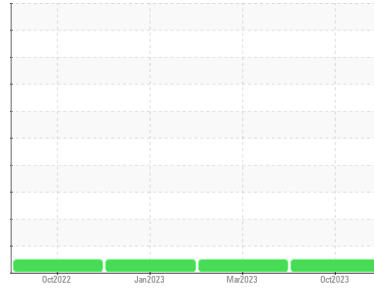




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
831054
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON GEO LD 15W40 (--- GAL)

DIAGNOSIS

Recommendation

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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0091561	GFL0070684	GFL0063716
Sample Date	Client Info		09 Oct 2023	13 Mar 2023	11 Jan 2023
Machine Age	kms	Client Info	2912	1881	1067
Oil Age	kms	Client Info	0	816	1067
Oil Changed	Client Info		Changed	Changed	Not Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>120	20	22	14
Chromium	ppm	ASTM D5185(m)	>20	2	2	1
Nickel	ppm	ASTM D5185(m)	>5	<1	1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	<1	<1
Silver	ppm	ASTM D5185(m)	>2	<1	0	0
Aluminum	ppm	ASTM D5185(m)	>20	3	3	2
Lead	ppm	ASTM D5185(m)	>40	4	2	<1
Copper	ppm	ASTM D5185(m)	>330	2	3	3
Tin	ppm	ASTM D5185(m)	>15	<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	8	8	10
Barium	ppm	ASTM D5185(m)	5	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	50	61	60	54
Manganese	ppm	ASTM D5185(m)	0	<1	2	2
Magnesium	ppm	ASTM D5185(m)	560	654	645	582
Calcium	ppm	ASTM D5185(m)	1510	1806	1833	1681
Phosphorus	ppm	ASTM D5185(m)	780	783	841	734
Zinc	ppm	ASTM D5185(m)	870	1017	986	927
Sulfur	ppm	ASTM D5185(m)	2040	2007	2154	2031
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

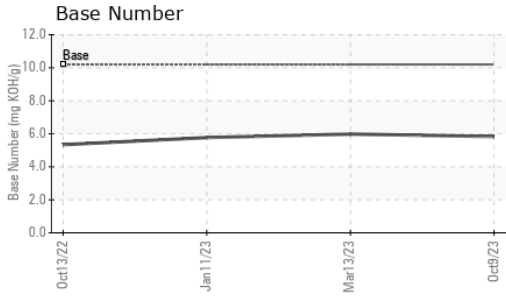
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	7	8	8
Sodium	ppm	ASTM D5185(m)		10	9	7
Potassium	ppm	ASTM D5185(m)	>20	5	1	<1

INFRA-RED

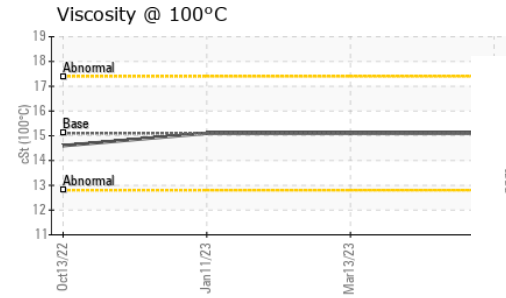
	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>4	0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	12.3	11.9	11.6
Sulfation	Abs/1mm	ASTM D7415*	>30	27.5	27.3	23.6



OIL ANALYSIS REPORT



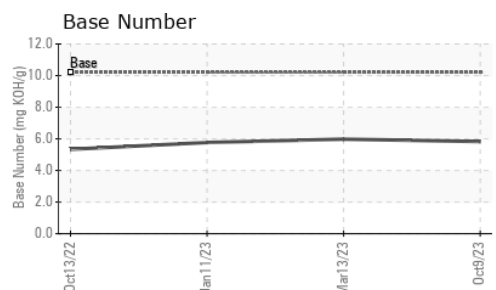
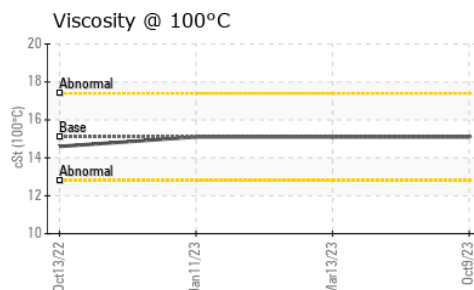
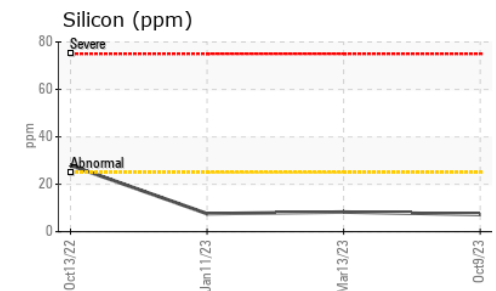
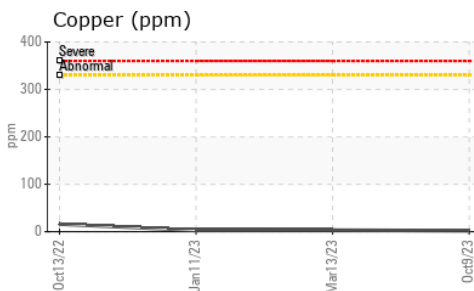
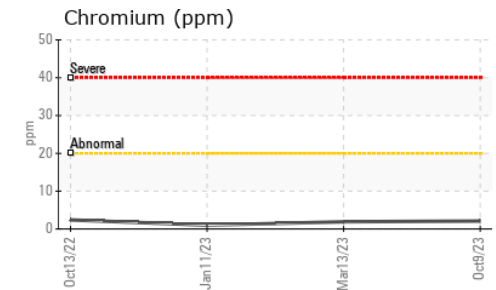
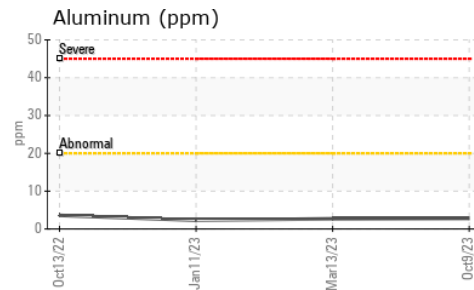
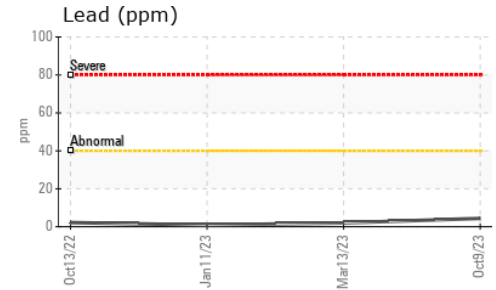
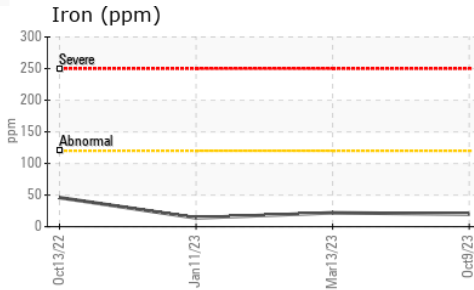
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	23.0	19.8	19.7
Base Number (BN)	mg KOH/g	ASTM D2896*	10.2	5.83	5.98	5.77



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)	15.1	15.1	15.1	15.1

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County
Sample No. : GFL0091561 **Received** : 17 Oct 2023 220 Carmek Blvd
Lab Number : **02589476** **Diagnosed** : 18 Oct 2023 Rocky View County, AB
Unique Number : 5658542 **Diagnostician** : Wes Davis CA T1X 1X1
Test Package : MOB 2 Contact: GFL Calgary calgarymaintenance@gflenv.com

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.

F: (403)369-6163