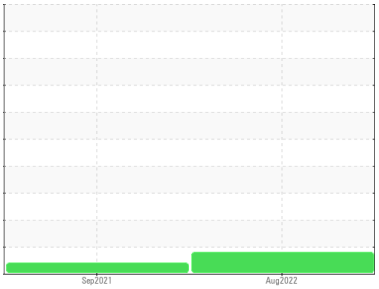
# PROBLEM SUMMARY

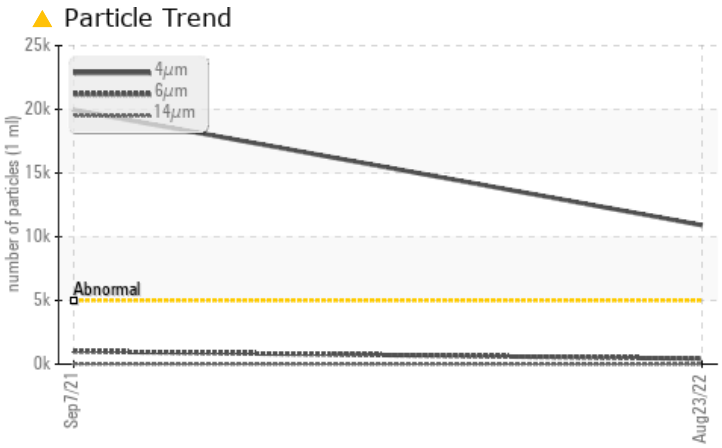
Sample Rating Trend




ISO

Area
**[348648]**
Machine Id
**BALER 2 (S/N 957010)**
Component
**Hydraulic System**
Fluid
**NOT GIVEN (--- GAL)**

## COMPONENT CONDITION SUMMARY




## RECOMMENDATION

Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

| | | | | | | |
|---|---|---|---|---|---|---|
| Sample Status | | | | **ABNORMAL** | ABNORMAL | --- |
| Particles >4µm | | ASTM D7647 | >5000 | ▲ **10906** | ▲ 19952 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | ▲ **21/16/11** | ▲ 21/17/12 | --- |

**Customer Id:** THRFAI
**Sample No.:** USP235997
**Lab Number:** 05637581
**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

**07 Sep 2021 Diag: Doug Bogart**

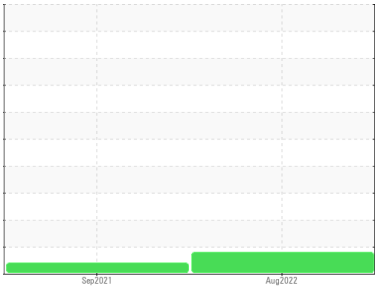
**ISO**

Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of silt (particulates < 6 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**

# OIL ANALYSIS REPORT

Sample Rating Trend




ISO

Area
**[348648]**
Machine Id
**BALER 2 (S/N 957010)**
Component
**Hydraulic System**
Fluid
**NOT GIVEN (--- GAL)**

## DIAGNOSIS

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

**Wear**
All 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 | | **USP235997** | USP222449 | --- |
| Sample Date | | Client Info | | **23 Aug 2022** | 07 Sep 2021 | --- |
| Machine Age | hrs | Client Info | | **0** | 0 | --- |
| Oil Age | hrs | Client Info | | **0** | 0 | --- |
| Oil Changed | | Client Info | | **N/A** | N/A | --- |
| Sample Status | | | | **ABNORMAL** | ABNORMAL | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >20 | **5** | 6 | --- |
| Chromium | ppm | ASTM D5185m | >20 | **<1** | <1 | --- |
| Nickel | ppm | ASTM D5185m | >20 | **0** | 0 | --- |
| Titanium | ppm | ASTM D5185m | | **0** | 0 | --- |
| Silver | ppm | ASTM D5185m | | **1** | <1 | --- |
| Aluminum | ppm | ASTM D5185m | >20 | **<1** | <1 | --- |
| Lead | ppm | ASTM D5185m | >20 | **0** | <1 | --- |
| Copper | ppm | ASTM D5185m | >20 | **<1** | <1 | --- |
| Tin | ppm | ASTM D5185m | >20 | **0** | 0 | --- |
| Antimony | ppm | ASTM D5185m | | **---** | 0 | --- |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | --- |
| Cadmium | ppm | ASTM D5185m | | **<1** | <1 | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **0** | <1 | --- |
| Barium | ppm | ASTM D5185m | | **0** | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | | **<1** | <1 | --- |
| Manganese | ppm | ASTM D5185m | | **0** | <1 | --- |
| Magnesium | ppm | ASTM D5185m | | **5** | 8 | --- |
| Calcium | ppm | ASTM D5185m | | **152** | 153 | --- |
| Phosphorus | ppm | ASTM D5185m | | **492** | 468 | --- |
| Zinc | ppm | ASTM D5185m | | **624** | 720 | --- |
| Sulfur | ppm | ASTM D5185m | | **7443** | 7064 | --- |

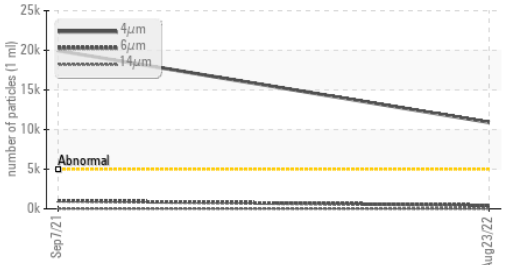
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >15 | **<1** | <1 | --- |
| Sodium | ppm | ASTM D5185m | | **2** | 2 | --- |
| Potassium | ppm | ASTM D5185m | >20 | **0** | <1 | --- |
| Water | % | ASTM D6304 | >0.05 | **0.020** | 0.012 | --- |
| ppm Water | ppm | ASTM D6304 | >500 | **200.4** | 124.3 | --- |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >5000 | ▲ **10906** | ▲ 19952 | --- |
| Particles >6µm | | ASTM D7647 | >1300 | **419** | 1004 | --- |
| Particles >14µm | | ASTM D7647 | >160 | **12** | 21 | --- |
| Particles >21µm | | ASTM D7647 | >40 | **5** | 4 | --- |
| Particles >38µm | | ASTM D7647 | >10 | **1** | 0 | --- |
| Particles >71µm | | ASTM D7647 | >3 | **0** | 0 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | ▲ **21/16/11** | ▲ 21/17/12 | --- |

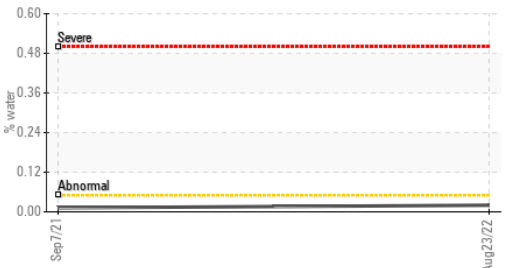
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | **0.77** | 0.830 | --- |

# OIL ANALYSIS REPORT

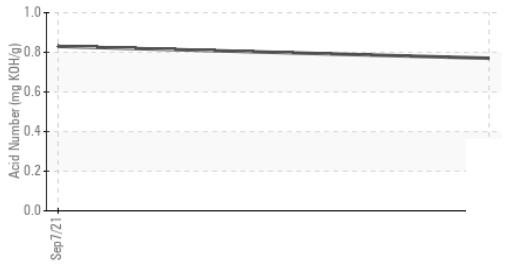
Particle Trend



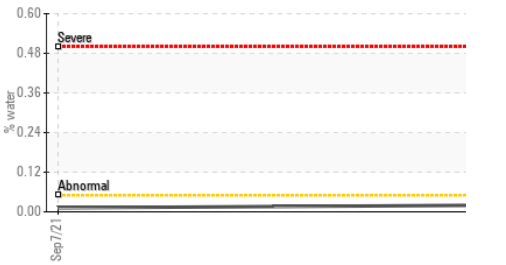

Water



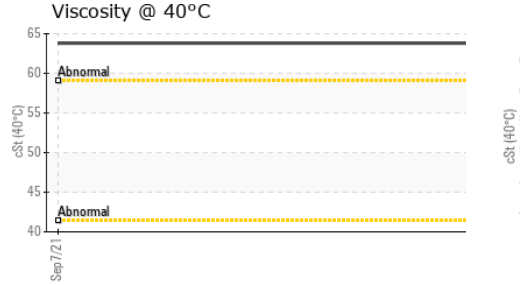

Acid Number




Water

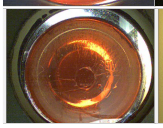



Viscosity @ 40°C



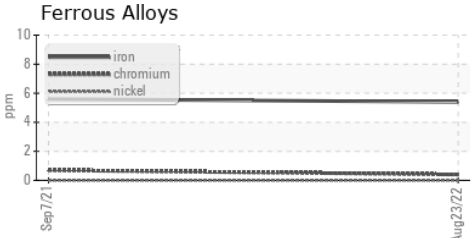

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Silt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

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | | **63.8** | 63.8 | --- |

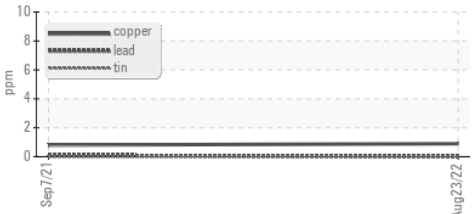
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  |  | *no image* |
| Bottom | | |  |  | *no image* |

## GRAPHS

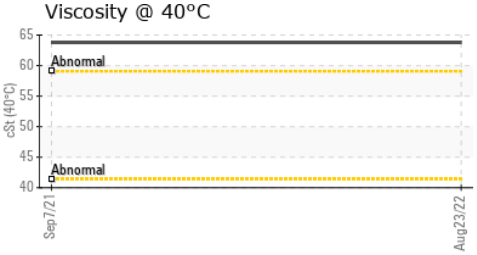
Ferrous Alloys



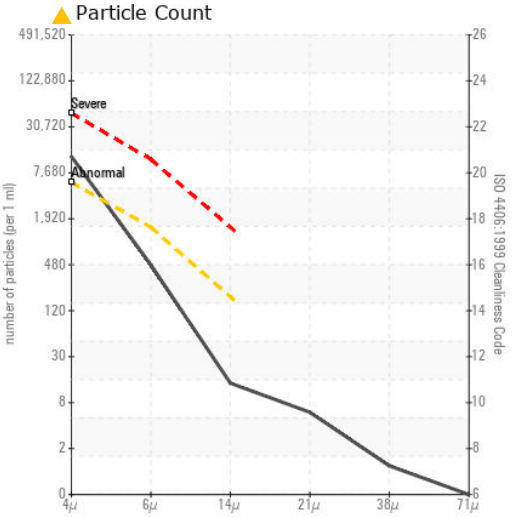

Non-ferrous Metals



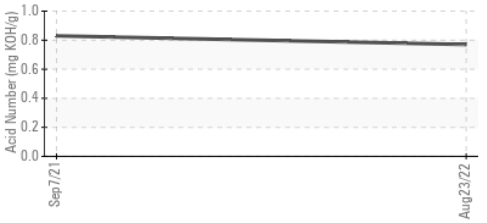

Viscosity @ 40°C




Particle Count




Acid Number




Certificate L2367

| | | | |
|---|---|---|---|
| **Laboratory** | : WearCheck USA - 501 Madison Ave., Cary, NC 27513 | | |
| **Sample No.** | : USP235997 | **Received** | : 09 Sep 2022 |
| **Lab Number** | : 05637581 | **Diagnosed** | : 12 Sep 2022 |
| **Unique Number** | : 10127111 | **Diagnostician** | : Doug Bogart |
| **Test Package** | : IND 2 | | |

*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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