

OIL ANALYSIS REPORT

VILTER 1 OER PUMPOUT (S/N 10065)

Refrigeration Compressor

USPI 1009-68 SC (--- GAL)

DIAGNOSIS

A Recommendation

Resample at the next service interval to monitor.

Wear

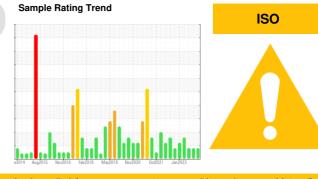
All component wear rates are normal.

Contamination

There is a high amount of silt (particulates < 14 microns in size) 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 | IATION | method | limit/base | current | history1 | history2 |
|------------------|----------|--------------|------------|----------------|---------------|----------------|
| Sample Number | | Client Info | | USP0008274 | USP0004621 | USP242686 |
| Sample Date | | Client Info | | 30 Mar 2024 | 27 Dec 2023 | 10 Oct 2023 |
| Machine Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | ABNORMAL | ABNORMAL | ABNORMAL |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >8 | 0 | <1 | 2 |
| Chromium | ppm | ASTM D5185m | >2 | <1 | <1 | 0 |
| Nickel | ppm | ASTM D5185m | | <1 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >3 | <1 | 1 | 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 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | | 0 | 1 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Manganese | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Calcium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Phosphorus | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Zinc | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Sulfur | ppm | ASTM D5185m | 50 | 0 | 0 | 4 |
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >15 | 0 | <1 | <1 |
| Sodium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Potassium | ppm | ASTM D5185m | >20 | <1 | 0 | 0 |
| Water | % | ASTM D6304 | >0.01 | 0.001 | 0.002 | 0.001 |
| ppm Water | ppm | ASTM D6304 | >100 | 12 | 16 | 5.3 |
| FLUID CLEANLIN | ESS | method | limit/base | current | history1 | history2 |
| Particles >4µm | | ASTM D7647 | | 125071 | 60976 | 122102 |
| Particles >6µm | | ASTM D7647 | >2500 | <u> </u> | 1 0936 | A 23358 |
| Particles >14µm | | ASTM D7647 | >320 | 236 | 172 | 182 |
| Particles >21µm | | ASTM D7647 | >80 | 31 | 22 | 19 |
| Particles >38µm | | ASTM D7647 | >20 | 1 | 0 | 0 |
| Particles >71µm | | ASTM D7647 | >4 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >/18/15 | 4/22/15 | ▲ 23/21/15 | ▲ 24/22/15 |
| FLUID DEGRADA | TION | method | limit/base | current | history1 | history2 |
| Acid Number (AN) | mg KOH/g | ASTM D974 | 0.005 | 0.014 | 0.014 | 0.015 |



Water

0.00

1500

1000 Water

500

80

75

(10°C) to 20°C

60

5

Ba

Vlar11

Marl

OIL ANALYSIS REPORT

method

*Visual

*Visual

*Visual

*Visual

*Visual

*Visua

*Visual

*Visual

method

method

ASTM D445 67

limit/base

NONE

NONE

NONE

NONE

NONE

NONE

NORML

NORML

limit/base

limit/base

>0.01

current

NONE

NONE

NONE

NONE

LIGHT

NONE

NORML

NORML

curren

current

NEG

NEG

66.3

history1

NONE

NONE

NONE

NONE

NONE

NONE

NORML

NORML

history

historv1

NEG

NEG

66.4

history2

NONE

NONE

NONE

NONE

NONE

NONE

NORML

NORML

history2

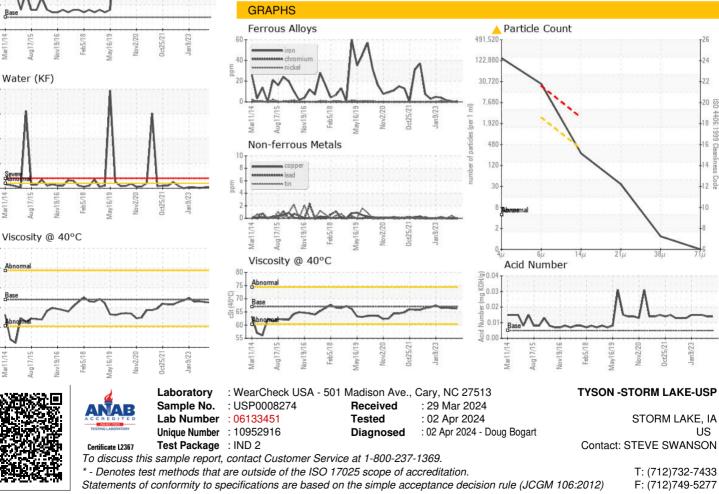
history2

NEG

NEG

66.6





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