



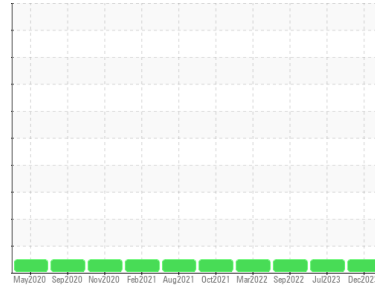
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
427009
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- 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		GFL0090415	GFL0071496	GFL0054316
Sample Date	Client Info		01 Dec 2023	14 Jul 2023	21 Sep 2022
Machine Age	kms	Client Info	351878	336425	316150
Oil Age	kms	Client Info	0	0	0
Oil Changed	Client Info		N/A	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
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) >120	15	20	7
Chromium	ppm	ASTM D5185(m) >20	0	<1	0
Nickel	ppm	ASTM D5185(m) >5	<1	0	0
Titanium	ppm	ASTM D5185(m) >2	0	0	0
Silver	ppm	ASTM D5185(m) >2	<1	0	0
Aluminum	ppm	ASTM D5185(m) >20	2	1	2
Lead	ppm	ASTM D5185(m) >40	2	3	1
Copper	ppm	ASTM D5185(m) >330	10	2	<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	3	4	4
Barium	ppm	ASTM D5185(m) 0	<1	0	0
Molybdenum	ppm	ASTM D5185(m) 60	59	60	58
Manganese	ppm	ASTM D5185(m) 0	0	<1	<1
Magnesium	ppm	ASTM D5185(m) 1010	950	991	956
Calcium	ppm	ASTM D5185(m) 1070	1025	1124	1114
Phosphorus	ppm	ASTM D5185(m) 1150	942	1024	1053
Zinc	ppm	ASTM D5185(m) 1270	1179	1223	1168
Sulfur	ppm	ASTM D5185(m) 2060	2251	2235	2486
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

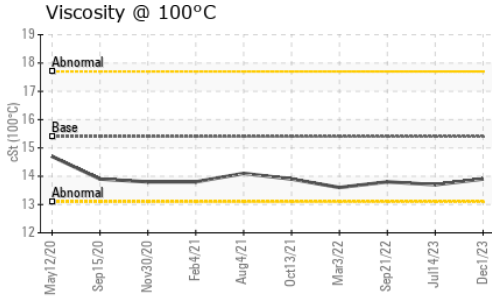
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	3	3	2
Sodium	ppm	ASTM D5185(m)	6	3	2
Potassium	ppm	ASTM D5185(m) >20	1	2	<1

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >4	0.7	0.7	0.1
Nitration	Abs/cm	ASTM D7624* >20	8.3	9.0	7.3
Sulfation	Abs./1mm	ASTM D7415* >30	20.7	22.5	20.1



OIL ANALYSIS REPORT



FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs:1mm ASTM D7414*	>25	16.5	18.5

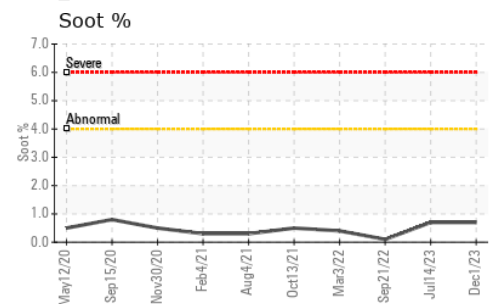
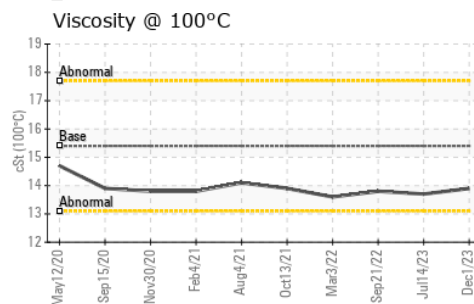
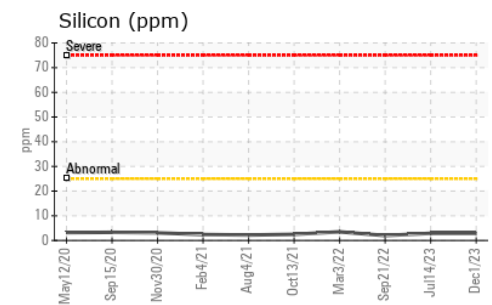
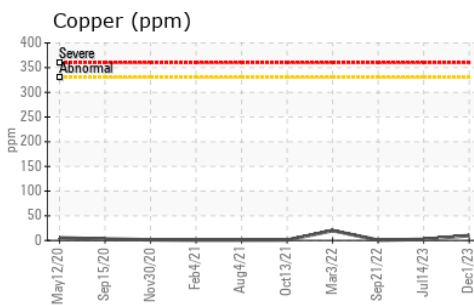
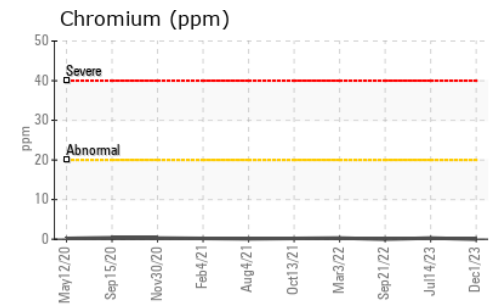
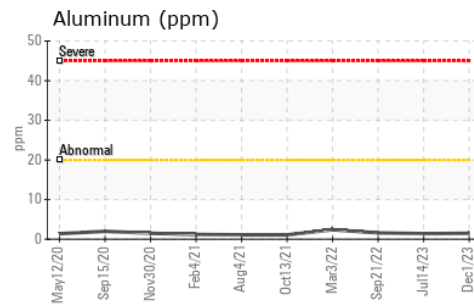
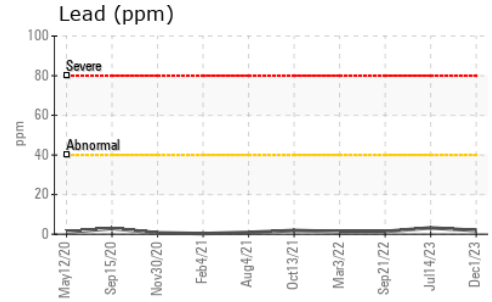
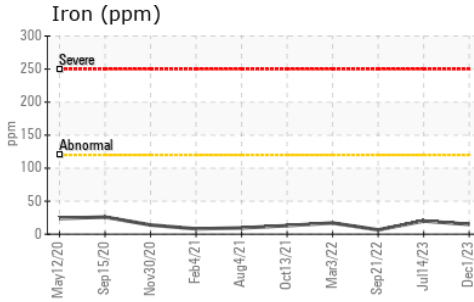
VISUAL

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	13.9	13.7

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0090415 **Received** : 05 Dec 2023
Lab Number : 02600801 **Diagnosed** : 05 Dec 2023
Unique Number : 5685881 **Diagnostician** : Wes Davis
Test Package : MOB 1

GFL Environmental - 216M
 2475 Beryl Drive
 Oakville, ON
 CA L6J 7X4
 Contact: Matthew Gunness
 mgunness@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.