



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER 001
 Component
Rear Diesel Engine
 Fluid
TRC MOLY XL PRO-SPEC IV XP 15W40 (8 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06045114	TR05724266	TR05559088
Sample Date		Client Info		21 Dec 2023	06 Nov 2022	21 May 2022
Machine Age	hrs	Client Info		4544	3597	2927
Oil Age	hrs	Client Info		939	902	232
Filter Age	hrs	Client Info		939	902	232
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	15	17	6
Chromium	ppm	ASTM D5185m	>6	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	6	4	2
Lead	ppm	ASTM D5185m	>95	0	1	0
Copper	ppm	ASTM D5185m	>85	0	2	<1
Tin	ppm	ASTM D5185m	>9	0	2	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

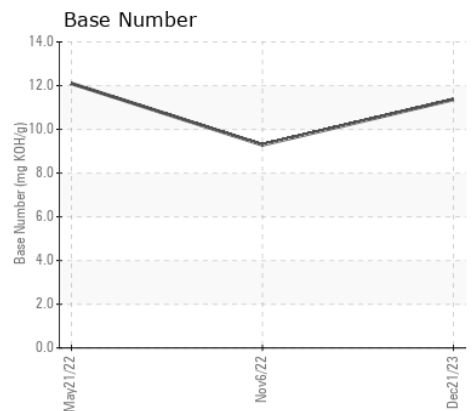
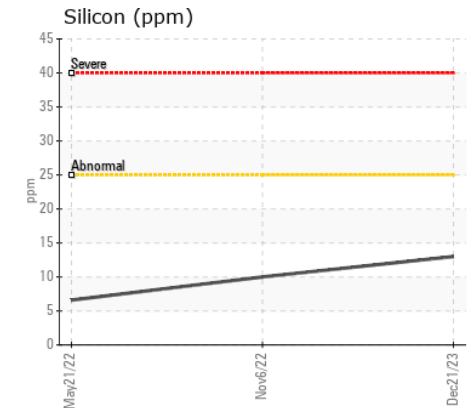
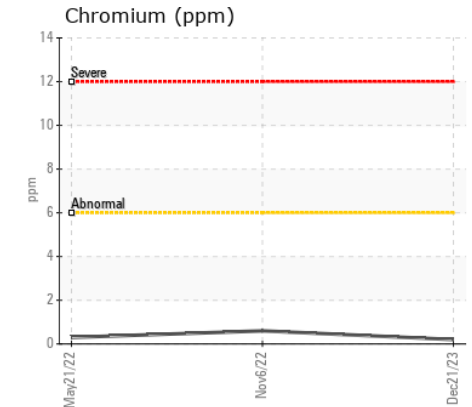
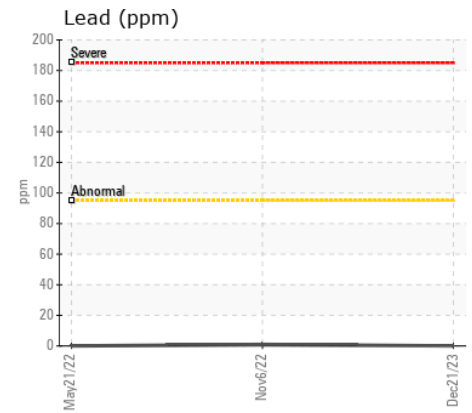
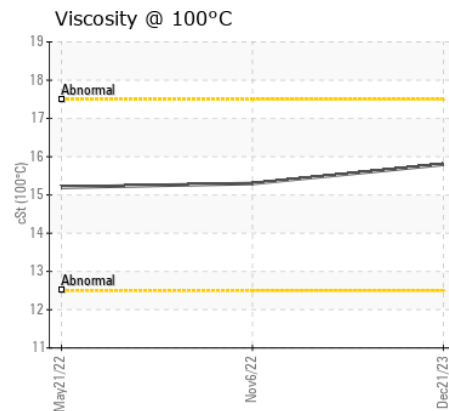
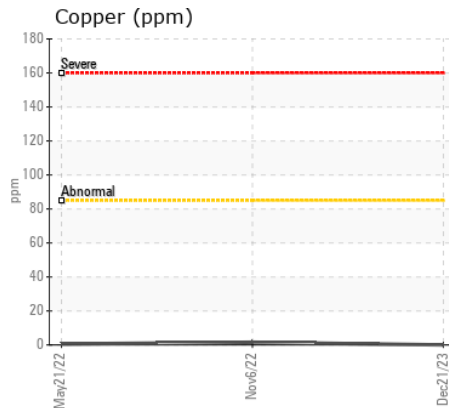
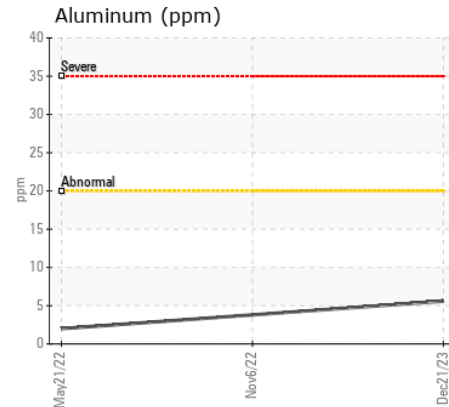
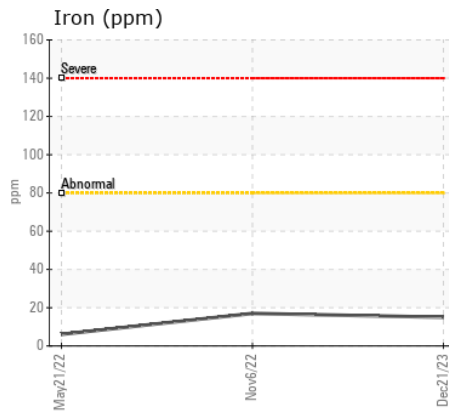
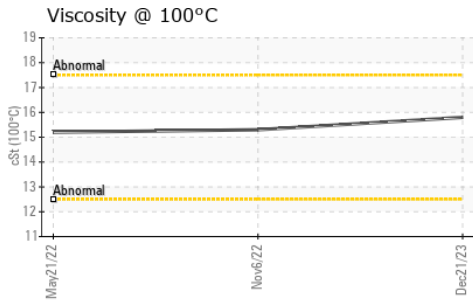
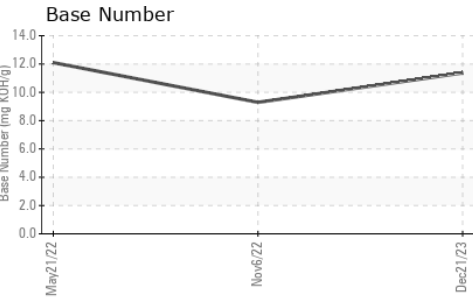
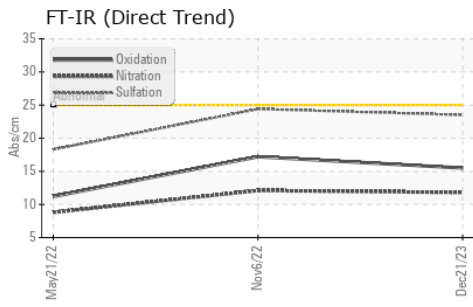
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	13	10	7
Potassium	ppm	ASTM D5185m	>20	1	2	3
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.4	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	11.8	12.1	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.5	24.4	18.3
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		2	3	1
Boron	ppm	ASTM D5185m		4	14	19
Barium	ppm	ASTM D5185m		0	0	2
Molybdenum	ppm	ASTM D5185m		129	121	119
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		23	22	16
Calcium	ppm	ASTM D5185m		4386	4088	3876
Phosphorus	ppm	ASTM D5185m		946	873	850
Zinc	ppm	ASTM D5185m		1104	1018	1071
Sulfur	ppm	ASTM D5185m		4393	4510	3984
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.5	17.2	11.2
Base Number (BN)	mg KOH/g	ASTM D2896		11.37	9.29	12.1
Visc @ 100°C	cSt	ASTM D445		15.8	15.3	15.2



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06045114 **Received** : 26 Dec 2023
Lab Number : 06045114 **Tested** : 27 Dec 2023
Unique Number : 10805722 **Diagnosed** : 27 Dec 2023 - Wes Davis
Test Package : MOB 2

GBD ENTERPRISE LLC
 7 ROOKERY RD
 MILTON, NH
 US 03851
 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: