

PETER HANSEN [6762] Machine Id VOLVO PENTA D6-435 A361551

Component Starboard Diesel Engine

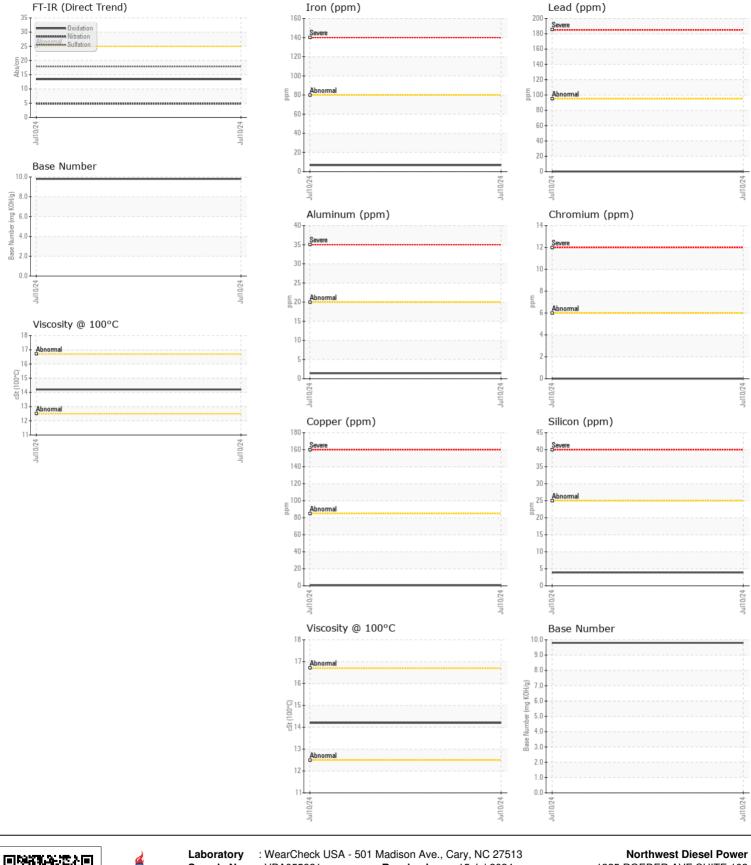
{not provided} (--- GAL)

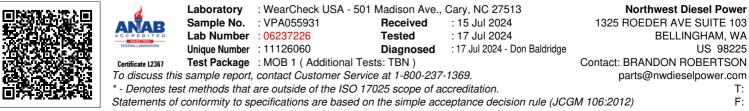
| RECOMMENDATION | Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|--|------------------|----------|-------------|-----------|-------------|----------|----------|
| | Sample Number | | Client Info | | VPA055931 | | |
| | Sample Date | | Client Info | | 10 Jul 2024 | | |
| | Machine Age | hrs | Client Info | | 511 | | |
| | Oil Age | hrs | Client Info | | 0 | | |
| | Filter Age | hrs | Client Info | | 0 | | |
| | Oil Changed | | Client Info | | Not Changd | | |
| | Filter Changed | | Client Info | | Not Changd | | |
| | Sample Status | | | | NORMAL | | |
| | | | | | | | |
| WEAR All component wear rates are normal. | Iron | ppm | ASTM D5185m | >80 | 7 | | |
| | Chromium | ppm | ASTM D5185m | >6 | 0 | | |
| | Nickel | ppm | ASTM D5185m | >2 | <1 | | |
| | Titanium | ppm | ASTM D5185m | >2 | 0 | | |
| | Silver | ppm | ASTM D5185m | >2 | 0 | | |
| | Aluminum | ppm | ASTM D5185m | >20 | 1 | | |
| | Lead | ppm | ASTM D5185m | >95 | 0 | | |
| | Copper | ppm | ASTM D5185m | >85 | <1 | | |
| | Tin | ppm | ASTM D5185m | >9 | <1 | | |
| | Vanadium | ppm | ASTM D5185m | | 0 | | |
| | White Metal | scalar | *Visual | NONE | NONE | | |
| | Yellow Metal | scalar | *Visual | NONE | NONE | | |
| | | | | | | | |
| CONTAMINATION | Silicon | ppm | ASTM D5185m | >25 | 4 | | |
| There is no indication of any contemination in the oil | Potassium | ppm | ASTM D5185m | >20 | <1 | | |
| There is no indication of any contamination in the oil. | Fuel | | WC Method | >4.0 | <1.0 | | |
| | Water | | WC Method | >0.1 | NEG | | |
| | Glycol | | WC Method | | NEG | | |
| | Soot % | % | *ASTM D7844 | | 0.1 | | |
| | Nitration | Abs/cm | *ASTM D7624 | >20 | 4.8 | | |
| | Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 17.9 | | |
| | Silt | scalar | *Visual | NONE | NONE | | |
| | Debris | scalar | *Visual | NONE | NONE | | |
| | Sand/Dirt | scalar | *Visual | NONE | NONE | | |
| | Appearance | scalar | *Visual | NORML | NORML | | |
| | Odor | scalar | *Visual | NORML | NORML | | |
| | Emulsified Water | scalar | *Visual | >0.1 | NEG | | |
| | | | | | | | |
| FLUID CONDITION | Sodium | ppm | ASTM D5185m | | 1 | | |
| The BN result indicates that there is suitable alkalinity remaining in the | Boron | ppm | ASTM D5185m | | 10 | | |
| oil. The condition of the oil is acceptable for the time in service. | Barium | ppm | ASTM D5185m | | 0 | | |
| | Molybdenum | ppm | ASTM D5185m | | 61 | | |
| | Manganese | ppm | ASTM D5185m | | 0 | | |
| | Magnesium | ppm | ASTM D5185m | | 959 | | |
| | Calcium | ppm | ASTM D5185m | | 1070 | | |
| | Phosphorus | ppm | ASTM D5185m | | 1090 | | |
| | Zinc | ppm | ASTM D5185m | | 1289 | | |
| | Sulfur | ppm | ASTM D5185m | | 3891 | | |
| | Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 13.4 | | |
| | Base Number (BN) | mg KOH/g | ASTM D2896 | | 9.8 | | |

Visc @ 100°C cSt

ASTM D445

14.2





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