



OIL ANALYSIS REPORT

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



Area
{unassigned}
Machine Id
JOHN DEERE 644K 1DW644KZJKF694571
Component
Hydraulic System
Fluid
JOHN DEERE HYDRAU (28 GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | LEC0049574 | LEC0043744 | LEC0027572 |
| Sample Date | | Client Info | | 10 Apr 2024 | 01 Aug 2023 | 16 Feb 2022 |
| Machine Age | hrs | Client Info | | 4025 | 3330 | 1870 |
| Oil Age | hrs | Client Info | | 4025 | 3330 | 1870 |
| Filter Age | hrs | Client Info | | 695 | 3330 | 1870 |
| Oil Changed | | Client Info | | Not Changd | Not Changd | Not Changd |
| Filter Changed | | Client Info | | Changd | Not Changd | Not Changd |
| Sample Status | | | | MARGINAL | MARGINAL | NORMAL |

WEAR

The chromium level is abnormal. All other component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|-------------|------|
| PQ | | ASTM D8184 | >50 | 22 | 19 | 16 |
| Iron | ppm | ASTM D5185m | >71 | 25 | 28 | 15 |
| Chromium | ppm | ASTM D5185m | >11 | ▲ 12 | ▲ 13 | 11 |
| Nickel | ppm | ASTM D5185m | >6 | 0 | <1 | <1 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >11 | <1 | 2 | 2 |
| Lead | ppm | ASTM D5185m | >13 | 0 | 0 | <1 |
| Copper | ppm | ASTM D5185m | >21 | 3 | 3 | 3 |
| Tin | ppm | ASTM D5185m | >5 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

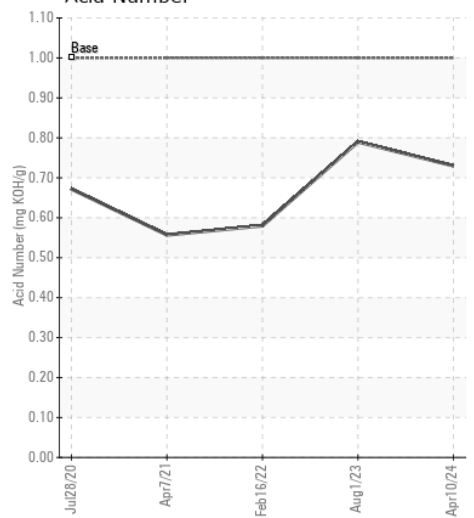
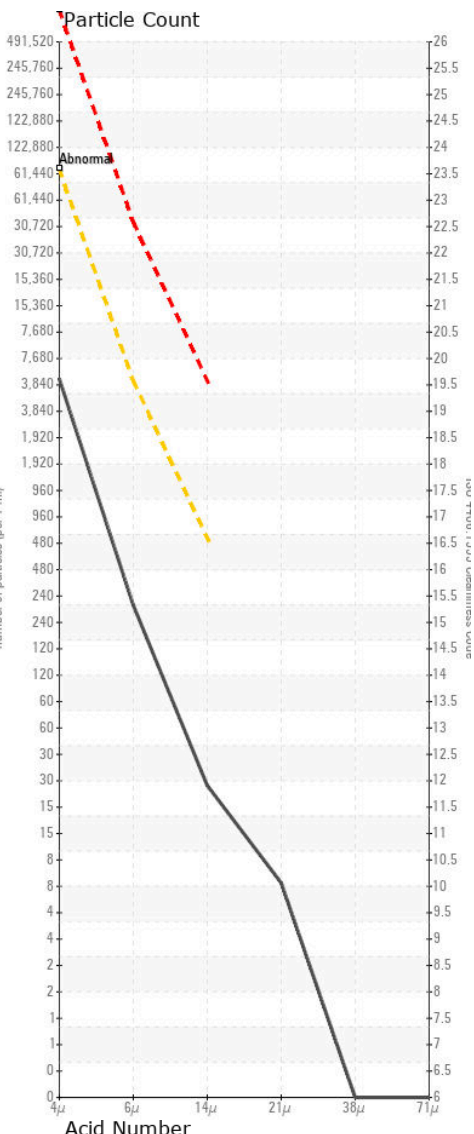
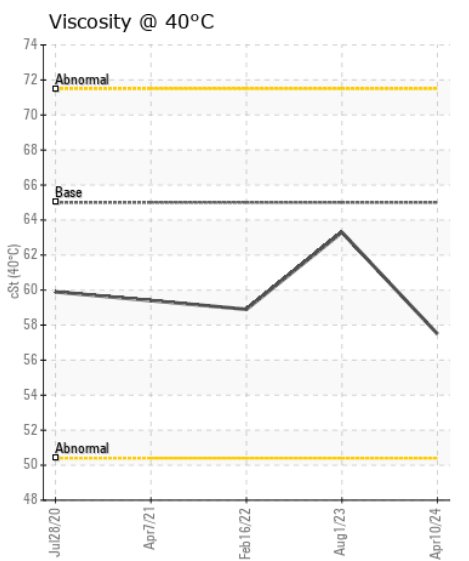
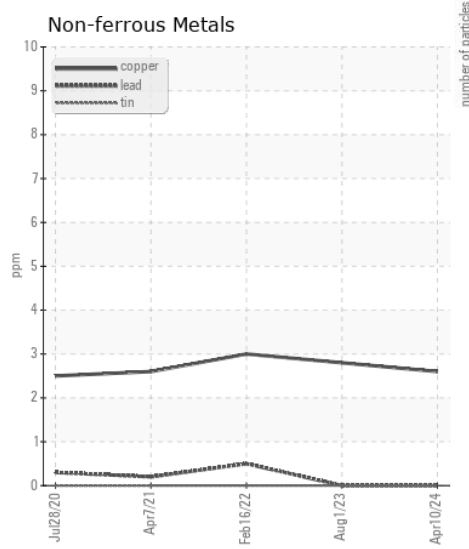
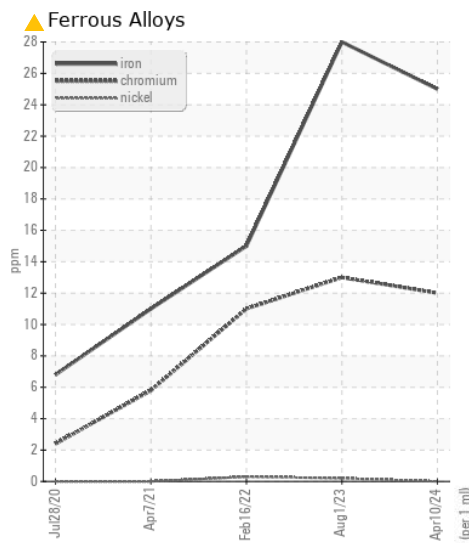
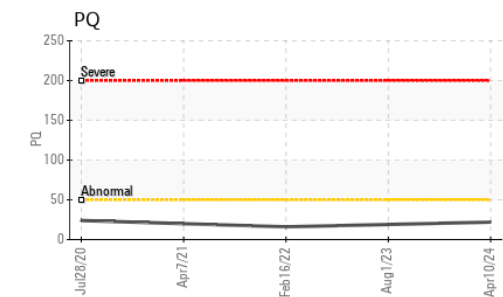
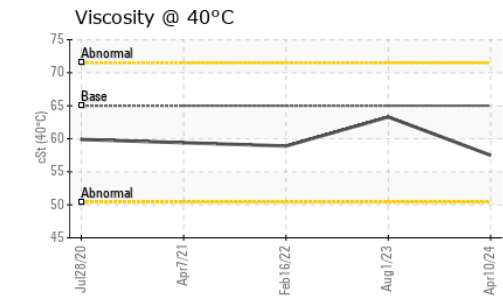
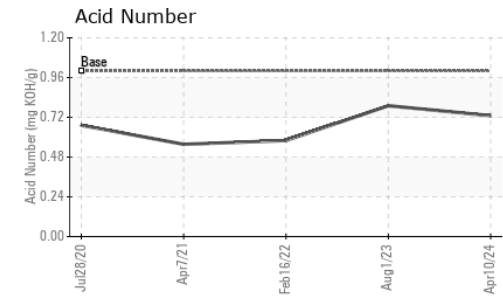
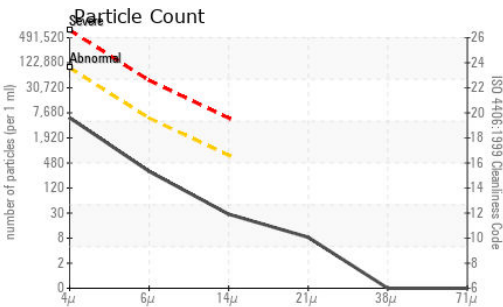
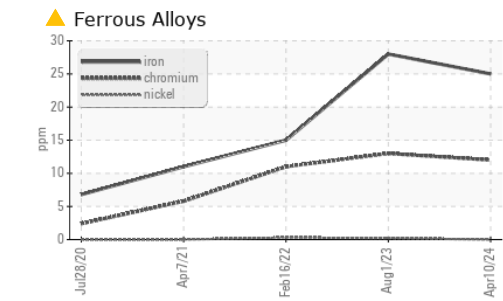
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|--------|--------------|-----------|-----------------|----------|----------|
| Silicon | ppm | ASTM D5185m | >24 | 3 | 4 | 3 |
| Potassium | ppm | ASTM D5185m | >20 | 3 | 7 | 5 |
| Water | | WC Method | >0.075 | NEG | NEG | NEG |
| Particles >4µm | | ASTM D7647 | >80000 | 5118 | 3380 | 12142 |
| Particles >6µm | | ASTM D7647 | >5000 | 265 | 111 | 389 |
| Particles >14µm | | ASTM D7647 | >640 | 25 | 6 | 26 |
| Particles >21µm | | ASTM D7647 | >160 | 7 | 1 | 5 |
| Particles >38µm | | ASTM D7647 | >40 | 0 | 0 | 0 |
| Particles >71µm | | ASTM D7647 | >10 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >23/19/16 | 20/15/12 | 19/14/10 | 21/16/12 |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | LIGHT | 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 | >0.075 | 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 | 5 | 2 | 3 |
| Boron | ppm | ASTM D5185m | | 39 | 50 | 0 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 1 | 2 | <1 |
| Manganese | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 8 | 15 | 2 |
| Calcium | ppm | ASTM D5185m | 87 | 455 | 550 | 95 |
| Phosphorus | ppm | ASTM D5185m | 727 | 579 | 670 | 606 |
| Zinc | ppm | ASTM D5185m | 900 | 713 | 906 | 859 |
| Sulfur | ppm | ASTM D5185m | 1500 | 1820 | 2167 | 1522 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 1.0 | 0.73 | 0.79 | 0.58 |
| Visc @ 40°C | cSt | ASTM D445 | 65 | 57.5 | 63.3 | 58.9 |



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0049574 **Received** : 15 Apr 2024
Lab Number : 06149501 **Tested** : 16 Apr 2024
Unique Number : 10979579 **Diagnosed** : 17 Apr 2024 - Don Baldrige
Test Package : CONST (Additional Tests: PQ)

LESLIE EQUIPMENT COMPANY
 105 TENNIS CENTER DR.
 MARIETTA, OH
 US 45750-9765
 Contact: LEANNE KENDALL
 KendalLeanne@lec1.com
 T:
 F: (740)373-5570

Certificate L2367
 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)