



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
722016-305155
Component
Diesel Engine
Fluid
15W40 MFA (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0103636	GFL0046097	GFL0046095
Sample Date		Client Info		24 May 2024	10 Mar 2024	10 Dec 2023
Machine Age	hrs	Client Info		450	450	450
Oil Age	hrs	Client Info		450	0	0
Filter Age	hrs	Client Info		450	0	0
Oil Changed		Client Info		Changed	Changed	Not Changd
Filter Changed		Client Info		Changed	Changed	Not Changd
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>120	21	57	26
Chromium	ppm	ASTM D5185m	>20	<1	1	<1
Nickel	ppm	ASTM D5185m	>5	6	22	12
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	<1	1	2
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	15	9	8
Tin	ppm	ASTM D5185m	>15	0	1	0
Vanadium	ppm	ASTM D5185m		0	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.

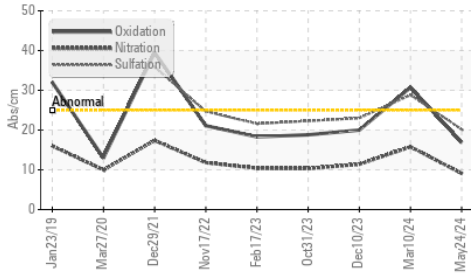
Silicon	ppm	ASTM D5185m	>25	2	9	11
Potassium	ppm	ASTM D5185m	>20	0	0	0
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.5	0.8	0.5
Nitration	Abs/cm	*ASTM D7624	>20	9.1	15.8	11.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.2	28.8	23.0
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

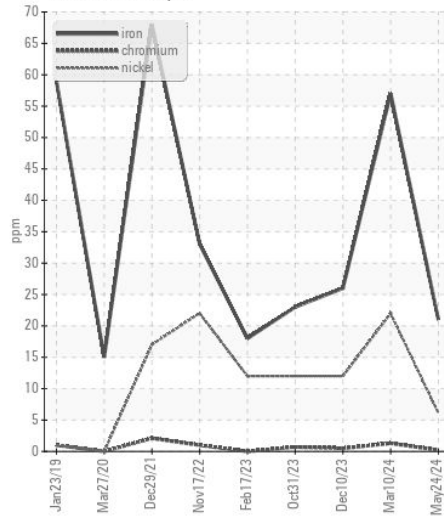
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		5	10	5
Boron	ppm	ASTM D5185m		0	<1	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		59	58	58
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		914	890	869
Calcium	ppm	ASTM D5185m		1118	1137	863
Phosphorus	ppm	ASTM D5185m		981	986	831
Zinc	ppm	ASTM D5185m		1198	1211	1026
Sulfur	ppm	ASTM D5185m		3117	2821	2541
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.9	30.7	20.0
Base Number (BN)	mg KOH/g	ASTM D2896		7.5	▲ 2.6	5.4
Visc @ 100°C	cSt	ASTM D445		13.2	12.4	12.5

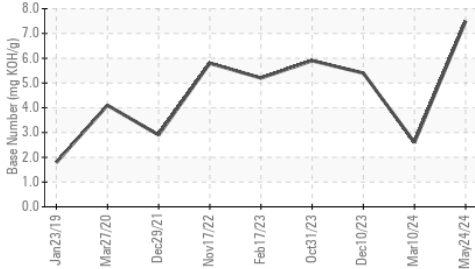
FT-IR (Direct Trend)



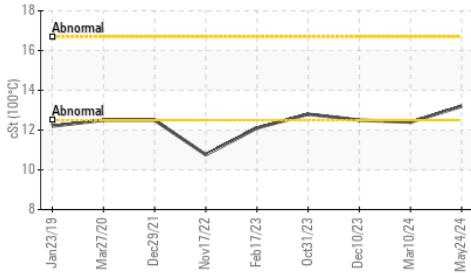
Ferrous Alloys



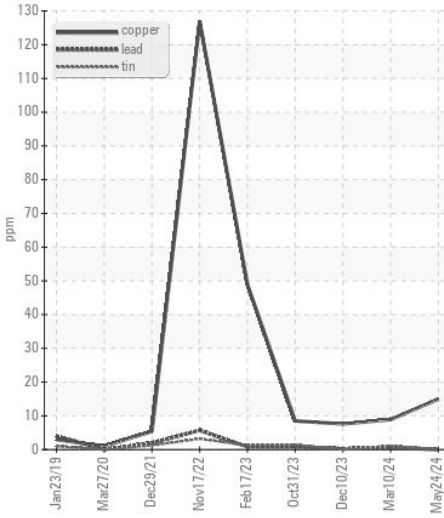
Base Number



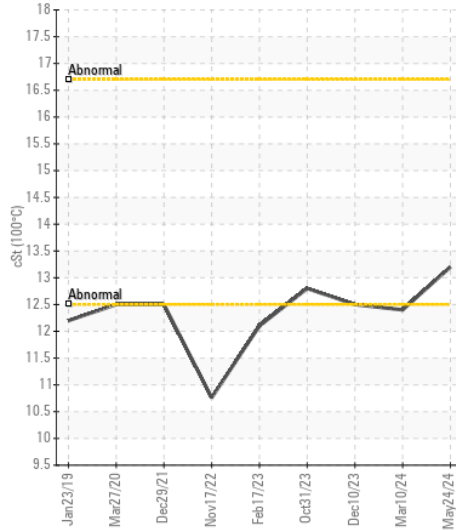
Viscosity @ 100°C



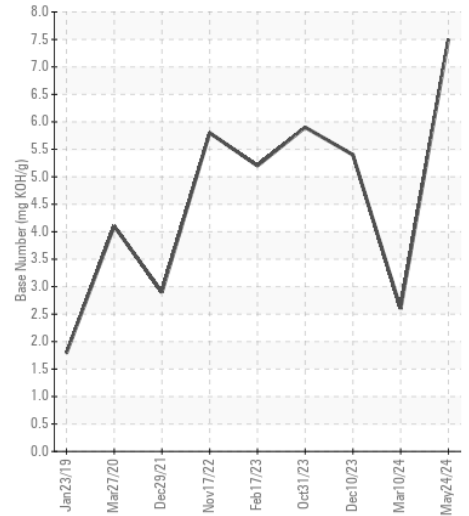
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0103636
Lab Number : 06197325
Unique Number : 11059448
Test Package : FLEET

Received : 03 Jun 2024
Tested : 03 Jun 2024
Diagnosed : 03 Jun 2024 - Wes Davis

GFL Environmental - 834 - Chillicothe Hauling
 201 Mitchell Road
 Chillicothe, MO
 US 64601
 Contact: Terry McKiddy
 tmckiddy@gflenv.com
 T: (816)225-6699
 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)