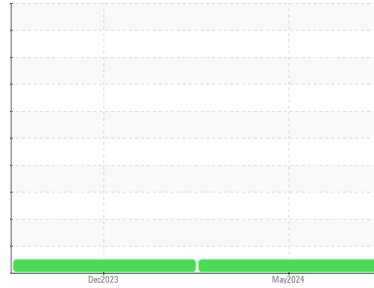




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

413130

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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0066540	GFL0066510	---
Sample Date	Client Info		21 May 2024	20 Dec 2023	---
Machine Age	mls	Client Info	64552	44165	---
Oil Age	mls	Client Info	20387	44165	---
Oil Changed	Client Info		Changed	Changed	---
Sample Status			NORMAL	NORMAL	---

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	20	13	---
Chromium	ppm	ASTM D5185m >20	1	<1	---
Nickel	ppm	ASTM D5185m >4	<1	0	---
Titanium	ppm	ASTM D5185m	<1	0	---
Silver	ppm	ASTM D5185m >3	1	0	---
Aluminum	ppm	ASTM D5185m >20	5	7	---
Lead	ppm	ASTM D5185m >40	<1	0	---
Copper	ppm	ASTM D5185m >330	2	<1	---
Tin	ppm	ASTM D5185m >15	<1	<1	---
Vanadium	ppm	ASTM D5185m	<1	0	---
Cadmium	ppm	ASTM D5185m	<1	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	23	157	---
Barium	ppm	ASTM D5185m 0	<1	0	---
Molybdenum	ppm	ASTM D5185m 60	47	49	---
Manganese	ppm	ASTM D5185m 0	<1	<1	---
Magnesium	ppm	ASTM D5185m 1010	74	217	---
Calcium	ppm	ASTM D5185m 1070	2329	1837	---
Phosphorus	ppm	ASTM D5185m 1150	998	1044	---
Zinc	ppm	ASTM D5185m 1270	1219	1204	---
Sulfur	ppm	ASTM D5185m 2060	3329	3312	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	14	9	---
Sodium	ppm	ASTM D5185m	5	0	---
Potassium	ppm	ASTM D5185m >20	13	17	---

INFRA-RED

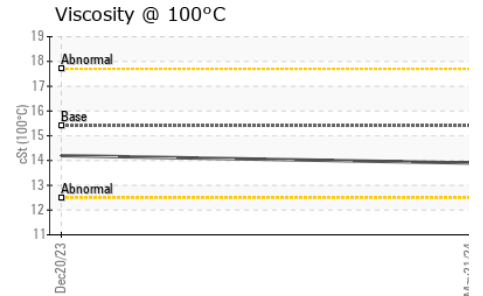
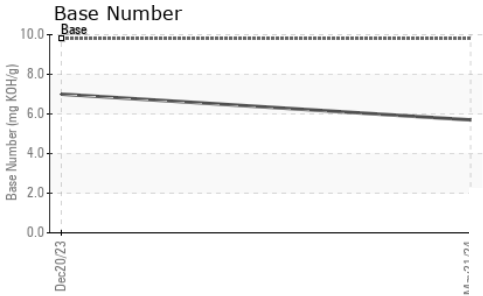
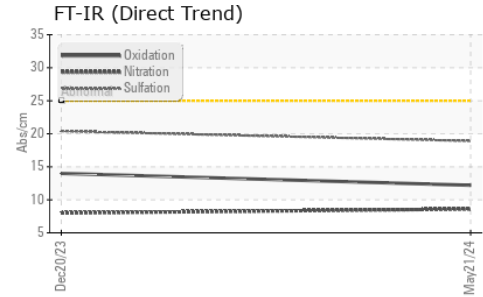
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.3	0.3	---
Nitration	Abs/cm	*ASTM D7624 >20	8.6	8.0	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.9	20.4	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	12.2	14.0	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	5.7	7.0	---



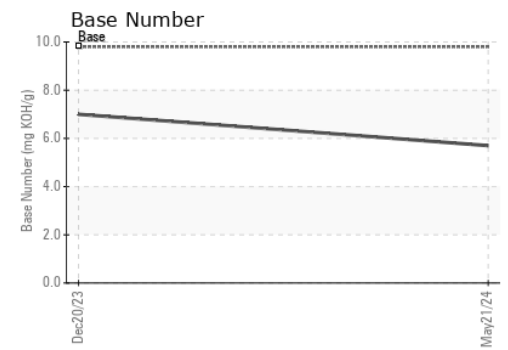
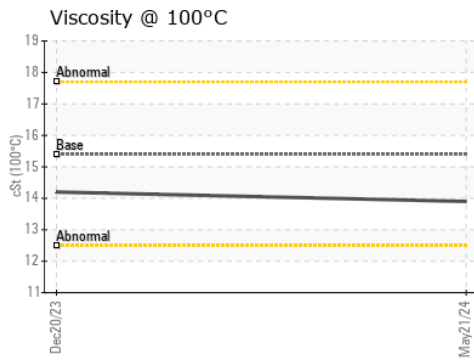
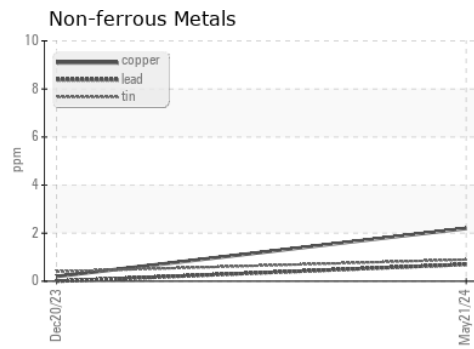
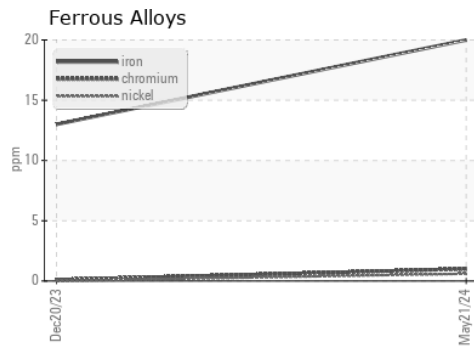
OIL ANALYSIS REPORT



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 @ 100°C	cSt	ASTM D445	15.4	13.9	14.2

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0066540 **Received** : 28 May 2024
Lab Number : 06191860 **Tested** : 29 May 2024
Unique Number : 11048612 **Diagnosed** : 30 May 2024 - Sean Felton
Test Package : FLEET

GFL Environmental - 977 - Montgomery Hauling
 17851 Highway 105 E
 Conroe, TX 77306
 Contact: CHRIS YOUNG
 christophery@gflenv.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)