



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**THOMAS BUS 3**

Component  
**Diesel Engine**

Fluid  
**TRC MOLY XL PRO-SPEC IV XP 15W40 (18 QTS)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>TR06102557</b>	TR06046341	TR06004500
Sample Date		Client Info		<b>30 Nov 2023</b>	30 Nov 2023	02 Nov 2023
Machine Age	hrs	Client Info		<b>5282</b>	5096	5035
Oil Age	hrs	Client Info		<b>905</b>	0	499
Filter Age	hrs	Client Info		<b>186</b>	719	292
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>130	<b>97</b>	68	60
Chromium	ppm	ASTM D5185m	>10	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>14</b>	12	12
Lead	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>125	<b>3</b>	1	3
Tin	ppm	ASTM D5185m	>4	<b>1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

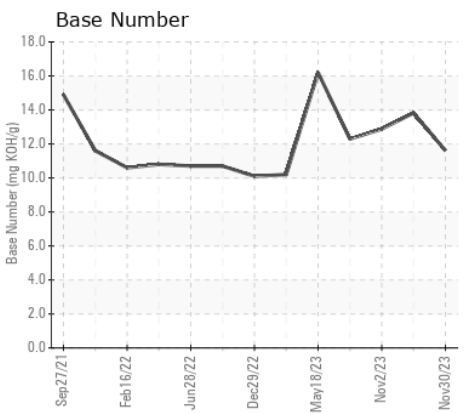
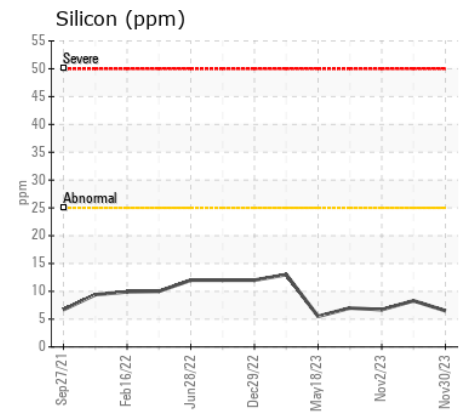
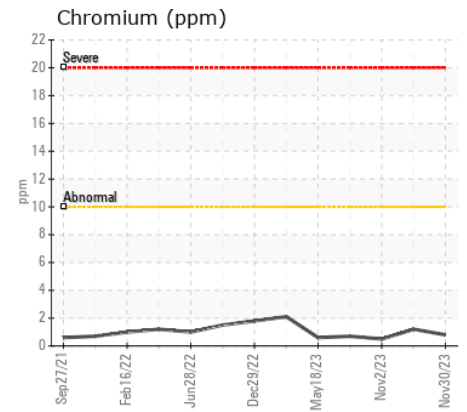
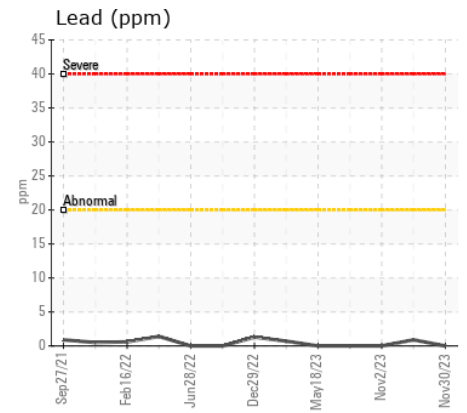
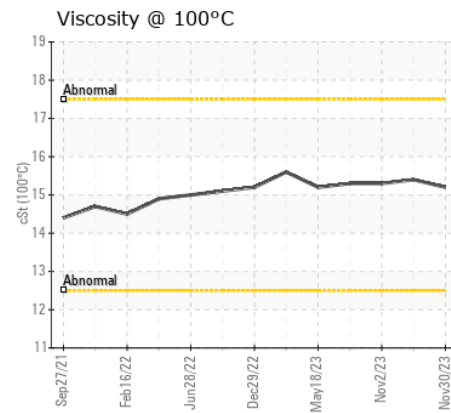
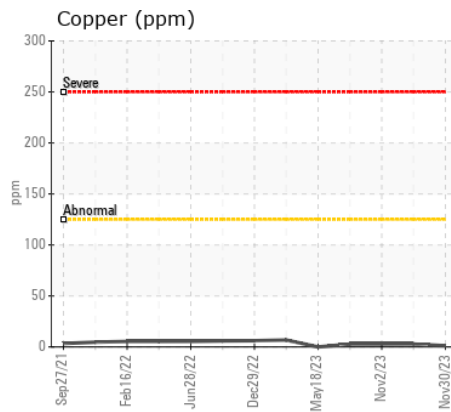
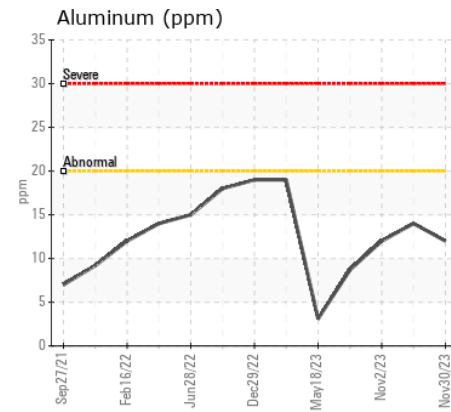
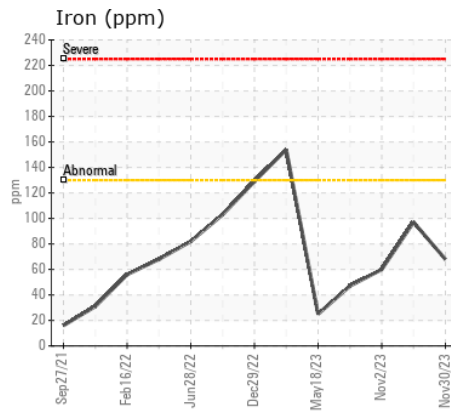
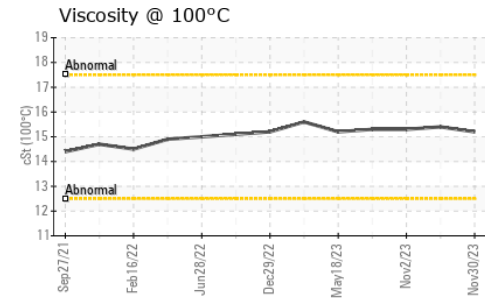
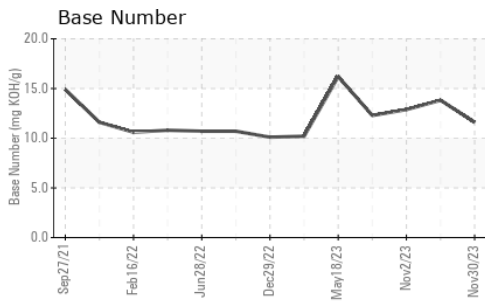
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	6	7
Potassium	ppm	ASTM D5185m	>20	<b>11</b>	10	12
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>6	<b>2.2</b>	1.9	1.7
Nitration	Abs/cm	*ASTM D7624	>20	<b>14.1</b>	13.1	12.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>28.7</b>	26.6	25.4
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	>0.2	<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>3</b>	2	2
Boron	ppm	ASTM D5185m		<b>1</b>	2	0
Barium	ppm	ASTM D5185m		<b>0</b>	0	7
Molybdenum	ppm	ASTM D5185m		<b>125</b>	122	132
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>22</b>	22	19
Calcium	ppm	ASTM D5185m		<b>4885</b>	4232	4357
Phosphorus	ppm	ASTM D5185m		<b>959</b>	888	1022
Zinc	ppm	ASTM D5185m		<b>1249</b>	1089	1114
Sulfur	ppm	ASTM D5185m		<b>4586</b>	3970	4508
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>18.4</b>	16.9	14.7
Base Number (BN)	mg KOH/g	ASTM D2896		<b>11.61</b>	13.82	12.88
Visc @ 100°C	cSt	ASTM D445		<b>15.2</b>	15.4	15.3



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TR06102557  
**Lab Number** : 06102557  
**Unique Number** : 10900787  
**Test Package** : MOB 2

**Received** : 27 Feb 2024  
**Tested** : 29 Feb 2024  
**Diagnosed** : 29 Feb 2024 - Wes Davis

**BOW SCHOOL DIST BUS GARAGE**  
 12 RODINSON RD  
 BOW, NH  
 US 03304  
 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: