



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

Machine Id
VOGELE 2000-3i 11740492
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|----------|----------|
| Sample Number | | Client Info | | JR0224510 | --- | --- |
| Sample Date | | Client Info | | 12 Jul 2024 | --- | --- |
| Machine Age | hrs | Client Info | | 221 | --- | --- |
| Oil Age | hrs | Client Info | | 221 | --- | --- |
| Filter Age | hrs | Client Info | | 221 | --- | --- |
| Oil Changed | | Client Info | | Changed | --- | --- |
| Filter Changed | | Client Info | | Changed | --- | --- |
| Sample Status | | | | ATTENTION | --- | --- |

WEAR

Metal levels are typical for a new component breaking in.

| | | | | | | |
|--------------|--------|-------------|------|--------------|-----|-----|
| Iron | ppm | ASTM D5185m | >100 | 23 | --- | --- |
| Chromium | ppm | ASTM D5185m | >20 | <1 | --- | --- |
| Nickel | ppm | ASTM D5185m | >4 | 0 | --- | --- |
| Titanium | ppm | ASTM D5185m | | 0 | --- | --- |
| Silver | ppm | ASTM D5185m | >3 | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185m | >20 | 4 | --- | --- |
| Lead | ppm | ASTM D5185m | >40 | 0 | --- | --- |
| Copper | ppm | ASTM D5185m | >330 | 10 | --- | --- |
| Tin | ppm | ASTM D5185m | >15 | 0 | --- | --- |
| Vanadium | ppm | ASTM D5185m | | 0 | --- | --- |
| White Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- | --- |

CONTAMINATION

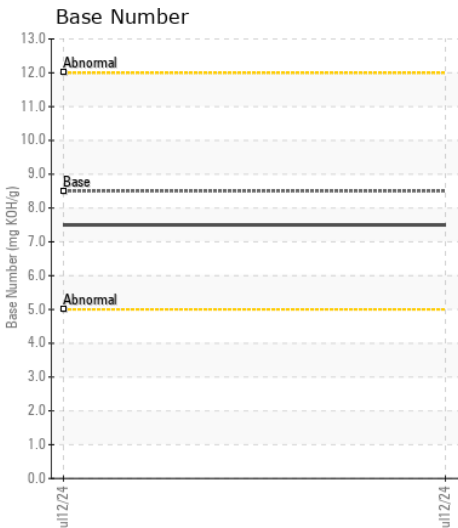
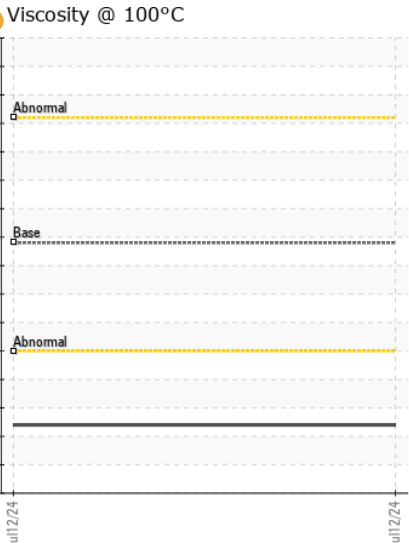
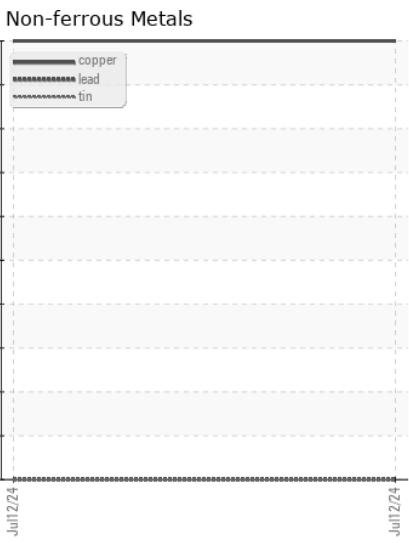
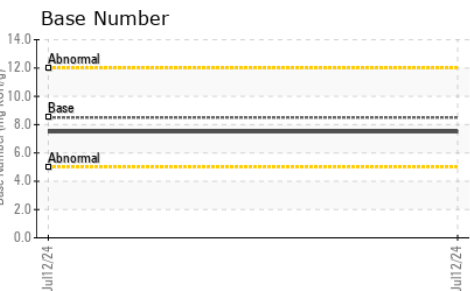
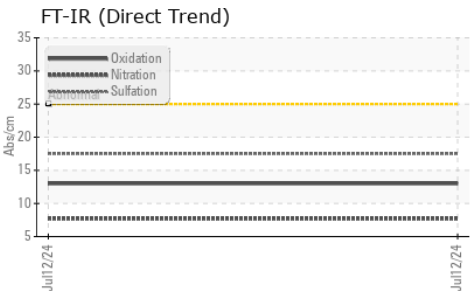
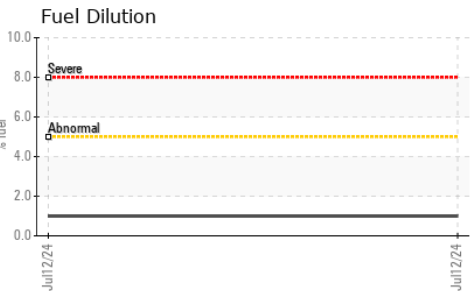
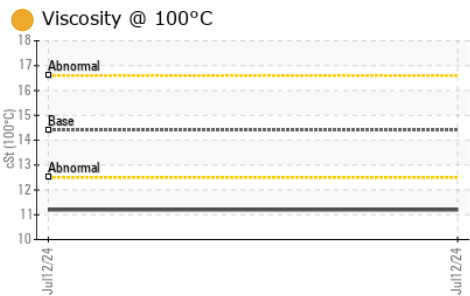
Fuel content negligible. There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|--------------|-----|-----|
| Silicon | ppm | ASTM D5185m | >25 | 21 | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | 3 | --- | --- |
| Fuel | % | ASTM D3524 | >5 | 1.0 | --- | --- |
| Water | | WC Method | >0.2 | NEG | --- | --- |
| Glycol | | WC Method | | NEG | --- | --- |
| Soot % | % | *ASTM D7844 | >3 | 0.1 | --- | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 7.7 | --- | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 17.5 | --- | --- |
| 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 | >0.2 | NEG | --- | --- |

FLUID CONDITION

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

| | | | | | | |
|------------------|----------|-------------|------|-------------|-----|-----|
| Sodium | ppm | ASTM D5185m | >158 | 5 | --- | --- |
| Boron | ppm | ASTM D5185m | 250 | 83 | --- | --- |
| Barium | ppm | ASTM D5185m | 10 | 2 | --- | --- |
| Molybdenum | ppm | ASTM D5185m | 100 | 80 | --- | --- |
| Manganese | ppm | ASTM D5185m | | 3 | --- | --- |
| Magnesium | ppm | ASTM D5185m | 450 | 80 | --- | --- |
| Calcium | ppm | ASTM D5185m | 3000 | 2225 | --- | --- |
| Phosphorus | ppm | ASTM D5185m | 1150 | 988 | --- | --- |
| Zinc | ppm | ASTM D5185m | 1350 | 1144 | --- | --- |
| Sulfur | ppm | ASTM D5185m | 4250 | 4326 | --- | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 13.0 | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 8.5 | 7.5 | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | 14.4 | 11.2 | --- | --- |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0224510 **Received** : 15 Jul 2024
Lab Number : 06235679 **Tested** : 17 Jul 2024
Unique Number : 11124513 **Diagnosed** : 17 Jul 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

JRE - ASHLAND
 11047 LEADBETTER RD
 ASHLAND, VA
 US 23005
 Contact: DAVID ZIEG
 dzieg@jamesriverequipment.com
 T: (804)798-6001
 F: (804)798-0292

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)