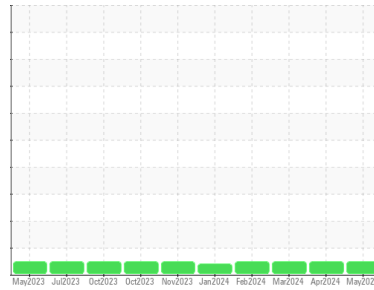




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

JOHN DEERE 624L 624L UNIT 1

Component

Transmission (Manual)

Fluid

TDH FLUID SAE 75W80 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please note that this is a corrected copy for laboratory data updates.

Wear

All component wear rates are normal.

Contamination

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

Fluid Condition

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

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|--------------------|-------------|-------------|------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | | PE0003844 | PE0003811 | PE0003828 |
| Sample Date | Client Info | | | 14 May 2024 | 05 Apr 2024 | 07 Mar 2024 |
| Machine Age | hrs | Client Info | | 7596 | 7316 | 7000 |
| Oil Age | hrs | Client Info | | 7316 | 7000 | 6721 |
| Oil Changed | Client Info | | | N/A | N/A | N/A |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---------------|-----------|--------|------------|------------|----------|----------|
| Water | WC Method | | >0.1 | NEG | NEG | NEG |

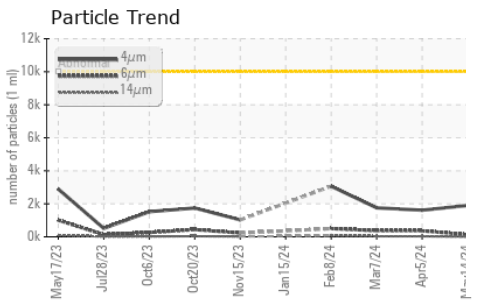
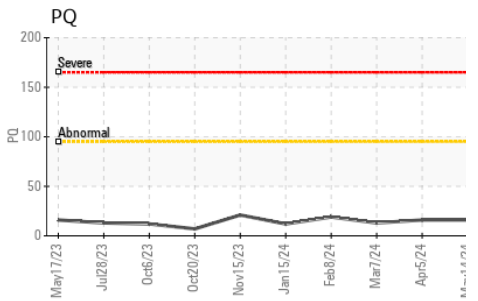
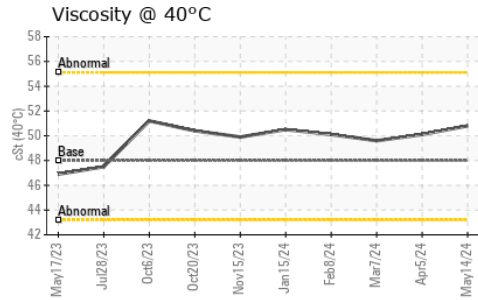
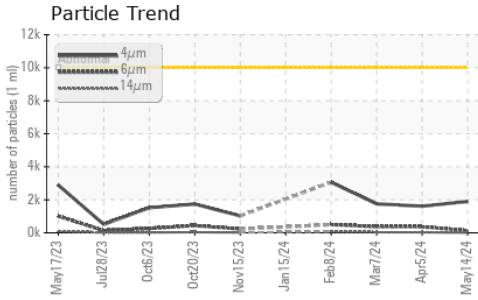
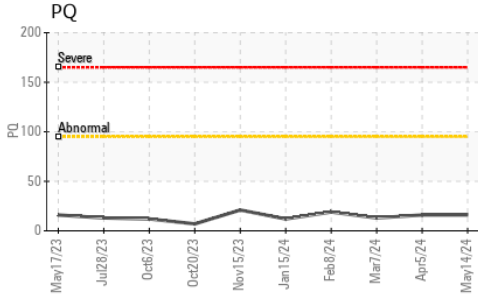
| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|-------------|------------|--------------|----------|----------|
| PQ | | ASTM D8184 | >95 | 16 | 16 | 13 |
| Iron | ppm | ASTM D5185m | >200 | 15 | 21 | 25 |
| Chromium | ppm | ASTM D5185m | >5 | <1 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >5 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Silver | ppm | ASTM D5185m | >7 | <1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | 1 | <1 | 2 |
| Lead | ppm | ASTM D5185m | >45 | <1 | 0 | 2 |
| Copper | ppm | ASTM D5185m | >225 | 1 | <1 | 2 |
| Tin | ppm | ASTM D5185m | >10 | <1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Cadmium | ppm | ASTM D5185m | | <1 | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | 10 | 0 | 0 | <1 |
| Barium | ppm | ASTM D5185m | 10 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 10 | <1 | 0 | <1 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 100 | 85 | 92 | 86 |
| Calcium | ppm | ASTM D5185m | 3500 | 3172 | 3233 | 3208 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 985 | 1024 | 1027 |
| Zinc | ppm | ASTM D5185m | 1150 | 1012 | 1111 | 1000 |
| Sulfur | ppm | ASTM D5185m | 5000 | 3702 | 3801 | 3824 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m | >125 | 6 | 9 | 10 |
| Sodium | ppm | ASTM D5185m | | <1 | 0 | 1 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|-------------------|--|--------------|------------|-----------------|----------|----------|
| Particles >4µm | | ASTM D7647 | >10000 | 1901 | 1610 | 1756 |
| Particles >6µm | | ASTM D7647 | >2500 | 128 | 363 | 374 |
| Particles >14µm | | ASTM D7647 | >320 | 7 | 32 | 34 |
| Particles >21µm | | ASTM D7647 | >80 | 3 | 9 | 9 |
| Particles >38µm | | ASTM D7647 | >20 | 0 | 1 | 0 |
| Particles >71µm | | ASTM D7647 | >4 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >20/18/15 | 18/14/10 | 18/16/12 | 18/16/12 |

OIL ANALYSIS REPORT

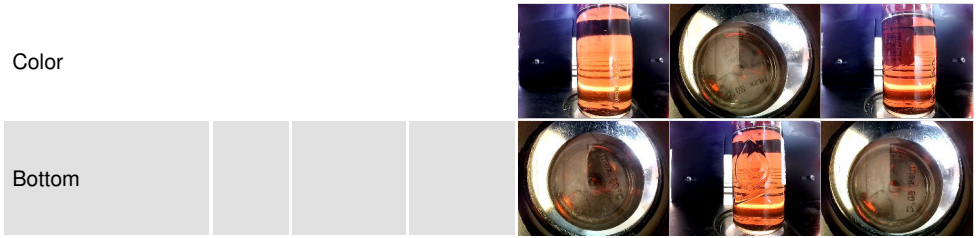


| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 2.25 | 1.35 | 1.29 | 1.32 |

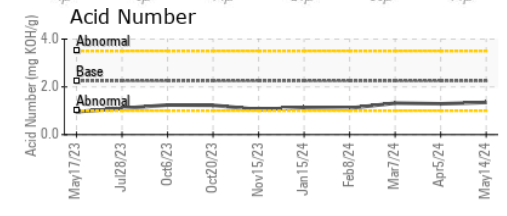
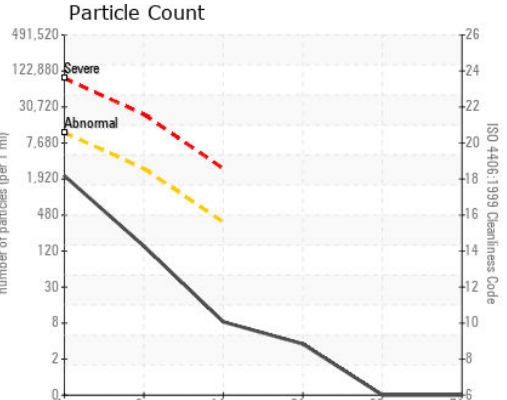
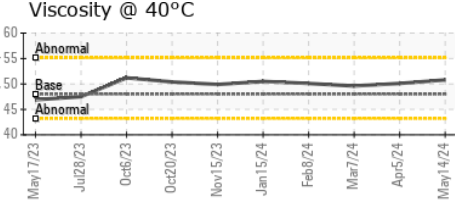
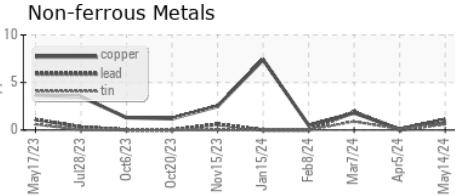
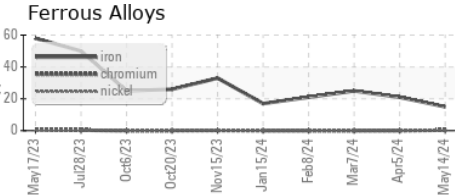
| VISUAL | | method | limit/base | current | history1 | history2 |
|------------------|--------|---------|------------|--------------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | LIGHT | 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 |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|------------------|-----|-----------|------------|-------------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 48 | 50.8 | 50.1 | 49.6 |

| SAMPLE IMAGES | | method | limit/base | current | history1 | history2 |
|---------------|--|--------|------------|---------|----------|----------|
|---------------|--|--------|------------|---------|----------|----------|



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PE0003844
Lab Number : **06182662**
Unique Number : 11033988
Test Package : CONST (Additional Tests: ICP, KV40, PQ, PrtCount, SCREEN)

Received : 17 May 2024
Tested : 22 May 2024
Diagnosed : 22 May 2024 - Don Baldrige

MORNING STAR DAIRY
 801 FM 694
 DALHART, TX
 US 79022
 Contact: JOHN DEVRIES
 johndevries@gmail.com

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)