



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
(YA163197) WHITEVILLE NC
Machine Id
213011
Component
Diesel Engine
Fluid
PETRO CANADA 15W40 (6 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0110498	GFL0083348	GFL0083374
Sample Date		Client Info		08 May 2024	13 Mar 2024	08 Nov 2023
Machine Age	hrs	Client Info		3504	3422	2753
Oil Age	hrs	Client Info		751	600	600
Filter Age	hrs	Client Info		0	600	0
Oil Changed		Client Info		Changed	Oil Added	Changed
Filter Changed		Client Info		Changed	Not Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	17	8	21
Chromium	ppm	ASTM D5185m	>20	1	<1	1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	7	4	9
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	2	<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

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.

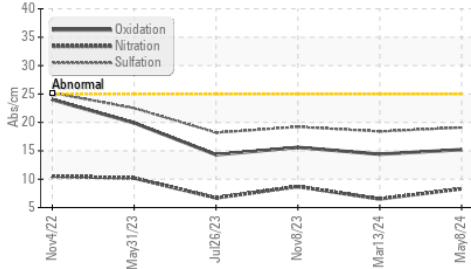
Silicon	ppm	ASTM D5185m	>25	4	3	5
Potassium	ppm	ASTM D5185m	>20	17	9	20
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.5	0.3	0.6
Nitration	Abs/cm	*ASTM D7624	>20	8.3	6.5	8.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.1	18.4	19.2
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

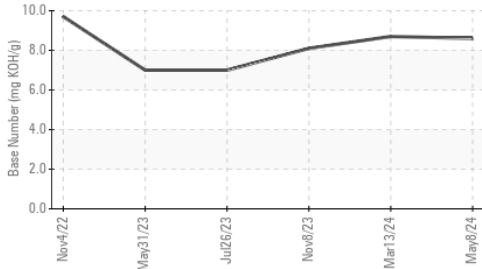
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		0	5	2
Boron	ppm	ASTM D5185m		4	<1	4
Barium	ppm	ASTM D5185m		2	0	0
Molybdenum	ppm	ASTM D5185m		61	56	62
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		916	906	960
Calcium	ppm	ASTM D5185m		1029	942	1093
Phosphorus	ppm	ASTM D5185m		1065	988	1066
Zinc	ppm	ASTM D5185m		1211	1169	1285
Sulfur	ppm	ASTM D5185m		3192	3209	2862
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.2	14.4	15.6
Base Number (BN)	mg KOH/g	ASTM D2896		8.6	8.7	8.1
Visc @ 100°C	cSt	ASTM D445		14.0	14.1	13.3

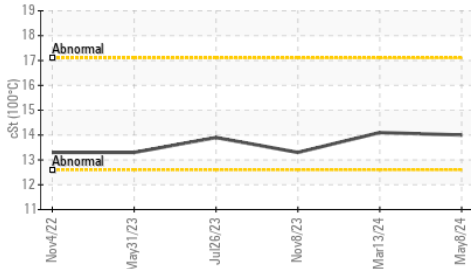
FT-IR (Direct Trend)



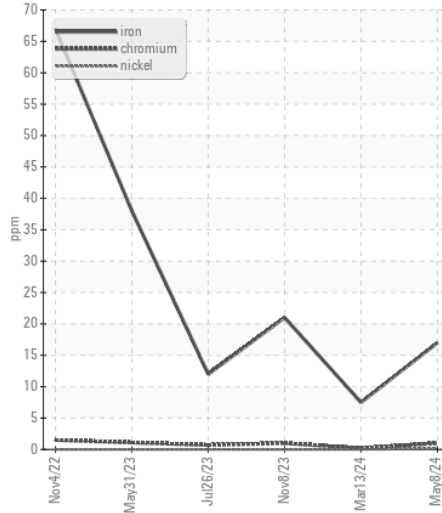
Base Number



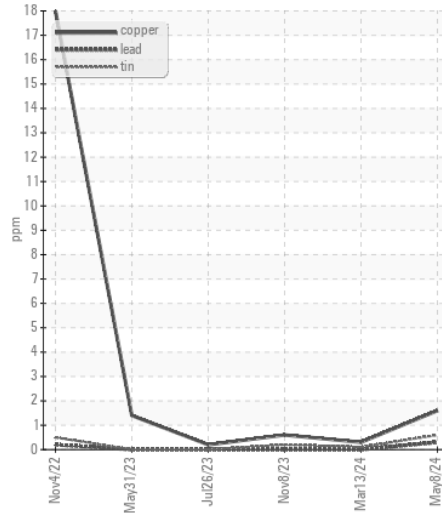
Viscosity @ 100°C



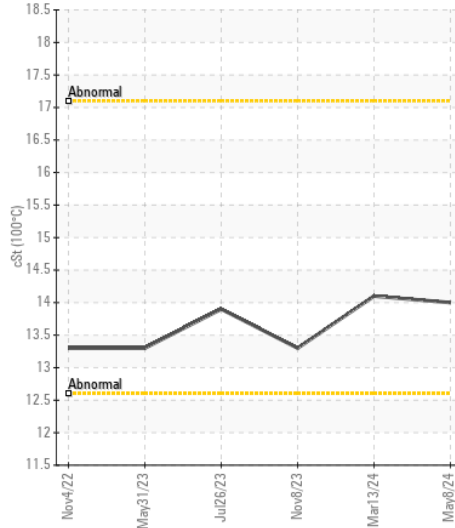
Ferrous Alloys



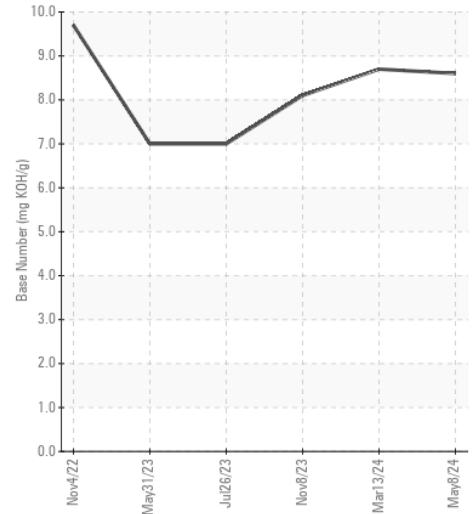
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0110498
Lab Number : 06176456
Unique Number : 11022509
Test Package : FLEET

Received : 10 May 2024
Tested : 13 May 2024
Diagnosed : 13 May 2024 - Wes Davis

GFL Environmental - 108 - Whiteville
 5240 James B White Hwy South
 Whiteville, NC
 US 28472

Contact: Victor McGee
 victor.mcgee@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:
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