



# OIL ANALYSIS REPORT

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

Area

## Blending

Machine Id

## Smartwax Thermal Oil Skid (S/N BL015U20U)

Component

## Heat Transfer Fluid

Fluid

## HEAT TRANSFER FLUID ISO 46 (--- GAL)

### RECOMMENDATION

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current     | History1    | History2    |
|----------------|-----|-------------|-----------|-------------|-------------|-------------|
| Sample Number  |     | Client Info |           | WC0895018   | WC0834707   | WC0782898   |
| Sample Date    |     | Client Info |           | 13 May 2024 | 14 Nov 2023 | 17 May 2023 |
| Machine Age    | hrs | Client Info |           | 0           | 0           | 0           |
| Oil Age        | hrs | Client Info |           | 0           | 0           | 0           |
| Filter Age     | hrs | Client Info |           | 0           | 0           | 0           |
| Oil Changed    |     | Client Info |           | N/A         | N/A         | N/A         |
| Filter Changed |     | Client Info |           | N/A         | N/A         | N/A         |
| Sample Status  |     |             |           | NORMAL      | NORMAL      | NORMAL      |

### WEAR

All component wear rates are normal.

|              |        |             |      |      |      |      |
|--------------|--------|-------------|------|------|------|------|
| Iron         | ppm    | ASTM D5185m | >200 | <1   | <1   | 2    |
| Chromium     | ppm    | ASTM D5185m | >21  | 0    | 0    | 0    |
| Nickel       | ppm    | ASTM D5185m | >21  | <1   | 0    | 0    |
| Titanium     | ppm    | ASTM D5185m | >21  | <1   | 0    | 0    |
| Silver       | ppm    | ASTM D5185m | >21  | <1   | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >21  | 0    | 0    | 0    |
| Lead         | ppm    | ASTM D5185m | >21  | 1    | 0    | 0    |
| Copper       | ppm    | ASTM D5185m | >21  | <1   | 0    | <1   |
| Tin          | ppm    | ASTM D5185m | >21  | 0    | 0    | 0    |
| Vanadium     | ppm    | ASTM D5185m |      | <1   | 0    | 0    |
| White Metal  | scalar | *Visual     | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE | NONE | NONE | NONE |

### CONTAMINATION

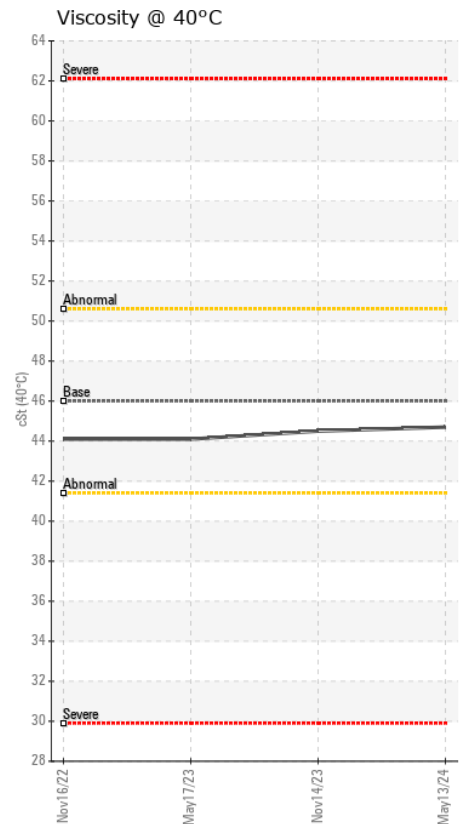
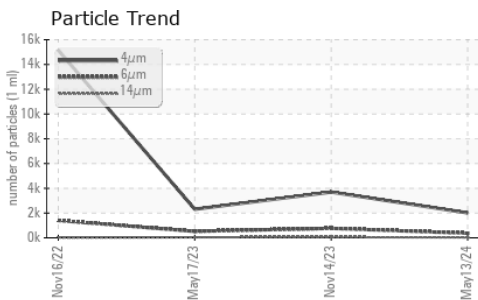
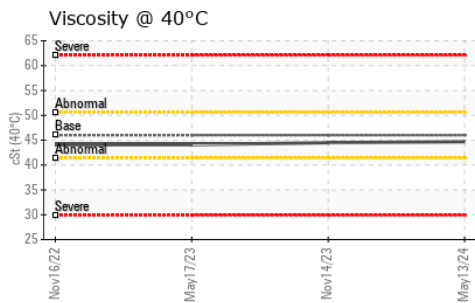
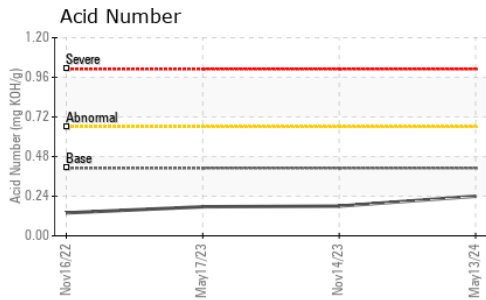
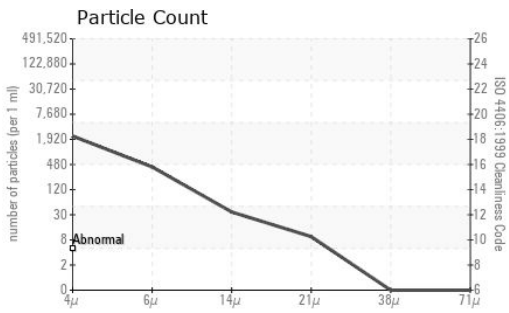
There is no indication of any contamination in the fluid. The amount and size of particulates present in the system are acceptable.

|                  |        |              |           |          |          |          |
|------------------|--------|--------------|-----------|----------|----------|----------|
| Silicon          | ppm    | ASTM D5185m  | >25       | <1       | <1       | <1       |
| Potassium        | ppm    | ASTM D5185m  | >20       | <1       | 0        | <1       |
| Water            |        | WC Method    | >0.0601   | NEG      | NEG      | NEG      |
| Particles >4µm   |        | ASTM D7647   |           | 2013     | 3698     | 2310     |
| Particles >6µm   |        | ASTM D7647   | >10240000 | 368      | 766      | 524      |
| Particles >14µm  |        | ASTM D7647   | >10240000 | 31       | 53       | 44       |
| Particles >21µm  |        | ASTM D7647   | >2560000  | 8        | 11       | 15       |
| Particles >38µm  |        | ASTM D7647   | >640000   | 0        | 0        | 2        |
| Particles >71µm  |        | ASTM D7647   | >160000   | 0        | 0        | 0        |
| Oil Cleanliness  |        | ISO 4406 (c) | >-/30/30  | 18/16/12 | 19/17/13 | 18/16/13 |
| 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      | >0.0601   | NEG      | NEG      | NEG      |

### FLUID CONDITION

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

|                  |          |             |      |      |      |       |
|------------------|----------|-------------|------|------|------|-------|
| Sodium           | ppm      | ASTM D5185m | >21  | 2    | 1    | <1    |
| 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    | <1   | 0    | <1    |
| Calcium          | ppm      | ASTM D5185m | 5    | 158  | 155  | 216   |
| Phosphorus       | ppm      | ASTM D5185m | 250  | 11   | 0    | 4     |
| Zinc             | ppm      | ASTM D5185m | 5    | 20   | 0    | <1    |
| Sulfur           | ppm      | ASTM D5185m | 3000 | 393  | 256  | 438   |
| Acid Number (AN) | mg KOH/g | ASTM D8045  | 0.41 | 0.24 | 0.18 | 0.176 |
| Visc @ 40°C      | cSt      | ASTM D445   | 46   | 44.7 | 44.5 | 44.1  |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0895018 **Received** : 21 May 2024  
**Lab Number** : 06186679 **Tested** : 23 May 2024  
**Unique Number** : 11043431 **Diagnosed** : 23 May 2024 - Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: PrtCount )

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)

**J.M. Huber Corporation**  
 PO BOX 38  
 CRYSTAL HILL, VA  
 US 24539  
 Contact: Ted Hudson  
 ted.hudson@huber.com  
 T: (434)476-6628  
 F: (434)476-8133