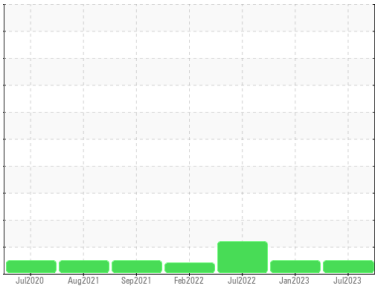
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
828009
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Fluid Condition
The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history 1	history 2
Sample Number		Client Info		**GFL**	GFL0059859	GFL0054924
Sample Date		Client Info		**05 Jul 2023**	12 Jan 2023	12 Jul 2022
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	0	599
Oil Changed		Client Info		**N/A**	N/A	Changed
Sample Status				**NORMAL**	NORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history 1	history 2
Fuel		WC Method	>5	**<1.0**	<1.0	▲ 2.7
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185(m)	>100	**17**	11	13
Chromium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	**0**	<1	0
Titanium	ppm	ASTM D5185(m)		**<1**	<1	<1
Silver	ppm	ASTM D5185(m)	>3	**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**4**	2	2
Lead	ppm	ASTM D5185(m)	>40	**0**	<1	<1
Copper	ppm	ASTM D5185(m)	>330	**1**	1	2
Tin	ppm	ASTM D5185(m)	>15	**0**	<1	0
Antimony	ppm	ASTM D5185(m)		**0**	<1	<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	history 1	history 2
Boron	ppm	ASTM D5185(m)	0	**2**	4	5
Barium	ppm	ASTM D5185(m)	0	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	60	**56**	55	54
Manganese	ppm	ASTM D5185(m)	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	**930**	919	859
Calcium	ppm	ASTM D5185(m)	1070	**1045**	1107	1129
Phosphorus	ppm	ASTM D5185(m)	1150	**1038**	1024	919
Zinc	ppm	ASTM D5185(m)	1270	**1151**	1154	1116
Sulfur	ppm	ASTM D5185(m)	2060	**2425**	2534	2429
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185(m)	>25	**11**	5	8
Sodium	ppm	ASTM D5185(m)		**2**	7	7
Potassium	ppm	ASTM D5185(m)	>20	**5**	2	2

INFRA-RED		method	limit/base	current	history 1	history 2
Soot %	%	ASTM D7844*	>3	**0.2**	0	0.3
Nitration	Abs/cm	ASTM D7624*	>20	**8.6**	7.6	9.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	**19.2**	20.2	20.1

FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**15.9**	15.6	16.3

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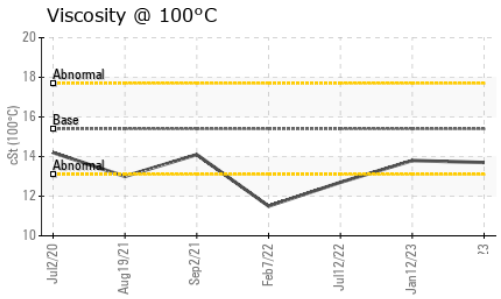
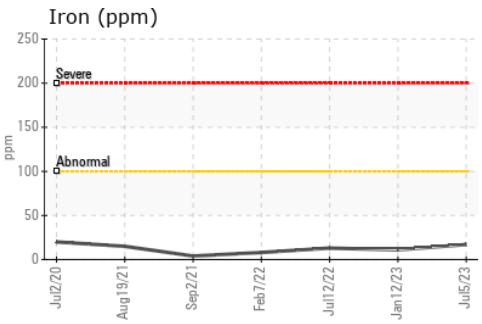
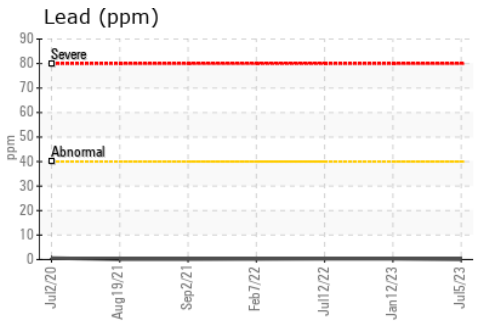


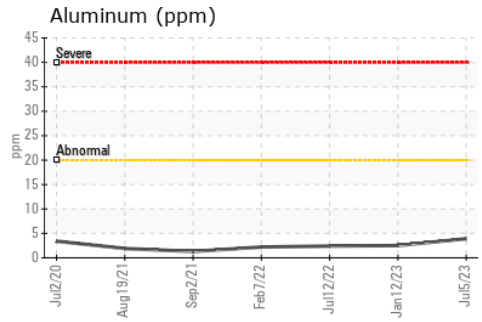
VISUAL		method	limit/base	current	history 1	history 2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

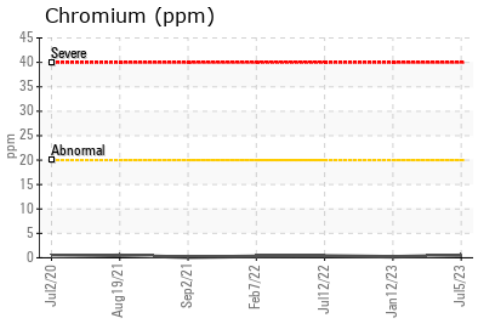
FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	**13.7**	13.8	▲ 12.7

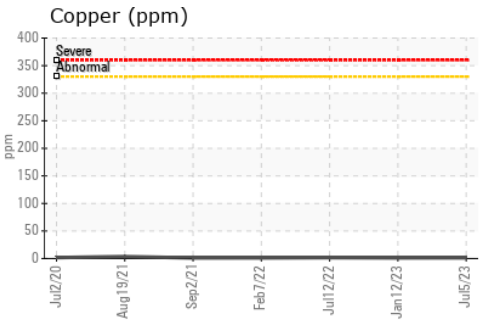
GRAPHS

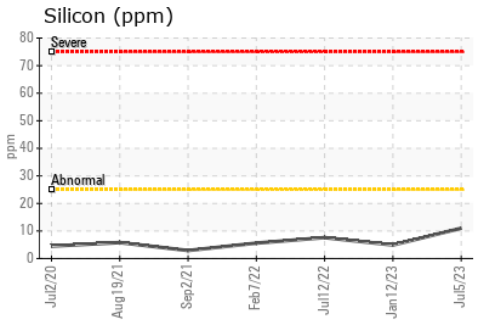


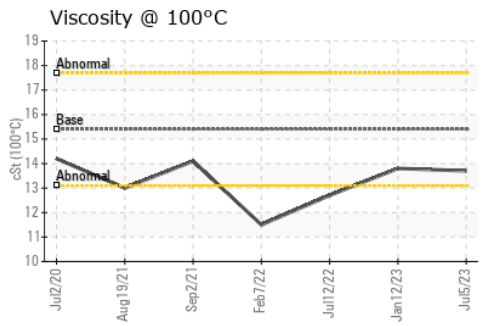


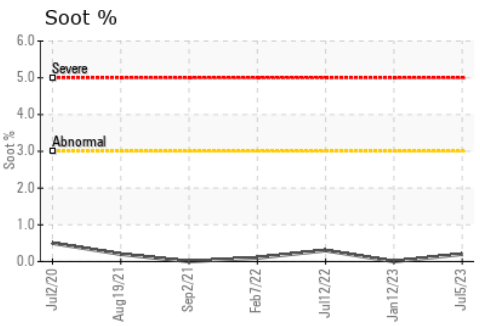












ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL
Lab Number : 02568394
Unique Number : 5605440
Test Package : MOB 1

Received : 07 Jul 2023
Diagnosed : 07 Jul 2023
Diagnostician : Wes Davis

GFL Environmental - 221 - Windsor
905 Tecumseh Road W
Windsor, ON
CA N8W 4J5
Contact: Rhys Marotte
rmarotte@gflenv.com
T:
F:

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.