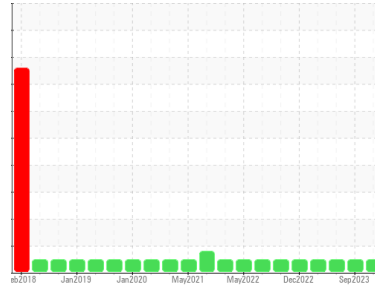




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
701047

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

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	GFL0097452	GFL0085686	GFL0077313
Sample Date	Client Info	30 Nov 2023	07 Sep 2023	16 Jun 2023
Machine Age	hrs Client Info	570	0	0
Oil Age	hrs Client Info	570	0	0
Oil Changed	Client Info	Changed	N/A	N/A
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	14	9	12
Chromium	ppm ASTM D5185(m) >20	<1	<1	<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	<1	<1
Aluminum	ppm ASTM D5185(m) >20	2	3	1
Lead	ppm ASTM D5185(m) >40	<1	0	0
Copper	ppm ASTM D5185(m) >330	2	1	2
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	2	1	3
Barium	ppm ASTM D5185(m) 0	<1	0	0
Molybdenum	ppm ASTM D5185(m) 60	55	56	58
Manganese	ppm ASTM D5185(m) 0	0	<1	<1
Magnesium	ppm ASTM D5185(m) 1010	886	943	945
Calcium	ppm ASTM D5185(m) 1070	963	1003	1013
Phosphorus	ppm ASTM D5185(m) 1150	907	1017	1020
Zinc	ppm ASTM D5185(m) 1270	1123	1163	1155
Sulfur	ppm ASTM D5185(m) 2060	2247	2450	2334
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

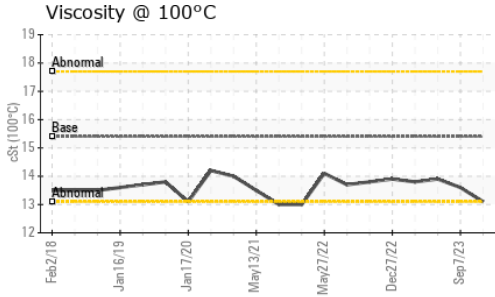
method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >25	3	3	4
Sodium	ppm ASTM D5185(m)	2	2	2
Potassium	ppm ASTM D5185(m) >20	1	<1	<1

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% ASTM D7844* >3	0.3	1.7	0.4
Nitration	Abs/cm ASTM D7624* >20	9.9	16.5	10.0
Sulfation	Abs/.1mm ASTM D7415* >30	21.5	23.2	20.8



OIL ANALYSIS REPORT

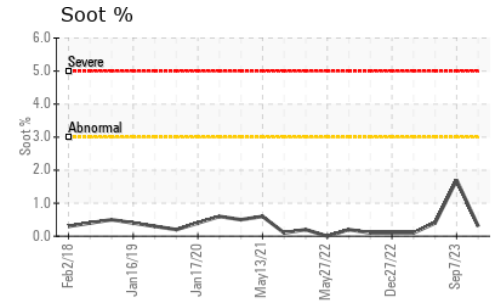
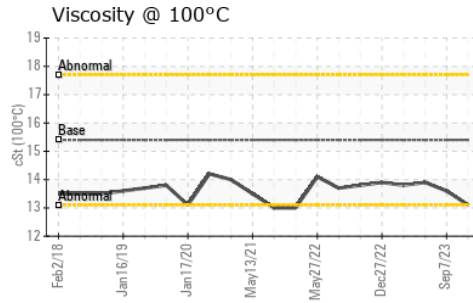
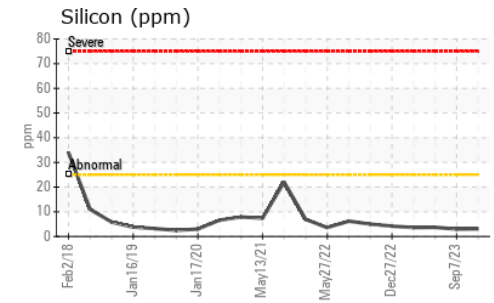
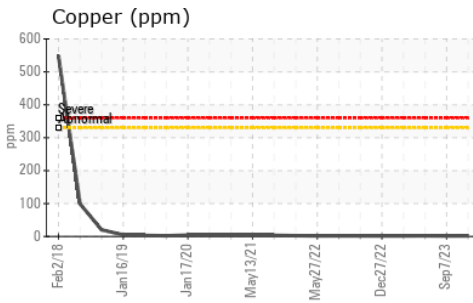
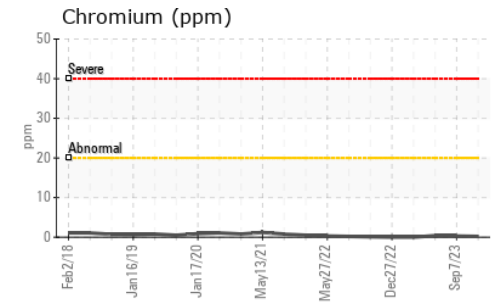
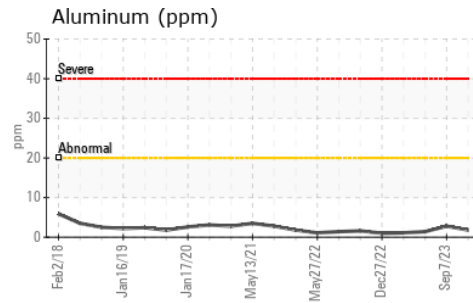
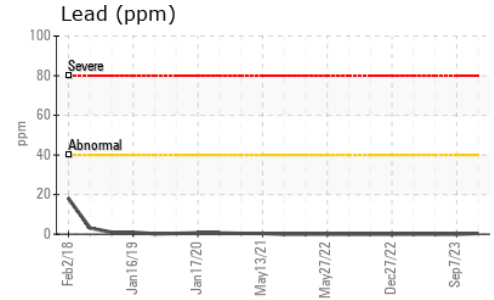
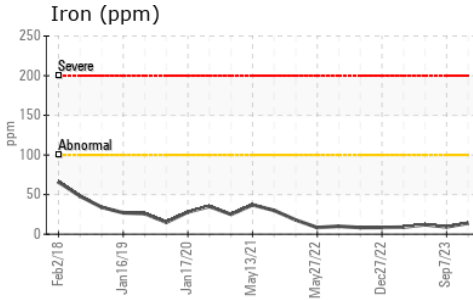


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	19.3	35.8	18.0

VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	NEG	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	13.1	13.6	13.9

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 221 - Windsor**
Sample No. : GFL0097452 **Received** : 05 Dec 2023 905 Tecumseh Road W
Lab Number : **02600812** **Diagnosed** : 05 Dec 2023 Windsor, ON
Unique Number : 5685892 **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.