



# OIL ANALYSIS REPORT

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

Machine Id  
**FREIGHTLINER 17765**  
Component  
**Diesel Engine**  
Fluid  
**EXXON 15W40 (--- QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0933291</b>	WC0903515	WC0858300
Sample Date		Client Info		<b>10 May 2024</b>	05 Feb 2024	07 Nov 2023
Machine Age	mls	Client Info		<b>134338</b>	0	123906
Oil Age	mls	Client Info		<b>5308</b>	0	5054
Filter Age	mls	Client Info		<b>5308</b>	0	5054
Oil Changed		Client Info		<b>Changed</b>	N/A	Changed
Filter Changed		Client Info		<b>Changed</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	<b>12</b>	10	11
Chromium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>30	<b>2</b>	2	1
Lead	ppm	ASTM D5185m	>30	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>150	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m	>5	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</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.

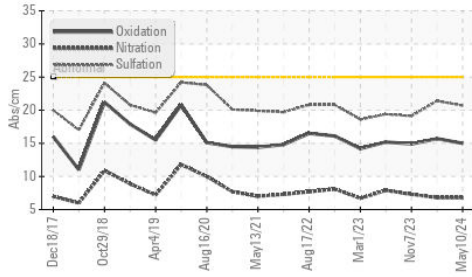
Silicon	ppm	ASTM D5185m	>20	<b>5</b>	5	4
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	4	2
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.8</b>	6.8	7.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.7</b>	21.4	19.1
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

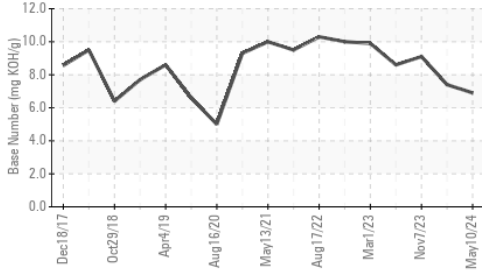
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>2</b>	0	0
Boron	ppm	ASTM D5185m		<b>365</b>	389	9
Barium	ppm	ASTM D5185m		<b>0</b>	<1	2
Molybdenum	ppm	ASTM D5185m		<b>86</b>	80	67
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>377</b>	388	863
Calcium	ppm	ASTM D5185m		<b>1457</b>	1163	1081
Phosphorus	ppm	ASTM D5185m		<b>1035</b>	958	935
Zinc	ppm	ASTM D5185m		<b>1234</b>	1072	1133
Sulfur	ppm	ASTM D5185m		<b>3648</b>	3065	3294
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.0</b>	15.7	14.9
Base Number (BN)	mg KOH/g	ASTM D2896		<b>6.9</b>	7.4	9.1
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.2</b>	13.3	12.4

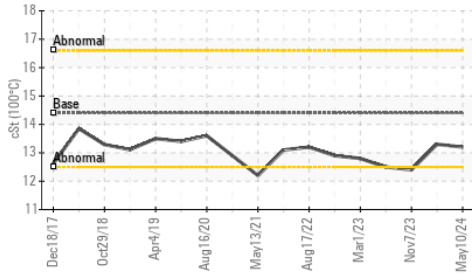
**FT-IR (Direct Trend)**



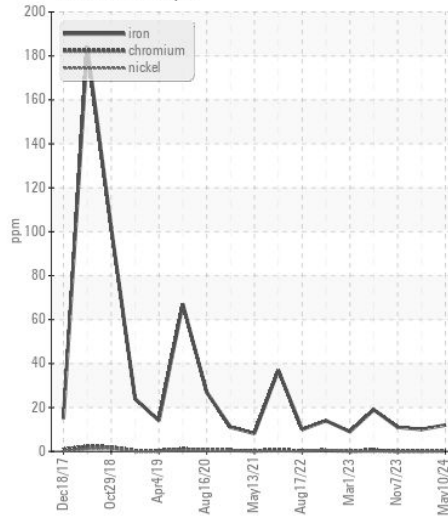
**Base Number**



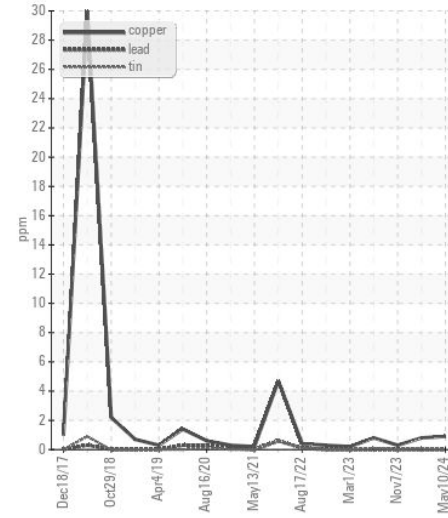
**Viscosity @ 100°C**



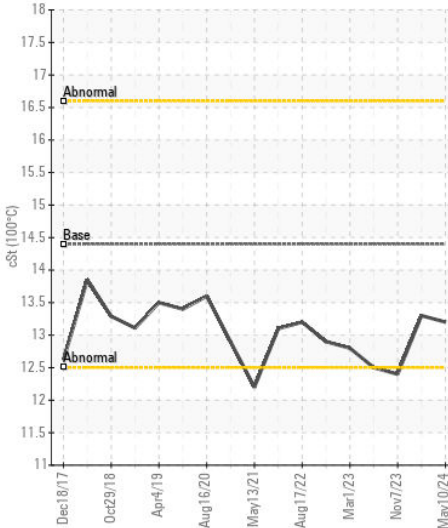
**Ferrous Alloys**



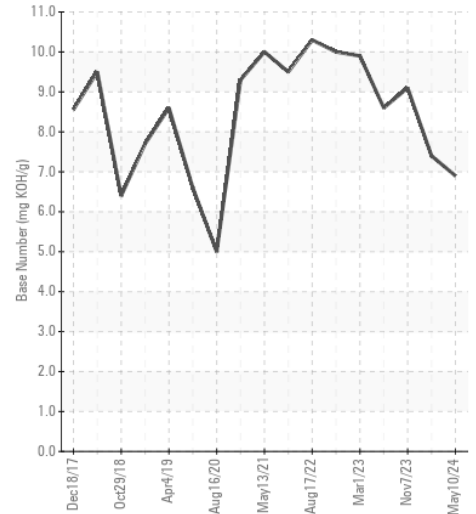
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0933291 **Received** : 14 Jun 2024  
**Lab Number** : 06211115 **Tested** : 19 Jun 2024  
**Unique Number** : 11083979 **Diagnosed** : 19 Jun 2024 - Sean Felton  
**Test Package** : FLEET

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