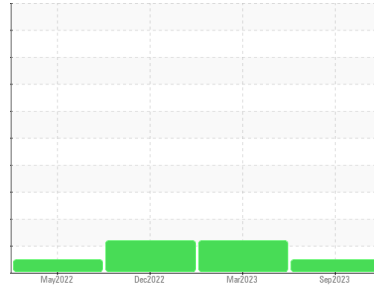




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
220025-106703

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

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

Light fuel dilution occurring. No other contaminants were detected 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		GFL0078656	GFL0065638	GFL0065667
Sample Date	Client Info		13 Sep 2023	14 Mar 2023	17 Dec 2022
Machine Age	hrs	Client Info	6368	5302	4753
Oil Age	hrs	Client Info	600	600	600
Oil Changed	Client Info		Not Changed	Changed	Changed
Sample Status			NORMAL	ABNORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >110	8	31	49
Chromium	ppm	ASTM D5185m >4	<1	1	1
Nickel	ppm	ASTM D5185m >2	0	0	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >25	4	22	31
Lead	ppm	ASTM D5185m >45	0	0	0
Copper	ppm	ASTM D5185m >85	<1	2	8
Tin	ppm	ASTM D5185m >4	0	0	<1
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	8	11	12
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	60	65	67
Manganese	ppm	ASTM D5185m 0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 1010	867	806	719
Calcium	ppm	ASTM D5185m 1070	1032	1219	1263
Phosphorus	ppm	ASTM D5185m 1150	972	946	926
Zinc	ppm	ASTM D5185m 1270	1155	1141	1136
Sulfur	ppm	ASTM D5185m 2060	3342	2901	3305

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >30	4	4	6
Sodium	ppm	ASTM D5185m	2	0	0
Potassium	ppm	ASTM D5185m >20	2	32	59
Fuel	%	ASTM D3524 >5	1.0	▲ 3.3	▲ 4.5

INFRA-RED

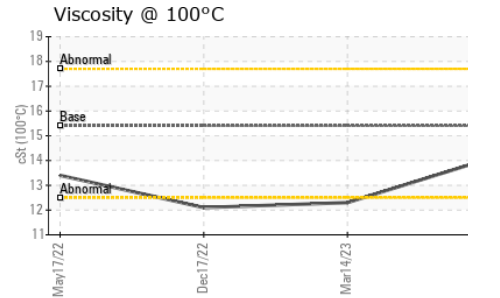
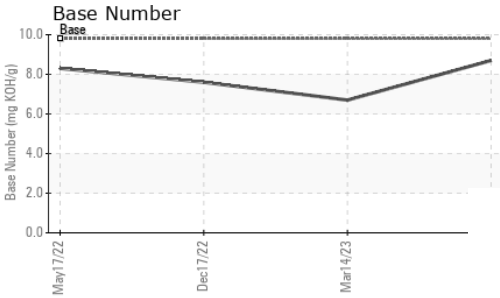
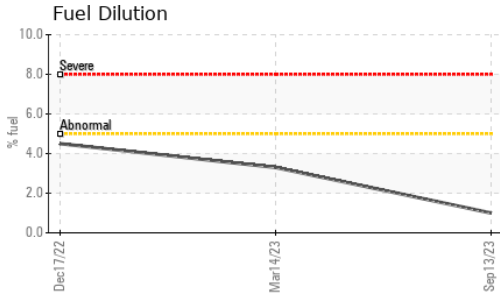
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.1	0.6	1.6
Nitration	Abs/cm	*ASTM D7624 >20	5.8	10.8	13.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	17.5	20.8	25.8

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	13.6	18.4	22.0
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	8.7	6.7	7.6



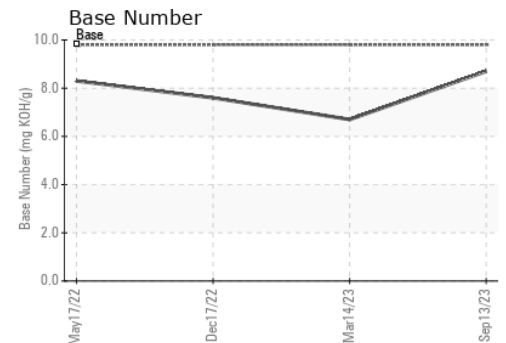
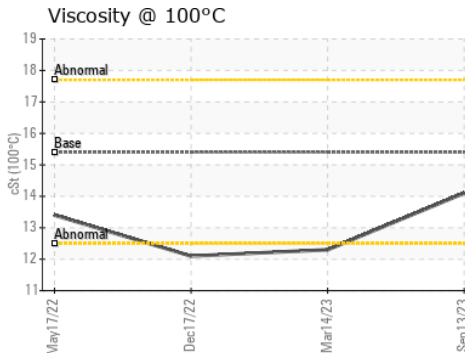
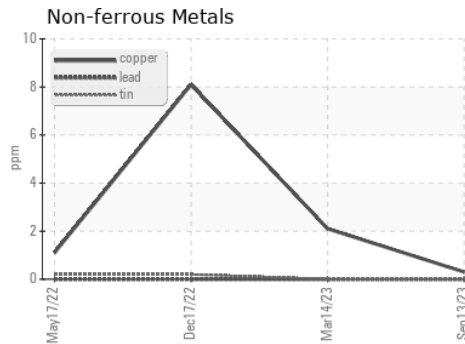
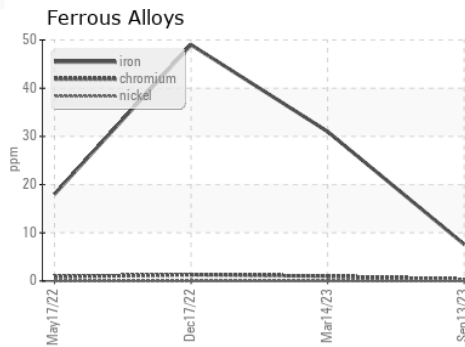
OIL ANALYSIS REPORT



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	14.1	▲ 12.3 ▲ 12.1

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0078656 Received : 20 Sep 2023
 Lab Number : 05956196 Diagnosed : 21 Sep 2023
 Unique Number : 10657409 Diagnostician : Wes Davis
 Test Package : FLEET (Additional Tests: PercentFuel)

GFL Environmental - 152 - Jacksonville
 7580 PHILIPS HWY
 Jacksonville, FL
 US 32256
 Contact: GRANVILLE CARROLL
 gcarroll@gflenv.com
 T: 1(904)252-6815
 F:

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)