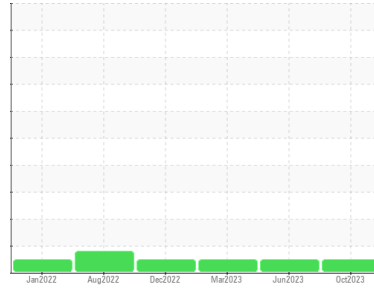




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**FACER 1**  
 Component  
**Hydraulic System**  
 Fluid  
**NOT GIVEN (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

### Wear

All component wear rates are normal.

### Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

### 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 | <b>PTK0005026</b>  | PTK0004498  | PTK0003116  |
| Sample Date   | Client Info | <b>25 Oct 2023</b> | 20 Jun 2023 | 08 Mar 2023 |
| Machine Age   | hrs         | Client Info        | 0           | 0           |
| Oil Age       | hrs         | Client Info        | 0           | 0           |
| Oil Changed   | Client Info | <b>Filtered</b>    | Filtered    | Filtered    |
| Sample Status |             | <b>NORMAL</b>      | NORMAL      | NORMAL      |

## WEAR METALS

| method   | limit/base | current         | history1     | history2 |    |
|----------|------------|-----------------|--------------|----------|----|
| Iron     | ppm        | ASTM D5185m >20 | <b>0</b>     | 0        | <1 |
| Chromium | ppm        | ASTM D5185m >10 | <b>&lt;1</b> | 0        | 0  |
| Nickel   | ppm        | ASTM D5185m >10 | <b>0</b>     | 0        | 0  |
| Titanium | ppm        | ASTM D5185m     | <b>0</b>     | 0        | 0  |
| Silver   | ppm        | ASTM D5185m     | <b>0</b>     | 0        | 0  |
| Aluminum | ppm        | ASTM D5185m >10 | <b>&lt;1</b> | 1        | 0  |
| Lead     | ppm        | ASTM D5185m >10 | <b>0</b>     | 0        | 0  |
| Copper   | ppm        | ASTM D5185m >75 | <b>6</b>     | 13       | 11 |
| Tin      | ppm        | ASTM D5185m >10 | <b>0</b>     | 0        | 0  |
| Vanadium | ppm        | ASTM D5185m     | <b>0</b>     | 0        | 0  |
| Cadmium  | ppm        | ASTM D5185m     | <b>0</b>     | 0        | 0  |

## ADDITIVES

| method     | limit/base | current     | history1     | history2 |      |
|------------|------------|-------------|--------------|----------|------|
| Boron      | ppm        | ASTM D5185m | <b>0</b>     | 0        | 2    |
| Barium     | ppm        | ASTM D5185m | <b>&lt;1</b> | 5        | 0    |
| Molybdenum | ppm        | ASTM D5185m | <b>153</b>   | 115      | 117  |
| Manganese  | ppm        | ASTM D5185m | <b>0</b>     | 0        | 0    |
| Magnesium  | ppm        | ASTM D5185m | <b>2</b>     | <1       | 1    |
| Calcium    | ppm        | ASTM D5185m | <b>53</b>    | 25       | 38   |
| Phosphorus | ppm        | ASTM D5185m | <b>473</b>   | 403      | 417  |
| Zinc       | ppm        | ASTM D5185m | <b>471</b>   | 372      | 392  |
| Sulfur     | ppm        | ASTM D5185m | <b>2057</b>  | 1652     | 1784 |

## CONTAMINANTS

| method    | limit/base | current         | history1     | history2 |   |
|-----------|------------|-----------------|--------------|----------|---|
| Silicon   | ppm        | ASTM D5185m >20 | <b>3</b>     | <1       | 2 |
| Sodium    | ppm        | ASTM D5185m     | <b>0</b>     | <1       | 0 |
| Potassium | ppm        | ASTM D5185m >20 | <b>&lt;1</b> | 0        | 0 |

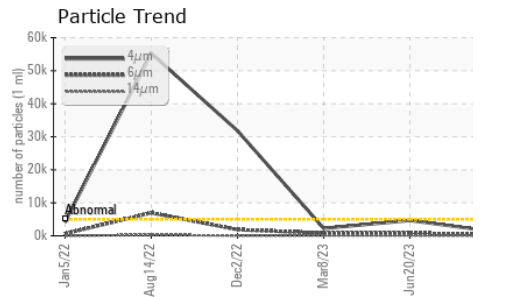
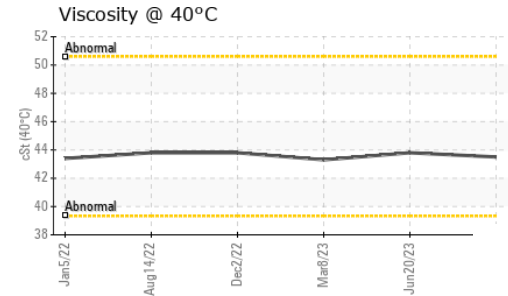
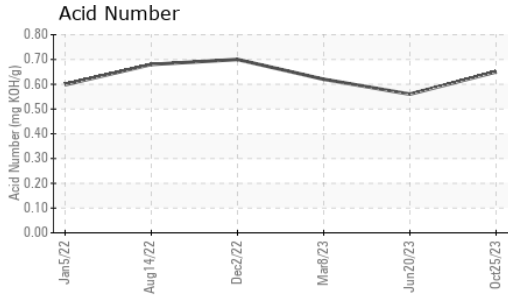
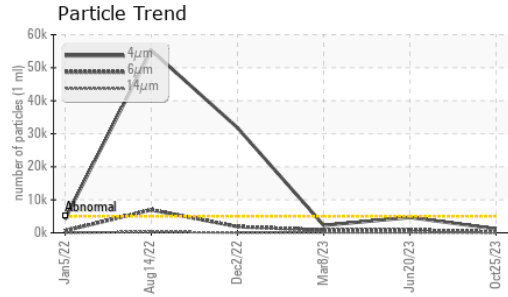
## FLUID CLEANLINESS

| method          | limit/base   | current   | history1        | history2 |          |
|-----------------|--------------|-----------|-----------------|----------|----------|
| Particles >4µm  | ASTM D7647   | >5000     | <b>1185</b>     | 4656     | 2267     |
| Particles >6µm  | ASTM D7647   | >1300     | <b>243</b>      | 858      | 822      |
| Particles >14µm | ASTM D7647   | >160      | <b>16</b>       | 66       | 83       |
| Particles >21µm | ASTM D7647   | >40       | <b>3</b>        | 19       | 18       |
| Particles >38µm | ASTM D7647   | >10       | <b>0</b>        | 1        | 1        |
| Particles >71µm | ASTM D7647   | >3        | <b>0</b>        | 0        | 0        |
| Oil Cleanliness | ISO 4406 (c) | >19/17/14 | <b>17/15/11</b> | 19/17/13 | 18/17/14 |

## FLUID DEGRADATION

| method           | limit/base | current    | history1    | history2 |      |
|------------------|------------|------------|-------------|----------|------|
| Acid Number (AN) | mg KOH/g   | ASTM D8045 | <b>0.65</b> | 0.56     | 0.62 |

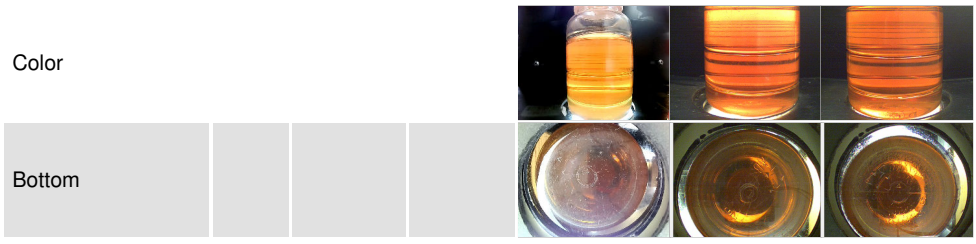
# OIL ANALYSIS REPORT



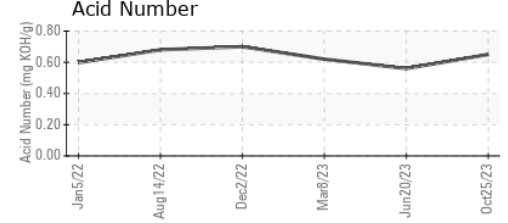
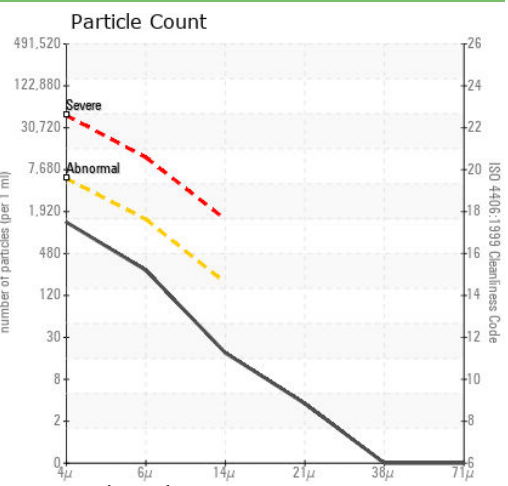
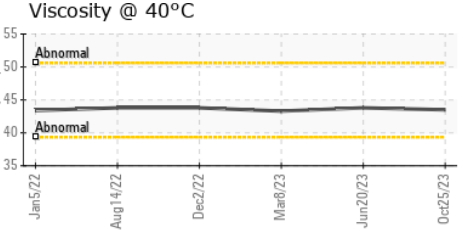
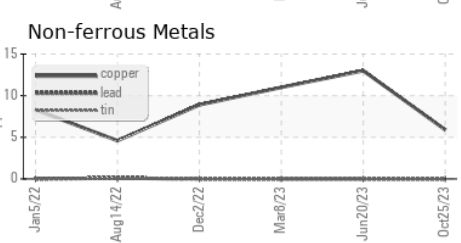
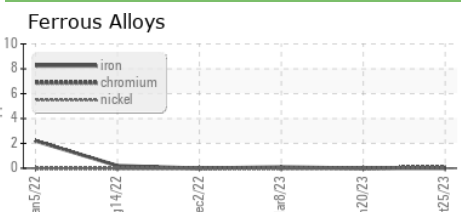
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| Precipitate      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Silt             | scalar | *Visual    | NONE    | NONE     | NONE     |
| Debris           | scalar | *Visual    | NONE    | NONE     | LIGHT    |
| 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  | 43.5    | 43.8     | 43.3     |

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



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PTK0005026 **Received** : 02 Nov 2023  
**Lab Number** : 05996665 **Diagnosed** : 03 Nov 2023  
**Unique Number** : 10725025 **Diagnostician** : Wes Davis  
**Test Package** : MOB 2

**LIBERTY CARTON**  
 870 LOUISIANA AVE S  
 MINNEAPOLIS, MN  
 US 55426  
 Contact: BRENT WENTWORTH  
 brentwentworth@libertycarton.com  
 T: (763)540-9589  
 F:

Certificate L2367  
 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)