



# ASCENDUM

## OIL ANALYSIS REPORT



Area

**Ascendum Machinery**

Machine Id

**VOLVO EC220E EX-4 (S/N 310878)**

Component

**Left Travel**

Fluid

**VOLVO PREMIUM GEAR OIL 85W-140 GL-5 (--- GAL)**

WEAR

ATTENTION

CONTAMINATION

ABNORMAL

FLUID CONDITION

NORMAL

### RECOMMENDATION

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current     | History1    | History2    |
|----------------|-----|-------------|-----------|-------------|-------------|-------------|
| Sample Number  |     | Client Info |           | ASC0000972  | ASC0000068  | VCP0007247  |
| Sample Date    |     | Client Info |           | 13 Dec 2023 | 06 Jun 2023 | 13 Feb 2023 |
| Machine Age    | hrs | Client Info |           | 5519        | 5011        | 4511        |
| Oil Age        | hrs | Client Info |           | 508         | 500         | 464         |
| Filter Age     | hrs | Client Info |           | 0           | 0           | 0           |
| Oil Changed    |     | Client Info |           | Changed     | Changed     | Changed     |
| Filter Changed |     | Client Info |           | N/A         | N/A         | N/A         |
| Sample Status  |     |             |           | ABNORMAL    | NORMAL      | NORMAL      |

### WEAR

All component wear rates are normal.

|              |        |             |       |      |      |      |
|--------------|--------|-------------|-------|------|------|------|
| Iron         | ppm    | ASTM D5185m | >1200 | 461  | 224  | <1   |
| Chromium     | ppm    | ASTM D5185m | >20   | 3    | 2    | 0    |
| Nickel       | ppm    | ASTM D5185m | >5    | 1    | <1   | 0    |
| Titanium     | ppm    | ASTM D5185m |       | 2    | 1    | 0    |
| Silver       | ppm    | ASTM D5185m |       | 0    | 3    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >100  | 40   | 24   | 0    |
| Lead         | ppm    | ASTM D5185m | >50   | 0    | 0    | 0    |
| Copper       | ppm    | ASTM D5185m | >50   | <1   | 0    | 0    |
| Tin          | ppm    | ASTM D5185m | >5    | 0    | 0    | 0    |
| Vanadium     | ppm    | ASTM D5185m |       | 0    | 0    | 0    |
| White Metal  | scalar | *Visual     | NONE  | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE  | NONE | NONE | NONE |

### CONTAMINATION

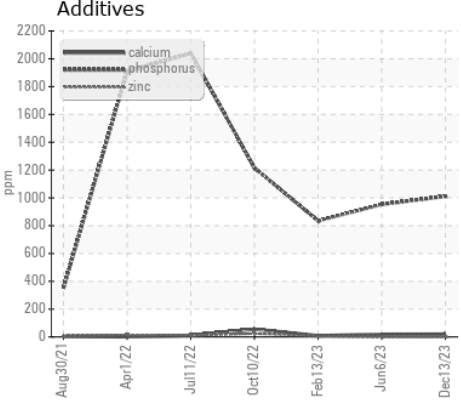
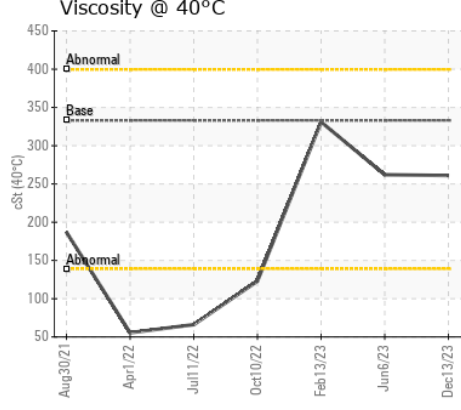
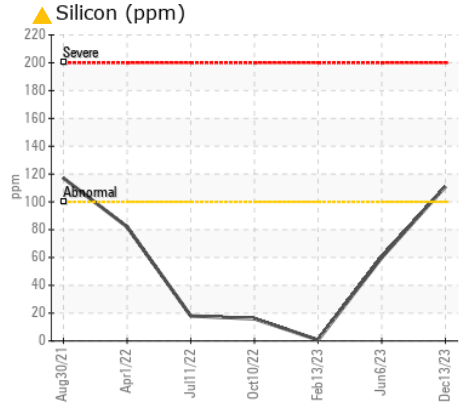
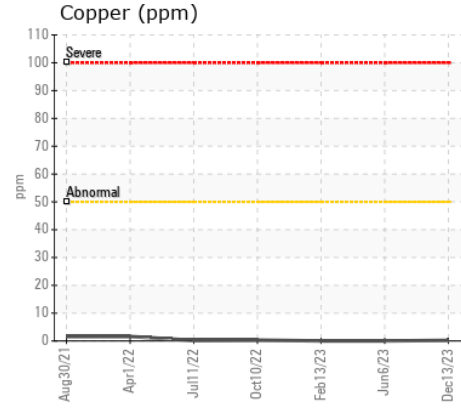
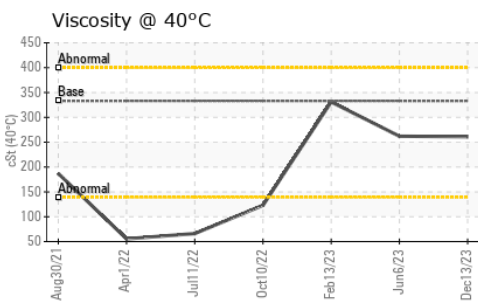
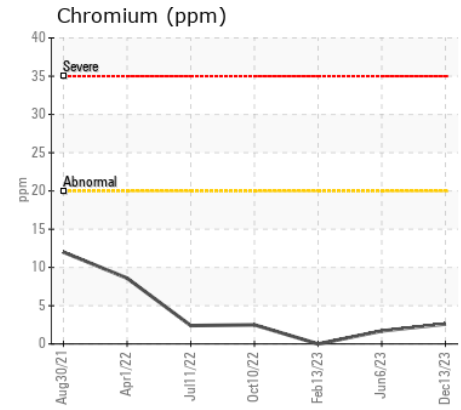
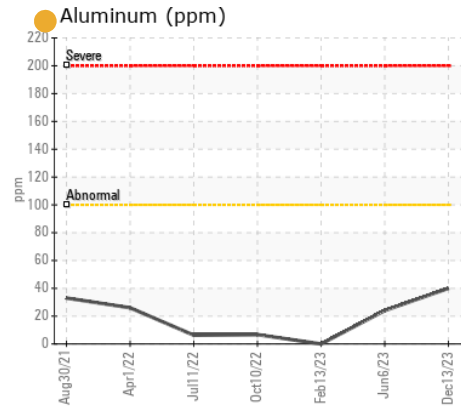
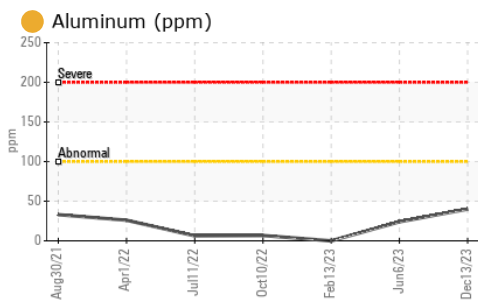
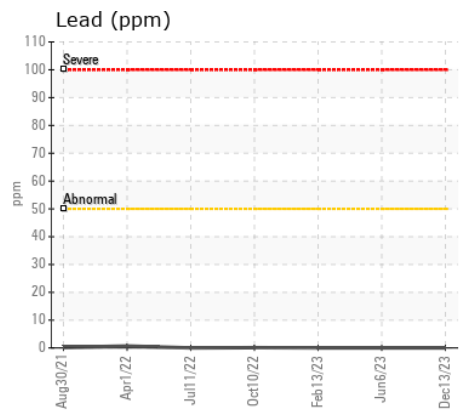
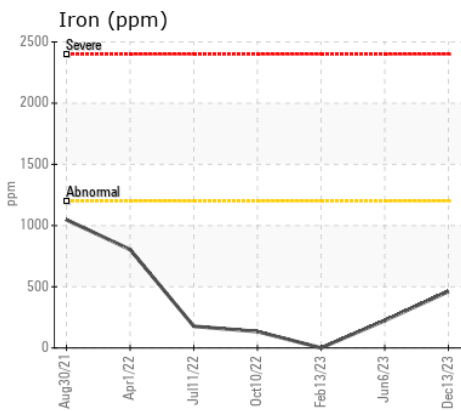
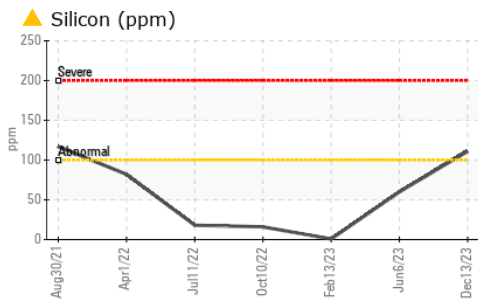
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

|                  |        |             |       |       |       |       |
|------------------|--------|-------------|-------|-------|-------|-------|
| Silicon          | ppm    | ASTM D5185m | >100  | 111   | 60    | <1    |
| Potassium        | ppm    | ASTM D5185m | >20   | 5     | 2     | 0     |
| Water            |        | WC Method   | >0.25 | NEG   | NEG   | NEG   |
| 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     | >0.25 | NEG   | NEG   | NEG   |

### FLUID CONDITION

The condition of the oil is acceptable for the time in service.

|             |     |             |       |       |       |       |
|-------------|-----|-------------|-------|-------|-------|-------|
| Sodium      | ppm | ASTM D5185m |       | 0     | 1     | <1    |
| Boron       | ppm | ASTM D5185m | 111   | 207   | 188   | 183   |
| Barium      | ppm | ASTM D5185m | 0.0   | 0     | 0     | 0     |
| Molybdenum  | ppm | ASTM D5185m | 0.9   | 0     | 0     | 0     |
| Manganese   | ppm | ASTM D5185m | 0.0   | 2     | 2     | 0     |
| Magnesium   | ppm | ASTM D5185m | 39    | 3     | 1     | 0     |
| Calcium     | ppm | ASTM D5185m | 93    | 20    | 19    | 9     |
| Phosphorus  | ppm | ASTM D5185m | 920   | 1011  | 953   | 835   |
| Zinc        | ppm | ASTM D5185m | 104   | 0     | 0     | 5     |
| Sulfur      | ppm | ASTM D5185m | 20179 | 33471 | 32030 | 28390 |
| Visc @ 40°C | cSt | ASTM D445   | 333   | 261   | 262   | 331   |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ASC0000972  
**Lab Number** : 06034917  
**Unique Number** : 10790146  
**Test Package** : MOBCE  
**Received** : 14 Dec 2023  
**Tested** : 15 Dec 2023  
**Diagnosed** : 18 Dec 2023 - Don Baldrige

**CAROLINA EXCAVATING**  
 1036 BRANCHVIEW DR, SUITE 106  
 CONCORD, NC  
 US 28025  
 Contact: KEVIN LADGERWOOD  
 kevin@carlinaexcavation.com  
 T:  
 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)