



# VOLVO

## OIL ANALYSIS REPORT

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



Area  
**[SPM674531]**  
 Machine Id  
**VOLVO L180G 19305**  
 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>VCP431232</b>	VCP417427	VCP405657
Sample Date		Client Info		<b>19 Feb 2024</b>	08 Aug 2023	03 May 2023
Machine Age	hrs	Client Info		<b>22125</b>	21063	20781
Oil Age	hrs	Client Info		<b>250</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	ATTENTION	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>5</b>	15	8
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>10	<b>2</b>	1	2
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>2</b>	2	2
Lead	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>15	<b>3</b>	6	4
Tin	ppm	ASTM D5185m	>10	<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

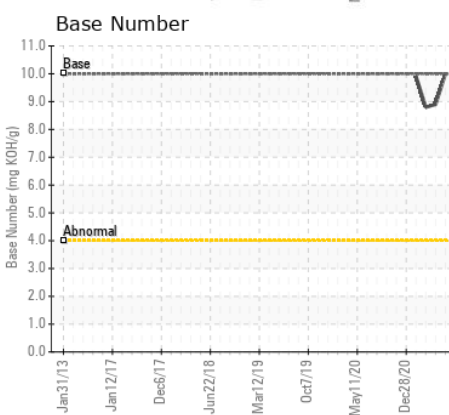
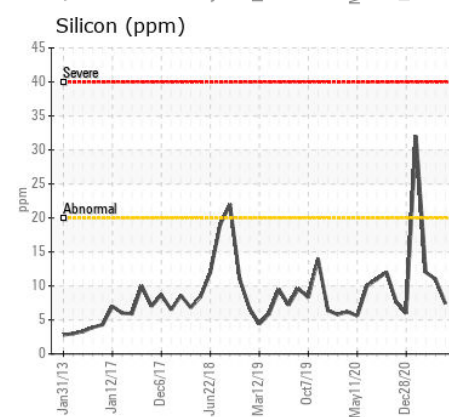
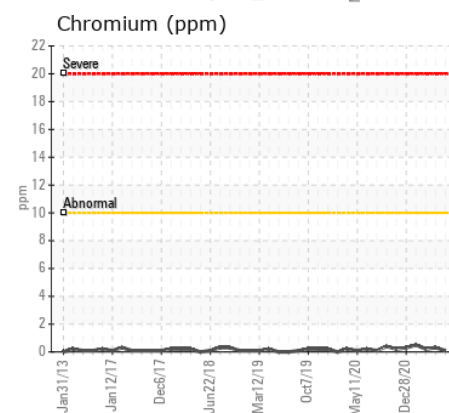
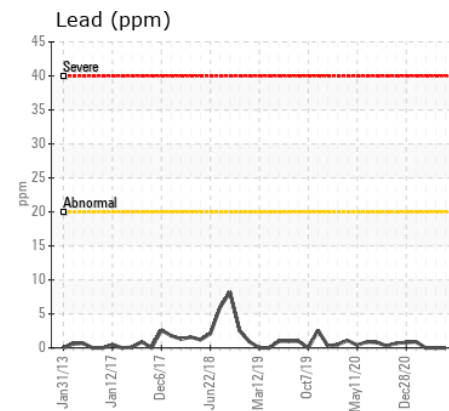
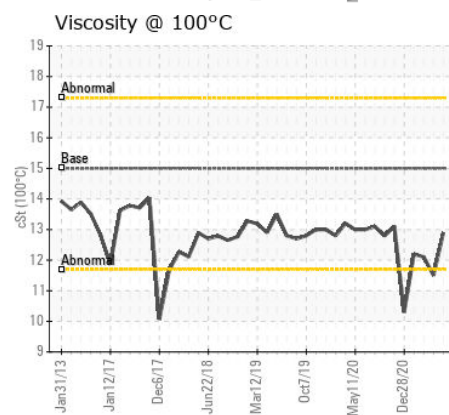
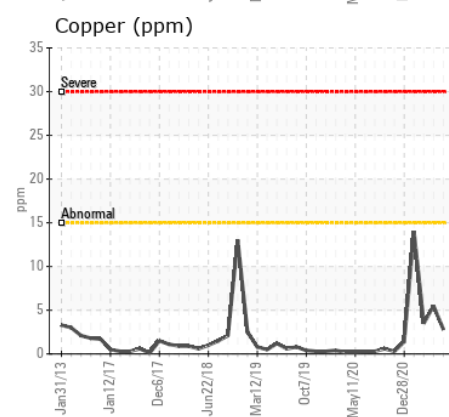
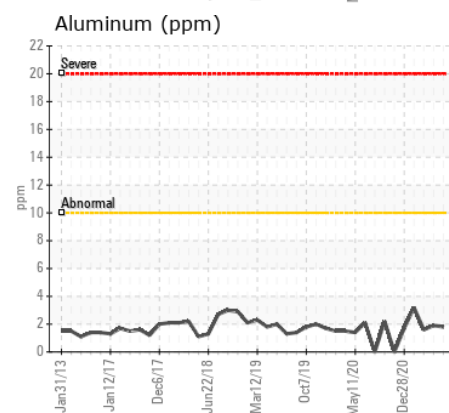
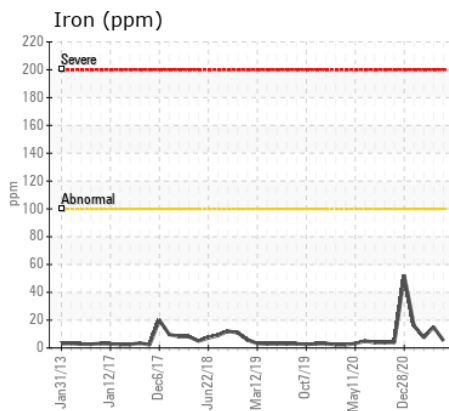
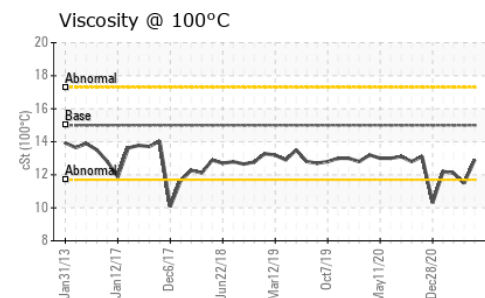
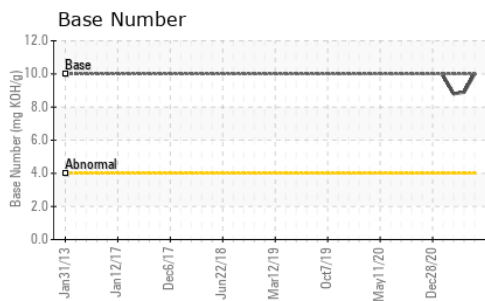
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>7</b>	11	12
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	3	2
Fuel		WC Method	>6.0	<b>&lt;1.0</b>	0.3	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.2</b>	5.6	5.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.1</b>	22.4	20.2
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	>0.1	<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>5</b>	3	2
Boron	ppm	ASTM D5185m	2.5	<b>63</b>	59	63
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0.7	<b>37</b>	35	38
Manganese	ppm	ASTM D5185m	0.0	<b>&lt;1</b>	1	<1
Magnesium	ppm	ASTM D5185m	256	<b>430</b>	454	481
Calcium	ppm	ASTM D5185m	2057	<b>1660</b>	1477	1730
Phosphorus	ppm	ASTM D5185m	935	<b>881</b>	893	920
Zinc	ppm	ASTM D5185m	1223	<b>963</b>	1040	1054
Sulfur	ppm	ASTM D5185m	4079	<b>2678</b>	3409	3324
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.7</b>	19.4	18.4
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>10.0</b>	8.9	8.8
Visc @ 100°C	cSt	ASTM D445	15.0	<b>12.9</b>	▲ 11.5	12.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VCP431232  
**Lab Number** : 06098206  
**Unique Number** : 10896436  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**Received** : 23 Feb 2024  
**Tested** : 25 Feb 2024  
**Diagnosed** : 25 Feb 2024 - Wes Davis

**COVANTA ONONDAGA LP**  
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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)