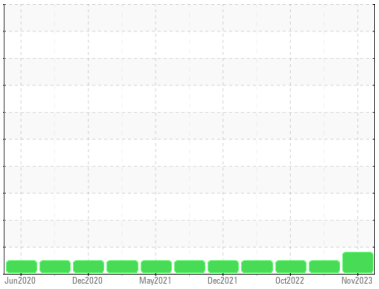
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
401198
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

DIAGNOSIS

▲ Recommendation
The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

▲ Wear
Aluminum ppm levels are abnormal. Piston wear is indicated.

Contamination
There is no indication of any contamination in the oil.

Fluid Condition
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0090417**	GFL0063574	GFL0054313
Sample Date		Client Info		**03 Nov 2023**	05 Jan 2023	27 Oct 2022
Machine Age	hrs	Client Info		**18985**	11088	17334
Oil Age	hrs	Client Info		**0**	600	0
Oil Changed		Client Info		**Changed**	N/A	Changed
Sample Status				**ABNORMAL**	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	0.0

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>120	**27**	19	6
Chromium	ppm	ASTM D5185(m)	>20	**2**	1	0
Nickel	ppm	ASTM D5185(m)	>15	**2**	<1	0
Titanium	ppm	ASTM D5185(m)	>2	**0**	<1	<1
Silver	ppm	ASTM D5185(m)	>3	**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	▲ **28**	4	3
Lead	ppm	ASTM D5185(m)	>40	**2**	<1	3
Copper	ppm	ASTM D5185(m)	>330	**2**	5	1
Tin	ppm	ASTM D5185(m)	>15	**<1**	<1	<1
Antimony	ppm	ASTM D5185(m)		**0**	<1	<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

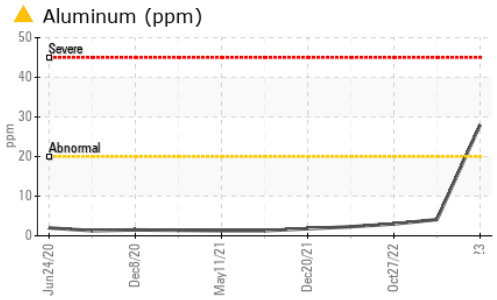
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**32**	2	13
Barium	ppm	ASTM D5185(m)	0	**<1**	0	0
Molybdenum	ppm	ASTM D5185(m)	60	**64**	59	42
Manganese	ppm	ASTM D5185(m)	0	**0**	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	**977**	971	849
Calcium	ppm	ASTM D5185(m)	1070	**1112**	1093	1147
Phosphorus	ppm	ASTM D5185(m)	1150	**966**	1051	945
Zinc	ppm	ASTM D5185(m)	1270	**1184**	1196	1019
Sulfur	ppm	ASTM D5185(m)	2060	**2503**	2444	2528
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

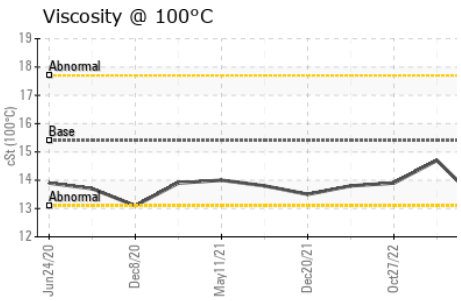
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**6**	6	8
Sodium	ppm	ASTM D5185(m)		**6**	3	6
Potassium	ppm	ASTM D5185(m)	>20	**2**	2	2

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>4	**0.4**	0.2	0.1
Nitration	Abs/cm	ASTM D7624*	>20	**10.2**	8.8	6.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	**23.2**	21.3	20.1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**20.1**	16.9	14.4

OIL ANALYSIS REPORT

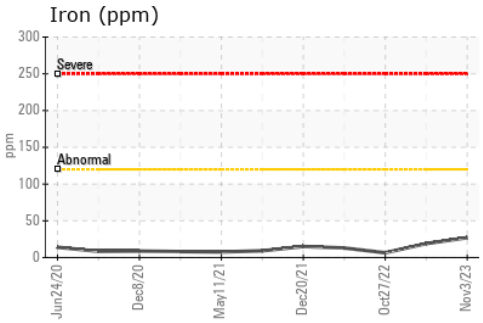


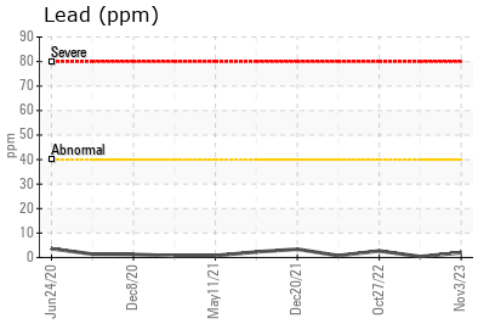


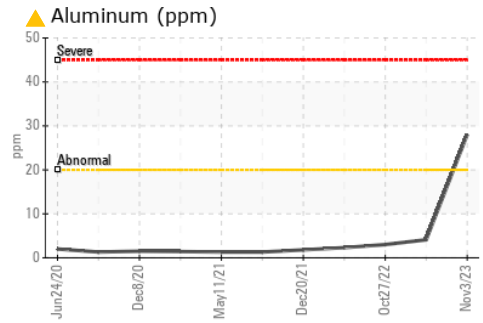
VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	.2%
Free Water	scalar	Visual*		**NEG**	NEG	NEG

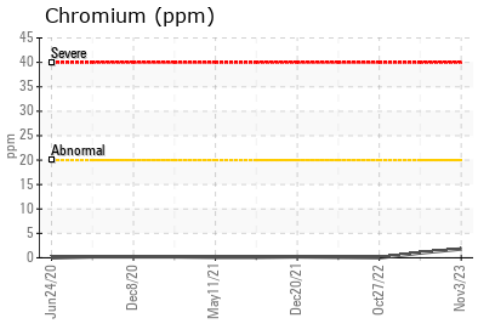
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	**13.2**	14.7	13.9

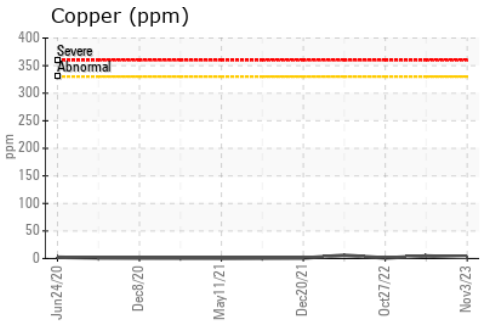
GRAPHS

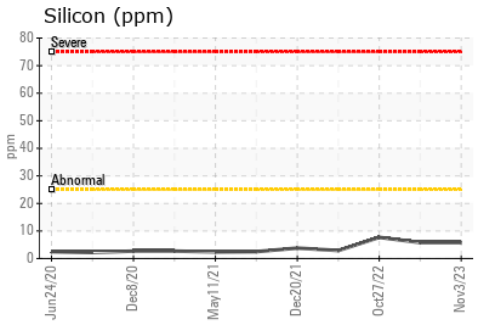


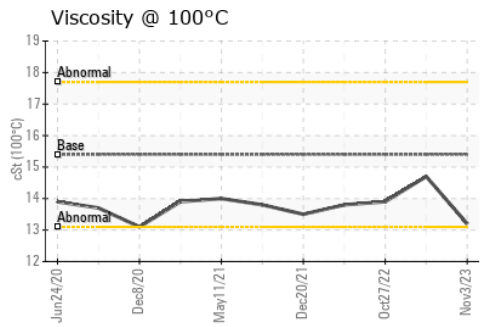


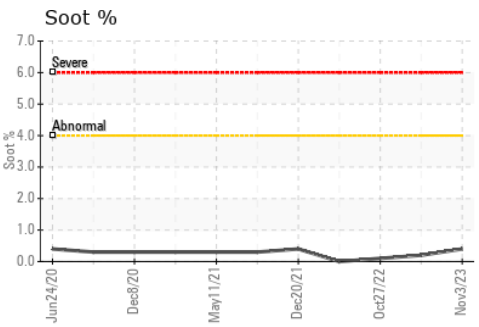












ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0090417
Lab Number : 02594813
Unique Number : 5671892
Test Package : MOB 1

Received : 08 Nov 2023
Diagnosed : 08 Nov 2023
Diagnostician : Kevin Marson

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.

GFL Environmental - 216M
2475 Beryl Drive
Oakville, ON
CA L6J 7X4
Contact: Matthew Gunness
mgunness@gflenv.com
T:
F: