

Area

NORMAL WEAR CONTAMINATION NORMAL FLUID CONDITION NORMAL

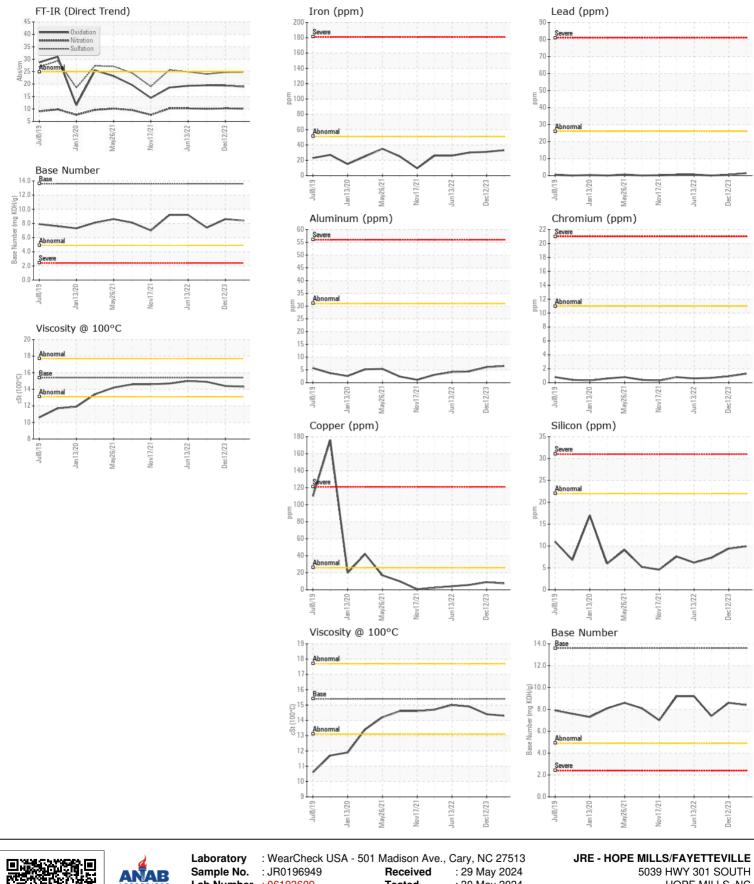


[W8934] **JOHN DEERE 850K 1T0850KXJJF343226**

Diesel Engine

JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (27 GAL)

| Test UOM Method Unitial History1 History1 Resample at the next service interval to monitor. (Customer Sample Comment: W8954) Sample Date Client Info J0019666 J0194266 J0194266 <th></th> <th></th> <th>•••••</th> <th>·····</th> <th></th> <th></th> <th></th> <th></th> | | | ••••• | ····· | | | | |
|---|---|------------------|----------|-------------|-----------|--------|--------|--------|
| Presemple at the next service interval to monitor. (Customer Sample Comment: W8934) Sample Date Machine Age has Cillent Info Cillent Info 28 May 204 (1) Command Comment: W8934) 20 Part 202 (2) Command Command: W8034) 21 Age 202 (2) Command: W8034) | RECOMMENDATION | | UOM | | Limit/Abn | | | - |
| Comment: W8334) Sample Data Machine App Count into Di Age The Chant into Di Age Sample Data Filter Age Count into Di Age Sample Data Filter Age <th< th=""><th rowspan="2"></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></th<> | | | | | | | | |
| Machine Age Ins Clent Info 5559 4495 4495 Oil Age hrs Clent Info 5591 0 439 4495 Filter Age hrs Clent Info 0 0 0 Changed Oil Changed Clent Info 0 0 Changed NA Changed Sampio Status V NORMA NORMA NORMA NORMA NORMA All component wear rates are normal. Inon ppm ASTM 5056n 2 2 -1 Nicke ppm ASTM 5056n -21 3 -1 0 0 Store ppm ASTM 5056n -23 6 -1 -1 0 0 All component wear rates are normal. Ppm ASTM 5056n -23 6 -1 -1 0 0 Advaninum ppm ASTM 5056n -23 6 -1 -1 0 Valadium ppm ASTM 5056n -23 1 | | | | | | - | | |
| Filter Age OI Changed No Oilent Info Oilent Age Changed NO Mail Changed NA NA< | | 0 | hrs | | | 5559 | | |
| Oil Changed Filter Changed Sample Status Client Info (lient Info Status) Changed NAM Changed NORMAL NAM Changed NORMAL Changed NAM Changed NORMAL WEAR Iron ppm ASIM DSISIO >51 33 31 00 All component wear rates are normal. Iron ppm ASIM DSISIO >51 33 31 00 All component wear rates are normal. Iron ppm ASIM DSISIO >51 33 31 0 Otromium ppm ASIM DSISIO >51 1 1 <1 1 <1 0 0 Aturninum ppm ASIM DSISIO >31 6 6 4 1 <1 0 0 Auguitum ppm ASIM DSISIO >4 1 <1 0 0 0 Visual NONE ASIM DSISIO >4 1 <1 0 0 There is no indication of any contamination in the oil. Piotassium Ppm ASIM DSISIO >20 4 <1 <10 | | - | hrs | | | | | |
| Filter Changed Sample Status Clenned NORMAL Changed NORMAL Changed NORMAL WEAR Normal | | 0 | hrs | | | | | |
| Sample Status NORMA NORMAL NORMAL WEAR Inon ppm ASTU 05165 -51 33 31 301 All component wear rates are normal. Nokel ppm ASTU 05165 -51 2 2 -1 Nokel ppm ASTU 05165 -51 2 2 -1 Maininum ppm ASTU 05165 -51 1 0 0 Aluminum ppm ASTU 05165 -51 1 -1 0 Aluminum ppm ASTU 05165 -51 1 -1 -1 Vanadium ppm ASTU 05165 -51 1 -1 -1 Vanadium ppm ASTU 05165 -22 10 NONE NONE Vanadium ppm ASTU 05165 -22 10 NONE NONE Vanadium ppm ASTU 05165 -22 10 NONE NONE Vanadium ppm ASTU 05165 -22 | | - | | | | - | | |
| WEAR Iron ppm ASIV DB165m >51 33 31 30 All component wear rates are normal. Ppm ASIV DB165m >1 1 | | - | | Client Info | | _ | | - |
| All component wear rates are normal. Chromium Nickel ppm ASTM (588m) 11 1 <1 | | Sample Status | | | | NORMAL | NORMAL | NORMAL |
| All component wear rates are normal. Chromium Nickel ppm ASTM (588m) 11 1 <1 | | Iron | nnm | ASTM D5185m | >51 | 33 | 31 | 30 |
| All component wear rates are normal. Nickel ppm 45TM 05185m >5 2 2 <1 | | | | | | | | |
| Titanium ppm ASTM D5185n | | | | | | | | |
| Silver pp ATM Diston 31 1 0 0 Atuminum ppm ASTM Diston 331 6 6 4 Lead ppm ASTM Diston 26 1 <1 0 Copper ppm ASTM Diston 266 8 9 6 Tin ppm ASTM Diston 26 8 9 0 Vanadium ppm ASTM Diston 26 8 9 0 Vanadium ppm ASTM Diston 26 8 9 0 Vanadium ppm ASTM Diston 20 1 <1 7 Vanadium ppm ASTM Diston 20 10 9 7 There is no indication of any contamination in the oil. Silicon ppm ASTM Diston 220 10 1.0 2.0 Water WC Method 2.1 <1.0 <1.0 2.0 1.0 2.0 Silit sccalar | | | | | | | | |
| Aluminum ppm ASTM D5185m >31 6 6 4 Lead ppm ASTM D5185m >26 1 <1 0 Copper Maintonistic >26 1 <1 0 0 Visual Monte ASTM D5185m >46 1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 | | | | | >3 | | | |
| Lead ppm ASTM 05185m >26 1 <1 | | | | | | | | |
| Copper ppm ASTM B8185m >26 8 9 6 Tin ppm ASTM D8185m | | | | | | | | |
| Tin ppm ASTM 05185n >4 1 <1 | | | | | | | | |
| Vanadium ppm ASTM D5185m <1 | | | | | | | | |
| White Metal Yellow Metal scalar 'Visual NONE | | | | | | | | |
| CONTAMINATION Silicon ppm ASTM 05/85m >22 10 9 7 There is no indication of any contamination in the oil. Potassium ppm ASTM 05/85m >20 4 4 <1 Fuel WC Method >2.1 <1.0 <1.0 <1.0 <1.0 <1.0 Water WC Method >0.2.1 NEG NEG NEG NEG Sold % % 'ASTM 07844 >3 0.7 0.6 0.6 Sold % % 'ASTM 07844 >3 0.7 0.6 0.6 Sulfation Abs/tm< 'ASTM 07845 >30 0.7 0.6 0.6 Sulfation Abs/tm< 'ASTM 07844 >3 0.7 0.6 0.6 Sulfation Abs/tm< 'ASTM 07845 >30 0.7 0.6 0.6 Sulfation Abs/tm< 'ASTM 0784 >3 0.7 0.6 0.6 Sulfation Abs/tm< 'ASTM 0784 >0.0NE NONE NONE NONE NONE NONE </th <th></th> <th>White Metal</th> <th></th> <th>*Visual</th> <th>NONE</th> <th>NONE</th> <th>NONE</th> <th></th> | | White Metal | | *Visual | NONE | NONE | NONE | |
| CONTAMINATION Silicon ppm ASTM 05/85m >22 10 9 7 There is no indication of any contamination in the oil. Potassium ppm ASTM 05/85m >20 4 4 <1 Fuel WC Method >2.1 <1.0 <1.0 <1.0 <1.0 <1.0 Water WC Method >0.2.1 NEG NEG NEG NEG Sold % % 'ASTM 07844 >3 0.7 0.6 0.6 Sold % % 'ASTM 07844 >3 0.7 0.6 0.6 Sulfation Abs/tm< 'ASTM 07845 >30 0.7 0.6 0.6 Sulfation Abs/tm< 'ASTM 07844 >3 0.7 0.6 0.6 Sulfation Abs/tm< 'ASTM 07845 >30 0.7 0.6 0.6 Sulfation Abs/tm< 'ASTM 0784 >3 0.7 0.6 0.6 Sulfation Abs/tm< 'ASTM 0784 >0.0NE NONE NONE NONE NONE NONE </th <th></th> <th>Yellow Metal</th> <th></th> <th>*Visual</th> <th>NONE</th> <th></th> <th>NONE</th> <th>NONE</th> | | Yellow Metal | | *Visual | NONE | | NONE | NONE |
| Potassium ppm ASTM 05185m >20 4 4 <1 | | | | | | | | |
| Fuel WC Method >≥.1 <1.0 | CONTAMINATION | | ppm | | | | | |
| Fuel Worker Worker Wirk | There is no indication of any contamination in the oil. | | ppm | | | 4 | | |
| Giycol WC Method NEG NEG NEG 0.6 0.6 Soot % % *ASTM D7844 >3 0.7 0.6 0.6 Nitration Abs/rm *ASTM D7844 >20 10.1 10.2 10.0 Sulfation Abs/rm *ASTM D7845 >20 24.0 NONE NORE N | | | | | | | | |
| Soot % % *ASTM D7844 >3 0.7 0.6 0.6 Nitration Abs/cm *ASTM D7624 >20 10.1 10.2 10.0 Sulfation Abs/tmm *ASTM D7624 >20 10.1 10.2 10.0 Sulfation Abs/tmm *ASTM D7624 >20 10.1 10.2 24.0 Sulfation Abs/tmm *ASTM D7624 >30 24.8 24.7 24.0 Sulfation Abs/tmm *ASTM D7624 NONE NORM | | | | | >0.21 | | | |
| Nitration Abs/cm *ASTM D7624 >20 10.1 10.2 10.0 Sulfation Abs/tmm *ASTM D7624 >20 24.8 24.7 24.0 Silt scalar *Visual NONE NORE | | | | | | | | |
| SulfationAbs/Imm'ASTM D7415>3024.824.724.0Siltscalar'VisualNONENONENONENONENONENONEDebrisscalar'VisualNONENONENONENONENONENONESand/Dirtscalar'VisualNONENONENONENONENONENONEAppearancescalar'VisualNORMNORMLNORMLNORMLNORMLNORMLOdorscalar'VisualNORMNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar'VisualNORNORMNORMLNORMLNORMLThe BN result indicates that there is suitable alkalinity remaining in the oil is suitable for further service.SodiumppmASTM D5185m>31314BoronppmASTM D5185m<158159134134134134134BariumppmASTM D5185m<1<1<1111116136157154157154157154157315715121498157315715121498157315715121498157315715121498157315715121498157315611<1113615731512149815731512149815731512149815731512149815731512149815731512149815 | | | | | | | | |
| Siltscalar*VisualNONENONENONENONENONEDebrisscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visualscalar*VisualscalarNORNORMLNORMLNORMLThe BN result indicates that there is suitable alkalinity remaining in the oil is suitable for further service.SodiumppmASTM D5185m>31314BoronppmASTM D5185m01200120MolybdenumppmASTM D5185m11111MaganeseppmASTM D5185m11111PhosphorusppmASTM D5185m11111361573PhosphorusppmASTM D5185m1117111191136SulfurppmASTM D5185m118.93423423OxidationAbs/Imm'ASTM D5185m1116.91498Abs/ImSulfurppmASTM D5185m1117111191136SulfurppmASTM D5185m13.6366532753423Phosphor | | | | | | | | |
| Debrisscalar*VisualNONENORE <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> | | | | | | | | |
| Sand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.21NEGNEGNEGFLUID CONDITIONSodiumppmASTM D5185m>31314BoronppmASTM D5185mI158159134BariumppmASTM D5185mI120MolybdenumppmASTM D5185mI1110MagnesiumppmASTM D5185mI111573PhosphorusppmASTM D5185mI151214981573PhosphorusppmASTM D5185mI117111191136SulfurppmASTM D5185mI117111191136SulfurppmASTM D5185mI356532753423OxidationAbs/Imm'ASTM D7141>2518.919.419.5Base Number (BN)mg KHigASTM D289613.68.48.67.4 | | | | | | | | |
| Appearancescalar*VisualNORML< | | | | | | | | |
| Odorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.21NEGNEGNEGFLUID CONDITIONSodiumppmASTM D5185m>31314BoronppmASTM D5185m>31314BariumppmASTM D5185m0120NolybdenumppmASTM D5185m0120MolybdenumppmASTM D5185m1<11MaganeseppmASTM D5185m1<11MagnesiumppmASTM D5185m1<11PhosphorusppmASTM D5185m1151214981573PhosphorusppmASTM D5185m1117111191136SulfurppmASTM D5185m1356532753423OxidationAbs/1mm'ASTM D7141>2518.919.419.5Base Number (BN)mg KOHgASTM D289613.68.48.67.4 | | | | | | | | |
| Emulsified Waterscalar*Visual>0.21NEGNEGFLUID CONDITIONSodiumppmASTM D5185m>31314BoronppmASTM D5185m158158159134BariumppmASTM D5185m0120MolybdenumppmASTM D5185m0120MaganeseppmASTM D5185m1<11MagnesiumppmASTM D5185m1<11MagnesiumppmASTM D5185m1<11PhosphorusppmASTM D5185m1151214981573PhosphorusppmASTM D5185m1117111191136SulfurppmASTM D5185m1117111191136SulfurppmASTM D5185m356532753423OxidationAbs/.1mm*ASTM D7414>2518.919.419.5Base Number (BN)mg KOHlgASTM D289613.68.48.67.4 | | | | | | | | |
| Sodium ppm ASTM D5185m >31 3 1 4 Boron ppm ASTM D5185m >31 158 159 134 Barium ppm ASTM D5185m 0 12 0 Molybdenum ppm ASTM D5185m 253 265 254 Manganese ppm ASTM D5185m 1 <1 1 Magnesium ppm ASTM D5185m 839 831 845 Calcium ppm ASTM D5185m 1512 1498 1573 Phosphorus ppm ASTM D5185m 953 869 897 Zinc ppm ASTM D5185m 1171 1119 1136 Sulfur ppm ASTM D5185m 3565 3275 3423 Oxidation Abs/.tmm *ASTM D7414 >25 18.9 19.4 19.5 Base Number (BN) mg KOHg ASTM D2896 13.6 8.4 8.6 7.4 | | | | | | _ | | |
| Boron ppm ASTM D5185m 158 159 134 Barium ppm ASTM D5185m 0 12 0 Molybdenum ppm ASTM D5185m 253 265 254 Manganese ppm ASTM D5185m 1 <1 1 Magnesium ppm ASTM D5185m 1 <1 1 Magnesium ppm ASTM D5185m 1 <1 1 Phosphorus ppm ASTM D5185m 1 <1 1 Tinc ppm ASTM D5185m 1512 1498 1573 Zinc ppm ASTM D5185m 1 1119 1136 Sulfur ppm ASTM D5185m 1 1194 1136 Oxidation Abs/.1mm *ASTM D5185m 1 1194 1136 Sulfur ppm ASTM D5185m 1 1194 1136 Sulfur ppm ASTM D5185m 1 119.4 19.5 | | Emuisitied water | scalar | visual | >0.21 | NEG | NEG | NEG |
| Boron ppm ASTM D5185m 158 159 134 Barium ppm ASTM D5185m 0 12 0 Molybdenum ppm ASTM D5185m 253 265 254 Manganese ppm ASTM D5185m 1 <1 1 Magnesium ppm ASTM D5185m 1 <1 1 Magnesium ppm ASTM D5185m 1 <1 1 Phosphorus ppm ASTM D5185m 1 <1 1 Tinc ppm ASTM D5185m 1512 1498 1573 Zinc ppm ASTM D5185m 1 1119 1136 Sulfur ppm ASTM D5185m 1 1194 1136 Oxidation Abs/.1mm *ASTM D5185m 1 1194 1136 Sulfur ppm ASTM D5185m 1 1194 1136 Sulfur ppm ASTM D5185m 1 119.4 19.5 | FLUID CONDITION | Sodium | ppm | ASTM D5185m | >31 | 3 | 1 | 4 |
| Barium ppm ASTM D5185m 0 12 0 Molybdenum ppm ASTM D5185m 253 265 254 Manganese ppm ASTM D5185m 1 <1 1 Magnesium ppm ASTM D5185m 1 <1 1 Magnesium ppm ASTM D5185m 1 <1 1 Magnesium ppm ASTM D5185m 1 <1 1 Phosphorus ppm ASTM D5185m 1 <1 1 Zinc ppm ASTM D5185m 1512 1498 1573 Sulfur ppm ASTM D5185m 1 1119 1136 Sulfur ppm ASTM D5185m 1 1498 1573 Oxidation Abs/.1mm ASTM D5185m 1171 1119 1136 Sulfur ppm ASTM D5185m 1 3565 3275 3423 Oxidation Abs/.1mm *ASTM D7141 >25 18.9 19.4 19.5 Base Number (BN) mg K0Hg ASTM D286 13.6 | | | | | | 158 | 159 | 134 |
| Molybdenum ppm ASTM D5185m 253 265 254 Manganese ppm ASTM D5185m 1 <1 1 Magnesium ppm ASTM D5185m 0 839 831 845 Calcium ppm ASTM D5185m 0 839 831 845 Calcium ppm ASTM D5185m 0 953 869 897 Zinc ppm ASTM D5185m 0 953 869 897 Zinc ppm ASTM D5185m 0 3565 3275 3423 Oxidation Abs/.1mm *ASTM D7141 >25 18.9 19.4 19.5 Base Number (BN) mg KOH/g ASTM D2896 13.6 8.4 8.6 7.4 | | | | ASTM D5185m | | | | |
| ManganeseppmASTM D5185m1<1 | | | | | | | | 254 |
| Magnesium ppm ASTM D5185m 839 831 845 Calcium ppm ASTM D5185m 1512 1498 1573 Phosphorus ppm ASTM D5185m 0 953 869 897 Zinc ppm ASTM D5185m 1171 1119 1136 Sulfur ppm ASTM D5185m 13565 3275 3423 Oxidation Abs/.1mm *ASTM D7414 >25 18.9 19.4 19.5 Base Number (BN) mg KOH/g ASTM D2896 13.6 8.4 8.6 7.4 | | Manganese | | | | | | |
| Calcium ppm ASTM D5185m 1512 1498 1573 Phosphorus ppm ASTM D5185m C 953 869 897 Zinc ppm ASTM D5185m 1171 1119 1136 Sulfur ppm ASTM D5185m C 3565 3275 3423 Oxidation Abs/.1mm *ASTM D7414 >25 18.9 19.4 19.5 Base Number (BN) mg KOH/g ASTM D2896 13.6 8.4 8.6 7.4 | | - | | ASTM D5185m | | 839 | | 845 |
| Phosphorus ppm ASTM D5185m 953 869 897 Zinc ppm ASTM D5185m 1171 1119 1136 Sulfur ppm ASTM D5185m 3255 3423 Oxidation Abs/.1mm *ASTM D7414 >25 18.9 19.4 19.5 Base Number (BN) mg KOH/g ASTM D2896 13.6 8.4 8.6 7.4 | | - | | | | | | |
| Sulfur ppm ASTM D5185m 33565 32275 3423 Oxidation Abs/.1mm *ASTM D7414 >25 18.9 19.4 19.5 Base Number (BN) mg KOH/g ASTM D2896 13.6 8.4 8.6 7.4 | | Phosphorus | | ASTM D5185m | | 953 | 869 | 897 |
| Sulfur ppm ASTM D5185m 33565 32275 3423 Oxidation Abs/.1mm *ASTM D7414 >25 18.9 19.4 19.5 Base Number (BN) mg KOH/g ASTM D2896 13.6 8.4 8.6 7.4 | | | | | | | | |
| Oxidation Abs/.1mm *ASTM D7414 >25 18.9 19.4 19.5 Base Number (BN) mg KOH/g ASTM D2896 13.6 8.4 8.6 7.4 | | Sulfur | | | | 3565 | 3275 | 3423 |
| Base Number (BN) mg KOH/g ASTM D2896 13.6 8.4 8.6 7.4 | | | | | >25 | | | |
| | | | mg KOH/g | ASTM D2896 | 13.6 | | 8.6 | |
| | | () | | ASTM D445 | 15.4 | | | |



Lab Number : 06193609 Tested HOPE MILLS, NC : 30 May 2024 Unique Number : 11050361 : 30 May 2024 - Sean Felton US 28348 Diagnosed Test Package : MOBCE (Additional Tests: TBN) Contact: FAYETTEVILLE SHOP Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. stephen.mullis@jamesriverequipment.com;canastasio@wearcheck.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: F: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Submitted By: Justin Jackson Page 2 of 2