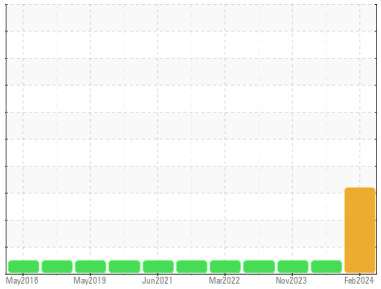
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
8419
Component
Natural Gas Engine
Fluid
PETRO CANADA DURON SHP 10W30 (--- GAL)

DIAGNOSIS

Recommendation
Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

Wear
Iron ppm levels are marginal. All other component wear rates are normal.

Contamination
There is no indication of any contamination in the oil.

Fluid Condition
Viscosity of sample indicates oil is within SAE 20 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		**GFL0102592**	GFL0094167	GFL0097617
Sample Date		Client Info		**22 Feb 2024**	12 Nov 2023	08 Nov 2023
Machine Age	hrs	Client Info		**0**	9422	1984
Oil Age	hrs	Client Info		**0**	600	1195
Oil Changed		Client Info		**N/A**	Changed	Changed
Sample Status				**ABNORMAL**	NORMAL	NORMAL

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>50	▲ **48**	22	18
Chromium	ppm	ASTM D5185(m)	>4	**<1**	1	2
Nickel	ppm	ASTM D5185(m)	>2	**0**	0	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)	>3	**0**	<1	0
Aluminum	ppm	ASTM D5185(m)	>9	**7**	4	2
Lead	ppm	ASTM D5185(m)	>30	**<1**	<1	4
Copper	ppm	ASTM D5185(m)	>35	**6**	1	5
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)	2	▲ **34**	2	8
Barium	ppm	ASTM D5185(m)	0	**0**	<1	<1
Molybdenum	ppm	ASTM D5185(m)	50	**35**	61	54
Manganese	ppm	ASTM D5185(m)	0	**0**	0	<1
Magnesium	ppm	ASTM D5185(m)	950	▲ **549**	976	578
Calcium	ppm	ASTM D5185(m)	1050	▲ **670**	1111	1660
Phosphorus	ppm	ASTM D5185(m)	995	▲ **683**	1009	703
Zinc	ppm	ASTM D5185(m)	1180	▲ **672**	1228	918
Sulfur	ppm	ASTM D5185(m)	2600	**2200**	2500	1916
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

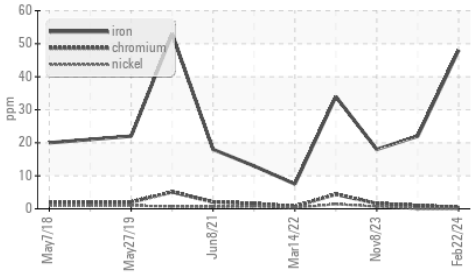
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>+100	**8**	6	4
Sodium	ppm	ASTM D5185(m)		**11**	6	14
Potassium	ppm	ASTM D5185(m)	>20	**2**	5	1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		**0.2**	0.4	0
Nitration	Abs/cm	ASTM D7624*	>20	**6.8**	9.7	11.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	**25.4**	21.1	25.3

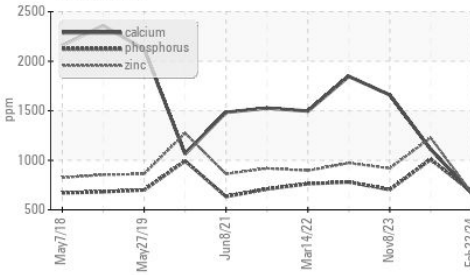
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**27.2**	17.2	20.7

OIL ANALYSIS REPORT

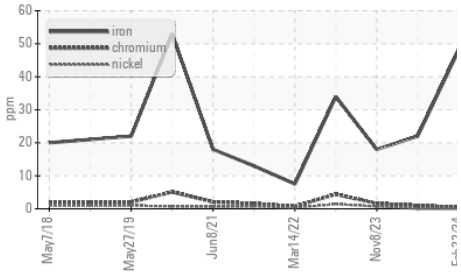
Ferrous Alloys



Additives



Ferrous Alloys

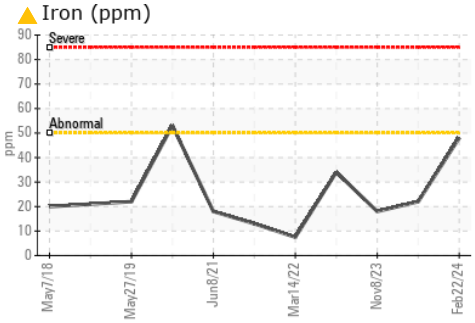


VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.1	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

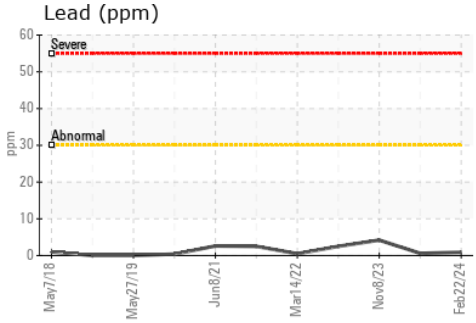
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	▲ **8.5**	11.3	14.7

GRAPHS

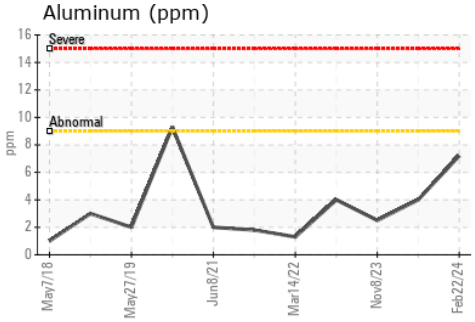
Iron (ppm)



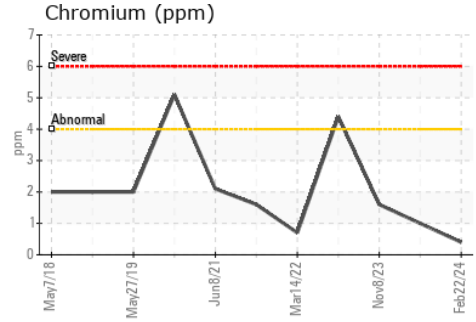
Lead (ppm)



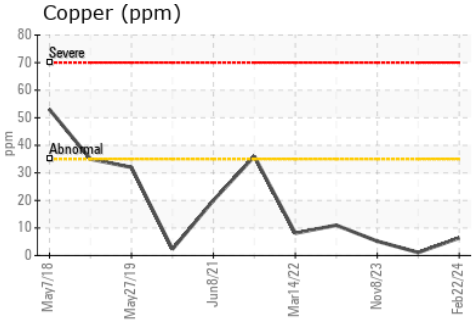
Aluminum (ppm)



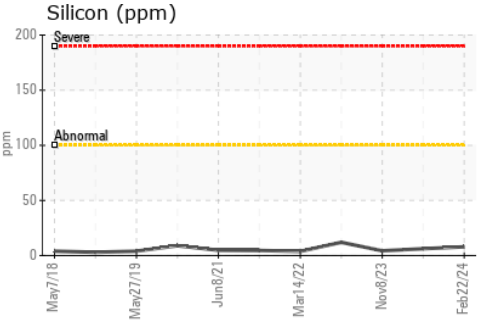
Chromium (ppm)



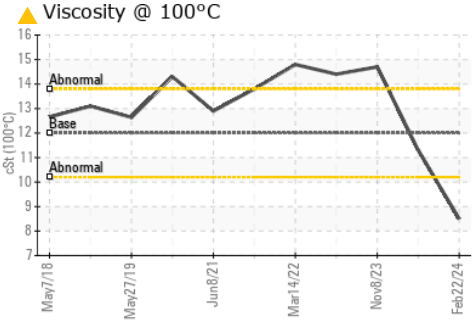
Copper (ppm)



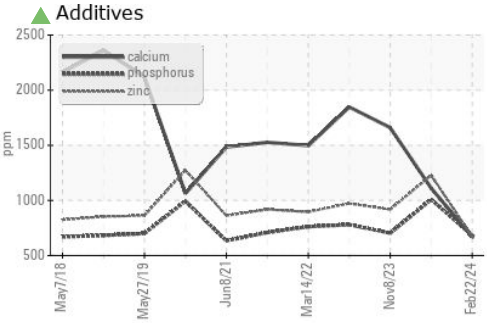
Silicon (ppm)



Viscosity @ 100°C



Additives



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0102592
Lab Number : 02617613
Unique Number : 5734723
Test Package : MOB 1

Received : 23 Feb 2024
Tested : 23 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.

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