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THE G. W. VAN KEPPEL CO.
Construction Equipment

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
VOLVO L180H 5444
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.

WEAR

All component wear rates are normal.

CONTAMINATION

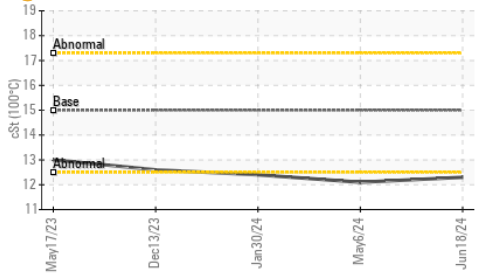
There is no indication of any contamination in the oil.

FLUID CONDITION

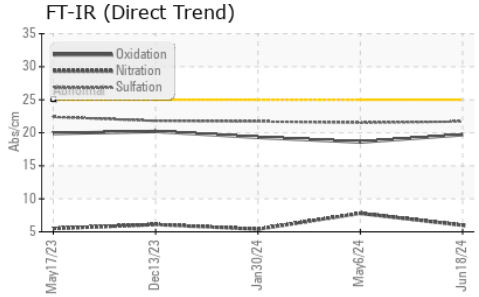
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VKC0001330	VKC0001163	VKC0001106
Sample Date		Client Info		18 Jun 2024	06 May 2024	30 Jan 2024
Machine Age	hrs	Client Info		7205	6915	6352
Oil Age	hrs	Client Info		0	0	250
Filter Age	hrs	Client Info		0	0	250
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	ATTENTION	NORMAL
Iron	ppm	ASTM D5185m	>200	2	4	<1
Chromium	ppm	ASTM D5185m	>20	0	<1	0
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>30	<1	<1	1
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>20	<1	1	<1
Tin	ppm	ASTM D5185m	>20	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	3	5	4
Potassium	ppm	ASTM D5185m	>20	<1	0	<1
Fuel		WC Method	>6.0	<1.0	0.2	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	6.0	7.8	5.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.7	21.5	21.7
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	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m		2	2	1
Boron	ppm	ASTM D5185m	2.5	55	77	70
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	0.7	40	42	38
Manganese	ppm	ASTM D5185m	0.0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	256	522	533	500
Calcium	ppm	ASTM D5185m	2057	1915	1695	1586
Phosphorus	ppm	ASTM D5185m	935	1005	931	965
Zinc	ppm	ASTM D5185m	1223	1158	1093	1106
Sulfur	ppm	ASTM D5185m	4079	3410	3252	2851
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.7	18.6	19.3
Base Number (BN)	mg KOH/g	ASTM D2896	10	10.4	9.1	10.1
Visc @ 100°C	cSt	ASTM D445	15.0	12.3	12.1	12.4

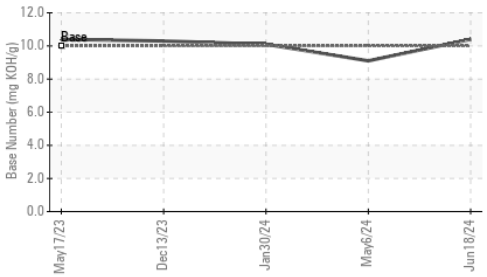
Viscosity @ 100°C



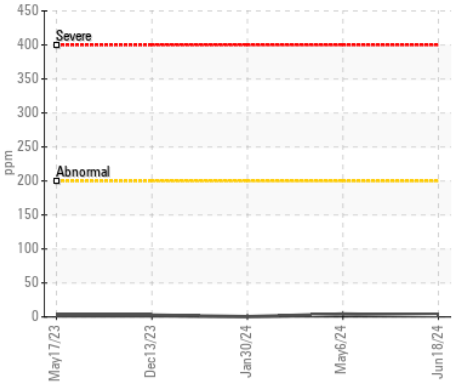
FT-IR (Direct Trend)



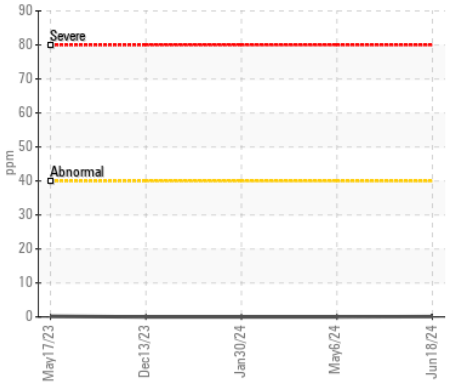
Base Number



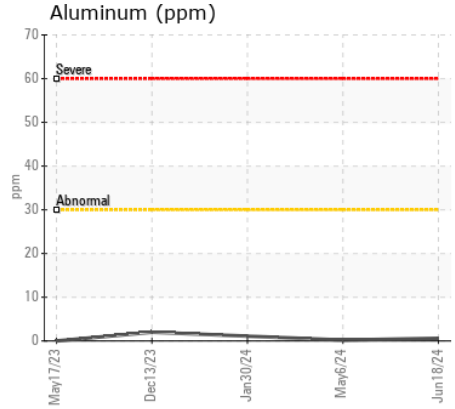
Iron (ppm)



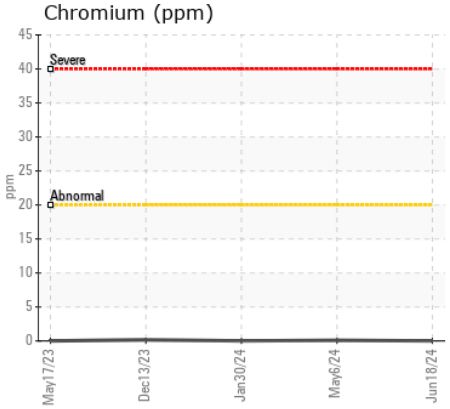
Lead (ppm)



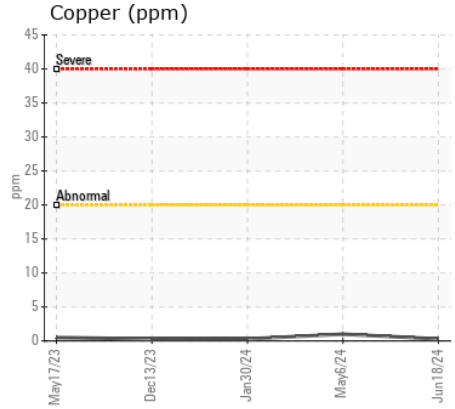
Aluminum (ppm)



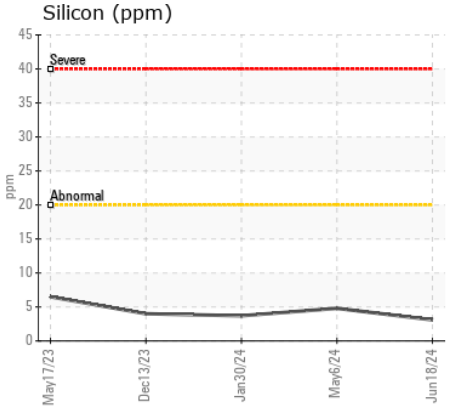
Chromium (ppm)



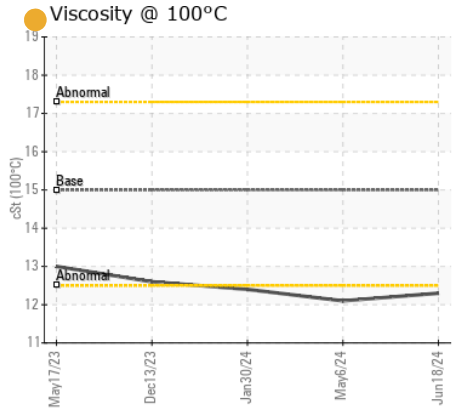
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



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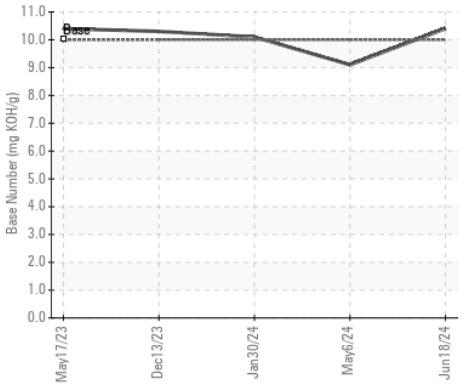

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VKC0001330 **Received** : 08 Jul 2024
Lab Number : 06231120 **Tested** : 10 Jul 2024
Unique Number : 11114613 **Diagnosed** : 10 Jul 2024 - Don Baldridge
Test Package : MOBCE (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.*
Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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