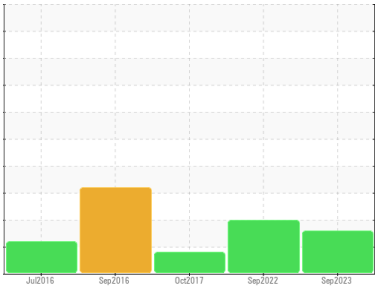
# PROBLEM SUMMARY

Sample Rating Trend

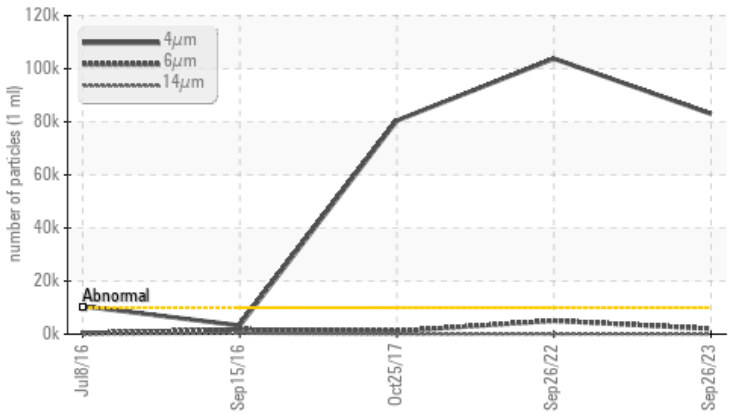



**WEAR**

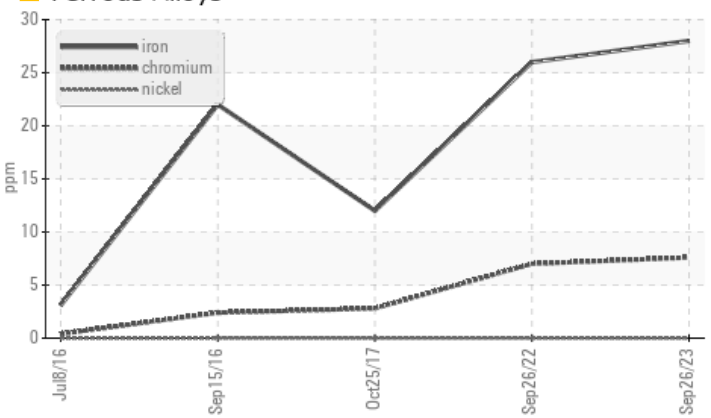
Area
**FINISHING**
Machine Id
**1225HP01**
Component
**Hydraulic System**
Fluid
**KLUBER SUMMIT HYSYN FG 46 (10 GAL)**

## COMPONENT CONDITION SUMMARY

▲ Particle Trend




▲ Ferrous Alloys




## RECOMMENDATION

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

## PROBLEMATIC TEST RESULTS

| | | | | | | |
|---|---|---|---|---|---|---|
| Sample Status | | | | **ABNORMAL** | ABNORMAL | ABNORMAL |
| Iron | ppm | ASTM D5185m | >20 | ▲ **28** | ▲ 26 | 12 |
| Particles >4µm | | ASTM D7647 | >10000 | ▲ **83003** | ▲ 103805 | ▲ 80454 |
| Oil Cleanliness | | ISO 4406 (c) | >20/18/15 | ▲ **24/18/12** | ▲ 24/20/12 | ▲ 24/17/11 |

**Customer Id:** FLAMONNC
**Sample No.:** WC0806878
**Lab Number:** 06027727
**Test Package:** IND 2

*To manage this report scan the QR code*

*To discuss the diagnosis or test data:*
Doug Bogart +1 (800)237-1369 x4016
dougb@wearcheckusa.com

*To change component or sample information:*
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

## RECOMMENDED ACTIONS

*There are no recommended actions for this sample.*

## HISTORICAL DIAGNOSIS

**26 Sep 2022 Diag: Don Baldridge**

WEAR

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.The iron level is abnormal. All other component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

**25 Oct 2017 Diag: Don Baldridge**

ISO

The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

**15 Sep 2016 Diag: Doug Bogart**

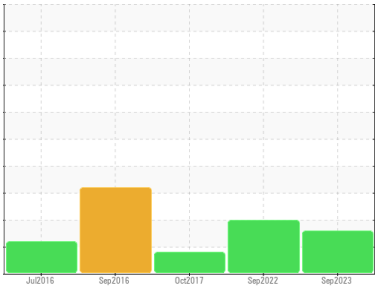
WEAR

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.The iron level is abnormal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

# OIL ANALYSIS REPORT

Sample Rating Trend




**WEAR**

Area
**FINISHING**
Machine Id
**1225HP01**
Component
**Hydraulic System**
Fluid
**KLUBER SUMMIT HYSYN FG 46 (10 GAL)**

## DIAGNOSIS

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

**Wear**
The iron level is abnormal. All other component wear rates are normal.

**Contamination**
There is a high amount of silt (particulates < 6 microns in size) 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 | | **WC0806878** | WC0668038 | WCI2319557 |
| Sample Date | | Client Info | | **26 Sep 2023** | 26 Sep 2022 | 25 Oct 2017 |
| Machine Age | hrs | Client Info | | **0** | 0 | 6 |
| Oil Age | hrs | Client Info | | **0** | 0 | 3 |
| Oil Changed | | Client Info | | **N/A** | Not Changd | Not Changd |
| Sample Status | | | | **ABNORMAL** | ABNORMAL | ABNORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| PQ | | ASTM D8184 | | **18** | --- | --- |
| Iron | ppm | ASTM D5185m | >20 | ▲ **28** | ▲ 26 | 12 |
| Chromium | ppm | ASTM D5185m | >20 | **8** | 7 | 3 |
| Nickel | ppm | ASTM D5185m | >20 | **0** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | **<1** | 0 | 0 |
| Silver | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | **2** | <1 | <1 |
| Lead | ppm | ASTM D5185m | >20 | **0** | <1 | 0 |
| Copper | ppm | ASTM D5185m | >20 | **6** | 5 | 2 |
| Tin | ppm | ASTM D5185m | >20 | **0** | <1 | <1 |
| Antimony | ppm | ASTM D5185m | | **---** | --- | 0 |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | **0** | <1 | 0 |

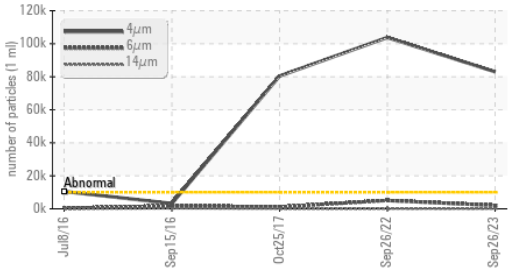
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **0** | 0 | <1 |
| Barium | ppm | ASTM D5185m | | **5** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | **0** | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | **3** | 2 | 1 |
| Calcium | ppm | ASTM D5185m | | **113** | 113 | 103 |
| Phosphorus | ppm | ASTM D5185m | | **465** | 447 | 390 |
| Zinc | ppm | ASTM D5185m | | **611** | 599 | 588 |
| Sulfur | ppm | ASTM D5185m | | **7422** | 7199 | 5906 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >15 | **1** | <1 | 1 |
| Sodium | ppm | ASTM D5185m | | **0** | 1 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | **2** | 0 | 0 |
| Water | % | ASTM D6304 | >0.05 | **0.00** | --- | --- |
| ppm Water | ppm | ASTM D6304 | >500 | **0** | --- | --- |

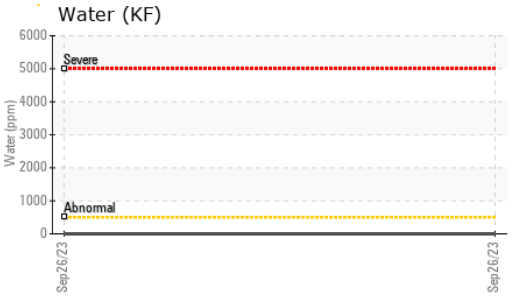
| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >10000 | ▲ **83003** | ▲ 103805 | ▲ 80454 |
| Particles >6µm | | ASTM D7647 | >2500 | **2053** | ▲ 5053 | ▲ 1156 |
| Particles >14µm | | ASTM D7647 | >320 | **21** | 40 | 13 |
| Particles >21µm | | ASTM D7647 | >80 | **5** | 7 | 6 |
| Particles >38µm | | ASTM D7647 | >20 | **1** | 0 | 4 |
| Particles >71µm | | ASTM D7647 | >4 | **0** | 0 | 3 |
| Oil Cleanliness | | ISO 4406 (c) | >20/18/15 | ▲ **24/18/12** | ▲ 24/20/12 | ▲ 24/17/11 |

# OIL ANALYSIS REPORT

Particle Trend

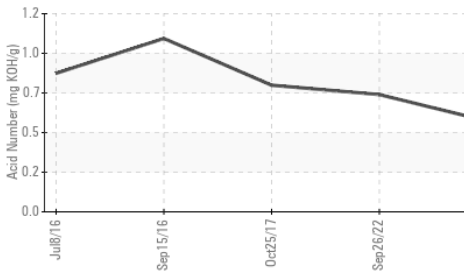



Water (KF)

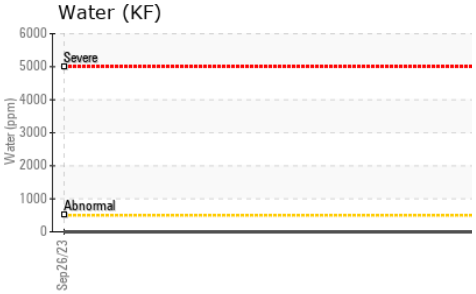



PQ


Acid Number




Water (KF)

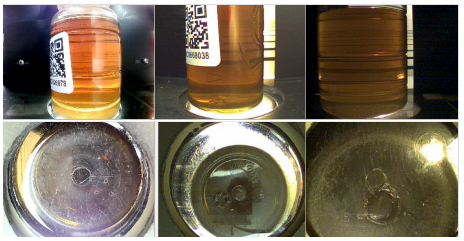



| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | **0.55** | 0.71 | 0.767 |

| 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 |

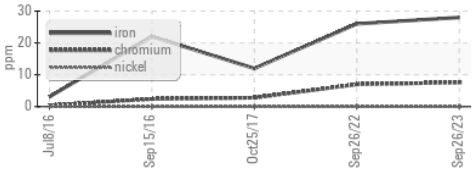
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 46 | **43.3** | 42.9 | 42.72 |

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

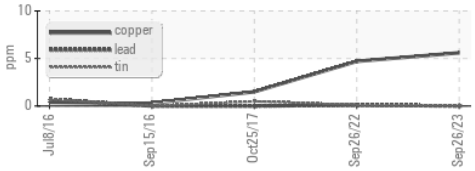


## GRAPHS

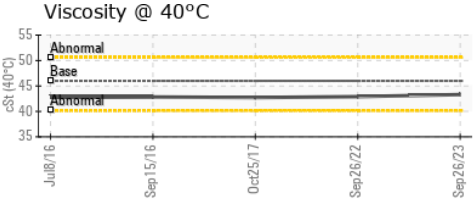
Ferrous Alloys



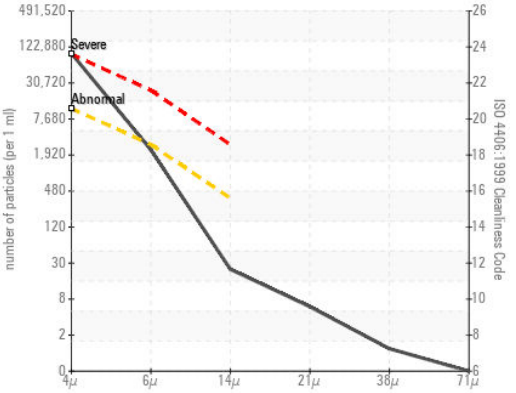

Non-ferrous Metals



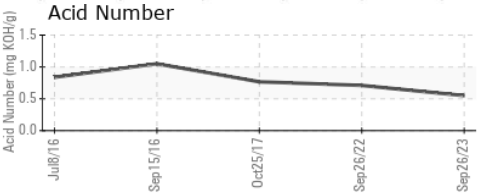

Viscosity @ 40°C




Particle Count




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WC0806878 **Received** : 07 Dec 2023
**Lab Number** : 06027727 **Diagnosed** : 08 Dec 2023
**Unique Number** : 10777518 **Diagnostician** : Doug Bogart
**Test Package** : IND 2 ( Additional Tests: KF, PQ )

*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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