

OIL ANALYSIS REPORT

VOLVO PENTA

JAMES FLYNN VOLVO PENTA 1012618057 - STARBOARD DIESEL ENGINE

Sample No: VPA041458

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

SAMPLE INFORMATION

| | | | | |
|---------------|-------------|-----|-----|-----|
| Sample Number | VPA041458 | --- | --- | --- |
| Sample Date | 27 Nov 2023 | --- | --- | --- |
| Machine Hours | 802 | --- | --- | --- |
| Oil Hours | 400 | --- | --- | --- |
| Oil Changed | Not Changd | --- | --- | --- |
| Sample Status | NORMAL | --- | --- | --- |

Cogswell Marine & Motorsports, Inc
865 Stella Street
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US 91911
Contact: Mitchell Cogswell
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F:

OIL CONDITION

| | | | | | |
|------------------|----------|--------|-----|-----|-----|
| Visc @ 100°C | cSt | █ 13.1 | --- | --- | --- |
| Base Number (BN) | mg KOH/g | █ 9.8 | --- | --- | --- |
| Oxidation (PA) | % | 57 | --- | --- | --- |

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.

CONTAMINATION

| | | | | | |
|----------------|-----|-------|-----|-----|-----|
| Water | % | NEG | --- | --- | --- |
| Soot % | % | █ 0.1 | --- | --- | --- |
| Nitration (PA) | % | 45 | --- | --- | --- |
| Sulfation (PA) | % | 51 | --- | --- | --- |
| Glycol | % | NEG | --- | --- | --- |
| Fuel | % | <1.0 | --- | --- | --- |
| Silicon | ppm | █ 6 | --- | --- | --- |
| Sodium | ppm | █ <1 | --- | --- | --- |
| Potassium | ppm | █ <1 | --- | --- | --- |

WEAR METALS

| | | | | | |
|------------|-----|------|-----|-----|-----|
| Iron | ppm | █ 1 | --- | --- | --- |
| Copper | ppm | █ 20 | --- | --- | --- |
| Lead | ppm | █ <1 | --- | --- | --- |
| Tin | ppm | █ 0 | --- | --- | --- |
| Aluminum | ppm | █ <1 | --- | --- | --- |
| Chromium | ppm | █ 0 | --- | --- | --- |
| Molybdenum | ppm | █ 62 | --- | --- | --- |
| Nickel | ppm | █ 0 | --- | --- | --- |
| Titanium | ppm | █ 0 | --- | --- | --- |
| Silver | ppm | █ 0 | --- | --- | --- |
| Manganese | ppm | █ 0 | --- | --- | --- |
| Vanadium | ppm | 0 | --- | --- | --- |

ADDITIVES

| | | | | | |
|------------|-----|--------|-----|-----|-----|
| Calcium | ppm | █ 1274 | --- | --- | --- |
| Magnesium | ppm | █ 1069 | --- | --- | --- |
| Zinc | ppm | █ 1574 | --- | --- | --- |
| Phosphorus | ppm | █ 1251 | --- | --- | --- |
| Barium | ppm | █ 0 | --- | --- | --- |
| Boron | ppm | █ 14 | --- | --- | --- |

Depot: VP152133
Unique No: 10767383
Signed: Don Baldrige
Report Date: 05 Dec 2023

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GRAPHS

