



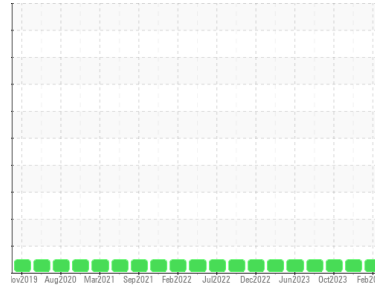
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
401207
 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		GFL0090397	GFL0090395	GFL0090420
Sample Date	Client Info		26 Feb 2024	20 Dec 2023	06 Oct 2023
Machine Age	hrs	Client Info	241789	230370	218538
Oil Age	hrs	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	20	12	25
Chromium	ppm	ASTM D5185(m) >20	<1	<1	<1
Nickel	ppm	ASTM D5185(m) >15	<1	<1	<1
Titanium	ppm	ASTM D5185(m) >2	0	0	0
Silver	ppm	ASTM D5185(m) >3	<1	0	<1
Aluminum	ppm	ASTM D5185(m) >20	2	2	3
Lead	ppm	ASTM D5185(m) >40	<1	<1	<1
Copper	ppm	ASTM D5185(m) >330	3	2	3
Tin	ppm	ASTM D5185(m) >15	<1	<1	<1
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	2	2
Barium	ppm	ASTM D5185(m) 0	0	0	<1
Molybdenum	ppm	ASTM D5185(m) 60	60	59	62
Manganese	ppm	ASTM D5185(m) 0	0	0	0
Magnesium	ppm	ASTM D5185(m) 1010	972	976	994
Calcium	ppm	ASTM D5185(m) 1070	1072	1064	1078
Phosphorus	ppm	ASTM D5185(m) 1150	968	991	981
Zinc	ppm	ASTM D5185(m) 1270	1185	1175	1223
Sulfur	ppm	ASTM D5185(m) 2060	2398	2545	2234
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

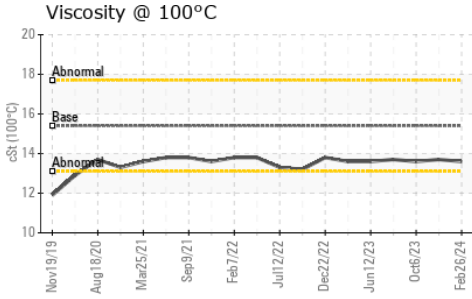
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	3	3	4
Sodium	ppm	ASTM D5185(m)	4	3	5
Potassium	ppm	ASTM D5185(m) >20	4	5	6

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >4	0.5	0.3	0.6
Nitration	Abs/cm	ASTM D7624* >20	9.8	8.2	9.3
Sulfation	Abs./1mm	ASTM D7415* >30	21.6	20.1	21.9



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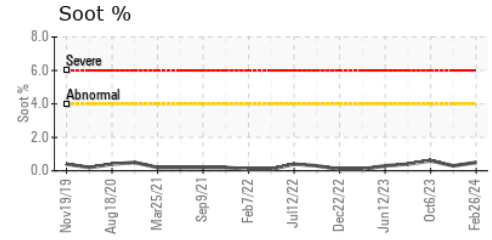
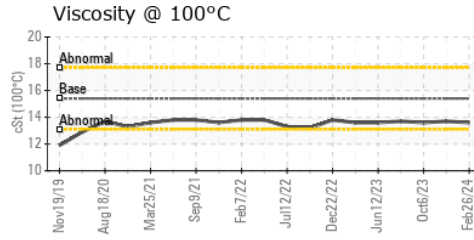
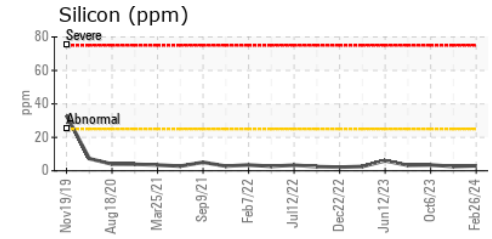
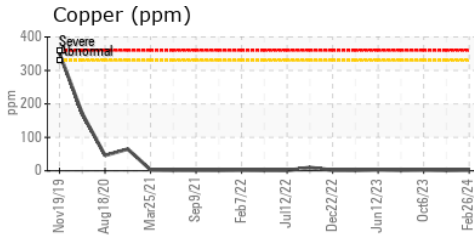
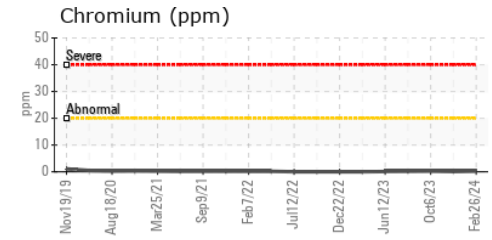
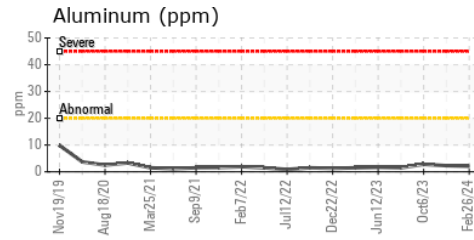
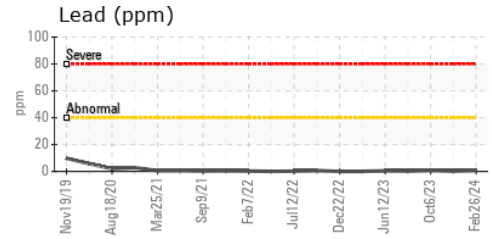
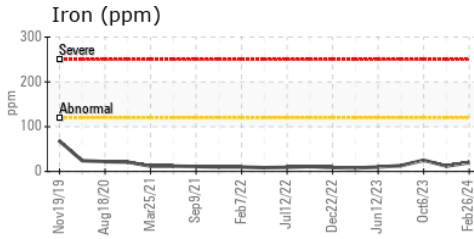


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	18.0	16.0	17.6

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---
Precipitate	scalar	Visual*	NONE	NONE	---	---
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
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	13.6	13.7	13.6

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0090397 **Received** : 28 Feb 2024
Lab Number : **02618584** **Tested** : 28 Feb 2024
Unique Number : 5735694 **Diagnosed** : 28 Feb 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: Visual)

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