



Machine Id
JOHN DEERE 644K 1dw644kzka0632734
 Component
Transmission (Auto)
 Fluid
JOHN DEERE HY-GARD HYD/TRANS (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | JR0183452 | JR0098227 | JR0197927 |
| Sample Date | | Client Info | | 16 Jul 2024 | 18 Apr 2024 | 07 Dec 2023 |
| Machine Age | hrs | Client Info | | 13428 | 13409 | 13144 |
| Oil Age | hrs | Client Info | | 1428 | 1409 | 0 |
| Filter Age | hrs | Client Info | | 0 | 1409 | 0 |
| Oil Changed | | Client Info | | Not Changd | Not Changd | N/A |
| Filter Changed | | Client Info | | Not Changd | N/A | N/A |
| Sample Status | | | | ATTENTION | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| PQ | | ASTM D8184 | >50 | 21 | 15 | 14 |
| Iron | ppm | ASTM D5185m | >160 | 20 | 13 | 21 |
| Chromium | ppm | ASTM D5185m | >5 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >5 | <1 | <1 | <1 |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >5 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >50 | 3 | 2 | 2 |
| Lead | ppm | ASTM D5185m | >50 | <1 | <1 | <1 |
| Copper | ppm | ASTM D5185m | >225 | 4 | 3 | 3 |
| Tin | ppm | ASTM D5185m | >10 | <1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

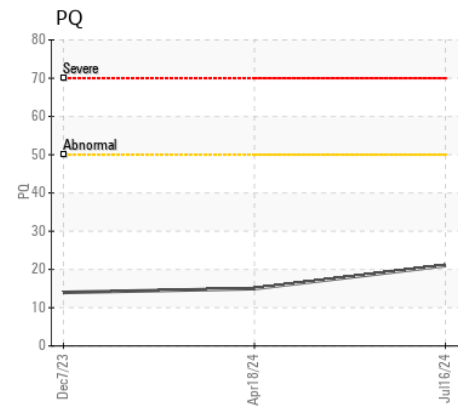
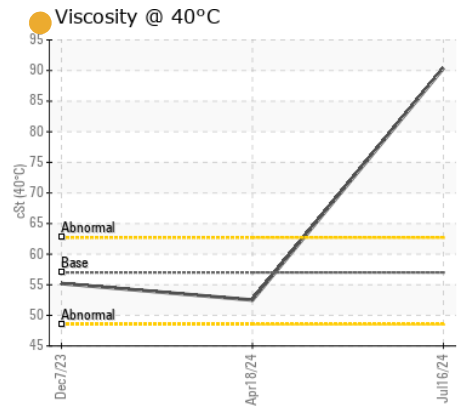
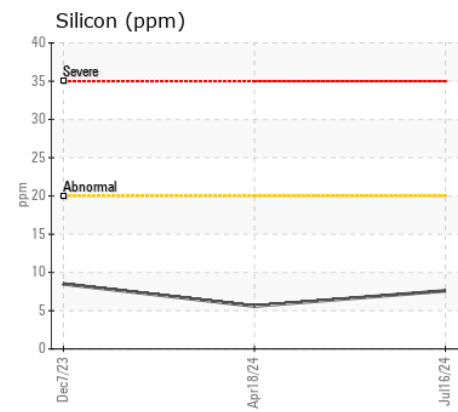
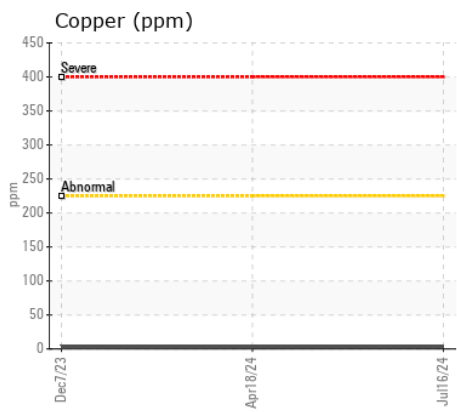
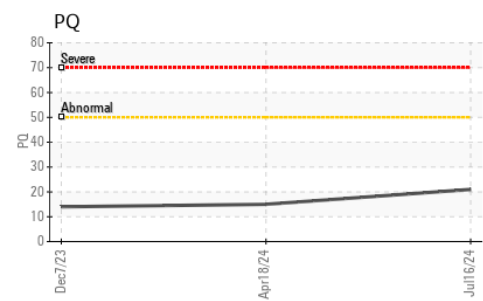
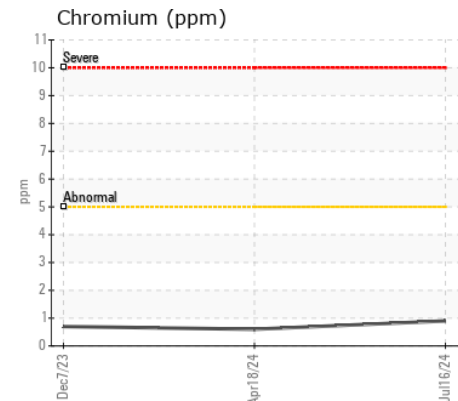
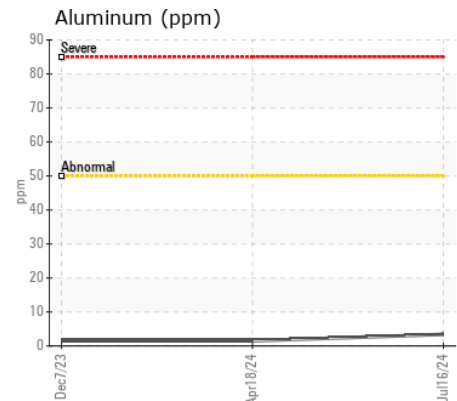
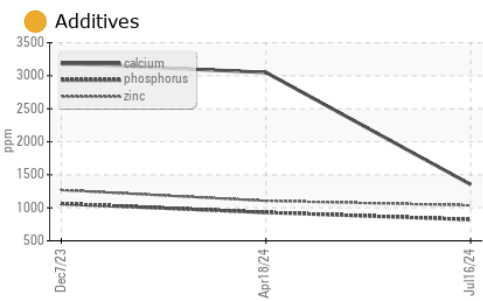
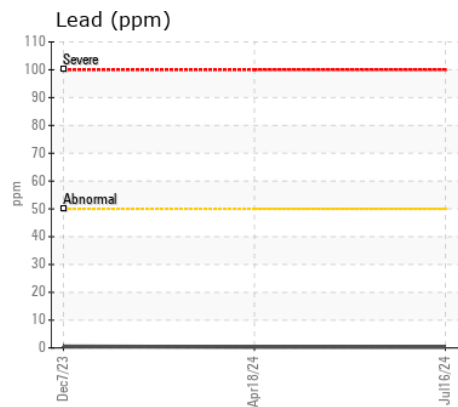
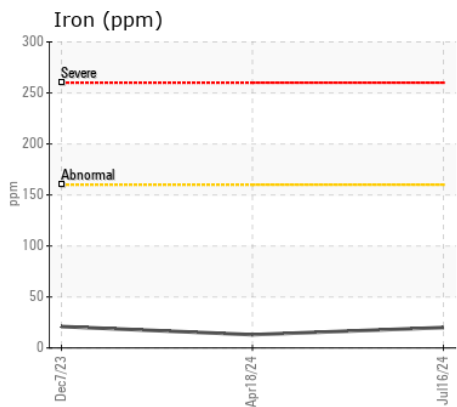
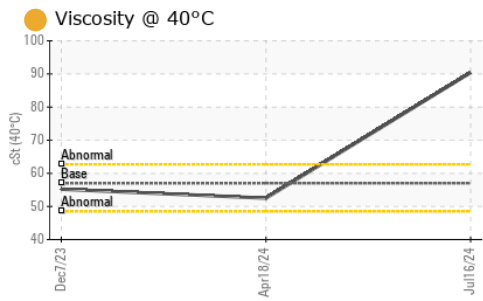
There is no indication of any contamination in the fluid.

| | | | | | | |
|------------------|--------|-------------|-------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >20 | 8 | 6 | 8 |
| Potassium | ppm | ASTM D5185m | >20 | 3 | 1 | <1 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| 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 | >0.1 | NEG | NEG | NEG |

FLUID CONDITION

The fluid viscosity is higher than normal. This plus the additive levels indicates the addition of a different brand, or type of oil. Confirm oil type.

| | | | | | | |
|-------------|-----|-------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185m | | 0 | 4 | 6 |
| Boron | ppm | ASTM D5185m | 6 | 286 | 6 | 6 |
| Barium | ppm | ASTM D5185m | 0 | 2 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | 235 | 1 | 2 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 145 | 718 | 86 | 83 |
| Calcium | ppm | ASTM D5185m | 3570 | 1352 | 3049 | 3187 |
| Phosphorus | ppm | ASTM D5185m | 1290 | 821 | 929 | 1062 |
| Zinc | ppm | ASTM D5185m | 1640 | 1036 | 1105 | 1269 |
| Sulfur | ppm | ASTM D5185m | | 3012 | 3290 | 3374 |
| Visc @ 40°C | cSt | ASTM D445 | 57.0 | 90.4 | 52.5 | 55.2 |



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0183452 **Received** : 17 Jul 2024
Lab Number : 06239336 **Tested** : 18 Jul 2024
Unique Number : 11128170 **Diagnosed** : 19 Jul 2024 - Sean Felton
Test Package : MOBCE (Additional Tests: PQ)

JRE - HOPE MILLS/FAYETTEVILLE
 5039 HWY 301 SOUTH
 HOPE MILLS, NC
 US 28348
 Contact: FAYETTEVILLE SHOP
 stephen.mullis@jamesriverequipment.com; canastasio@wearcheck.com
 T:
 F:

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)