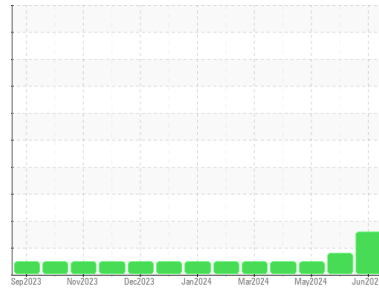




OIL ANALYSIS REPORT

Area
(41KM9B)
 Machine Id
834015
 Component
Natural Gas Engine
 Fluid
PETRO CANADA DURON GEO LD 15W40 (--- GAL)

Sample Rating Trend



DIAGNOSIS

Recommendation
 No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
 Piston, ring and cylinder wear is indicated.

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		GFL0122824	GFL0122933	GFL0118789
Sample Date	Client Info		14 Jun 2024	04 Jun 2024	10 May 2024
Machine Age	hrs	Client Info	1756	1638	1498
Oil Age	hrs	Client Info	1756	1638	1498
Oil Changed	Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status			ABNORMAL	ABNORMAL	NORMAL

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	▲ 79	▲ 82	65
Chromium	ppm	ASTM D5185m >4	2	2	2
Nickel	ppm	ASTM D5185m >2	2	3	3
Titanium	ppm	ASTM D5185m	0	<1	<1
Silver	ppm	ASTM D5185m >3	<1	<1	1
Aluminum	ppm	ASTM D5185m >9	▲ 11	10	9
Lead	ppm	ASTM D5185m >30	11	9	6
Copper	ppm	ASTM D5185m >35	17	20	17
Tin	ppm	ASTM D5185m >4	4	4	4
Vanadium	ppm	ASTM D5185m	0	0	<1
Cadmium	ppm	ASTM D5185m	0	0	<1

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 50	7	5	6
Barium	ppm	ASTM D5185m 5	3	3	2
Molybdenum	ppm	ASTM D5185m 50	69	74	63
Manganese	ppm	ASTM D5185m 0	11	11	9
Magnesium	ppm	ASTM D5185m 560	921	869	763
Calcium	ppm	ASTM D5185m 1510	1708	1649	1467
Phosphorus	ppm	ASTM D5185m 780	923	952	831
Zinc	ppm	ASTM D5185m 870	1169	1122	1010
Sulfur	ppm	ASTM D5185m 2040	2887	2592	2623

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >+100	21	23	19
Sodium	ppm	ASTM D5185m	8	6	7
Potassium	ppm	ASTM D5185m >20	12	13	11

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0.1	0	0.1
Nitration	Abs/cm	*ASTM D7624 >20	14.6	14.3	13.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	28.9	28.2	26.5

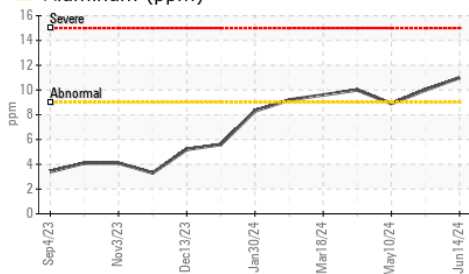
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	27.9	26.8	25.0
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	3.5	3.5	3.7

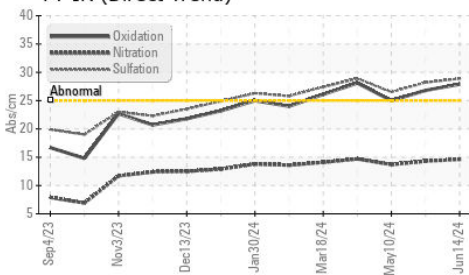


OIL ANALYSIS REPORT

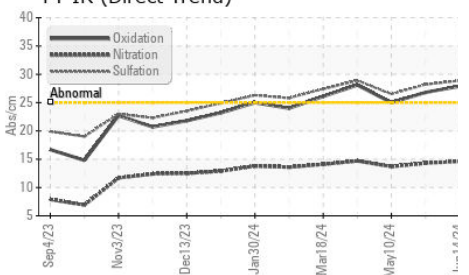
▲ Aluminum (ppm)



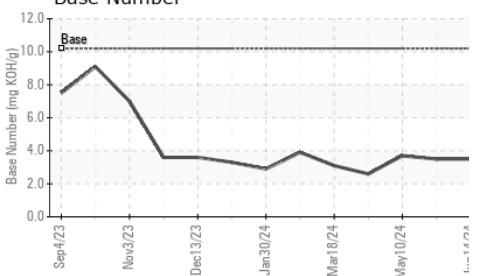
● FT-IR (Direct Trend)



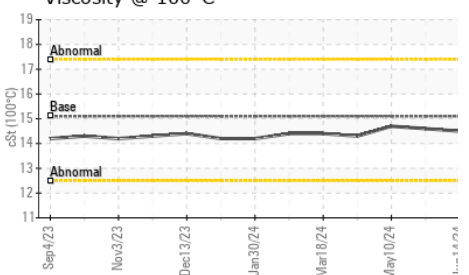
● FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

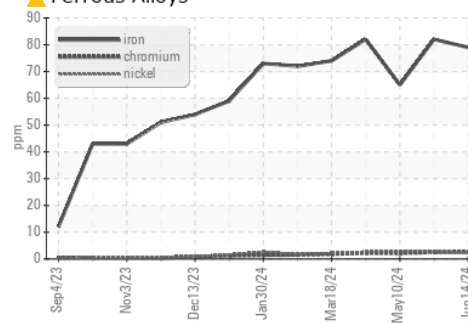


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

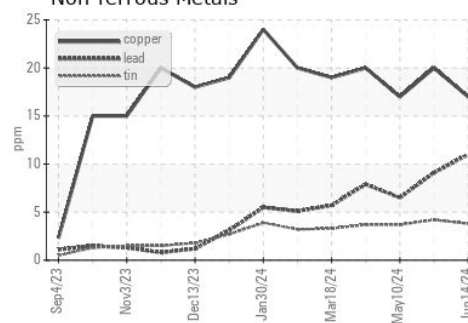
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.1	14.5	14.6	14.7

GRAPHS

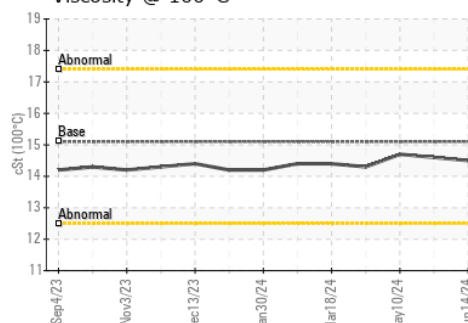
▲ Ferrous Alloys



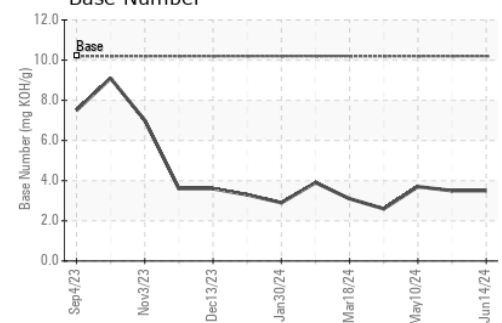
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0122824
Lab Number : 06220520
Unique Number : 11098717
Test Package : FLEET

GFL Environmental - 836 - Kansas City Hauling
 7801 East Truman Road
 Kansas City, MO
 US 64126
 Contact: Loyce Stewart
 loyce.stewart@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)

T:
F: