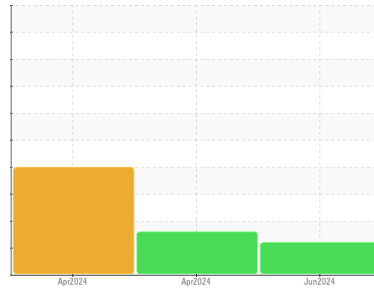


# OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id  
**LEROI VRUOXY0031 (S/N LE17493)**  
 Component  
**Compressor**  
 Fluid  
**CIMARRON HB-150 (--- GAL)**

**DIAGNOSIS**

**Recommendation**  
 We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. Please note that this is a corrected copy.

**Wear**  
 All component wear rates are normal.

**Contamination**  
 There is a high amount of silt (particulates < 14 microns in size) present in the oil.

**Fluid Condition**  
 The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

**SAMPLE INFORMATION**

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>TO90004154</b>	TO90004050	TO90004181
Sample Date	Client Info	<b>09 Jun 2024</b>	19 Apr 2024	16 Apr 2024
Machine Age	hrs	<b>0</b>	0	0
Oil Age	hrs	<b>0</b>	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 >50	<b>0</b>	4	▲ 95
Chromium	ppm	ASTM D5185m >10	<b>0</b>	0	1
Nickel	ppm	ASTM D5185m	<b>0</b>	<1	2
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m >25	<b>&lt;1</b>	1	4
Lead	ppm	ASTM D5185m >25	<b>1</b>	<1	1
Copper	ppm	ASTM D5185m >50	<b>&lt;1</b>	2	<1
Tin	ppm	ASTM D5185m >15	<b>2</b>	1	2
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	1

**ADDITIVES**

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 0	<b>0</b>	0	1
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 0	<b>0</b>	<1	1
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185m 0	<b>0</b>	0	<1
Calcium	ppm	ASTM D5185m 0	<b>0</b>	0	6
Phosphorus	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	90
Zinc	ppm	ASTM D5185m 0	<b>0</b>	0	1
Sulfur	ppm	ASTM D5185m 0	<b>86</b>	34	715

**CONTAMINANTS**

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	<b>1</b>	1	4
Sodium	ppm	ASTM D5185m	<b>0</b>	1	9
Potassium	ppm	ASTM D5185m >20	<b>3</b>	3	2
Water	%	ASTM D6304 >2.26	<b>0.741</b>	0.733	▲ 3.99
ppm Water	ppm	ASTM D6304 >22600	<b>7416</b>	7330	▲ 39900

**FLUID CLEANLINESS**

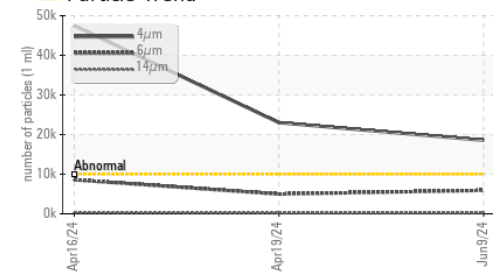
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >10000	● <b>18554</b>	▲ 23009	▲ 47488
Particles >6µm	ASTM D7647 >2500	▲ <b>5914</b>	● 4977	▲ 8595
Particles >14µm	ASTM D7647 >320	<b>229</b>	222	● 329
Particles >21µm	ASTM D7647 >80	<b>28</b>	43	64
Particles >38µm	ASTM D7647 >20	<b>1</b>	1	1
Particles >71µm	ASTM D7647 >4	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c) >20/18/15	▲ <b>21/20/15</b>	▲ 22/19/15	▲ 23/20/16

**FLUID DEGRADATION**

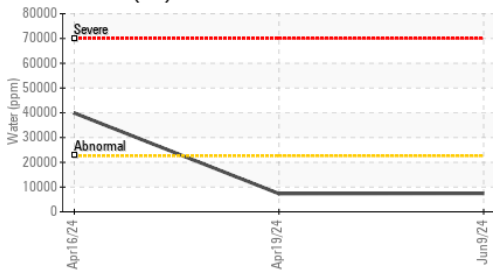
method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.058</b>	0.16	0.41

# OIL ANALYSIS REPORT

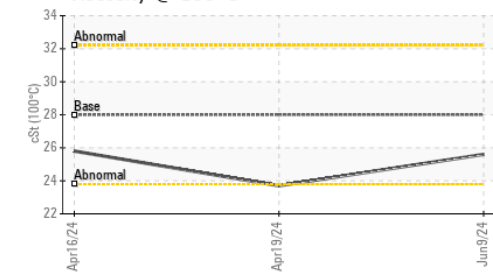
## ▲ Particle Trend



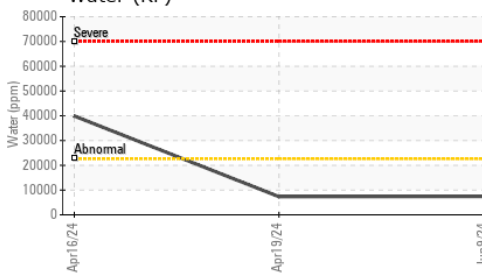
## Water (KF)



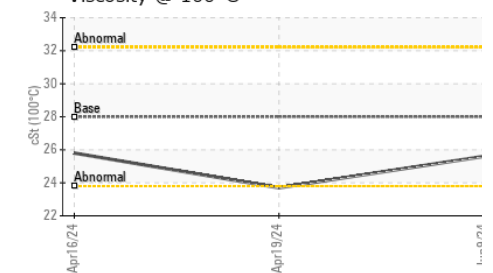
## Viscosity @ 100°C



## Water (KF)



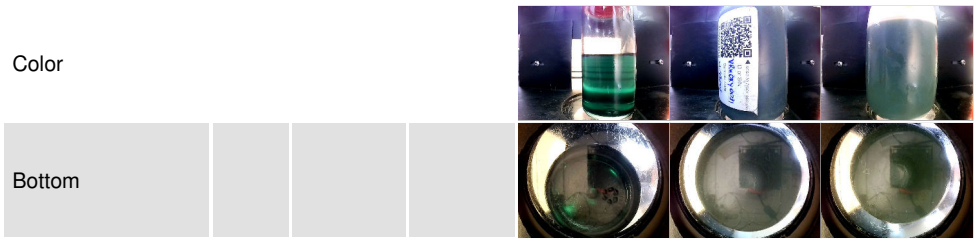
## Viscosity @ 100°C



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>2.26	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

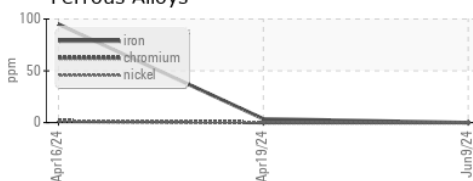
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	151	126	139
Visc @ 100°C	cSt	ASTM D445	28	23.7	25.8
Viscosity Index (VI)	Scale	ASTM D2270	224	220	221

## SAMPLE IMAGES

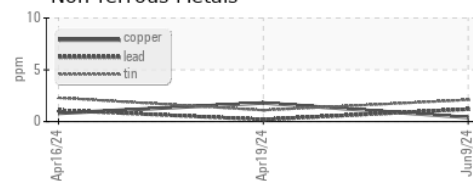


## GRAPHS

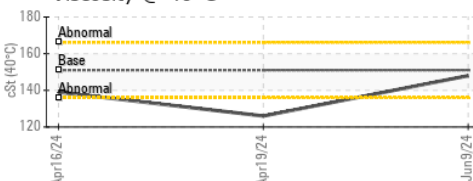
### Ferrous Alloys



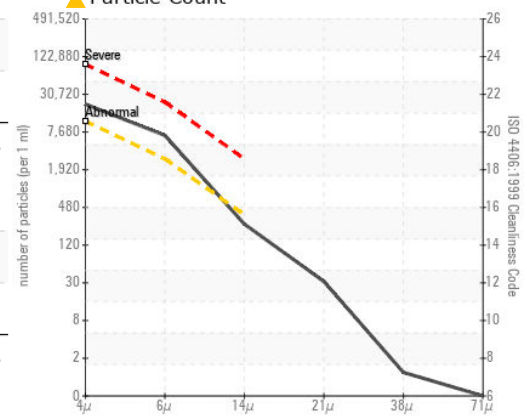
### Non-ferrous Metals



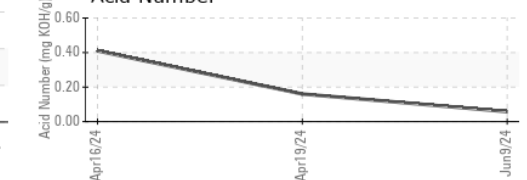
### Viscosity @ 40°C



### ▲ Particle Count



### Acid Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TO90004154  
**Lab Number** : 06204749  
**Unique Number** : 11072210  
**Test Package** : IND 2 ( Additional Tests: KF, KV100, PrtCount, VI )  
**Received** : 10 Jun 2024  
**Tested** : 13 Jun 2024  
**Diagnosed** : 13 Jun 2024 - Doug Bogart

**CIMARRON ENERGY - CARLSBAD**  
 4425 GRANDI RD, UNIT F  
 CARLSBAD, NM  
 UM 88220-8923  
 Contact: CARLOS LEAL  
 cleal@cimarron.com

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: