



# VOLVO

## OIL ANALYSIS REPORT

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



Area  
**[ATLAS ORGANICS]**  
 Machine Id  
**VOLVO EC220EL 314414**  
 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>VCP445560</b>   | VCP442744   | ---      |
| Sample Date    |     | Client Info |           | <b>10 Apr 2024</b> | 27 Sep 2023 | ---      |
| Machine Age    | hrs | Client Info |           | <b>3518</b>        | 2019        | ---      |
| Oil Age        | hrs | Client Info |           | <b>0</b>           | 0           | ---      |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | 0           | ---      |
| Oil Changed    |     | Client Info |           | <b>Not Changed</b> | Changed     | ---      |
| Filter Changed |     | Client Info |           | <b>Not Changed</b> | Changed     | ---      |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | ---      |

### WEAR

All component wear rates are normal.

|              |        |             |      |              |      |     |
|--------------|--------|-------------|------|--------------|------|-----|
| Iron         | ppm    | ASTM D5185m | >25  | <b>3</b>     | 4    | --- |
| Chromium     | ppm    | ASTM D5185m | >10  | <b>&lt;1</b> | <1   | --- |
| Nickel       | ppm    | ASTM D5185m | >10  | <b>0</b>     | 0    | --- |
| Titanium     | ppm    | ASTM D5185m |      | <b>0</b>     | 0    | --- |
| Silver       | ppm    | ASTM D5185m |      | <b>0</b>     | 0    | --- |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>&lt;1</b> | 0    | --- |
| Lead         | ppm    | ASTM D5185m | >20  | <b>0</b>     | 0    | --- |
| Copper       | ppm    | ASTM D5185m | >150 | <b>15</b>    | 26   | --- |
| Tin          | ppm    | ASTM D5185m | >10  | <b>0</b>     | 0    | --- |
| Vanadium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | 0    | --- |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | --- |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | --- |

### CONTAMINATION

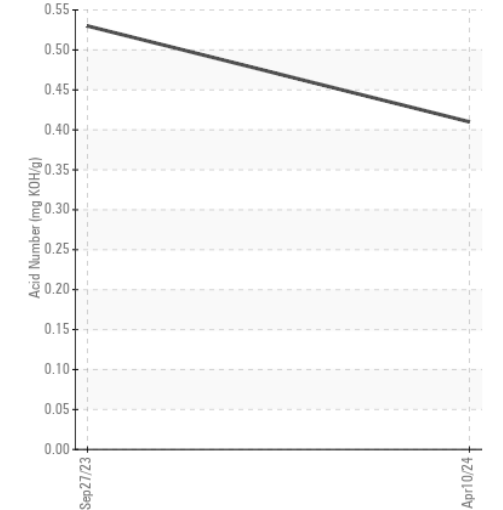
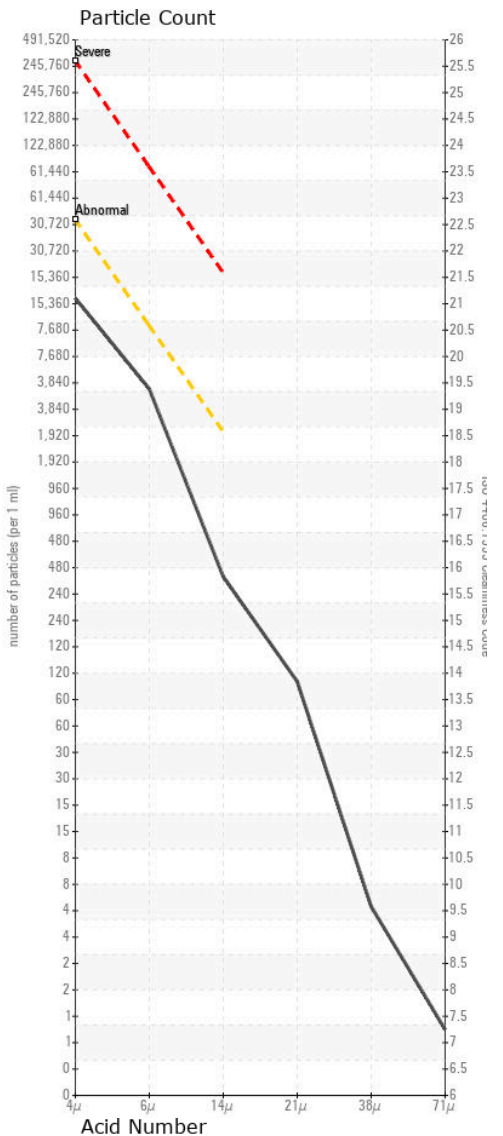
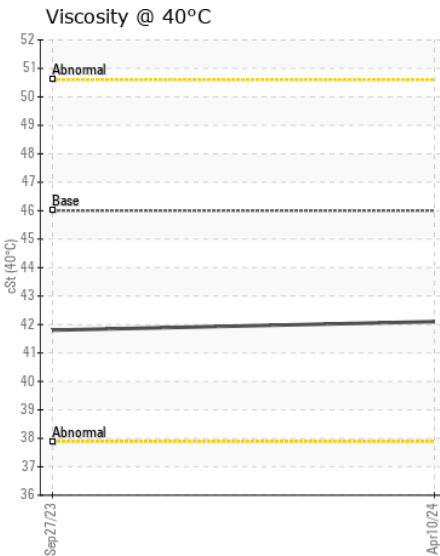
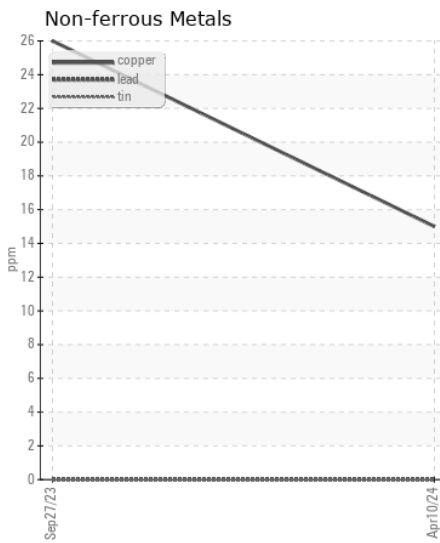
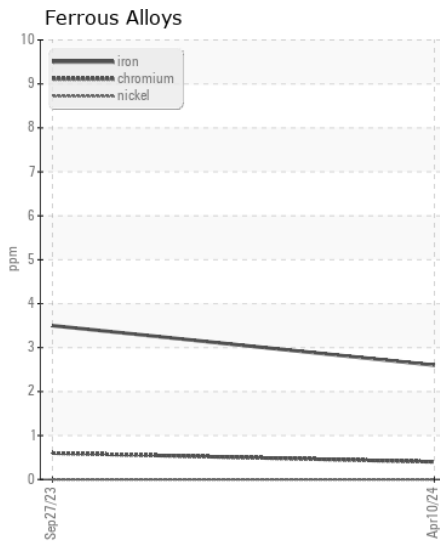
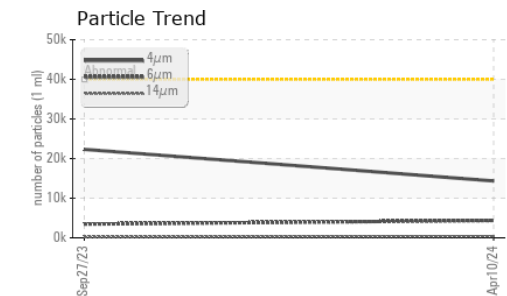
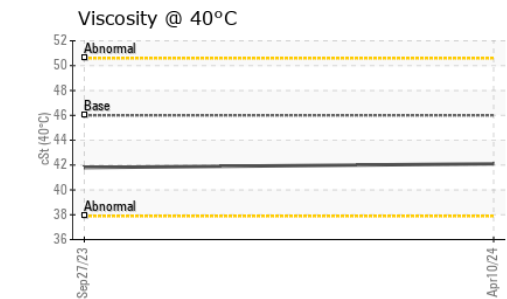
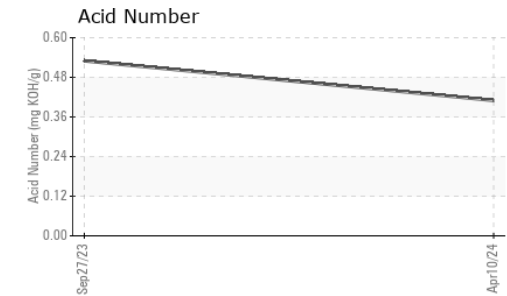
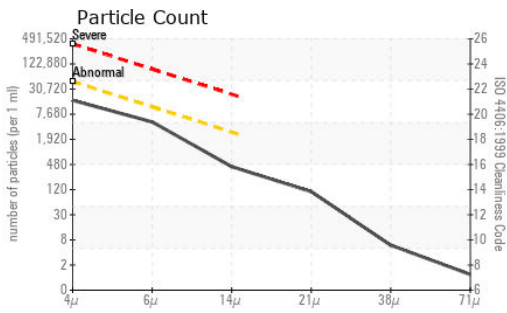
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

|                  |        |              |           |                 |          |     |
|------------------|--------|--------------|-----------|-----------------|----------|-----|
| Silicon          | ppm    | ASTM D5185m  | >50       | <b>3</b>        | 5        | --- |
| Potassium        | ppm    | ASTM D5185m  | >20       | <b>&lt;1</b>    | 0        | --- |
| Water            |        | WC Method    | >0.1      | <b>NEG</b>      | NEG      | --- |
| Particles >4µm   |        | ASTM D7647   | >40000    | <b>14349</b>    | 22329    | --- |
| Particles >6µm   |        | ASTM D7647   | >10000    | <b>4374</b>     | 3456     | --- |
| Particles >14µm  |        | ASTM D7647   | >2500     | <b>375</b>      | 162      | --- |
| Particles >21µm  |        | ASTM D7647   | >640      | <b>95</b>       | 40       | --- |
| Particles >38µm  |        | ASTM D7647   | >160      | <b>5</b>        | 2        | --- |
| Particles >71µm  |        | ASTM D7647   | >40       | <b>1</b>        | 0        | --- |
| Oil Cleanliness  |        | ISO 4406 (c) | >22/20/18 | <b>21/19/16</b> | 22/19/15 | --- |
| Silt             | scalar | *Visual      | NONE      | <b>NONE</b>     | NONE     | --- |
| Debris           | scalar | *Visual      | NONE      | <b>NONE</b>     | NONE     | --- |
| Sand/Dirt        | scalar | *Visual      | NONE      | <b>NONE</b>     | NONE     | --- |
| Appearance       | scalar | *Visual      | NORML     | <b>NORML</b>    | NORML    | --- |
| Odor             | scalar | *Visual      | NORML     | <b>NORML</b>    | NORML    | --- |
| Emulsified Water | scalar | *Visual      | >0.1      | <b>NEG</b>      | 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> | 1    | --- |
| Boron            | ppm      | ASTM D5185m | 14   | <b>0</b>     | 0    | --- |
| Barium           | ppm      | ASTM D5185m | 0.0  | <b>0</b>     | 0    | --- |
| Molybdenum       | ppm      | ASTM D5185m | 0.0  | <b>0</b>     | 0    | --- |
| Manganese        | ppm      | ASTM D5185m | 0.0  | <b>0</b>     | 0    | --- |
| Magnesium        | ppm      | ASTM D5185m | 2.6  | <b>1</b>     | 0    | --- |
| Calcium          | ppm      | ASTM D5185m | 49   | <b>68</b>    | 72   | --- |
| Phosphorus       | ppm      | ASTM D5185m | 354  | <b>394</b>   | 364  | --- |
| Zinc             | ppm      | ASTM D5185m | 419  | <b>527</b>   | 455  | --- |
| Sulfur           | ppm      | ASTM D5185m | 3719 | <b>1898</b>  | 1052 | --- |
| Acid Number (AN) | mg KOH/g | ASTM D8045  |      | <b>0.41</b>  | 0.53 | --- |
| Visc @ 40°C      | cSt      | ASTM D445   | 46   | <b>42.1</b>  | 41.8 | --- |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VCP445560  
**Lab Number** : 06209997  
**Unique Number** : 11082861  
**Test Package** : MOB 2

**Received** : 14 Jun 2024  
**Tested** : 17 Jun 2024  
**Diagnosed** : 17 Jun 2024 - Wes Davis

ALTA EQUIPMENT/FLAGLER CONSTRUCTION EQUIPMENT LLC  
 8418 PALM RIVER ROAD  
 TAMPA, FL  
 US 33619  
 Contact: KENNY HANEY  
 khaney@flaglerce.com  
 T: (813)630-0077  
 F: (813)630-2233

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)