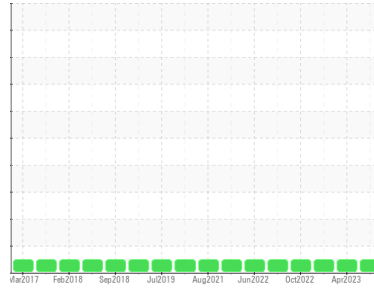




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
4491

Component
Front Diesel Engine

Fluid
PETRO CANADA DURON XL SYN BLEND 15W40 (37 LTR)

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	history 1	history 2	
Sample Number	Client Info	GFL0084264	GFL0077552	GFL0063770	
Sample Date	Client Info	06 Jul 2023	12 Apr 2023	20 Jan 2023	
Machine Age	kms	Client Info	812322	28685	28181
Oil Age	kms	Client Info	0	28685	503
Oil Changed	Client Info	Changed	Changed	Changed	
Sample Status		NORMAL	NORMAL	NORMAL	

CONTAMINATION

method	limit/base	current	history 1	history 2
Fuel	WC Method >6.0	<1.0	<1.0	1.3
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history 1	history 2
Iron	ppm ASTM D5185(m) >100	14	10	14
Chromium	ppm ASTM D5185(m) >20	<1	0	<1
Nickel	ppm ASTM D5185(m) >2	0	<1	<1
Titanium	ppm ASTM D5185(m)	0	<1	<1
Silver	ppm ASTM D5185(m) >2	0	0	0
Aluminum	ppm ASTM D5185(m) >25	2	2	2
Lead	ppm ASTM D5185(m) >40	<1	<1	<1
Copper	ppm ASTM D5185(m) >330	1	1	2
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	history 1	history 2
Boron	ppm ASTM D5185(m) 1	2	2	3
Barium	ppm ASTM D5185(m) 1	0	0	0
Molybdenum	ppm ASTM D5185(m) 60	57	56	57
Manganese	ppm ASTM D5185(m) 1	<1	<1	<1
Magnesium	ppm ASTM D5185(m) 1010	943	902	918
Calcium	ppm ASTM D5185(m) 1070	1030	1096	1054
Phosphorus	ppm ASTM D5185(m) 1150	1042	1055	1056
Zinc	ppm ASTM D5185(m) 1270	1153	1142	1164
Sulfur	ppm ASTM D5185(m) 2060	2517	2597	2619
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

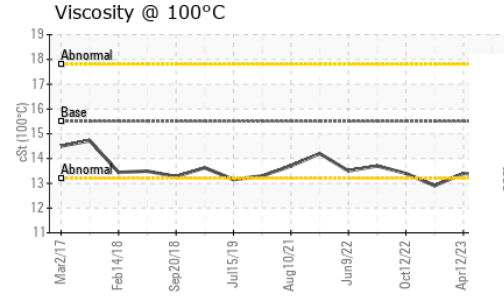
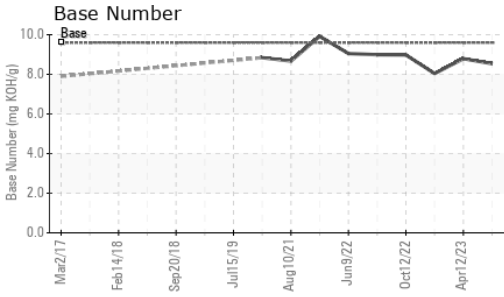
method	limit/base	current	history 1	history 2
Silicon	ppm ASTM D5185(m) >25	5	4	4
Sodium	ppm ASTM D5185(m)	3	3	4
Potassium	ppm ASTM D5185(m) >20	<1	<1	0

INFRA-RED

method	limit/base	current	history 1	history 2
Soot %	% ASTM D7844* >3	0.8	0.4	0.3
Nitration	Abs/cm ASTM D7624* >20	8.0	7.6	8.9
Sulfation	Abs./1mm ASTM D7415* >30	20.0	19.0	19.7



OIL ANALYSIS REPORT

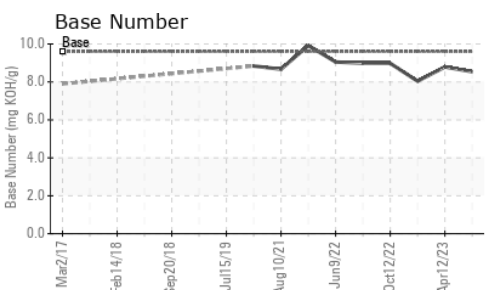
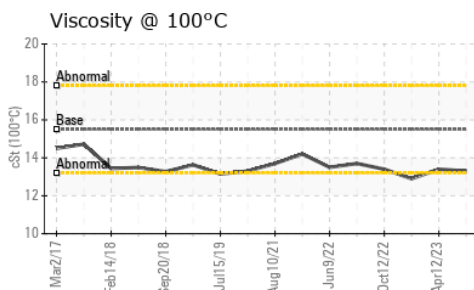
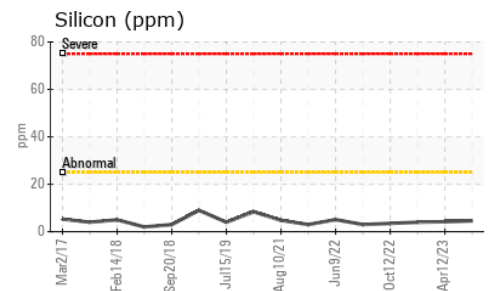
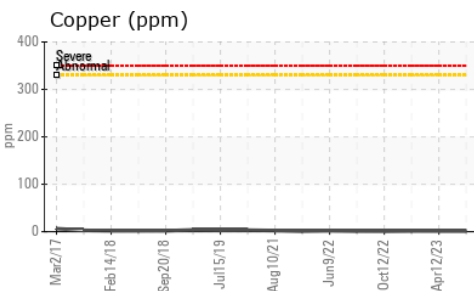
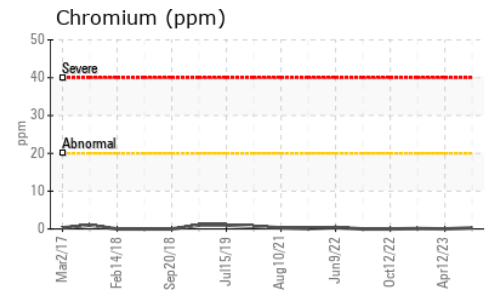
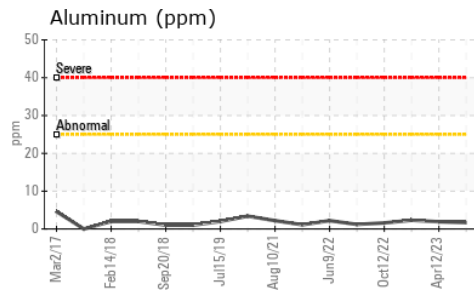
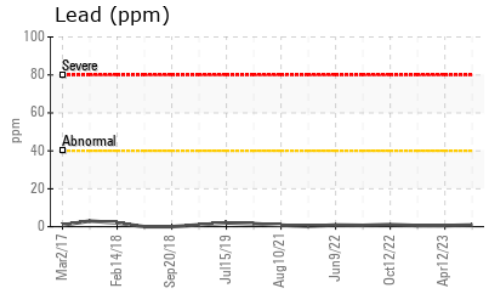
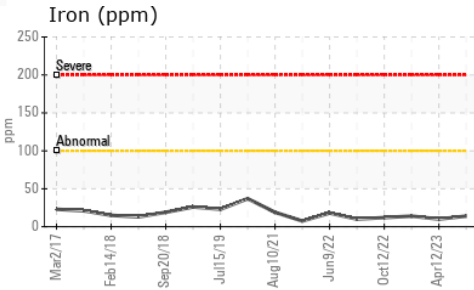


FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs./1mm	ASTM D7414*	>25	15.5	14.9	15.2
Base Number (BN)	mg KOH/g	ASTM D2896*	9.6	8.54	8.79	8.04

VISUAL		method	limit/base	current	history 1	history 2
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D7279(m)	15.5	13.3	13.4	12.9

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County
Sample No. : GFL0084264 **Received** : 11 Jul 2023
Lab Number : 02568979 **Diagnosed** : 11 Jul 2023
Unique Number : 5606025 **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
 calgarymaintenance@gflenv.com
 T: (403)369-6163