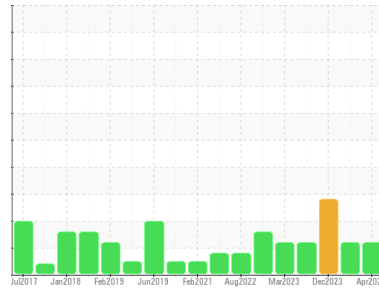




# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id  
**FAB-CV 3-PUMP 3 (S/N U205100011)**  
 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

There is a moderate amount of silt (particulates < 14 microns in size) present 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 |             | <b>USPM36798</b>   | USP0005336  | USPM31695   |
| Sample Date   | Client Info |             | <b>23 Apr 2024</b> | 28 Jan 2024 | 28 Dec 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>ATTENTION</b>   | ABNORMAL    | ABNORMAL    |

## WEAR METALS

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

## ADDITIVES

|            | method | limit/base       | current    | history1 | history2 |
|------------|--------|------------------|------------|----------|----------|
| Boron      | ppm    | ASTM D5185m 0    | <b>0</b>   | 0        | 0        |
| Barium     | ppm    | ASTM D5185m 0    | <b>0</b>   | 0        | 0        |
| Molybdenum | ppm    | ASTM D5185m 0    | <b>0</b>   | 0        | 0        |
| Manganese  | ppm    | ASTM D5185m      | <b>0</b>   | 0        | <1       |
| Magnesium  | ppm    | ASTM D5185m 0    | <b>0</b>   | 0        | 0        |
| Calcium    | ppm    | ASTM D5185m 0    | <b>0</b>   | 0        | 0        |
| Phosphorus | ppm    | ASTM D5185m 1800 | <b>620</b> | 691      | 701      |
| Zinc       | ppm    | ASTM D5185m 0    | <b>0</b>   | 0        | 0        |
| Sulfur     | ppm    | ASTM D5185m 0    | <b>49</b>  | 14       | 0        |

## CONTAMINANTS

|           | method | limit/base       | current      | history1 | history2 |
|-----------|--------|------------------|--------------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >60  | <b>7</b>     | 4        | 5        |
| Sodium    | ppm    | ASTM D5185m      | <b>0</b>     | 0        | 2        |
| Potassium | ppm    | ASTM D5185m >20  | <b>0</b>     | 0        | 2        |
| Water     | %      | ASTM D6304 >.1   | <b>0.026</b> | 0.028    | ▲ 0.198  |
| ppm Water | ppm    | ASTM D6304 >1000 | <b>261</b>   | 282      | ▲ 1980   |

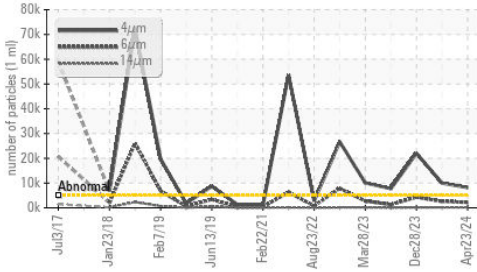
## FLUID CLEANLINESS

|                 | method       | limit/base | current           | history1   | history2   |
|-----------------|--------------|------------|-------------------|------------|------------|
| Particles >4µm  | ASTM D7647   | >5000      | ● <b>8177</b>     | ● 9984     | ▲ 21992    |
| Particles >6µm  | ASTM D7647   | >1300      | ● <b>2191</b>     | ▲ 2571     | ▲ 4350     |
| Particles >14µm | ASTM D7647   | >160       | <b>146</b>        | 148        | 133        |
| Particles >21µm | ASTM D7647   | >40        | <b>38</b>         | 31         | 16         |
| Particles >38µm | ASTM D7647   | >10        | <b>1</b>          | 0          | 0          |
| Particles >71µm | ASTM D7647   | >3         | <b>0</b>          | 0          | 0          |
| Oil Cleanliness | ISO 4406 (c) | >19/17/14  | ● <b>20/18/14</b> | ▲ 20/19/14 | ▲ 22/19/14 |

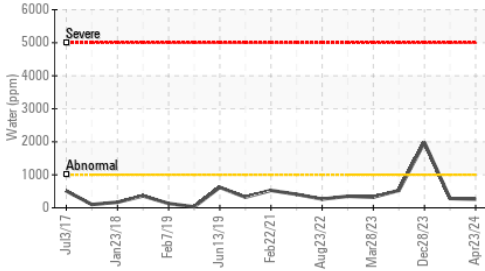
## FLUID DEGRADATION

|                  | method   | limit/base      | current     | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.05 | <b>0.11</b> | 0.084    | 0.046    |

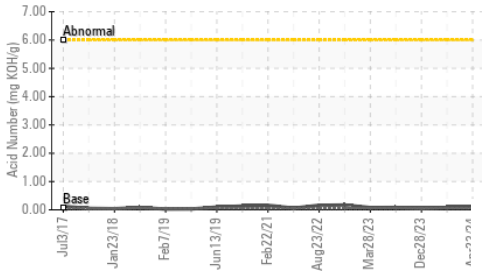
### Particle Trend



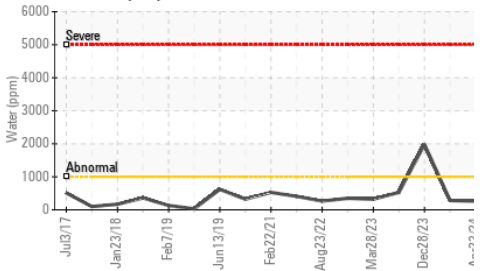
### Water (KF)



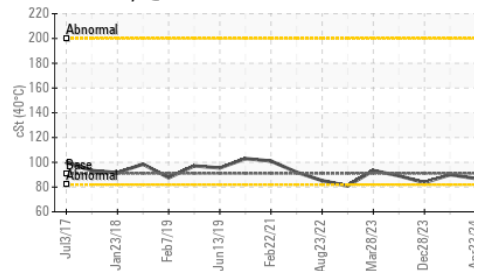
### Acid Number



### Water (KF)



### Viscosity @ 40°C

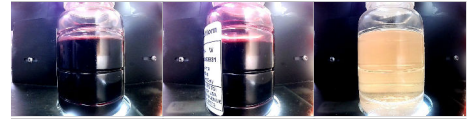


| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| 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      | ▲ 0.2%   |
| Free Water       | scalar | *Visual    |         | NEG      | NEG      |

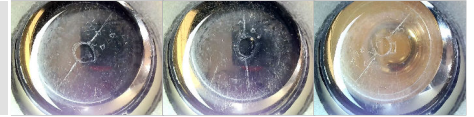
| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D445  | 91      | 86.9     | 90.0     |

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

Color

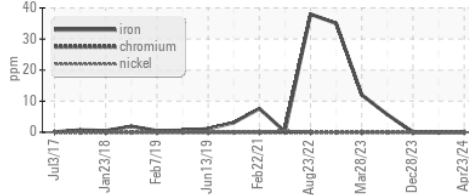


Bottom

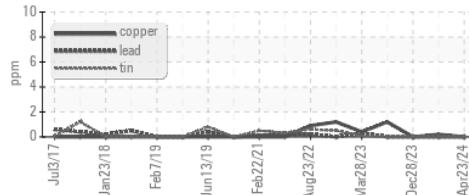


### GRAPHS

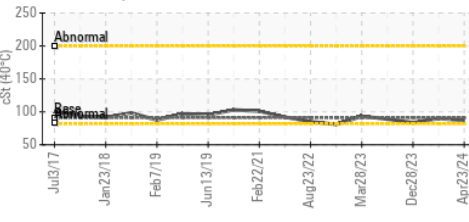
#### Ferrous Alloys



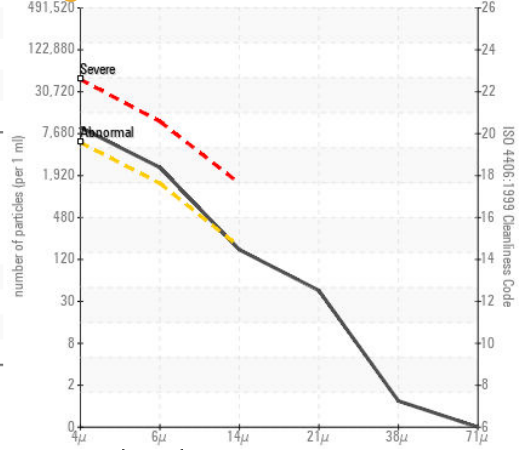
#### Non-ferrous Metals



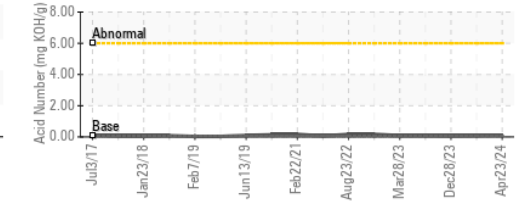
#### Viscosity @ 40°C



#### Particle Count



#### Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : USPM36798

Lab Number : 06159144

Unique Number : 10994567

Test Package : IND 2

Received : 24 Apr 2024

Tested : 25 Apr 2024

Diagnosed : 26 Apr 2024 - Jonathan Hester

JBS - TOLLESON

TOLLESON, AZ

US 85353

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)

T:

F: