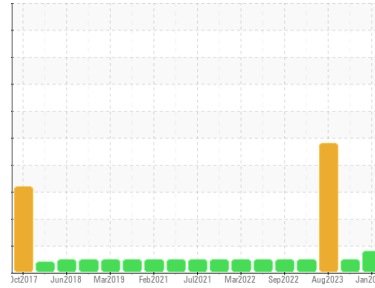




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
201042

Component
Diesel Engine

Fluid
PETRO CANADA DURON XL SYN BLEND 15W40 (--- GAL)

DIAGNOSIS

Recommendation

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

Wear

Silver ppm levels are abnormal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0099553	GFL0084348	GFL0084320
Sample Date	Client Info		16 Jan 2024	17 Aug 2023	09 Aug 2023
Machine Age	kms	Client Info	402088	392291	391695
Oil Age	kms	Client Info	0	0	0
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			ABNORMAL	NORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	0.0	▲ 0.09

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>100	24	10	22
Chromium	ppm	ASTM D5185(m)	>20	<1	0	<1
Nickel	ppm	ASTM D5185(m)	>4	<1	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	▲ 3	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	6	2	5
Lead	ppm	ASTM D5185(m)	>40	2	<1	2
Copper	ppm	ASTM D5185(m)	>330	8	4	9
Tin	ppm	ASTM D5185(m)	>15	<1	0	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)	1	2	3	3
Barium	ppm	ASTM D5185(m)	1	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	56	55	58
Manganese	ppm	ASTM D5185(m)	1	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	870	909	920
Calcium	ppm	ASTM D5185(m)	1070	1072	1042	1012
Phosphorus	ppm	ASTM D5185(m)	1150	937	1023	1101
Zinc	ppm	ASTM D5185(m)	1270	1138	1113	1115
Sulfur	ppm	ASTM D5185(m)	2060	2553	2555	2567
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

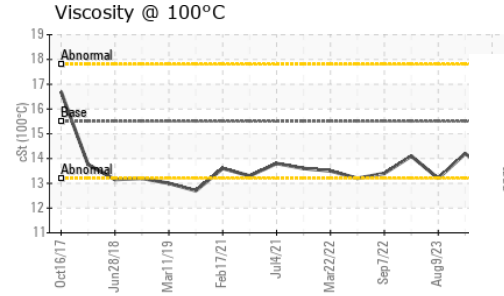
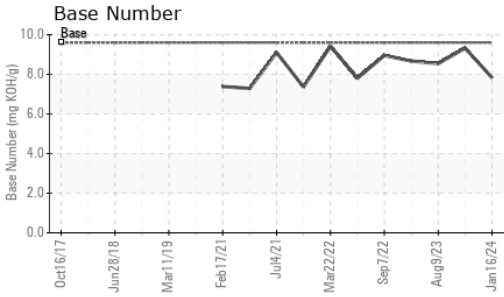
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	16	11	33
Sodium	ppm	ASTM D5185(m)		50	42	▲ 304
Potassium	ppm	ASTM D5185(m)	>20	2	2	▲ 17

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	0.5	0	0.5
Nitration	Abs/cm	ASTM D7624*	>20	12.4	5.6	10.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.9	19.4	21.5



OIL ANALYSIS REPORT

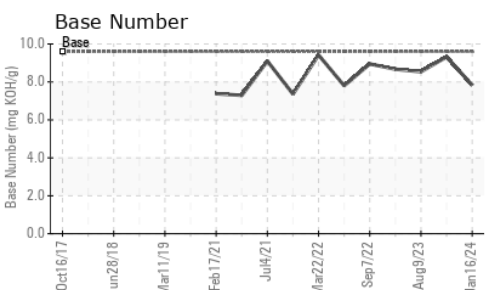
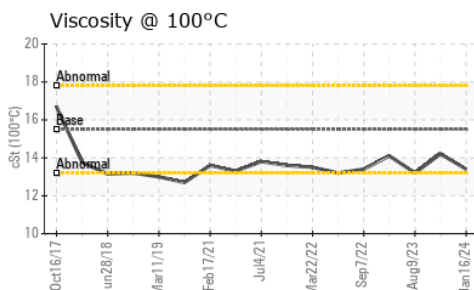
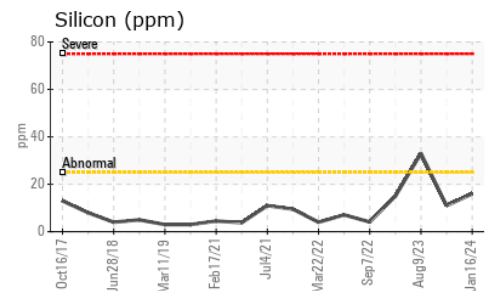
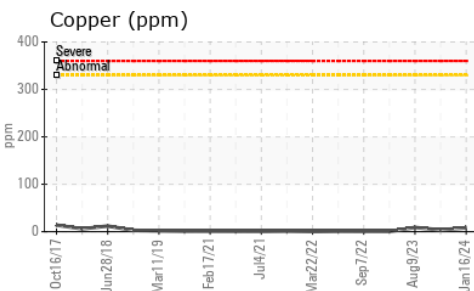
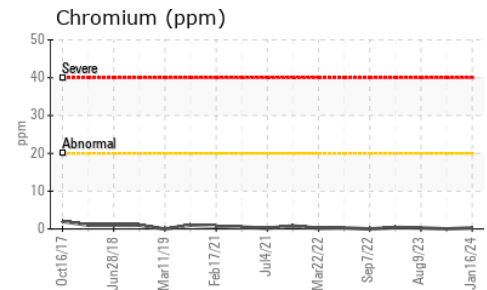
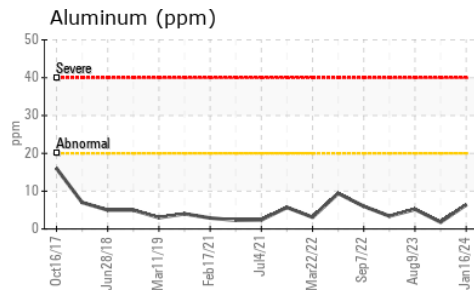
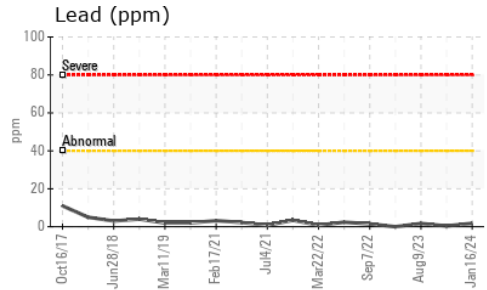
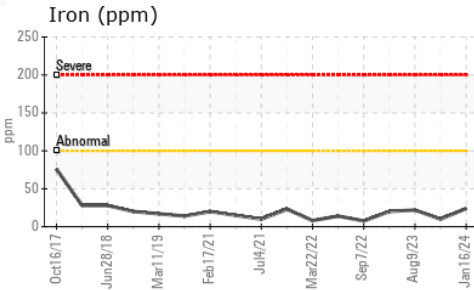


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	19.7	14.3	18.3
Base Number (BN)	mg KOH/g	ASTM D2896*	9.6	7.83	9.32	8.54

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)	15.5	13.4	14.2	13.2

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County
Sample No. : GFL0099553 **Received** : 31 Jan 2024
Lab Number : **02612324** **Diagnosed** : 01 Feb 2024
Unique Number : 5721419 **Diagnostician** : Bill Quesnel
Test Package : MOB 2

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.

Contact: GFL Calgary
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 T: (403)369-6163