



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

Machine Id
JOHN DEERE 748L 1dw748lbepI717202
 Component
Diesel Engine
 Fluid
CITGO CITGARD 700 15W40 (7 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | JR0214184 | JR0200791 | JR0186552 |
| Sample Date | | Client Info | | 17 Apr 2024 | 08 Feb 2024 | 15 Nov 2023 |
| Machine Age | hrs | Client Info | | 2015 | 1712 | 1066 |
| Oil Age | hrs | Client Info | | 470 | 646 | 550 |
| Filter Age | hrs | Client Info | | 470 | 646 | 0 |
| Oil Changed | | Client Info | | Changed | Changed | Not Changd |
| Filter Changed | | Client Info | | Changed | Changed | Not Changd |
| Sample Status | | | | NORMAL | NORMAL | ABNORMAL |

WEAR

Metal levels are typical for a new component breaking in.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >51 | 13 | 16 | 16 |
| Chromium | ppm | ASTM D5185m | >11 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >5 | 0 | 1 | 1 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >31 | 1 | <1 | 5 |
| Lead | ppm | ASTM D5185m | >26 | 1 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >26 | 4 | 7 | ▲ 67 |
| Tin | ppm | ASTM D5185m | >4 | <1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

There is no indication of any contamination in the oil.

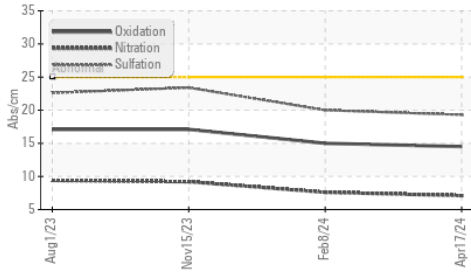
| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >22 | 3 | 0 | 9 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 0 | 3 |
| Fuel | | WC Method | >2.1 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.21 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.5 | 0.4 | 0.6 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 7.1 | 7.6 | 9.2 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.3 | 20.0 | 23.4 |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.21 | NEG | NEG | NEG |

FLUID CONDITION

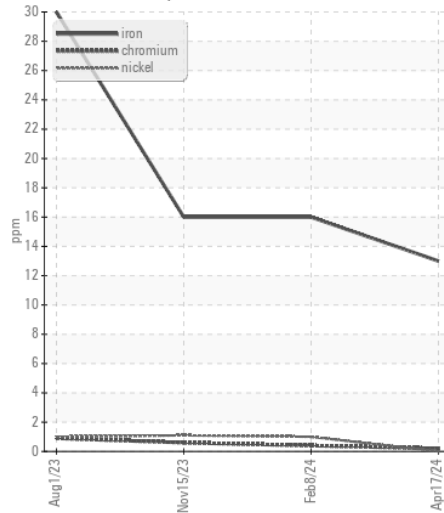
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185m | >31 | 2 | 2 | 0 |
| Boron | ppm | ASTM D5185m | 20 | 0 | 7 | 112 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | <1 |
| Molybdenum | ppm | ASTM D5185m | 59 | 67 | 72 | 260 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | 1 |
| Magnesium | ppm | ASTM D5185m | 783 | 1023 | 942 | 882 |
| Calcium | ppm | ASTM D5185m | 1238 | 1141 | 1055 | 1415 |
| Phosphorus | ppm | ASTM D5185m | 949 | 1059 | 982 | 916 |
| Zinc | ppm | ASTM D5185m | 1116 | 1234 | 1171 | 1106 |
| Sulfur | ppm | ASTM D5185m | 2909 | 3636 | 2828 | 2733 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 14.5 | 15.0 | 17.1 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10 | 9.5 | 8.6 | 7.8 |
| Visc @ 100°C | cSt | ASTM D445 | 15.2 | 13.7 | 13.3 | 13.4 |

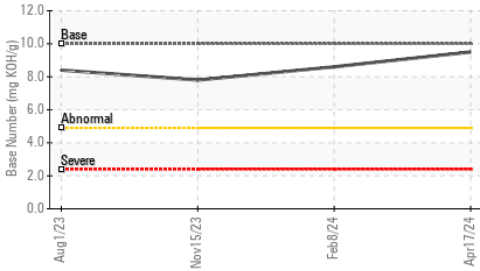
FT-IR (Direct Trend)



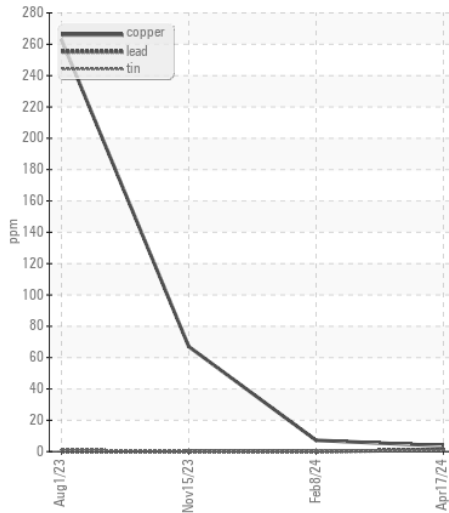
Ferrous Alloys



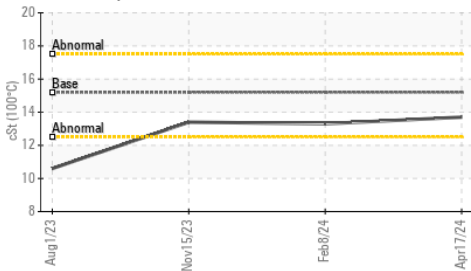
Base Number



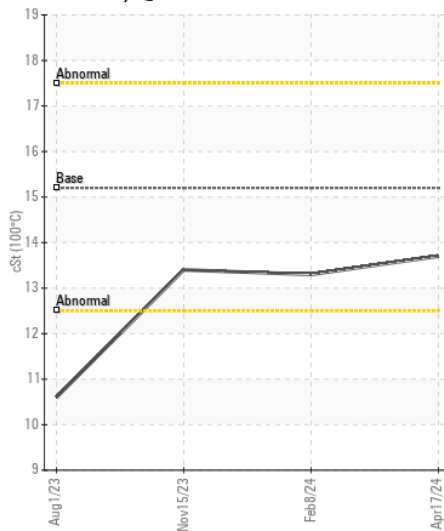
Non-ferrous Metals



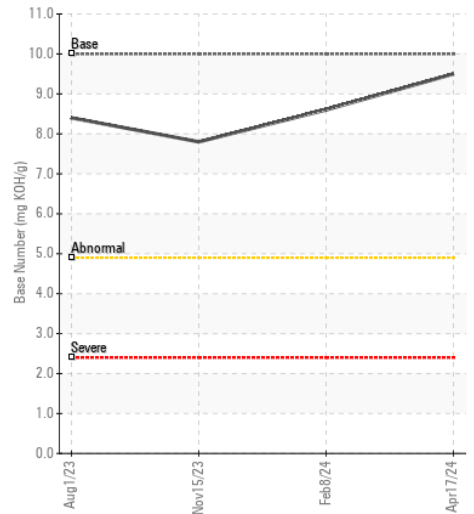
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0214184 **Received** : 19 Apr 2024
Lab Number : 06154133 **Tested** : 22 Apr 2024
Unique Number : 10989556 **Diagnosed** : 22 Apr 2024 - Wes Davis
Test Package : CONST (Additional Tests: TBN)

NEUSE RIVER FOREST PRODUCTS

PO BOX 234
 PRINCETON, NC
 US 27569

Contact: Service Manager
 neuseriverfp@gmail.com

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)

T:
F: