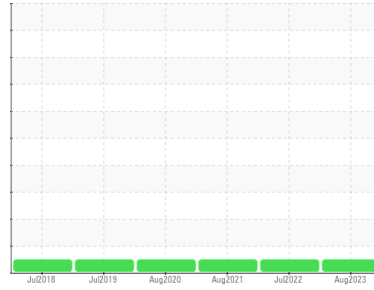




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
PORTALS - CVHE C1 (S/N L05G03372)

Component
Refrigeration Compressor
Fluid
TRANE 0022 (--- Oz)

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 | | | WC0830511 | WC0713825 | WC0597132 |
| Sample Date | Client Info | | | 13 Aug 2023 | 15 Jul 2022 | 02 Aug 2021 |
| Machine Age | hrs | Client Info | | 0 | 14261 | 13325 |
| Oil Age | hrs | Client Info | | 0 | 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 | 0 | <1 | <1 |
| Chromium | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | <1 | <1 |
| Aluminum | ppm | ASTM D5185m | >3 | <1 | <1 | 0 |
| Lead | ppm | ASTM D5185m | >2 | 0 | <1 | <1 |
| Copper | ppm | ASTM D5185m | >8 | <1 | <1 | <1 |
| Tin | ppm | ASTM D5185m | >4 | <1 | <1 | <1 |
| Antimony | ppm | ASTM D5185m | | --- | --- | 0 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | 0 |

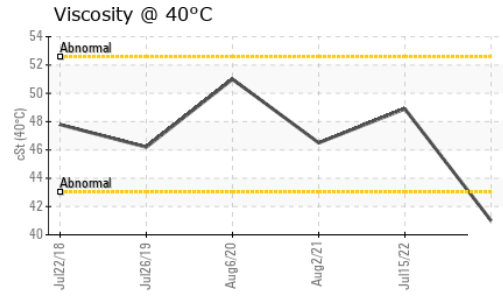
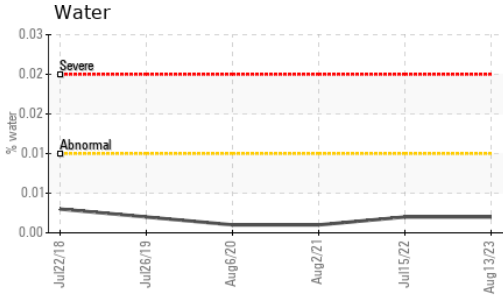
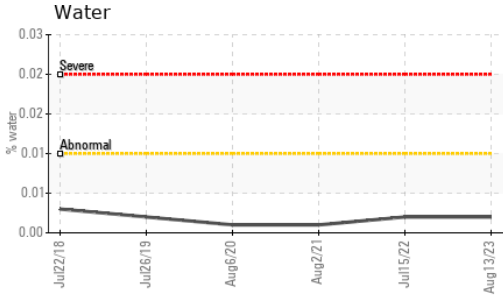
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Barium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | | 6 | 0 | 0 |
| Calcium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Phosphorus | ppm | ASTM D5185m | | 3 | 0 | 0 |
| Zinc | ppm | ASTM D5185m | | 15 | 0 | 0 |
| Sulfur | ppm | ASTM D5185m | | 0 | 0 | 92 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m | >15 | 16 | 20 | 14 |
| Sodium | ppm | ASTM D5185m | | 1 | 0 | 0 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 1 | 0 |
| Water | % | ASTM D6304 | >0.01 | 0.002 | 0.002 | 0.001 |
| ppm Water | ppm | ASTM D6304 | >100 | 16.6 | 20.2 | 10.5 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|-----------|------------|--------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D974 | | 0.013 | 0.014 | 0.015 |



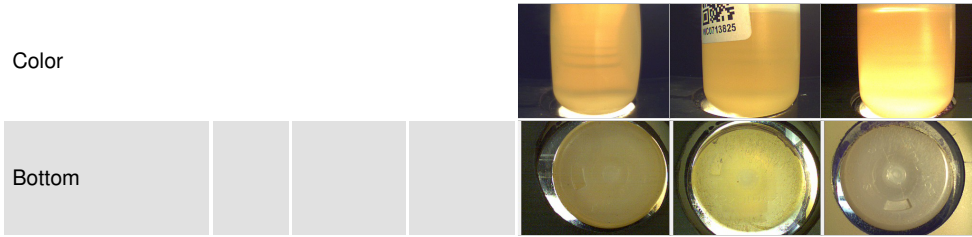
OIL ANALYSIS REPORT



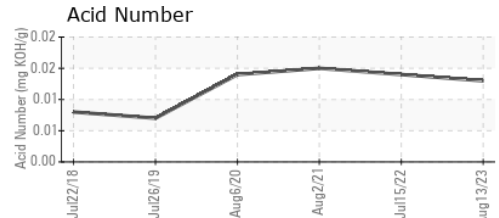
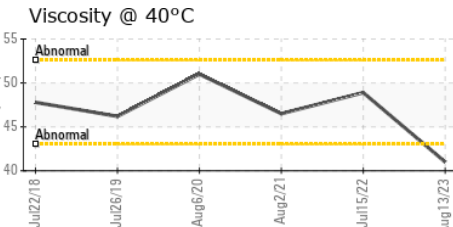
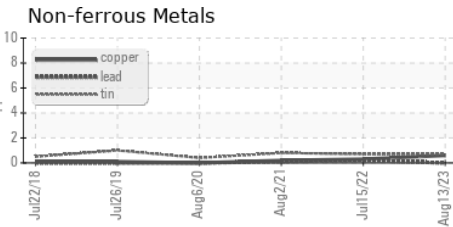
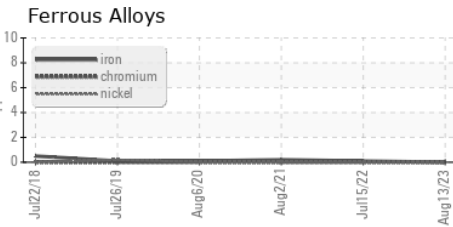
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | 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 | 41.0 | 48.9 | 46.5 |

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



GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0830511 **Received** : 14 Aug 2023
Lab Number : 05923457 **Diagnosed** : 15 Aug 2023
Unique Number : 10603404 **Diagnostician** : Doug Bogart
Test Package : IND 2

CDS MECHANICAL SERVICES INC
 1654 CROFTON BLVD, SUITE 9
 CROFTON, MD
 US 21114
 Contact: DAVID BEALE
 DBEALE@CDSMECHANICAL.NET

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)

T:
F: