



# OIL ANALYSIS REPORT

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

Machine Id  
**FREIGHTLINER 31120**  
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>WC0946000</b>	WC0904565	WC0840135
Sample Date		Client Info		<b>18 Jun 2024</b>	05 Mar 2024	28 Jul 2023
Machine Age	mls	Client Info		<b>0</b>	0	475046
Oil Age	mls	Client Info		<b>0</b>	0	11445
Filter Age	mls	Client Info		<b>0</b>	0	11445
Oil Changed		Client Info		<b>N/A</b>	N/A	Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>200	<b>9</b>	2	8
Chromium	ppm	ASTM D5185m	>6	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>3	<b>1</b>	0	<1
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<1
Aluminum	ppm	ASTM D5185m	>50	<b>3</b>	3	1
Lead	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>50	<b>2</b>	<1	2
Tin	ppm	ASTM D5185m	>6	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

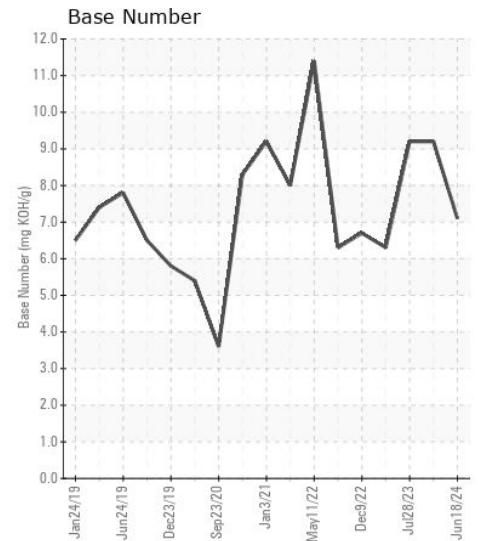
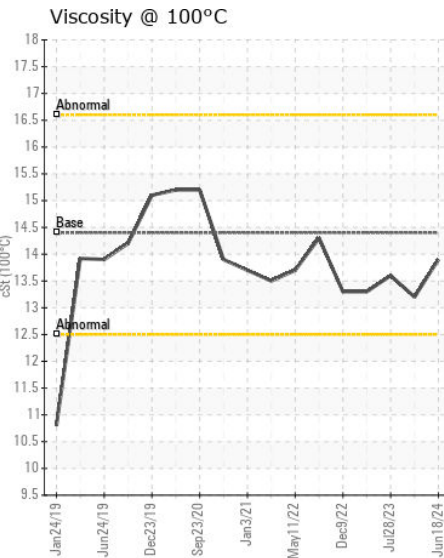
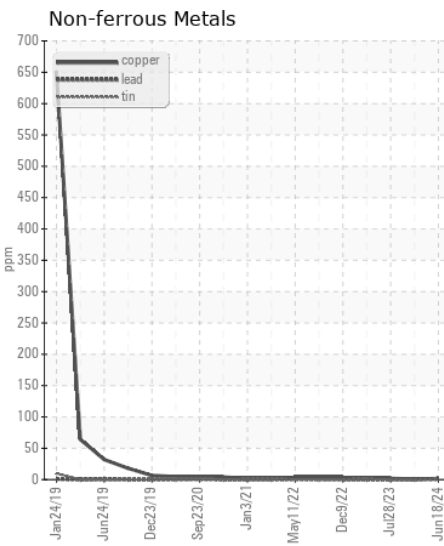
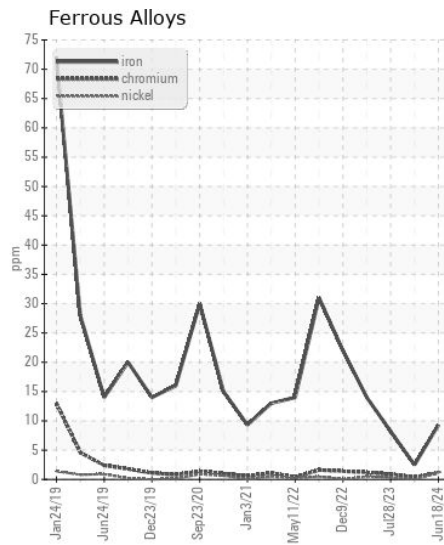
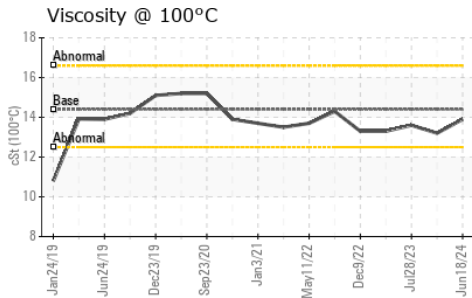
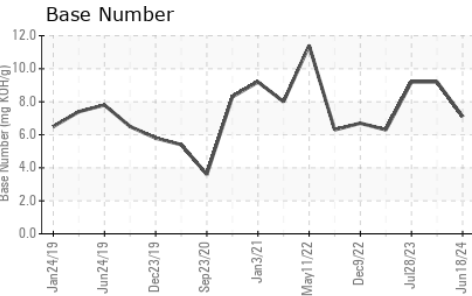
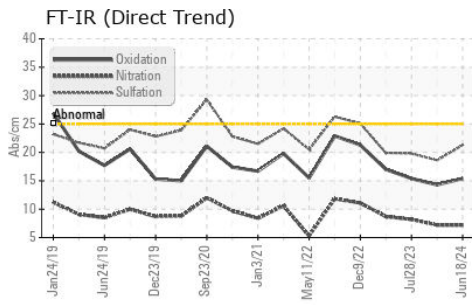
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>50	<b>6</b>	4	3
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	0	1
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	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.2</b>	7.2	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.3</b>	18.6	19.8
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>0</b>	<1	1
Boron	ppm	ASTM D5185m		<b>269</b>	3	2
Barium	ppm	ASTM D5185m		<b>1</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>86</b>	68	65
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>495</b>	1003	937
Calcium	ppm	ASTM D5185m		<b>1336</b>	1181	1118
Phosphorus	ppm	ASTM D5185m		<b>1142</b>	1110	981
Zinc	ppm	ASTM D5185m		<b>1277</b>	1308	1226
Sulfur	ppm	ASTM D5185m		<b>3440</b>	3671	3644
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.4</b>	14.3	15.4
Base Number (BN)	mg KOH/g	ASTM D2896		<b>7.1</b>	9.2	9.2
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.9</b>	13.2	13.6



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0946000  
**Lab Number** : 06219234  
**Unique Number** : 11097431  
**Test Package** : FLEET

**Received** : 24 Jun 2024  
**Tested** : 25 Jun 2024  
**Diagnosed** : 26 Jun 2024 - Jonathan Hester

**SALEM NATIONALEASE CORPORATION**  
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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)