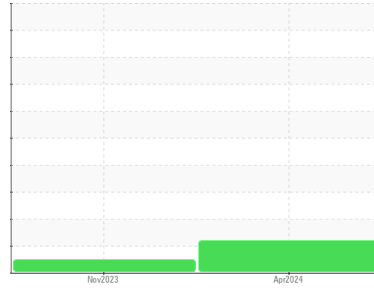


OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id
SC7 - PILGRAMS WEST PLANT REFRIGERATION (S/N C210733A-1)
 Component
Screw Compressor
 Fluid
TULCO LUBSOIL A68 (--- GAL)

DIAGNOSIS

Recommendation
 No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
 All component wear rates are normal.

Contamination
 There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition
 The oil viscosity is higher than normal. Confirm oil type. 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 | | TO10002259 | TO10002269 | --- |
| Sample Date | Client Info | | 03 Apr 2024 | 30 Nov 2023 | --- |
| Machine Age | hrs | Client Info | 0 | 0 | --- |
| Oil Age | hrs | Client Info | 0 | 0 | --- |
| Oil Changed | Client Info | | Not Changed | Not Changed | --- |
| Sample Status | | | ABNORMAL | NORMAL | --- |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|-----------------|----------|----------|----------|
| Iron | ppm | ASTM D5185m >60 | 6 | 25 | --- |
| Chromium | ppm | ASTM D5185m >4 | 0 | <1 | --- |
| Nickel | ppm | ASTM D5185m | 0 | 0 | --- |
| Titanium | ppm | ASTM D5185m | 0 | 0 | --- |
| Silver | ppm | ASTM D5185m | 0 | 0 | --- |
| Aluminum | ppm | ASTM D5185m >5 | 0 | <1 | --- |
| Lead | ppm | ASTM D5185m >10 | 0 | 0 | --- |
| Copper | ppm | ASTM D5185m >30 | 0 | 0 | --- |
| Tin | ppm | ASTM D5185m >15 | 0 | 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 | --- |
| Barium | ppm | ASTM D5185m | 0 | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | 0 | 0 | --- |
| Manganese | ppm | ASTM D5185m | <1 | 0 | --- |
| Magnesium | ppm | ASTM D5185m | 0 | 0 | --- |
| Calcium | ppm | ASTM D5185m | 0 | 10 | --- |
| Phosphorus | ppm | ASTM D5185m | 0 | <1 | --- |
| Zinc | ppm | ASTM D5185m | 0 | 10 | --- |
| Sulfur | ppm | ASTM D5185m 250 | 0 | 280 | --- |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|------------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m >50 | 0 | <1 | --- |
| Sodium | ppm | ASTM D5185m | 1 | <1 | --- |
| Potassium | ppm | ASTM D5185m >20 | 0 | <1 | --- |
| Water | % | ASTM D6304 >0.1 | 0.005 | 0.005 | --- |
| ppm Water | ppm | ASTM D6304 >1000 | 50 | 54 | --- |

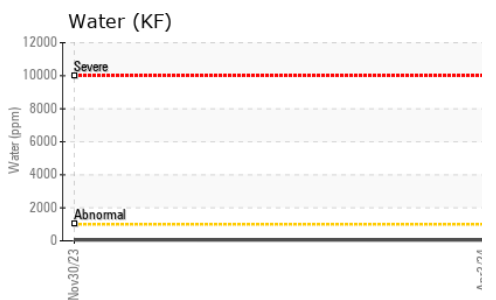
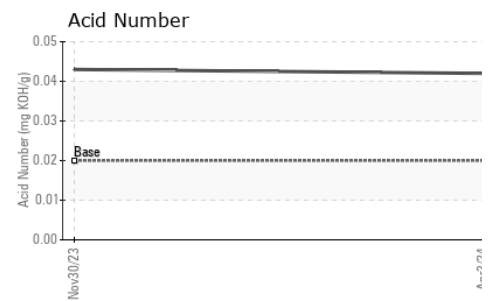
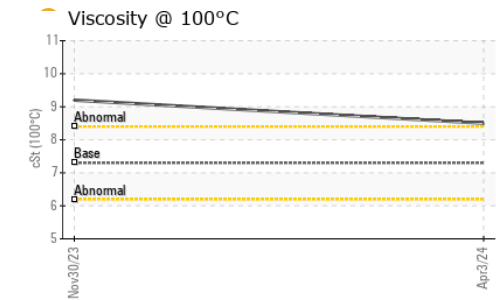
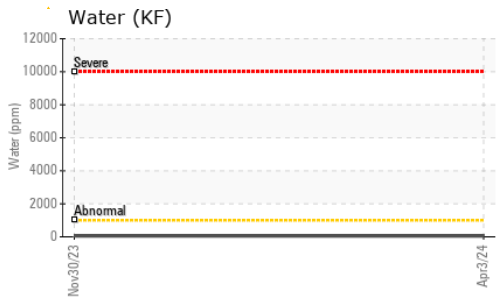
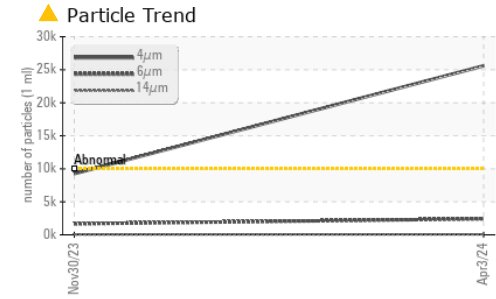
FLUID CLEANLINESS

| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-------------------|----------|----------|
| Particles >4µm | ASTM D7647 | >10000 | ▲ 25594 | 9257 | --- |
| Particles >6µm | ASTM D7647 | >2500 | 2413 | 1671 | --- |
| Particles >14µm | ASTM D7647 | >320 | 66 | 47 | --- |
| Particles >21µm | ASTM D7647 | >80 | 13 | 11 | --- |
| Particles >38µm | ASTM D7647 | >20 | 0 | 1 | --- |
| Particles >71µm | ASTM D7647 | >4 | 0 | 0 | --- |
| Oil Cleanliness | ISO 4406 (c) | >20/18/15 | ▲ 22/18/13 | 20/18/13 | --- |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|-----------------|--------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.02 | 0.042 | 0.043 | --- |

OIL ANALYSIS REPORT



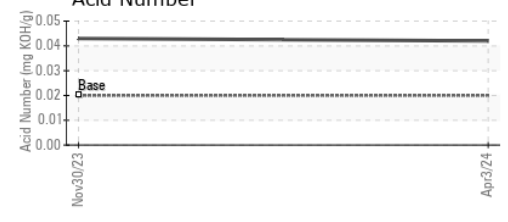
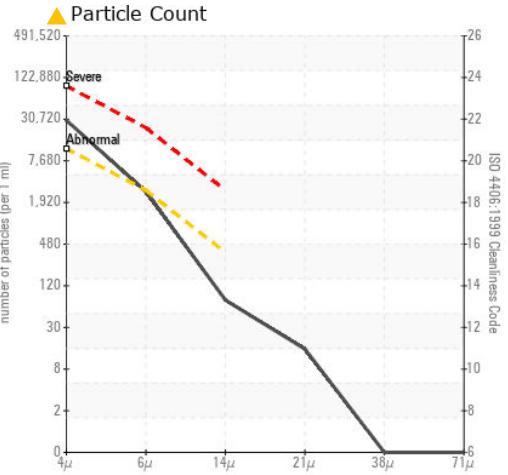
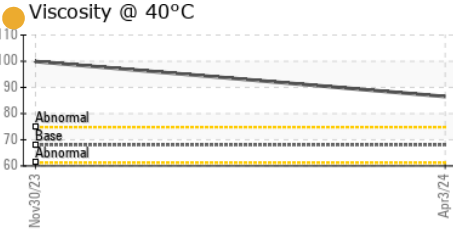
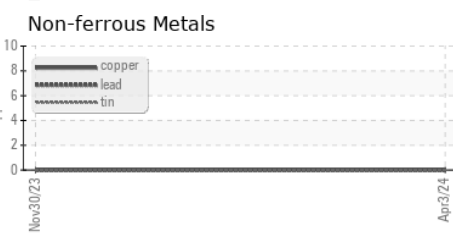
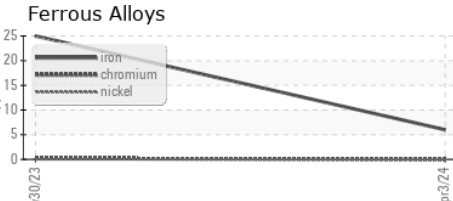
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- |
| Precipitate | scalar | *Visual | NONE | NONE | ---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

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|----------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 68 | 86.5 | 99.9 |
| Visc @ 100°C | cSt | ASTM D445 | 7.3 | 8.5 | 9.2 |
| Viscosity Index (VI) | Scale | ASTM D2270 | 50 | 54 | 51 |

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



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10002259 **Received** : 09 Apr 2024
Lab Number : 06143134 **Tested** : 10 Apr 2024
Unique Number : 10967942 **Diagnosed** : 11 Apr 2024 - Angela Borella
Test Package : IND 2 (Additional Tests: KF, KV100, PrtCount, VI)

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P.O. BOX 993
HENDERSON, TX
US 75653
Contact: AARON NILSSON
awn.nilsson@icloud.com
T: (903)807-9576
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)