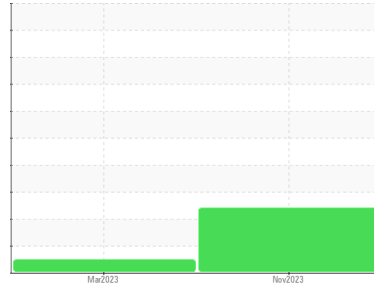




OIL ANALYSIS REPORT

Sample Rating Trend



PH



Machine Id
831006

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 AN level is above the recommended limit. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0091596	GFL0044551	---
Sample Date	Client Info		16 Nov 2023	15 Mar 2023	---
Machine Age	kms	Client Info	63220	4248	---
Oil Age	kms	Client Info	0	1200	---
Oil Changed	Client Info		Changed	Changed	---
Sample Status			ABNORMAL	NORMAL	---

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.1	NEG	NEG	---

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>50	11	10	---
Chromium	ppm	ASTM D5185(m)	>4	1	<1	---
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	---
Titanium	ppm	ASTM D5185(m)		0	<1	---
Silver	ppm	ASTM D5185(m)	>3	<1	0	---
Aluminum	ppm	ASTM D5185(m)	>9	2	2	---
Lead	ppm	ASTM D5185(m)	>30	<1	<1	---
Copper	ppm	ASTM D5185(m)	>35	1	2	---
Tin	ppm	ASTM D5185(m)	>4	0	<1	---
Antimony	ppm	ASTM D5185(m)		0	0	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
Beryllium	ppm	ASTM D5185(m)		0	0	---
Cadmium	ppm	ASTM D5185(m)		0	0	---

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	50	7	9	---
Barium	ppm	ASTM D5185(m)	5	<1	0	---
Molybdenum	ppm	ASTM D5185(m)	50	51	53	---
Manganese	ppm	ASTM D5185(m)	0	<1	<1	---
Magnesium	ppm	ASTM D5185(m)	560	532	543	---
Calcium	ppm	ASTM D5185(m)	1510	1604	1593	---
Phosphorus	ppm	ASTM D5185(m)	780	657	734	---
Zinc	ppm	ASTM D5185(m)	870	910	894	---
Sulfur	ppm	ASTM D5185(m)	2040	1917	2001	---
Lithium	ppm	ASTM D5185(m)		<1	<1	---

CONTAMINANTS

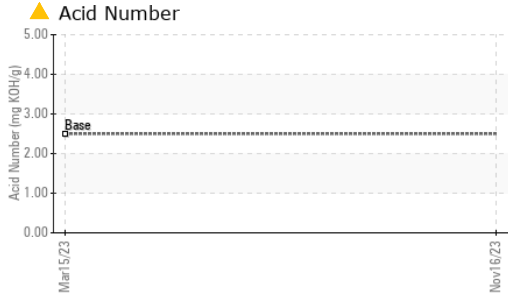
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>+100	5	13	---
Sodium	ppm	ASTM D5185(m)		7	2	---
Potassium	ppm	ASTM D5185(m)	>20	<1	0	---

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*		0	0	---
Nitration	Abs/cm	ASTM D7624*	>20	11.1	9.2	---
Sulfation	Abs/1mm	ASTM D7415*	>30	22.6	23.4	---

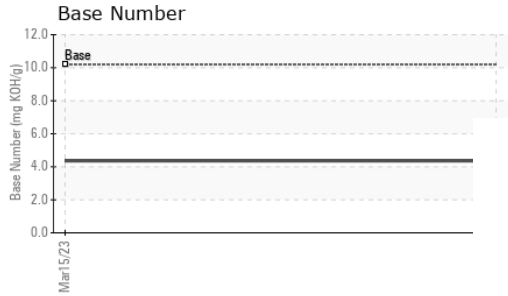


OIL ANALYSIS REPORT



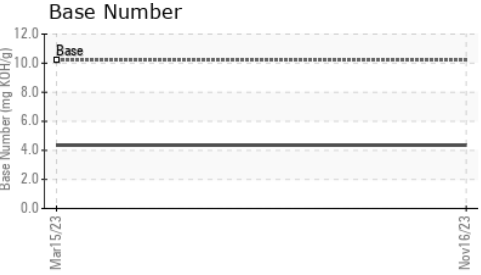
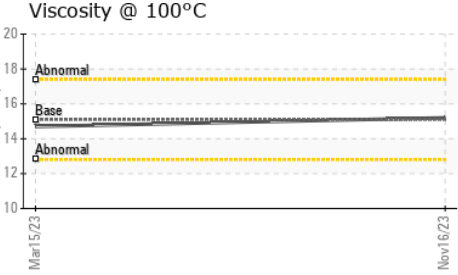
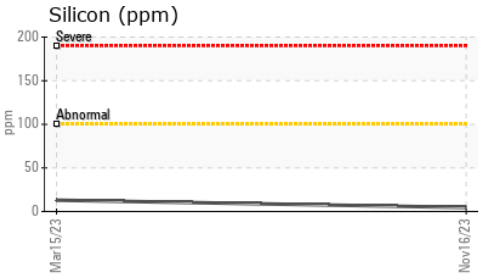
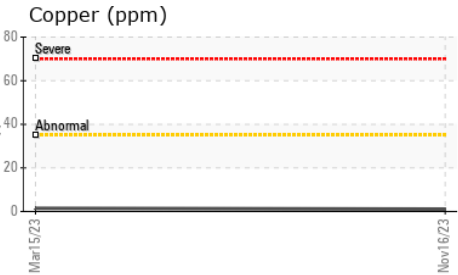
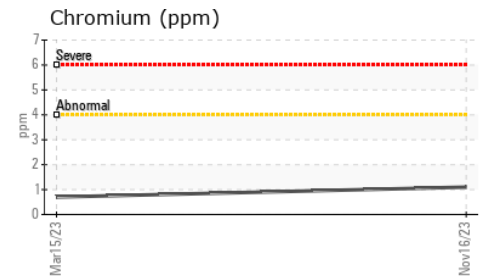
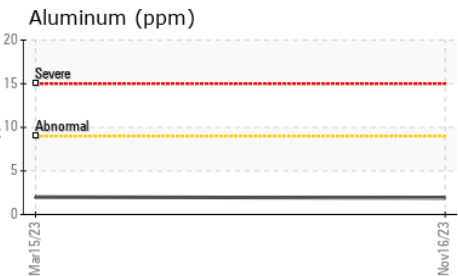
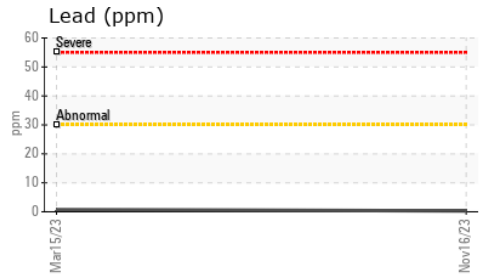
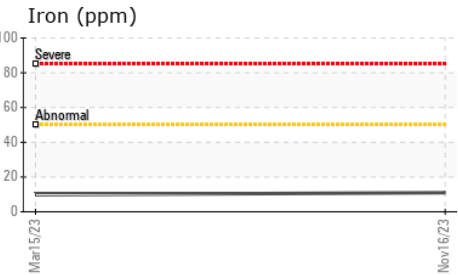
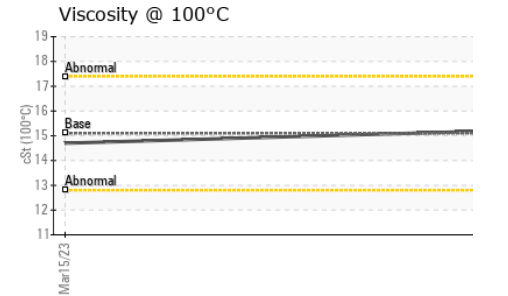
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	19.8	16.1	---
Acid Number (AN)	mg KOH/g	ASTM D974*	2.5	▲ 4.90	---	---
Base Number (BN)	mg KOH/g	ASTM D2896*	10.2	4.36	4.36	---
i-pH	Scale 0-14	ASTM D7946*	<4.5	▲ 4.03	---	---

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	15.2	14.7	---

GRAPHS



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County
Sample No. : GFL0091596 **Received** : 04 Dec 2023
Lab Number : 02600457 **Diagnosed** : 05 Dec 2023
Unique Number : 5685537 **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.

220 Carmek Blvd
 Rocky View County, AB
 CA T1X 1X1
 Contact: GFL Calgary
 calgarymaintenance@gflenv.com
 T:
 F: (403)369-6163