



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**VOLVO L220H 82 (S/N 2995)**  
 Component  
**Diesel Engine**  
 Fluid  
**TRC MOLY XL PROSPEC III 15W40 (13 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>TR06212582</b>	TR06045117	TR05970945
Sample Date		Client Info		<b>10 Jun 2024</b>	21 Dec 2023	29 Sep 2023
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>525</b>	1151	808
Filter Age	hrs	Client Info		<b>525</b>	1151	808
Oil Changed		Client Info		<b>Not Changd</b>	Changed	Not Changd
Filter Changed		Client Info		<b>Not Changd</b>	Changed	Not Changd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

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

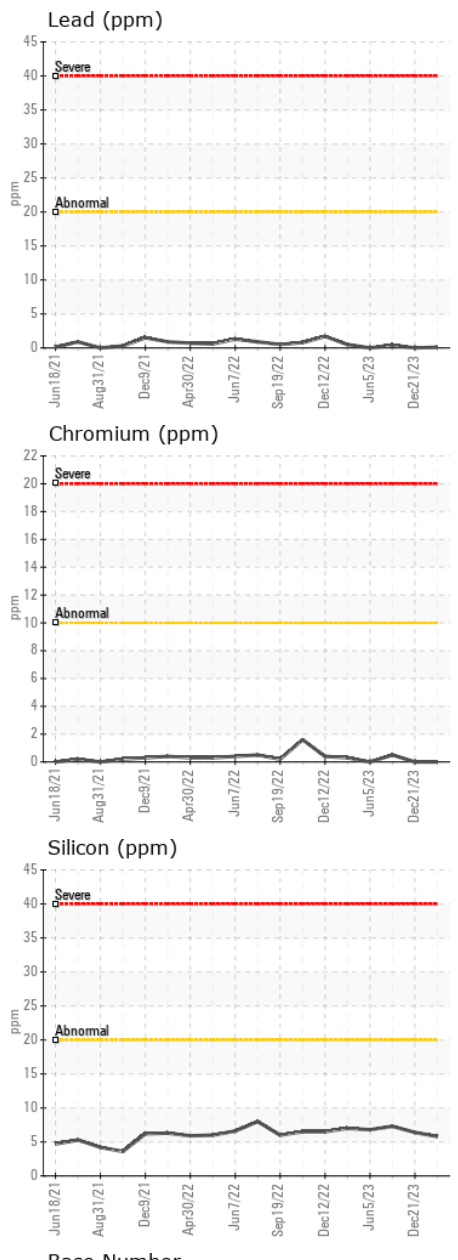
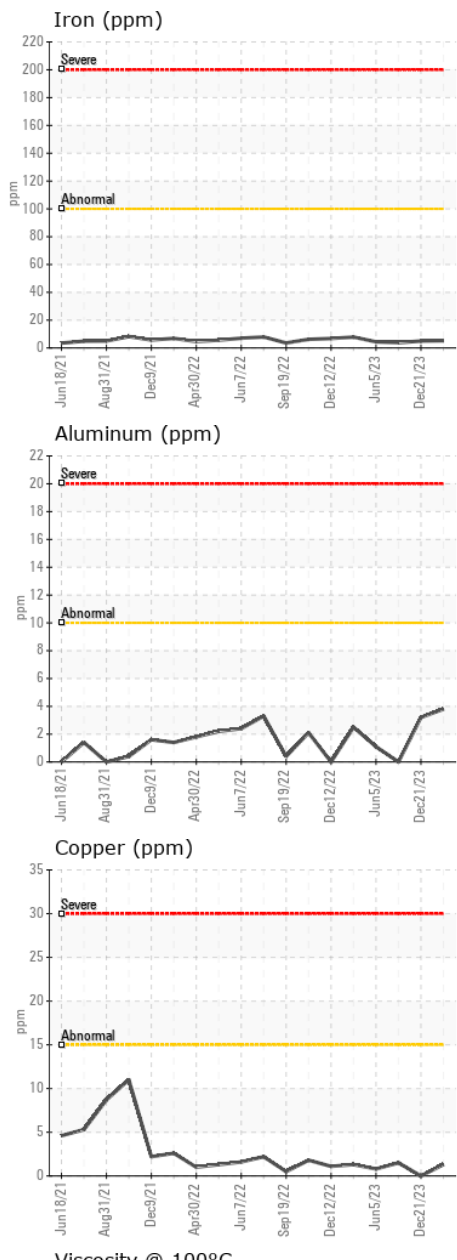
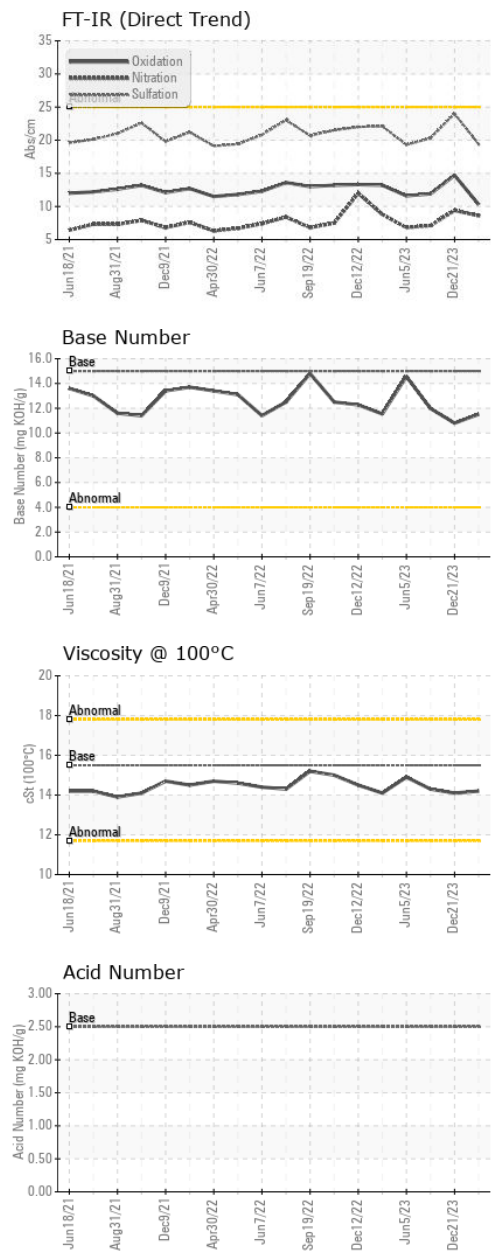
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>6</b>	6	7
Potassium	ppm	ASTM D5185m	>20	<b>5</b>	1	5
Fuel		WC Method	>6.0	<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>0.1</b>	0.4	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.6</b>	9.4	7.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.4</b>	24.0	20.3
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	>0.1	<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>	2	<1
Boron	ppm	ASTM D5185m		<b>15</b>	150	196
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>131</b>	159	203
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>54</b>	432	481
Calcium	ppm	ASTM D5185m	4500	<b>4318</b>	3706	3901
Phosphorus	ppm	ASTM D5185m		<b>969</b>	898	1020
Zinc	ppm	ASTM D5185m	1400	<b>1075</b>	1041	1356
Sulfur	ppm	ASTM D5185m		<b>5087</b>	3570	6441
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>10.3</b>	14.7	11.9
Base Number (BN)	mg KOH/g	ASTM D2896	15	<b>11.51</b>	10.80	11.98
Visc @ 100°C	cSt	ASTM D445	15.5	<b>14.2</b>	14.1	14.3



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TR06212582  
**Lab Number** : 06212582  
**Unique Number** : 11085446  
**Test Package** : MOB 2 ( Additional Tests: TAN Man )  
**Received** : 17 Jun 2024  
**Tested** : 19 Jun 2024  
**Diagnosed** : 19 Jun 2024 - Sean Felton

**NUTTER ENTERPRISES INC**  
 28 STONE RD  
 BELMONT, NH  
 US 03220  
 Contact: DON PERCY

Certificate L2367  
 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)