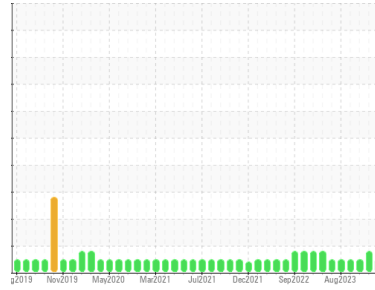




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area

**GFM**  
Machine Id

## CHUCKHEAD A RESERVOIR

Component

**Gearbox**

Fluid

**ROYAL PURPLE SYNERGY 140/680 (220 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.

#### 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>WC0905605</b>   | WC0905626   | WC0826337   |
| Sample Date   | Client Info |             | <b>09 Apr 2024</b> | 04 Mar 2024 | 29 Nov 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>      | ABNORMAL    | NORMAL      |

### CONTAMINATION

|       | method    | limit/base | current    | history1 | history2 |
|-------|-----------|------------|------------|----------|----------|
| Water | WC Method | >0.2       | <b>NEG</b> | NEG      | NEG      |

### WEAR METALS

|          | method | limit/base       | current      | history1 | history2 |
|----------|--------|------------------|--------------|----------|----------|
| Iron     | ppm    | ASTM D5185m >200 | <b>59</b>    | 50       | 20       |
| Chromium | ppm    | ASTM D5185m >15  | <b>1</b>     | <1       | <1       |
| Nickel   | ppm    | ASTM D5185m >15  | <b>2</b>     | 2        | 1        |
| Titanium | ppm    | ASTM D5185m      | <b>&lt;1</b> | <1       | <1       |
| Silver   | ppm    | ASTM D5185m      | <b>0</b>     | 0        | 0        |
| Aluminum | ppm    | ASTM D5185m >25  | <b>2</b>     | 2        | <1       |
| Lead     | ppm    | ASTM D5185m >100 | <b>1</b>     | 0        | 0        |
| Copper   | ppm    | ASTM D5185m >200 | <b>138</b>   | ▲ 254    | 170      |
| Tin      | ppm    | ASTM D5185m >25  | <b>7</b>     | 12       | 6        |
| Vanadium | ppm    | ASTM D5185m      | <b>&lt;1</b> | 0        | 0        |
| Cadmium  | ppm    | ASTM D5185m      | <b>&lt;1</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>&lt;1</b> | 0        | 0        |
| Manganese  | ppm    | ASTM D5185m     | <b>1</b>     | 0        | <1       |
| Magnesium  | ppm    | ASTM D5185m     | <b>52</b>    | 87       | 42       |
| Calcium    | ppm    | ASTM D5185m 34  | <b>12</b>    | 0        | 3        |
| Phosphorus | ppm    | ASTM D5185m 200 | <b>97</b>    | 121      | 52       |
| Zinc       | ppm    | ASTM D5185m     | <b>138</b>   | 213      | 90       |
| Sulfur     | ppm    | ASTM D5185m     | <b>17378</b> | 24490    | 14516    |

### CONTAMINANTS

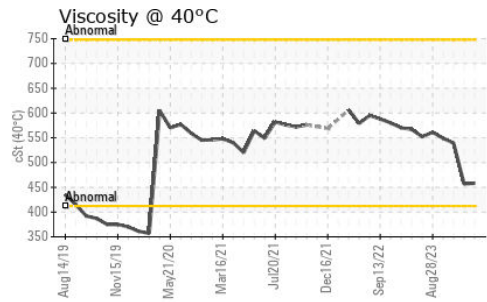
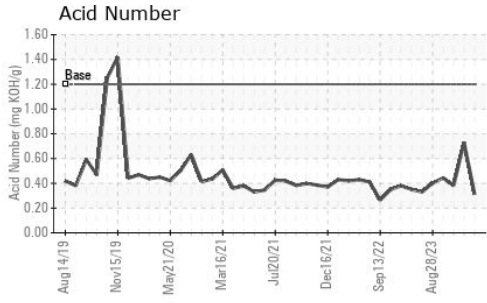
|           | method | limit/base      | current      | history1 | history2 |
|-----------|--------|-----------------|--------------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >50 | <b>5</b>     | 8        | 6        |
| Sodium    | ppm    | ASTM D5185m     | <b>&lt;1</b> | 2        | <1       |
| Potassium | ppm    | ASTM D5185m >20 | <b>&lt;1</b> | <1       | <1       |

### FLUID DEGRADATION

|                  | method   | limit/base     | current     | history1 | history2 |
|------------------|----------|----------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 1.2 | <b>0.31</b> | 0.73     | 0.382    |



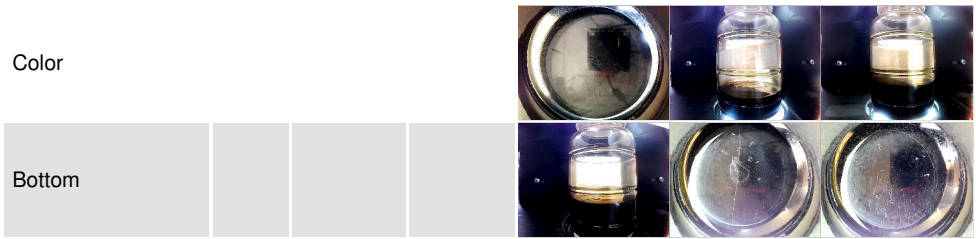
# OIL ANALYSIS REPORT



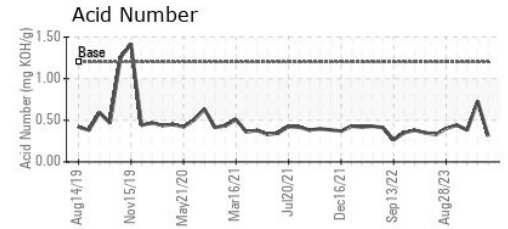
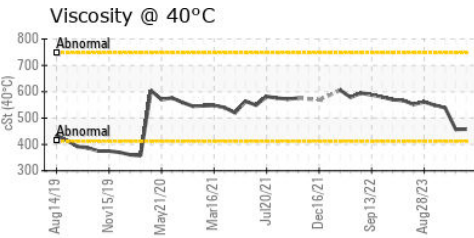
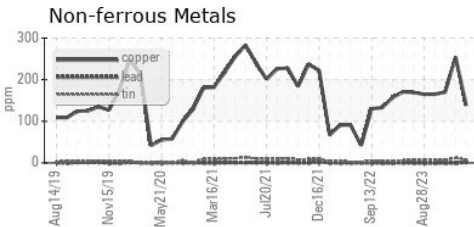
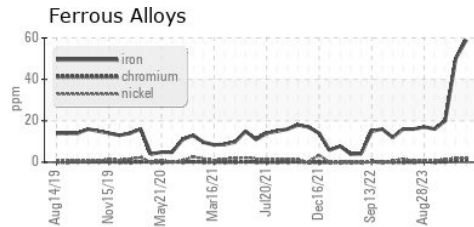
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| 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  | <b>458</b> | 457      | 539      |

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



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0905605      **Received** : 10 Apr 2024  
**Lab Number** : **06144466**      **Tested** : 11 Apr 2024  
**Unique Number** : 10969274      **Diagnosed** : 12 Apr 2024 - Angela Borella  
**Test Package** : IND 2

**ALLVAC SAF CONDITIONING**  
 3750 ALLOY WAY  
 MONROE, NC  
 US 28110  
 Contact: JEREMY ALMOND  
 jeremy.almond@atimetals.com

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)