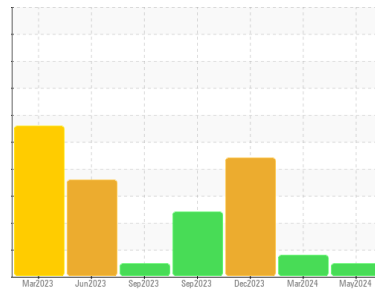




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
725078
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Fuel content negligible. 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		GFL0086969	GFL0086979	GFL0086920
Sample Date	Client Info		31 May 2024	08 Mar 2024	01 Dec 2023
Machine Age	hrs	Client Info	10600	10200	9800
Oil Age	hrs	Client Info	500	622	222
Oil Changed	Client Info		Not Chngd	Not Chngd	N/A
Sample Status			NORMAL	ABNORMAL	SEVERE

CONTAMINATION

	method	limit/base	current	history1	history2
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 D5185m >120	4	21	22
Chromium	ppm	ASTM D5185m >20	0	<1	<1
Nickel	ppm	ASTM D5185m >5	0	0	0
Titanium	ppm	ASTM D5185m >2	0	0	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >20	<1	1	1
Lead	ppm	ASTM D5185m >40	0	<1	0
Copper	ppm	ASTM D5185m >330	<1	2	2
Tin	ppm	ASTM D5185m >15	0	0	0
Vanadium	ppm	ASTM D5185m	0	0	<1
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	5	8	2
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	57	61	48
Manganese	ppm	ASTM D5185m 0	0	<1	0
Magnesium	ppm	ASTM D5185m 1010	898	967	776
Calcium	ppm	ASTM D5185m 1070	1073	1102	768
Phosphorus	ppm	ASTM D5185m 1150	1008	998	733
Zinc	ppm	ASTM D5185m 1270	1175	1234	921
Sulfur	ppm	ASTM D5185m 2060	3511	3506	2350

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	0	4	4
Sodium	ppm	ASTM D5185m	<1	<1	2
Potassium	ppm	ASTM D5185m >20	0	<1	0
Fuel	%	ASTM D3524 >3.0	0.6	▲ 3.2	▲ 20.5

INFRA-RED

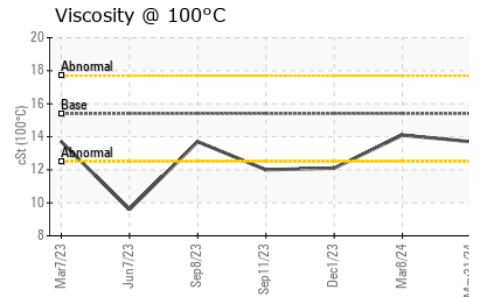
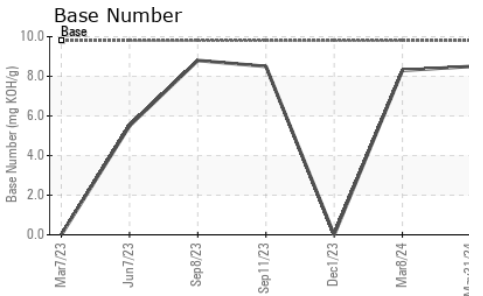
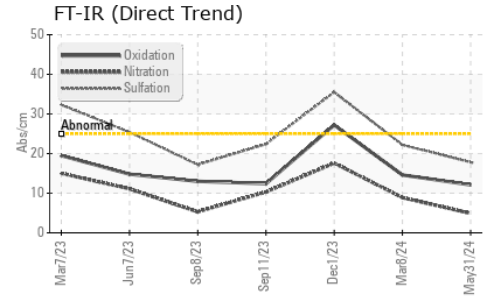
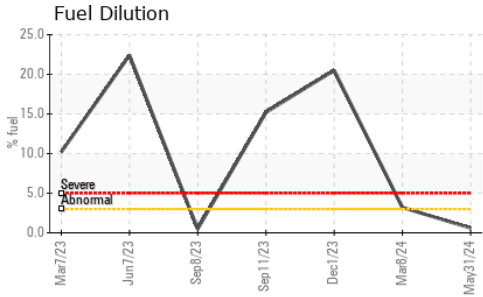
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	0.7	2.5	▲ 5.5
Nitration	Abs/cm	*ASTM D7624 >20	4.9	8.9	17.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	17.8	22.2	35.5

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	12.1	14.6	27.2
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	8.5	8.3	▲ 0.0



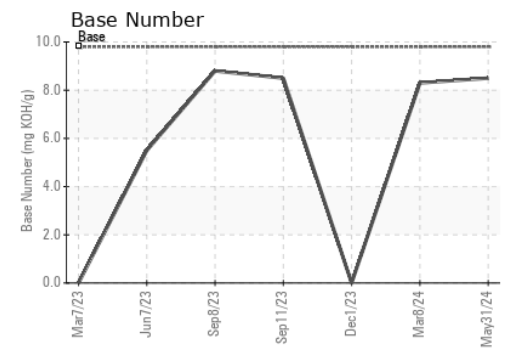
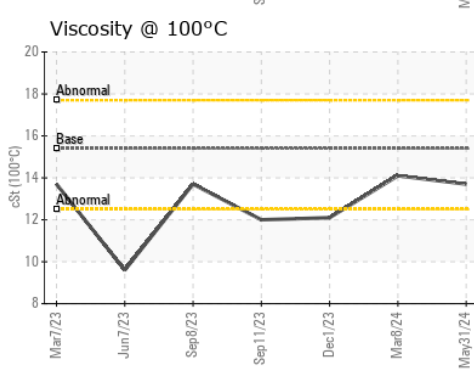
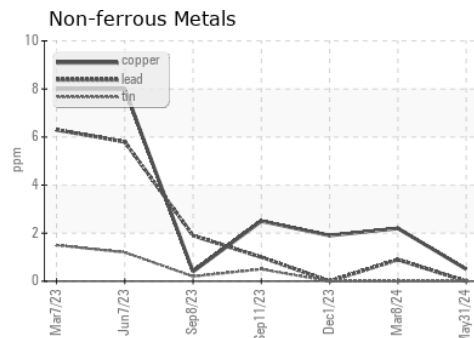
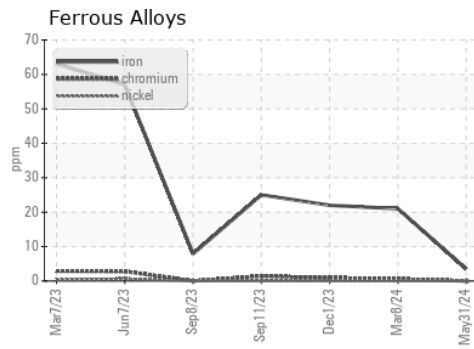
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.7	14.1 ▲ 12.1

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0086969 **Received** : 04 Jun 2024
Lab Number : **06198816** **Tested** : 06 Jun 2024
Unique Number : 11060939 **Diagnosed** : 06 Jun 2024 - Wes Davis
Test Package : FLEET (Additional Tests: PercentFuel)

GFL Environmental - 408 - Brown City
 4235 M-53
 BROWN CITY, MI
 US 48416
 Contact: MARK WOMBLE

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)

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F: