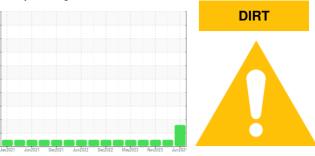


OIL ANALYSIS REPORT

SAMPLE INFORMATION method

Sample Rating Trend

limit/base



current

history1

history2

Machine Id

L15 Component Vacuum Pump Fluid USPI VAC 100 (--- LTR)

DIAGNOSIS

A Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Elemental level of silicon (Si) above normal. The amount and size of particulates present in the system are acceptable.

Fluid Condition

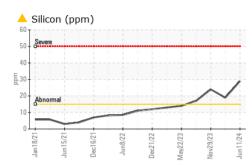
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

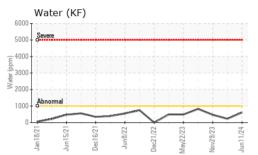
| SAMPLE INFORM | ATION | method | limit/base | current | history1 | history2 |
|------------------|----------|--------------|------------|-------------------|-------------|-------------|
| Sample Number | | Client Info | | USPM37696 | USPM30342 | USPM31952 |
| Sample Date | | Client Info | | 11 Jun 2024 | 06 Mar 2024 | 29 Nov 2023 |
| Machine Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | MARGINAL | NORMAL | NORMAL |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >20 | 6 | 2 | 4 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | 0 | <1 |
| Nickel | ppm | ASTM D5185m | >20 | <1 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| Lead | ppm | ASTM D5185m | >20 | <1 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >20 | <1 | 0 | 0 |
| Tin | ppm | ASTM D5185m | >20 | <1 | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | 0 | 3 | 2 | 1 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | <1 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | 0 | 0 | 0 | <1 |
| Calcium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Phosphorus | ppm | ASTM D5185m | 1800 | 1111 | 1133 | 1345 |
| Zinc | ppm | ASTM D5185m | 0 | <1 | 0 | 0 |
| Sulfur | ppm | ASTM D5185m | 0 | 6 | 63 | 24 |
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >15 | <mark>/</mark> 29 | 19 | 24 |
| Sodium | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | <1 | 0 | <1 |
| Water | % | ASTM D6304 | >.1 | 0.060 | 0.022 | 0.046 |
| ppm Water | ppm | ASTM D6304 | >1000 | 607 | 229 | 466 |
| FLUID CLEANLIN | ESS | method | limit/base | current | history1 | history2 |
| Particles >4µm | | ASTM D7647 | >10000 | 131 | 152 | 372 |
| Particles >6µm | | ASTM D7647 | | 44 | 46 | 154 |
| Particles >14µm | | ASTM D7647 | >640 | 7 | 9 | 7 |
| Particles >21µm | | ASTM D7647 | | 3 | 3 | 1 |
| Particles >38µm | | ASTM D7647 | >40 | 0 | 1 | 0 |
| Particles >71µm | | ASTM D7647 | | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >20/18/16 | 14/13/10 | 14/13/10 | 16/14/10 |
| FLUID DEGRADA | TION | method | limit/base | current | history1 | history2 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.05 | 0.15 | 0.14 | 0.13 |

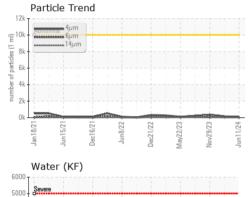
Contact/Location: JOHN KONRAD - KRADAV Page 1 of 2

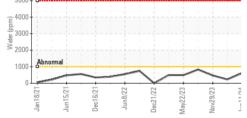


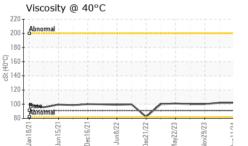
OIL ANALYSIS REPORT







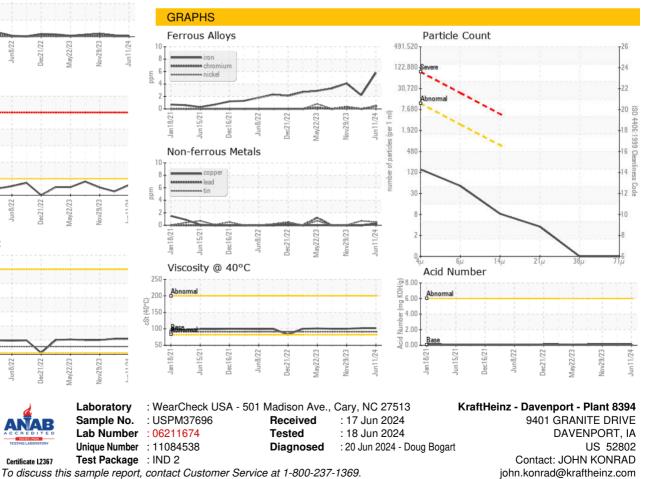






| VISUAL | | method | limit/base | current | history1 | history2 |
|------------------|--------|-----------|------------|--|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | 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 | >.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 | 91 | 102 | 102 | 100 |
| SAMPLE IMAGES | S | method | limit/base | current | history1 | history2 |
| Color | | | | Participation of the second se | | |

Bottom



* - 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) F: (563)326-8391

Report Id: KRADAV [WUSCAR] 06211674 (Generated: 06/21/2024 22:24:50) Rev: 1

Certificate 12367

Contact/Location: JOHN KONRAD - KRADAV

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