



## WILL LAPORT 7719139 VOLVO PENTA A1025650 - DIESEL ENGINE

Sample No: VPA050874

Oil Type: VOLVO VDS-4.5 Premium Motor Oil 15W40

| SAMPLE INFORMAT  | TION     |                |              |      |
|------------------|----------|----------------|--------------|------|
| Sample Number    |          | VPA050874      | VPA042100    | <br> |
| Sample Date      |          | 07 Mar 2024    | 29 Aug 2022  | <br> |
| Machine Hours    |          | 539            | 374          | <br> |
| Oil Hours        |          | 130            | 0            | <br> |
| Oil Changed      |          | Not Changd     | N/A          | <br> |
| Sample Status    |          | ABNORMAL       | ABNORMAL     | <br> |
|                  |          |                |              |      |
| OIL CONDITION    |          |                |              |      |
| Visc @ 100°C     | cSt      | <b>13.2</b>    | <b>14.3</b>  | <br> |
| Base Number (BN) | mg KOH/g | ■8.8           | 9.9          | <br> |
| Oxidation (PA)   | %        | 57             | 69           | <br> |
| CONTAMINATION    |          |                |              |      |
| Water            | %        | NEG            | NEG          | <br> |
| Soot %           | %        | NEG<br>■ 0.4   | □ 0.6        | <br> |
| Nitration (PA)   | %        | 68             | 93           | <br> |
| Sulfation (PA)   | %        | 52             | 57           | <br> |
| Glycol           | %        | NEG            | NEG          | <br> |
| Fuel             | %        | <1.0           | <1.0         | <br> |
| Silicon          | ppm      | ▲ 30           | □ 17         | <br> |
| Sodium           | ppm      | 6              | 193          | <br> |
| Potassium        | ppm      | <b>18</b>      | <b>13</b>    | <br> |
| WEAD METALS      |          |                |              |      |
| WEAR METALS      |          |                |              |      |
| Iron             | ppm      | ■33            | <u>^</u> 254 | <br> |
| Copper           | ppm      | <b>16</b>      | <b>1</b> 4   | <br> |
| Lead             | ppm      | ■3             | ■16          | <br> |
| Tin              | ppm      | <b>■</b> 3     | <b>5</b>     | <br> |
| Aluminum         | ppm      | <b>19</b>      | <u> </u>     | <br> |
| Chromium         | ppm      | <b>2</b>       | <b>△</b> 31  | <br> |
| Molybdenum       | ppm      | 14             | <b>1</b> 1   | <br> |
| Nickel           | ppm      | <b>■3</b>      | <b>4</b>     | <br> |
| Titanium         | ppm      | <b>■ &lt;1</b> | <b>-</b> <1  | <br> |
| Silver           | ppm      | <b>0</b>       | <b>=</b> <1  | <br> |
| Manganese        | ppm      | <b>2</b>       | 3            | <br> |
| Vanadium         | ppm      | <1             | <1           | <br> |
| ADDITIVES        |          |                |              |      |
| Calcium          | ppm      | <b>1463</b>    | <b>1504</b>  | <br> |
| Magnesium        | ppm      | <b>755</b>     | ■818         | <br> |
| Zinc             | ppm      | 893            | □999         | <br> |
| Phosphorus       | ppm      | <b>■781</b>    | ■854         | <br> |
| Barium           | ppm      | <b>1</b>       | ■3           | <br> |
| Boron            | ppm      | ■98            | ■84          | <br> |
|                  |          |                |              |      |

## Pacific Power Group - VP981534

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## Diagnosis

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend an early resample to monitor this condition. All component wear rates are normal. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

 Depot:
 VP99031103

 Unique No:
 10942518

 Signed:
 Jonathan Hester

 Report Date:
 28 Mar 2024

## **OIL ANALYSIS REPORT**



