



THE G. W. VAN KEPPEL CO.  
Construction Equipment

# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Machine Id  
**VOLVO L180H 38230 (S/N 5603)**  
Component  
**Diesel Engine**  
Fluid  
**VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)**

## RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>VKC0001189</b>	VKC0000832	VKC0000932
Sample Date		Client Info		<b>01 Feb 2024</b>	14 Nov 2023	31 Jul 2023
Machine Age	hrs	Client Info		<b>3969</b>	3590	2972
Oil Age	hrs	Client Info		<b>250</b>	500	0
Filter Age	hrs	Client Info		<b>250</b>	500	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>200	<b>&lt;1</b>	3	3
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>30	<b>1</b>	<1	1
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	<1
Tin	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

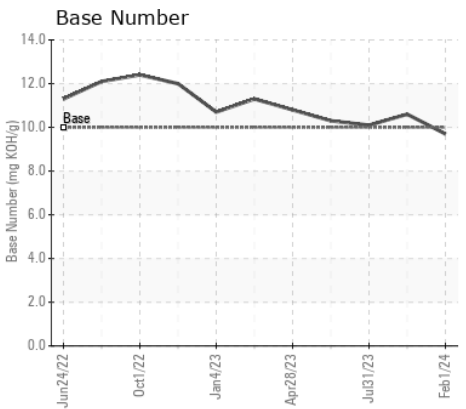
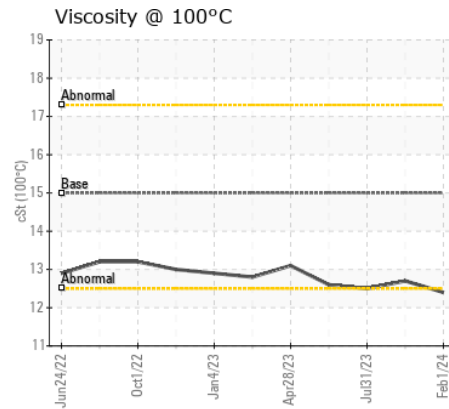
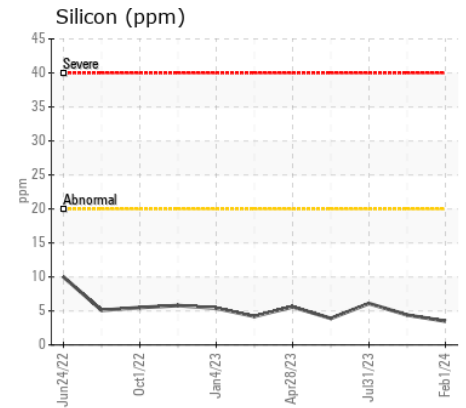
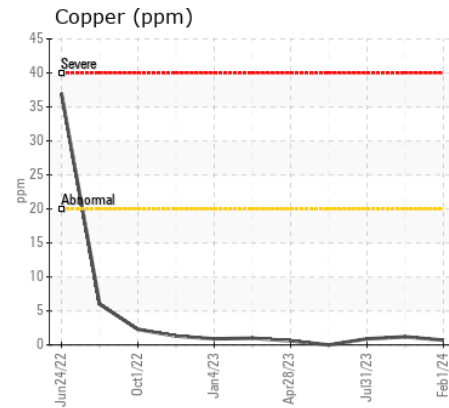
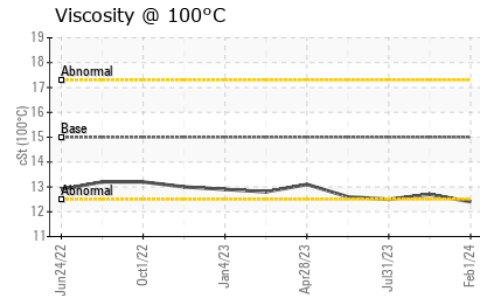
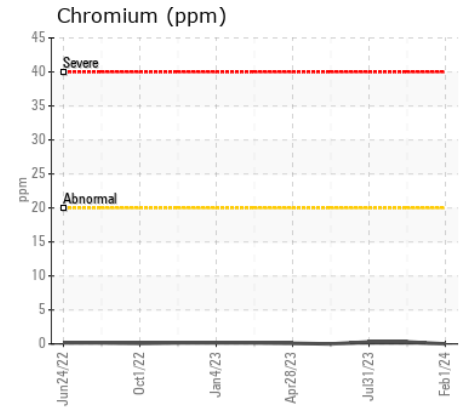
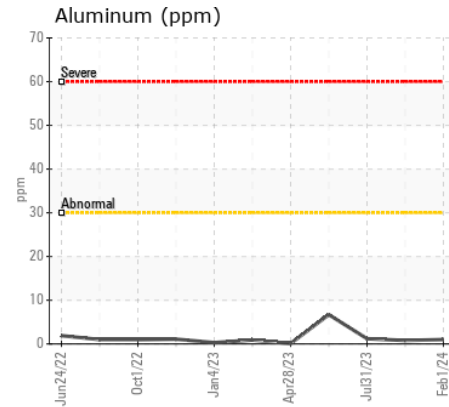
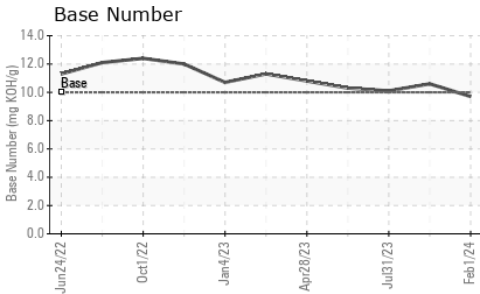
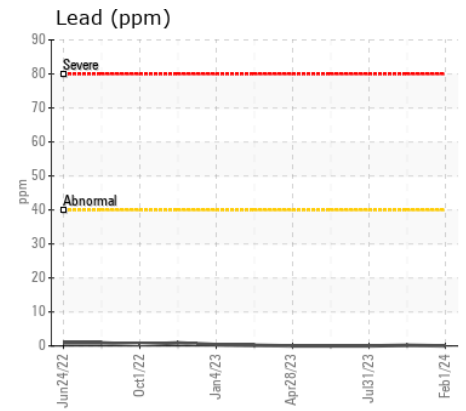
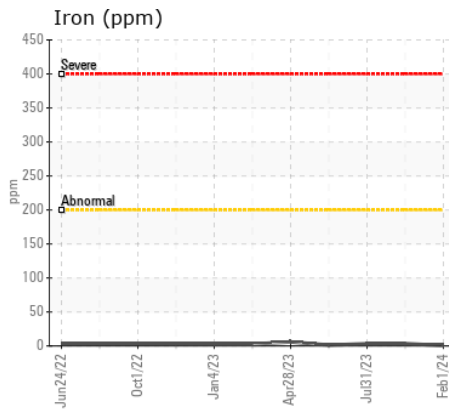
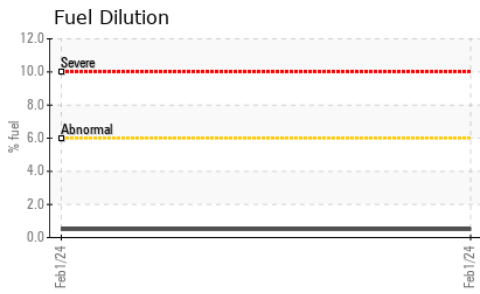
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>4</b>	4	6
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	2	<1
Fuel	%	ASTM D3524	>6.0	<b>0.5</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.0</b>	6.1	5.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.9</b>	21.9	21.3
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	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		<b>2</b>	0	<1
Boron	ppm	ASTM D5185m	2.5	<b>59</b>	58	63
Barium	ppm	ASTM D5185m	0.0	<b>&lt;1</b>	<1	0
Molybdenum	ppm	ASTM D5185m	0.7	<b>37</b>	42	39
Manganese	ppm	ASTM D5185m	0.0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	256	<b>481</b>	491	469
Calcium	ppm	ASTM D5185m	2057	<b>1581</b>	1650	1561
Phosphorus	ppm	ASTM D5185m	935	<b>910</b>	924	896
Zinc	ppm	ASTM D5185m	1223	<b>1053</b>	1075	1076
Sulfur	ppm	ASTM D5185m	4079	<b>2702</b>	3077	2913
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.6</b>	20.0	19.2
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>9.7</b>	10.6	10.1
Visc @ 100°C	cSt	ASTM D445	15.0	<b>12.4</b>	12.7	12.5



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VKC0001189 **Received** : 13 Feb 2024  
**Lab Number** : 06087929 **Tested** : 15 Feb 2024  
**Unique Number** : 10875374 **Diagnosed** : 15 Feb 2024 - Wes Davis  
**Test Package** : MOBCE ( Additional Tests: FuelDilution, PercentFuel, 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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