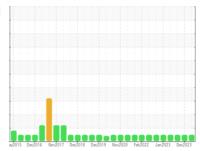


# **OIL ANALYSIS REPORT**

Sample Rating Trend



NORMAL



HT-4 (S/N 32052R)
Component
Refrigeration Compressor

USPI 1009-68 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.

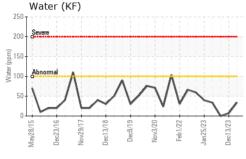
## **Fluid Condition**

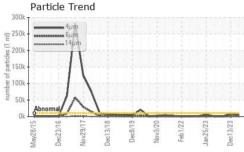
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

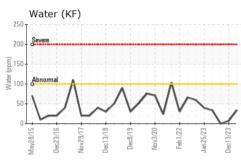
| w/2015 Dec2016 Nov/2017 Dec2018 Dec2019 Nov/2020 Feb-2022 Jan-2023 Dec2023 |          |              |            |             |             |             |
|--|----------|--------------|------------|-------------|-------------|-------------|
| SAMPLE INFORM  | MATION   | method       | limit/base | current     | history1    | history2    |
| Sample Number  |          | Client Info  |            | USP0006565  | USP0004194  | USP0000325  |
| Sample Date  |          | Client Info  |            | 23 Apr 2024 | 13 Dec 2023 | 31 Aug 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         | <1          | 0           | 0           |
| Nickel   | ppm      | ASTM D5185m  |            | <1          | 0           | 0           |
| Titanium   | ppm      | ASTM D5185m  |            | <1          | 0           | 0           |
| Silver   | ppm      | ASTM D5185m  | >2         | 0           | 0           | 0           |
| Aluminum   | ppm      | ASTM D5185m  | >3         | 0           | 0           | 0           |
| Lead   | ppm      | ASTM D5185m  | >2         | <1          | 0           | 0           |
| Copper   | ppm      | ASTM D5185m  | >8         | <1          | 0           | 0           |
| Tin  | ppm      | ASTM D5185m  | >4         | <1          | 0           | 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  |            | 0           | 0           | 0           |
| Molybdenum   | ppm      | ASTM D5185m  |            | <1          | 0           | 0           |
| Manganese  | ppm      | ASTM D5185m  |            | 0           | 0           | 0           |
| Magnesium  | ppm      | ASTM D5185m  |            | <1          | 0           | 0           |
| Calcium  | ppm      | ASTM D5185m  |            | 0           | 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           | 0           |
| Sodium   | ppm      | ASTM D5185m  |            | <1          | 0           | 0           |
| Potassium  | ppm      | ASTM D5185m  | >20        | <1          | 0           | <1          |
| Water  | %        | ASTM D6304   | >0.01      | 0.003       | 0.001       | 0.00        |
| ppm Water  | ppm      | ASTM D6304   |            | 34          | 7           | 0.00        |
| FLUID CLEANLIN   | ESS      | method       | limit/base | current     | history1    | history2    |
| Particles >4µm   |          | ASTM D7647   | >10000     | 5077        | 8083        | 377         |
| Particles >6µm   |          | ASTM D7647   | >2500      | 1212        | 1381        | 107         |
| Particles >14µm  |          | ASTM D7647   | >320       | 32          | 24          | 12          |
| Particles >21µm  |          | ASTM D7647   | >80        | 4           | 4           | 5           |
| Particles >38µm  |          | ASTM D7647   | >20        | 0           | 0           | 1           |
| Particles >71µm  |          | ASTM D7647   | >4         | 0           | 0           | 0           |
| Oil Cleanliness  |          | ISO 4406 (c) | >20/18/15  | 20/17/12    | 20/18/12    | 16/14/11    |
| 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       |
| ` '  | - 0      |              |            |             |             |             |

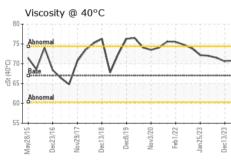


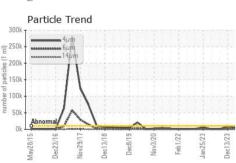
## **OIL ANALYSIS REPORT**

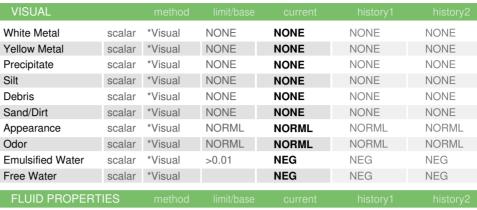








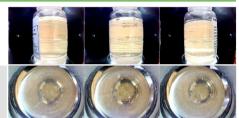


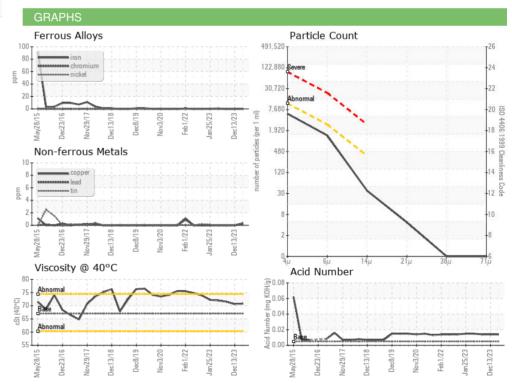


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|-------------------|-----|-----------|----|------|------|------|--|
| Visc @ 40°C       | cSt | ASTM D445 | 67 | 70.8 | 70.6 | 71.5 |  |

| SAMPLE IMAGES | method |    |     |  |  |
|---------------|--------|----|-----|--|--|
|               |        |    |     | od years and the second and the seco |  |
| Color         |        | 8. | 22. |  |  |











Certificate 12367

Laboratory Sample No. Lab Number

: USP0006565 : 06159190 Unique Number : 10994613 Test Package : IND 2

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 24 Apr 2024

**Tested** : 25 Apr 2024 Diagnosed : 26 Apr 2024 - Jonathan Hester

**SMITHFIELD FARMLAND - MARTIN CITY** 

13825 WYANDOTTE ST KANSAS CITY, MO

US 64145 Contact:

T: (816)943-3255

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

 $^st$  - 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)

Contact/Location: ? ? - SMIKAN

F: