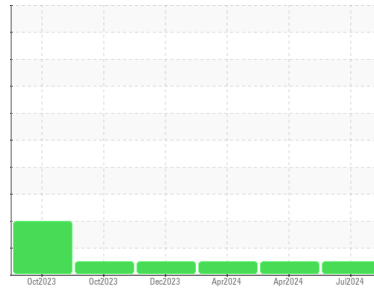




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
414057
 Component
Diesel Engine
 Fluid
PETRO CANADA 15W40 (10 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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		GFL0125783	GFL0112939	GFL0112936
Sample Date	Client Info		02 Jul 2024	03 Apr 2024	01 Apr 2024
Machine Age	hrs	Client Info	465	465	465
Oil Age	hrs	Client Info	529	465	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			NORMAL	NORMAL	NORMAL

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	11	<1	12
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>5	<1	0	0
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	<1
Aluminum	ppm	ASTM D5185m	>20	5	1	3
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	86	36	270
Tin	ppm	ASTM D5185m	>15	1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		<1	1	3
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		61	55	59
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		932	926	948
Calcium	ppm	ASTM D5185m		1085	1018	1062
Phosphorus	ppm	ASTM D5185m		979	1052	1035
Zinc	ppm	ASTM D5185m		1238	1222	1247
Sulfur	ppm	ASTM D5185m		2543	3570	3198

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	5	3	4
Sodium	ppm	ASTM D5185m		<1	1	2
Potassium	ppm	ASTM D5185m	>20	14	2	7

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>4	0.3	0.1	0.3
Nitration	Abs/cm	*ASTM D7624	>20	7.5	4.7	7.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.6	17.7	19.4

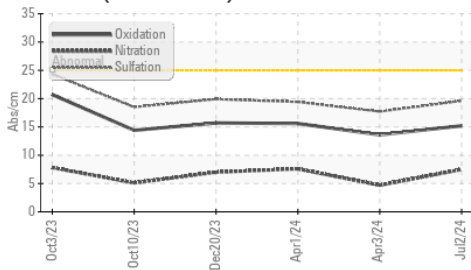
FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.2	13.6	15.6
Base Number (BN)	mg KOH/g	ASTM D2896		7.4	9.1	7.6

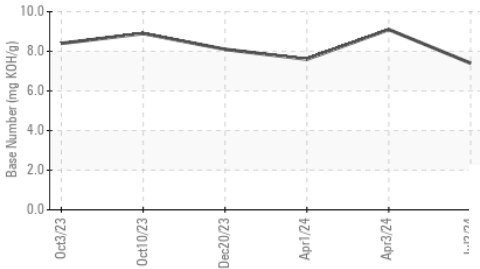


OIL ANALYSIS REPORT

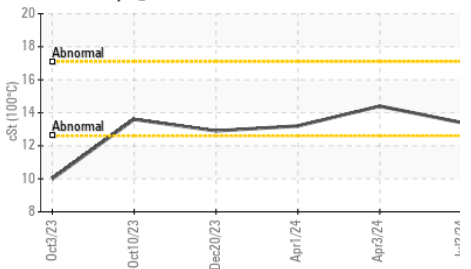
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

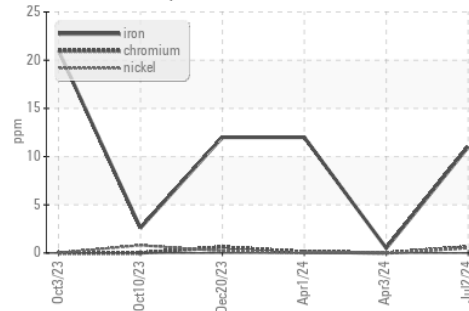


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

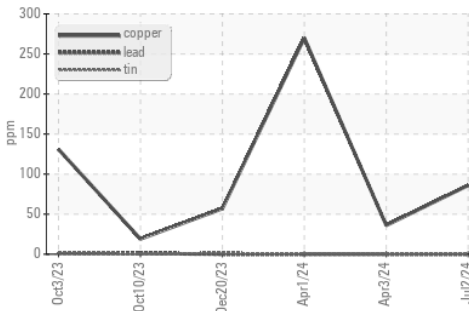
PARAMETER	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.4	14.4	13.2

GRAPHS

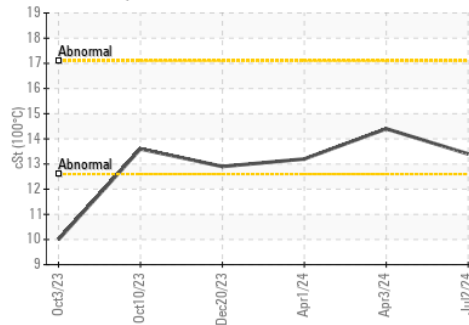
Ferrous Alloys



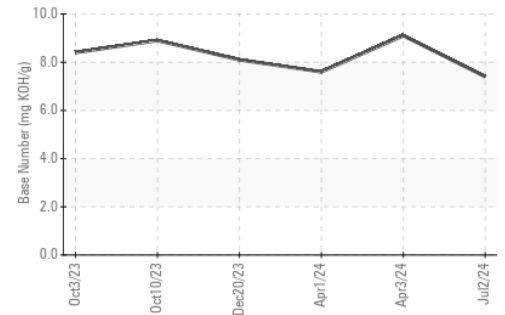
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0125783
 Lab Number : 06225804
 Unique Number : 11109297
 Test Package : FLEET

Received : 02 Jul 2024
 Tested : 03 Jul 2024
 Diagnosed : 03 Jul 2024 - Wes Davis

GFL Environmental - 017 - Durham
 148 Stone Park Court
 Durham, NC
 US 27703
 Contact: William Russel
 william.russell@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: (919)598-1852