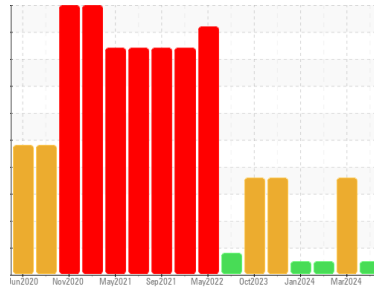




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
(40957HA)
Machine Id
826028-1018

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

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	GFL0116574	GFL0111836	GFL0108248
Sample Date	Client Info	08 Apr 2024	01 Mar 2024	07 Feb 2024
Machine Age	hrs	18138	18046	17751
Oil Age	hrs	17843	295	14895
Oil Changed	Client Info	Not Chngd	Not Chngd	Changed
Sample Status		NORMAL	ABNORMAL	NORMAL

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 >90	16	34	32
Chromium	ppm ASTM D5185m >4	2	2	2
Nickel	ppm ASTM D5185m >4	<1	<1	<1
Titanium	ppm ASTM D5185m >2	<1	1	<1
Silver	ppm ASTM D5185m >2	0	0	0
Aluminum	ppm ASTM D5185m >15	2	9	2
Lead	ppm ASTM D5185m >50	<1	3	2
Copper	ppm ASTM D5185m >55	2	3	6
Tin	ppm ASTM D5185m >4	1	0	<1
Vanadium	ppm ASTM D5185m	<1	0	0
Cadmium	ppm ASTM D5185m	<1	0	<1

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	11	20	20
Barium	ppm ASTM D5185m 0	<1	0	0
Molybdenum	ppm ASTM D5185m 60	57	45	84
Manganese	ppm ASTM D5185m 0	<1	<1	<1
Magnesium	ppm ASTM D5185m 1010	941	841	1308
Calcium	ppm ASTM D5185m 1070	1167	1698	1534
Phosphorus	ppm ASTM D5185m 1150	1116	1073	1342
Zinc	ppm ASTM D5185m 1270	1253	1307	1735
Sulfur	ppm ASTM D5185m 2060	3591	3169	4073

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >15	6	22	10
Sodium	ppm ASTM D5185m	6	3	4
Potassium	ppm ASTM D5185m >20	20	2	24
Fuel	% ASTM D3524 >3.0	0.3	5.3	<1.0

INFRA-RED

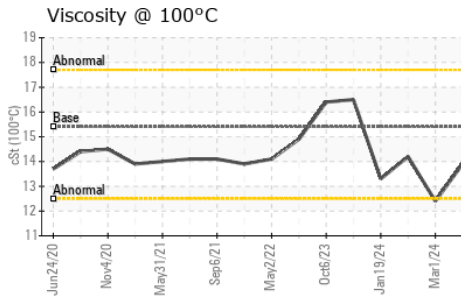
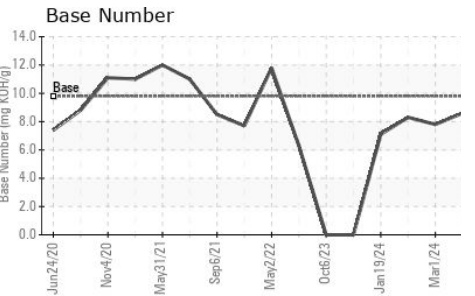
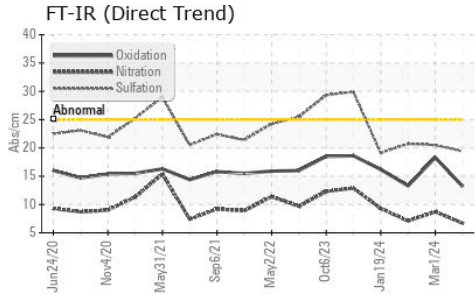
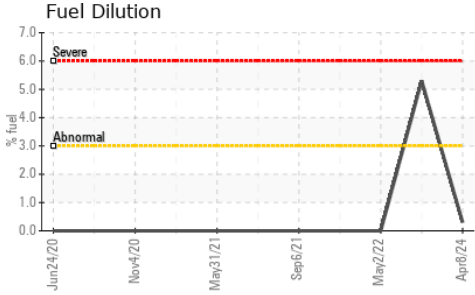
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >6	1	0.3	2
Nitration	Abs/cm *ASTM D7624 >20	6.7	8.7	7.1
Sulfation	Abs/.1mm *ASTM D7415 >30	19.4	20.5	20.7

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	13.2	18.3	13.3
Base Number (BN)	mg KOH/g ASTM D2896 9.8	8.6	7.8	8.3



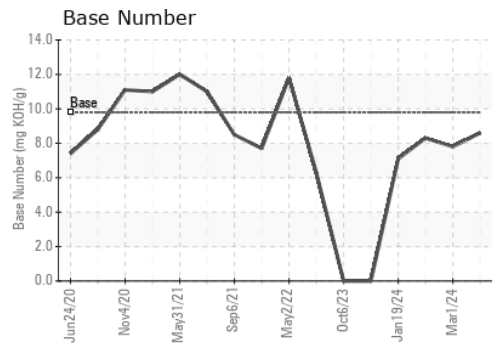
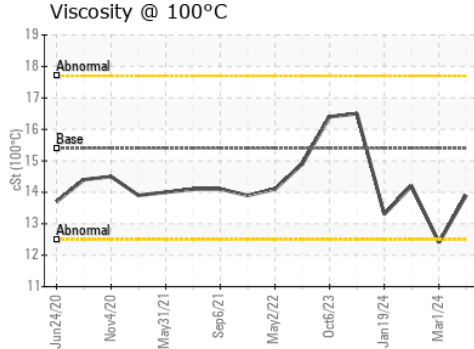
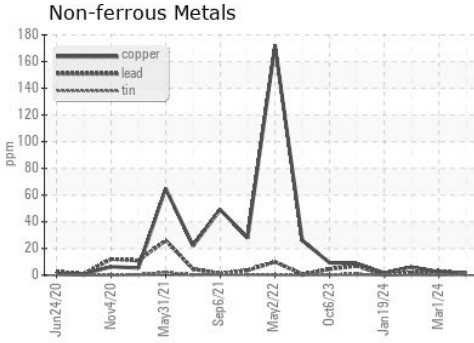
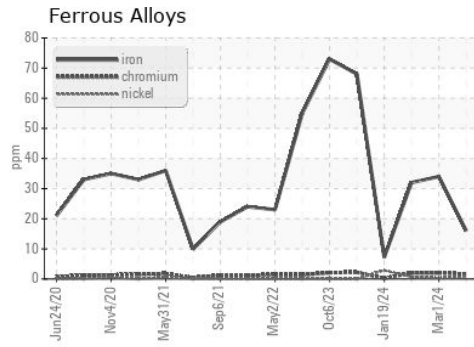
OIL ANALYSIS REPORT



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	13.9	▲ 12.4	14.2

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0116574
Lab Number : **06143535**
Unique Number : 10968343
Test Package : FLEET (Additional Tests: PercentFuel)

GFL Environmental - 652 - Fredericksburg Hauling
 10954 Houser Drive
 Fredericksburg, VA
 US 22408

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)

Contact: WILLIAM MILO
 wmilo@gflenv.com

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 F: