

OIL ANALYSIS REPORT

Sample Rating Trend



FES CARCOL 6 (S/N 165146-A)

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 a moderate 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.

| n2010 Jun2012 Nov2013 Apr2015 Oct2018 Aug2020 Ju2022 Jul2023 | | | | | | | | | | | |
|--|---------|--------------|------------|------------------|-------------|-----------------|--|--|--|--|--|
| SAMPLE INFORM | MATION | method | limit/base | current | history1 | history2 | | | | | |
| Sample Number | | Client Info | | USP0006105 | USP0005494 | USP0003281 | | | | | |
| Sample Date | | Client Info | | 18 Mar 2024 | 01 Feb 2024 | 07 Nov 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 | | | | ATTENTION | ATTENTION | ABNORMAL | | | | | |
| WEAR METALS | | method | limit/base | current | history1 | history2 | | | | | |
| Iron | ppm | ASTM D5185m | >8 | 0 | 0 | 0 | | | | | |
| Chromium | ppm | ASTM D5185m | >2 | 0 | 0 | <1 | | | | | |
| 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 | 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 | 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 | 0 | 0 | | | | | |
| Magnesium | ppm | ASTM D5185m | | 0 | 0 | <1 | | | | | |
| Calcium | ppm | ASTM D5185m | | 0 | 0 | <1 | | | | | |
| 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 | 2 | 2 | | | | | |
| Sodium | ppm | ASTM D5185m | | 0 | 0 | 0 | | | | | |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 1 | 1 | | | | | |
| Water | % | ASTM D6304 | >0.01 | 0.001 | 0.002 | 0.002 | | | | | |
| ppm Water | ppm | ASTM D6304 | >100 | 0 | 21 | 23.0 | | | | | |
| FLUID CLEANLIN | IESS | method | limit/base | current | history1 | history2 | | | | | |
| Particles >4µm | | ASTM D7647 | >10000 | 10484 | 5842 | <u>4</u> 24851 | | | | | |
| Particles >6µm | | ASTM D7647 | >2500 | 4822 | 2533 | <u>11518</u> | | | | | |
| Particles >14µm | | ASTM D7647 | >320 | 195 | 136 | ▲ 393 | | | | | |
| Particles >21µm | | ASTM D7647 | >80 | 13 | 15 | 29 | | | | | |
| Particles >38µm | | ASTM D7647 | >20 | 0 | 0 | 0 | | | | | |
| Particles >71µm | | ASTM D7647 | >4 | 0 | 0 | 0 | | | | | |
| Oil Cleanliness | | ISO 4406 (c) | >20/18/15 | 2 1/19/15 | 20/19/14 | <u>22/21/16</u> | | | | | |
| FLUID DEGRADA | ATION _ | method | limit/base | current | history1 | history2 | | | | | |
| Asid Number (AN) | I/OII/- | ACTM DOZA | 0.005 | 0.014 | 0.015 | 0.015 | | | | | |

Acid Number (AN)

0.015

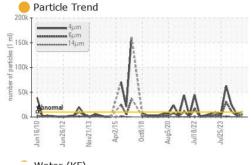
0.014

mg KOH/g ASTM D974 0.005

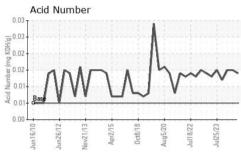
0.015

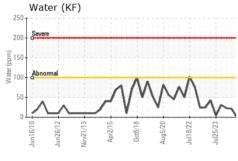


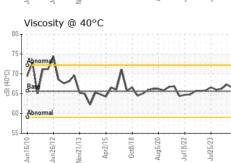
OIL ANALYSIS REPORT

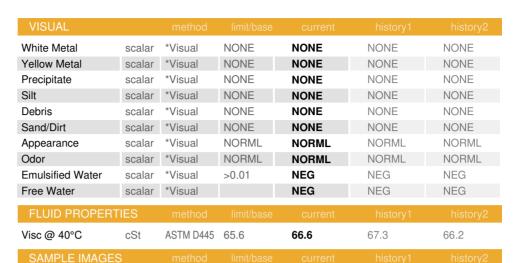


| 250 T | Water (Ki | =) | | | | | | | | |
|---------------|----------------------|-----------------|---------|------|-------|----------|---|--|--|--|
| 200- | Severe | | | | | | | | | |
| Mater (ppm) | | | | | | | | | | |
| ® 100+ 50+ | | | | | | | | | | |
| | | 13 | V | V | 727 | 1 | 7 | | | |
| | Jun16/10 Jun26/12 | Nov21/ Apr2/ | Oct6/18 | Aug5 | Jull8 | Jul25/2 | | | | |

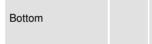


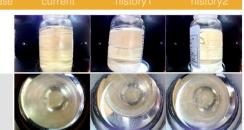


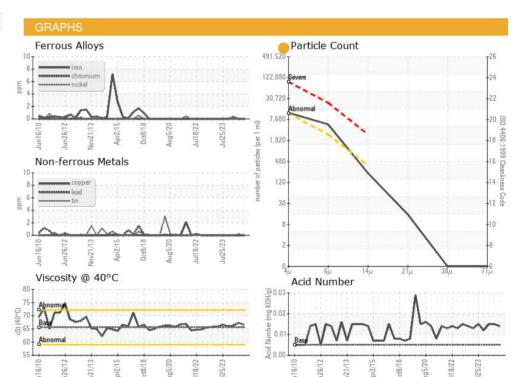




Color











Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** : 10936585

Test Package : IND 2

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : USP0006105

: 06122434

Tested Diagnosed

Received : 19 Mar 2024 : 20 Mar 2024 : 20 Mar 2024 - Doug Bogart **CARGILL FOODS-COLUMBUS**

COLUMBUS, NE US 68601 Contact:

> T: F:

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)