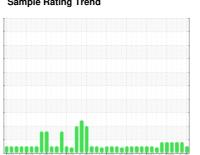


# **OIL ANALYSIS REPORT**

## Sample Rating Trend







# TYSHAR 7 600HP (S/N XD0215)

**Refrigeration Compressor** 

USPI ALT-68 SC (--- GAL)

### Recommendation

Resample at the next service interval to monitor.

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.

| 9/2013 Sep2015 Oct2016 Nov2017 Oct2018 Aug/2019 Oct2020 Nov2021 Nov2022 Oct20 |          |              |            |             |                 |                 |
|---|----------|--------------|------------|-------------|-----------------|-----------------|
| SAMPLE INFORM   | MATION   | method       | limit/base | current     | history1        | history2        |
| Sample Number   |          | Client Info  |            | USP0002943  | USP250067       | USP248984       |
| Sample Date   |          | Client Info  |            | 30 Oct 2023 | 03 Aug 2023     | 04 May 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      | ABNORMAL        | ABNORMAL        |
| WEAR METALS   |          | method       | limit/base | current     | history1        | history2        |
| Iron  | ppm      | ASTM D5185m  | >8         | 0           | 2               | 2               |
| Chromium  | ppm      | ASTM D5185m  | >2         | 0           | 0               | 0               |
| Nickel  | ppm      | ASTM D5185m  |            | 0           | 0               | 0               |
| Titanium  | ppm      | ASTM D5185m  |            | 0           | 0               | 0               |
| Silver  | ppm      | ASTM D5185m  | >2         | 0           | 0               | 0               |
| Aluminum  | ppm      | ASTM D5185m  | >3         | 0           | 0               | <1              |
| Lead  | ppm      | ASTM D5185m  | >2         | 0           | 0               | 0               |
| Copper  | ppm      | ASTM D5185m  | >8         | 0           | <1              | 0               |
| Tin   | ppm      | ASTM D5185m  | >4         | 0           | 0               | 0               |
| Vanadium  | ppm      | ASTM D5185m  |            | 0           | 0               | 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           | <1              | <1              |
| Magnesium   | ppm      | ASTM D5185m  |            | 0           | 0               | 0               |
| Calcium   | ppm      | ASTM D5185m  |            | 0           | 0               | 0               |
| Phosphorus  | ppm      | ASTM D5185m  |            | 0           | 1               | 0               |
| Zinc  | ppm      | ASTM D5185m  |            | 0           | 0               | 0               |
| Sulfur  | ppm      | ASTM D5185m  | 50         | 0           | 40              | 0               |
| CONTAMINANTS  |          | method       | limit/base | current     | history1        | history2        |
| Silicon   | ppm      | ASTM D5185m  | >15        | 4           | 6               | 4               |
| Sodium  | ppm      | ASTM D5185m  |            | 0           | 1               | 0               |
| Potassium   | ppm      | ASTM D5185m  | >20        | <1          | 0               | 0               |
| Water   | %        | ASTM D6304   | >0.01      | 0.004       | 0.003           | 0.003           |
| ppm Water   | ppm      | ASTM D6304   | >100       | 44.4        | 30.4            | 37.6            |
| FLUID CLEANLIN  | ESS      | method       | limit/base | current     | history1        | history2        |
| Particles >4µm  |          | ASTM D7647   |            | 3512        | 23381           | 28930           |
| Particles >6µm  |          | ASTM D7647   | >2500      | 890         | <b>4</b> 9004   | <u>▲</u> 6581   |
| Particles >14µm   |          | ASTM D7647   | >320       | 13          | 234             | 25              |
| Particles >21µm   |          | ASTM D7647   | >80        | 2           | 16              | 2               |
| Particles >38µm   |          | ASTM D7647   | >20        | 0           | 0               | 0               |
| Particles >71µm   |          | ASTM D7647   | >4         | 0           | 0               | 0               |
| Oil Cleanliness   |          | ISO 4406 (c) | >/18/15    | 19/17/11    | <u>22/20/15</u> | <u>22/20/12</u> |
| FLUID DEGRADA   | TION     | method       | limit/base | current     | history1        | history2        |
| Acid Number (AN)  | mg KOH/g | ASTM D974    | 0.005      | 0.013       | 0.014           | 0.015           |



## **OIL ANALYSIS REPORT**





Certificate L2367

Sample No. Lab Number

**Unique Number** 

: 05995046 : 10723406 Test Package : IND 2

: 31 Oct 2023 : USP0002943 Received : 01 Nov 2023

Diagnosed Diagnostician : Doug Bogart

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) 501 N LIBERTY STREET HARRISONBURG, VA US 22802

Contact:

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