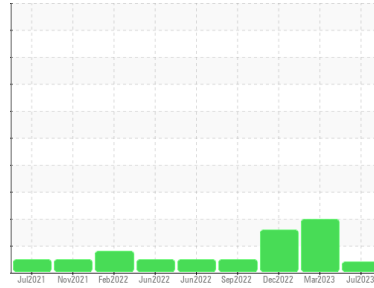




PROBLEM SUMMARY

Sample Rating Trend



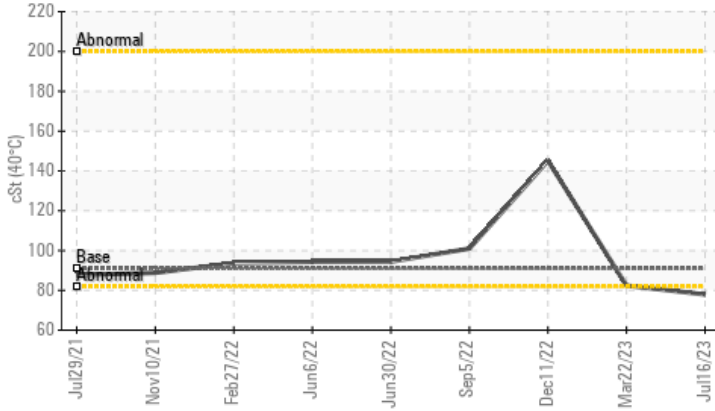
VISCOSITY



Machine Id
BUSCH CV3 P2
 Component
Vacuum Pump
 Fluid
USPI VAC 100 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Viscosity @ 40°C



RECOMMENDATION

Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

| Sample Status | | | | ATTENTION | ABNORMAL | ABNORMAL |
|---------------|-----|-----------|----|-----------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 91 | ▲ 77.91 | 82.4 | ▲ 145.1 |

Customer Id: SIOSIOIOW
 Sample No.: USP255071
 Lab Number: 05899953
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Doug Bogart +1 (800)237-1369 x4016
dougb@wearcheckusa.com

To change component or sample information:
 Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

22 Mar 2023 Diag: Doug Bogart

ISO



We recommend you service the filters on this component. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



11 Dec 2022 Diag: Jonathan Hester

VISCOSITY



Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The oil viscosity is higher than normal. The AN level is acceptable for this fluid.

view report



05 Sep 2022 Diag: Doug Bogart

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

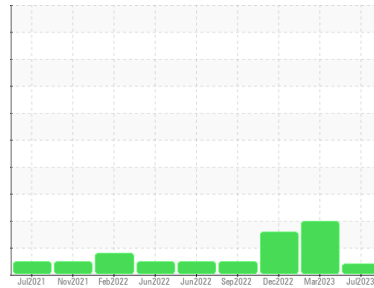
view report





OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id
BUSCH CV3 P2
 Component
Vacuum Pump
 Fluid
USPI VAC 100 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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 oil viscosity is lower than normal. Confirmed. The AN level is acceptable for this fluid.

SAMPLE INFORMATION

| method | limit/base | current | history1 | history2 |
|---------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | USP255071 | USPM27658 | USPM25168 |
| Sample Date | Client Info | 16 Jul 2023 | 22 Mar 2023 | 11 Dec 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 | | ATTENTION | ABNORMAL | ABNORMAL |

WEAR METALS

| method | limit/base | current | history1 | history2 | |
|----------|------------|-----------------|--------------|----------|----|
| Iron | ppm | ASTM D5185m >20 | 13 | 1 | 2 |
| Chromium | ppm | ASTM D5185m >20 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m >20 | 0 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >20 | 1 | <1 | 1 |
| Lead | ppm | ASTM D5185m >20 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m >20 | <1 | <1 | <1 |
| Tin | ppm | ASTM D5185m >20 | 0 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | 0 | 0 | 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 | <1 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m 0 | 0 | <1 | <1 |
| Calcium | ppm | ASTM D5185m 0 | 2 | <1 | 0 |
| Phosphorus | ppm | ASTM D5185m 1800 | 727 | 693 | 789 |
| Zinc | ppm | ASTM D5185m 0 | 12 | 4 | 0 |
| Sulfur | ppm | ASTM D5185m 0 | 661 | 490 | 532 |

CONTAMINANTS

| method | limit/base | current | history1 | history2 | |
|-----------|------------|-----------------|--------------|----------|-------|
| Silicon | ppm | ASTM D5185m >15 | 4 | 9 | 6 |
| Sodium | ppm | ASTM D5185m | 0 | <1 | 0 |
| Potassium | ppm | ASTM D5185m >20 | <1 | <1 | 0 |
| Water | % | ASTM D6304 | 0.055 | 0.014 | 0.013 |
| ppm Water | ppm | ASTM D6304 >.1 | 550.6 | 144.5 | 136.6 |

FLUID CLEANLINESS

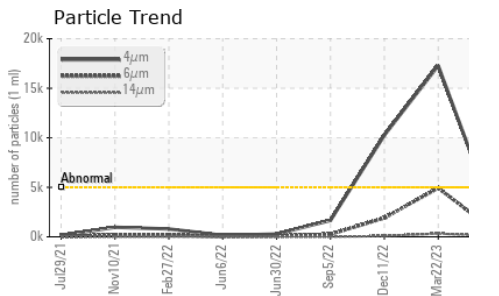
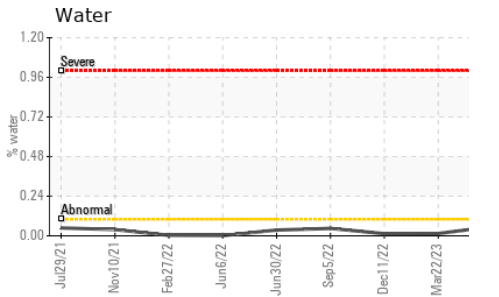
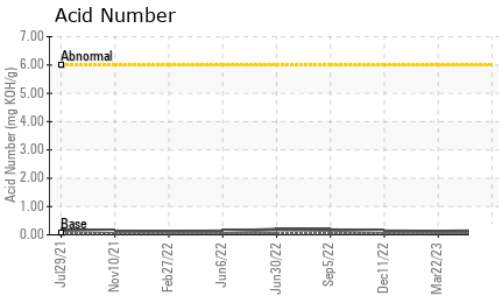
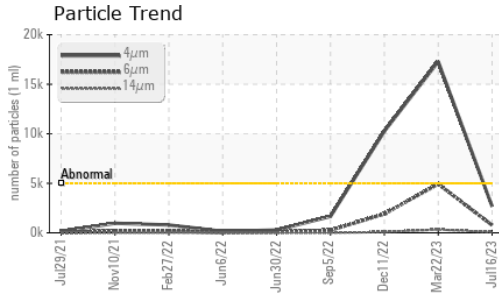
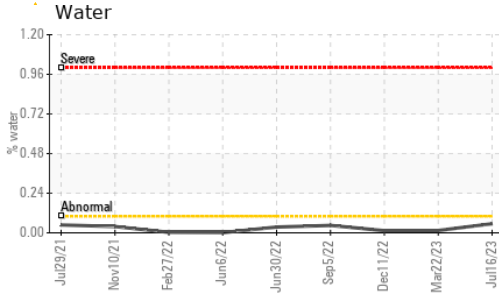
| method | limit/base | current | history1 | history2 |
|-----------------|------------------------|-----------------|------------|------------|
| Particles >4µm | ASTM D7647 >5000 | 2678 | ▲ 17283 | ▲ 10253 |
| Particles >6µm | ASTM D7647 >1300 | 773 | ▲ 4931 | ▲ 1908 |
| Particles >14µm | ASTM D7647 >160 | 67 | ▲ 331 | 79 |
| Particles >21µm | ASTM D7647 >40 | 18 | ▲ 57 | 10 |
| Particles >38µm | ASTM D7647 >10 | 2 | 4 | 0 |
| Particles >71µm | ASTM D7647 >3 | 1 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) >19/17/14 | 19/17/13 | ▲ 21/19/16 | ▲ 21/18/13 |

FLUID DEGRADATION

| method | limit/base | current | history1 | history2 | |
|------------------|------------|-----------------|-------------|----------|------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.05 | 0.14 | 0.12 | 0.13 |



OIL ANALYSIS REPORT



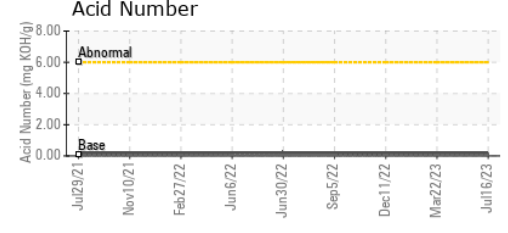
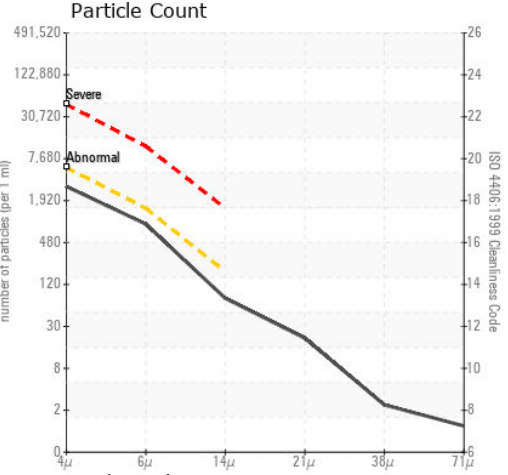
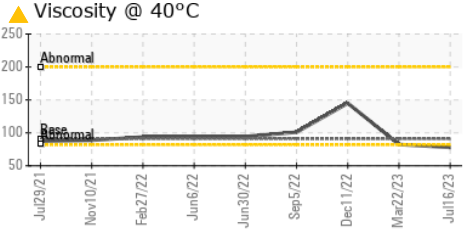
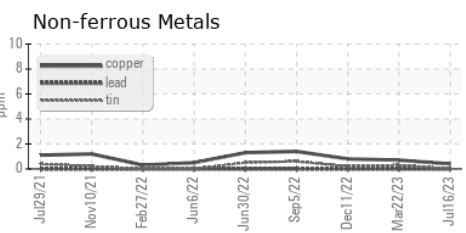
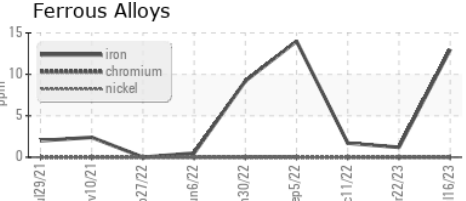
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE |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

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|--------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 91 | ▲ 77.91 | 82.4 | ▲ 145.1 |

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



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USP255071
Lab Number : 05899953
Unique Number : 10561309
Test Package : IND 2

SIUXPREME PACKAGING COMPANY
 2800 MURRAY STREET
 SIOUX CITY, IA
 US 51111
 Contact: Service Manager

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)

T:
F: