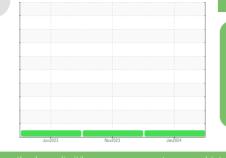


## **OIL ANALYSIS REPORT**

#### Sample Rating Trend







Machine Id D-236 Component Right Final Drive

### JOHN DEERE HY-GARD HYD/TRANS (--- GAL)

#### 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.

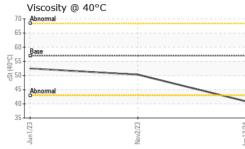
#### Fluid Condition

The condition of the oil is acceptable for the time in service.

| SAMPLE INFORM   | IATION   | method  | limit/base  | current  | history1   | history2  |
|---|--|---|---|--|--|---|
| Sample Number   |  | Client Info   |   | WC0878687  | WC0828486  | WC0780371   |
| Sample Date   |  | Client Info   |   | 12 Jan 2024  | 02 Nov 2023  | 01 Jun 2023   |
| Machine Age   | hrs  | Client Info   |   | 2264   | 2002   | 1441  |
| Oil Age   | hrs  | Client Info   |   | 262  | 1002   | 355   |
| Oil Changed   |  | Client Info   |   | Not Changd   | Changed  | Not Changd  |
| Sample Status   |  |   |   | NORMAL   | NORMAL   | NORMAL  |
| CONTAMINATION   | J  | method  | limit/base  | current  | history1   | history2  |
| Water   |  | WC Method   | >0.2  | NEG  | NEG  | NEG   |
| WEAR METALS   |  | method  | limit/base  | current  | history1   | history2  |
| Iron  | ppm  | ASTM D5185m   | >500  | 13   | 32   | 18  |
| Chromium  | ppm  | ASTM D5185m   | >10   | <1   | <1   | 0   |
| Nickel  | ppm  | ASTM D5185m   | >10   | 0  | 0  | 0   |
| Titanium  | ppm  | ASTM D5185m   |   | 0  | 0  | 0   |
| Silver  | ppm  | ASTM D5185m   |   | 0  | 0  | 0   |
| Aluminum  | ppm  | ASTM D5185m   | >25   | 2  | <1   | 1   |
| Lead  | ppm  | ASTM D5185m   | >25   | 0  | 0  | 0   |
| Copper  | ppm  | ASTM D5185m   | >50   | 0  | 0  | 0   |
| Tin   | ppm  | ASTM D5185m   | >10   | 0  | 0  | 0   |
| Vanadium  | ppm  | ASTM D5185m   |   | 0  | 0  | 0   |
| Cadmium   | ppm  | ASTM D5185m   |   | 0  | 0  | 0   |
| ADDITIVES   |  | method  | limit/base  | current  | history1   | history2  |
| Boron   | ppm  | ASTM D5185m   | 6   | 111  | <1   | <1  |
| Barium  | ppm  | ASTM D5185m   | 0   | 3  | 0  | 0   |
| Molybdenum  | ppm  | ASTM D5185m   | 0   | 0  | <1   | <1  |
| Manganese   | ppm  | ASTM D5185m   |   | 0  | <1   | <1  |
| Magnesium   | ppm  | ASTM D5185m   | 145   | 19   | 83   | 98  |
| Calcium   | ppm  | ASTM D5185m   | 3570  | 3221   | 3095   | 3489  |
| Phosphorus  | ppm  | ASTM D5185m   | 1290  | 1031   | 934  | 991   |
| Zinc  | ppm  | ASTM D5185m   | 1640  | 1360   | 1097   | 1233  |
| Sulfur  | ppm  | ASTM D5185m   |   | 3445   | 3144   | 4403  |
| CONTAMINANTS  |  |   |   |  |  |   |
|   |  | method  | limit/base  | current  | history1   | history2  |
| Silicon   | ppm  |   | >75   | current<br>18  | history1<br>5  | history2<br>5   |
|   | ppm<br>ppm   |   |   |  |  |   |
| Silicon   |  | ASTM D5185m   | >75   | 18   | 5  | 5   |
| Silicon<br>Sodium   | ppm  | ASTM D5185m<br>ASTM D5185m  | >75   | 18<br>0  | 5  | 5   |
| Silicon<br>Sodium<br>Potassium  | ppm  | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m   | >75<br>>20  | 18<br>0<br>2   | 5<br>2<br>0  | 5<br>2<br>0   |
| Silicon<br>Sodium<br>Potassium<br>VISUAL  | ppm<br>ppm   | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>method   | >75<br>>20<br>limit/base  | 18<br>0<br>2<br>current  | 5<br>2<br>0<br>history1  | 5<br>2<br>0<br>history2   |
| Silicon<br>Sodium<br>Potassium<br>VISUAL<br>White Metal<br>Yellow Metal<br>Precipitate  | ppm<br>ppm<br>scalar<br>scalar<br>scalar   | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>•Visual<br>*Visual<br>*Visual  | >75<br>>20<br>limit/base<br>NONE<br>NONE<br>NONE                                      | 18<br>0<br>2<br>current<br>NONE<br>NONE<br>NONE                                  | 5<br>2<br>0<br>history1<br>MODER<br>NONE<br>NONE   | 5<br>2<br>0<br>history2<br>MODER<br>NONE<br>NONE  |
| Silicon<br>Sodium<br>Potassium<br>VISUAL<br>White Metal<br>Yellow Metal<br>Precipitate<br>Silt  | ppm<br>ppm<br>scalar<br>scalar   | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>*Visual<br>*Visual<br>*Visual<br>*Visual   | >75<br>>20<br>limit/base<br>NONE<br>NONE  | 18<br>0<br>2<br>current<br>NONE<br>NONE<br>NONE<br>NONE                          | 5<br>2<br>0<br>history1<br>MODER<br>NONE   | 5<br>2<br>0<br>history2<br>MODER<br>NONE<br>NONE<br>NONE  |
| Silicon<br>Sodium<br>Potassium<br>VISUAL<br>White Metal<br>Yellow Metal<br>Precipitate  | ppm<br>ppm<br>scalar<br>scalar<br>scalar   | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>•Visual<br>*Visual<br>*Visual  | >75<br>>20<br>limit/base<br>NONE<br>NONE<br>NONE                                      | 18<br>0<br>2<br>current<br>NONE<br>NONE<br>NONE                                  | 5<br>2<br>0<br>history1<br>MODER<br>NONE<br>NONE   | 5<br>2<br>0<br>history2<br>MODER<br>NONE<br>NONE  |
| Silicon<br>Sodium<br>Potassium<br>VISUAL<br>White Metal<br>Yellow Metal<br>Precipitate<br>Silt  | ppm<br>ppm<br>scalar<br>scalar<br>scalar<br>scalar   | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>*Visual<br>*Visual<br>*Visual<br>*Visual   | >75<br>>20<br>limit/base<br>NONE<br>NONE<br>NONE<br>NONE                              | 18<br>0<br>2<br>current<br>NONE<br>NONE<br>NONE<br>NONE                          | 5<br>2<br>0<br>history1<br>MODER<br>NONE<br>NONE<br>NONE                                       | 5<br>2<br>0<br>history2<br>MODER<br>NONE<br>NONE<br>NONE  |
| Silicon<br>Sodium<br>Potassium<br>VISUAL<br>White Metal<br>Yellow Metal<br>Precipitate<br>Silt<br>Debris                                    | ppm<br>ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar                               | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual                                  | >75<br>>20<br>limit/base<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE                      | 18<br>0<br>2<br>current<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE                  | 5<br>2<br>0<br>history1<br>MODER<br>NONE<br>NONE<br>NONE<br>NONE                               | 5<br>2<br>0<br>history2<br>MODER<br>NONE<br>NONE<br>NONE<br>NONE                                  |
| Silicon<br>Sodium<br>Potassium<br>VISUAL<br>White Metal<br>Yellow Metal<br>Precipitate<br>Silt<br>Debris<br>Sand/Dirt                       | ppm<br>ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar                     | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual                       | >75<br>>20<br>Iimit/base<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE                      | 18<br>0<br>2<br>current<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE                  | 5<br>2<br>0<br>history1<br>MODER<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE                       | 5<br>2<br>0<br>history2<br>MODER<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE                          |
| Silicon<br>Sodium<br>Potassium<br>VISUAL<br>White Metal<br>Yellow Metal<br>Precipitate<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance         | ppm<br>ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar           | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual            | >75<br>>20<br>Iimit/base<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE      | 18<br>0<br>2<br>current<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NORML | 5<br>2<br>0<br>history1<br>MODER<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NO | 5<br>2<br>0<br>history2<br>MODER<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NO    |
| Silicon<br>Sodium<br>Potassium<br>VISUAL<br>White Metal<br>Yellow Metal<br>Precipitate<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance<br>Odor | ppm<br>ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual | >75<br>20<br>imit/base<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NON | 18<br>0<br>2<br>current<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NORE<br>NORML | 5<br>2<br>0<br>history1<br>MODER<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NORML<br>NORML     | 5<br>2<br>0<br><u>history2</u><br>MODER<br>NONE<br>NONE<br>NONE<br>NONE<br>NORE<br>NORML<br>NORML |



# **OIL ANALYSIS REPORT**



|   | FLUID PROPE  | RTIES  | method  | limit/base                          | current  | history1                           | history2   |
|---|--|--|---|-------------------------------------|----------|------------------------------------|--|
|   | Visc @ 40°C  | cSt  | ASTM D445   | 57.0                                | 40.9     | 50.3                               | 52.5   |
|   | SAMPLE IMAG  | BES  | method  | limit/base                          | current  | history1                           | history2   |
|   | Color  |  |   |                                     | no image | no image                           | no image   |
| Jan 12/24   | Bottom   |  |   |                                     | no image | no image                           | no image   |
|   | GRAPHS   |  |   |                                     |          |                                    |  |
|   | Ferrous Alloys   |  |   |                                     |          |                                    |  |
|   | Non-ferrous Me   |  |   | 4 Jan1224                           |          |                                    |  |
|   | Jun1/23  | Nov2/23  |   | Jan12/24                            |          |                                    |  |
| (J=1017) + 69 °   | Viscosity @ 40°  | DC<br>Nov2233                                  |   | Jan 1224                            |          |                                    |  |
| Laboratory<br>Sample No.<br>Lab Number<br>Unique Number<br>Test Package<br>s sample report, c | : WearCheck USA<br>: WC0878687<br>: 06064627<br>: 10836009<br>: CONST<br>contact Customer Se<br>outlade of the JSC | Recieve<br>Diagnos<br>Diagnos<br>ervice at 1-6 | d : 18 .<br>sed : 21 .<br>stician : Dor<br>800-237-1369 | Jan 2024<br>Jan 2024<br>n Baldridge |          | 4201 FAYI<br>Contac<br>.DIXON@DUKE | JKE LAZZARA<br>ETTEVILLE RD<br>RALEIGH, NC<br>US 27603<br>tt: NICK DIXON<br>ELAZZAM.COM<br>(010)760 7707 |

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)

Certificate L2367

F:

T: (919)760-7797