

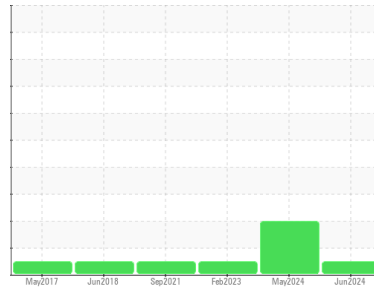


OIL ANALYSIS REPORT



Area
OKLAHOMA/102/EG - BACKHOE LOADER
 Machine Id
53.513L [OKLAHOMA^102^EG - BACKHOE LOADER]
 Component
Hydraulic System
 Fluid
MOBIL MOBILTRANS AST 30 (--- GAL)

Sample Rating Trend



NORMAL



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: 5726 hours)

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil. 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 oil is suitable for further service.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | WC0925208 | WC0864414 | WC0603280 |
| Sample Date | Client Info | | 10 Jun 2024 | 03 May 2024 | 04 Feb 2023 |
| Machine Age | hrs | Client Info | 5726 | 5634 | 4697 |
| Oil Age | hrs | Client Info | 3420 | 3420 | 2280 |
| Oil Changed | Client Info | | N/A | N/A | N/A |
| Sample Status | | | NORMAL | ABNORMAL | NORMAL |

CONTAMINATION

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

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|-----------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m >20 | 8 | 9 | 8 |
| Chromium | ppm | ASTM D5185m >10 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m >10 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | <1 | <1 | <1 |
| Silver | ppm | ASTM D5185m | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >10 | 5 | 6 | 4 |
| Lead | ppm | ASTM D5185m >10 | 4 | 4 | 5 |
| Copper | ppm | ASTM D5185m >75 | 2 | 5 | 2 |
| Tin | ppm | ASTM D5185m >10 | 0 | <1 | <1 |
| Antimony | ppm | ASTM D5185m | --- | --- | --- |
| Vanadium | ppm | ASTM D5185m | <1 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | <1 | 0 | 0 |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|-------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | 25 | 29 | 29 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 2 | 2 | 3 |
| Manganese | ppm | ASTM D5185m | <1 | 1 | <1 |
| Magnesium | ppm | ASTM D5185m | 39 | 44 | 41 |
| Calcium | ppm | ASTM D5185m | 2565 | 2522 | 2320 |
| Phosphorus | ppm | ASTM D5185m | 938 | 922 | 855 |
| Zinc | ppm | ASTM D5185m | 1154 | 1158 | 1085 |
| Sulfur | ppm | ASTM D5185m | 4788 | 4716 | 4108 |

CONTAMINANTS

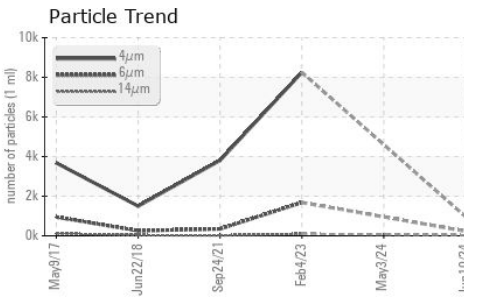
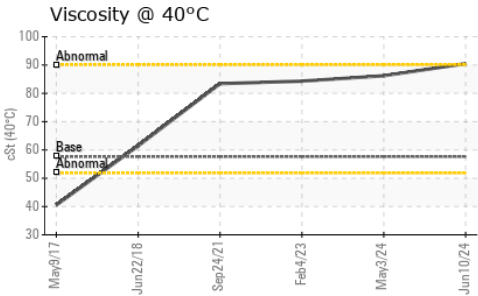
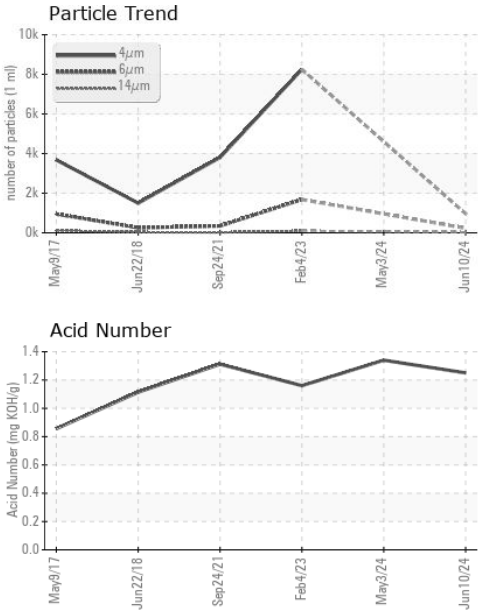
| | method | limit/base | current | history1 | history2 |
|-----------|--------|-----------------|-----------|----------|----------|
| Silicon | ppm | ASTM D5185m >20 | 12 | 15 | 12 |
| Sodium | ppm | ASTM D5185m | 4 | 4 | 2 |
| Potassium | ppm | ASTM D5185m >20 | 2 | <1 | 4 |

FLUID CLEANLINESS

| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-----------------|----------|----------|
| Particles >4µm | ASTM D7647 | | 963 | --- | 8250 |
| Particles >6µm | ASTM D7647 | >2500 | 230 | --- | 1685 |
| Particles >14µm | ASTM D7647 | >640 | 29 | --- | 98 |
| Particles >21µm | ASTM D7647 | >160 | 8 | --- | 24 |
| Particles >38µm | ASTM D7647 | >40 | 0 | --- | 2 |
| Particles >71µm | ASTM D7647 | >10 | 0 | --- | 0 |
| Oil Cleanliness | ISO 4406 (c) | >--/18/16 | 17/15/12 | --- | 20/18/14 |



OIL ANALYSIS REPORT

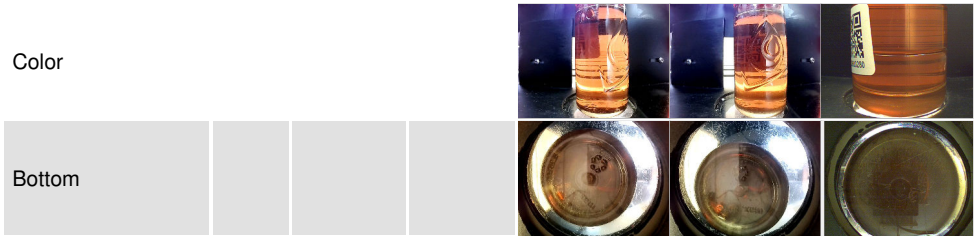


| FLUID DEGRADATION | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 1.25 | 1.34 | 1.16 |

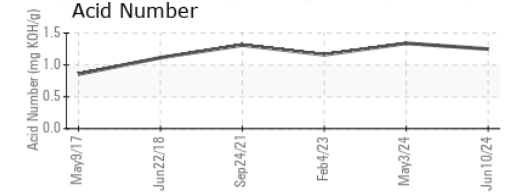
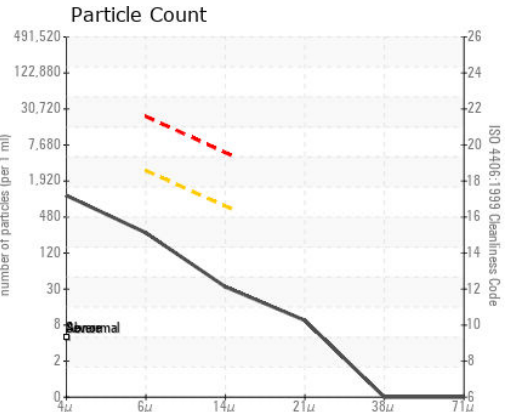
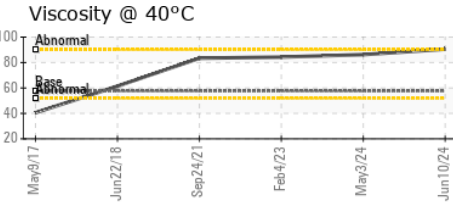
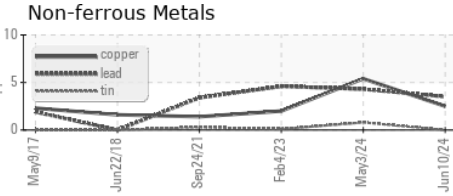
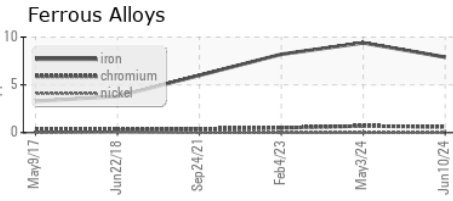
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | ▲ MODER | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.1 | NEG | 0.2% |
| Free Water | scalar | *Visual | | NEG | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|-------------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 90.5 | 86.2 | 84.3 |

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



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0925208
Lab Number : 06212292
Unique Number : 11085156
Test Package : CONST

Received : 17 Jun 2024
Tested : 19 Jun 2024
Diagnosed : 19 Jun 2024 - Don Baldrige

SHERWOOD CONSTRUCTION CO INC
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 WICHITA, KS
 US 67213
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 doug.king@sherwood.net
 T: (316)617-3161
 F: x:

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)