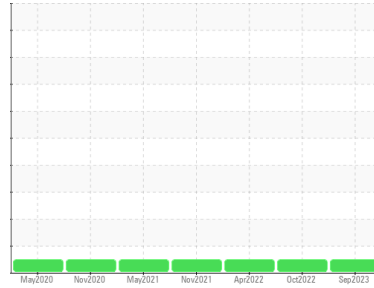




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
828011
 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	history1	history2
Sample Number	Client Info		GFL0065879	GFL0061948	GFL0051192
Sample Date	Client Info		25 Sep 2023	14 Oct 2022	25 Apr 2022
Machine Age	hrs	Client Info	0	8708	8385
Oil Age	hrs	Client Info	9485	323	238
Oil Changed	Client Info		N/A	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<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)	>80	20	16	13
Chromium	ppm	ASTM D5185(m)	>5	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	0	0	<1
Titanium	ppm	ASTM D5185(m)		0	<1	<1
Silver	ppm	ASTM D5185(m)	>3	<1	0	0
Aluminum	ppm	ASTM D5185(m)	>30	4	4	4
Lead	ppm	ASTM D5185(m)	>30	1	<1	0
Copper	ppm	ASTM D5185(m)	>150	1	2	<1
Tin	ppm	ASTM D5185(m)	>5	0	<1	<1
Antimony	ppm	ASTM D5185(m)		0	<1	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	44	6	7
Barium	ppm	ASTM D5185(m)	0	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	60	21	56	57
Manganese	ppm	ASTM D5185(m)	0	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	315	893	952
Calcium	ppm	ASTM D5185(m)	1070	1857	1068	1025
Phosphorus	ppm	ASTM D5185(m)	1150	951	1023	1015
Zinc	ppm	ASTM D5185(m)	1270	1161	1131	1172
Sulfur	ppm	ASTM D5185(m)	2060	2706	2473	2539
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>20	4	4	4
Sodium	ppm	ASTM D5185(m)		3	6	3
Potassium	ppm	ASTM D5185(m)	>20	13	2	3

INFRA-RED

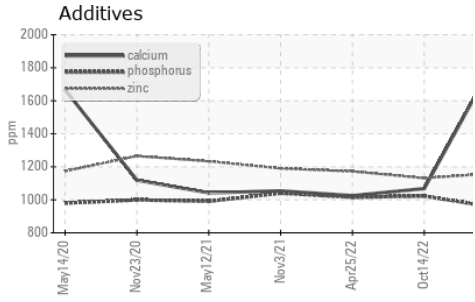
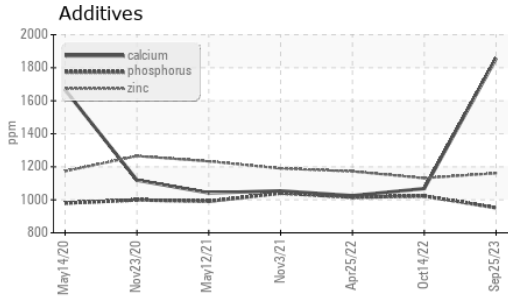
	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	0.4	0.2	0.1
Nitration	Abs/cm	ASTM D7624*	>20	9.1	8.7	7.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.1	19.8	20.4

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414*	>25	16.9	15.4	14.3



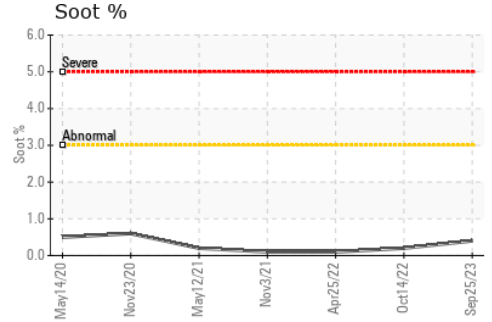
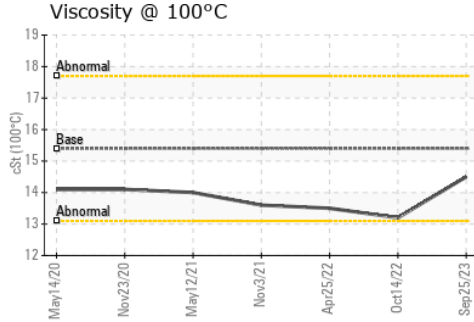
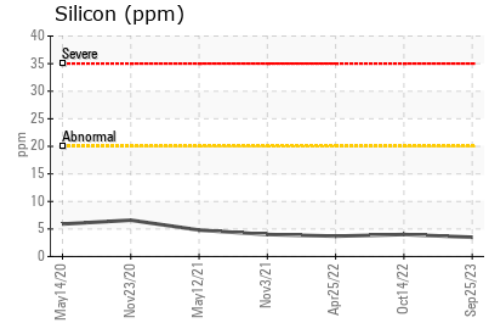
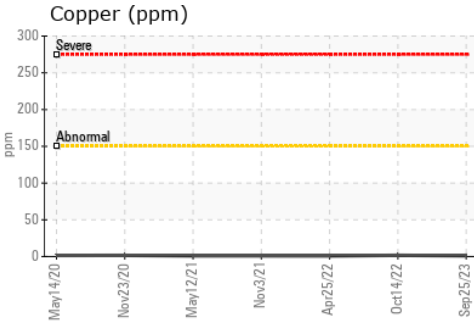
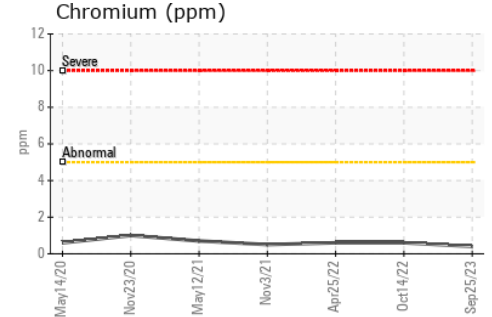
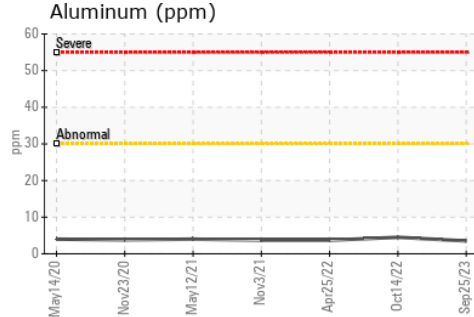
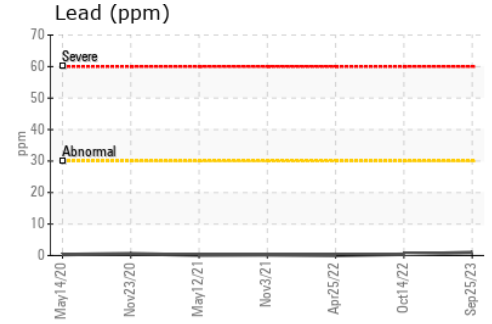
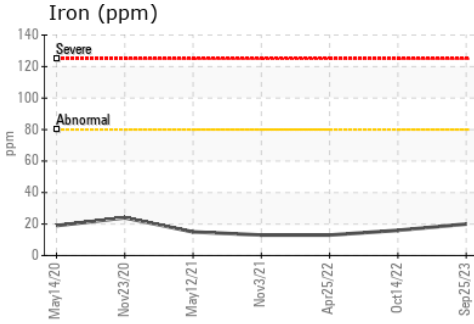
OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	14.5	13.2

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 246 - Windsor**
Sample No. : GFL0065879 **Received** : 27 Sep 2023
Lab Number : 02585449 **Diagnosed** : 27 Sep 2023
Unique Number : 5646514 **Diagnostician** : Wes Davis
Test Package : MOB 1

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.