

OIL ANALYSIS REPORT

VOLVO PENTA

VOLVO PENTA A1104549 - STARBOARD DIESEL ENGINE

Sample No: VPA048751

Oil Type: DIESEL ENGINE OIL SAE 15W40

SAMPLE INFORMATION

| | | | | |
|---------------|-------------|-----|-----|-----|
| Sample Number | VPA048751 | --- | --- | --- |
| Sample Date | 19 Nov 2023 | --- | --- | --- |
| Machine Hours | 350 | --- | --- | --- |
| Oil Hours | 80 | --- | --- | --- |
| Oil Changed | Not Changd | --- | --- | --- |
| Sample Status | NORMAL | --- | --- | --- |

Viking Boat Harbor Inc

1121 S. Islington Rd.

CEDARVILLE, MI

US 49719

Contact: Steve Honnila

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OIL CONDITION

| | | | | | |
|------------------|----------|--------|-----|-----|-----|
| Visc @ 100°C | cSt | █ 14.1 | --- | --- | --- |
| Base Number (BN) | mg KOH/g | █ 8.4 | --- | --- | --- |
| Oxidation (PA) | % | 60 | --- | --- | --- |

CONTAMINATION

| | | | | | |
|----------------|-----|-------|-----|-----|-----|
| Water | % | NEG | --- | --- | --- |
| Soot % | % | █ 0.1 | --- | --- | --- |
| Nitration (PA) | % | 50 | --- | --- | --- |
| Sulfation (PA) | % | 53 | --- | --- | --- |
| Glycol | % | NEG | --- | --- | --- |
| Fuel | % | <1.0 | --- | --- | --- |
| Silicon | ppm | █ 4 | --- | --- | --- |
| Sodium | ppm | █ <1 | --- | --- | --- |
| Potassium | ppm | █ 8 | --- | --- | --- |

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.

WEAR METALS

| | | | | | |
|------------|-----|------|-----|-----|-----|
| Iron | ppm | █ 17 | --- | --- | --- |
| Copper | ppm | █ 4 | --- | --- | --- |
| Lead | ppm | █ 1 | --- | --- | --- |
| Tin | ppm | █ 0 | --- | --- | --- |
| Aluminum | ppm | █ 4 | --- | --- | --- |
| Chromium | ppm | █ <1 | --- | --- | --- |
| Molybdenum | ppm | █ 16 | --- | --- | --- |
| Nickel | ppm | █ 1 | --- | --- | --- |
| Titanium | ppm | █ <1 | --- | --- | --- |
| Silver | ppm | █ 0 | --- | --- | --- |
| Manganese | ppm | █ 0 | --- | --- | --- |
| Vanadium | ppm | 0 | --- | --- | --- |

ADDITIVES

| | | | | | |
|------------|-----|--------|-----|-----|-----|
| Calcium | ppm | █ 2107 | --- | --- | --- |
| Magnesium | ppm | █ 33 | --- | --- | --- |
| Zinc | ppm | █ 1132 | --- | --- | --- |
| Phosphorus | ppm | █ 968 | --- | --- | --- |
| Barium | ppm | █ 0 | --- | --- | --- |
| Boron | ppm | █ 198 | --- | --- | --- |

Depot: VP155388

Unique No: 10751242

Signed: Sean Felton

Report Date: 21 Nov 2023

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GRAPHS

