

## **OIL ANALYSIS REPORT**

## FRICK TYSHOUP RC-5 (S/N XJF120L193FF) Component

**Refrigeration Compressor** USPI ALT-68 SC (15 GAL)

### Recommendation

Resample at the next service interval to monitor.

#### Wear

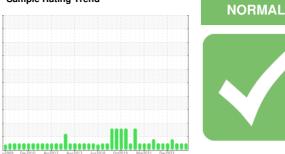
All component wear rates are normal.

#### Contamination

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

### Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



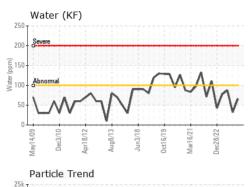


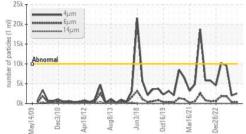
Sample Rating Trend

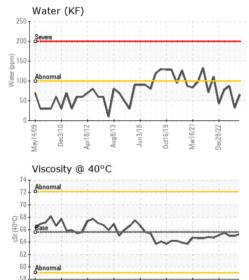
| SAMPLE INFORM    | <b>IATION</b> | method       | limit/base | current     | history1    | history2    |
|------------------|---------------|--------------|------------|-------------|-------------|-------------|
| Sample Number    |               | Client Info  |            | USP0007802  | USP0003100  | USP249898   |
| Sample Date      |               | Client Info  |            | 21 Feb 2024 | 02 Nov 2023 | 12 Jul 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    |               |              |            | NORMAL      | NORMAL      | NORMAL      |
| WEAR METALS      |               | method       | limit/base | current     | history1    | history2    |
| Iron             | ppm           | ASTM D5185m  | >8         | 0           | 0           | 0           |
| Chromium         | ppm           | ASTM D5185m  | >2         | 0           | 0           | 0           |
| Nickel           | ppm           | ASTM D5185m  |            | 0           | 0           | 0           |
| Titanium         | ppm           | ASTM D5185m  |            | 0           | 0           | <1          |
| Silver           | ppm           | ASTM D5185m  | >2         | 0           | 0           | 0           |
| Aluminum         | ppm           | ASTM D5185m  | >3         | 0           | 0           | <1          |
| Lead             | ppm           | ASTM D5185m  | >2         | 0           | 0           | <1          |
| Copper           | ppm           | ASTM D5185m  | >8         | 0           | 0           | 0           |
| Tin              | ppm           | ASTM D5185m  | >4         | <1          | 0           | 0           |
| Vanadium         | ppm           | ASTM D5185m  |            | 0           | 0           | <1          |
| 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  |            | <1          | 0           | 0           |
| Magnesium        | ppm           | ASTM D5185m  |            | 0           | 0           | 0           |
| Calcium          | ppm           | ASTM D5185m  |            | 1           | 0           | 0           |
| Phosphorus       | ppm           | ASTM D5185m  |            | 0           | 0           | 0           |
| Zinc             | ppm           | ASTM D5185m  |            | 0           | 0           | 0           |
| Sulfur           | ppm           | ASTM D5185m  | 50         | 0           | 0           | 0           |
| CONTAMINANTS     |               | method       | limit/base | current     | history1    | history2    |
| Silicon          | ppm           | ASTM D5185m  | >15        | <1          | 0           | <1          |
| Sodium           | ppm           | ASTM D5185m  |            | <1          | 0           | <1          |
| Potassium        | ppm           | ASTM D5185m  | >20        | <1          | 0           | 3           |
| Water            | %             | ASTM D6304   | >0.01      | 0.006       | 0.003       | 0.008       |
| ppm Water        | ppm           | ASTM D6304   | >100       | 66          | 32.1        | 87.5        |
| FLUID CLEANLIN   | IESS          | method       | limit/base | current     | history1    | history2    |
| Particles >4µm   |               | ASTM D7647   | >10000     | 2557        | 2025        | 9626        |
| Particles >6µm   |               | ASTM D7647   | >2500      | 366         | 348         | 1849        |
| Particles >14µm  |               | ASTM D7647   | >320       | 9           | 13          | 33          |
| Particles >21µm  |               | ASTM D7647   | >80        | 2           | 3           | 4           |
| Particles >38µm  |               | ASTM D7647   | >20        | 0           | 0           | 0           |
| Particles >71µm  |               | ASTM D7647   | >4         | 0           | 0           | 0           |
| Oil Cleanliness  |               | ISO 4406 (c) | >20/18/15  | 19/16/10    | 18/16/11    | 20/18/12    |
| FLUID DEGRADA    | TION          | method       | limit/base | current     | history1    | history2    |
| Acid Number (AN) | mg KOH/g      | ASTM D974    | 0.005      | 0.014       | 0.014       | 0.014       |

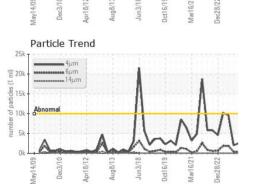


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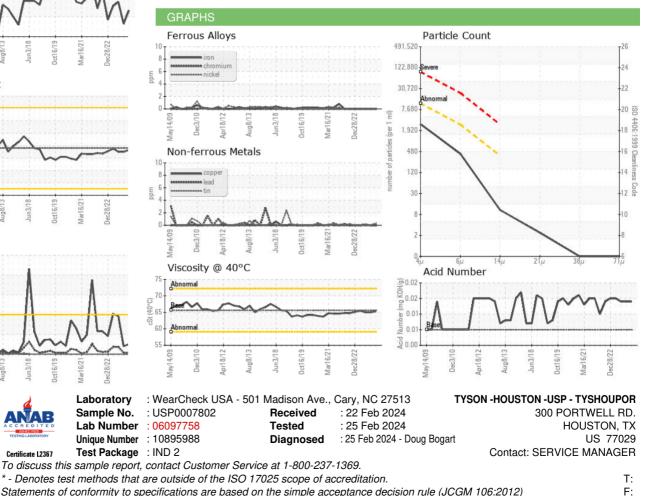








| VISUAL           |        | method    | limit/base | current | history1 | history2 |
|------------------|--------|-----------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual   | NONE       | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual   | 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    | ΓIES   | method    | limit/base | current | history1 | history2 |
| Visc @ 40°C      | cSt    | ASTM D445 | 65.6       | 65.3    | 65.0     | 65.0     |
| SAMPLE IMAGES    | S      | method    | limit/base | current | history1 | history2 |
| Color            |        |           |            | •       |          |          |
| Bottom           |        |           |            |         | 6        |          |



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

Certificate L2367

Contact/Location: SERVICE MANAGER - TYSHOU