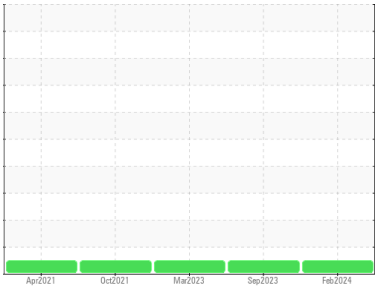
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
731022
Component
Natural Gas Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation
Confirm the source of the lubricant being utilized for top-up/fill. 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
Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0100721**	GFL0079570	GFL0041650
Sample Date		Client Info		**23 Feb 2024**	06 Sep 2023	01 Mar 2023
Machine Age	kms	Client Info		**131339**	113666	92800
Oil Age	kms	Client Info		**0**	0	0
Oil Changed		Client Info		**Changed**	Changed	N/A
Sample Status				**NORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.1	**NEG**	NEG	NEG
Glycol		WC Method		**---**	---	0.0

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>50	**13**	15	22
Chromium	ppm	ASTM D5185(m)	>4	**<1**	1	1
Nickel	ppm	ASTM D5185(m)	>2	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	<1
Silver	ppm	ASTM D5185(m)	>3	**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>9	**2**	2	2
Lead	ppm	ASTM D5185(m)	>30	**3**	4	<1
Copper	ppm	ASTM D5185(m)	>35	**1**	1	2
Tin	ppm	ASTM D5185(m)	>4	**<1**	<1	<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)	0	**7**	7	7
Barium	ppm	ASTM D5185(m)	0	**0**	<1	3
Molybdenum	ppm	ASTM D5185(m)	60	**54**	57	56
Manganese	ppm	ASTM D5185(m)	0	**0**	<1	2
Magnesium	ppm	ASTM D5185(m)	1010	**559**	628	546
Calcium	ppm	ASTM D5185(m)	1070	**1746**	1730	1623
Phosphorus	ppm	ASTM D5185(m)	1150	**753**	813	721
Zinc	ppm	ASTM D5185(m)	1270	**953**	1010	921
Sulfur	ppm	ASTM D5185(m)	2060	**2182**	2124	2089
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

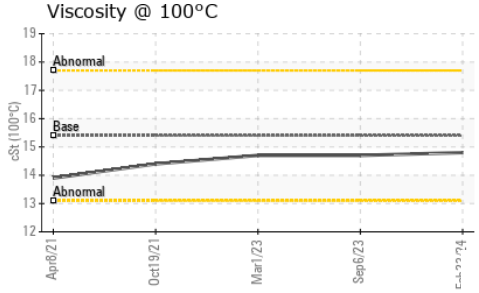
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>+100	**3**	5	15
Sodium	ppm	ASTM D5185(m)		**3**	4	8
Potassium	ppm	ASTM D5185(m)	>20	**2**	5	59

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		**0**	0	0
Nitration	Abs/cm	ASTM D7624*	>20	**12.5**	12.1	10.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	**26.4**	26.2	22.1

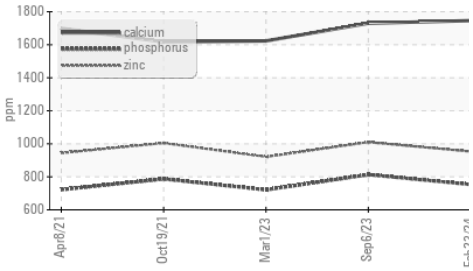
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**21.4**	21.9	15.7

OIL ANALYSIS REPORT

Viscosity @ 100°C



Additives

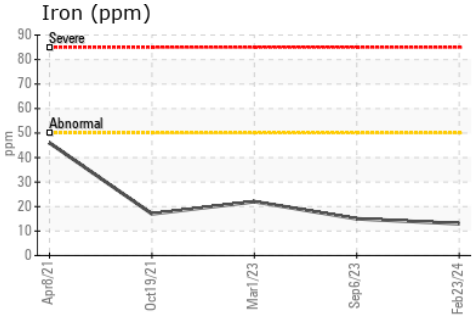


VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.1	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

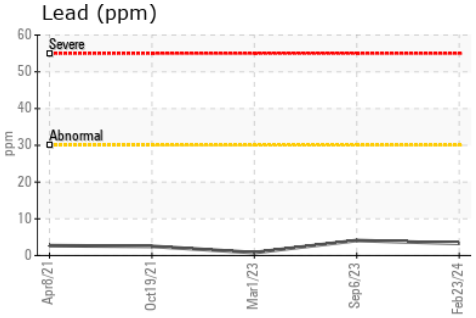
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	**14.8**	14.7	14.7

GRAPHS

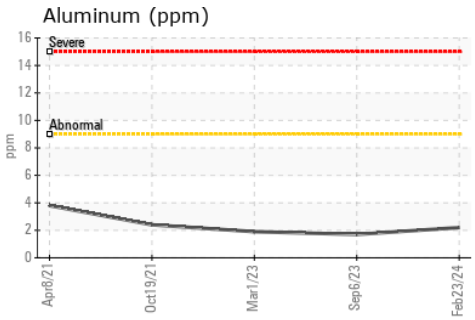
Iron (ppm)



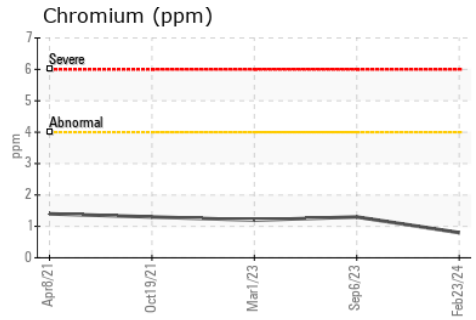
Lead (ppm)



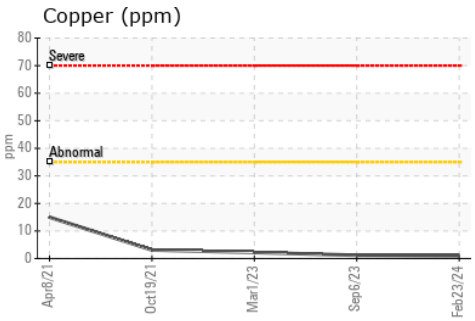
Aluminum (ppm)



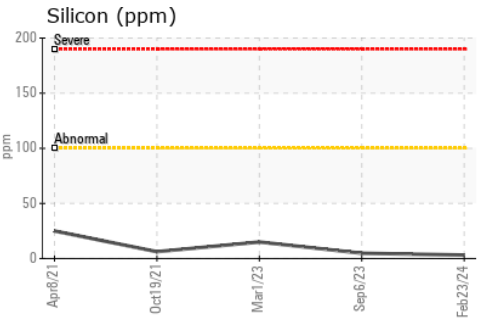
Chromium (ppm)



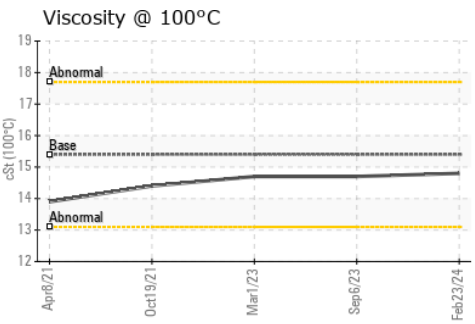
Copper (ppm)



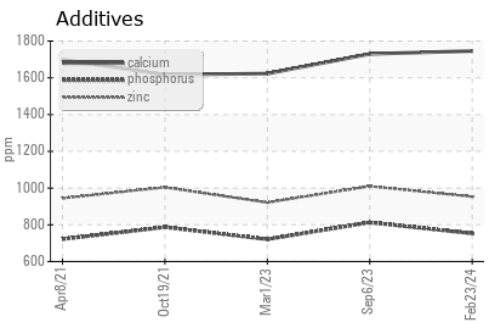
Silicon (ppm)



Viscosity @ 100°C



Additives



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0100721
Lab Number : 02617937
Unique Number : 5735047
Test Package : MOB 1

Received : 26 Feb 2024
Tested : 26 Feb 2024
Diagnosed : 26 Feb 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 - 277 - Niagara Regional
C/O Metro Truck Niagara Inc., 411 Glendale Avenue
St. Catharines, ON
CA L2P 3Y1
Contact: Kelly Bremner
kbremner@gflenv.com
T: (437)235-6849
F: