WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL

Area

[5136 ADM]

**VOLVO L70H 622854** 

Diesel Engine

**VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- QTS)** 

| VOLVO ULTRA DIESEL ENGINE OIL 13W40 VDS-3 ( Q15)  |                    |          |                            |           |             |          |          |
|---|--------------------|----------|----------------------------|-----------|-------------|----------|----------|
| RECOMMENDATION  | Test               | UOM      | Method                     | Limit/Abn | Current     | History1 | History2 |
| Resample at the next service interval to monitor.   | Sample Number      |          | Client Info                |           | VCP412865   |          |          |
|   | Sample Date        |          | Client Info                |           | 03 Apr 2024 |          |          |
|   | Machine Age        | hrs      | Client Info                |           | 2725        |          |          |
|   | Oil Age            | hrs      | Client Info                |           | 0           |          |          |
|   | Filter Age         | hrs      | Client Info                |           | 0           |          |          |
|   | Oil Changed        |          | Client Info                |           | Changed     |          |          |
|   | Filter Changed     |          | Client Info                |           | N/A         |          |          |
|   | Sample Status      |          |                            |           | NORMAL      |          |          |
| WEAD  | I.e.               |          | AOTM DE405                 | 400       |             |          |          |
| WEAR  All component wear rates are normal.  | Iron               | ppm      | ASTM D5185m                |           | 8           |          |          |
|   | Chromium           | ppm      | ASTM D5185m                |           | <1          |          |          |
|   | Nickel             | ppm      | ASTM D5185m                | >10       | 0           |          |          |
|   | Titanium<br>Silver | ppm      | ASTM D5185m                | . 0       | 0           |          |          |
|   |                    | ppm      | ASTM D5185m                |           | 0           |          |          |
|   | Aluminum<br>Lead   | ppm      | ASTM D5185m<br>ASTM D5185m |           | -1          |          |          |
|   | Copper             | ppm      | ASTM D5185m                |           | <1<br><1    |          |          |
|   | Tin                | ppm      | ASTM D5185m                |           | 0           |          |          |
|   | Vanadium           | ppm      | ASTM D5185m                | >10       | 0           |          |          |
|   | White Metal        | scalar   | *Visual                    | NONE      | NONE        |          |          |
|   | Yellow Metal       | scalar   | *Visual                    | NONE      | NONE        |          |          |
|   |                    |          | VIOUUI                     |           |             |          |          |
| CONTAMINATION   | Silicon            | ppm      | ASTM D5185m                | >20       | 6           |          |          |
|   | Potassium          | ppm      | ASTM D5185m                | >20       | <1          |          |          |
| There is no indication of any contamination in the oil.   | Fuel               |          | WC Method                  | >6.0      | <1.0        |          |          |
|   | Water              |          | WC Method                  | >0.1      | NEG         |          |          |
|   | Glycol             |          | WC Method                  |           | NEG         |          |          |
|   | Soot %             | %        | *ASTM D7844                | >3        | 0.2         |          |          |
|   | Nitration          | Abs/cm   | *ASTM D7624                | >20       | 7.0         |          |          |
|   | Sulfation          | Abs/.1mm | *ASTM D7415                | >30       | 21.8        |          |          |
|   | 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                    | >0.1      | NEG         |          |          |
| FLUID CONDITION   | Sodium             | ppm      | ASTM D5185m                |           | 2           |          |          |
| I LOID CONDITION  | Boron              | ppm      | ASTM D5185m                | 25        | 67          |          |          |
| The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service. | Barium             | ppm      | ASTM D5185m                |           | 0           |          |          |
|   | Molybdenum         | ppm      | ASTM D5185m                |           | 46          |          |          |
|   | Manganese          | ppm      |                            | 0.0       | <1          |          |          |
|   | Magnesium          | ppm      | ASTM D5185m                |           | 584         |          |          |
|   | Calcium            | ppm      | ASTM D5185m                | 2057      | 2024        |          |          |
|   | Phosphorus         | ppm      | ASTM D5185m                |           | 1136        |          |          |
|   | Zinc               | ppm      | ASTM D5185m                |           | 1330        |          |          |
|   | Sulfur             | ppm      | ASTM D5185m                |           | 4079        |          |          |
|   | Oxidation          | Abs/.1mm | *ASTM D7414                |           | 20.4        |          |          |
|   | Base Number (BN)   |          |                            |           | 10.8        |          |          |
|   | Visc @ 100°C       | cSt      | ASTM D445                  |           | 13.0        |          |          |
|   |                    |          |                            |           |             |          |          |





Certificate L2367

Laboratory Sample No.

Lab Number : 06154034

: VCP412865 Unique Number: 10989457

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received

**Tested** Diagnosed

: 19 Apr 2024

: 26 Apr 2024 : 26 Apr 2024 - Jonathan Hester

403 - ASCENDUM MACHINERY INC - FARGO

3739 38TH ST SW, SUITE E FARGO, ND

US 58104

Contact: JESSE SCHEELE jesse.scheele@ascendummachinery.com

Test Package : MOB 1 ( Additional Tests: TBN ) 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.

T: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (701)356-4072

Contact/Location: JESSE SCHEELE - ASCFAR