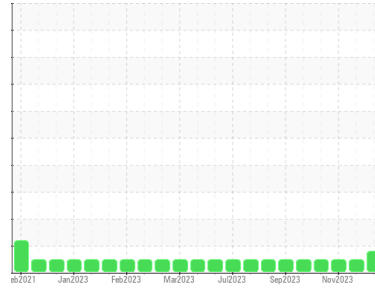




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id

2414

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

Exhaust valve wear is indicated.

Contamination

Fuel content negligible. 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 acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0103486	GFL0100439	GFL0094798
Sample Date	Client Info		02 Jan 2024	18 Dec 2023	20 Nov 2023
Machine Age	hrs	Client Info	20430	20360	20212
Oil Age	hrs	Client Info	950	880	732
Oil Changed	Client Info		N/A	Not Changd	N/A
Sample Status			ABNORMAL	NORMAL	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 >100	8	6	2
Chromium	ppm	ASTM D5185m >20	<1	<1	0
Nickel	ppm	ASTM D5185m >2	▲ 4	2	<1
Titanium	ppm	ASTM D5185m	<1	0	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >25	4	4	2
Lead	ppm	ASTM D5185m >40	<1	0	0
Copper	ppm	ASTM D5185m >330	1	<1	<1
Tin	ppm	ASTM D5185m >15	1	0	<1
Vanadium	ppm	ASTM D5185m	0	0	<1
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	2	1	2
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	57	59	62
Manganese	ppm	ASTM D5185m 0	<1	0	0
Magnesium	ppm	ASTM D5185m 1010	850	842	908
Calcium	ppm	ASTM D5185m 1070	967	953	1029
Phosphorus	ppm	ASTM D5185m 1150	845	836	1031
Zinc	ppm	ASTM D5185m 1270	1097	1096	1191
Sulfur	ppm	ASTM D5185m 2060	3209	2984	3032

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	5	4	3
Sodium	ppm	ASTM D5185m	0	2	3
Potassium	ppm	ASTM D5185m >20	3	2	<1
Fuel	%	ASTM D3524 >6.0	1.2	<1.0	<1.0

INFRA-RED

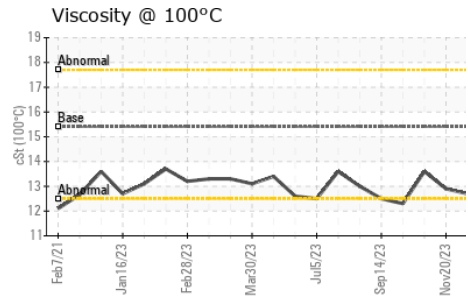
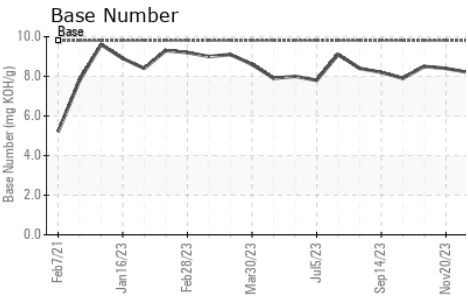
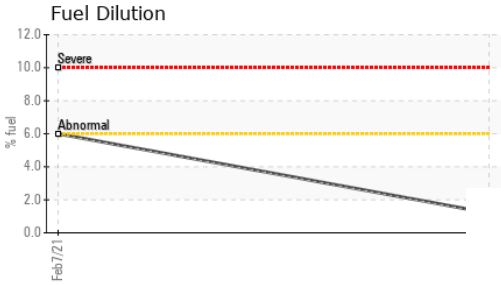
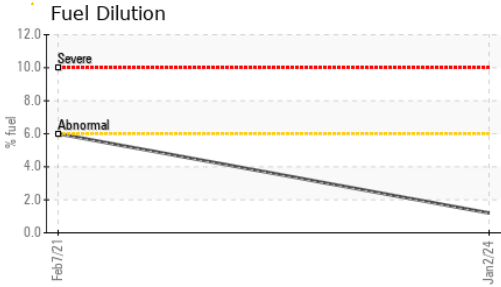
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.5	0.4	0.2
Nitration	Abs/cm	*ASTM D7624 >20	8.0	7.4	6.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.3	17.9	17.5

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	14.4	14.2	13.8
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	7.9	8.2	8.4



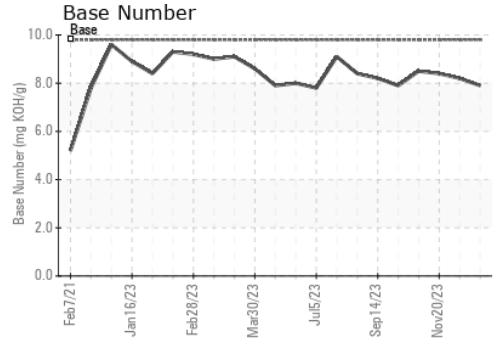
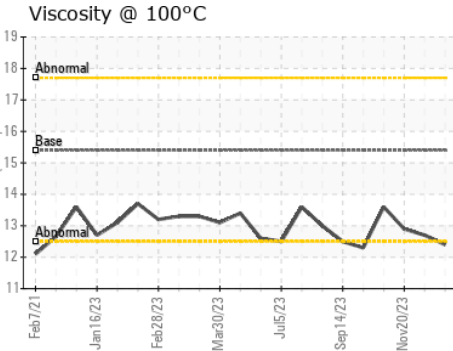
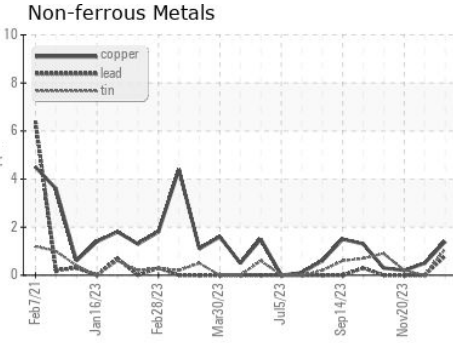
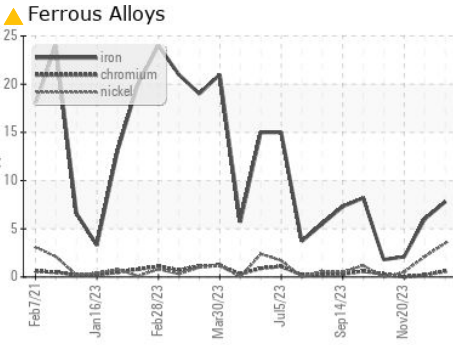
OIL ANALYSIS REPORT



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	12.4	12.7	12.9

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0103486 **Received** : 09 Jan 2024
Lab Number : 06055266 **Diagnosed** : 11 Jan 2024
Unique Number : 10821215 **Diagnostician** : Sean Felton
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 868 - Childersburg Fines Hauling (Alpine)
 13737 Plant Rd
 Childersburg, AL
 US 35044
 Contact: JONATHAN WILLIAMS
 jonathan.williams@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)

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F: