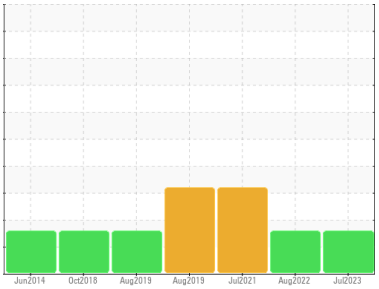
PROBLEM SUMMARY

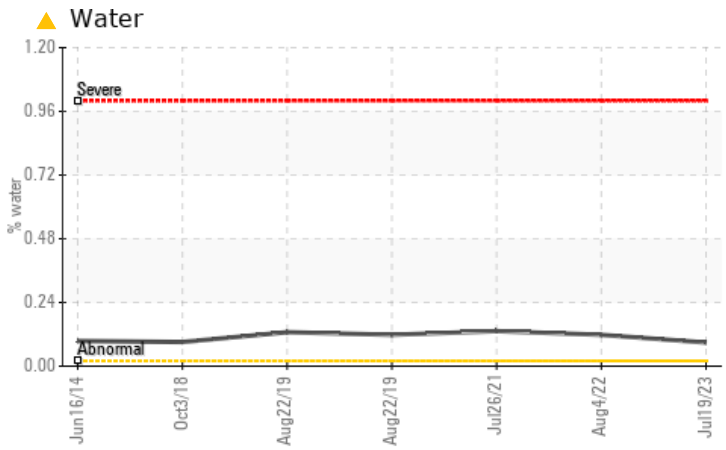
Sample Rating Trend



WATER

Machine Id
MCQUAY QBE CHILLER 3 STAGE 2 (S/N STNU121200121)
Component
Refrigeration Compressor
Fluid
POE (6 GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL
Water	%	ASTM D6304	>0.02	▲ **0.089**	▲ 0.118	▲ 0.132
ppm Water	ppm	ASTM D6304	>250	▲ **896.5**	▲ 1187.7	▲ 1325.0

Customer Id: NORDEF
Sample No.: WC0709616
Lab Number: 05934412
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Angela Borella +1 800-237-1369
angela.borella@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

04 Aug 2022 Diag: Doug Bogart

WATER

No corrective action is recommended at this time. We recommend an early resample to monitor this condition.All component wear rates are normal. Insufficient sample was received to conduct all the routine laboratory tests. There is a moderate concentration of water present in the oil. The condition of the oil is acceptable for the time in service.

view report

---

26 Jul 2021 Diag: Don Baldridge

WATER

No corrective action is recommended at this time. We recommend an early resample to monitor this condition.All component wear rates are normal. There is a moderate concentration of water present in the oil. Elemental level of silicon (Si) above normal. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

---

22 Aug 2019 Diag: Don Baldridge

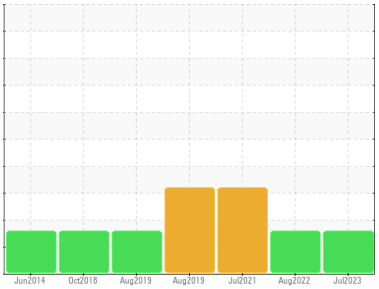
WATER

No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. There is a light concentration of water present in the oil. Elemental level of silicon (Si) above normal. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



WATER

Machine Id
MCQUAY QBE CHILLER 3 STAGE 2 (S/N STNU121200121)
Component
Refrigeration Compressor
Fluid
POE (6 GAL)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

Wear
All component wear rates are normal.

Contamination
There is a light concentration of water 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		**WC0709616**	WC0578137	WCI2245801
Sample Date		Client Info		**19 Jul 2023**	04 Aug 2022	26 Jul 2021
Machine Age	yrs	Client Info		**11**	10	9
Oil Age	yrs	Client Info		**1**	10	9
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**0**	3	1
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	0
Aluminum	ppm	ASTM D5185m	>50	**0**	0	0
Lead	ppm	ASTM D5185m	>2	**0**	0	0
Copper	ppm	ASTM D5185m	>100	**0**	<1	<1
Tin	ppm	ASTM D5185m	>4	**0**	<1	<1
Antimony	ppm	ASTM D5185m		**---**	---	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

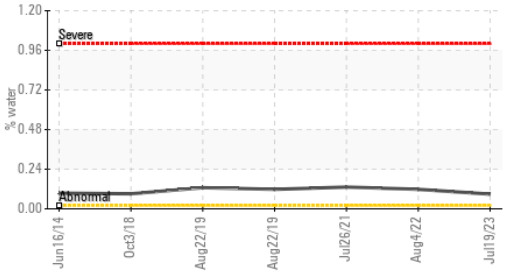
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	0	<1
Barium	ppm	ASTM D5185m		**0**	<1	0
Molybdenum	ppm	ASTM D5185m		**0**	0	0
Manganese	ppm	ASTM D5185m		**0**	0	0
Magnesium	ppm	ASTM D5185m		**0**	0	0
Calcium	ppm	ASTM D5185m		**0**	0	0
Phosphorus	ppm	ASTM D5185m		**3**	6	13
Zinc	ppm	ASTM D5185m		**0**	0	0
Sulfur	ppm	ASTM D5185m		**0**	1	7

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**16**	46	▲ 54
Sodium	ppm	ASTM D5185m		**0**	0	0
Potassium	ppm	ASTM D5185m	>20	**<1**	0	0
Water	%	ASTM D6304	>0.02	▲ **0.089**	▲ 0.118	▲ 0.132
ppm Water	ppm	ASTM D6304	>250	▲ **896.5**	▲ 1187.7	▲ 1325.0

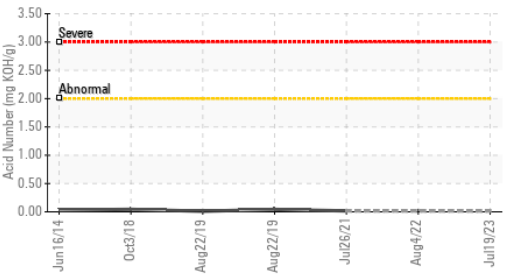
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974		**0.014**	---	0.016

OIL ANALYSIS REPORT

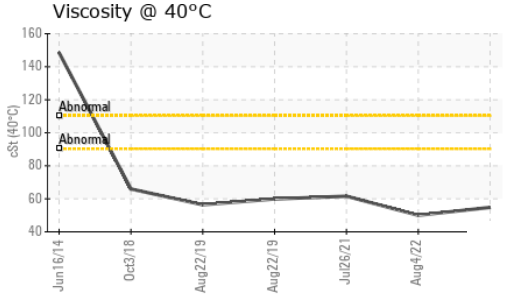
Water



Acid Number

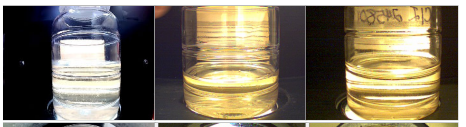
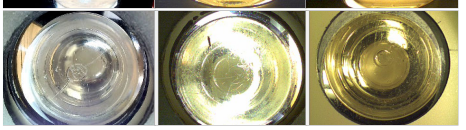


Viscosity @ 40°C



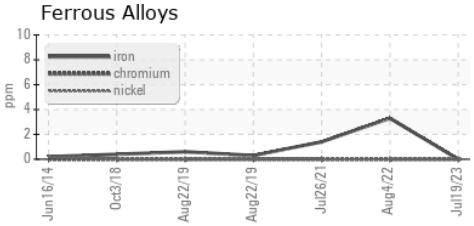
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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		**54.8**	50.0	61.6

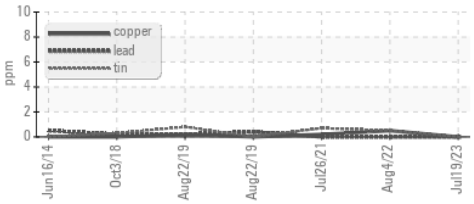
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

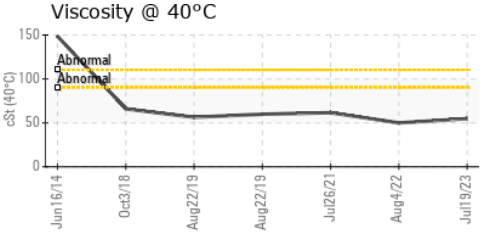
Ferrous Alloys



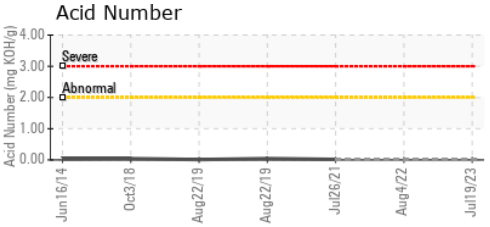
Non-ferrous Metals



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0709616
Lab Number : 05934412
Unique Number : 10619683
Test Package : IND 2

Received : 24 Aug 2023
Diagnosed : 29 Aug 2023
Diagnostician : 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)

NORTH AMERICAN MECHANICAL
4401 STATE RD 19
WINDSOR, WI
US 53598
Contact: STACEY QUAM
squam@naminc.com
T: (608)240-8906
F: (608)240-8965