



Area

[VULCAN]

Machine Id

SENNEBOGEN 875 875.5.1066

Component

Diesel Engine

Fluid

JOHN DEERE ENGINE OIL PLUS 50 II 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 | | JR0069123 | --- | --- |
| Sample Date | | Client Info | | 28 Oct 2020 | --- | --- |
| Machine Age | hrs | Client Info | | 321 | --- | --- |
| Oil Age | hrs | Client Info | | 321 | --- | --- |
| Filter Age | hrs | Client Info | | 321 | --- | --- |
| Oil Changed | | Client Info | | Changed | --- | --- |
| Filter Changed | | Client Info | | Changed | --- | --- |
| Sample Status | | | | ABNORMAL | --- | --- |

WEAR

Metal levels are typical for a new component breaking in.

| | | | | | | |
|--------------|--------|-------------|------|--------------|-----|-----|
| Iron | ppm | ASTM D5185m | >100 | 21 | --- | --- |
| Chromium | ppm | ASTM D5185m | >20 | <1 | --- | --- |
| Nickel | ppm | ASTM D5185m | >4 | 1 | --- | --- |
| Titanium | ppm | ASTM D5185m | | <1 | --- | --- |
| Silver | ppm | ASTM D5185m | >3 | <1 | --- | --- |
| Aluminum | ppm | ASTM D5185m | >20 | 19 | --- | --- |
| Lead | ppm | ASTM D5185m | >40 | 2 | --- | --- |
| Copper | ppm | ASTM D5185m | >330 | 14 | --- | --- |
| Tin | ppm | ASTM D5185m | >15 | 0 | --- | --- |
| Vanadium | ppm | ASTM D5185m | | 0 | --- | --- |
| White Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- | --- |

CONTAMINATION

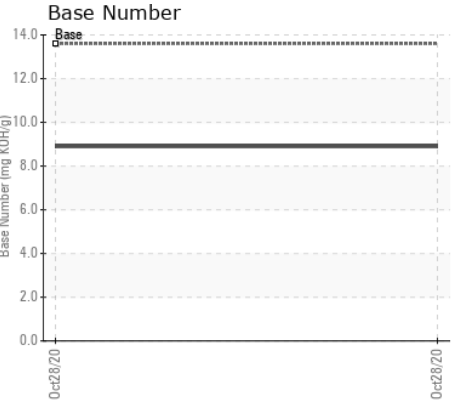
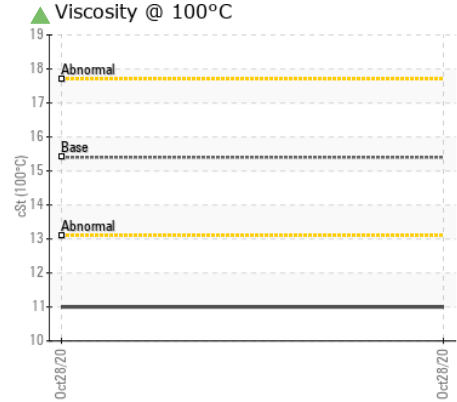
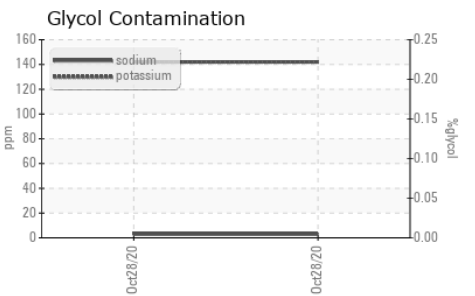
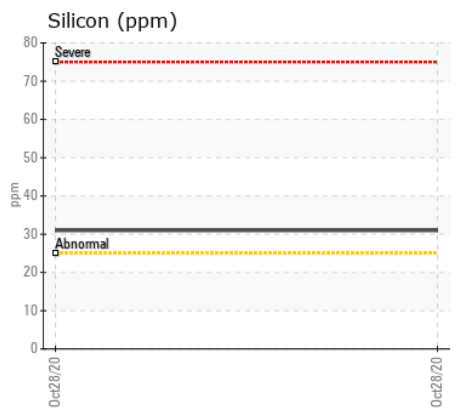
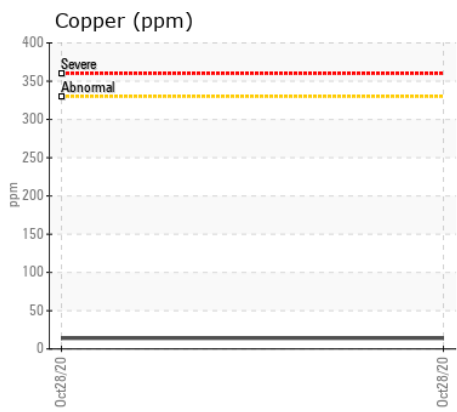
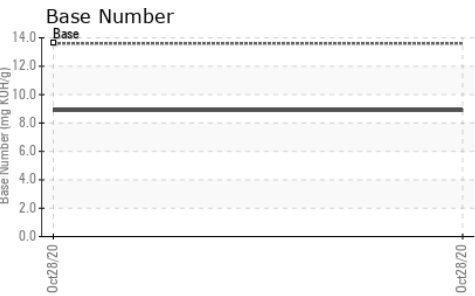
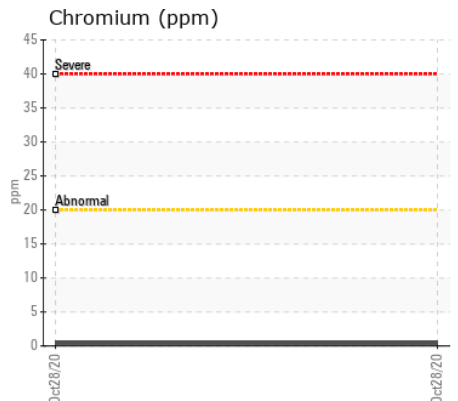
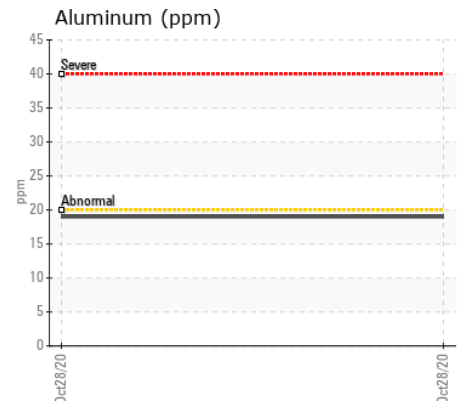
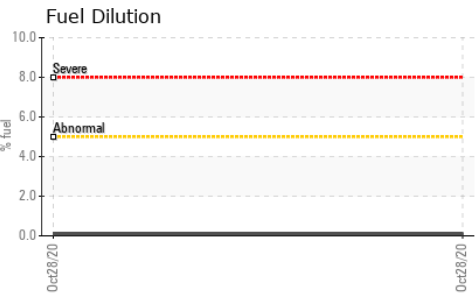
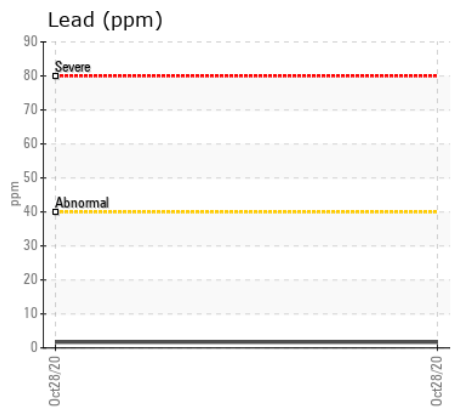
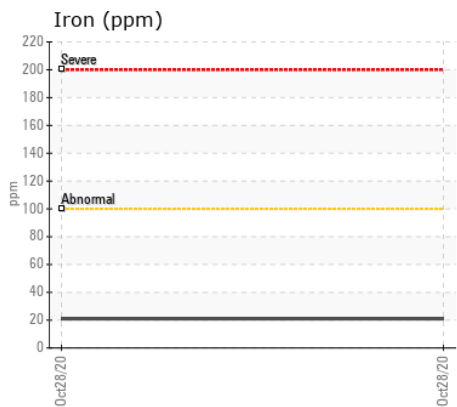
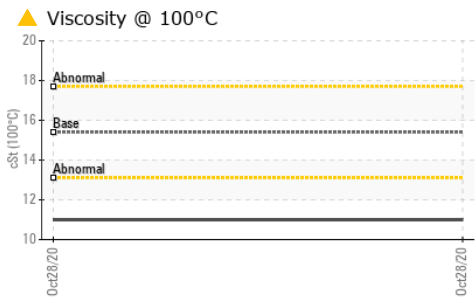
Sodium and/or potassium levels are high. Test for glycol is negative. Tests indicate that there is no fuel present in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|--------------|-----|-----|
| Silicon | ppm | ASTM D5185m | >25 | 31 | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | ▲ 142 | --- | --- |
| Fuel | % | ASTM D3524 | >5 | 0.1 | --- | --- |
| Water | | WC Method | >0.2 | NEG | --- | --- |
| Glycol | % | *ASTM D2982 | | NEG | --- | --- |
| Soot % | % | *ASTM D7844 | >3 | 0.1 | --- | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 6.6 | --- | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.7 | --- | --- |
| 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 | | 3 | --- | --- |
| Boron | ppm | ASTM D5185m | | 87 | --- | --- |
| Barium | ppm | ASTM D5185m | | 2 | --- | --- |
| Molybdenum | ppm | ASTM D5185m | | 54 | --- | --- |
| Manganese | ppm | ASTM D5185m | | 4 | --- | --- |
| Magnesium | ppm | ASTM D5185m | | 359 | --- | --- |
| Calcium | ppm | ASTM D5185m | | 1872 | --- | --- |
| Phosphorus | ppm | ASTM D5185m | | 972 | --- | --- |
| Zinc | ppm | ASTM D5185m | | 1143 | --- | --- |
| Sulfur | ppm | ASTM D5185m | | 2879 | --- | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 14.8 | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 13.6 | 8.9 | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | ▲ 11.0 | --- | --- |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0069123
Lab Number : 05108303
Unique Number : 9243562
Test Package : MOBCE (Additional Tests: FuelDilution, Glycol, PercentFuel, TBN)

Received : 04 Nov 2020
Tested : 12 Nov 2020
Diagnosed : 12 Nov 2020 - Jonathan Hester

JRE - MANASSAS PARK
 9107 OWENS DRIVE
 MANASSAS PARK, VA
 US 20111

Contact: DON VEST
 dvest@jamesriverequipment.com
 T: (703)631-8500
 F: (703)631-4715

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)