

Mobil SHC™ Aware™ Hydraulic Series

High-performance environmentally acceptable* hydraulic lubricants for marine applications



Product features

Mobil SHC™ Aware™ Hydraulic Series high-performance hydraulic oils meet the requirements set out by the US Environmental Protection Agency's (EPA) 2013 Vessel General Permit (VGP) as well as EU EcoLabel regulations. The oils:

- Provide long equipment life through outstanding load carrying and excellent anti-wear properties
- Reduce maintenance downtime and costs and enable long equipment, oil and filter life through excellent thermal and oxidation stability properties
- Sustain equipment protection over a wide temperature range thanks to their shear-stable high viscosity index formulation
- Maximise time between dry dock and overhaul intervals, reducing operating and maintenance costs

Mobil SHC™ Aware™ Hydraulic Series oils have been developed to comply with the US EPA 2013 Vessel General Permit (VGP) and EU EcoLabel

VGP and EcoLabel compliant, providing optimal performance in areas where environmental protection regulations are in force

Potential benefits

Mobil SHC™ Aware™ Hydraulic Series oils provide:

- 1 Outstanding wear protection in systems operating under high loads and pressures
- 2 Maximise service life of machinery and reduce maintenance between dry docks
- 3 Compatibility with most common elastomers and seals

Specifications and Approvals

This product has the following approvals:	HYDRAULIC 32	HYDRAULIC 46	HYDRAULIC 68
Blue Angel RAL-UZ 178	✓	✓	✓
Denison HF-1	✓	✓	✓
Denison HF-2	✓	✓	✓
Denison HF-6	✓	✓	✓
Eaton Brochure No. 03-401-2010, Rev 1	✓	✓	✓
HOCNF Norway-NEMS, Black	✓	✓	✓
USDA Certified BioBased Product	✓	✓	✓
This product meets or exceeds the requirements of:	HYDRAULIC 32	HYDRAULIC 46	HYDRAULIC 68
AFNOR EU EcoLabel	✓	✓	✓
ISO L-HEES (ISO 15380:2016)	✓	✓	✓
JCMAS HKB VG32 (JCMAS P 042:2004)	✓		
JCMAS HKB VG46L		✓	
Swedish Standard 15 54 34 AAV 32 Environmentally Acceptable (2015)	✓		
Swedish Standard 15 54 34 AAV 46 Environmentally Acceptable (2015)		✓	
Swedish Standard 15 54 34 AAV 68 Environmentally Acceptable (2015)			✓
US EPA VGP:2013	✓	✓	✓

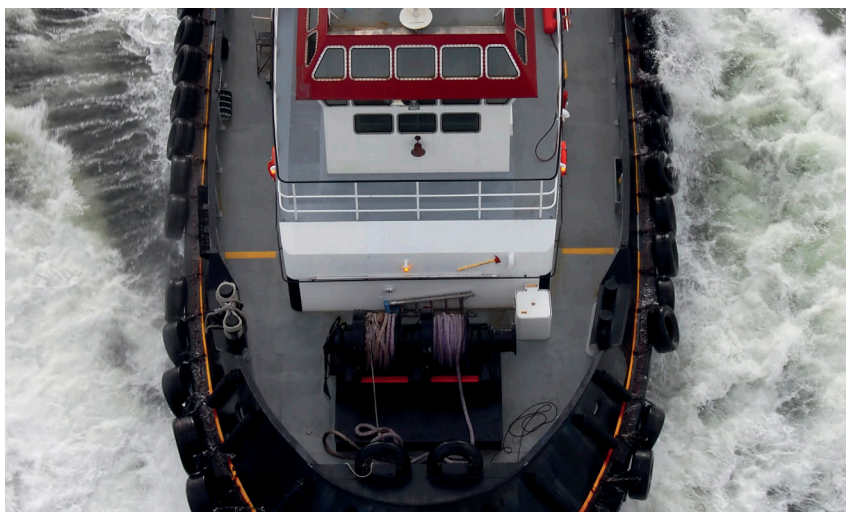
*Environmentally acceptable lubricants are defined in the United States Environmental Protection Agency's (EPA) 2013 Vessel General Permit (VGP) as lubricants that are biodegradable, minimally toxic and non-bioaccumulative.

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Recommended applications

Mobil SHC™ Aware™ Hydraulic Series oils help provide optimal performance under high loads and pressures.

Recommended applications	
Marine controllable pitch propeller systems and fin stabilisers	✓
Deck equipment and mobile equipment operating in environmentally sensitive areas	✓
Systems where readily biodegradable and minimally toxic fluids are required	✓
Steering gear systems	✓



Enhanced hydraulic performance

Mobil SHC™ Aware™ Hydraulic Series oils are specifically formulated to provide exceptional anti-wear and film thickness attributes required for the most strenuous hydraulic systems. The lubricants also have the potential to improve hydraulic efficiency compared with ExxonMobil's standard hydraulic fluids**.

Excellent component life

Mobil SHC™ Aware™ Hydraulic Series oils possess excellent load-carrying and anti-wear properties, which can help deliver protects system components against wear and scuffing and provide long equipment life.

Properties and Specifications

Property	HYDRAULIC 32	HYDRAULIC 46	HYDRAULIC 68
Grade	ISO 32	ISO 46	ISO 68
Density @ 15°C, kg/l, ASTM D4052	0.936	0.93	0.923
FZG Scuffing, Fail Load Stage, A/8.3/90, ISO 14635-1	10	11	11
Flash Point, Cleveland Open Cup, °C, ASTM D92	282	298	292
Kinematic Viscosity @ 100°C, mm ² /s, ASTM D445	6.2	7.7	11
Kinematic Viscosity @ 40°C, mm ² /s, ASTM D445	31.1	43.3	71
Pour Point, °C, ASTM D97	-33	-42	-27
Viscosity Index, ASTM D2270	152	149	144

**Hydraulic efficiency relates solely to the fluid performance when compared to ExxonMobil's standard hydraulic fluids. The technology used provides up to 3.6% efficiency compared to ExxonMobil's standard hydraulic fluids when tested in an Eaton 25VMQ vane pump under controlled conditions in accordance with applicable industry standards and protocols. Efficiency improvements will vary based on lubricants previously used, operating conditions and application.