



OIL ANALYSIS REPORT

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

Machine Id
9780
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 32 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

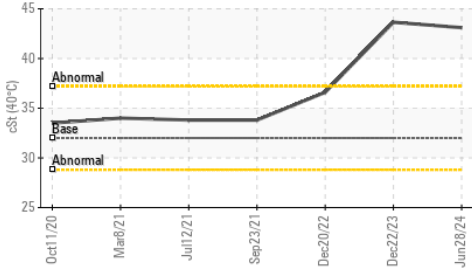
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

FLUID CONDITION

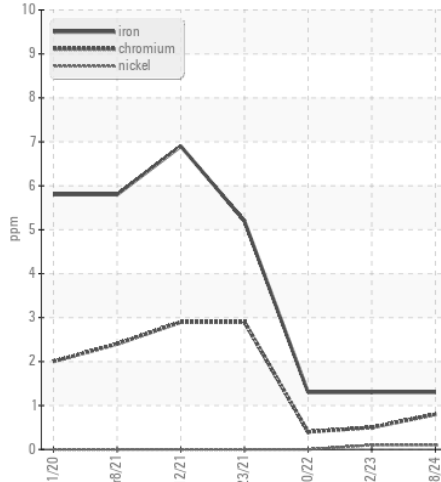
Viscosity of sample indicates oil is within ISO 46 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|------------------|----------|--------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | PTK0004958 | PTK0004969 | PTK0004164 |
| Sample Date | | Client Info | | 28 Jun 2024 | 22 Dec 2023 | 20 Dec 2022 |
| Machine Age | hrs | Client Info | | 8644 | 7687 | 5685 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | N/A | N/A |
| Filter Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | ATTENTION | ATTENTION | NORMAL |
| Iron | ppm | ASTM D5185m | >20 | 1 | 1 | 1 |
| Chromium | ppm | ASTM D5185m | >10 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >10 | <1 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | 0 |
| Silver | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >10 | 2 | 2 | 1 |
| Lead | ppm | ASTM D5185m | >10 | <1 | <1 | 0 |
| Copper | ppm | ASTM D5185m | >75 | 4 | 4 | 3 |
| Tin | ppm | ASTM D5185m | >10 | <1 | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >20 | 1 | <1 | 1 |
| Potassium | ppm | ASTM D5185m | >20 | 1 | <1 | <1 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Particles >4µm | | ASTM D7647 | | 3037 | 4566 | 2659 |
| Particles >6µm | | ASTM D7647 | >2500 | 645 | 706 | 421 |
| Particles >14µm | | ASTM D7647 | >320 | 18 | 23 | 19 |
| Particles >21µm | | ASTM D7647 | >80 | 2 | 6 | 5 |
| Particles >38µm | | ASTM D7647 | >20 | 0 | 0 | 1 |
| Particles >71µm | | ASTM D7647 | >4 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >18/15 | 17/11 | 17/12 | 16/11 |
| 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 |
| Sodium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Boron | ppm | ASTM D5185m | 5 | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | 5 | <1 | 7 | 0 |
| Molybdenum | ppm | ASTM D5185m | 5 | <1 | <1 | <1 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | 25 | 3 | <1 | <1 |
| Calcium | ppm | ASTM D5185m | 200 | 22 | 25 | 26 |
| Phosphorus | ppm | ASTM D5185m | 300 | 353 | 381 | 374 |
| Zinc | ppm | ASTM D5185m | 370 | 445 | 473 | 475 |
| Sulfur | ppm | ASTM D5185m | 2500 | 3097 | 3474 | 3597 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.57 | 0.38 | 0.36 | 0.34 |
| Visc @ 40°C | cSt | ASTM D445 | 32 | 43.1 | 43.65 | 36.6 |

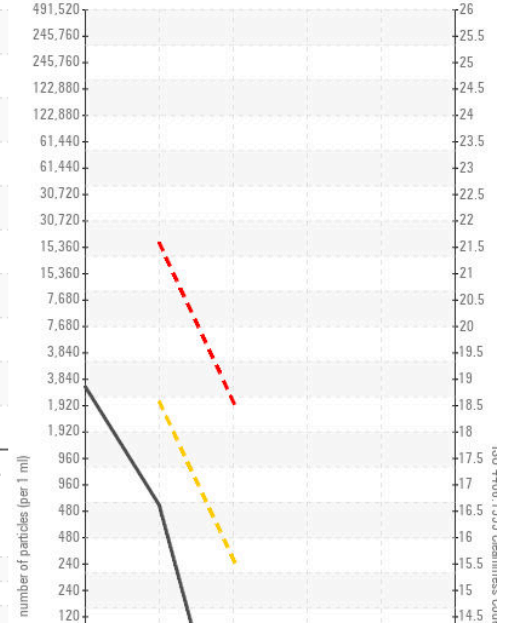
● Viscosity @ 40°C



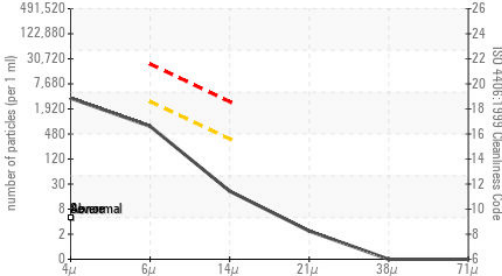
Ferrous Alloys



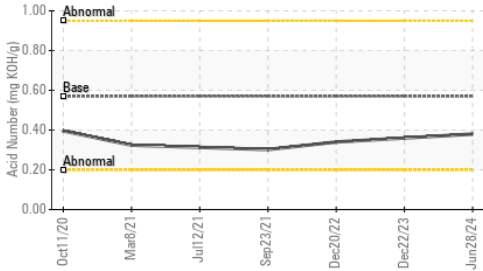
Particle Count



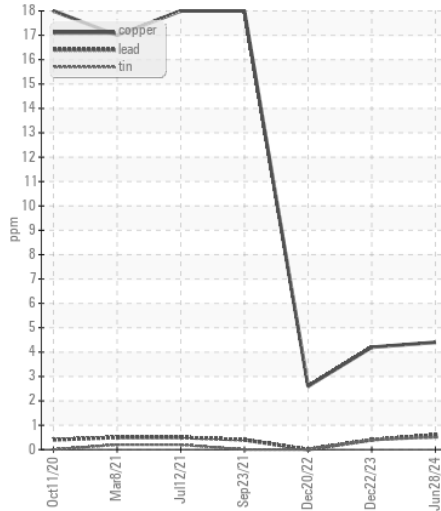
Particle Count



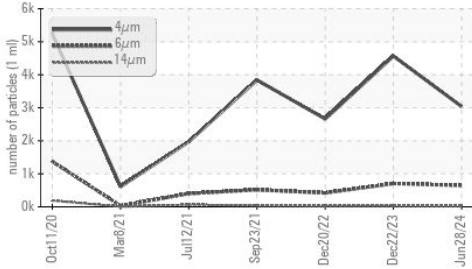
Acid Number



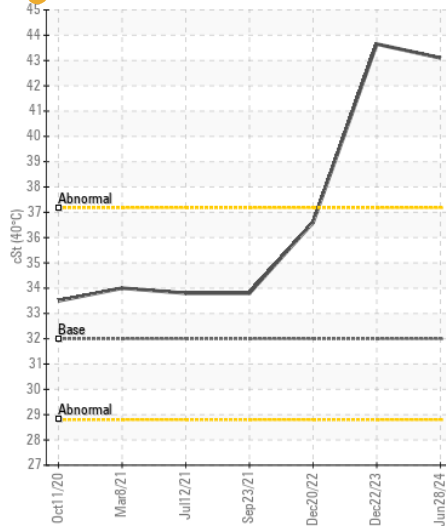
Non-ferrous Metals



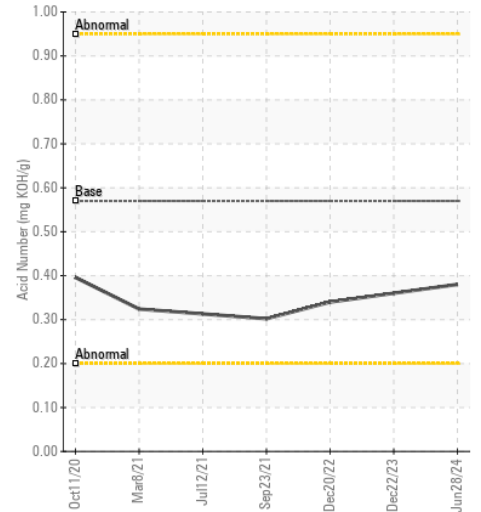
Particle Trend



● Viscosity @ 40°C



Acid Number



Certificate L2367

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

Sample No. : PTK0004958

Lab Number : 06231463

Unique Number : 11114956

Test Package : MOB 2

Received : 09 Jul 2024

Tested : 10 Jul 2024

Diagnosed : 11 Jul 2024 - Jonathan Hester

MES RECYCLE

16105 FREDERICK RD

ROCKVILLE, MD

US 20850

Contact: DAVID SHAFFER

dshaffer@menv.com

T:

F:

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)