



OIL ANALYSIS REPORT

| | |
|-----------------|-----------|
| WEAR | NORMAL |
| CONTAMINATION | NORMAL |
| FLUID CONDITION | ATTENTION |



Machine Id
CATERPILLAR 420 FST BACKHOE 6010 (S/N SKR04232)
Component
Rear Differential
Fluid
TULCO LUBSOIL TO-4 50 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | TO10002854 | TO10002407 | TO10002182 |
| Sample Date | | Client Info | | 14 Nov 2023 | 25 Jul 2023 | 18 Apr 2023 |
| Machine Age | hrs | Client Info | | 12883 | 12310 | 11802 |
| Oil Age | hrs | Client Info | | 1594 | 1271 | 763 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Not Changd | Not Changd | Not Changd |
| Filter Changed | | Client Info | | None | None | None |
| Sample Status | | | | ATTENTION | ATTENTION | NORMAL |

WEAR

All component wear rates are normal.

| PQ | UOM | Method | Limit/Abn | Current | History1 | History2 |
|--------------|--------|-------------|-----------|--------------|----------|----------|
| | | ASTM D8184 | | 25 | 23 | 27 |
| Iron | ppm | ASTM D5185m | >500 | 27 | 22 | 25 |
| Chromium | ppm | ASTM D5185m | >3 | 0 | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | >2 | 0 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >30 | 3 | 3 | 2 |
| Lead | ppm | ASTM D5185m | >13 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >103 | 2 | 2 | <1 |
| Tin | ppm | ASTM D5185m | >5 | <1 | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | LIGHT | LIGHT |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

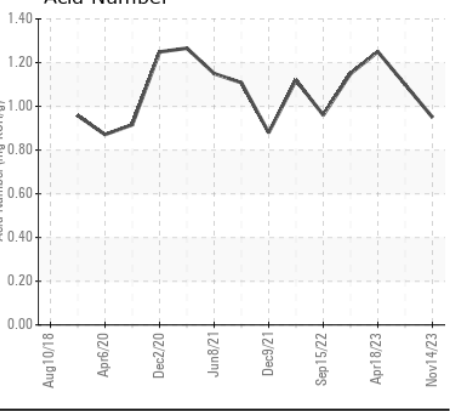
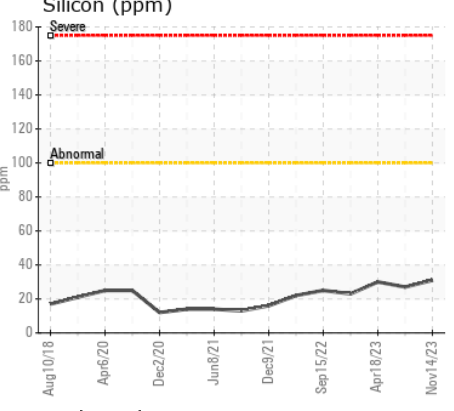
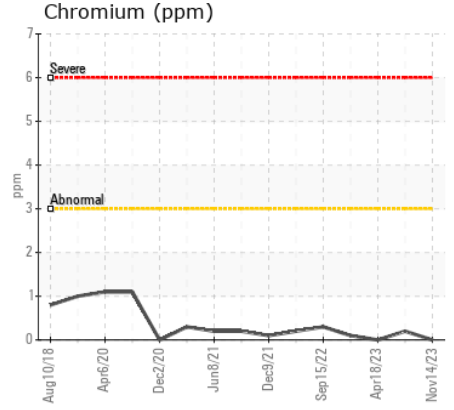
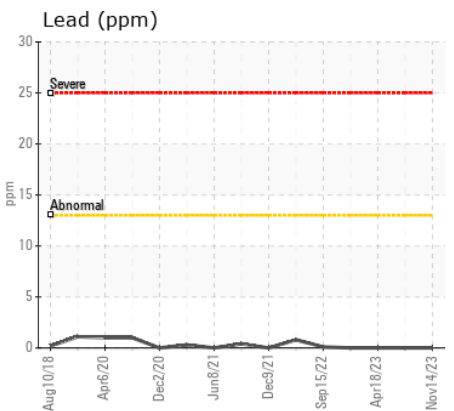
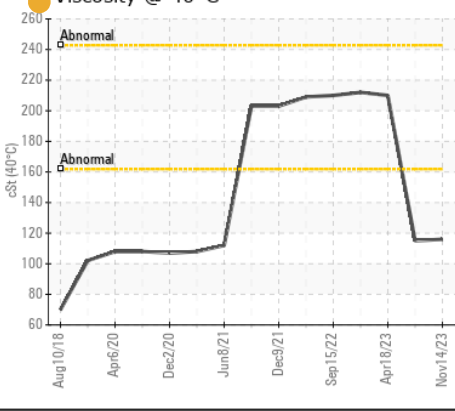
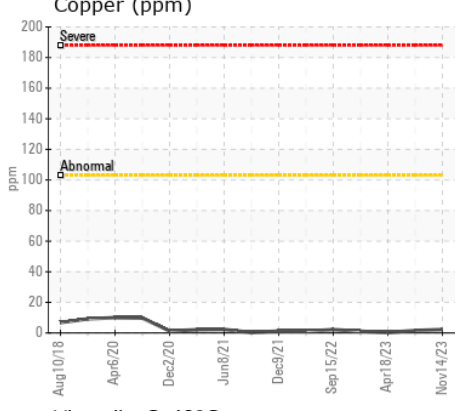
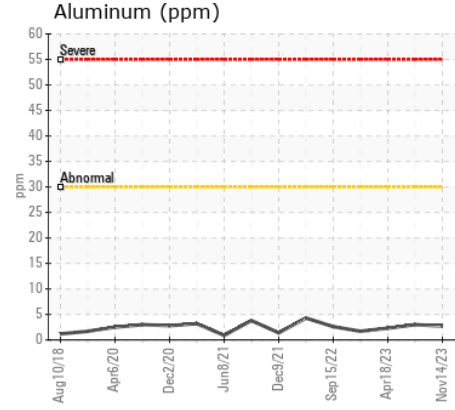
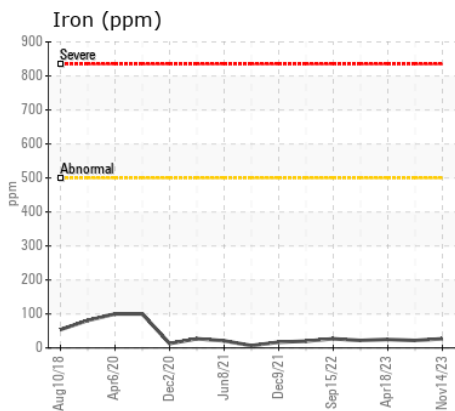
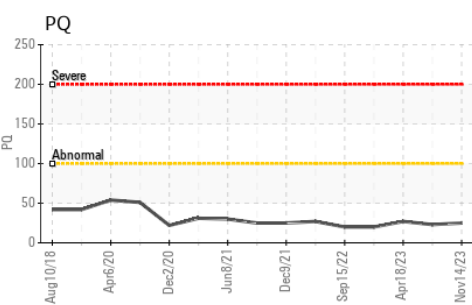
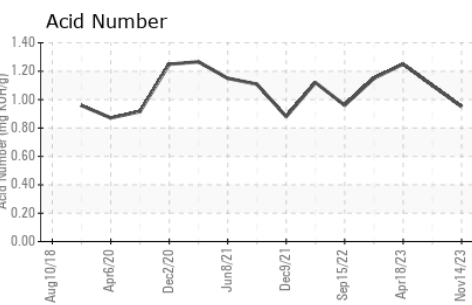
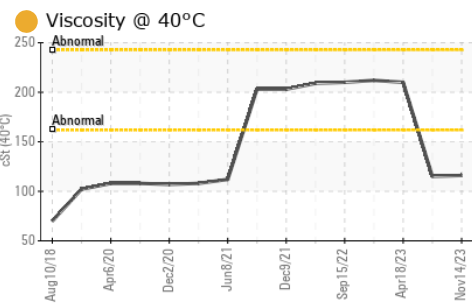
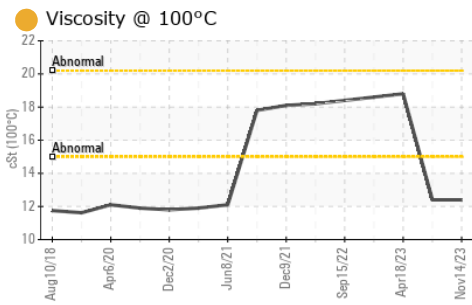
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|--------|-------------|-------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >100 | 31 | 27 | 30 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 1 | 0 |
| Water | | WC Method | >.2 | NEG | NEG | NEG |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >.2 | NEG | NEG | NEG |

FLUID CONDITION

The oil viscosity is lower than normal. Confirm oil type. The AN level is acceptable for this fluid.

| | | | | | | |
|----------------------|----------|-------------|--|--------------|------|------|
| Sodium | ppm | ASTM D5185m | | 5 | 6 | 5 |
| Boron | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 10 | 4 | 18 |
| Calcium | ppm | ASTM D5185m | | 2959 | 3139 | 3136 |
| Phosphorus | ppm | ASTM D5185m | | 871 | 886 | 913 |
| Zinc | ppm | ASTM D5185m | | 1046 | 1114 | 1182 |
| Sulfur | ppm | ASTM D5185m | | 4036 | 5135 | 5204 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 0.95 | 1.10 | 1.25 |
| Visc @ 40°C | cSt | ASTM D445 | | 116 | 115 | 210 |
| Visc @ 100°C | cSt | ASTM D445 | | 12.4 | 12.4 | 18.8 |
| Viscosity Index (VI) | Scale | ASTM D2270 | | 97 | 98 | 99 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10002854 **Received** : 20 Nov 2023
Lab Number : 06013419 **Tested** : 21 Nov 2023
Unique Number : 10752563 **Diagnosed** : 23 Nov 2023 - Don Baldrige
Test Package : MOB 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)

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: