



# OIL ANALYSIS REPORT

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

Machine Id  
**FREIGHTLINER 54386**  
Component  
**Diesel Engine**  
Fluid  
**CHEVRON 15W40 (45 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0948693</b>	WC0819506	WC0842566
Sample Date		Client Info		<b>02 Jul 2024</b>	12 Jan 2024	28 Jul 2023
Machine Age	mls	Client Info		<b>505851</b>	468882	432388
Oil Age	mls	Client Info		<b>36969</b>	36494	40659
Filter Age	mls	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
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>25</b>	24	33
Chromium	ppm	ASTM D5185m	>5	<b>1</b>	1	2
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<1
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>13</b>	12	18
Lead	ppm	ASTM D5185m	>30	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>150	<b>7</b>	6	7
Tin	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	<1
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.

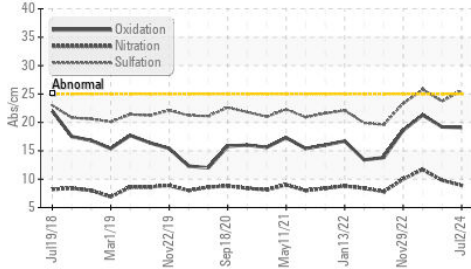
Silicon	ppm	ASTM D5185m	>20	<b>7</b>	6	8
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	1	2
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.9</b>	1.1	1.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.9</b>	9.8	11.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>25.6</b>	23.7	25.8
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

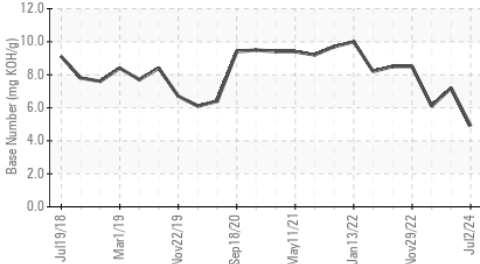
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>50	<b>2</b>	1	2
Boron	ppm	ASTM D5185m		<b>50</b>	4	1
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>76</b>	66	72
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>477</b>	1039	1096
Calcium	ppm	ASTM D5185m		<b>1277</b>	1177	1200
Phosphorus	ppm	ASTM D5185m		<b>935</b>	1013	1088
Zinc	ppm	ASTM D5185m		<b>1210</b>	1292	1390
Sulfur	ppm	ASTM D5185m		<b>2617</b>	2838	3204
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.1</b>	19.2	21.3
Base Number (BN)	mg KOH/g	ASTM D2896		<b>4.9</b>	7.2	6.1
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.8</b>	14.0	14.4

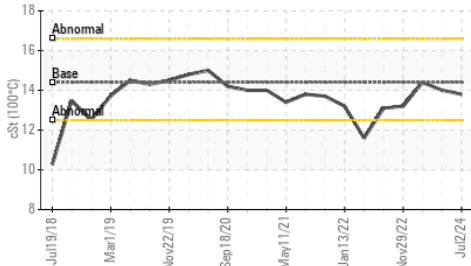
**FT-IR (Direct Trend)**



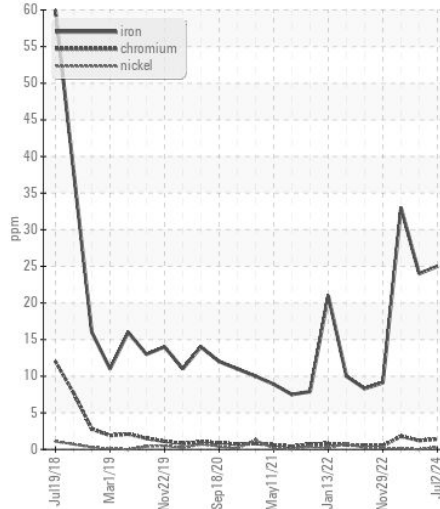
**Base Number**



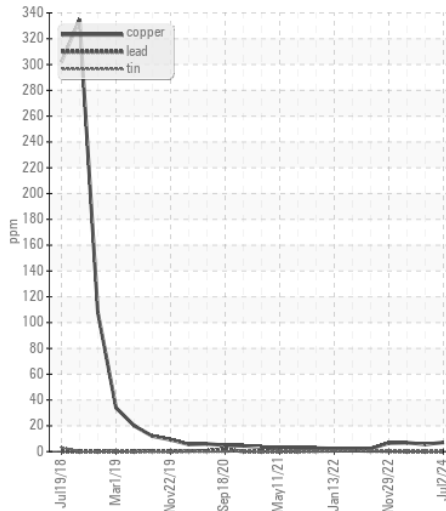
**Viscosity @ 100°C**



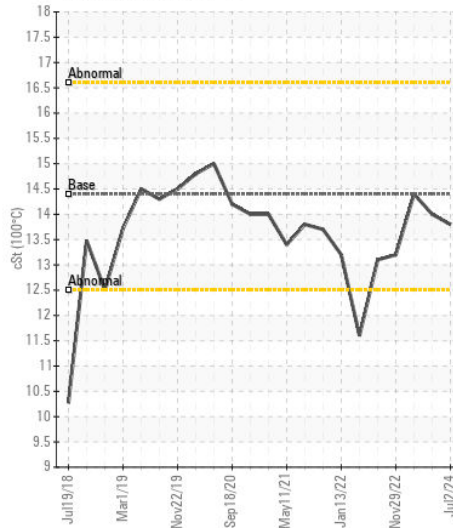
**Ferrous Alloys**



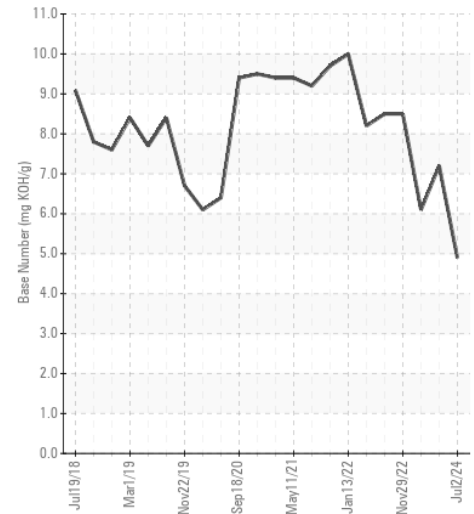
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : WC0948693

**Lab Number** : 06241248

**Unique Number** : 11130082

**Test Package** : FLEET

**Received** : 18 Jul 2024

**Tested** : 19 Jul 2024

**Diagnosed** : 19 Jul 2024 - Wes Davis

**SALEM NATIONALEASE CORPORATION**

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WINSTON SALEM, NC

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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)