

# **OIL ANALYSIS REPORT**

## NORMAL

#### Machine Id

# FES TYSROGCNQ 12 (S/N XD0286)

**Refrigeration Compressor** 

USPI ALT-68 SC (--- GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

## Wear

All component wear rates are normal.

### 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

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  |            | USP0011382  | USP0005379  | USP0003216  |
| Sample Date     |        | Client Info  |            | 06 May 2024 | 13 Jan 2024 | 09 Oct 2023 |
| Machine Age     | hrs    | Client Info  |            | 23906       | 23287       | 23108       |
| Oil Age         | hrs    | Client Info  |            | 0           | 0           | 0           |
| Oil Changed     |        | Client Info  |            | N/A         | N/A         | N/A         |
| Sample Status   |        |              |            | NORMAL      | NORMAL      | NORMAL      |
| WEAR METALS     |        | method       | limit/base | current     | history1    | history2    |
| Iron            | ppm    | ASTM D5185m  | >8         | 3           | 3           | 3           |
| Chromium        | ppm    | ASTM D5185m  | >2         | <1          | 0           | 0           |
| Nickel          | ppm    | ASTM D5185m  |            | 0           | <1          | 0           |
| Titanium        | ppm    | ASTM D5185m  |            | <1          | 0           | 0           |
| Silver          | ppm    | ASTM D5185m  | >2         | 0           | 0           | 0           |
| Aluminum        | ppm    | ASTM D5185m  | >3         | 0           | <1          | <1          |
| Lead            | ppm    | ASTM D5185m  | >2         | <1          | <1          | 0           |
| Copper          | ppm    | ASTM D5185m  | >8         | <1          | 0           | 1           |
| Tin             | ppm    | ASTM D5185m  | >4         | <1          | <1          | 0           |
| Vanadium        | ppm    | ASTM D5185m  |            | <1          | 0           | 0           |
| Cadmium         | ppm    | ASTM D5185m  |            | <1          | 0           | 0           |
| ADDITIVES       |        | method       | limit/base | current     | history1    | history2    |
| Boron           | ppm    | ASTM D5185m  |            | 0           | 0           | 0           |
| Barium          | ppm    | ASTM D5185m  |            | 1           | 0           | 0           |
| Molybdenum      | ppm    | ASTM D5185m  |            | <1          | 0           | 0           |
| Manganese       | ppm    | ASTM D5185m  |            | 0           | <1          | <1          |
| Magnesium       | ppm    | ASTM D5185m  |            | <1          | 1           | 0           |
| Calcium         | ppm    | ASTM D5185m  |            | 0           | 0           | 2           |
| Phosphorus      | ppm    | ASTM D5185m  |            | 0           | <1          | <1          |
| Zinc            | ppm    | ASTM D5185m  |            | 3           | 0           | 0           |
| Sulfur          | ppm    | ASTM D5185m  | 50         | 0           | 15          | 12          |
| CONTAMINANTS    |        | method       | limit/base | current     | history1    | history2    |
| Silicon         | ppm    | ASTM D5185m  | >15        | 3           | 1           | <1          |
| Sodium          | ppm    | ASTM D5185m  |            | 0           | <1          | 2           |
| Potassium       | ppm    | ASTM D5185m  | >20        | 1           | 2           | <1          |
| Water           | %      | ASTM D6304   | >0.01      | 0.005       | 0.008       | 0.011       |
| ppm Water       | ppm    | ASTM D6304   | >100       | 51          | 88          | 111.3       |
| FLUID CLEANLIN  | ESS    | method       | limit/base | current     | history1    | history2    |
| Particles >4µm  |        | ASTM D7647   |            | 1636        | 10731       | 1881        |
| Particles >6µm  |        | ASTM D7647   | >2500      | 434         | 1463        | 445         |
| Particles >14µm |        | ASTM D7647   | >320       | 15          | 123         | 15          |
| Particles >21µm |        | ASTM D7647   | >80        | 3           | 44          | 5           |
| Particles >38µm |        | ASTM D7647   | >20        | 0           | 3           | 0           |
| Particles >71µm |        | ASTM D7647   | >4         | 0           | 0           | 0           |
| Oil Cleanliness |        | ISO 4406 (c) | >/18/15    | 18/16/11    | 21/18/14    | 18/16/11    |
| FLUID DEGRADA   | TION   | method       | limit/base | current     | history1    | history2    |

Acid Number (AN)

mg KOH/g ASTM D974 0.005

Contact/Location: SERVICE MANAGER - TYSROGCNQ

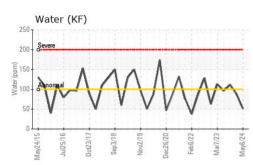
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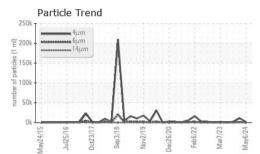
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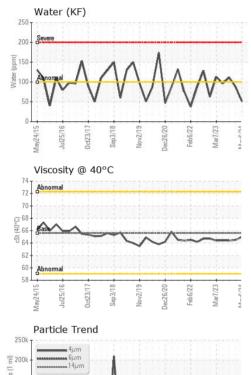
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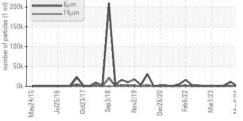


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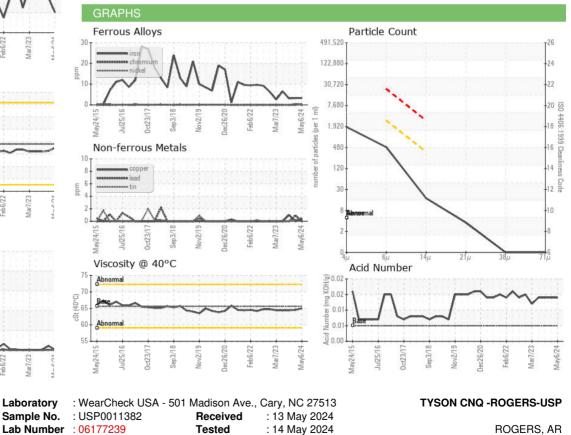






| VISUAL           |        | method    | limit/base | current | history1 | history2 |
|------------------|--------|-----------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual   | NONE       | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual   | NONE       | NONE    | NONE     | NONE     |
| Precipitate      | scalar | *Visual   | NONE       | NONE    | NONE     | NONE     |
| Silt             | scalar | *Visual   | NONE       | NONE    | NONE     | NONE     |
| Debris           | scalar | *Visual   | NONE       | LIGHT   | 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       | 65.0    | 64.5     | 64.4     |
| SAMPLE IMAGES    | S      | method    | limit/base | current | history1 | history2 |
| Color            |        |           |            | •       | •        | 3        |

Bottom



: 14 May 2024 - Doug Bogart

US Contact: SERVICE MANAGER

To discuss this sample report, contact Customer Service at 1-800-237-1369.

Unique Number : 11023292

Test Package : IND 2

\* - 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)

Diagnosed

Report Id: TYSROGCNQ [WUSCAR] 06177239 (Generated: 05/14/2024 22:09:09) Rev: 1

Certificate 12367

Contact/Location: SERVICE MANAGER - TYSROGCNQ

T:

F: