# PROBLEM SUMMARY

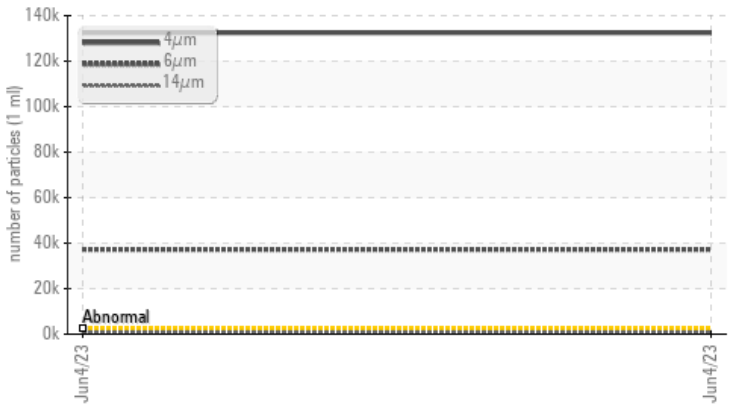
Sample Rating Trend


**VISCOSITY**

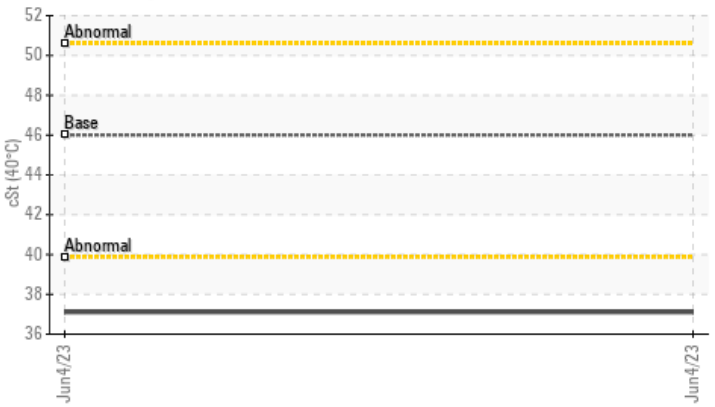
Machine Id
## PRESS 219
Component
**Hydraulic System**
Fluid
**AW HYDRAULIC OIL ISO 46 (--- GAL)**

## COMPONENT CONDITION SUMMARY

Particle Trend




Viscosity @ 40°C




## RECOMMENDATION

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

## PROBLEMATIC TEST RESULTS

| | | | | | | |
|---|---|---|---|---|---|---|
| Sample Status | | | | **ABNORMAL** | --- | --- |
| Particles >4µm | | ASTM D7647 | >2500 | ▲ **132421** | --- | --- |
| Particles >6µm | | ASTM D7647 | >640 | ▲ **37195** | --- | --- |
| Particles >14µm | | ASTM D7647 | >160 | ▲ **1045** | --- | --- |
| Particles >21µm | | ASTM D7647 | >40 | ▲ **171** | --- | --- |
| Oil Cleanliness | | ISO 4406 (c) | >18/16/14 | ▲ **24/22/17** | --- | --- |
| Visc @ 40°C | cSt | ASTM D445 | 46 | ▲ **37.11** | --- | --- |

**Customer Id:** GRAFAY
**Sample No.:** KFS0002092
**Lab Number:** 05864248
**Test Package:** IND 2

*To manage this report scan the QR code*

*To discuss the diagnosis or test data:*
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

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

## RECOMMENDED ACTIONS

| Action | Status | Date | Done By | Description |
|---|---|---|---|---|
| Change Filter | --- | --- | ? | We recommend you service the filters on this component. |

## HISTORICAL DIAGNOSIS

KIMBRO FLUID SOLUTIONS

# OIL ANALYSIS REPORT

Sample Rating Trend


**VISCOSITY**

Machine Id
## PRESS 219
Component
### Hydraulic System
Fluid
### AW HYDRAULIC OIL ISO 46 (--- GAL)

## DIAGNOSIS

**Recommendation**
We recommend you service the filters on this component. 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 oil viscosity is lower than normal. Confirm oil type. The AN level is acceptable for this fluid.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **KFS0002092** | --- | --- |
| Sample Date | | Client Info | | **04 Jun 2023** | --- | --- |
| Machine Age | hrs | Client Info | | **0** | --- | --- |
| Oil Age | hrs | Client Info | | **0** | --- | --- |
| Oil Changed | | Client Info | | **N/A** | --- | --- |
| Sample Status | | | | **ABNORMAL** | --- | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >20 | **13** | --- | --- |
| Chromium | ppm | ASTM D5185m | >20 | **<1** | --- | --- |
| Nickel | ppm | ASTM D5185m | >20 | **0** | --- | --- |
| Titanium | ppm | ASTM D5185m | | **<1** | --- | --- |
| Silver | ppm | ASTM D5185m | | **0** | --- | --- |
| Aluminum | ppm | ASTM D5185m | >20 | **<1** | --- | --- |
| Lead | ppm | ASTM D5185m | >20 | **0** | --- | --- |
| Copper | ppm | ASTM D5185m | >20 | **19** | --- | --- |
| Tin | ppm | ASTM D5185m | >20 | **0** | --- | --- |
| Vanadium | ppm | ASTM D5185m | | **0** | --- | --- |
| Cadmium | ppm | ASTM D5185m | | **0** | --- | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | 5 | **0** | --- | --- |
| Barium | ppm | ASTM D5185m | 5 | **0** | --- | --- |
| Molybdenum | ppm | ASTM D5185m | 5 | **<1** | --- | --- |
| Manganese | ppm | ASTM D5185m | | **<1** | --- | --- |
| Magnesium | ppm | ASTM D5185m | 25 | **2** | --- | --- |
| Calcium | ppm | ASTM D5185m | 200 | **91** | --- | --- |
| Phosphorus | ppm | ASTM D5185m | 300 | **300** | --- | --- |
| Zinc | ppm | ASTM D5185m | 370 | **348** | --- | --- |
| Sulfur | ppm | ASTM D5185m | 2500 | **2157** | --- | --- |

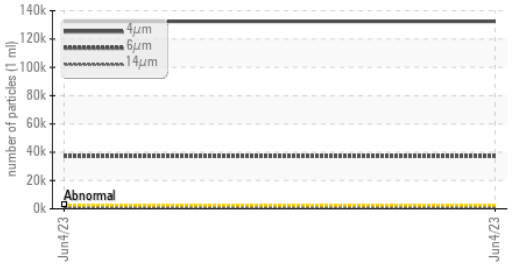
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >15 | **14** | --- | --- |
| Sodium | ppm | ASTM D5185m | | **<1** | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | **0** | --- | --- |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >2500 | ▲ **132421** | --- | --- |
| Particles >6µm | | ASTM D7647 | >640 | ▲ **37195** | --- | --- |
| Particles >14µm | | ASTM D7647 | >160 | ▲ **1045** | --- | --- |
| Particles >21µm | | ASTM D7647 | >40 | ▲ **171** | --- | --- |
| Particles >38µm | | ASTM D7647 | >10 | **7** | --- | --- |
| Particles >71µm | | ASTM D7647 | >3 | **1** | --- | --- |
| Oil Cleanliness | | ISO 4406 (c) | >18/16/14 | ▲ **24/22/17** | --- | --- |

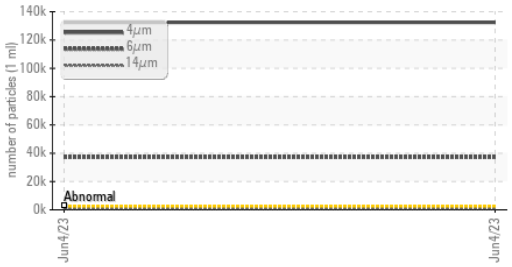
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.57 | **0.34** | --- | --- |

# OIL ANALYSIS REPORT

Particle Trend




Particle Trend

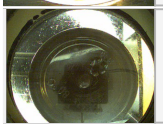



Viscosity @ 40°C


Acid Number

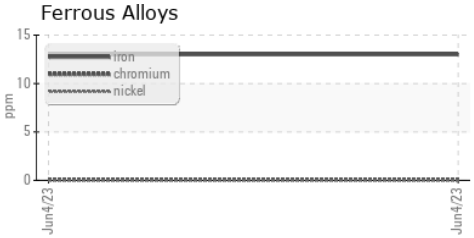

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **LIGHT** | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | --- | --- |
| Precipitate | scalar | *Visual | NONE | **NONE** | --- | --- |
| Silt | 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 | >0.05 | **NEG** | --- | --- |
| Free Water | scalar | *Visual | | **NEG** | --- | --- |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 46 | ▲ **37.11** | --- | --- |

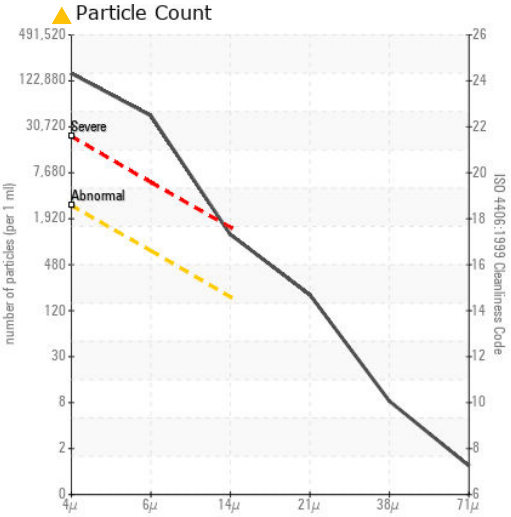
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | *no image* | *no image* |
| Bottom | | |  | *no image* | *no image* |

## GRAPHS

Ferrous Alloys

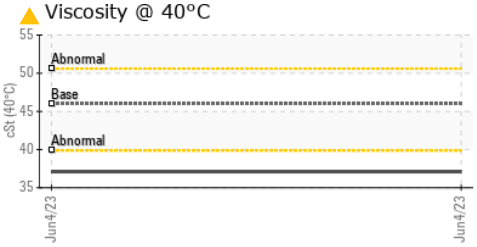



Particle Count




Non-ferrous Metals


Viscosity @ 40°C




Acid Number


Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : KFS0002092
**Lab Number** : 05864248
**Unique Number** : 10498713
**Test Package** : IND 2

**Received** : 05 Jun 2023
**Diagnosed** : 09 Jun 2023
**Diagnostician** : Jonathan Hester

*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)*

**GRAMMER**
11 E PARK DR
FAYETTEVILLE, TN
US 37334
Contact: JOHN SMITH
jsmith@industrialcoatings.com
T: (905)555-1212
F: (905)555-2121