



OIL ANALYSIS REPORT

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



Machine Id
JOHN DEERE 210G 1FF210GXVKF527613
 Component
Hydraulic System
 Fluid
HITACHI HYDRAULIC SUPER EX 46HN (63 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | LEC0049030 | LEC0040728 | LEC0026956 |
| Sample Date | | Client Info | | 24 May 2024 | 23 Jul 2023 | 30 Dec 2021 |
| Machine Age | hrs | Client Info | | 4179 | 3574 | 2280 |
| Oil Age | hrs | Client Info | | 4179 | 3574 | 2280 |
| Filter Age | hrs | Client Info | | 500 | 1883 | 397 |
| Oil Changed | | Client Info | | Not Changed | Not Changed | Not Changed |
| Filter Changed | | Client Info | | Changed | Changed | Not Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|-------------|------|------|
| PQ | | ASTM D8184 | >50 | 15 | 15 | 11 |
| Iron | ppm | ASTM D5185m | >32 | 7 | 4 | 2 |
| Chromium | ppm | ASTM D5185m | >9 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >5 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >9 | 1 | 2 | <1 |
| Lead | ppm | ASTM D5185m | >28 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >50 | 7 | 6 | <1 |
| Tin | ppm | ASTM D5185m | >5 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

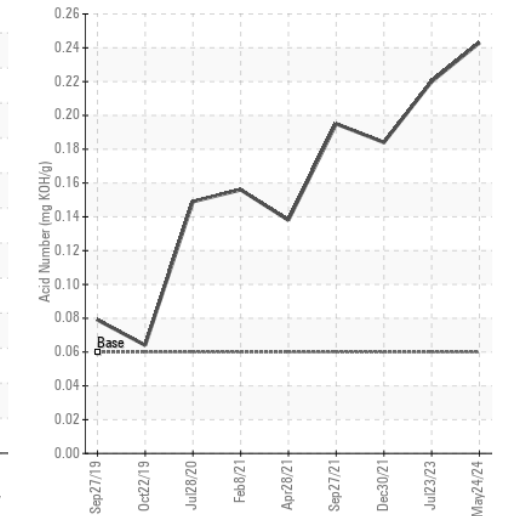
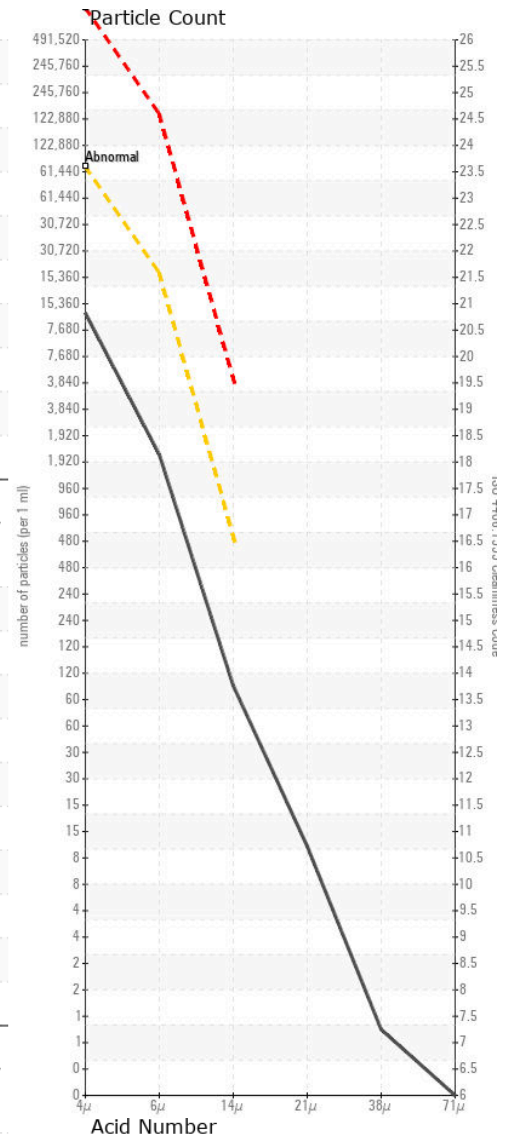
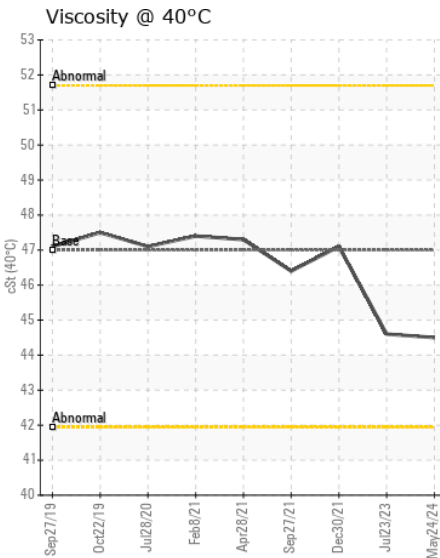
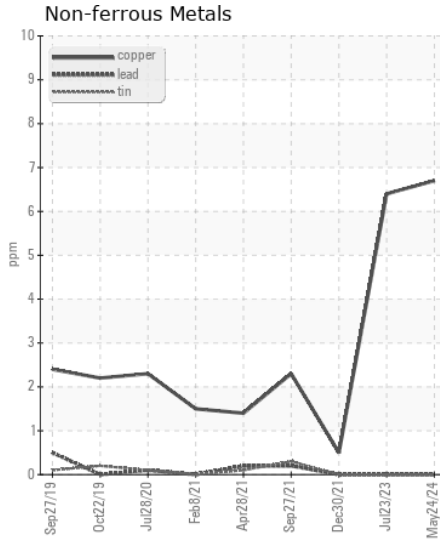
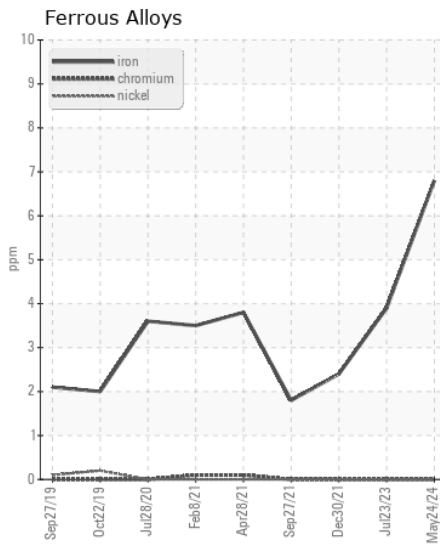
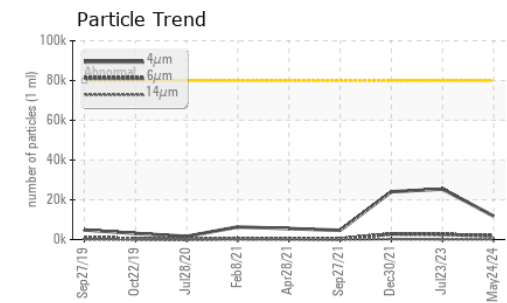
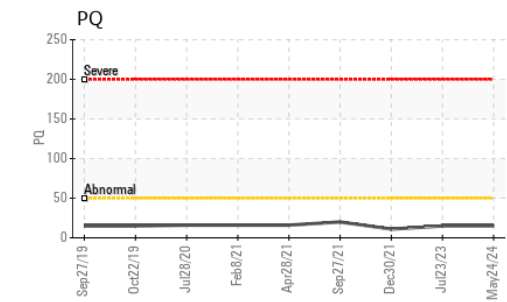
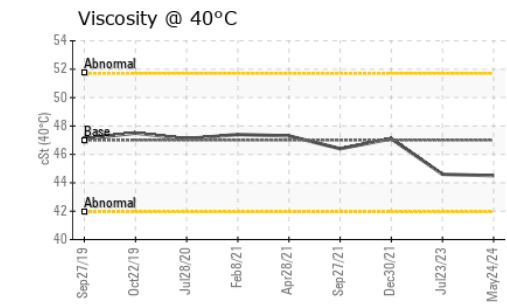
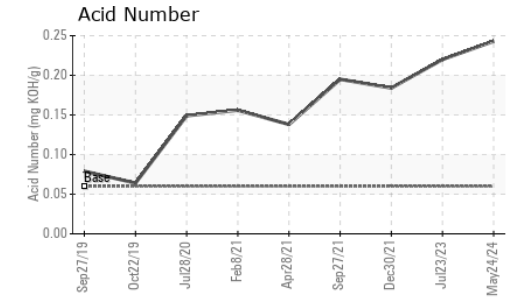
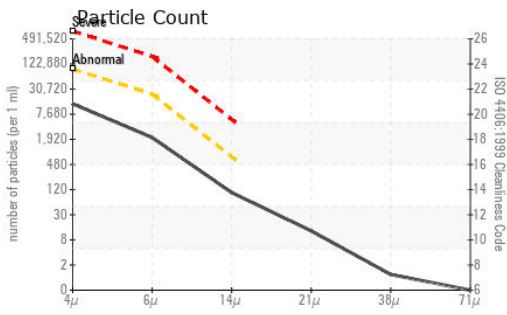
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

| | | | | | | |
|------------------|--------|--------------|-----------|-----------------|----------|----------|
| Silicon | ppm | ASTM D5185m | >11 | 2 | 1 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | <1 | 0 | 0 |
| Water | | WC Method | >0.075 | NEG | NEG | NEG |
| Particles >4µm | | ASTM D7647 | >80000 | 11822 | 25395 | 24061 |
| Particles >6µm | | ASTM D7647 | >20000 | 1854 | 2583 | 2805 |
| Particles >14µm | | ASTM D7647 | >640 | 90 | 56 | 173 |
| Particles >21µm | | ASTM D7647 | >160 | 11 | 21 | 39 |
| Particles >38µm | | ASTM D7647 | >40 | 1 | 2 | 3 |
| Particles >71µm | | ASTM D7647 | >10 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >23/21/16 | 21/18/14 | 22/19/13 | 22/19/15 |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE | LIGHT |
| 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 | >0.075 | NEG | NEG | NEG |

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|-------------|------|--------------|------|-------|
| Sodium | ppm | ASTM D5185m | >21 | 1 | <1 | 0 |
| Boron | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | | 4 | 0 | 0 |
| Calcium | ppm | ASTM D5185m | | 19 | 8 | 2 |
| Phosphorus | ppm | ASTM D5185m | 827 | 406 | 464 | 442 |
| Zinc | ppm | ASTM D5185m | 0 | 58 | 47 | 7 |
| Sulfur | ppm | ASTM D5185m | 13 | 615 | 617 | 85 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.06 | 0.243 | 0.22 | 0.184 |
| Visc @ 40°C | cSt | ASTM D445 | 47 | 44.5 | 44.6 | 47.1 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0049030 **Received** : 31 May 2024
Lab Number : 06196565 **Tested** : 03 Jun 2024
Unique Number : 11058688 **Diagnosed** : 03 Jun 2024 - Wes Davis
Test Package : CONST (Additional Tests: PQ)

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)

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