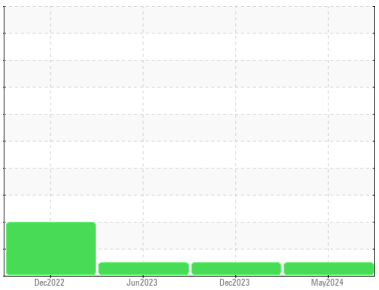
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
426104
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

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 condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0099510**	GFL0099522	GFL0068043
Sample Date		Client Info		**28 May 2024**	05 Dec 2023	06 Jun 2023
Machine Age	hrs	Client Info		**13844**	13540	12982
Oil Age	hrs	Client Info		**304**	558	432
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**NORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	0.0	0.0

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>110	**11**	23	53
Chromium	ppm	ASTM D5185(m)	>4	**<1**	1	2
Nickel	ppm	ASTM D5185(m)	>2	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	<1
Silver	ppm	ASTM D5185(m)	>2	**0**	<1	0
Aluminum	ppm	ASTM D5185(m)	>25	**2**	4	9
Lead	ppm	ASTM D5185(m)	>45	**0**	<1	0
Copper	ppm	ASTM D5185(m)	>85	**<1**	1	1
Tin	ppm	ASTM D5185(m)	>4	**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

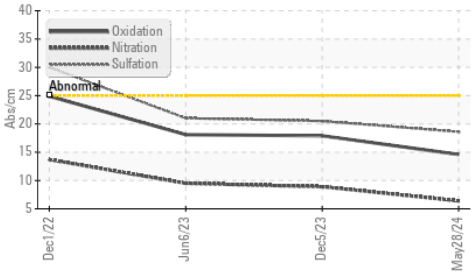
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**5**	4	4
Barium	ppm	ASTM D5185(m)	0	**0**	<1	0
Molybdenum	ppm	ASTM D5185(m)	60	**59**	62	59
Manganese	ppm	ASTM D5185(m)	0	**0**	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	**956**	990	856
Calcium	ppm	ASTM D5185(m)	1070	**1032**	1072	1182
Phosphorus	ppm	ASTM D5185(m)	1150	**985**	988	1039
Zinc	ppm	ASTM D5185(m)	1270	**1160**	1220	1177
Sulfur	ppm	ASTM D5185(m)	2060	**2520**	2505	2547
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>30	**2**	4	6
Sodium	ppm	ASTM D5185(m)		**3**	8	13
Potassium	ppm	ASTM D5185(m)	>20	**4**	21	63

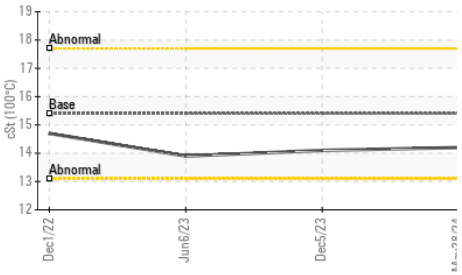
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0**	0.2	0.4
Nitration	Abs/cm	ASTM D7624*	>20	**6.4**	8.9	9.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	**18.6**	20.5	21.0

OIL ANALYSIS REPORT

FT-IR (Direct Trend)



Viscosity @ 100°C



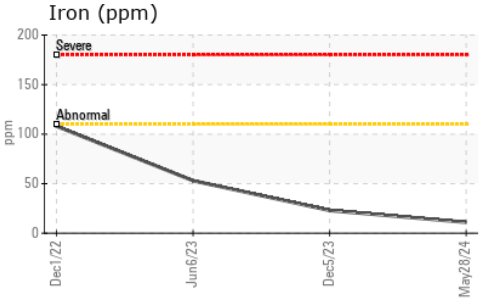
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**14.6**	17.9	18.1

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

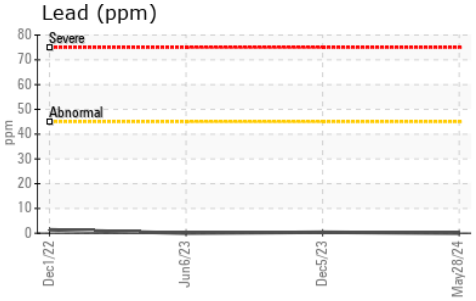
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	**14.2**	14.1	13.9

GRAPHS

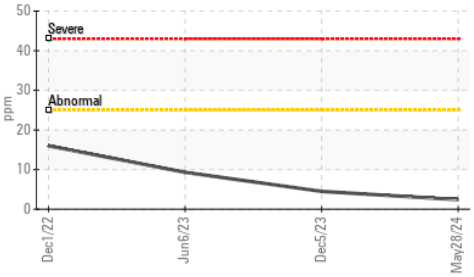
Iron (ppm)



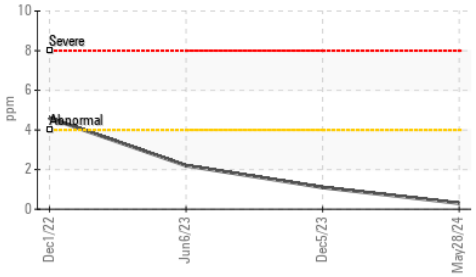
Lead (ppm)



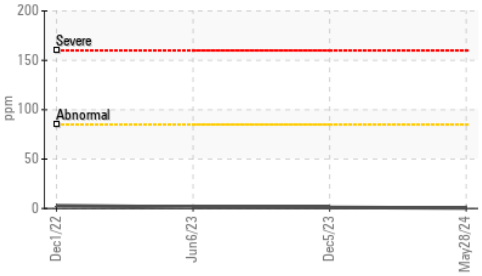
Aluminum (ppm)



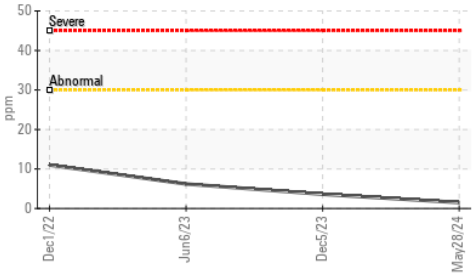
Chromium (ppm)



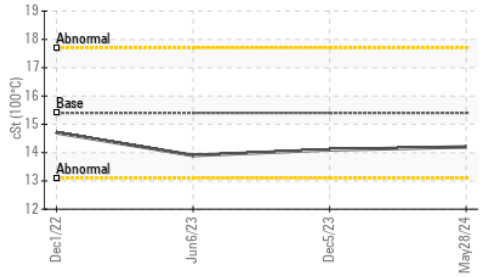
Copper (ppm)



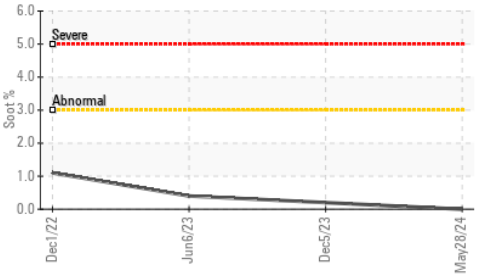
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0099510
Lab Number : 02641380
Unique Number : 5798919
Test Package : MOB 1

Received : 12 Jun 2024
Tested : 12 Jun 2024
Diagnosed : 12 Jun 2024 - Wes Davis

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 - 522
175 MacAlpine Crescent
Fort McMurray, AB
CA T9H 4A5
Contact: Brad Poole
bradley.poole@gflenv.com
T:
F: