



# OIL ANALYSIS REPORT

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

Machine Id  
**FREIGHTLINER 36166**  
Component  
**Front Diesel Engine**  
Fluid  
**EXXON 15W40 (48 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0842171</b>	WC0742255	WC0742428
Sample Date		Client Info		<b>19 Mar 2024</b>	23 Jul 2023	11 May 2023
Machine Age	mls	Client Info		<b>463448</b>	440256	417907
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>14</b>	21	35
Chromium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>30	<b>3</b>	2	4
Lead	ppm	ASTM D5185m	>30	<b>4</b>	5	3
Copper	ppm	ASTM D5185m	>150	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
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.

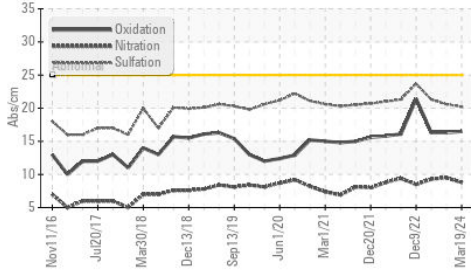
Silicon	ppm	ASTM D5185m	>20	<b>9</b>	5	5
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	7	10
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	0.5	0.6
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.8</b>	9.5	9.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.2</b>	20.6	21.3
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

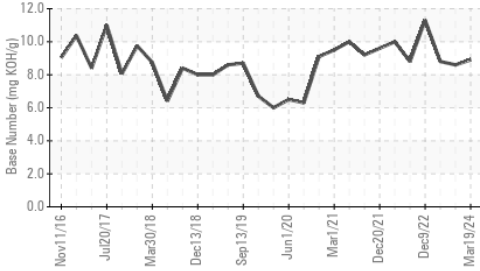
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>2</b>	<1	6
Boron	ppm	ASTM D5185m		<b>38</b>	0	1
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>68</b>	68	71
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>1019</b>	1010	1017
Calcium	ppm	ASTM D5185m		<b>1158</b>	1161	1180
Phosphorus	ppm	ASTM D5185m		<b>1057</b>	1083	1105
Zinc	ppm	ASTM D5185m		<b>1363</b>	1325	1344
Sulfur	ppm	ASTM D5185m		<b>3807</b>	3686	3501
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.5</b>	16.3	16.3
Base Number (BN)	mg KOH/g	ASTM D2896		<b>8.9</b>	8.6	8.8
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.4</b>	13.3	13.1

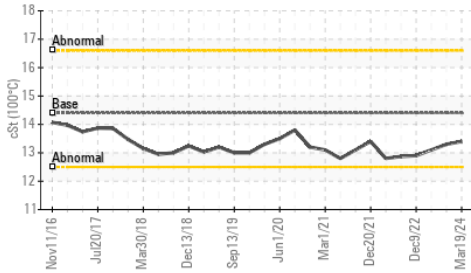
**FT-IR (Direct Trend)**



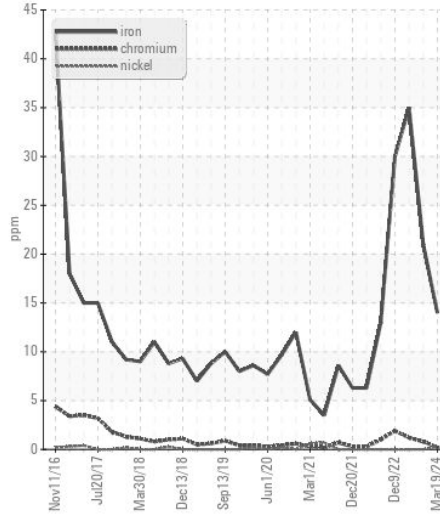
**Base Number**



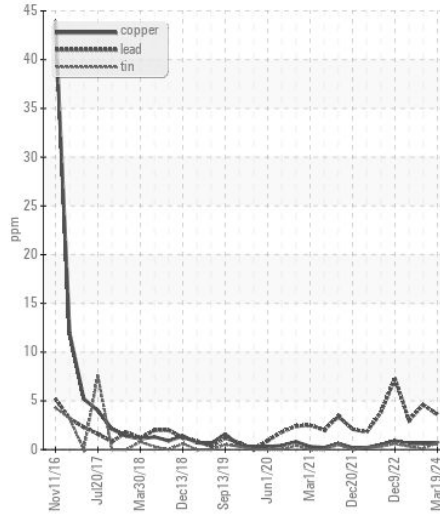
**Viscosity @ 100°C**



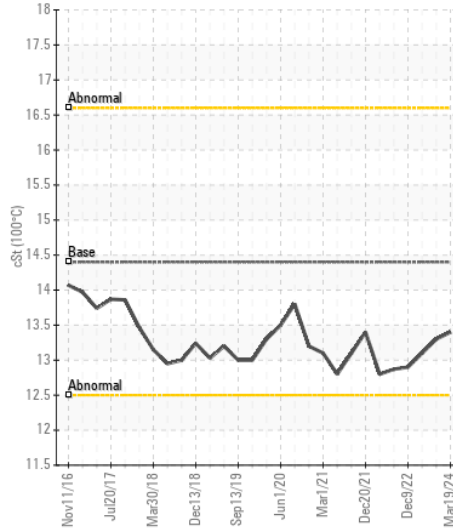
**Ferrous Alloys**



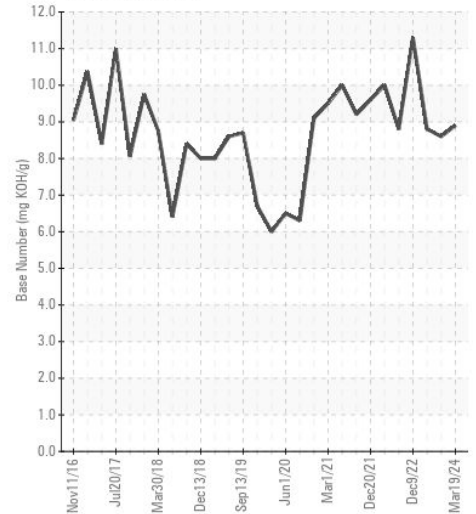
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0842171  
**Lab Number** : 06190121  
**Unique Number** : 11046873  
**Test Package** : FLEET

**Received** : 23 May 2024  
**Tested** : 28 May 2024  
**Diagnosed** : 28 May 2024 - Wes Davis

**SALEM NATIONALEASE CORPORATION**  
 198 PARK PLAZA DRIVE  
 WINSTON SALEM, NC  
 US 27105

Contact: Audrey Hopkins  
 Audrey.Hopkins@salemcorp.com  
 T: (336)767-9642

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)

F: x: