

## **OIL ANALYSIS REPORT**

### Area [SV2312180183/1] MCQUAY VBCC CHILLER 3 (S/N STNU040500275)

**Refrigeration Compressor** 

Fluid MOBIL EAL ARTIC ISO 46 (8 GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

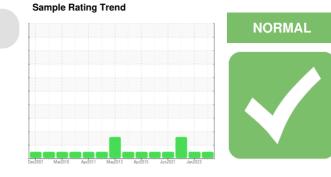
All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

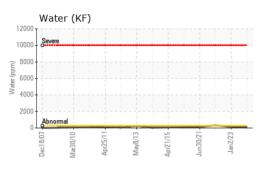
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

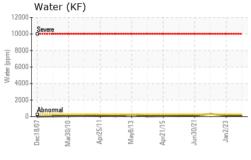


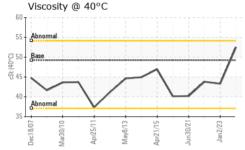
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WCI2310927	WCI2310926	WC0430730
Sample Date		Client Info		11 Apr 2024	02 Jan 2023	18 Apr 2022
Machine Age	hrs	Client Info		6120	3740	3690
Oil Age	hrs	Client Info		0	3740	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	MARGINAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	1	1	1
Chromium	ppm	ASTM D5185m	>2	<1	0	0
Nickel	ppm	ASTM D5185m		<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>50	1	0	<1
Lead	ppm	ASTM D5185m	>2	1	0	<1
Copper	ppm	ASTM D5185m	>100	1	3	5
Tin	ppm	ASTM D5185m	>4	1	0	<1
Antimony	ppm	ASTM D5185m				
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		1	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 0	history1 0	history2 <1
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	0	0	<1
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	0 0 <1 <1	0	<1 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 <1	0 0 0	<1 0 0
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 <1 <1	0 0 0 0	<1 0 0 0
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 <1 <1 <1	0 0 0 0 0 9	<1 0 0 0 0 0 0 0
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 <1 <1 <1 <1 3 113 <1	0 0 0 0 0 0	<1 0 0 0 0 0 0 0 0 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 <1 <1 <1 <1 3 113	0 0 0 0 0 9	<1 0 0 0 0 0 0 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 <1 <1 <1 <1 3 113 <1	0 0 0 0 0 9 0	<1 0 0 0 0 0 0 0 0 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 0 <1 <1 3 113 <1 0	0 0 0 0 0 9 0 30	<1 0 0 0 0 0 0 0 0 0 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 <1 <1 3 113 <1 0 current	0 0 0 0 0 9 0 30 <b>history1</b>	<1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b>	limit/base	0 0 <1 <1 <1 3 113 <1 0 <u>current</u> 12	0 0 0 0 0 9 0 30 30 history1 17	<1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 16
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	limit/base >50 >20	0 0 <1 <1 <1 3 113 <1 0	0 0 0 0 0 9 0 30 <b>history1</b> 17 0	<1 0 0 0 0 0 0 0 0 0 0 0 0 0 16 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >50 >20	0 0 <1 <1 <1 3 113 <1 0	0 0 0 0 0 9 0 30 <b>history1</b> 17 0 <1	<1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >50 >20 >0.02	0 0 <1 <1 <1 3 113 <1 0 <u>current</u> 12 <1 <1 <1 0.012	0 0 0 0 0 9 0 30 <b>history1</b> 17 0 <1 0.012	<1 0 0 0 0 0 0 0 0 0 0 0 0 0



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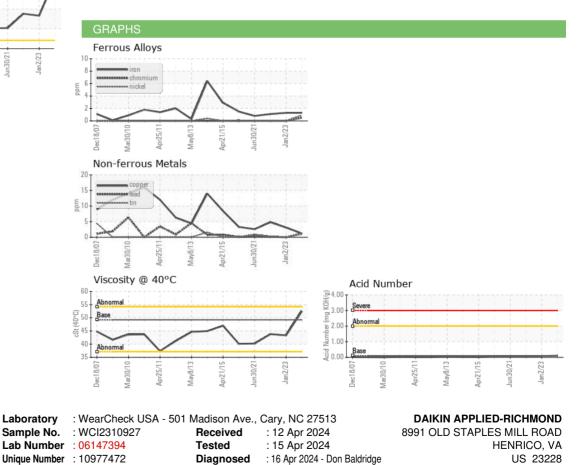






VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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	49.2	52.5	43.3	43.8
SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Pottom						

Bottom



 TESTING LABORATORY
 Unique Number
 : 10977472

 Certificate L2367
 Test Package
 : IND 2

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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Page 2 of 2

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