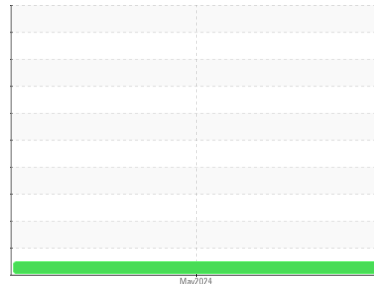




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
WESTERN STAR 424079
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON HP 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			GFL0122264	---	---
Sample Date	Client Info			30 May 2024	---	---
Machine Age	hrs	Client Info		15483	---	---
Oil Age	hrs	Client Info		457	---	---
Oil Changed	Client Info			Changed	---	---
Sample Status				NORMAL	---	---

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<1.0	---	---
Water	WC Method	>0.2		NEG	---	---
Glycol	WC Method			NEG	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	7	---	---
Chromium	ppm	ASTM D5185(m)	>20	<1	---	---
Nickel	ppm	ASTM D5185(m)	>4	0	---	---
Titanium	ppm	ASTM D5185(m)		0	---	---
Silver	ppm	ASTM D5185(m)	>3	0	---	---
Aluminum	ppm	ASTM D5185(m)	>20	1	---	---
Lead	ppm	ASTM D5185(m)	>40	2	---	---
Copper	ppm	ASTM D5185(m)	>330	88	---	---
Tin	ppm	ASTM D5185(m)	>15	0	---	---
Antimony	ppm	ASTM D5185(m)		0	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---
Beryllium	ppm	ASTM D5185(m)		0	---	---
Cadmium	ppm	ASTM D5185(m)		0	---	---

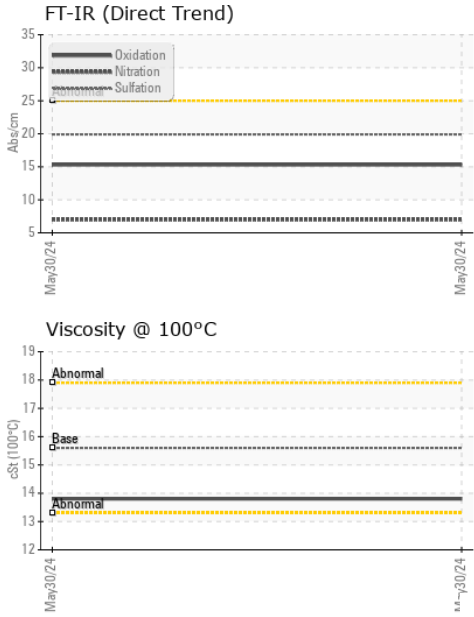
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	2	---	---
Barium	ppm	ASTM D5185(m)	0	0	---	---
Molybdenum	ppm	ASTM D5185(m)	60	62	---	---
Manganese	ppm	ASTM D5185(m)	0	0	---	---
Magnesium	ppm	ASTM D5185(m)	1010	1003	---	---
Calcium	ppm	ASTM D5185(m)	1070	1096	---	---
Phosphorus	ppm	ASTM D5185(m)	1150	1012	---	---
Zinc	ppm	ASTM D5185(m)	1270	1207	---	---
Sulfur	ppm	ASTM D5185(m)	2060	2463	---	---
Lithium	ppm	ASTM D5185(m)		<1	---	---

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

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0.2	---	---
Nitration	Abs/cm	ASTM D7624*	>20	7.0	---	---
Sulfation	Abs./1mm	ASTM D7415*	>30	19.9	---	---



OIL ANALYSIS REPORT

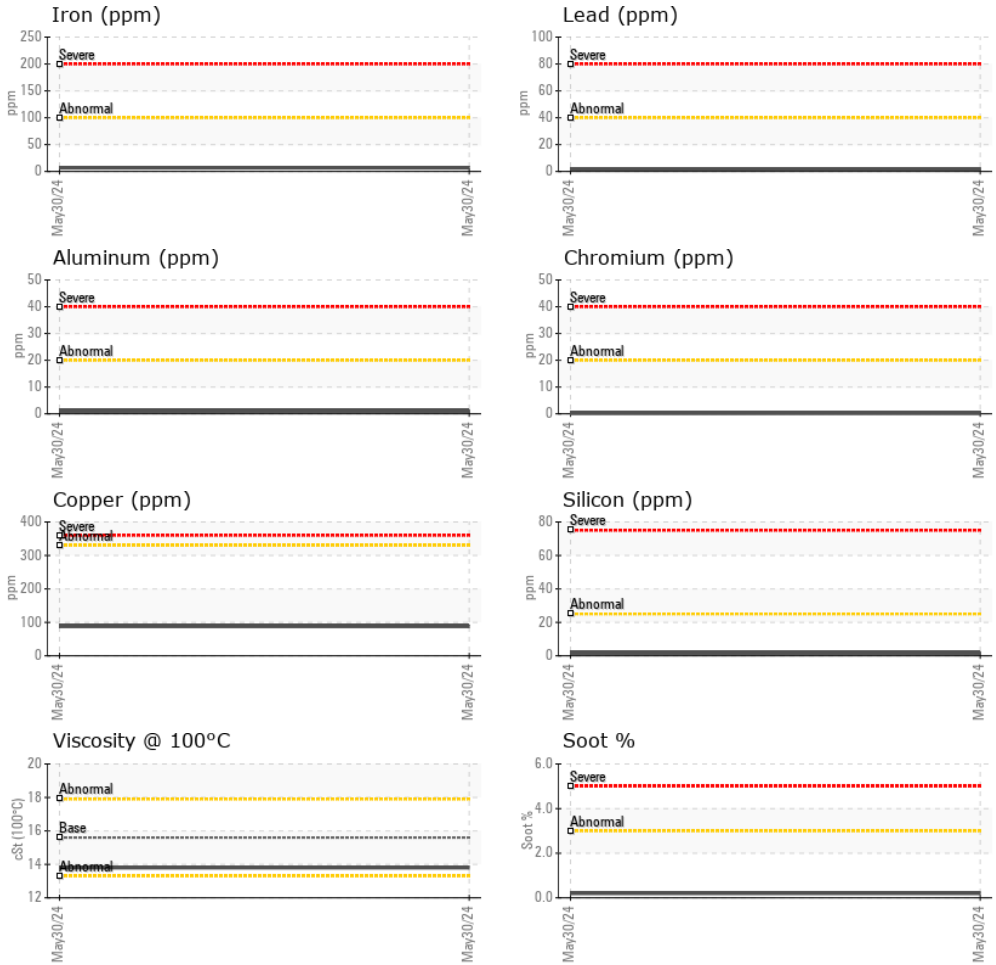


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	15.3	---	---

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	VLITE	---	---
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 @ 100°C	cSt	ASTM D7279(m)	15.6	13.8	---	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 987 - Charlottetown**
Sample No. : GFL0122264 **Received** : 06 Jun 2024 7 Superior Crescent
Lab Number : **02640175** **Tested** : 06 Jun 2024 Charlottetown, PE
Unique Number : 5789337 **Diagnosed** : 06 Jun 2024 - Wes Davis CA C1A 7N5
Test Package : MOB 1 (Additional Tests: Visual) Contact: Vicki Metcalfe
 vmetcalfe@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.

T: (782)377-5918
 F: (506)453-9490