



# OIL ANALYSIS REPORT

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

Machine Id  
**FREIGHTLINER 6533**  
Component  
**Diesel Engine**  
Fluid  
**EXXON 15W40 (40 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0919259</b>	WC0885565	WC0858236
Sample Date		Client Info		<b>14 May 2024</b>	17 Jan 2024	16 Oct 2023
Machine Age	mls	Client Info		<b>0</b>	718929	693589
Oil Age	mls	Client Info		<b>0</b>	40608	15268
Filter Age	mls	Client Info		<b>0</b>	40608	15268
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	ABNORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>65	<b>22</b>	26	31
Chromium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	1	2
Nickel	ppm	ASTM D5185m	>3	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>35	<b>10</b>	▲ 40	▲ 43
Lead	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>180	<b>&lt;1</b>	2	2
Tin	ppm	ASTM D5185m	>8	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<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.

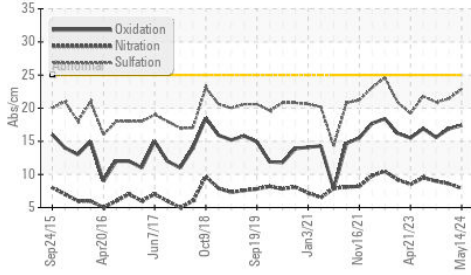
Silicon	ppm	ASTM D5185m	>15	<b>5</b>	4	6
Potassium	ppm	ASTM D5185m	>20	<b>24</b>	▲ 118	▲ 112
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.3	0.8
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.9</b>	8.6	9.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.9</b>	21.4	20.9
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

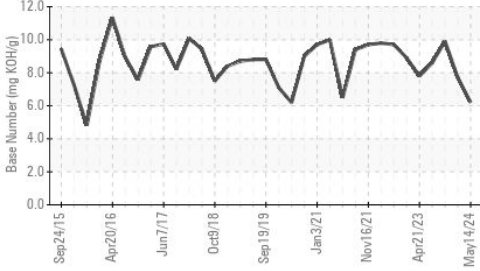
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>22</b>	▲ 107	▲ 97
Boron	ppm	ASTM D5185m		<b>271</b>	100	7
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>84</b>	74	69
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185m		<b>492</b>	793	936
Calcium	ppm	ASTM D5185m		<b>1540</b>	1144	1047
Phosphorus	ppm	ASTM D5185m		<b>1098</b>	998	1028
Zinc	ppm	ASTM D5185m		<b>1460</b>	1268	1251
Sulfur	ppm	ASTM D5185m		<b>3879</b>	2874	3069
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.4</b>	16.9	15.6
Base Number (BN)	mg KOH/g	ASTM D2896		<b>6.2</b>	7.7	9.9
Visc @ 100°C	cSt	ASTM D445	14.4	<b>14.0</b>	14.1	13.8

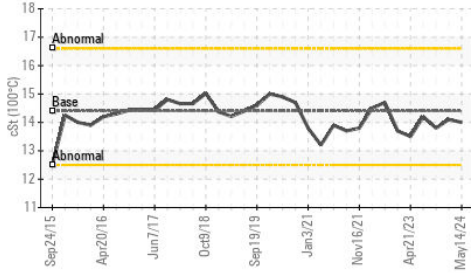
**FT-IR (Direct Trend)**



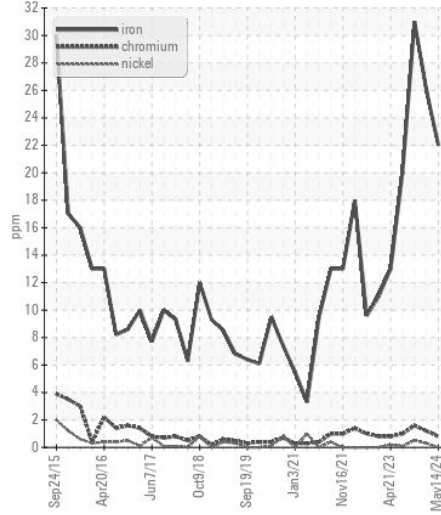
**Base Number**



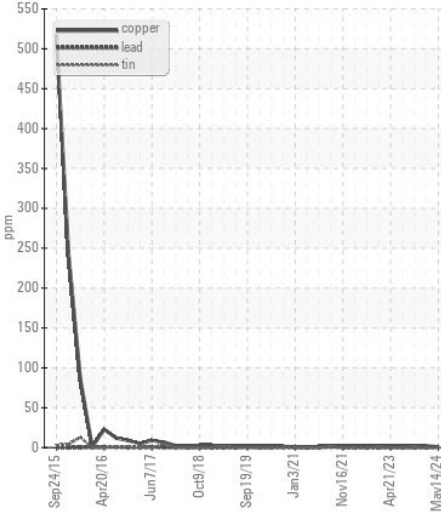
**Viscosity @ 100°C**



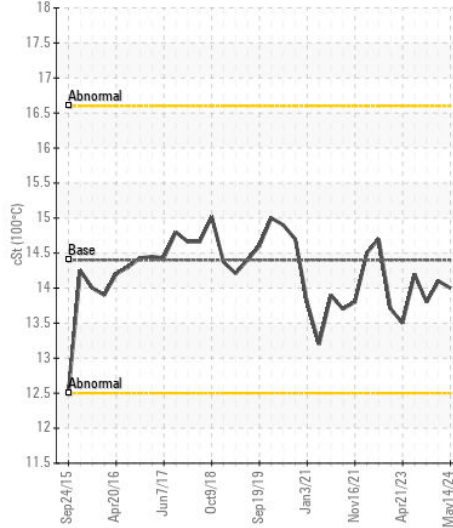
**Ferrous Alloys**



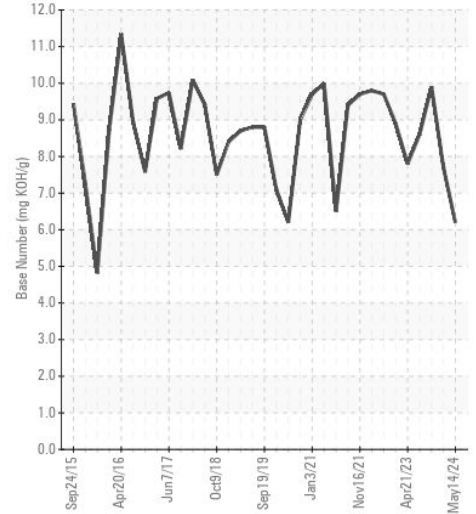
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0919259  
**Lab Number** : 06193279  
**Unique Number** : 11050031  
**Test Package** : FLEET

**Received** : 28 May 2024  
**Tested** : 30 May 2024  
**Diagnosed** : 30 May 2024 - Wes Davis

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

Contact: Audrey Hopkins  
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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)

F: x: