

OIL ANALYSIS REPORT

VOLVO PENTA

ZF 20012493 - INBOARD - STARBOARD GEARBOX

Sample No: VPA020808

Oil Type: SHELL ROTELLA T 30

SAMPLE INFORMATION

| | | | | |
|---------------|-------------|-------------|-----|-----|
| Sample Number | VPA020808 | VPA020343 | --- | --- |
| Sample Date | 19 Sep 2023 | 18 Mar 2022 | --- | --- |
| Machine Hours | 1405 | 1464 | --- | --- |
| Oil Hours | 50 | 25 | --- | --- |
| Oil Changed | Not Changd | Not Changd | --- | --- |
| Sample Status | NORMAL | NORMAL | --- | --- |

CAROLINA MARINE DIESEL

PO BOX 24159
HILTON HEAD, SC
US 29925

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OIL CONDITION

| | | | | | |
|-------------|-----|------|-------|-----|-----|
| Visc @ 40°C | cSt | 70.8 | █ 106 | --- | --- |
|-------------|-----|------|-------|-----|-----|

CONTAMINATION

| | | | | | |
|-----------|-----|-----|-----|-----|-----|
| Silicon | ppm | █ 4 | █ 4 | --- | --- |
| Sodium | ppm | █ 0 | █ 3 | --- | --- |
| Potassium | ppm | █ 2 | █ 0 | --- | --- |

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 condition of the oil is acceptable for the time in service.

WEAR METALS

| | | | | | |
|------------|-----|------|------|-----|-----|
| PQ | | █ 23 | █ 18 | --- | --- |
| Iron | ppm | █ 13 | █ 9 | --- | --- |
| Copper | ppm | █ 40 | █ 24 | --- | --- |
| Lead | ppm | █ 2 | █ 1 | --- | --- |
| Tin | ppm | █ <1 | █ <1 | --- | --- |
| Aluminum | ppm | █ 4 | █ 1 | --- | --- |
| Chromium | ppm | █ 0 | <1 | --- | --- |
| Molybdenum | ppm | █ 25 | █ 70 | --- | --- |
| Nickel | ppm | █ 0 | 0 | --- | --- |
| Titanium | ppm | <1 | <1 | --- | --- |
| Silver | ppm | 0 | 0 | --- | --- |
| Manganese | ppm | █ <1 | █ <1 | --- | --- |
| Vanadium | ppm | 0 | 0 | --- | --- |

ADDITIVES

| | | | | | |
|------------|-----|--------|-------|-----|-----|
| Calcium | ppm | █ 4120 | 2961 | --- | --- |
| Magnesium | ppm | █ 61 | █ 156 | --- | --- |
| Zinc | ppm | █ 941 | █ 960 | --- | --- |
| Phosphorus | ppm | █ 848 | █ 930 | --- | --- |
| Barium | ppm | █ 0 | █ 0 | --- | --- |
| Boron | ppm | █ 5 | █ 13 | --- | --- |

Depot: CARHILSC
Unique No: 10658409
Signed: Jonathan Hester
Report Date: 25 Sep 2023

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GRAPHS

