



OIL ANALYSIS REPORT

| | |
|-----------------|-----------------|
| WEAR | ABNORMAL |
| CONTAMINATION | ABNORMAL |
| FLUID CONDITION | NORMAL |



Machine Id
CATERPILLAR 345C 345C-2 (S/N TDG00286)
Component
Hydraulic System
Fluid
MOBIL MOBILTRANS AST 30 (--- GAL)

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 | | TLY0002283 | TLY0001648 | --- |
| Sample Date | | Client Info | | 16 Apr 2024 | 29 Jun 2023 | --- |
| Machine Age | hrs | Client Info | | 12433 | 12050 | --- |
| Oil Age | hrs | Client Info | | 12050 | 2050 | --- |
| Filter Age | hrs | Client Info | | 12050 | 2050 | --- |
| Oil Changed | | Client Info | | Changed | Not Changd | --- |
| Filter Changed | | Client Info | | Not Changed | N/A | --- |
| Sample Status | | | | ABNORMAL | ABNORMAL | --- |

WEAR

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

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|-----|
| Iron | ppm | ASTM D5185m | >20 | ▲ 29 | ▲ 27 | --- |
| Chromium | ppm | ASTM D5185m | >10 | <1 | 1 | --- |
| Nickel | ppm | ASTM D5185m | >10 | 0 | 0 | --- |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | --- |
| Silver | ppm | ASTM D5185m | | 0 | 0 | --- |
| Aluminum | ppm | ASTM D5185m | >10 | 1 | 3 | --- |
| Lead | ppm | ASTM D5185m | >10 | <1 | 0 | --- |
| Copper | ppm | ASTM D5185m | >75 | 11 | 12 | --- |
| Tin | ppm | ASTM D5185m | >10 | <1 | 1 | --- |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | --- |
| White Metal | scalar | *Visual | NONE | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | --- |

CONTAMINATION

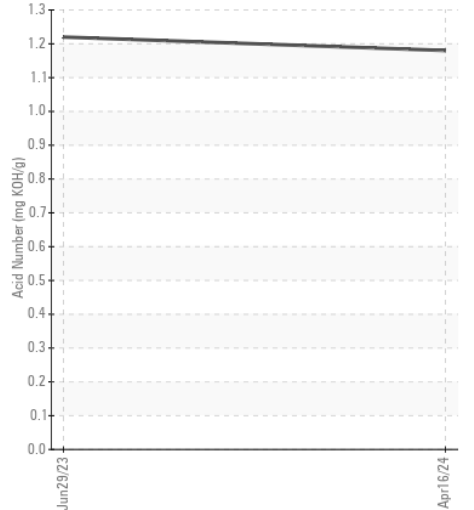
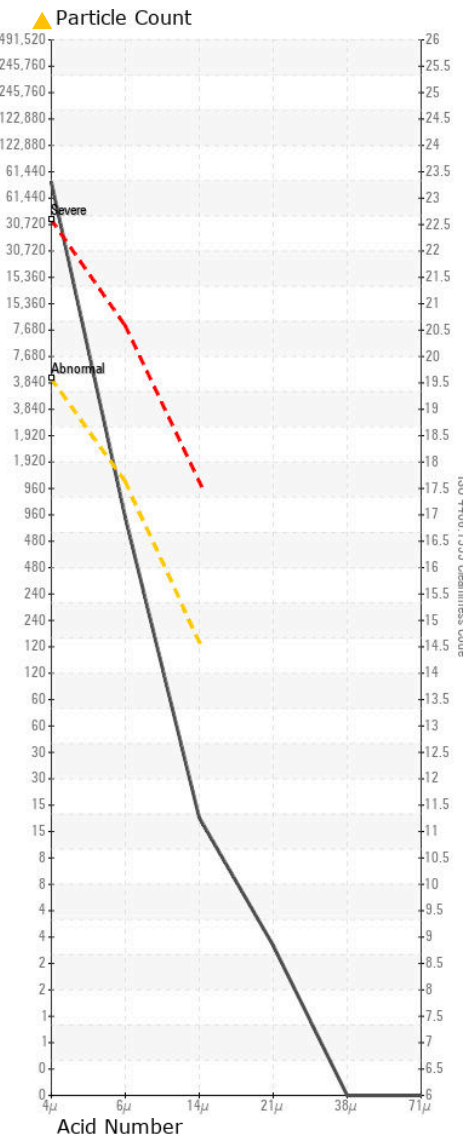
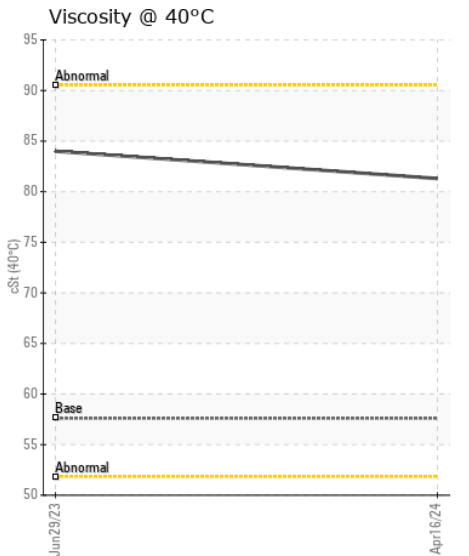
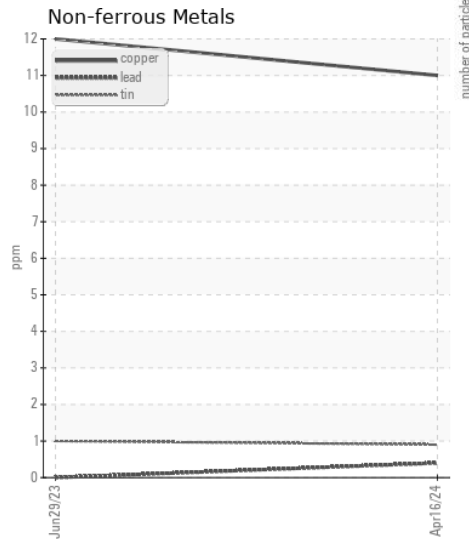
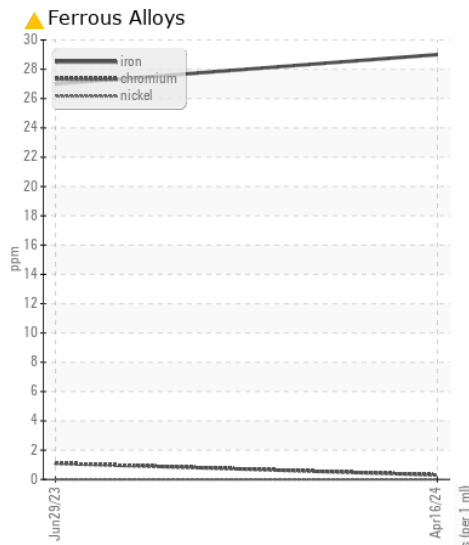
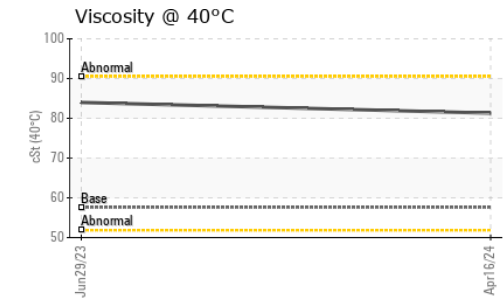
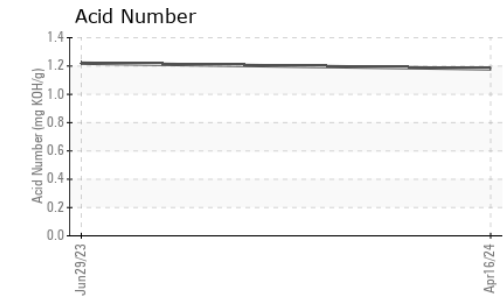
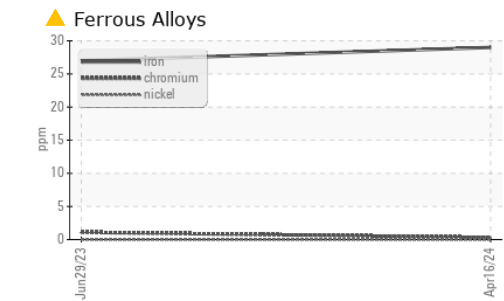
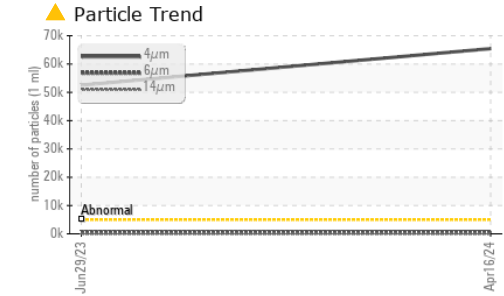
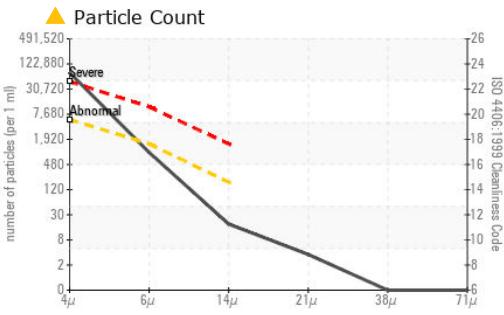
There is a high amount of silt (particulates < 6 microns in size) present in the oil.

| | | | | | | |
|------------------|--------|--------------|-----------|-------------------|------------|-----|
| Silicon | ppm | ASTM D5185m | >20 | 5 | 5 | --- |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 3 | --- |
| Water | | WC Method | >0.1 | NEG | NEG | --- |
| Particles >4µm | | ASTM D7647 | >5000 | ▲ 65438 | ▲ 52536 | --- |
| Particles >6µm | | ASTM D7647 | >1300 | 815 | 741 | --- |
| Particles >14µm | | ASTM D7647 | >160 | 16 | 31 | --- |
| Particles >21µm | | ASTM D7647 | >40 | 3 | 7 | --- |
| Particles >38µm | | ASTM D7647 | >10 | 0 | 1 | --- |
| Particles >71µm | | ASTM D7647 | >3 | 0 | 0 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | ▲ 23/17/11 | ▲ 23/17/12 | --- |
| Silt | scalar | *Visual | NONE | NONE | NONE | --- |
| Debris | scalar | *Visual | NONE | NONE | NONE | --- |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | --- |
| Appearance | scalar | *Visual | NORML | NORML | NORML | --- |
| Odor | scalar | *Visual | NORML | NORML | NORML | --- |
| Emulsified Water | scalar | *Visual | >0.1 | NEG | NEG | --- |

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|-------------|------|--------------|------|-----|
| Sodium | ppm | ASTM D5185m | | 5 | 2 | --- |
| Boron | ppm | ASTM D5185m | | 51 | 54 | --- |
| Barium | ppm | ASTM D5185m | | 0 | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | | 22 | 27 | --- |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | --- |
| Magnesium | ppm | ASTM D5185m | | 104 | 129 | --- |
| Calcium | ppm | ASTM D5185m | | 2553 | 2830 | --- |
| Phosphorus | ppm | ASTM D5185m | | 954 | 1032 | --- |
| Zinc | ppm | ASTM D5185m | | 1127 | 1299 | --- |
| Sulfur | ppm | ASTM D5185m | | 5066 | 5741 | --- |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 1.18 | 1.22 | --- |
| Visc @ 40°C | cSt | ASTM D445 | 57.6 | 81.3 | 84.0 | --- |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TLY0002283
Lab Number : 06154310
Unique Number : 10989733
Test Package : CONST

Received : 19 Apr 2024
Tested : 22 Apr 2024
Diagnosed : 23 Apr 2024 - Jonathan Hester

GAINES & COMPANY
 112 WESTMINSTER RD
 REISTERSTOWN, MD
 US 21136

Contact: LANCE TANCRAITOR
 ltancraitor@gainesandco.com
 T: (410)833-9833

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)

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