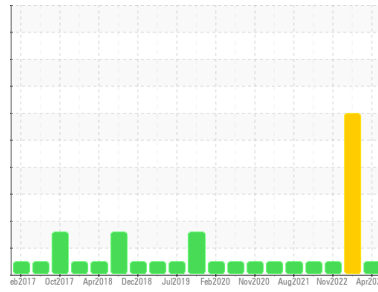




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
VAC 1178645-4 SOUTH (S/N 5589594)
 Component
Pump
 Fluid
USPI VAC 100 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

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

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 | USPM36817 | USPM27382 | USPM23647 |
| Sample Date | Client Info | 23 Apr 2024 | 13 Jul 2023 | 17 Nov 2022 |
| Machine Age | hrs | Client Info | 0 | 0 |
| Oil Age | hrs | Client Info | 0 | 0 |
| Oil Changed | Client Info | N/A | N/A | N/A |
| Sample Status | | NORMAL | ABNORMAL | NORMAL |

WEAR METALS

| method | limit/base | current | history1 | history2 | |
|----------|------------|-----------------|------------|----------|-----|
| Iron | ppm | ASTM D5185m >90 | 2 | 2 | 0 |
| Chromium | ppm | ASTM D5185m >5 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m >5 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m >3 | 0 | <1 | 0 |
| Silver | ppm | ASTM D5185m >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >7 | 0 | <1 | 0 |
| Lead | ppm | ASTM D5185m >12 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m >30 | 0 | 1 | 0 |
| Tin | ppm | ASTM D5185m >9 | 0 | 0 | <1 |
| Antimony | ppm | ASTM D5185m | --- | --- | --- |
| Vanadium | ppm | ASTM D5185m | 0 | <1 | 0 |
| Cadmium | ppm | ASTM D5185m | 0 | 0 | 0 |

ADDITIVES

| method | limit/base | current | history1 | history2 | |
|------------|------------|------------------|--------------|----------|-----|
| Boron | ppm | ASTM D5185m 0 | 0 | 0 | <1 |
| Barium | ppm | ASTM D5185m 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m 0 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m 0 | <1 | 2 | 0 |
| Calcium | ppm | ASTM D5185m 0 | <1 | 0 | 0 |
| Phosphorus | ppm | ASTM D5185m 1800 | 1008 | 488 | 836 |
| Zinc | ppm | ASTM D5185m 0 | 0 | 0 | 0 |
| Sulfur | ppm | ASTM D5185m 0 | 14 | 283 | 15 |

CONTAMINANTS

| method | limit/base | current | history1 | history2 | |
|-----------|------------|------------------|--------------|----------|-------|
| Silicon | ppm | ASTM D5185m >60 | 2 | 11 | 8 |
| Sodium | ppm | ASTM D5185m | 0 | 2 | 0 |
| Potassium | ppm | ASTM D5185m >20 | 0 | 1 | 0 |
| Water | % | ASTM D6304 >.1 | 0.050 | 0.145 | 0.024 |
| ppm Water | ppm | ASTM D6304 >1000 | 501 | 1450 | 244.9 |

FLUID CLEANLINESS

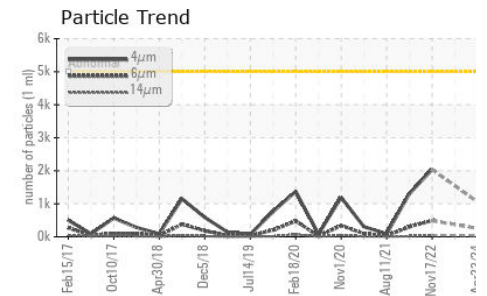
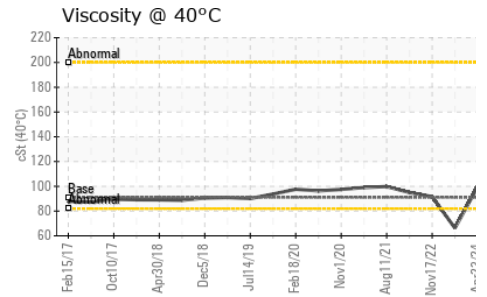
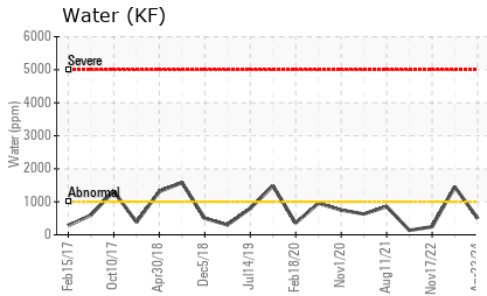
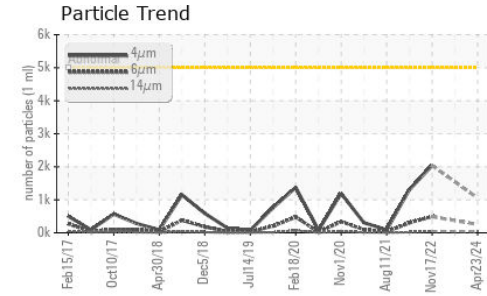
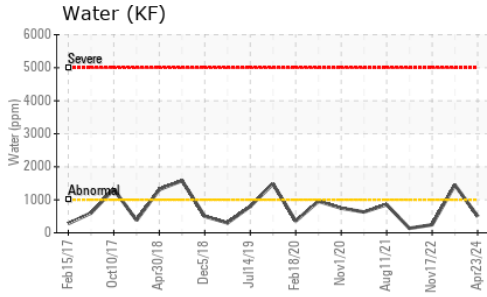
| method | limit/base | current | history1 | history2 |
|-----------------|------------------------|-----------------|----------|----------|
| Particles >4µm | ASTM D7647 >5000 | 1054 | --- | 2039 |
| Particles >6µm | ASTM D7647 >1300 | 255 | --- | 489 |
| Particles >14µm | ASTM D7647 >160 | 33 | --- | 44 |
| Particles >21µm | ASTM D7647 >40 | 10 | --- | 14 |
| Particles >38µm | ASTM D7647 >10 | 1 | --- | 1 |
| Particles >71µm | ASTM D7647 >3 | 1 | --- | 0 |
| Oil Cleanliness | ISO 4406 (c) >19/17/14 | 17/15/12 | --- | 18/16/13 |

FLUID DEGRADATION

| method | limit/base | current | history1 | history2 | |
|------------------|------------|-----------------|-------------|----------|------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.05 | 0.30 | 0.30 | 0.22 |



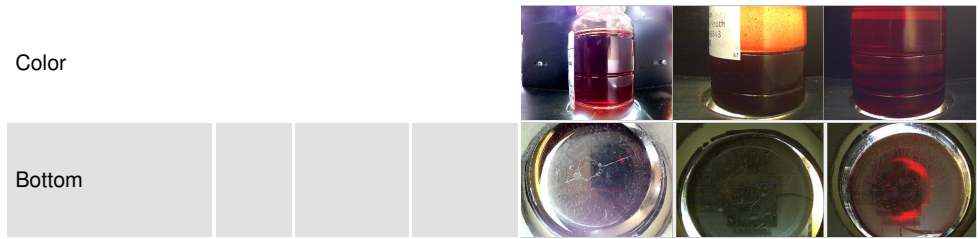
OIL ANALYSIS REPORT



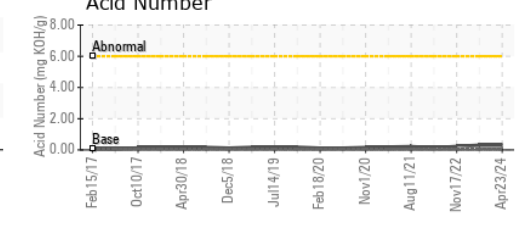
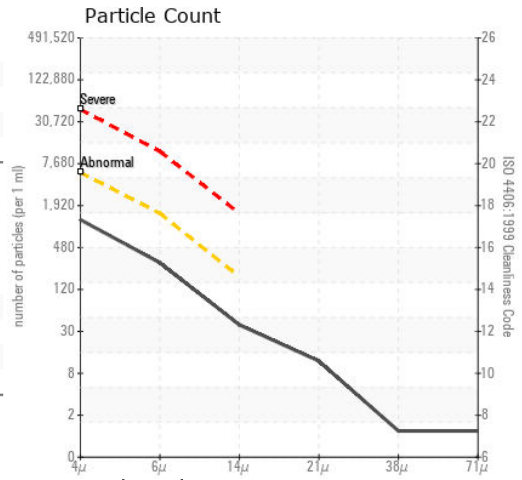
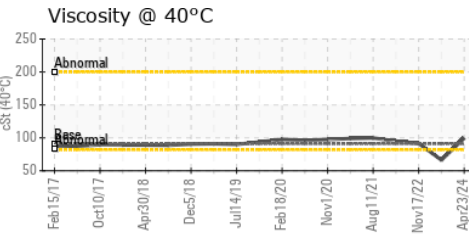
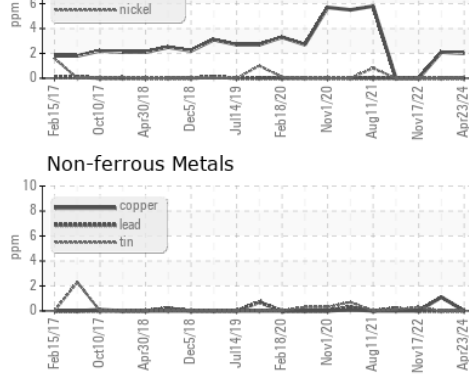
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | ▲ MODER | NONE |
| Debris | scalar | *Visual | NONE | NONE | VLITE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | ● SOLID | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >.1 | ▲ 0.2% | NEG |
| Free Water | scalar | *Visual | | ● >10% | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|--------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 91 | 99.5 | ● 66.26 | 91.6 |

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



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USPM36817
Lab Number : 06159129
Unique Number : 10994552
Test Package : IND 2
Received : 24 Apr 2024
Tested : 25 Apr 2024
Diagnosed : 26 Apr 2024 - Jonathan Hester

JBS - BEARDSTOWN
 8295 ARENZVILLE RD
 BEARDSTOWN, IL
 US 62618
 Contact:

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)