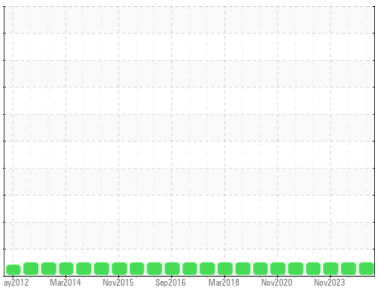
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Area
[1304295]
Machine Id
5551
Component
Front Diesel Engine
Fluid
CASTROL TECTION EXTRA SAE 15W-40 (38 LTR)

DIAGNOSIS

Recommendation
Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Wear
Metal levels are typical for a new component breaking in.

Contamination
There is no indication of any contamination in the oil.

Fluid Condition
Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0118550**	GFL0102727	GFL0094527
Sample Date		Client Info		**02 Jul 2024**	02 Feb 2024	13 Nov 2023
Machine Age	kms	Client Info		**20555**	20002	19405
Oil Age	kms	Client Info		**0**	0	0
Oil Changed		Client Info		**Changed**	N/A	N/A
Sample Status				**NORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>120	**6**	8	8
Chromium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	**0**	0	<1
Silver	ppm	ASTM D5185(m)	>2	**0**	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	**2**	4	4
Lead	ppm	ASTM D5185(m)	>40	**0**	<1	1
Copper	ppm	ASTM D5185(m)	>330	**<1**	<1	1
Tin	ppm	ASTM D5185(m)	>15	**0**	<1	0
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)	30	**2**	2	4
Barium	ppm	ASTM D5185(m)		**0**	0	<1
Molybdenum	ppm	ASTM D5185(m)		**58**	56	57
Manganese	ppm	ASTM D5185(m)		**0**	0	0
Magnesium	ppm	ASTM D5185(m)	110	**952**	927	921
Calcium	ppm	ASTM D5185(m)	2740	**1029**	1046	1023
Phosphorus	ppm	ASTM D5185(m)	1240	**1012**	986	1001
Zinc	ppm	ASTM D5185(m)	1350	**1198**	1140	1135
Sulfur	ppm	ASTM D5185(m)	3520	**2610**	2630	2495
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**2**	3	1
Sodium	ppm	ASTM D5185(m)		**3**	4	2
Potassium	ppm	ASTM D5185(m)	>20	**<1**	1	0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>4	**0**	0.1	0.1
Nitration	Abs/cm	ASTM D7624*	>20	**8.1**	9.1	8.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	**18.1**	19.3	19.2

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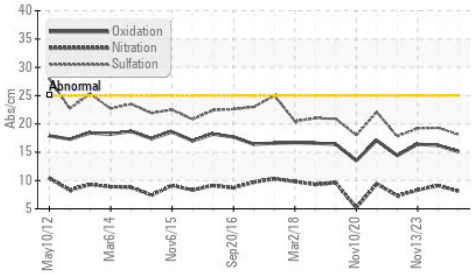
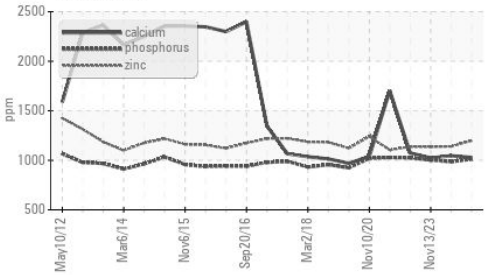
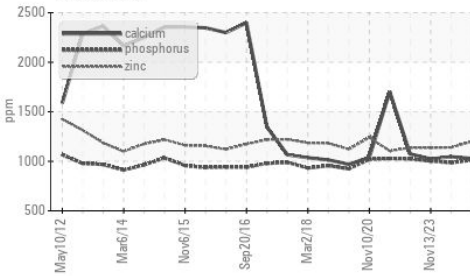
FT-IR (Direct Trend)



Additives



Additives



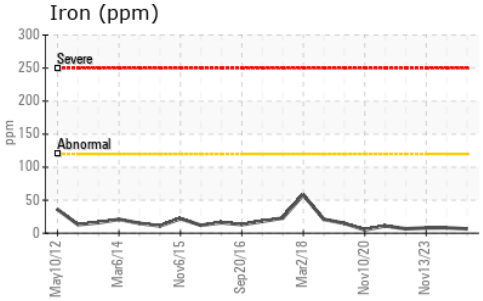
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**15.1**	16.2	16.4

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

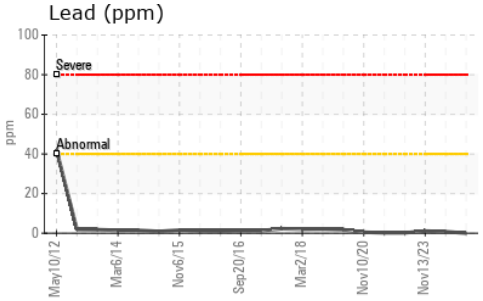
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.2	**13.5**	13.2	13.3

GRAPHS

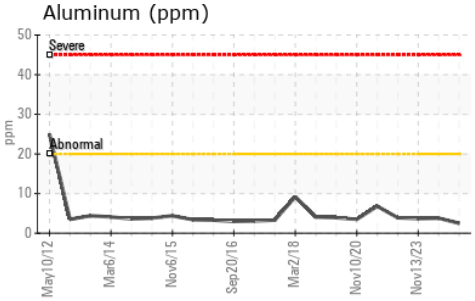
Iron (ppm)



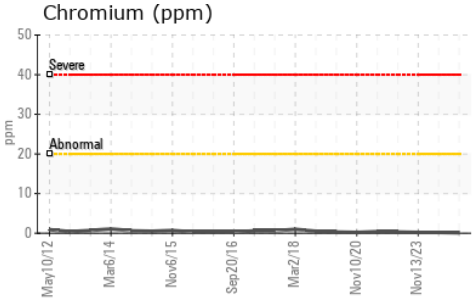
Lead (ppm)



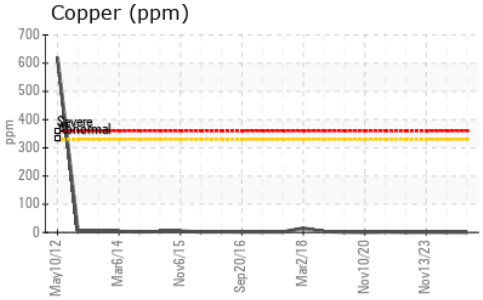
Aluminum (ppm)



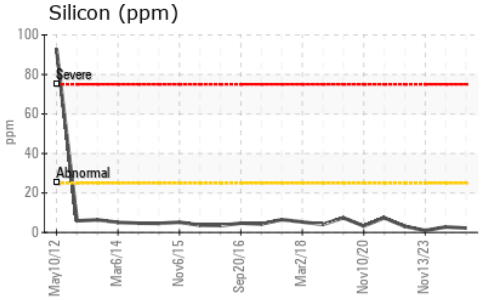
Chromium (ppm)



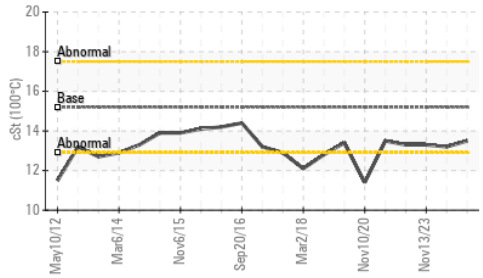
Copper (ppm)



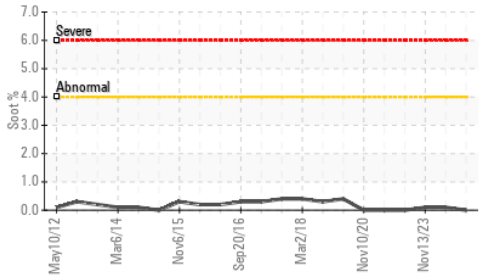
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0118550
Lab Number : 02647298
Unique Number : 5812850
Test Package : MOB 1

Received : 11 Jul 2024
Tested : 11 Jul 2024
Diagnosed : 11 Jul 2024 - Wes Davis

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.

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