

# **OIL ANALYSIS REPORT**

#### Area SCOF [98256887] Machine Id VACUUM PUMP 2 Component

Vacuum Pump Fluid R&O OIL ISO 100 (--- GAL)

## DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

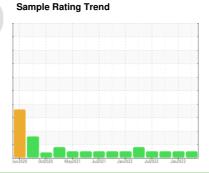
All component wear rates are normal.

#### 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.





NORMAL

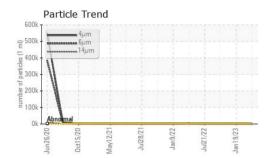
| SAMPLE INFOR     | MATION   | method       | limit/base  | current     | history1        | history2    |
|------------------|----------|--------------|-------------|-------------|-----------------|-------------|
| Sample Number    |          | Client Info  |             | PCA0096859  | PCA0081554      | PCA0073922  |
| Sample Date      |          | Client Info  |             | 21 May 2023 | 19 Jan 2023     | 16 Oct 2022 |
| Machine Age      | hrs      | Client Info  |             | 0           | 0               | 0           |
| Oil Age          | hrs      | Client Info  |             | 0           | 0               | 0           |
| Oil Changed      |          | Client Info  |             | Filtered    | Filtered        | Filtered    |
| Sample Status    |          |              |             | NORMAL      | NORMAL          | NORMAL      |
| CONTAMINAT       |          | method       | limit/base  | ourropt     | biotory1        | history2    |
| Water            |          | WC Method    | iiiiii/base | current     | history1<br>NEG | NEG         |
|                  | 0        |              | 1           | -           |                 | -           |
| WEAR METAL       |          | method       | limit/base  | current     | history1        | history2    |
| Iron             | ppm      | ASTM D5185m  | >20         | <1          | 2               | 3           |
| Chromium         | ppm      | ASTM D5185m  |             | 0           | 0               | 0           |
| Nickel           | ppm      | ASTM D5185m  | >20         | <1          | 0               | 0           |
| Titanium         | ppm      | ASTM D5185m  |             | 0           | 0               | 0           |
| Silver           | ppm      | ASTM D5185m  |             | 0           | 0               | 0           |
| Aluminum         | ppm      | ASTM D5185m  |             | <1          | 0               | <1          |
| Lead             | ppm      | ASTM D5185m  | >20         | 0           | 0               | 0           |
| Copper           | ppm      | ASTM D5185m  |             | 0           | <1              | <1          |
| Tin              | ppm      | ASTM D5185m  | >20         | 0           | 0               | <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  | 5           | 0           | 0               | 0           |
| Barium           | ppm      | ASTM D5185m  | 5           | 0           | 0               | 0           |
| Molybdenum       | ppm      | ASTM D5185m  | 5           | 0           | 0               | 0           |
| Manganese        | ppm      | ASTM D5185m  |             | <1          | 0               | 0           |
| Magnesium        | ppm      | ASTM D5185m  | 5           | 0           | 0               | 0           |
| Calcium          | ppm      | ASTM D5185m  | 5           | <1          | 0               | 0           |
| Phosphorus       | ppm      | ASTM D5185m  | 100         | 449         | 202             | 260         |
| Zinc             | ppm      | ASTM D5185m  | 25          | 0           | 3               | 2           |
| Sulfur           | ppm      | ASTM D5185m  | 1500        | 1745        | 949             | 1190        |
| CONTAMINAN       | TS       | method       | limit/base  | current     | history1        | history2    |
| Silicon          | ppm      | ASTM D5185m  | >15         | 0           | <1              | <1          |
| Sodium           | ppm      | ASTM D5185m  |             | <1          | 1               | 3           |
| Potassium        | ppm      | ASTM D5185m  | >20         | 0           | 0               | 0           |
| FLUID CLEANL     | INESS    | method       | limit/base  | current     | history1        | history2    |
| Particles >4µm   |          | ASTM D7647   | >1300       | 300         | 306             | 485         |
| Particles >6µm   |          | ASTM D7647   | >320        | 109         | 136             | 141         |
| Particles >14µm  |          | ASTM D7647   | >80         | 12          | 14              | 29          |
| Particles >21µm  |          | ASTM D7647   | >20         | 4           | 2               | 8           |
| Particles >38µm  |          | ASTM D7647   | >4          | 0           | 0               | 0           |
| Particles >71µm  |          | ASTM D7647   | >3          | 0           | 0               | 0           |
| Oil Cleanliness  |          | ISO 4406 (c) | >17/15/13   | 15/14/11    | 15/14/11        | 16/14/12    |
| FLUID DEGRAD     | DATION   | method       | limit/base  | current     | history1        | history2    |
| Acid Number (AN) | mg KOH/g | ASTM D8045   | 0.08        | 0.04        | 0.064           | 0.102       |
|                  |          |              | ~           |             |                 |             |

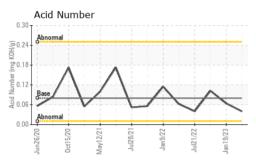
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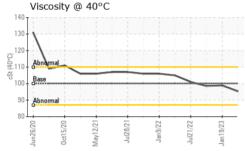
Contact/Location: Service Manager - KRASPRMO

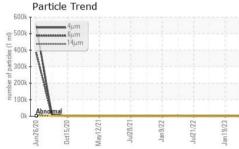


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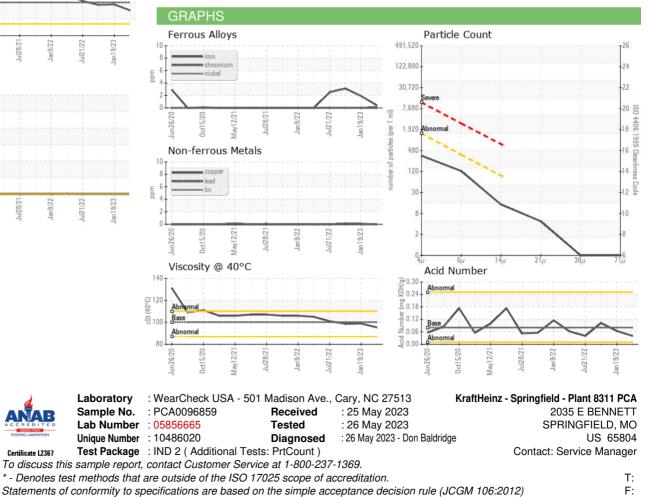








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|------------------|--------|------------------|------------|---------|---------------------|------------|
| VISUAL           |        | method           | limit/base | current | history1            | history2   |
| White Metal      | scalar | *Visual          | 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          |            | NEG     | NEG                 | NEG        |
| Free Water       | scalar | *Visual          |            | NEG     | NEG                 | NEG        |
| FLUID PROPE      | RTIES  | method           | limit/base | current | history1            | history2   |
| Visc @ 40°C      | cSt    | ASTM D445        | 100        | 95.3    | 98.9                | 98.55      |
| SAMPLE IMAG      | iES    | method           | limit/base | current | history1            | history2   |
| Color            |        |                  |            |         |                     |            |
| Bottom           |        |                  |            |         |                     | $\bigcirc$ |



Contact/Location: Service Manager - KRASPRMO