



PERFORMANCE  
UNDER  
PRESSURE

OIL ANALYSIS REPORT

|                 |           |
|-----------------|-----------|
| WEAR            | NORMAL    |
| CONTAMINATION   | ATTENTION |
| FLUID CONDITION | ATTENTION |

Machine Id  
**SHREDDER**

Component  
**Hydraulic System**

Fluid  
**AW HYDRAULIC OIL ISO 32 (15 GAL)**

**RECOMMENDATION**

No corrective action is recommended at this time. Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>RP0028972</b>   | RP0028991   | RP0020824   |
| Sample Date    |     | Client Info |           | <b>21 Dec 2023</b> | 28 Jun 2023 | 16 Jan 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>ATTENTION</b>   | ATTENTION   | ABNORMAL    |

**WEAR**

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >20  | <b>&lt;1</b> | <1   | <1   |
| Chromium     | ppm    | ASTM D5185m | >20  | <b>0</b>     | 0    | 0    |
| 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>     | <1   | <1   |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>0</b>     | 0    | 0    |
| Lead         | ppm    | ASTM D5185m | >20  | <b>0</b>     | <1   | 0    |
| Copper       | ppm    | ASTM D5185m | >20  | <b>0</b>     | <1   | <1   |
| Tin          | ppm    | ASTM D5185m | >20  | <b>0</b>     | <1   | <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**

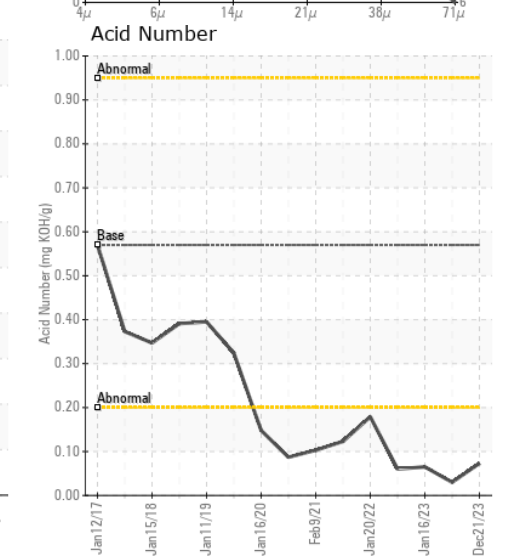
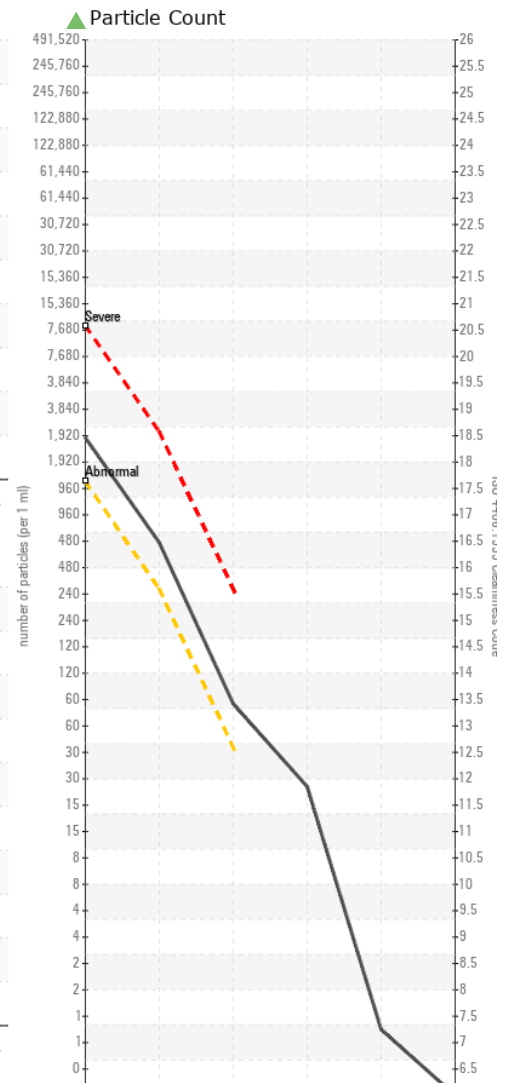
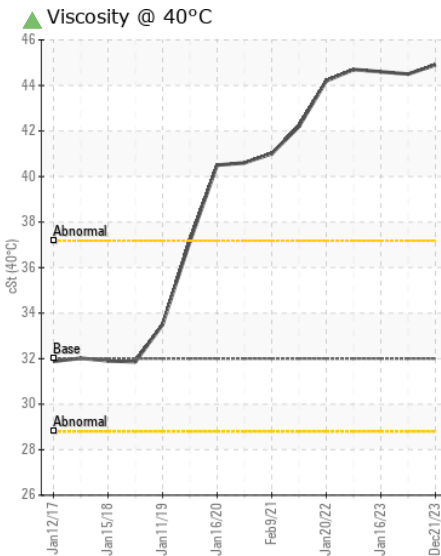
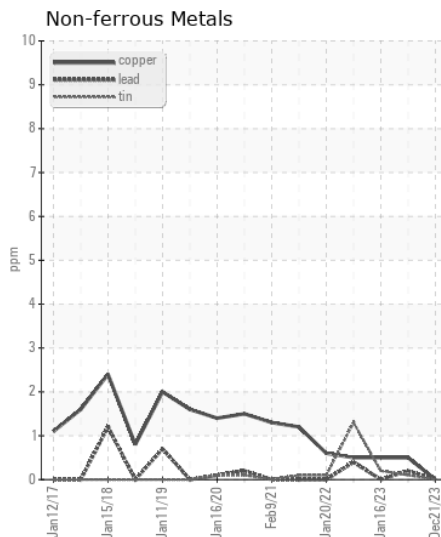
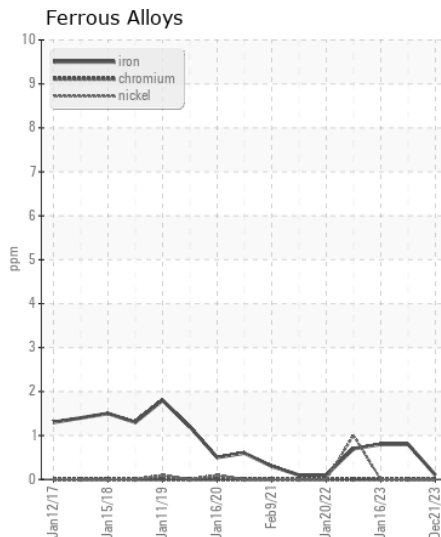
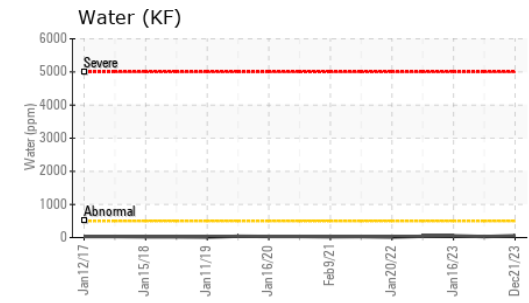
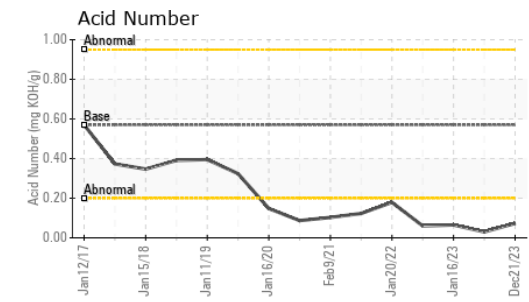
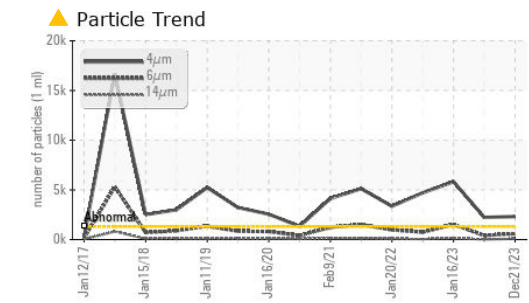
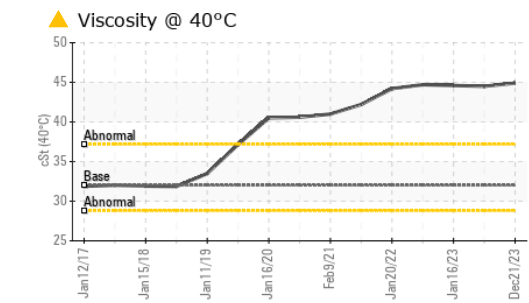
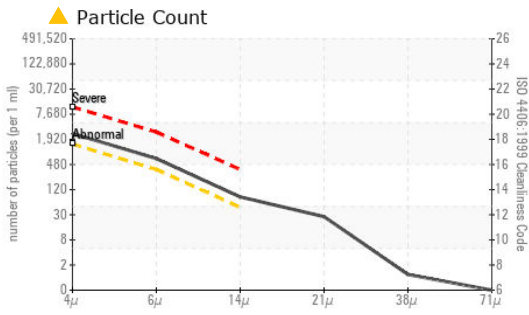
There is a moderate amount of particulates present in the oil.

|                  |        |              |           |                   |            |            |
|------------------|--------|--------------|-----------|-------------------|------------|------------|
| Silicon          | ppm    | ASTM D5185m  | >15       | <b>0</b>          | 0          | <1         |
| Potassium        | ppm    | ASTM D5185m  | >20       | <b>0</b>          | <1         | 0          |
| Water            | %      | ASTM D6304   | >0.05     | <b>0.005</b>      | 0.003      | 0.005      |
| ppm Water        | ppm    | ASTM D6304   | >500      | <b>56</b>         | 28.4       | 55.1       |
| Particles >4µm   |        | ASTM D7647   | >1300     | <b>▲ 2313</b>     | ▲ 2233     | ▲ 5825     |
| Particles >6µm   |        | ASTM D7647   | >320      | <b>▲ 585</b>      | ▲ 405      | ▲ 1510     |
| Particles >14µm  |        | ASTM D7647   | >40       | <b>▲ 71</b>       | 19         | ▲ 123      |
| Particles >21µm  |        | ASTM D7647   | >10       | <b>▲ 24</b>       | 3          | ▲ 29       |
| Particles >38µm  |        | ASTM D7647   | >3        | <b>1</b>          | 0          | ▲ 6        |
| Particles >71µm  |        | ASTM D7647   | >3        | <b>0</b>          | 0          | 1          |
| Oil Cleanliness  |        | ISO 4406 (c) | >17/15/12 | <b>▲ 18/16/13</b> | ▲ 18/16/11 | ▲ 20/18/14 |
| Silt             | scalar | *Visual      | NONE      | <b>NONE</b>       | NONE       | NONE       |
| Debris           | scalar | *Visual      | NONE      | <b>LIGHT</b>      | LIGHT      | LIGHT      |
| 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>NEG</b>        | NEG        | NEG        |

**FLUID CONDITION**

Viscosity of sample indicates oil is within ISO 46 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

|                  |          |             |      |               |        |        |
|------------------|----------|-------------|------|---------------|--------|--------|
| Sodium           | ppm      | ASTM D5185m |      | <b>0</b>      | 0      | <1     |
| Boron            | ppm      | ASTM D5185m | 5    | <b>0</b>      | 0      | 0      |
| Barium           | ppm      | ASTM D5185m | 5    | <b>0</b>      | <1     | 0      |
| Molybdenum       | ppm      | ASTM D5185m | 5    | <b>0</b>      | 0      | 0      |
| Manganese        | ppm      | ASTM D5185m |      | <b>0</b>      | 0      | 0      |
| Magnesium        | ppm      | ASTM D5185m | 25   | <b>0</b>      | 0      | <1     |
| Calcium          | ppm      | ASTM D5185m | 200  | <b>0</b>      | 0      | 0      |
| Phosphorus       | ppm      | ASTM D5185m | 300  | <b>523</b>    | 491    | 484    |
| Zinc             | ppm      | ASTM D5185m | 370  | <b>&lt;1</b>  | 8      | 0      |
| Acid Number (AN) | mg KOH/g | ASTM D8045  | 0.57 | <b>0.073</b>  | 0.03   | 0.065  |
| Visc @ 40°C      | cSt      | ASTM D445   | 32   | <b>▲ 44.9</b> | ▲ 44.5 | ▲ 44.6 |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RP0028972  
**Lab Number** : 06055908  
**Unique Number** : 10821857  
**Test Package** : PLANT

**WESTLAKE CHEMICAL - WESTFIELD**  
 44 GREIF WAY  
 WESTFIELD, MA  
 US 01085  
 Contact: MICHAEL WINN  
 michael\_winn@westlake.net  
 T: (413)485-0161  
 F:

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)