



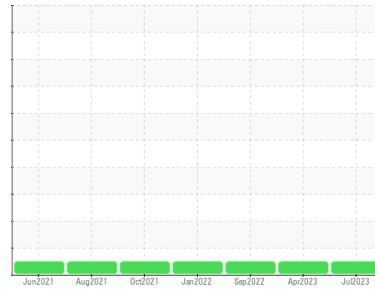
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
411005
 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

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		GFL0086768	GFL0042867	GFL0042868
Sample Date	Client Info		06 Jul 2023	17 Apr 2023	16 Sep 2022
Machine Age	hrs	Client Info	24752	6785	5199
Oil Age	hrs	Client Info	24752	0	130387
Oil Changed	Client Info		Changed	N/A	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	8	9	5
Chromium	ppm	ASTM D5185(m)	>20	<1	0	0
Nickel	ppm	ASTM D5185(m)	>5	<1	<1	0
Titanium	ppm	ASTM D5185(m)	>2	<1	<1	<1
Silver	ppm	ASTM D5185(m)	>2	<1	0	0
Aluminum	ppm	ASTM D5185(m)	>20	2	1	3
Lead	ppm	ASTM D5185(m)	>40	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>330	2	2	1
Tin	ppm	ASTM D5185(m)	>15	<1	<1	<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	13	4	43
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	39	8	83
Manganese	ppm	ASTM D5185(m)	0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	22	16	26
Calcium	ppm	ASTM D5185(m)	1070	2307	2428	2217
Phosphorus	ppm	ASTM D5185(m)	1150	1004	967	1065
Zinc	ppm	ASTM D5185(m)	1270	1115	1063	1164
Sulfur	ppm	ASTM D5185(m)	2060	3063	3108	3185
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)		2	2	2
Potassium	ppm	ASTM D5185(m)	>20	2	2	<1

INFRA-RED

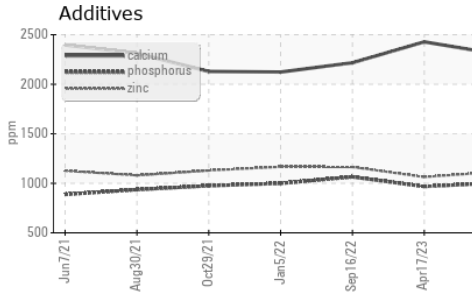
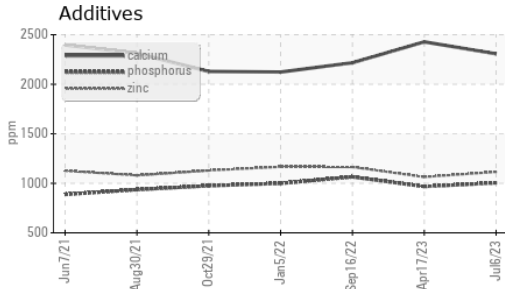
	method	limit/base	current	history 1	history 2	
Soot %	%	ASTM D7844*	>4	0.1	0.1	0
Nitration	Abs/cm	ASTM D7624*	>20	9.0	8.2	8.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.8	21.0	19.1

FLUID DEGRADATION

	method	limit/base	current	history 1	history 2	
Oxidation	Abs/.1mm	ASTM D7414*	>25	14.0	12.3	13.7



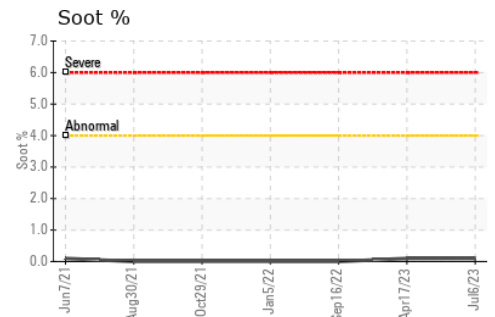
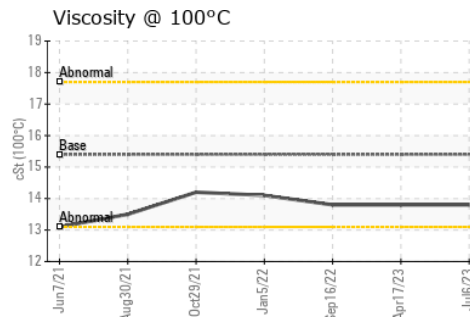
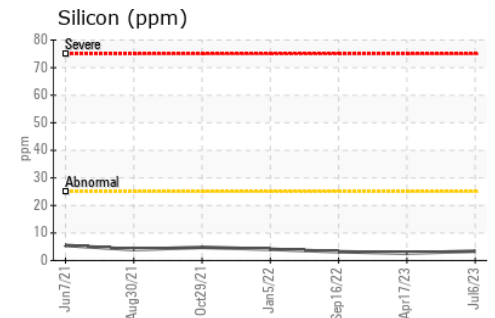
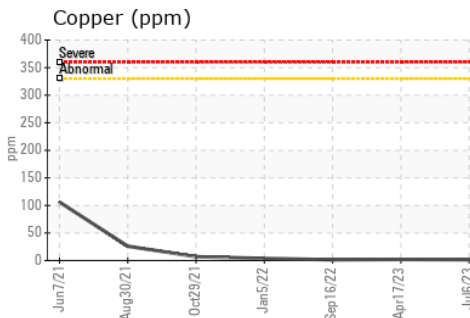
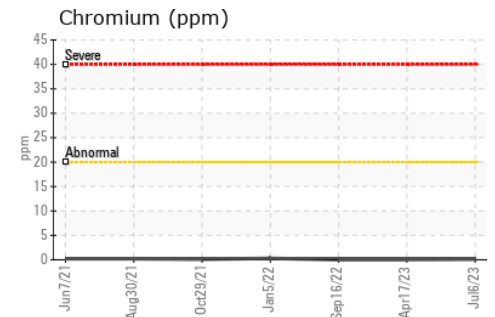
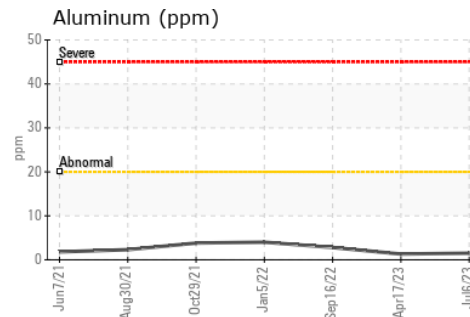
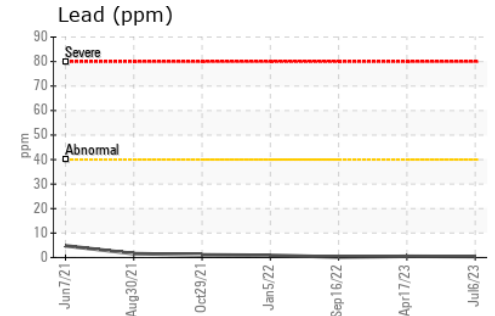
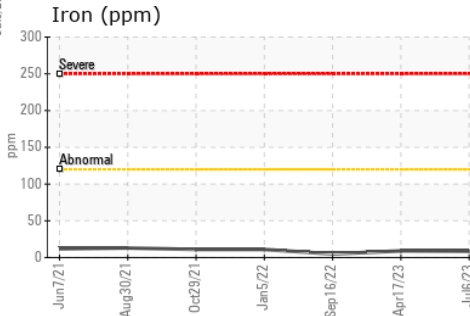
OIL ANALYSIS REPORT



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

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

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0086768
Lab Number : 02568663
Unique Number : 5605709
Test Package : MOB 1

GFL Environmental - 222 - Sandhill
 SANDHILL DISPOSAL & RECYCLING DIVIS, 19 COMMERCE ROAD
 ORANGEVILLE, ON
 CA L9W 3X5
 Contact: GLENN COOK
 gcook@gflenv.com
 T: (519)940-4167
 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.