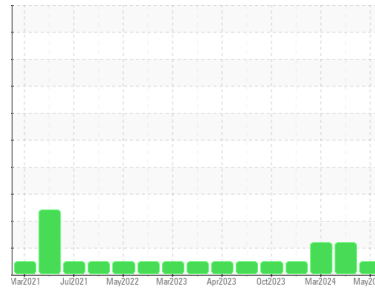




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
227009-1044

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (20 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: Sampled oil)

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		GFL0120864	GFL0110339	GFL0110342
Sample Date	Client Info		31 May 2024	29 Mar 2024	08 Mar 2024
Machine Age	hrs	Client Info	10623	10507	10466
Oil Age	hrs	Client Info	116	580	511
Oil Changed		Client Info	N/A	Changed	Not Chngd
Sample Status			NORMAL	ABNORMAL	ABNORMAL

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	>100	10	28	22
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	7	7
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	<1	<1	0
Tin	ppm	ASTM D5185m	>15	0	0	0
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	0	1	3	0
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	58	63	63
Manganese	ppm	ASTM D5185m	0	0	<1	<1
Magnesium	ppm	ASTM D5185m	1010	869	929	900
Calcium	ppm	ASTM D5185m	1070	1090	1145	1058
Phosphorus	ppm	ASTM D5185m	1150	1022	1030	1045
Zinc	ppm	ASTM D5185m	1270	1188	1233	1209
Sulfur	ppm	ASTM D5185m	2060	3392	3329	3218

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	0	3	3
Sodium	ppm	ASTM D5185m		<1	2	<1
Potassium	ppm	ASTM D5185m	>20	<1	4	4
Fuel	%	ASTM D3524	>2.0	1.4	▲ 3.2	▲ 3.6

INFRA-RED

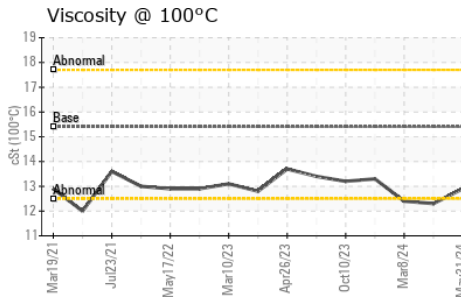
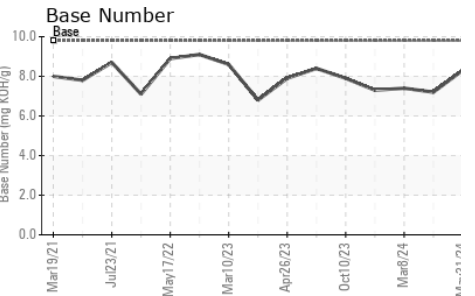
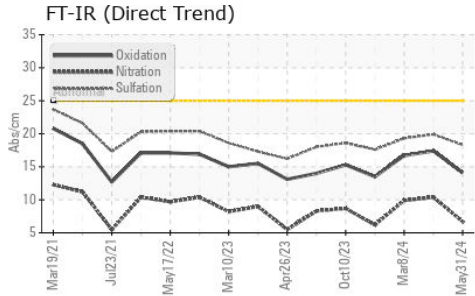
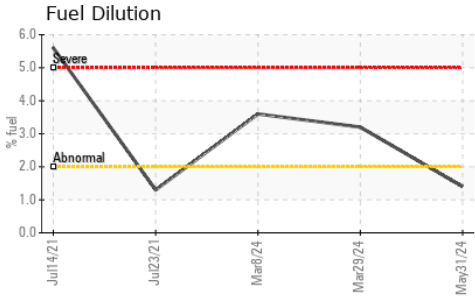
	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	0.4	0.8	0.7
Nitration	Abs/cm	*ASTM D7624	>20	6.7	10.4	9.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.3	19.9	19.3

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.1	17.4	16.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.3	7.2	7.4



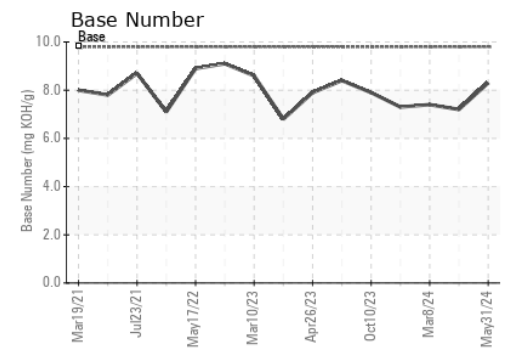
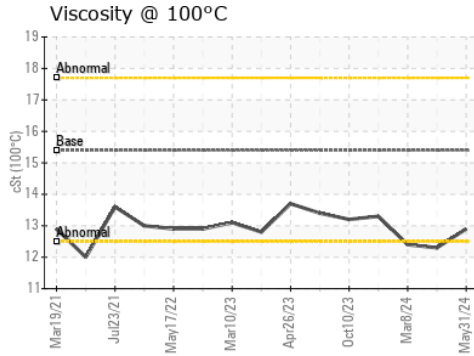
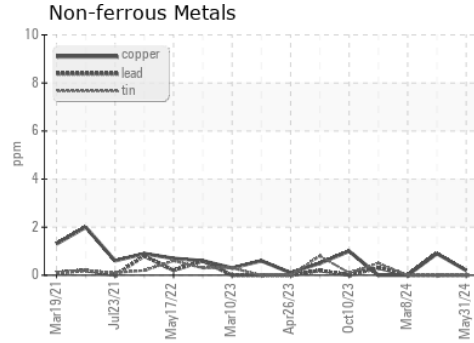
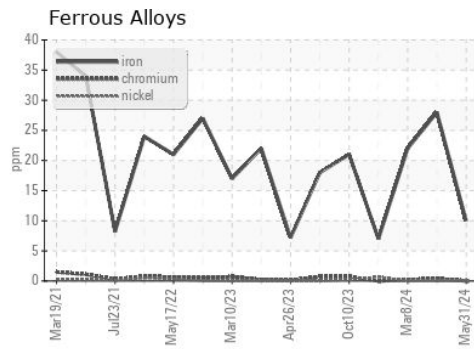
OIL ANALYSIS REPORT



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	12.9	▲ 12.3	▲ 12.4

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0120864 **Received** : 04 Jun 2024
Lab Number : **06198914** **Tested** : 06 Jun 2024
Unique Number : 11061037 **Diagnosed** : 06 Jun 2024 - Don Baldrige
Test Package : FLEET (Additional Tests: PercentFuel)

GFL Environmental - 622 - Traverse City Hauling
 160 Hughes Dr
 Traverse City, MI
 US 49686
 Contact: GARY BREWER

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)

T:
F: