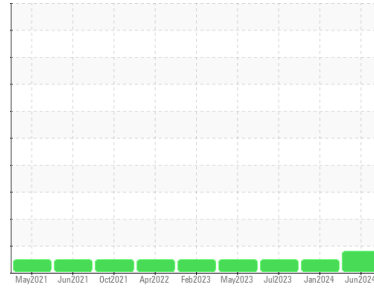




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id

949005-205278

Component

Natural Gas Engine

Fluid

PETRO CANADA DURON GEO LD 15W40 (--- LTR)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

The lead level is abnormal. All other component wear rates are normal.

Contamination

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	GFL0096065	GFL0095993	GFL0071745
Sample Date	Client Info	04 Jun 2024	23 Jan 2024	26 Jul 2023
Machine Age	hrs	23550	22679	12367
Oil Age	hrs	600	600	600
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		ABNORMAL	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method	>0.1	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185m	>50	17	7	7
Chromium	ppm	ASTM D5185m	>4	2	<1	1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	4	1	2
Lead	ppm	ASTM D5185m	>30	▲ 39	7	10
Copper	ppm	ASTM D5185m	>35	10	2	2
Tin	ppm	ASTM D5185m	>4	<1	1	<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	50	9	7	8
Barium	ppm	ASTM D5185m	5	1	0	0
Molybdenum	ppm	ASTM D5185m	50	60	53	56
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	560	617	587	601
Calcium	ppm	ASTM D5185m	1510	1760	1705	1696
Phosphorus	ppm	ASTM D5185m	780	874	742	834
Zinc	ppm	ASTM D5185m	870	1089	1016	1076
Sulfur	ppm	ASTM D5185m	2040	2757	2467	3088

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>+100	9	5	5
Sodium	ppm	ASTM D5185m		7	41	9
Potassium	ppm	ASTM D5185m	>20	4	<1	<1

INFRA-RED

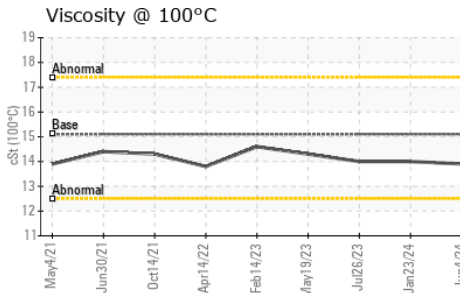
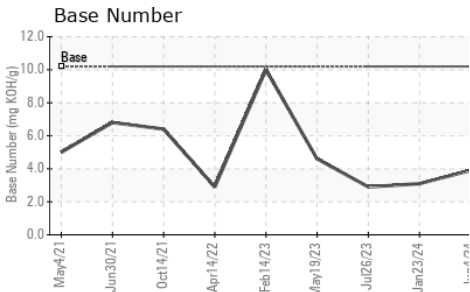
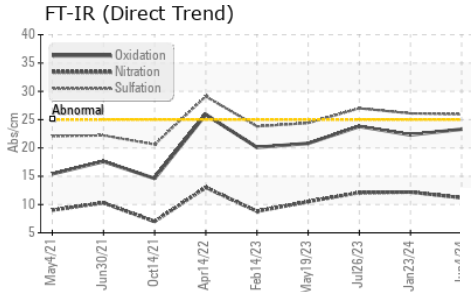
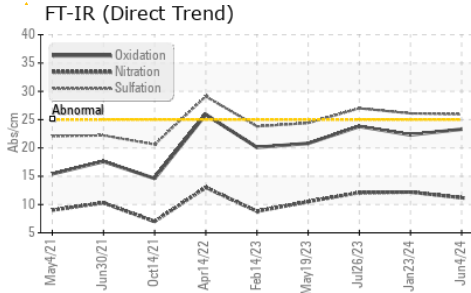
method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844		0.3	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	11.2	12.2	12.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.9	26.1	27.0

FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.3	22.3	23.8
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	3.9	3.1	2.9



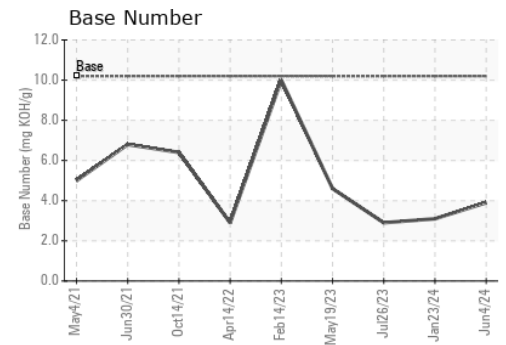
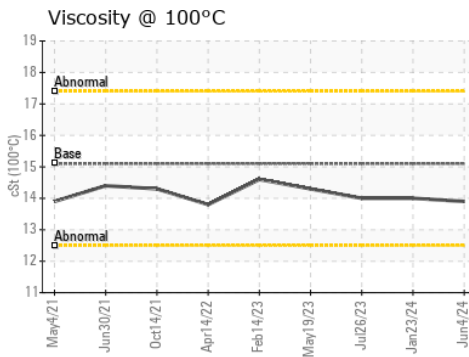
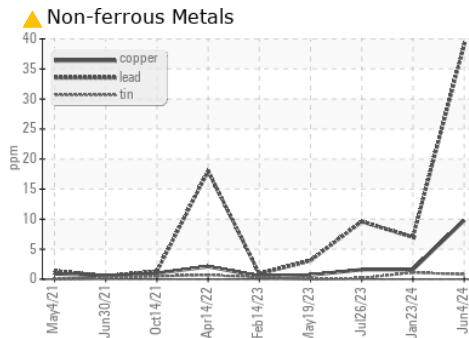
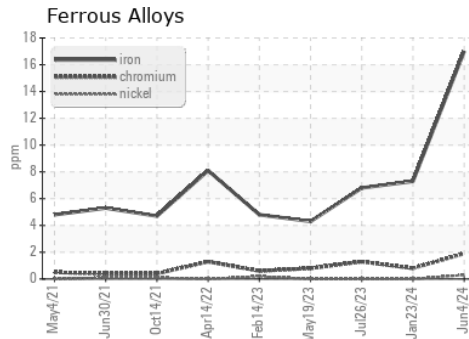
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	LIGHT	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	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	13.9	14.0

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0096065
Lab Number : 06200999
Unique Number : 11063122
Test Package : FLEET

GFL Environmental - 883 - Orange City
 1378 South Volusia Ave
 Orange City, FL
 US 32763

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)

Received : 05 Jun 2024
Tested : 07 Jun 2024
Diagnosed : 08 Jun 2024 - Don Baldrige

Contact: JEFF COOPERSMITH
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 T: (386)503-8468