



OIL ANALYSIS REPORT

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

Machine Id
BAILEY CYL 288-338/YS12-21 - MCELROY

Component
Hydraulic System

Fluid
AW HYDRAULIC OIL ISO 46 (--- GAL)

RECOMMENDATION

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|-------------|----------|----------|
| Sample Number | | Client Info | | TO10001943 | --- | --- |
| Sample Date | | Client Info | | 08 Feb 2024 | --- | --- |
| Machine Age | hrs | Client Info | | 0 | --- | --- |
| Oil Age | hrs | Client Info | | 0 | --- | --- |
| Filter Age | hrs | Client Info | | 0 | --- | --- |
| Oil Changed | | Client Info | | N/A | --- | --- |
| Filter Changed | | Client Info | | N/A | --- | --- |
| Sample Status | | | | ABNORMAL | --- | --- |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|------|-----|-----|
| Iron | ppm | ASTM D5185m | >20 | 1 | --- | --- |
| Chromium | ppm | ASTM D5185m | >20 | <1 | --- | --- |
| Nickel | ppm | ASTM D5185m | >20 | <1 | --- | --- |
| Titanium | ppm | ASTM D5185m | | <1 | --- | --- |
| Silver | ppm | ASTM D5185m | | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185m | >20 | 2 | --- | --- |
| Lead | ppm | ASTM D5185m | >20 | <1 | --- | --- |
| Copper | ppm | ASTM D5185m | >20 | 2 | --- | --- |
| Tin | ppm | ASTM D5185m | >20 | <1 | --- | --- |
| Vanadium | ppm | ASTM D5185m | | 0 | --- | --- |
| White Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- | --- |

CONTAMINATION

Moderate concentration of visible dirt/debris present in the oil.

| | | | | | | |
|------------------|--------|-------------|-------|---------|-----|-----|
| Silicon | ppm | ASTM D5185m | >15 | <1 | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | 5 | --- | --- |
| Water | % | ASTM D6304 | >0.05 | 0.006 | --- | --- |
| ppm Water | ppm | ASTM D6304 | >500 | 61 | --- | --- |
| Silt | scalar | *Visual | NONE | NONE | --- | --- |
| Debris | scalar | *Visual | NONE | ▲ MODER | --- | --- |
| Sand/Dirt | scalar | *Visual | NONE | NONE | --- | --- |
| Appearance | scalar | *Visual | NORML | NORML | --- | --- |
| Odor | scalar | *Visual | NORML | NORML | --- | --- |
| Emulsified Water | scalar | *Visual | >0.05 | NEG | --- | --- |

FLUID CONDITION

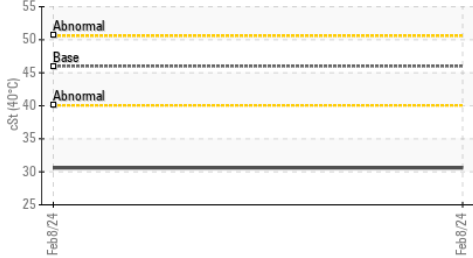
Viscosity of sample indicates oil is within ISO 32 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

| | | | | | | |
|----------------------|----------|-------------|------|--------|-----|-----|
| Sodium | ppm | ASTM D5185m | | 0 | --- | --- |
| Boron | ppm | ASTM D5185m | 5 | 0 | --- | --- |
| Barium | ppm | ASTM D5185m | 5 | 13 | --- | --- |
| Molybdenum | ppm | ASTM D5185m | 5 | 1 | --- | --- |
| Manganese | ppm | ASTM D5185m | | <1 | --- | --- |
| Magnesium | ppm | ASTM D5185m | 25 | 1 | --- | --- |
| Calcium | ppm | ASTM D5185m | 200 | 89 | --- | --- |
| Phosphorus | ppm | ASTM D5185m | 300 | 352 | --- | --- |
| Zinc | ppm | ASTM D5185m | 370 | 433 | --- | --- |
| Sulfur | ppm | ASTM D5185m | 2500 | 966 | --- | --- |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.57 | 0.48 | --- | --- |
| Visc @ 40°C | cSt | ASTM D445 | 46 | ▲ 30.6 | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | 6.7 | ▲ 5.6 | --- | --- |
| Viscosity Index (VI) | Scale | ASTM D2270 | 97 | 123 | --- | --- |

▲ Viscosity @ 100°C



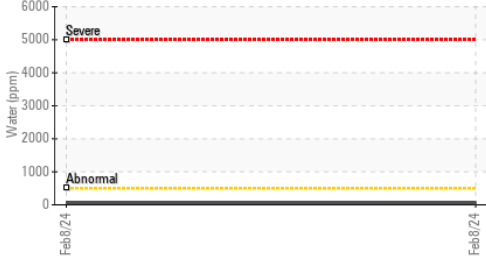
▲ Viscosity @ 40°C



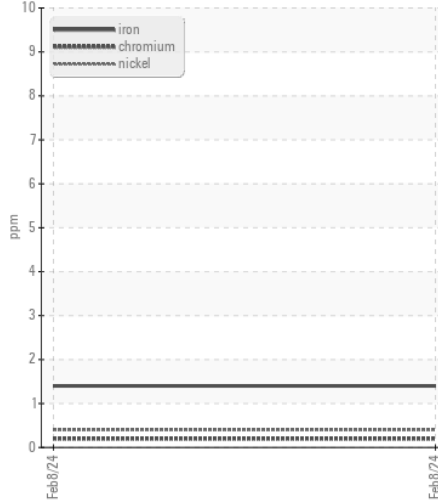
Acid Number



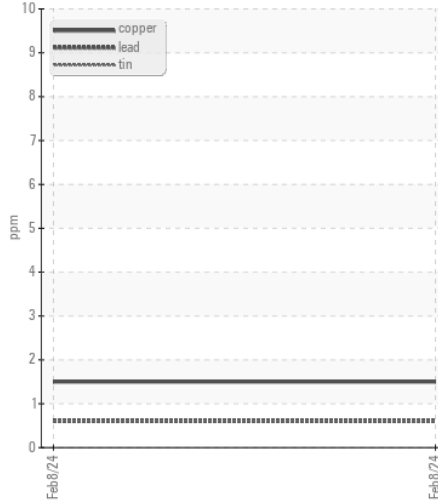
Water (KF)



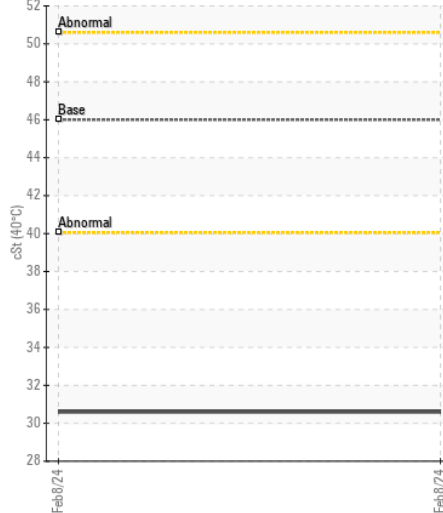
Ferrous Alloys



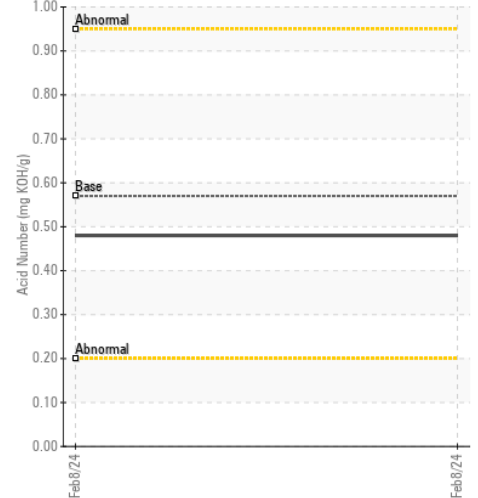
Non-ferrous Metals



▲ Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : TO10001943

Lab Number : 06086038

Unique Number : 10873483

Test Package : IND 2 (Additional Tests: KF, KV100, VI)

Received : 12 Feb 2024

Tested : 13 Feb 2024

Diagnosed : 13 Feb 2024 - Don Baldrige

TULCO OILS INC (001-TULSA DIVISION)

5240 EAST PINE

TULSA, OK

US 74115

Contact: DYLAN COPE

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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)