

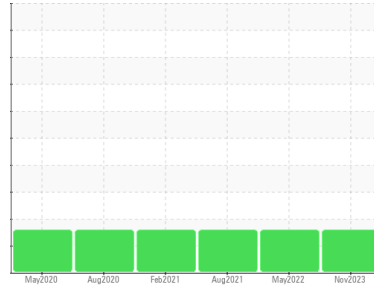
# PROBLEM SUMMARY

Sample Rating Trend

**WATER**

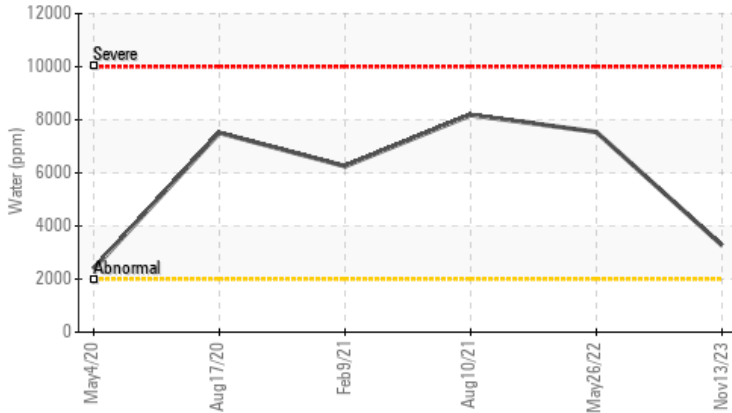


Machine Id  
**RAL-112D**  
Component  
**Gearbox**  
Fluid  
**SYNGEAR PG460 (--- GAL)**



## COMPONENT CONDITION SUMMARY

### ▲ Water (KF)



## RECOMMENDATION

We advise that you check for the source of water entry. Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

| Sample Status |     |            |       | <b>ABNORMAL</b> | ABNORMAL | ABNORMAL |
|---------------|-----|------------|-------|-----------------|----------|----------|
| Water         | %   | ASTM D6304 | >0.2  | ▲ <b>0.327</b>  | ▲ 0.754  | ▲ 0.818  |
| ppm Water     | ppm | ASTM D6304 | >2000 | ▲ <b>3272.5</b> | ▲ 7540   | ▲ 8180   |

**Customer Id:** HOLCOR  
**Sample No.:** RP0027868  
**Lab Number:** 06007040  
**Test Package:** IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Doug Bogart +1 (800)237-1369 x4016  
[dougb@wearcheckusa.com](mailto:dougb@wearcheckusa.com)

To change component or sample information:  
Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

RECOMMENDED ACTIONS

| Action             | Status | Date | Done By | Description   |
|--------------------|--------|------|---------|---|
| Check Water Access | ---    | ---  | ?       | We advise that you check for the source of water entry. |

HISTORICAL DIAGNOSIS

26 May 2022 Diag: Don Baldrige

WATER



We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate concentration of water present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



10 Aug 2021 Diag: Don Baldrige

WATER



We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate concentration of water present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



09 Feb 2021 Diag: Don Baldrige

WATER



We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate concentration of water present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

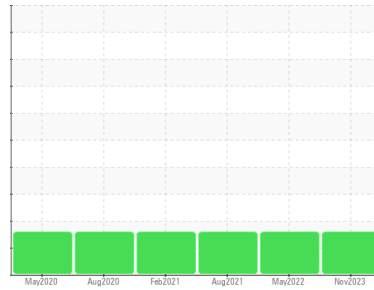
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



**WATER**



Machine Id  
**RAL-112D**  
 Component  
**Gearbox**  
 Fluid  
**SYNGEAR PG460 (--- GAL)**

**DIAGNOSIS**

**Recommendation**

We advise that you check for the source of water entry. Resample at the next service interval to monitor.

**Wear**

All component wear rates are normal.

**Contamination**

There is a light concentration of water present in the oil.

**Fluid Condition**

The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

**SAMPLE INFORMATION**

|               | method      | limit/base  | current            | history1    | history2    |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info |             | <b>RP0027868</b>   | RP0012054   | RP0011901   |
| Sample Date   | Client Info |             | <b>13 Nov 2023</b> | 26 May 2022 | 10 Aug 2021 |
| 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>         | Changed     | Changed     |
| Sample Status |             |             | <b>ABNORMAL</b>    | ABNORMAL    | ABNORMAL    |

**WEAR METALS**

|          | method | limit/base       | current      | history1 | history2 |
|----------|--------|------------------|--------------|----------|----------|
| Iron     | ppm    | ASTM D5185m >200 | <b>4</b>     | 1        | 0        |
| Chromium | ppm    | ASTM D5185m >15  | <b>&lt;1</b> | 0        | 0        |
| Nickel   | ppm    | ASTM D5185m >15  | <b>&lt;1</b> | 0        | 0        |
| Titanium | ppm    | ASTM D5185m      | <b>&lt;1</b> | 0        | 0        |
| Silver   | ppm    | ASTM D5185m      | <b>2</b>     | 0        | 0        |
| Aluminum | ppm    | ASTM D5185m >25  | <b>6</b>     | <1       | 0        |
| Lead     | ppm    | ASTM D5185m >100 | <b>0</b>     | 3        | 0        |
| Copper   | ppm    | ASTM D5185m >200 | <b>1</b>     | 2        | 2        |
| Tin      | ppm    | ASTM D5185m >25  | <b>&lt;1</b> | 3        | <1       |
| Antimony | ppm    | ASTM D5185m >5   | <b>---</b>   | ---      | 0        |
| 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>2</b>   | 12       | 3        |
| Barium     | ppm    | ASTM D5185m | <b>0</b>   | 0        | 0        |
| Molybdenum | ppm    | ASTM D5185m | <b>0</b>   | <1       | 0        |
| Manganese  | ppm    | ASTM D5185m | <b>0</b>   | 0        | 0        |
| Magnesium  | ppm    | ASTM D5185m | <b>2</b>   | <1       | 0        |
| Calcium    | ppm    | ASTM D5185m | <b>2</b>   | 12       | 0        |
| Phosphorus | ppm    | ASTM D5185m | <b>641</b> | 944      | 697      |
| Zinc       | ppm    | ASTM D5185m | <b>0</b>   | 2        | 0        |

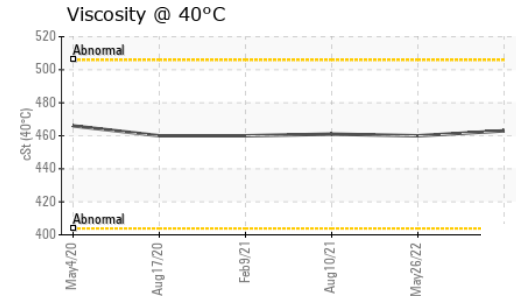
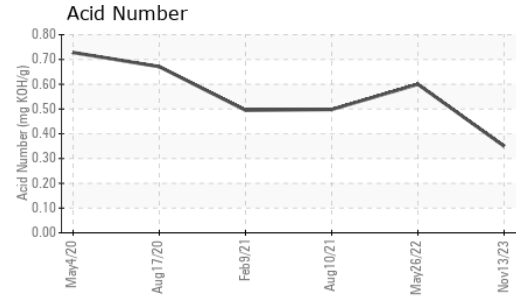
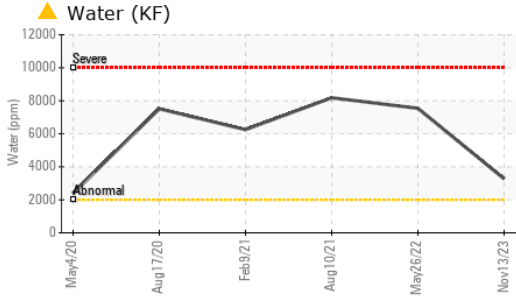
**CONTAMINANTS**

|           | method | limit/base       | current         | history1 | history2 |
|-----------|--------|------------------|-----------------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >50  | <b>2</b>        | 3        | <1       |
| Sodium    | ppm    | ASTM D5185m      | <b>18</b>       | 0        | 0        |
| Potassium | ppm    | ASTM D5185m >20  | <b>3</b>        | 0        | 0        |
| Water     | %      | ASTM D6304 >0.2  | <b>▲ 0.327</b>  | ▲ 0.754  | ▲ 0.818  |
| ppm Water | ppm    | ASTM D6304 >2000 | <b>▲ 3272.5</b> | ▲ 7540   | ▲ 8180   |

**FLUID DEGRADATION**

|                  | method   | limit/base | current     | history1 | history2 |
|------------------|----------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | <b>0.35</b> | 0.60     | 0.498    |

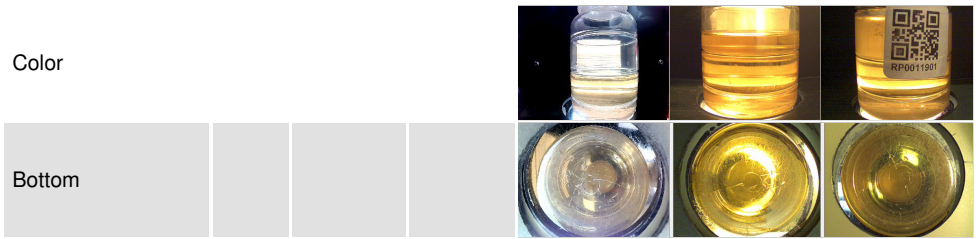
# OIL ANALYSIS REPORT



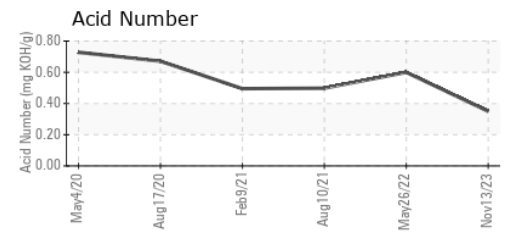
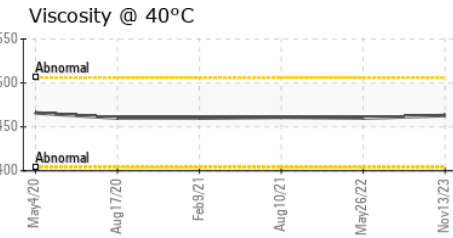
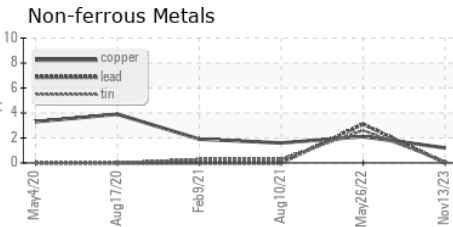
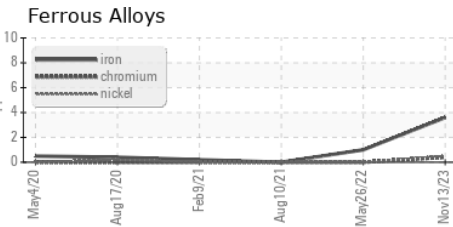
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| 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  | 463     | 460      | 461      |

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



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RP0027868 **Received** : 14 Nov 2023  
**Lab Number** : 06007040 **Diagnosed** : 15 Nov 2023  
**Unique Number** : 10740802 **Diagnostician** : Doug Bogart  
**Test Package** : IND 2

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Certificate L2367  
 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)