



# OIL ANALYSIS REPORT

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

Machine Id  
**FREIGHTLINER 10462**  
Component  
**Diesel Engine**  
Fluid  
**SHELL 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>WC0742280</b>	WC0594943	WC05198014
Sample Date		Client Info		<b>04 Apr 2024</b>	19 Jul 2021	07 Mar 2021
Machine Age	mls	Client Info		<b>462355</b>	309366	0
Oil Age	mls	Client Info		<b>0</b>	40000	0
Filter Age	mls	Client Info		<b>0</b>	40000	0
Oil Changed		Client Info		<b>Changed</b>	Changed	N/A
Filter Changed		Client Info		<b>Changed</b>	Changed	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>200	<b>77</b>	40	25
Chromium	ppm	ASTM D5185m	>6	<b>2</b>	2	1
Nickel	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185m	>50	<b>22</b>	14	7
Lead	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m	>50	<b>3</b>	6	5
Tin	ppm	ASTM D5185m	>6	<b>&lt;1</b>	<1	0
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.

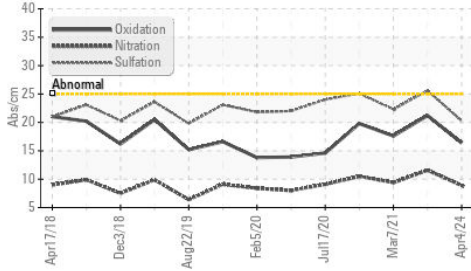
Silicon	ppm	ASTM D5185m	>50	<b>6</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	13	0
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.6</b>	1	0.6
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.9</b>	11.6	9.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.3</b>	25.6	22.3
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

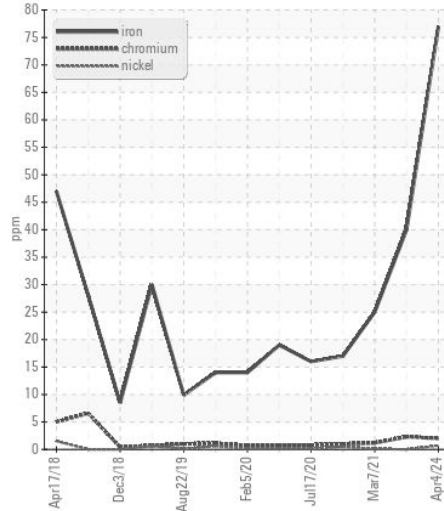
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>150	<b>2</b>	2	2
Boron	ppm	ASTM D5185m		<b>10</b>	6	4
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>63</b>	76	66
Manganese	ppm	ASTM D5185m		<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>989</b>	954	1011
Calcium	ppm	ASTM D5185m		<b>1115</b>	1186	1258
Phosphorus	ppm	ASTM D5185m		<b>1013</b>	1032	1076
Zinc	ppm	ASTM D5185m		<b>1308</b>	1241	1251
Sulfur	ppm	ASTM D5185m		<b>3465</b>	2369	2692
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.4</b>	21.2	17.6
Base Number (BN)	mg KOH/g	ASTM D2896		<b>8.4</b>	7.2	8.5
Visc @ 100°C	cSt	ASTM D445		<b>14.3</b>	13.8	13.6

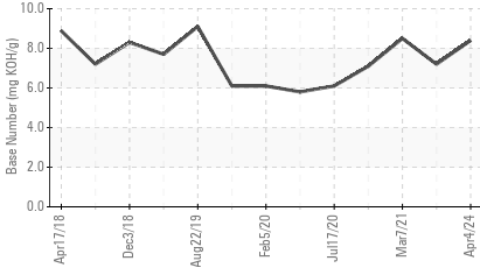
**FT-IR (Direct Trend)**



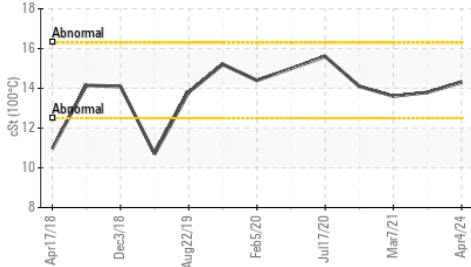
**Ferrous Alloys**



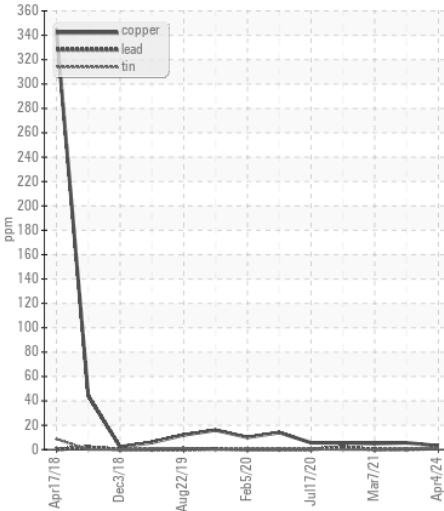
**Base Number**



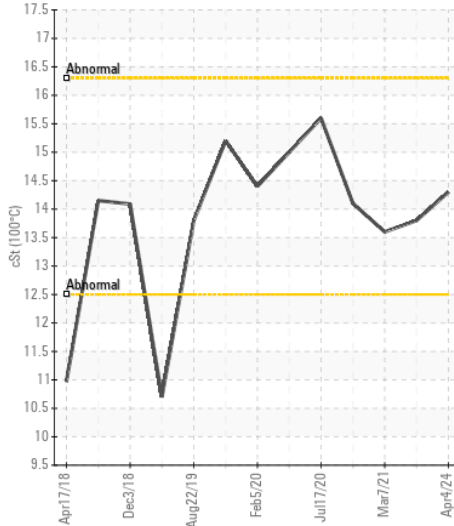
**Viscosity @ 100°C**



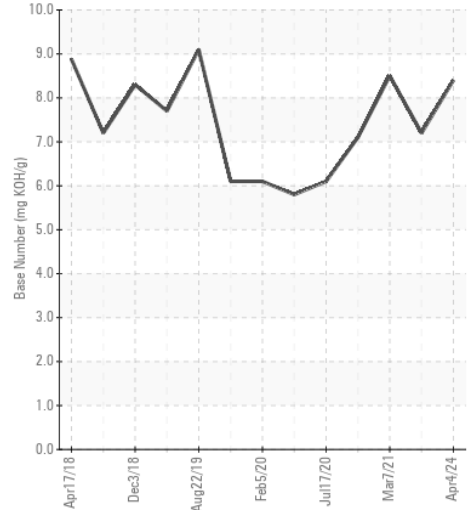
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0742280  
**Lab Number** : 06190119  
**Unique Number** : 11046871  
**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

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)

T: (336)767-9642

F: x: