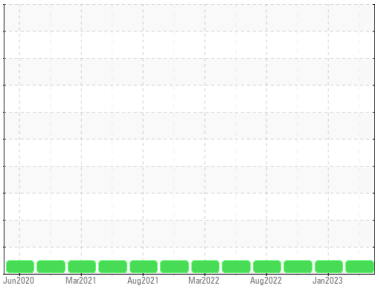
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
728002
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation
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
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
Additive levels indicate the addition of a different brand, or type of oil. 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		**GFL0078507**	GFL0071313	GFL0061957
Sample Date		Client Info		**06 Jun 2023**	18 Jan 2023	27 Oct 2022
Machine Age	kms	Client Info		**205803**	11830	11288
Oil Age	kms	Client Info		**0**	547	563
Oil Changed		Client Info		**N/A**	Changed	Changed
Sample Status				**NORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history 1	history 2
Fuel		WC Method	>3.0	**<1.0**	<1.0	<1.0
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185(m)	>120	**6**	4	5
Chromium	ppm	ASTM D5185(m)	>20	**<1**	0	0
Nickel	ppm	ASTM D5185(m)	>5	**0**	<1	0
Titanium	ppm	ASTM D5185(m)	>2	**<1**	<1	<1
Silver	ppm	ASTM D5185(m)	>2	**<1**	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	**2**	2	2
Lead	ppm	ASTM D5185(m)	>40	**<1**	<1	<1
Copper	ppm	ASTM D5185(m)	>330	**<1**	<1	<1
Tin	ppm	ASTM D5185(m)	>15	**<1**	0	<1
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	**75**	4	3
Barium	ppm	ASTM D5185(m)	0	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	60	**13**	57	58
Manganese	ppm	ASTM D5185(m)	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	**169**	922	947
Calcium	ppm	ASTM D5185(m)	1070	**2008**	1103	1137
Phosphorus	ppm	ASTM D5185(m)	1150	**976**	1008	1007
Zinc	ppm	ASTM D5185(m)	1270	**1164**	1165	1188
Sulfur	ppm	ASTM D5185(m)	2060	**2632**	2446	2410
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185(m)	>25	**3**	3	3
Sodium	ppm	ASTM D5185(m)		**4**	3	4
Potassium	ppm	ASTM D5185(m)	>20	**6**	<1	<1

INFRA-RED		method	limit/base	current	history 1	history 2
Soot %	%	ASTM D7844*	>4	**0.2**	0	0.1
Nitration	Abs/cm	ASTM D7624*	>20	**8.7**	7.9	7.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	**22.7**	20.5	20.7

FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**17.8**	15.4	16.1

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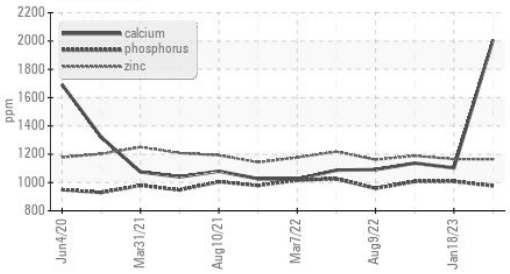
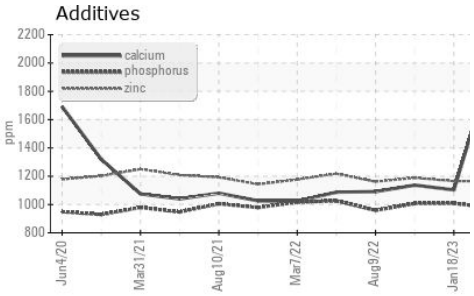
Additives



Additives

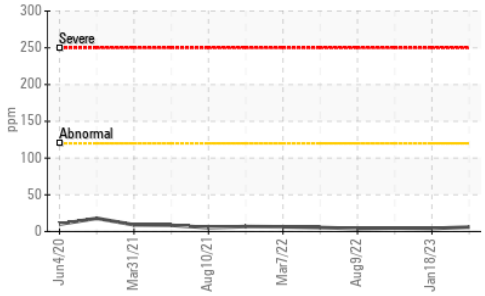


VISUAL		method	limit/base	current	history 1	history 2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

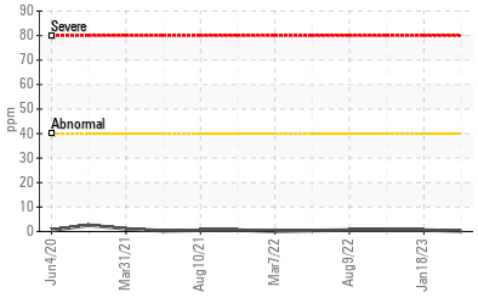
FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	**14.4**	13.6	13.7

GRAPHS

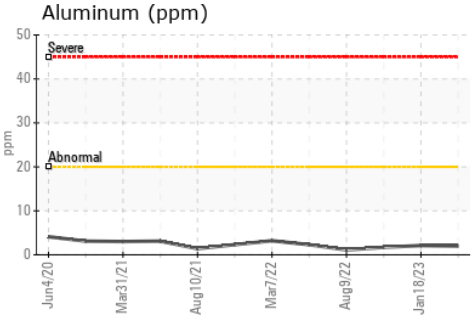
Iron (ppm)



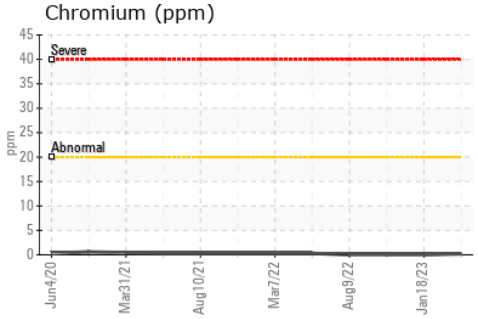
Lead (ppm)



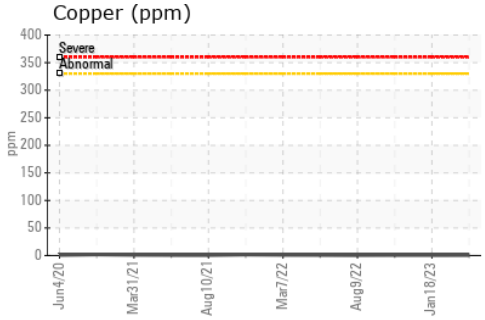
Aluminum (ppm)



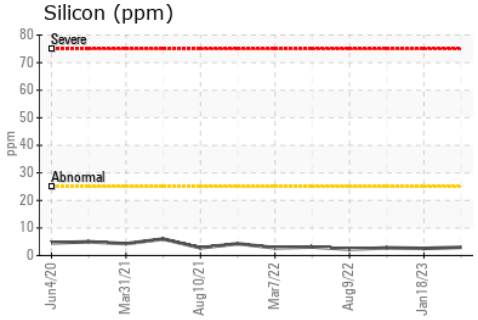
Chromium (ppm)



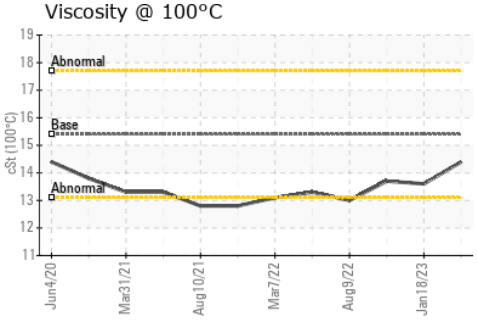
Copper (ppm)



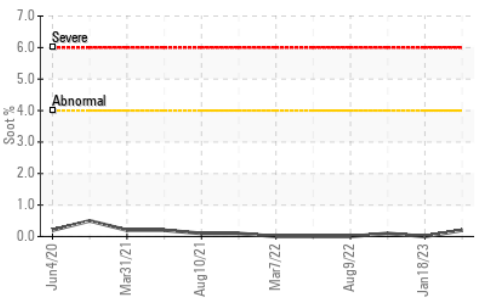
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0078507
Lab Number : 02569037
Unique Number : 5606083
Test Package : MOB 1

Received : 11 Jul 2023
Diagnosed : 11 Jul 2023
Diagnostician : Wes Davis

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: