

OIL ANALYSIS REPORT

VOLVO PENTA

BILL MORENO - GALEON VOLVO PENTA VP318231 - PORT DIESEL ENGINE

Sample No: VPA036455

Oil Type: SHELL ROTELLA T 15W40

SAMPLE INFORMATION

| | | | | |
|---------------|-------------|-------------|-----|-----|
| Sample Number | VPA036455 | VPA043530 | --- | --- |
| Sample Date | 19 Dec 2023 | 10 Dec 2022 | --- | --- |
| Machine Hours | 566 | 513 | --- | --- |
| Oil Hours | 566 | 513 | --- | --- |
| Oil Changed | Changed | Changed | --- | --- |
| Sample Status | NORMAL | ATTENTION | --- | --- |

Larry's Lighthouse Marina

1250
AQUEBOGUE, NY
US 11931
Contact: MAX FUHLBRUGGE
info@lighthousemarina.com

T: x:

F: x:

OIL CONDITION

| | | | | | |
|------------------|----------|--------|--------|-----|-----|
| Visc @ 100°C | cSt | █ 13.2 | ▲ 12.3 | --- | --- |
| Base Number (BN) | mg KOH/g | █ 8.4 | █ 9.9 | --- | --- |
| Oxidation (PA) | % | 66 | 90 | --- | --- |

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 | NEG | --- | --- |
| Soot % | % | █ 0.2 | █ 0.1 | --- | --- |
| Nitration (PA) | % | 53 | 73 | --- | --- |
| Sulfation (PA) | % | 57 | 68 | --- | --- |
| Glycol | % | NEG | NEG | --- | --- |
| Fuel | % | <1.0 | █ 1.3 | --- | --- |
| Silicon | ppm | █ 5 | █ 8 | --- | --- |
| Sodium | ppm | █ 1 | █ 0 | --- | --- |
| Potassium | ppm | █ 7 | █ 2 | --- | --- |

WEAR METALS

| | | | | | |
|------------|-----|------|------|-----|-----|
| Iron | ppm | █ 4 | █ 10 | --- | --- |
| Copper | ppm | █ 18 | █ 65 | --- | --- |
| Lead | ppm | █ 1 | █ 1 | --- | --- |
| Tin | ppm | █ <1 | █ <1 | --- | --- |
| Aluminum | ppm | █ 1 | █ 1 | --- | --- |
| Chromium | ppm | █ <1 | █ <1 | --- | --- |
| Molybdenum | ppm | █ 9 | █ 59 | --- | --- |
| Nickel | ppm | █ <1 | █ 0 | --- | --- |
| Titanium | ppm | █ 0 | █ 0 | --- | --- |
| Silver | ppm | █ 0 | █ 1 | --- | --- |
| Manganese | ppm | █ 0 | █ <1 | --- | --- |
| Vanadium | ppm | <1 | <1 | --- | --- |

ADDITIVES

| | | | | | |
|------------|-----|--------|--------|-----|-----|
| Calcium | ppm | █ 1917 | █ 1107 | --- | --- |
| Magnesium | ppm | █ 161 | █ 871 | --- | --- |
| Zinc | ppm | █ 1232 | █ 1193 | --- | --- |
| Phosphorus | ppm | █ 1046 | █ 1011 | --- | --- |
| Barium | ppm | █ 0 | █ 0 | --- | --- |
| Boron | ppm | █ 146 | █ 6 | --- | --- |

Depot: VP610438

Unique No: 10843051

Signed: Angela Borella

Report Date: 23 Jan 2024

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PENTA**

GRAPHS

