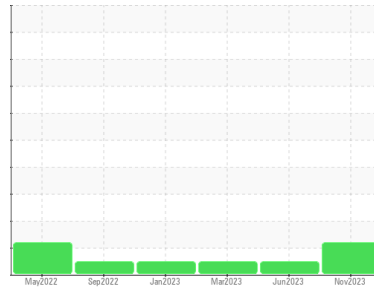




OIL ANALYSIS REPORT

Sample Rating Trend



PH



Machine Id
930021

Component
Natural Gas Engine

Fluid
PETRO CANADA DURON GEO LD 15W40 (--- GAL)

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. 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

The i-pH level is abnormally low. The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The oil is no longer serviceable.

SAMPLE INFORMATION

method	limit/base	current	history1	history2	
Sample Number	Client Info	GFL0091584	GFL0077643	GFL0070742	
Sample Date	Client Info	06 Nov 2023	13 Jun 2023	04 Mar 2023	
Machine Age	kms	Client Info	76328	4485	3706
Oil Age	kms	Client Info	0	782	385
Oil Changed	Client Info	Changed	Changed	Changed	
Sample Status		ABNORMAL	NORMAL	NORMAL	

WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185(m)	>50	12	10	10
Chromium	ppm	ASTM D5185(m)	>4	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>3	<1	0	0
Aluminum	ppm	ASTM D5185(m)	>9	4	3	4
Lead	ppm	ASTM D5185(m)	>30	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>35	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>4	<1	<1	<1
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)	50	9	9	17
Barium	ppm	ASTM D5185(m)	5	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	50	53	52	51
Manganese	ppm	ASTM D5185(m)	0	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	560	555	544	553
Calcium	ppm	ASTM D5185(m)	1510	1604	1572	1648
Phosphorus	ppm	ASTM D5185(m)	780	687	687	787
Zinc	ppm	ASTM D5185(m)	870	904	891	899
Sulfur	ppm	ASTM D5185(m)	2040	1952	1929	2124
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185(m)	>+100	1	4	5
Sodium	ppm	ASTM D5185(m)		6	8	7
Potassium	ppm	ASTM D5185(m)	>20	0	<1	<1

INFRA-RED

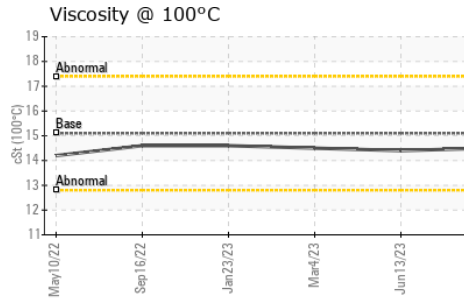
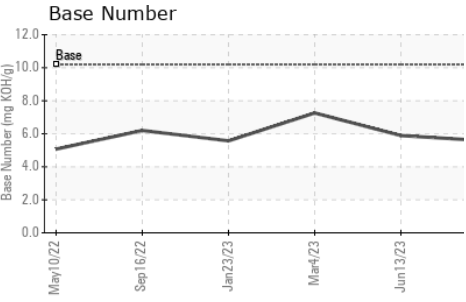
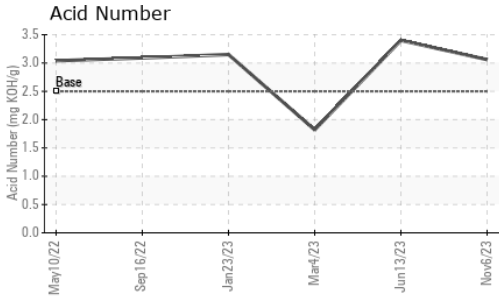
method	limit/base	current	history1	history2		
Soot %	%	ASTM D7844*		0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	11.1	11.2	10.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	23.8	22.6	19.8

FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	ASTM D7414*	>25	19.0	19.3	16.7
Acid Number (AN)	mg KOH/g	ASTM D974*	2.5	3.06	3.40	1.82
Base Number (BN)	mg KOH/g	ASTM D2896*	10.2	5.57	5.89	7.26
i-pH	Scale 0-14	ASTM D7946*	<4.5	▲ 4.01	5.27	5.47



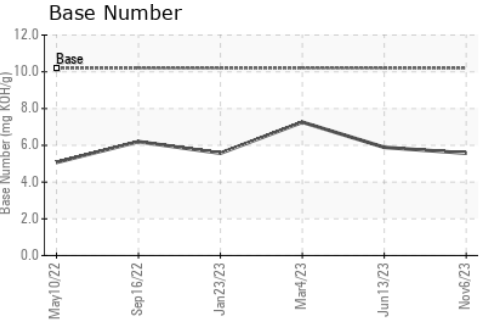
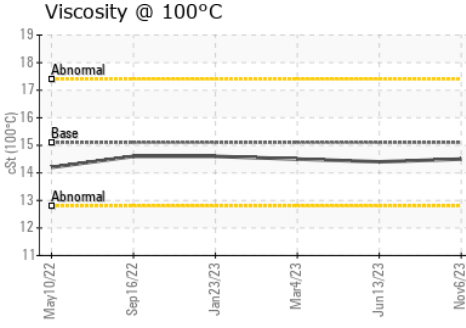
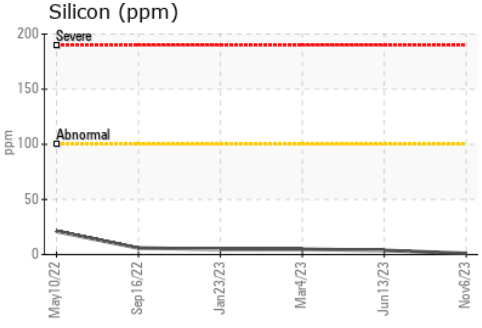
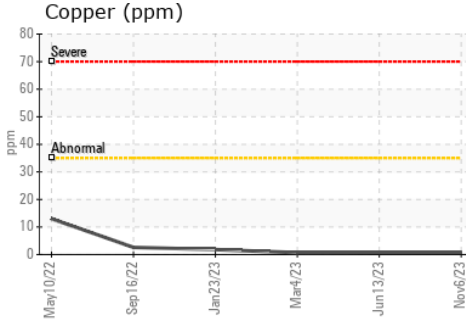
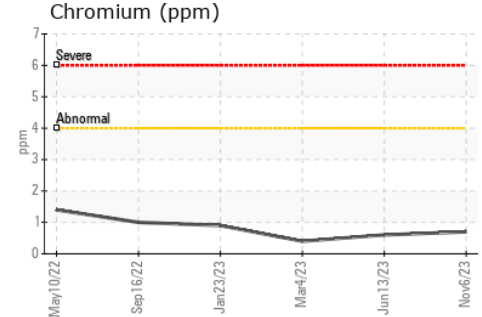
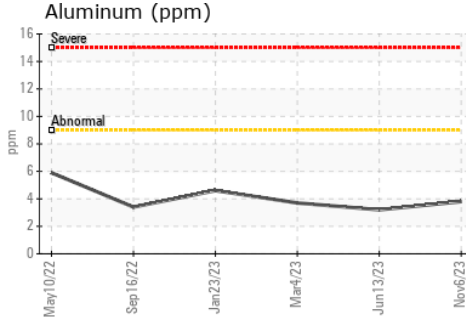
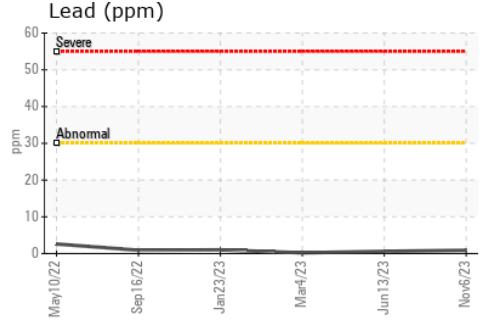
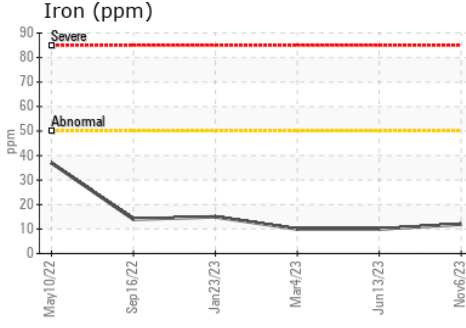
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.1	14.5	14.4

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County
Sample No. : GFL0091584 **Received** : 15 Nov 2023
Lab Number : 02596480 **Diagnosed** : 15 Nov 2023
Unique Number : 5681560 **Diagnostician** : Kevin Marson
Test Package : MOB 2 (Additional Tests: i-pH, TAN Auto, TAN Man)

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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