WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL



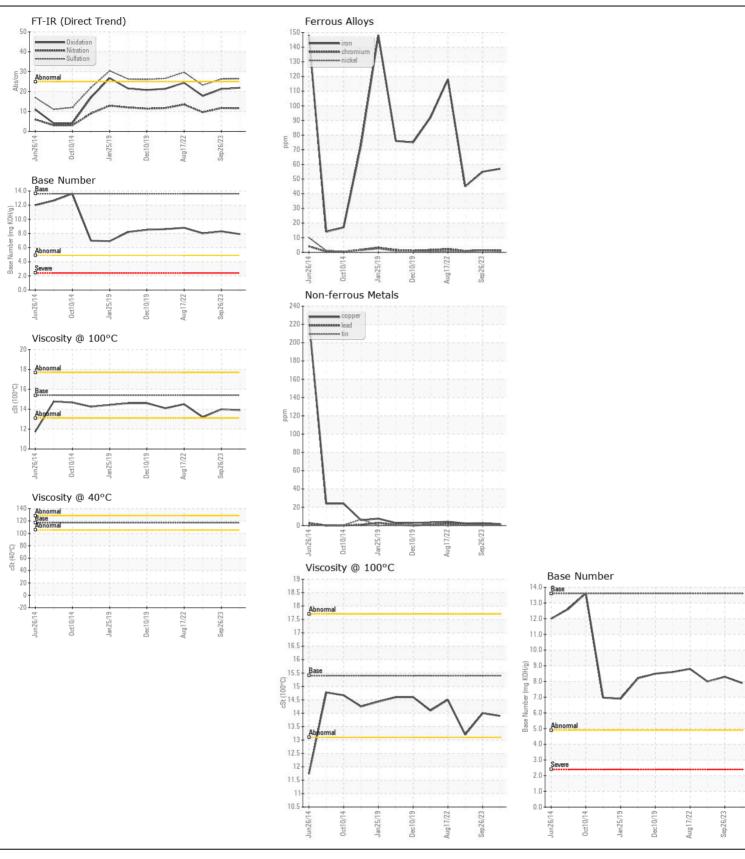
[W52665]

## JOHN DEERE 350GLC 1FF350GXLDE809738

Diesel Engine

JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (5 GAL)

| Sample Number   Client Info   25 Jun 2024   25 Jun 2024  | RECOMMENDATION   | T                | 11014    | Made 1      | 155741    | (a      | 118-4- 4   | 115-4-   |
|--|--|------------------|----------|-------------|-----------|---------|------------|----------|
| Sample Date   Client Info  | RECOMMENDATION   | Test             | UOM      | Method      | Limit/Abn | Current | History1   | History2 |
| Sample Date    | Resample at the next service interval to monitor.              |                  |          |             |           |         |            |          |
| Col Age  |  |                  | laua     |             |           |         |            |          |
| Filter Age   |  | •                |          |             |           |         |            |          |
| Cil Changed   Cilent Info   Changed   Chang  |  |                  |          |             |           |         |            |          |
| Filter Changed   Change  |  |                  | nrs      |             |           |         |            |          |
| VEAR   Iron  |  | -                |          |             |           | _       | _          |          |
| Chromium   ppm   ASTM D5185m   511   1   1   1   1   1   1   1   1   |  | _                |          | Client into |           | _       |            | NORMAL   |
| Chromium   ppm   ASTM D5185m   511   1   1   1   1   1   1   1   1   | WEAR   | Iron             | ppm      | ASTM D5185m | >51       | 57      | <u></u> 55 | 45       |
| Titlanium   ppm  |  | Chromium         |          | ASTM D5185m | >11       |         | 1          | 1        |
| Titanium   ppm   ASTM 05186m   <1   <1   <1   <1   <1   <1   <1   <  | All component wear rates are normal.                           | Nickel           |          |             |           | <1      | 1          | <1       |
| Aluminum   ppm   ASTM D5185m   2-31   4   4   3  |  | Titanium         |          | ASTM D5185m |           | <1      | <1         | <1       |
| Aluminum   ppm   ASTM D5185m   >31   4   4   3   3   4   4   4   3   3   4   4   |  | Silver           |          | ASTM D5185m | >3        | 0       | 0          | 0        |
| Lead   |  | Aluminum         |          | ASTM D5185m | >31       | 4       | 4          | 3        |
| Copper   |  | Lead             |          |             |           | 1       | 1          | <1       |
| Time   |  | Copper           |          | ASTM D5185m | >26       | 2       | 3          | 2        |
| White Metal   Scalar   Visual   NONE   NON |  | Tin              | ppm      | ASTM D5185m | >4        | <1      | <1         | <1       |
| Silicon   ppm   ASTM D5185m   >22   8   8   8   8   8   8   8   8   8  |  | Vanadium         | ppm      | ASTM D5185m |           | 0       | 0          | <1       |
| Silicon   ppm   ASTM D5185m   >22   8   8   8   8   8   8   8   8   8  |  | White Metal      | scalar   | *Visual     | NONE      | NONE    | NONE       | NONE     |
| Potassium   ppm   ASTM D5185m   >20   0   3   1  |  | Yellow Metal     | scalar   | *Visual     | NONE      | NONE    | NONE       | NONE     |
| Fuel   WC Method   So.21   C1.0   C | CONTAMINATION  | Silicon          | ppm      | ASTM D5185m | >22       | 8       | 8          | 8        |
| Water  | There is no indication of any contamination in the oil.        |                  | ppm      |             |           | 0       |            | 1        |
| Glycol   |  | Fuel             |          | WC Method   | >2.1      | <1.0    | <1.0       |          |
| Soot %   |  |                  |          | WC Method   | >0.21     | NEG     | NEG        |          |
| Nitration  |  | Glycol           |          |             |           |         |            |          |
| Sulfation   Abs/.lmm   *ASTM D7415   >30   26.5   26.3   23.2  |  | Soot %           |          | *ASTM D7844 |           |         |            |          |
| Silt   scalar *Visual   NONE   NORML   NOR |  |                  |          |             |           |         |            |          |
| Debris   Scalar   *Visual   NONE   NONE   NONE   NONE   Sand/Dirt   Scalar   *Visual   NONE   NONE |  |                  | Abs/.1mm |             |           |         |            |          |
| Sand/Dirt   Scalar   *Visual   NONE   NONE   NONE   Appearance   Scalar   *Visual   NORML    |  |                  |          |             |           |         |            |          |
| Appearance   Scalar   Visual   NORML   NORML |  |                  |          |             |           |         |            |          |
| Odor   Scalar   *Visual   NORML   NO |  |                  |          |             |           |         |            |          |
| Emulsified Water   scalar   *Visual   >0.21   NEG   NEG   NEG  |  | • •              |          |             |           |         |            |          |
| Sodium   ppm   ASTM D5185m   >31   2   2   2   2   2   2   2   2   3   3   |  |                  |          |             |           |         |            |          |
| Boron   ppm   ASTM D5185m   71   82   169  |  | Emulsified Water | scalar   | *Visual     | >0.21     | NEG     | NEG        | NEG      |
| Boron   ppm   ASTM D5185m   71   82   169  | FLUID CONDITION  | Sodium           | ppm      |             | >31       |         |            |          |
| Molybdenum   ppm   ASTM D5185m   222   233   185   |  |                  | ppm      | ASTM D5185m |           |         | 82         | 169      |
| Molybdenum         ppm         ASTM D5185m         222         233         185           Manganese         ppm         ASTM D5185m         1         <1         <1         <1           Magnesium         ppm         ASTM D5185m         887         784         712           Calcium         ppm         ASTM D5185m         1790         1510         1623           Phosphorus         ppm         ASTM D5185m         1102         969         924           Zinc         ppm         ASTM D5185m         1353         1192         1160           Sulfur         ppm         ASTM D5185m         4154         3115         3695           Oxidation         Abs/.1mm         *ASTM D7414         >25         21.9         21.2         17.8           Base Number (BN)         mg KOH/g         ASTM D2896         13.6         7.9         8.3         8.0   | oil. The condition of the oil is suitable for further service. |                  | ppm      |             |           |         |            |          |
| Magnesium         ppm         ASTM D5185m         887         784         712           Calcium         ppm         ASTM D5185m         1790         1510         1623           Phosphorus         ppm         ASTM D5185m         1102         969         924           Zinc         ppm         ASTM D5185m         1353         1192         1160           Sulfur         ppm         ASTM D5185m         4154         3115         3695           Oxidation         Abs/.1mm         *ASTM D7414         >25         21.9         21.2         17.8           Base Number (BN)         mg KOH/g         ASTM D2896         13.6         7.9         8.3         8.0   |  | •                | ppm      |             |           |         |            |          |
| Calcium         ppm         ASTM D5185m         1790         1510         1623           Phosphorus         ppm         ASTM D5185m         1102         969         924           Zinc         ppm         ASTM D5185m         1353         1192         1160           Sulfur         ppm         ASTM D5185m         4154         3115         3695           Oxidation         Abs/.1mm         *ASTM D7414         >25         21.9         21.2         17.8           Base Number (BN)         mg KOH/g         ASTM D2896         13.6         7.9         8.3         8.0   |  |                  |          |             |           |         |            |          |
| Phosphorus         ppm         ASTM D5185m         1102         969         924           Zinc         ppm         ASTM D5185m         1353         1192         1160           Sulfur         ppm         ASTM D5185m         4154         3115         3695           Oxidation         Abs/.1mm         *ASTM D7414         >25         21.9         21.2         17.8           Base Number (BN)         mg KOH/g         ASTM D2896         13.6         7.9         8.3         8.0  |  | -                | ppm      |             |           |         |            |          |
| Zinc         ppm         ASTM D5185m         1353         1192         1160           Sulfur         ppm         ASTM D5185m         4154         3115         3695           Oxidation         Abs/.1mm         *ASTM D7414         >25         21.9         21.2         17.8           Base Number (BN)         mg KOH/g         ASTM D2896         13.6         7.9         8.3         8.0  |  |                  |          |             |           |         |            |          |
| Sulfur         ppm         ASTM D5185m         4154         3115         3695           Oxidation         Abs/.1mm         *ASTM D7414         >25         21.9         21.2         17.8           Base Number (BN)         mg KOH/g         ASTM D2896         13.6         7.9         8.3         8.0  |  | •                |          |             |           |         |            |          |
| Oxidation         Abs/.1mm         *ASTM D7414         >25         21.9         21.2         17.8           Base Number (BN)         mg KOH/g         ASTM D2896         13.6         7.9         8.3         8.0  |  |                  |          |             |           |         |            |          |
| Base Number (BN)         mg KOH/g         ASTM D2896         13.6         7.9         8.3         8.0  |  |                  | ppm      |             |           |         |            |          |
|  |  |                  |          |             |           |         |            |          |
| Visc @ 100°C cSt ASTM D445 15.4 13.9 14.0 13.2   |  | ( /              | mg KOH/g | ASTM D2896  | 13.6      |         |            |          |
|  |  | Visc @ 100°C     | cSt      | ASTM D445   | 15.4      | 13.9    | 14.0       | 13.2     |







Certificate L2367

Laboratory Sample No.

: JR0224884 Lab Number : 06224399 Unique Number : 11102596

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

Received : 01 Jul 2024 **Tested** Diagnosed Test Package : CONST ( Additional Tests: KV40, TBN )

: 02 Jul 2024

: 02 Jul 2024 - Jonathan Hester

Contact: TERRY THOMPSON terry@hendersoninc.com T: (757)603-0418

**HENDERSON INC** 

5806 MOORETOWN RD

WILLIAMSBURG, VA

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)

US 23188

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