



PROBLEM SUMMARY

Area
OCEAN NAVIGATOR
 Machine Id
[OCEAN NAVIGATOR] OCEAN NAVIGATOR - EDG
 Component
Diesel Engine
 Fluid
FUCHS 15W40 (60 LTR)

Sample Rating Trend

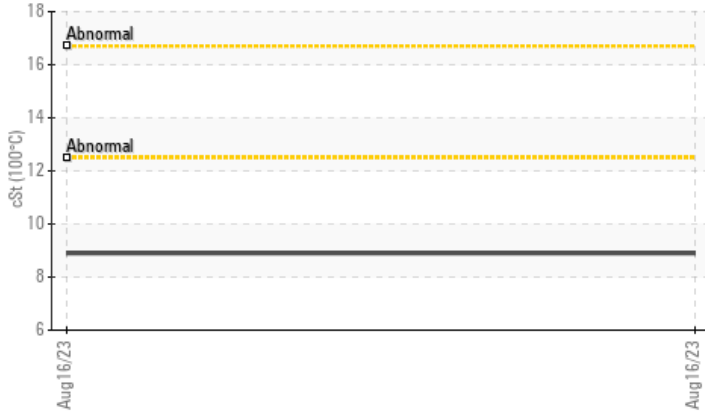


FUEL

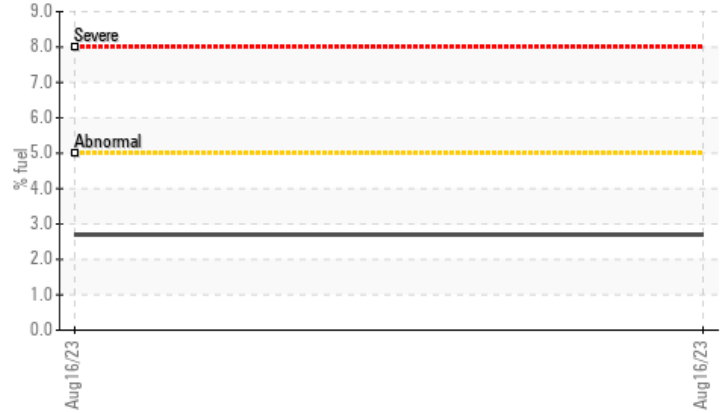


COMPONENT CONDITION SUMMARY

▲ Viscosity @ 100°C



▲ Fuel Dilution



RECOMMENDATION

Resample at the next service interval to monitor.
 Please specify the component make and model with your next sample.

PROBLEMATIC TEST RESULTS

| Sample Status | | | | ABNORMAL | --- | --- |
|---------------|-----|------------|----|----------|-----|-----|
| Fuel | % | ASTM D3524 | >5 | ▲ 2.7 | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | | ▲ 8.9 | --- | --- |

Customer Id: VICNEWIN
 Sample No.: WC0824509
 Lab Number: 05926673
 Test Package: MAR 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

To change component or sample information:
 Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

| Action | Status | Date | Done By | Description |
|----------------------|--------|------|---------|--|
| Information Required | --- | --- | ? | Please specify the component make and model with your next sample. |

HISTORICAL DIAGNOSIS



OIL ANALYSIS REPORT

Sample Rating Trend

FUEL

Area
OCEAN NAVIGATOR
 Machine Id
[OCEAN NAVIGATOR] OCEAN NAVIGATOR - EDG
 Component
Diesel Engine
 Fluid
FUCHS 15W40 (60 LTR)



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

| method | limit/base | current | history1 | history2 |
|---------------|-----------------|--------------------|----------|----------|
| Sample Number | Client Info | WC0824509 | --- | --- |
| Sample Date | Client Info | 16 Aug 2023 | --- | --- |
| Machine Age | hrs Client Info | 0 | --- | --- |
| Oil Age | hrs Client Info | 0 | --- | --- |
| Oil Changed | Client Info | N/A | --- | --- |
| Sample Status | | ABNORMAL | --- | --- |

CONTAMINATION

| method | limit/base | current | history1 | history2 |
|--------|------------|------------|----------|----------|
| Glycol | WC Method | NEG | --- | --- |

WEAR METALS

| method | limit/base | current | history1 | history2 |
|----------|----------------------|--------------|----------|----------|
| Iron | ppm ASTM D5185m >100 | 2 | --- | --- |
| Chromium | ppm ASTM D5185m >20 | <1 | --- | --- |
| Nickel | ppm ASTM D5185m >4 | <1 | --- | --- |
| Titanium | ppm ASTM D5185m | 0 | --- | --- |
| Silver | ppm ASTM D5185m >3 | 0 | --- | --- |
| Aluminum | ppm ASTM D5185m >20 | 1 | --- | --- |
| Lead | ppm ASTM D5185m >40 | <1 | --- | --- |
| Copper | ppm ASTM D5185m >330 | 36 | --- | --- |
| Tin | ppm ASTM D5185m >15 | 0 | --- | --- |
| Vanadium | ppm ASTM D5185m | 0 | --- | --- |
| Cadmium | ppm ASTM D5185m | 2 | --- | --- |

ADDITIVES

| method | limit/base | current | history1 | history2 |
|------------|-----------------|--------------|----------|----------|
| Boron | ppm ASTM D5185m | 53 | --- | --- |
| Barium | ppm ASTM D5185m | 6 | --- | --- |
| Molybdenum | ppm ASTM D5185m | 4 | --- | --- |
| Manganese | ppm ASTM D5185m | <1 | --- | --- |
| Magnesium | ppm ASTM D5185m | 197 | --- | --- |
| Calcium | ppm ASTM D5185m | 1323 | --- | --- |
| Phosphorus | ppm ASTM D5185m | 815 | --- | --- |
| Zinc | ppm ASTM D5185m | 989 | --- | --- |
| Sulfur | ppm ASTM D5185m | 7149 | --- | --- |

CONTAMINANTS

| method | limit/base | current | history1 | history2 |
|-----------|---------------------|--------------|----------|----------|
| Silicon | ppm ASTM D5185m >25 | 2 | --- | --- |
| Sodium | ppm ASTM D5185m | 2 | --- | --- |
| Potassium | ppm ASTM D5185m >20 | 2 | --- | --- |
| Fuel | % ASTM D3524 >5 | ▲ 2.7 | --- | --- |

INFRA-RED

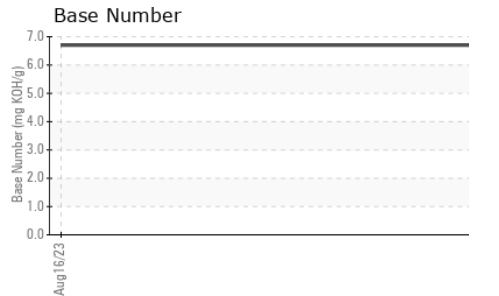
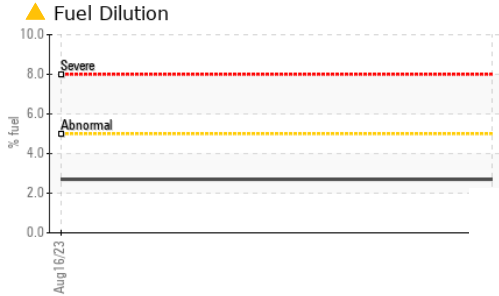
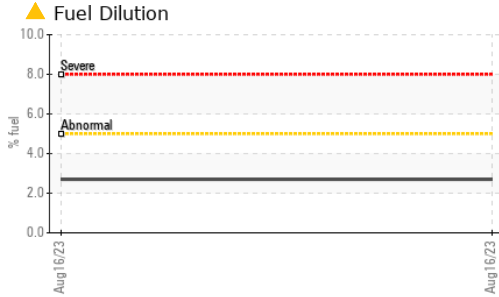
| method | limit/base | current | history1 | history2 |
|-----------|--------------------------|-------------|----------|----------|
| Soot % | % *ASTM D7844 >3 | 0 | --- | --- |
| Nitration | Abs/cm *ASTM D7624 >20 | 4.0 | --- | --- |
| Sulfation | Abs/.1mm *ASTM D7415 >30 | 20.2 | --- | --- |

FLUID DEGRADATION

| method | limit/base | current | history1 | history2 |
|------------------|--------------------------|-------------|----------|----------|
| Oxidation | Abs/.1mm *ASTM D7414 >25 | 14.1 | --- | --- |
| Base Number (BN) | mg KOH/g ASTM D2896 | 6.7 | --- | --- |



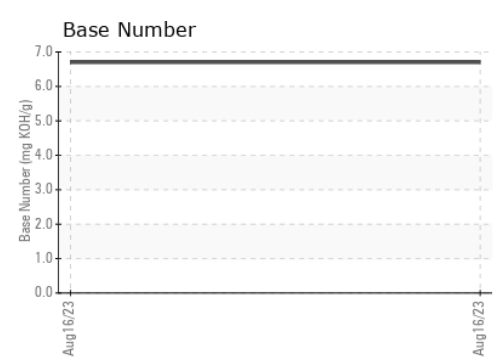
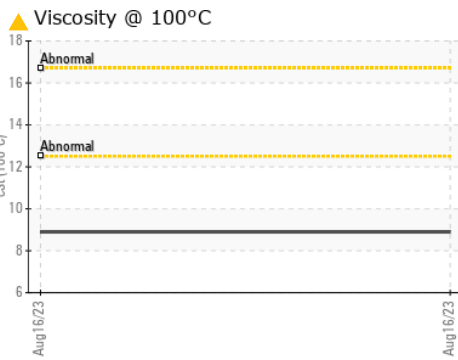
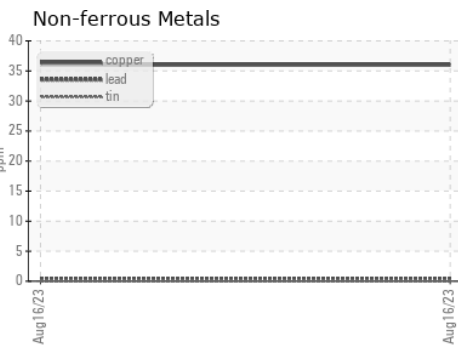
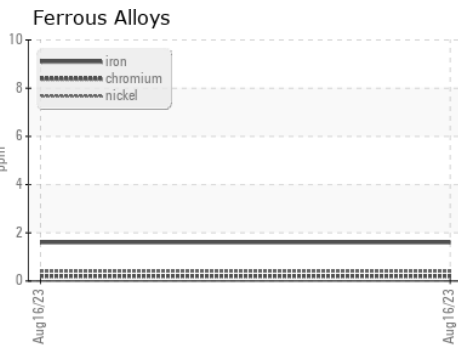
OIL ANALYSIS REPORT



| VISUAL | method | limit/base | current | history1 | history2 | |
|------------------|--------|------------|---------|----------|----------|-----|
| White Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Precipitate | scalar | *Visual | NONE | NONE | --- | --- |
| 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 | >0.2 | NEG | --- | --- |
| Free Water | scalar | *Visual | | NEG | --- | --- |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 100°C | cSt | ASTM D445 | ▲ 8.9 | --- | --- |

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0824509 **Received** : 16 Aug 2023
Lab Number : 05926673 **Diagnosed** : 18 Aug 2023
Unique Number : 10606620 **Diagnostician** : Wes Davis
Test Package : MAR 2 (Additional Tests: FuelDilution, PercentFuel)

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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)