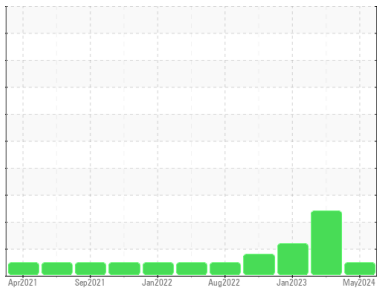
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
429012
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation
The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Wear
All component wear rates are normal.

Contamination
Light fuel dilution occurring. No other contaminants were detected 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		**GFL0094974**	GFL0044705	GFL0044762
Sample Date		Client Info		**23 May 2024**	18 May 2023	31 Jan 2023
Machine Age	hrs	Client Info		**15705**	13569	13069
Oil Age	hrs	Client Info		**2136**	600	600
Oil Changed		Client Info		**Changed**	Changed	Changed
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	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>120	**14**	21	18
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**	<1	<1
Silver	ppm	ASTM D5185(m)	>2	**<1**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**2**	2	3
Lead	ppm	ASTM D5185(m)	>40	**0**	0	0
Copper	ppm	ASTM D5185(m)	>330	**1**	1	2
Tin	ppm	ASTM D5185(m)	>15	**0**	0	0
Antimony	ppm	ASTM D5185(m)		**0**	<1	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

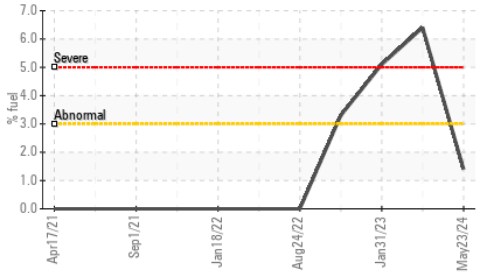
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**2**	6	2
Barium	ppm	ASTM D5185(m)	0	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	60	**53**	54	57
Manganese	ppm	ASTM D5185(m)	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	**835**	833	910
Calcium	ppm	ASTM D5185(m)	1070	**1118**	988	1023
Phosphorus	ppm	ASTM D5185(m)	1150	**943**	903	994
Zinc	ppm	ASTM D5185(m)	1270	**1146**	1047	1124
Sulfur	ppm	ASTM D5185(m)	2060	**2501**	2316	2443
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**5**	7	7
Sodium	ppm	ASTM D5185(m)		**4**	5	6
Potassium	ppm	ASTM D5185(m)	>20	**<1**	2	2
Fuel	%	ASTM D7593*	>3.0	**1.4**	▲ 6.4	▲ 5.1

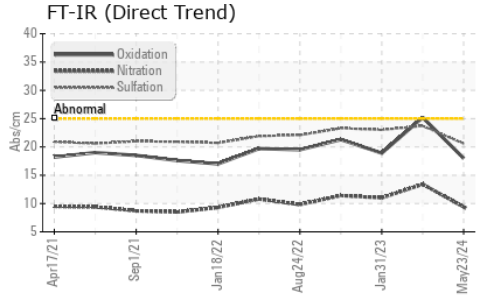
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>4	**0.4**	0.4	0.3
Nitration	Abs/cm	ASTM D7624*	>20	**9.4**	13.4	11.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	**20.6**	23.7	23.0

OIL ANALYSIS REPORT

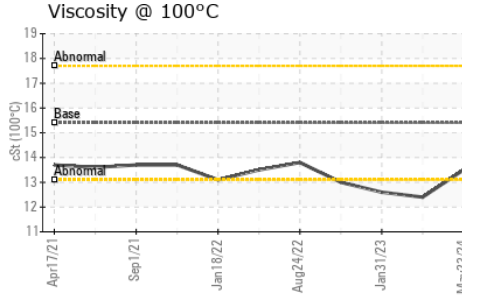
Fuel Dilution



FT-IR (Direct Trend)



Viscosity @ 100°C



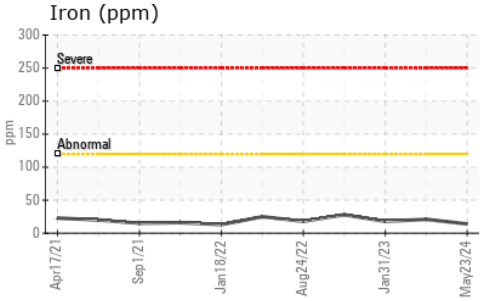
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**18.0**	25.2	18.9

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

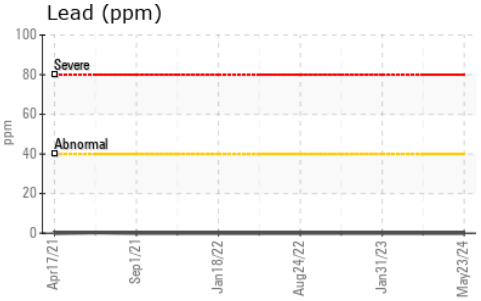
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	**13.5**	▲ 12.4	▲ 12.6

GRAPHS

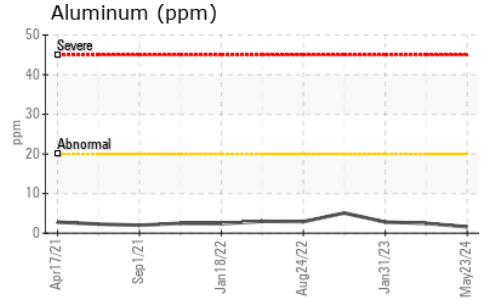
Iron (ppm)



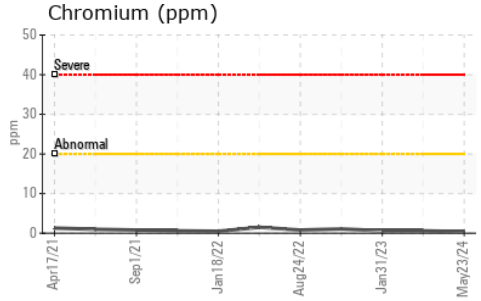
Lead (ppm)



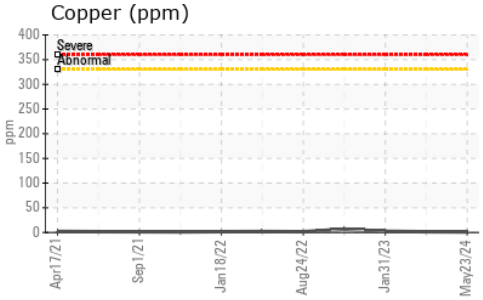
Aluminum (ppm)



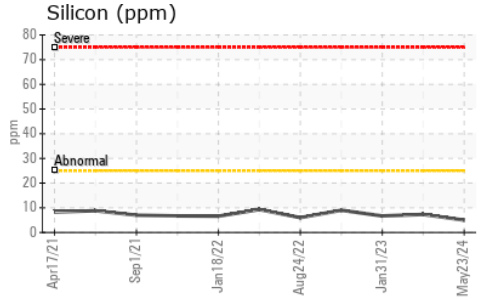
Chromium (ppm)



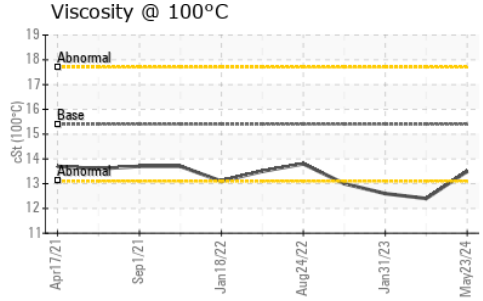
Copper (ppm)



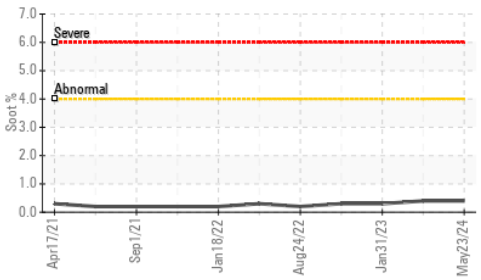
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0094974
Lab Number : 02647515
Unique Number : 5813067
Test Package : MOB 1 (Additional Tests: PercentFuel)

Received : 12 Jul 2024
Tested : 15 Jul 2024
Diagnosed : 15 Jul 2024 - 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 - 577 - First Class
8540 Chilliwack Mountain Rd,
Chilliwack, BC
CA V2R 3W8
Contact: Derek Jessop
djessop@gflenv.com
T: (604)798-5301
F: