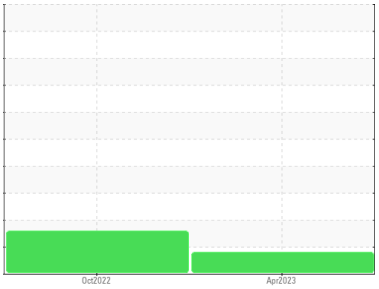
# PROBLEM SUMMARY

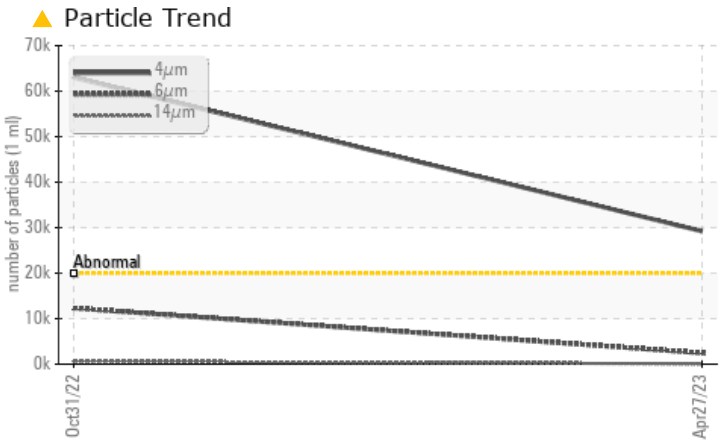
Sample Rating Trend




ISO

Machine Id
**HT 85**
Component
**Agitator Gearbox**
Fluid
**GEAR OIL LS 80W90 (--- LTR)**

## COMPONENT CONDITION SUMMARY




## RECOMMENDATION

Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

| | | | | | | |
|---|---|---|---|---|---|---|
| Sample Status | | | | **ATTENTION** | ABNORMAL | --- |
| Particles >4µm | | ASTM D7647 | >20000 | ▲ **29210** | ▲ 63024 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >21/19/16 | ▲ **22/18/13** | ▲ 23/21/17 | --- |

**Customer Id:** KRAMASIOW
**Sample No.:** USP248906
**Lab Number:** 05835335
**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

| Action | Status | Date | Done By | Description |
|---|---|---|---|---|
| Other Action (see Note) | DONE | May 17 2023 | ? | No recommended actions |

## HISTORICAL DIAGNOSIS

**31 Oct 2022 Diag: Doug Bogart**

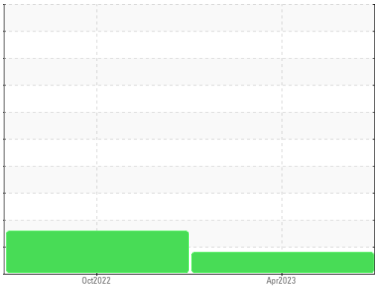
ISO

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. Please specify the brand and viscosity of the oil on your next sample.All component wear rates are normal. 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




ISO

Machine Id
**HT 85**
Component
**Agitator Gearbox**
Fluid
**GEAR OIL LS 80W90 (--- LTR)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor.

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

**Contamination**
There is a moderate 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 | | **USP248906** | USP234447 | --- |
| Sample Date | | Client Info | | **27 Apr 2023** | 31 Oct 2022 | --- |
| Machine Age | hrs | Client Info | | **0** | 0 | --- |
| Oil Age | hrs | Client Info | | **0** | 0 | --- |
| Oil Changed | | Client Info | | **N/A** | N/A | --- |
| Sample Status | | | | **ATTENTION** | ABNORMAL | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >150 | **9** | 13 | --- |
| Chromium | ppm | ASTM D5185m | >10 | **0** | 0 | --- |
| Nickel | ppm | ASTM D5185m | >10 | **0** | 0 | --- |
| Titanium | ppm | ASTM D5185m | | **0** | 0 | --- |
| Silver | ppm | ASTM D5185m | | **0** | 0 | --- |
| Aluminum | ppm | ASTM D5185m | >25 | **0** | 0 | --- |
| Lead | ppm | ASTM D5185m | >100 | **0** | 0 | --- |
| Copper | ppm | ASTM D5185m | >50 | **<1** | 0 | --- |
| Tin | ppm | ASTM D5185m | >10 | **<1** | <1 | --- |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | --- |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | 150 | **131** | 143 | --- |
| Barium | ppm | ASTM D5185m | | **0** | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | | **1** | 1 | --- |
| Manganese | ppm | ASTM D5185m | | **<1** | <1 | --- |
| Magnesium | ppm | ASTM D5185m | 10 | **<1** | <1 | --- |
| Calcium | ppm | ASTM D5185m | 70 | **7** | 7 | --- |
| Phosphorus | ppm | ASTM D5185m | 2000 | **1022** | 1030 | --- |
| Zinc | ppm | ASTM D5185m | 50 | **39** | 40 | --- |
| Sulfur | ppm | ASTM D5185m | 20000 | **16442** | 20494 | --- |

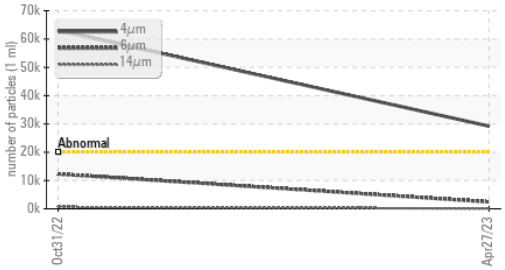
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >50 | **19** | 21 | --- |
| Sodium | ppm | ASTM D5185m | | **4** | 7 | --- |
| Potassium | ppm | ASTM D5185m | >20 | **4** | 4 | --- |
| Water | % | ASTM D6304 | >0.1 | **0.079** | 0.016 | --- |
| ppm Water | ppm | ASTM D6304 | >1000 | **795.0** | 161.8 | --- |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >20000 | ▲ **29210** | ▲ 63024 | --- |
| Particles >6µm | | ASTM D7647 | >5000 | **2445** | ▲ 12308 | --- |
| Particles >14µm | | ASTM D7647 | >640 | **56** | ▲ 644 | --- |
| Particles >21µm | | ASTM D7647 | >160 | **12** | 143 | --- |
| Particles >38µm | | ASTM D7647 | >40 | **1** | 2 | --- |
| Particles >71µm | | ASTM D7647 | >10 | **0** | 0 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >21/19/16 | ▲ **22/18/13** | ▲ 23/21/17 | --- |

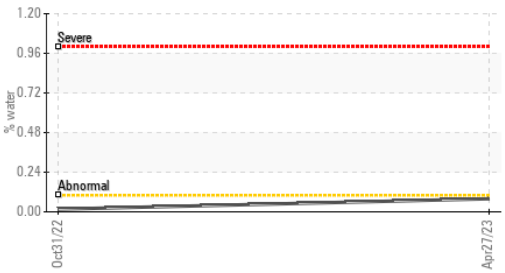
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | **1.64** | 1.66 | --- |

# OIL ANALYSIS REPORT

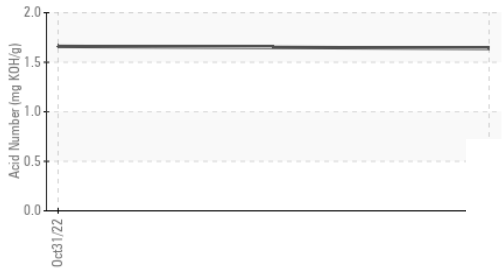
Particle Trend



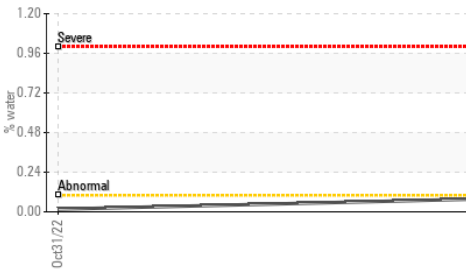

Water



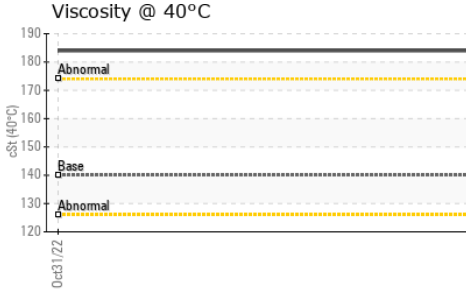

Acid Number




Water

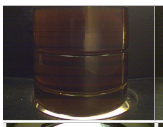
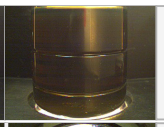
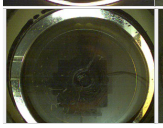



Viscosity @ 40°C



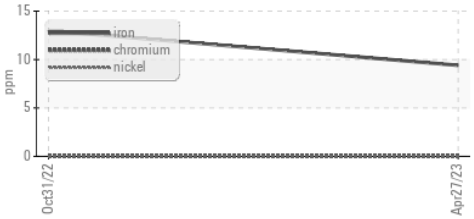

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | LIGHT | --- |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Silt | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Debris | scalar | *Visual | NONE | **NONE** | VLITE | --- |
| Sand/Dirt | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Appearance | scalar | *Visual | NORML | **NORML** | NORML | --- |
| Odor | scalar | *Visual | NORML | **NORML** | NORML | --- |
| Emulsified Water | scalar | *Visual | >0.1 | **NEG** | NEG | --- |
| Free Water | scalar | *Visual | | **NEG** | NEG | --- |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 140 | **184** | 184 | --- |

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

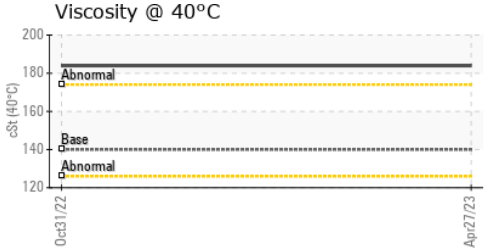
## GRAPHS

Ferrous Alloys

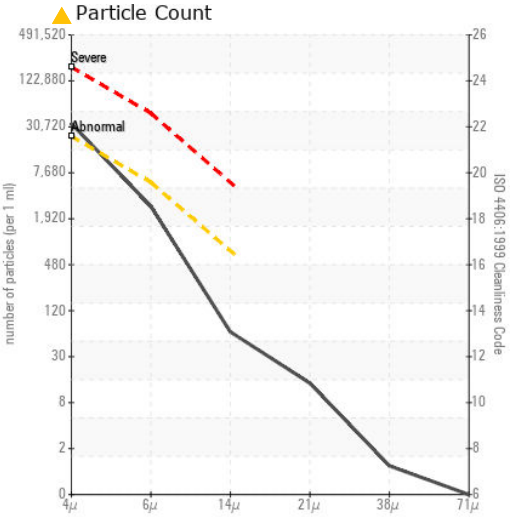



Non-ferrous Metals

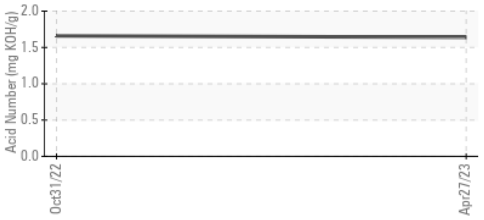

Viscosity @ 40°C




Particle Count




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : USP248906
**Lab Number** : 05835335
**Unique Number** : 10454138
**Test Package** : IND 2

**Received** : 02 May 2023
**Diagnosed** : 03 May 2023
**Diagnostician** : Doug Bogart

**KraftHeinz - Mason City - Plant 8360**
1022 12TH ST
MASON CITY, IA
US 50401
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:
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