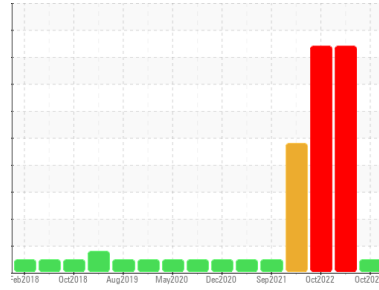




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
701048

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

Metal levels are typical for a new component breaking in.

Contamination

Test for glycol is negative. 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	history1	history2
Sample Number	Client Info	GFL0085675	GFL0059882	GFL0059878
Sample Date	Client Info	16 Oct 2023	08 Nov 2022	25 Oct 2022
Machine Age	hrs	610	0	0
Oil Age	hrs	610	108	310
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		NORMAL	SEVERE	SEVERE

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) >100	12	4	13
Chromium	ppm ASTM D5185(m) >20	<1	0	<1
Nickel	ppm ASTM D5185(m) >4	<1	<1	<1
Titanium	ppm ASTM D5185(m)	0	<1	<1
Silver	ppm ASTM D5185(m) >3	<1	<1	<1
Aluminum	ppm ASTM D5185(m) >20	2	2	2
Lead	ppm ASTM D5185(m) >40	0	1	3
Copper	ppm ASTM D5185(m) >330	3	38	127
Tin	ppm ASTM D5185(m) >15	<1	<1	<1
Antimony	ppm ASTM D5185(m)	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	34	16	2
Barium	ppm ASTM D5185(m) 0	<1	0	0
Molybdenum	ppm ASTM D5185(m) 60	60	57	53
Manganese	ppm ASTM D5185(m) 0	0	<1	2
Magnesium	ppm ASTM D5185(m) 1010	280	776	724
Calcium	ppm ASTM D5185(m) 1070	1860	914	878
Phosphorus	ppm ASTM D5185(m) 1150	996	970	864
Zinc	ppm ASTM D5185(m) 1270	1178	1025	952
Sulfur	ppm ASTM D5185(m) 2060	2808	2481	2220
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >25	10	5	5
Sodium	ppm ASTM D5185(m)	11	▲ 1205	▲ 1702
Potassium	ppm ASTM D5185(m) >20	9	▲ 256	▲ 782
Glycol	% ASTM D7922*	0.0	◆ 0.187	◆ 0.101

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% ASTM D7844* >3	0.1	0	0.1
Nitration	Abs/cm ASTM D7624* >20	8.9	9.1	13.2
Sulfation	Abs/.1mm ASTM D7415* >30	21.2	20.3	22.6

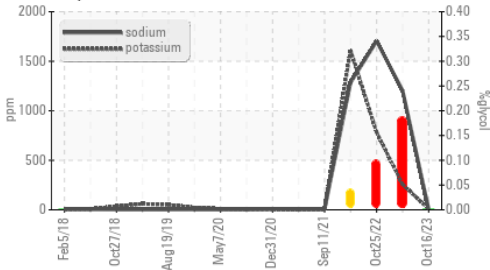
FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm ASTM D7414* >25	16.8	14.7	16.6

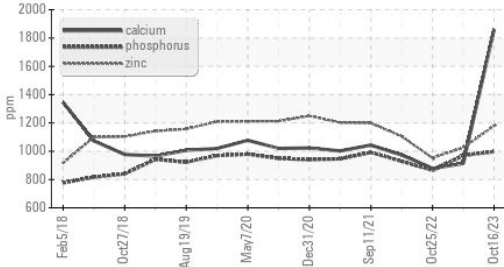


OIL ANALYSIS REPORT

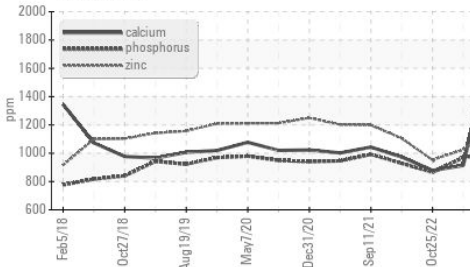
Glycol Contamination



Additives



Additives

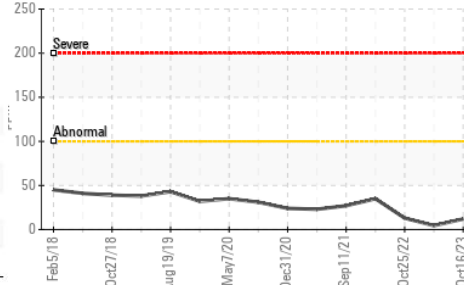


VISUAL	method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

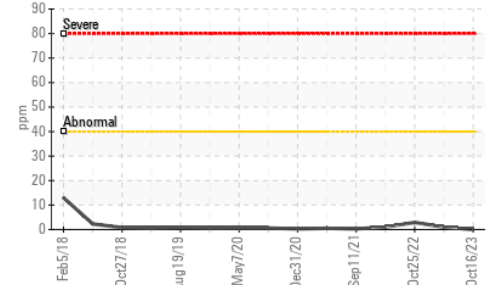
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	14.0	15.3

GRAPHS

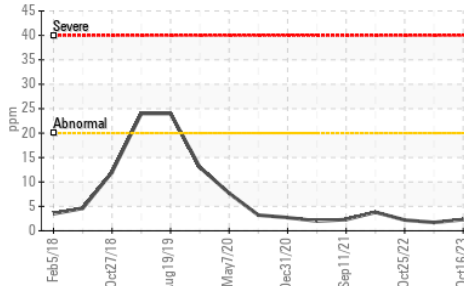
Iron (ppm)



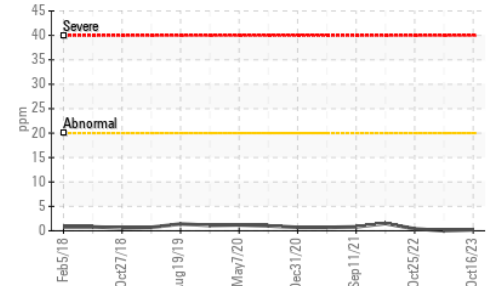
Lead (ppm)



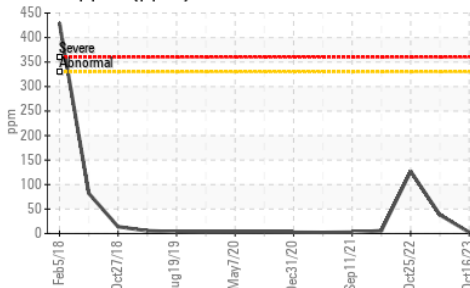
Aluminum (ppm)



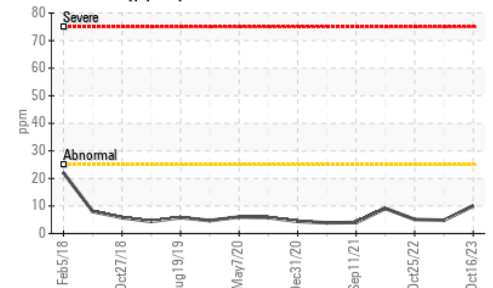
Chromium (ppm)



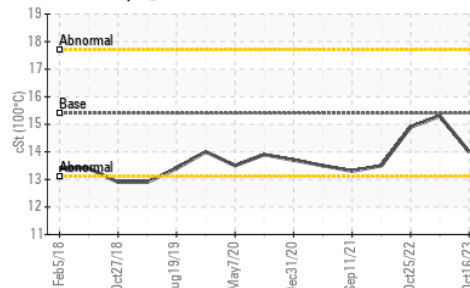
Copper (ppm)



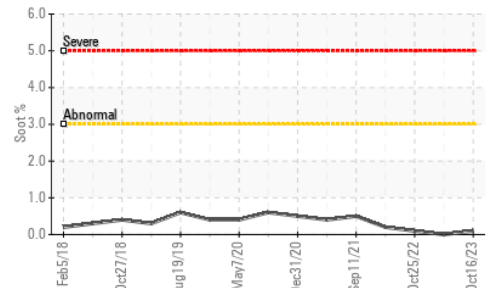
Silicon (ppm)



Viscosity @ 100°C



Soot %



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 221 - Windsor**
Sample No. : GFL0085675 **Received** : 18 Oct 2023 905 Tecumseh Road W
Lab Number : 02589924 **Diagnosed** : 18 Oct 2023 Windsor, ON
Unique Number : 5658990 **Diagnostician** : Wes Davis CA N8W 4J5
Test Package : MOB 1 **Contact:** Rhys Marotte
 rmarotte@gflenv.com

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.