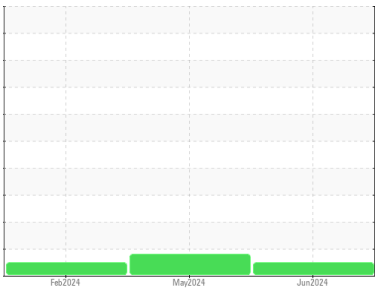
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Area
**Doyle**
Machine Id
**JOHN DEERE John Deere feed generator (S/N PE6068N015799)**
Component
**Diesel Engine**
Fluid
**MOBIL DELVAC 1 5W40 (30 LTR)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor.

**Wear**
All component wear rates are normal.

**Contamination**
There is no indication of any contamination in the oil.

**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.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **WC0894271** | WC0894262 | WC0894284 |
| Sample Date | | Client Info | | **25 Jun 2024** | 15 May 2024 | 07 Feb 2024 |
| Machine Age | hrs | Client Info | | **1310** | 865 | 85 |
| Oil Age | hrs | Client Info | | **445** | 780 | 85 |
| Oil Changed | | Client Info | | **Not Changd** | Changed | Changed |
| Sample Status | | | | **NORMAL** | ABNORMAL | NORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Fuel | | WC Method | >2.1 | **<1.0** | <1.0 | 0.7 |
| Water | | WC Method | >0.21 | **NEG** | NEG | NEG |
| Glycol | | WC Method | | **NEG** | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185(m) | >51 | **13** | 19 | 8 |
| Chromium | ppm | ASTM D5185(m) | >11 | **<1** | <1 | 0 |
| Nickel | ppm | ASTM D5185(m) | >5 | **<1** | <1 | <1 |
| Titanium | ppm | ASTM D5185(m) | | **0** | <1 | 0 |
| Silver | ppm | ASTM D5185(m) | >3 | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >31 | **<1** | <1 | 5 |
| Lead | ppm | ASTM D5185(m) | >26 | **<1** | 2 | 1 |
| Copper | ppm | ASTM D5185(m) | >26 | **30** | ▲ 118 | 4 |
| Tin | ppm | ASTM D5185(m) | >4 | **0** | 0 | 0 |
| Antimony | ppm | ASTM D5185(m) | | **0** | 0 | 0 |
| Vanadium | ppm | ASTM D5185(m) | | **0** | 0 | 0 |
| Beryllium | ppm | ASTM D5185(m) | | **0** | 0 | 0 |
| Cadmium | ppm | ASTM D5185(m) | | **0** | 0 | 0 |

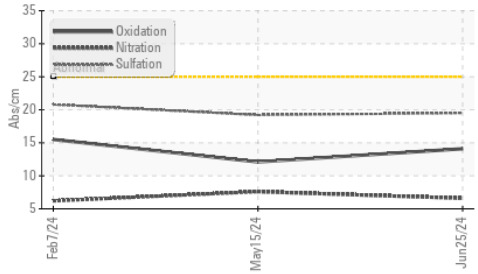
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185(m) | 291 | **3** | 23 | 255 |
| Barium | ppm | ASTM D5185(m) | 0.0 | **<1** | <1 | <1 |
| Molybdenum | ppm | ASTM D5185(m) | 8.0 | **57** | 44 | 254 |
| Manganese | ppm | ASTM D5185(m) | | **<1** | <1 | <1 |
| Magnesium | ppm | ASTM D5185(m) | 624 | **854** | 304 | 786 |
| Calcium | ppm | ASTM D5185(m) | 2158 | **1213** | 1988 | 1426 |
| Phosphorus | ppm | ASTM D5185(m) | 1132 | **1014** | 916 | 908 |
| Zinc | ppm | ASTM D5185(m) | 1300 | **1181** | 1071 | 985 |
| Sulfur | ppm | ASTM D5185(m) | 3616 | **2637** | 2838 | 2773 |
| Lithium | ppm | ASTM D5185(m) | | **<1** | <1 | <1 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | >22 | **5** | 15 | 24 |
| Sodium | ppm | ASTM D5185(m) | >31 | **2** | 2 | 2 |
| Potassium | ppm | ASTM D5185(m) | >20 | **<1** | <1 | 1 |

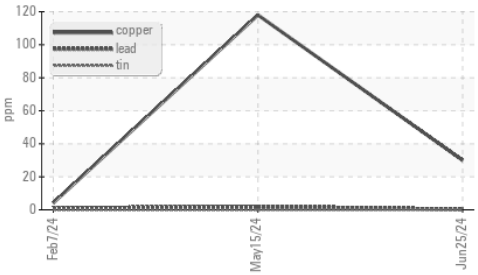
| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | ASTM D7844* | >3 | **0.4** | 0.5 | 0 |
| Nitration | Abs/cm | ASTM D7624* | >20 | **6.6** | 7.6 | 6.2 |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | **19.5** | 19.2 | 20.8 |

# OIL ANALYSIS REPORT

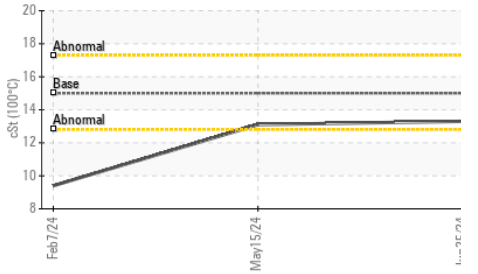
FT-IR (Direct Trend)



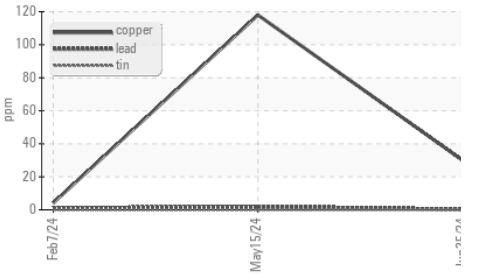

Non-ferrous Metals




Viscosity @ 100°C




Non-ferrous Metals



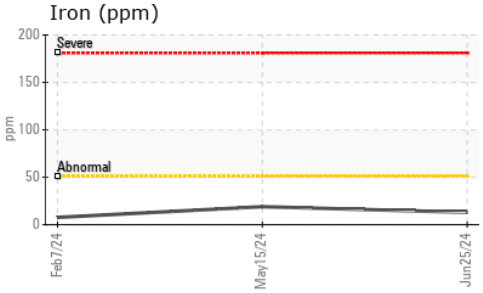

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | **14.1** | 12.1 | 15.5 |
| Base Number (BN) | mg KOH/g | ASTM D2896* | 11.0 | **10.62** | 8.23 | 10.65 |

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Emulsified Water | scalar | Visual* | >0.21 | **NEG** | NEG | NEG |
| Free Water | scalar | Visual* | | **NEG** | NEG | NEG |

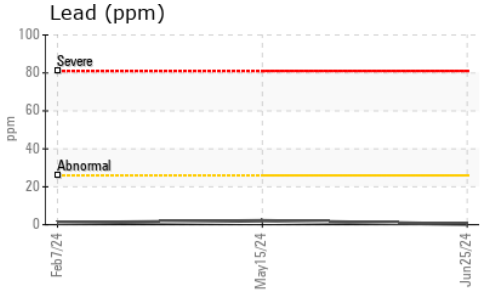
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 100°C | cSt | ASTM D7279(m) | 15.0 | **13.3** | 13.1 | 9.4 |

GRAPHS

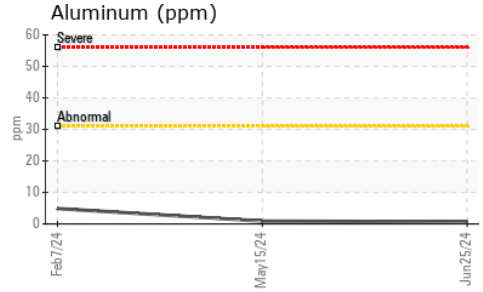
Iron (ppm)



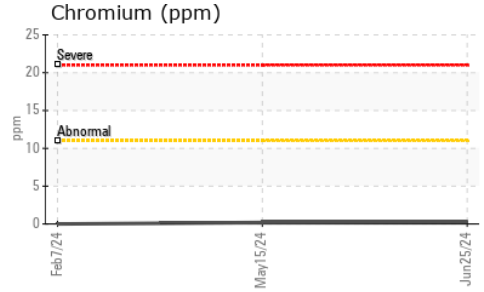

Lead (ppm)



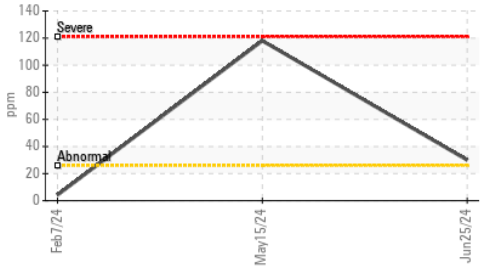

Aluminum (ppm)



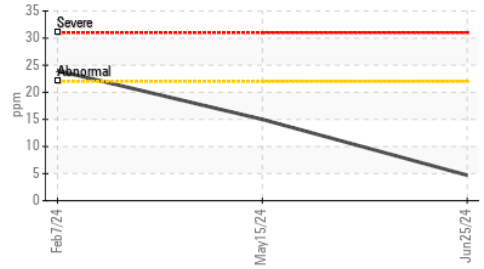

Chromium (ppm)



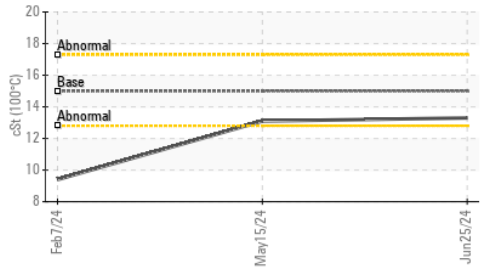

Copper (ppm)



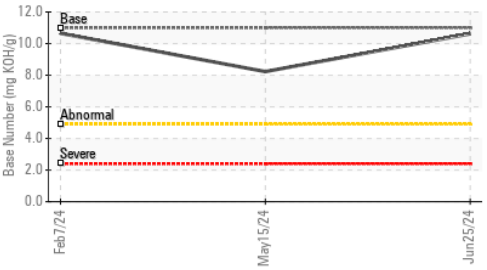

Silicon (ppm)




Viscosity @ 100°C




Base Number




ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : WC0894271
**Lab Number** : 02646637
**Unique Number** : 5812189
**Test Package** : MOB 2

**Received** : 09 Jul 2024
**Tested** : 10 Jul 2024
**Diagnosed** : 10 Jul 2024 - Kevin Marson

*To discuss this sample report, contact Customer Service at 1-800-268-2131.*
*Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.*
*Validity of results and interpretation are based on the sample and information as supplied.*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