

OIL ANALYSIS REPORT

VOLVO PENTA

DAVID BOVEE ANTHONY VOLVO PENTA 1012569561 - STARBOARD DIESEL ENGINE

Sample No: VPA059098

Oil Type: VOLVO PENTA SAE 15W40

SAMPLE INFORMATION

| | | | | |
|---------------|-------------|-------------|-----|-----|
| Sample Number | VPA059098 | VPA044799 | --- | --- |
| Sample Date | 05 Feb 2024 | 21 Dec 2022 | --- | --- |
| Machine Hours | 1084 | 991 | --- | --- |
| Oil Hours | 93 | 0 | --- | --- |
| Oil Changed | N/A | N/A | --- | --- |
| Sample Status | ABNORMAL | NORMAL | --- | --- |

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OIL CONDITION

| | | | | | |
|------------------|----------|--------|--------|-----|-----|
| Visc @ 100°C | cSt | █ 12.7 | █ 12.8 | --- | --- |
| Base Number (BN) | mg KOH/g | █ 9.5 | █ 10.9 | --- | --- |
| Oxidation (PA) | % | 61 | 65 | --- | --- |

CONTAMINATION

| | | | | | |
|----------------|-----|-------|-------|-----|-----|
| Water | % | NEG | NEG | --- | --- |
| Soot % | % | █ 0.1 | █ 0.1 | --- | --- |
| Nitration (PA) | % | 54 | 58 | --- | --- |
| Sulfation (PA) | % | 53 | 58 | --- | --- |
| Glycol | % | NEG | NEG | --- | --- |
| Fuel | % | <1.0 | <1.0 | --- | --- |
| Silicon | ppm | █ 5 | █ 2 | --- | --- |
| Sodium | ppm | █ 0 | █ 0 | --- | --- |
| Potassium | ppm | █ <1 | █ 2 | --- | --- |

Diagnosis

We recommend you service the filters on this component. Resample at the next service interval to monitor. All component wear rates are normal. Moderate concentration of visible dirt/debris present 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 | █ 5 | █ 3 | --- | --- |
| Copper | ppm | █ 2 | █ <1 | --- | --- |
| Lead | ppm | █ <1 | █ <1 | --- | --- |
| Tin | ppm | █ <1 | █ <1 | --- | --- |
| Aluminum | ppm | █ <1 | █ 0 | --- | --- |
| Chromium | ppm | █ <1 | █ 0 | --- | --- |
| Molybdenum | ppm | █ 66 | █ 59 | --- | --- |
| Nickel | ppm | █ <1 | █ 0 | --- | --- |
| Titanium | ppm | █ <1 | █ <1 | --- | --- |
| Silver | ppm | █ 0 | █ 0 | --- | --- |
| Manganese | ppm | █ <1 | 0 | --- | --- |
| Vanadium | ppm | 0 | 0 | --- | --- |

ADDITIVES

| | | | | | |
|------------|-----|--------|--------|-----|-----|
| Calcium | ppm | █ 1123 | █ 1158 | --- | --- |
| Magnesium | ppm | 1062 | █ 901 | --- | --- |
| Zinc | ppm | █ 1348 | █ 1251 | --- | --- |
| Phosphorus | ppm | █ 1064 | █ 1055 | --- | --- |
| Barium | ppm | █ 0 | █ 0 | --- | --- |
| Boron | ppm | █ 7 | █ 5 | --- | --- |

Depot: VP794951
Unique No: 10872634
Signed: Don Baldrige
Report Date: 12 Feb 2024

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GRAPHS

