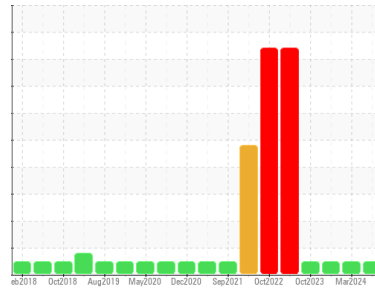




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

701048

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	GFL0123442	GFL0110716	GFL0097443
Sample Date	Client Info	10 Jul 2024	26 Mar 2024	15 Jan 2024
Machine Age	hrs	610	610	610
Oil Age	hrs	610	610	610
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		NORMAL	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<1.0	<1.0	<1.0
Water	WC Method >0.2	NEG	NEG	NEG
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m) >100	17	10	12
Chromium	ppm ASTM D5185(m) >20	<1	0	<1
Nickel	ppm ASTM D5185(m) >4	<1	0	0
Titanium	ppm ASTM D5185(m)	0	0	0
Silver	ppm ASTM D5185(m) >3	<1	0	0
Aluminum	ppm ASTM D5185(m) >20	2	<1	2
Lead	ppm ASTM D5185(m) >40	0	0	0
Copper	ppm ASTM D5185(m) >330	<1	<1	1
Tin	ppm ASTM D5185(m) >15	0	0	0
Antimony	ppm ASTM D5185(m)	0	0	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	3	2	4
Barium	ppm ASTM D5185(m) 0	0	0	0
Molybdenum	ppm ASTM D5185(m) 60	60	57	58
Manganese	ppm ASTM D5185(m) 0	<1	0	0
Magnesium	ppm ASTM D5185(m) 1010	985	930	854
Calcium	ppm ASTM D5185(m) 1070	1080	1023	1153
Phosphorus	ppm ASTM D5185(m) 1150	1011	964	986
Zinc	ppm ASTM D5185(m) 1270	1249	1163	1173
Sulfur	ppm ASTM D5185(m) 2060	2499	2399	2585
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

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

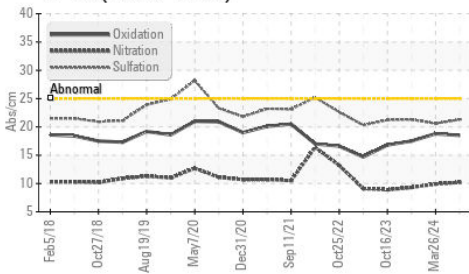
INFRA-RED

method	limit/base	current	history1	history2
Soot %	% ASTM D7844* >3	0.2	0.1	0.1
Nitration	Abs/cm ASTM D7624* >20	10.2	9.9	9.3
Sulfation	Abs/.1mm ASTM D7415* >30	21.3	20.6	21.3

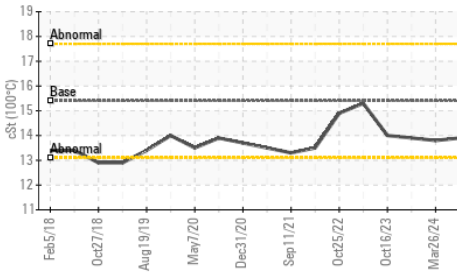


OIL ANALYSIS REPORT

FT-IR (Direct Trend)



Viscosity @ 100°C



FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs./1mm ASTM D7414*	>25	18.8	17.5

VISUAL

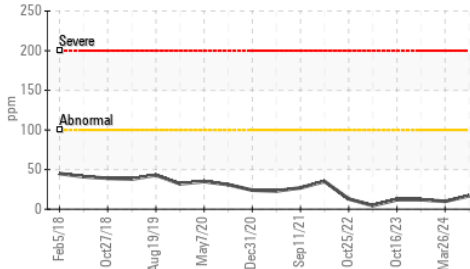
method	limit/base	current	history1	history2
Emulsified Water	scalar Visual*	>0.2	NEG	NEG
Free Water	scalar Visual*	NEG	NEG	NEG

FLUID PROPERTIES

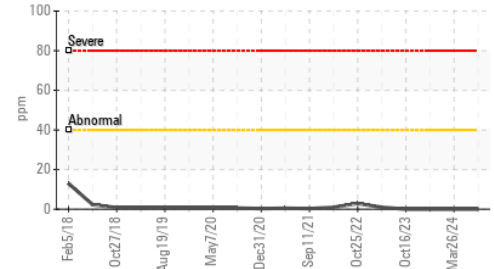
method	limit/base	current	history1	history2
Visc @ 100°C	cSt ASTM D7279(m)	15.4	13.8	13.9

GRAPHS

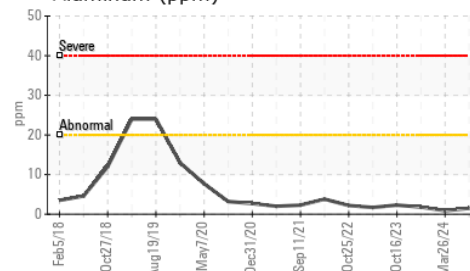
Iron (ppm)



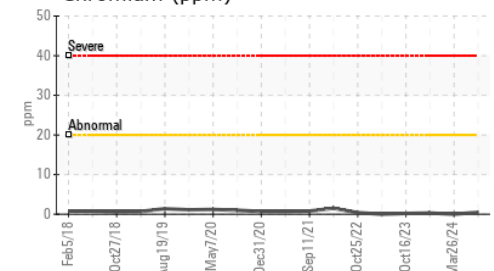
Lead (ppm)



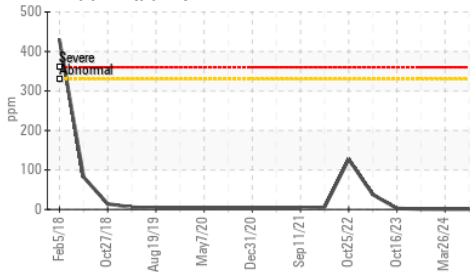
Aluminum (ppm)



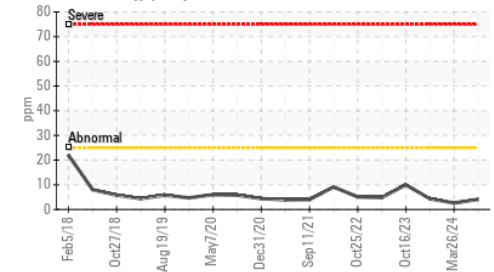
Chromium (ppm)



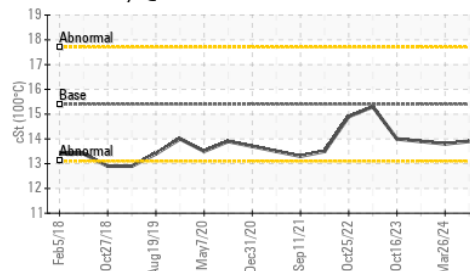
Copper (ppm)



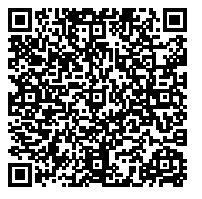
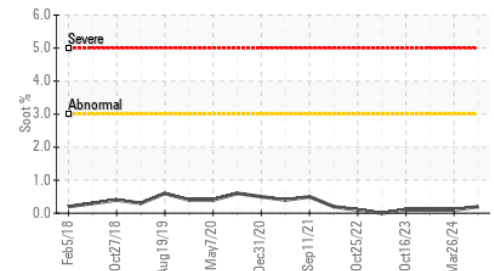
Silicon (ppm)



Viscosity @ 100°C



Soot %



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0123442
Lab Number : 02647745
Unique Number : 5813297
Test Package : MOB 1

GFL Environmental - 221 - Windsor
 905 Tecumseh Road W
 Windsor, ON
 CA N8W 4J5
 Contact: Pamela-Jean Butler
 pamelajeau.butler@gflenv.com
 T: (519)948-8126
 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.