



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
934035
Component
Natural Gas Engine
Fluid
NOT GIVEN (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0127214	GFL0122088	GFL0122053
Sample Date		Client Info		04 Jul 2024	13 Jun 2024	24 May 2024
Machine Age	hrs	Client Info		1386	1214	1054
Oil Age	hrs	Client Info		172	1214	1054
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Not Changd
Filter Changed		Client Info		Changed	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	16	75	71
Chromium	ppm	ASTM D5185m	>4	1	2	2
Nickel	ppm	ASTM D5185m	>2	1	1	2
Titanium	ppm	ASTM D5185m		1	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	0	<1
Aluminum	ppm	ASTM D5185m	>9	6	19	18
Lead	ppm	ASTM D5185m	>30	1	2	2
Copper	ppm	ASTM D5185m	>35	4	15	15
Tin	ppm	ASTM D5185m	>4	1	1	2
Vanadium	ppm	ASTM D5185m		<1	<1	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.

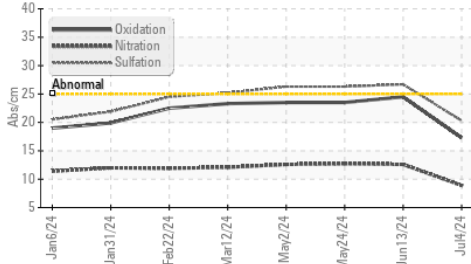
Silicon	ppm	ASTM D5185m	>+100	7	22	22
Potassium	ppm	ASTM D5185m	>20	5	21	17
Water		WC Method	>0.1	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	8.9	12.6	12.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.3	26.7	26.3
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	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	>0.1	NEG	NEG	NEG

FLUID CONDITION

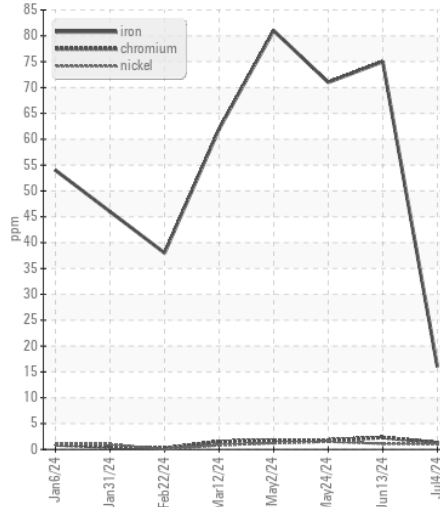
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		7	8	7
Boron	ppm	ASTM D5185m		20	8	7
Barium	ppm	ASTM D5185m		0	<1	3
Molybdenum	ppm	ASTM D5185m		54	65	56
Manganese	ppm	ASTM D5185m		2	11	11
Magnesium	ppm	ASTM D5185m		612	727	740
Calcium	ppm	ASTM D5185m		1540	1388	1316
Phosphorus	ppm	ASTM D5185m		759	791	814
Zinc	ppm	ASTM D5185m		1008	1067	983
Sulfur	ppm	ASTM D5185m		2280	2521	2565
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.3	24.5	23.5
Base Number (BN)	mg KOH/g	ASTM D2896		6.9	3.2	3.5
Visc @ 100°C	cSt	ASTM D445		15.1	14.8	14.7

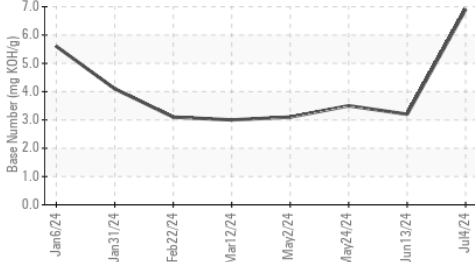
FT-IR (Direct Trend)



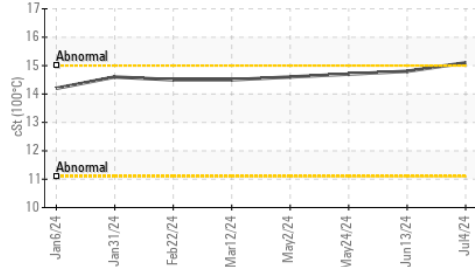
Ferrous Alloys



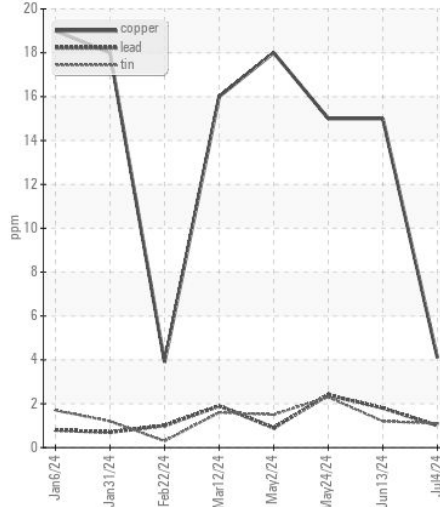
Base Number



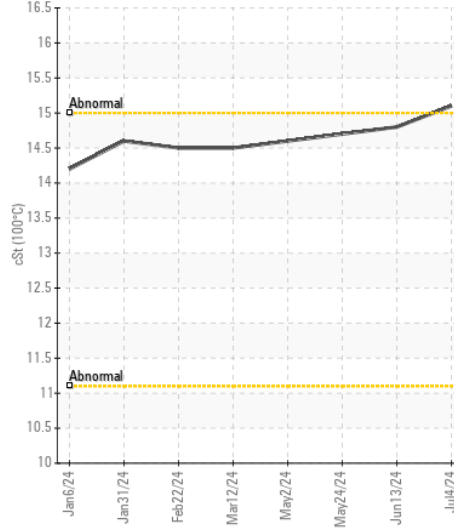
Viscosity @ 100°C



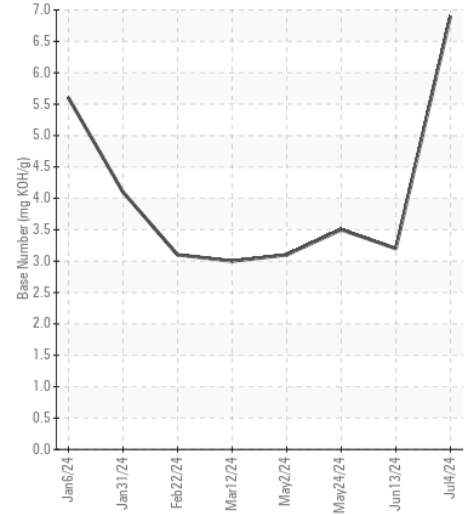
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0127214
Lab Number : 06229888
Unique Number : 11113381
Test Package : FLEET

Received : 08 Jul 2024
Tested : 09 Jul 2024
Diagnosed : 09 Jul 2024 - Don Baldrige

GFL Environmental - 652 - Fredericksburg Hauling
 10954 Houser Drive
 Fredericksburg, VA
 US 22408
 Contact: WILLIAM MILO
 wmilo@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)

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