



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**VOLVO L-60 LOADER L-22**  
 Component  
**Diesel Engine**  
 Fluid  
**TRC MOLY XL PROSPEC III 15W40 (6 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>TR05828551</b>	TR05477144	TR05208657
Sample Date		Client Info		<b>17 Apr 2023</b>	23 Feb 2022	26 Feb 2021
Machine Age	hrs	Client Info		<b>0</b>	2805	2427
Oil Age	hrs	Client Info		<b>1536</b>	378	615
Filter Age	hrs	Client Info		<b>410</b>	378	615
Oil Changed		Client Info		<b>Changed</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>Changed</b>	Not Changd	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>30</b>	20	15
Chromium	ppm	ASTM D5185m	>10	<b>1</b>	1	1
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	1
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>10	<b>9</b>	8	6
Lead	ppm	ASTM D5185m	>20	<b>0</b>	<1	1
Copper	ppm	ASTM D5185m	>15	<b>5</b>	5	4
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	0
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**

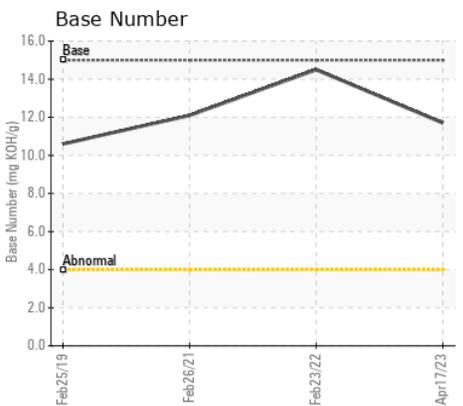
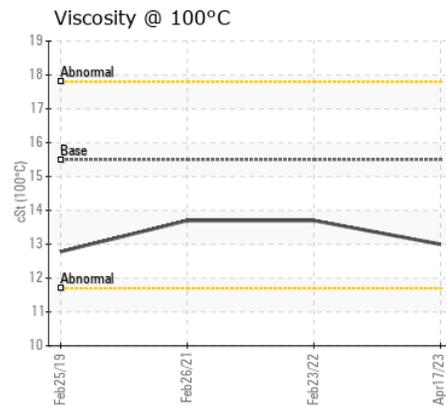
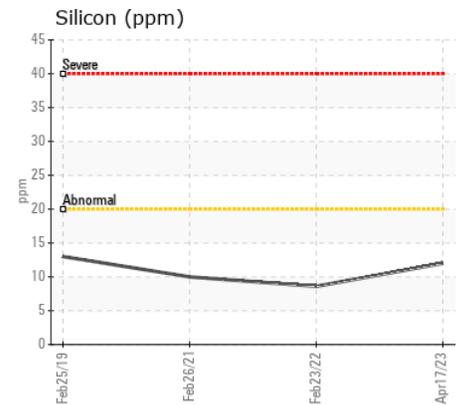
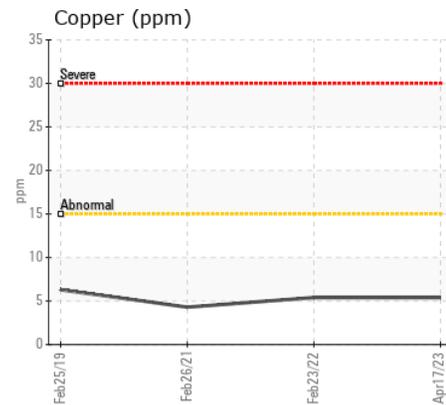
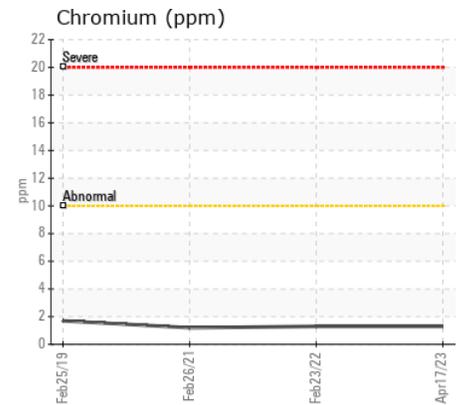
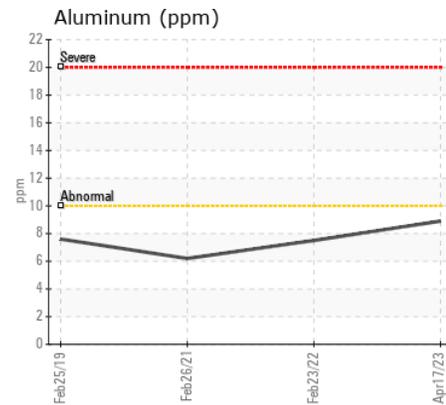
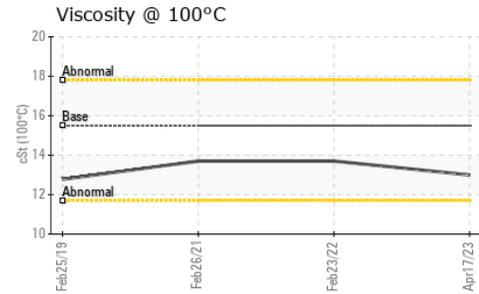
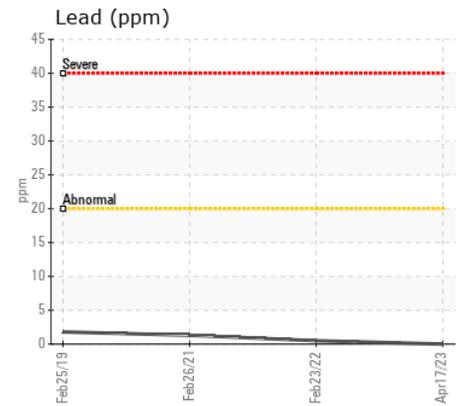
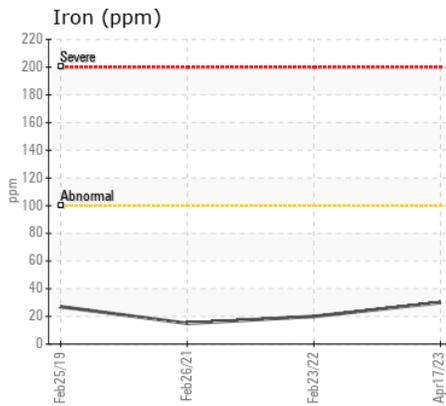
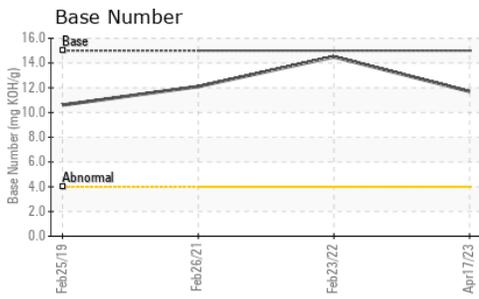
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>12</b>	9	10
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	2	0
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<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>0.2</b>	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.4</b>	9.1	7.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.6</b>	22.9	20.6
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>&lt;1</b>	<1	2
Boron	ppm	ASTM D5185m		<b>160</b>	175	172
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>198</b>	206	181
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>433</b>	460	442
Calcium	ppm	ASTM D5185m	4500	<b>4027</b>	4352	4160
Phosphorus	ppm	ASTM D5185m		<b>754</b>	883	800
Zinc	ppm	ASTM D5185m	1400	<b>1016</b>	1113	945
Sulfur	ppm	ASTM D5185m		<b>4092</b>	3444	2988
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.7</b>	13.7	12.2
Base Number (BN)	mg KOH/g	ASTM D2896	15	<b>11.70</b>	14.5	12.1
Visc @ 100°C	cSt	ASTM D445	15.5	<b>13.0</b>	13.7	13.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : TR05828551

Lab Number : 05828551

Unique Number : 10442044

Test Package : MOB 2

Received : 24 Apr 2023

Tested : 25 Apr 2023

Diagnosed : 25 Apr 2023 - Wes Davis

CALCO INC

2878 VT RT 18

WATERFORD, VT

US 05819

Contact: DON PERCY

To discuss this sample report, contact Customer Service at 1-800-827-0711.

\* - 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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