



TRAAP

Texas Refinery Advanced Analysis Program

# OIL ANALYSIS REPORT

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

Machine Id  
**FREIGHTLINER 431877**

Component  
**Diesel Engine**

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

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>TR06157122</b>	TR05715297	---
Sample Date		Client Info		<b>06 Sep 2023</b>	18 Jul 2022	---
Machine Age	mls	Client Info		<b>724266</b>	612082	---
Oil Age	mls	Client Info		<b>0</b>	0	---
Filter Age	mls	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>Not Chngd</b>	Not Chngd	---
Filter Changed		Client Info		<b>Changed</b>	Changed	---
Sample Status				<b>NORMAL</b>	NORMAL	---

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	<b>24</b>	26	---
Chromium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	1	---
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	<1	---
Titanium	ppm	ASTM D5185m		<b>0</b>	0	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>30	<b>15</b>	5	---
Lead	ppm	ASTM D5185m	>30	<b>0</b>	0	---
Copper	ppm	ASTM D5185m	>150	<b>5</b>	4	---
Tin	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

## CONTAMINATION

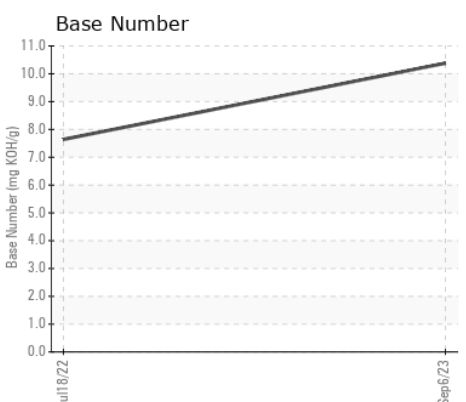
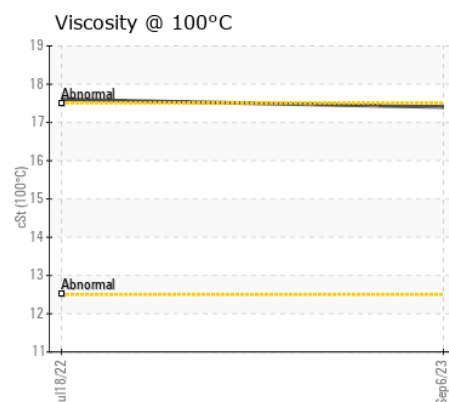
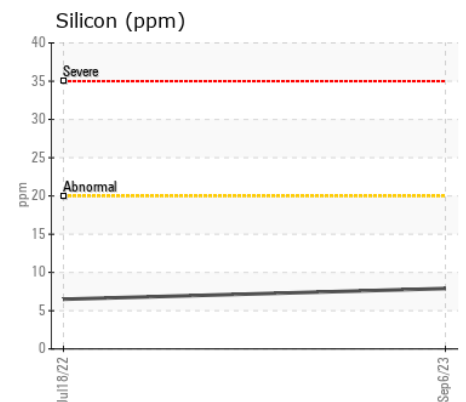
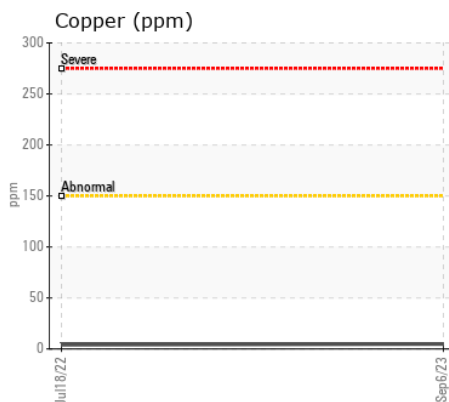
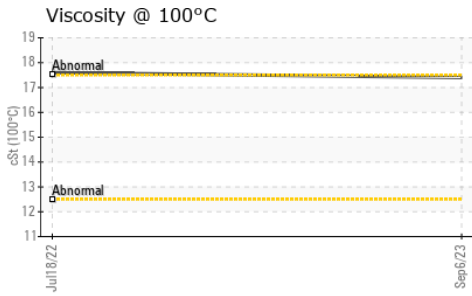
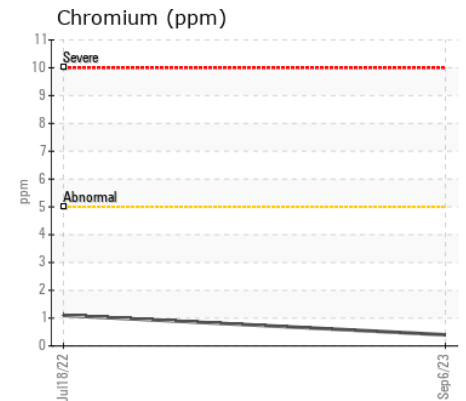
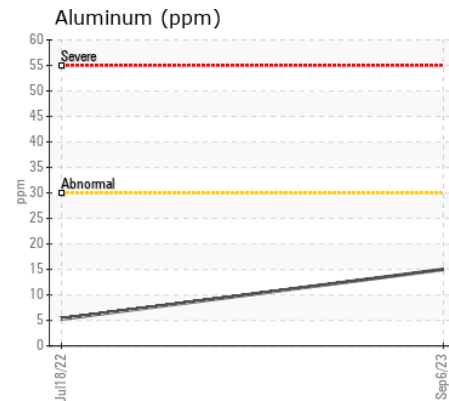
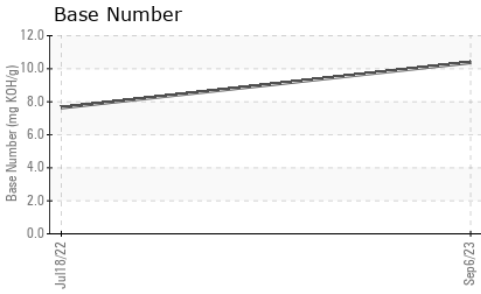
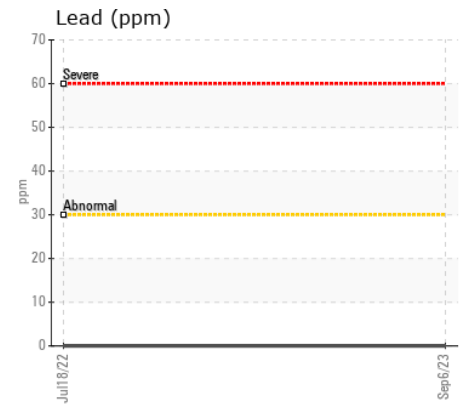
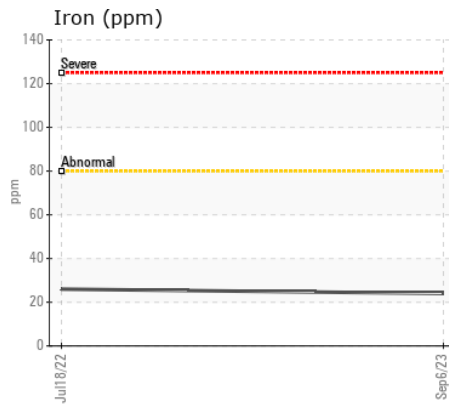
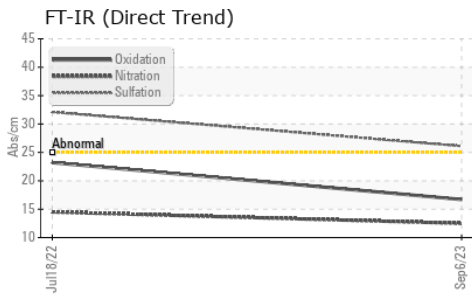
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>8</b>	6	---
Potassium	ppm	ASTM D5185m	>20	<b>5</b>	6	---
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	---
Water		WC Method	>0.2	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844	>3	<b>0.9</b>	1.1	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>12.5</b>	14.5	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>26.1</b>	32.1	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	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	---
Boron	ppm	ASTM D5185m		<b>4</b>	7	---
Barium	ppm	ASTM D5185m		<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>134</b>	110	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m		<b>30</b>	61	---
Calcium	ppm	ASTM D5185m		<b>4497</b>	3708	---
Phosphorus	ppm	ASTM D5185m		<b>931</b>	951	---
Zinc	ppm	ASTM D5185m		<b>1112</b>	1197	---
Sulfur	ppm	ASTM D5185m		<b>4737</b>	4985	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.7</b>	23.2	---
Base Number (BN)	mg KOH/g	ASTM D2896		<b>10.38</b>	7.64	---
Visc @ 100°C	cSt	ASTM D445		<b>17.4</b>	17.6	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TR06157122  
**Lab Number** : 06157122  
**Unique Number** : 10992545  
**Test Package** : MOB 2

**Received** : 22 Apr 2024  
**Tested** : 23 Apr 2024  
**Diagnosed** : 23 Apr 2024 - Wes Davis

**BENNETT BUILDING SERVICES**  
 1660 DIXON AIRLINE RD  
 AUGUSTA, GA  
 US 30809  
 Contact: STEVE MATSON  
 HSMATSON@YAHOO.COM

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)

T:  
F: