** meets the requirements of Japan Engine Corporation, MAN ES, and WinGD.

SAE Grade: 30 TBN 5

Meets & Exceeds:

- MAN ES (MAN B&W)
- WinGD (Wärtsilä)
- Japan Engine Corporation (UE Engines)

SYSTEM 40-5

VIRGIN SYSTEM 40-5 system oil for 2-stroke crosshead diesel engine crankshafts. With excellent detergency and dispersancy properties to maintain the circuit clean and protect metallic parts against wear, corrosion and the build-up of lacquers and varnishes. **VIRGIN SYSTEM 40-5** meets the requirements of Japan Engine Corporation, MAN ES, and WinGD.

SAE Grade: 40 TBN 5

Meets & Exceeds:

- MAN ES (MAN B&W)
- WinGD (Wärtsilä)
- Japan Engine Corporation (UE Engines)

MEDIUM-SPEED ENGINES

VIRGIN, always striving to be at the forefront of innovation and technology in the maritime sector, and VIRGIN offers a wide range of lubricants for large vessels with slow-speed 2-stroke engines to protect the engine and ensure smooth operation regardless of the quality of fuel used. A unique combination of chemically modified additives in combination with a broad TBN range make Johnson's 2-stroke engine lubricants an outstanding choice for all working conditions.

The 2-stroke lubricants range ensures minimum engine wear, maximum cleanliness, lower maintenance costs and long review periods.

VOYAGER 30-15

VIRGIN VOYAGER 30-15 is a new generation of lubricant oils can be used in main and auxiliary engines of all types and ratings which run on marine diesel or intermediate fuel oil with low sulphur content. As a result, it offers excellent detergency and dispersant properties, which are effective in the entire range of engine operating temperatures. It is also suitable for lubrication of bearings, stern tubes, and reduction gears. **VIRGIN VOYAGER 30-15** meets the requirements of Japan Engine Corporation, MAN ES, and WinGD.

SAE Grade: 30 TBN 15

Meets & Exceeds:

- WÄRTSILÄ
- MAN ENERGY SOLUTIONS
- CATERPILLAR MAK
- YANMAR
- DAIHATSU
- HIMSEN
- ROLLS-ROYCE

VOYAGER 30-20

VIRGIN VOYAGER 30-20 designed for use in highly rated, medium speed diesel engines used for both marine and stationary power generation. Engines using residual heavy fuel oil with low sulfur content. It is also suitable for dual fuel 4-stroke engines. The product can also be used to lubricate bearings, stern tubes and reduction gears. **VIRGIN VOYAGER 30-20** meets the requirements of Japan Engine Corporation, MAN ES, and WinGD.

SAE Grade: 30 TBN 20

Meets & Exceeds:

- WÄRTSILÄ
- MAN ENERGY SOLUTIONS
- CATERPILLAR MAK
- YANMAR
- DAIHATSU
- HIMSEN
- ROLLS-ROYCE

VOYAGER 30-30

VIRGIN VOYAGER 30-30 marine trunk piston engine oil for 4-stroke medium speed diesel engines running on high sulfur heavy fuel oil (HSFO) for marine and stationary power generation, ensures outstanding cleanliness of both the hot and cold parts of an engine. Excellent resistance to the negative effects of residual fuel contamination. Excellent thermal resistance and oxidation resistance. Good wear protection and excellent oil film strength at extreme pressures. **VIRGIN VOYAGER 30-30** meets the requirements of Japan Engine Corporation, MAN ES, and WinGD.

SAE Grade: 30 TBN 30

Meets & Exceeds:

- WÄRTSILÄ
- MAN ENERGY SOLUTIONS
- CATERPILLAR MAK
- YANMAR
- DAIHATSU
- HIMSEN
- ROLLS-ROYCE

VOYAGER 30-40

VIRGIN VOYAGER 30-40 range of trunk piston engine oils are developed for use in medium speed diesel engines utilising IMO 2020 compliant and residual fuels, combines an exclusive formulation of the latest additive technologies, developed by the Johnson research center, the product utilizes and highly refined base oils to provide a substantial safety margin able to cope with higher stress levels. **VIRGIN VOYAGER 30-40** meets the requirements of Japan Engine Corporation, MAN ES, and WinGD.

SAE Grade: 30 TBN 40

Meets & Exceeds:

- WÄRTSILÄ
- MAN ENERGY SOLUTIONS
- CATERPILLAR MAK
- YANMAR
- DAIHATSU
- HIMSEN
- ROLLS-ROYCE

VOYAGER 40-15

JOHNSON MOYENNE 40-15 new generation of lubricant oils developed for main and auxiliary engines of all types and ratings running on marine diesel or intermediate fuel oil with low sulphur content. Its noted for their good detergency and dispersant properties in the whole engine operation temperature range, excellent anti-wear protection. Its also suitable for the lubrication of bearings, stern tubes and reduction gears. **JOHNSON MOYENNE 40-15** meets the requirements of Japan Engine Corporation, MAN ES, and WinGD.

SAE Grade: 40 TBN 15

Meets & Exceeds:

- WÄRTSILÄ
- MAN ENERGY SOLUTIONS
- CATERPILLAR MAK
- YANMAR
- DAIHATSU
- HIMSEN
- ROLLS-ROYCE

VOYAGER 40-20

VIRGIN VOYAGER 40-20 marine trunk piston engine oil for 4-stroke medium speed diesel or dual-fuel engines running on low sulfur fuel oil (LSFO) for marine and stationary power generation. The product offers excellent resistance to the negative effects of residual fuel contamination, along with excellent thermal resistance and oxidation resistance, is also very water resistant, with outstanding demulsibility capacity, enabling rapid removal of water after an ingress and the maintenance of good engine performance. **VIRGIN VOYAGER 40-20** meets the requirements of Japan Engine Corporation, MAN ES, and WinGD.

SAE Grade: 40 TBN 20

Meets & Exceeds:

- WÄRTSILÄ
- MAN ENERGY SOLUTIONS
- CATERPILLAR MAK
- YANMAR
- DAIHATSU
- HIMSEN
- ROLLS-ROYCE

VOYAGER 40-30

JOHNSON MOYENNE 40-30 marine trunk piston engine oil for 4-stroke medium speed diesel or dual-fuel engines running on low sulfur fuel oil (LSFO) for marine and stationary power generation. Good detergency and dispersant capacity in a wide range of temperatures, high oxidation resistance and excellent anti-wear protection, cleanliness of both the hot and cold parts of an engine. **JOHNSON MOYENNE 40-30** meets the requirements of Japan Engine Corporation, MAN ES, and WinGD.

SAE Grade: 40 TBN 30

Meets & Exceeds:

- WÄRTSILÄ
- MAN ENERGY SOLUTIONS
- CATERPILLAR MAK
- YANMAR
- DAIHATSU
- HIMSEN
- ROLLS-ROYCE

VOYAGER 40-40

JOHNSON MOYENNE 40-40 exceeds the CF specification defined by the American Petroleum Institute (API), specially formulated for marine trunk piston engine oil for 4-stroke medium speed diesel or dual-fuel engines running on low sulfur fuel oil (LSFO) for marine and stationary power generation, high ability to reduce heavy deposit build-up in an engine creates savings via a reduction in maintenance costs. **JOHNSON MOYENNE 40-40** meets the requirements of Japan Engine Corporation, MAN ES, and WinGD.

SAE Grade: 40 TBN 40

Meets & Exceeds:

- WÄRTSILÄ
- MAN ENERGY SOLUTIONS
- CATERPILLAR MAK
- YANMAR
- DAIHATSU
- HIMSEN
- ROLLS-ROYCE

VOYAGER 40-55

JOHNSON MOYENNE 40-55 marine trunk piston engine oil for 4-stroke medium speed diesel or dual-fuel engines running on low sulfur fuel oil (LSFO) for marine and stationary power generation, ensures outstanding cleanliness of both the hot and cold parts of an engine. It contains a strengthened alkaline reserve to neutralise combustion acids in all engines running on high sulphur heavy fuel oils and very low lubricant oil consumption. **JOHNSON MOYENNE 40-55** meets the requirements of Japan Engine Corporation, MAN ES, and WinGD.

SAE Grade: 40 TBN 55

Meets & Exceeds:

- WÄRTSILÄ
- MAN ENERGY SOLUTIONS
- CATERPILLAR MAK
- YANMAR
- DAIHATSU
- HIMSEN
- ROLLS-ROYCE

HIGH-SPEED ENGINES

VIRGIN, GRAND series is designed for the highest performing range of high performance engines, providing the greatest level of cleanliness and protection which results in an extended life of your engine. It can help to lower your maintenance cost.

GRAND 15W40-10

VIRGIN GRAND 15W40-10 is a multigrade marine trunk piston engine oil for highly rated diesel engines (life boat engines, emergency power units, fire pumps). Very stable multigrade feature enabling the lubricant to be used in all seasons. Very high detergent properties at high temperature and high dispersant properties at low temperature. Excellent thermal stability and oxidation resistance.

VIRGIN GRAND 15W40-10 meets the requirements of Japan Engine Corporation, MAN ES, and WinGD.

SAE Grade: 15W-40 TBN 10

Meets & Exceeds:

- WÄRTSILÄ
- MAN ENERGY SOLUTIONS
- CATERPILLAR MAK
- YANMAR
- DAIHATSU
- HiMSEN
- ROLLS-ROYCE

GRAND 30-12

VIRGIN GRAND 30-12 is indicated for modern high-speed and medium-speed engines using distillate and semi-distillate fuels up to contents of 1% sulphur or MDO. These oils have a high detergent capacity, neutralise combustion acids and alkaline reserve for excellent thermal stability.

VIRGIN GRAND 30-12 meets the requirements of Japan Engine Corporation, MAN ES, and WinGD.

SAE Grade: 30 TBN 12

Meets & Exceeds:

- WÄRTSILÄ
- MAN ENERGY SOLUTIONS
- CATERPILLAR MAK
- YANMAR
- DAIHATSU
- HiMSEN
- ROLLS-ROYCE

GRAND 40-12

VIRGIN GRAND 40-12 is a monograde marine trunk piston engine oil for highly rated high speed diesel engines, adapted to high sulfur distillate fuels up to 0.5%S. Excellent detergent and dispersant capabilities guaranteeing engine cleanliness in all running conditions. Very good anti-corrosion and anti-oxidation capabilities providing engine durability. Excellent anti-wear and extreme pressure performances allowing use in reduction gears.

VIRGIN GRAND 40-12 meets the requirements of Japan Engine Corporation, MAN ES, and WinGD.

SAE Grade: 40 TBN 12

Meets & Exceeds:

- WÄRTSILÄ
- MAN ENERGY SOLUTIONS
- CATERPILLAR MAK
- YANMAR
- DAIHATSU
- HiMSEN
- ROLLS-ROYCE

GRAND 40-20

VIRGIN GRAND 40-20 is designed to meet the needs of a wide range of high-speed marine diesel engines operating under all conditions. It's additive technology helps protect against corrosion and wear throughout the oil-drain interval, control piston deposits and maintain good standards of engine cleanliness. It can be used in many aspirated and turbo-charged engines to provide protection and longer engine life.

VIRGIN GRAND 40-20 meets the requirements of Japan Engine Corporation, MAN ES, and WinGD.

SAE Grade: 40 TBN 20

Meets & Exceeds:

- WÄRTSILÄ
- MAN ENERGY SOLUTIONS
- CATERPILLAR MAK
- YANMAR
- DAIHATSU
- HiMSEN
- ROLLS-ROYCE

SPECIAL APPLICATION

SPEAR SAE 40-N13

VIRGIN SPEAR SA40-N13 is modern, fifth-generation technology oil, especially designed for use in diesel engines with silver bearings with all types of oils. Its additivation ensures thorough cleaning of internal engine parts, particularly the piston segment area, thus preventing abrasive wear and extending engine life. **VIRGIN SPEAR SA40-N13** meets the requirements of Japan Engine Corporation, MAN ES, and WinGD.

SAE Grade: 40 TBN 13

Meets & Exceeds:

- WÄRTSILÄ
- MAN ENERGY SOLUTIONS
- CATERPILLAR MAK
- YANMAR
- DAIHATSU
- HIMSEN
- ROLLS-ROYCE

SPEAR N7.8

VIRGIN SPEAR N7.8 is specifically designed for 2-stroke engines running on distillate fuels (in compliance with Detroit Diesel specifications). Monograde lubricant with high resistance to oxidation, anti-wear properties, high detergentdispersant power and low-ash additivation to prevent inlet port and exhaust blockages. Reacting to your engines' demands, it provides added protection. It can also be used in transmissions and torque converters. **VIRGIN SPEAR N7.8** meets the requirements of Japan Engine Corporation, MAN ES, and WinGD.

SAE Grade: 40 TBN 7.8

Meets & Exceeds:

- WÄRTSILÄ
- MAN ENERGY SOLUTIONS
- CATERPILLAR MAK
- YANMAR
- DAIHATSU
- HIMSEN
- ROLLS-ROYCE



A photograph of an offshore oil rig at sunset. The rig's complex structure, including platforms, ladders, and a crane with a yellow hook, is silhouetted against a sky with soft orange and pink clouds. The dark ocean is visible in the background. In the foreground, a dark vehicle is parked on the deck, and a red container is partially visible at the bottom right.

2. AUXILIARY MACHINERY

HYDRAULIC

VIRGIN HYDRAULIC fluids for marine applications ensure the lubrication, robustness and reliability of equipment. Their anti-wear, resistance to oxidation, corrosion protection, excellent water separation and high viscosity index properties make all our products exceed in many cases the requirements set forth in DIN 51524 and ISO 6743/4 standards.

HYDRO MARINE HVLP 68

VIRGIN HYDRO MARINE HVLP 68 is a marine hydraulic oil, particularly recommended for all high pressure and high speed (vane, piston and gear type hydraulic pumps) and for use in all hydraulic equipments operating in extreme temperature conditions, including:

- Remote control systems
- Hydraulic deck machinery
- Steering gears

Especially developed in order to satisfy the wide variations in temperature encountered with modern hydraulic systems.

ISO: 68

Meets & Exceeds:

- DIN-51524,
- Part 3 (HVLP)
- ISO 6743/4 HV
- ISO 11158
- AFNOR NF E 48-603 HV
- Filterability AFNOR (NF E 48-690 & 48-691)
- Eaton Vickers I-286-S & M-2950-S
- MAG IAS P-68, P-69, P-70 (ex Cincinnati)

HYDRO MARINE HVLP 100

VIRGIN HYDRO MARINE HVLP 100 fluid are high performance hydraulic fluids based on Group II base oils that provide outstanding protection and performance across a wide range of temperatures. They resist breakdown under heat or mechanical stress and are ideally suited to most mobile equipment and other applications subjected to a wider range of operating temperatures. It have a good stability in the presence of moisture, with ensure long fluid life and reduces the risk of corrosion and rusting, particularly in moist or humid environments.

ISO: 100

Meets & Exceeds:

- DIN-51524,
- Part 3 (HVLP)
- ISO 6743/4 HV
- ISO 11158
- AFNOR NF E 48-603 HV
- Filterability AFNOR (NF E 48-690 & 48-691)
- Eaton Vickers I-286-S & M-2950-S
- MAG IAS P-68, P-69, P-70 (ex Cincinnati)

HYDRO MARINE BIO

VIRGIN HTDRO MARINE BIO is a fully formulated anti-wear, readily biodegradable, environmentally friendly, ecologically responsive, non-toxic fluid designed for high pressure industrial, marine, construction and mobile hydraulic systems, turbines and circulating oil systems that are operated in environmentally sensitive areas. Fully synthetic esters, blended with ashless additives, with a superior blend of lubrication performance.

ISO: 68

Meets & Exceeds:

- ISO 6743/4 (HEES)
- ISO 15380 (HEES)
- DIN 51524/3 (HV)*
- Biodegradability OECD 301-B
- Biotelex Ecolabel 46 & 68

HYDRO MARINE BIO TMP

VIRGINE HYDRO MARINE BIO TMP is a synthetic biodegradable hydraulic oil featured by outstanding viscosimetric performances and good low temperature behaviour, thus offering a very wide range of operating temperatures. Suitable for any hydraulic system requiring a lubricant with good anti-wear properties, high viscosity index and improved thermal and oxidation stability giving an increased service life of the fluid.

ISO: 68

Meets & Exceeds:

- ISO 15380 (HEES)
- EAL according to VGP
- Meets Swedish Standard SS155434
- VDMA 24568: HEES
- ROLLS-ROYCE

GEARS

REGALIA GL-5 80W90

VIRGIN REGALIA GL-5 80W-90 is a high performance gear lubricant formulated with high performance base oils and an advanced additive system. Its ability to lubricate elements subjected to boundary lubrication (metal/metal contact) and its excellent water separation capacity in the event of pollution, make this lubricant ideal for working in all marine gear subjected to extreme lubrication conditions. Meets the requirements for API GL4 and GL5 performance categories and corresponds to SAE 80W-90 viscosity grade. For outboard and inboard transmissions subject to a normal to high load.

SAE GRADE: 80W-90 API GL-5

Meets & Exceeds:

- MB 235.6
- MAN 342 Type M2
- ZF TE-ML:07A, 16C, 17B, 19B, 21A
- US Military MIL-L-2105D

REGALIA GL-4 80W90

VIRGIN REGALIA GL-4 80W-90 is a high performance gear lubricant formulated with high performance base oils and an advanced additive system. PAO and ester-based synthetic lubricant for gears running under very severe load and temperature conditions. Its protection against micropitting failure is particularly noteworthy. Meets the requirements for API GL4 and GL5 performance categories and corresponds to SAE 80W-90 viscosity grade. For outboard and inboard transmissions subject to a normal to high load.

SAE Grade: 80W-90 API GL-4

Meets & Exceeds:

- MIL-L-2105
- MAN 341
- MB 235.10
- ZF TE-ML 01,02 and 08
- Massey Ferguson M1110
- JI Case MS 1210

REGALIA GL-5 85W140

VIRGIN REGALIA GL-5 85W140 is mineral low-viscosity hypoid gear oil. For vehicles with tried and tested transmission technology. Even under the most difficult conditions and during large temperature fluctuations, it ensures flawless aggregate functioning. Greatest lubrication security, maximum wear protection through large viscosity bandwidth. Outstanding viscosity temperature behavior. Reduces transmission noise.

SAE Grade: 85W-140 API GL-5

Meets & Exceeds:

- MB 235.6
- MAN 342 Type M2
- ZF TE-ML:07A, 16C, 17B, 19B, 21A
- US Military MIL-L-2105D

REGALIA GL-4 85W140

VIRGIN REGALIA GL-4 85W-140 is a high performance oil developed for axles, highly loaded gears and hypoid axles with double or single reduction requiring API GL-5 (gear boxes, axles, transfer boxes). Its a premium mineral gear oil, ensures high corrosion protection, even with sea water contamination, and provides lubrication advantages at both high and low temperatures compared to mineral oils. It is particularly adapted for the lubrication ZF manual transmission with drain interval based on OEM recommendations.

SAE Grade: 85W-140 API GL-4

Meets & Exceeds:

- MIL-L-2105
- MAN 341
- MB 235.10
- ZF TE-ML 01,02 and 08
- Massey Ferguson M1110
- JI Case MS 1210

REGALIA GL-5 75W80

VIRGIN REGALIA GL-5 85W-140 is a high performance oil developed for axles, highly loaded gears and hypoid axles with double or single reduction requiring API GL-5 (gear boxes, axles, transfer boxes). Its a premium mineral gear oil, ensures high corrosion protection, even with sea water contamination, and provides lubrication advantages at both high and low temperatures compared to mineral oils. It is particularly adapted for the lubrication ZF manual transmission with drain interval based on OEM recommendations.

SAE Grade: 85W-140 API GL-4

Meets & Exceeds:

- MB 235.6
- MAN 342 Type M2
- ZF TE-ML:07A, 16C, 17B, 19B, 21A
- US Military MIL-L-2105D

REGALIA GL-5 75W90

VIRGIN REGALIA GL-5 75W-90 is fully synthetic high-performance gear oil with extremely high performance reserves. Ensures assemblies function perfectly, even under extreme operating conditions and when exposed to large temperature fluctuations. Meets the requirements for API GL4 and GL5 performance categories and corresponds to SAE 75W-90 viscosity grade. For marine transmissions which require a top quality lubricant. Also suitable for drive wheels of different categories and reverse gears. Exceeds the highest test requirements of well-known transmission manufacturers.

SAE Grade: 75W-90

Meets & Exceeds:

- API GL4/5
- API MT-1

REGALIA ISO 100

VIRGIN REGALIA ISO 100 is 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. It 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. This product are formulated to meet the stress by providing extra protection for gears, bearings and seals.

ISO: 100

Meets & Exceeds:

- DIN 51517 Part 3
- ISO 12925-1 Type CKC
- AGMA 9005 E-02
- David Brown S1.53 101(E) and US Steel 224.

REGALIA ISO 220

VIRGIN REGALIA ISO 220 is high performance extreme pressure gear oils developed for lubrication of heavy duty industrial gears working under severe operating conditions. These are blended from high quality base stocks and sulphur-phosphorous type extreme pressure additive system that gives excellent load carrying capability to provide protection against shock loading and wear. The high thermo oxidative stability of the oil helps resist high temperature deposit formation and oil thickening. In addition, these oils also possess excellent water separation characteristics and offer resistance to foaming.

ISO: 220

Meets & Exceeds:

- DIN 51517/ Part 3 CLP
- MAN ENERGY SOLUTIONS
- AIST 224
- ISO-L-CKD
- AGMA 9005-E02-EP 1.53.101
- ISO 12925-1 CKD
- MAG IAS

REGALIA ISO 320

VIRGIN REGALIA ISO 320 is an excellent, high performance, gear oil for use in sensitive environments such as off-shore platforms and other marine related services. The long life and high film strength of REGALIA ISO 320 greatly increases equipment reliability and provides excellent protection in highly corrosive environments. It gains its performance advantage over competing oils through its superior blend of base oils technology. This unique, synthetic additive technology is proven to make bearings and equipment run smoother, cooler, quieter, longer and more efficiently.

ISO: 320

Meets & Exceeds:

- DIN 51517/ Part 3 CLP
- MAN ENERGY SOLUTIONS
- AIST 224
- ISO-L-CKD
- AGMA 9005-E02-EP 1.53.101
- ISO 12925-1 CKD
- MAG IAS

REGALIA ISO 460

VIRGIN REGALIA ISO 460 is a range of marine and industrial gear oils, combining high quality mineral oils and extreme pressure (EP) additives, intended for use in marine and industrial gear systems of the spur, helical and straight and spiral bevel types. VIRGIN REGALIA ISO 460 Gear Oils have high load carrying capability and ensure 'clean' gear performance under conditions of high temperature and oxidation. Additionally these grades provide strong protection against wear, oxidation, foam, rust and corrosion.

ISO: 460

Meets & Exceeds:

- DIN 51517/ Part 3 CLP
- MAN ENERGY SOLUTIONS
- AIST 224
- ISO-L-CKD
- AGMA 9005-E02-EP 1.53.101
- ISO 12925-1 CKD
- MAG IAS

REGALIA BIO

VIRGIN REGALIA BIO is a Biodegradable gear oil. Developed for lubricating gears and bearings subjected to harsh lubrication conditions in applications which might pollute the marine environment. Excellent extreme pressure properties and high load capacity ensuring excellent protection of lubricated gears. High protection against corrosion, also with sea water pollution, providing lubrication advantages at high and low temperatures compare to mineral oils. It is suitable for propulsion systems.

Meets & Exceeds:

- DIN 51517
- Part 3 CLP
- ISO 12925-1 CKC/CKD
- EA for 2013 VGP
- ZF Propulsion
- Wärtsilä
- HHI Thrusters
- Scania



STERN TUBE

Very specific marine environment application for which VIRGIN has developed its own lubricating oils, incorporating a unique additivation capable of emulsifying water entering the system in the event of leakage, maintaining adequate equipment lubrication.

VOLUTE 150

VIRGIN VOLUTE 150 is a high performance, high viscosity lubricant developed especially for the lubrication of Cedervall-type stern tube bearings used in ships and for certain bearings of ships' fin stabilizers, formulated from relatively high Viscosity Index (VI) base oils combined with emulsifiers, structure modifiers, surface active agents and corrosion preventives. It provides effective rust protection in the presence of seawater and the lubricating film is resistant to water washing so that corrosion protection is maintained for extended periods under severe operating conditions.

ISO: 150

Meets & Exceeds:

- BLOHM & VOSS (SIMPLEX)
- WÄRTSILÄ
- PROPULSION.

VOLUTE BIO 220

VOLUTE BIO 220 is synthetic biodegradable lubricant for stern tubes. Particularly recommended for stern tube sliding rolling bearings, minimising environmental impact in the event of spillage. Wide range of working temperatures. Excellent anti-wear and anti-corrosion properties. Compatible with main seals: Viton, Nitrile NBR and Bioseal.

ISO: 220

Meets & Exceeds:

- Ecolabel
- EAL for VGP
- Blohm & Voss (Simplex)
- Wärtsilä Propulsion

VOLUTE HT BIO 100

VOLUTE HT BIO 100 is Biodegradable ester-based oil specifically developed to comply with KEMEL manufacturer quality standards. **VOLUTE HT BIO 100** features excellent anti-wear properties and good performance at low temperatures, offering a very wide range of working temperatures. Excellent anti-corrosive properties and compatible with most seals.

ISO: 100

Meets & Exceeds:

- ISO 15380: HEES
- EAL for VGP
- KEMEL all types and sizes of seals
- Kamome Propeller

TURBINE

This is a range of oils obtained from selected paraffinic bases, improved with oxidation, rust and foam inhibitor additives, offering excellent properties and outstanding operational performance. Multifunctional lubricant oil for circulatory systems that include highly revolutionary mechanisms, in their lower viscosities, hydraulic or steam turbines in grades between ISO 32 and ISO 100 and for lubrication of various types of mechanical equipment in casing or by circulation in higher viscosities.

ROTAR 32

VIRGIN ROTAR 32 oils are formulated for superior protection against oxidation, sludge, and varnish. By combining quality base oils with highly effective additives, we've created some of the highest-performing turbine oils in the industry. Some of the most significant changes include improved RPVOT retention, water separation, varnish and sludge protection, rust and corrosion reduction, and foam and entrained air release.

ISO: 32

Meets & Exceeds:

- DIN 51515 Part 1 L-TD
- DIN 8659 Part 2
- DIN 51517 Part 2, CL
- ISO 3498 (1986) CKB
- DIN 51506 VBL & VCL
- ISO 6743 Part 3 DAA
- Complies with quality level:
ABB, Siemens, AEG,
Westinghouse, Alstom,
Sulzer, GE, KKK

ROTAR 46

VIRGIN ROTAR 46 are premium performance, anti-wear type turbine oil formulated from premium base oils, highly refined group II base stocks and unique additive package minimizing the formation of deposits in reservoirs, high temperature bearings and other hot areas of the turbine. an as h-less anti-wear additive system, rust, oxidation and foam inhibitors. Designed primarily for use in industrial gas and steam turbines including those with reduction gear sets.

ISO: 46

Meets & Exceeds:

- DIN 51515 Part 1 L-TD
- DIN 8659 Part 2
- DIN 51517 Part 2, CL
- ISO 3498 (1986) CKB
- DIN 51506 VBL & VCL
- ISO 6743 Part 3 DAA
- Complies with quality level:
ABB, Siemens, AEG,
Westinghouse, Alstom,
Sulzer, GE, KKK

ROTAR 68

VIRGIN ROTAR 68 is highly refined base stocks and multi-component oxidation inhibitor system resist the formation of harmful sludge and varnish deposits. The rust inhibitor protects components against corrosion. Good water separability of the highly refined base stocks and inhibitor system ensure rapid settling of harmful water accumulated from steam condensate, non-silicone foam inhibitor allows rapid release of entrained air while minimizing foam formation, enabling reliable operation of sensitive hydraulic control devices

ISO: 68

Meets & Exceeds:

- DIN 51515 Part 1 L-TD
- DIN 8659 Part 2
- DIN 51517 Part 2, CL
- ISO 3498 (1986) CKB
- DIN 51506 VBL & VCL
- ISO 6743 Part 3 DAA
- Complies with quality level:
ABB, Siemens, AEG,
Westinghouse, Alstom,
Sulzer, GE, KKK

ROTAR 100

VIRGIN ROTAR 68 is highly refined base stocks and multi-component oxidation inhibitor system resist the formation of harmful sludge and varnish deposits. The rust inhibitor protects components against corrosion. Good water separability of the highly refined base stocks and inhibitor system ensure rapid settling of harmful water accumulated from steam condensate, non-silicone foam inhibitor allows rapid release of entrained air while minimizing foam formation, enabling reliable operation of sensitive hydraulic control devices

ISO: 68

Meets & Exceeds:

- DIN 51515 Part 1 L-TD
- DIN 8659 Part 2
- DIN 51517 Part 2, CL
- ISO 3498 (1986) CKB
- DIN 51506 VBL & VCL
- ISO 6743 Part 3 DAA
- Complies with quality level:
ABB, Siemens, AEG,
Westinghouse, Alstom,
Sulzer, GE, KKK

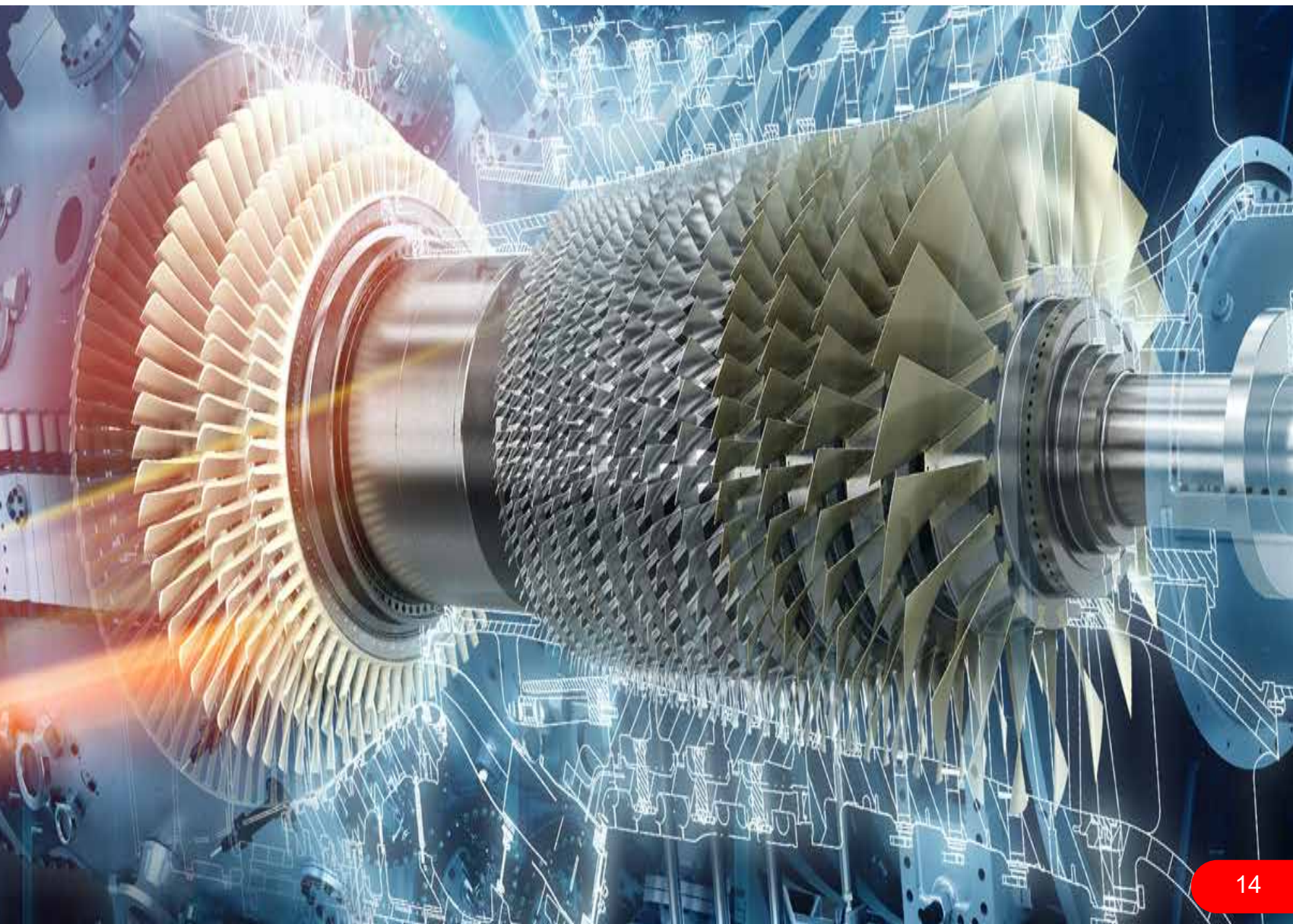
ROTAR 100

VIRGIN ROTAR 100 is developed to offer improved performance capable of meeting the demands of the most modern steam turbine systems and light duty gas turbines, which require in enhanced anti-wear performance for the gearbox. Formulated with an anti-foam additive, which generally controls foam formation. **VIRGIN ROTAR 100** prevents the formation of rust and guards against onset of corrosion ensuring protection for equipment following exposure to humidity or water during operation and during shut-downs, minimizing maintenance.

ISO: 100

Meets & Exceeds:

- DIN 51515 Part 1 L-TD
- DIN 8659 Part 2
- DIN 51517 Part 2, CL
- ISO 3498 (1986) CKB
- DIN 51506 VBL & VCL
- ISO 6743 Part 3 DAA
- Complies with quality level:
ABB, Siemens, AEG,
Westinghouse, Alstom,
Sulzer, GE, KKK



COMPRESSOR

For equipment requiring enhanced lubricant antioxidant properties due to the high temperatures reached in lubrication circuits, VIRGIN has a wide range of oils made with hydrogenated bases for turbines and next generation turbochargers. Designed to protect equipment from corrosion and wear and minimize the build-up of deposits and the formation of varnishes, guaranteeing a long oil and lubricated equipment lifespan

SERVO HVLP 68

VIRGIN SERVO HVLP 68 is a marine mineral oil with specific high performance additives designed to lubricate screw and reciprocating air compressors. It allows real cuts in the operating costs of the compressed air production facility by optimizing the compressor efficiency. The range of this product has an anti-clogging property that ensures the efficiency of the filters during a long period, thus extending the service life of the separating filter elements.

ISO: 68

Meets & Exceeds:

- DIN 51506-VDL & VCL
- ISO 6743 DAA DAG

SERVO HVLP 100

VIRGIN SERVO HVLP 100 is a marine mineral oil with specific high performance additives designed to lubricate screw and reciprocating air compressors. Formulated with premium base oils and a unique additive system that provide excellent thermal and oxidation stability, high viscosity index, high flash point, low pour point, and excellent hydrolytic stability.

ISO: 100

Meets & Exceeds:

- DIN 51506-VDL & VCL
- Complies with quality levels: Dresser-Rand, Neuenhauser, Sauer & Sohn, Sulzer, Tabane, etc.
- ISO 6743 DAB DAG

SERVO 100

VIRGIN SERVO HVLP 150 is a synthetic lubricant based on esters specifically formulated for cylinders of reciprocating air compressors. Allows to prolong the oil change life and is also suitable for lubrication of compressor bearings

ISO: 150

Meets & Exceeds:

- DIN 51506-VDL
- ISO L-DAB
- ISO L-DAJ

SERVO HVLP 150

VIRGIN SERVO HVLP 150 is a marine mineral oil with specific high performance additives designed to lubricate screw and reciprocating air compressors. Designed and formulated to be use in conditions where the discharge temperature does not exceed 100°C, otherwise, the use of synthetic oils is preferred.

ISO: 150

Meets & Exceeds:

- ISO 6743 DAH DAJ
- Screw Compressors: Sauer & Sohn, Tamrotor
- Turbochargers: ABB

REFRIGERATION COMPRESSOR

We have a wide range of VIRGIN products to lubricate all types of refrigeration compressors, whichever type of refrigerant gas and equipment working conditions. Many refrigerant gases are used for cold generation. The key for selecting the correct lubricant is to know the interactions between the gas and the lubricant chemistry used, so that they may be compatible but immiscible to always maintain correct lubricant viscosity that ensures the machine protection.

ALGOR 32

VIRGIN ALGOR 32 is a premium quality synthetic compressor lubricant made from alkylbenzenes, which are highly miscible 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.

ISO: 32

Meets & Exceeds:

- DIN 51503 KAA
- ISO 6743-3B-DRA

ALGOR 46

VIRGIN ALGOR 46 is a synthetic lubricant for refrigerating compressors, particularly recommended for hermetic type compressors (domestic fridges), open-type or partially sealed industrial units and heat pump systems that operate with standard refrigerating fluids (R-12, R-22, ammonia). It can prevent solidification of particles within the expensor circuit, due to a low flocculation and pour point.

ISO: 46

Meets & Exceeds:

- ISO L-DRA-DRB
- Bock
- Bitzer
- Grasso

ALGOR 68

VIRGIN ALGOR 68 is a synthetic refrigeration lubricant based on alkylated benzenes with a polyol ester base fluid. It has excellent high temperature and oxidation stability, this product provides extended service life even where high compression discharge temperatures occur. It can be used with a full spectrum of refrigerants (with the exception of HFCs).

ISO: 68

Meets & Exceeds:

- DIN 51503 KD
- ISO 6743-3B-DRD

ALGOR 100

VIRGO ALGOR 100 is made from ultra-low wax naphthenic oils, and is intended primarily for cooling compressors in which a non-inhibited lubricant is needed. Particularly recommended for hermetic type compressors (domestic fridges), open-type or partially sealed industrial units and heat pump systems that operate with standard refrigerating fluids (R-12, R-22, ammonia).

ISO: 100

Meets & Exceeds:

- Bock
- Howden
- Grasso
- York

HEAT TRANSFER

Within its heat transfer oil range, VIRGIN has mineral and synthetic oils to cover the whole working temperature range. They have a good heat transfer coefficient, low discharge loss and can lengthen the service life preventing the formation of deposits and the increase of viscosity.

ARDEUR S-HTO

VIRGIN ARTEUR S-HTO is a Synthetic fluid especially formulated for use in closed circuit forced-circulation heat transfer systems, where the working temperature is around 315°C. Its specific additivation gives it extraordinary resistance to oxidation. Its main features are great thermal stability, low vapour pressure and long service life with regard to mineral lubricant oils, giving it great temperature control in these processes.

ISO:

Meets & Exceeds:

- ISO 6743/12-QC

ARDEUR M-HTO

VIRGIN ARTEUR M-HTO Fluid specially formulated for use as a heat transfer agent. It is formulated from highly refined mineral bases with specific additivation that gives it extraordinary resistance to oxidation, minimises the formation of varnishes and prevents oil cracking at working temperatures.

It is a specific oil for use in closed-circuit and forced-circulation heat transfer systems in which maximum working temperatures reach approximately 300 °C.

Meets & Exceeds:

- ISO 6743/12-QB
- DIN 51522-Q



GREASES

Aimed at completing our lubrication portfolio to cover all on-board machinery requirements. The highest quality standards applied by VIRGIN guarantee the most suitable lubrication in all types of applications and working conditions, not only in the lubricant but also in the grease. The wide range of thickeners used by VIRGIN and its knowledge of all the formulation variables to adapt the grease benefits to the working environments ensure the proper performance of all our greases in marine environments

GREASE CS

VIRGIN GREASE CS is an extreme-pressure water resistant high temperature calcium sulfonate complex marine grease, with excellent thermal and mechanical stability features. It adapted for a wide range of temperatures and remarkable load resistance thanks to its naturally high extreme pressure and anti-wear properties.

NLGI: 2

Meets & Exceeds:

- ISO 6743-9: L-XBDIB 0
- DIN 51 502: OGPON -20

GREASE CSC

VIRGIN GREASE CSC is an extreme-pressure water resistant high temperature calcium sulfonate complex marine grease. It is suitable in centralized greasing systems for the lubrication of all kinds of components where the grease is in frequent contact with water or sea water due to enhanced antirust performances.

NLGI: 2

Meets & Exceeds:

- ISO 6743-9: L-XBFIB 1/2
- DIN 51 502: KP1/2R -30

GREASE CSC-WR

VIRGIN GREASE CSC-WR is an extreme-pressure water resistant high temperature calcium sulfonate complex marine grease. It is suitable in centralized greasing systems for the lubrication of all kinds of components where the grease is in frequent contact with water or sea water due to enhanced antirust performances.

NLGI: 2

Meets & Exceeds:

- ISO 6743-9: L-XBFIB 1/2
- DIN 51 502: KP1/2R -30

GREASE LC 0

VIRGIN GREASE LC 0 is an extreme pressure lithium/calcium marine grease, with very high load carrying capacity and anti-wear properties.

This high performance grease assures a low coefficient of friction, good water resistance and excellent protection against rust and corrosion.

NLGI: 0

Meets & Exceeds:

- ISO 6743-9: L-XBFIB 1/2
- DIN 51 502: KP1/2R -30

GREASE LC 0

VIRGIN GREASE EP 1 is an extreme pressure lithium/calcium marine grease, with very high load carrying capacity and anti-wear properties.

This high performance grease assures a low coefficient of friction, good water resistance and excellent protection against rust and corrosion.

NLGI: 1

Meets & Exceeds:

- ISO 6743-9 L-XBEBB 1
- DIN 51502 KP1P -20

GREASE EP 2

VIRGIN GREASE EP 2 is an extreme pressure lithium/calcium marine grease, with very high load carrying capacity and anti-wear properties.

This high performance grease assures a low coefficient of friction, good water resistance and excellent protection against rust and corrosion.

NLGI: 2

Meets & Exceeds:

- ISO 6743-9 L-XBEBB 1
- DIN 51502 KP1P -20

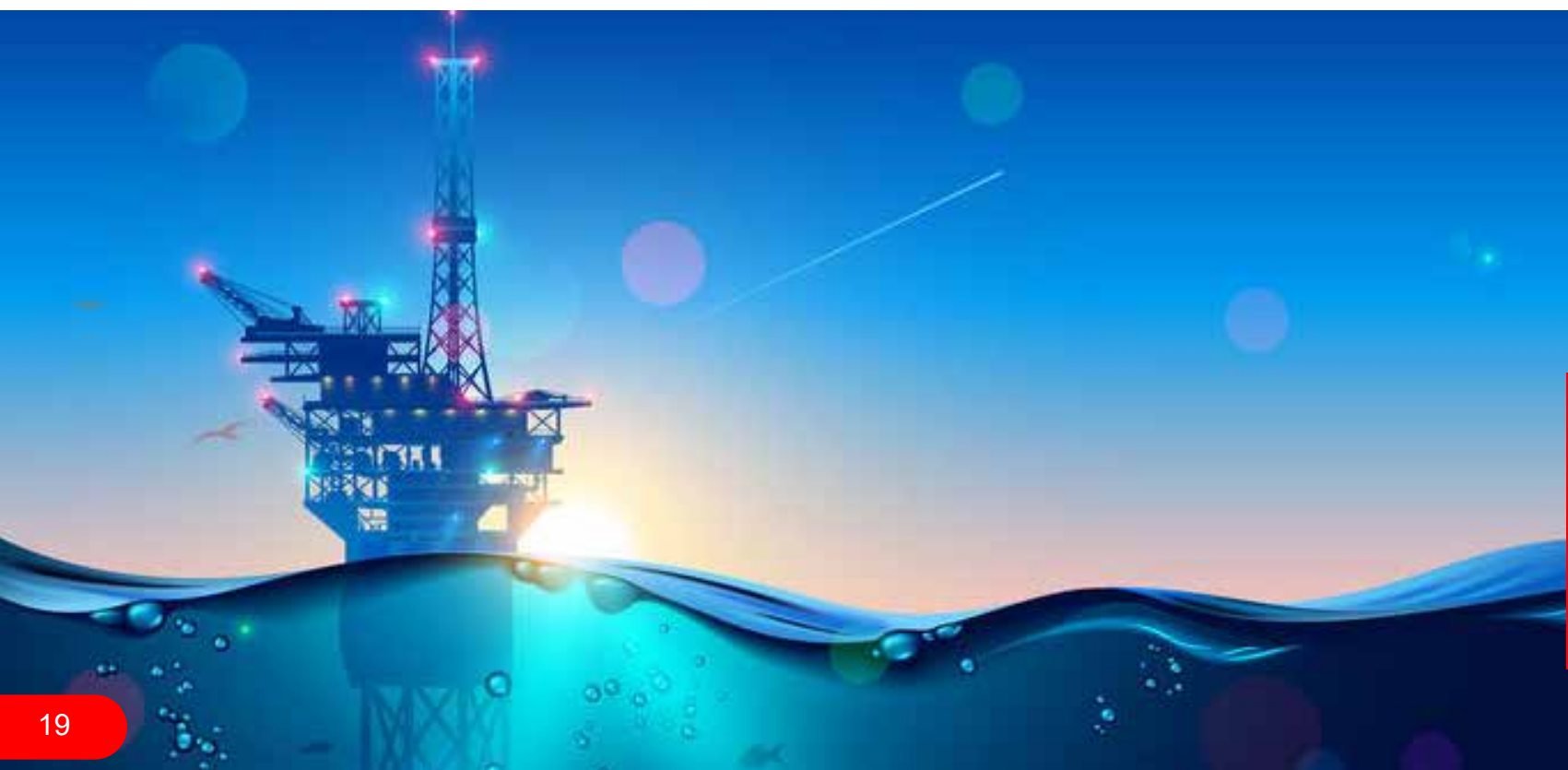
GREASE MDS 2

VIRGIN GREASE MDS 2 is an extreme pressure lithium/calcium grease with molybdenum disulfide, with very high load carrying capacity and anti-wear properties. Recommended for long intervals greasing without any change of its properties or characteristics. Its operating temperature ranges within minus 25°C to 130°C. This high performance grease assures a low coefficient of friction, good water resistance and excellent protection against rust and corrosion.

NLGI: 2

Meets & Exceeds:

- ISO 6743-9 L-XBEBB 1
- DIN 51502 KP1P -20





3. PLEASURE SPEED BOAT

2 STROKE PETROL ENGINE

2T TC

VIRGIN 2T TC is high performance 2-stroke engine oil for use in 2T marine applications with excellent additive system to provide good overall cleaning and performance. It provides maximum film strength and anti-wear characteristics for main and big end bearings, gudgeon pins, rings and bores.

SAE Grade: 20 NMMA TC

Meets & Exceeds:

- NMMA TC
- API TC
- JASO FC

2T TCW

VIRGIN 2T TC is semi-synthetic lubricant oil, especially formulated to meet the demands of two-stroke water-cooled marine outboard motors, in accordance with the NMMA TC-WII specification, therefore guaranteeing excellent protection against corrosion and rust in the marine environment.

SAE Grade: 30 API TCW

Meets & Exceeds:

- NMMA TC
- API TC
- JASO FC

2T TCW2

VIRGIN 2T TCW2 Universal lubricant designed for the lubrication of cylinders in engines (prior to 2008) running on high sulphur fuel content between 0.5% and 3.5%. Its patented formula allows you to protect the engine for a longer period of time than with conventional higher TBN-content oils.

SAE Grade: 10W-30 API TCW2

Meets & Exceeds:

- NMMA TC-W3

2T TCW3

VIRGIN 2T TCW3 Cylinder oil formulated for the lubrication of 2-stroke slow-speed crosshead diesel engines, ensuring engine protection when running on high sulphur fuel oil, extending engine overhaul shutdowns.

SAE Grade: 10W-30 API TCW3

Meets & Exceeds:

- NMMA TC-W3



4 STROKE PETROL ENGINE

4T 25W40

VIRGIN 4T 25W40 Marine Engine Oil SAE 25W-40 is designed with synthetic base oil to improve wear protection and increase catalyst life in newer inboards using catalytic converters. Meets or exceeds NMMA FC-W (CAT) performance. It can be used in automotive applications where API SM oils are called out for. Also have applications in 4-stroke outboards and 4-stroke personal watercraft

SAE Grade: 25W-40 API SL

Meets & Exceeds:

- NMMA FC-W
- API SL

4T 10W40

VIRGIN 4T 10W40 is a Fully Synthetic multi-grade marine trunk piston engine lubricant for highly rated High speed 4-Stroke diesel engines (like marine life boat, emergency power unit, fire pumps, etc). It is designed to meet the most severe conditions and high speed engines with high temperatures.

SAE Grade: 10W-40 API SN

Meets & Exceeds:

- ACEA C2-16 • MB 229.31
- ACEA C3-16 • MB 229.52
- VW 505 01 • VW 505 00
- BMW LONGLIFE-04
- FIAT 9.55535-S3
- GM DEXOS 2
- OPEL/VAUXHALL OV0401547

4T 5W30

VIRGIN 4T 5W30 is a fully synthetic high-performance high-lubricity engine oil for petrol engines for marine use, which are subjected to heavy loads. Formulated with G-III base oil oils and a high proportion of fully synthetic additives also provide a reliable margin in reserve, even under the toughest operating conditions.

SAE Grade: 5W-30 API SN

Meets & Exceeds:

- ACEA C2-16 • MB 229.31
- ACEA C3-16 • MB 229.52
- VW 505 01 • VW 505 00
- BMW LONGLIFE-04
- FIAT 9.55535-S3
- GM DEXOS 2
- OPEL/VAUXHALL OV0401547





HATCHES

- HYDRO MARINE HVLP 68
- REGALIA GL-5 80W90
- GREASE CS
- HYDRO MARINE BIO TMP
- REGALIA BIO
- GREASE MDS 2



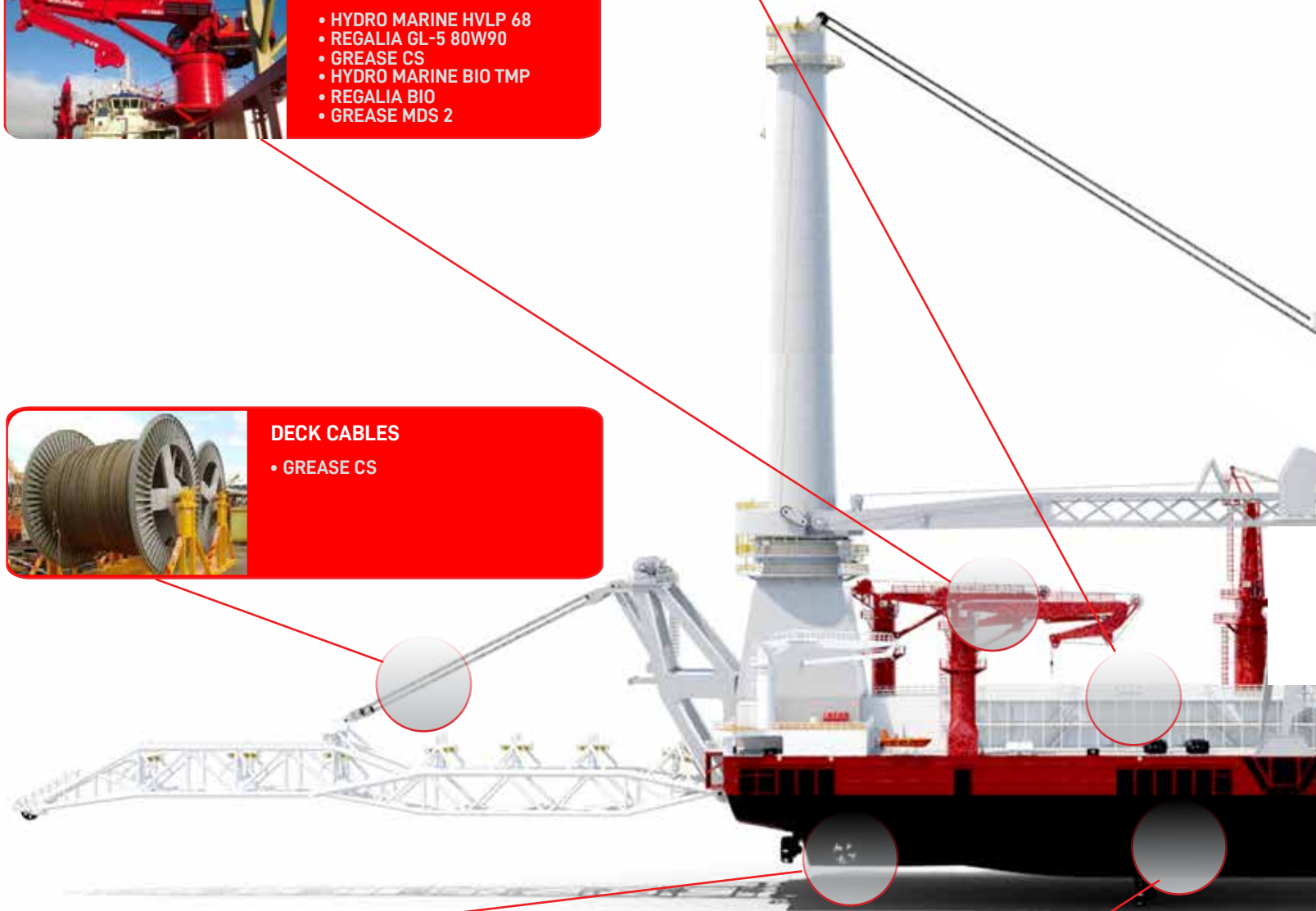
DECK CRANES

- HYDRO MARINE HVLP 68
- REGALIA GL-5 80W90
- GREASE CS
- HYDRO MARINE BIO TMP
- REGALIA BIO
- GREASE MDS 2



DECK CABLES

- GREASE CS



STERN TUBE AND TAIL SHAFT

- VOLUTE BIO 220
- VOLUTE HT BIO 100
- VOLUTE 150



MAIN ENGINE

- LEISURE 50-25
- LEISURE 50-70



THERMAL BOILERS

- ARTEUR S-HTO



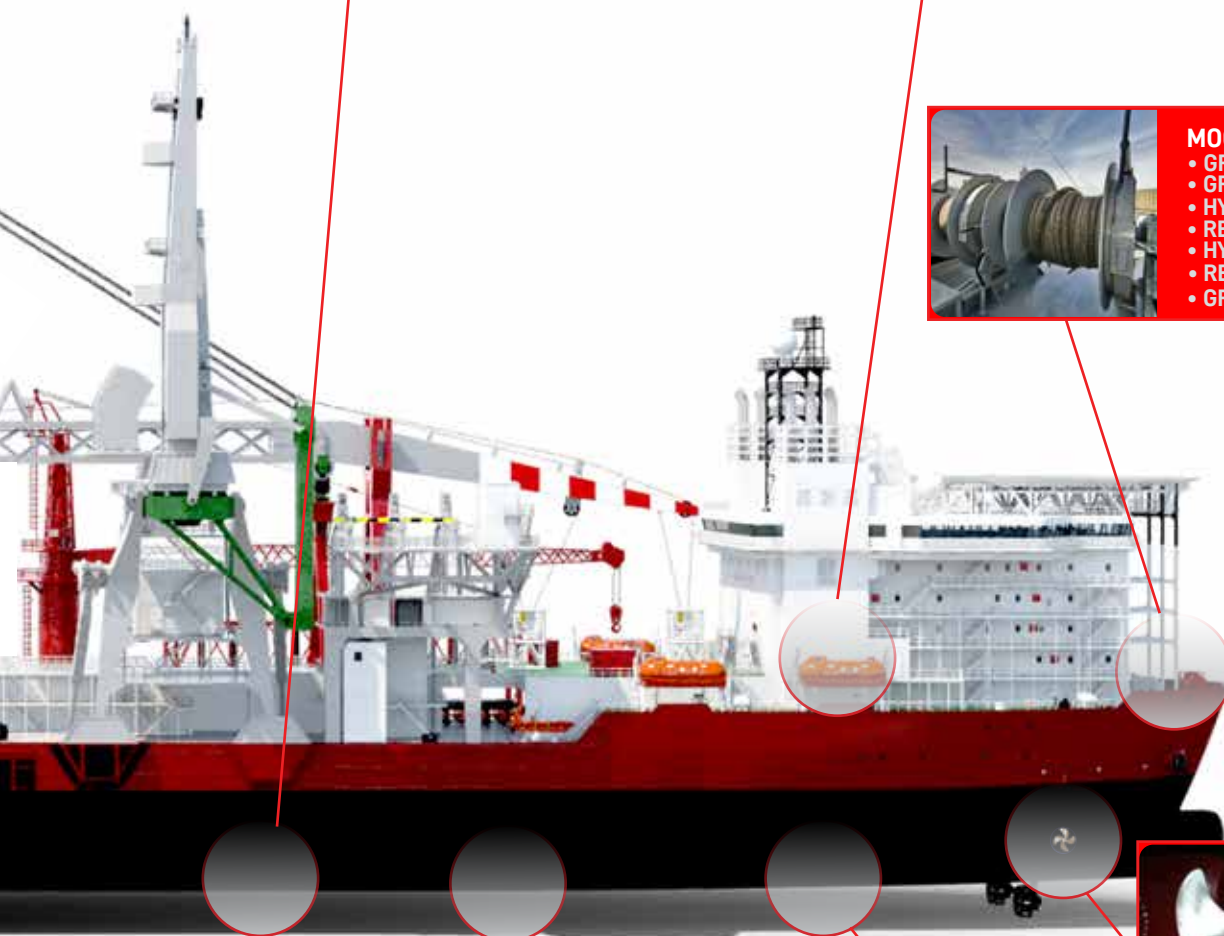
LIFEBOAT

- GREASE CSC
- GREASE CS
- HYDRO MARINE HVLP 68
- REGALIA GL-5 80W90
- HYDRO MARINE TMP
- REGALIA BIO
- GRAND 15W40-10



MOORING MACHINERY

- GREASE CSC
- GREASE CS
- HYDRO MARINE HVLP 68
- REGALIA GL-5 80W90
- HYDRO MARINE BIO TMP
- REGALIA BIO
- GREASE MDS 2



AUXILIARY ENGINE

- GRAND 15W40-10



PROPELLERS

- HYDRO MARINE HVLP 68
- HYDRO MARINE BIO TMP



ENGINE ROOM

- PUMPS/
TURBOPUMPS
- SERVO HVLP 68
- SERVO HVLP 100
- SERVO HVLP 150

WASTEWATER TREATMENT SYSTEM

- HYDRO MARINE HVLP 68
- REGALIA GL-5 80W90
- SERVO HVLP 100
- SERVO HVLP 150

AIR COMPRESSOR

- SERVO HVLP 100
- SERVO HVLP 150

TURBOCHARGERS

- SERVO HVLP 150

REFRIGERATION COMPRESSOR

- ALGOR 32
- ALGOR 46
- ALGOR 68
- ALGOR 100



Bio Lubricant

BIODEGRADABLE LUBRICANTS

Use of Biodegradable Lubricants, Bio-lubes, Green Oils or Environmentally Considerate Lubricants (ECLs) is becoming a common contract requirement in lubricant applications where environmental sensitivity is an issue, particularly where access to groundwater, rivers, streams and lakes is a risk.

Many biodegradable lubricants are made from natural vegetable oils such as rapeseed or sunflower seed oils. The condition of these products needs to be monitored in use as their service life can vary and may be significantly reduced compared to mineral oils, depending on the type and application.



HYDRO MARINE BIO 68



HYDRO MARINE BIO 68

VIRGIN HYDRO MARINE BIO 68 is a fully formulated anti-wear, readily biodegradable, environmentally friendly, ecologically responsive, non-toxic fluid designed for high pressure industrial, marine, construction and mobile hydraulic systems, turbines and circulating oil systems that are operated in environmentally sensitive areas. Natural esters, blended with ash less additives, with a superior blend of lubrication performance.

ISO: 68

Meets & Exceeds:

- ISO 6743/4 (HEES)
- ISO 15380 (HEES)
- DIN 51524/3 (HV)*
- Biodegradability OECD 301-B
- Biotelex Ecolabel 46 & 68



HYDRO MARINE BIO TMP

HYDRO MARINE BIO TMP

VIRGIN HYDRO BIO TMP is a synthetic biodegradable hydraulic oil featured by outstanding viscosimetric performances and good low temperature behavior, thus offering a very wide range of operating temperatures. Suitable for any hydraulic system requiring a lubricant with good anti-wear properties, high viscosity index and improved thermal and oxidation stability giving an increased service life of the fluid.

ISO: 68

Meets & Exceeds:

- ISO 15380 (HEES)
- EAL according to VGP
- Meets Swedish Standard SS155434
- VDMA 24568: HEES
- ROLLS-ROYCE



VOLUTE BIO 220

VOLUTE BIO 220

VIRGIN VOLUTE BIO is synthetic biodegradable lubricant for stern tubes. Particularly recommended for stern tube sliding rolling bearings, minimising environmental impact in the event of spillage. Wide range of working temperatures. Excellent anti-wear and anti-corrosion properties. Compatible with main seals: Viton, Nitrile NBR and Bioseal.

ISO: 220

Meets & Exceeds:

- Ecolabel
- EAL for VGP
- Blohm & Voss (Simplex)
- Wärtsilä Propulsion

VOLUTE HT BIO 100



VOLUTE HT BIO 100

VIRGIN VOLUTE BIO 100 is Biodegradable ester-based oil specifically developed to comply with KEMEL manufacturer quality standards. **VIRGIN VOLUTE BIO 100** features excellent anti-wear properties and good performance at low temperatures, offering a very wide range of working temperatures. Excellent anti-corrosive properties and compatible with most seals.

ISO: 100

Meets & Exceeds:

- ISO 15380: HEES
- EAL for VGP
- KEMEL all types and sizes of seals
- Kamome Propeller

REGALIA BIO 220



REGALIA BIO 220

VIRGIN REGALIA BIO 220 GEAR OIL is high protection against corrosion, also with sea water pollution, providing lubrication advantages at high and low temperatures compared to mineral oils. It is suitable for propulsion systems (although it is not an emulsifying oil), provided equipment manufacturer requirements are met.

ISO Grade: 220

Meets & Exceeds:

- DIN 51517
- Part 3 CLP
- ISO 12925-1 CKC/CKD
- EA for 2013 VGP
- ZF Propulsion
- Wärtsilä HHI Thrusters
- Scania



TECHNICAL CHARACTERISTIC

ENGINES

SLOW- SPEED ENGINES	SAE Grade	Density @ 15°C g/mc3 ASTM D 4052	Viscosity @ 100°C cSt ASTM D 445	Flash Point (COC) °C ASTM D 92	Pour Point °C ASTM D 97	TBN mg KOH/g ASTM D 2896
LEISURE 50-22	50	0.8920	19.50	244	-9	25
LEISURE 50-40	50	0.8930	19.40	244	-9	40
LEISURE UNIVERSAL 50-57	50	0.8938	19.30	242	-9	57
LEISURE UNIVERSAL 50-70	50	0.8950	19.40	246	-9	70
LEISURE UNIVERSAL 50-100	50	0.8962	19.10	242	-9	100
LEISURE 50-100	50	0.8968	19.40	240	-9	100
LEISURE 50-140	50	0.8990	19.30	242	-9	140
SYSTEM 30-5	30	0.8750	11.90	232	-15	5
SYSTEM 40-5	40	0.8850	14.80	238	-12	5

MEDIUM- SPEED ENGINES	SAE Grade	Density @ 15°C g/mc3 ASTM D 4052	Viscosity @ 100°C cSt ASTM D 445	Flash Point (COC) °C ASTM D 92	Pour Point °C ASTM D 97	TBN mg KOH/g ASTM D 2896
VOYAGER 30-15	30	0.8870	11.90	230	-12	15
VOYAGER 30-20	30	0.8874	11.80	230	-12	20
VOYAGER 30-30	30	0.8878	12.00	232	-12	30
VOYAGER 30-40	30	0.8880	11.80	234	-12	40
VOYAGER 40-15	40	0.8900	14.5	236	-12	15
VOYAGER 40-20	40	0.8908	14.7	234	-12	20
VOYAGER 40-30	40	0.8912	14.6	242	-12	30
VOYAGER 40-40	40	0.8920	14.6	236	-12	40
VOYAGER 40-55	40	0.8930	14.8	234	-12	55

The characteristics above represent typical values and cannot be considered as product specifications.

TECHNICAL CHARACTERISTIC

HYDRAULIC	SAE Grade	Density @15°C g/mc3 ASTM D 4052	Viscosity @40°C	Viscosity @100°C cSt ASTM D 445	Viscosity Index ASTM D 2270	Flash Point (COC) °C ASTM D 92	Pour Point °C ASTM D 97	TAN mg KOH/g ASTM D 664	RPVOT min ASTM D 943	FZG DIN 51354
HYDRO MARINE HVLP 68	68	0.8830	68.2	8.720	99	224	-21	0.2		
HYDRO MARINE HVLP 100	100	0.8880	100.10	11.30	99	230	-18	0.2		
HYDRO MARINE BIO	68	0.8830	68.1	8.700	99	224	-21	0.2		
HYDRO MARINE BIO TMP	68	0.8830	68.0	8.68	99	226	-21	0.2		
GEARS	SAE Grade	Density @15°C g/mc3 ASTM D 4052	Viscosity @40°C	Viscosity @100°C cSt ASTM D 445	Viscosity Index ASTM D 2270	Flash Point (COC) °C ASTM D 92	Pour Point °C ASTM D 97	TAN mg KOH/g ASTM D 664	RPVOT min ASTM D 943	FZG DIN 51354
REGALIA GL-5 80W90	80W-90	0.8850	16.0	167.00	98	226	-26			
REGALIA GL-4 80W90	80W-90	0.8850	16.2	170.5	98	220	-26			
REGALIA GL-5 85W140	85W-140	0.8940	28.2	395	98	290	-12			
REGALIA GL-4 85W140	85W-140	0.8950	28.3	395.2	98	300	-12			
REGALIA GL-5 75W80	75W-80	0.8840	57.0	9.50	150	220	-45			
REGALIA GL-5 75W90	75W-90	0.8820	108.0	14.80	142	230	-42			
REGALIA ISO 100	ISO 140	0.8920	100.1	11.30	99	210	-21			
REGALIA ISO 220	ISO 220	0.8900	220.2	18.7	95	220	-15			
REGALIA ISO 320	ISO 320	0.8920	320.1	24.1	96	226	-12			
REGALIA ISO 460	ISO 460	0.8950	460.1	30.10	94	236	-12			
STERN TUBES	SAE Grade	Density @15°C g/mc3 ASTM D 4052	Viscosity @40°C	Viscosity @100°C cSt ASTM D 445	Viscosity Index ASTM D 2270	Flash Point (COC) °C ASTM D 92	Pour Point °C ASTM D 97	TAN mg KOH/g ASTM D 664	RPVOT min ASTM D 943	FZG DIN 51354
VOLUTE 150	150	0.8920	150	14.80	98	240	-9			
VOLUTE BIO 220	100	0.8920	100.0	11.22	98	230	-9			
VOLUTE HT BIO 100	100	0.8920	100.1	11.25	98	230	-9			

TURBINE	SAE Grade	Density @15°C g/mc3 ASTM D 4052	Viscosity @40°C	Viscosity @100°C cSt ASTM D 445	Viscosity Index ASTM D 2270	Flash Point (COC) °C ASTM D 92	Pour Point °C ASTM D 97	TAN mg KOH/g ASTM D 664	RPVOT min ASTM D 943	FZG DIN 51354
ROTAR 32	32	0.8830	72.2	5.360	99	210	-9			
ROTAR 46	46	0.8800	19.3	6.75	99	210	-9			
ROTAR 68	68	0.8810	19.2	8.701	99	238	-9			
ROTAR 100	100	0.8820	19.3	11.300	99	232	-9			
COMPRESSORS	SAE Grade	Density @15°C g/mc3 ASTM D 4052	Viscosity @40°C	Viscosity @100°C cSt ASTM D 445	Viscosity Index ASTM D 2270	Flash Point (COC) °C ASTM D 92	Pour Point °C ASTM D 97	TAN mg KOH/g ASTM D 664	RPVOT min ASTM D 943	FZG DIN 51354
SERVO HVLP 68	68	0.8830	19.0	8.74	108		-36			
SERVO HVLP 100	100	0.8830	19.0	11.4	108		-36			
SERVO 100	68	0.8830	19.1	8.75	108		-36			
SERVO HVLP 150	68	0.8830	19.2	8.72	108		-36			
REFRIGERATION COMPRESSORS	SAE Grade	Density @15°C g/mc3 ASTM D 4052	Viscosity @40°C	Viscosity @100°C cSt ASTM D 445	Viscosity Index ASTM D 2270	Flash Point (COC) °C ASTM D 92	Pour Point °C ASTM D 97	TAN mg KOH/g ASTM D 664	RPVOT min ASTM D 943	FZG DIN 51354
ALGOR 32	32	0.8820	68.1	8.75	100		-42			
ALGOR 46	46	0.8840	100.1	11.40	100		-36			
ALGOR 68	68	0.8830	68.20	8.760	100		-42			
ALGOR 100	100	0.8830	68.00	8.720	100		-42			
HEAT TRANSFER	ISO Grade	Density @15°C g/mc3 ASTM D 4052	Viscosity @40°C	Viscosity @100°C cSt ASTM D 445	Viscosity Index ASTM D 2270	Flash Point (COC) °C ASTM D 92	Pour Point °C ASTM D 97	TAN mg KOH/g ASTM D 664	RPVOT min ASTM D 943	FZG DIN 51354
ARDEUR S-HTO	15	0.854	15.2	3.42	97	200	-27			
ARDEUR M-HTO	32	0.8760	32.10	5.32	96	210	-24			
GREASES	Consistency NLGI		Density @15°C g/mc3 ASTM D 4052	Viscosity @40°C ACEITE BASE cSt ASTM D 445		Viscosity @100°C cSt ASTM D 445		Viscosity Index ASTM D 2270		TBN
GREASE CS	2		0.8910	145.1		14.50		98		
GREASE CSC	2		0.8910	145.6		14.53		98		
GREASE CSC-WR	2		0.9018	398.2		28.31		98		
GREASE LC 0	0		0.9020	397.1		28.18		98		
GREASE LC 0	1		0.8960	225.1		19.42		98		15

The characteristics above represent typical values and cannot be considered as product specifications.

GREASES	Consistency NLGI	Density @15°C g/mc3 ASTM D 4052	Viscosity @40°C ACEITE BASE cSt ASTM D 445	Viscosity @100°C cSt ASTM D 445	Viscosity Index ASTM D 2270	TBN
GREASE EP 2	2	0.8954	225.2	19.50	98	20
GREASE MDS 2	2	0.8940	220.2	19.20	98	30

PLEASURE SPEED BOAT

2 STROKE ENGINE OIL	SAE Grade	Density @15°C g/mc3 ASTM D 4052	Viscosity @40°C ACEITE BASE cSt ASTM D 445	Viscosity @100°C cSt ASTM D 445	Viscosity Index ASTM D 2270	Pour Point °C ASTM D 97
2T TC	50	0.8760	108.0	11.90	99	
2T TCW	50	0.8760	108.2	11.95	99	
2T TCW2	50	0.8770	107.0	11.95	100	
2T TCW3	50	0.8770	107.2	11.90	100	

4 STROKE ENGINE OIL	SAE Grade	Density @15°C g/mc3 ASTM D 4052	Viscosity @40°C ACEITE BASE cSt ASTM D 445	Viscosity @100°C cSt ASTM D 445	Viscosity Index ASTM D 2270	Pour Point °C ASTM D 97
4T 25W40	25W-40	0.8800	122.1	14.52	120	-24
4T 10W40	10W-40	0.8240	120.2	14.32	120	-33
4T 5W30	5W-30	0.8630	85.50	14.80	130	-36

PACKAGING

PRODUCTS	BULK	Container 1000L	Drum 208L	Container 20L	Container 5L	Container 1L
SLOW-SPEED ENGINES						
LEISURE 50-22	•	•	•	•		
LEISURE 50-40	•	•	•	•		
LEISURE UNIVERSAL 50-57	•	•	•	•		
LEISURE UNIVERSAL 50-70	•	•	•	•		
LEISURE UNIVERSAL 50-100	•	•	•	•		
LEISURE 50-100	•	•	•	•		
LEISURE 50-140	•	•	•	•		
SYSTEM 30-5	•	•	•	•		
SYSTEM 40-5	•	•	•	•		
MEDIUM-SPEED ENGINES						
VOYAGER 30-15	•	•	•	•		
VOYAGER 30-20	•	•	•	•		
VOYAGER 30-30	•	•	•	•		
VOYAGER 30-40	•	•	•	•		
VOYAGER 40-15	•	•	•	•		
VOYAGER 40-20	•	•	•	•		
VOYAGER 40-30	•	•	•	•		
VOYAGER 40-40	•	•	•	•		
VOYAGER 40-55	•	•	•	•		
HIGH-SPEED ENGINES						
VOYAGER 30-15	•	•	•	•	•	•
VOYAGER 30-20	•	•	•	•	•	•
VOYAGER 30-30	•	•	•	•	•	•
VOYAGER 30-40	•	•	•	•	•	•
VOYAGER 40-15	•	•	•	•	•	•
VOYAGER 40-20	•	•	•	•	•	•

HIGH-SPEED ENGINES

VOYAGER 40-30	•	•	•	•	•	•
VOYAGER 40-40	•	•	•	•	•	•
VOYAGER 40-55	•	•	•	•	•	•

PRODUCTS	BULK	Container 1000L	Drum 208L	Container 20L	Container 5L	Container 1L
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HYDRAULIC

HYDRO MARINE HVLP 68	•	•	•	•	•	•
HYDRO MARINE HVLP 100	•	•	•	•	•	•
HYDRO MARINE BIO	•	•	•	•	•	•
HYDRO MARINE BIO TMP	•	•	•	•	•	•

GEARS

REGALIA GL-5 80W90	•	•	•	•	•	•
REGALIA GL-4 80W90	•	•	•	•	•	•
REGALIA GL-5 85W140	•	•	•	•	•	•
REGALIA GL-4 85W140	•	•	•	•	•	•
REGALIA GL-5 75W80	•	•	•	•	•	•
REGALIA GL-5 75W90	•	•	•	•	•	•
REGALIA ISO 100	•	•	•	•	•	•
REGALIA ISO 220	•	•	•	•	•	•
REGALIA ISO 320	•	•	•	•	•	•
REGALIA ISO 460	•	•	•	•	•	•

STERN TUBES

VOLUTE 150	•	•	•	•	•	•
VOLUTE BIO 220	•	•	•	•	•	•
VOLUTE HT BIO 100	•	•	•	•	•	•

COMPRESSORS

SERVO HVLP 68	•	•	•	•	•	•
SERVO HVLP 100	•	•	•	•	•	•
SERVO 100	•	•	•	•	•	•
SERVO HVLP 150	•	•	•	•	•	•

PRODUCTS	BULK	Container 1000L	Drum 208L	Container 20L	Container 5L	Container 1L
REFRIGERATION COMPRESSORS						
ALGOR 32	•	•	•	•	•	•
ALGOR 46	•	•	•	•	•	•
ALGOR 68	•	•	•	•	•	•
ALGOR 100	•	•	•	•	•	•
HEAT TRANSFER						
ARDEUR S-HTO	•	•	•	•	•	•
ARDEUR M-HTO	•	•	•	•	•	•
GREASES						
GREASE CS	•	•	•	•	•	•
GREASE CSC	•	•	•	•	•	•
GREASE CSC-WR	•	•	•	•	•	•
GREASE LC 0	•	•	•	•	•	•
GREASE LC 0	•	•	•	•	•	•
GREASE EP 2	•	•	•	•	•	•
GREASE MDS 2	•	•	•	•	•	•
STERN TUIBES						
VOLUTE 150	•	•	•	•	•	•
VOLUTE BIO 220	•	•	•	•	•	•
4 STROKE ENGINE OIL						
4T 25W40	•	•	•	•	•	•
4T 10W40	•	•	•	•	•	•
4T 5W30	•	•	•	•	•	•
2 STROKE ENGINE OIL						
2T TC	•	•	•	•	•	•
2T TCW	•	•	•	•	•	•
2T TCW2	•	•	•	•	•	•
2T TCW3	•	•	•	•	•	•



Lubricant

Manufacture & Franchised by:



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