



# OIL ANALYSIS REPORT

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

Machine Id  
**FREIGHTLINER 54374**  
Component  
**Diesel Engine**  
Fluid  
**SHELL ROTELLA T 15W40 (--- QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0883168</b>	WC0883250	WC0796000
Sample Date		Client Info		<b>11 Apr 2024</b>	16 Jan 2024	09 Aug 2023
Machine Age	mls	Client Info		<b>530344</b>	0	452092
Oil Age	mls	Client Info		<b>0</b>	25000	25000
Filter Age	mls	Client Info		<b>16000</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	<b>23</b>	11	14
Chromium	ppm	ASTM D5185m	>5	<b>2</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>30	<b>11</b>	7	8
Lead	ppm	ASTM D5185m	>30	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>150	<b>4</b>	3	4
Tin	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	<1
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.

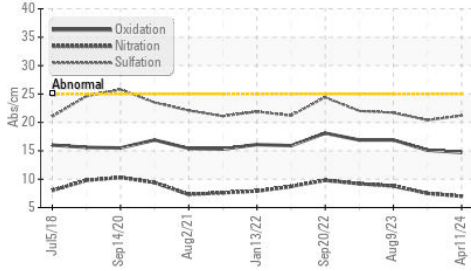
Silicon	ppm	ASTM D5185m	>20	<b>11</b>	4	5
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	<1	<1
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.6</b>	0.7	0.9
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.0</b>	7.5	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.2</b>	20.4	21.7
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

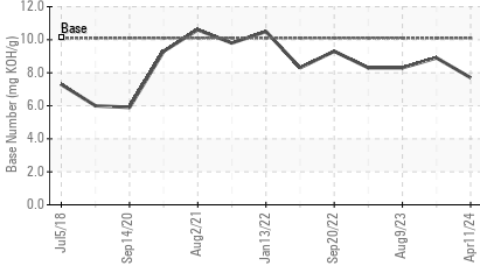
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>2</b>	0	1
Boron	ppm	ASTM D5185m	316	<b>333</b>	19	6
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	1.2	<b>118</b>	64	65
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	24	<b>722</b>	909	1042
Calcium	ppm	ASTM D5185m	2292	<b>1818</b>	1210	1252
Phosphorus	ppm	ASTM D5185m	1064	<b>1357</b>	1012	1109
Zinc	ppm	ASTM D5185m	1160	<b>1626</b>	1320	1400
Sulfur	ppm	ASTM D5185m	4996	<b>4265</b>	3217	3849
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.7</b>	15.1	16.9
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	<b>7.7</b>	8.9	8.3
Visc @ 100°C	cSt	ASTM D445	15.7	<b>13.7</b>	13.8	14.1

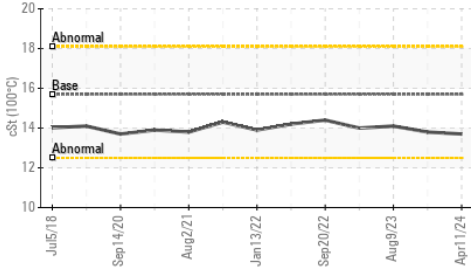
**FT-IR (Direct Trend)**



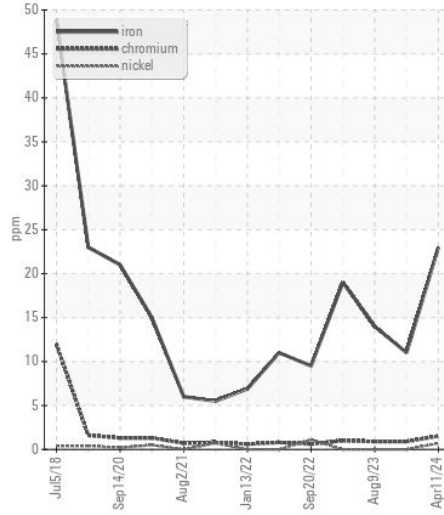
**Base Number**



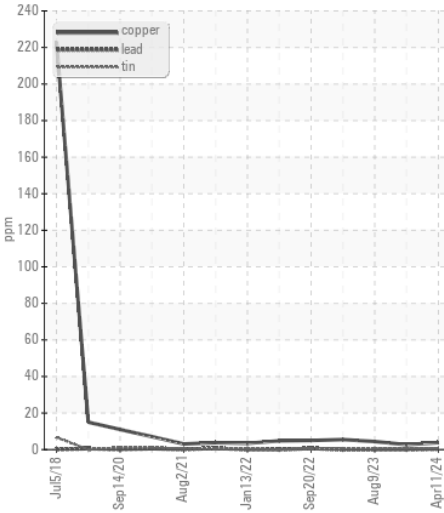
**Viscosity @ 100°C**



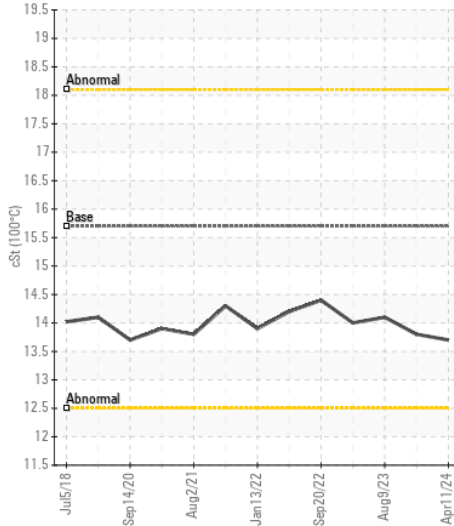
**Ferrous Alloys**



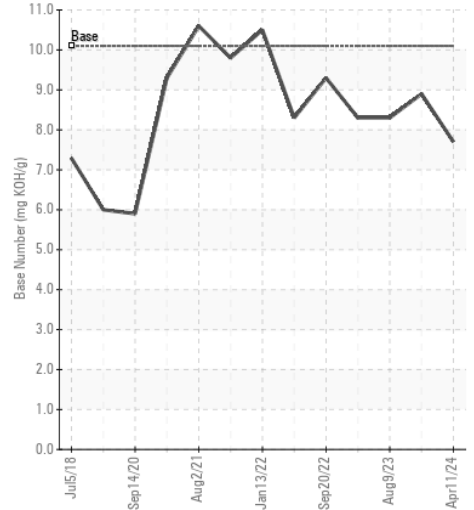
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0883168  
**Lab Number** : 06155129  
**Unique Number** : 10990552  
**Test Package** : FLEET

**Received** : 19 Apr 2024  
**Tested** : 24 Apr 2024  
**Diagnosed** : 24 Apr 2024 - Sean Felton

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

Contact: Audrey Hopkins  
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 T: (336)767-9642

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: