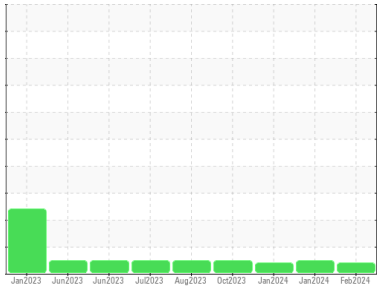
OIL ANALYSIS REPORT

Area
(GBD071)
Machine Id
MACK 813005
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

Sample Rating Trend



VISCOSITY

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

Fuel content negligible. There is no indication of any contamination in the oil.

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		**GFL0109085**	GFL0109092	GFL0109067
Sample Date		Client Info		**01 Feb 2024**	23 Jan 2024	05 Jan 2024
Machine Age	hrs	Client Info		**3427**	3386	3250
Oil Age	hrs	Client Info		**3427**	3386	3251
Oil Changed		Client Info		**N/A**	Not Changd	N/A
Sample Status				**ATTENTION**	NORMAL	ATTENTION

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	>120	**8**	5	6
Chromium	ppm	ASTM D5185m	>20	**<1**	0	<1
Nickel	ppm	ASTM D5185m	>5	**<1**	0	0
Titanium	ppm	ASTM D5185m	>2	**0**	0	0
Silver	ppm	ASTM D5185m	>2	**<1**	0	0
Aluminum	ppm	ASTM D5185m	>20	**3**	<1	2
Lead	ppm	ASTM D5185m	>40	**<1**	0	0
Copper	ppm	ASTM D5185m	>330	**2**	1	<1
Tin	ppm	ASTM D5185m	>15	**<1**	0	0
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	**16**	15	20
Barium	ppm	ASTM D5185m	10	**0**	0	0
Molybdenum	ppm	ASTM D5185m	100	**59**	59	60
Manganese	ppm	ASTM D5185m		**<1**	<1	0
Magnesium	ppm	ASTM D5185m	450	**703**	814	714
Calcium	ppm	ASTM D5185m	3000	**1064**	1190	1105
Phosphorus	ppm	ASTM D5185m	1150	**908**	982	926
Zinc	ppm	ASTM D5185m	1350	**1077**	1206	1092
Sulfur	ppm	ASTM D5185m	4250	**2656**	3114	2951

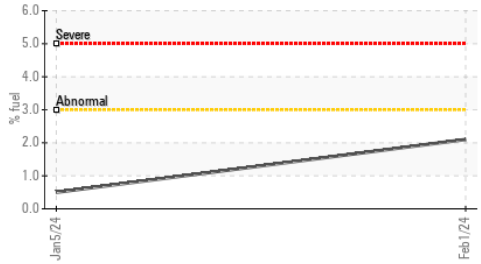
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**3**	2	3
Sodium	ppm	ASTM D5185m	>216	**4**	<1	3
Potassium	ppm	ASTM D5185m	>20	**5**	<1	3
Fuel	%	ASTM D3524	>3.0	**2.1**	<1.0	0.5

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	**0.5**	0.2	0.3
Nitration	Abs/cm	*ASTM D7624	>20	**8.4**	5.8	7.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	**18.6**	17.2	17.7

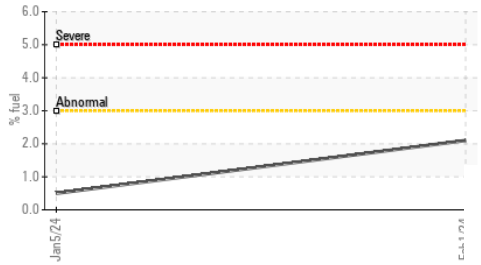
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**14.6**	11.8	13.4
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	**6.8**	7.4	7.2

OIL ANALYSIS REPORT

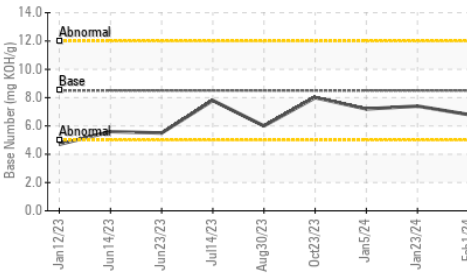
Fuel Dilution



Fuel Dilution



Base Number

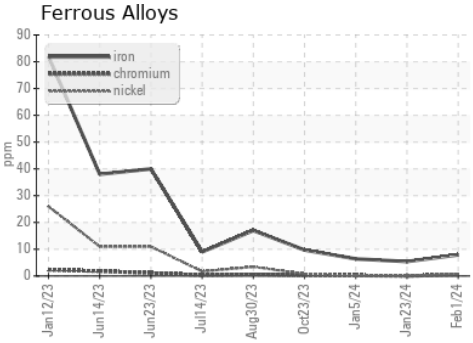


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

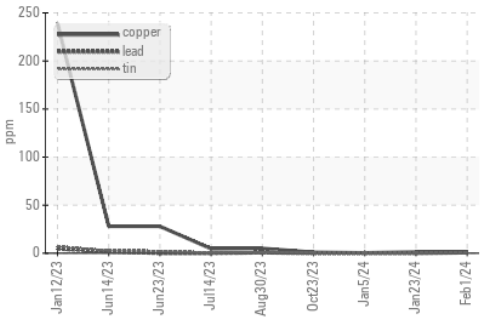
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	▲ **11.9**	12.7	▲ 12.1

GRAPHS

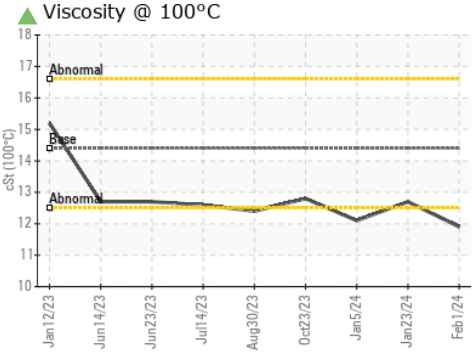
Ferrous Alloys



Non-ferrous Metals



▲ Viscosity @ 100°C



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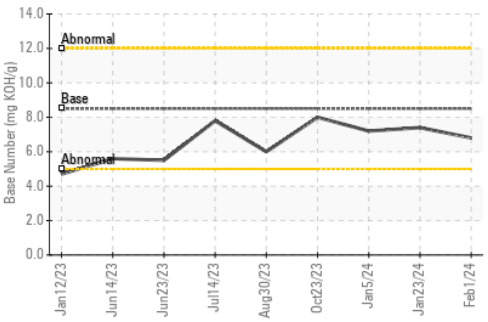

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0109085
Lab Number : 06081863
Unique Number : 10869308
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

Received : 06 Feb 2024
Tested : 08 Feb 2024
Diagnosed : 08 Feb 2024 - Angela Borella

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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