



# OIL ANALYSIS REPORT

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

Machine Id  
**FREIGHTLINER 38744**  
Component  
**Diesel Engine**  
Fluid  
**SHELL 15W40 (25 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0919249</b>	WC0887078	WC0872573
Sample Date		Client Info		<b>04 Apr 2024</b>	15 Jan 2024	25 Oct 2023
Machine Age	mls	Client Info		<b>0</b>	0	0
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>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	<b>16</b>	12	4
Chromium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	1
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>30	<b>5</b>	3	2
Lead	ppm	ASTM D5185m	>30	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>150	<b>0</b>	<1	<1
Tin	ppm	ASTM D5185m	>5	<b>0</b>	<1	0
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

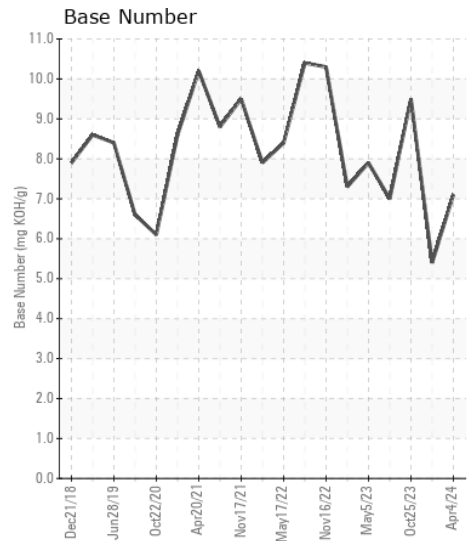
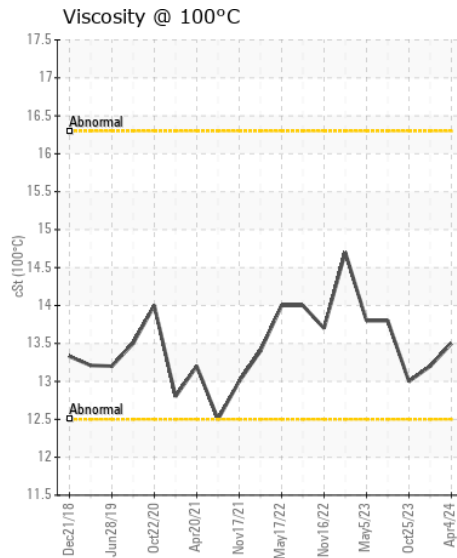
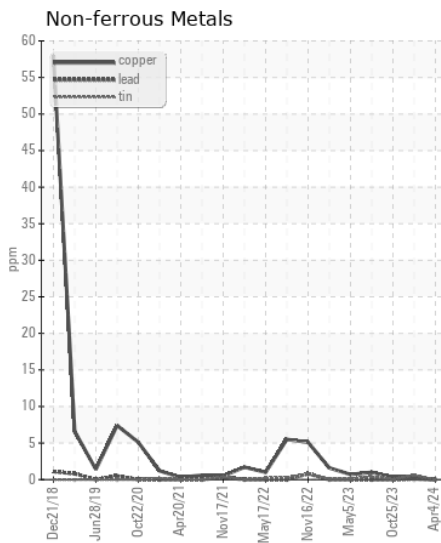
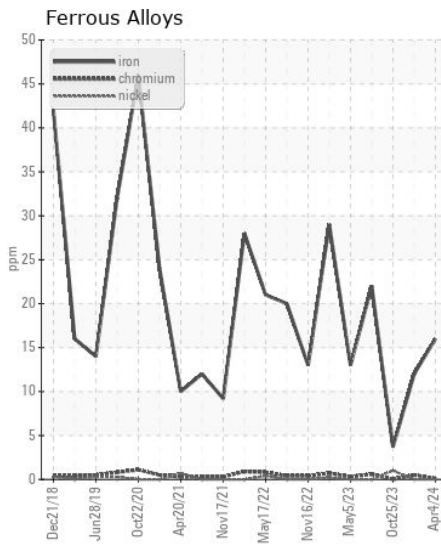
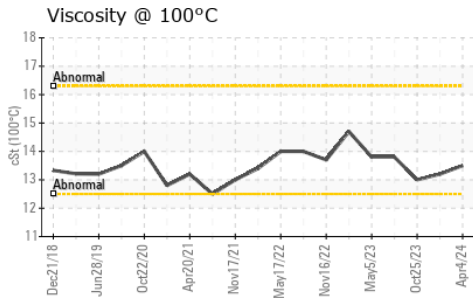
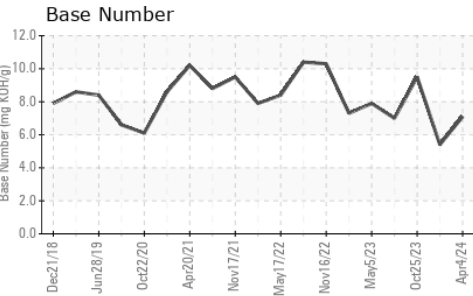
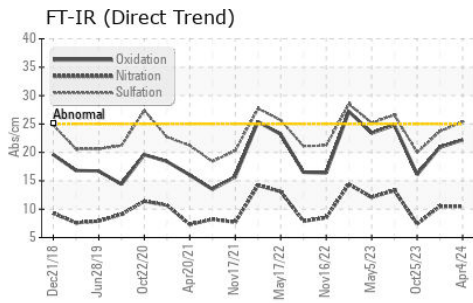
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>7</b>	5	3
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	2	3
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>0.5</b>	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.5</b>	10.5	7.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>25.4</b>	23.7	20.0
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	>150	<b>1</b>	2	1
Boron	ppm	ASTM D5185m		<b>309</b>	147	9
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>102</b>	75	65
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>626</b>	716	933
Calcium	ppm	ASTM D5185m		<b>1620</b>	1343	1072
Phosphorus	ppm	ASTM D5185m		<b>1263</b>	1053	1058
Zinc	ppm	ASTM D5185m		<b>1482</b>	1226	1278
Sulfur	ppm	ASTM D5185m		<b>4028</b>	2906	3340
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>22.2</b>	20.9	16.1
Base Number (BN)	mg KOH/g	ASTM D2896		<b>7.1</b>	5.4	9.5
Visc @ 100°C	cSt	ASTM D445		<b>13.5</b>	13.2	13.0



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0919249  
**Lab Number** : 06149321  
**Unique Number** : 10979399  
**Test Package** : FLEET

**Received** : 15 Apr 2024  
**Tested** : 16 Apr 2024  
**Diagnosed** : 16 Apr 2024 - Wes Davis

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

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)

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