



THE G. W. VAN KEPPEL CO.  
Construction Equipment

# OIL ANALYSIS REPORT

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



Area

**[RICHEY BROTHERS]**

Machine Id

**VOLVO L90H 624618**

Component

**Diesel Engine**

Fluid

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

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>VKC0001220</b>	VKC0001015	---
Sample Date		Client Info		<b>15 Apr 2024</b>	27 Jul 2023	---
Machine Age	hrs	Client Info		<b>5804</b>	5000	---
Oil Age	hrs	Client Info		<b>506</b>	0	---
Filter Age	hrs	Client Info		<b>506</b>	0	---
Oil Changed		Client Info		<b>Changed</b>	N/A	---
Filter Changed		Client Info		<b>Changed</b>	N/A	---
Sample Status				<b>NORMAL</b>	NORMAL	---

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>200	<b>10</b>	18	---
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	---
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	---
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>30	<b>3</b>	6	---
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	---
Copper	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	---
Tin	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	---
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

## CONTAMINATION

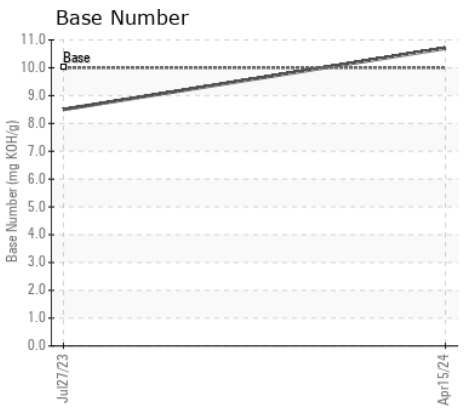
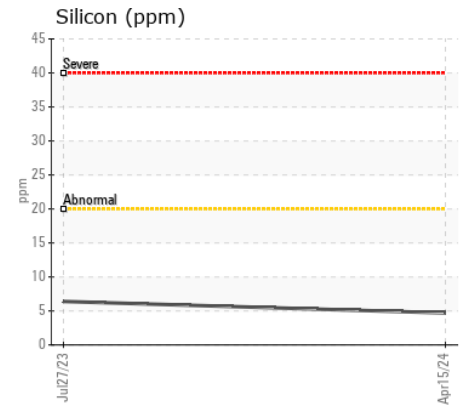
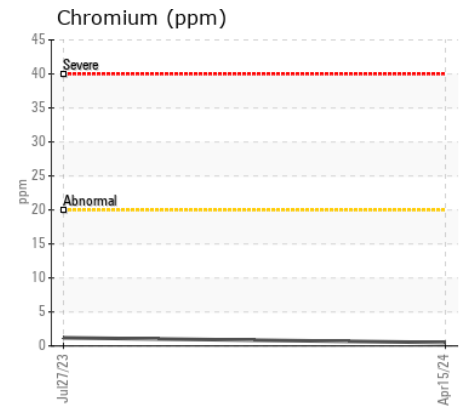
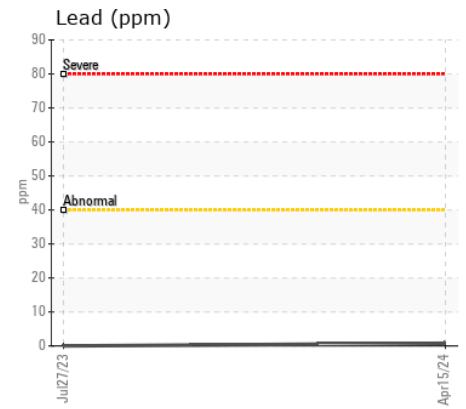
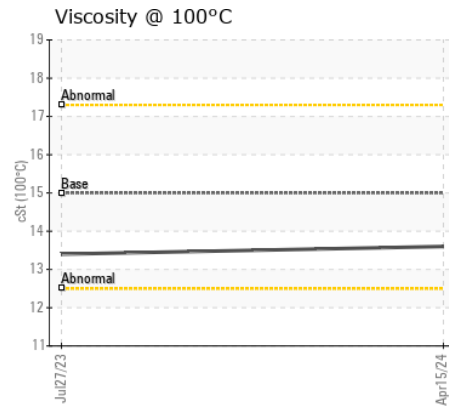
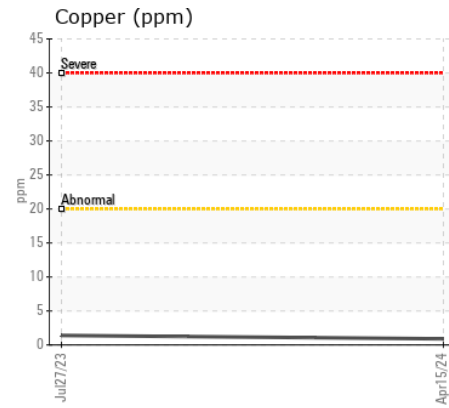
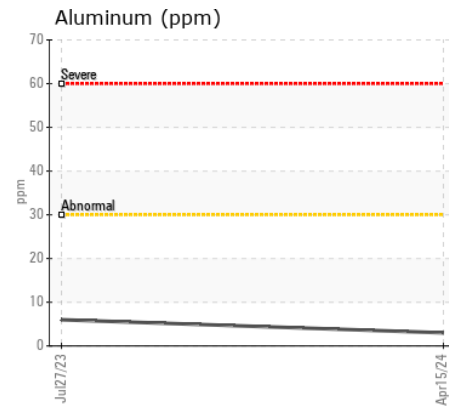
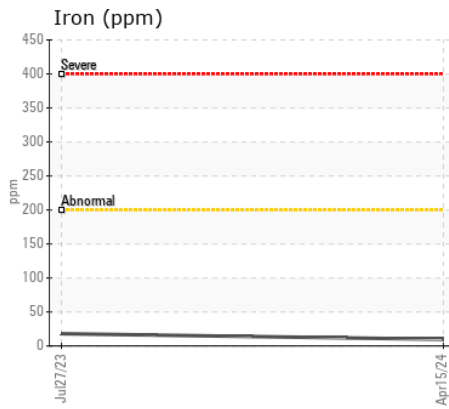
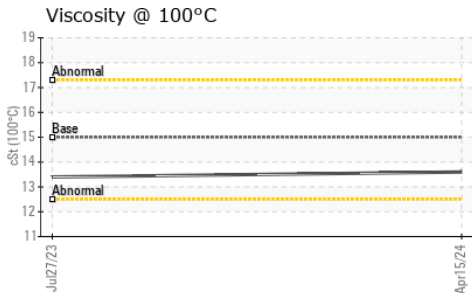
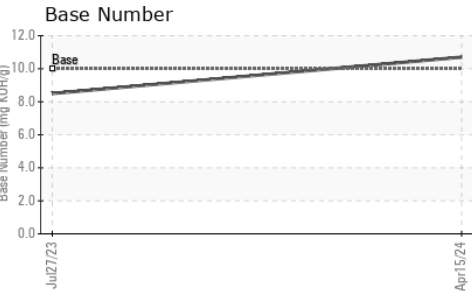
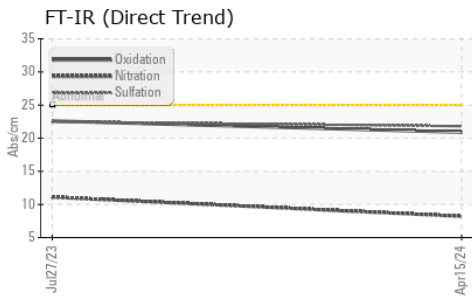
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>5</b>	6	---
Potassium	ppm	ASTM D5185m	>20	<b>22</b>	<1	---
Fuel		WC Method	>6.0	<b>&lt;1.0</b>	<1.0	---
Water		WC Method	>0.2	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.4	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.2</b>	11.1	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.8</b>	22.5	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	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>5</b>	8	---
Boron	ppm	ASTM D5185m	2.5	<b>46</b>	31	---
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m	0.7	<b>50</b>	59	---
Manganese	ppm	ASTM D5185m	0.0	<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m	256	<b>539</b>	626	---
Calcium	ppm	ASTM D5185m	2057	<b>1832</b>	2000	---
Phosphorus	ppm	ASTM D5185m	935	<b>995</b>	1062	---
Zinc	ppm	ASTM D5185m	1223	<b>1128</b>	1294	---
Sulfur	ppm	ASTM D5185m	4079	<b>3347</b>	3740	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>20.9</b>	22.6	---
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>10.7</b>	8.5	---
Visc @ 100°C	cSt	ASTM D445	15.0	<b>13.6</b>	13.4	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VKC0001220 **Received** : 16 Apr 2024  
**Lab Number** : 06150909 **Tested** : 17 Apr 2024  
**Unique Number** : 10980987 **Diagnosed** : 17 Apr 2024 - Wes Davis  
**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)

**GW VAN KEPPEL CO**  
 1801 NORTH 9TH ST  
 KANSAS CITY, KS  
 US 66110  
 Contact: PAT SAUSE  
 psause@vankeppel.com

T:  
 F: (913)281-4815