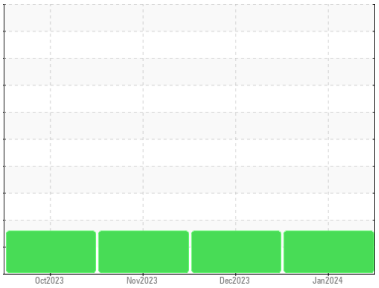
OIL ANALYSIS REPORT

Sample Rating Trend



DIRT

Machine Id
914059
Component
Diesel Engine
Fluid
{not provided} (--- GAL)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear
Metal levels are typical for a new component breaking in.

Contamination
Elemental level of silicon (Si) above normal indicating ingress of seal material.

Fluid Condition
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0102982**	GFL0086408	GFL0086404
Sample Date		Client Info		**07 Jan 2024**	11 Dec 2023	20 Nov 2023
Machine Age	hrs	Client Info		**623**	467	316
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**44**	39	28
Chromium	ppm	ASTM D5185m	>20	**1**	1	<1
Nickel	ppm	ASTM D5185m	>4	**7**	8	5
Titanium	ppm	ASTM D5185m		**<1**	<1	<1
Silver	ppm	ASTM D5185m	>3	**<1**	<1	1
Aluminum	ppm	ASTM D5185m	>20	**6**	6	5
Lead	ppm	ASTM D5185m	>40	**<1**	<1	2
Copper	ppm	ASTM D5185m	>330	**185**	213	131
Tin	ppm	ASTM D5185m	>15	**4**	3	2
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**0**	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**153**	248	284
Barium	ppm	ASTM D5185m		**0**	11	0
Molybdenum	ppm	ASTM D5185m		**112**	115	107
Manganese	ppm	ASTM D5185m		**4**	4	3
Magnesium	ppm	ASTM D5185m		**678**	603	607
Calcium	ppm	ASTM D5185m		**1558**	1511	1532
Phosphorus	ppm	ASTM D5185m		**795**	684	680
Zinc	ppm	ASTM D5185m		**945**	844	865
Sulfur	ppm	ASTM D5185m		**2552**	2613	2396

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	▲ **76**	▲ 83	▲ 80
Sodium	ppm	ASTM D5185m		**3**	<1	3
Potassium	ppm	ASTM D5185m	>20	**8**	9	4
Fuel	%	ASTM D3524	>5	**<1.0**	<1.0	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.5**	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	**10.7**	9.8	8.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	**24.0**	24.8	25.6

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**22.1**	22.3	21.7
Base Number (BN)	mg KOH/g	ASTM D2896		**7.0**	7.6	8.6

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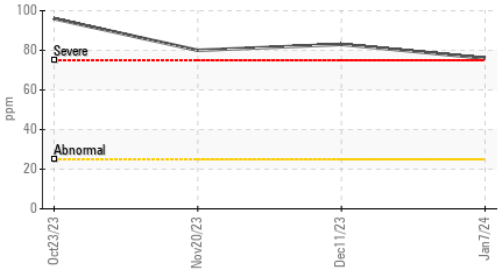
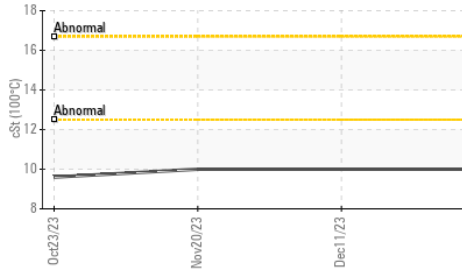
Silicon (ppm)

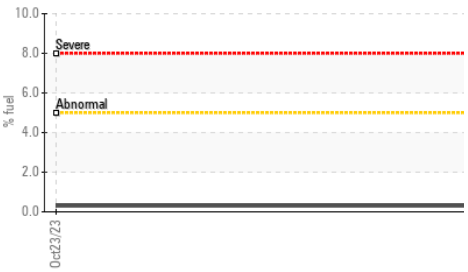


Fuel Dilution

Viscosity @ 100°C



Fuel Dilution

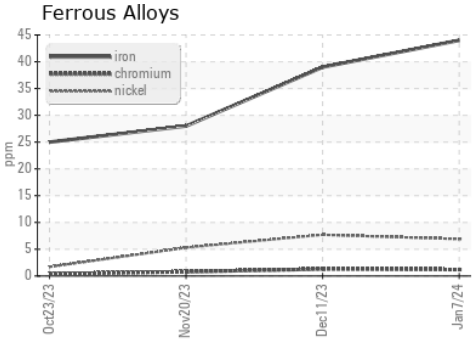


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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

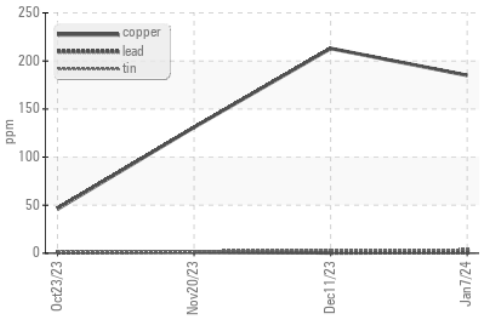
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		**10.0**	10.0	10.0

GRAPHS

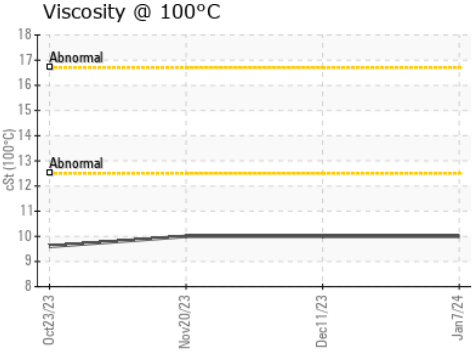
Ferrous Alloys



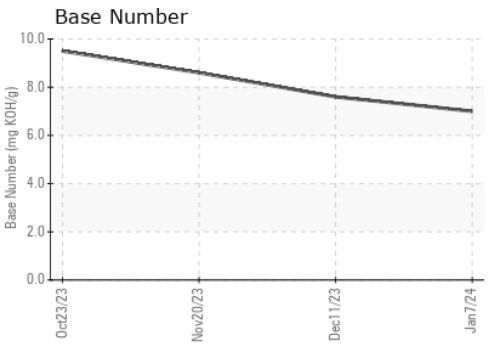
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0102982 **Recieved** : 08 Jan 2024
Lab Number : 06054588 **Diagnosed** : 10 Jan 2024
Unique Number : 10820537 **Diagnostician** : Sean Felton
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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