



# VOLVO

## OIL ANALYSIS REPORT

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



Area  
**[A12800]**  
Machine Id  
**VOLVO L180H 5446**  
Component  
**Diesel Engine**  
Fluid  
**MOBIL 15W40 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>VCP425937</b>   | VCP407245   | VCP439461   |
| Sample Date    |     | Client Info |           | <b>10 Jun 2024</b> | 05 Mar 2024 | 23 Dec 2023 |
| Machine Age    | hrs | Client Info |           | <b>8555</b>        | 7518        | 6982        |
| Oil Age        | hrs | Client Info |           | <b>500</b>         | 500         | 500         |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | Changed     | Not Changd  |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | ATTENTION   |

### WEAR

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >100 | <b>3</b>     | 3    | 3    |
| Chromium     | ppm    | ASTM D5185m | >10  | <b>0</b>     | 0    | <1   |
| Nickel       | ppm    | ASTM D5185m | >10  | <b>&lt;1</b> | 0    | <1   |
| Titanium     | ppm    | ASTM D5185m |      | <b>0</b>     | 0    | <1   |
| Silver       | ppm    | ASTM D5185m | >2   | <b>0</b>     | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >10  | <b>2</b>     | <1   | 3    |
| Lead         | ppm    | ASTM D5185m | >20  | <b>0</b>     | 0    | <1   |
| Copper       | ppm    | ASTM D5185m | >15  | <b>0</b>     | <1   | <1   |
| Tin          | ppm    | ASTM D5185m | >10  | <b>&lt;1</b> | 0    | <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

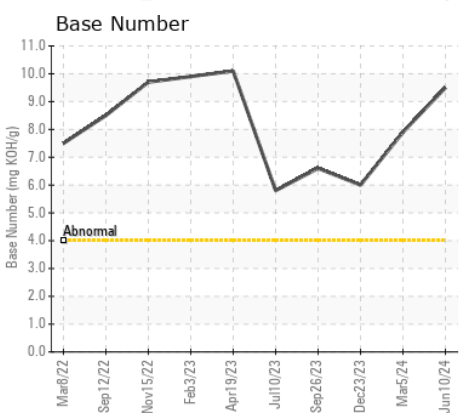
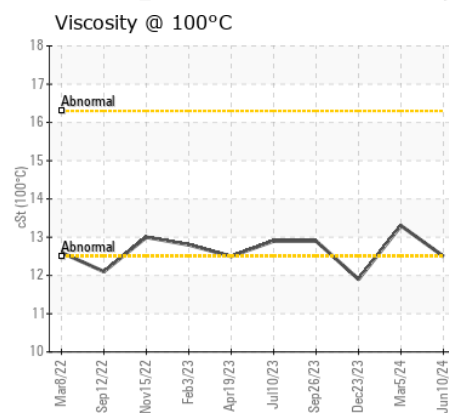
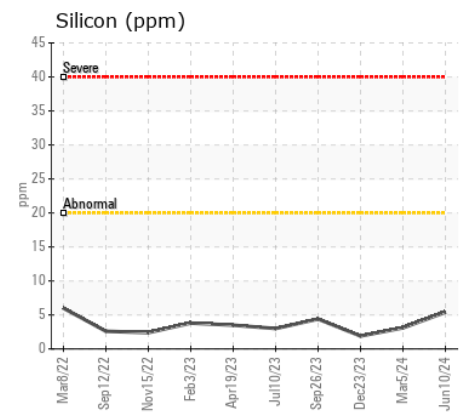
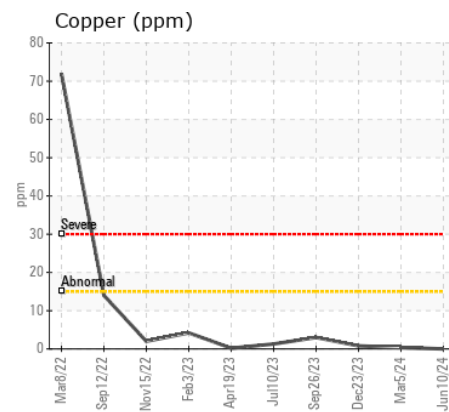
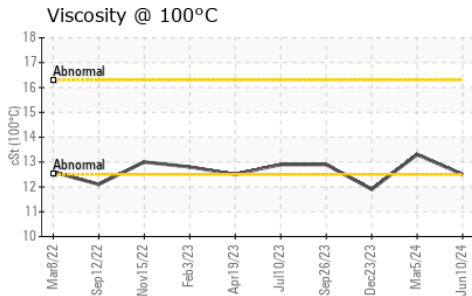
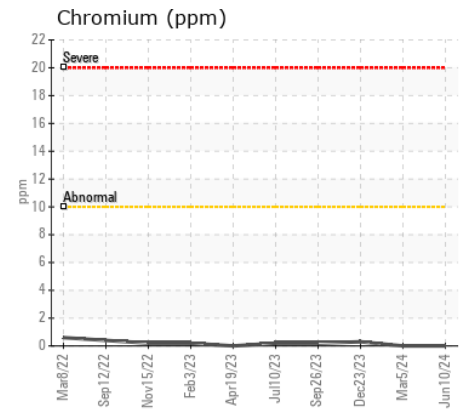
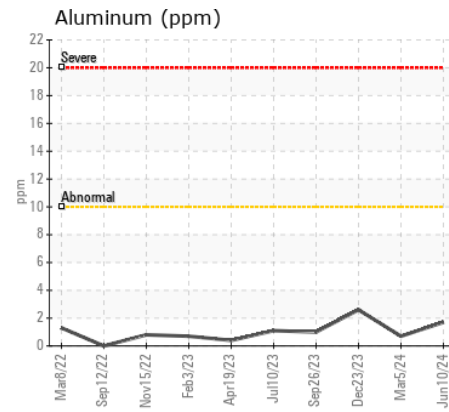
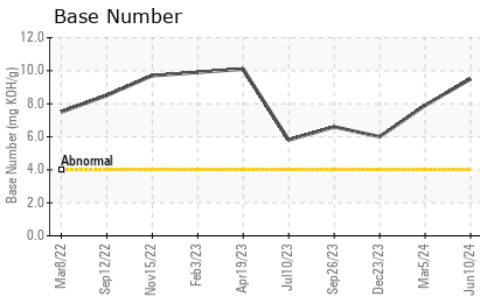
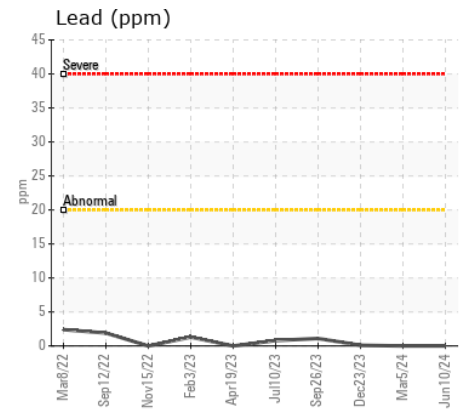
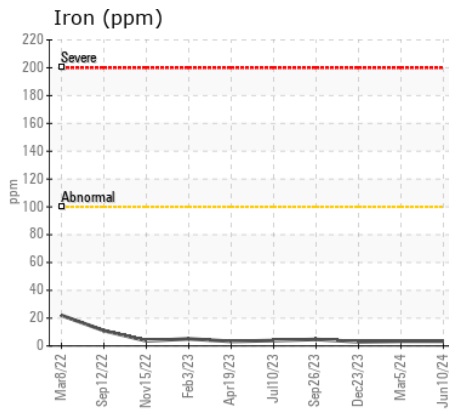
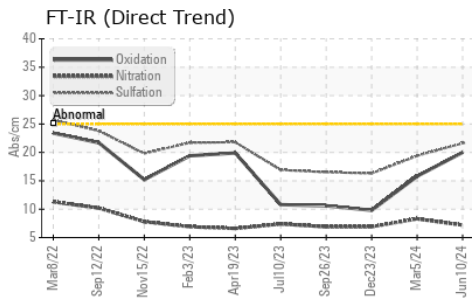
There is no indication of any contamination in the oil.

|                  |          |             |       |                |       |       |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >20   | <b>5</b>       | 3     | 2     |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>4</b>       | 0     | 2     |
| Fuel             |          | WC Method   | >6.0  | <b>&lt;1.0</b> | <1.0  | 0.6   |
| Water            |          | WC Method   | >0.1  | <b>NEG</b>     | NEG   | NEG   |
| Glycol           |          | WC Method   |       | <b>NEG</b>     | NEG   | NEG   |
| Soot %           | %        | *ASTM D7844 | >3    | <b>0.1</b>     | 0.2   | 0.1   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>7.2</b>     | 8.3   | 6.9   |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>21.6</b>    | 19.4  | 16.3  |
| 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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

|                  |          |             |      |              |      |      |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium           | ppm      | ASTM D5185m | >118 | <b>4</b>     | 3    | 0    |
| Boron            | ppm      | ASTM D5185m |      | <b>47</b>    | 33   | 10   |
| Barium           | ppm      | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| Molybdenum       | ppm      | ASTM D5185m |      | <b>38</b>    | 46   | 17   |
| Manganese        | ppm      | ASTM D5185m |      | <b>&lt;1</b> | 0    | 0    |
| Magnesium        | ppm      | ASTM D5185m |      | <b>519</b>   | 521  | 214  |
| Calcium          | ppm      | ASTM D5185m |      | <b>1704</b>  | 1592 | 1517 |
| Phosphorus       | ppm      | ASTM D5185m |      | <b>1003</b>  | 1024 | 967  |
| Zinc             | ppm      | ASTM D5185m |      | <b>1176</b>  | 1161 | 904  |
| Sulfur           | ppm      | ASTM D5185m |      | <b>3482</b>  | 3569 | 4964 |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>20.0</b>  | 15.8 | 9.8  |
| Base Number (BN) | mg KOH/g | ASTM D2896  |      | <b>9.5</b>   | 7.9  | 6.0  |
| Visc @ 100°C     | cSt      | ASTM D445   |      | <b>12.5</b>  | 13.3 | 11.9 |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VCP425937 **Received** : 20 Jun 2024  
**Lab Number** : 06215400 **Tested** : 21 Jun 2024  
**Unique Number** : 11088264 **Diagnosed** : 21 Jun 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**COVANTA METAL MARKETING LLC**  
 500 MIDDLE DR  
 FAIRLESS HILLS, PA  
 US 19030  
 Contact: J.P.

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)