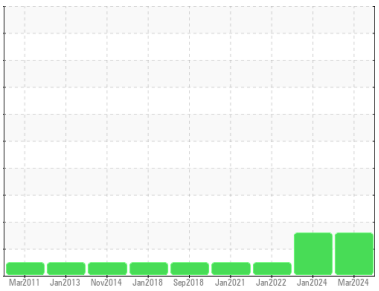
OIL ANALYSIS REPORT

Sample Rating Trend



WATER

Machine Id
MCQUAY FBI ACADEMY CHILLER 3 CIRCUIT 2 (S/N STNU050100067)
Component
Refrigeration Compressor
Fluid
ICI EMKARATE RL 68H (8 GAL)

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
There is a trace of moisture present 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		**WC0903759**	WC0783413	WC0660638
Sample Date		Client Info		**07 Mar 2024**	11 Jan 2024	20 Jan 2022
Machine Age	hrs	Client Info		**32762**	32504	25512
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	Not Changd
Sample Status				**MARGINAL**	MARGINAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**3**	3	3
Chromium	ppm	ASTM D5185m	>2	**0**	0	0
Nickel	ppm	ASTM D5185m		**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	<1
Aluminum	ppm	ASTM D5185m	>50	**0**	0	0
Lead	ppm	ASTM D5185m	>2	**0**	0	0
Copper	ppm	ASTM D5185m	>100	**<1**	1	2
Tin	ppm	ASTM D5185m	>4	**0**	<1	<1
Antimony	ppm	ASTM D5185m		**---**	---	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	0	**0**	0	<1
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	0	**0**	0	0
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	0	**0**	<1	<1
Calcium	ppm	ASTM D5185m	0	**0**	1	0
Phosphorus	ppm	ASTM D5185m	1900	**24**	3	4
Zinc	ppm	ASTM D5185m	0	**0**	0	0
Sulfur	ppm	ASTM D5185m	25	**0**	<1	0

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**1**	3	<1
Sodium	ppm	ASTM D5185m		**0**	<1	0
Potassium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Water	%	ASTM D6304	>0.02	▲ **0.022**	▲ 0.022	0.002
ppm Water	ppm	ASTM D6304	>200	▲ **221**	▲ 220	24.5

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974	0.02	**0.014**	0.014	0.038

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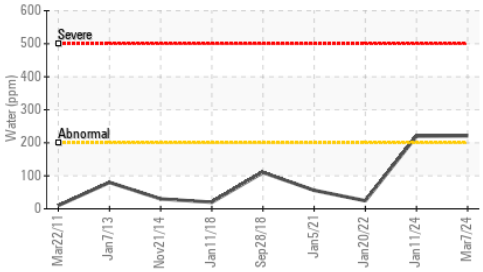
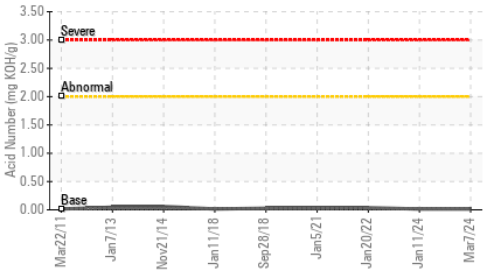
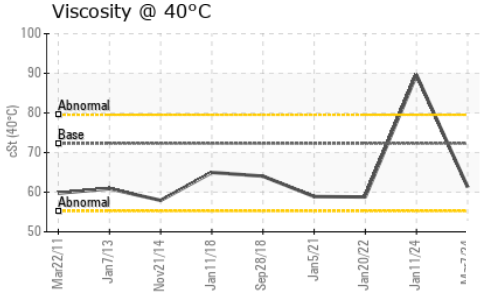
Water (KF)



Acid Number



Viscosity @ 40°C



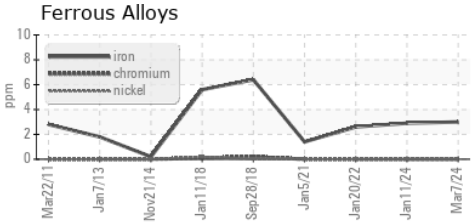
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.02	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	72.3	**61.3**	89.6	58.8

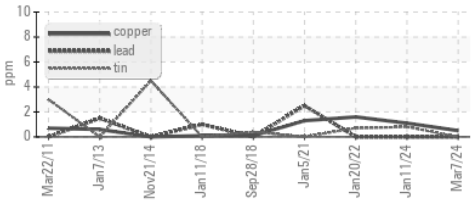
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

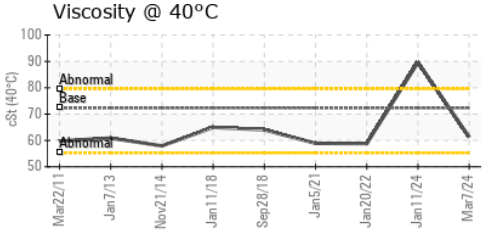
Ferrous Alloys



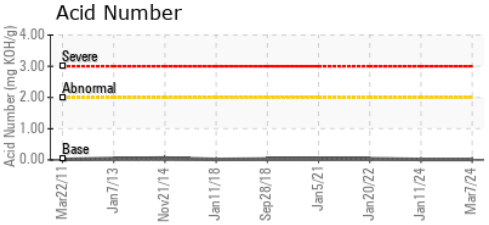
Non-ferrous Metals



Viscosity @ 40°C



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0903759
Lab Number : 06152035
Unique Number : 10982113
Test Package : IND 2

Received : 17 Apr 2024
Tested : 18 Apr 2024
Diagnosed : 22 Apr 2024 - Jonathan Hester

Certificate L2367

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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