

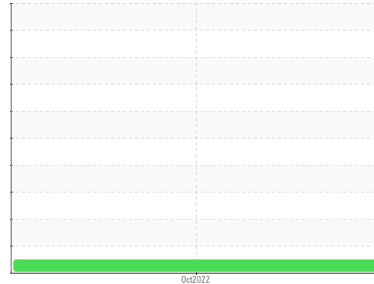
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**CATERPILLAR 980M 6141 (S/N KRS00885)**  
 Component  
**Rear Left Final Drive**  
 Fluid  
**TULCO LUBSOIL TO-4 50 (3 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 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>TO10001631</b>  | ---      | ---      |
| Sample Date   | Client Info |             | <b>25 Oct 2022</b> | ---      | ---      |
| Machine Age   | hrs         | Client Info | <b>9802</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 | >500        | <b>12</b> | ---       | ---      |
| Iron     | ppm        | ASTM D5185m | >500      | <b>11</b> | ---      |
| Chromium | ppm        | ASTM D5185m | >10       | <b>0</b>  | ---      |
| Nickel   | ppm        | ASTM D5185m |           | <b>0</b>  | ---      |
| Titanium | ppm        | ASTM D5185m |           | <b>0</b>  | ---      |
| Silver   | ppm        | ASTM D5185m |           | <b>0</b>  | ---      |
| Aluminum | ppm        | ASTM D5185m | >25       | <b>2</b>  | ---      |
| Lead     | ppm        | ASTM D5185m | >25       | <b>0</b>  | ---      |
| Copper   | ppm        | ASTM D5185m | >50       | <b>24</b> | ---      |
| Tin      | ppm        | ASTM D5185m | >10       | <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>17</b>   | ---      |
| Barium     | ppm    | ASTM D5185m |         | <b>0</b>    | ---      |
| Molybdenum | ppm    | ASTM D5185m |         | <b>24</b>   | ---      |
| Manganese  | ppm    | ASTM D5185m |         | <b>1</b>    | ---      |
| Magnesium  | ppm    | ASTM D5185m |         | <b>90</b>   | ---      |
| Calcium    | ppm    | ASTM D5185m |         | <b>1610</b> | ---      |
| Phosphorus | ppm    | ASTM D5185m |         | <b>710</b>  | ---      |
| Zinc       | ppm    | ASTM D5185m |         | <b>894</b>  | ---      |
| Sulfur     | ppm    | ASTM D5185m |         | <b>3061</b> | ---      |

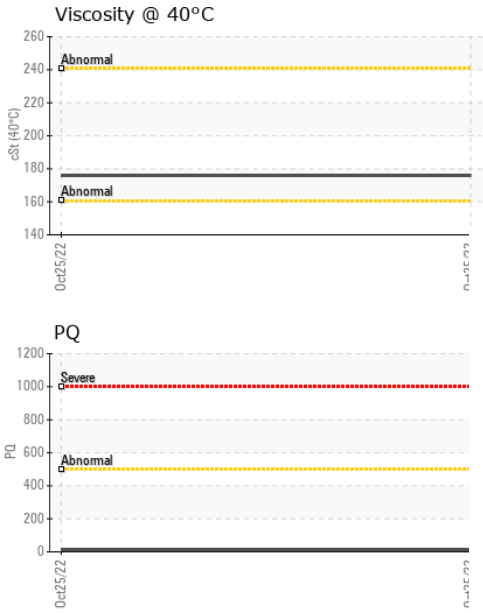
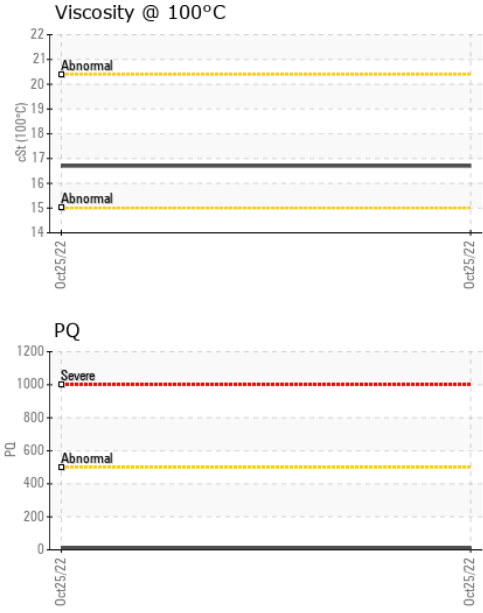
## CONTAMINANTS

|           | method | limit/base  | current | history1 | history2 |
|-----------|--------|-------------|---------|----------|----------|
| Silicon   | ppm    | ASTM D5185m | >75     | <b>3</b> | ---      |
| Sodium    | ppm    | ASTM D5185m |         | <b>0</b> | ---      |
| Potassium | ppm    | ASTM D5185m | >20     | <b>0</b> | ---      |

## FLUID DEGRADATION

|                  | method   | limit/base | current | history1    | history2 |
|------------------|----------|------------|---------|-------------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 |         | <b>1.53</b> | ---      |

# OIL ANALYSIS REPORT

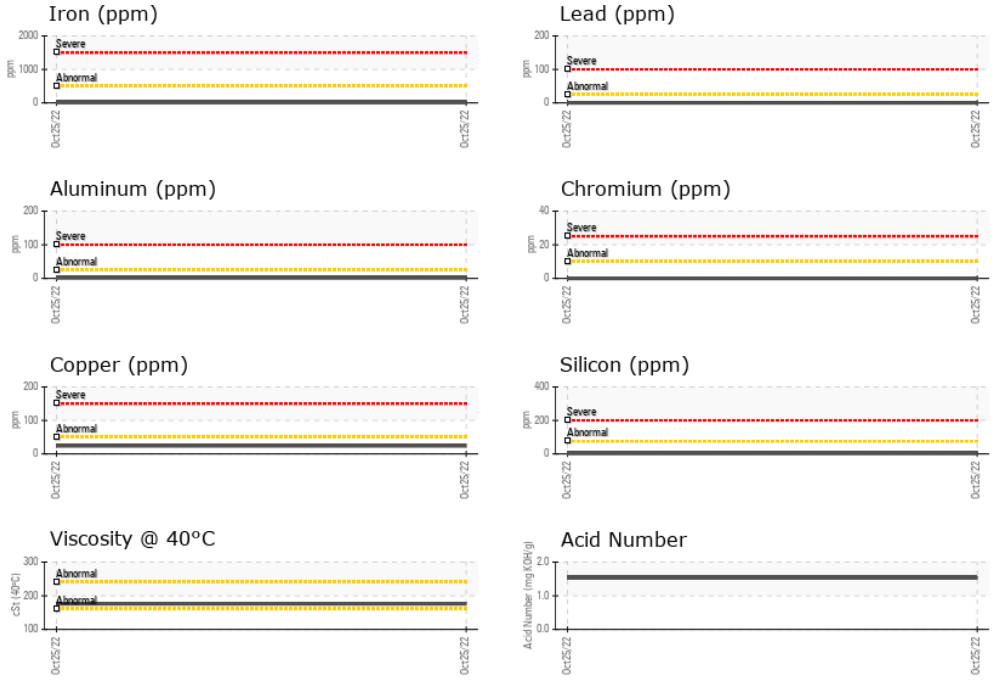


| VISUAL           | method | limit/base | current | history1     | history2 |
|------------------|--------|------------|---------|--------------|----------|
| White Metal      | scalar | *Visual    | NONE    | <b>LIGHT</b> | ---      |
| Yellow Metal     | scalar | *Visual    | NONE    | <b>NONE</b>  | ---      |
| 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>   | ---      |

| FLUID PROPERTIES     | method | limit/base | current     | history1 | history2 |
|----------------------|--------|------------|-------------|----------|----------|
| Visc @ 40°C          | cSt    | ASTM D445  | <b>176</b>  | ---      | ---      |
| Visc @ 100°C         | cSt    | ASTM D445  | <b>16.7</b> | ---      | ---      |
| Viscosity Index (VI) | Scale  | ASTM D2270 | <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.** : TO10001631 **Received** : 02 Nov 2022  
**Lab Number** : **05682921** **Tested** : 03 Nov 2022  
**Unique Number** : 10202493 **Diagnosed** : 04 Nov 2022 - Angela Borella  
**Test Package** : MOB 2 ( Additional Tests: KV100, PQ, VI )

**ANCHOR STONE TULSA ROCK**  
 TULSA ROCK QUARRY, 66TH ST N 145TH AVENUE  
 TULSA, OK  
 US 74137  
 Contact: MIKE SNYDER  
 msnyder@anchorstoneco.com  
 T: (417)850-9635  
 F:

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)