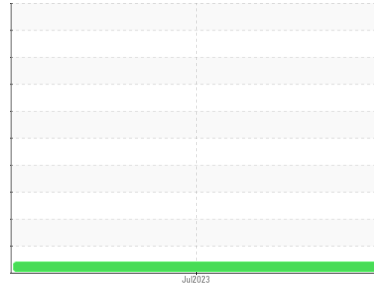




# PROBLEM SUMMARY

Sample Rating Trend



VISCOSITY



Machine Id  
**3051907901**

Component  
**Hydraulic System**

Fluid  
**CHEVRON RANDO HD 68 (--- GAL)**

## COMPONENT CONDITION SUMMARY

### ▲ Viscosity @ 40°C



## RECOMMENDATION

No corrective action is recommended at this time.  
Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status

**ATTENTION** ---

Visc @ 40°C cSt ASTM D445 64.6

▲ **36.76** ---

PrtFilter

|  |          |          |
|--|----------|----------|
|  | no image | no image |
|--|----------|----------|

Customer Id: HILWAL  
Sample No.: PH0001772  
Lab Number: 05929560  
Test Package: PLANT



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Jonathan Hester +1 919-379-4092 x4092  
[jhester@wearcheckusa.com](mailto:jhester@wearcheckusa.com)

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

## RECOMMENDED ACTIONS

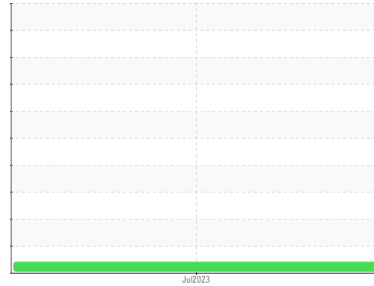
*There are no recommended actions for this sample.*

## HISTORICAL DIAGNOSIS



# OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id  
**3051907901**

Component  
**Hydraulic System**

Fluid  
**CHEVRON RANDO HD 68 (--- GAL)**

## DIAGNOSIS

### ▲ Recommendation

No corrective action is recommended at this time. 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 oil viscosity is lower than normal. Confirm oil type. The AN level is acceptable for this fluid.

## SAMPLE INFORMATION

| method        | limit/base  | current            | history1   | history2 |
|---------------|-------------|--------------------|------------|----------|
| Sample Number | Client Info | <b>PH0001772</b>   | ---        | ---      |
| Sample Date   | Client Info | <b>25 Jul 2023</b> | ---        | ---      |
| Machine Age   | hrs         | Client Info        | <b>820</b> | ---      |
| Oil Age       | hrs         | Client Info        | <b>0</b>   | ---      |
| Oil Changed   | Client Info | <b>N/A</b>         | ---        | ---      |
| Sample Status |             | <b>ATTENTION</b>   | ---        | ---      |

## WEAR METALS

| method   | limit/base | current     | history1 | history2     |     |     |
|----------|------------|-------------|----------|--------------|-----|-----|
| Iron     | ppm        | ASTM D5185m | >20      | <b>&lt;1</b> | --- | --- |
| Chromium | ppm        | ASTM D5185m | >20      | <b>0</b>     | --- | --- |
| Nickel   | ppm        | ASTM D5185m | >20      | <b>0</b>     | --- | --- |
| Titanium | ppm        | ASTM D5185m |          | <b>&lt;1</b> | --- | --- |
| Silver   | ppm        | ASTM D5185m |          | <b>0</b>     | --- | --- |
| Aluminum | ppm        | ASTM D5185m | >20      | <b>0</b>     | --- | --- |
| Lead     | ppm        | ASTM D5185m | >20      | <b>0</b>     | --- | --- |
| Copper   | ppm        | ASTM D5185m | >20      | <b>1</b>     | --- | --- |
| Tin      | ppm        | ASTM D5185m | >20      | <b>0</b>     | --- | --- |
| Vanadium | ppm        | ASTM D5185m |          | <b>&lt;1</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>0</b>     | --- | --- |
| Magnesium  | ppm        | ASTM D5185m |          | <b>&lt;1</b> | --- | --- |
| Calcium    | ppm        | ASTM D5185m |          | <b>50</b>    | --- | --- |
| Phosphorus | ppm        | ASTM D5185m |          | <b>335</b>   | --- | --- |
| Zinc       | ppm        | ASTM D5185m |          | <b>390</b>   | --- | --- |
| Sulfur     | ppm        | ASTM D5185m |          | <b>1202</b>  | --- | --- |

## CONTAMINANTS

| method    | limit/base | current     | history1 | history2 |     |     |
|-----------|------------|-------------|----------|----------|-----|-----|
| Silicon   | ppm        | ASTM D5185m | >15      | <b>0</b> | --- | --- |
| Sodium    | ppm        | ASTM D5185m |          | <b>1</b> | --- | --- |
| Potassium | ppm        | ASTM D5185m | >20      | <b>0</b> | --- | --- |

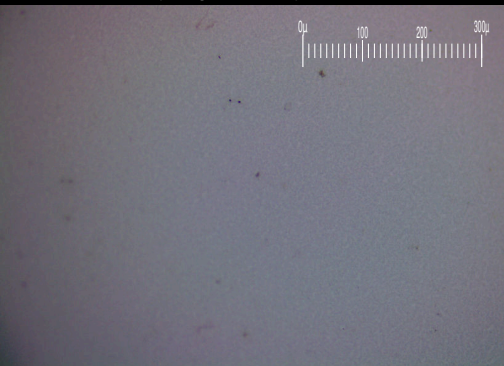
## FLUID CLEANLINESS

| method          | limit/base   | current   | history1        | history2 |     |
|-----------------|--------------|-----------|-----------------|----------|-----|
| Particles >4µm  | ASTM D7647   | >10000    | <b>1885</b>     | ---      | --- |
| Particles >6µm  | ASTM D7647   | >2500     | <b>505</b>      | ---      | --- |
| Particles >14µm | ASTM D7647   | >320      | <b>42</b>       | ---      | --- |
| Particles >21µm | ASTM D7647   | >80       | <b>11</b>       | ---      | --- |
| Particles >38µm | ASTM D7647   | >20       | <b>0</b>        | ---      | --- |
| Particles >71µm | ASTM D7647   | >4        | <b>0</b>        | ---      | --- |
| Oil Cleanliness | ISO 4406 (c) | >20/18/15 | <b>18/16/13</b> | ---      | --- |

## FLUID DEGRADATION

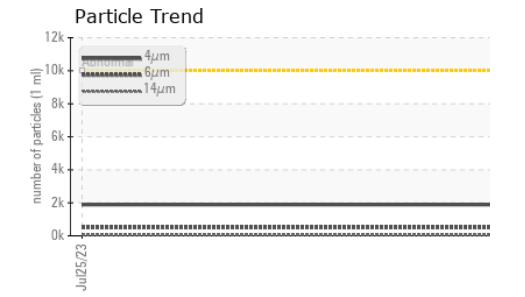
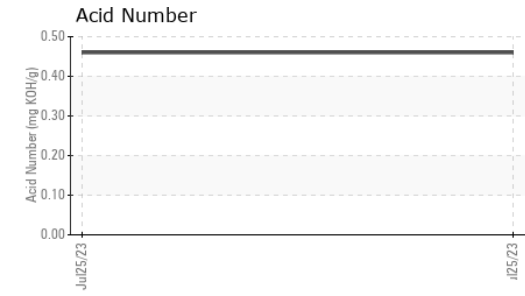
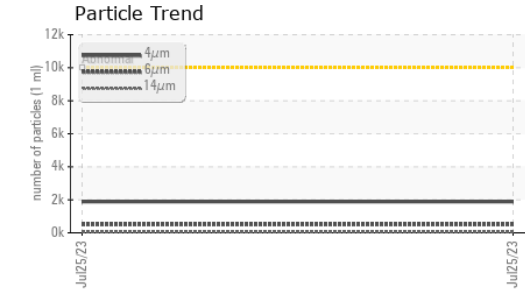
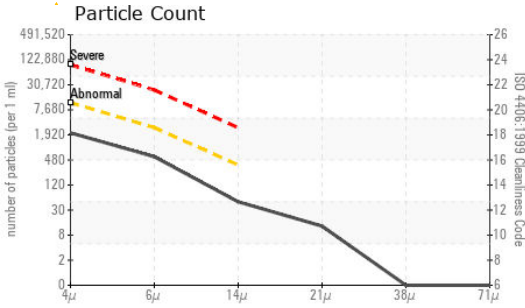
| method           | limit/base | current    | history1 | history2    |     |     |
|------------------|------------|------------|----------|-------------|-----|-----|
| Acid Number (AN) | mg KOH/g   | ASTM D8045 |          | <b>0.46</b> | --- | --- |

Particle Filter (Magn: 200 x)





# OIL ANALYSIS REPORT



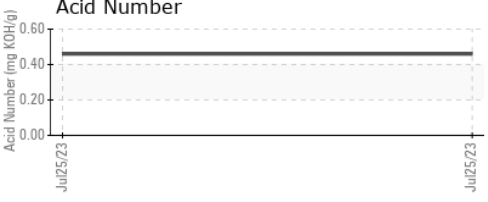
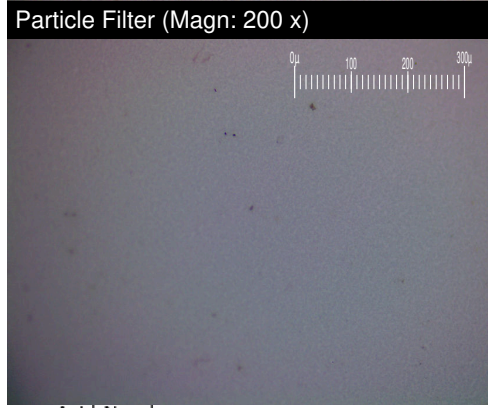
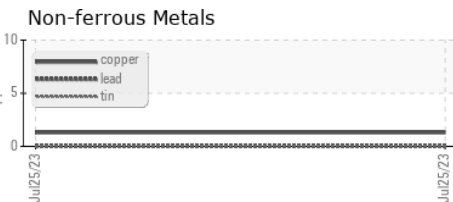
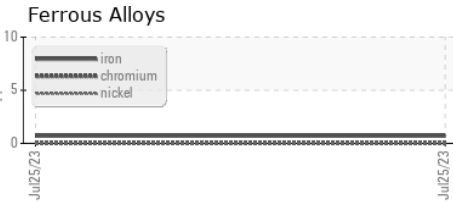
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | ---      |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | ---      |
| Precipitate      | scalar | *Visual    | NONE    | NONE     | ---      |
| Silt             | scalar | *Visual    | NONE    | NONE     | ---      |
| Debris           | scalar | *Visual    | NONE    | NONE     | ---      |
| Sand/Dirt        | scalar | *Visual    | NONE    | NONE     | ---      |
| Appearance       | scalar | *Visual    | NORML   | NORML    | ---      |
| Odor             | scalar | *Visual    | NORML   | NORML    | ---      |
| Emulsified Water | scalar | *Visual    | >0.05   | NEG      | ---      |
| Free Water       | scalar | *Visual    |         | NEG      | ---      |

| FLUID PROPERTIES | method | limit/base | current      | history1 | history2 |
|------------------|--------|------------|--------------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D445  | 64.6 ▲ 36.76 | ---      | ---      |

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

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

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PH0001772      **Received** : 21 Aug 2023  
**Lab Number** : 05929560      **Diagnosed** : 24 Aug 2023  
**Unique Number** : 10609507      **Diagnostician** : Jonathan Hester  
**Test Package** : PLANT ( Additional Tests: PrtFilter )

**HILER**  
 104 FULMER ST  
 WALKERTON, IN  
 US 46574  
 Contact: Service Manager

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: