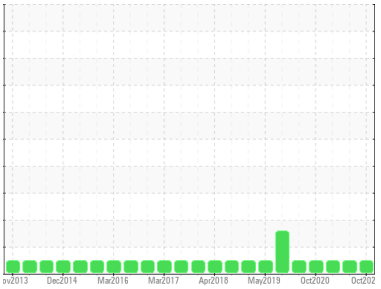
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Area
CHEATHAM ANNEX
Machine Id
1731 CRANE 1A
Component
Gearbox
Fluid
SHELL OMALA S4 WE 220 (--- 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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0752671**	WC0752664	WC0513579
Sample Date		Client Info		**01 Oct 2023**	22 Jan 2023	07 Mar 2021
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**NORMAL**	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	**1**	1	<1
Chromium	ppm	ASTM D5185m	>15	**0**	<1	<1
Nickel	ppm	ASTM D5185m	>15	**<1**	5	<1
Titanium	ppm	ASTM D5185m		**0**	0	<1
Silver	ppm	ASTM D5185m		**0**	<1	<1
Aluminum	ppm	ASTM D5185m	>25	**3**	1	<1
Lead	ppm	ASTM D5185m	>100	**0**	0	<1
Copper	ppm	ASTM D5185m	>200	**0**	<1	<1
Tin	ppm	ASTM D5185m	>25	**<1**	<1	<1
Antimony	ppm	ASTM D5185m	>5	**---**	---	0
Vanadium	ppm	ASTM D5185m		**0**	<1	<1
Cadmium	ppm	ASTM D5185m		**0**	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	0	3
Barium	ppm	ASTM D5185m		**0**	<1	0
Molybdenum	ppm	ASTM D5185m		**0**	0	<1
Manganese	ppm	ASTM D5185m		**<1**	<1	0
Magnesium	ppm	ASTM D5185m		**5**	<1	<1
Calcium	ppm	ASTM D5185m		**5**	1	4
Phosphorus	ppm	ASTM D5185m		**1068**	821	1037
Zinc	ppm	ASTM D5185m		**0**	1	0
Sulfur	ppm	ASTM D5185m		**799**	549	675

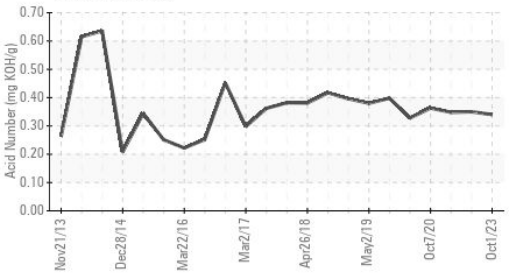
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**6**	3	2
Sodium	ppm	ASTM D5185m		**0**	6	0
Potassium	ppm	ASTM D5185m	>20	**4**	1	1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.34**	0.35	0.348

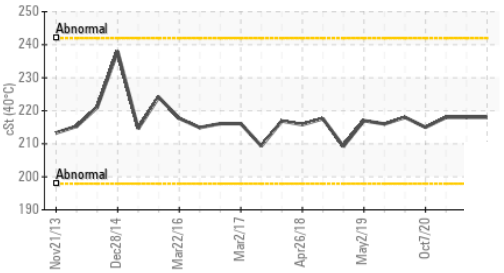
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

OIL ANALYSIS REPORT

Acid Number

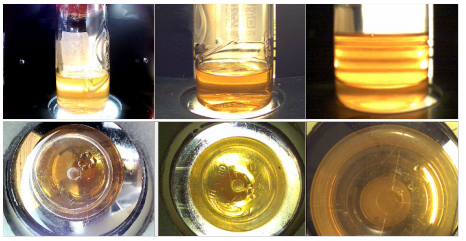


Viscosity @ 40°C



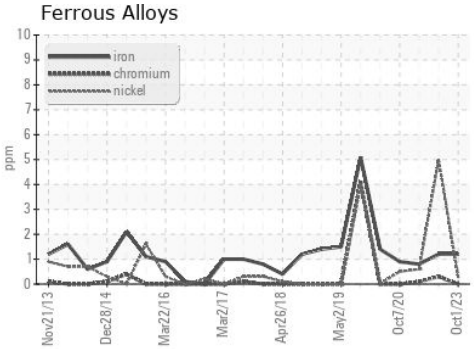
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		**218**	218	218

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

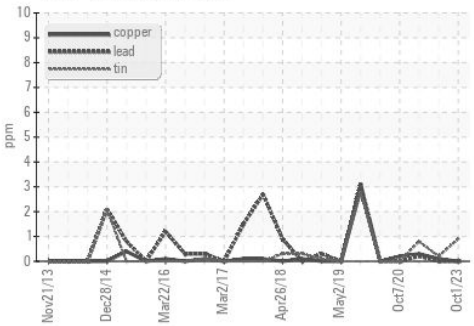


GRAPHS

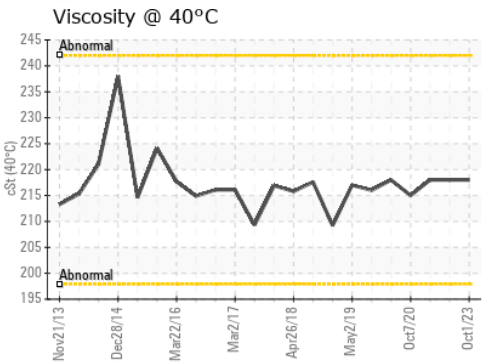
Ferrous Alloys



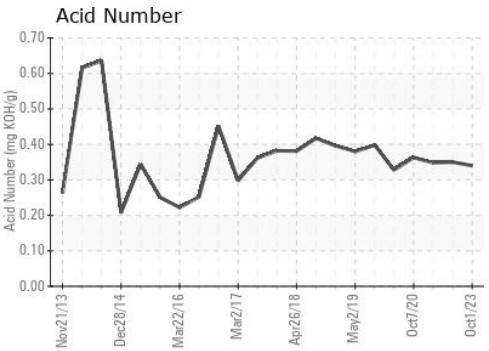
Non-ferrous Metals



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0752671
Lab Number : 05965484
Unique Number : 10672035
Test Package : IND 2

Received : 29 Sep 2023
Diagnosed : 02 Oct 2023
Diagnostician : Don Baldridge

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)

CARGOTEC MARINE - MACGREGOR
525 BYRON ST, SUITE B
CHESAPEAKE, VA
US 23320
Contact: TARMO MAGI
tarmo.magi@macgregor.com
T: (757)558-4584
F: (757)558-4581