



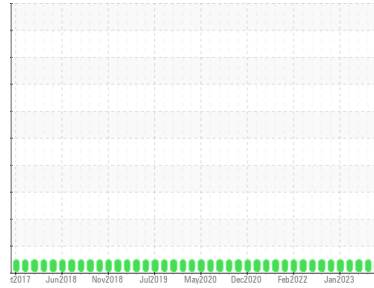
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
CATERPILLAR D10T 15105049 (S/N CATOD10TCRJG01495)
 Component
Transmission (Manual)
 Fluid
RP CMT 50 (--- 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 | | | RP0033748 | RP0033353 | RP0022097 |
| Sample Date | Client Info | | | 13 Sep 2023 | 02 Aug 2023 | 20 Mar 2023 |
| Machine Age | hrs | Client Info | | 24938 | 24690 | 24481 |
| Oil Age | hrs | Client Info | | 453 | 209 | 2394 |
| Oil Changed | Client Info | | | Not Chngd | Not Chngd | Not Chngd |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|-------------|------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m | >200 | 10 | 10 | 31 |
| Chromium | ppm | ASTM D5185m | >5 | 0 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >5 | <1 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >7 | 0 | 1 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | 2 | 2 | 2 |
| Lead | ppm | ASTM D5185m | >45 | <1 | 2 | 0 |
| Copper | ppm | ASTM D5185m | >225 | 15 | 12 | 149 |
| Tin | ppm | ASTM D5185m | >10 | 0 | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | <1 | 0 |

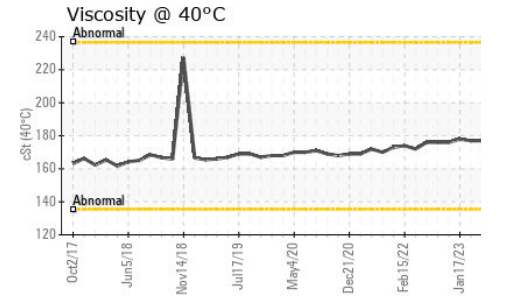
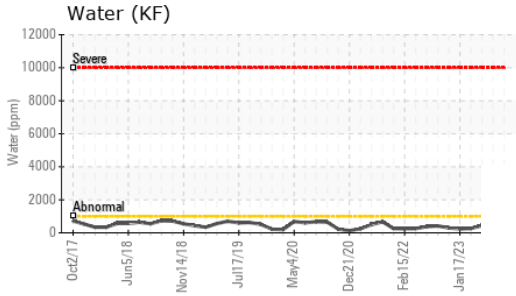
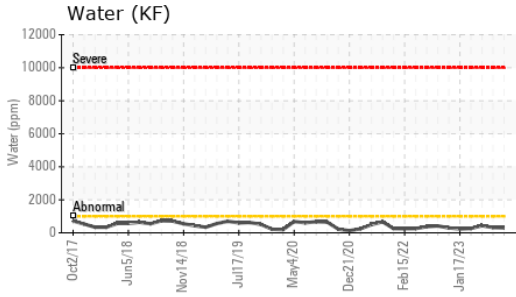
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 8 | 18 | 13 |
| Calcium | ppm | ASTM D5185m | | 3487 | 3533 | 3122 |
| Phosphorus | ppm | ASTM D5185m | | 1212 | 1217 | 1074 |
| Zinc | ppm | ASTM D5185m | | 1472 | 1479 | 1214 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m | >125 | 8 | 9 | 6 |
| Sodium | ppm | ASTM D5185m | | 1 | 4 | 7 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 2 | 0 |
| Water | % | ASTM D6304 | >0.1 | 0.029 | 0.031 | 0.043 |
| ppm Water | ppm | ASTM D6304 | >1000 | 296.4 | 319.6 | 432.9 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 1.80 | 1.82 | 0.732 |

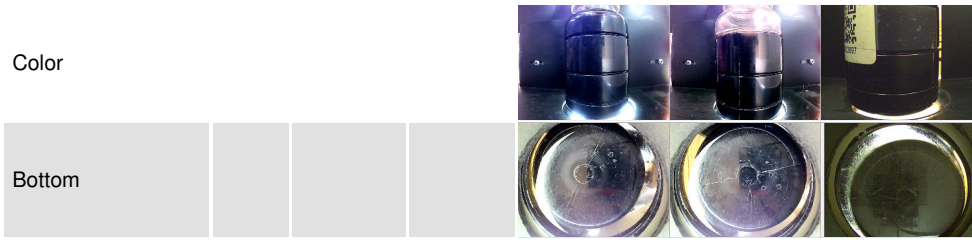
| VISUAL | | method | limit/base | current | history1 | history2 |
|------------------|--------|---------|------------|--------------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE |
| 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 | >0.1 | NEG | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |

OIL ANALYSIS REPORT

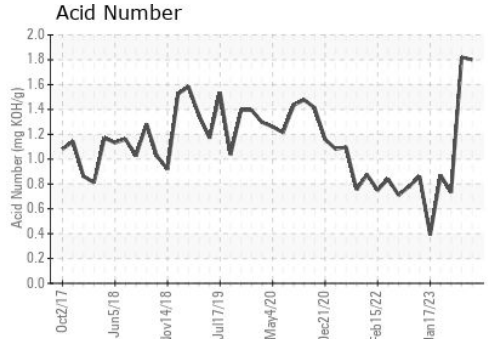
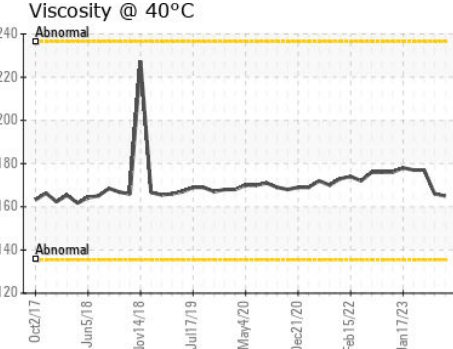
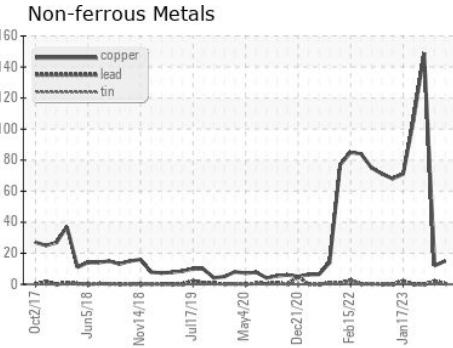
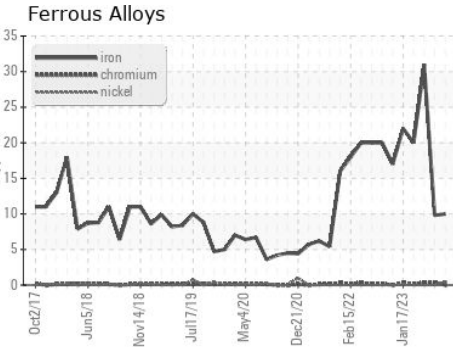


| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|------------------|-----|-----------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | | 165 | 166 | 177 |

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



GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0033748
Lab Number : 05959869
Unique Number : 10661082
Test Package : IND 2

Received : 25 Sep 2023
Diagnosed : 26 Sep 2023
Diagnostician : Don Baldrige

NRG TEXAS LLC
 3784 FM 39 SOUTH
 JEWETT, TX
 US 75846

Contact: JURGEN THOMPSON
 JThompson@ecomaterial.com
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 F: (903)626-9772

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)