



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**FREIGHTLINER 45658**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0861073</b>	WC0861140	WC0826641
Sample Date		Client Info		<b>27 Dec 2023</b>	23 Sep 2023	09 Jul 2023
Machine Age	mls	Client Info		<b>100578</b>	695860	683365
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>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	>65	<b>11</b>	10	12
Chromium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>3	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m	>5	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>35	<b>3</b>	3	2
Lead	ppm	ASTM D5185m	>10	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>180	<b>2</b>	2	3
Tin	ppm	ASTM D5185m	>8	<b>0</b>	<1	0
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

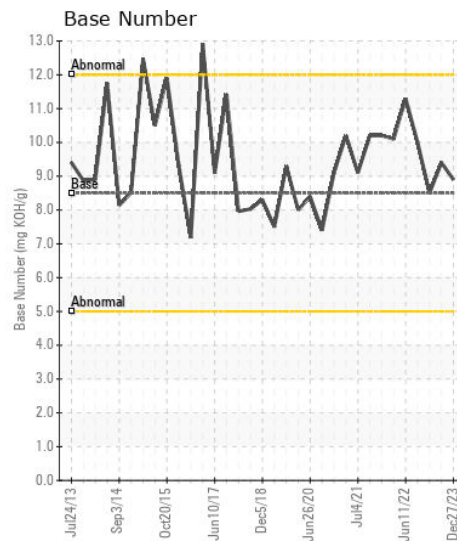
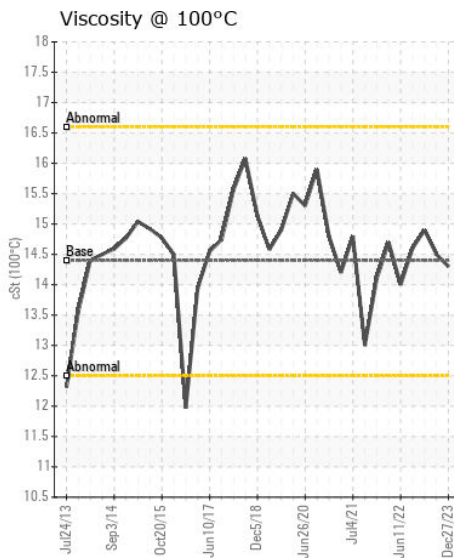
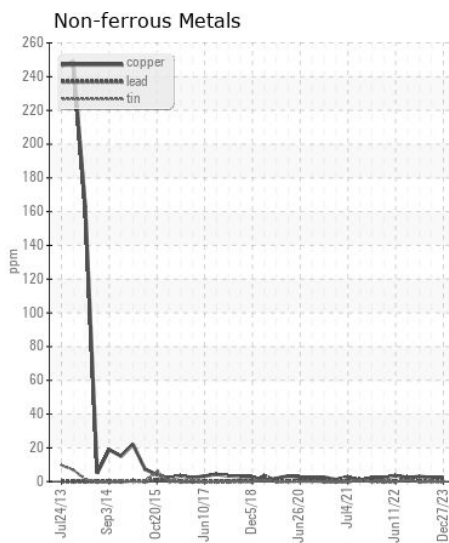
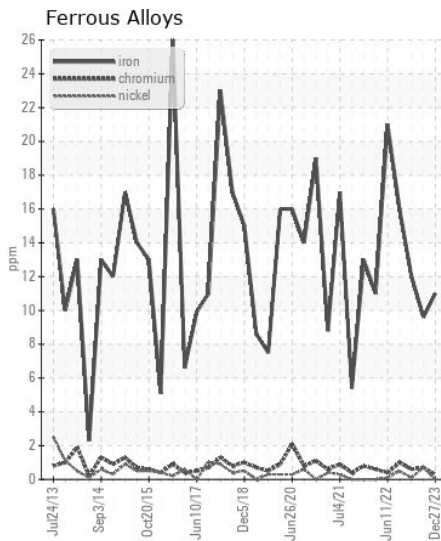
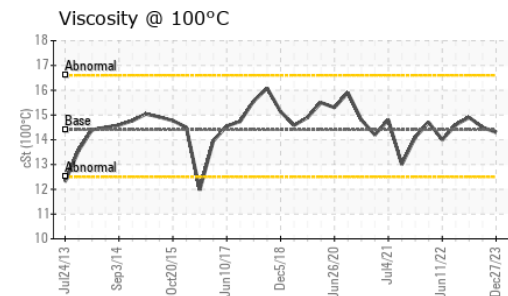
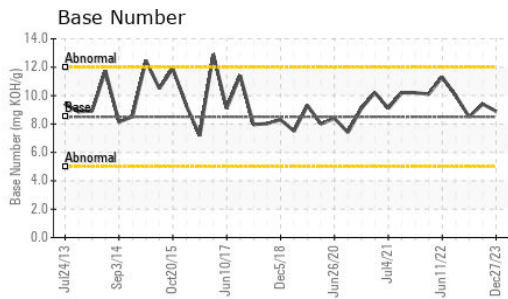
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>15	<b>6</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	3	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	>3	<b>0.7</b>	0.8	0.9
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.7</b>	8.7	9.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.4</b>	20.5	21.6
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>0</b>	0	1
Boron	ppm	ASTM D5185m	250	<b>&lt;1</b>	0	0
Barium	ppm	ASTM D5185m	10	<b>0</b>	1	0
Molybdenum	ppm	ASTM D5185m	100	<b>65</b>	63	65
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>1058</b>	984	1046
Calcium	ppm	ASTM D5185m	3000	<b>1159</b>	1091	1112
Phosphorus	ppm	ASTM D5185m	1150	<b>1071</b>	970	1031
Zinc	ppm	ASTM D5185m	1350	<b>1299</b>	1203	1269
Sulfur	ppm	ASTM D5185m	4250	<b>3388</b>	3303	3308
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.8</b>	16.1	17.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>8.9</b>	9.4	8.5
Visc @ 100°C	cSt	ASTM D445	14.4	<b>14.3</b>	14.5	14.9



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0861073 **Received** : 12 Jan 2024  
**Lab Number** : 06059936 **Diagnosed** : 16 Jan 2024  
**Unique Number** : 10831318 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

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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)