



# VOLVO

## OIL ANALYSIS REPORT

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



Area  
**[51535]**  
Machine Id  
**VOLVO L120H 632867**  
Component  
**Diesel Engine**  
Fluid  
**{not provided} (--- GAL)**

### RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

| Test           | UOM | Method      | Limit/Abn | Current            | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|----------|----------|
| Sample Number  |     | Client Info |           | <b>VCP445361</b>   | ---      | ---      |
| Sample Date    |     | Client Info |           | <b>12 Apr 2024</b> | ---      | ---      |
| Machine Age    | hrs | Client Info |           | <b>6165</b>        | ---      | ---      |
| Oil Age        | hrs | Client Info |           | <b>0</b>           | ---      | ---      |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | ---      | ---      |
| Oil Changed    |     | Client Info |           | <b>N/A</b>         | ---      | ---      |
| Filter Changed |     | Client Info |           | <b>N/A</b>         | ---      | ---      |
| Sample Status  |     |             |           | <b>SEVERE</b>      | ---      | ---      |

### WEAR

Piston and cylinder wear is indicated.

|              |        |             |      |              |     |     |
|--------------|--------|-------------|------|--------------|-----|-----|
| Iron         | ppm    | ASTM D5185m | >100 | <b>▲ 115</b> | --- | --- |
| Chromium     | ppm    | ASTM D5185m | >10  | <b>4</b>     | --- | --- |
| Nickel       | ppm    | ASTM D5185m | >10  | <b>2</b>     | --- | --- |
| Titanium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | --- | --- |
| Silver       | ppm    | ASTM D5185m | >2   | <b>0</b>     | --- | --- |
| Aluminum     | ppm    | ASTM D5185m | >10  | <b>● 53</b>  | --- | --- |
| Lead         | ppm    | ASTM D5185m | >20  | <b>4</b>     | --- | --- |
| Copper       | ppm    | ASTM D5185m | >15  | <b>7</b>     | --- | --- |
| Tin          | ppm    | ASTM D5185m | >10  | <b>3</b>     | --- | --- |
| Vanadium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | --- | --- |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | --- | --- |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | --- | --- |

### CONTAMINATION

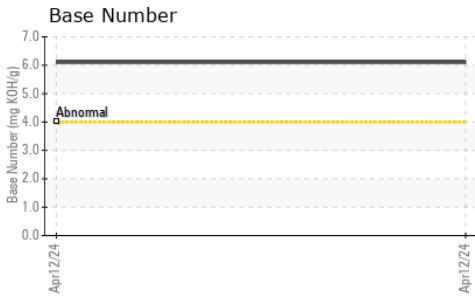
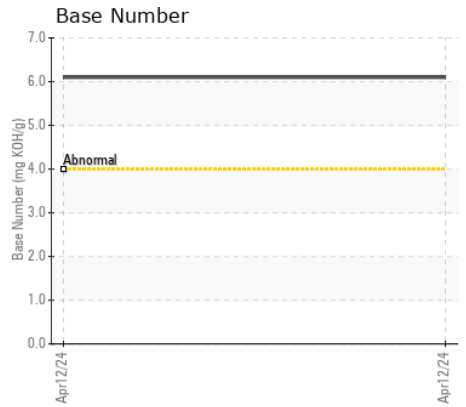
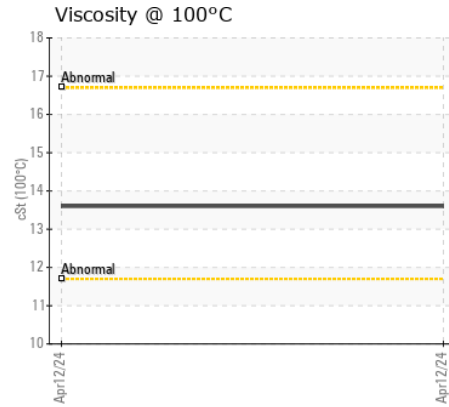
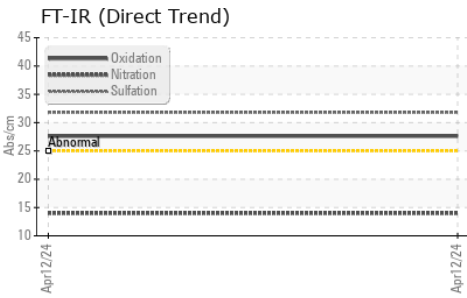
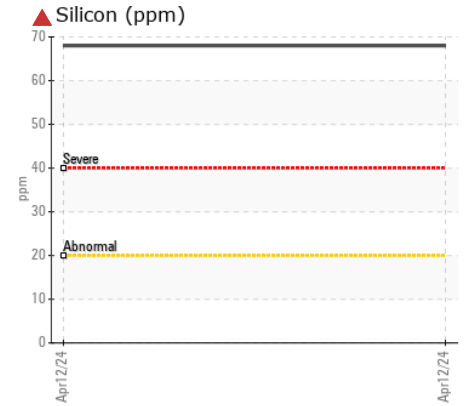
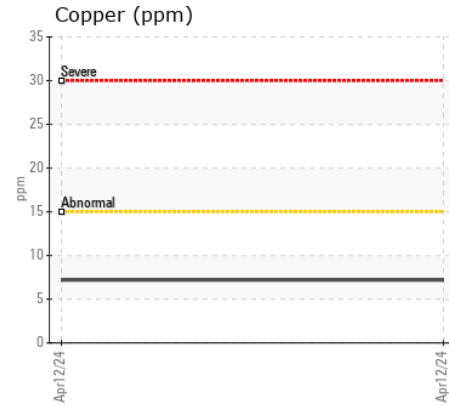
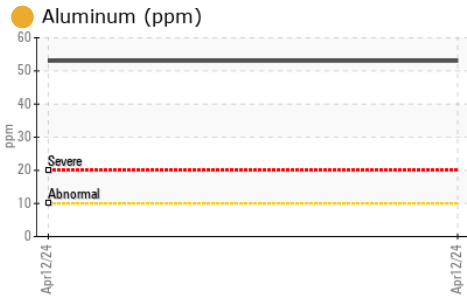
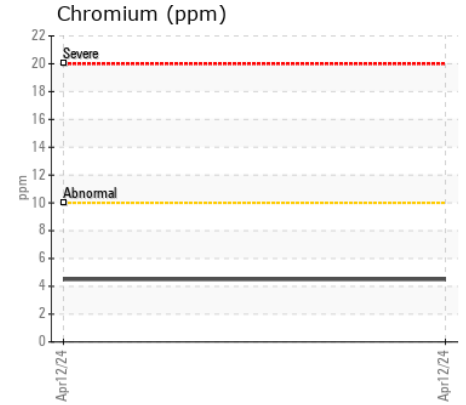
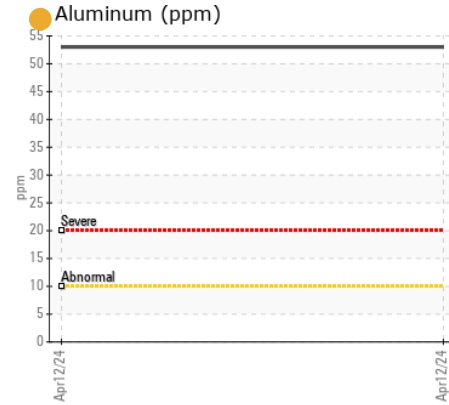
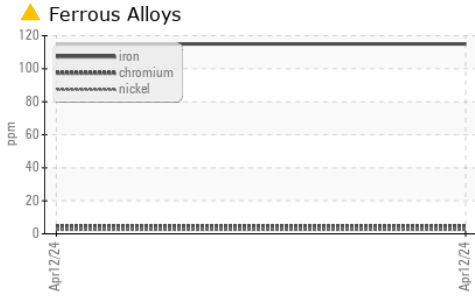
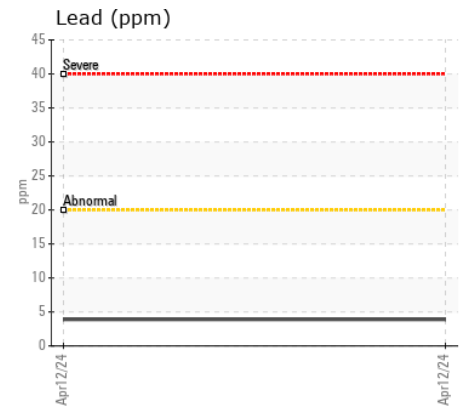
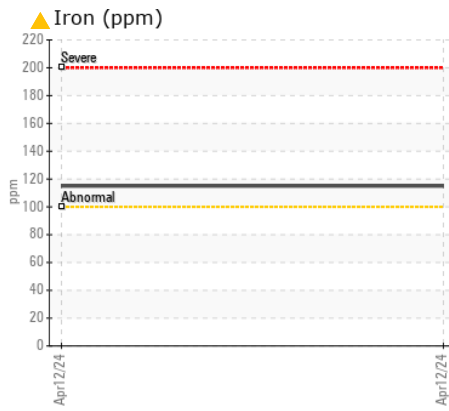
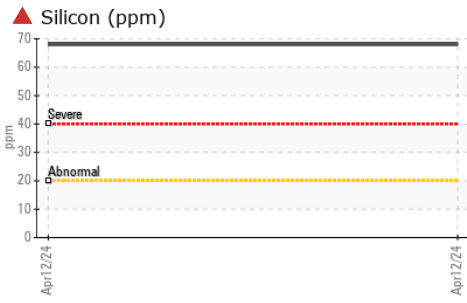
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

|                  |          |             |       |                |     |     |
|------------------|----------|-------------|-------|----------------|-----|-----|
| Silicon          | ppm      | ASTM D5185m | >20   | <b>▲ 68</b>    | --- | --- |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>0</b>       | --- | --- |
| Fuel             |          | WC Method   | >6.0  | <b>&lt;1.0</b> | --- | --- |
| Water            |          | WC Method   | >0.1  | <b>NEG</b>     | --- | --- |
| Glycol           |          | WC Method   |       | <b>NEG</b>     | --- | --- |
| Soot %           | %        | *ASTM D7844 | >3    | <b>2.7</b>     | --- | --- |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>14.0</b>    | --- | --- |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>31.8</b>    | --- | --- |
| Silt             | scalar   | *Visual     | NONE  | <b>NONE</b>    | --- | --- |
| Debris           | scalar   | *Visual     | NONE  | <b>NONE</b>    | --- | --- |
| Sand/Dirt        | scalar   | *Visual     | NONE  | <b>NONE</b>    | --- | --- |
| Appearance       | scalar   | *Visual     | NORML | <b>NORML</b>   | --- | --- |
| Odor             | scalar   | *Visual     | NORML | <b>NORML</b>   | --- | --- |
| Emulsified Water | scalar   | *Visual     | >0.1  | <b>NEG</b>     | --- | --- |

### FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

|                  |          |             |     |              |     |     |
|------------------|----------|-------------|-----|--------------|-----|-----|
| Sodium           | ppm      | ASTM D5185m |     | <b>3</b>     | --- | --- |
| Boron            | ppm      | ASTM D5185m |     | <b>29</b>    | --- | --- |
| Barium           | ppm      | ASTM D5185m |     | <b>&lt;1</b> | --- | --- |
| Molybdenum       | ppm      | ASTM D5185m |     | <b>67</b>    | --- | --- |
| Manganese        | ppm      | ASTM D5185m |     | <b>1</b>     | --- | --- |
| Magnesium        | ppm      | ASTM D5185m |     | <b>1184</b>  | --- | --- |
| Calcium          | ppm      | ASTM D5185m |     | <b>1326</b>  | --- | --- |
| Phosphorus       | ppm      | ASTM D5185m |     | <b>1136</b>  | --- | --- |
| Zinc             | ppm      | ASTM D5185m |     | <b>1355</b>  | --- | --- |
| Sulfur           | ppm      | ASTM D5185m |     | <b>3510</b>  | --- | --- |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25 | <b>27.6</b>  | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896  |     | <b>6.1</b>   | --- | --- |
| Visc @ 100°C     | cSt      | ASTM D445   |     | <b>13.6</b>  | --- | --- |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VCP445361 **Received** : 19 Apr 2024  
**Lab Number** : 06153890 **Tested** : 22 Apr 2024  
**Unique Number** : 10989313 **Diagnosed** : 23 Apr 2024 - Jonathan Hester  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**367 - ASCENDUM MACHINERY INC - BUFORD**  
 3779 RYDER BLVD  
 BUFORD, GA  
 US 30519  
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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)