



# ASCENDUM

## OIL ANALYSIS REPORT



Area

**Ascendum Machinery/500 Hour CSA**

Machine Id

**VOLVO L150H 2328 (S/N L150HV7200)**

Component

**Hydraulic System**

Fluid

**AW HYDRAULIC OIL ISO 46 (--- GAL)**

WEAR

**NORMAL**

CONTAMINATION

**ABNORMAL**

FLUID CONDITION

**NORMAL**

### RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>ASC0011388</b>  | ASC0008953  | VCP414084   |
| Sample Date    |     | Client Info |           | <b>17 May 2024</b> | 31 Jan 2024 | 06 Oct 2023 |
| Machine Age    | hrs | Client Info |           | <b>4104</b>        | 3550        | 2070        |
| Oil Age        | hrs | Client Info |           | <b>4104</b>        | 1550        | 0           |
| Filter Age     | hrs | Client Info |           | <b>2104</b>        | 1550        | 0           |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | Not Changd  | Not Changd  |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | Not Changd  | Changed     |
| Sample Status  |     |             |           | <b>ABNORMAL</b>    | NORMAL      | ATTENTION   |

### WEAR

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >50  | <b>11</b>    | 7    | 2    |
| Chromium     | ppm    | ASTM D5185m | >20  | <b>&lt;1</b> | <1   | <1   |
| Nickel       | ppm    | ASTM D5185m | >10  | <b>0</b>     | <1   | 0    |
| Titanium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | <1   | 0    |
| Silver       | ppm    | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>12</b>    | 10   | 4    |
| Lead         | ppm    | ASTM D5185m | >20  | <b>2</b>     | 2    | 0    |
| Copper       | ppm    | ASTM D5185m | >150 | <b>3</b>     | 4    | 2    |
| Tin          | ppm    | ASTM D5185m | >20  | <b>&lt;1</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

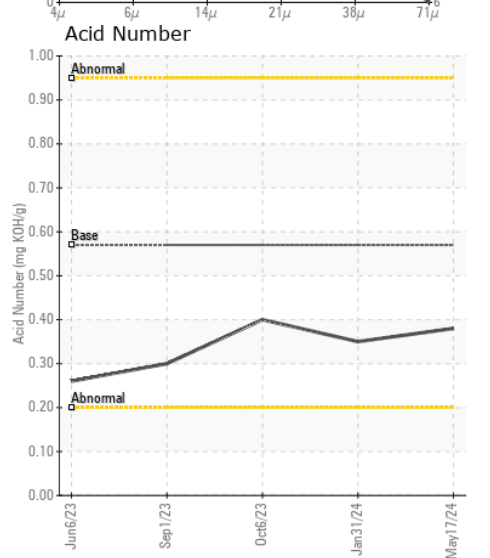
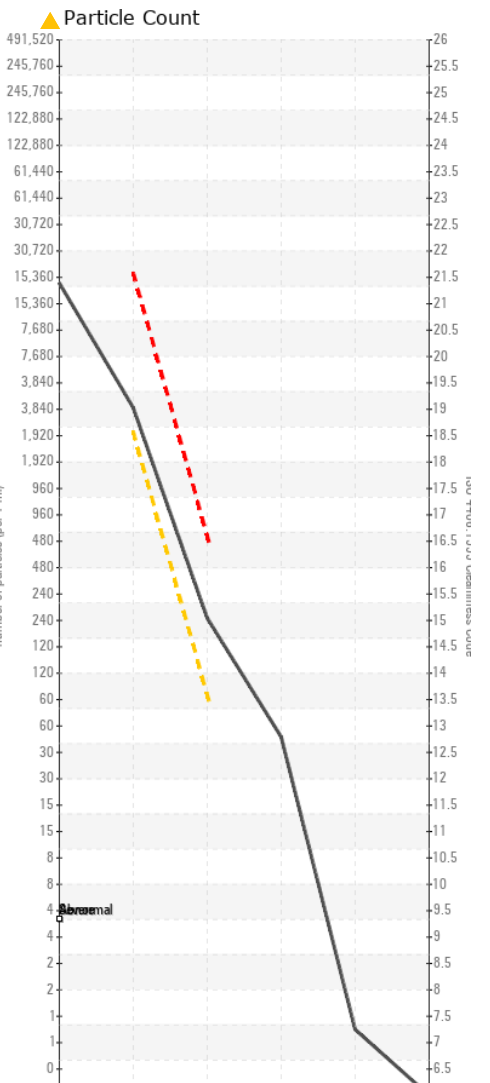
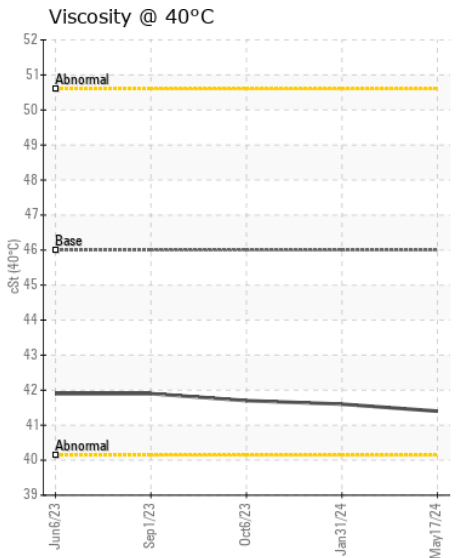
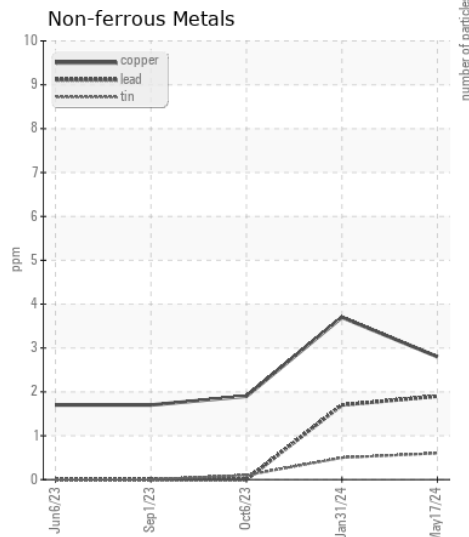
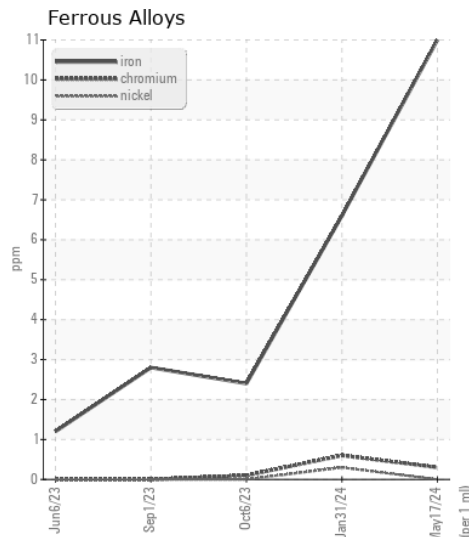
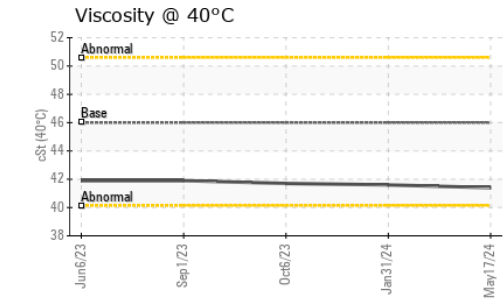
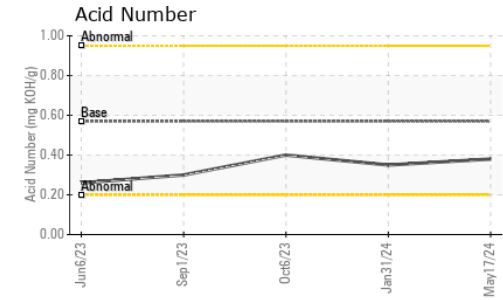
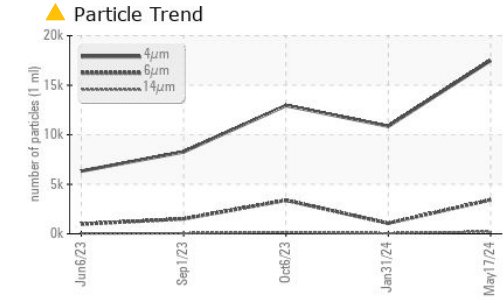
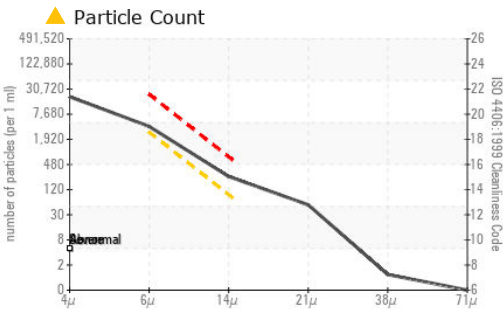
There is a moderate amount of particulates (2 to 100 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code.

|                  |        |              |          |                 |          |          |
|------------------|--------|--------------|----------|-----------------|----------|----------|
| Silicon          | ppm    | ASTM D5185m  | >20      | <b>16</b>       | 14       | 4        |
| Potassium        | ppm    | ASTM D5185m  | >20      | <b>0</b>        | 2        | 0        |
| Water            |        | WC Method    | >0.1     | <b>NEG</b>      | NEG      | NEG      |
| Particles >4µm   |        | ASTM D7647   |          | <b>17497</b>    | 10855    | 12950    |
| Particles >6µm   |        | ASTM D7647   | >2500    | <b>3416</b>     | 1060     | 3387     |
| Particles >14µm  |        | ASTM D7647   | >80      | <b>218</b>      | 51       | 153      |
| Particles >21µm  |        | ASTM D7647   | >20      | <b>46</b>       | 10       | 27       |
| Particles >38µm  |        | ASTM D7647   | >4       | <b>1</b>        | 0        | 0        |
| Particles >71µm  |        | ASTM D7647   | >3       | <b>0</b>        | 0        | 0        |
| Oil Cleanliness  |        | ISO 4406 (c) | >-/18/13 | <b>21/19/15</b> | 21/17/13 | 21/19/14 |
| 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      | >0.1     | <b>NEG</b>      | NEG      | NEG      |

### FLUID CONDITION

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

|                  |          |             |      |              |      |      |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium           | ppm      | ASTM D5185m |      | <b>2</b>     | 1    | 0    |
| Boron            | ppm      | ASTM D5185m | 5    | <b>0</b>     | 0    | 0    |
| Barium           | ppm      | ASTM D5185m | 5    | <b>0</b>     | 0    | 0    |
| Molybdenum       | ppm      | ASTM D5185m | 5    | <b>&lt;1</b> | 0    | 0    |
| Manganese        | ppm      | ASTM D5185m |      | <b>&lt;1</b> | <1   | <1   |
| Magnesium        | ppm      | ASTM D5185m | 25   | <b>0</b>     | 1    | 0    |
| Calcium          | ppm      | ASTM D5185m | 200  | <b>76</b>    | 54   | 52   |
| Phosphorus       | ppm      | ASTM D5185m | 300  | <b>339</b>   | 340  | 325  |
| Zinc             | ppm      | ASTM D5185m | 370  | <b>417</b>   | 433  | 416  |
| Sulfur           | ppm      | ASTM D5185m | 2500 | <b>1489</b>  | 1285 | 1208 |
| Acid Number (AN) | mg KOH/g | ASTM D8045  | 0.57 | <b>0.38</b>  | 0.35 | 0.40 |
| Visc @ 40°C      | cSt      | ASTM D445   | 46   | <b>41.4</b>  | 41.6 | 41.7 |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ASC0011388  
**Lab Number** : 06186064  
**Unique Number** : 11042816  
**Test Package** : CONST

**Received** : 21 May 2024  
**Tested** : 22 May 2024  
**Diagnosed** : 22 May 2024 - Wes Davis

**G S MATERIALS INC**  
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 US 27216

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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)