

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

ARBURG E-05 (S/N 256386)

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

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

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

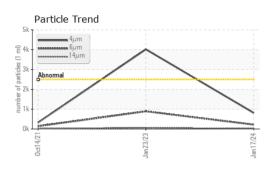
Fluid Condition

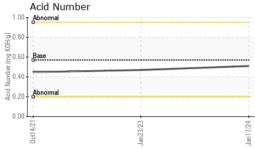
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

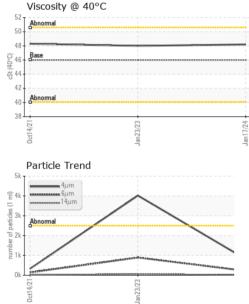
| Sample Date Client Info 17 Jan 2024 23 Jan 2023 14 Oct 2021 Machine Age yrs Client Info 0 0 0 Oil Age yrs Client Info 0 0 0 Oil Changed Client Info N/A N/A N/A N/A Sample Status Client Info N/A N/A N/A N/A CONTAMINATION method Imit/base current history1 history2 Water WC Method >0.05 NEG NEG NEG WEAR METALS method imit/base current history1 history2 Iron ppm ASTM D5185m >20 0 0 0 Nickel ppm ASTM D5185m >20 0 0 0 Astm D5185m >20 0 0 0 0 0 Astm D5185m >20 3 3 2 1 0 Astm D5185m >20 0 | | | Oct | 2021 | Jan2023 Jan2 | 024 | |
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| Particles >38μm ASTM D7647 >4 0 1 0 Particles >71μm ASTM D7647 >3 0 0 0 | Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm | ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m | 5 5 5 25 200 300 370 2500 2500 >15 >2500 | 0 0 2 3 1 1 8 1 4 7 3 601 2 3 3 6 0 2 3 3 0 2 2 3 6 2 2 3 6 2 2 3 6 2 2 3 6 2 2 3 6 2 2 3 6 2 2 3 6 2 2 3 6 2 2 3 6 2 2 3 6 2 2 3 6 2 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 2 3 6 2 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 2 3 6 2 3 6 2 3 6 2 3 6 2 2 3 6 2 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 3 6 2 2 3 6 2 2 3 6 2 2 3 6 2 2 3 6 2 2 3 6 2 2 3 6 2 2 2 2 | history1 0 1 0 <1 | 0 0 0 9 92 474 597 2268 history2 0 2 0 2 0 bistory2 326 |
| Particles >71μm ASTM D7647 >3 0 0 0 | Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium | ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m | 5 5 5 200 300 370 2500 2500 2500 >15 >20 imit/base >2500 >320 | 0 0 0 <1 1 81 473 601 2336 current <1 3 0 current 814 217 | history1 0 1 0 <1 | 0 0 0 0 1 92 474 597 2268 history2 0 2 0 2 0 0 2 0 0 1 2 0 0 1 2 1 0 1 2 1 0 1 2 1 0 1 2 1 1 1 1 |
| | Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm | ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m | 5 5 5 200 300 370 2500 2500 2500 >15 >20 <u>limit/base</u> >2500 >320 >320 >80 | 0 0 0 <1 1 81 473 601 2336 current <1 3 0 current 814 217 22 | history1 0 1 0 <1 <1 82 462 623 2476 history1 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 892 61 | 0 0 0 0 4 1 0 92 474 597 2268 history2 0 2268 0 2 0 0 2 0 0 1 2 0 0 1 2 1 4 2 1 8 |
| Oil Cleanliness ISO 4406 (c) >18/15/13 17/15/12 19/17/13 16/14/11 | Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm | ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 | 5 5 5 25 200 300 370 2500 2500 2500 >15 >20 imit/base >2500 >320 >320 >320 | 0 0 0 <1 1 81 473 601 2336 current <1 3 0 current 814 217 22 6 | history1 0 1 0 <1 <1 82 462 623 2476 history1 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 10 <1 17 | 0 0 0 3 4 1 0 92 4 7 4 597 2268 history2 0 2 2 0 2 0 0 history2 326 1 4 2 1 8 3 3 |
| | Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm | ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 | 5 5 5 25 200 300 370 2500 2500 2500 >15 20 20 2500 >22 320 >320 >80 >20 >4 | 0 0 0 <1 1 81 473 601 2336 current <1 3 0 current 814 217 22 6 0 | history1 0 1 0 <1 <1 82 462 623 2476 history1 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 1 4019 892 61 17 1 | 0 0 0 9 474 597 2268 history2 0 2 0 2 0 history2 326 142 18 3 3 0 |



OIL ANALYSIS REPORT



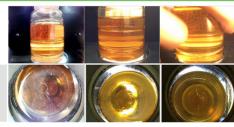


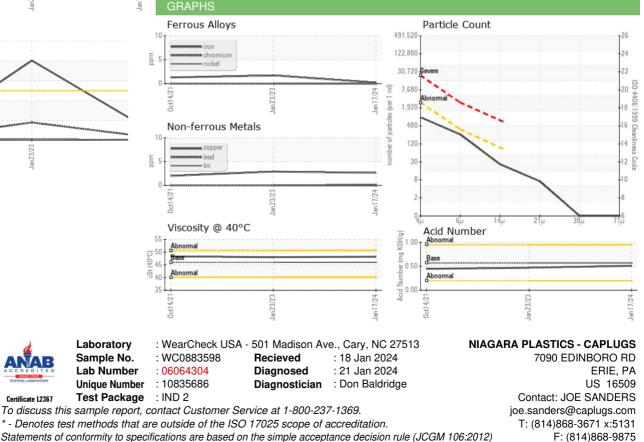


| FLUID DEGRADA | TION | method | limit/base | current | history1 | history2 |
|------------------|----------|------------|------------|---------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.57 | 0.51 | 0.47 | 0.448 |
| VISUAL | | method | limit/base | current | history1 | history2 |
| 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 | >0.05 | NEG | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |
| FLUID PROPERT | IES | method | limit/base | current | history1 | history2 |
| Visc @ 40°C | cSt | ASTM D445 | 46 | 48.2 | 48.0 | 48.3 |
| SAMPLE IMAGES | \$ | method | limit/base | current | history1 | history2 |

Color

Bottom





Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Certificate L2367

Contact/Location: JOE SANDERS - NIAERI