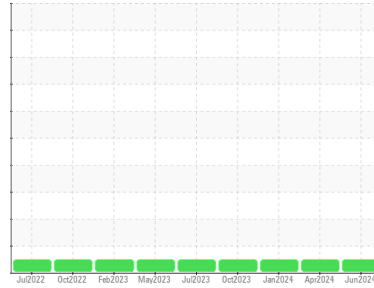




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area

GFL216

Machine Id

412026

Component

Diesel Engine

Fluid

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

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	GFL0124671	GFL0110699	GFL0110708	
Sample Date	Client Info	21 Jun 2024	10 Apr 2024	15 Jan 2024	
Machine Age	hrs	Client Info	6377	5806	5245
Oil Age	hrs	Client Info	600	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 >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	11	9	9
Chromium	ppm ASTM D5185(m) >20	<1	0	0
Nickel	ppm ASTM D5185(m) >15	<1	<1	1
Titanium	ppm ASTM D5185(m) >2	0	0	0
Silver	ppm ASTM D5185(m) >3	0	0	0
Aluminum	ppm ASTM D5185(m) >20	1	1	2
Lead	ppm ASTM D5185(m) >40	0	0	<1
Copper	ppm ASTM D5185(m) >330	2	2	2
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	1	3	<1
Barium	ppm ASTM D5185(m) 0	0	0	0
Molybdenum	ppm ASTM D5185(m) 60	59	60	56
Manganese	ppm ASTM D5185(m) 0	<1	<1	0
Magnesium	ppm ASTM D5185(m) 1010	965	992	950
Calcium	ppm ASTM D5185(m) 1070	1027	1072	1068
Phosphorus	ppm ASTM D5185(m) 1150	959	993	980
Zinc	ppm ASTM D5185(m) 1270	1198	1207	1166
Sulfur	ppm ASTM D5185(m) 2060	2359	2489	2595
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

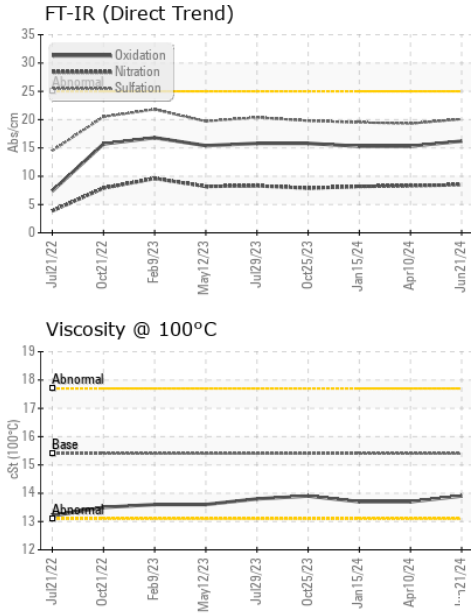
method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >25	3	2	3
Sodium	ppm ASTM D5185(m)	2	1	1
Potassium	ppm ASTM D5185(m) >20	2	1	3

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% ASTM D7844* >4	0.3	0.3	0.2
Nitration	Abs/cm ASTM D7624* >20	8.5	8.3	8.2
Sulfation	Abs./1mm ASTM D7415* >30	20.1	19.3	19.5



OIL ANALYSIS REPORT

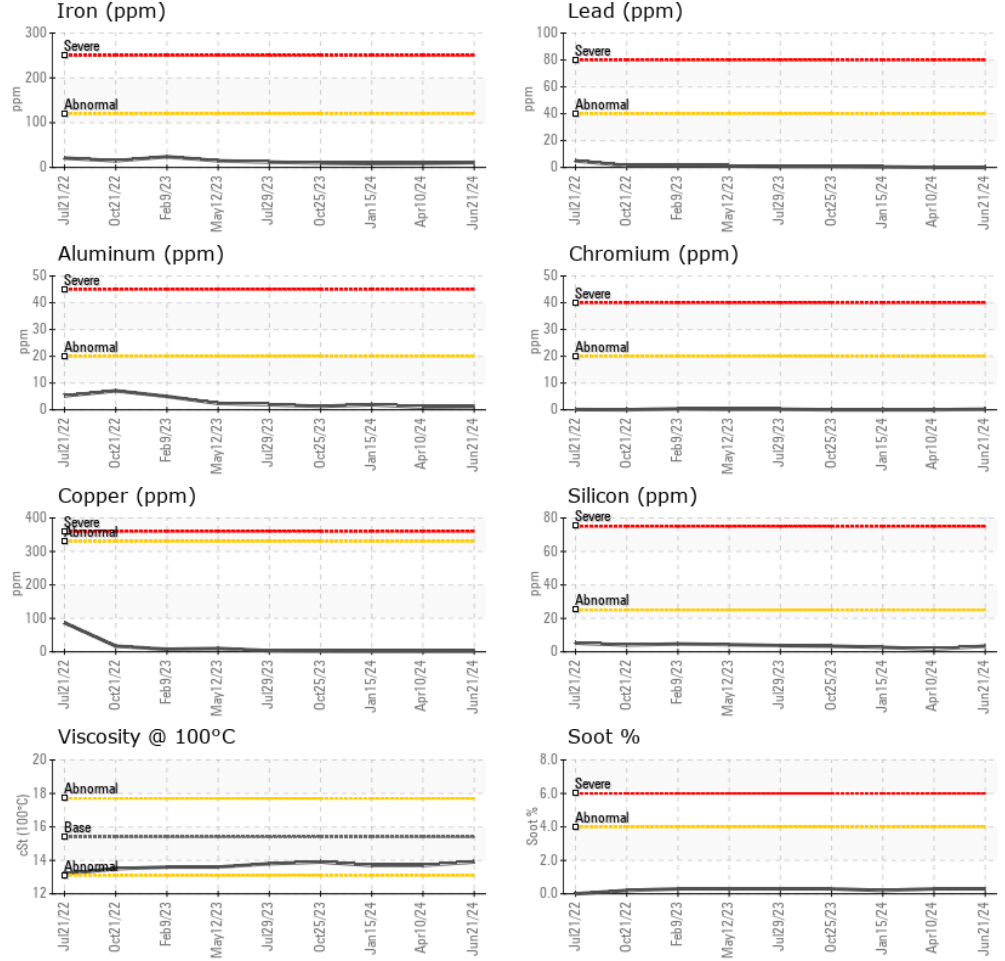


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	16.2	15.3	15.3

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	VLITE	---	---
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	13.9	13.7	13.7

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0124671
Lab Number : 02643963
Unique Number : 5801502
Test Package : MOB 1 (Additional Tests: Visual)

GFL Environmental - 207 - Pickering SW
 1034 TOY AVENUE, PICKERING YARD
 PICKERING, ON
 CA L1W 3P1
 Contact: Ian Patton
 ipatton@gflenv.com
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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.