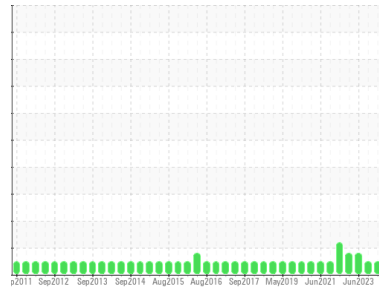




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
HOWDEN RC-1 (S/N MK5/XRV204110MV/139)
 Component
Refrigeration Compressor
 Fluid
CAMCO 717 HT (75 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 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 | USP0012457 | USP0004848 | USP243570 |
| Sample Date | Client Info | 22 May 2024 | 10 Jan 2024 | 12 Jun 2023 |
| 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 | ATTENTION |

WEAR METALS

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

CONTAMINANTS

| method | limit/base | current | history1 | history2 | | |
|-----------|------------|-------------|----------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >15 | <1 | 2 | <1 |
| Sodium | ppm | ASTM D5185m | | 2 | 0 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | <1 | <1 | <1 |
| Water | % | ASTM D6304 | >0.01 | 0.003 | 0.003 | 0.002 |
| ppm Water | ppm | ASTM D6304 | >100 | 34 | 27 | 16.5 |

FLUID CLEANLINESS

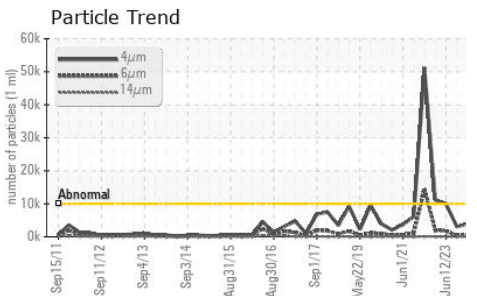
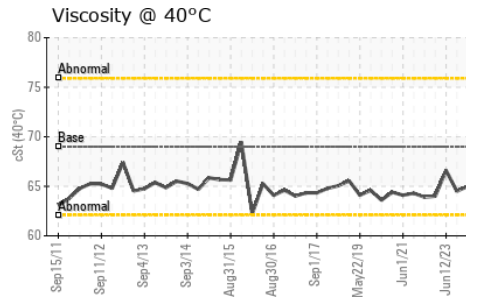
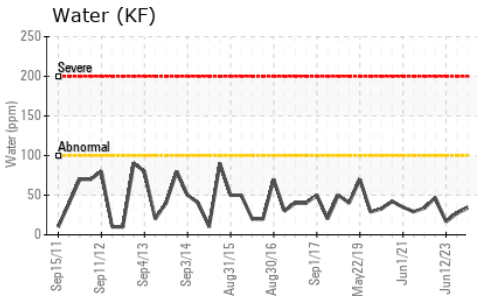
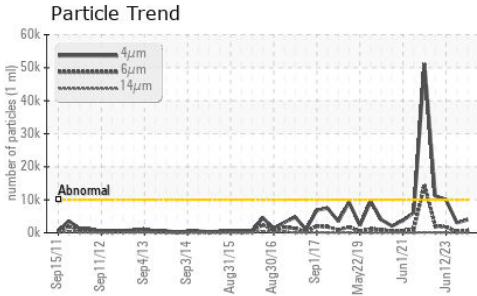
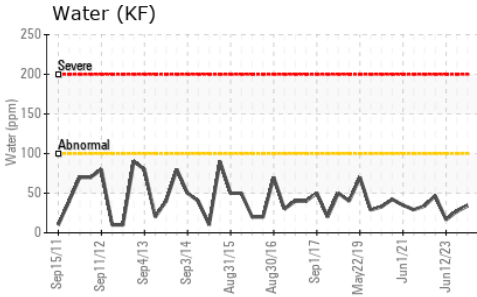
| method | limit/base | current | history1 | history2 | |
|-----------------|--------------|-----------|-----------------|----------|------------|
| Particles >4µm | ASTM D7647 | >10000 | 3934 | 3025 | ● 10010 |
| Particles >6µm | ASTM D7647 | >2500 | 725 | 371 | 1757 |
| Particles >14µm | ASTM D7647 | >320 | 11 | 26 | 37 |
| Particles >21µm | ASTM D7647 | >80 | 1 | 8 | 3 |
| Particles >38µm | ASTM D7647 | >20 | 0 | 0 | 0 |
| Particles >71µm | ASTM D7647 | >4 | 0 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >20/18/15 | 19/17/11 | 19/16/12 | ● 21/18/12 |

FLUID DEGRADATION

| method | limit/base | current | history1 | history2 | | |
|------------------|------------|-----------|----------|--------------|-------|-------|
| Acid Number (AN) | mg KOH/g | ASTM D974 | 0.007 | 0.014 | 0.014 | 0.015 |



OIL ANALYSIS REPORT



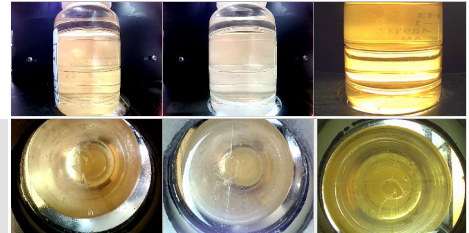
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | 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 69 | 65.0 | 64.5 | 66.6 |

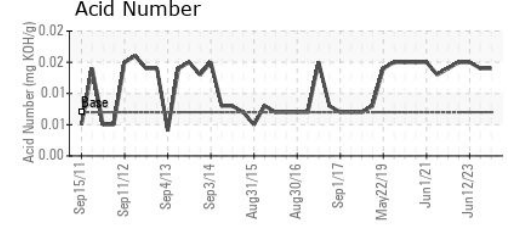
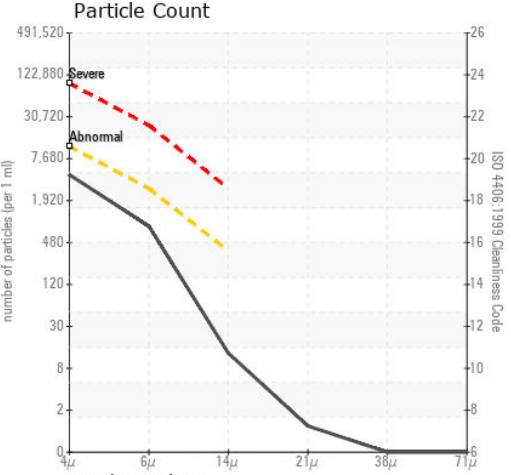
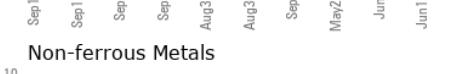
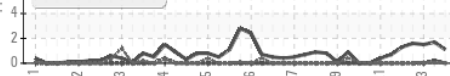
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
|---------------|--------|------------|---------|----------|----------|

Color

Bottom



GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : USP0012457

Lab Number : 06204729

Unique Number : 11072190

Test Package : IND 2

Received : 10 Jun 2024

Tested : 12 Jun 2024

Diagnosed : 12 Jun 2024 - Doug Bogart

DOT FOODS

CAMBRIDGE CITY, US

Contact: SERVICE MANAGER

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: