



THE G. W. VAN KEPPEL CO.
Construction Equipment

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area

[ASH GROVE]

Machine Id

VOLVO L110H 38256 (S/N 632327)

Component

Diesel Engine

Fluid

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

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VKC0001170	VKC0001016	VKC0000599
Sample Date		Client Info		13 May 2024	31 Jul 2023	12 Jul 2022
Machine Age	hrs	Client Info		2667	1935	572
Oil Age	hrs	Client Info		500	500	572
Filter Age	hrs	Client Info		500	500	572
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	ABNORMAL

WEAR

The aluminum level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	27	25	46
Chromium	ppm	ASTM D5185m	>10	<1	1	4
Nickel	ppm	ASTM D5185m	>10	0	<1	0
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>2	<1	0	1
Aluminum	ppm	ASTM D5185m	>10	▲ 16	9	▲ 73
Lead	ppm	ASTM D5185m	>20	<1	<1	2
Copper	ppm	ASTM D5185m	>15	2	2	15
Tin	ppm	ASTM D5185m	>10	2	1	4
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

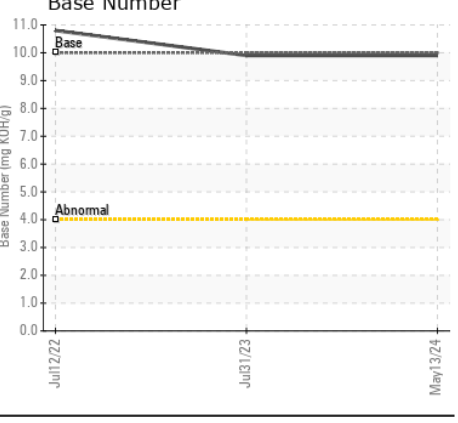
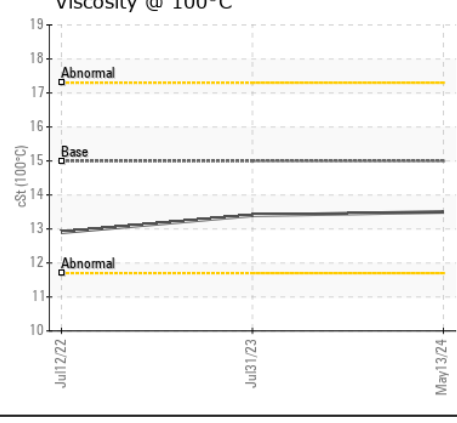
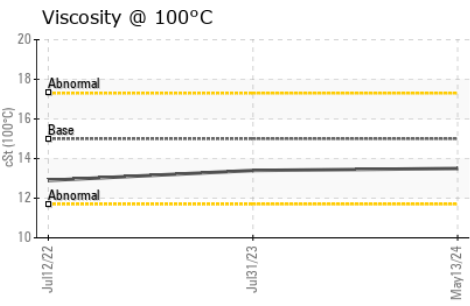
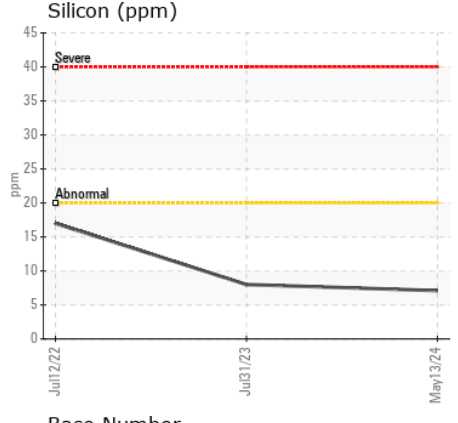
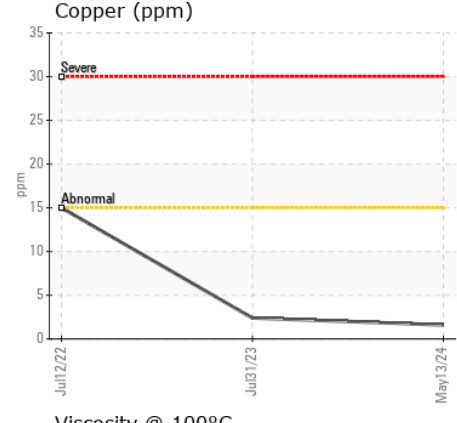
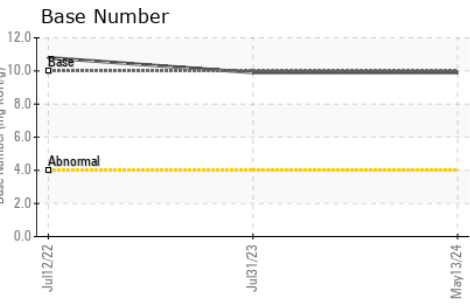
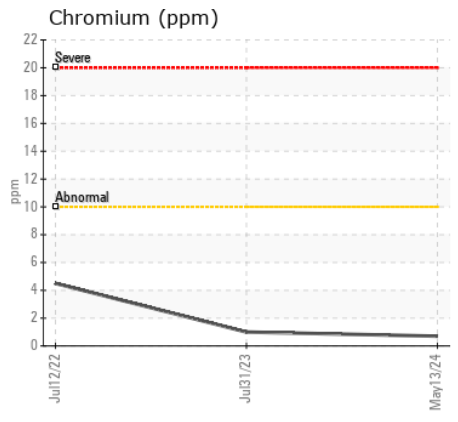
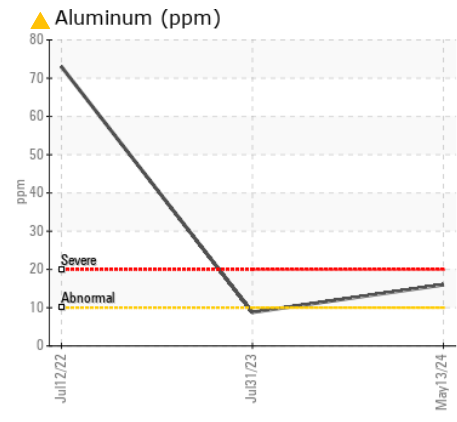
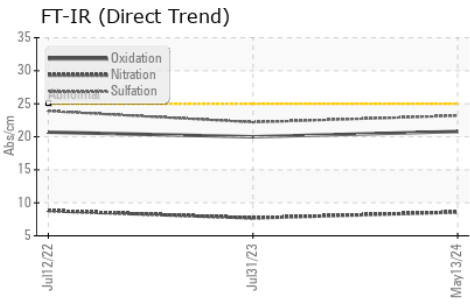
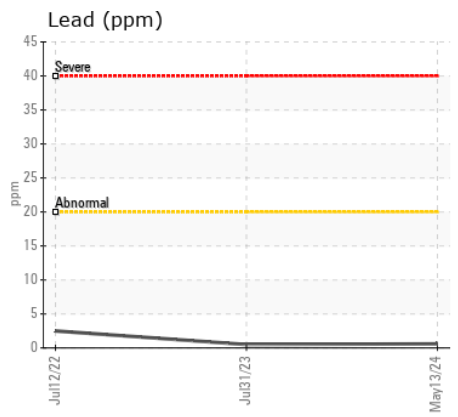
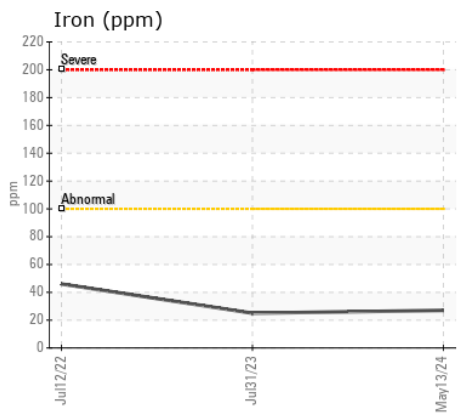
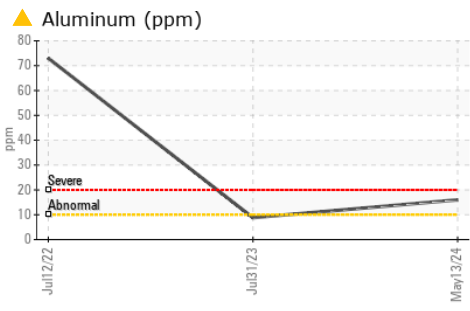
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	7	8	17
Potassium	ppm	ASTM D5185m	>20	5	1	2
Fuel		WC Method	>6.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.7	0.7	0.6
Nitration	Abs/cm	*ASTM D7624	>20	8.6	7.7	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.2	22.2	23.9
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	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		3	3	2
Boron	ppm	ASTM D5185m	2.5	65	32	34
Barium	ppm	ASTM D5185m	0.0	0	2	11
Molybdenum	ppm	ASTM D5185m	0.7	54	55	39
Manganese	ppm	ASTM D5185m	0.0	1	<1	3
Magnesium	ppm	ASTM D5185m	256	573	657	610
Calcium	ppm	ASTM D5185m	2057	1744	2160	1568
Phosphorus	ppm	ASTM D5185m	935	973	1222	964
Zinc	ppm	ASTM D5185m	1223	1151	1447	1146
Sulfur	ppm	ASTM D5185m	4079	3239	3771	3898
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.8	20.0	20.7
Base Number (BN)	mg KOH/g	ASTM D2896	10	9.9	9.9	10.8
Visc @ 100°C	cSt	ASTM D445	15.0	13.5	13.4	12.9



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VKC0001170 **Received** : 28 May 2024
Lab Number : 06193387 **Tested** : 30 May 2024
Unique Number : 11050139 **Diagnosed** : 30 May 2024 - Jonathan Hester
Test Package : MOBCE (Additional Tests: TBN)

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