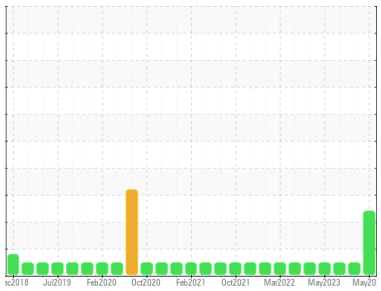
OIL ANALYSIS REPORT

Sample Rating Trend



COOL CHEMICALS

Area
(P658099)
Machine Id
3819C
Component
Natural Gas Engine
Fluid
PETRO CANADA 10W40 (8 GAL)

DIAGNOSIS

Recommendation
We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear
All component wear rates are normal.

Contamination
Sodium and/or potassium levels are high.

Fluid Condition
The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0109580**	GFL0096944	GFL0096985
Sample Date		Client Info		**23 May 2024**	29 Jan 2024	05 Dec 2023
Machine Age	hrs	Client Info		**13646**	13116	12733
Oil Age	hrs	Client Info		**13646**	13116	0
Oil Changed		Client Info		**Changed**	Not Changd	Not Changd
Sample Status				**ABNORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.1	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	**6**	<1	14
Chromium	ppm	ASTM D5185m	>4	**<1**	0	<1
Nickel	ppm	ASTM D5185m	>2	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>9	**2**	1	2
Lead	ppm	ASTM D5185m	>30	**1**	<1	<1
Copper	ppm	ASTM D5185m	>35	**1**	0	<1
Tin	ppm	ASTM D5185m	>4	**<1**	<1	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**20**	41	7
Barium	ppm	ASTM D5185m		**0**	<1	0
Molybdenum	ppm	ASTM D5185m		**72**	47	62
Manganese	ppm	ASTM D5185m		**<1**	<1	0
Magnesium	ppm	ASTM D5185m		**607**	550	612
Calcium	ppm	ASTM D5185m		**1486**	1307	1493
Phosphorus	ppm	ASTM D5185m		**800**	758	730
Zinc	ppm	ASTM D5185m		**967**	868	1016
Sulfur	ppm	ASTM D5185m		**2760**	2253	2575

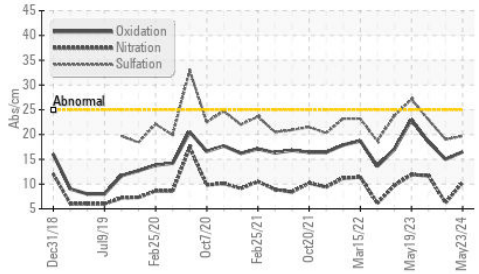
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>+100	**8**	5	6
Sodium	ppm	ASTM D5185m	>20	▲ **260**	3	12
Potassium	ppm	ASTM D5185m	>20	▲ **72**	0	2

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		**0**	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**10.3**	6.2	11.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	**19.7**	19.0	23.0

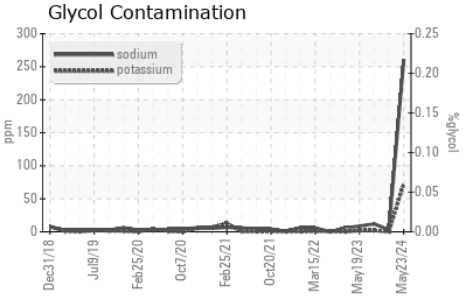
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**16.5**	15.0	18.5
Base Number (BN)	mg KOH/g	ASTM D2896		**6.4**	8.2	4.8

OIL ANALYSIS REPORT

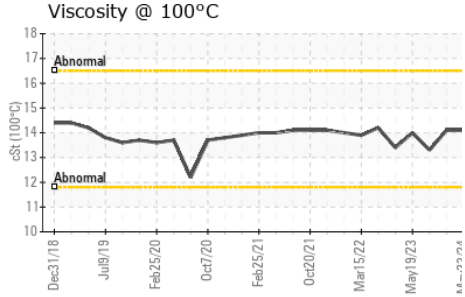
FT-IR (Direct Trend)



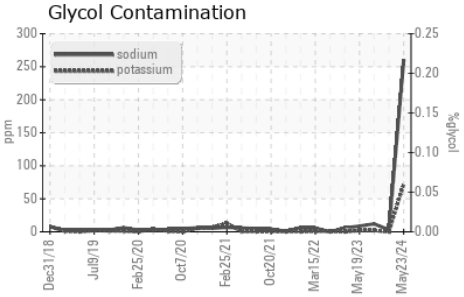
Glycol Contamination



Viscosity @ 100°C



Glycol Contamination

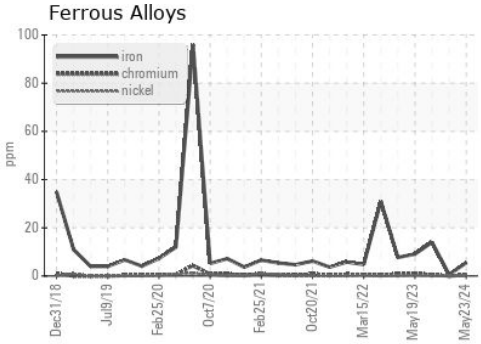


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

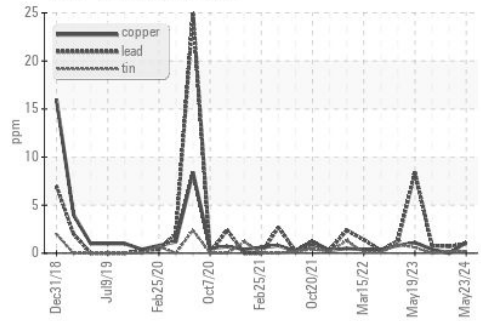
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		**14.1**	14.1	13.3

GRAPHS

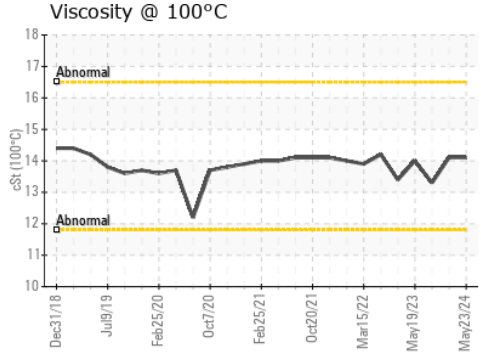
Ferrous Alloys



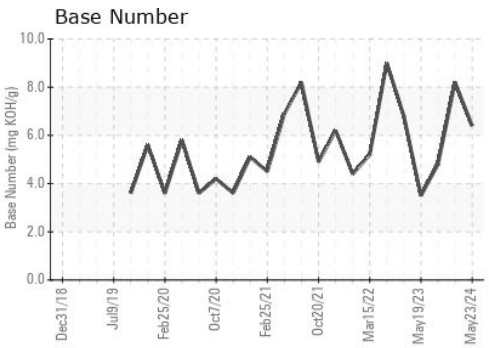
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0109580
Lab Number : 06191645
Unique Number : 11048397
Test Package : FLEET (Additional Tests: Glycol)

Received : 24 May 2024
Tested : 30 May 2024
Diagnosed : 30 May 2024 - Jonathan Hester

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)

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