

## **OIL ANALYSIS REPORT**

Sample Rating Trend

SAMPLE INFORMATION method limit/base



history1

current

history2

Machine Id

RACK B Component Refrigeration Compressor Fluid Copeland Ultra 32-3MAF (--- GAL)

### DIAGNOSIS

#### A Recommendation

We recommend you service the filters on this component. We were unable to perform a particle count due to a high concentration of particles present in this sample.

## 🔺 Wear

The iron level has decreased, but is still abnormal.

#### Contamination

There is a light concentration of water present in the oil.

#### Fluid Condition

An increase in the AN level is noted. Confirmed. Confirm oil type.

Sample Number		Client Info		WC06195516	WC05850586	WCI2288301
Sample Date		Client Info		29 May 2024	10 May 2023	31 Oct 2017
Machine Age	mths	Client Info		0	0	0
Oil Age	mths	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>8	<mark>/</mark> 36	<u> </u>	<u> </u>
Chromium	ppm	ASTM D5185m	>2	0	0	<1
Nickel	ppm	ASTM D5185m		0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>3	<1	3	<1
Lead	ppm	ASTM D5185m	>2	0	<1	3
Copper	ppm	ASTM D5185m	>8	5	2	7
Tin	ppm	ASTM D5185m	>4	1	1	<1
Antimony	ppm	ASTM D5185m				0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 0	history1 0	history2 0
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base 0 0	current 0 0	history1 0 0	history2 0 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 0	Current 0 0 0	history1 0 0 0	history2 0 0 0
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 0	current 0 0 0 <1	history1 0 0 0 <1	history2 0 0 0 0 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 0 0	current     0     0     0        1	history1 0 0 0 <1 8	history2 0 0 0 0 0 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	methodASTM D5185mASTM D5185mASTM D5185mASTM D5185mASTM D5185mASTM D5185m	limit/base 0 0 0 0 0 0	current     0     0     0	history1 0 0 0 <1 8 0	history2 0 0 0 0 0 0 0 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 0 0 0 0 600	current     0     0     0     -     1     0     <1	history1 0 0 0 <1 8 0 0 0	history2 0 0 0 0 0 0 0 0 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	methodASTM D5185mASTM D5185mASTM D5185mASTM D5185mASTM D5185mASTM D5185mASTM D5185mASTM D5185m	limit/base 0 0 0 0 0 0 600 0	Current 0 0 <1 1 0 <1 1 1 0 <1 10	history1 0 0 0 1 8 0 0 0 1 3	history2 0 0 0 0 0 0 0 0 21
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	limit/base 0 0 0 0 0 0 600 0 50	current     0     0     0     <1     1     0     <1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1	history1     0     0     0     0     0     0     0     1     8     0     0     13     0	history2 0 0 0 0 0 0 0 0 0 21 6
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	limit/base 0 0 0 0 0 0 600 0 50 Limit/base	current     0     0	history1   0   0   0   <1   8   0   0   13   0   history1	history2     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     21     6     history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	methodASTM D5185mASTM D5185m	limit/base 0 0 0 0 0 0 600 0 50 50 limit/base >15	current     0     0     0     <1     1     0     <1     10     13     current     4	history1   0   0   0   0   <1   8   0   0   13   0   history1   4	history2     0<
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	method     ASTM D5185m	limit/base 0 0 0 0 0 0 600 0 50 50 limit/base >15	current     0     0     0     <1     1     0     <1     10     13     current     4     <1	history1   0   0   0   0   <1   8   0   0   13   0   history1   4   0	history2     0     6     0
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	limit/base 0 0 0 0 0 0 600 0 50 50 1 1 15 520	current     0     0     0     <1     1     0     <1     10     13     current     4     <1     1	history1   0   0   0   <1   8   0   0   13   0   history1   4   0   0   0	history2     0     6     0     0     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	method     ASTM D5185m	limit/base 0 0 0 0 0 0 600 0 600 0 50 50 2 15 50 2 15 20 2 20 2 0.01	current   0   0   <1   1   0   <1   10   13   current   4   <1   1   0   0.118	history1   0   0   0   <1   8   0   0   13   0   history1   4   0   0   0   0.107	history2   0   0   0   0   0   0   0   0   0   21   6   history2   6   0   0   0.101
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water ppm Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method     ASTM D5185m     ASTM D6304     ASTM D6304	limit/base 0 0 0 0 0 0 0 600 0 600 0 50 limit/base >15 >20 >0.01 >100	0   0   0      1   0   <1   10   13   current   4   <1   1   0   13   current   4   <1   1   0.1118   1182	history1   0   0   0   <1   8   0   0   13   0   history1   4   0   0   0   0   0   0   137000000000000000000000000000000000000	history2   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   6   0   0   0   0   0   0   0   1010
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water ppm Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method     ASTM D5185m     ASTM D6304     ASTM D6304     ASTM D6304	limit/base 0 0 0 0 0 0 0 0 0 0 0 0 0	current   0   0   <1   1   0   <1   10   13   current   4   <1   10   13   current   4   <1   1   <11   1   <118   1182   current	history1   0   0   0   <1   8   0   0   13   0   history1   4   0   0   0   0.107   1076.1   history1	history2   0   0   0   0   0   0   0   0   0   21   6   history2   6   0   0   0   0.101   1010



# **OIL ANALYSIS REPORT**









VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	LIGHT
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	>0.01	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
		method	limit/base	current	history1	history?
		methou	iiiiii/base	Guirent	HISTOLAL	mistoryz
Visc @ 40°C	cSt	ASTM D445	32.0	29.4	28.3	28.02
SAMPLE IMAGES	3	method	limit/base	current	history1	history2
Color						

Bottom





GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 ALMA FOODS Sample No. : WC06195516 Received : 30 May 2024 110 E 1ST Ň Lab Number : 06195516 Tested : 31 May 2024 ALMA, KS Unique Number : 11057639 Diagnosed : 02 Jun 2024 - Doug Bogart US 66401 Test Package : IND 2 Contact: JAY WHEELER Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. T: (785)765-3396 \* - 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) F: (785)765-2294

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Contact/Location: JAY WHEELER - ALMALMWC

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