

VOLVO CONSTRUCTION EQUIPMENT

LUBRICANTS



MORE CARE. BUILT IN.



VOLVO LUBRICANTS HELP YOU AVOID UNNECESSARY WEAR

We have designed and built your Volvo, and that's why we know what your Volvo needs.

Lubricants specially developed for Volvo Construction Equipment machines:

- Improve your Volvo components' performance.
- Extend the service life of your machine.
- Reduce fuel and oil consumption.

Volvo Construction Equipment lubricants contain many protective additives that reduce wear, bind water, carbon, sludge and metal particles and neutralize acids. Through lower fuel consumption, carbon dioxide emissions are reduced as well, which helps to protect the environment.

Always use genuine Volvo lubricants

Genuine Volvo lubricants meet the high standards required so that your Volvo maintains its performance, productivity and low owning and operating costs during its entire service life.





DIESEL ENGINE OIL

Volvo engine oils are developed for our diesel engines. That's natural for us, since the requirements for engine oils become tougher all the time for optimal function of the engine. That's why the choice of engine oil is important to the whole machine's profitability, both in the short term and in the long run. Depending on the machine and its application, you can choose the right Volvo oil which always gives you valuable advantages.

- Lower oil and fuel consumption due to low friction.
- Outstanding cleaning characteristics.
- Minimal engine wear and longer service life.
- Excellent protection against corrosion and rust.

ULTRA DIESEL ENGINE OIL



This is the best engine oil on the market, developed specifically for Volvo diesel engines. It optimizes engine performance as well as oil and fuel consumption. The oil is available both as SAE 10W-40 and SAE 15W-40; 10W-40 is recommended for colder climates. Volvo Ultra Diesel Engine Oil has, thanks to its additives, very good lubricating characteristics and keeps the engine extremely clean, which extends the engine's service life. The oil's high quality enables it to exceed the very tough requirements for VDS-3, something that allows longer change intervals in combination with Volvo long-life filter.

Part No.	Quantity	Viscosity	Quality level
VOE 11709711	5 litres	SAE 15W-40	VDS-3, ECEA E7, API CI-4
VOE 11708320	20 litres	SAE 15W-40	VDS-3, ECEA E7, API CI-4
VOE 11708321	208 litres	SAE 15W-40	VDS-3, ECEA E7, API CI-4
VOE 11713219	1000 litres	SAE 15W-40	VDS-3, ACEA E7, API CI-4
VOE 11988174	5 litres	SAE 10W-40	VDS-3, ACEA E7, API CI-4
VOE 11988175	20 litres	SAE 10W-40	VDS-3, ACEA E7, API CI-4
VOE 11988176	208 litres	SAE 10W-40	VDS-3, ACEA E7, API CI-4



REQUIREMENTS FOR EXTENDED ENGINE OIL DRAIN INTERVAL

Engine oil requirements for Volvo engines fulfilling the TIER 3 and Stage IIIA emission standard. The oil drain interval is 500 hours if the following requirements are fulfilled:

Minimum oil grade: Volvo Ultra Diesel Engine Oil or VDS-3

Volvo genuine filter: For D9-D16 engines,
Long life Part No. VOE 478736 and
Bypass Part No. VOE 477556.
For D4-D7 engines, Part No. VOE 3831236.

Sulphur content in fuel: < 0,3%

Note:

- If sulphur content >0,5% then 125 hours drain interval must be followed.
- If one item (or more) does not fulfill the requirements then the 250 hours drain interval must be followed.
- Maximum 12 months between oil change.
- Volvo D9-D16 engines only: Tough applications can result in reduced drain interval. This is monitored by a function in the engine ECU.
- Oil filter must be changed at every oil change.

AXLE AND TRANSMISSION OIL

Just like engine oils, axle and transmission oils are made up of one or several high-quality base oils, mixed with an optimal proportion of special additives. Different transmissions and spur gears have different requirements of the oil's characteristics – our oils are developed for Volvo's machines, for maximal operating reliability and service life.



AUTOMATIC TRANSMISSION FLUID

An oil recommended specifically for Volvo machines with electronically controlled automatic transmissions. The oil has very good characteristics at low temperatures and very good lubricating properties during the entire service interval.

Part No.	Quantity	Quality level
VOE 11706206	20 litres	Volvo Transmission Oil 97341, Allison C-4
VOE 11706207	208 litres	Volvo Transmission Oil 97341, Allison C-4

EXTRA AUTOMATIC TRANSMISSION FLUID

An oil specifically tested and approved to be used in the automatic transmissions of the G900 series Motor Graders. Its optimized friction characteristics allow smooth shifting. This oil has also outstanding oxidation stability which allows optimal performance even under extreme operating conditions.

Part No.	Quantity	Quality level
VOE 11716164	20 litres	Exceeds Volvo Transmission Oil 97341
VOE 11716165	208 litres	Exceeds Volvo Transmission Oil 97341

WET BRAKE TRANSAXLE OIL

This oil is developed for certain transmissions and drop-boxes as well as axles with wet brakes. Volvo Wet Brake Transaxle Oil has very good lubricating characteristics, even in tough conditions, and has excellent protection against foaming, corrosion and oxidation. The oil has additives that protect against wear and noise from the brakes.



Part No.	Quantity	Quality level
VOE 11706212	20 litres	WB 101, API GL-4, Allison C-4
VOE 11998770	208 litres	WB 101, API GL-4, Allison C-4

SUPER WET BRAKE TRANSAXLE OIL

This oil offers outstanding performance of wet brakes under a wide range of temperatures and under all operating conditions. Its improved lubricating properties protect against wear and reduce friction, which enables lower fuel consumption. And of course, just like with Wet Brake Transaxle Oil, its additives also prevent noise in the brakes.

Part No.	Quantity	Quality level
VOE 15018621	20 litres	WB102
VOE 15018646	208 litres	WB102

LIMITED SLIP GEAR OIL

This oil has been developed for use in differentials with limited slip functionality. Volvo Limited Slip Gear Oil protects against wear thanks to special additives which reduce friction. Its formulation is also designed to reduce the noise from the differential. Volvo Limited Slip Gear Oil offers protection even at high gear teeth loads.



Part No.	Quantity	Viscosity	Quality level
VOE 11708371	20 litres	SAE 85W-90	API GL-5 Limited Slip
VOE 11708372	208 litres	SAE 85W-90	API GL-5 Limited Slip



SUPER TRANSMISSION OIL

Axle and Gear Oil

An oil for axles and dropboxes based on a mixture of high-quality base oils and carefully selected additives. The oil gives very good protection against wear, even during high working loads and heavy impacts. Volvo Super Transmission Oil has long-term stable viscosity, even at high temperatures.



Part No.	Quantity	Viscosity	Quality level
VOE 11706213	20 litres	SAE 80W-90	API GL-5
VOE 11706214	208 litres	SAE 80W-90	API GL-5
VOE 11706786	20 litres	SAE 80W-140	API GL-5

Transmission Oil

This is a high performance transmission and drive-train lubricant which meets the strict demands of Volvo Construction Equipment. Friction control, wear protection, thermal and shear stability have been optimally balanced to provide extended clutch life, slippage control and high load operation even on inclined slopes at extreme temperatures.

Part No.	Quantity	Viscosity	Quality level
VOE 15000659	20 litres	SAE 10W	TO-4
VOE 15002772	20 litres	SAE 30	TO-4

SUPER GEAR OIL

This oil is formulated with the highest quality base oils and additives. It is designed to offer optimal performance and protection under all operating conditions. Its optimized additive formulation gives superior wear and gear protection even at extreme loads. Super Gear Oil's optimal viscosity over a wide temperature range enables excellent protection and minimal friction, which reduces the fuel consumption.

Part No.	Quantity	Quality level
VOE 15018624	20 litres	GO101

HYDRAULIC OIL

The right viscosity is basic when choosing hydraulic oil. But hydraulic oils with the same viscosity may differ a lot in quality. When you choose Volvo hydraulic oils you don't have to take a chance.

Volvo has oils that can handle high temperatures as well as severe cold. You don't have to worry about if it has good oxidation stability or if it has very good lubricating capacity. Volvo hydraulic oils have both!



SUPER HYDRAULIC OIL

A high-quality oil that meets the highest requirements for filtration and protects against rust and corrosion. The oil has a high viscosity index, enabling trouble-free operation in a wide range of temperatures. Volvo Super Hydraulic Oil has excellent anti-wear characteristics and the lubricating capacity is improved with minimal foaming. Good oxidation stability gives the oil maximal service life

with unchanged characteristics.

Part No.	Quantity	Viscosity	Quality level
VOE 11706208	20 litres	ISO VG 32	Acc. to std VCE 1286,08, ISO 6743-4, Cat.HV
VOE 11706209	208 litres	ISO VG 32	Acc. to std VCE 1286,08, ISO 6743-4, Cat.HV
VOE 11706210	20 litres	ISO VG 46	Acc. to std VCE 1286,08, ISO 6743-4, Cat.HV
VOE 11706211	208 litres	ISO VG 46	Acc. to std VCE 1286,08, ISO 6743-4, Cat.HV
VOE 11708322	20 litres	ISO VG 68	Acc. to std VCE 1286,08, ISO 6743-4, Cat.HV
VOE 11708323	208 litres	ISO VG 68	Acc. to std VCE 1286,08, ISO 6743-4, Cat.HV

BIODEGRADABLE HYDRAULIC OIL

A biodegradable hydraulic oil with the same high quality as Volvo Super Hydraulic Oil. The oil is the obvious choice for operations in sensitive environments and when the application demands greater environmental care, for example, close to water reservoirs. The oil is made of degradable synthetic esters, which gives excellent oxidation stability.



Part No.	Quantity	Viscosity	Quality level
VOE 11712433	20 litres	ISO VG 46	Acc. to std VCE 1286,1, ISO 6743-4, Cat. HEES
VOE 11712434	208 litres	ISO VG 46	Acc. to std VCE 1286,1, ISO 6743-4, Cat. HEES

ULTRA HYDRAULIC OIL

This oil is formulated with premium group III base oil and carefully selected additives, which improves the oil's performance and protection. The oil's excellent oxidation stability allows it to be used with extended service intervals. Its improved shear stability permits to maintain a stable viscosity during the complete oil's service life. Volvo Ultra Hydraulic Oil also provides outstanding wear protection and optimal performance over a wide range of temperatures.

Part No.	Quantity	Quality level
VOE 15030580	20 litres	Acc. to std VCE 1286,2, ISO 6743-4, Cat.HV
VOE 15030482	208 litres	Acc. to std VCE 1286,2, ISO 6743-4, Cat.HV





GREASE

Volvo grease is designed to lubricate and protect machine parts exposed to friction such as wheel bearings, pins and bushings, which operate in very tough conditions.

Volvo grease protects at high temperatures and under heavy loading. It offers high resistance against water washout and thanks to its good adherence properties gives effective protection against corrosion.

SUPER GREASE LITHIUM

A quality grease appropriate for machines operating in dusty and humid environments. Volvo Super Grease Lithium has been developed to give extra protection against wear and rust, and is also suitable for use in central lubrication systems.

Super Grease Lithium

Part No.	Quantity	Grade
VOE 11716834	400 g	NLGI 2 EP Lithium
VOE 11714110	18 kg	NLGI 2 EP Lithium
VOE 11714104	18 kg	NLGI 0 EP Lithium

ULTRA GREASE LITHIUM COMPLEX EP 2

A superior quality grease, which guarantees optimal performance even in extreme working conditions such as high temperature, heavy loads or wet and dirty environments. Volvo Ultra Grease Lithium Complex has excellent adhesion properties and offers outstanding protection against wear and corrosion.

Part No. Quantity Grade

VOE 15026328	400 g	NLGI 2 EP Lithium Complex
VOE 11714105	18 kg	NLGI 2 EP Lithium Complex

ULTRA GREASE MOLY EP 2

This grease contains 3 % of molybdenum disulphide which makes it suitable for specific applications where high loads and small movements take place. Since Volvo Ultra Grease Moly also contains Lithium complex, it has excellent adherence properties and offers outstanding protection against water washout and corrosion.

Part No. Quantity Grade

VOE 15026338	400 g	NLGI 2 EP Molybdenumdisulphide
VOE 11714103	18 kg	NLGI 2 EP Molybdenum disulphide

SUGGESTIONS AND ADVICE

Change oil and filter on time

For every hour you operate, the amount of impurities in the oil rises, thus increasing engine wear at the end of the oil's usable life. Seized piston rings are often caused by carelessness with oil changes. It is economical to change the oil filter at the same time as you change oil. A new oil's characteristics deteriorate quickly when an old oil filter is used. When the oil filters become clogged and the oil circulation is obstructed, there is risk for oil stop and engine failure.

Maintain cleanliness during all filling of oil

When filling oil, it is very important to maintain cleanliness in your work area, especially around the filler hole. Be very thorough because carelessness is one of the major sources of impurities that cause wear, erosion, corrosion and malfunctions.

Biodegradable hydraulic oil

This oil is used as an alternative to mineral hydraulic oil for machines that operate in sensitive environments, for example, a gravel pit in a water conservation area. Both the fully synthetic base oil and the additives have been selected for minimal environmental impact in case of spillage. Contact your Volvo dealer to find out what requirements must be met to be able to replace the normal hydraulic oil with biodegradable hydraulic oil.

Check the oil level

An oil level that is too low is a frequent cause of component failures. Therefore, check the oil level in the engine, transmission and hydraulic system at regular intervals.

Waste oil

Waste oils should be handled as environmentally hazardous waste. They may contain substances that cause cancer and impurities such as lead, nickel and copper. Ensure that waste oil is disposed of responsibly and according to the local regulations.

Direct contact with oil and grease

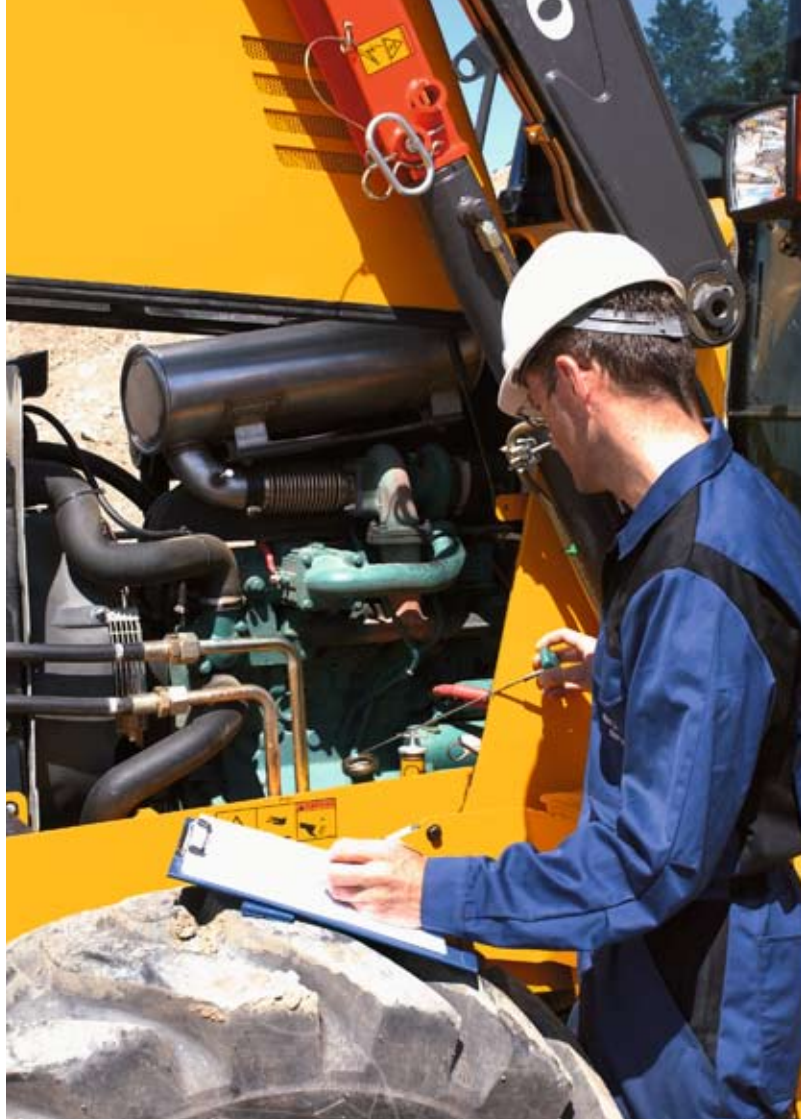
In case of daily contact, the skin may dry out and crack. Therefore, avoid direct skin contact with oil and grease. Oil smoke and oil mist can irritate respiratory organs and damage the nervous system and lungs.

In case of contact with eyes, rinse immediately with plenty of water.

Volvo oil analysis

Continuous monitoring of the oil's status with the help of Volvo oil analysis gives better control of your machine, which leads to reduced downtime, reduced time for troubleshooting/diagnostics and lower operating costs.

Contact your Volvo dealer for more information.



EXPLANATIONS

VDS, VDS-2, VDS-3

Volvo Drain Specifications. Volvo's high requirements for protection against cylinder polishing, ring wear, camshaft/tappet wear, high oil consumption, etc. VDS-3 gives lower piston deposits and makes it possible to extend oil change intervals.

ACEA

European automotive manufacturers organisation. Specifies oils for passenger cars, light duty and heavy duty vehicles.

ACEA E2, E3, E4, E5, E7

Meet requirements for heavy duty diesel engines. ACEA E7 meets the most recent requirements.

API

American Petroleum Institute. Specifies oil quality.

API CI-4, CH-4, CG-4, CF, CF-4

Specifies oil quality standard for Diesel Engine Oil. This standard indicates requirements regarding carbon deposits on pistons, bearing corrosion, camshaft

wear, oil consumption as well as max. viscosity increase of the oil.

API CF-4

Lubricants that only meet the API CF-4 specifications are NOT suitable for Volvo engines. By using such oil there is a risk of engine failure.

API CI-4

API CI-4 is the latest group within American Petroleum Institute for diesel engines that meet US 2002 emission demands. Oils that meet the API CI-4 standard are adapted for engines with EGR system.

ALLISON

Manufacturer's requirement.

SAE

Society of Automotive Engineers. Classification of lubricants depending on their viscosity. There are two systems for SAE-numbers, one for engine oils and one for transmission oils. The lower the SAE-no. in respective SAE-system, the thinner the oil.

VOLVO TRANSMISSION OIL 97341

Volvo's requirements for Automatic Transmission Fluids (ATF) in order to guarantee the right performance in Volvo automatic transmissions. It has higher demands for shear and oxidation stability compared to other common ATF.

API GL-4

Refers to mild EP-oil for hypoid (bevel) gears.

API GL-5

Refers to oils for hypoid (bevel) gears under high load.

WB 101

Specification specially developed for Volvo Construction Equipment with wet brake axles.

ISO VG

Viscosity classification of industrial oils. A class designation does not entail a quality evaluation, it only informs about the viscosity at the reference temperature which is 40°C. VG stands for Viscosity Grade.

ISO VG 32

Viscosity's nominal value = 32 cSt at 40 °C

ISO VG 46

Viscosity's nominal value = 46 cSt at 40 °C

ISO VG 68

Viscosity's nominal value = 68 cSt at 40 °C

NLGI number

A scale for comparing consistency (hardness) range of greases. Number are in order of increasing consistency with NLGI 0 being semifluid and NLGI 6 solid.

EP grease

Grease containing additives to prevent metals surfaces from seizing under extreme pressure (EP) conditions.

Moly grease

Grease containing Molybdenum Disulphide particles as a solid additive to improve wear performance in special applications.



With a philosophy of quality down to the last detail, we take an integrated, whole life cost approach to machines, parts and service. That gives added value, a distinct feature of Volvo Construction Equipment.

More care. Built in.

Under our policy of continuous improvement, we reserve the right to change specifications and designs without prior notice. Contact your dealer for further information.

VOLVO

Volvo Construction Equipment
www.volvo.com

Ref. No VOE 21B1002294 English
Printed in Sweden 2008.03-2,0 CST
Volvo, Eskilstuna