

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

RECYCLED NH3 (S/N SCC19180005)

Refrigeration Compressor Fluid USPI ALT-68 SC (--- GAL)

DIAGNOSIS

Recommendation

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

Contamination

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Fluid Condition

An increase in the AN level is noted. Confirmed. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.





| SAMPLE INFORM | IATION | method | limit/base | current | history1 | history2 |
|------------------|----------|--------------|------------|-------------|-------------|-------------|
| Sample Number | | Client Info | | USP0008331 | USP0007568 | USP0007023 |
| Sample Date | | Client Info | | 28 Feb 2024 | 23 Feb 2024 | 14 Feb 2024 |
| Machine Age | days | Client Info | | 0 | 0 | 0 |
| Oil Age | days | Client Info | | 4 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | NORMAL | NORMAL | ATTENTION |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | maa | ASTM D5185m | >8 | 0 | 0 | 0 |
| Chromium | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Lead | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >8 | 0 | 0 | 0 |
| Tin | ppm | ASTM D5185m | >4 | 0 | 1 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Calcium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Phosphorus | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Zinc | ppm | ASTM D5185m | | 0 | 2 | 0 |
| Sulfur | ppm | ASTM D5185m | 50 | 0 | 2 | 2 |
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >15 | 1 | 2 | 2 |
| Sodium | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | <1 | 0 |
| Water | % | ASTM D6304 | >0.01 | 0.003 | 0.006 | 0.004 |
| ppm Water | ppm | ASTM D6304 | >100 | 29 | 68 | 42 |
| FLUID CLEANLIN | IESS | method | limit/base | current | history1 | history2 |
| Particles >4µm | | ASTM D7647 | | 4123 | 7316 | 11962 |
| Particles >6µm | | ASTM D7647 | >2500 | 615 | 620 | 1503 |
| Particles >14µm | | ASTM D7647 | >320 | 26 | 6 | 9 |
| Particles >21µm | | ASTM D7647 | >80 | 8 | 1 | 2 |
| Particles >38µm | | ASTM D7647 | >20 | 0 | 0 | 0 |
| Particles >71µm | | ASTM D7647 | >4 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >/18/15 | 19/16/12 | 20/16/10 | 21/18/10 |
| FLUID DEGRADA | TION | method | limit/base | current | history1 | history2 |
| Acid Number (AN) | mg KOH/g | ASTM D974 | 0.005 | 0.042 | 0.013 | 0.014 |

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| VISUAL | | method | limit/base | current | history1 | history2 |
|------------------|--------|-----------|------------|---------|-------------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.01 | NEG | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |
| FLUID PROPERT | IES | method | limit/base | current | history1 | history2 |
| Visc @ 40°C | cSt | ASTM D445 | 65.6 | 63.1 | 63.7 | 58.8 |
| SAMPLE IMAGES | ; | method | limit/base | current | history1 | history2 |
| Color | | | | DRUM | DRUM . | |
| Bottom | | | | | (\circ) | 6-00 |



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

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