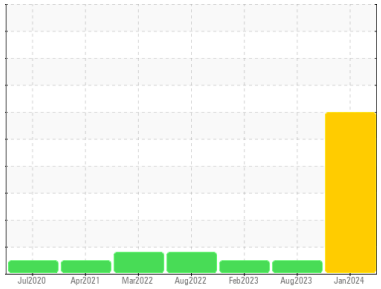
OIL ANALYSIS REPORT

Machine Id
525003
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend



WEAR

DIAGNOSIS

Recommendation
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
Nickel ppm levels are severe. Exhaust valve wear is indicated.

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

Fluid Condition
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0102854**	GFL0090866	GFL0071324
Sample Date		Client Info		**18 Jan 2024**	02 Aug 2023	09 Feb 2023
Machine Age	hrs	Client Info		**18530**	18155	17717
Oil Age	hrs	Client Info		**0**	0	458
Oil Changed		Client Info		**N/A**	Changed	Changed
Sample Status				**SEVERE**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>120	**13**	16	15
Chromium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	**9**	4	2
Titanium	ppm	ASTM D5185(m)	>2	**0**	<1	<1
Silver	ppm	ASTM D5185(m)	>2	**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**9**	10	8
Lead	ppm	ASTM D5185(m)	>40	**<1**	<1	<1
Copper	ppm	ASTM D5185(m)	>330	**5**	4	3
Tin	ppm	ASTM D5185(m)	>15	**<1**	0	<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

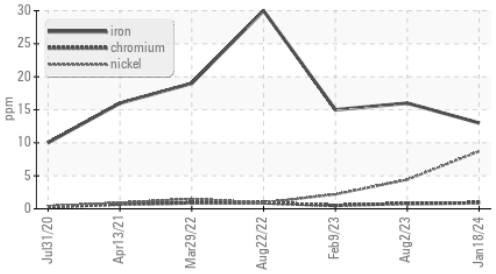
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**6**	34	4
Barium	ppm	ASTM D5185(m)	0	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	60	**58**	59	58
Manganese	ppm	ASTM D5185(m)	0	**0**	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	**852**	494	943
Calcium	ppm	ASTM D5185(m)	1070	**1118**	1734	1128
Phosphorus	ppm	ASTM D5185(m)	1150	**990**	1095	1084
Zinc	ppm	ASTM D5185(m)	1270	**1137**	1237	1200
Sulfur	ppm	ASTM D5185(m)	2060	**2694**	2830	2696
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**4**	5	10
Sodium	ppm	ASTM D5185(m)		**4**	4	6
Potassium	ppm	ASTM D5185(m)	>20	**6**	9	8
Glycol	%	ASTM D7922*		**0.0**	0.0	0.0

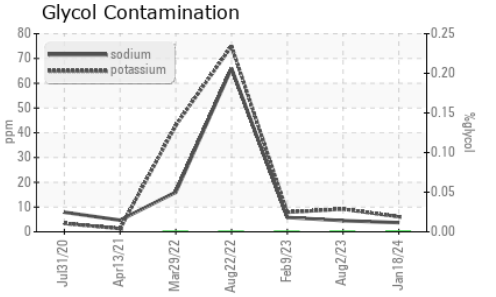
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>4	**0.3**	0.4	0
Nitration	Abs/cm	ASTM D7624*	>20	**8.5**	8.9	4.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	**18.8**	21.2	15.8

OIL ANALYSIS REPORT

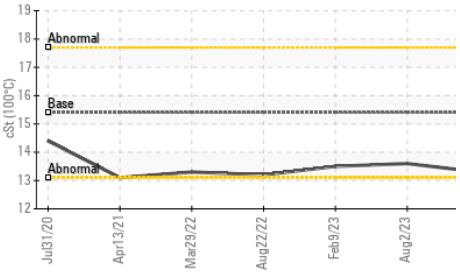
Ferrous Alloys



Glycol Contamination



Viscosity @ 100°C



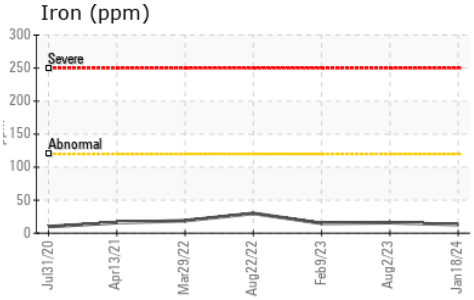
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**14.8**	16.7	7.6

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

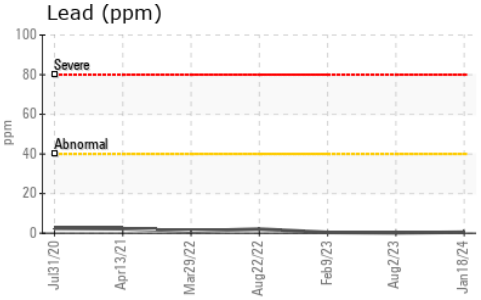
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	**13.3**	13.6	13.5

GRAPHS

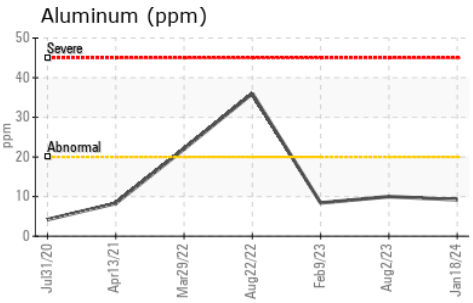
Iron (ppm)



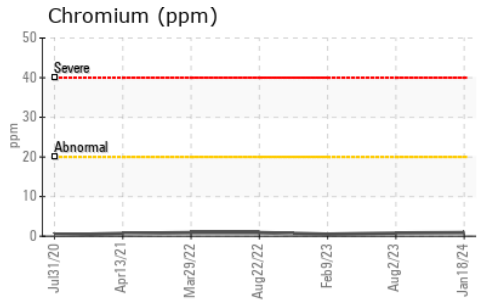
Lead (ppm)



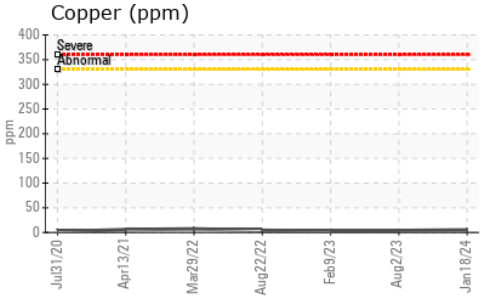
Aluminum (ppm)



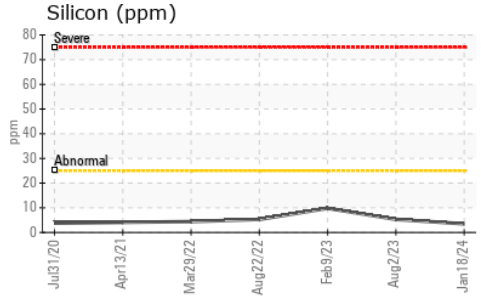
Chromium (ppm)



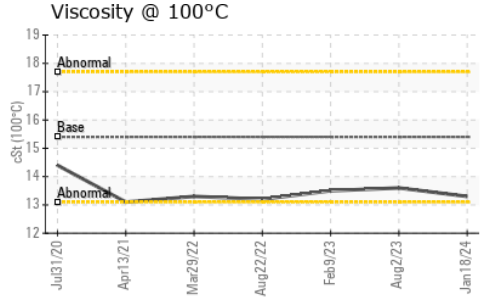
Copper (ppm)



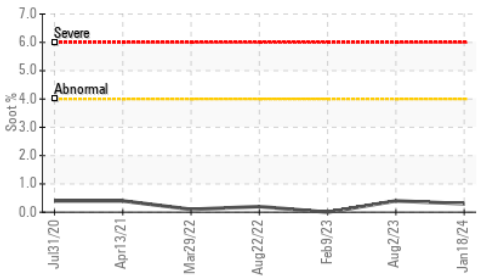
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0102854
Lab Number : 02609920
Unique Number : 5711006
Test Package : MOB 1 (Additional Tests: Glycol)

Recieved : 19 Jan 2024
Diagnosed : 19 Jan 2024
Diagnostician : 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 - 246 - Windsor
2700 Deziel Dr
Windsor, ON
CA N8W 5H8
Contact: Dave Varga
dvarga@gflenv.com
T: (519)944-8009
F: