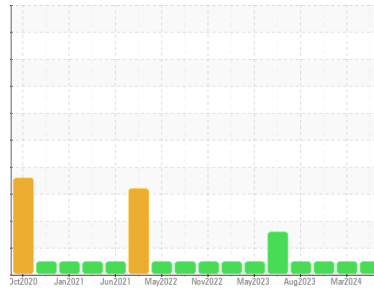


OIL ANALYSIS REPORT

Area
PAL 68
Machine Id
20BE000981
Component
Compressor

Sample Rating Trend



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.

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

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | UCS06184449 | UCS06130773 | UCS05995792 |
| Sample Date | Client Info | | 14 May 2024 | 21 Mar 2024 | 27 Oct 2023 |
| Machine Age | hrs | Client Info | 36953 | 35660 | 32154 |
| Oil Age | hrs | Client Info | 1510 | 1352 | 1516 |
| Oil Changed | Client Info | | Not Changed | Not Changed | Not Changed |
| Sample Status | | | NORMAL | NORMAL | NORMAL |

CONTAMINATION

| | method | limit/base | current | history1 | history2 |
|-------|-----------|------------|------------|----------|----------|
| Water | WC Method | >0.1 | NEG | NEG | NEG |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|-----------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m >50 | <1 | 0 | 0 |
| Chromium | ppm | ASTM D5185m >10 | <1 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | <1 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | <1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >25 | 2 | 1 | 0 |
| Lead | ppm | ASTM D5185m >25 | <1 | 0 | 0 |
| Copper | ppm | ASTM D5185m >50 | <1 | 0 | <1 |
| Tin | ppm | ASTM D5185m >15 | <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 1.3 | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m 0.5 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m 0 | <1 | 0 | 0 |
| Manganese | ppm | ASTM D5185m 0.6 | <1 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m 0 | 0 | <1 | 0 |
| Calcium | ppm | ASTM D5185m 0 | 3 | 3 | 0 |
| Phosphorus | ppm | ASTM D5185m 210 | 240 | 234 | 246 |
| Zinc | ppm | ASTM D5185m 0 | 0 | 0 | 0 |
| Sulfur | ppm | ASTM D5185m 297 | 619 | 793 | 632 |

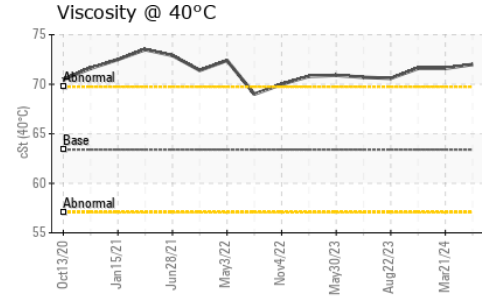
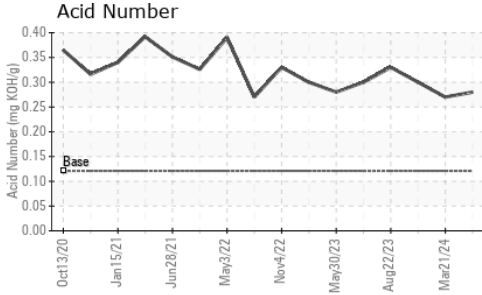
CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-----------------|----------|----------|----------|
| Silicon | ppm | ASTM D5185m >25 | 3 | 2 | 2 |
| Sodium | ppm | ASTM D5185m | 0 | <1 | <1 |
| Potassium | ppm | ASTM D5185m >20 | 2 | 1 | 1 |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|------------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.121 | 0.28 | 0.27 | 0.30 |

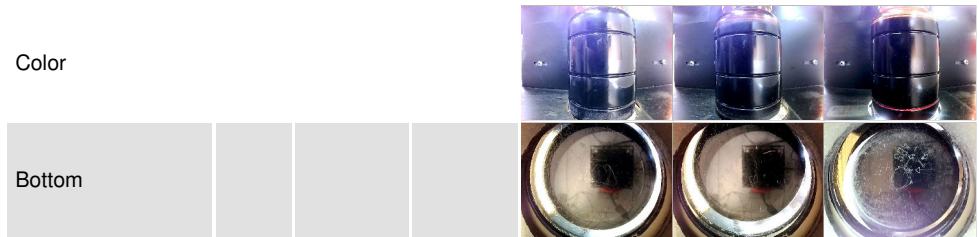
OIL ANALYSIS REPORT



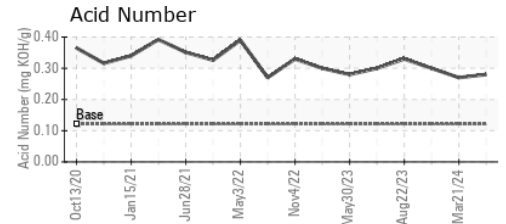
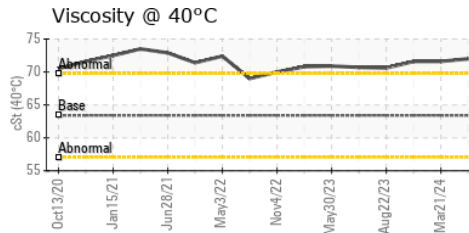
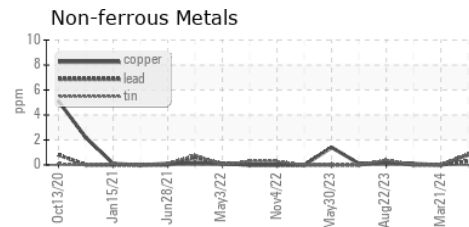
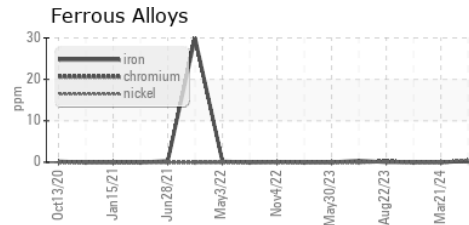
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|--------------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | 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 | >0.1 | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|-------------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 63.4 | 72.0 | 71.6 |

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



GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : UCS06184449
Lab Number : **06184449**
Unique Number : 11035775
Test Package : IND 2
Received : 20 May 2024
Tested : 21 May 2024
Diagnosed : 22 May 2024 - Sean Felton

NORTHERN NATURAL GAS

CLIFTON, KS
 US 66937
 Contact: SEAN BAKER
 sean.baker@nngco.com
 T: (402)536-8329
 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)