

Machine Id
FALK VAC-PAN-4

Component
Gearbox

Fluid
CASTROL AP GEAR LUBRICANT 85W140 (10 GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. Due to an abnormal test result it is recommended to contact Stauff Corp at (201)-444-7800 for help resolving the issue.

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 | | ST43731 | ST44858 | ST38750 |
| Sample Date | Client Info | | 03 Apr 2024 | 13 Apr 2023 | 13 Apr 2023 |
| Machine Age | mths | Client Info | 0 | 0 | 0 |
| Oil Age | mths | Client Info | 0 | 0 | 0 |
| Oil Changed | Client Info | | N/A | N/A | N/A |
| Sample Status | | | ABNORMAL | ATTENTION | ABNORMAL |

WEAR METALS

| | method | limit/base | current | history1 | history2 | |
|----------|--------|-------------|---------|--------------|----------|----|
| Iron | ppm | ASTM D5185m | >200 | 22 | 0 | 15 |
| Chromium | ppm | ASTM D5185m | >15 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >15 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | 0 | 0 | <1 |
| Lead | ppm | ASTM D5185m | >100 | <1 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >200 | 0 | 0 | <1 |
| Tin | ppm | ASTM D5185m | >25 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | 0 |

ADDITIVES

| | method | limit/base | current | history1 | history2 | |
|------------|--------|-------------|---------|--------------|----------|-------|
| Boron | ppm | ASTM D5185m | | 20 | 0 | 30 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 2 | 0 | 2 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 0 | 1 | 1 |
| Calcium | ppm | ASTM D5185m | | 11 | 0 | 10 |
| Phosphorus | ppm | ASTM D5185m | | 200 | 363 | 456 |
| Zinc | ppm | ASTM D5185m | | 4 | 0 | 20 |
| Sulfur | ppm | ASTM D5185m | | 13845 | 79 | 23646 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 | |
|-----------|--------|-------------|---------|--------------|----------|-------|
| Silicon | ppm | ASTM D5185m | >50 | 3 | 9 | <1 |
| Sodium | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| Water | % | ASTM D6304 | >0.2 | 0.006 | 0.008 | 0.011 |
| ppm Water | ppm | ASTM D6304 | >2000 | 60 | 87.7 | 116.3 |

FLUID CLEANLINESS

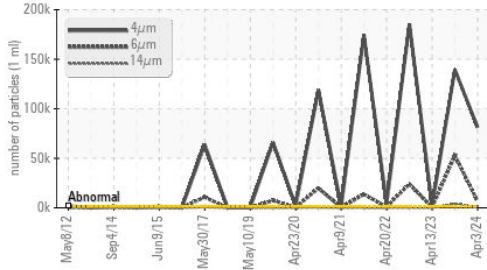
| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-------------------|------------|------------|
| Particles >4µm | ASTM D7647 | >1300 | ▲ 81200 | ● 1974 | ▲ 139589 |
| Particles >6µm | ASTM D7647 | >320 | ▲ 6577 | ● 604 | ▲ 52682 |
| Particles >14µm | ASTM D7647 | >80 | ▲ 282 | 40 | ▲ 4117 |
| Particles >21µm | ASTM D7647 | >20 | ▲ 85 | 6 | ▲ 789 |
| Particles >38µm | ASTM D7647 | >4 | ▲ 5 | 1 | ▲ 46 |
| Particles >71µm | ASTM D7647 | >3 | 0 | 0 | 1 |
| Oil Cleanliness | ISO 4406 (c) | >17/15/13 | ▲ 24/20/15 | ● 18/16/12 | ▲ 24/23/19 |

FLUID DEGRADATION

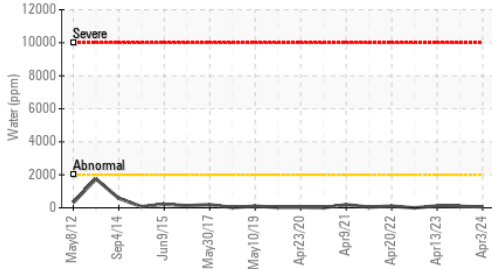
| | method | limit/base | current | history1 | history2 | |
|------------------|----------|------------|---------|-------------|----------|------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 0.85 | 0.43 | 1.55 |

OIL ANALYSIS REPORT

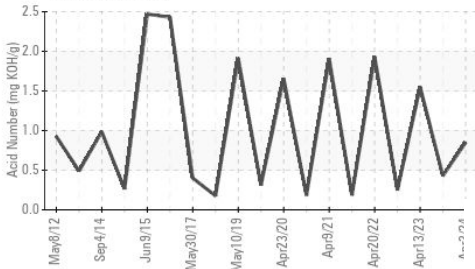
Particle Trend



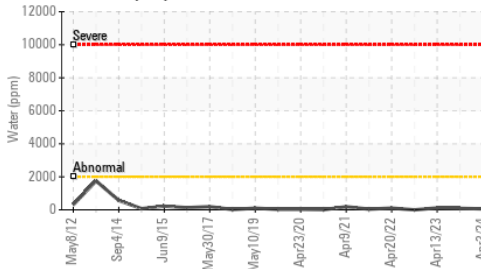
Water (KF)



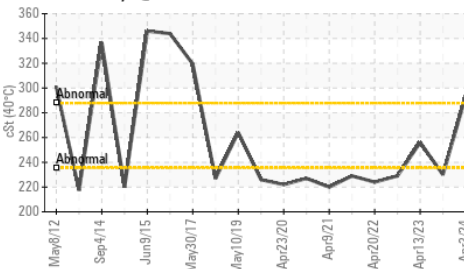
Acid Number



Water (KF)



Viscosity @ 40°C



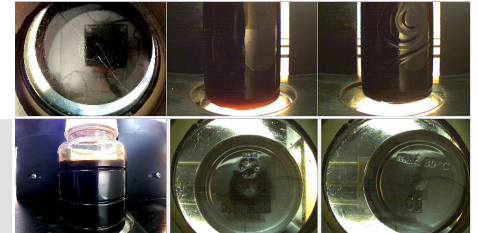
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.2 | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 293 | 230 | 256 |

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

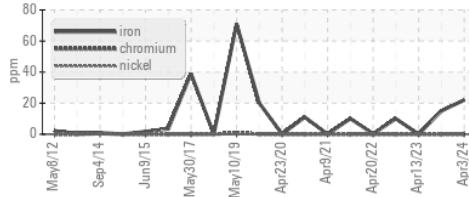
Color

Bottom

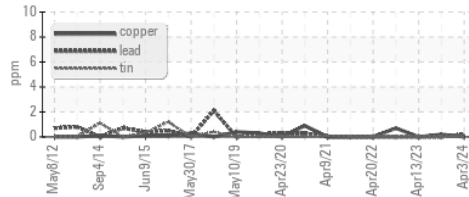


GRAPHS

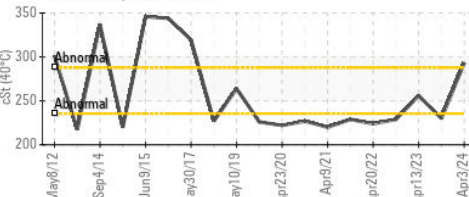
Ferrous Alloys



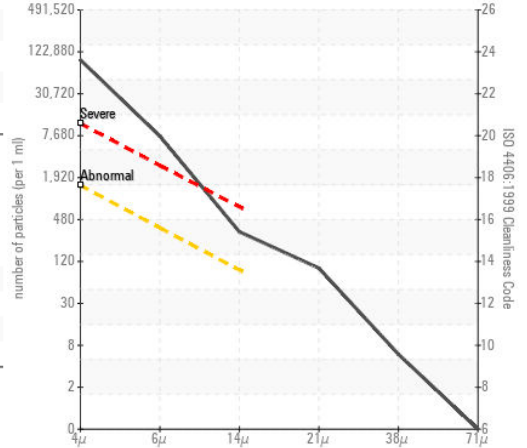
Non-ferrous Metals



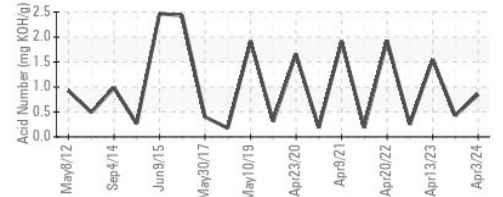
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : ST43731

Lab Number : 06143073

Unique Number : 10967881

Test Package : IND 2 (Additional Tests: KF, PrtCount)

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)

Received : 09 Apr 2024

Tested : 10 Apr 2024

Diagnosed : 11 Apr 2024 - Jonathan Hester

HYDRAULIC SUPPLY COMPANY

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