

WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL NORMAL



## VOLVO L180H 5445

Diesel Engine

**VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)** 

VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 ( GAL)							
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
	Sample Number		Client Info		VKC0001212		
Resample at the next service interval to monitor.	Sample Date		Client Info		25 Jun 2024		
	Machine Age	hrs	Client Info		8034		
	Oil Age	hrs	Client Info		0		
	Filter Age	hrs	Client Info		0		
	Oil Changed		Client Info		Changed		
	Filter Changed		Client Info		Changed		
	Sample Status				NORMAL		
WEAR							
WEAR All component wear rates are normal.	Iron	ppm	ASTM D5185m		7		
	Chromium	ppm	ASTM D5185m		<1		
	Nickel	ppm	ASTM D5185m	>10	<1		
	Titanium	ppm	ASTM D5185m		<1		
	Silver	ppm	ASTM D5185m		<1		
	Aluminum	ppm	ASTM D5185m		2		
	Lead	ppm	ASTM D5185m		<1		
	Copper	ppm	ASTM D5185m		1		
	Tin	ppm	ASTM D5185m	>10	<1		
	Vanadium	ppm	ASTM D5185m	NONE	<1		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
CONTAMINATION	Silicon	ppm	ASTM D5185m	>20	6		
CONTAININATION	Potassium	ppm	ASTM D5185m		2		
There is no indication of any contamination in the oil.	Fuel	<b>PP</b>	WC Method		- <1.0		
	Water		WC Method		NEG		
	Glycol		WC Method		NEG		
	Soot %	%	*ASTM D7844	>3	0.4		
	Nitration	Abs/cm	*ASTM D7624	>20	8.0		
	Sulfation	Abs/.1mm	*ASTM D7415	>30	22.7		
	Silt	scalar	*Visual	NONE	NONE		
	Debris	scalar	*Visual	NONE	NONE		
	Sand/Dirt	scalar	*Visual	NONE	NONE		
	Appearance	scalar	*Visual	NORML	NORML		
	Odor	scalar	*Visual	NORML	NORML		
	<b>Emulsified Water</b>	scalar	*Visual	>0.1	NEG		
ELUD CONDITION							
FLUID CONDITION	Sodium	ppm	ASTM D5185m	0.5	1		
The BN result indicates that there is suitable alkalinity remaining in the	Boron	ppm	ASTM D5185m		33		
oil. The condition of the oil is suitable for further service.	Barium	ppm	ASTM D5185m		0		
	Molybdenum	ppm	ASTM D5185m		41		
	Manganese	ppm	ASTM D5185m		<1		
	Magnesium	ppm	ASTM D5185m		508		
	Calcium	ppm	ASTM D5185m	2057	1668		
	Phosphorus	ppm	ASTM D5185m		951		
	Zinc	ppm		1223	1116		
	Sulfur	ppm Abo/1mm	ASTM D5185m		2795		
	Oxidation	Abs/.1mm	*ASTM D7414		20.6		
	Base Number (BN)	0	ASTM D2896		9.6		
	Visc @ 100°C	cSt	ASTM D445	15.0	12.6		





Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : VKC0001212 Lab Number : 06238741

Unique Number : 11127575

Received **Tested** Diagnosed Test Package: MOBCE (Additional Tests: TBN)

: 16 Jul 2024 : 17 Jul 2024

: 17 Jul 2024 - Wes Davis

KANSAS CITY, KS Contact: PAT SAUSE

psause@vankeppel.com

**GW VAN KEPPEL CO** 

1801 NORTH 9TH ST

To discuss this sample report, contact Customer Service at 1-800-237-1369. \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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US 66110