



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**FREIGHTLINER CASCADIA 1235**  
 Component  
**Diesel Engine**  
 Fluid  
**MOBIL 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0917153</b>	WC0909283	WC0878843
Sample Date		Client Info		<b>28 May 2024</b>	30 Apr 2024	09 Jan 2024
Machine Age	mls	Client Info		<b>112218</b>	108218	90788
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>	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	>80	<b>6</b>	7	14
Chromium	ppm	ASTM D5185m	>5	<b>0</b>	<1	1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>30	<b>2</b>	3	3
Lead	ppm	ASTM D5185m	>30	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>150	<b>0</b>	<1	1
Tin	ppm	ASTM D5185m	>5	<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

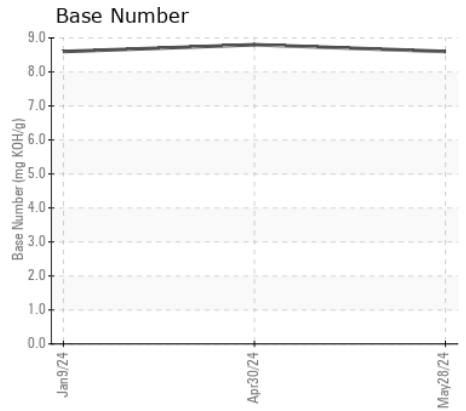
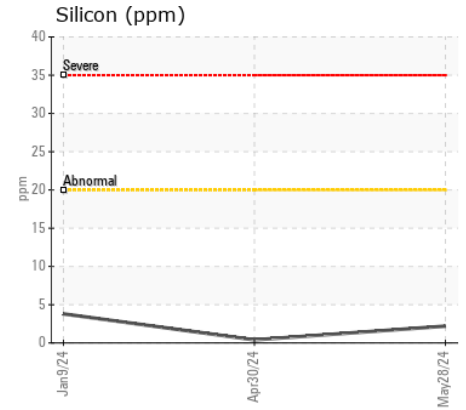
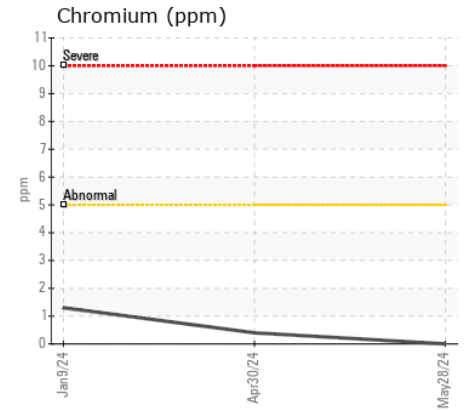
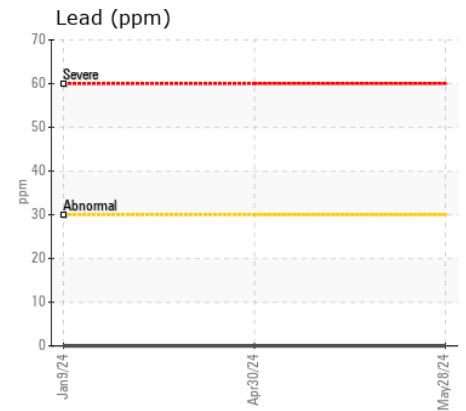
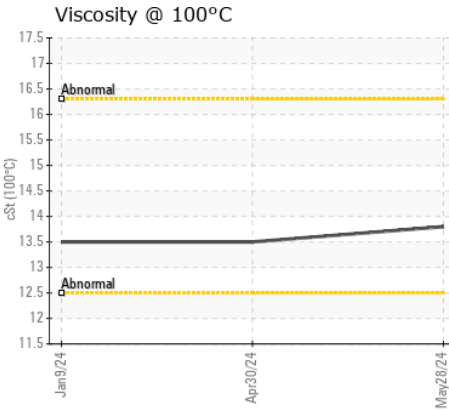
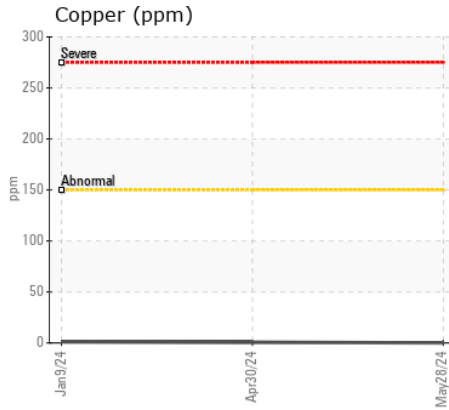
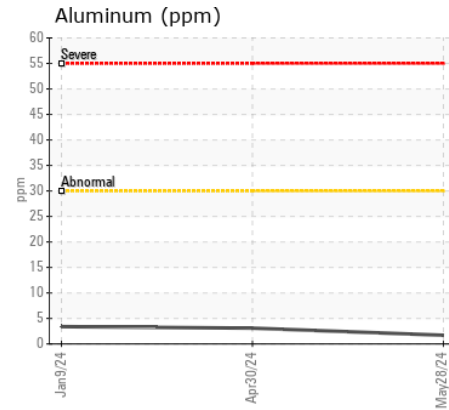
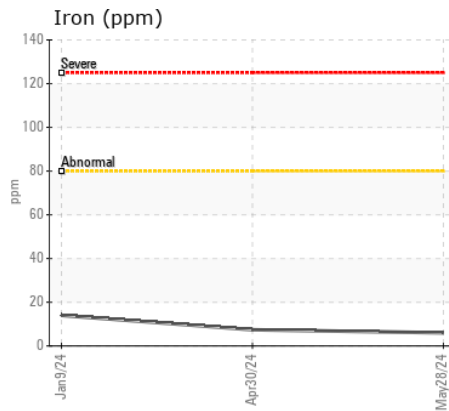
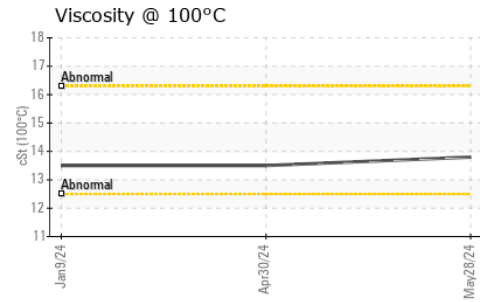
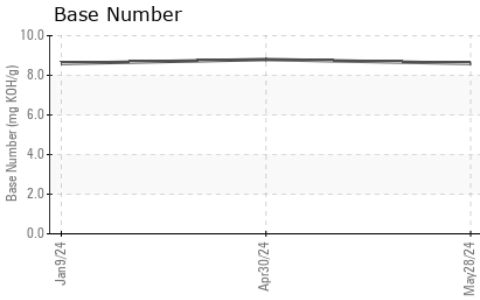
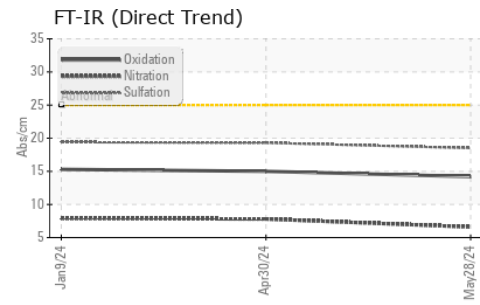
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>2</b>	<1	4
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	6	6
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>0.3</b>	0.5	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.6</b>	7.8	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.5</b>	19.3	19.4
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	>118	<b>&lt;1</b>	2	1
Boron	ppm	ASTM D5185m		<b>3</b>	0	2
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>51</b>	59	56
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>844</b>	958	999
Calcium	ppm	ASTM D5185m		<b>1099</b>	1165	1070
Phosphorus	ppm	ASTM D5185m		<b>969</b>	1056	1016
Zinc	ppm	ASTM D5185m		<b>1130</b>	1252	1209
Sulfur	ppm	ASTM D5185m		<b>3330</b>	3413	2868
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.2</b>	15.0	15.3
Base Number (BN)	mg KOH/g	ASTM D2896		<b>8.6</b>	8.8	8.6
Visc @ 100°C	cSt	ASTM D445		<b>13.8</b>	13.5	13.5



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0917153 **Received** : 19 Jun 2024  
**Lab Number** : 06214280 **Tested** : 20 Jun 2024  
**Unique Number** : 11087144 **Diagnosed** : 20 Jun 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**CONCRETE SERVICE CO - FAY BLOCK**  
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 US 28301  
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 T: (800)326-9198  
 F:

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)