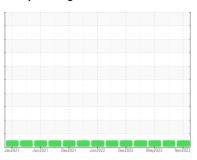


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



MS-2 - B STUFF

Component **Pump** Fluid

USPI VAC 100 (--- LTR)

DIAGNOSIS

Recommendation

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.

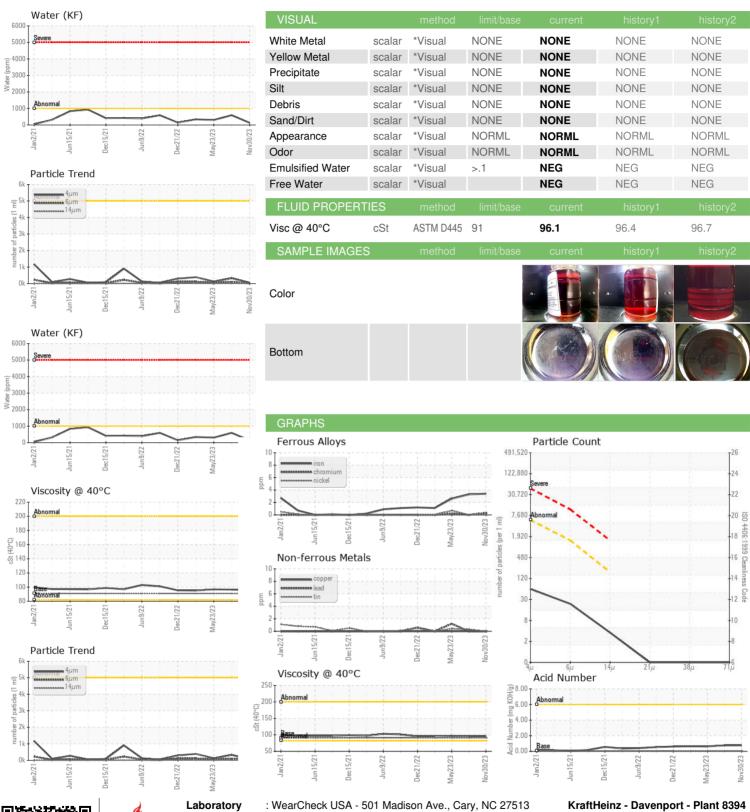
Fluid Condition

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

| | | Jan2021 | Jun2021 Dec2021 | Jun2022 Dec2022 May2023 | Nov2023 | |
|------------------|----------|--------------|-----------------|-------------------------|-------------|-------------|
| SAMPLE INFORM | MATION | method | limit/base | current | history1 | history2 |
| Sample Number | | Client Info | | USPM31960 | USPM29378 | USPM28405 |
| Sample Date | | Client Info | | 30 Nov 2023 | 17 Aug 2023 | 23 May 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 | | | | NORMAL | NORMAL | NORMAL |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >90 | 3 | 3 | 3 |
| Chromium | ppm | ASTM D5185m | >5 | <1 | 0 | <1 |
| Nickel | ppm | ASTM D5185m | >5 | 0 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | >3 | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >7 | 0 | 0 | 0 |
| Lead | ppm | ASTM D5185m | >12 | 0 | 0 | 1 |
| Copper | ppm | ASTM D5185m | >30 | 0 | 0 | 0 |
| Tin | ppm | ASTM D5185m | >9 | 0 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | 0 | <1 | <1 | <1 |
| Calcium | ppm | ASTM D5185m | 0 | 3 | 6 | 4 |
| Phosphorus | ppm | ASTM D5185m | 1800 | 1112 | 1214 | 1212 |
| Zinc | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Sulfur | ppm | ASTM D5185m | 0 | 0 | 28 | 0 |
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >60 | 8 | 7 | 5 |
| Sodium | ppm | ASTM D5185m | | 2 | 1 | 2 |
| Potassium | ppm | ASTM D5185m | >20 | 1 | 0 | 2 |
| Water | % | ASTM D6304 | | 0.013 | 0.059 | 0.029 |
| ppm Water | ppm | ASTM D6304 | | 132 | 593.2 | 299.7 |
| FLUID CLEANLIN | | method | limit/base | current | history1 | history2 |
| Particles >4µm | | ASTM D7647 | >5000 | 53 | 324 | 125 |
| Particles >6µm | | ASTM D7647 | >1300 | 20 | 102 | 57 |
| Particles >14µm | | ASTM D7647 | >160 | 3 | 21 | 11 |
| Particles >21µm | | ASTM D7647 | >40 | 0 | 6 | 4 |
| Particles >38µm | | ASTM D7647 | >10 | 0 | 0 | 1 |
| Particles >71μm | | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | 13/11/9 | 16/14/12 | 14/13/11 |
| FLUID DEGRADA | TION | method | limit/base | current | history1 | history2 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.05 | 0.77 | 0.76 | 0.63 |



OIL ANALYSIS REPORT







Certificate L2367

Sample No. Lab Number **Unique Number**

: USPM31960 : 06027784 : 10777575 Test Package : IND 2

: 07 Dec 2023 Received

: 08 Dec 2023 Diagnosed Diagnostician : Doug Bogart 9401 GRANITE DRIVE DAVENPORT, IA

US 52802 Contact: JOHN KONRAD john.konrad@kraftheinz.com

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)

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