

# OIL ANALYSIS REPORT

# VOLVO PENTA

**DAN KRAEMER 3194000651 - STARBOARD IPS**

**Sample No:** VPA038172

**Oil Type:** GEAR OIL SAE 75W90

## SAMPLE INFORMATION

|               |                    |             |     |     |
|---------------|--------------------|-------------|-----|-----|
| Sample Number | <b>VPA038172</b>   | VPA031591   | --- | --- |
| Sample Date   | <b>18 Sep 2021</b> | 19 Sep 2020 | --- | --- |
| Machine Hours | <b>633</b>         | 613         | --- | --- |
| Oil Hours     | <b>33</b>          | 40          | --- | --- |
| Oil Changed   | <b>Changed</b>     | Changed     | --- | --- |
| Sample Status | <b>NORMAL</b>      | NORMAL      | --- | --- |

## INTERSTATE POWER SYSTEMS

2901 E 78TH ST  
MINNEAPOLIS, MN  
US 55425

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T:  
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## OIL CONDITION

|             |     |            |     |     |     |
|-------------|-----|------------|-----|-----|-----|
| Visc @ 40°C | cSt | <b>102</b> | 102 | --- | --- |
|-------------|-----|------------|-----|-----|-----|

## CONTAMINATION

|           |     |              |    |     |     |
|-----------|-----|--------------|----|-----|-----|
| Silicon   | ppm | <b>16</b>    | 7  | --- | --- |
| Sodium    | ppm | <b>&lt;1</b> | 0  | --- | --- |
| Potassium | ppm | <b>10</b>    | <1 | --- | --- |

## 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         |     | <b>29</b>    | 24 | --- | --- |
| Iron       | ppm | <b>36</b>    | 25 | --- | --- |
| Copper     | ppm | <b>4</b>     | 2  | --- | --- |
| Lead       | ppm | <b>&lt;1</b> | 0  | --- | --- |
| Tin        | ppm | <b>0</b>     | 0  | --- | --- |
| Aluminum   | ppm | <b>&lt;1</b> | 0  | --- | --- |
| Chromium   | ppm | <b>&lt;1</b> | <1 | --- | --- |
| Molybdenum | ppm | <b>0</b>     | <1 | --- | --- |
| Nickel     | ppm | <b>&lt;1</b> | <1 | --- | --- |
| Titanium   | ppm | <b>0</b>     | 0  | --- | --- |
| Silver     | ppm | <b>0</b>     | <1 | --- | --- |
| Manganese  | ppm | <b>&lt;1</b> | <1 | --- | --- |
| Vanadium   | ppm | <b>0</b>     | 0  | --- | --- |

## ADDITIVES

|            |     |             |      |     |     |
|------------|-----|-------------|------|-----|-----|
| Calcium    | ppm | <b>0</b>    | 22   | --- | --- |
| Magnesium  | ppm | <b>0</b>    | 2    | --- | --- |
| Zinc       | ppm | <b>2</b>    | 0    | --- | --- |
| Phosphorus | ppm | <b>1307</b> | 1368 | --- | --- |
| Barium     | ppm | <b>0</b>    | 0    | --- | --- |
| Boron      | ppm | <b>314</b>  | 378  | --- | --- |

**Depot:** VP1103105  
**Unique No:** 9672330  
**Signed:** Angela Borella  
**Report Date:** 27 Sep 2021

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## GRAPHS

