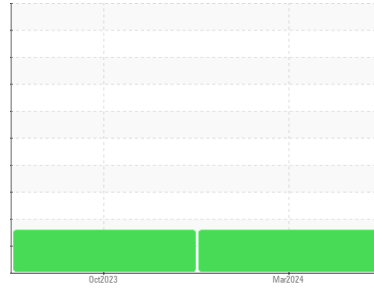




OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id
FRICK DC-2 (S/N SGC19180205)
 Component
Refrigeration Compressor
 Fluid
PETRO CANADA REFLO 46A AMMONIA OIL (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

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 oil viscosity is higher than normal. Confirmed.
The AN level is acceptable for this fluid.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|----------|
| Sample Number | Client Info | | USP0008059 | USP0002798 | --- |
| Sample Date | Client Info | | 31 Mar 2024 | 23 Oct 2023 | --- |
| Machine Age | hrs | Client Info | 13843 | 11743 | --- |
| Oil Age | hrs | Client Info | 0 | 0 | --- |
| Oil Changed | Client Info | | N/A | N/A | --- |
| Sample Status | | | ATTENTION | ABNORMAL | --- |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|----------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m >8 | 9 | 2 | --- |
| Chromium | ppm | ASTM D5185m >2 | <1 | 0 | --- |
| Nickel | ppm | ASTM D5185m | 0 | 0 | --- |
| Titanium | ppm | ASTM D5185m | <1 | <1 | --- |
| Silver | ppm | ASTM D5185m >2 | 0 | 0 | --- |
| Aluminum | ppm | ASTM D5185m >3 | 0 | 0 | --- |
| Lead | ppm | ASTM D5185m >2 | 0 | 0 | --- |
| Copper | ppm | ASTM D5185m >8 | <1 | <1 | --- |
| Tin | ppm | ASTM D5185m >4 | <1 | 0 | --- |
| Vanadium | ppm | ASTM D5185m | 0 | 0 | --- |
| Cadmium | ppm | ASTM D5185m | 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 | --- |
| Magnesium | ppm | ASTM D5185m 0 | <1 | 0 | --- |
| Calcium | ppm | ASTM D5185m 0 | 0 | 0 | --- |
| Phosphorus | ppm | ASTM D5185m 0 | 0 | 0 | --- |
| Zinc | ppm | ASTM D5185m 0 | <1 | 2 | --- |
| Sulfur | ppm | ASTM D5185m 0 | 0 | 37 | --- |

CONTAMINANTS

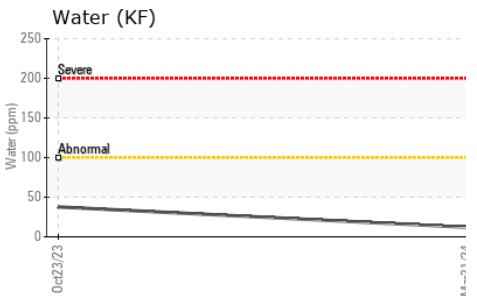
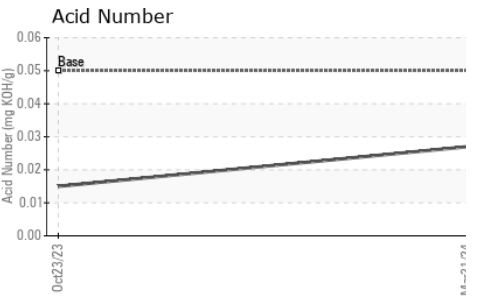
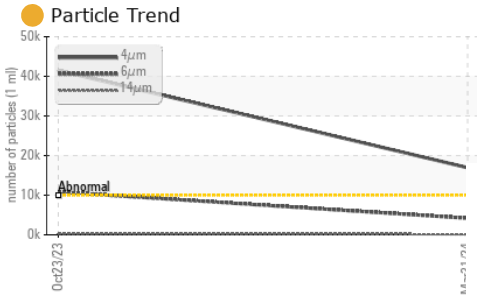
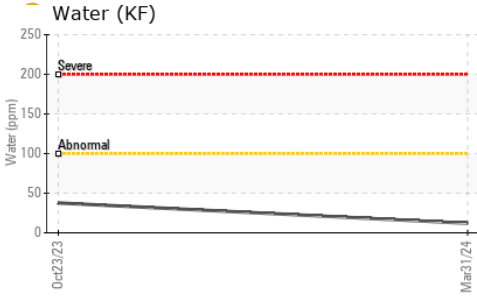
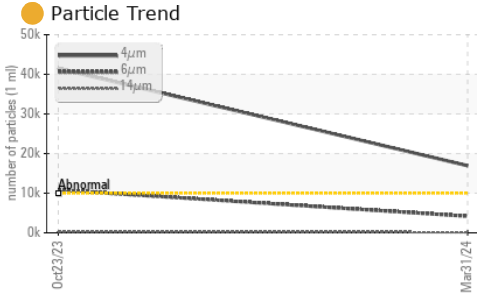
| | method | limit/base | current | history1 | history2 |
|-----------|--------|------------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m >15 | 1 | 1 | --- |
| Sodium | ppm | ASTM D5185m | 0 | 1 | --- |
| Potassium | ppm | ASTM D5185m >20 | <1 | 0 | --- |
| Water | % | ASTM D6304 >0.01 | 0.001 | 0.003 | --- |
| ppm Water | ppm | ASTM D6304 >100 | 12 | 37.7 | --- |

FLUID CLEANLINESS

| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-----------------|----------|----------|
| Particles >4µm | ASTM D7647 | >10000 | 16937 | 41487 | --- |
| Particles >6µm | ASTM D7647 | >2500 | 4192 | 10792 | --- |
| Particles >14µm | ASTM D7647 | >320 | 127 | 272 | --- |
| Particles >21µm | ASTM D7647 | >80 | 17 | 29 | --- |
| Particles >38µm | ASTM D7647 | >20 | 0 | 0 | --- |
| Particles >71µm | ASTM D7647 | >4 | 0 | 0 | --- |
| Oil Cleanliness | ISO 4406 (c) | >20/18/15 | 21/19/14 | 23/21/15 | --- |

FLUID DEGRADATION

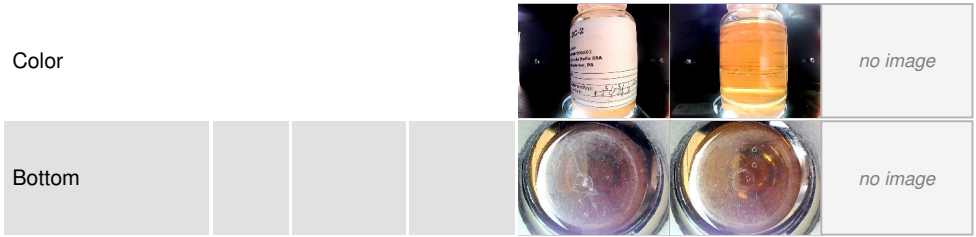
| | method | limit/base | current | history1 | history2 |
|------------------|----------|----------------|--------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D974 0.05 | 0.027 | 0.015 | --- |



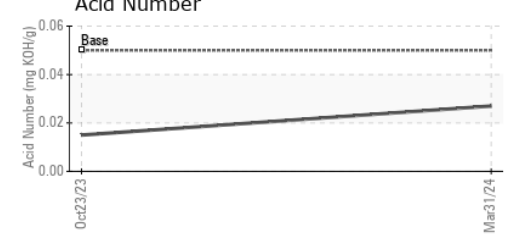
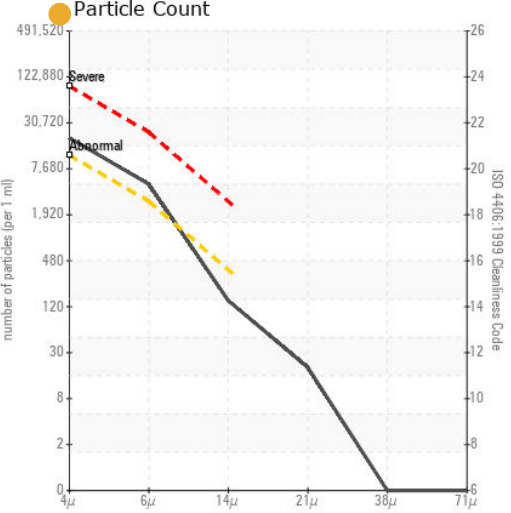
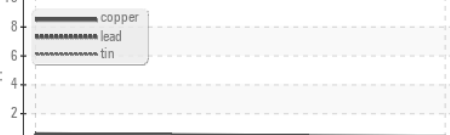
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- |
| Precipitate | scalar | *Visual | NONE | NONE | ---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

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 46.0 | 58.1 | 58.0 |

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



GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USP008059 **Received** : 04 Apr 2024
Lab Number : 06138579 **Tested** : 05 Apr 2024
Unique Number : 10963387 **Diagnosed** : 05 Apr 2024 - Doug Bogart
Test Package : IND 2

JBS
 SOUDERTON, PA
 US
 Contact:

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)