

### **OIL ANALYSIS REPORT**

## Area [61270] **VOLVO VNR660 4616**

Component **Diesel Engine** 

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

# Sample Rating Trend VISCOSITY



#### **DIAGNOSIS**

#### Recommendation

Please note that all wear metal and contaminant levels are being considered accumulative. No corrective action is recommended at this time. Resample at the next service interval to monitor. 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. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MOB 2 test kits, this testkit includes BN to determine the suitability of the oil for continued use.

#### Wear

All component wear rates are normal.

#### Contamination

Fuel content negligible. Elevated aluminum (Al) 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 no indication of any contamination in the oil.

#### Fluid Condition

Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The condition of the oil is acceptable for the time in service.

| SAMPLE INFORM   | <b>IATION</b>  | method  | limit/base                       | current   | history1                 | history2                 |
|---|--|---|----------------------------------|---|--------------------------|--------------------------|
| Sample Number   |  | Client Info   |                                  | WC0831178   |                          |                          |
| Sample Date   |  | Client Info   |                                  | 18 Aug 2023   |                          |                          |
| Machine Age   | kms  | Client Info   |                                  | 198576  |                          |                          |
| Oil Age   | kms  | Client Info   |                                  | 107123  |                          |                          |
| Oil Changed   |  | Client Info   |                                  | N/A   |                          |                          |
| 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  |   | >100                             | 100   |                          |                          |
| Chromium  | ppm  | ASTM D5185(m)   | >20                              | 2   |                          |                          |
| Nickel  | ppm  | ASTM D5185(m)   |                                  | 3   |                          |                          |
| Titanium  | ppm  | ASTM D5185(m)   | _                                | <1  |                          |                          |
| Silver  | ppm  | ` ′   | >2                               | <1  |                          |                          |
| Aluminum  | ppm  | ASTM D5185(m)   | >25                              | 6   |                          |                          |
| Lead  | ppm  | ASTM D5185(m)   | >40                              | 2   |                          |                          |
| Copper  | ppm  | ASTM D5185(m)   | >330                             | 17  |                          |                          |
| Tin   | ppm  | ASTM D5185(m)   | >15                              | 2   |                          |                          |
| Antimony  | ppm  | ASTM D5185(m)   | 710                              | 0   |                          |                          |
| Vanadium  | ppm  | ASTM D5185(m)   |                                  | 0   |                          |                          |
| Beryllium   | ppm  | ASTM D5185(m)   |                                  | 0   |                          |                          |
| Cadmium   | ppm  | ASTM D5185(m)   |                                  | 0   |                          |                          |
|   | ррш  | . ,   | lineit/lenene                    | -   |                          |                          |
| ADDITIVES   |  | method  | limit/base                       | current   | history1                 | history2                 |
| Boron   | ppm  | ASTM D5185(m)   |                                  | 4   |                          |                          |
| Barium  | ppm  | ASTM D5185(m)   |                                  | 0   |                          |                          |
| Molybdenum  | ppm  | ASTM D5185(m)   |                                  | 50  |                          |                          |
| Manganese   |  | 10TH DE (05)  |                                  | 59  |                          |                          |
|   | ppm  | ASTM D5185(m)   |                                  | 2   |                          |                          |
| Magnesium   | ppm  | ASTM D5185(m)   |                                  | 2<br>878  |                          |                          |
| Calcium   | ppm  | ASTM D5185(m) ASTM D5185(m)   |                                  | 2<br>878<br>1260  |                          |                          |
| Calcium<br>Phosphorus   | ppm<br>ppm<br>ppm                                    | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)   |                                  | 2<br>878<br>1260<br>947   |                          |                          |
| Calcium<br>Phosphorus<br>Zinc   | ppm<br>ppm<br>ppm                                    | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)   |                                  | 2<br>878<br>1260<br>947<br>1153   |                          |                          |
| Calcium<br>Phosphorus<br>Zinc<br>Sulfur   | ppm<br>ppm<br>ppm<br>ppm                             | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)   |                                  | 2<br>878<br>1260<br>947<br>1153<br>2032   |                          |                          |
| Calcium Phosphorus Zinc Sulfur Lithium  | ppm<br>ppm<br>ppm<br>ppm<br>ppm                      | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)   |                                  | 2<br>878<br>1260<br>947<br>1153   |                          | <br><br><br>             |
| Calcium<br>Phosphorus<br>Zinc<br>Sulfur   | ppm<br>ppm<br>ppm<br>ppm<br>ppm                      | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)   | limit/base                       | 2<br>878<br>1260<br>947<br>1153<br>2032<br><1                                   |                          |                          |
| Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon                                 | ppm<br>ppm<br>ppm<br>ppm<br>ppm                      | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method ASTM D5185(m)   | limit/base<br>>25                | 2<br>878<br>1260<br>947<br>1153<br>2032<br><1<br>current                        |                          | <br><br><br>             |
| Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium                          | ppm<br>ppm<br>ppm<br>ppm<br>ppm                      | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  METHOD  METHOD  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  | >25                              | 2<br>878<br>1260<br>947<br>1153<br>2032<br><1<br>current<br>10                  | <br><br><br><br>history1 | <br><br><br><br>history2 |
| Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium                | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm        | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  METHOD  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  | >25<br>>20                       | 2<br>878<br>1260<br>947<br>1153<br>2032<br><1<br>current<br>10<br>4             | <br><br><br><br>history1 | <br><br><br>history2     |
| Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium                          | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm               | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  METHOD  METHOD  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  | >25                              | 2<br>878<br>1260<br>947<br>1153<br>2032<br><1<br>current<br>10                  | <br><br><br><br>history1 | history2                 |
| Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium                | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm        | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  METHOD  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  ASTM D5185(m)  | >25<br>>20                       | 2<br>878<br>1260<br>947<br>1153<br>2032<br><1<br>current<br>10<br>4             | <br><br><br>history1     | history2                 |
| Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Fuel           | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm        | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  METHOD  METHOD  ASTM D5185(m)  ASTM D5185(m) | >25<br>>20<br>>6.0               | 2<br>878<br>1260<br>947<br>1153<br>2032<br><1<br>current<br>10<br>4<br>8<br>0.7 | history1                 | history2                 |
| Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  METHOD  METHOD  ASTM D5185(m)  ASTM D7593*   | >25<br>>20<br>>6.0<br>limit/base | 2<br>878<br>1260<br>947<br>1153<br>2032<br><1<br>current<br>10<br>4<br>8<br>0.7 | history1 history1        | history2 history2        |



#### **OIL ANALYSIS REPORT**





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number **Unique Number** 

: 5630710

: WC0831178 : 02577650

Received Diagnosed

: 23 Aug 2023 : 24 Aug 2023

Diagnostician : Kevin Marson Test Package : MOB 1 ( Additional Tests: FuelDilution, PercentFuel, PQ )

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 PERFORMANCE EQUIPMENT - VISION TRUCK 415 EVANS AVENUE ETOBICOKE, ON

**CA M8W 0B3** Contact: Service

To discuss this sample report, contact Customer Service at 1-800-268-2131.

etobservice@visiontruckgroup.com T:

Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

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