Mobil SHC 500 Series

Supreme-performance synthetic hydraulic oils

Get superior protection across a wide temperature range.

Advanced-technology Mobil SHC 500 Series high-Viscosity Index (VI) hydraulic oils are designed to provide excellent wear protection for high-pressure vane, piston, and gear pumps in a wide range of temperatures across all industry segments. Exhibiting outstanding oxidation and shear stability, excellent rust and corrosion protection, demulsibility, and keep-clean performance, Mobil SHC 500 Series helps extend the service life of machine components.

Productivity that's proven: Lasts up to 3x longer than competitive mineral oils.

The proprietary combination of high-VI synthetic basestocks and performance additives in Mobil SHC 500 Series helps provide outstanding low- and high-temperature performance and an extra margin of equipment protection beyond the capabilities of comparable mineral oil–based products — improving productivity by reducing maintenance shutdowns and total cost of ownership.

Energy efficiency built in.

With Mobil SHC 500 Series' dramatically increased hydraulic efficiency and excellent system cleanliness and durability, you can decrease machine maintenance, extend oil drain intervals, and potentially reduce hydraulic system energy consumption by up to 6.2 percent when compared with standard mineral hydraulic oils. The increased hydraulic efficiency gained from using Mobil SHC 500 can also result in an overall reduction in CO_2 emissions, helping your operation better meet environmental goals.

Benefit from excellent oxidation and greater shear stability.

Mobil SHC 500 Series' outstanding thermal stability and oxidation resistance allows long oil drains and filter change intervals while helping keep hydraulic systems and components free from deposits and sludge for trouble-free operation. And its superior shear stability as compared with conventional high-VI mineral hydraulic oils helps to prevent permanent viscosity loss and therefore stays in grade.

High-Performance Benefits

Equipment protection
Helps provide a high level of hydraulic component protection for pumps, pistons, and servovalves, with the highest level of shear protection when compared with all high-VI oils in an industry study.

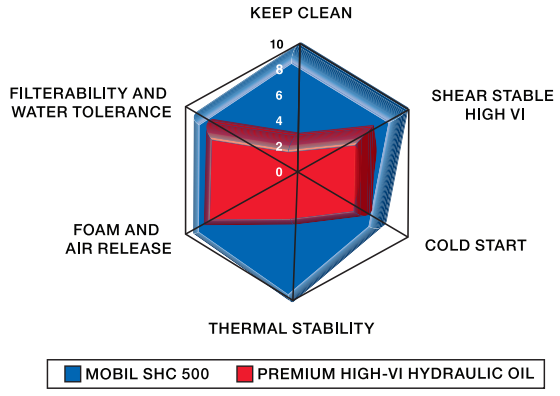
Ultra keep-clean
Excellent system deposit and sludge control helps prevent valve sticking and filter clogging and improve hydraulic system response time.

Hydraulic efficiency
High shear-stable VI enables increased hydraulic efficiency of up to 6% compared with standard mineral hydraulic oils,* potentially reducing energy consumption in high-pressure hydraulic systems.

Low-temperature performance
Wide temperature range performance beyond the capabilities of standard mineral oil hydraulic fluids.

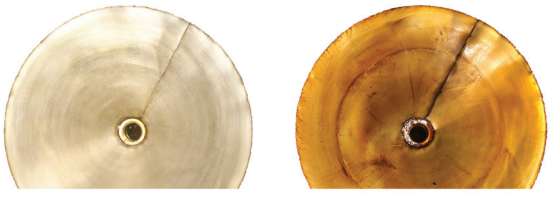
Mobil SHC 500 Series — Performance

Balanced Formulation



Compared with premium high-Viscosity Index (VI) hydraulic fluids, Mobil SHC 500 Series helps provide added protection for severe applications at both high and low temperatures.

Keep-Clean Performance

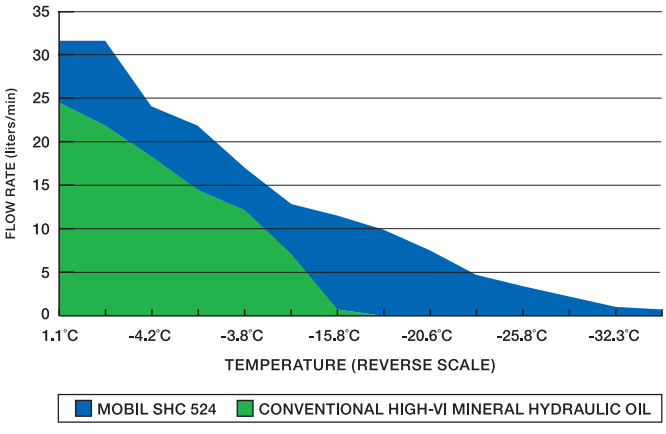


MOBIL SHC 500 SERIES AT 3,000 HOURS

MARKET GENERAL MINERAL HYDRAULIC FLUID AT 750 HOURS

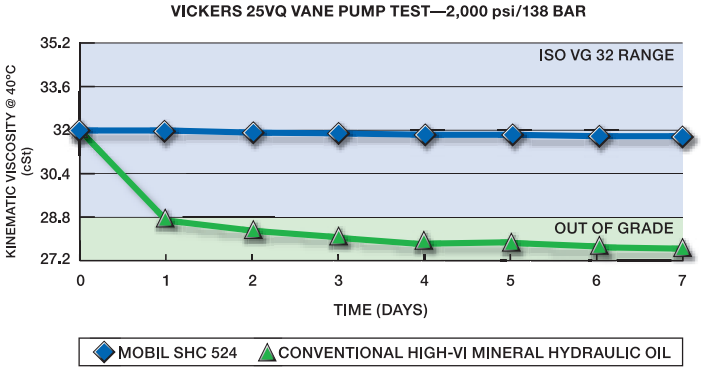
In demanding proprietary Mobil Hydraulic Fluid Durability (MHFD) testing, Mobil SHC 500 Series outlasts conventional mineral oil products, keeping systems cleaner for longer periods of time.

Low-Temperature Performance



Mobil SHC 500 Series' excellent low-temperature properties allow for quicker start-up and increased wear protection at low temperatures compared with conventional high-VI hydraulic oils. The graph above shows hydraulic fluid flow rate measured in a Vickers 104C hydraulic pump at decreasing ambient temperatures. Mobil SHC 500 Series provides pump start-up performance at temperatures lower than -20˚C (-4˚F).

Shear Stability



In a vane pump operating at 2,000 psi (138 bar), some competitive high-VI oils shear out of grade in as little as one day. Mobil SHC 500 Series possesses the highest degree of shear stability when compared with all high-VI oils within the study, providing maximum wear protection over long drain intervals.

Typical Properties**

Mobil SHC 500 Series	524	525	526	527
ISO Viscosity Grade	32	46	68	100
Viscosity, ASTM D 445				
cST @ 40°C	32	46	68	100
cST @ 100°C	6.4	8.54	11.5	15.9
Brookfield Viscosity @ -18°C, ASTM D 2983, cp	923	1376	2385	4500
Viscosity Index, ASTM D 2270	144	154	158	160
Density 15°C, ASTM D 4052, kg/L	0.852	0.851	0.854	0.858
Copper Strip Corrosion, ASTM D 130, 3 hours @ 100°C	1B	1B	1B	1B
Rust Characteristics, ASTM D 665B	Pass	Pass	Pass	Pass
FZG Gear Test, DIN 51534, Fail Stage	11	11	11	11
Pour Point, °C, ASTM D 97	-57	-54	-54	-51
Flash Point, °C, ASTM D 92	234	238	240	243
Foam Sequence I, II, III, ASTM D 893, ml	50/0	50/0	50/0	50/0
Demulsibility, ASTM D 1401, 82°C, minutes to 3ml emulsion	20	20	20	20

**Due to continual product research and development, the information contained herein is subject to change without notification. Typical properties may vary slightly.

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

energy efficiency™

For more information on Mobil SHC 500 Series and other Mobil Industrial Lubricants and services, contact your local company representative or visit mobilindustrial.com.

*Results are based on a controlled laboratory test and may vary depending on operating conditions.

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