WEAR
CONTAMINATION
FLUID CONDITION

NORMAL NORMAL ABNORMAL

Area

[9601]



Diesel Engine

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

VOLVO ULTRA DIESEL ENGIN	E OIL 15W4	0 VDS	S-3 (G	iAL)			
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.	Sample Number		Client Info		VCP413784		
	Sample Date		Client Info		14 Sep 2023		
	Machine Age	hrs	Client Info		592		
	Oil Age	hrs	Client Info		0		
	Filter Age	hrs	Client Info		0		
	Oil Changed		Client Info		Changed		
	Filter Changed		Client Info		Changed		
	Sample Status				ABNORMAL		
WEAR	Iron	ppm	ASTM D5185m	>200	19		
Metal levels are typical for a new component breaking in.	Chromium	ppm	ASTM D5185m	>20	<1		
	Nickel	ppm	ASTM D5185m		2		
	Titanium	ppm	ASTM D5185m		0		
	Silver	ppm	ASTM D5185m	>2	0		
	Aluminum	ppm	ASTM D5185m		3		
	Lead	ppm	ASTM D5185m	>40	<1		
	Copper	ppm	ASTM D5185m		380		
	Tin	ppm	ASTM D5185m		3		
	Vanadium	ppm	ASTM D5185m	720	0		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
<u> </u>		Scalai	Visuai	INOINL	INONE		
CONTAMINATION Fuel content negligible. There is no indication of any contamination in the oil.	Silicon	ppm	ASTM D5185m	>20	26		
	Potassium	ppm	ASTM D5185m	>20	4		
	Fuel	%	ASTM D3524	>3.0	0.4		
	Water		WC Method	>0.2	NEG		
	Glycol		WC Method		NEG		
	Soot %	%	*ASTM D7844	>3	0.2		
	Nitration	Abs/cm	*ASTM D7624	>20	8.0		
	Sulfation	Abs/.1mm	*ASTM D7415	>30	19.3		
	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		
	Emulsified Water	scalar	*Visual	>0.2	NEG		
FLUID CONDITION	Sodium	nnm	ASTM D5185m		3		
I LOID CONDITION	Boron	ppm	ASTM D5185m	25	68		
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.	Barium	ppm	ASTM D5185m		0		
	Molybdenum		ASTM D5185m		63		
	•	ppm	ASTM D5185m				
	Manganese	ppm		0.0	3		
	Magnesium	ppm	ASTM D5185m		236		
	Calcium	ppm	ASTM D5185m		1949		
	Phosphorus	ppm	ASTM D5185m		1031		
	Zinc	ppm	ASTM D5185m		1266		
	Sulfur	ppm	ASTM D5185m		4021		
	Oxidation	Abs/.1mm	*ASTM D7414		14.4		
	Base Number (BN)		ASTM D2896		6.1		
	Visc @ 100°C	cSt	ASTM D445	15.0	11.1		





Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Lab Number : 05956140

: VCP413784

Tested Unique Number: 10657353 Diagnosed

: 21 Sep 2023 : 21 Sep 2023 - Angela Borella Test Package: MOB 1 (Additional Tests: FuelDilution, PercentFuel, TBN)

: 20 Sep 2023

Received

Certificate L2367 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. PLEASANT EXCAVATING COMPANY INC

24024 FREDERICK ROAD CLARKSBURG, MD US 20871

Contact: H TRENT HTRENT@PLEASANTS.ORG

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