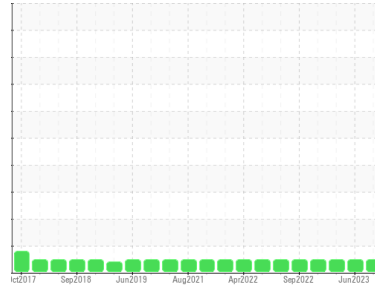




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
201039

Component
Diesel Engine

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

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

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		GFL0091604	GFL0077582	GFL0070678
Sample Date	Client Info		11 Sep 2023	28 Jun 2023	15 Mar 2023
Machine Age	kms	Client Info	0	409191	10442
Oil Age	kms	Client Info	0	0	600
Oil Changed	Client Info		Changed	N/A	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<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) >100	9	14	6
Chromium	ppm	ASTM D5185(m) >20	<1	<1	0
Nickel	ppm	ASTM D5185(m) >4	0	0	0
Titanium	ppm	ASTM D5185(m)	0	0	0
Silver	ppm	ASTM D5185(m) >3	<1	<1	0
Aluminum	ppm	ASTM D5185(m) >20	3	5	3
Lead	ppm	ASTM D5185(m) >40	9	8	1
Copper	ppm	ASTM D5185(m) >330	1	2	<1
Tin	ppm	ASTM D5185(m) >15	<1	<1	<1
Antimony	ppm	ASTM D5185(m)	0	0	<1
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	2	2
Barium	ppm	ASTM D5185(m) 1	0	0	0
Molybdenum	ppm	ASTM D5185(m) 60	58	59	56
Manganese	ppm	ASTM D5185(m) 1	<1	<1	<1
Magnesium	ppm	ASTM D5185(m) 1010	962	966	936
Calcium	ppm	ASTM D5185(m) 1070	1040	1053	1095
Phosphorus	ppm	ASTM D5185(m) 1150	1067	1064	1091
Zinc	ppm	ASTM D5185(m) 1270	1182	1201	1177
Sulfur	ppm	ASTM D5185(m) 2060	2477	2443	2654
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

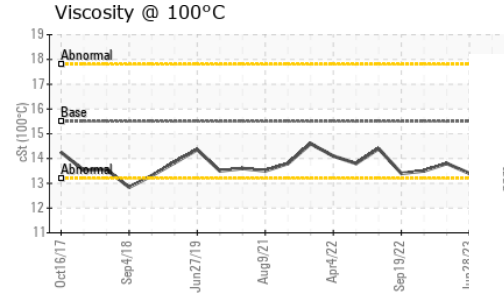
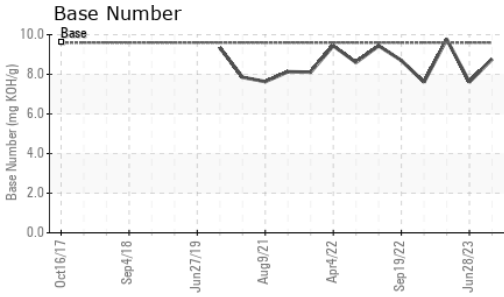
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	3	4	3
Sodium	ppm	ASTM D5185(m)	2	3	2
Potassium	ppm	ASTM D5185(m) >20	2	4	4

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >3	1.4	1.9	0.5
Nitration	Abs/cm	ASTM D7624* >20	11.1	13.6	9.0
Sulfation	Abs/.1mm	ASTM D7415* >30	23.5	25.8	22.8



OIL ANALYSIS REPORT

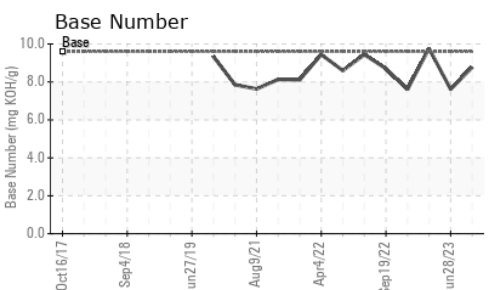
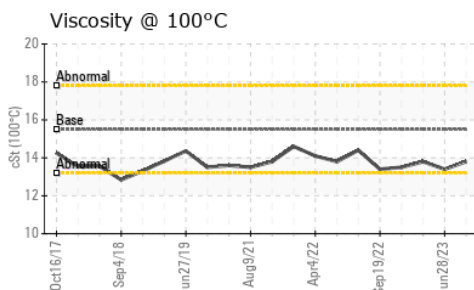
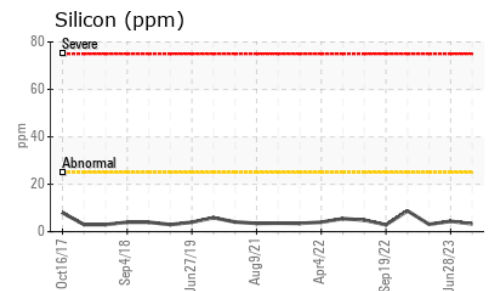
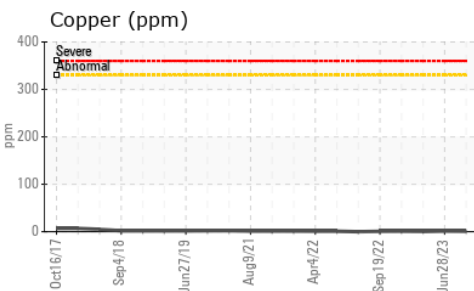
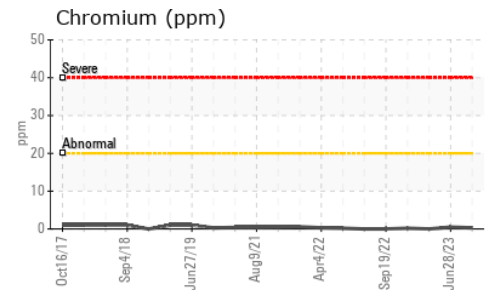
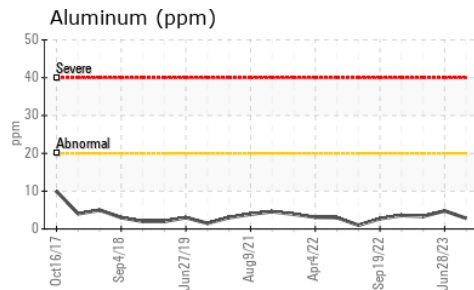
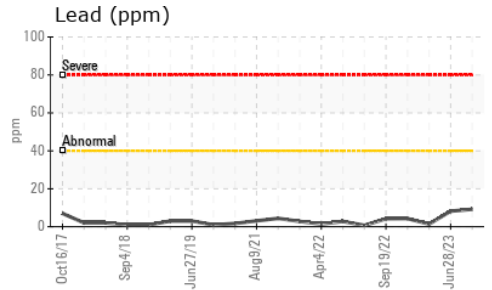
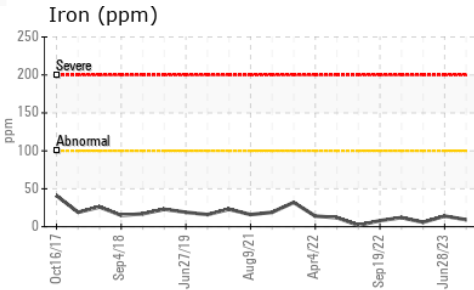


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	20.9	24.6	17.3
Base Number (BN)	mg KOH/g	ASTM D2896*	9.6	8.77	7.61	9.77

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)	15.5	13.8	13.4	13.8

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County
Sample No. : GFL0091604 **Received** : 19 Sep 2023
Lab Number : **02583465** **Diagnosed** : 20 Sep 2023
Unique Number : 5644530 **Diagnostician** : Wes Davis
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