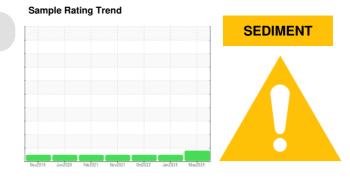


OIL ANALYSIS REPORT



Machine Id

VACPUMP-045 - WEST (S/N 1812B1604) Component Pump

Fluid SHELL MORLINA S4 B 320 (--- GAL)

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of visible silt present in the sample.

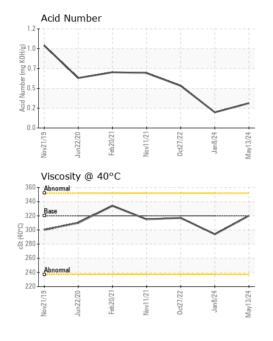
Fluid Condition

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

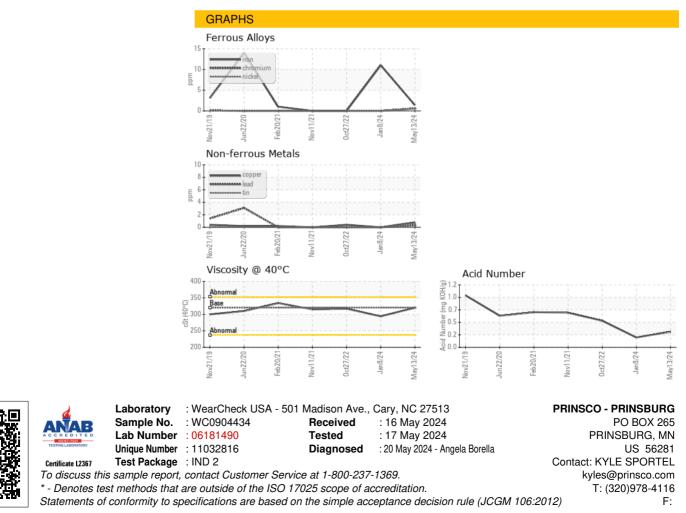
| SAMPLE INFORM | MATION | method | limit/base | current | history1 | history2 |
|------------------|---------------|-------------|------------|-------------|-------------|-------------|
| Sample Number | | Client Info | | WC0904434 | WC0849061 | WC0714787 |
| Sample Date | | Client Info | | 13 May 2024 | 08 Jan 2024 | 27 Oct 2022 |
| Machine Age | hrs | Client Info | | 22509 | 23049 | 17550 |
| Oil Age | hrs | Client Info | | 2117 | 2002 | 2238 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | ABNORMAL | NORMAL | NORMAL |
| CONTAMINATION | N | method | limit/base | current | history1 | history2 |
| Water | | WC Method | >.1 | NEG | NEG | NEG |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >90 | 1 | 11 | 0 |
| Chromium | ppm | ASTM D5185m | >5 | <1 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >5 | <1 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | >3 | <1 | 0 | <1 |
| Silver | ppm | ASTM D5185m | >3 | <1 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >7 | 4 | 0 | 0 |
| Lead | ppm | ASTM D5185m | >12 | <1 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >30 | <1 | 0 | <1 |
| Tin | ppm | ASTM D5185m | >9 | <1 | 0 | 0 |
| Antimony | ppm | ASTM D5185m | | | | |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 1 |
| Cadmium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Manganese | ppm | ASTM D5185m | | <1 | 0 | 2 |
| Magnesium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Calcium | ppm | ASTM D5185m | | 5 | 0 | 0 |
| Phosphorus | ppm | ASTM D5185m | | 94 | 79 | 258 |
| Zinc | ppm | ASTM D5185m | | 3 | 5 | 0 |
| Sulfur | ppm | ASTM D5185m | | 177 | 628 | 510 |
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >60 | 4 | 56 | 1 |
| Sodium | ppm | ASTM D5185m | | <1 | 0 | 1 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | <1 | <1 |
| FLUID DEGRADA | TION | method | limit/base | current | history1 | history2 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 0.30 | 0.19 | 0.51 |



OIL ANALYSIS REPORT



| 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 | A MODER | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | LIGHT | VLITE |
| 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 | >.1 | 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 | 320 | 320 | 294 | 317 |
| SAMPLE IMAGES | | method | limit/base | current | history1 | history2 |
| Color | | | | | | |
| Bottom | | | | | | |



Contact/Location: KYLE SPORTEL - PRIPRIMN