



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

Area

[VA EXCAVATION]

Machine Id

JOHN DEERE 85G 1FF085GXJMJ022275 (S/N 1FF085GXMJM022275)

Component

Diesel Engine

Fluid

JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)**RECOMMENDATION**

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|----------|
| Sample Number | | Client Info | | JR0211866 | JR0107423 | --- |
| Sample Date | | Client Info | | 05 Jul 2024 | 09 Dec 2021 | --- |
| Machine Age | hrs | Client Info | | 1178 | 486 | --- |
| Oil Age | hrs | Client Info | | 500 | 0 | --- |
| Filter Age | hrs | Client Info | | 500 | 0 | --- |
| Oil Changed | | Client Info | | Changed | Changed | --- |
| Filter Changed | | Client Info | | Changed | Changed | --- |
| Sample Status | | | | NORMAL | ABNORMAL | --- |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|-----|
| Iron | ppm | ASTM D5185m | >51 | 23 | 41 | --- |
| Chromium | ppm | ASTM D5185m | >11 | 1 | 1 | --- |
| Nickel | ppm | ASTM D5185m | >5 | 1 | 2 | --- |
| Titanium | ppm | ASTM D5185m | | 1 | <1 | --- |
| Silver | ppm | ASTM D5185m | >3 | <1 | 0 | --- |
| Aluminum | ppm | ASTM D5185m | >31 | 8 | 4 | --- |
| Lead | ppm | ASTM D5185m | >26 | <1 | 1 | --- |
| Copper | ppm | ASTM D5185m | >26 | 3 | 6 | --- |
| Tin | ppm | ASTM D5185m | >4 | <1 | 1 | --- |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | --- |
| White Metal | scalar | *Visual | NONE | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | --- |

CONTAMINATION

There is no indication of any contamination in the oil.

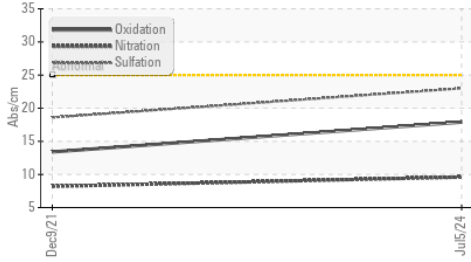
| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-----|
| Silicon | ppm | ASTM D5185m | >22 | 21 | 39 | --- |
| Potassium | ppm | ASTM D5185m | >20 | 24 | ▲ 193 | --- |
| Fuel | | WC Method | >2.1 | <1.0 | 0.9 | --- |
| Water | | WC Method | >0.21 | NEG | NEG | --- |
| Glycol | | WC Method | | NEG | NEG | --- |
| Soot % | % | *ASTM D7844 | >3 | 0.5 | 0.5 | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 9.6 | 8.2 | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 23.0 | 18.6 | --- |
| Silt | scalar | *Visual | NONE | NONE | NONE | --- |
| Debris | scalar | *Visual | NONE | NONE | NONE | --- |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | --- |
| Appearance | scalar | *Visual | NORML | NORML | NORML | --- |
| Odor | scalar | *Visual | NORML | NORML | NORML | --- |
| Emulsified Water | scalar | *Visual | >0.21 | NEG | NEG | --- |

FLUID CONDITION

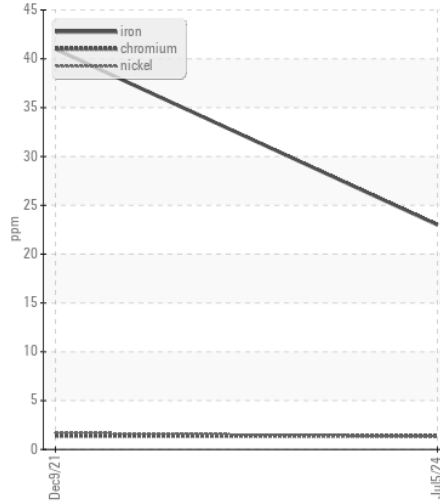
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|-------------|------|-------------|--------|-----|
| Sodium | ppm | ASTM D5185m | >31 | 2 | 9 | --- |
| Boron | ppm | ASTM D5185m | | 188 | 175 | --- |
| Barium | ppm | ASTM D5185m | | 0 | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | | 256 | 173 | --- |
| Manganese | ppm | ASTM D5185m | | 1 | 1 | --- |
| Magnesium | ppm | ASTM D5185m | | 848 | 32 | --- |
| Calcium | ppm | ASTM D5185m | | 1551 | 2536 | --- |
| Phosphorus | ppm | ASTM D5185m | | 956 | 639 | --- |
| Zinc | ppm | ASTM D5185m | | 1202 | 830 | --- |
| Sulfur | ppm | ASTM D5185m | | 3242 | 2221 | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 17.9 | 13.4 | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 13.6 | 8.1 | 7.3 | --- |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 14.0 | ● 10.7 | --- |

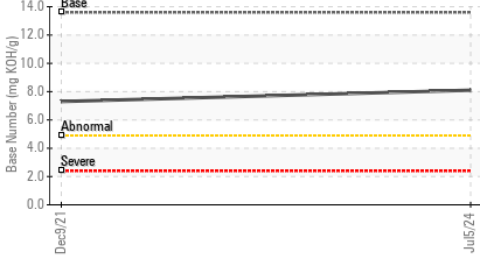
FT-IR (Direct Trend)



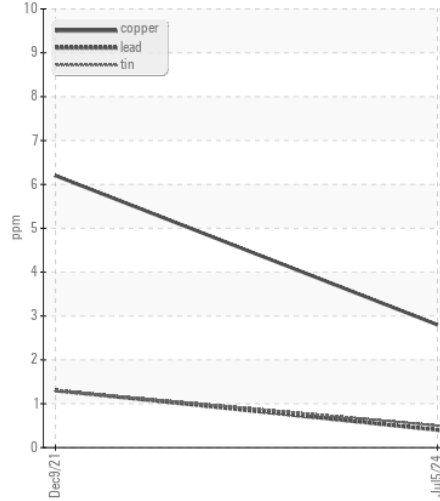
Ferrous Alloys



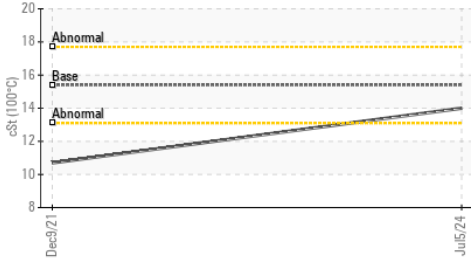
Base Number



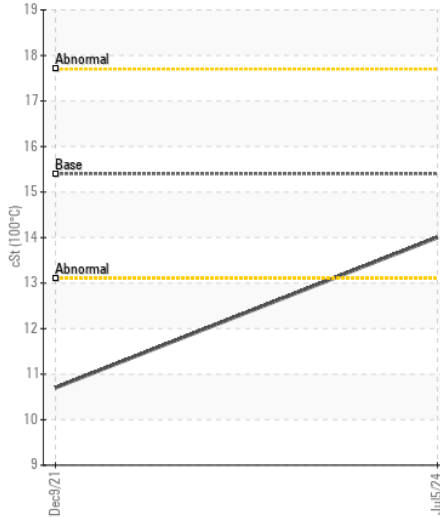
Non-ferrous Metals



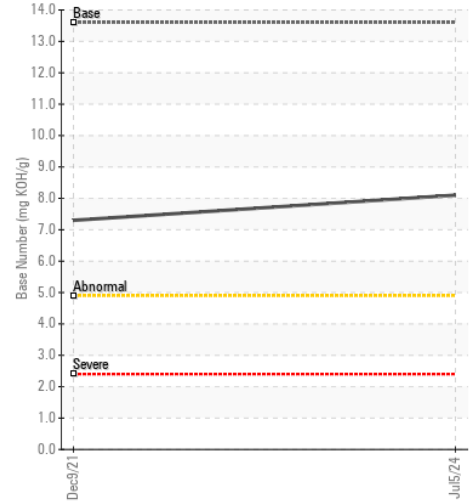
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : JR0211866

Lab Number : 06229946

Unique Number : 11113439

Test Package : CONST (Additional Tests: TBN)

Received : 08 Jul 2024

Tested : 09 Jul 2024

Diagnosed : 09 Jul 2024 - Wes Davis

JRE - ASHLAND

11047 LEADBETTER RD

ASHLAND, VA

US 23005

Contact: DAVID ZIEG

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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)