

JULIEN BOURGEIOUS

NO UNIT WA0021676 Starboard Diesel Engine

{not provided} (--- GAL)

| REC | /IEIN | DAI | IUN | |
|-----|-------|-----|-----|--|
| | | | | |

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

Visc @ 100°C cSt

Viscosity Index (VI) Scale ASTM D2270*

ASTM D7279(m)

WEAR

All component wear rates are normal.

CONTAMINATION

There is no indication of any contamination in the oil.

FLUID CONDITION

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

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|------------------|----------|---------------|-----------|-------------|----------|----------|
| Sample Number | | Client Info | | WA0021676 | | |
| Sample Date | | Client Info | | 25 Jun 2024 | | |
| Machine Age | hrs | Client Info | | 0 | | |
| Oil Age | hrs | Client Info | | 0 | | |
| Filter Age | hrs | Client Info | | 0 | | |
| Oil Changed | | Client Info | | N/A | | |
| Filter Changed | | Client Info | | N/A | | |
| Sample Status | | | | NORMAL | | |
| | | | | | | |
| Iron | ppm | ASTM D5185(m) | >80 | 37 | | |
| Chromium | ppm | ASTM D5185(m) | >6 | <1 | | |
| Nickel | ppm | ASTM D5185(m) | >2 | <1 | | |
| Titanium | ppm | ASTM D5185(m) | >2 | 0 | | |
| Silver | ppm | ASTM D5185(m) | >2 | <1 | | |
| Aluminum | ppm | ASTM D5185(m) | >20 | 18 | | |
| Lead | ppm | ASTM D5185(m) | >95 | 0 | | |
| Copper | ppm | ASTM D5185(m) | >85 | <1 | | |
| Tin | ppm | ASTM D5185(m) | >9 | 0 | | |
| Vanadium | ppm | ASTM D5185(m) | | 0 | | |
| White Metal | scalar | Visual* | NONE | NONE | | |
| Yellow Metal | scalar | Visual* | NONE | NONE | | |
| | | | | | | |
| Silicon | ppm | ASTM D5185(m) | >25 | 4 | | |
| Potassium | ppm | ASTM D5185(m) | >20 | 2 | | |
| Fuel | | WC Method | >4.0 | <1.0 | | |
| Water | | WC Method | >0.1 | NEG | | |
| Glycol | | WC Method | | NEG | | |
| Soot % | % | ASTM D7844* | | 0 | | |
| Nitration | Abs/cm | ASTM D7624* | >20 | 4.3 | | |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 18.4 | | |
| 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 | | |
| Caaliuma | | | | 00 | | |
| Sodium | ppm | ASTM D5185(m) | | 20 2 | | |
| Boron | ppm | ASTM D5185(m) | | - | | |
| Barium | ppm | ASTM D5185(m) | | 0 | | |
| Molybdenum | ppm | ASTM D5185(m) | | 55 | | |
| Manganese | ppm | ASTM D5185(m) | | <1 | | |
| Magnesium | ppm | ASTM D5185(m) | | 924 | | |
| Calcium | ppm | ASTM D5185(m) | | 988 | | |
| Phosphorus | ppm | ASTM D5185(m) | | 965 | | |
| Zinc | ppm | ASTM D5185(m) | | 1143 | | |
| Sulfur | ppm | ASTM D5185(m) | | 2724 | | |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 13.4 | | |
| Visc @ 40°C | cSt | ASTM D7279(m) | | 102 | | |

13.8

136



