



# OIL ANALYSIS REPORT

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

Machine Id  
**FREIGHTLINER 2123**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0909282</b>	WC0906274	WC0878833
Sample Date		Client Info		<b>29 Apr 2024</b>	19 Feb 2024	03 Jan 2024
Machine Age	mls	Client Info		<b>0</b>	368732	360360
Oil Age	mls	Client Info		<b>0</b>	0	0
Filter Age	mls	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
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	>80	<b>20</b>	13	14
Chromium	ppm	ASTM D5185m	>5	<b>2</b>	1	1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>30	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185m	>30	<b>13</b>	3	4
Copper	ppm	ASTM D5185m	>150	<b>1</b>	<1	<1
Tin	ppm	ASTM D5185m	>5	<b>0</b>	<1	2
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

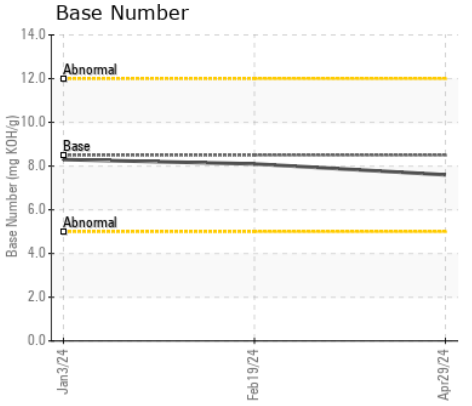
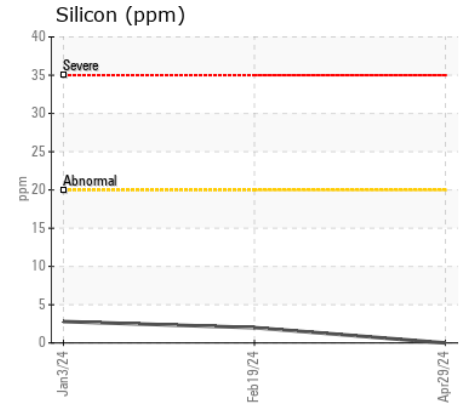
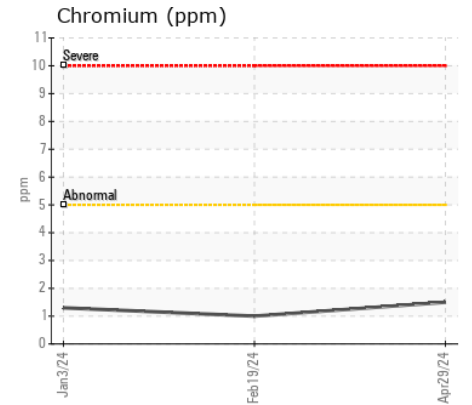
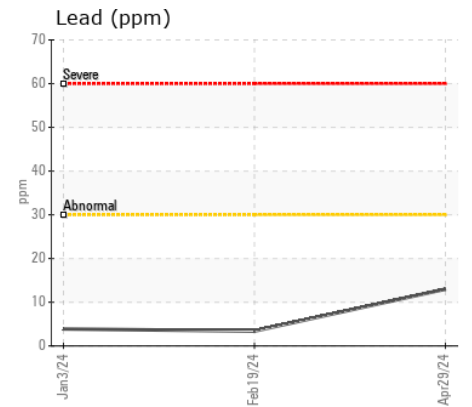
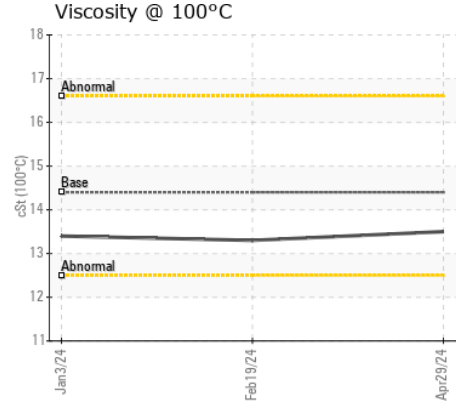
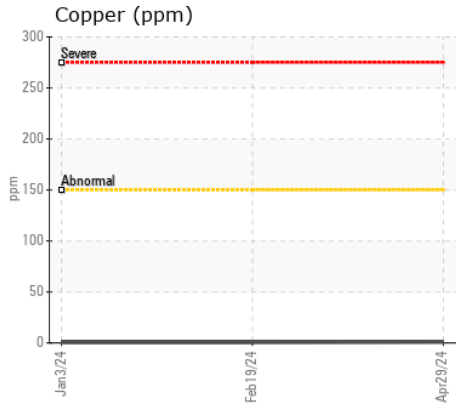
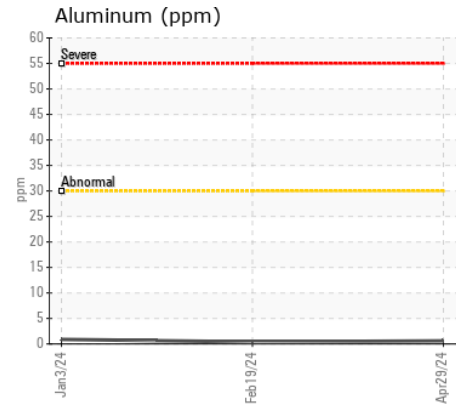
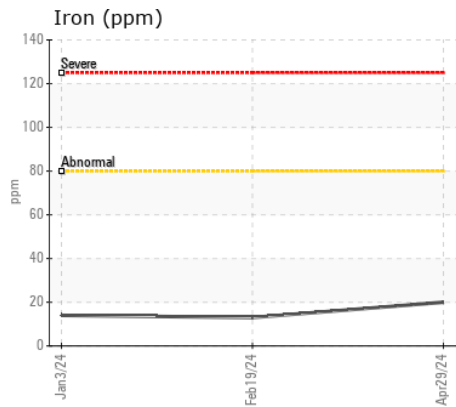
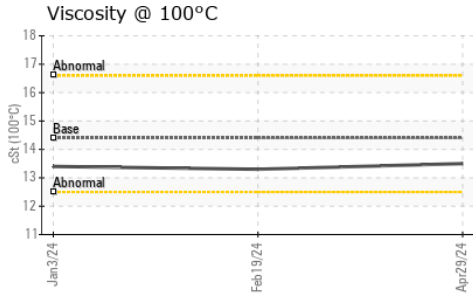
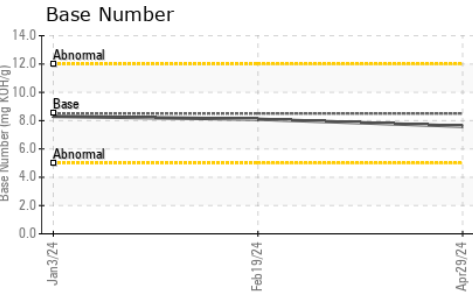
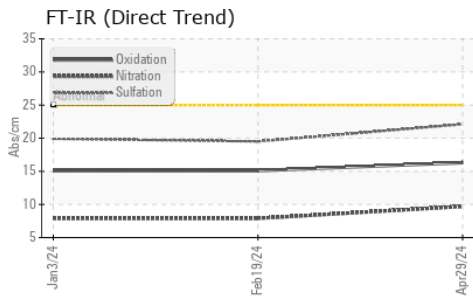
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>0</b>	2	3
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	<1
Fuel		WC Method	>5	<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	>3	<b>1.7</b>	0.8	0.8
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.7</b>	7.9	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.1</b>	19.5	19.9
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	>158	<b>2</b>	3	1
Boron	ppm	ASTM D5185m	250	<b>0</b>	2	3
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>60</b>	55	54
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m	450	<b>988</b>	873	961
Calcium	ppm	ASTM D5185m	3000	<b>1127</b>	1027	1037
Phosphorus	ppm	ASTM D5185m	1150	<b>1078</b>	910	1010
Zinc	ppm	ASTM D5185m	1350	<b>1293</b>	1079	1171
Sulfur	ppm	ASTM D5185m	4250	<b>3514</b>	3192	2926
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.3</b>	15.1	15.1
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>7.6</b>	8.1	8.3
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.5</b>	13.3	13.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0909282 **Received** : 03 Jun 2024  
**Lab Number** : 06197255 **Tested** : 03 Jun 2024  
**Unique Number** : 11059378 **Diagnosed** : 03 Jun 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**CONCRETE SERVICE CO - FAY BLOCK**  
 161 BUILDERS BLVD  
 FAYETTEVILLE, NC  
 US 28301  
 Contact: BRYAN VANNIMAN  
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 F:

To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - 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)