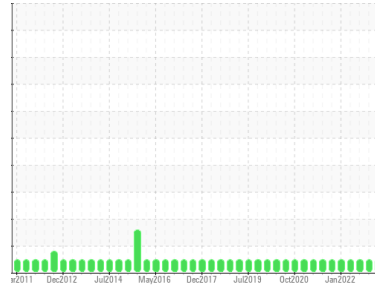




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
FES TYSNRH B309 (S/N 2512317)

Component
Refrigeration Compressor
Fluid
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 component. The amount and size of particulates present in the system is acceptable.

Fluid Condition

The TAN level is acceptable for this fluid. The condition of the oil is suitable for further service. Viscosity confirmed.

SAMPLE INFORMATION

| method | limit/base | current | history1 | history2 |
|---------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | USP0004991 | USP239135 | USP240121 |
| Sample Date | Client Info | 15 Jan 2024 | 27 Oct 2022 | 28 Jul 2022 |
| Machine Age | hrs | Client Info | 0 | 0 |
| Oil Age | hrs | Client Info | 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 | <1 | <1 | 0 |
| Chromium | ppm | ASTM D5185m >2 | <1 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | 0 | <1 | 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 | <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 | <1 |
| Molybdenum | ppm | ASTM D5185m | 0 | 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 | <1 | 0 |
| Zinc | ppm | ASTM D5185m | 0 | 0 | 0 |
| Sulfur | ppm | ASTM D5185m 50 | 0 | 15 | 12 |

CONTAMINANTS

| method | limit/base | current | history1 | history2 | |
|-----------|------------|------------------|--------------|----------|-------|
| Silicon | ppm | ASTM D5185m >15 | 3 | 2 | 2 |
| Sodium | ppm | ASTM D5185m | 0 | 0 | <1 |
| Potassium | ppm | ASTM D5185m >20 | <1 | 0 | 0 |
| Water | % | ASTM D6304 >0.01 | 0.003 | 0.001 | 0.006 |
| ppm Water | ppm | ASTM D6304 >100 | 35 | 14.5 | 66.5 |

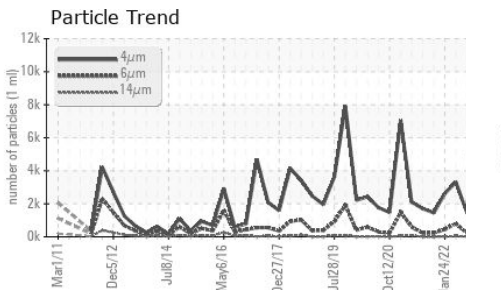
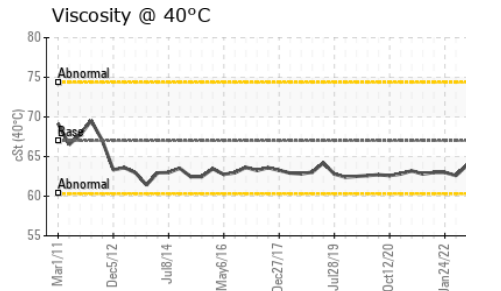
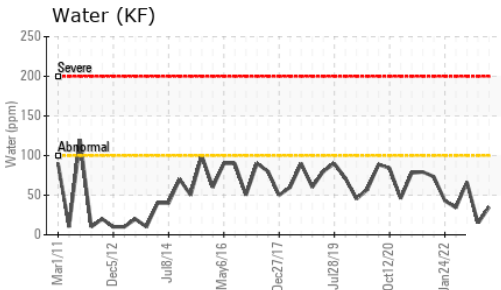
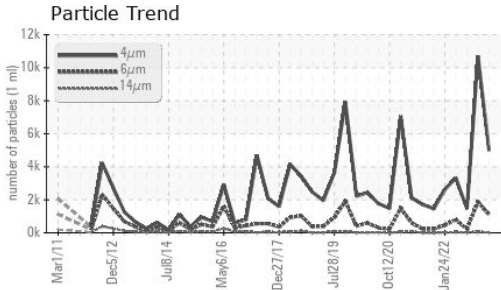
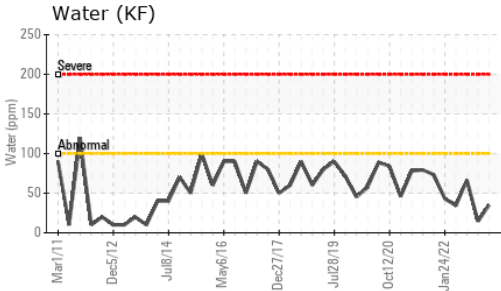
FLUID CLEANLINESS

| method | limit/base | current | history1 | history2 |
|-----------------|------------------------|-----------------|----------|----------|
| Particles >4µm | ASTM D7647 | 4978 | 10688 | 1454 |
| Particles >6µm | ASTM D7647 >2500 | 1088 | 1877 | 224 |
| Particles >14µm | ASTM D7647 >320 | 23 | 50 | 13 |
| Particles >21µm | ASTM D7647 >80 | 3 | 6 | 5 |
| Particles >38µm | ASTM D7647 >20 | 0 | 0 | 0 |
| Particles >71µm | ASTM D7647 >4 | 0 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) >--/18/15 | 19/17/12 | 21/18/13 | 18/15/11 |

FLUID DEGRADATION

| method | limit/base | current | history1 | history2 | |
|------------------|------------|-----------------|--------------|----------|-------|
| Acid Number (AN) | mg KOH/g | ASTM D974 0.005 | 0.014 | 0.029 | 0.014 |

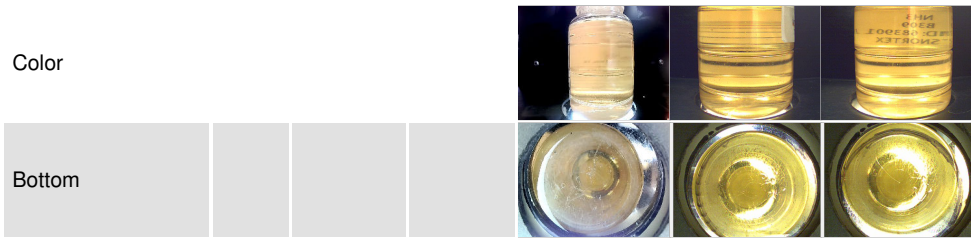
OIL ANALYSIS REPORT



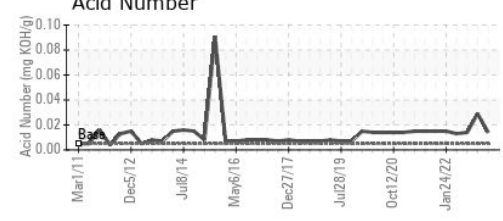
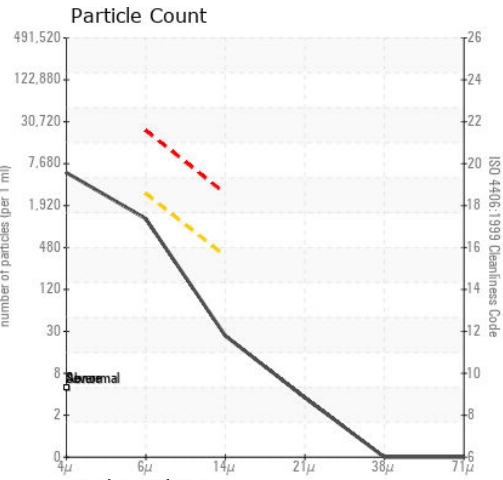
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.01 | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|--------------|-------------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 67 | 63.3 | 62.1 | 63.9 |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
|---------------|--------|------------|---------|----------|----------|



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USP0004991 **Received** : 16 Jan 2024
Lab Number : 06061194 **Diagnosed** : 18 Jan 2024
Unique Number : 10832576 **Diagnostician** : Doug Bogart
Test Package : IND 2

TYSON-NORTH RICHLAND HILLS-UPS
 6350 BLOWN CT
 NORTH RICHLAND HILLS, TX
 US 76180
 Contact: JOHN MORGAN

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)

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