

WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL

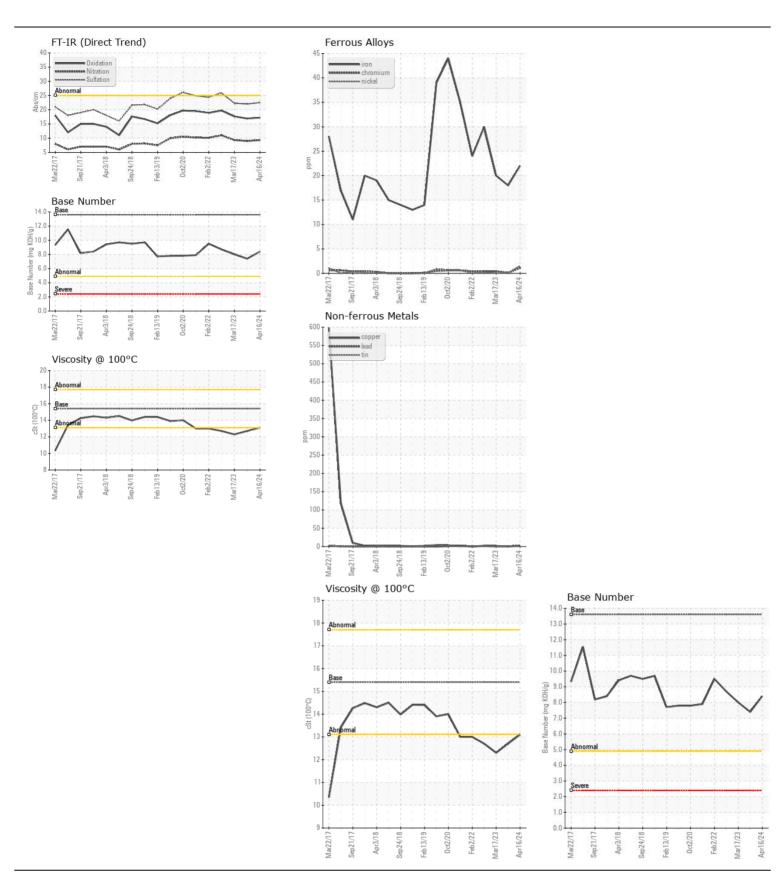


## JOHN DEERE 624K 1DW624KZVGF678340

Diesel Engine

JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (20 QTS)

| JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (20 Q1S)                            |                  |          |             |           |             |             |             |
|----------------------------------------------------------------------------|------------------|----------|-------------|-----------|-------------|-------------|-------------|
| RECOMMENDATION                                                             | Test             | UOM      | Method      | Limit/Abn | Current     | History1    | History2    |
| RESSMINERDATION                                                            | Sample Number    |          | Client Info |           | JR0208209   | JR0184778   | JR0159715   |
| Resample at the next service interval to monitor.                          | Sample Date      |          | Client Info |           | 16 Apr 2024 | 06 Oct 2023 | 17 Mar 2023 |
|                                                                            | Machine Age      | hrs      | Client Info |           | 8973        | 8529        | 8027        |
|                                                                            | Oil Age          | hrs      | Client Info |           | 8529        | 0           | 0           |
|                                                                            | Filter Age       | hrs      | Client Info |           | 8529        | 0           | 0           |
|                                                                            | Oil Changed      |          | Client Info |           | Changed     | Changed     | Changed     |
|                                                                            | Filter Changed   |          | Client Info |           | Changed     | Changed     | Changed     |
|                                                                            | Sample Status    |          |             |           | NORMAL      | NORMAL      | MARGINAL    |
| WEAR                                                                       | Iron             | ppm      | ASTM D5185m | >51       | 22          | 18          | 20          |
| All component wear rates are normal.                                       | Chromium         | ppm      | ASTM D5185m |           | 1           | <1          | <1          |
|                                                                            | Nickel           | ppm      | ASTM D5185m |           | 2           | <1          | 0           |
|                                                                            | Titanium         | ppm      | ASTM D5185m |           | <1          | 0           | <1          |
|                                                                            | Silver           | ppm      | ASTM D5185m | >3        | <1          | 0           | 0           |
|                                                                            | Aluminum         | ppm      | ASTM D5185m |           | 5           | 4           | 3           |
|                                                                            | Lead             | ppm      | ASTM D5185m |           | 2           | <1          | 0           |
|                                                                            | Copper           | ppm      | ASTM D5185m |           | 2           | <1          | 2           |
|                                                                            | Tin              | ppm      | ASTM D5185m |           | 1           | <1          | <1          |
|                                                                            | Vanadium         | ppm      | ASTM D5185m |           | <1          | <1          | 0           |
|                                                                            | White Metal      | scalar   | *Visual     | NONE      | NONE        | NONE        | NONE        |
|                                                                            | Yellow Metal     | scalar   | *Visual     | NONE      | NONE        | NONE        | NONE        |
|                                                                            |                  |          |             |           |             |             |             |
| CONTAMINATION                                                              | Silicon          | ppm      | ASTM D5185m | >22       | 8           | 7           | 7           |
| There is no indication of any contamination in the oil.                    | Potassium        | ppm      | ASTM D5185m | >20       | 2           | 1           | 1           |
|                                                                            | Fuel             |          | WC Method   | >2.1      | <1.0        | <1.0        | <b>4.3</b>  |
|                                                                            | Water            |          | WC Method   | >0.21     | NEG         | NEG         | NEG         |
|                                                                            | Glycol           |          | WC Method   |           | NEG         | NEG         | NEG         |
|                                                                            | Soot %           | %        | *ASTM D7844 | >3        | 0.5         | 0.5         | 0.4         |
|                                                                            | Nitration        | Abs/cm   | *ASTM D7624 | >20       | 9.3         | 9.0         | 9.3         |
|                                                                            | Sulfation        | Abs/.1mm | *ASTM D7415 | >30       | 22.5        | 22.0        | 22.3        |
|                                                                            | 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                                                            | Sodium           | ppm      | ASTM D5185m | >31       | 3           | 1           | 3           |
| The BN result indicates that there is suitable alkalinity remaining in the | Boron            | ppm      | ASTM D5185m |           | 251         | 221         | 199         |
| oil. The condition of the oil is suitable for further service.             | Barium           | ppm      | ASTM D5185m |           | <1          | 0           | 0           |
|                                                                            | Molybdenum       | ppm      | ASTM D5185m |           | 244         | 250         | 228         |
|                                                                            | Manganese        | ppm      | ASTM D5185m |           | 1           | <1          | 1           |
|                                                                            | Magnesium        | ppm      | ASTM D5185m |           | 769         | 853         | 797         |
|                                                                            | Calcium          | ppm      | ASTM D5185m |           | 1380        | 1442        | 1440        |
|                                                                            | Phosphorus       | ppm      | ASTM D5185m |           | 960         | 894         | 852         |
|                                                                            | Zinc             | ppm      | ASTM D5185m |           | 1058        | 1101        | 1069        |
|                                                                            | Sulfur           | ppm      | ASTM D5185m |           | 3419        | 3096        | 3162        |
|                                                                            | Oxidation        | Abs/.1mm | *ASTM D7414 |           | 17.2        | 16.9        | 17.6        |
|                                                                            | Base Number (BN) | 0 0      | ASTM D2896  |           | 8.4         | 7.4         | 8.0         |
|                                                                            | Visc @ 100°C     | cSt      | ASTM D445   | 15.4      | 13.1        | 12.7        | <u>12.3</u> |







Certificate L2367

Report Id: JAMWIN [WUSCAR] 06152898 (Generated: 04/19/2024 11:52:21) Rev: 1

Laboratory Sample No.

Lab Number : 06152898 Unique Number: 10982976

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : JR0208209

Received **Tested** 

: 18 Apr 2024 Diagnosed Test Package : CONST (Additional Tests: TBN)

: 19 Apr 2024 : 19 Apr 2024 - Wes Davis

245 YARDMASTER COURT STEPHENSON, VA

US 22656-1761 Contact: PHIL DAUGHERTY pdaugherty@jamesriverequipment.com

JRE - STEPHENSON

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.

T: x: F: (540)693-2588

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)