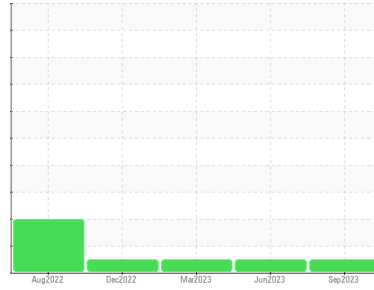




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**BUSCH VP-8A (S/N 0108)**

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 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 |             |            | <b>USPM29749</b>   | USPM27163   | USPM27586   |
| Sample Date        | Client Info |             |            | <b>26 Sep 2023</b> | 25 Jun 2023 | 13 Mar 2023 |
| Machine Age        | hrs         | Client Info |            | <b>0</b>           | 0           | 0           |
| Oil Age            | hrs         | Client Info |            | <b>0</b>           | 0           | 0           |
| Oil Changed        | Client Info |             |            | <b>N/A</b>         | N/A         | N/A         |
| Sample Status      |             |             |            | <b>NORMAL</b>      | NORMAL      | NORMAL      |

| WEAR METALS |     | method      | limit/base | current      | history1 | history2 |
|-------------|-----|-------------|------------|--------------|----------|----------|
| Iron        | ppm | ASTM D5185m | >20        | <b>&lt;1</b> | <1       | <1       |
| Chromium    | ppm | ASTM D5185m | >20        | <b>0</b>     | 0        | 0        |
| Nickel      | ppm | ASTM D5185m | >20        | <b>0</b>     | <1       | 0        |
| Titanium    | ppm | ASTM D5185m |            | <b>&lt;1</b> | 0        | <1       |
| Silver      | ppm | ASTM D5185m |            | <b>0</b>     | 0        | 0        |
| Aluminum    | ppm | ASTM D5185m | >20        | <b>3</b>     | 1        | 0        |
| Lead        | ppm | ASTM D5185m | >20        | <b>0</b>     | 2        | 0        |
| Copper      | ppm | ASTM D5185m | >20        | <b>1</b>     | <1       | <1       |
| Tin         | ppm | ASTM D5185m | >20        | <b>&lt;1</b> | 2        | <1       |
| Vanadium    | ppm | ASTM D5185m |            | <b>&lt;1</b> | 0        | <1       |
| Cadmium     | ppm | ASTM D5185m |            | <b>&lt;1</b> | 0        | 0        |

| ADDITIVES  |     | method      | limit/base | current      | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron      | ppm | ASTM D5185m | 0          | <b>0</b>     | <1       | 0        |
| Barium     | ppm | ASTM D5185m | 0          | <b>0</b>     | 0        | 0        |
| Molybdenum | ppm | ASTM D5185m | 0          | <b>0</b>     | 0        | <1       |
| Manganese  | ppm | ASTM D5185m |            | <b>&lt;1</b> | <1       | <1       |
| Magnesium  | ppm | ASTM D5185m | 0          | <b>&lt;1</b> | 0        | 8        |
| Calcium    | ppm | ASTM D5185m | 0          | <b>&lt;1</b> | 0        | 1        |
| Phosphorus | ppm | ASTM D5185m | 1800       | <b>597</b>   | 726      | 587      |
| Zinc       | ppm | ASTM D5185m | 0          | <b>0</b>     | 0        | 4        |
| Sulfur     | ppm | ASTM D5185m | 0          | <b>126</b>   | 113      | 0        |

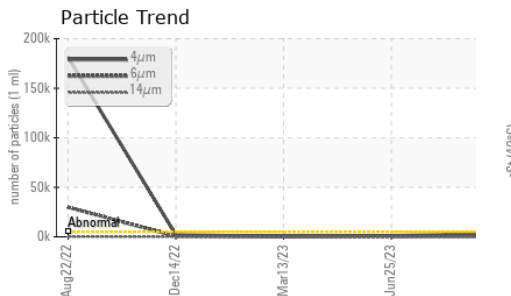
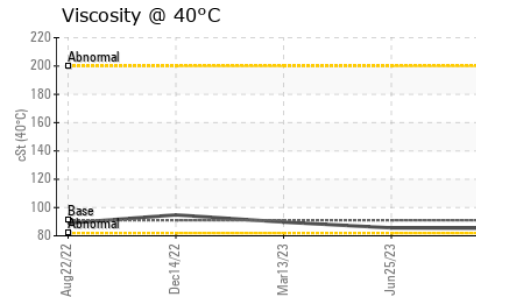
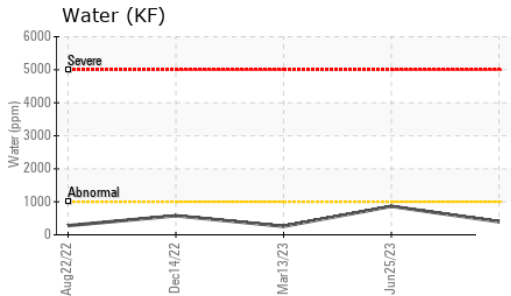
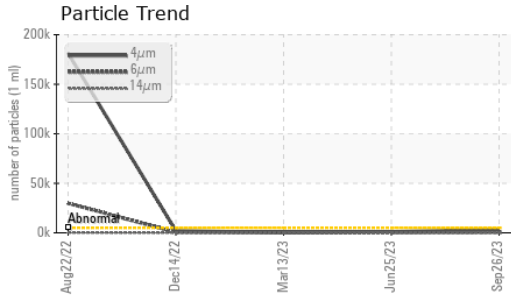
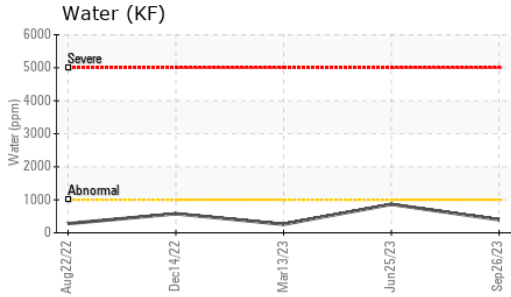
| CONTAMINANTS |     | method      | limit/base | current      | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon      | ppm | ASTM D5185m | >15        | <b>6</b>     | 8        | 6        |
| Sodium       | ppm | ASTM D5185m |            | <b>0</b>     | <1       | 0        |
| Potassium    | ppm | ASTM D5185m | >20        | <b>2</b>     | 2        | 0        |
| Water        | %   | ASTM D6304  | >.1        | <b>0.039</b> | 0.086    | 0.025    |
| ppm Water    | ppm | ASTM D6304  | >1000      | <b>395.3</b> | 864.5    | 257.9    |

| FLUID CLEANLINESS |  | method       | limit/base | current         | history1 | history2 |
|-------------------|--|--------------|------------|-----------------|----------|----------|
| Particles >4µm    |  | ASTM D7647   | >5000      | <b>3285</b>     | 1066     | 125      |
| Particles >6µm    |  | ASTM D7647   | >1300      | <b>633</b>      | 305      | 24       |
| Particles >14µm   |  | ASTM D7647   | >160       | <b>40</b>       | 24       | 2        |
| Particles >21µm   |  | ASTM D7647   | >40        | <b>11</b>       | 6        | 1        |
| Particles >38µm   |  | ASTM D7647   | >10        | <b>1</b>        | 1        | 0        |
| Particles >71µm   |  | ASTM D7647   | >3         | <b>0</b>        | 0        | 0        |
| Oil Cleanliness   |  | ISO 4406 (c) | >19/17/14  | <b>19/16/12</b> | 17/15/12 | 14/12/9  |

| FLUID DEGRADATION |          | method     | limit/base | current     | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN)  | mg KOH/g | ASTM D8045 | 0.05       | <b>0.09</b> | 0.16     | 0.07     |



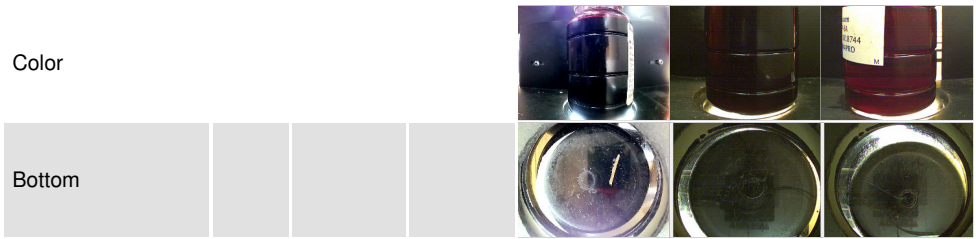
# OIL ANALYSIS REPORT



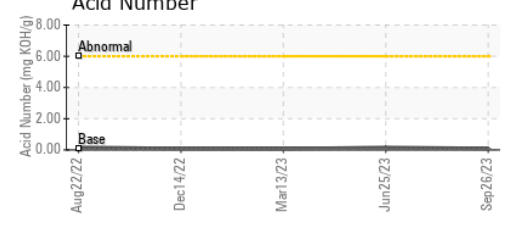
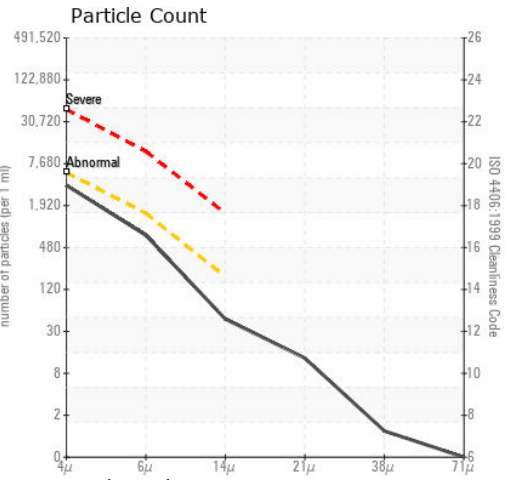
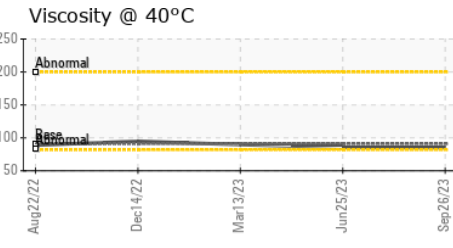
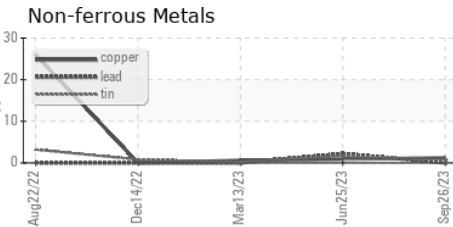
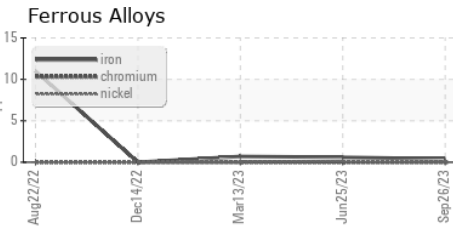
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
|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

| FLUID PROPERTIES | method | limit/base   | current     | history1 | history2 |
|------------------|--------|--------------|-------------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D445 91 | <b>85.3</b> | 85.6     | 89.7     |

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



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : USPM29749 **Received** : 26 Sep 2023  
**Lab Number** : **05961789** **Diagnosed** : 27 Sep 2023  
**Unique Number** : 10668340 **Diagnostician** : Doug Bogart  
**Test Package** : IND 2

**TYSON - AMARILLO-PRO**  
 AMARILLO, TX  
 US  
 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: