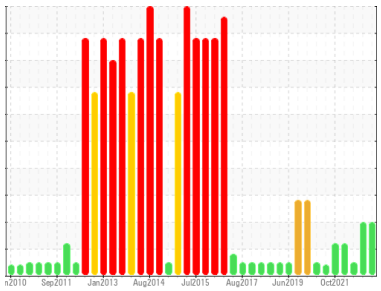
# OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
**TM 11**
Machine Id
**TM 11 YANKEE HOOD FANS**
Component
**Lube System**
Fluid
**AW HYDRAULIC OIL ISO 68 (--- GAL)**

## DIAGNOSIS

**Recommendation**
We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

**Wear**
All component wear rates are normal.

**Contamination**
There is a high amount of particulates present 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 | | **RP0037972** | RP0034373 | RP0023582 |
| Sample Date | | Client Info | | **30 Jan 2024** | 09 Aug 2023 | 05 May 2023 |
| Machine Age | hrs | Client Info | | **0** | 0 | 0 |
| Oil Age | hrs | Client Info | | **0** | 0 | 0 |
| Oil Changed | | Client Info | | **N/A** | N/A | N/A |
| Sample Status | | | | **ABNORMAL** | ABNORMAL | NORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| PQ | | ASTM D8184 | | **9** | 15 | 11 |
| Iron | ppm | ASTM D5185m | >20 | **2** | 2 | 1 |
| Chromium | ppm | ASTM D5185m | >20 | **0** | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >20 | **0** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | **<1** | <1 | <1 |
| Silver | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | **0** | <1 | <1 |
| Lead | ppm | ASTM D5185m | >20 | **2** | 2 | <1 |
| Copper | ppm | ASTM D5185m | >20 | **27** | 30 | 25 |
| Tin | ppm | ASTM D5185m | >20 | **<1** | 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 | 5 | **0** | 0 | 0 |
| Barium | ppm | ASTM D5185m | 5 | **0** | 20 | 0 |
| Molybdenum | ppm | ASTM D5185m | 5 | **<1** | <1 | <1 |
| Manganese | ppm | ASTM D5185m | | **<1** | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 25 | **36** | 33 | 30 |
| Calcium | ppm | ASTM D5185m | 200 | **32** | 34 | 39 |
| Phosphorus | ppm | ASTM D5185m | 300 | **264** | 297 | 287 |
| Zinc | ppm | ASTM D5185m | 370 | **281** | 318 | 317 |

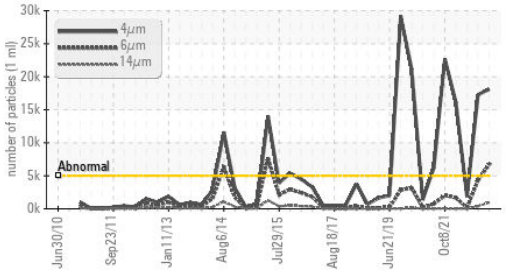
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >15 | **1** | <1 | <1 |
| Sodium | ppm | ASTM D5185m | | **<1** | 3 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | **0** | 0 | 0 |
| Water | % | ASTM D6304 | >0.05 | **0.006** | 0.006 | 0.005 |
| ppm Water | ppm | ASTM D6304 | >500 | **68** | 68.5 | 52.3 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >5000 | ▲ **18092** | ▲ 17271 | 1861 |
| Particles >6µm | | ASTM D7647 | >1300 | ▲ **6698** | ▲ 4339 | 141 |
| Particles >14µm | | ASTM D7647 | >160 | ▲ **942** | ▲ 406 | 7 |
| Particles >21µm | | ASTM D7647 | >40 | ▲ **254** | ▲ 110 | 2 |
| Particles >38µm | | ASTM D7647 | >10 | **7** | 5 | 0 |
| Particles >71µm | | ASTM D7647 | >3 | **0** | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | ▲ **21/20/17** | ▲ 21/19/16 | 18/14/10 |

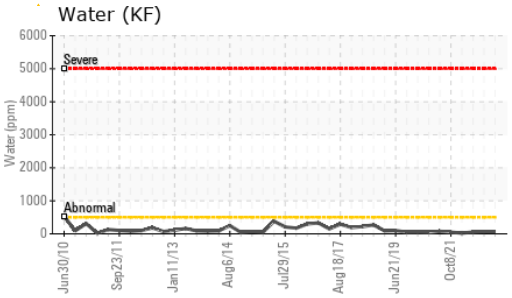
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.57 | **0.49** | 0.42 | 0.41 |

# OIL ANALYSIS REPORT

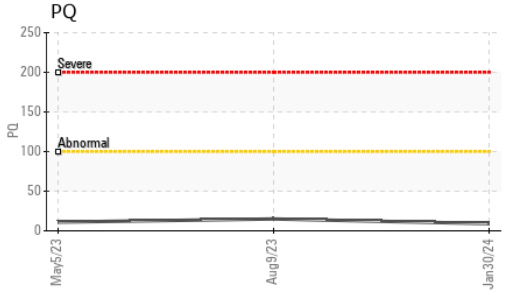
Particle Trend



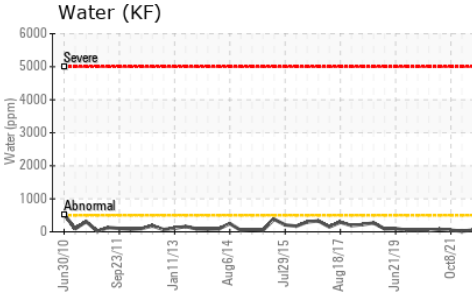

Water (KF)



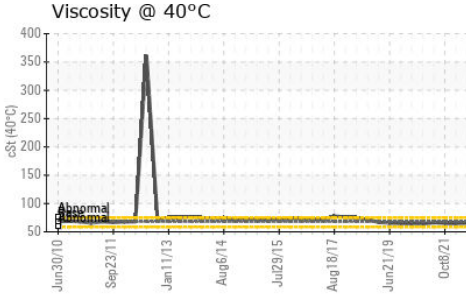

PQ




Water (KF)




Viscosity @ 40°C



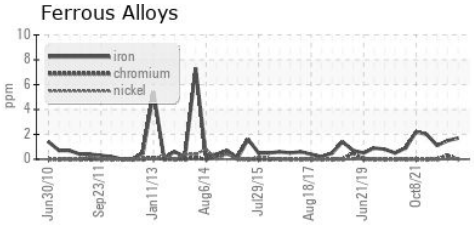

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Debris | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Appearance | scalar | *Visual | NORML | **NORML** | NORML | NORML |
| Odor | scalar | *Visual | NORML | **NORML** | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.05 | **NEG** | NEG | NEG |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 68 | **64.8** | 63.5 | 65.2 |

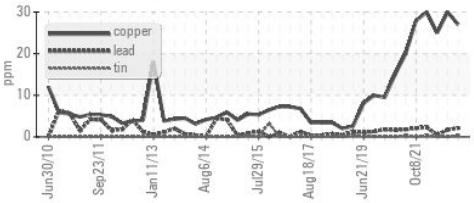
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | |
| Bottom | | |  | | |

## GRAPHS

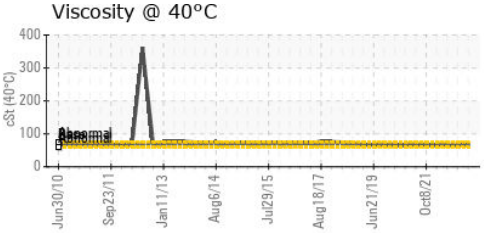
Ferrous Alloys



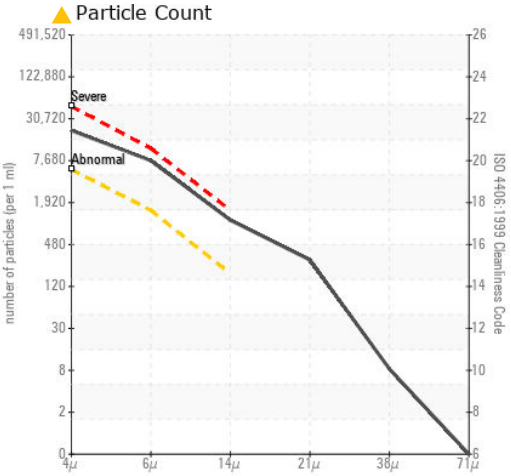

Non-ferrous Metals



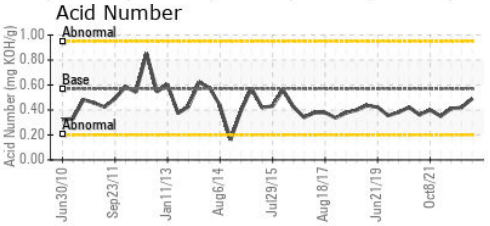

Viscosity @ 40°C




Particle Count




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : RP0037972 **Recieved** : 31 Jan 2024
**Lab Number** : 06075762 **Diagnosed** : 01 Feb 2024
**Unique Number** : 10857853 **Diagnostician** : Don Baldridge
**Test Package** : IND 2 ( Additional Tests: PQ, PrtCount )

*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)*

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