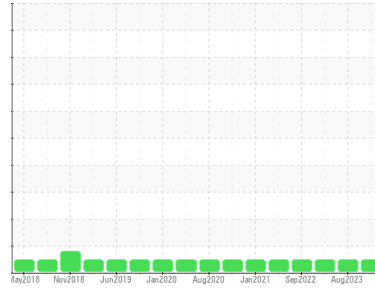




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
801057
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (20 LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

Contamination

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		GFL0094196	GFL0091030	GFL0068360
Sample Date	Client Info		17 Oct 2023	04 Aug 2023	19 Dec 2022
Machine Age	kms	Client Info	59468	59468	59468
Oil Age	kms	Client Info	0	10387	0
Oil Changed	Client Info		Changed	Changed	N/A
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >80	30	45	31
Chromium	ppm	ASTM D5185(m) >5	<1	1	<1
Nickel	ppm	ASTM D5185(m) >2	0	<1	<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	9	3
Lead	ppm	ASTM D5185(m) >30	<1	0	0
Copper	ppm	ASTM D5185(m) >150	1	2	2
Tin	ppm	ASTM D5185(m) >5	0	0	0
Antimony	ppm	ASTM D5185(m)	0	0	<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	history1	history2
Boron	ppm	ASTM D5185(m) 0	6	8	5
Barium	ppm	ASTM D5185(m) 0	<1	0	0
Molybdenum	ppm	ASTM D5185(m) 60	61	62	59
Manganese	ppm	ASTM D5185(m) 0	0	<1	<1
Magnesium	ppm	ASTM D5185(m) 1010	953	964	924
Calcium	ppm	ASTM D5185(m) 1070	1088	1077	1097
Phosphorus	ppm	ASTM D5185(m) 1150	987	1055	1027
Zinc	ppm	ASTM D5185(m) 1270	1206	1229	1162
Sulfur	ppm	ASTM D5185(m) 2060	2430	2367	2367
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >20	6	10	6
Sodium	ppm	ASTM D5185(m)	20	33	56
Potassium	ppm	ASTM D5185(m) >20	5	16	3
Glycol	%	ASTM D7922*	0.0	0.0	NEG

INFRA-RED

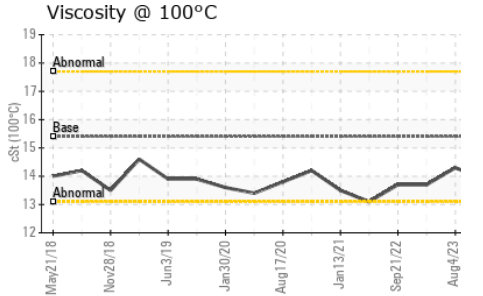
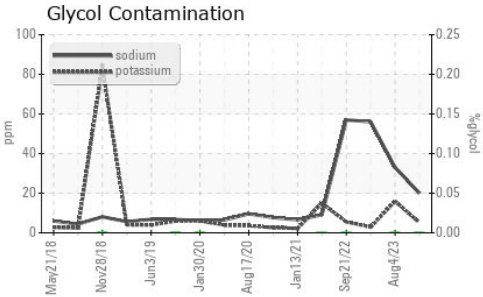
	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >3	0.7	0.9	0.5
Nitration	Abs/cm	ASTM D7624* >20	9.3	10.9	10.3
Sulfation	Abs/.1mm	ASTM D7415* >30	20.6	23.8	23.2

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414* >25	16.2	19.2	18.9



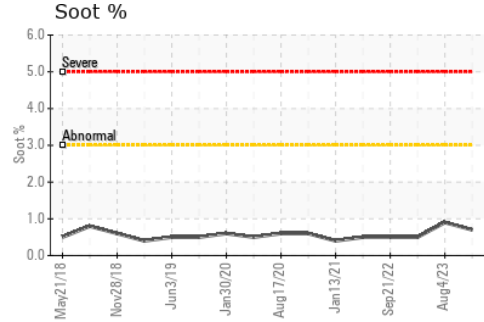
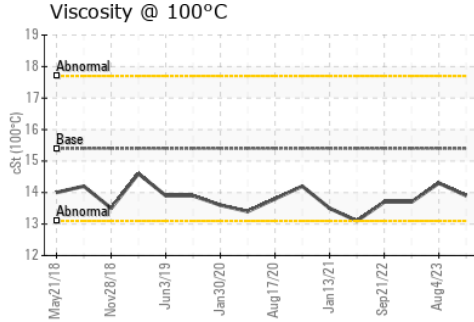
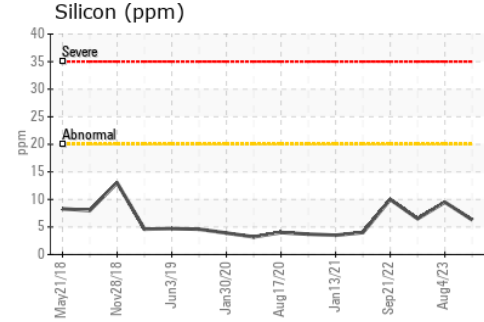
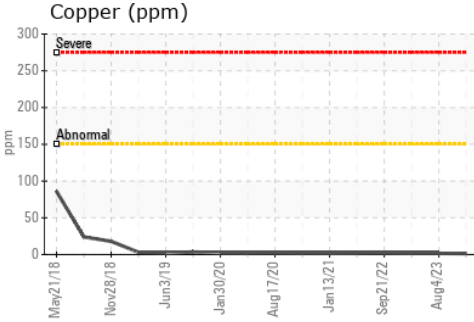
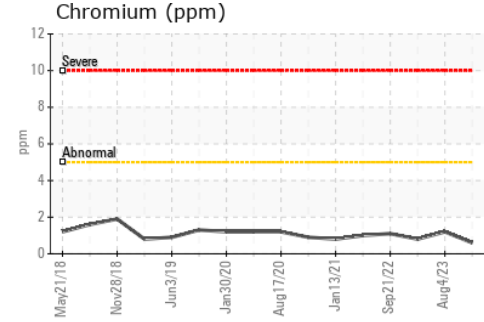
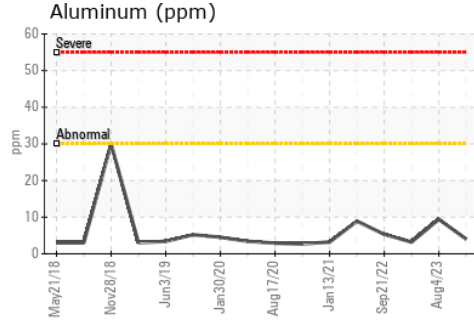
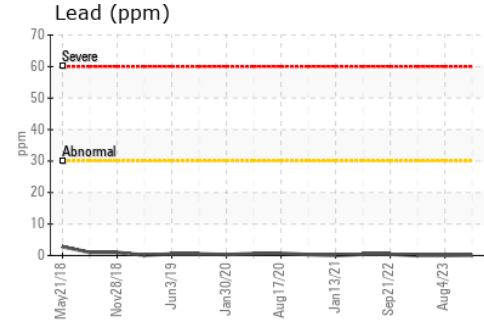
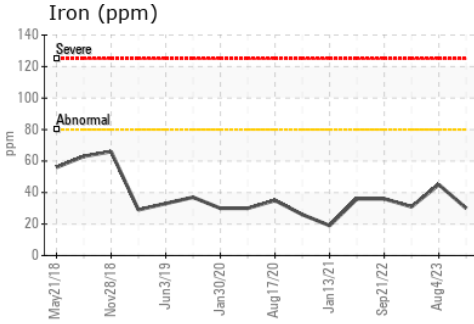
OIL ANALYSIS REPORT



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	13.9	14.3

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0094196
Lab Number : 02590199
Unique Number : 5659265
Test Package : MOB 1 (Additional Tests: Glycol)

GFL Environmental - 217 - Aurora
 14131 BAYVIEW AVE, AURORA YARD
 AURORA, ON
 CA L4G 0K6
 Contact: Mike Havens
 MHavens@gflenv.com
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 F: (905)713-2445

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.