

OIL ANALYSIS REPORT

Sample Rating Trend

ISO

Machine Id

GEA C-2365 Component Screw Compressor Fluid

TULCO LUBSOIL SYN RL WI 100 (300 GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. 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.

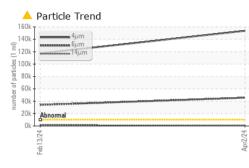
Fluid Condition

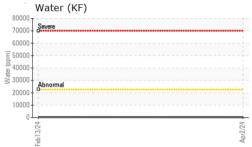
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

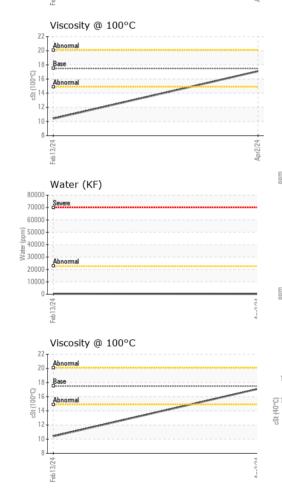
| SAMPLE INFORM | ATION | method | limit/base | current | history1 | history2 |
|------------------|--------------|--------------|------------|---------------|-----------------|----------|
| Sample Number | | Client Info | | TO20000427 | TO90003234 | |
| Sample Date | | Client Info | | 02 Apr 2024 | 13 Feb 2024 | |
| Machine Age | hrs | Client Info | | 700 | 0 | |
| Oil Age | hrs | Client Info | | 700 | 0 | |
| Oil Changed | | Client Info | | Changed | N/A | |
| Sample Status | | | | ABNORMAL | ABNORMAL | |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >60 | <1 | 2 | |
| Chromium | ppm | ASTM D5185m | >4 | 0 | <1 | |
| Nickel | ppm | ASTM D5185m | | <1 | 0 | |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | |
| Silver | ppm | ASTM D5185m | | 0 | 0 | |
| Aluminum | ppm | ASTM D5185m | >5 | <1 | 0 | |
| Lead | ppm | ASTM D5185m | >10 | 0 | 0 | |
| Copper | ppm | ASTM D5185m | >30 | 2 | 0 | |
| Tin | ppm | ASTM D5185m | >15 | 1 | <1 | |
| Vanadium | ppm | ASTM D5185m | 210 | 0 | 0 | |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | | 0 | 0 | |
| Barium | ppm | ASTM D5185m | | 0 | 0 | |
| Molybdenum | ppm | ASTM D5185m | | 1 | 0 | |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | |
| Magnesium | ppm | ASTM D5185m | | 0 | 1 | |
| Calcium | ppm | ASTM D5185m | | 0 | 11 | |
| Phosphorus | ppm | ASTM D5185m | 1500 | 1669 | 9 | |
| Zinc | ppm | ASTM D5185m | | 0 | 4 | |
| Sulfur | ppm | ASTM D5185m | | 48 | <1 | |
| CONTAMINANTS | ; | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >50 | 2 | 3 | |
| Sodium | ppm | ASTM D5185m | | <1 | 0 | |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 0 | |
| Water | % | ASTM D6304 | >2.26 | 0.022 | 0.035 | |
| ppm Water | ppm | ASTM D6304 | >22600 | 228 | 353 | |
| FLUID CLEANLIN | IESS | method | limit/base | current | history1 | history2 |
| Particles >4µm | | ASTM D7647 | >10000 | 153709 | ▲ 117036 | |
| Particles >6µm | | ASTM D7647 | >2500 | <u> </u> | A 34046 | |
| Particles >14µm | | ASTM D7647 | >320 | A 778 | 1 661 | |
| Particles >21µm | | ASTM D7647 | >80 | <u> </u> | ▲ 322 | |
| Particles >38µm | | ASTM D7647 | >20 | 2 | 5 | |
| Particles >71μm | | ASTM D7647 | >4 | 0 | 0 | |
| Oil Cleanliness | | ISO 4406 (c) | >20/18/15 | <u> </u> | 4 /22/18 | |
| FLUID DEGRADA | | method | limit/base | current | history1 | history2 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.04 | 0.014 | 0.046 | |



OIL ANALYSIS REPORT







| VISUAL | | method | limit/base | current | history1 | history2 |
|---|-------------------------|-----------------------------------|---|-----------------------|----------|--|
| Vhite Metal | scalar | *Visual | NONE | NONE | NONE | |
| ellow Metal | scalar | *Visual | NONE | NONE | NONE | |
| recipitate | scalar | *Visual | NONE | NONE | NONE | |
| ilt | scalar | *Visual | NONE | LIGHT | LIGHT | |
| ebris | scalar | *Visual | NONE | NONE | NONE | |
| and/Dirt | scalar | *Visual | NONE | NONE | NONE | |
| ppearance | scalar | *Visual | NORML | NORML | NORML | |
| dor | scalar | *Visual | NORML | NORML | NORML | |
| mulsified Water | scalar | *Visual | >2.26 | NEG | NEG | |
| ree Water | scalar | *Visual | | NEG | NEG | |
| FLUID PROPERTI | ES | method | limit/base | current | history1 | history2 |
| isc @ 40°C | cSt | ASTM D445 | 97 | 98.2 | 65.0 | |
| isc @ 100°C | cSt | ASTM D445 | 17.5 | 17.1 | 0.4 | |
| iscosity Index (VI) | Scale | ASTM D2270 | 198 | 190 | 147 | |
| SAMPLE IMAGES | | method | limit/base | current | history1 | history2 |
| | | | - | | 1000 E | |
| olor | | | | 5 | s The s | no image |
| | | | | | | |
| | | | | 12-11 | | |
| ottom | | | | | | no image |
| | | | | | | 0 |
| GRAPHS | | | | | | |
| Ferrous Alloys | | | | Particle Coun | t | |
| | | | 491,52 | T | - | I ²⁶ |
| iron chromium | | | 122,88 | Severe | | -24 |
| ssessesses nickel | | | | | | |
| | | | 30,72 | Abnormal | | -22 |
| 4 | | | ₹ 〒 7,68 | · · · | | -20 |
| Feb 13/24 | | | Apr2/24- | | | -18 |
| _ | | | Sles | | | -18 -16 -14 |
| Non-ferrous Metals | | | optied 48 | | | -16 |
| copper | | | ja 12 | D- | | -14 |
| sessesses tin | | | E 3 | D- | | -12 |
| | | | | | | 10 |
| | | | | 8- | | 10 |
| 24 | | | Apr2/24 | 2- | | 1 |
| 13/24 | | | Ap |) | 14 | 28 |
| Feb13/ | | | | 4μ 6μ | 14µ 21µ | 38µ 71µ |
| ਿੱਤੂ Viscosity @ 40°C | | | | Acid Number | | |
| Feb | | | .0 ₽ | Acid Number | | |
| Discosity @ 40°C Abnormal Base | | | 0.0 00 KO 0.0 K | Acid Number | | |
| ੇ Viscosity @ 40°C | | | 0.0 (0) 0.0 K 0.0 (m 0.0 (m 0.0 (m) | Acid Number | | |
| Discosity @ 40°C Abnormal Base | | | 0.0(0) 0.0 K 0.0, mg K 0.0, Mrmber 0.0 V | Acid Number | | <u> </u> |
| ₽ Viscosity @ 40°C Abnormal Abnormal | | | 0.0 (0) 0.0 (0 | | | |
| P Viscosity @ 40°C | | | 0.0 0000000000000000000000000000000000 | | | |
| ₽ Viscosity @ 40°C Abnormal Abnormal | | | Apr2/24 | Acid Number | | ACCON |
| Uiscosity @ 40°C | Madiso | n Ave., Cary | Apr2/2 | Feb1324 | | |
| Uiscosity @ 40°C | Madiso | ived : 20 | , NC 27513 May 2024 | Feb1324 | | S - DIAMONI 1964 FM 2903 |
| PearCheck USA - 501 20000427 185085 | Recei Teste | ived : 20 d : 22 | , NC 27513 May 2024 May 2024 | Fabra Harrison (File) | | S - DIAMONI 1964 FM 2903 MORHEA, TX |
| Uiscosity @ 40°C | Recei Teste Diagr | ived : 20 d : 22 nosed : 22 | , NC 27513 May 2024 May 2024 May 2024 - Dor | Fabra Harrison (File) | BAL | S - DIAMONI 1964 FM 2903 |

To discuss this sample report, co * - 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)

Report Id: KINBAL [WUSCAR] 06185085 (Generated: 05/22/2024 15:22:59) Rev: 1

Certificate L2367

Laboratory Sample No. Lab Number **Unique Number Test Package**

> Contact/Location: Service Manager - KINBAL Page 2 of 2

F: