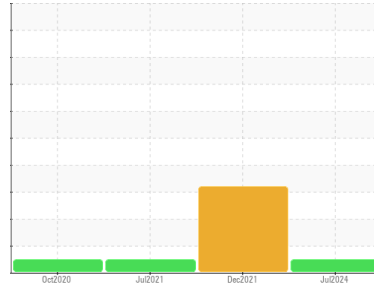




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

219005

Component

Front 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		GFL0126252	GFL0041375	GFL0030257
Sample Date	Client Info		15 Jul 2024	18 Dec 2021	28 Jul 2021
Machine Age	kms	Client Info	0	0	83
Oil Age	kms	Client Info	0	0	83
Oil Changed	Client Info		N/A	N/A	Changed
Sample Status			NORMAL	ABNORMAL	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	20	▲ 125	10
Chromium	ppm	ASTM D5185(m) >20	<1	3	<1
Nickel	ppm	ASTM D5185(m) >4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	0	0	<1
Silver	ppm	ASTM D5185(m) >3	0	0	<1
Aluminum	ppm	ASTM D5185(m) >20	3	▲ 27	5
Lead	ppm	ASTM D5185(m) >40	0	1	1
Copper	ppm	ASTM D5185(m) >330	2	8	7
Tin	ppm	ASTM D5185(m) >15	0	<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	4	5	101
Barium	ppm	ASTM D5185(m) 0	0	0	3
Molybdenum	ppm	ASTM D5185(m) 60	58	49	12
Manganese	ppm	ASTM D5185(m) 0	<1	2	1
Magnesium	ppm	ASTM D5185(m) 1010	922	930	702
Calcium	ppm	ASTM D5185(m) 1070	1016	1035	1588
Phosphorus	ppm	ASTM D5185(m) 1150	1162	958	784
Zinc	ppm	ASTM D5185(m) 1270	1188	1141	843
Sulfur	ppm	ASTM D5185(m) 2060	2655	2405	2793
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

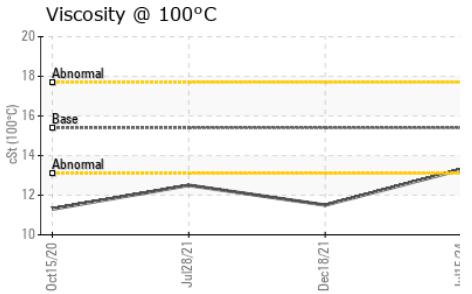
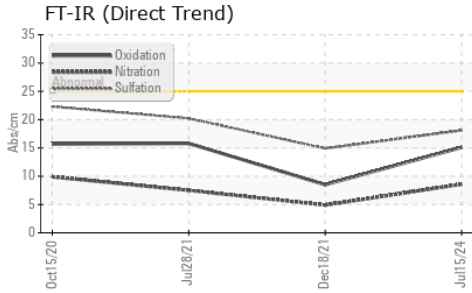
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	5	▲ 26	465
Sodium	ppm	ASTM D5185(m)	2	7	4
Potassium	ppm	ASTM D5185(m) >20	0	3	4

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >3	0.1	0	0
Nitration	Abs/cm	ASTM D7624* >20	8.6	4.9	7.5
Sulfation	Abs/.1mm	ASTM D7415* >30	18.1	14.9	20.2



OIL ANALYSIS REPORT

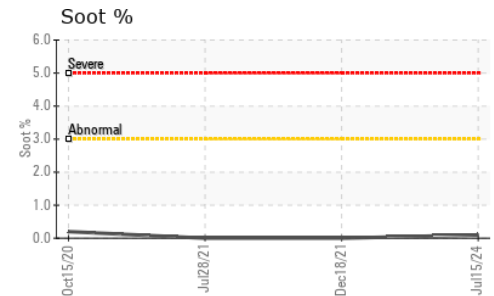
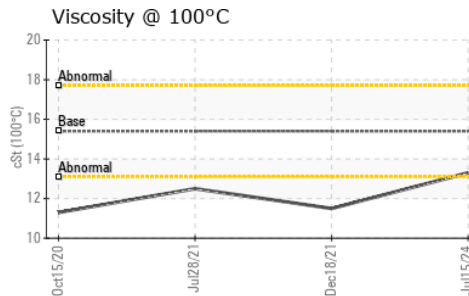
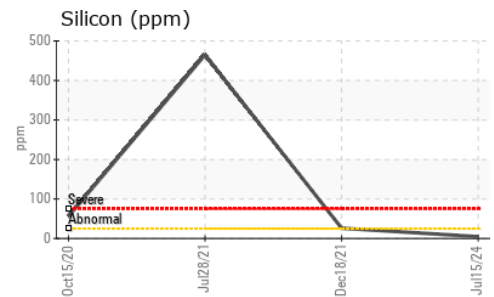
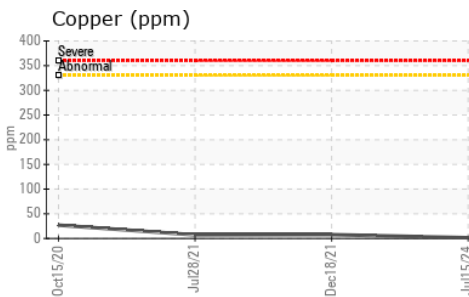
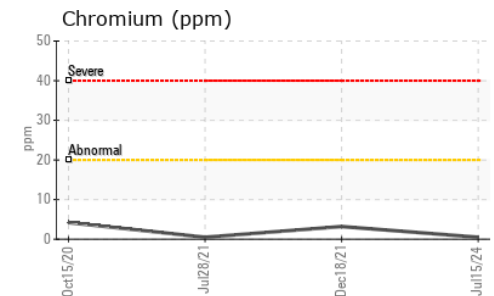
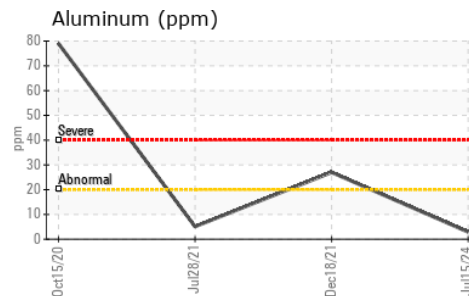
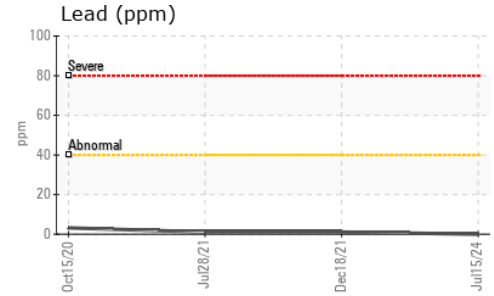
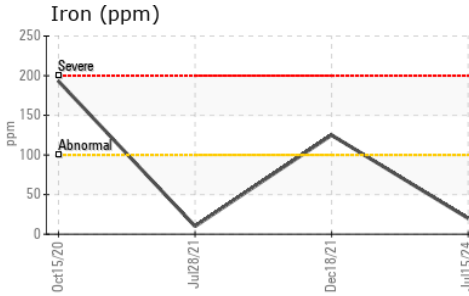


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	15.1	8.5	15.8

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	13.3	11.5	12.5

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0126252 **Received** : 16 Jul 2024
Lab Number : **02648065** **Tested** : 16 Jul 2024
Unique Number : 5813617 **Diagnosed** : 16 Jul 2024 - Kevin Marson
Test Package : MOB 1

GFL Environmental - 216
 15 Bermondsey Road
 Toronto, ON
 CA M4B 1Y9
 Contact: Tom Hatzioannidis
 thatzioannidis@gflenv.com
 T: (416)678-9340
 F:

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.