



# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**A-904.1**

Component  
**Hydraulic System**

Fluid  
**HIGH PERFORMANCE LUBRICANTS COMPRESSOR LIFE 46 (--- 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>HPL0003014</b>  | ---      | ---      |
| Sample Date   | Client Info |             | <b>12 Sep 2023</b> | ---      | ---      |
| Machine Age   | hrs         | Client Info | <b>0</b>           | ---      | ---      |
| Oil Age       | hrs         | Client Info | <b>0</b>           | ---      | ---      |
| Oil Changed   | Client Info |             | <b>Not Chngd</b>   | ---      | ---      |
| Sample Status |             |             | <b>NORMAL</b>      | ---      | ---      |

## WEAR METALS

|          | method | limit/base      | current      | history1 | history2 |
|----------|--------|-----------------|--------------|----------|----------|
| Iron     | ppm    | ASTM D5185m >20 | <b>&lt;1</b> | ---      | ---      |
| Chromium | ppm    | ASTM D5185m >10 | <b>0</b>     | ---      | ---      |
| Nickel   | ppm    | ASTM D5185m >10 | <b>0</b>     | ---      | ---      |
| Titanium | ppm    | ASTM D5185m     | <b>0</b>     | ---      | ---      |
| Silver   | ppm    | ASTM D5185m     | <b>0</b>     | ---      | ---      |
| Aluminum | ppm    | ASTM D5185m >10 | <b>&lt;1</b> | ---      | ---      |
| Lead     | ppm    | ASTM D5185m >10 | <b>0</b>     | ---      | ---      |
| Copper   | ppm    | ASTM D5185m >75 | <b>7</b>     | ---      | ---      |
| Tin      | ppm    | ASTM D5185m >10 | <b>0</b>     | ---      | ---      |
| Vanadium | ppm    | ASTM D5185m     | <b>0</b>     | ---      | ---      |
| Cadmium  | ppm    | ASTM D5185m     | <b>0</b>     | ---      | ---      |

## ADDITIVES

|            | method | limit/base        | current      | history1 | history2 |
|------------|--------|-------------------|--------------|----------|----------|
| Boron      | ppm    | ASTM D5185m       | <b>0</b>     | ---      | ---      |
| Barium     | ppm    | ASTM D5185m       | <b>0</b>     | ---      | ---      |
| Molybdenum | ppm    | ASTM D5185m       | <b>0</b>     | ---      | ---      |
| Manganese  | ppm    | ASTM D5185m       | <b>&lt;1</b> | ---      | ---      |
| Magnesium  | ppm    | ASTM D5185m       | <b>0</b>     | ---      | ---      |
| Calcium    | ppm    | ASTM D5185m 225   | <b>15</b>    | ---      | ---      |
| Phosphorus | ppm    | ASTM D5185m       | <b>203</b>   | ---      | ---      |
| Zinc       | ppm    | ASTM D5185m       | <b>0</b>     | ---      | ---      |
| Sulfur     | ppm    | ASTM D5185m 22000 | <b>18270</b> | ---      | ---      |

## CONTAMINANTS

|           | method | limit/base      | current      | history1 | history2 |
|-----------|--------|-----------------|--------------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >20 | <b>&lt;1</b> | ---      | ---      |
| Sodium    | ppm    | ASTM D5185m     | <b>&lt;1</b> | ---      | ---      |
| Potassium | ppm    | ASTM D5185m >20 | <b>0</b>     | ---      | ---      |

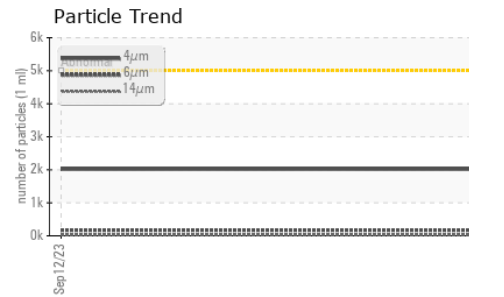
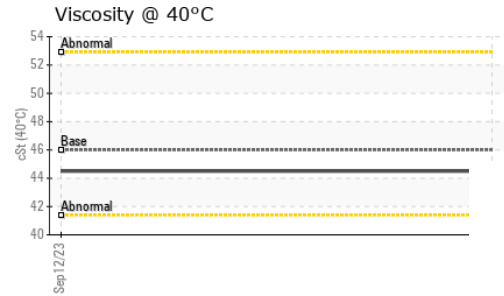
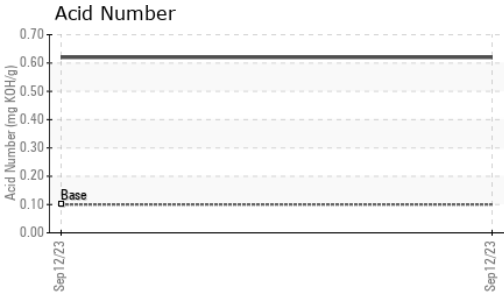
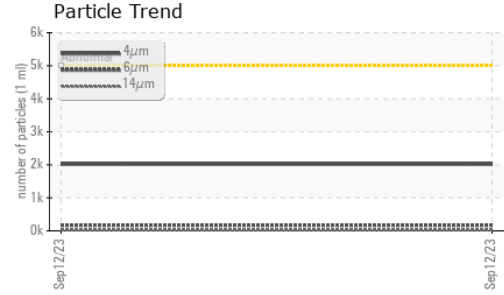
## FLUID CLEANLINESS

|                 | method       | limit/base | current         | history1 | history2 |
|-----------------|--------------|------------|-----------------|----------|----------|
| Particles >4µm  | ASTM D7647   | >5000      | <b>2019</b>     | ---      | ---      |
| Particles >6µm  | ASTM D7647   | >1300      | <b>169</b>      | ---      | ---      |
| Particles >14µm | ASTM D7647   | >160       | <b>21</b>       | ---      | ---      |
| Particles >21µm | ASTM D7647   | >40        | <b>6</b>        | ---      | ---      |
| Particles >38µm | ASTM D7647   | >10        | <b>0</b>        | ---      | ---      |
| Particles >71µm | ASTM D7647   | >3         | <b>0</b>        | ---      | ---      |
| Oil Cleanliness | ISO 4406 (c) | >19/17/14  | <b>18/15/12</b> | ---      | ---      |

## FLUID DEGRADATION

|                  | method   | limit/base     | current     | history1 | history2 |
|------------------|----------|----------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.1 | <b>0.62</b> | ---      | ---      |

# OIL ANALYSIS REPORT



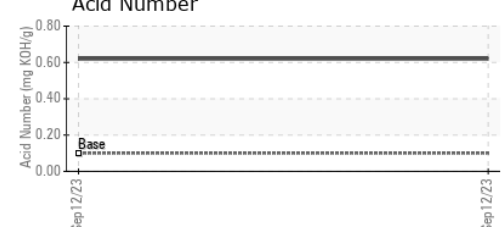
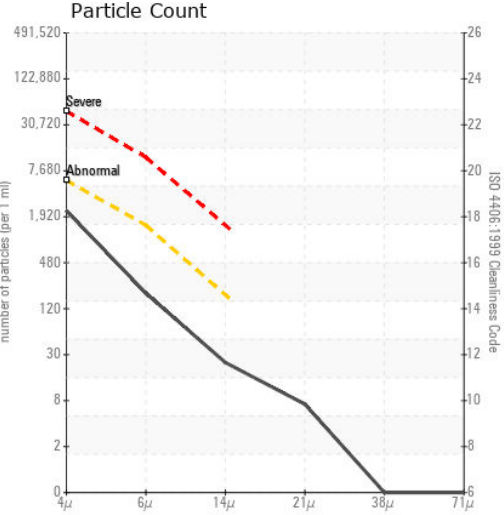
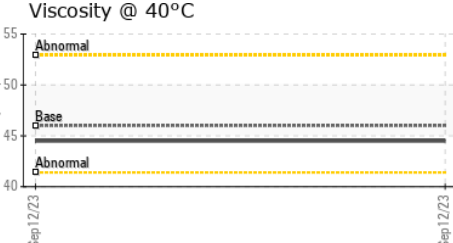
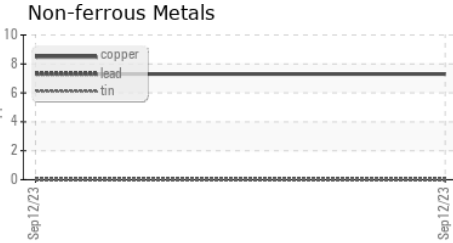
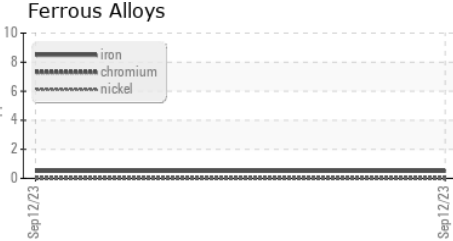
| VISUAL           | method | limit/base | current | history1     | history2 |
|------------------|--------|------------|---------|--------------|----------|
| White Metal      | scalar | *Visual    | NONE    | <b>LIGHT</b> | ---      |
| Yellow Metal     | scalar | *Visual    | NONE    | <b>NONE</b>  | ---      |
| Precipitate      | scalar | *Visual    | NONE    | <b>NONE</b>  | ---      |
| Silt             | scalar | *Visual    | NONE    | <b>NONE</b>  | ---      |
| Debris           | scalar | *Visual    | NONE    | <b>NONE</b>  | ---      |
| Sand/Dirt        | scalar | *Visual    | NONE    | <b>NONE</b>  | ---      |
| Appearance       | scalar | *Visual    | NORML   | <b>NORML</b> | ---      |
| Odor             | scalar | *Visual    | NORML   | <b>NORML</b> | ---      |
| Emulsified Water | scalar | *Visual    | >0.1    | <b>NEG</b>   | ---      |
| Free Water       | scalar | *Visual    |         | <b>NEG</b>   | ---      |

| FLUID PROPERTIES | method | limit/base | current | history1    | history2 |
|------------------|--------|------------|---------|-------------|----------|
| Visc @ 40°C      | cSt    | ASTM D445  | 46      | <b>44.5</b> | ---      |

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

|        |  |          |          |
|--------|--|----------|----------|
| Color  |  | no image | no image |
| Bottom |  | no image | no image |

### GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : HPL0003014 **Received** : 28 Sep 2023  
**Lab Number** : **05963523** **Diagnosed** : 02 Oct 2023  
**Unique Number** : 10670074 **Diagnostician** : Jonathan Hester  
**Test Package** : MOB 2

**STEPAN - MILLSDALE PLANT**  
 22500W. Millsdale Rd.  
 Elwood, IL  
 US 60421  
 Contact: Gregory Brooker  
 gbrooker@stepan.com  
 T: (815)774-5265  
 F: (815)774-5427

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)