



# OIL ANALYSIS REPORT

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

Machine Id  
**FREIGHTLINER 45919**  
Component  
**Diesel Engine**  
Fluid  
**MOBIL DELVAC 1 5W40 (--- QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0936727</b>	WC0936755	WC0915963
Sample Date		Client Info		<b>14 Jun 2024</b>	23 May 2024	02 Apr 2024
Machine Age	hrs	Client Info		<b>342307</b>	0	0
Oil Age	hrs	Client Info		<b>10000</b>	10000	10000
Filter Age	hrs	Client Info		<b>10000</b>	10000	10000
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>11</b>	23	33
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	2
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>	<1	0
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	4	9
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	<1	2
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	1
Vanadium	ppm	ASTM D5185m		<b>0</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.

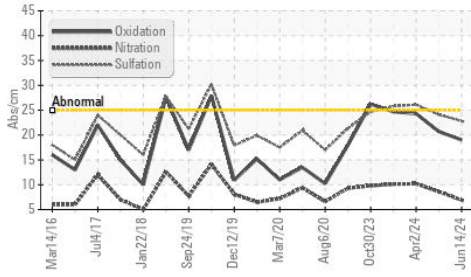
Silicon	ppm	ASTM D5185m	>25	<b>6</b>	9	9
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	5	4
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	0.4
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>6	<b>0.2</b>	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.9</b>	8.6	10.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.8</b>	24.1	26.1
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

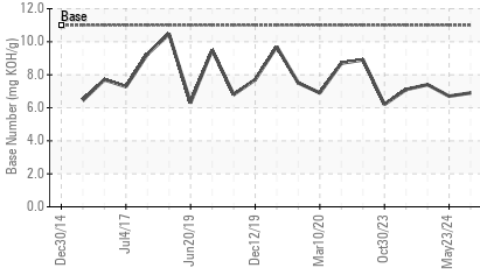
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>1</b>	2	2
Boron	ppm	ASTM D5185m	291	<b>322</b>	248	251
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m	8.0	<b>87</b>	101	153
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185m	624	<b>414</b>	472	737
Calcium	ppm	ASTM D5185m	2158	<b>1416</b>	1747	1741
Phosphorus	ppm	ASTM D5185m	1132	<b>1038</b>	1114	748
Zinc	ppm	ASTM D5185m	1300	<b>1268</b>	1409	960
Sulfur	ppm	ASTM D5185m	3616	<b>3728</b>	3998	2756
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.0</b>	20.7	24.3
Base Number (BN)	mg KOH/g	ASTM D2896	11.0	<b>6.9</b>	6.7	7.4
Visc @ 100°C	cSt	ASTM D445	15.0	<b>12.9</b>	13.8	13.3

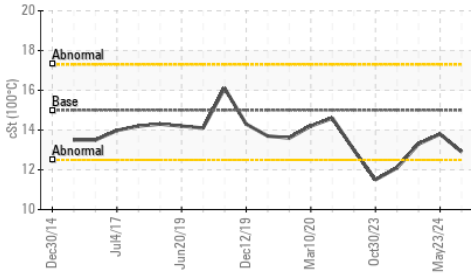
**FT-IR (Direct Trend)**



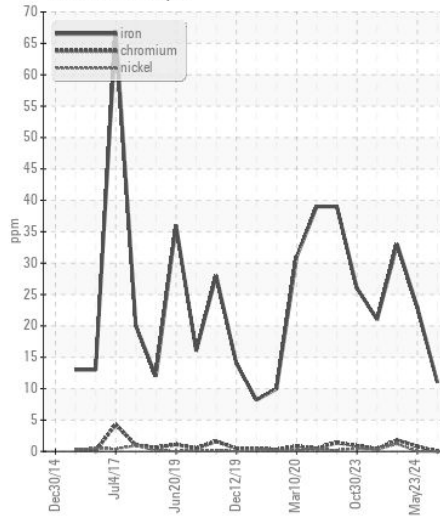
**Base Number**



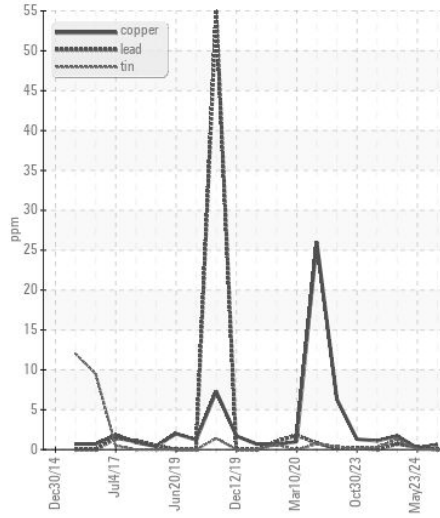
**Viscosity @ 100°C**



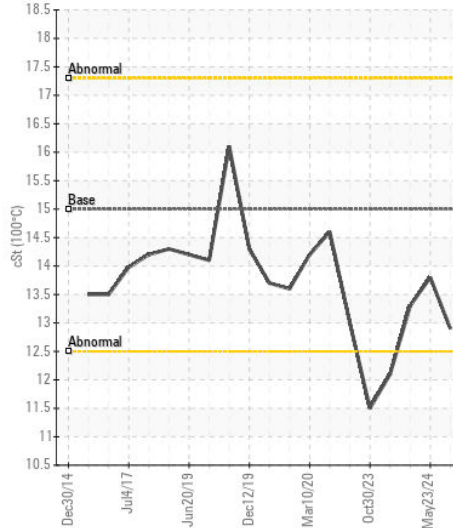
**Ferrous Alloys**



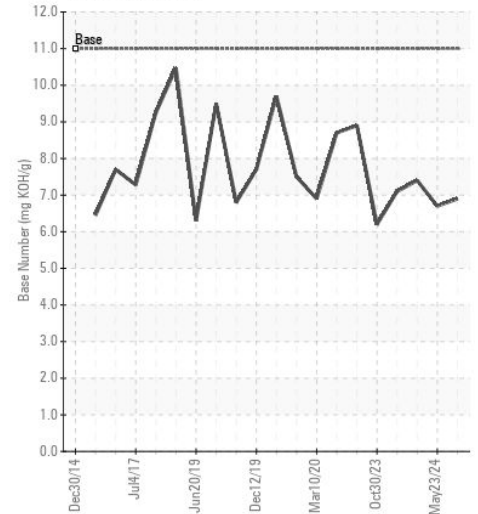
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0936727  
**Lab Number** : 06220541  
**Unique Number** : 11098738  
**Test Package** : FLEET

**Received** : 25 Jun 2024  
**Tested** : 26 Jun 2024  
**Diagnosed** : 26 Jun 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: