



# OIL ANALYSIS REPORT

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



Machine Id  
**FREIGHTLINER 236**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (24 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>RW0005209</b>	RW0004302	RW0003903
Sample Date		Client Info		<b>01 Jul 2024</b>	07 Jun 2023	08 Sep 2022
Machine Age	mls	Client Info		<b>0</b>	27126	2424
Oil Age	mls	Client Info		<b>0</b>	2520	169
Filter Age	mls	Client Info		<b>0</b>	2520	169
Oil Changed		Client Info		<b>Changed</b>	N/A	Changed
Filter Changed		Client Info		<b>Changed</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

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

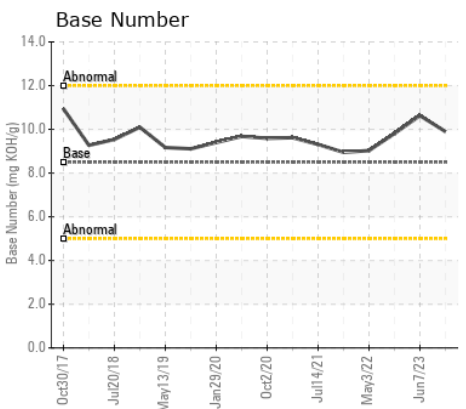
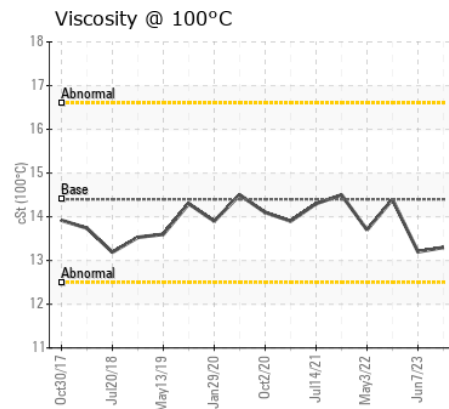
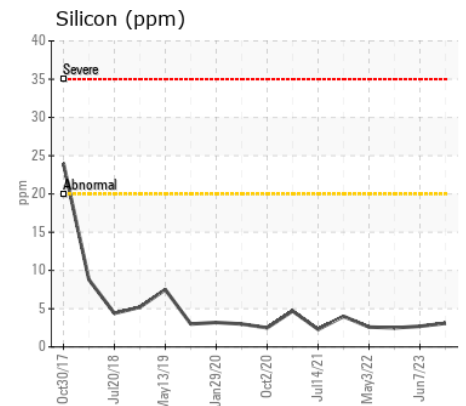
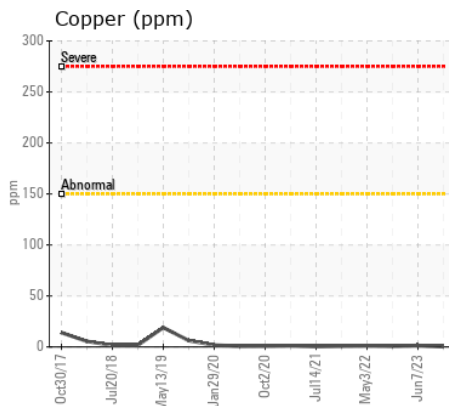
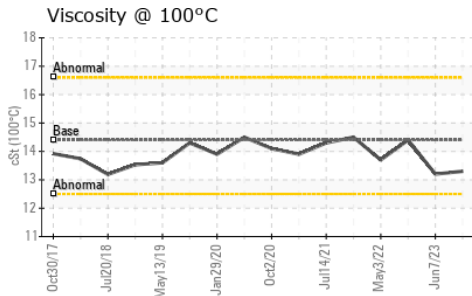
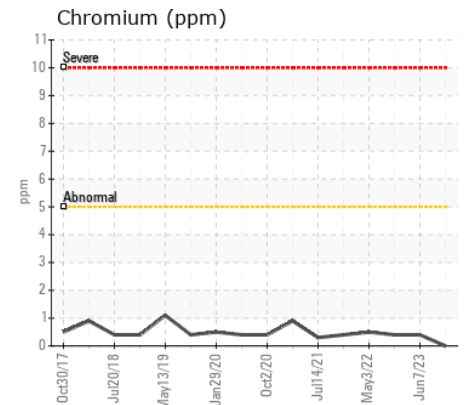
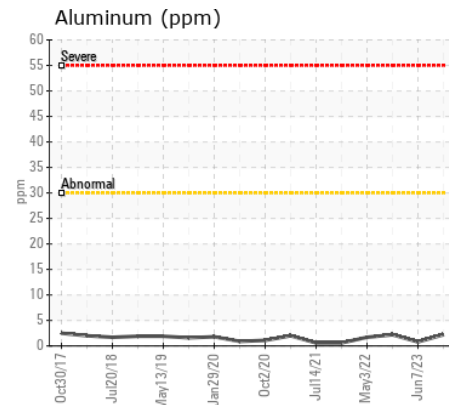
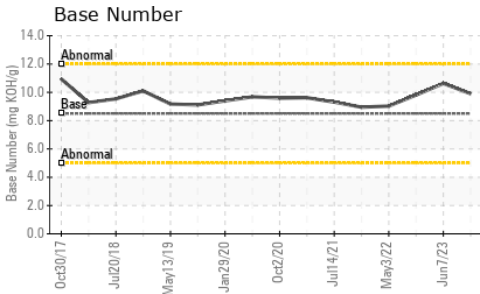
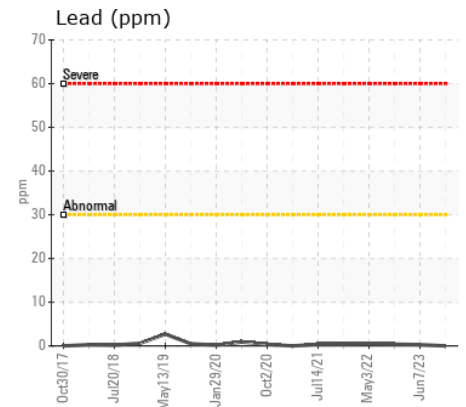
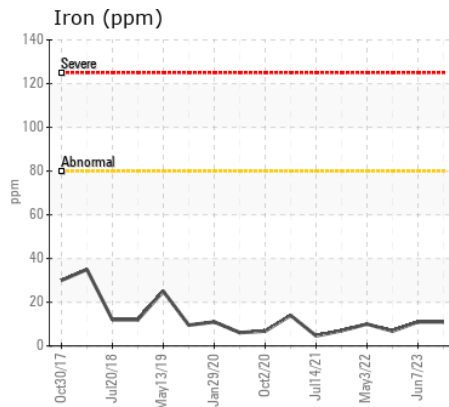
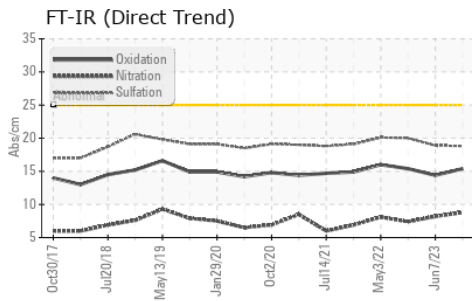
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>3</b>	3	2
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	4	5
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>0.4</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.8</b>	8.2	7.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.8</b>	18.9	20.0
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	>158	<b>4</b>	0	2
Boron	ppm	ASTM D5185m	250	<b>6</b>	5	7
Barium	ppm	ASTM D5185m	10	<b>0</b>	2	<1
Molybdenum	ppm	ASTM D5185m	100	<b>61</b>	70	58
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>950</b>	867	869
Calcium	ppm	ASTM D5185m	3000	<b>1119</b>	1112	1047
Phosphorus	ppm	ASTM D5185m	1150	<b>1090</b>	994	1008
Zinc	ppm	ASTM D5185m	1350	<b>1288</b>	1217	1231
Sulfur	ppm	ASTM D5185m	4250	<b>3671</b>	3443	3110
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.4</b>	14.4	15.4
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>9.90</b>	10.63	9.81
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.3</b>	13.2	14.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RW0005209  
**Lab Number** : 06226454  
**Unique Number** : 11109947  
**Test Package** : MOB 2

**Received** : 02 Jul 2024  
**Tested** : 03 Jul 2024  
**Diagnosed** : 03 Jul 2024 - Wes Davis

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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)