

TOC OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Machine Id

TOCAW46ZF-031824 - HYDRAULIC OIL

Component New (Unused) Oil Fluid

{not provided} (--- GAL)

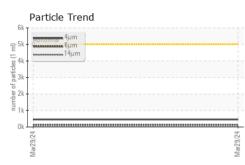
Recommendation

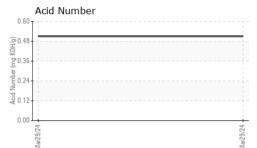
This is a baseline read-out on the submitted sample.

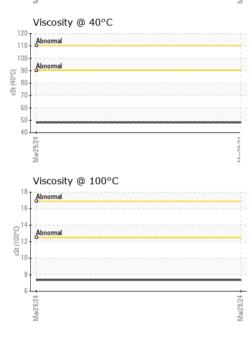
| SAMPLE INFORM | IATION | method | limit/base | current | history1 | history2 |
|------------------|---------------|--------------|------------|-------------|----------|----------|
| Sample Number | | Client Info | | TOC06136718 | | |
| Sample Date | | Client Info | | 29 Mar 2024 | | |
| Machine Age | hrs | Client Info | | 0 | | |
| Oil Age | hrs | Client Info | | 0 | | |
| Oil Changed | | Client Info | | N/A | | |
| Sample Status | | | | NORMAL | | |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >5 | 0 | | |
| Chromium | ppm | ASTM D5185m | >5 | 0 | | |
| Nickel | ppm | ASTM D5185m | >5 | 0 | | |
| Titanium | ppm | ASTM D5185m | | 0 | | |
| Silver | ppm | ASTM D5185m | >5 | 0 | | |
| Aluminum | ppm | ASTM D5185m | >5 | 0 | | |
| Lead | ppm | ASTM D5185m | >5 | 0 | | |
| Copper | ppm | ASTM D5185m | >5 | 0 | | |
| Tin | ppm | ASTM D5185m | >5 | 0 | | |
| Vanadium | ppm | ASTM D5185m | | 0 | | |
| Cadmium | ppm | ASTM D5185m | | 0 | | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | | 0 | | |
| Barium | ppm | ASTM D5185m | | 0 | | |
| Molybdenum | ppm | ASTM D5185m | | 0 | | |
| Manganese | ppm | ASTM D5185m | | <1 | | |
| Magnesium | ppm | ASTM D5185m | | 0 | | |
| Calcium | ppm | ASTM D5185m | | 0 | | |
| Phosphorus | ppm | ASTM D5185m | | 424 | | |
| Zinc | ppm | ASTM D5185m | | 0 | | |
| Sulfur | ppm | ASTM D5185m | | 2208 | | |
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >15 | 0 | | |
| Sodium | ppm | ASTM D5185m | | 1 | | |
| Potassium | ppm | ASTM D5185m | >20 | 0 | | |
| Water | % | ASTM D6304 | | NEG | | |
| FLUID CLEANLIN | IESS | method | limit/base | current | history1 | history2 |
| Particles >4µm | | ASTM D7647 | >5000 | 456 | | |
| Particles >6µm | | ASTM D7647 | >1300 | 129 | | |
| Particles >14µm | | ASTM D7647 | >160 | 14 | | |
| Particles >21µm | | ASTM D7647 | >40 | 6 | | |
| Particles >38µm | | ASTM D7647 | >10 | 1 | | |
| Particles >71µm | | ASTM D7647 | >3 | 0 | | |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | 16/14/11 | | |
| FLUID DEGRADA | TION | method | limit/base | current | history1 | history2 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 0.51 | | |



OIL ANALYSIS REPORT







| | VISUAL | | method | limit/base | current | history1 | history2 |
|---|---------------------------|------------------------|----------------------|---|-----------------|--------------------------|---|
| | White Metal | scalar | *Visual | NONE | NONE | | |
| | Yellow Metal | scalar | *Visual | NONE | NONE | | |
| | Precipitate | scalar | *Visual | NONE | NONE | | |
| | Silt | scalar | *Visual | NONE | NONE | | |
| | Debris | scalar | *Visual | NONE | NONE | | |
| | Sand/Dirt | scalar | *Visual | NONE | NONE | | |
| Mar29/24 | Appearance | scalar | *Visual | NORML | NORML | | |
| Marź | Odor | scalar | *Visual | NORML | NORML | | |
| | Emulsified Water | scalar | *Visual | | NEG | | |
| | Free Water | scalar | *Visual | | NEG | | |
| | FLUID PROPER | TIES | method | limit/base | current | history1 | history |
| | Visc @ 40°C | cSt | ASTM D445 | | 48.17 | | |
| | Visc @ 100°C | cSt | ASTM D445 | | 7.36 | | |
| | Viscosity Index (VI) | Scale | ASTM D2270 | | 114 | | |
| | | | | 11 | | | |
| Mar29/24 - | SAMPLE IMAGE | S | method | limit/base | current | history1 | history2 |
| Mai2 | Color | | | | | no image | no image |
| - | Bottom | | | | | no image | no image |
| | GRAPHS | | | • | | | |
| | Ferrous Alloys | | | | Particle Count | | |
| | | | | 491,5 | 20 | | ľ |
| . U. U. | 8 iron | | | 122,8 | 80 - | | -2 |
| | E 4 | | | 30,7 | Severe | | |
| | 2 | | | | | | |
| | 24 | | | 7.6 E | 80 Abnormal | | |
| | Mar29/24 | | | Mar29/24 (per 1 ml | 20 | | -1 |
| | ∠ Non-ferrous Meta | le | | ticles A | 80 | | 1 |
| | ¹⁰ T | | | of pa | | | +1 |
| | 8 - copper | | | 1 number | 20- | | -1 |
| | E 6 | | | | 30- | | -1 |
| Mar29/24 | 2 | | | | 8 | | -1 |
| War | | | | | | 1 | |
| | Mar29/24 | | | Mar29/24 | 2- | | |
| | | | | Mar | 0411 611 | 14µ 21µ | 38µ 71µ |
| | Viscosity @ 40°C | | | | Acid Number | ι τ _μ ε Ζ Ιμί | ουμ Πμ |
| | 120 Abnormal | | | .0. .0. .0. .0. | ⁶⁰ T | | |
| | ာ ¹⁰⁰ Abnormal | | | Q Q. | 48 | | |
| | 2100 Abnomal | | | -0. | 3b 24 | | |
| | 60- | | | O did Number | 12 | | |
| | 40 | | | Acid | 00 | | |
| | Mar29/24 | | | Mar29/24 | Mar29/24 | | |
| | Mai | | | Mai | Mai | | |
| Laboratory Sample No. Lab Number Unique Number | | Rece Teste Diagr | ived : 02 ed : 05 | 2 Apr 2024 5 Apr 2024 Apr 2024 - Jona | athan Hester | | Iomas oil () Rj Parkw Franklin, US 461 |

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Report Id: THOFRA [WUSCAR] 06136718 (Generated: 04/05/2024 23:29:05) Rev: 1

Contact/Location: RANDY BROWN - THOFRA

F: