



# ASCENDUM

## OIL ANALYSIS REPORT

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



Area  
**Ascendum Machinery**  
Machine Id  
**VOLVO A40G ED-1 (S/N 352172)**  
Component  
**Hydraulic System**  
Fluid  
**VOLVO SUPER HYDRAULIC OIL 46 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>ASC0007899</b>  | ASC0001473  | VCP0006378  |
| Sample Date    |     | Client Info |           | <b>30 Jan 2024</b> | 14 Sep 2023 | 29 Mar 2023 |
| Machine Age    | hrs | Client Info |           | <b>5497</b>        | 4994        | 4495        |
| Oil Age        | hrs | Client Info |           | <b>4500</b>        | 4496        | 498         |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | 4496        | 0           |
| Oil Changed    |     | Client Info |           | <b>Not Changd</b>  | Not Changd  | Not Changd  |
| Filter Changed |     | Client Info |           | <b>Not Changd</b>  | Not Changd  | Not Changd  |
| Sample Status  |     |             |           | <b>NORMAL</b>      | ABNORMAL    | NORMAL      |

### WEAR

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >50  | <b>3</b>     | 6    | 5    |
| Chromium     | ppm    | ASTM D5185m | >20  | <b>&lt;1</b> | <1   | 0    |
| Nickel       | ppm    | ASTM D5185m | >10  | <b>0</b>     | 0    | 0    |
| Titanium     | ppm    | ASTM D5185m |      | <b>0</b>     | <1   | 0    |
| Silver       | ppm    | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>1</b>     | 2    | 2    |
| Lead         | ppm    | ASTM D5185m | >20  | <b>2</b>     | 1    | 2    |
| Copper       | ppm    | ASTM D5185m | >150 | <b>2</b>     | 3    | 2    |
| Tin          | ppm    | ASTM D5185m | >20  | <b>0</b>     | 0    | 0    |
| 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

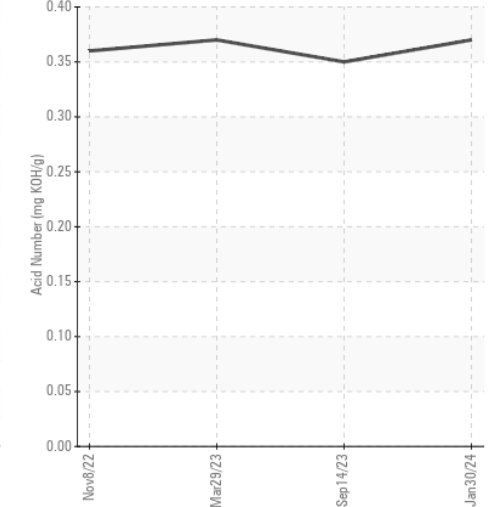
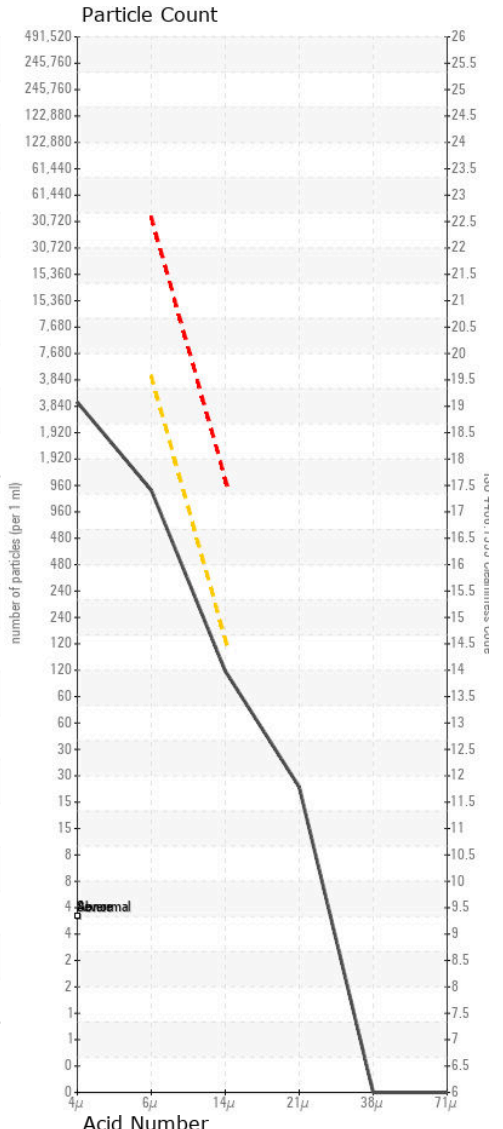
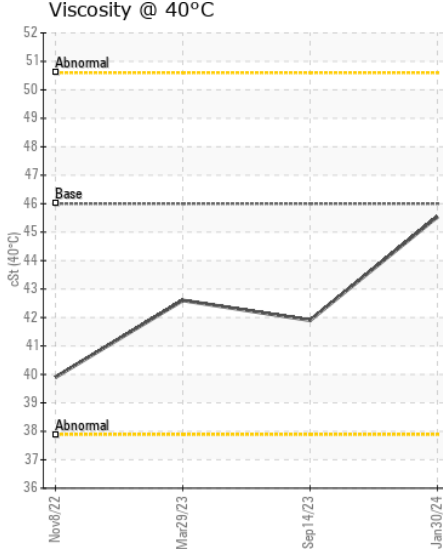
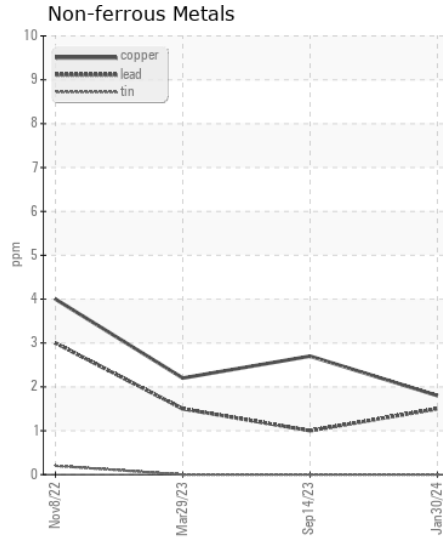
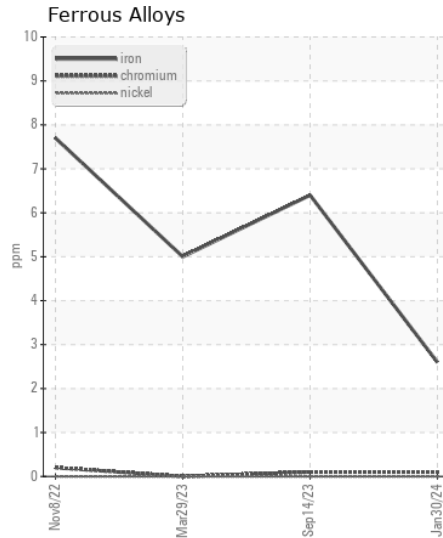
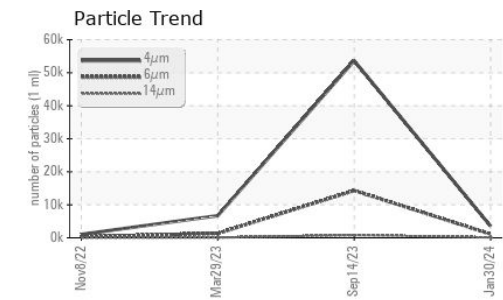
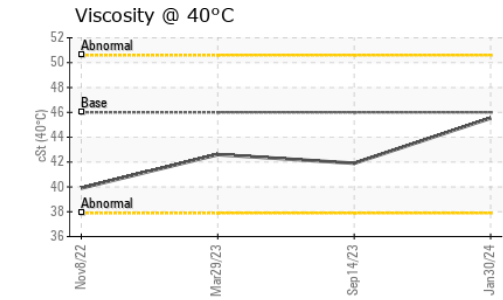
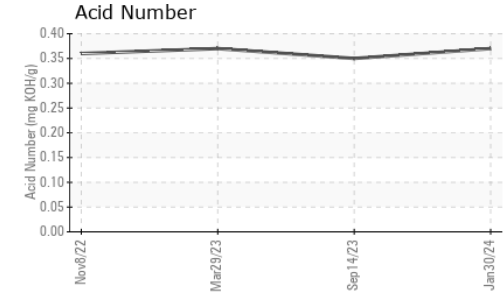
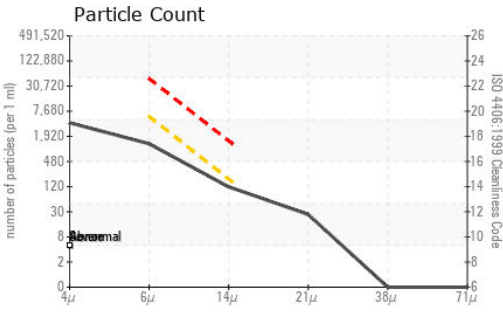
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

|                  |        |              |          |                 |            |          |
|------------------|--------|--------------|----------|-----------------|------------|----------|
| Silicon          | ppm    | ASTM D5185m  | >20      | <b>5</b>        | 5          | 4        |
| Potassium        | ppm    | ASTM D5185m  | >20      | <b>0</b>        | 0          | 1        |
| Water            |        | WC Method    | >0.1     | <b>NEG</b>      | NEG        | NEG      |
| Particles >4µm   |        | ASTM D7647   |          | <b>3537</b>     | 53620      | 6709     |
| Particles >6µm   |        | ASTM D7647   | >5000    | <b>1117</b>     | ▲ 14321    | 1337     |
| Particles >14µm  |        | ASTM D7647   | >160     | <b>105</b>      | ▲ 802      | 71       |
| Particles >21µm  |        | ASTM D7647   | >40      | <b>23</b>       | ▲ 167      | 20       |
| Particles >38µm  |        | ASTM D7647   | >10      | <b>0</b>        | 4          | 2        |
| Particles >71µm  |        | ASTM D7647   | >3       | <b>0</b>        | 0          | 0        |
| Oil Cleanliness  |        | ISO 4406 (c) | >-/19/14 | <b>19/17/14</b> | ▲ 23/21/17 | 20/18/13 |
| Silt             | scalar | *Visual      | NONE     | <b>NONE</b>     | NONE       | NONE     |
| Debris           | scalar | *Visual      | NONE     | <b>NONE</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      | >0.1     | <b>NEG</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>0</b>     | 2    | 0    |
| Boron            | ppm      | ASTM D5185m | 14   | <b>0</b>     | 0    | 0    |
| Barium           | ppm      | ASTM D5185m | 0.0  | <b>0</b>     | 0    | <1   |
| Molybdenum       | ppm      | ASTM D5185m | 0.0  | <b>2</b>     | 3    | 3    |
| Manganese        | ppm      | ASTM D5185m | 0.0  | <b>&lt;1</b> | <1   | 0    |
| Magnesium        | ppm      | ASTM D5185m | 2.6  | <b>7</b>     | <1   | 4    |
| Calcium          | ppm      | ASTM D5185m | 49   | <b>215</b>   | 142  | 135  |
| Phosphorus       | ppm      | ASTM D5185m | 354  | <b>359</b>   | 368  | 340  |
| Zinc             | ppm      | ASTM D5185m | 419  | <b>486</b>   | 440  | 448  |
| Sulfur           | ppm      | ASTM D5185m | 3719 | <b>2399</b>  | 2449 | 2375 |
| Acid Number (AN) | mg KOH/g | ASTM D8045  |      | <b>0.37</b>  | 0.35 | 0.37 |
| Visc @ 40°C      | cSt      | ASTM D445   | 46   | <b>45.54</b> | 41.9 | 42.6 |



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ASC0007899 **Received** : 27 Feb 2024  
**Lab Number** : 06101546 **Tested** : 04 Mar 2024  
**Unique Number** : 10899776 **Diagnosed** : 04 Mar 2024 - Jonathan Hester  
**Test Package** : CONST

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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)