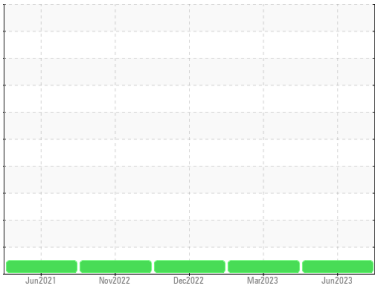
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Area
{UNASSIGNED}
Machine Id
322002-880
Component
Gasoline Engine
Fluid
NOT GIVEN (--- GAL)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor.

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.

SAMPLE INFORMATION		method	limit/base	current	history 1	history 2
Sample Number		Client Info		**GFL0077498**	GFL0068178	GFL0060766
Sample Date		Client Info		**28 Jun 2023**	23 Mar 2023	21 Dec 2022
Machine Age	mls	Client Info		**238991**	236510	230195
Oil Age	mls	Client Info		**37**	6315	3975
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**NORMAL**	NORMAL	NORMAL

CONTAMINATION	method	limit/base	current	history 1	history 2
Glycol	WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>150	**13**	22	11
Chromium	ppm	ASTM D5185m	>20	**0**	1	<1
Nickel	ppm	ASTM D5185m	>5	**0**	0	<1
Titanium	ppm	ASTM D5185m		**19**	<1	<1
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>40	**<1**	4	2
Lead	ppm	ASTM D5185m	>50	**0**	0	<1
Copper	ppm	ASTM D5185m	>155	**4**	<1	<1
Tin	ppm	ASTM D5185m	>10	**0**	0	<1
Vanadium	ppm	ASTM D5185m		**<1**	0	<1
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m		**71**	11	20
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**66**	52	50
Manganese	ppm	ASTM D5185m		**0**	2	<1
Magnesium	ppm	ASTM D5185m		**721**	507	413
Calcium	ppm	ASTM D5185m		**930**	1071	1028
Phosphorus	ppm	ASTM D5185m		**685**	637	584
Zinc	ppm	ASTM D5185m		**810**	777	664
Sulfur	ppm	ASTM D5185m		**2541**	2360	2292

CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>30	**8**	8	7
Sodium	ppm	ASTM D5185m	>400	**3**	4	2
Potassium	ppm	ASTM D5185m	>20	**1**	<1	<1
Fuel	%	ASTM D3524	>4.0	**<1.0**	<1.0	<1.0

INFRA-RED		method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844		**0.1**	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**10.0**	14.2	11.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	**19.1**	24.1	20.3

FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**14.9**	20.5	13.3
Base Number (BN)	mg KOH/g	ASTM D2896		**5.2**	5.1	4.8

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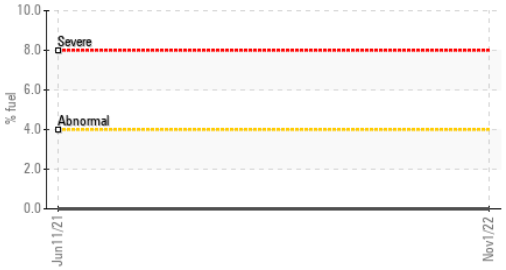
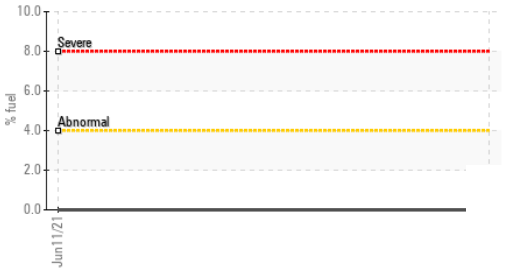
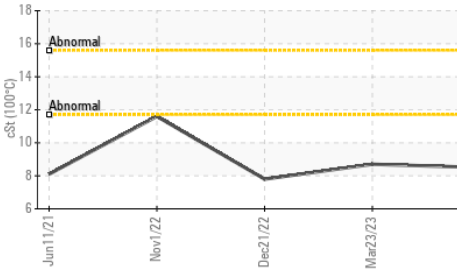
Fuel Dilution



Fuel Dilution



Viscosity @ 100°C

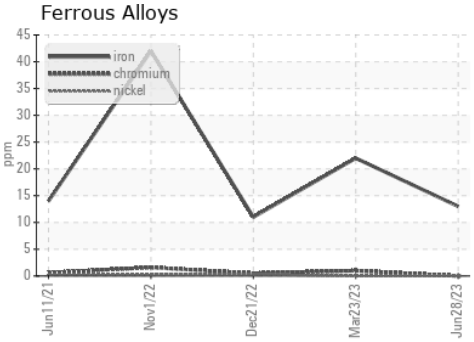


VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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

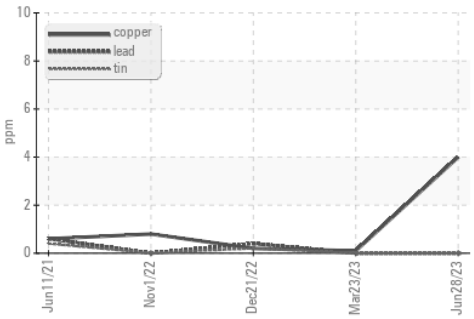
FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D445		**8.5**	8.7	7.8

GRAPHS

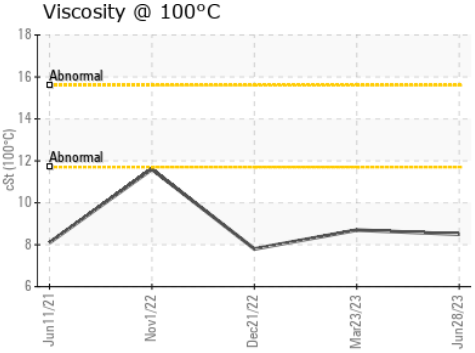
Ferrous Alloys



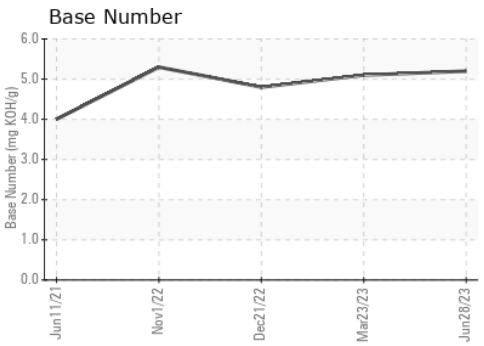
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0077498 **Received** : 03 Jul 2023
Lab Number : 05889599 **Diagnosed** : 06 Jul 2023
Unique Number : 10540082 **Diagnostician** : Angela Borella
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

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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Contact: Glenda Standen
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T:
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Report Id: GFL625 [WUSCAR] 05889599 (Generated: 07/07/2023 03:17:02) Rev: 1

Submitted By: also GFL632 and GFL638 - Glenda Standen