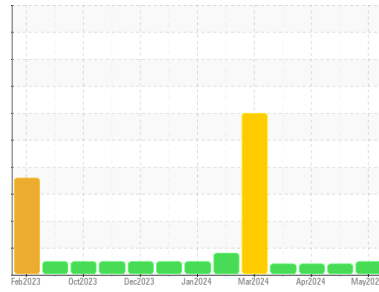




OIL ANALYSIS REPORT

Area
(83J 44U)
 Machine Id
913147
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON UHP 5W30 (--- GAL)

Sample Rating Trend



NORMAL



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All 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		GFL0122922	GFL0118779	GFL0118804
Sample Date	Client Info		28 May 2024	08 May 2024	17 Apr 2024
Machine Age	hrs	Client Info	3456	3359	3243
Oil Age	hrs	Client Info	97	3086	2970
Oil Changed	Client Info		Not Changed	Changed	Not Changed
Sample Status			NORMAL	ATTENTION	ATTENTION

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	<1.0
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 >120	0	6	6
Chromium	ppm	ASTM D5185m >20	0	0	<1
Nickel	ppm	ASTM D5185m >5	0	2	3
Titanium	ppm	ASTM D5185m >2	0	0	<1
Silver	ppm	ASTM D5185m >2	0	<1	<1
Aluminum	ppm	ASTM D5185m >20	<1	1	3
Lead	ppm	ASTM D5185m >40	0	<1	<1
Copper	ppm	ASTM D5185m >330	0	0	2
Tin	ppm	ASTM D5185m >15	0	<1	1
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 0	37	35	40
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 64	55	56	58
Manganese	ppm	ASTM D5185m 0	0	<1	<1
Magnesium	ppm	ASTM D5185m 1160	1076	1063	1038
Calcium	ppm	ASTM D5185m 820	872	801	813
Phosphorus	ppm	ASTM D5185m 1160	1046	1050	1058
Zinc	ppm	ASTM D5185m 1260	1211	1227	1199
Sulfur	ppm	ASTM D5185m 3000	3809	3698	3392

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<1	4	5
Sodium	ppm	ASTM D5185m	5	5	3
Potassium	ppm	ASTM D5185m >20	0	1	2

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	0.2	0.3	0.2
Nitration	Abs/cm	*ASTM D7624 >20	7.1	8.7	8.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.0	20.2	19.9

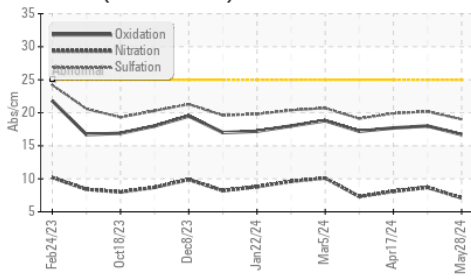
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.7	18.0	17.7
Base Number (BN)	mg KOH/g	ASTM D2896 11.0	9.0	8.3	8.6

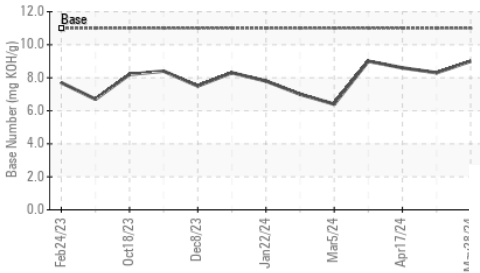


OIL ANALYSIS REPORT

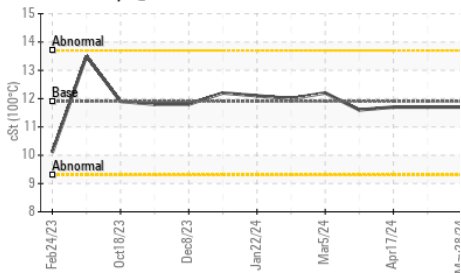
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

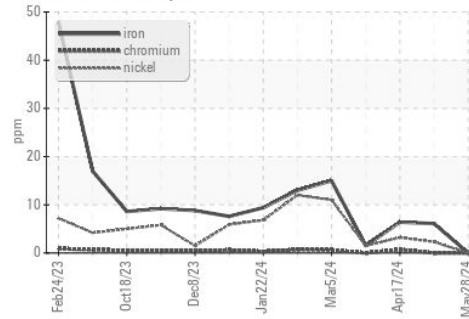


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

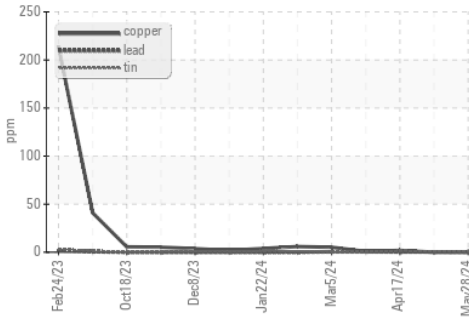
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	11.9	11.7	11.7

GRAPHS

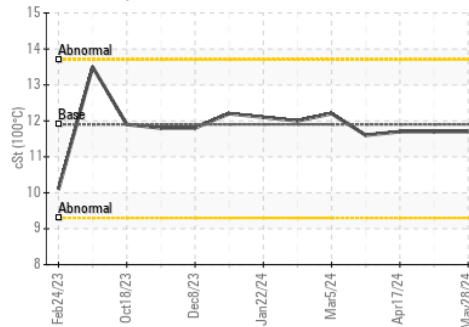
Ferrous Alloys



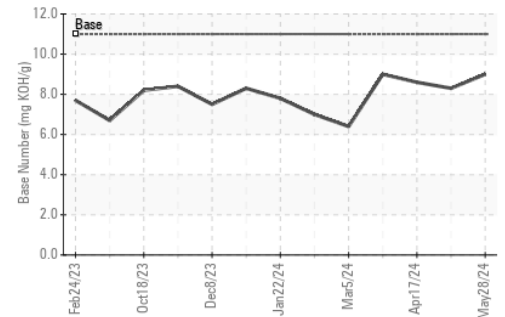
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0122922
 Lab Number : 06197288
 Unique Number : 11059411
 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: