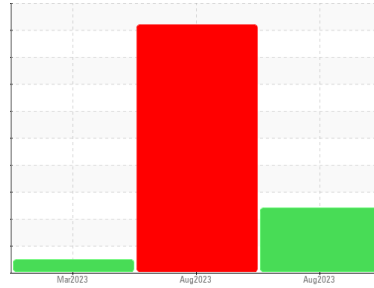




OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



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

DIAGNOSIS

Recommendation

Check for low coolant level. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Wear

Metal levels are typical for a new component breaking in.

Contamination

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

Fluid Condition

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

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0631593	WC0828202	WC0794917
Sample Date	Client Info		27 Aug 2023	03 Aug 2023	31 Mar 2023
Machine Age	kms	Client Info	112684	65690	29052
Oil Age	kms	Client Info	0	36639	28715
Oil Changed	Client Info		N/A	Changed	Changed
Sample Status			ABNORMAL	SEVERE	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>100	15	54	50
Chromium	ppm	ASTM D5185(m)	>20	1	5	3
Nickel	ppm	ASTM D5185(m)	>4	0	<1	<1
Titanium	ppm	ASTM D5185(m)		<1	<1	<1
Silver	ppm	ASTM D5185(m)	>3	<1	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	25	▲ 119	68
Lead	ppm	ASTM D5185(m)	>40	<1	2	5
Copper	ppm	ASTM D5185(m)	>330	39	94	203
Tin	ppm	ASTM D5185(m)	>15	0	2	3
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	250	5	11	36
Barium	ppm	ASTM D5185(m)	10	0	<1	<1
Molybdenum	ppm	ASTM D5185(m)	100	113	126	46
Manganese	ppm	ASTM D5185(m)		<1	3	4
Magnesium	ppm	ASTM D5185(m)	450	915	888	544
Calcium	ppm	ASTM D5185(m)	3000	1016	1151	1806
Phosphorus	ppm	ASTM D5185(m)	1150	1005	935	840
Zinc	ppm	ASTM D5185(m)	1350	1123	1119	929
Sulfur	ppm	ASTM D5185(m)	4250	2484	1926	1906
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	9	18	7
Sodium	ppm	ASTM D5185(m)		▲ 1395	▲ 1639	5
Potassium	ppm	ASTM D5185(m)	>20	▲ 789	▲ 2540	136
Glycol	%	ASTM D7922*		0.0	◆ 0.208	NEG

INFRA-RED

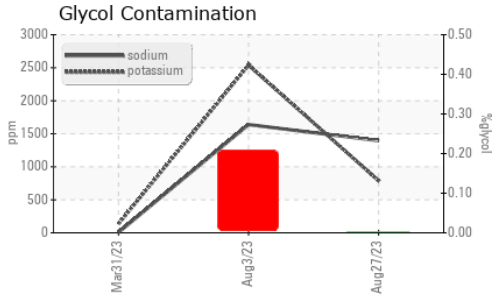
	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	0.1	0.6	0.2
Nitration	Abs/cm	ASTM D7624*	>20	9.9	15.1	10.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.7	22.8	25.5

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414*	>25	14.3	17.1	22.7



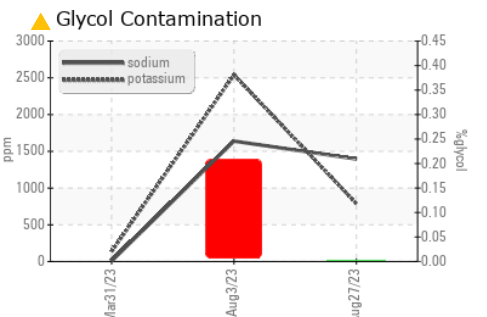
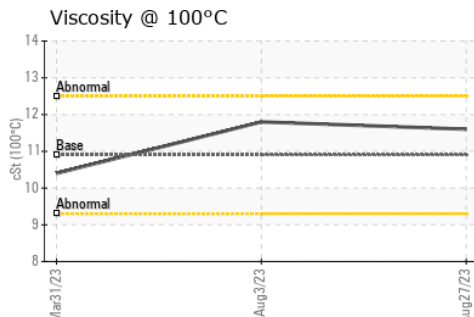
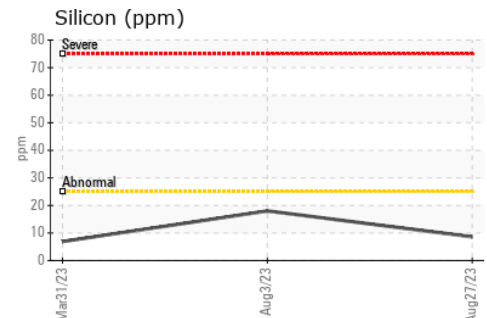
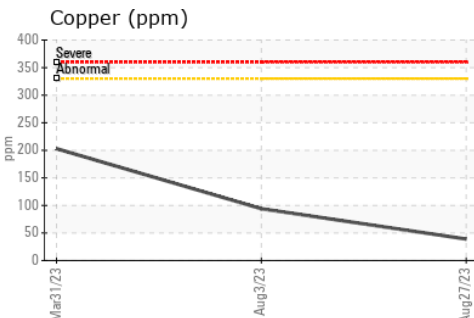
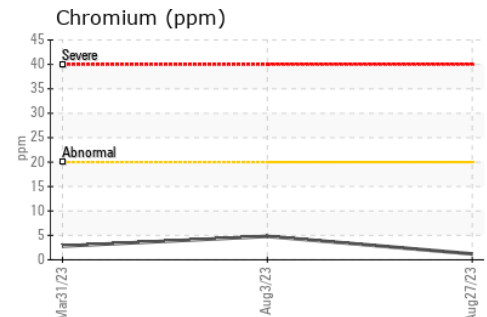
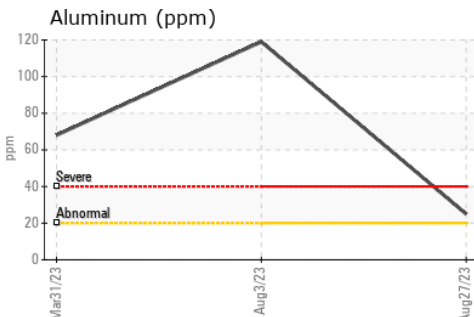
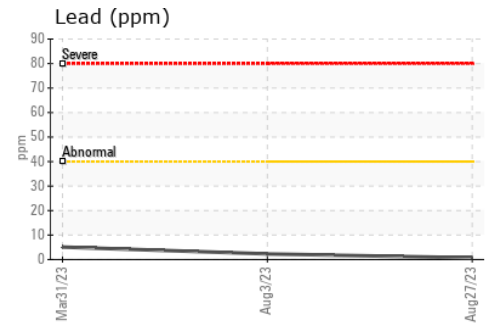
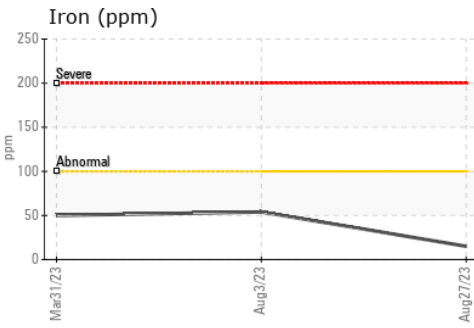
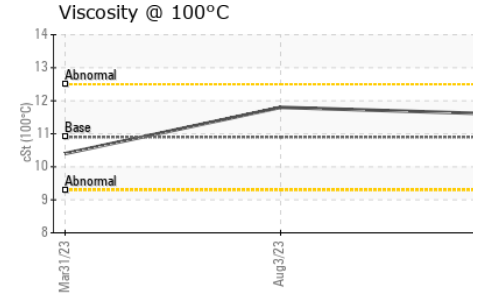
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	10.9	11.6	11.8

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0631593 **Received** : 28 Aug 2023
Lab Number : 02578620 **Diagnosed** : 29 Aug 2023
Unique Number : 5631680 **Diagnostician** : Kevin Marson
Test Package : MOB 1

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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.