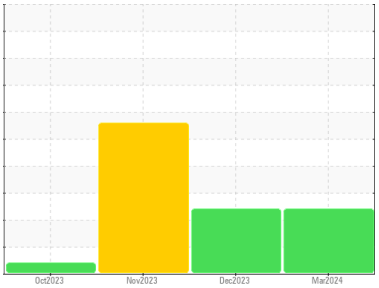
OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Machine Id
800010
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

▲ Recommendation

We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

▲ Contamination

There is a high amount of fuel present in the oil. Test for glycol is negative. Tests confirm the presence of fuel in the oil.

▲ Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0028550**	GFL0102704	GFL0094536
Sample Date		Client Info		**04 Mar 2024**	26 Dec 2023	14 Nov 2023
Machine Age	hrs	Client Info		**0**	15747	15399
Oil Age	hrs	Client Info		**0**	15747	0
Oil Changed		Client Info		**N/A**	Changed	N/A
Sample Status				**SEVERE**	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	**37**	24	38
Chromium	ppm	ASTM D5185(m)	>20	**1**	1	3
Nickel	ppm	ASTM D5185(m)	>4	**<1**	<1	0
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)	>3	**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**2**	5	▲ 18
Lead	ppm	ASTM D5185(m)	>40	**0**	<1	2
Copper	ppm	ASTM D5185(m)	>330	**1**	1	3
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	**3**	1	2
Barium	ppm	ASTM D5185(m)	0	**0**	0	<1
Molybdenum	ppm	ASTM D5185(m)	60	**65**	125	488
Manganese	ppm	ASTM D5185(m)	0	**0**	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	**813**	845	817
Calcium	ppm	ASTM D5185(m)	1070	**892**	952	891
Phosphorus	ppm	ASTM D5185(m)	1150	**856**	882	1072
Zinc	ppm	ASTM D5185(m)	1270	**993**	1001	1027
Sulfur	ppm	ASTM D5185(m)	2060	**2178**	2377	2288
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**7**	7	15
Sodium	ppm	ASTM D5185(m)		**129**	● 497	● 2961
Potassium	ppm	ASTM D5185(m)	>20	**4**	14	▲ 66
Fuel	%	ASTM D7593*	>5	▲ **10.5**	▲ 7.7	<1.0
Glycol	%	ASTM D7922*		**0.0**	0.0	▲ 0.015

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**1**	0.6	0.7
Nitration	Abs/cm	ASTM D7624*	>20	**13.7**	12.1	18.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	**25.6**	22.2	25.9

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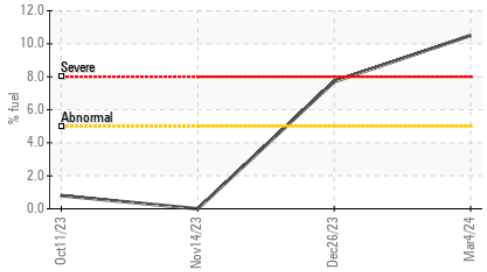
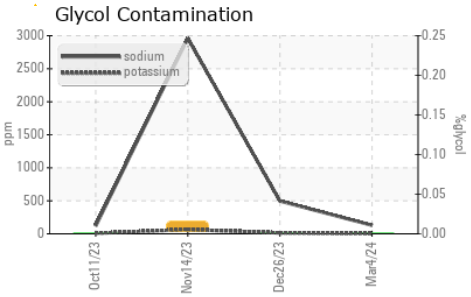
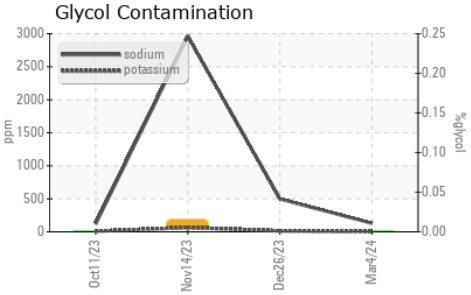
▲ Fuel Dilution



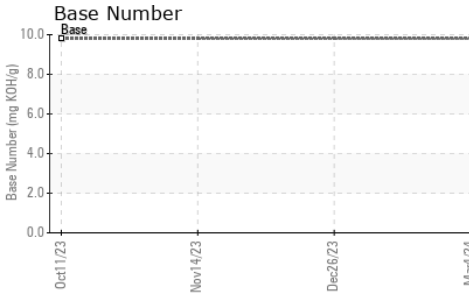
Glycol Contamination



Glycol Contamination



Base Number



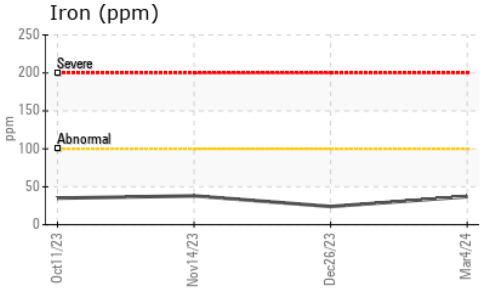
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**27.1**	21.3	24.8
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	**6.00**	---	---

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

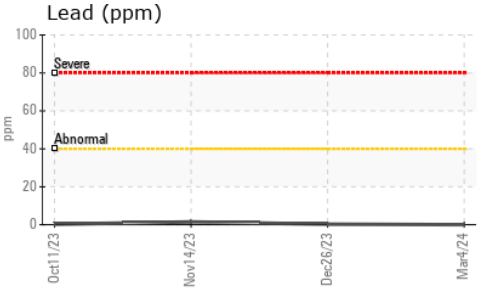
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ **12.4**	▲ 12.6	13.5

GRAPHS

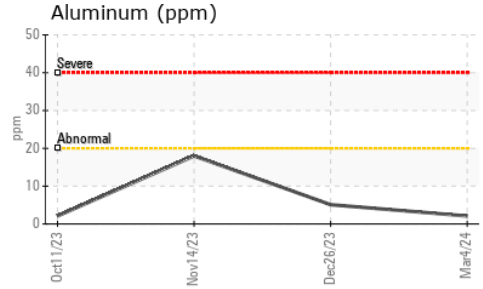
Iron (ppm)



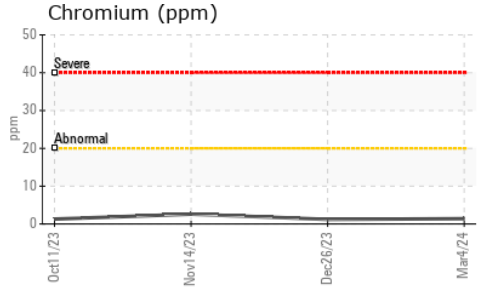
Lead (ppm)



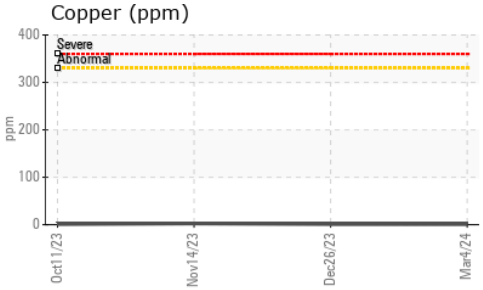
Aluminum (ppm)



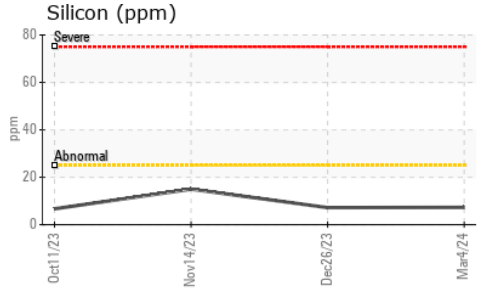
Chromium (ppm)



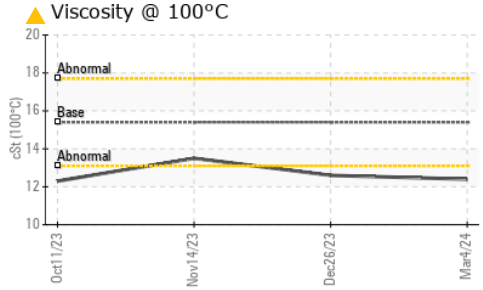
Copper (ppm)



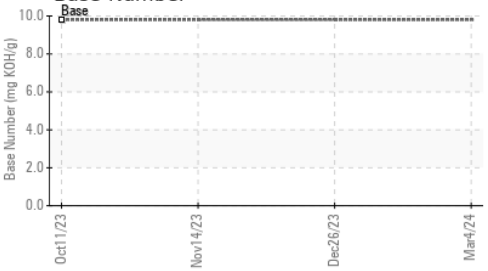
Silicon (ppm)



▲ Viscosity @ 100°C



Base Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0028550
Lab Number : 02620431
Unique Number : 5737541
Test Package : MOB 2 (Additional Tests: Glycol, PercentFuel)

Received : 07 Mar 2024
Tested : 08 Mar 2024
Diagnosed : 08 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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