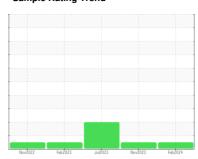


# **OIL ANALYSIS REPORT**

**Sample Rating Trend** 







Machine Id VP-25 Component Pump Fluid

**USPI VAC 100 (--- GAL)** 

### 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.

|                        |            | Nov2022      |            | Jul2023 Nov2023 | Feb2024     |                                   |
|------------------------|------------|--------------|------------|-----------------|-------------|-----------------------------------|
| SAMPLE INFORM          | MATION     | method       | limit/base | current         | history1    | history2                          |
| Sample Number          |            | Client Info  |            | USPM30121       | USPM31240   | USPM27092                         |
| Sample Date            |            | Client Info  |            | 22 Feb 2024     | 07 Nov 2023 | 17 Jul 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      | ABNORMAL                          |
| WEAR METALS            |            | method       | limit/base | current         | history1    | history2                          |
| Iron                   | ppm        | ASTM D5185m  | >90        | <1              | 0           | 1                                 |
| Chromium               | ppm        | ASTM D5185m  | >5         | <1              | 0           | <1                                |
| Nickel                 | ppm        | ASTM D5185m  | >5         | <1              | 0           | 0                                 |
| Titanium               | ppm        | ASTM D5185m  | >3         | <1              | 0           | 0                                 |
| Silver                 | ppm        | ASTM D5185m  | >3         | <1              | 0           | 0                                 |
| Aluminum               | ppm        | ASTM D5185m  | >7         | <1              | 0           | 2                                 |
| Lead                   | ppm        | ASTM D5185m  | >12        | <1              | 0           | 0                                 |
| Copper                 | ppm        | ASTM D5185m  | >30        | <1              | 0           | <1                                |
| Tin                    | ppm        | ASTM D5185m  | >9         | <1              | 0           | 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          | 0               | 0           | 0                                 |
| 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           | <1                                |
| Phosphorus             | ppm        | ASTM D5185m  | 1800       | 844             | 924         | 1568                              |
| Zinc                   | ppm        | ASTM D5185m  | 0          | 2               | 0           | 1                                 |
| Sulfur                 | ppm        | ASTM D5185m  | 0          | 0               | 0           | 59                                |
| CONTAMINANTS           |            | method       | limit/base | current         | history1    | history2                          |
| Silicon                | ppm        | ASTM D5185m  | >60        | 2               | <1          | 2                                 |
| Sodium                 | ppm        | ASTM D5185m  |            | 0               | 0           | <1                                |
| Potassium              | ppm        | ASTM D5185m  | >20        | <1              | 0           | <1                                |
| Water                  | %          | ASTM D6304   |            | 0.045           | 0.037       | 0.072                             |
| ppm Water              | ppm        | ASTM D6304   | >1000      | 452             | 378.6       | 720.7                             |
| FLUID CLEANLIN         | ESS        | method       | limit/base | current         | history1    | history2                          |
| Particles >4µm         |            | ASTM D7647   | >5000      | 1636            | 1108        | <b>▲</b> 10993                    |
| Particles >6µm         |            | ASTM D7647   | >1300      | 377             | 134         | ▲ 3369                            |
| Particles >14µm        |            | ASTM D7647   | >160       | 35              | 14          | <u>^</u> 280                      |
| Particles >21μm        |            | ASTM D7647   | >40        | 10              | 5           | <u></u> ▲ 61                      |
| Particles >38µm        |            | ASTM D7647   | >10        | 0               | 2           | 1                                 |
| Particles >71μm        |            | ASTM D7647   | >3         | 0               | 0           | 0                                 |
| Oil Cleanliness        |            | ISO 4406 (c) | >19/17/14  | 18/16/12        | 17/14/11    | <u>\$\text{\Delta}\$ 21/19/15</u> |
| FLUID DEGRADA          | TION       | method       | limit/base | current         | history1    | history2                          |
| A sial Nivershaw (ANI) | ma 1/011/- | ACTM DOGAE   | 0.05       | 0.175           | 0.050       | 0.10                              |

Acid Number (AN)

0.052

0.175

mg KOH/g ASTM D8045 0.05

0.19



## **OIL ANALYSIS REPORT**

