



# VOLVO

## OIL ANALYSIS REPORT

WEAR  
CONTAMINATION  
FLUID CONDITION

SEVERE

SEVERE

ATTENTION



Area

[467711 DCF]

Machine Id

VOLVO EC350 310329

Component

Rear Right Final Drive

Fluid

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

### RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

### WEAR

Gear wear is indicated.

### CONTAMINATION

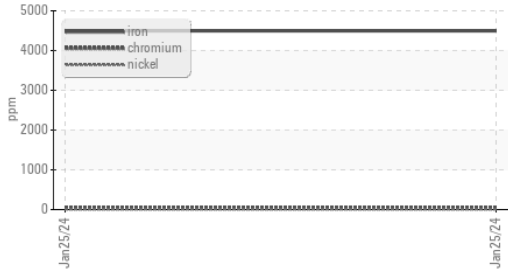
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

### FLUID CONDITION

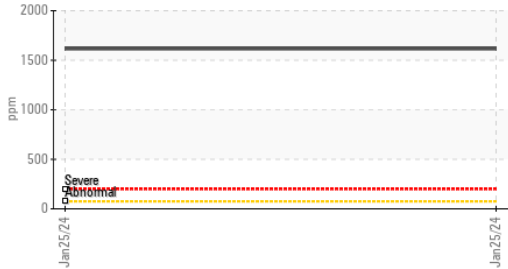
The oil viscosity is higher than normal. The oil is no longer serviceable due to the presence of contaminants.

| Test             | UOM    | Method      | Limit/Abn | Current     | History1 | History2 |
|------------------|--------|-------------|-----------|-------------|----------|----------|
| Sample Number    |        | Client Info |           | VCP439091   | ---      | ---      |
| Sample Date      |        | Client Info |           | 25 Jan 2024 | ---      | ---      |
| Machine Age      | hrs    | Client Info |           | 6518        | ---      | ---      |
| Oil Age          | hrs    | Client Info |           | 0           | ---      | ---      |
| Filter Age       | hrs    | Client Info |           | 0           | ---      | ---      |
| Oil Changed      |        | Client Info |           | Not Changed | ---      | ---      |
| Filter Changed   |        | Client Info |           | Not Changed | ---      | ---      |
| Sample Status    |        |             |           | SEVERE      | ---      | ---      |
| Iron             | ppm    | ASTM D5185m | >500      | 4496        | ---      | ---      |
| Chromium         | ppm    | ASTM D5185m | >10       | 46          | ---      | ---      |
| Nickel           | ppm    | ASTM D5185m | >10       | 7           | ---      | ---      |
| Titanium         | ppm    | ASTM D5185m |           | 9           | ---      | ---      |
| Silver           | ppm    | ASTM D5185m |           | 0           | ---      | ---      |
| Aluminum         | ppm    | ASTM D5185m | >25       | 95          | ---      | ---      |
| Lead             | ppm    | ASTM D5185m | >25       | <1          | ---      | ---      |
| Copper           | ppm    | ASTM D5185m | >50       | 9           | ---      | ---      |
| Tin              | ppm    | ASTM D5185m | >10       | <1          | ---      | ---      |
| Vanadium         | ppm    | ASTM D5185m |           | 0           | ---      | ---      |
| White Metal      | scalar | *Visual     | NONE      | NONE        | ---      | ---      |
| Yellow Metal     | scalar | *Visual     | NONE      | NONE        | ---      | ---      |
| Silicon          | ppm    | ASTM D5185m | >75       | 1616        | ---      | ---      |
| Potassium        | ppm    | ASTM D5185m | >20       | 1           | ---      | ---      |
| Water            |        | WC Method   | >0.2      | NEG         | ---      | ---      |
| Silt             | scalar | *Visual     | NONE      | NONE        | ---      | ---      |
| Debris           | scalar | *Visual     | NONE      | NONE        | ---      | ---      |
| Sand/Dirt        | scalar | *Visual     | NONE      | NONE        | ---      | ---      |
| Appearance       | scalar | *Visual     | NORML     | NORML       | ---      | ---      |
| Odor             | scalar | *Visual     | NORML     | NORML       | ---      | ---      |
| Emulsified Water | scalar | *Visual     | >0.2      | NEG         | ---      | ---      |
| Sodium           | ppm    | ASTM D5185m |           | 0           | ---      | ---      |
| Boron            | ppm    | ASTM D5185m | 111       | 138         | ---      | ---      |
| Barium           | ppm    | ASTM D5185m | 0.0       | 0           | ---      | ---      |
| Molybdenum       | ppm    | ASTM D5185m | 0.9       | 8           | ---      | ---      |
| Manganese        | ppm    | ASTM D5185m | 0.0       | 26          | ---      | ---      |
| Magnesium        | ppm    | ASTM D5185m | 39        | 12          | ---      | ---      |
| Calcium          | ppm    | ASTM D5185m | 93        | 129         | ---      | ---      |
| Phosphorus       | ppm    | ASTM D5185m | 920       | 878         | ---      | ---      |
| Zinc             | ppm    | ASTM D5185m | 104       | 37          | ---      | ---      |
| Sulfur           | ppm    | ASTM D5185m | 20179     | 40559       | ---      | ---      |
| Visc @ 40°C      | cSt    | ASTM D445   | 333       | 1015        | ---      | ---      |

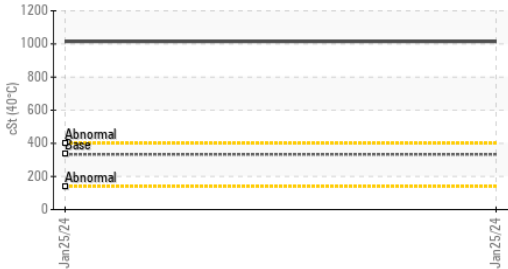
**Ferrous Alloys**



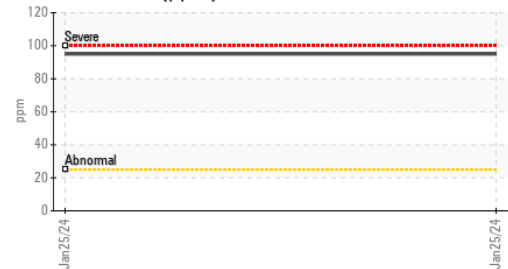
**Silicon (ppm)**



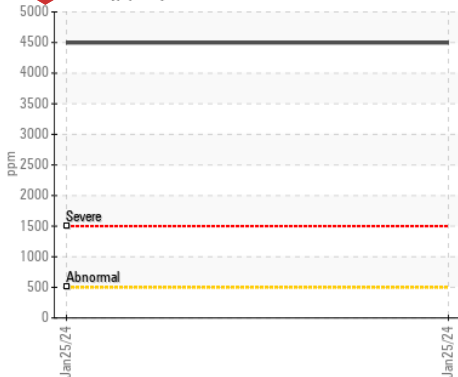
**Viscosity @ 40°C**



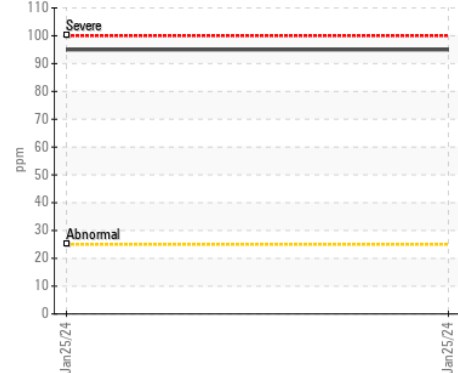
**Aluminum (ppm)**



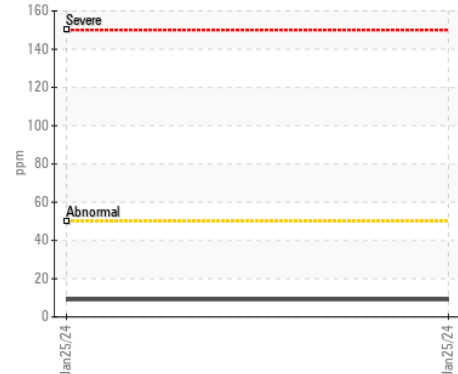
**Iron (ppm)**



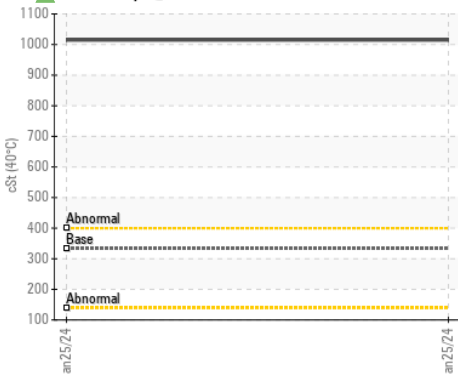
**Aluminum (ppm)**



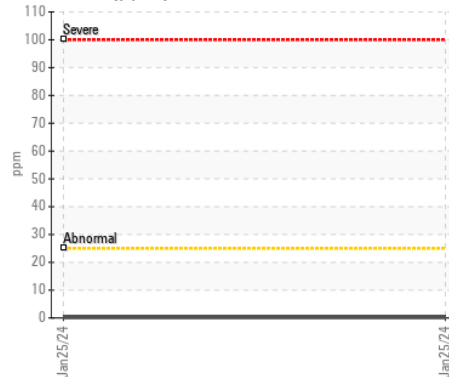
**Copper (ppm)**



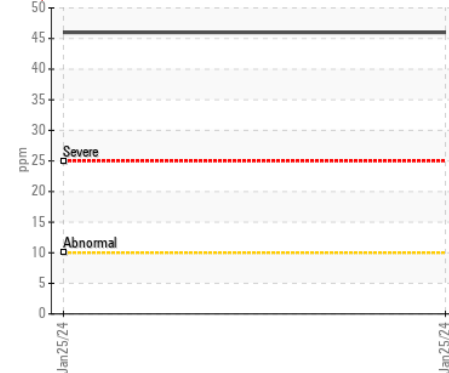
**Viscosity @ 40°C**



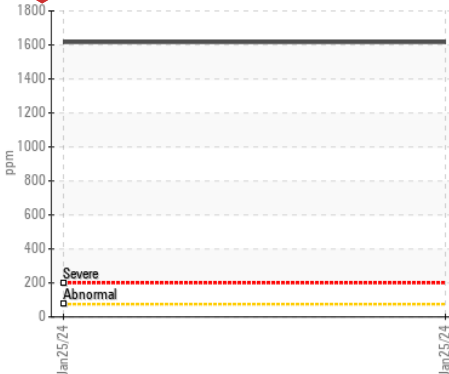
**Lead (ppm)**



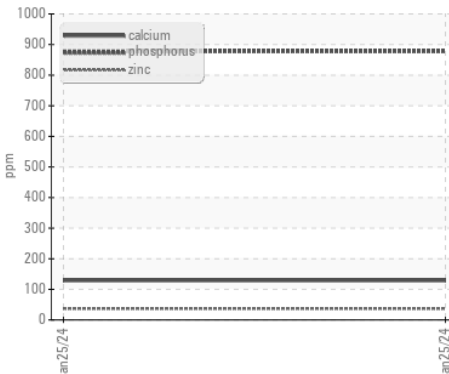
**Chromium (ppm)**



**Silicon (ppm)**



**Additives**



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VCP439091 **Received** : 30 Jan 2024  
**Lab Number** : 06075200 **Diagnosed** : 01 Feb 2024  
**Unique Number** : 10857291 **Diagnostician** : Sean Felton  
**Test Package** : MOBCE

**ALTA EQUIPMENT/FLAGLER CONSTRUCTION EQUIPMENT LLC**  
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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)