



OIL ANALYSIS REPORT

|                 |                 |
|-----------------|-----------------|
| WEAR            | <b>NORMAL</b>   |
| CONTAMINATION   | <b>MARGINAL</b> |
| FLUID CONDITION | <b>NORMAL</b>   |

Machine Id  
**EVACUACION**  
Component  
**Hydraulic System**  
Fluid  
**ANDEROL BIO GUARD FRHF 46 (--- QTS)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>AN06060259</b>  | AN06060244  | AN05974968  |
| Sample Date    |     | Client Info |           | <b>10 Nov 2023</b> | 04 Oct 2023 | 01 Sep 2023 |
| Machine Age    | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Age        | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Changed    |     | Client Info |           | <b>N/A</b>         | N/A         | N/A         |
| Filter Changed |     | Client Info |           | <b>N/A</b>         | N/A         | N/A         |
| Sample Status  |     |             |           | <b>MARGINAL</b>    | ABNORMAL    | ABNORMAL    |

**WEAR**

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >20  | <b>0</b>     | 0    | 0    |
| Chromium     | ppm    | ASTM D5185m | >20  | <b>&lt;1</b> | <1   | <1   |
| Nickel       | ppm    | ASTM D5185m | >20  | <b>0</b>     | 0    | 0    |
| Titanium     | ppm    | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| Silver       | ppm    | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>2</b>     | 2    | 0    |
| Lead         | ppm    | ASTM D5185m | >20  | <b>0</b>     | 0    | 0    |
| Copper       | ppm    | ASTM D5185m | >20  | <b>&lt;1</b> | <1   | 1    |
| Tin          | ppm    | ASTM D5185m | >20  | <b>0</b>     | 0    | <1   |
| Vanadium     | ppm    | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |

**CONTAMINATION**

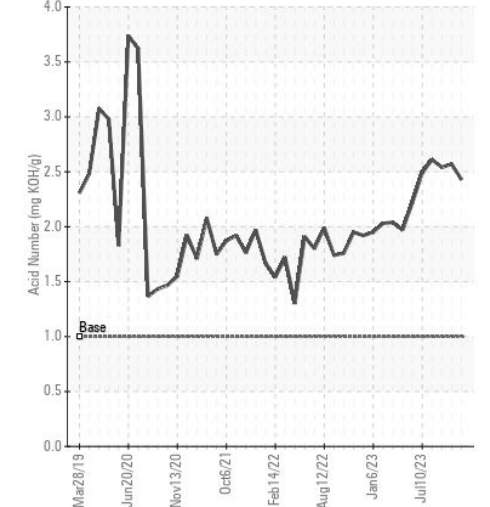
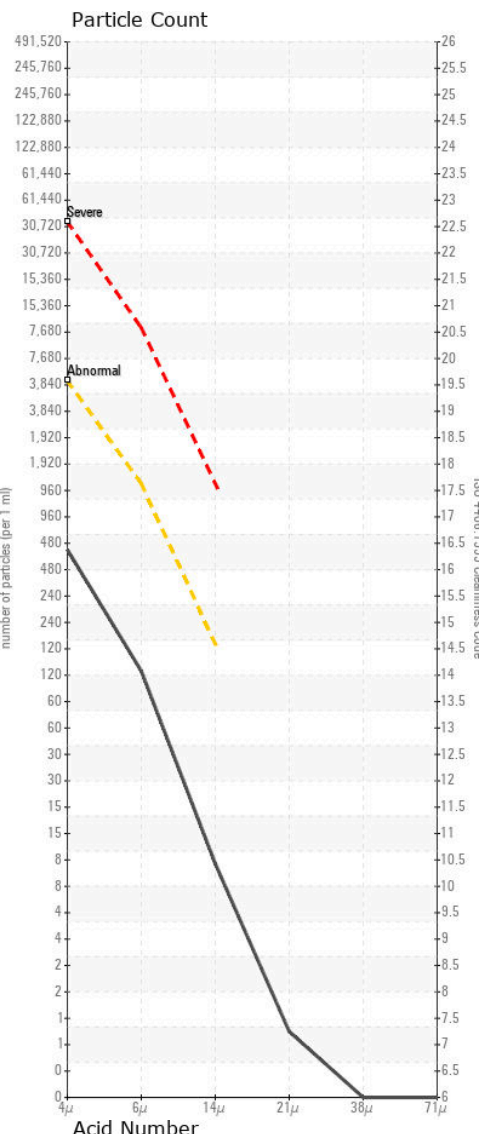
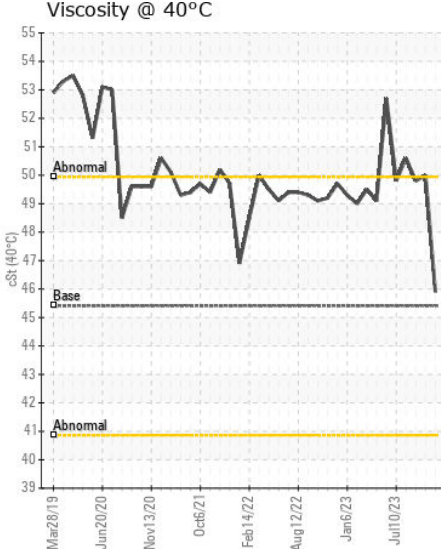
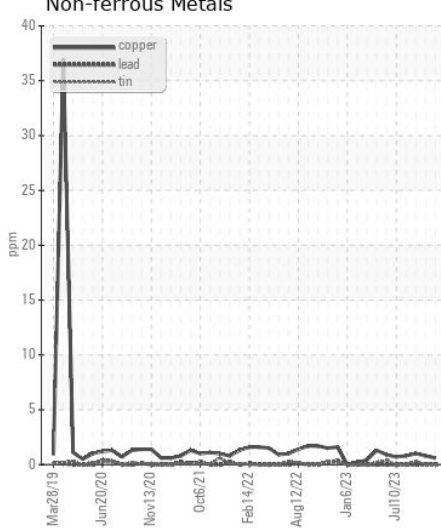
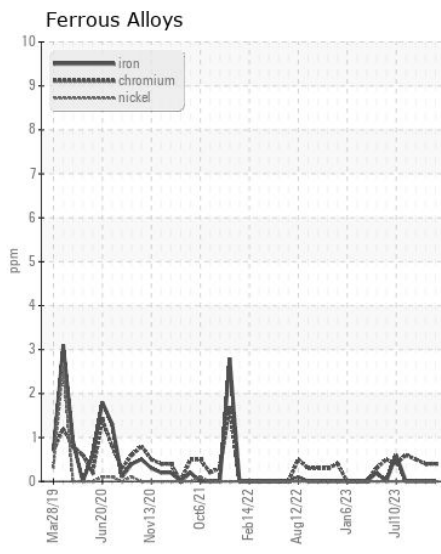
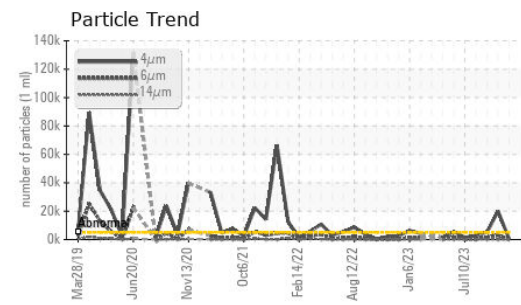
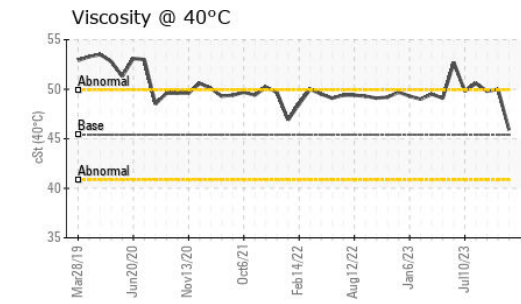
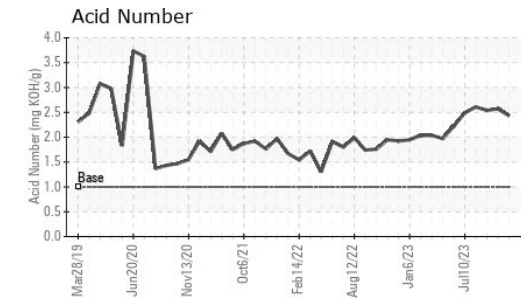
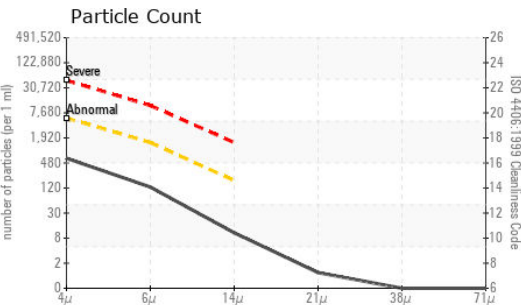
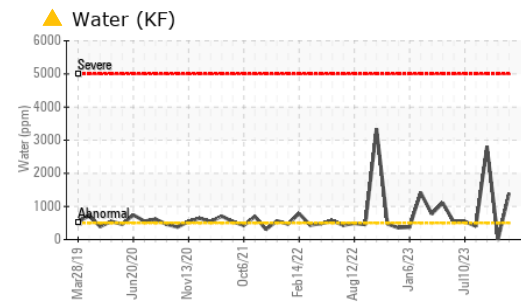
There is a light concentration of water present in the oil. The amount and size of particulates present in the system are acceptable.

|                  |        |              |           |                 |            |            |
|------------------|--------|--------------|-----------|-----------------|------------|------------|
| Silicon          | ppm    | ASTM D5185m  | >15       | <b>&lt;1</b>    | <1         | <1         |
| Potassium        | ppm    | ASTM D5185m  | >20       | <b>&lt;1</b>    | <1         | 1          |
| Water            | %      | ASTM D6304   | >0.05     | <b>▲ 0.140</b>  | 0.00       | ▲ 0.281    |
| ppm Water        | ppm    | ASTM D6304   | >500      | <b>▲ 1400</b>   | 0          | ▲ 2811.0   |
| Particles >4µm   |        | ASTM D7647   | >5000     | <b>548</b>      | ▲ 20052    | ▲ 5106     |
| Particles >6µm   |        | ASTM D7647   | >1300     | <b>112</b>      | ▲ 3114     | ▲ 1518     |
| Particles >14µm  |        | ASTM D7647   | >160      | <b>9</b>        | 131        | 66         |
| Particles >21µm  |        | ASTM D7647   | >40       | <b>1</b>        | 26         | 12         |
| Particles >38µm  |        | ASTM D7647   | >10       | <b>0</b>        | 1          | 0          |
| Particles >71µm  |        | ASTM D7647   | >3        | <b>0</b>        | 0          | 0          |
| Oil Cleanliness  |        | ISO 4406 (c) | >19/17/14 | <b>16/14/10</b> | ▲ 22/19/14 | ▲ 20/18/13 |
| Silt             | scalar | *Visual      | NONE      | <b>NONE</b>     | NONE       | NONE       |
| Debris           | scalar | *Visual      | NONE      | <b>NONE</b>     | NONE       | NONE       |
| Sand/Dirt        | scalar | *Visual      | NONE      | <b>NONE</b>     | NONE       | NONE       |
| Appearance       | scalar | *Visual      | NORML     | <b>NORML</b>    | NORML      | NORML      |
| Odor             | scalar | *Visual      | NORML     | <b>NORML</b>    | NORML      | NORML      |
| Emulsified Water | scalar | *Visual      | >0.05     | <b>0.2%</b>     | NEG        | NEG        |

**FLUID CONDITION**

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

|                  |          |             |       |              |      |      |
|------------------|----------|-------------|-------|--------------|------|------|
| Sodium           | ppm      | ASTM D5185m |       | <b>&lt;1</b> | 0    | 1    |
| Boron            | ppm      | ASTM D5185m |       | <b>0</b>     | 0    | <1   |
| Barium           | ppm      | ASTM D5185m |       | <b>0</b>     | 0    | 0    |
| Molybdenum       | ppm      | ASTM D5185m |       | <b>0</b>     | 0    | 0    |
| Manganese        | ppm      | ASTM D5185m |       | <b>0</b>     | 0    | 0    |
| Magnesium        | ppm      | ASTM D5185m |       | <b>0</b>     | 0    | 4    |
| Calcium          | ppm      | ASTM D5185m |       | <b>0</b>     | 0    | 0    |
| Phosphorus       | ppm      | ASTM D5185m | 196   | <b>238</b>   | 238  | 201  |
| Zinc             | ppm      | ASTM D5185m |       | <b>0</b>     | 0    | 0    |
| Sulfur           | ppm      | ASTM D5185m | 1440  | <b>1859</b>  | 1830 | 1617 |
| Acid Number (AN) | mg KOH/g | ASTM D8045  | 1     | <b>2.43</b>  | 2.57 | 2.54 |
| Visc @ 40°C      | cSt      | ASTM D445   | 45.41 | <b>45.9</b>  | 50.0 | 49.8 |



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : AN06060259 **Received** : 12 Jan 2024  
**Lab Number** : 06060259 **Diagnosed** : 18 Jan 2024  
**Unique Number** : 10831641 **Diagnostician** : Doug Bogart  
**Test Package** : IND 2 ( Additional Tests: PrtCount )

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Certificate L2367  
 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)