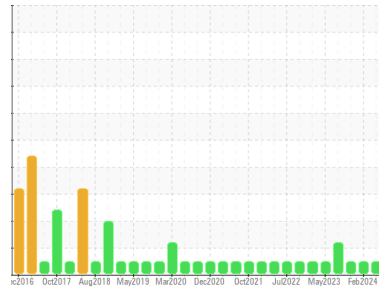




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**4 PRESSOR**  
 Component  
**Gearbox**  
 Fluid  
**USPI GEAR 680 (--- 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>USPM36449</b>   | USPM30229   | USPM31469   |
| Sample Date   | Client Info |             | <b>03 Jun 2024</b> | 27 Feb 2024 | 28 Nov 2023 |
| Machine Age   | yrs         | Client Info | <b>0</b>           | 0           | 0           |
| Oil Age       | yrs         | 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 >200 | <b>8</b>     | 16       | 19       |
| Chromium | ppm    | ASTM D5185m >15  | <b>0</b>     | <1       | <1       |
| Nickel   | ppm    | ASTM D5185m >15  | <b>0</b>     | <1       | 0        |
| Titanium | ppm    | ASTM D5185m      | <b>0</b>     | 0        | 0        |
| Silver   | ppm    | ASTM D5185m      | <b>0</b>     | 0        | 0        |
| Aluminum | ppm    | ASTM D5185m >25  | <b>&lt;1</b> | 1        | 1        |
| Lead     | ppm    | ASTM D5185m >100 | <b>0</b>     | <1       | 0        |
| Copper   | ppm    | ASTM D5185m >200 | <b>&lt;1</b> | <1       | <1       |
| Tin      | ppm    | ASTM D5185m >25  | <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 | <b>0</b>     | 0        | 0        |
| Barium     | ppm    | ASTM D5185m | <b>0</b>     | 0        | 0        |
| Molybdenum | ppm    | ASTM D5185m | <b>0</b>     | 0        | 0        |
| Manganese  | ppm    | ASTM D5185m | <b>&lt;1</b> | <1       | <1       |
| Magnesium  | ppm    | ASTM D5185m | <b>0</b>     | 2        | 1        |
| Calcium    | ppm    | ASTM D5185m | <b>3</b>     | 12       | 6        |
| Phosphorus | ppm    | ASTM D5185m | <b>212</b>   | 200      | 184      |
| Zinc       | ppm    | ASTM D5185m | <b>0</b>     | 4        | 0        |
| Sulfur     | ppm    | ASTM D5185m | <b>7055</b>  | 6221     | 5864     |

## CONTAMINANTS

|           | method | limit/base       | current      | history1 | history2 |
|-----------|--------|------------------|--------------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >50  | <b>0</b>     | <1       | <1       |
| Sodium    | ppm    | ASTM D5185m      | <b>2</b>     | 2        | <1       |
| Potassium | ppm    | ASTM D5185m >20  | <b>&lt;1</b> | 2        | 1        |
| Water     | %      | ASTM D6304 >0.2  | <b>0.003</b> | 0.029    | 0.003    |
| ppm Water | ppm    | ASTM D6304 >2000 | <b>33</b>    | 299      | 30       |

## FLUID CLEANLINESS

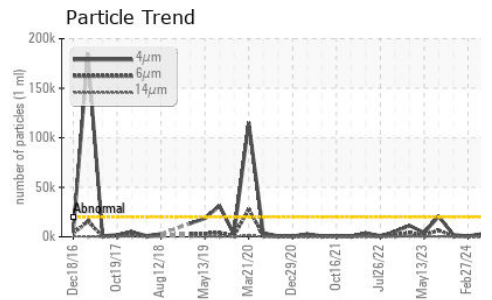
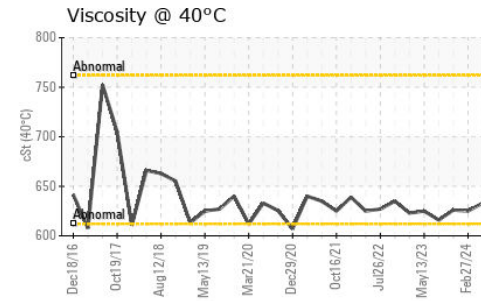
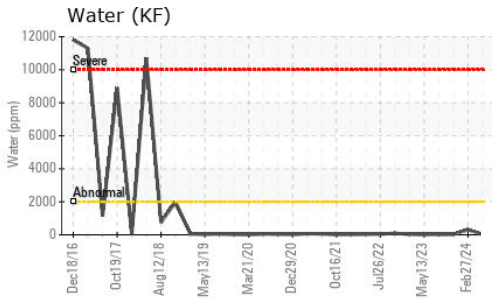
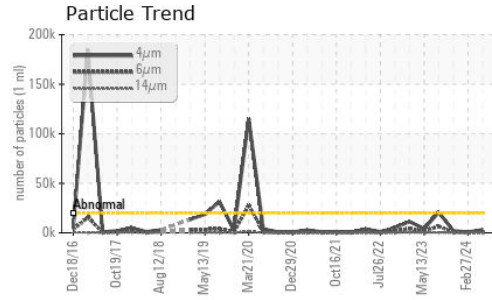
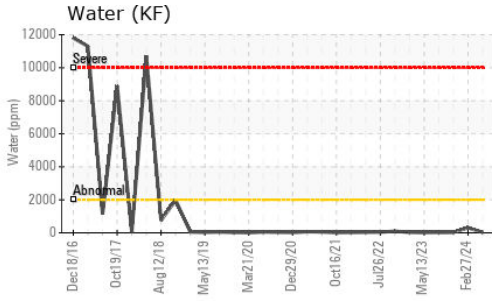
|                 | method       | limit/base | current         | history1 | history2 |
|-----------------|--------------|------------|-----------------|----------|----------|
| Particles >4µm  | ASTM D7647   | >20000     | <b>3161</b>     | 794      | 2034     |
| Particles >6µm  | ASTM D7647   | >5000      | <b>777</b>      | 212      | 629      |
| Particles >14µm | ASTM D7647   | >640       | <b>69</b>       | 17       | 83       |
| Particles >21µm | ASTM D7647   | >160       | <b>21</b>       | 3        | 32       |
| Particles >38µm | ASTM D7647   | >40        | <b>5</b>        | 0        | 3        |
| Particles >71µm | ASTM D7647   | >10        | <b>1</b>        | 0        | 0        |
| Oil Cleanliness | ISO 4406 (c) | >21/19/16  | <b>19/17/13</b> | 17/15/11 | 18/16/14 |

## FLUID DEGRADATION

|                  | method   | limit/base | current     | history1 | history2 |
|------------------|----------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | <b>0.46</b> | 0.47     | 0.45     |



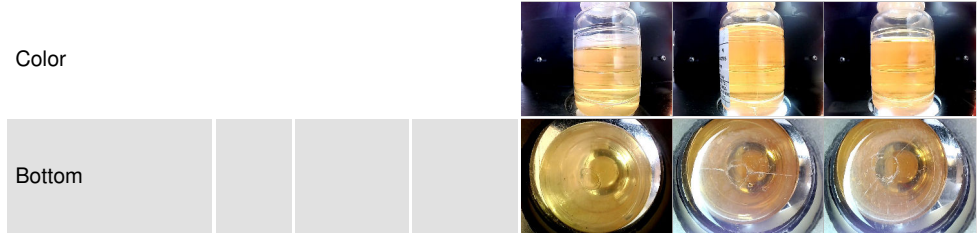
# OIL ANALYSIS REPORT



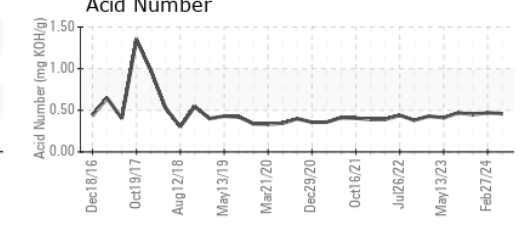
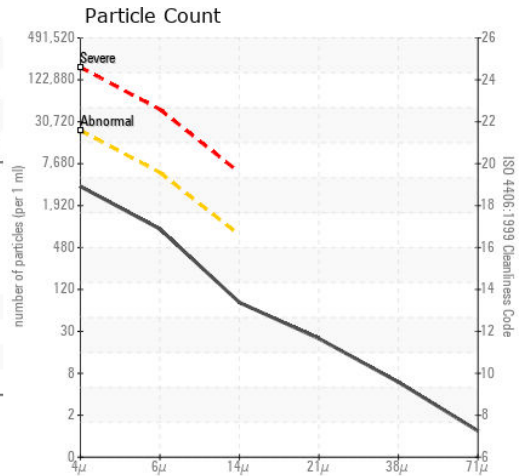
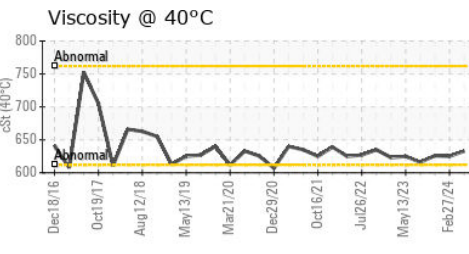
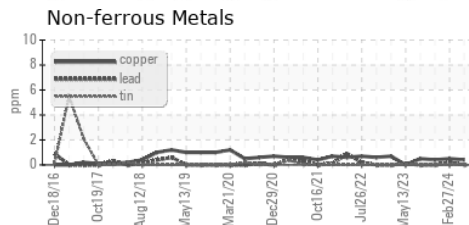
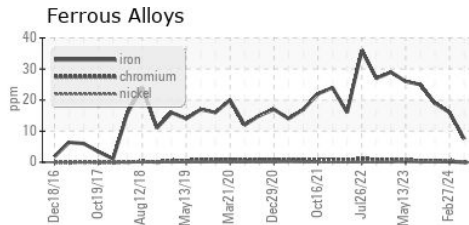
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
|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

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D445  | 633     | 625      | 626      |

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



## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : USPM36449  
 Lab Number : 06199242  
 Unique Number : 11061365  
 Test Package : IND 2

Received : 04 Jun 2024  
 Tested : 06 Jun 2024  
 Diagnosed : 09 Jun 2024 - Doug Bogart

TYSON - DAKOTA CITY RENDERING

DAKOTA CITY, NE  
 US  
 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: