

OIL ANALYSIS REPORT



NADINE URUIOLI PATRICK HENDRICKSON VOLVO PENTA 5100693410 - DIESEL ENGINE

Sample No: VPA061546

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

SAMPLE INFORMATION

| | | | | |
|---------------|-------------|-----|-----|-----|
| Sample Number | VPA061546 | --- | --- | --- |
| Sample Date | 29 May 2024 | --- | --- | --- |
| Machine Hours | 95 | --- | --- | --- |
| Oil Hours | 95 | --- | --- | --- |
| Oil Changed | Not Changd | --- | --- | --- |
| Sample Status | NORMAL | --- | --- | --- |

Helmut's Marine Service
619 Canal Street
SAN RAFAEL, CA
US 94901-3545
Contact: NADINE URUIOLI
SERVICE@HELMUTSMARINE.COM
T: x:
F: x:

OIL CONDITION

| | | | | | |
|----------------|-----|---------|-----|-----|-----|
| Visc @ 100°C | cSt | █ 13.85 | --- | --- | --- |
| Oxidation (PA) | % | 69 | --- | --- | --- |

CONTAMINATION

| | | | | | |
|----------------|-----|-------|-----|-----|-----|
| Water | % | NEG | --- | --- | --- |
| Soot % | % | █ 0.1 | --- | --- | --- |
| Nitration (PA) | % | 84 | --- | --- | --- |
| Sulfation (PA) | % | 55 | --- | --- | --- |
| Glycol | % | NEG | --- | --- | --- |
| Fuel | % | < 1.0 | --- | --- | --- |
| Silicon | ppm | █ 6 | --- | --- | --- |
| Sodium | ppm | █ 2 | --- | --- | --- |
| Potassium | ppm | █ 4 | --- | --- | --- |

Diagnosis

No corrective action is recommended at this time. 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 condition of the oil is acceptable for the time in service.

WEAR METALS

| | | | | | |
|------------|-----|-------|-----|-----|-----|
| Iron | ppm | █ 7 | --- | --- | --- |
| Copper | ppm | █ 3 | --- | --- | --- |
| Lead | ppm | █ < 1 | --- | --- | --- |
| Tin | ppm | █ 1 | --- | --- | --- |
| Aluminum | ppm | █ 2 | --- | --- | --- |
| Chromium | ppm | █ < 1 | --- | --- | --- |
| Molybdenum | ppm | █ 20 | --- | --- | --- |
| Nickel | ppm | █ < 1 | --- | --- | --- |
| Titanium | ppm | █ < 1 | --- | --- | --- |
| Silver | ppm | █ 0 | --- | --- | --- |
| Manganese | ppm | █ < 1 | --- | --- | --- |
| Vanadium | ppm | 0 | --- | --- | --- |

ADDITIVES

| | | | | | |
|------------|-----|--------|-----|-----|-----|
| Calcium | ppm | █ 1470 | --- | --- | --- |
| Magnesium | ppm | █ 704 | --- | --- | --- |
| Zinc | ppm | █ 907 | --- | --- | --- |
| Phosphorus | ppm | █ 832 | --- | --- | --- |
| Barium | ppm | █ < 1 | --- | --- | --- |
| Boron | ppm | █ 141 | --- | --- | --- |

Depot: VP152741
Unique No: 11059345
Signed: Doug Bogart
Report Date: 31 May 2024

OIL ANALYSIS REPORT

VOLVO PENTA

GRAPHS

