



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**FREIGHTLINER 714**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (17 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0870835</b>	WC0821268	WC0706361
Sample Date		Client Info		<b>05 Dec 2023</b>	19 May 2023	03 Jun 2022
Machine Age	mls	Client Info		<b>219158</b>	214099	205065
Oil Age	mls	Client Info		<b>0</b>	0	0
Filter Age	mls	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	<b>54</b>	39	44
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	1	2
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>20	<b>9</b>	8	7
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	2
Copper	ppm	ASTM D5185m	>330	<b>2</b>	<1	2
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

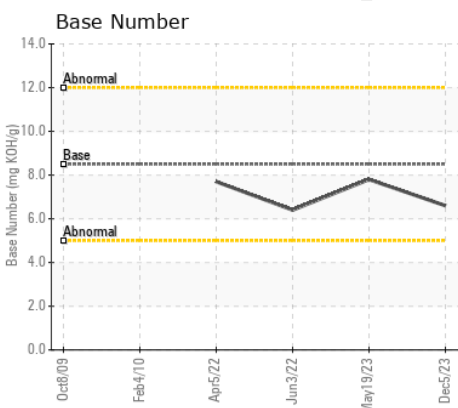
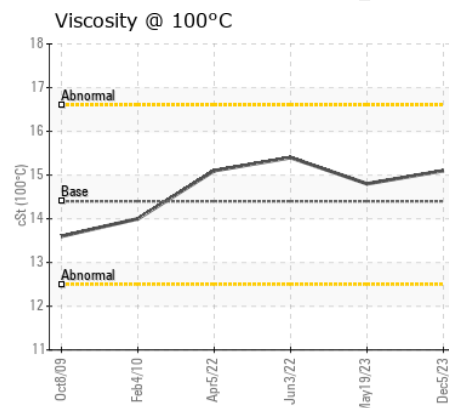
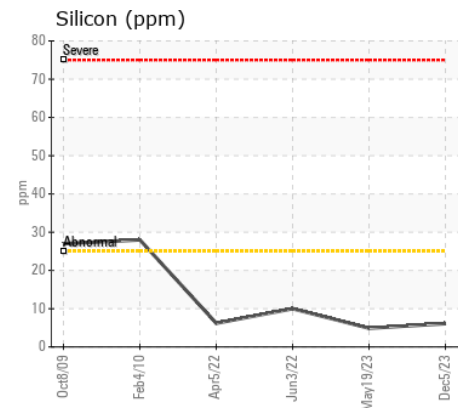
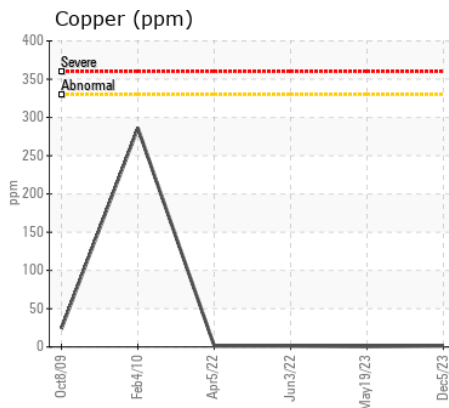
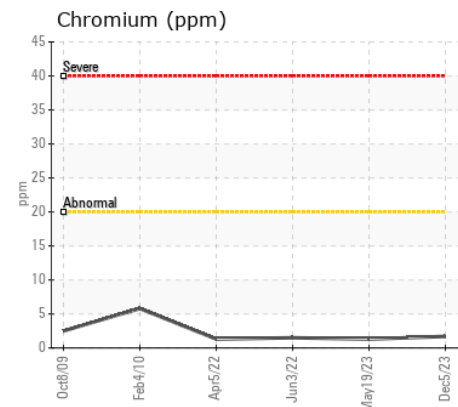
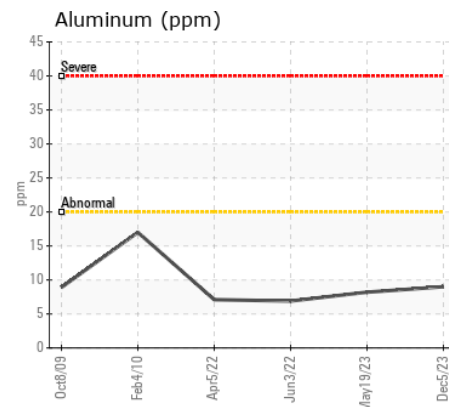
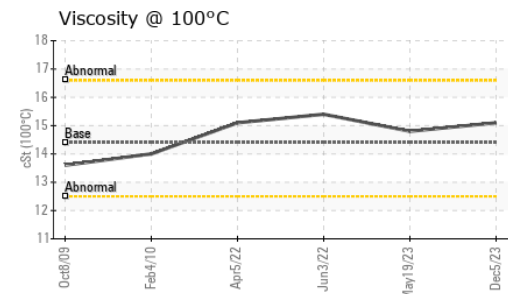
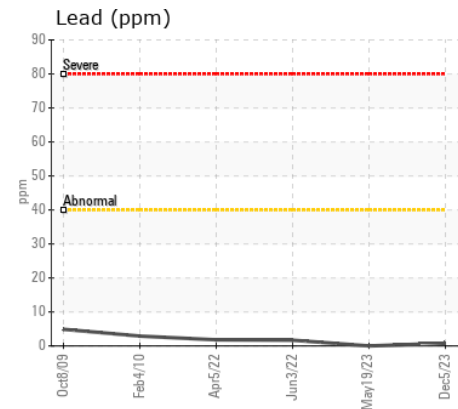
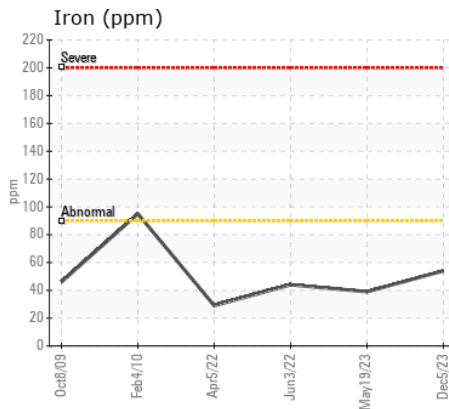
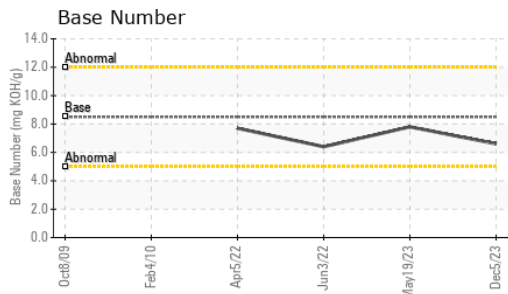
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	5	10
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	3
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>1.3</b>	0.9	1.7
Nitration	Abs/cm	*ASTM D7624	>20	<b>12.1</b>	11.3	13.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.8</b>	21.1	27.0
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>3</b>	4	3
Boron	ppm	ASTM D5185m	250	<b>23</b>	37	28
Barium	ppm	ASTM D5185m	10	<b>3</b>	0	1
Molybdenum	ppm	ASTM D5185m	100	<b>78</b>	83	93
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>105</b>	50	20
Calcium	ppm	ASTM D5185m	3000	<b>2090</b>	2342	2264
Phosphorus	ppm	ASTM D5185m	1150	<b>950</b>	1094	1028
Zinc	ppm	ASTM D5185m	1350	<b>1167</b>	1363	1264
Sulfur	ppm	ASTM D5185m	4250	<b>3512</b>	4680	3402
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.0</b>	15.5	20.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>6.6</b>	7.8	6.4
Visc @ 100°C	cSt	ASTM D445	14.4	<b>15.1</b>	14.8	15.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0870835 **Received** : 12 Jan 2024  
**Lab Number** : 06059832 **Diagnosed** : 15 Jan 2024  
**Unique Number** : 10831214 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**WAKE COUNTY PUBLIC SCHOOL SYSTEM**  
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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)