WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL

Area

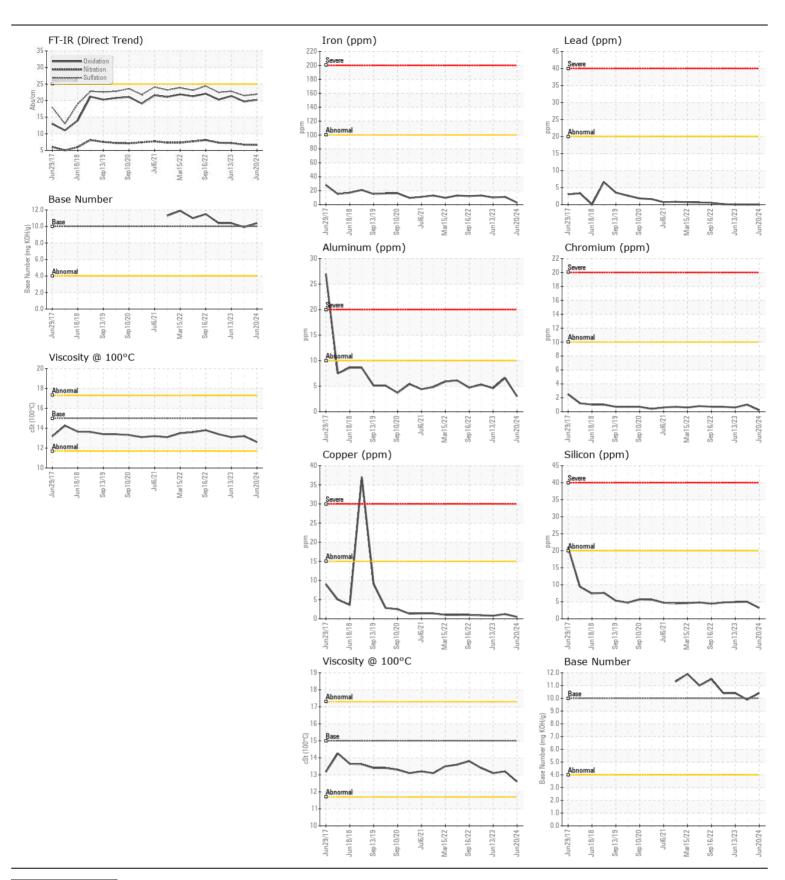
[2014]



Diesel Engine

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

			S-3 (G	·/			
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
December at the west comice interval to require	Sample Number		Client Info		VCP434490	VCP383104	VCP38292
Resample at the next service interval to monitor.	Sample Date		Client Info		20 Jun 2024	12 Oct 2023	13 Jun 202
	Machine Age	hrs	Client Info		9575	8550	8035
	Oil Age	hrs	Client Info		0	500	500
	Filter Age	hrs	Client Info		0	0	0
	Oil Changed		Client Info		Changed	Changed	Changed
	Filter Changed		Client Info		Changed	Changed	Changed
	Sample Status				NORMAL	NORMAL	NORMAL
WEAR	Iron	ppm	ASTM D5185m	>100	3	11	10
All component wear rates are normal.	Chromium	ppm	ASTM D5185m	>10	<1	1	<1
	Nickel	ppm	ASTM D5185m	>10	0	<1	0
	Titanium	ppm	ASTM D5185m		0	<1	0
	Silver	ppm	ASTM D5185m	>2	0	0	0
	Aluminum	ppm	ASTM D5185m	>10	3	7	5
	Lead	ppm	ASTM D5185m	>20	0	0	0
	Copper	ppm	ASTM D5185m	>15	<1	1	<1
	Tin	ppm	ASTM D5185m	>10	0	<1	1
	Vanadium	ppm	ASTM D5185m		0	<1	0
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
CONTAMINATION	Silicon	ppm	ASTM D5185m	>20	3	5	5
	Potassium	ppm	ASTM D5185m		1	0	<1
There is no indication of any contamination in the oil.	Fuel	pp	WC Method		<1.0	<1.0	<1.0
	Water		WC Method		NEG	NEG	NEG
	Glycol		WC Method		NEG	NEG	NEG
	Soot %	%	*ASTM D7844	>3	0.2	0.3	0.3
	Nitration	Abs/cm	*ASTM D7624	>20	6.6	6.7	7.2
	Sulfation	Abs/.1mm	*ASTM D7415		21.9	21.5	22.8
	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
	Appearance	scalar	*Visual	NORML	NORML	NORML	NORM
	Odor	scalar	*Visual	NORML	NORML	NORML	NORM
	Emulsified Water		*Visual	>0.1	NEG	NEG	NEG
FLUID CONDITION	Sodium	nnm	ΔSTM D5185m		2	3	2
.	Boron	ppm	ASTM D5185m	2.5	47	50	52
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Barium	ppm	ASTM D5185m		0	0	0
	Molybdenum	ppm	ASTM D5185m		39	44	41
	Manganese	ppm	ASTM D5185m		0	<1	<1
	Magnesium	ppm	ASTM D5185m		505	498	541
	Calcium	ppm	ASTM D5185m		1683	1656	1806
		ppm	ASTM D5185m		924	903	997
	Phosphorus	ppiii	AO INI DO IOOIII				
	Phosphorus Zinc	nnm	ASTM D5185m	1223	1163	IIInn	1:26/4
	Zinc	ppm	ASTM D5185m		1163 2927	1066 2669	1264 3803
	Zinc Sulfur	ppm	ASTM D5185m	4079	2927	2669	3803
	Zinc	ppm Abs/.1mm	ASTM D5185m *ASTM D7414	4079 >25			







Certificate L2367

Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : VCP434490 Lab Number : 06220781

Unique Number: 11098978

Received **Tested** Diagnosed

: 26 Jun 2024 : 27 Jun 2024

: 27 Jun 2024 - Wes Davis

Test Package : MOB 1 (Additional Tests: TBN)

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.

LEONARDS CONTRACTING 30850 STEPHENSON HWY

MADISON HEIGHTS, MI US 48071

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