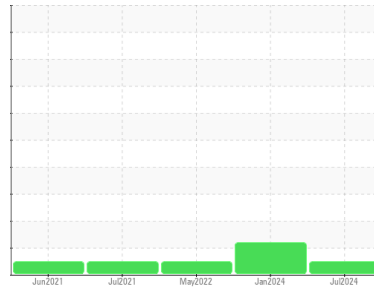




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**CENTRAL**  
 Component  
**Hydraulic System**  
 Fluid  
**ESSO NUTO H ISO 46 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are 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>USP0015035</b>  | USP0004846  | USP235780   |
| Sample Date        | Client Info |             |            | <b>17 Jul 2024</b> | 17 Jan 2024 | 01 May 2022 |
| Machine Age        | hrs         | Client Info |            | <b>0</b>           | 0           | 0           |
| Oil Age            | hrs         | Client Info |            | <b>0</b>           | 0           | 0           |
| Oil Changed        | Client Info |             |            | <b>N/A</b>         | N/A         | N/A         |
| Sample Status      |             |             |            | <b>NORMAL</b>      | ABNORMAL    | NORMAL      |

| WEAR METALS |     | method      | limit/base | current  | history1 | history2 |
|-------------|-----|-------------|------------|----------|----------|----------|
| Iron        | ppm | ASTM D5185m | >20        | <b>0</b> | 0        | <1       |
| Chromium    | ppm | ASTM D5185m | >20        | <b>0</b> | 0        | 0        |
| Nickel      | ppm | ASTM D5185m | >20        | <b>0</b> | 0        | 0        |
| Titanium    | ppm | ASTM D5185m |            | <b>0</b> | 0        | 0        |
| Silver      | ppm | ASTM D5185m |            | <b>0</b> | 0        | <1       |
| Aluminum    | ppm | ASTM D5185m | >20        | <b>0</b> | 0        | 0        |
| Lead        | ppm | ASTM D5185m | >20        | <b>0</b> | 0        | 0        |
| Copper      | ppm | ASTM D5185m | >20        | <b>9</b> | 10       | 8        |
| Tin         | ppm | ASTM D5185m | >20        | <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 | 0          | <b>0</b>     | 0        | 1        |
| Barium     | ppm | ASTM D5185m | 0          | <b>0</b>     | 0        | 0        |
| Molybdenum | ppm | ASTM D5185m | 0          | <b>0</b>     | 0        | <1       |
| Manganese  | ppm | ASTM D5185m |            | <b>0</b>     | 0        | 0        |
| Magnesium  | ppm | ASTM D5185m | 5          | <b>&lt;1</b> | 1        | 6        |
| Calcium    | ppm | ASTM D5185m | 50         | <b>55</b>    | 54       | 62       |
| Phosphorus | ppm | ASTM D5185m | 330        | <b>323</b>   | 344      | 318      |
| Zinc       | ppm | ASTM D5185m | 410        | <b>402</b>   | 438      | 433      |
| Sulfur     | ppm | ASTM D5185m | 2700       | <b>983</b>   | 804      | 753      |

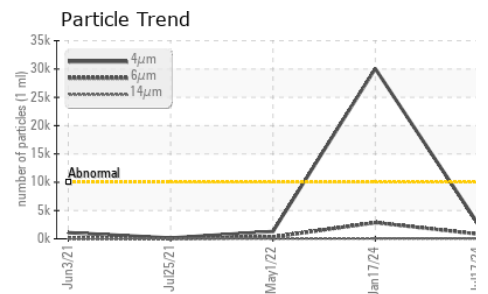
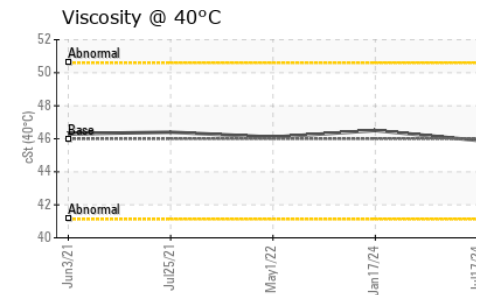
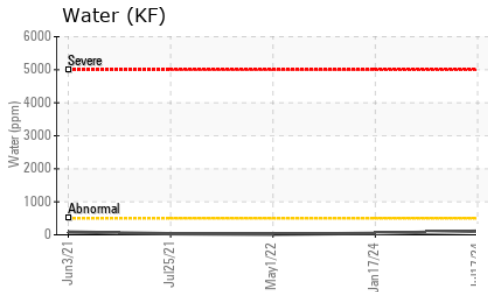
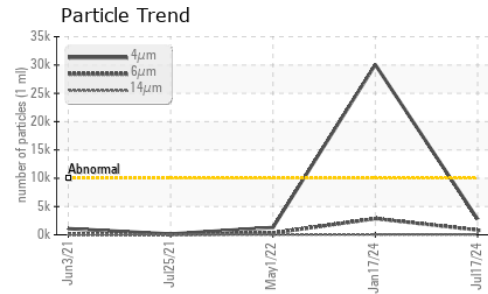
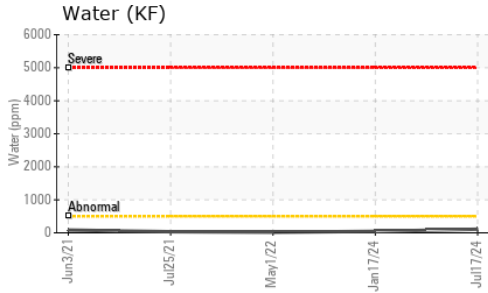
| CONTAMINANTS |     | method      | limit/base | current      | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon      | ppm | ASTM D5185m | >15        | <b>0</b>     | 0        | 0        |
| Sodium       | ppm | ASTM D5185m |            | <b>1</b>     | <1       | 0        |
| Potassium    | ppm | ASTM D5185m | >20        | <b>0</b>     | <1       | 1        |
| Water        | %   | ASTM D6304  | >0.05      | <b>0.011</b> | 0.004    | 0.002    |
| ppm Water    | ppm | ASTM D6304  | >500       | <b>110</b>   | 45       | 17.1     |

| FLUID CLEANLINESS |  | method       | limit/base | current         | history1   | history2 |
|-------------------|--|--------------|------------|-----------------|------------|----------|
| Particles >4µm    |  | ASTM D7647   | >10000     | <b>2765</b>     | ▲ 30063    | 1301     |
| Particles >6µm    |  | ASTM D7647   | >2500      | <b>843</b>      | ● 2864     | 323      |
| Particles >14µm   |  | ASTM D7647   | >640       | <b>50</b>       | 48         | 15       |
| Particles >21µm   |  | ASTM D7647   | >160       | <b>8</b>        | 10         | 0        |
| Particles >38µm   |  | ASTM D7647   | >40        | <b>1</b>        | 0          | 0        |
| Particles >71µm   |  | ASTM D7647   | >10        | <b>0</b>        | 0          | 0        |
| Oil Cleanliness   |  | ISO 4406 (c) | >20/18/16  | <b>19/17/13</b> | ▲ 22/19/13 | 18/16/11 |

| FLUID DEGRADATION |          | method     | limit/base | current     | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN)  | mg KOH/g | ASTM D8045 | 0.45       | <b>0.32</b> | 0.28     | 0.28     |



# OIL ANALYSIS REPORT



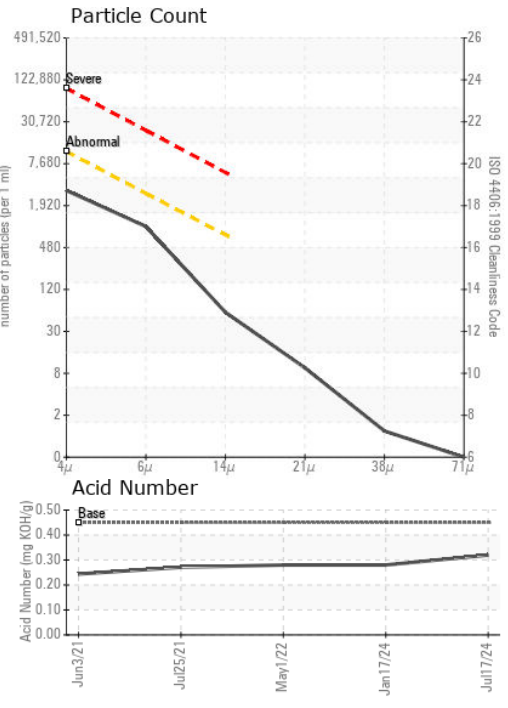
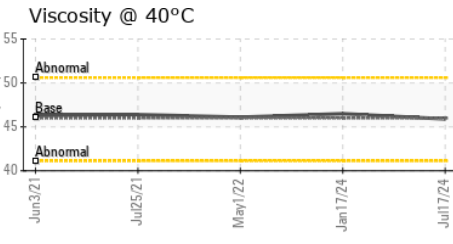
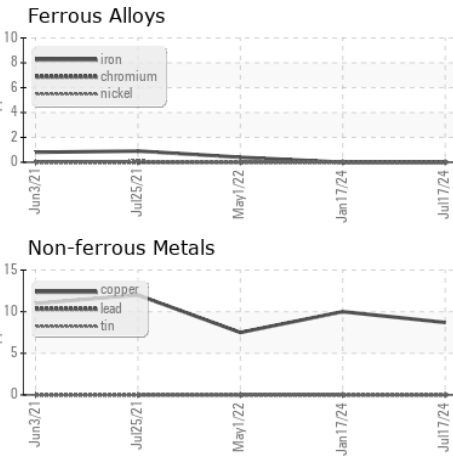
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| Precipitate      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Silt             | scalar | *Visual    | NONE    | NONE     | NONE     |
| Debris           | scalar | *Visual    | NONE    | NONE     | 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 46 | 45.9    | 46.5     | 46.1     |

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



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : USP0015035      **Received** : 18 Jul 2024  
**Lab Number** : 06240379      **Tested** : 19 Jul 2024  
**Unique Number** : 11129213      **Diagnosed** : 19 Jul 2024 - Doug Bogart  
**Test Package** : IND 2

**KraftHeinz - Newberry - Plant 8335**  
 3704 LOUIS RICH DR  
 NEWBERRY, SC  
 US 29108  
 Contact:

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)