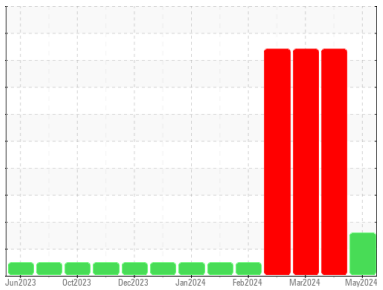
OIL ANALYSIS REPORT

Area
(34744UA)
Machine Id
813000
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

Sample Rating Trend



GLYCOL

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Sodium and/or potassium levels are high. Fuel content negligible. Test for glycol is negative.

Fluid Condition
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0122067**	GFL0116573	GFL0111818
Sample Date		Client Info		**30 May 2024**	16 Apr 2024	21 Mar 2024
Machine Age	hrs	Client Info		**4190**	4036	3922
Oil Age	hrs	Client Info		**3903**	3863	3781
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**ATTENTION**	SEVERE	SEVERE

CONTAMINATION	method	limit/base	current	history1	history2
Water	WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	**10**	16	6
Chromium	ppm	ASTM D5185m	>20	**<1**	1	0
Nickel	ppm	ASTM D5185m	>5	**<1**	1	<1
Titanium	ppm	ASTM D5185m	>2	**<1**	<1	0
Silver	ppm	ASTM D5185m	>2	**0**	<1	0
Aluminum	ppm	ASTM D5185m	>20	**4**	2	2
Lead	ppm	ASTM D5185m	>40	**<1**	1	0
Copper	ppm	ASTM D5185m	>330	**4**	11	1
Tin	ppm	ASTM D5185m	>15	**<1**	1	<1
Vanadium	ppm	ASTM D5185m		**<1**	<1	0
Cadmium	ppm	ASTM D5185m		**<1**	1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	**0**	14	13
Barium	ppm	ASTM D5185m	10	**0**	0	0
Molybdenum	ppm	ASTM D5185m	100	**11**	83	140
Manganese	ppm	ASTM D5185m		**<1**	2	<1
Magnesium	ppm	ASTM D5185m	450	**78**	839	890
Calcium	ppm	ASTM D5185m	3000	**2118**	1086	1045
Phosphorus	ppm	ASTM D5185m	1150	**931**	1027	960
Zinc	ppm	ASTM D5185m	1350	**1069**	1126	1172
Sulfur	ppm	ASTM D5185m	4250	**3965**	3305	3443

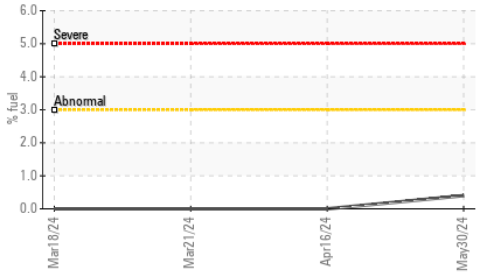
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**4**	5	6
Sodium	ppm	ASTM D5185m	>216	**6**	● 34	▲ 129
Potassium	ppm	ASTM D5185m	>20	● **55**	▲ 290	▲ 1120
Fuel	%	ASTM D3524	>3.0	**0.4**	<1.0	<1.0
Glycol	%	*ASTM D2982		**NEG**	▲ 0.10	▲ 0.20

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	**0.2**	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	**5.5**	5.4	8.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	**15.5**	18.4	19.7

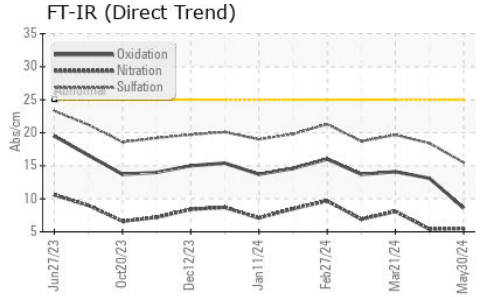
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**8.6**	13.1	14.1
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	**7.5**	9.4	9.9

OIL ANALYSIS REPORT

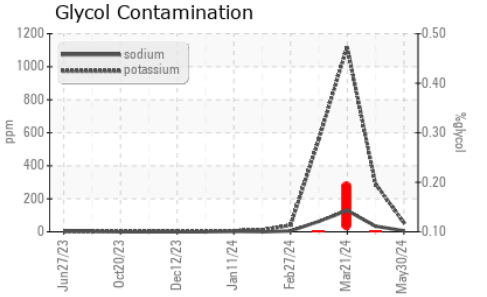
Fuel Dilution



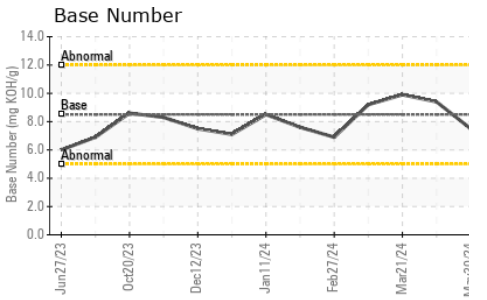
FT-IR (Direct Trend)



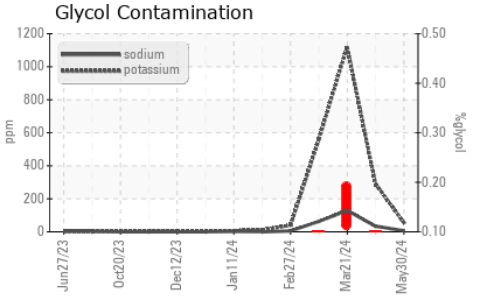
Glycol Contamination



Base Number



Glycol Contamination

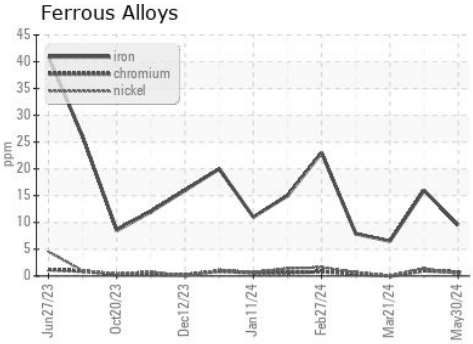


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

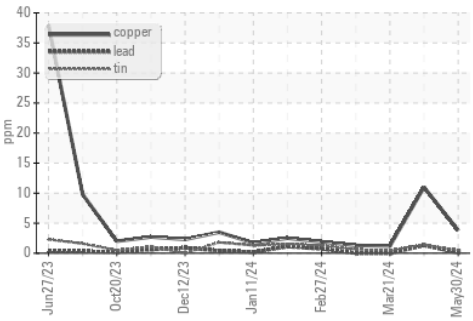
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	**11.8**	14.2	14.2

GRAPHS

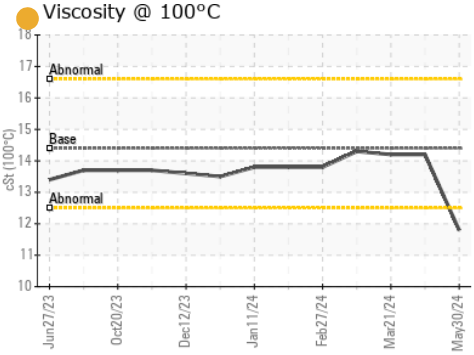
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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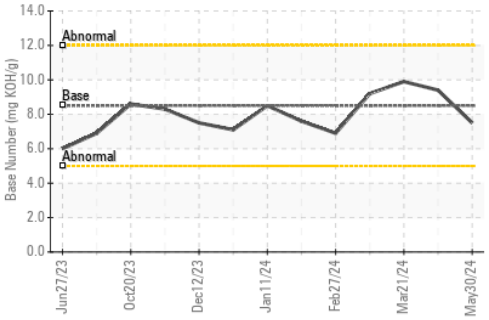

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0122067
Lab Number : 06197508
Unique Number : 11059631
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

Received : 03 Jun 2024
Tested : 05 Jun 2024
Diagnosed : 05 Jun 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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