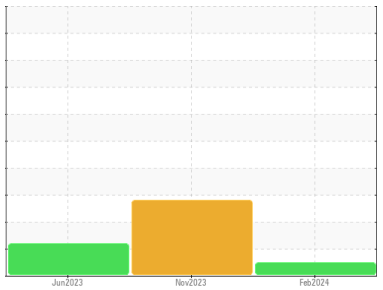
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
5599
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (--- GAL)

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. Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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		**GFL0102588**	GFL0101712	GFL0085921
Sample Date		Client Info		**05 Feb 2024**	22 Nov 2023	28 Jun 2023
Machine Age	hrs	Client Info		**0**	20429	19748
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	Changed	N/A
Sample Status				**NORMAL**	SEVERE	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	0.0

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>120	**12**	12	20
Chromium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	**0**	0	<1
Silver	ppm	ASTM D5185(m)	>2	**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**3**	5	▲ 22
Lead	ppm	ASTM D5185(m)	>40	**<1**	2	2
Copper	ppm	ASTM D5185(m)	>330	**3**	2	3
Tin	ppm	ASTM D5185(m)	>15	**0**	0	<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)	2	**2**	2	2
Barium	ppm	ASTM D5185(m)	0	**0**	<1	0
Molybdenum	ppm	ASTM D5185(m)	50	**60**	46	54
Manganese	ppm	ASTM D5185(m)	0	**0**	0	<1
Magnesium	ppm	ASTM D5185(m)	950	**979**	692	867
Calcium	ppm	ASTM D5185(m)	1050	**1092**	786	922
Phosphorus	ppm	ASTM D5185(m)	995	**990**	698	932
Zinc	ppm	ASTM D5185(m)	1180	**1186**	861	1060
Sulfur	ppm	ASTM D5185(m)	2600	**2478**	1958	2267
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**5**	8	13
Sodium	ppm	ASTM D5185(m)		**9**	15	20
Potassium	ppm	ASTM D5185(m)	>20	**5**	4	33
Fuel	%	ASTM D7593*	>3.0	**0.8**	⬢ 17	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>4	**0.2**	0.3	0.3
Nitration	Abs/cm	ASTM D7624*	>20	**8.6**	9.2	9.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	**20.2**	20.4	22.1

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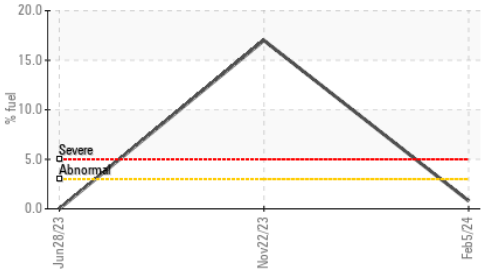
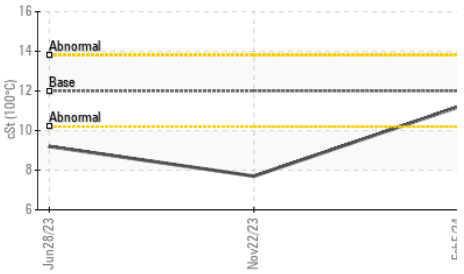
Fuel Dilution



Viscosity @ 100°C



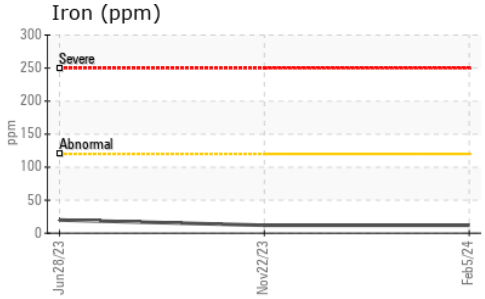
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**16.9**	17.7	20.7

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

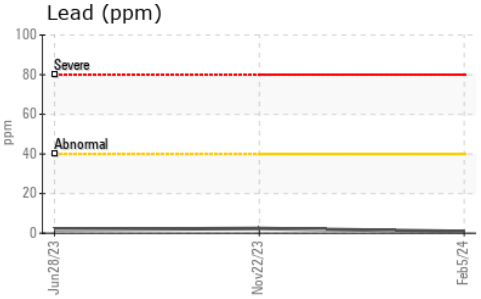
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	**11.2**	⬢ 7.7	▲ 9.2

GRAPHS

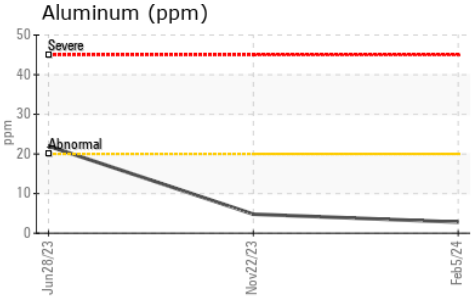
Iron (ppm)



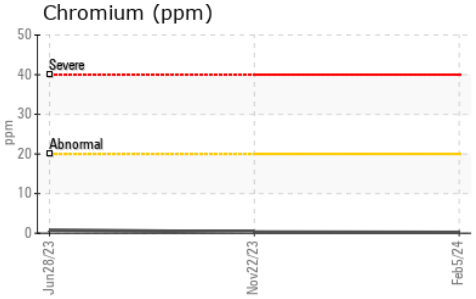
Lead (ppm)



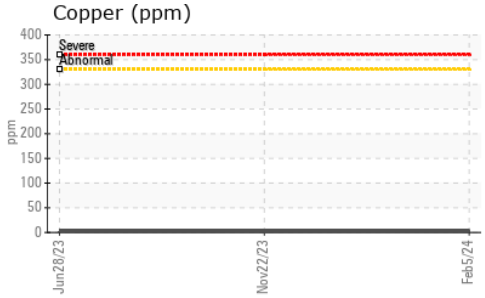
Aluminum (ppm)



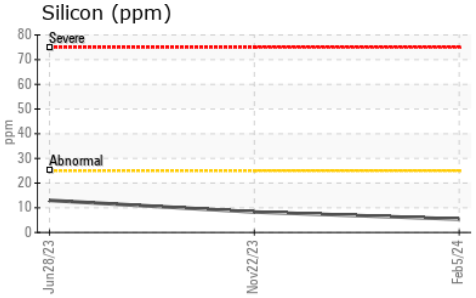
Chromium (ppm)



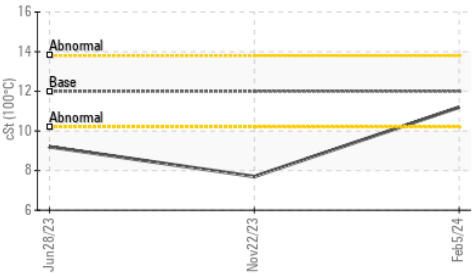
Copper (ppm)



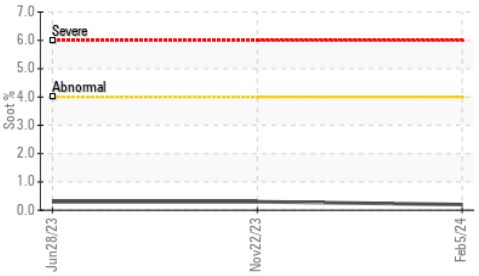
Silicon (ppm)



Viscosity @ 100°C



Soot %



CALA
ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 554 - Edmonton SW**
Sample No. : GFL0102588 **Recieved** : 06 Feb 2024
Lab Number : 02613676 **Diagnosed** : 07 Feb 2024
Unique Number : 5722771 **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.