

OIL ANALYSIS REPORT

VOLVO PENTA

RICHARD FORTIER VOLVO PENTA A272704 - STARBOARD DIESEL ENGINE

Sample No: VPA048259

Oil Type: VOLVO VDS-4.5 Premium Motor Oil 15W40

SAMPLE INFORMATION

| | | | | |
|---------------|-------------|-------------|-----|-----|
| Sample Number | VPA048259 | VPA035692 | --- | --- |
| Sample Date | 24 Oct 2023 | 28 Oct 2022 | --- | --- |
| Machine Hours | 522 | 490 | --- | --- |
| Oil Hours | 35 | 25 | --- | --- |
| Oil Changed | Not Changd | Not Changd | --- | --- |
| Sample Status | NORMAL | NORMAL | --- | --- |

OIL CONDITION

| | | | | | |
|------------------|----------|--------|--------|-----|-----|
| Visc @ 100°C | cSt | █ 14.0 | █ 13.5 | --- | --- |
| Base Number (BN) | mg KOH/g | █ 8.8 | █ 10.6 | --- | --- |
| Oxidation (PA) | % | 61 | 53 | --- | --- |

CONTAMINATION

| | | | | | |
|----------------|-----|-------|-------|-----|-----|
| Water | % | NEG | NEG | --- | --- |
| Soot % | % | █ 0.1 | █ 0.1 | --- | --- |
| Nitration (PA) | % | 43 | 41 | --- | --- |
| Sulfation (PA) | % | 54 | 51 | --- | --- |
| Glycol | % | NEG | NEG | --- | --- |
| Fuel | % | <1.0 | <1.0 | --- | --- |
| Silicon | ppm | █ 4 | █ 4 | --- | --- |
| Sodium | ppm | █ 0 | █ 2 | --- | --- |
| Potassium | ppm | █ 7 | █ 1 | --- | --- |

WEAR METALS

| | | | | | |
|------------|-----|------|------|-----|-----|
| Iron | ppm | █ 8 | █ 6 | --- | --- |
| Copper | ppm | █ 2 | █ 1 | --- | --- |
| Lead | ppm | █ 0 | █ 0 | --- | --- |
| Tin | ppm | █ 0 | █ 0 | --- | --- |
| Aluminum | ppm | █ 1 | █ 0 | --- | --- |
| Chromium | ppm | █ <1 | █ <1 | --- | --- |
| Molybdenum | ppm | █ 15 | █ 57 | --- | --- |
| Nickel | ppm | █ <1 | █ 0 | --- | --- |
| Titanium | ppm | █ <1 | █ 0 | --- | --- |
| Silver | ppm | █ 0 | █ 0 | --- | --- |
| Manganese | ppm | █ 0 | █ 0 | --- | --- |
| Vanadium | ppm | 0 | 0 | --- | --- |

ADDITIVES

| | | | | | |
|------------|-----|--------|--------|-----|-----|
| Calcium | ppm | █ 1806 | █ 1087 | --- | --- |
| Magnesium | ppm | █ 226 | █ 887 | --- | --- |
| Zinc | ppm | █ 1109 | █ 1230 | --- | --- |
| Phosphorus | ppm | █ 966 | █ 1022 | --- | --- |
| Barium | ppm | █ 0 | █ 0 | --- | --- |
| Boron | ppm | █ 167 | █ 5 | --- | --- |

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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 acceptable for the time in service.

Depot: VP153550

Unique No: 10750533

Signed: Sean Felton

Report Date: 21 Nov 2023

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GRAPHS

