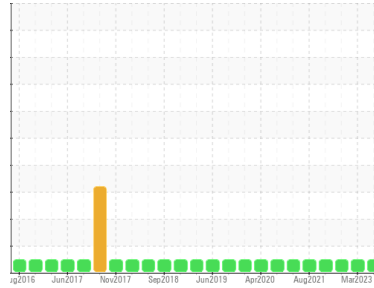




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
4569
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (40 LTR)

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	GFL0088935	GFL0061073	GFL0054517
Sample Date	Client Info	16 Aug 2023	01 Mar 2023	20 Aug 2022
Machine Age	hrs	14546	13669	12693
Oil Age	hrs	877	530	454
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) >65	17	12	24
Chromium	ppm ASTM D5185(m) >5	1	<1	2
Nickel	ppm ASTM D5185(m) >3	0	<1	<1
Titanium	ppm ASTM D5185(m) >5	<1	<1	<1
Silver	ppm ASTM D5185(m) >2	0	0	0
Aluminum	ppm ASTM D5185(m) >35	7	6	9
Lead	ppm ASTM D5185(m) >10	0	0	0
Copper	ppm ASTM D5185(m) >180	3	1	3
Tin	ppm ASTM D5185(m) >8	<1	<1	<1
Antimony	ppm ASTM D5185(m) >35	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	4	4	6
Barium	ppm ASTM D5185(m) 0	0	0	0
Molybdenum	ppm ASTM D5185(m) 60	60	60	60
Manganese	ppm ASTM D5185(m) 0	<1	<1	<1
Magnesium	ppm ASTM D5185(m) 1010	994	981	976
Calcium	ppm ASTM D5185(m) 1070	1058	1148	1137
Phosphorus	ppm ASTM D5185(m) 1150	1036	1088	984
Zinc	ppm ASTM D5185(m) 1270	1200	1201	1220
Sulfur	ppm ASTM D5185(m) 2060	2394	2647	2523
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >15	6	4	6
Sodium	ppm ASTM D5185(m)	3	2	3
Potassium	ppm ASTM D5185(m) >20	2	<1	2

INFRA-RED

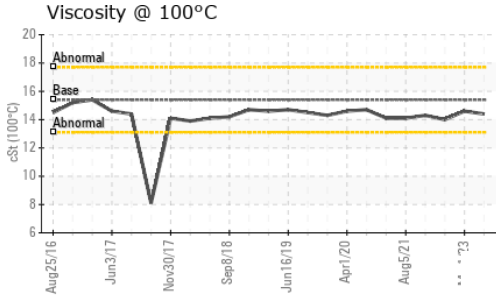
method	limit/base	current	history1	history2
Soot %	% ASTM D7844* >3	0.7	0.2	0.5
Nitration	Abs/cm ASTM D7624* >20	8.3	7.1	7.9
Sulfation	Abs/.1mm ASTM D7415* >30	20.9	20.7	19.8

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm ASTM D7414* >25	15.4	14.5	14.9



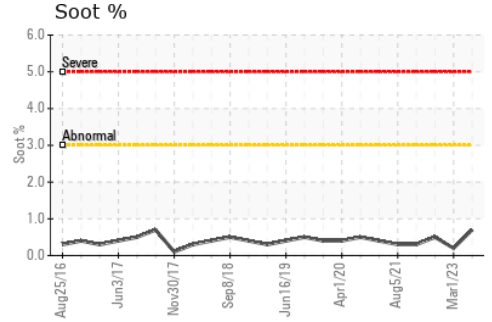
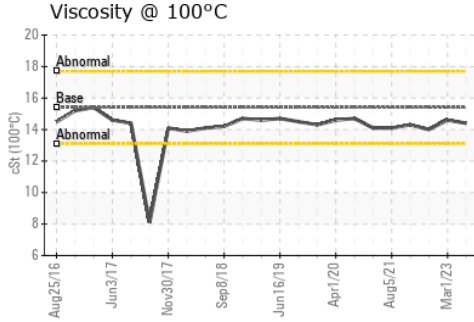
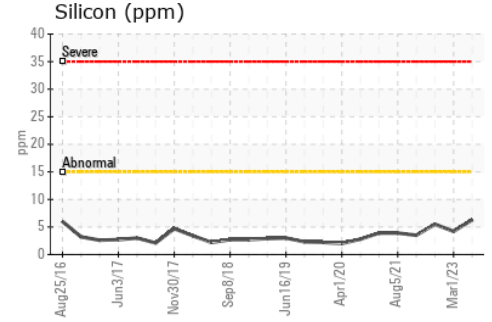
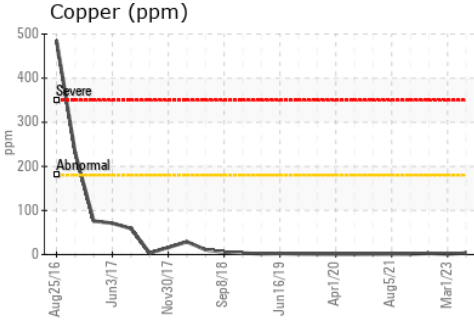
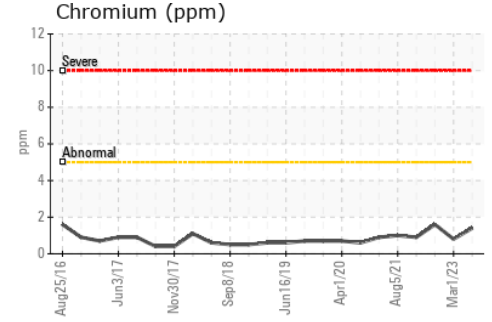
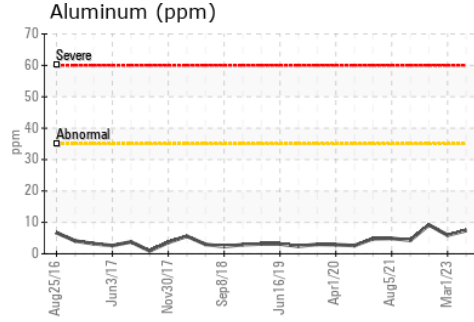
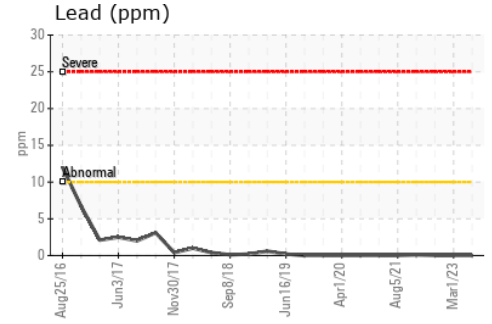
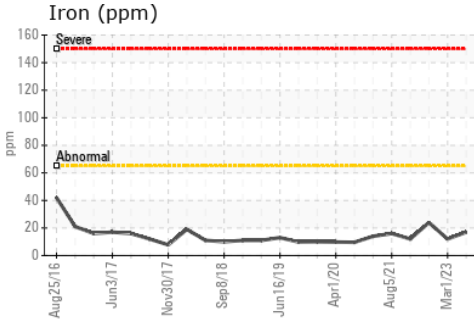
OIL ANALYSIS REPORT



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	14.4	14.6

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0088935 **Received** : 17 Aug 2023
Lab Number : 02576388 **Diagnosed** : 17 Aug 2023
Unique Number : 5629448 **Diagnostician** : Wes Davis
Test Package : MOB 1

GFL Environmental - 216
 15 Bermondsey Road
 Toronto, ON
 CA M4B 0A6
 Contact: Tom Hatzioannidis
 thatzioannidis@gflenv.com
 T: (416)678-9340
 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.