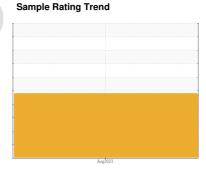


# **OIL ANALYSIS REPORT**

### [61132] Machine Id VOLVO VNL740 4662

Diesel Engine

**NOT GIVEN (--- GAL)** 





### DIAGNOSIS

#### 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 from the component if this has not already been done. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. The fluid was not specified, however, a fluid match indicates that this fluid is SAE 30 Diesel Engine Oil. Please confirm the oil type and grade, and specify the brand of the oil on your next sample.

#### Wear

Aluminum, iron, nickel and silver ppm levels are abnormal. Cylinder, crank, or cam shaft wear is indicated. Exhaust valve wear is indicated. Piston wear is indicated.

#### Contamination

Fuel content negligible. Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is a moderate concentration of dirt present in the oil. High amount of ingressed dirt has caused abrasive wear to the component.

### **Fluid Condition**

Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

| SAMPLE INFORM | MATION   | method        | limit/base | current     | history1 | history2 |
|---------------|----------|---------------|------------|-------------|----------|----------|
| Sample Number |          | Client Info   |            | WC0831173   |          |          |
| Sample Date   |          | Client Info   |            | 17 Aug 2023 |          |          |
| Machine Age   | kms      | Client Info   |            | 121393      |          |          |
| Oil Age       | kms      | Client Info   |            | 0           |          |          |
| Oil Changed   |          | Client Info   |            | Changed     |          |          |
| Sample Status |          |               |            | ABNORMAL    |          |          |
| CONTAMINATION | J        | method        | limit/base | current     | history1 | history2 |
| Glycol        |          | WC Method     |            | NEG         |          |          |
| WEAR METALS   |          | method        | limit/base | current     | history1 | history2 |
| PQ            |          | ASTM D8184*   |            | 0           |          |          |
| Iron          | ppm      | ASTM D5185(m) | >100       | <u> 110</u> |          |          |
| Chromium      | ppm      | ASTM D5185(m) | >20        | 2           |          |          |
| Nickel        | ppm      | ASTM D5185(m) |            | <u> </u>    |          |          |
| Titanium      | ppm      | ASTM D5185(m) |            | <1          |          |          |
| Silver        | ppm      | ASTM D5185(m) | >2         | <u>^</u> 3  |          |          |
| Aluminum      | ppm      | ASTM D5185(m) | >25        | <u>^</u> 39 |          |          |
| Lead          | ppm      | ASTM D5185(m) | >40        | 2           |          |          |
| Copper        | ppm      | ASTM D5185(m) | >330       | 48          |          |          |
| Tin           | ppm      | ASTM D5185(m) | >15        | 6           |          |          |
| Antimony      | ppm      | ASTM D5185(m) |            | 0           |          |          |
| Vanadium      | ppm      | ASTM D5185(m) |            | 0           |          |          |
| Beryllium     | ppm      | ASTM D5185(m) |            | 0           |          |          |
| Cadmium       | ppm      | ASTM D5185(m) |            | 0           |          |          |
| ADDITIVES     |          | method        | limit/base | current     | history1 | history2 |
| Boron         | ppm      | ASTM D5185(m) |            | 19          |          |          |
| Barium        | ppm      | ASTM D5185(m) |            | <1          |          |          |
| Molybdenum    | ppm      | ASTM D5185(m) |            | 133         |          |          |
| Manganese     | ppm      | ASTM D5185(m) |            | 5           |          |          |
| Magnesium     | ppm      | ASTM D5185(m) |            | 725         |          |          |
| Calcium       | ppm      | ASTM D5185(m) |            | 1658        |          |          |
| Phosphorus    | ppm      | ASTM D5185(m) |            | 773         |          |          |
| Zinc          | ppm      | ASTM D5185(m) |            | 892         |          |          |
| Sulfur        | ppm      | ASTM D5185(m) |            | 1991        |          |          |
| Lithium       | ppm      | ASTM D5185(m) |            | 1           |          |          |
| CONTAMINANTS  |          | method        | limit/base | current     | history1 | history2 |
| Silicon       | ppm      | ASTM D5185(m) | >25        | <b>△</b> 55 |          |          |
| Sodium        | ppm      | ASTM D5185(m) |            | 6           |          |          |
| Potassium     | ppm      | ASTM D5185(m) | >20        | 117         |          |          |
| Fuel          | %        | ASTM D7593*   | >6.0       | 0.7         |          |          |
| INFRA-RED     |          | method        | limit/base | current     | history1 | history2 |
| Soot %        | %        | ASTM D7844*   | >3         | 0.6         |          |          |
| Nitration     | Abs/cm   | ASTM D7624*   | >20        | 14.9        |          |          |
| Sulfation     | Abs/.1mm | ASTM D7415*   | >30        | 30.0        |          |          |



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