



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
(YA154619) WHITEVILLE NC

Machine Id
10983

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		GFL0110487	GFL0083381	GFL0083366
Sample Date		Client Info		18 Jun 2024	28 Feb 2024	08 Nov 2023
Machine Age	hrs	Client Info		11527	10299	10299
Oil Age	hrs	Client Info		600	600	600
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	13	7	11
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	3	2	2
Lead	ppm	ASTM D5185m	>25	1	0	0
Copper	ppm	ASTM D5185m	>100	3	<1	<1
Tin	ppm	ASTM D5185m	>4	0	<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.

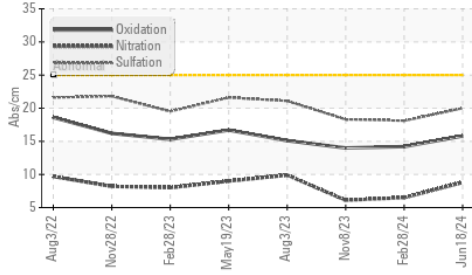
Silicon	ppm	ASTM D5185m	>25	6	9	8
Potassium	ppm	ASTM D5185m	>20	22	8	27
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.6	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.8	6.5	6.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.0	18.1	18.3
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

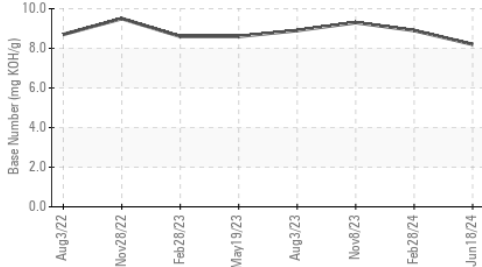
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		27	12	60
Boron	ppm	ASTM D5185m		7	2	1
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		60	59	64
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		901	982	1021
Calcium	ppm	ASTM D5185m		1331	986	1136
Phosphorus	ppm	ASTM D5185m		1125	1032	1135
Zinc	ppm	ASTM D5185m		1395	1282	1363
Sulfur	ppm	ASTM D5185m		3824	3427	3188
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.8	14.2	14.0
Base Number (BN)	mg KOH/g	ASTM D2896		8.2	8.9	9.3
Visc @ 100°C	cSt	ASTM D445		13.5	14.0	14.4

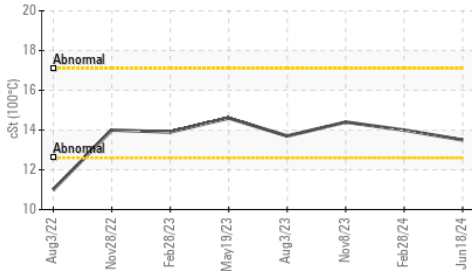
FT-IR (Direct Trend)



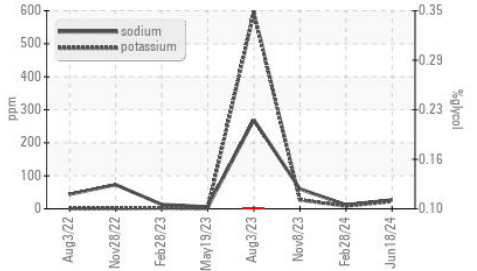
Base Number



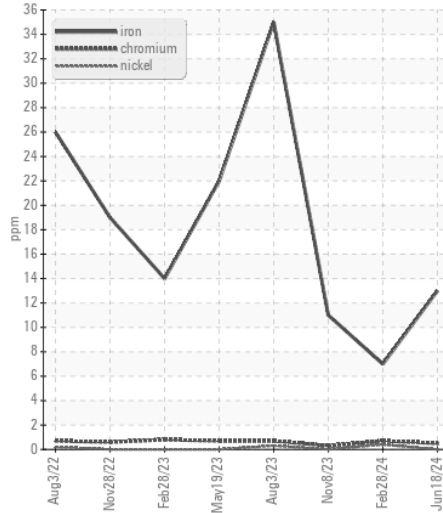
Viscosity @ 100°C



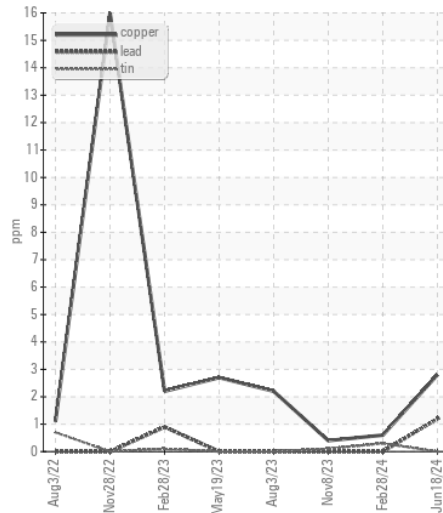
Glycol Contamination



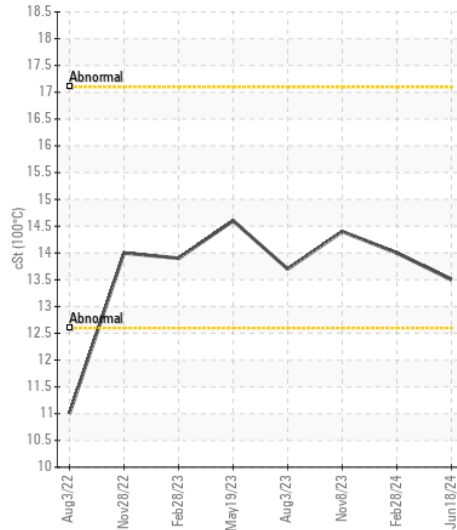
Ferrous Alloys



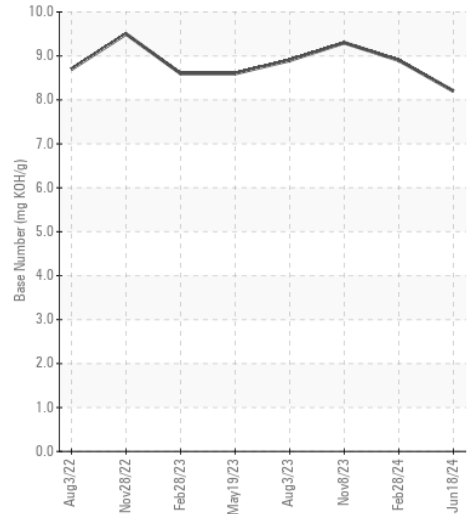
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0110487 **Received** : 20 Jun 2024
Lab Number : 06215545 **Tested** : 22 Jun 2024
Unique Number : 11088409 **Diagnosed** : 22 Jun 2024 - Don Baldrige
Test Package : FLEET (Additional Tests: Glycol)

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:
F: