

# OIL ANALYSIS REPORT

# VOLVO PENTA

**KELLY GENERATOR 23432 MULTIQUIP 9110454 - INDUSTRIAL - GENSET**

**Sample No:** VPA039634

**Oil Type:** JOHN DEERE ENGINE OIL PLUS 50 II 10W30

## SAMPLE INFORMATION

|               |             |     |     |     |
|---------------|-------------|-----|-----|-----|
| Sample Number | VPA039634   | --- | --- | --- |
| Sample Date   | 09 Jan 2024 | --- | --- | --- |
| Machine Hours | 2840        | --- | --- | --- |
| Oil Hours     | 109         | --- | --- | --- |
| Oil Changed   | Not Changd  | --- | --- | --- |
| Sample Status | NORMAL      | --- | --- | --- |

### Rutt's Machine Inc.

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## OIL CONDITION

|                  |          |        |     |     |     |
|------------------|----------|--------|-----|-----|-----|
| Visc @ 100°C     | cSt      | █ 10.2 | --- | --- | --- |
| Base Number (BN) | mg KOH/g | █ 10.3 | --- | --- | --- |
| Oxidation (PA)   | %        | 61     | --- | --- | --- |

## CONTAMINATION

|                |     |       |     |     |     |
|----------------|-----|-------|-----|-----|-----|
| Water          | %   | NEG   | --- | --- | --- |
| Soot %         | %   | █ 0.1 | --- | --- | --- |
| Nitration (PA) | %   | 55    | --- | --- | --- |
| Sulfation (PA) | %   | 55    | --- | --- | --- |
| Glycol         | %   | NEG   | --- | --- | --- |
| Fuel           | %   | < 1.0 | --- | --- | --- |
| Silicon        | ppm | █ 6   | --- | --- | --- |
| Sodium         | ppm | █ 1   | --- | --- | --- |
| Potassium      | ppm | █ 2   | --- | --- | --- |

## WEAR METALS

|            |     |       |     |     |     |
|------------|-----|-------|-----|-----|-----|
| Iron       | ppm | █ 8   | --- | --- | --- |
| Copper     | ppm | █ 5   | --- | --- | --- |
| Lead       | ppm | █ 1   | --- | --- | --- |
| Tin        | ppm | █ < 1 | --- | --- | --- |
| Aluminum   | ppm | █ 4   | --- | --- | --- |
| Chromium   | ppm | █ 0   | --- | --- | --- |
| Molybdenum | ppm | █ 247 | --- | --- | --- |
| Nickel     | ppm | █ 0   | --- | --- | --- |
| Titanium   | ppm | 0     | --- | --- | --- |
| Silver     | ppm | █ 0   | --- | --- | --- |
| Manganese  | ppm | █ 1   | --- | --- | --- |
| Vanadium   | ppm | < 1   | --- | --- | --- |

## ADDITIVES

|            |     |        |     |     |     |
|------------|-----|--------|-----|-----|-----|
| Calcium    | ppm | █ 1410 | --- | --- | --- |
| Magnesium  | ppm | 855    | --- | --- | --- |
| Zinc       | ppm | █ 1123 | --- | --- | --- |
| Phosphorus | ppm | █ 941  | --- | --- | --- |
| Barium     | ppm | █ 0    | --- | --- | --- |
| Boron      | ppm | █ 284  | --- | --- | --- |

## Diagnosis

ENGINE FAILUREAll component wear rates are normal. The wear metal levels do not reflect the reported failure. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil.

**Depot:** VP743218  
**Unique No:** 10830419  
**Signed:** Don Baldrige  
**Report Date:** 15 Jan 2024

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## GRAPHS

