

OIL ANALYSIS REPORT

Machine Id MCQUAY CHAMPLAIN BLDG CH-1 (S/N 5TA81055-00)

Refrigeration Compressor

Fluid EMKARATE RL 32H (8 GAL)

DIAGNOSIS

A Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

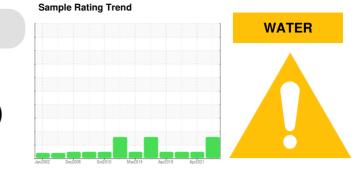
All component wear rates are normal.

Contamination

There is a trace of moisture present in the oil.

Fluid Condition

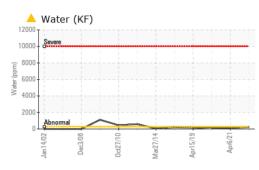
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

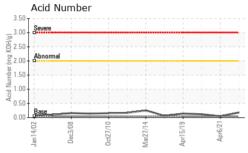


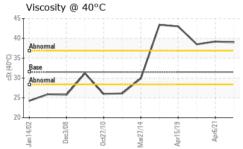
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0660704	WC0384488	WCI2310421
Sample Date		Client Info		18 Mar 2024	06 Apr 2021	23 Mar 2020
Machine Age	hrs	Client Info		56806	47360	44610
Oil Age	hrs	Client Info		56806	0	44610
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				MARGINAL	NORMAL	NORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	26	17	13
Chromium	ppm	ASTM D5185m	>2	0	<1	<1
Nickel	ppm	ASTM D5185m		<1	<1	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>50	<1	<1	<1
Lead	ppm	ASTM D5185m	>2	<1	2	1
Copper	ppm	ASTM D5185m	>100	<1	<1	2
Tin	ppm	ASTM D5185m	>4	2	2	1
Antimony	ppm	ASTM D5185m			<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
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ADDITIVES	1- 1-	method	limit/base	current	history1	history2
	ppm		limit/base 0	-		
ADDITIVES		method ASTM D5185m		current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	0	current 0	history1 2	history2 <1
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	0	Current 0 0	<mark>history1</mark> 2 0	<mark>history2</mark> <1 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	0	Current O O O O	history1 2 0 <1	history2 <1 0 <1
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0	Current 0 0 0 <1	history1 2 0 <1 <1	history2 <1 0 <1 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0	Current 0 0 0 0 <1 <1	history1 2 0 <1 <1 <1	history2 <1 0 <1 0 0 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0	Current 0 0 0 <1 <1 <1 0	history1 2 0 <1 <1 <1 <1 <1 <1	history2 <1 0 <1 0 0 0 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0 5	current 0 0 0 0 <1 <1 9	history1 2 0 <1 <1 <1 <1 <1 <1 11	history2 <1 0 <1 0 0 0 0 5
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0 5 10	Current 0 0 0 <1 <1 <1 0 9 61	history1 2 0 <1 <1 <1 <1 <1 11 58	history2 <1 0 <1 0 0 0 0 5 47
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0 5 10 50	current 0 0 0 0 2 1 2 9 61 90	history1 2 0 <1 <1 <1 <1 <1 11 58 32	history2 <1 0 <1 0 0 0 5 47 35
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0 5 10 50 limit/base	Current	history1 2 0 <1 <1 <1 <1 <1 11 58 32 32 history1	<1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m	0 0 0 0 0 5 10 50 limit/base	current 0 0 0 0 <1 <1 0 9 61 90 current 6	history1 2 0 <1	<1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	methodASTM D5185mASTM D5185m	0 0 0 0 0 5 10 50 10 50 limit/base	Current 0 0 0 -1 -1 -1 0 9 61 90 Current 6 -1 -1	history1 2 0 <1 <1 <1 <1 32 history1 17 1	<1 0 <1 0 0 0 0 0 0 0 0 0 0 0 0 18 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m	0 0 0 0 0 5 10 50 10 50 limit/base >50	current 0 0 0 0 <1 <1 0 9 61 90 current 6 <1 <1	history1 2 0 <1 <1 <1 <1 58 32 history1 17 1 <1 17 1 <1 1 1 <1	<1 0 <1 0 <1 0 0 0 0 0 0 0 0 1 0 18 <1 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	methodASTM D5185mASTM D5185m	0 0 0 0 0 5 5 10 5 0 10 5 0 10 5 0 10 5 0 20 > 20 > 0.02	current 0 0 0 <1 <1 0 9 61 90 current 6 <1 <1 0 90 current 6 <1 <1 <1 <0.022	history1 2 0 <1	<1



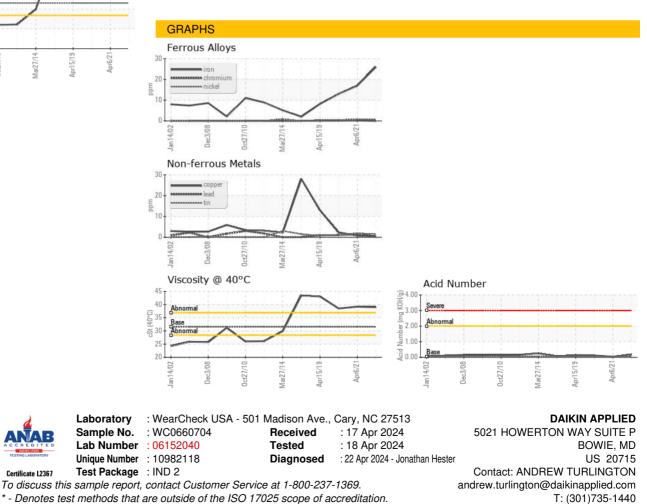
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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*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 PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	31.5	39.0	39.2	38.5
SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom						



Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) Report Id: MCQUPP [WUSCAR] 06152040 (Generated: 04/23/2024 15:21:38) Rev: 1

Certificate 12367

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