



|                 |                 |
|-----------------|-----------------|
| WEAR            | <b>ABNORMAL</b> |
| CONTAMINATION   | <b>NORMAL</b>   |
| FLUID CONDITION | <b>NORMAL</b>   |



Area  
**[05W44711]**  
Machine Id  
**CATERPILLAR 950GC C285096 (S/N 0M5T05487)**  
Component  
**Rear Differential**  
Fluid  
**CAT TDTO SAE 50 (40 QTS)**

### RECOMMENDATION

No corrective action is recommended at this time. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|----------|
| Sample Number  |     | Client Info |           | <b>JR0203184</b>   | JR0192205   | ---      |
| Sample Date    |     | Client Info |           | <b>12 Feb 2024</b> | 14 Nov 2023 | ---      |
| Machine Age    | hrs | Client Info |           | <b>2018</b>        | 1485        | ---      |
| Oil Age        | hrs | Client Info |           | <b>2018</b>        | 1485        | ---      |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | 0           | ---      |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | Not Changd  | ---      |
| Filter Changed |     | Client Info |           | <b>N/A</b>         | N/A         | ---      |
| Sample Status  |     |             |           | <b>ABNORMAL</b>    | ABNORMAL    | ---      |

### WEAR

The copper level is abnormal. All other component wear rates are normal.

|              |        |             |      |              |       |     |
|--------------|--------|-------------|------|--------------|-------|-----|
| PQ           |        | ASTM D8184  |      | <b>114</b>   | 104   | --- |
| Iron         | ppm    | ASTM D5185m | >500 | <b>249</b>   | 245   | --- |
| Chromium     | ppm    | ASTM D5185m | >3   | <b>1</b>     | <1    | --- |
| Nickel       | ppm    | ASTM D5185m | >3   | <b>&lt;1</b> | 0     | --- |
| Titanium     | ppm    | ASTM D5185m | >2   | <b>&lt;1</b> | 0     | --- |
| Silver       | ppm    | ASTM D5185m | >2   | <b>0</b>     | 0     | --- |
| Aluminum     | ppm    | ASTM D5185m | >30  | <b>6</b>     | 5     | --- |
| Lead         | ppm    | ASTM D5185m | >13  | <b>1</b>     | 1     | --- |
| Copper       | ppm    | ASTM D5185m | >103 | <b>▲ 107</b> | ▲ 104 | --- |
| Tin          | ppm    | ASTM D5185m | >5   | <b>&lt;1</b> | 0     | --- |
| Vanadium     | ppm    | ASTM D5185m |      | <b>0</b>     | 0     | --- |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE  | --- |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE  | --- |

### CONTAMINATION

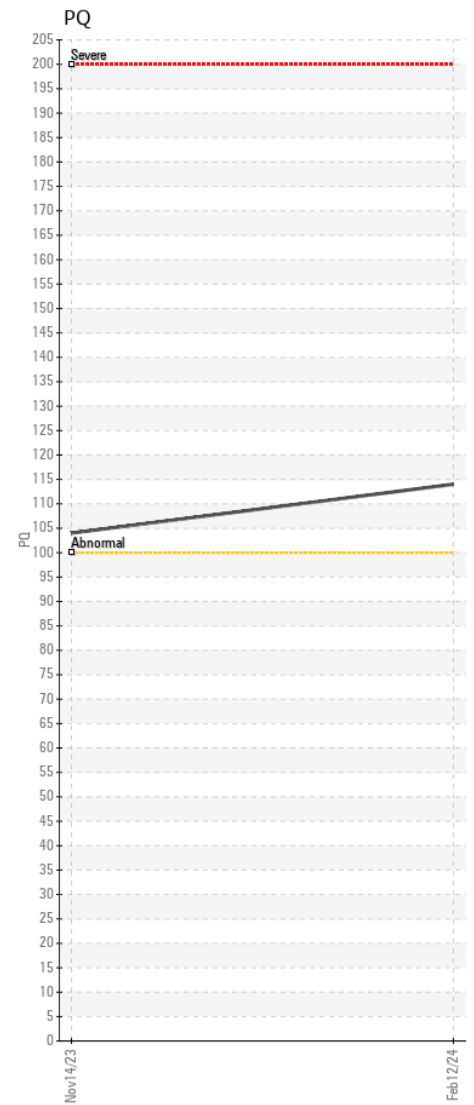
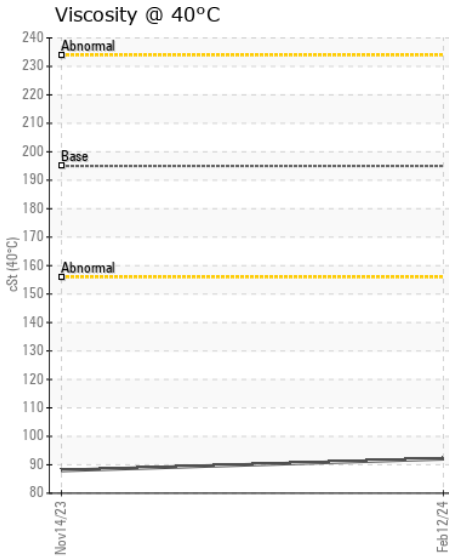
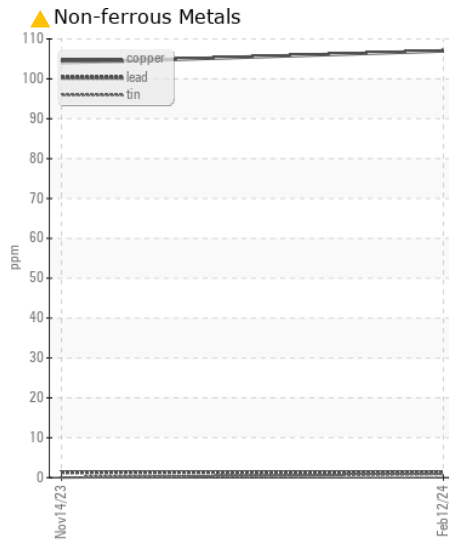
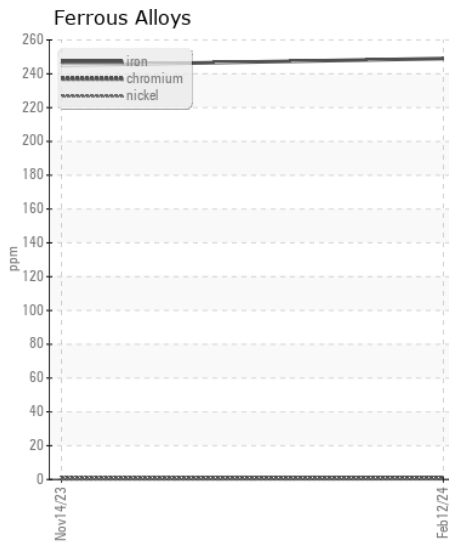
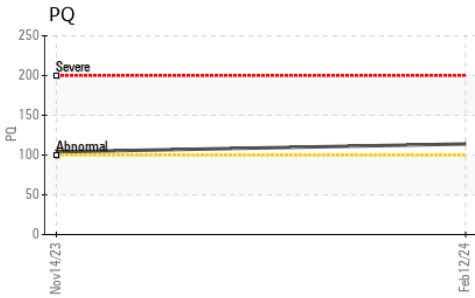
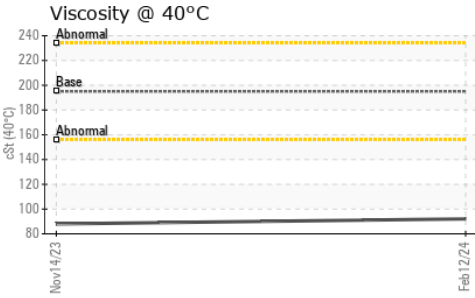
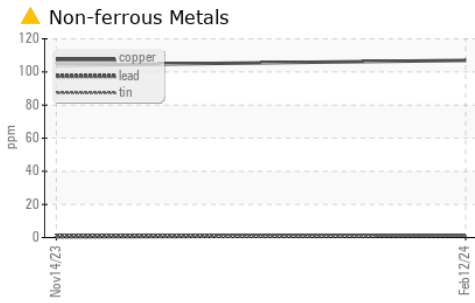
There is no indication of any contamination in the oil.

|                  |        |             |       |              |       |     |
|------------------|--------|-------------|-------|--------------|-------|-----|
| Silicon          | ppm    | ASTM D5185m | >100  | <b>8</b>     | 8     | --- |
| Potassium        | ppm    | ASTM D5185m | >20   | <b>&lt;1</b> | 0     | --- |
| Water            |        | WC Method   | >.2   | <b>NEG</b>   | NEG   | --- |
| Silt             | scalar | *Visual     | NONE  | <b>NONE</b>  | NONE  | --- |
| Debris           | scalar | *Visual     | NONE  | <b>NONE</b>  | NONE  | --- |
| Sand/Dirt        | scalar | *Visual     | NONE  | <b>NONE</b>  | NONE  | --- |
| Appearance       | scalar | *Visual     | NORML | <b>NORML</b> | NORML | --- |
| Odor             | scalar | *Visual     | NORML | <b>NORML</b> | NORML | --- |
| Emulsified Water | scalar | *Visual     | >.2   | <b>NEG</b>   | NEG   | --- |

### FLUID CONDITION

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

|             |     |             |      |             |      |     |
|-------------|-----|-------------|------|-------------|------|-----|
| Sodium      | ppm | ASTM D5185m |      | <b>4</b>    | 4    | --- |
| Boron       | ppm | ASTM D5185m |      | <b>3</b>    | 4    | --- |
| Barium      | ppm | ASTM D5185m |      | <b>4</b>    | 4    | --- |
| Molybdenum  | ppm | ASTM D5185m |      | <b>0</b>    | 0    | --- |
| Manganese   | ppm | ASTM D5185m |      | <b>7</b>    | 7    | --- |
| Magnesium   | ppm | ASTM D5185m |      | <b>17</b>   | 11   | --- |
| Calcium     | ppm | ASTM D5185m | 2980 | <b>2905</b> | 3030 | --- |
| Phosphorus  | ppm | ASTM D5185m | 1100 | <b>1064</b> | 1097 | --- |
| Zinc        | ppm | ASTM D5185m | 1270 | <b>1291</b> | 1344 | --- |
| Sulfur      | ppm | ASTM D5185m |      | <b>4393</b> | 4266 | --- |
| Visc @ 40°C | cSt | ASTM D445   | 195  | <b>92.1</b> | 88.0 | --- |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0203184  
**Lab Number** : 06089719  
**Unique Number** : 10877164  
**Test Package** : CONST ( Additional Tests: PQ )

**TITAN VIRGINIA READY MIX LLC**  
 5700 LAKEWRIGHT DR, SUITE 300  
 NORFOLK, VA  
 US 23502

**Contact: ROBERT TAUBER**  
 rtauber@titanamerica.com

T: (571)436-2579

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)

F: