

# **OIL ANALYSIS REPORT**

Sample Rating Trend

WATER

# Machine Id MCQUAY FBI ACADEMY BLDG 5 CH 1 (S/N STNU050700057)

Refrigeration Compressor

ICI EMKARATE RL 46H (2 GAL)

## DIAGNOSIS

#### A 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.

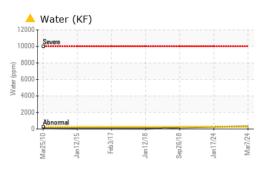
### Fluid Condition

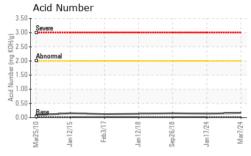
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

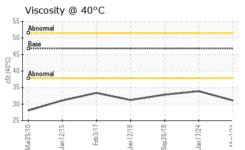
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0903768	WC0814427	WCI2310150
Sample Date		Client Info		07 Mar 2024	17 Jan 2024	26 Sep 2018
Machine Age	hrs	Client Info		11600	11600	10150
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				MARGINAL	MARGINAL	NORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	32	33	4
Chromium	ppm	ASTM D5185m	>2	0	<1	0
Nickel	ppm	ASTM D5185m		0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>50	<1	2	<1
Lead	ppm	ASTM D5185m	>2	<1	<1	0
Copper	ppm	ASTM D5185m	>100	2	3	<1
Tin	ppm	ASTM D5185m	>4	<1	1	7
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
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 0	history1 0	<mark>history2</mark> <1
	ppm ppm		0			
Boron		ASTM D5185m	0	0	0	<1
Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m	0 0 0	0 0	0	<1 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	0 0 0	0 0 <1	<1 0 0
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0	0 0 1 <1 0	0 0 <1 1 <1 0	<1 0 0 <1 <1 <1 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0 0 1900	0 0 1 <1 0 8	0 0 <1 1 <1 0 0 0	<1 0 0 <1 <1 <1 <1 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0 0 1900 0	0 0 1 <1 0 8 89	0 0 <1 1 <1 0 0 77	<1 0 <1 <1 <1 <1 0 25
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	0 0 0 0 0 0 1900	0 0 1 <1 0 8	0 0 <1 1 <1 0 0 0	<1 0 0 <1 <1 <1 <1 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0 0 1900 0	0 0 1 <1 0 8 89	0 0 <1 1 <1 0 0 77	<1 0 <1 <1 <1 <1 0 25
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> ASTM D5185m	0 0 0 0 0 0 1900 0 25	0 0 1 <1 0 8 8 89 62 2 current 12	0 0 <1 1 <1 0 0 77 0 history1 12	<1 0 0 <1 <1 <1 0 25 16 history2 8
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	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	0 0 0 0 0 1900 0 25 limit/base >50	0 0 1 <1 0 8 89 62 current 12 2	0 0 <1 1 <1 0 0 77 0 history1 12 0	<1 0 0 <1 <1 <1 0 25 16 history2 8 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm 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	0 0 0 0 0 0 1900 0 25 limit/base	0 0 1 <1 0 8 8 9 62 62 current 12 2 6	0 0 <1 1 <1 0 0 77 0 history1 12 0 7	<1 0 0 <1 <1 <1 0 25 16 <u>history2</u> 8 <1 <1
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 ASTM D5185m	0 0 0 0 0 1900 0 25 limit/base >50	0 0 1 <1 0 8 89 62 current 12 2	0 0 <1 1 <1 0 0 777 0 history1 12 0 7 ↓ 00 7 ↓ 00 0 0 0 0 0 0 0 0 0 0 0 0	<1 0 0 <1 <1 <1 0 25 16 <u>history2</u> 8 <1 <1 <1 0.017
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	0 0 0 0 0 1900 0 25 limit/base >50	0 0 1 <1 0 8 8 9 62 62 current 12 2 6	0 0 <1 1 <1 0 0 77 0 history1 12 0 7	<1 0 0 <1 <1 <1 0 25 16 <u>history2</u> 8 <1 <1
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	0 0 0 0 0 1900 0 25 limit/base >50 ->20 >0.02	0 0 0 1 <1 0 8 8 89 62 62 <i>current</i> 12 2 6 6 0.031	0 0 <1 1 <1 0 0 777 0 history1 12 0 7 ↓ 00 7 ↓ 00 0 0 0 0 0 0 0 0 0 0 0 0	<1 0 0 <1 <1 <1 0 25 16 <u>history2</u> 8 <1 <1 <1 0.017



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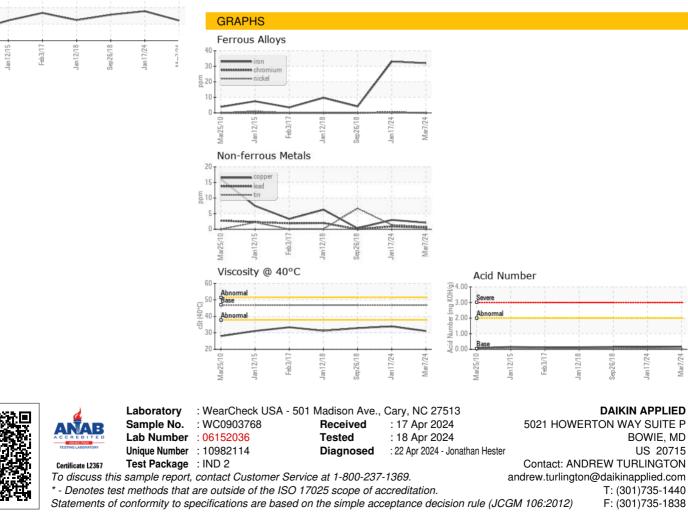






VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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	46.8	31.1	33.9	32.86
SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						

Bottom



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Contact/Location: ANDREW TURLINGTON - MCQUPP

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