

OIL ANALYSIS REPORT

VOLVO PENTA

NADINE URUIOLI MATT KORWELL VOLVO PENTA MATT KORWELL (S/N N/A) - STARBOARD DIESEL ENGINE

Sample No: VPA061553

Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3

SAMPLE INFORMATION

| | | | | |
|---------------|-------------|-----|-----|-----|
| Sample Number | VPA061553 | --- | --- | --- |
| Sample Date | 10 Jun 2024 | --- | --- | --- |
| Machine Hours | 0 | --- | --- | --- |
| Oil Hours | 0 | --- | --- | --- |
| Oil Changed | Not Changd | --- | --- | --- |
| Sample Status | NORMAL | --- | --- | --- |

Helmuts Marine Service

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T: x:

F: x:

OIL CONDITION

| | | | | | |
|------------------|----------|---------|-----|-----|-----|
| Visc @ 100°C | cSt | █ 13.76 | --- | --- | --- |
| Base Number (BN) | mg KOH/g | █ 10.0 | --- | --- | --- |
| Oxidation (PA) | % | 71 | --- | --- | --- |

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

CONTAMINATION

| | | | | | |
|----------------|-----|-------|-----|-----|-----|
| Water | % | NEG | --- | --- | --- |
| Soot % | % | █ 0.1 | --- | --- | --- |
| Nitration (PA) | % | 39 | --- | --- | --- |
| Sulfation (PA) | % | 56 | --- | --- | --- |
| Glycol | % | NEG | --- | --- | --- |
| Fuel | % | < 1.0 | --- | --- | --- |
| Silicon | ppm | █ 5 | --- | --- | --- |
| Sodium | ppm | █ 7 | --- | --- | --- |
| Potassium | ppm | █ 3 | --- | --- | --- |

WEAR METALS

| | | | | | |
|------------|-----|-------|-----|-----|-----|
| Iron | ppm | █ 6 | --- | --- | --- |
| Copper | ppm | █ 3 | --- | --- | --- |
| Lead | ppm | █ 4 | --- | --- | --- |
| Tin | ppm | █ < 1 | --- | --- | --- |
| Aluminum | ppm | █ 2 | --- | --- | --- |
| Chromium | ppm | █ < 1 | --- | --- | --- |
| Molybdenum | ppm | █ 34 | --- | --- | --- |
| Nickel | ppm | █ 0 | --- | --- | --- |
| Titanium | ppm | █ 0 | --- | --- | --- |
| Silver | ppm | █ 0 | --- | --- | --- |
| Manganese | ppm | █ 1 | --- | --- | --- |
| Vanadium | ppm | 0 | --- | --- | --- |

ADDITIVES

| | | | | | |
|------------|-----|--------|-----|-----|-----|
| Calcium | ppm | █ 1302 | --- | --- | --- |
| Magnesium | ppm | █ 373 | --- | --- | --- |
| Zinc | ppm | █ 751 | --- | --- | --- |
| Phosphorus | ppm | █ 667 | --- | --- | --- |
| Barium | ppm | █ 0 | --- | --- | --- |
| Boron | ppm | █ 78 | --- | --- | --- |

Depot: VP152741

Unique No: 11075734

Signed: Doug Bogart

Report Date: 12 Jun 2024

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GRAPHS

