



# OIL ANALYSIS REPORT

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

Machine Id  
**FREIGHTLINER 43644**  
Component  
**Diesel Engine**  
Fluid  
**MOBIL 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>WC0879645</b>	WC0730597	WC0483888
Sample Date		Client Info		<b>04 Jan 2024</b>	18 Jan 2023	09 Jul 2020
Machine Age	mls	Client Info		<b>481176</b>	430128	279007
Oil Age	mls	Client Info		<b>0</b>	18631	0
Filter Age	mls	Client Info		<b>0</b>	18631	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	>90	<b>17</b>	18	17
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>4</b>	1	2
Lead	ppm	ASTM D5185m	>40	<b>2</b>	6	2
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	0
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.

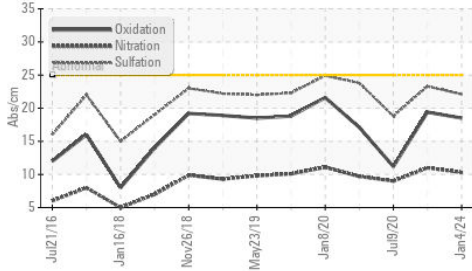
Silicon	ppm	ASTM D5185m	>25	<b>5</b>	5	6
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	0
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>6	<b>0.5</b>	0.6	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.3</b>	11.0	9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.1</b>	23.3	18.8
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

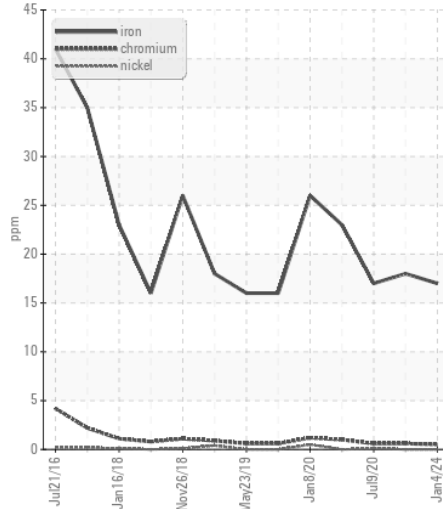
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>118	<b>2</b>	2	3
Boron	ppm	ASTM D5185m		<b>3</b>	7	5
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>62</b>	69	6
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>962</b>	969	42
Calcium	ppm	ASTM D5185m		<b>1135</b>	1284	2684
Phosphorus	ppm	ASTM D5185m		<b>1016</b>	1138	1011
Zinc	ppm	ASTM D5185m		<b>1187</b>	1356	1169
Sulfur	ppm	ASTM D5185m		<b>3273</b>	3833	3075
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>18.5</b>	19.4	11.2
Base Number (BN)	mg KOH/g	ASTM D2896		<b>7.8</b>	7.8	7.4
Visc @ 100°C	cSt	ASTM D445		<b>13.6</b>	13.9	14.2

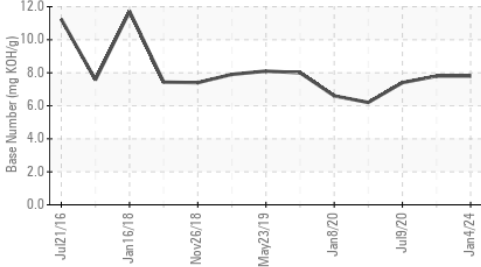
**FT-IR (Direct Trend)**



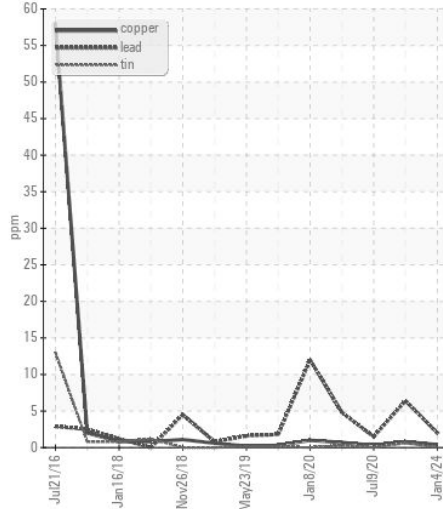
**Ferrous Alloys**



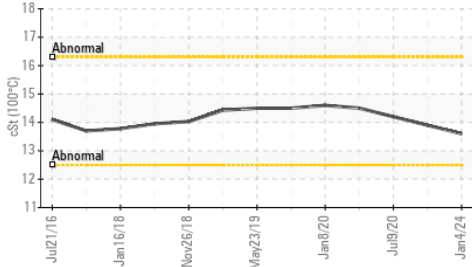
**Base Number**



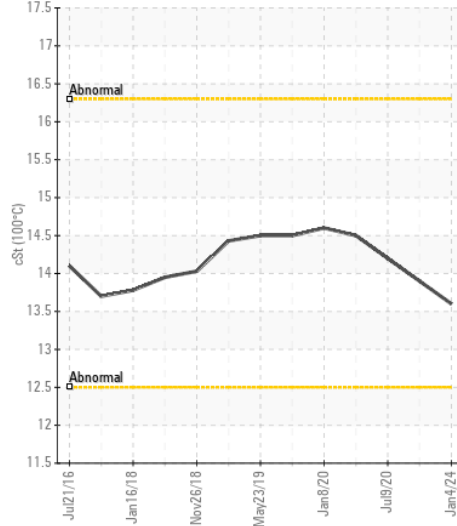
**Non-ferrous Metals**



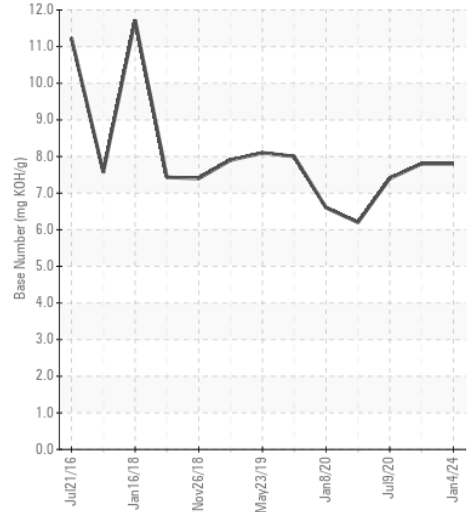
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0879645  
**Lab Number** : 06147998  
**Unique Number** : 10978076  
**Test Package** : FLEET

**Received** : 12 Apr 2024  
**Tested** : 15 Apr 2024  
**Diagnosed** : 15 Apr 2024 - Wes Davis

**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: