



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**VOLVO EC380E E21 (S/N 311948)**  
 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		TR06084355	TR05953446	TR05871125
Sample Date		Client Info		29 Jan 2024	09 Sep 2023	05 Jun 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		1079	500	261
Filter Age	hrs	Client Info		1079	500	261
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	11	11	11
Chromium	ppm	ASTM D5185m	>10	0	<1	0
Nickel	ppm	ASTM D5185m	>10	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	3	0	2
Lead	ppm	ASTM D5185m	>20	<1	0	0
Copper	ppm	ASTM D5185m	>15	<1	0	<1
Tin	ppm	ASTM D5185m	>10	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

**CONTAMINATION**

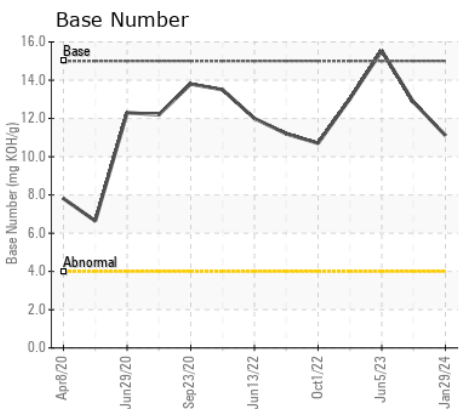
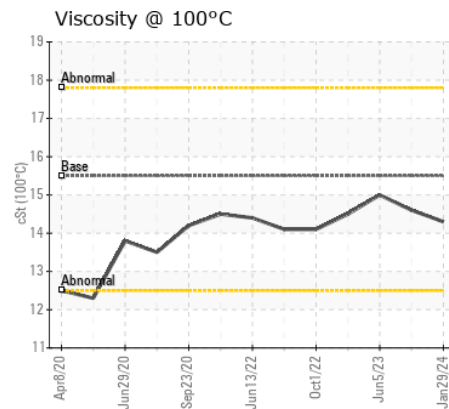
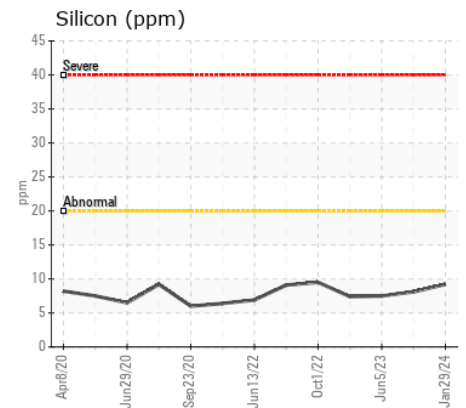
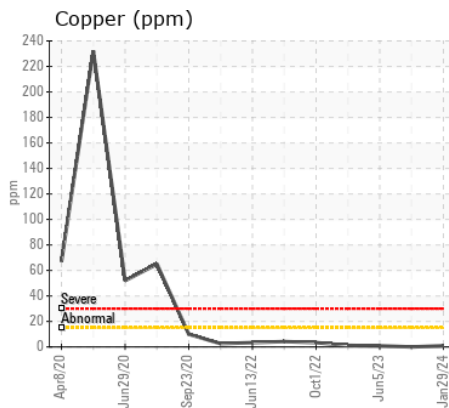
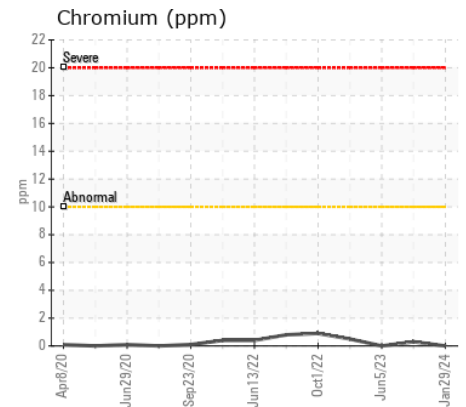
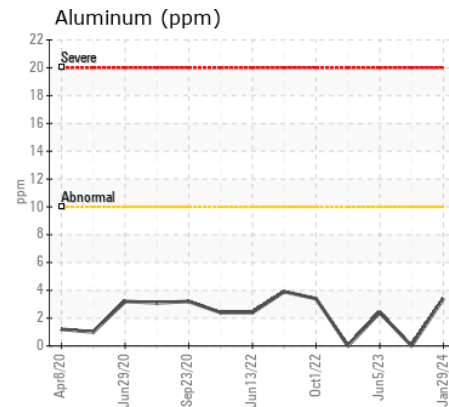
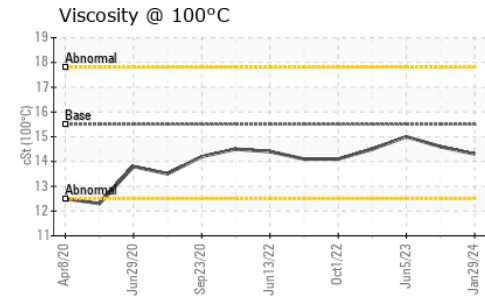
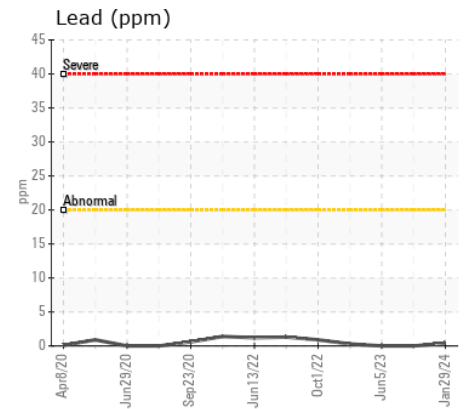
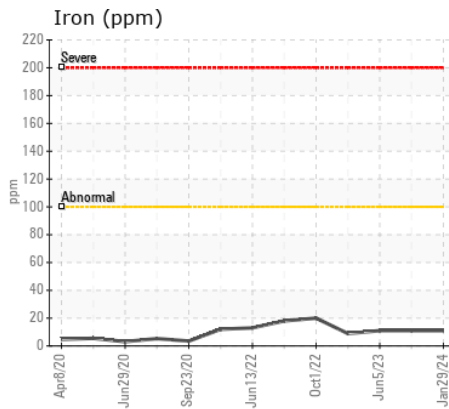
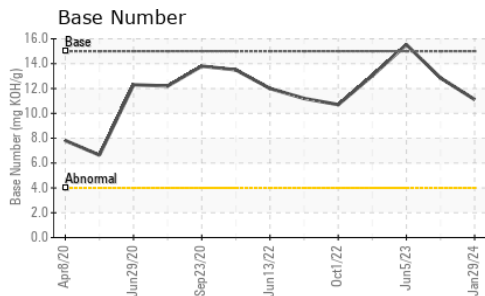
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	9	8	8
Potassium	ppm	ASTM D5185m	>20	0	0	0
Fuel		WC Method	>6.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	9.4	8.0	6.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.5	20.9	19.6
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	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		5	4	4
Boron	ppm	ASTM D5185m		190	211	234
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		153	160	152
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		417	454	411
Calcium	ppm	ASTM D5185m	4500	3694	4010	3971
Phosphorus	ppm	ASTM D5185m		888	837	846
Zinc	ppm	ASTM D5185m	1400	1037	1059	988
Sulfur	ppm	ASTM D5185m		3709	4685	4356
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.3	13.2	12.4
Base Number (BN)	mg KOH/g	ASTM D2896	15	11.11	12.85	15.53
Visc @ 100°C	cSt	ASTM D445	15.5	14.3	14.6	15.0



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TR06084355 **Received** : 08 Feb 2024  
**Lab Number** : 06084355 **Tested** : 09 Feb 2024  
**Unique Number** : 10871800 **Diagnosed** : 09 Feb 2024 - Wes Davis  
**Test Package** : MOB 2

**NUTTER ENTERPRISES INC**  
 28 STONE RD  
 BELMONT, NH  
 US 03220  
 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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F: