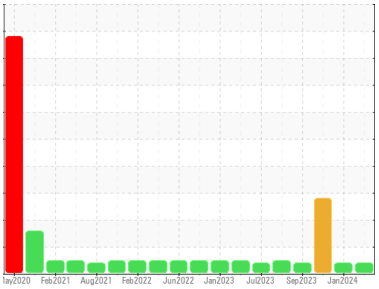
OIL ANALYSIS REPORT

Machine Id
925009
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend



VISCOSITY

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. 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
Light fuel dilution occurring. No other contaminants were detected in the oil.

Fluid Condition
Viscosity of sample indicates oil is within SAE 30 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0113255**	GFL0102858	GFL0097301
Sample Date		Client Info		**04 Mar 2024**	11 Jan 2024	08 Dec 2023
Machine Age	kms	Client Info		**0**	0	0
Oil Age	kms	Client Info		**20535**	20174	19954
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	ABNORMAL	SEVERE

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	**5**	3	10
Chromium	ppm	ASTM D5185(m)	>20	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>5	**2**	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	**2**	2	3
Lead	ppm	ASTM D5185(m)	>40	**0**	0	1
Copper	ppm	ASTM D5185(m)	>330	**<1**	<1	2
Tin	ppm	ASTM D5185(m)	>15	**0**	0	0
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	**36**	52	37
Barium	ppm	ASTM D5185(m)	0	**0**	0	<1
Molybdenum	ppm	ASTM D5185(m)	60	**45**	42	27
Manganese	ppm	ASTM D5185(m)	0	**0**	0	0
Magnesium	ppm	ASTM D5185(m)	1010	**512**	455	303
Calcium	ppm	ASTM D5185(m)	1070	**1670**	1705	1425
Phosphorus	ppm	ASTM D5185(m)	1150	**775**	742	612
Zinc	ppm	ASTM D5185(m)	1270	**897**	842	745
Sulfur	ppm	ASTM D5185(m)	2060	**2323**	2240	1787
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**4**	3	4
Sodium	ppm	ASTM D5185(m)		**2**	2	6
Potassium	ppm	ASTM D5185(m)	>20	**1**	<1	4
Fuel	%	ASTM D7593*	>3.0	**2.5**	1.9	▲ 21.3

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>4	**0.1**	0	0.1
Nitration	Abs/cm	ASTM D7624*	>20	**9.0**	6.5	8.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	**21.6**	22.0	20.3

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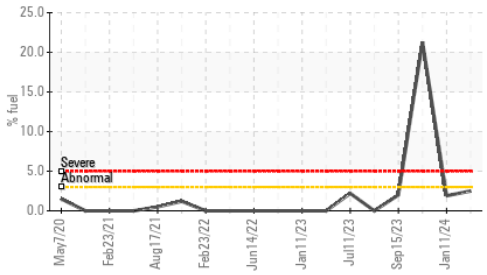
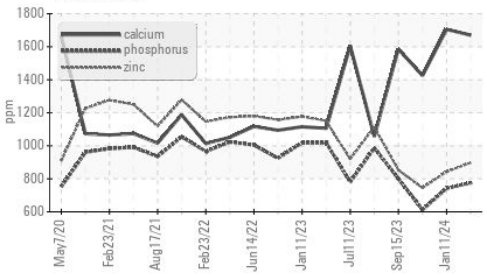
Fuel Dilution



Additives



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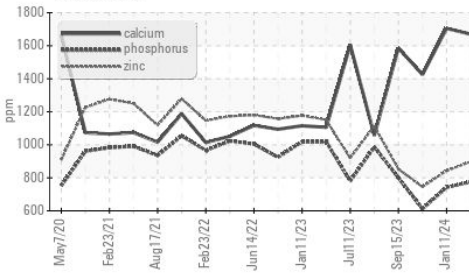


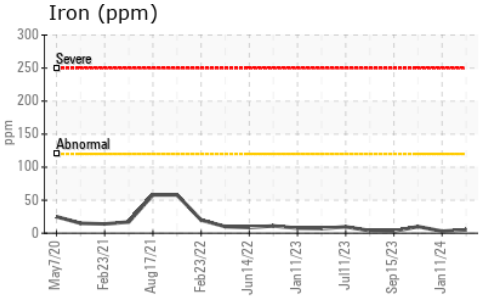
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**20.8**	19.6	17.4

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

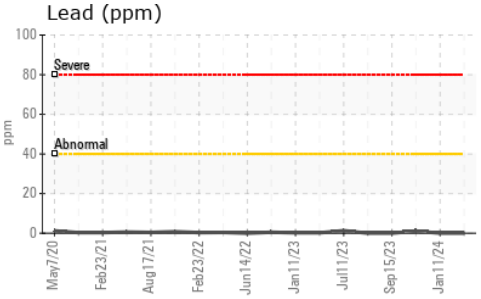
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ **11.4**	▲ 11.2	▲ 6.5

GRAPHS

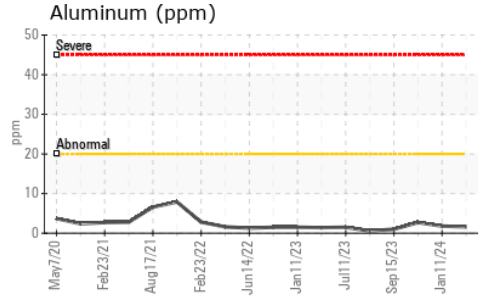
Iron (ppm)



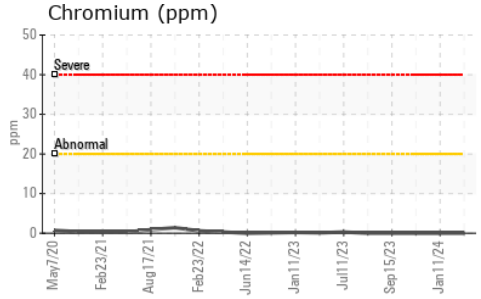
Lead (ppm)



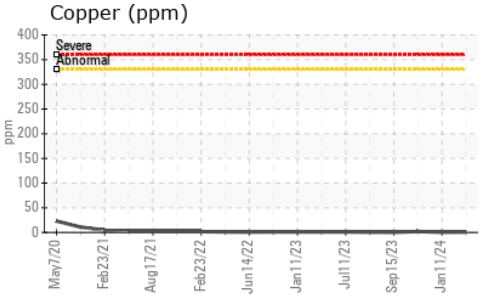
Aluminum (ppm)



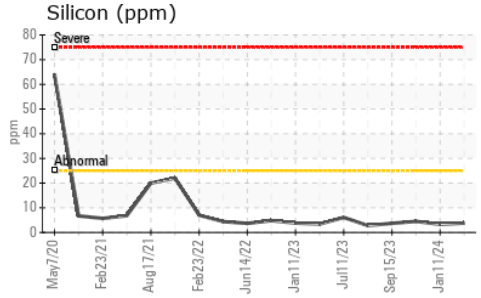
Chromium (ppm)



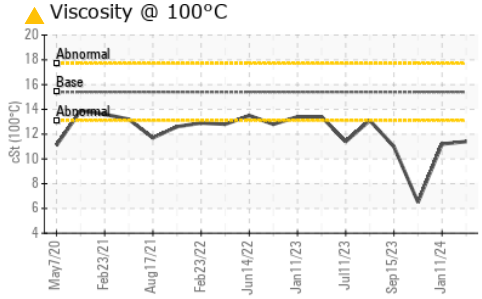
Copper (ppm)



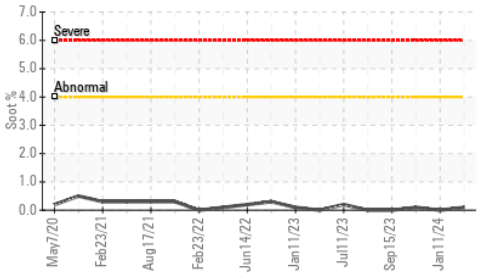
Silicon (ppm)



▲ Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0113255
Lab Number : 02619836
Unique Number : 5736946
Test Package : MOB 1 (Additional Tests: FUELDILUTION, PercentFuel)

Received : 05 Mar 2024
Tested : 07 Mar 2024
Diagnosed : 07 Mar 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.

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