

OIL ANALYSIS REPORT

VOLVO PENTA

MILLER VOLVO PENTA 20132182441 - STARBOARD DIESEL ENGINE

Sample No: VPA059987
Oil Type: DIESEL ENGINE OIL SAE 40

SAMPLE INFORMATION

| | | | | |
|---------------|-------------|-----|-----|-----|
| Sample Number | VPA059987 | --- | --- | --- |
| Sample Date | 05 Dec 2023 | --- | --- | --- |
| Machine Hours | 153 | --- | --- | --- |
| Oil Hours | 0 | --- | --- | --- |
| Oil Changed | N/A | --- | --- | --- |
| Sample Status | NORMAL | --- | --- | --- |

Walstrom Marine - 767948

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US 49740
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OIL CONDITION

| | | | | | |
|------------------|----------|--------|-----|-----|-----|
| Visc @ 100°C | cSt | █ 13.0 | --- | --- | --- |
| Base Number (BN) | mg KOH/g | █ 7.6 | --- | --- | --- |
| Oxidation (PA) | % | 35 | --- | --- | --- |

CONTAMINATION

| | | | | | |
|----------------|-----|-------|-----|-----|-----|
| Water | % | NEG | --- | --- | --- |
| Soot % | % | █ 0.4 | --- | --- | --- |
| Nitration (PA) | % | 43 | --- | --- | --- |
| Sulfation (PA) | % | 43 | --- | --- | --- |
| Glycol | % | NEG | --- | --- | --- |
| Fuel | % | <1.0 | --- | --- | --- |
| Silicon | ppm | █ 32 | --- | --- | --- |
| Sodium | ppm | █ <1 | --- | --- | --- |
| Potassium | ppm | █ 32 | --- | --- | --- |

Diagnosis

Resample at the next service interval to monitor. Metal levels are typical for a new component breaking in. 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 acceptable for the time in service.

WEAR METALS

| | | | | | |
|------------|-----|------|-----|-----|-----|
| Iron | ppm | █ 18 | --- | --- | --- |
| Copper | ppm | █ 32 | --- | --- | --- |
| Lead | ppm | █ 3 | --- | --- | --- |
| Tin | ppm | █ 2 | --- | --- | --- |
| Aluminum | ppm | █ 15 | --- | --- | --- |
| Chromium | ppm | █ <1 | --- | --- | --- |
| Molybdenum | ppm | █ 5 | --- | --- | --- |
| Nickel | ppm | █ <1 | --- | --- | --- |
| Titanium | ppm | █ <1 | --- | --- | --- |
| Silver | ppm | █ 0 | --- | --- | --- |
| Manganese | ppm | █ 2 | --- | --- | --- |
| Vanadium | ppm | <1 | --- | --- | --- |

ADDITIVES

| | | | | | |
|------------|-----|--------|-----|-----|-----|
| Calcium | ppm | █ 1158 | --- | --- | --- |
| Magnesium | ppm | █ 1007 | --- | --- | --- |
| Zinc | ppm | █ 1399 | --- | --- | --- |
| Phosphorus | ppm | █ 1111 | --- | --- | --- |
| Barium | ppm | █ 0 | --- | --- | --- |
| Boron | ppm | █ 0 | --- | --- | --- |

Depot: VP154879
Unique No: 10789515
Signed: Sean Felton
Report Date: 18 Dec 2023

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GRAPHS

