



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
(48021UA)
Machine Id
834034
Component
Natural Gas Engine
Fluid
{not provided} (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

WEAR

All component wear rates are normal.

CONTAMINATION

There is no indication of any contamination in the oil.

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.

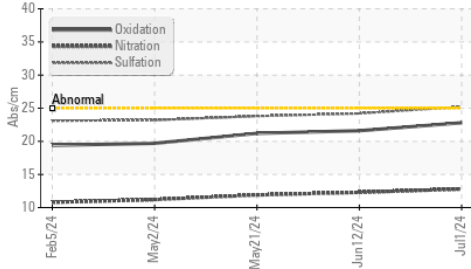
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0121999	GFL0122085	GFL0116593
Sample Date		Client Info		01 Jul 2024	12 Jun 2024	21 May 2024
Machine Age	hrs	Client Info		1891	1764	1606
Oil Age	hrs	Client Info		1228	1259	1225
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

Iron	ppm	ASTM D5185m	>50	28	28	38
Chromium	ppm	ASTM D5185m	>4	<1	<1	2
Nickel	ppm	ASTM D5185m	>2	1	0	2
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	0	1
Aluminum	ppm	ASTM D5185m	>9	5	4	7
Lead	ppm	ASTM D5185m	>30	<1	<1	2
Copper	ppm	ASTM D5185m	>35	6	7	10
Tin	ppm	ASTM D5185m	>4	2	0	3
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

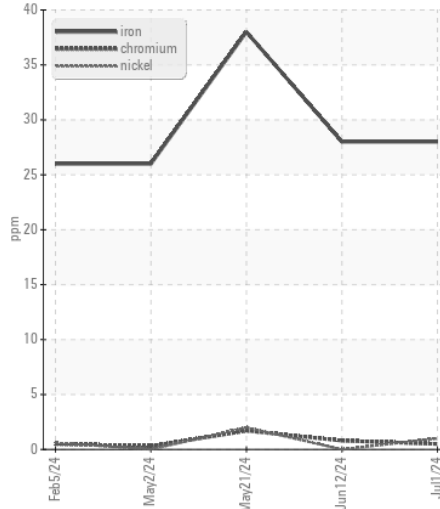
Silicon	ppm	ASTM D5185m	>+100	12	12	17
Potassium	ppm	ASTM D5185m	>20	6	6	10
Water		WC Method	>0.1	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0	0.4
Nitration	Abs/cm	*ASTM D7624	>20	12.8	12.3	11.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.2	24.2	23.8
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	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

Sodium	ppm	ASTM D5185m		5	4	7
Boron	ppm	ASTM D5185m		6	6	9
Barium	ppm	ASTM D5185m		<1	0	<1
Molybdenum	ppm	ASTM D5185m		55	57	77
Manganese	ppm	ASTM D5185m		6	6	8
Magnesium	ppm	ASTM D5185m		689	593	871
Calcium	ppm	ASTM D5185m		1586	1501	2061
Phosphorus	ppm	ASTM D5185m		768	692	1000
Zinc	ppm	ASTM D5185m		1021	1016	1353
Sulfur	ppm	ASTM D5185m		2714	2486	3499
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.8	21.6	21.2
Base Number (BN)	mg KOH/g	ASTM D2896		3.1	3.5	5.1
Visc @ 100°C	cSt	ASTM D445		14.7	14.8	14.7

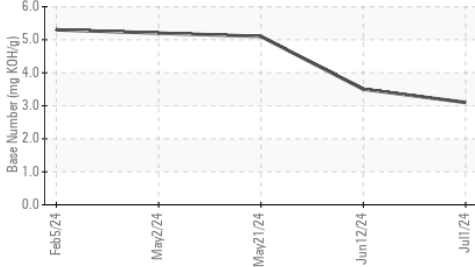
FT-IR (Direct Trend)



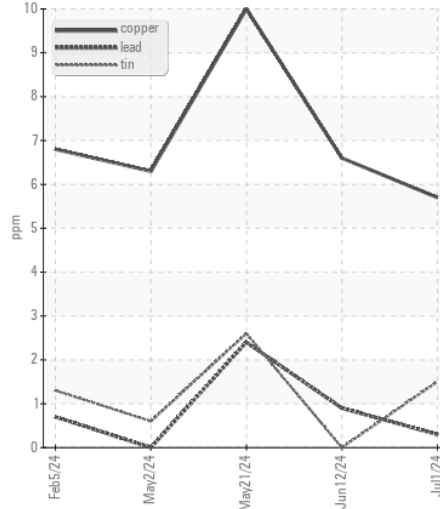
Ferrous Alloys



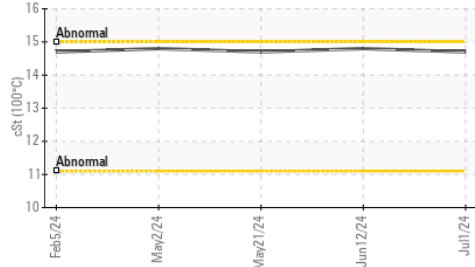
Base Number



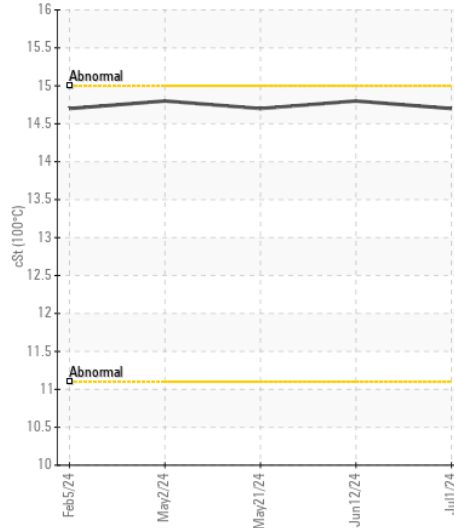
Non-ferrous Metals



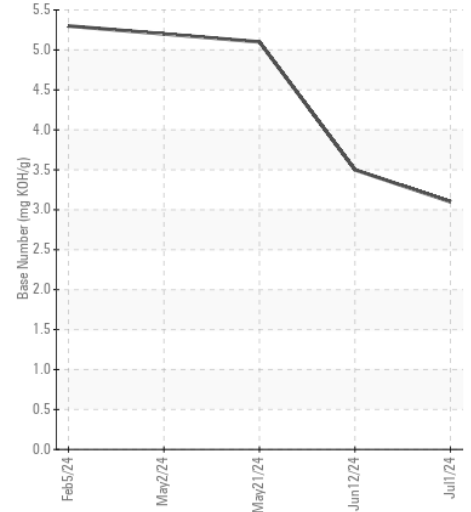
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : GFL0121999

Lab Number : 06228266

Unique Number : 11111759

Test Package : FLEET

Received : 05 Jul 2024

Tested : 05 Jul 2024

Diagnosed : 08 Jul 2024 - Don Baldrige

GFL Environmental - 652 - Fredericksburg Hauling

10954 Houser Drive

Fredericksburg, VA

US 22408

Contact: WILLIAM MILO

wmilo@gflenv.com

T:

F:

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)