



# OIL ANALYSIS REPORT

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

Machine Id  
**FREIGHTLINER 52947**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 10W30 (--- GAL)**

## RECOMMENDATION

Check for low coolant level. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0935010</b>	WC0631604	WC0892094
Sample Date		Client Info		<b>23 May 2024</b>	28 Feb 2024	01 Feb 2024
Machine Age	mls	Client Info		<b>136896</b>	0	115518
Oil Age	mls	Client Info		<b>37582</b>	0	16205
Filter Age	mls	Client Info		<b>37582</b>	0	16205
Oil Changed		Client Info		<b>Changed</b>	N/A	Not Changd
Filter Changed		Client Info		<b>Changed</b>	N/A	Not Changd
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>80	<b>47</b>	25	17
Chromium	ppm	ASTM D5185(m)	>5	<b>2</b>	1	1
Nickel	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185(m)	>30	<b>22</b>	16	13
Lead	ppm	ASTM D5185(m)	>30	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>150	<b>32</b>	30	24
Tin	ppm	ASTM D5185(m)	>5	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

## CONTAMINATION

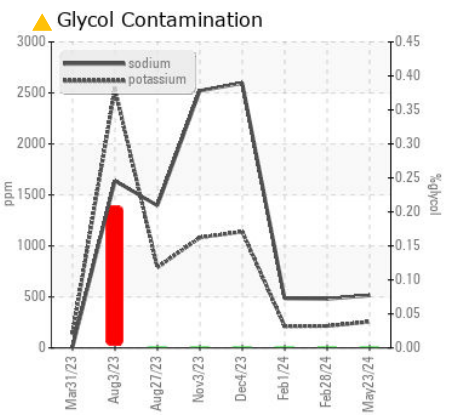
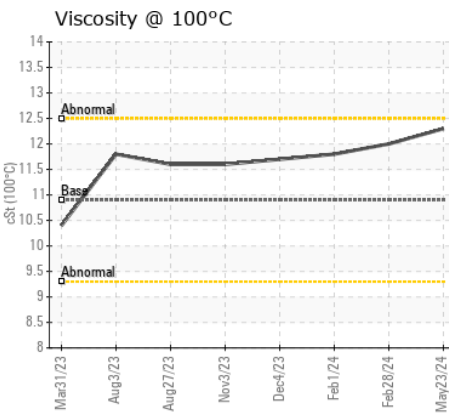
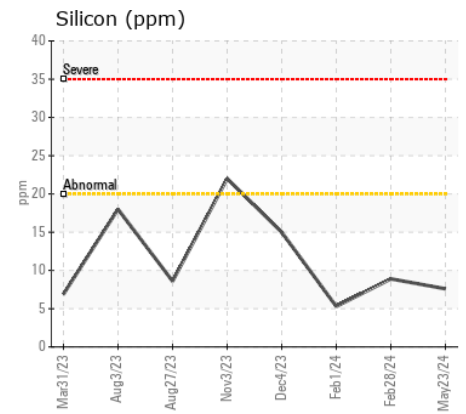
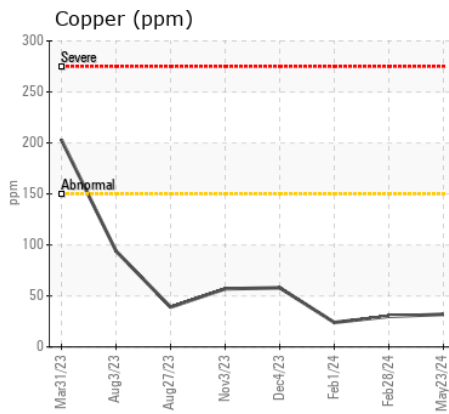
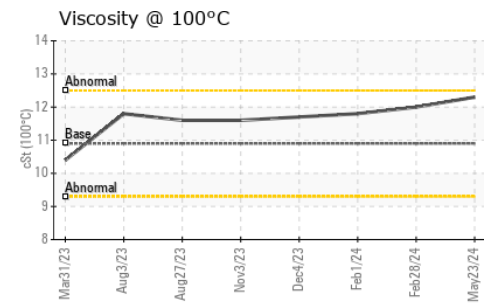
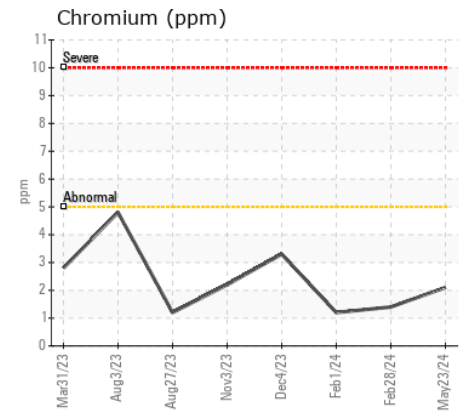
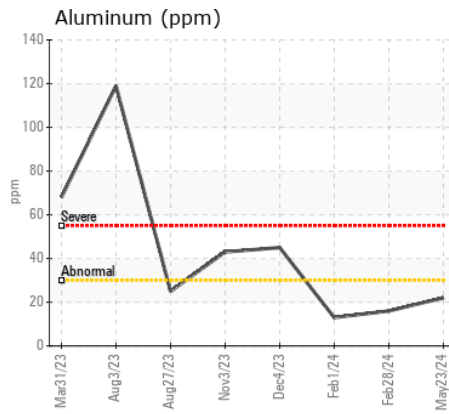
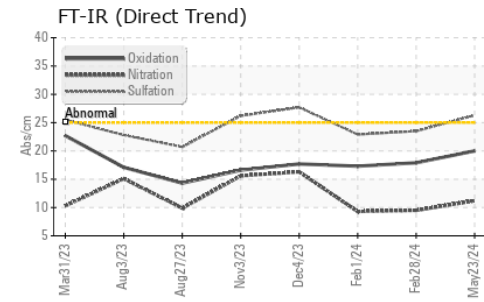
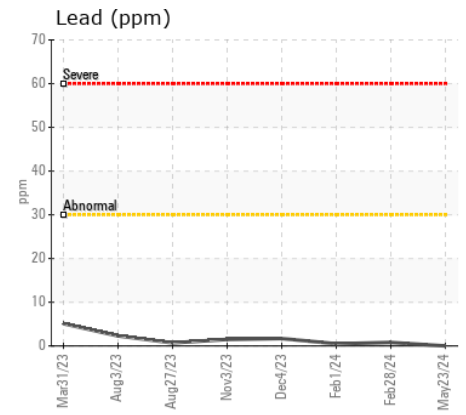
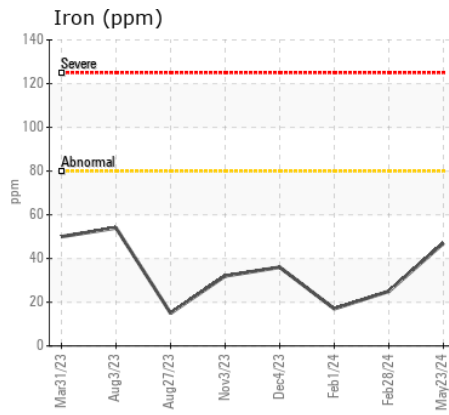
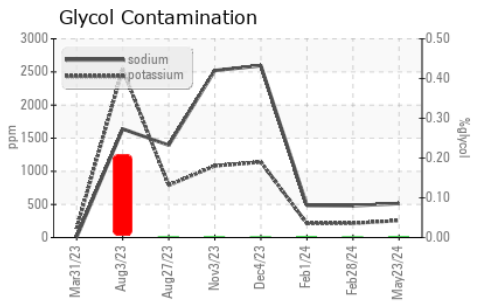
Water treatment chemicals present, indicating slow coolant leak. Test for glycol is negative.

Silicon	ppm	ASTM D5185(m)	>20	<b>8</b>	9	5
Potassium	ppm	ASTM D5185(m)	>20	<b>▲ 257</b>	▲ 215	▲ 212
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	%	ASTM D7922*		<b>0.0</b>	0.0	0.0
Soot %	%	ASTM D7844*	>3	<b>0.8</b>	0.4	0.3
Nitration	Abs/cm	ASTM D7624*	>20	<b>11.2</b>	9.5	9.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>26.3</b>	23.5	22.9
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

The condition of the oil is acceptable for the time in service (see recommendation).

Sodium	ppm	ASTM D5185(m)		<b>● 514</b>	● 481	● 485
Boron	ppm	ASTM D5185(m)	250	<b>35</b>	83	104
Barium	ppm	ASTM D5185(m)	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	100	<b>30</b>	28	28
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185(m)	450	<b>144</b>	147	145
Calcium	ppm	ASTM D5185(m)	3000	<b>2042</b>	1987	1989
Phosphorus	ppm	ASTM D5185(m)	1150	<b>798</b>	876	913
Zinc	ppm	ASTM D5185(m)	1350	<b>1114</b>	1104	1121
Sulfur	ppm	ASTM D5185(m)	4250	<b>2596</b>	2782	2929
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>20.0</b>	17.9	17.3
Visc @ 100°C	cSt	ASTM D7279(m)	10.9	<b>12.3</b>	12.0	11.8



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0935010 **Received** : 06 Jun 2024  
**Lab Number** : 02640061 **Tested** : 06 Jun 2024  
**Unique Number** : 5789223 **Diagnosed** : 07 Jun 2024 - Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: Glycol )

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To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.