



VOLVO PENTA

OIL ANALYSIS REPORT

| | |
|-----------------|--------|
| WEAR | NORMAL |
| CONTAMINATION | NORMAL |
| FLUID CONDITION | NORMAL |

Area

HUBLEY [DUANE]

Machine Id

VOLVO PENTA 2061198862

Component

Starboard Diesel Engine

Fluid

{not provided} (24 QTS)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|-------------|----------|----------|
| Sample Number | | Client Info | | VPA061914 | --- | --- |
| Sample Date | | Client Info | | 18 Jun 2024 | --- | --- |
| Machine Age | hrs | Client Info | | 965 | --- | --- |
| Oil Age | hrs | Client Info | | 0 | --- | --- |
| Filter Age | hrs | Client Info | | 0 | --- | --- |
| Oil Changed | | Client Info | | Not Chngd | --- | --- |
| Filter Changed | | Client Info | | Not Chngd | --- | --- |
| Sample Status | | | | NORMAL | --- | --- |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|------|-----|-----|
| Iron | ppm | ASTM D5185m | >80 | 19 | --- | --- |
| Chromium | ppm | ASTM D5185m | >6 | <1 | --- | --- |
| Nickel | ppm | ASTM D5185m | >2 | 2 | --- | --- |
| Titanium | ppm | ASTM D5185m | >2 | <1 | --- | --- |
| Silver | ppm | ASTM D5185m | >2 | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185m | >20 | 2 | --- | --- |
| Lead | ppm | ASTM D5185m | >95 | <1 | --- | --- |
| Copper | ppm | ASTM D5185m | >85 | 6 | --- | --- |
| Tin | ppm | ASTM D5185m | >9 | 0 | --- | --- |
| Vanadium | ppm | ASTM D5185m | | <1 | --- | --- |
| White Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- | --- |

CONTAMINATION

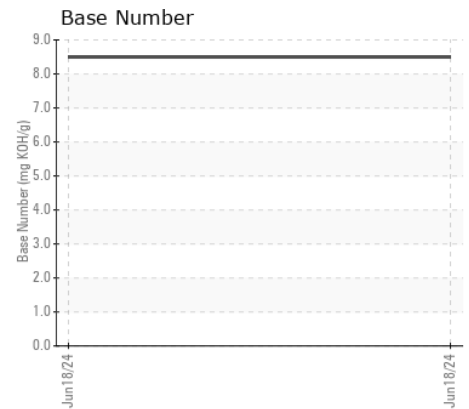
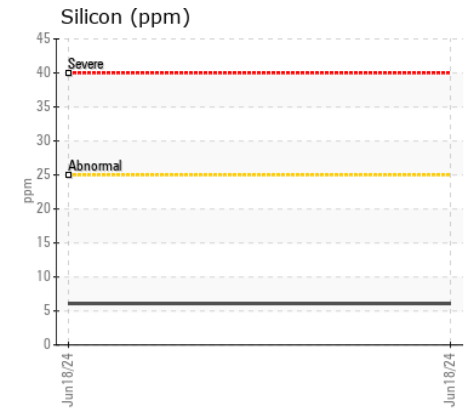
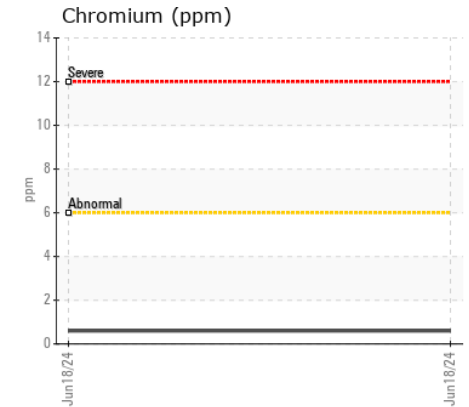
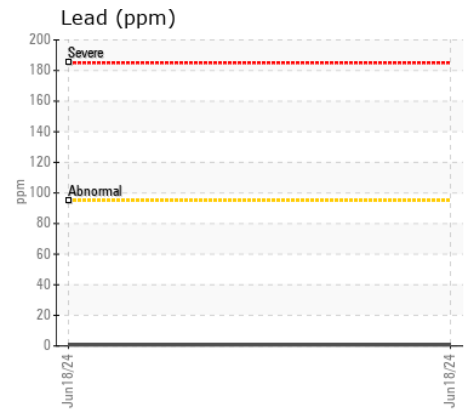
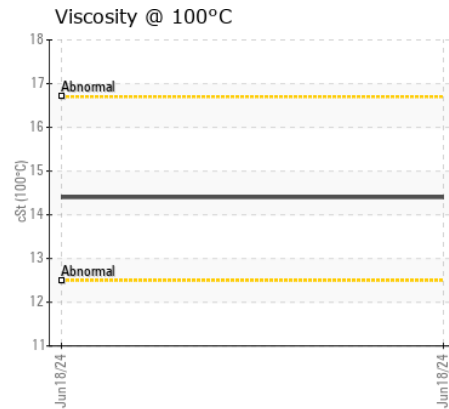
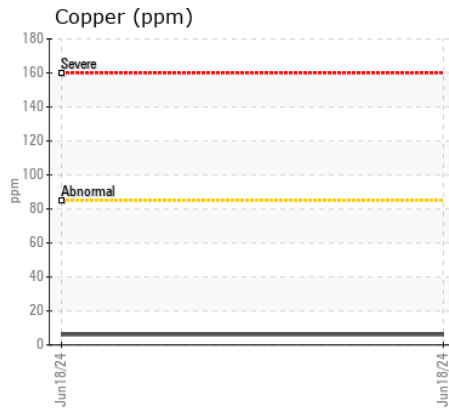
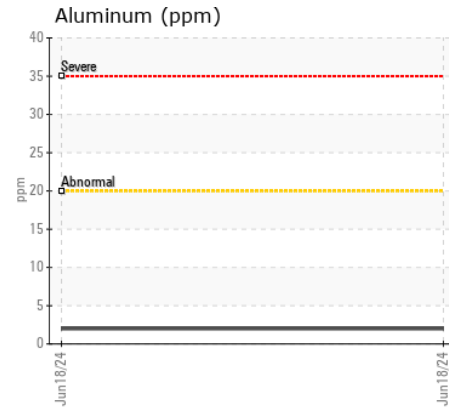
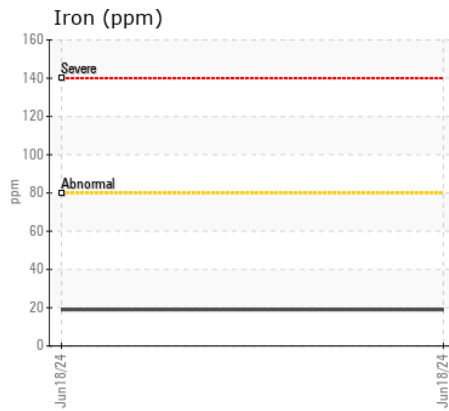
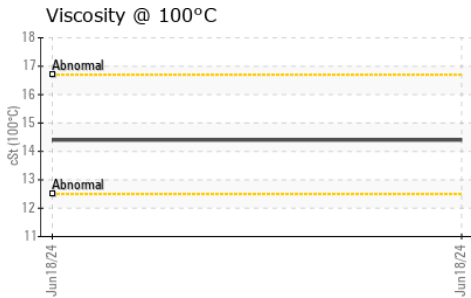
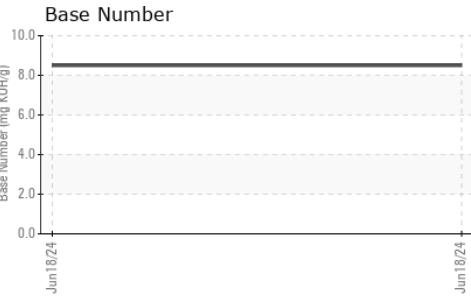
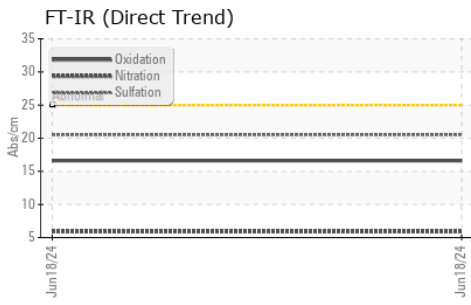
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|-------|-----|-----|
| Silicon | ppm | ASTM D5185m | >25 | 6 | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | 9 | --- | --- |
| Fuel | | WC Method | >4.0 | <1.0 | --- | --- |
| Water | | WC Method | >0.1 | NEG | --- | --- |
| Glycol | | WC Method | | NEG | --- | --- |
| Soot % | % | *ASTM D7844 | | 0.2 | --- | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 5.9 | --- | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 20.5 | --- | --- |
| 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

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.

| | | | | | | |
|------------------|----------|-------------|-----|------|-----|-----|
| Sodium | ppm | ASTM D5185m | | 4 | --- | --- |
| Boron | ppm | ASTM D5185m | | 223 | --- | --- |
| Barium | ppm | ASTM D5185m | | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185m | | 3 | --- | --- |
| Manganese | ppm | ASTM D5185m | | 0 | --- | --- |
| Magnesium | ppm | ASTM D5185m | | 15 | --- | --- |
| Calcium | ppm | ASTM D5185m | | 2472 | --- | --- |
| Phosphorus | ppm | ASTM D5185m | | 1143 | --- | --- |
| Zinc | ppm | ASTM D5185m | | 1387 | --- | --- |
| Sulfur | ppm | ASTM D5185m | | 4170 | --- | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 16.6 | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 8.5 | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | | 14.4 | --- | --- |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VPA061914 **Received** : 21 Jun 2024
Lab Number : 06216520 **Tested** : 24 Jun 2024
Unique Number : 11089384 **Diagnosed** : 24 Jun 2024 - Sean Felton
Test Package : MOB 1 (Additional Tests: TBN)

Mobile Marine Services Inc
 01032 Advance Rd South
 EAST JORDAN, MI
 US 49727
 Contact: Duane Kujat
 mobilemarine@twin-valley.net
 T: Phone
 F:

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)