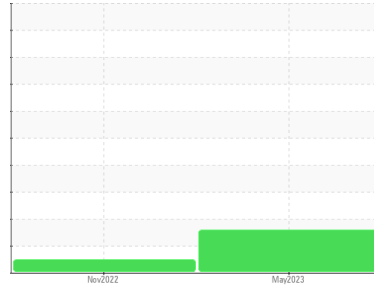




PROBLEM SUMMARY

Area
NOT GIVEN
 Machine Id
QUINCY UN060657 - BLUEWATER THERMAL
 Component
Compressor

Sample Rating Trend



WATER



COMPONENT CONDITION SUMMARY

No relevant graphs to display

RECOMMENDATION

We advise that you follow the water drain-off procedure for this component. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status			ABNORMAL	NORMAL	---
Free Water	scalar	*Visual	▲ >10%	NEG	---

Customer Id: UCMICGRA
 Sample No.: UCH05840758
 Lab Number: 05840758
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Doug Bogart +1 (800)237-1369 x4016
dougb@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
Water Drain-off	---	---	?	We advise that you follow the water drain-off procedure for this component.

HISTORICAL DIAGNOSIS

02 Nov 2022 Diag: Don Baldrige

NORMAL



Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

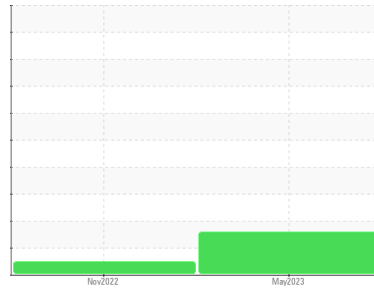
view report





OIL ANALYSIS REPORT

Sample Rating Trend



WATER



Area
NOT GIVEN

Machine Id
QUINCY UN060657 - BLUEWATER THERMAL

Component
Compressor

DIAGNOSIS

▲ Recommendation

We advise that you follow the water drain-off procedure for this component. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

▲ Contamination

Excessive free water present. Moderate concentration of visible dirt/debris present in the oil. 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	history 1	history 2
Sample Number	Client Info		UCH05840758	UCH05686538	---
Sample Date	Client Info		03 May 2023	02 Nov 2022	---
Machine Age	hrs	Client Info	100320	100158	---
Oil Age	hrs	Client Info	331	2937	---
Oil Changed	Client Info		Not Changed	Changed	---
Sample Status			ABNORMAL	NORMAL	---

WEAR METALS

	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m >50	0	<1	---
Chromium	ppm	ASTM D5185m >10	0	0	---
Nickel	ppm	ASTM D5185m	0	0	---
Titanium	ppm	ASTM D5185m	0	0	---
Silver	ppm	ASTM D5185m	0	0	---
Aluminum	ppm	ASTM D5185m >25	0	<1	---
Lead	ppm	ASTM D5185m >25	0	0	---
Copper	ppm	ASTM D5185m >50	<1	<1	---
Tin	ppm	ASTM D5185m >15	0	0	---
Vanadium	ppm	ASTM D5185m	0	0	---
Cadmium	ppm	ASTM D5185m	0	0	---

ADDITIVES

	method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m	0	0	---
Barium	ppm	ASTM D5185m	0	0	---
Molybdenum	ppm	ASTM D5185m	0	0	---
Manganese	ppm	ASTM D5185m	0	0	---
Magnesium	ppm	ASTM D5185m	0	<1	---
Calcium	ppm	ASTM D5185m	0	0	---
Phosphorus	ppm	ASTM D5185m	639	358	---
Zinc	ppm	ASTM D5185m	0	1	---
Sulfur	ppm	ASTM D5185m	766	7	---

CONTAMINANTS

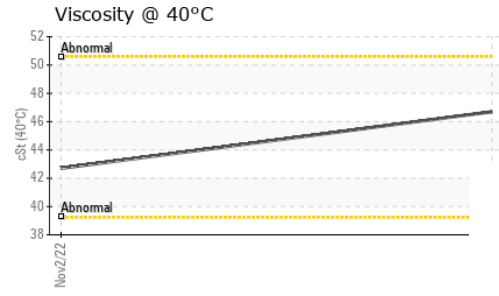
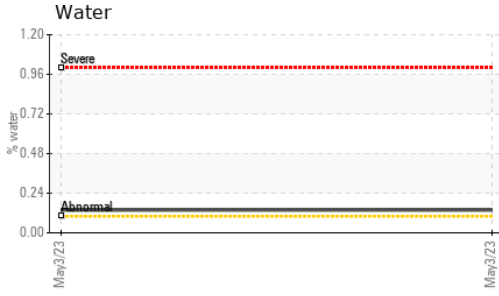
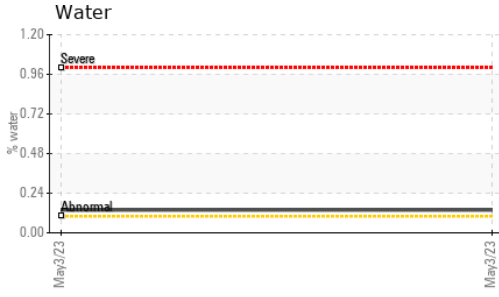
	method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m >25	<1	<1	---
Sodium	ppm	ASTM D5185m	0	0	---
Potassium	ppm	ASTM D5185m >20	0	<1	---
Water	%	ASTM D6304 >0.1	0.138	---	---
ppm Water	ppm	ASTM D6304 >1000	1380	---	---

FLUID DEGRADATION

	method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.23	0.29	---



OIL ANALYSIS REPORT



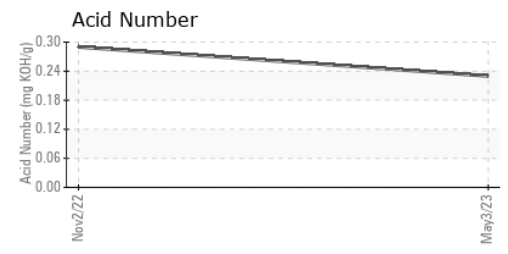
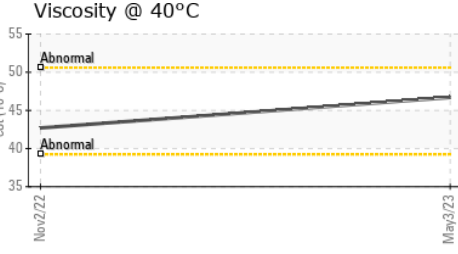
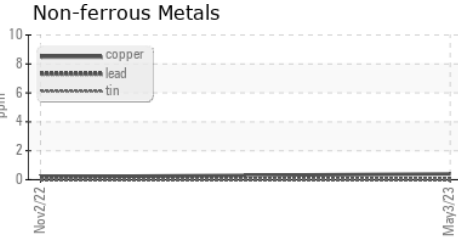
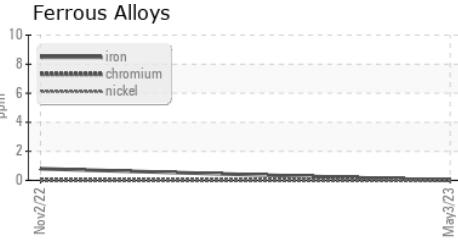
VISUAL	method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	MODER	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.1	0.2%	---
Free Water	scalar	*Visual		▲ >10%	---

FLUID PROPERTIES	method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D445	46.7	42.7	---

SAMPLE IMAGES	method	limit/base	current	history 1	history 2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : UCH05840758 **Received** : 08 May 2023
Lab Number : 05840758 **Diagnosed** : 10 May 2023
Unique Number : 10459561 **Diagnostician** : Doug Bogart
Test Package : IND 2 (Additional Tests: KF)

MICHIGAN AIR SOLUTIONS
 4511 CLAY AVE SW
 GRAND RAPIDS, MI
 US 49548
 Contact: KEVIN GEERTMAN
 kevin@mi-air.com
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 F: (616)531-0084

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)