



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
(YA172346)
Machine Id
413035
Component
Diesel Engine
Fluid
PETRO CANADA 15W40 (10 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0125787	GFL0112908	GFL0112958
Sample Date		Client Info		02 Jul 2024	15 May 2024	04 Mar 2024
Machine Age	hrs	Client Info		806	806	806
Oil Age	hrs	Client Info		328	806	568
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>120	8	9	11
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>5	<1	0	<1
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	3	<1	2
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	1	<1	1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

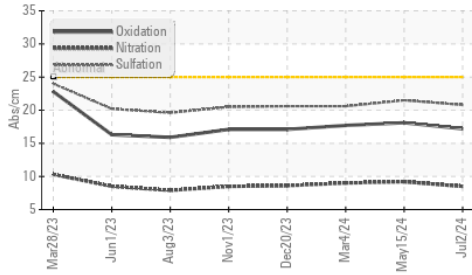
Silicon	ppm	ASTM D5185m	>25	4	3	4
Potassium	ppm	ASTM D5185m	>20	6	5	4
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.3	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	8.5	9.2	9.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.8	21.5	20.6
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

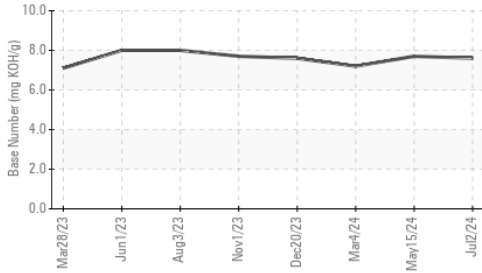
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		3	2	3
Boron	ppm	ASTM D5185m		2	<1	0
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		61	63	58
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		913	1005	1133
Calcium	ppm	ASTM D5185m		1107	1127	1210
Phosphorus	ppm	ASTM D5185m		969	1071	1174
Zinc	ppm	ASTM D5185m		1199	1326	1391
Sulfur	ppm	ASTM D5185m		2639	3443	3394
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.2	18.1	17.7
Base Number (BN)	mg KOH/g	ASTM D2896		7.6	7.7	7.2
Visc @ 100°C	cSt	ASTM D445		14.2	14.2	13.8

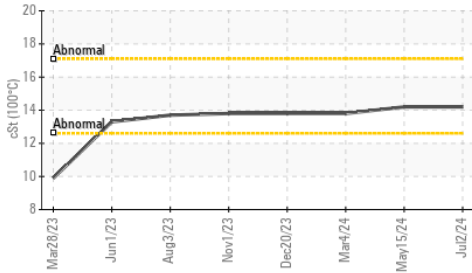
FT-IR (Direct Trend)



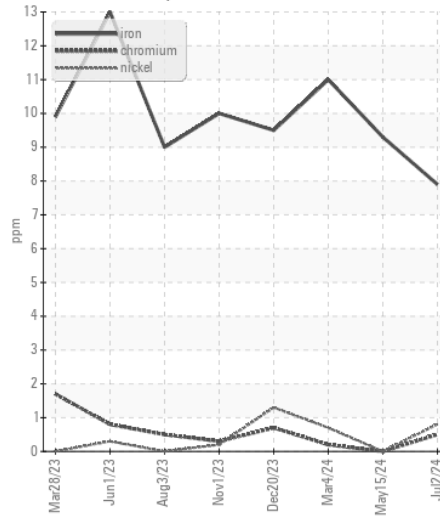
Base Number



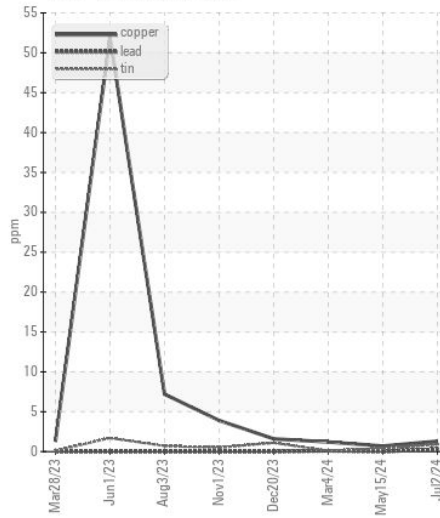
Viscosity @ 100°C



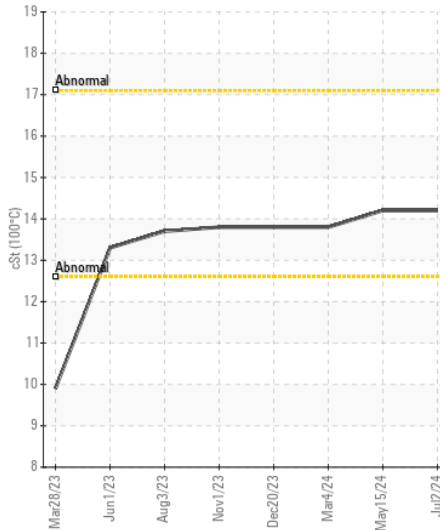
Ferrous Alloys



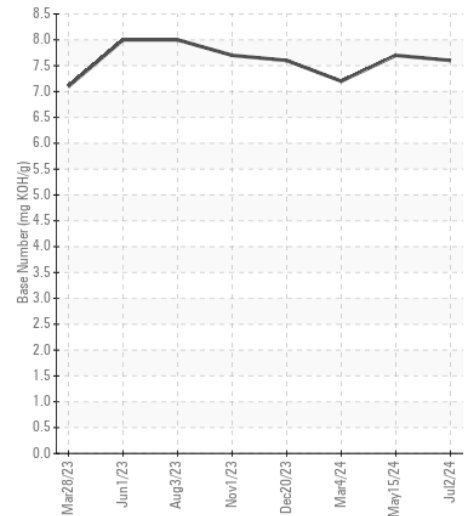
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : GFL0125787

Lab Number : 06225809

Unique Number : 11109302

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

T:

F: (919)598-1852

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)