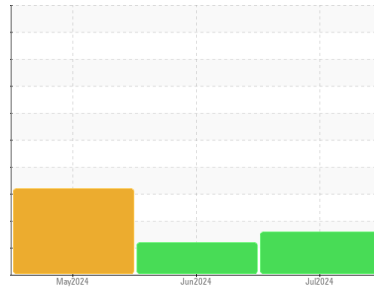


OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id
NK 112822 - LPH2
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.

Wear
All component wear rates are normal.

Contamination
There is a high amount of particulates 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 INFORMATION

| method | limit/base | current | history1 | history2 |
|---------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | TO90004475 | TO90004079 | TO90004251 |
| Sample Date | Client Info | 15 Jul 2024 | 06 Jun 2024 | 06 May 2024 |
| Machine Age | hrs | 0 | 0 | 0 |
| Oil Age | hrs | 0 | 0 | 0 |
| Oil Changed | Client Info | N/A | N/A | N/A |
| Sample Status | | ABNORMAL | ATTENTION | SEVERE |

WEAR METALS

| method | limit/base | current | history1 | history2 | |
|----------|------------|-----------------|--------------|----------|----|
| Iron | ppm | ASTM D5185m >50 | 12 | 0 | 2 |
| Chromium | ppm | ASTM D5185m >10 | <1 | 0 | <1 |
| Nickel | ppm | ASTM D5185m | 1 | <1 | <1 |
| Titanium | ppm | ASTM D5185m | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185m | <1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >25 | 1 | <1 | 2 |
| Lead | ppm | ASTM D5185m >25 | 0 | 0 | <1 |
| Copper | ppm | ASTM D5185m >50 | 6 | 0 | <1 |
| Tin | ppm | ASTM D5185m >15 | 1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | <1 | 0 | <1 |
| Cadmium | ppm | ASTM D5185m | <1 | 0 | <1 |

ADDITIVES

| method | limit/base | current | history1 | history2 | |
|------------|------------|---------------|--------------|----------|----|
| Boron | ppm | ASTM D5185m 0 | 3 | 0 | 0 |
| Barium | ppm | ASTM D5185m 0 | 0 | 0 | 1 |
| Molybdenum | ppm | ASTM D5185m 0 | 4 | 0 | <1 |
| Manganese | ppm | ASTM D5185m | 1 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m 0 | 3 | 1 | <1 |
| Calcium | ppm | ASTM D5185m 0 | 6 | 0 | 4 |
| Phosphorus | ppm | ASTM D5185m 0 | 23 | 8 | 18 |
| Zinc | ppm | ASTM D5185m 0 | <1 | 4 | 3 |
| Sulfur | ppm | ASTM D5185m 0 | 387 | 46 | 7 |

CONTAMINANTS

| method | limit/base | current | history1 | history2 | |
|-----------|------------|-------------------|--------------|----------|---------|
| Silicon | ppm | ASTM D5185m >25 | 2 | 2 | 1 |
| Sodium | ppm | ASTM D5185m | 4 | 0 | <1 |
| Potassium | ppm | ASTM D5185m >20 | 4 | 5 | 1 |
| Water | % | ASTM D6304 >2.26 | 0.837 | 0.818 | ▲ 1.34 |
| ppm Water | ppm | ASTM D6304 >22600 | 8370 | 8180 | ▲ 13400 |

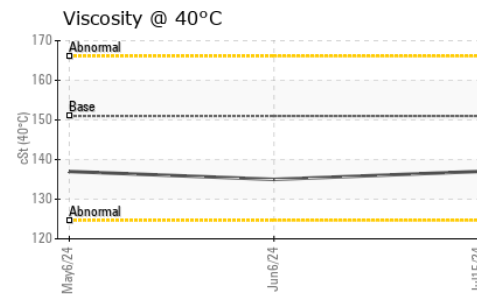
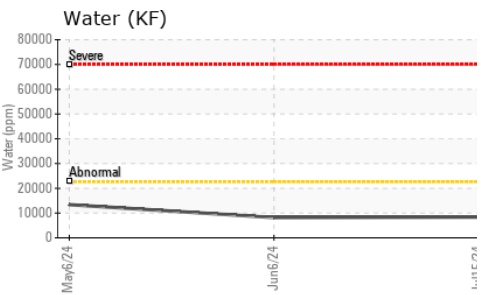
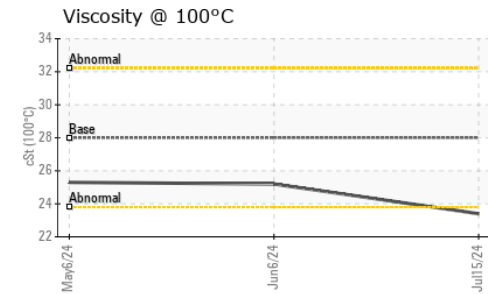
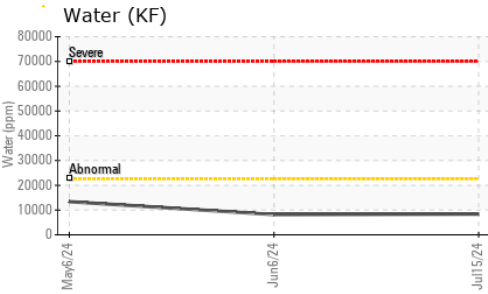
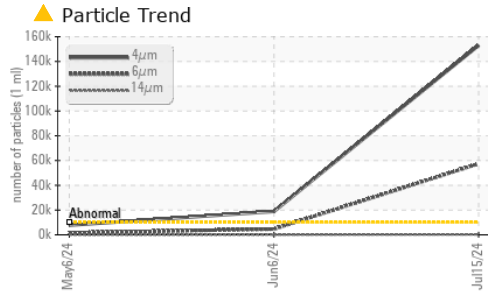
FLUID CLEANLINESS

| method | limit/base | current | history1 | history2 |
|-----------------|------------------------|-------------------|------------|----------|
| Particles >4µm | ASTM D7647 >10000 | ▲ 153009 | ● 18864 | 7767 |
| Particles >6µm | ASTM D7647 >2500 | ▲ 57419 | ● 4665 | 1578 |
| Particles >14µm | ASTM D7647 >320 | ▲ 312 | 156 | 34 |
| Particles >21µm | ASTM D7647 >80 | 8 | 28 | 3 |
| Particles >38µm | ASTM D7647 >20 | 0 | 1 | 1 |
| Particles >71µm | ASTM D7647 >4 | 0 | 0 | 1 |
| Oil Cleanliness | ISO 4406 (c) >20/18/15 | ▲ 24/23/15 | ● 21/19/14 | 20/18/12 |

FLUID DEGRADATION

| method | limit/base | current | history1 | history2 | |
|------------------|------------|------------|-------------|----------|------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.27 | 0.064 | 0.14 |

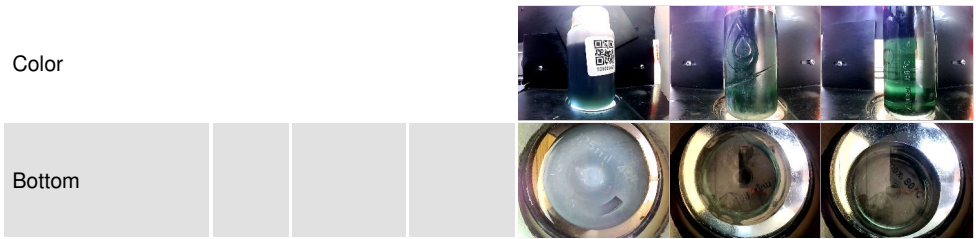
OIL ANALYSIS REPORT



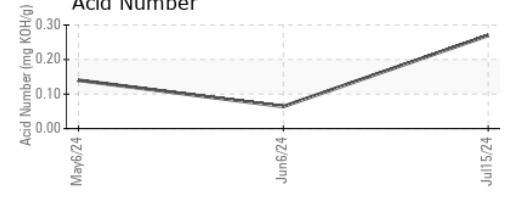
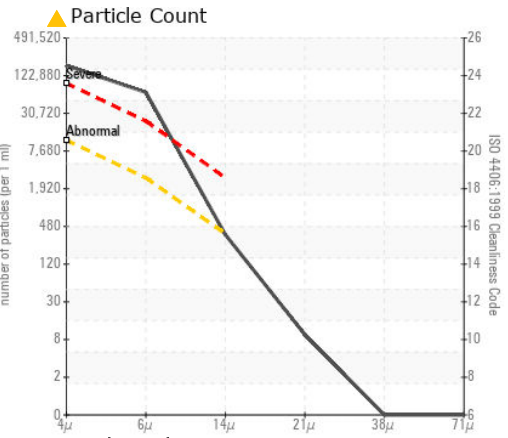
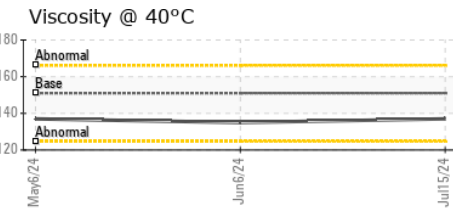
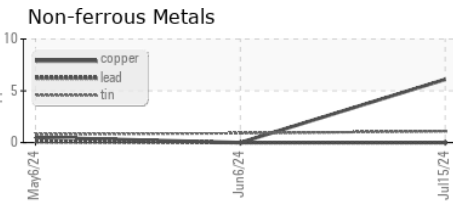
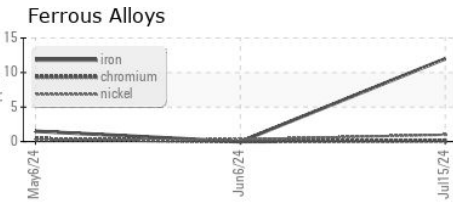
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | LIGHT |
| 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 | 137 | 137 |
| Visc @ 100°C | cSt | ASTM D445 | 28 | 25.2 | 25.3 |
| Viscosity Index (VI) | Scale | ASTM D2270 | 224 | 221 | 220 |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
|---------------|--------|------------|---------|----------|----------|



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO90004475 **Received** : 16 Jul 2024
Lab Number : 06238442 **Tested** : 18 Jul 2024
Unique Number : 11127276 **Diagnosed** : 18 Jul 2024 - Don Baldrige
Test Package : IND 2 (Additional Tests: KF, KV100, PrtCount, VI)

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)