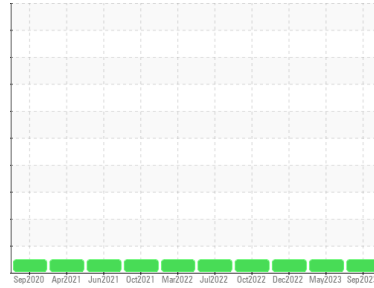




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
4635

Component
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

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	GFL0086770	GFL0063928	GFL0055396
Sample Date	Client Info	01 Sep 2023	29 May 2023	07 Dec 2022
Machine Age	hrs	Client Info	11510	11510
Oil Age	hrs	Client Info	11510	11510
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) >100	27	21	12
Chromium	ppm ASTM D5185(m) >20	<1	<1	<1
Nickel	ppm ASTM D5185(m) >4	0	0	<1
Titanium	ppm ASTM D5185(m)	0	<1	<1
Silver	ppm ASTM D5185(m) >3	0	0	0
Aluminum	ppm ASTM D5185(m) >20	10	4	4
Lead	ppm ASTM D5185(m) >40	3	3	2
Copper	ppm ASTM D5185(m) >330	<1	<1	<1
Tin	ppm ASTM D5185(m) >15	<1	<1	<1
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	5	2	2
Barium	ppm ASTM D5185(m) 0	0	0	0
Molybdenum	ppm ASTM D5185(m) 60	62	63	61
Manganese	ppm ASTM D5185(m) 0	<1	<1	<1
Magnesium	ppm ASTM D5185(m) 1010	992	995	976
Calcium	ppm ASTM D5185(m) 1070	1112	1163	1171
Phosphorus	ppm ASTM D5185(m) 1150	1079	1093	1090
Zinc	ppm ASTM D5185(m) 1270	1220	1242	1231
Sulfur	ppm ASTM D5185(m) 2060	2497	2549	2609
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >25	5	5	3
Sodium	ppm ASTM D5185(m)	4	8	2
Potassium	ppm ASTM D5185(m) >20	3	1	<1

INFRA-RED

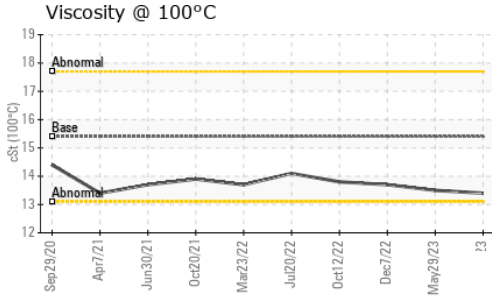
method	limit/base	current	history1	history2
Soot %	% ASTM D7844* >3	1.2	1.5	0.9
Nitration	Abs/cm ASTM D7624* >20	13.3	15.7	11.5
Sulfation	Abs/.1mm ASTM D7415* >30	24.3	26.7	22.5

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm ASTM D7414* >25	21.9	26.9	20.6



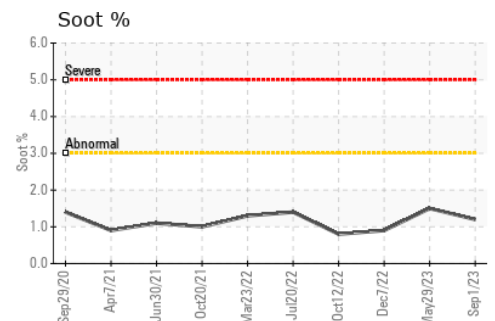
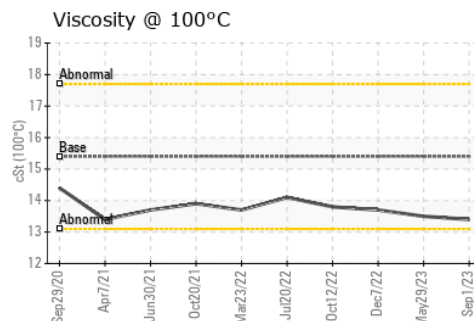
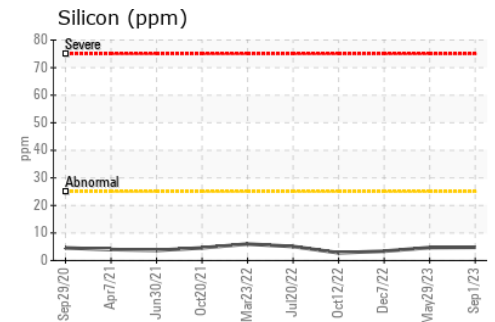
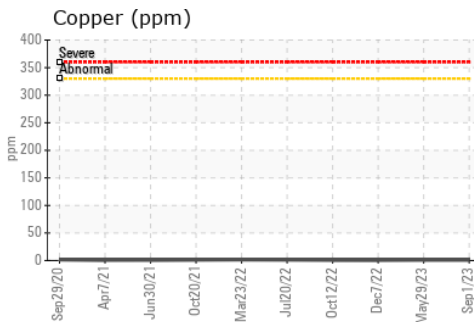
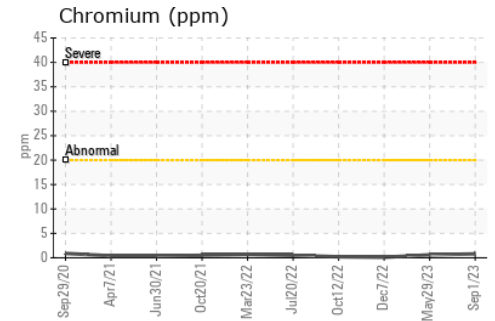
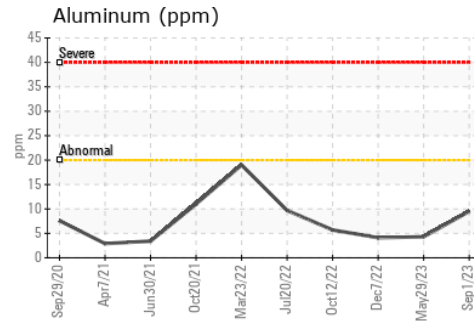
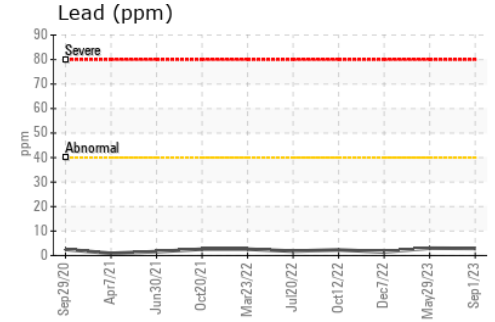
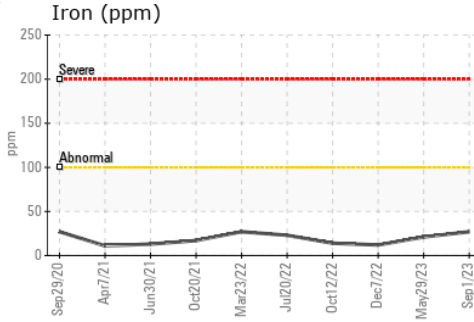
OIL ANALYSIS REPORT



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	13.4	13.5

GRAPHS



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0086770
Lab Number : 02580319
Unique Number : 5633379
Test Package : MOB 1

Received : 05 Sep 2023
Diagnosed : 05 Sep 2023
Diagnostician : Kevin Marson

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.