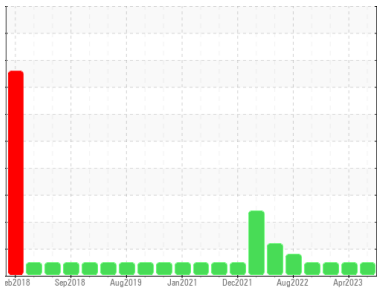
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
701049
Component
Front Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

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	history1	history2
Sample Number		Client Info		**GFL0085671**	GFL0070437	GFL0059858
Sample Date		Client Info		**27 Sep 2023**	03 Apr 2023	03 Jan 2023
Machine Age	hrs	Client Info		**1393**	1393	0
Oil Age	hrs	Client Info		**1393**	1393	543
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**NORMAL**	NORMAL	NORMAL

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>90	**11**	7	8
Chromium	ppm	ASTM D5185(m)	>20	**<1**	0	<1
Nickel	ppm	ASTM D5185(m)	>2	**0**	0	<1
Titanium	ppm	ASTM D5185(m)	>2	**0**	<1	0
Silver	ppm	ASTM D5185(m)	>2	**<1**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**4**	8	9
Lead	ppm	ASTM D5185(m)	>40	**<1**	0	0
Copper	ppm	ASTM D5185(m)	>330	**2**	<1	<1
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	**2**	2	1
Barium	ppm	ASTM D5185(m)	0	**<1**	0	0
Molybdenum	ppm	ASTM D5185(m)	60	**58**	56	57
Manganese	ppm	ASTM D5185(m)	0	**0**	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	**932**	926	951
Calcium	ppm	ASTM D5185(m)	1070	**1032**	1080	1079
Phosphorus	ppm	ASTM D5185(m)	1150	**951**	1039	1065
Zinc	ppm	ASTM D5185(m)	1270	**1173**	1151	1175
Sulfur	ppm	ASTM D5185(m)	2060	**2317**	2563	2549
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**4**	3	3
Sodium	ppm	ASTM D5185(m)		**2**	2	6
Potassium	ppm	ASTM D5185(m)	>20	**6**	16	18

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>6	**0.2**	0	0.1
Nitration	Abs/cm	ASTM D7624*	>20	**9.1**	8.5	9.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	**20.0**	21.5	20.4

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**16.8**	15.8	16.6

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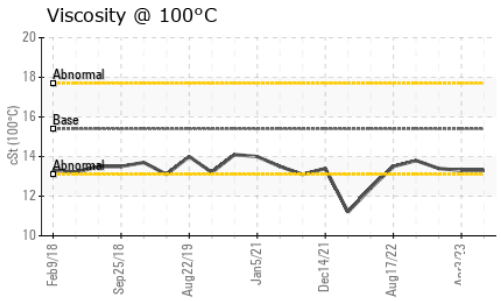
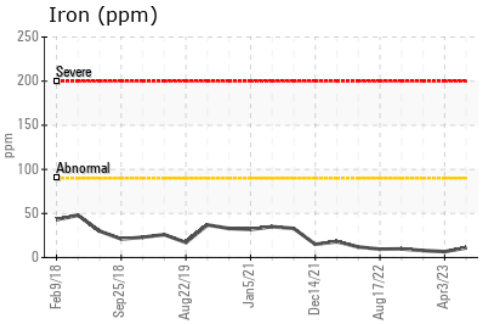
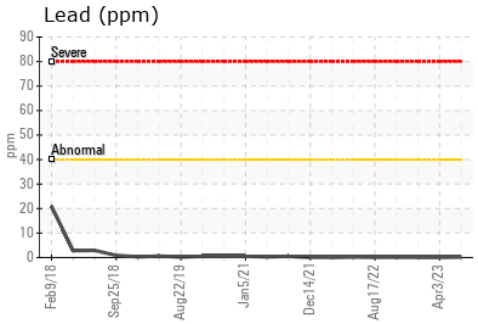


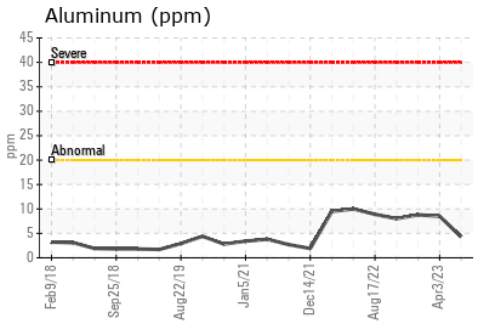
VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

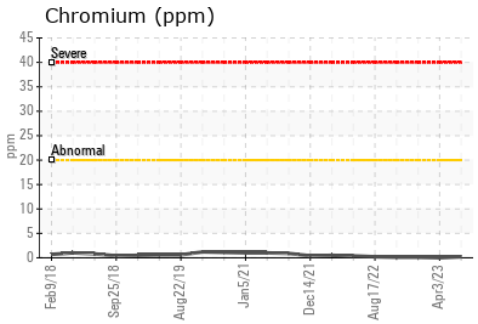
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	**13.3**	13.3	13.4

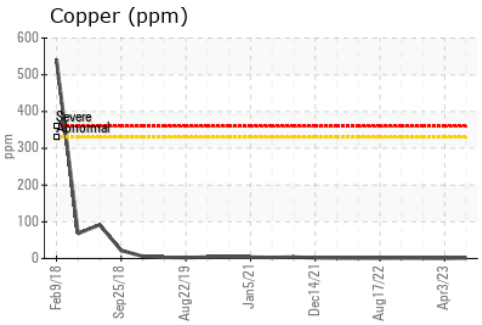
GRAPHS

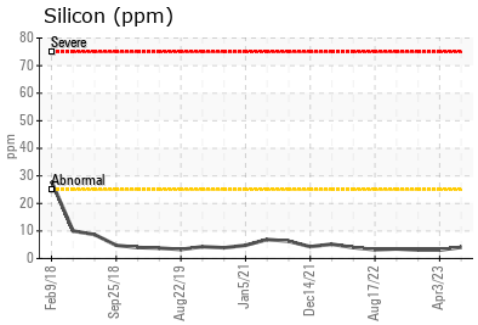


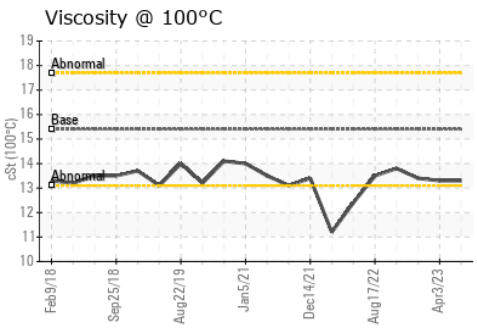


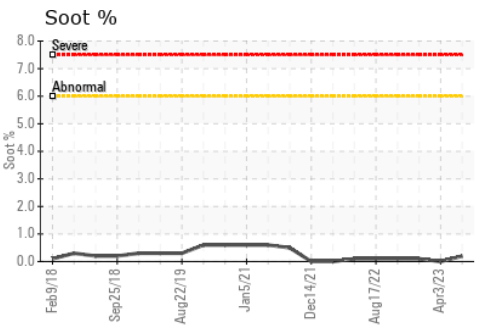












ISO 17025:2017 Accredited Laboratory

Laboratory	: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9	**GFL Environmental - 221 - Windsor**	
Sample No.	: GFL0085671	**Received**	: 03 Oct 2023
Lab Number	: 02586292	**Diagnosed**	: 03 Oct 2023
Unique Number	: 5655358	**Diagnostician**	: Wes Davis
Test Package	: MOB 1		

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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.