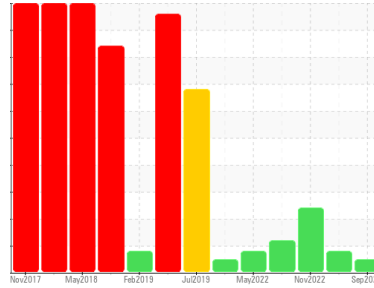




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
401022

Component
Diesel Engine

Fluid
PETRO CANADA DURON XL SYN BLEND 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		GFL0091628	GFL0077624	GFL0063793
Sample Date	Client Info		21 Sep 2023	23 May 2023	16 Nov 2022
Machine Age	kms	Client Info	20140	686586	18428
Oil Age	kms	Client Info	632	0	951
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	MARGINAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	▲ 3.1	▲ 6.5

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >100	63	41	43
Chromium	ppm	ASTM D5185(m) >20	2	2	2
Nickel	ppm	ASTM D5185(m) >4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	0	<1	<1
Silver	ppm	ASTM D5185(m) >3	<1	0	0
Aluminum	ppm	ASTM D5185(m) >20	8	9	8
Lead	ppm	ASTM D5185(m) >40	<1	<1	<1
Copper	ppm	ASTM D5185(m) >330	6	4	6
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	3
Barium	ppm	ASTM D5185(m) 1	<1	0	0
Molybdenum	ppm	ASTM D5185(m) 60	61	61	76
Manganese	ppm	ASTM D5185(m) 1	<1	<1	<1
Magnesium	ppm	ASTM D5185(m) 1010	925	913	812
Calcium	ppm	ASTM D5185(m) 1070	1040	1034	958
Phosphorus	ppm	ASTM D5185(m) 1150	925	1000	880
Zinc	ppm	ASTM D5185(m) 1270	1160	1099	1026
Sulfur	ppm	ASTM D5185(m) 2060	2164	2332	2198
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

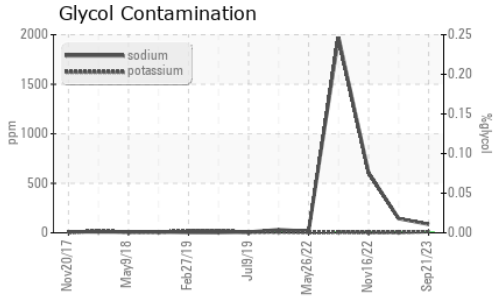
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Silicon	ppm	ASTM D5185(m) >25	9	6	7
Sodium	ppm	ASTM D5185(m)	86	144	▲ 606
Potassium	ppm	ASTM D5185(m) >20	12	4	3
Glycol	%	ASTM D7922*	0.0	0.0	0.0

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >3	2.4	1.7	1.1
Nitration	Abs/cm	ASTM D7624* >20	12.5	10.7	12.2
Sulfation	Abs/.1mm	ASTM D7415* >30	28.0	24.1	24.0



OIL ANALYSIS REPORT

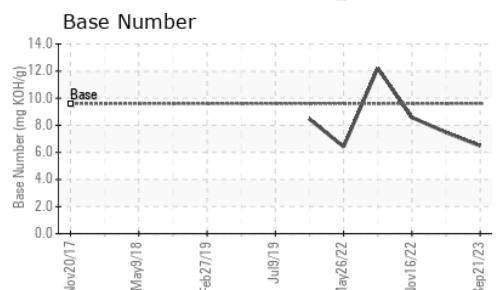
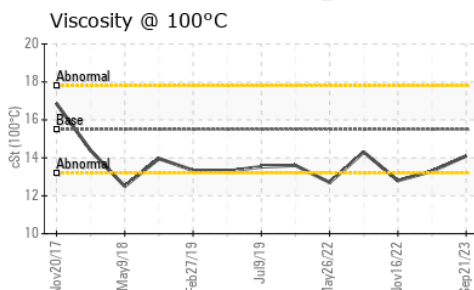
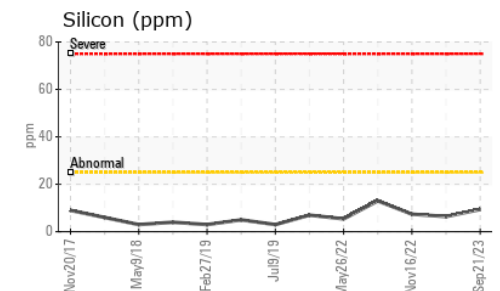
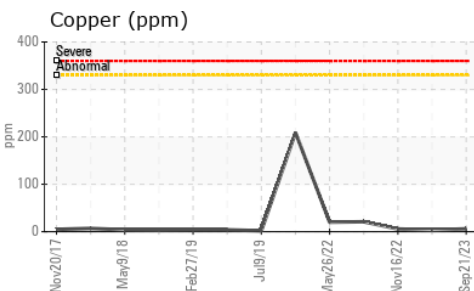
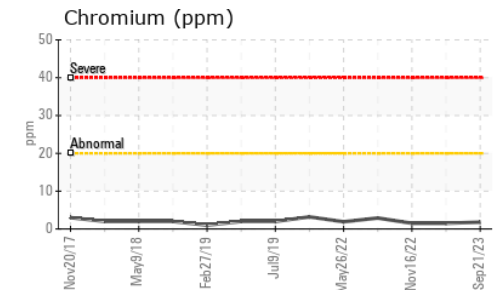
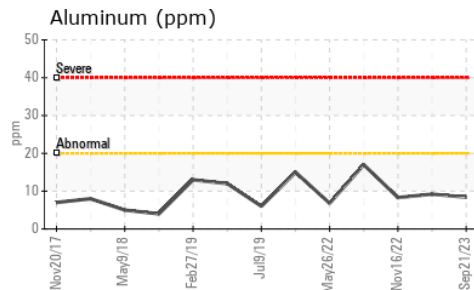
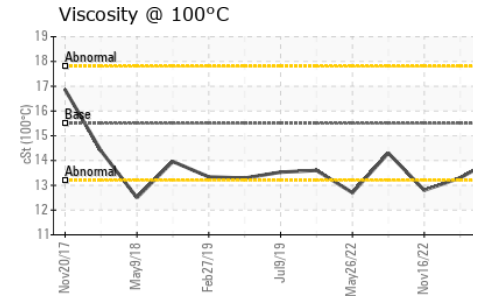
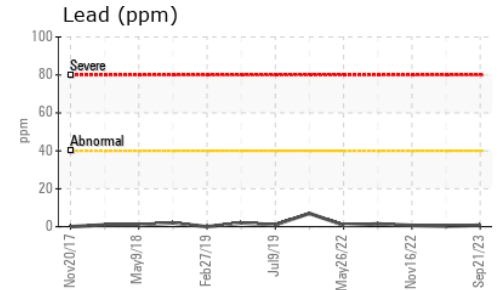
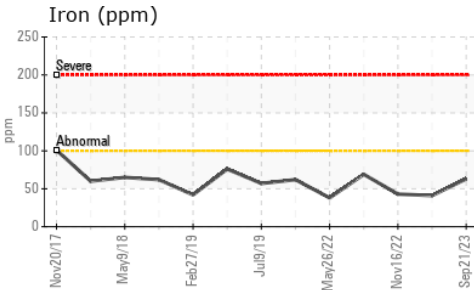
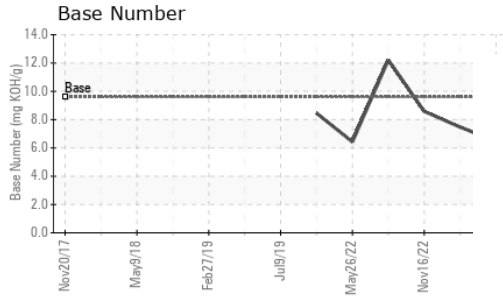


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	24.9	19.2	19.7
Base Number (BN)	mg KOH/g	ASTM D2896*	9.6	6.48	7.47	8.58

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	14.1	13.3	▲ 12.8

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County
Sample No. : GFL0091628 **Received** : 27 Sep 2023
Lab Number : 02585426 **Diagnosed** : 28 Sep 2023
Unique Number : 5646491 **Diagnostician** : Wes Davis
Test Package : MOB 2 (Additional Tests: Glycol)

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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