

# OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id  
**3504**  
Component  
**Gearbox**  
Fluid  
**TULCO LUBSOIL 4220 SYN GEAR 220 (200 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.

**Fluid Condition**  
The condition of the oil is acceptable for the time in service.

## SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1 | history2 |
|---------------|-------------|-------------|--------------------|----------|----------|
| Sample Number | Client Info |             | <b>TO50002379</b>  | ---      | ---      |
| Sample Date   | Client Info |             | <b>21 May 2024</b> | ---      | ---      |
| Machine Age   | hrs         | Client Info | <b>13540</b>       | ---      | ---      |
| Oil Age       | hrs         | Client Info | <b>0</b>           | ---      | ---      |
| Oil Changed   | Client Info |             | <b>Changed</b>     | ---      | ---      |
| Sample Status |             |             | <b>NORMAL</b>      | ---      | ---      |

## CONTAMINATION

|       | method    | limit/base | current    | history1 | history2 |
|-------|-----------|------------|------------|----------|----------|
| Water | WC Method | >0.2       | <b>NEG</b> | ---      | ---      |

## WEAR METALS

|          | method     | limit/base       | current   | history1 | history2 |
|----------|------------|------------------|-----------|----------|----------|
| PQ       | ASTM D8184 |                  | <b>17</b> | ---      | ---      |
| Iron     | ppm        | ASTM D5185m >200 | <b>11</b> | ---      | ---      |
| Chromium | ppm        | ASTM D5185m >15  | <b>0</b>  | ---      | ---      |
| Nickel   | ppm        | ASTM D5185m >15  | <b>0</b>  | ---      | ---      |
| Titanium | ppm        | ASTM D5185m      | <b>0</b>  | ---      | ---      |
| Silver   | ppm        | ASTM D5185m      | <b>0</b>  | ---      | ---      |
| Aluminum | ppm        | ASTM D5185m >25  | <b>0</b>  | ---      | ---      |
| Lead     | ppm        | ASTM D5185m >100 | <b>0</b>  | ---      | ---      |
| Copper   | ppm        | ASTM D5185m >200 | <b>1</b>  | ---      | ---      |
| Tin      | ppm        | ASTM D5185m >25  | <b>0</b>  | ---      | ---      |
| Vanadium | ppm        | ASTM D5185m      | <b>0</b>  | ---      | ---      |
| Cadmium  | ppm        | ASTM D5185m      | <b>0</b>  | ---      | ---      |

## ADDITIVES

|            | method | limit/base       | current     | history1 | history2 |
|------------|--------|------------------|-------------|----------|----------|
| Boron      | ppm    | ASTM D5185m      | <b>3</b>    | ---      | ---      |
| Barium     | ppm    | ASTM D5185m      | <b>0</b>    | ---      | ---      |
| Molybdenum | ppm    | ASTM D5185m      | <b>2</b>    | ---      | ---      |
| Manganese  | ppm    | ASTM D5185m      | <b>0</b>    | ---      | ---      |
| Magnesium  | ppm    | ASTM D5185m      | <b>31</b>   | ---      | ---      |
| Calcium    | ppm    | ASTM D5185m      | <b>31</b>   | ---      | ---      |
| Phosphorus | ppm    | ASTM D5185m 230  | <b>372</b>  | ---      | ---      |
| Zinc       | ppm    | ASTM D5185m      | <b>38</b>   | ---      | ---      |
| Sulfur     | ppm    | ASTM D5185m 2530 | <b>5862</b> | ---      | ---      |

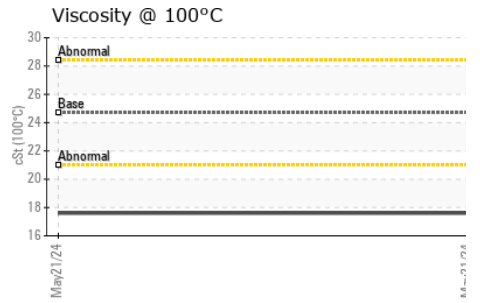
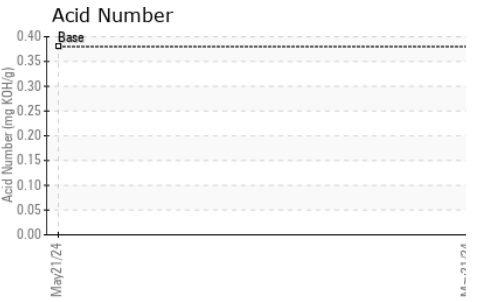
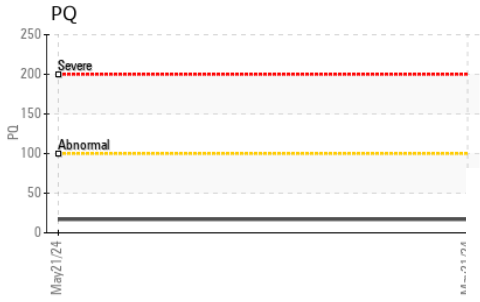
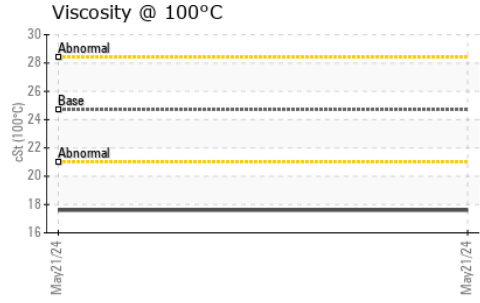
## CONTAMINANTS

|           | method | limit/base      | current      | history1 | history2 |
|-----------|--------|-----------------|--------------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >50 | <b>&lt;1</b> | ---      | ---      |
| Sodium    | ppm    | ASTM D5185m     | <b>0</b>     | ---      | ---      |
| Potassium | ppm    | ASTM D5185m >20 | <b>1</b>     | ---      | ---      |


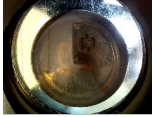
## VISUAL

|                  | method | limit/base    | current      | history1 | history2 |
|------------------|--------|---------------|--------------|----------|----------|
| White Metal      | scalar | *Visual NONE  | <b>NONE</b>  | ---      | ---      |
| Yellow Metal     | scalar | *Visual NONE  | <b>NONE</b>  | ---      | ---      |
| Precipitate      | scalar | *Visual NONE  | <b>NONE</b>  | ---      | ---      |
| Silt             | scalar | *Visual NONE  | <b>NONE</b>  | ---      | ---      |
| Debris           | scalar | *Visual NONE  | <b>NONE</b>  | ---      | ---      |
| Sand/Dirt        | scalar | *Visual NONE  | <b>NONE</b>  | ---      | ---      |
| Appearance       | scalar | *Visual NORML | <b>NORML</b> | ---      | ---      |
| Odor             | scalar | *Visual NORML | <b>NORML</b> | ---      | ---      |
| Emulsified Water | scalar | *Visual >0.2  | <b>NEG</b>   | ---      | ---      |
| Free Water       | scalar | *Visual       | <b>NEG</b>   | ---      | ---      |

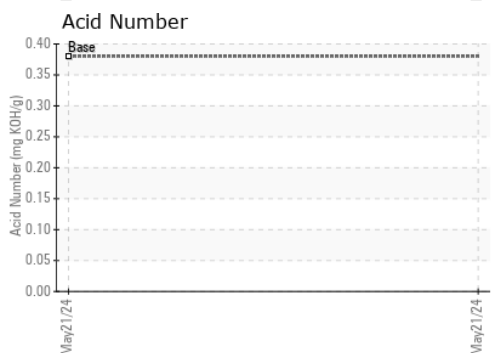
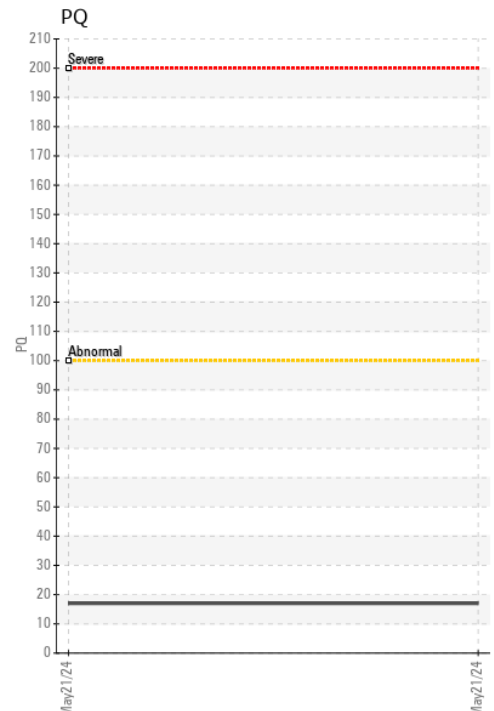
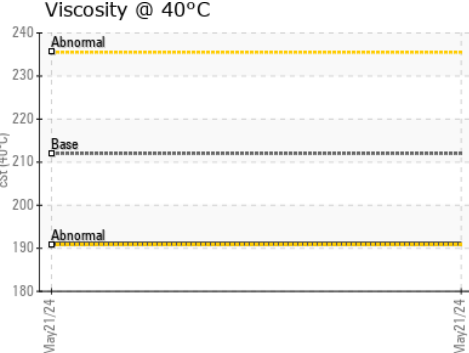
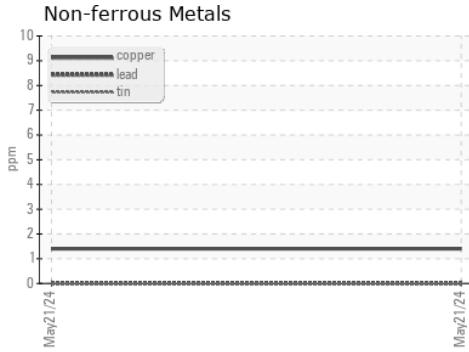
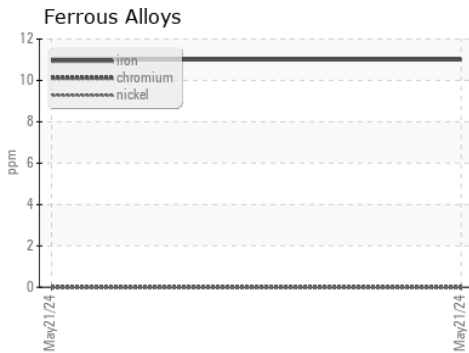
# OIL ANALYSIS REPORT



| FLUID PROPERTIES     | method | limit/base | current | history1    | history2 |     |
|----------------------|--------|------------|---------|-------------|----------|-----|
| Visc @ 40°C          | cSt    | ASTM D445  | 212     | <b>191</b>  | ---      | --- |
| Visc @ 100°C         | cSt    | ASTM D445  | 24.7    | <b>17.6</b> | ---      | --- |
| Viscosity Index (VI) | Scale  | ASTM D2270 | 146     | <b>99</b>   | ---      | --- |

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

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TO50002379      **Received** : 11 Jun 2024  
**Lab Number** : **06207198**      **Tested** : 14 Jun 2024  
**Unique Number** : 11074659      **Diagnosed** : 14 Jun 2024 - Sean Felton  
**Test Package** : IND 2 ( Additional Tests: KV100, PQ, VI )

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)

**KLX ENERGY SERVICES**  
 701 N MAIN  
 UNION CITY, OK  
 US 73090-9657  
 Contact: FRANKIE GOAD  
 frankie.goad@klx.com

T:  
F: