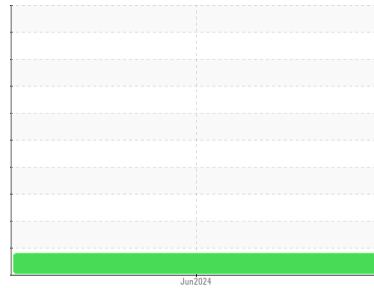




OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id
INTERNATIONAL 229117
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON HP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

Fluid Condition

Viscosity of sample indicates oil is within SAE 10W30 range, advise investigate. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0122253	---	---
Sample Date	Client Info		19 Jun 2024	---	---
Machine Age	hrs	Client Info	9590	---	---
Oil Age	hrs	Client Info	150	---	---
Oil Changed	Client Info		Changed	---	---
Sample Status			ABNORMAL	---	---

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	NEG	---	---
Glycol	WC Method		NEG	---	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >100	95	---	---
Chromium	ppm	ASTM D5185(m) >20	<1	---	---
Nickel	ppm	ASTM D5185(m) >4	<1	---	---
Titanium	ppm	ASTM D5185(m)	0	---	---
Silver	ppm	ASTM D5185(m) >3	0	---	---
Aluminum	ppm	ASTM D5185(m) >20	6	---	---
Lead	ppm	ASTM D5185(m) >40	6	---	---
Copper	ppm	ASTM D5185(m) >330	22	---	---
Tin	ppm	ASTM D5185(m) >15	<1	---	---
Antimony	ppm	ASTM D5185(m)	0	---	---
Vanadium	ppm	ASTM D5185(m)	0	---	---
Beryllium	ppm	ASTM D5185(m)	0	---	---
Cadmium	ppm	ASTM D5185(m)	0	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) 0	3	---	---
Barium	ppm	ASTM D5185(m) 0	0	---	---
Molybdenum	ppm	ASTM D5185(m) 60	61	---	---
Manganese	ppm	ASTM D5185(m) 0	<1	---	---
Magnesium	ppm	ASTM D5185(m) 1010	968	---	---
Calcium	ppm	ASTM D5185(m) 1070	1066	---	---
Phosphorus	ppm	ASTM D5185(m) 1150	1020	---	---
Zinc	ppm	ASTM D5185(m) 1270	1203	---	---
Sulfur	ppm	ASTM D5185(m) 2060	2675	---	---
Lithium	ppm	ASTM D5185(m)	<1	---	---

CONTAMINANTS

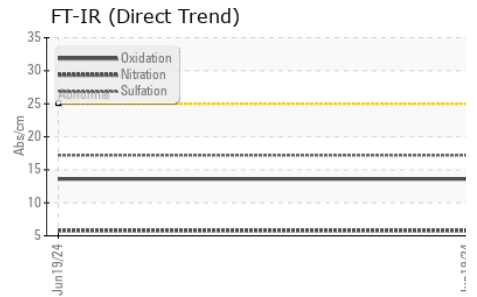
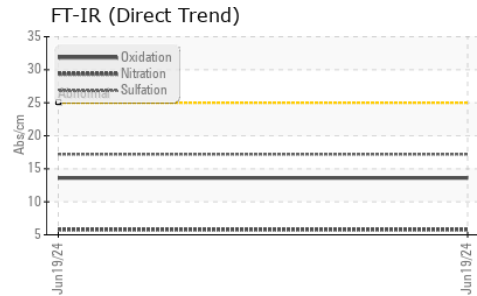
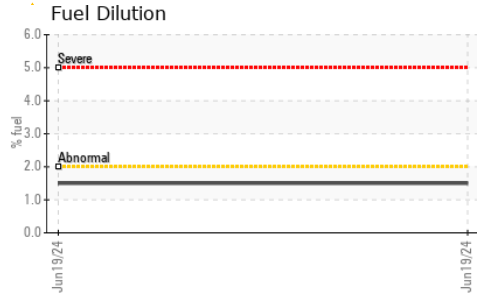
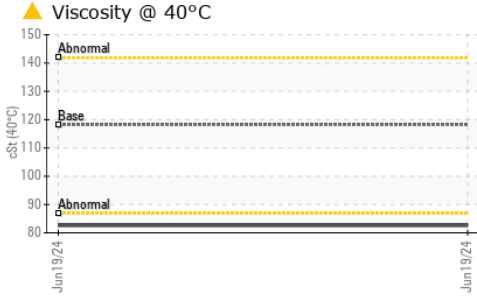
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	3	---	---
Sodium	ppm	ASTM D5185(m)	3	---	---
Potassium	ppm	ASTM D5185(m) >20	<1	---	---
Fuel	%	ASTM D7593* >2.0	1.5	---	---

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >3	0	---	---
Nitration	Abs/cm	ASTM D7624* >20	5.8	---	---
Sulfation	Abs/.1mm	ASTM D7415* >30	17.2	---	---



OIL ANALYSIS REPORT

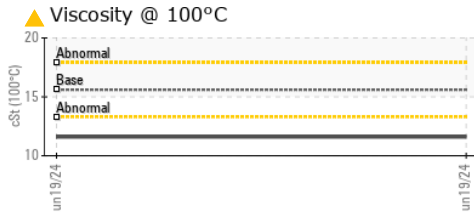
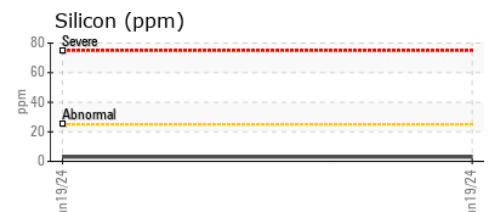
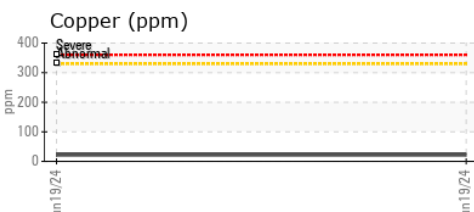
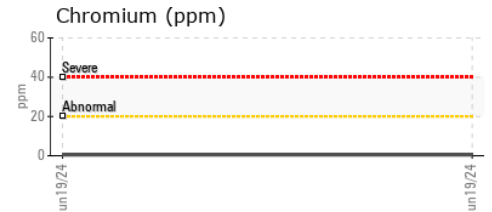
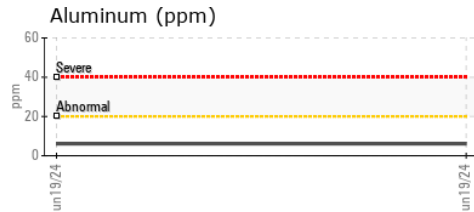
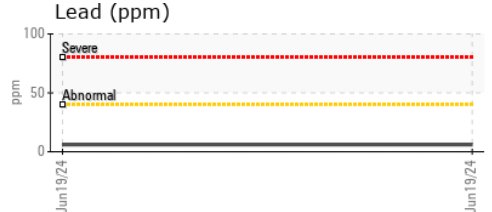
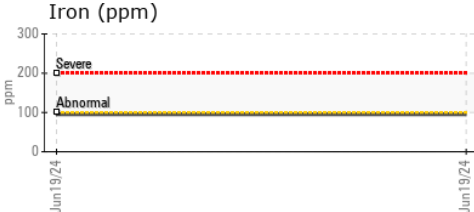


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	13.6	---	---

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	---	---
Emulsified Water	scalar	Visual*	>0.2	NEG	---	---
Free Water	scalar	Visual*		NEG	---	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	118.2	▲ 82.6	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	▲ 11.6	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	139	131	---	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 987 - Charlottetown**
Sample No. : GFL0122253 **Received** : 28 Jun 2024 **7 Superior Crescent**
Lab Number : **02644534** **Tested** : 02 Jul 2024 **Charlottetown, PE**
Unique Number : 5802073 **Diagnosed** : 02 Jul 2024 - Kevin Marson **CA C1A 7N5**
Test Package : MOB 1 (Additional Tests: FuelDilution, KV40, PercentFuel, VI, Visual) **Contact: Vicki Metcalfe**
Validity of results and interpretation are based on the sample and information as supplied. **vmetcalfe@gflenv.com**

To discuss this sample report, contact Customer Service at 1-800-268-2131. **T: (782)377-5918**
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. **F: (506)453-9490**