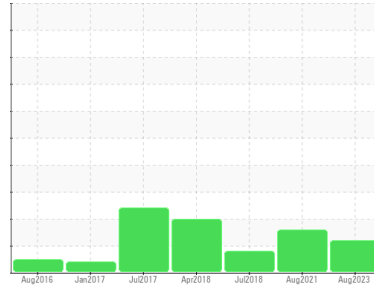




# PROBLEM SUMMARY

Sample Rating Trend



## VISUAL METAL



Machine Id  
**LS 4 (S/N S0124MFMFLHAA3)**  
 Component  
**Refrigeration Compressor**  
 Fluid  
**CHEVRON CAPELLA OIL WF 68 (--- GAL)**

### COMPONENT CONDITION SUMMARY

No relevant graphs to display

### RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to metal particles present in this sample.

### PROBLEMATIC TEST RESULTS

Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL
White Metal	scalar	*Visual	NONE	<b>▲ MODER</b>	LIGHT	NONE

**Customer Id:** CARFORCO  
**Sample No.:** USP248231  
**Lab Number:** 05938338  
**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](mailto:dougb@wearcheckusa.com)

To change component or sample information:  
 Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component.
Alert	---	---	?	We were unable to perform a particle count due to metal particles present in this sample.

## HISTORICAL DIAGNOSIS

### 11 Aug 2021 Diag: Doug Bogart

ISO



We recommend you service the filters on this component. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 01 Jul 2018 Diag: Doug Bogart

ISO



We recommend you service the filters on this component. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 24 Apr 2018 Diag: Jonathan Hester

WATER



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. There is a trace of moisture present in the oil. Water value confirmed (113ppm/117ppm). The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

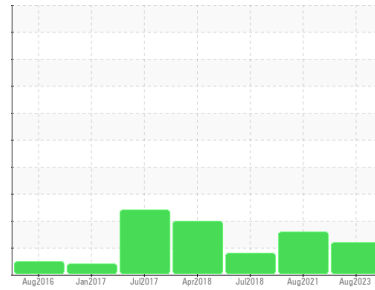
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



## VISUAL METAL



Machine Id  
**LS 4 (S/N S0124MFMFLHAA3)**

Component  
**Refrigeration Compressor**

Fluid  
**CHEVRON CAPELLA OIL WF 68 (--- GAL)**

### DIAGNOSIS

#### Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to metal particles present in this sample.

#### Wear

Moderate concentration of visible metal present. All component wear rates are normal.

#### Contamination

No other contaminants were detected 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	history1	history2
Sample Number	Client Info	<b>USP248231</b>	USP217538	USP170610
Sample Date	Client Info	<b>29 Aug 2023</b>	11 Aug 2021	01 Jul 2018
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

### WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >8	<b>4</b>	21	8
Chromium	ppm	ASTM D5185m >2	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >3	<b>&lt;1</b>	0	<1
Lead	ppm	ASTM D5185m >2	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >8	<b>&lt;1</b>	<1	2
Tin	ppm	ASTM D5185m >4	<b>0</b>	0	0
Antimony	ppm	ASTM D5185m	<b>---</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

### ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>0</b>	0	<1
Manganese	ppm	ASTM D5185m	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m 0	<b>0</b>	0	<1
Calcium	ppm	ASTM D5185m	<b>0</b>	0	0
Phosphorus	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Zinc	ppm	ASTM D5185m	<b>1</b>	0	8
Sulfur	ppm	ASTM D5185m	<b>23</b>	51	46

### CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >15	<b>0</b>	<1	0
Sodium	ppm	ASTM D5185m	<b>0</b>	0	<1
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	0
Water	%	ASTM D6304 >0.01	<b>0.002</b>	0.001	0.005
ppm Water	ppm	ASTM D6304 >100	<b>15.1</b>	11.8	50

### FLUID CLEANLINESS

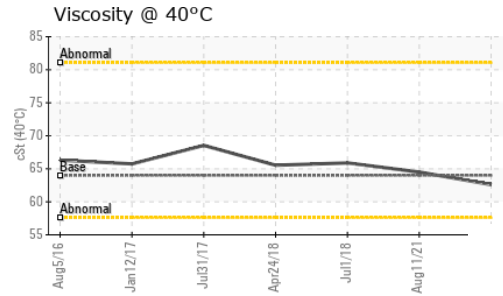
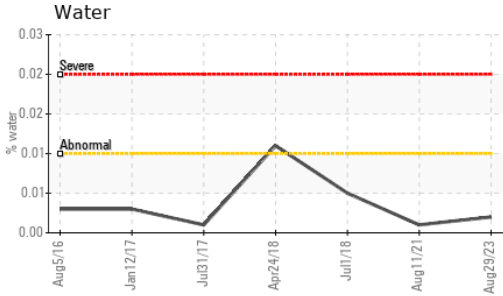
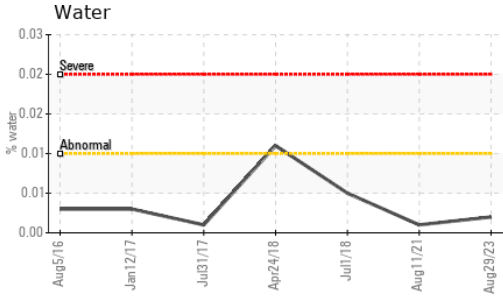
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >10000	<b>---</b>	▲ 129225	95373
Particles >6µm	ASTM D7647 >2500	<b>---</b>	▲ 32426	▲ 15074
Particles >14µm	ASTM D7647 >320	<b>---</b>	▲ 759	▲ 456
Particles >21µm	ASTM D7647 >80	<b>---</b>	▲ 115	71
Particles >38µm	ASTM D7647 >20	<b>---</b>	2	0
Particles >71µm	ASTM D7647 >4	<b>---</b>	0	0
Oil Cleanliness	ISO 4406 (c) >20/18/15	<b>---</b>	▲ 24/22/17	▲ 24/21/16

### FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D974	<b>0.015</b>	0.015	0.008



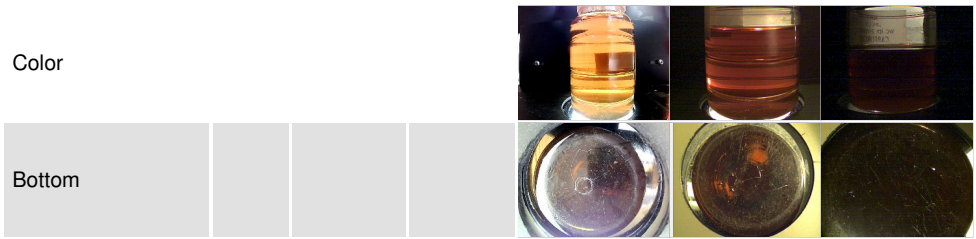
# OIL ANALYSIS REPORT



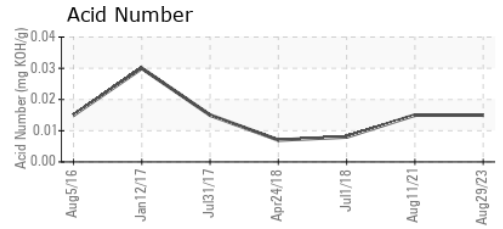
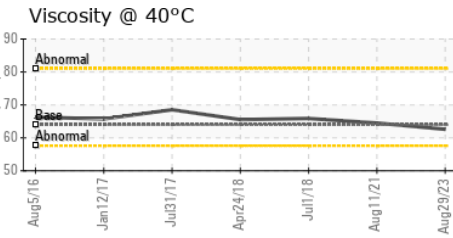
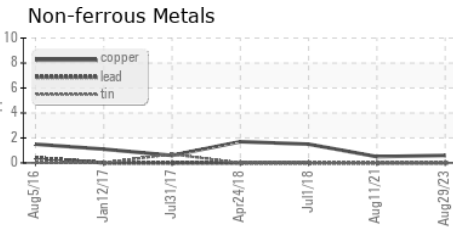
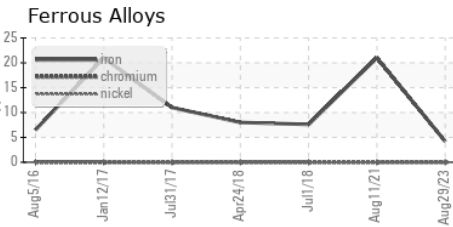
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	▲ MODER	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.01	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	64.0	62.6	64.5	65.89

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : USP248231 **Received** : 30 Aug 2023  
**Lab Number** : 05938338 **Diagnosed** : 31 Aug 2023  
**Unique Number** : 10628950 **Diagnostician** : Doug Bogart  
**Test Package** : IND 2

**CARGILL**  
 FORT MORGAN, CO  
 US  
 Contact:

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)

T:  
F: