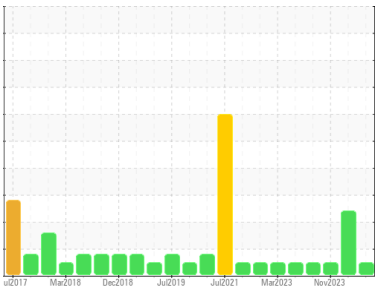
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
4524
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (--- LTR)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

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

Fluid Condition
The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0102642**	GFL0101688	GFL0097598
Sample Date		Client Info		**08 Jan 2024**	04 Jan 2024	01 Nov 2023
Machine Age	kms	Client Info		**1333495**	0	31249
Oil Age	kms	Client Info		**0**	0	526
Oil Changed		Client Info		**Changed**	N/A	Changed
Sample Status				**NORMAL**	SEVERE	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>120	**2**	2	9
Chromium	ppm	ASTM D5185(m)	>20	**0**	0	<1
Nickel	ppm	ASTM D5185(m)	>5	**0**	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	**0**	0	0
Silver	ppm	ASTM D5185(m)	>2	**0**	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	**1**	1	4
Lead	ppm	ASTM D5185(m)	>40	**<1**	0	<1
Copper	ppm	ASTM D5185(m)	>330	**6**	<1	3
Tin	ppm	ASTM D5185(m)	>15	**0**	0	<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)	2	**9**	10	7
Barium	ppm	ASTM D5185(m)	0	**0**	0	<1
Molybdenum	ppm	ASTM D5185(m)	50	**57**	55	61
Manganese	ppm	ASTM D5185(m)	0	**0**	0	0
Magnesium	ppm	ASTM D5185(m)	950	**921**	884	934
Calcium	ppm	ASTM D5185(m)	1050	**1030**	990	1042
Phosphorus	ppm	ASTM D5185(m)	995	**990**	938	979
Zinc	ppm	ASTM D5185(m)	1180	**1121**	1077	1172
Sulfur	ppm	ASTM D5185(m)	2600	**2730**	2653	2594
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**2**	2	4
Sodium	ppm	ASTM D5185(m)		**1**	3	3
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	4
Fuel	%	ASTM D7593*	>3.0	**0.6**	6.1	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>4	**0**	0	0.2
Nitration	Abs/cm	ASTM D7624*	>20	**4.7**	5.0	9.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	**17.2**	17.4	19.1

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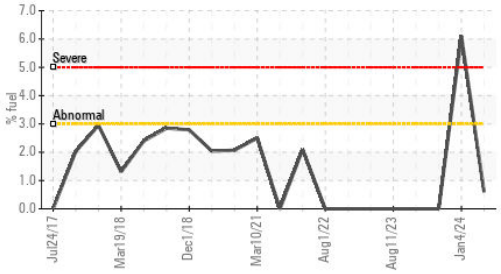
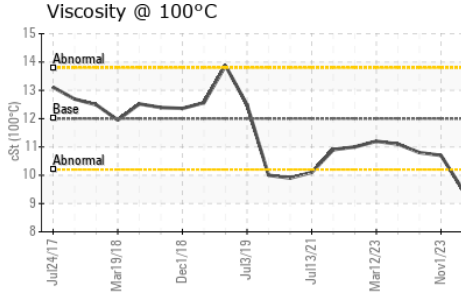
Fuel Dilution



Viscosity @ 100°C



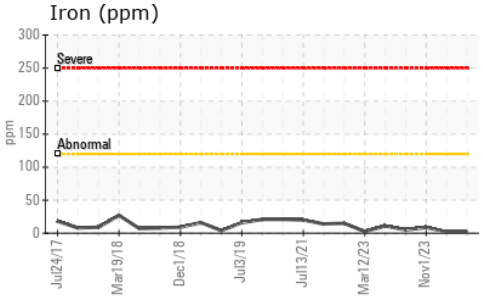
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**13.1**	13.0	16.2

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

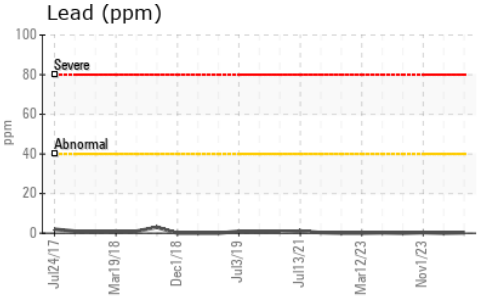
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	**11.1**	▲ 9.5	10.7

GRAPHS

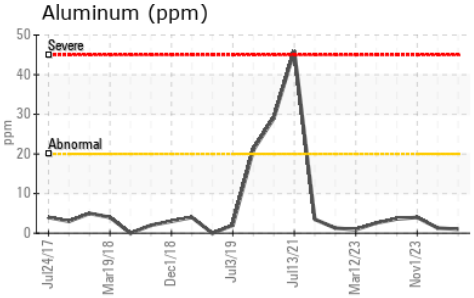
Iron (ppm)



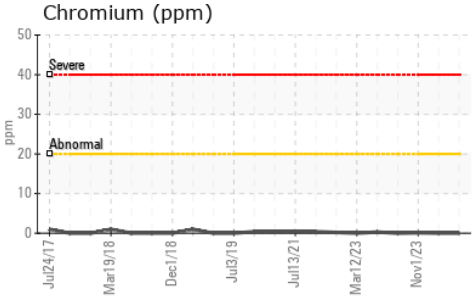
Lead (ppm)



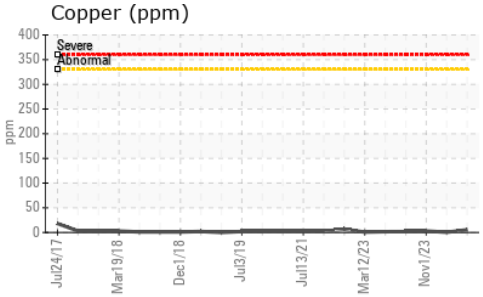
Aluminum (ppm)



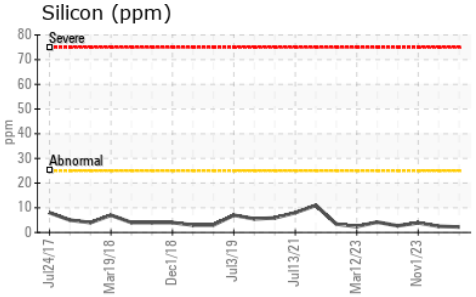
Chromium (ppm)



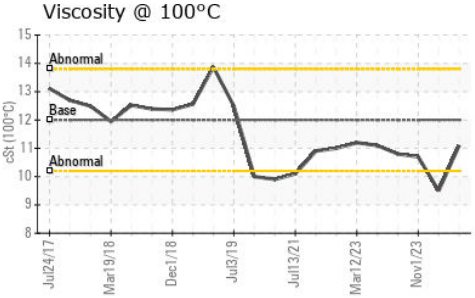
Copper (ppm)



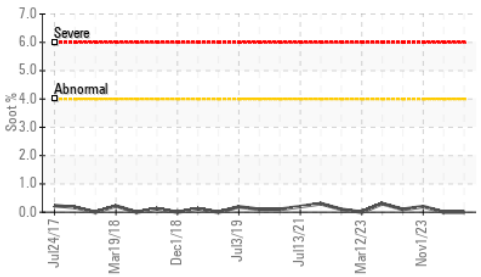
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 554 - Edmonton SW**
Sample No. : GFL0102642 **Recieved** : 22 Jan 2024
Lab Number : 02610193 **Diagnosed** : 23 Jan 2024
Unique Number : 5711279 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: PercentFuel)

8409 -15th Street NW
Edmonton, AB
CA T6P 0B8
Contact: Tim Greig
tgreig@gflenv.com
T: (780)231-0521
F:

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.