

# PROBLEM SUMMARY

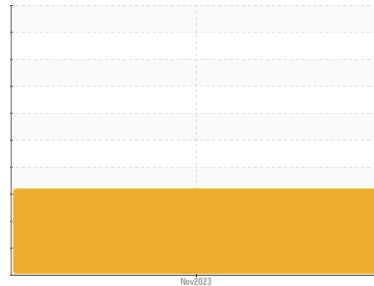
Sample Rating Trend

**DEGRADATION**

Machine Id  
**575 P74465**

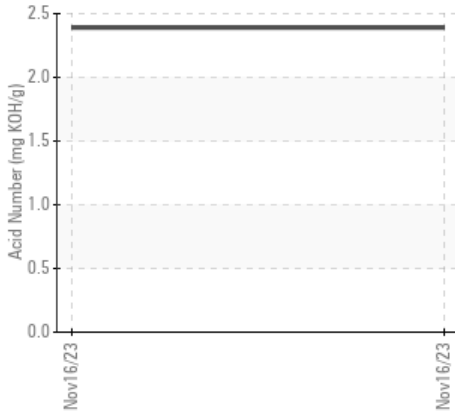
Component  
**Hydraulic System**

Fluid  
**CHEVRON HYDRAULIC OIL AW ISO 46 (475 GAL)**

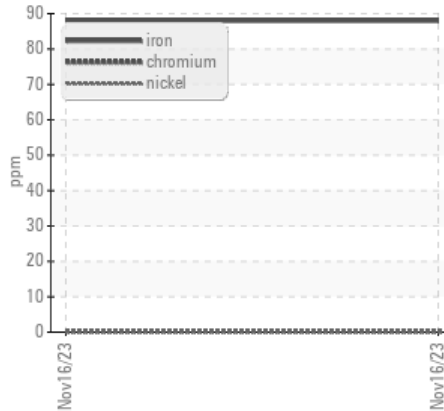


## COMPONENT CONDITION SUMMARY

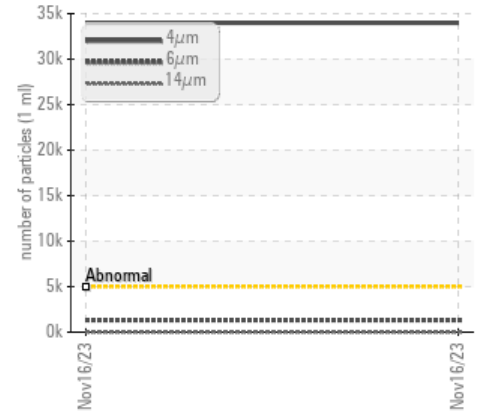
### ▲ Acid Number



### ▲ Ferrous Alloys



### ▲ Particle Trend



## RECOMMENDATION

The oil is near the end of its useful service life, recommend schedule an oil change. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

## PROBLEMATIC TEST RESULTS

| Sample Status    |          |              |           | <b>ABNORMAL</b>   | --- | --- |
|------------------|----------|--------------|-----------|-------------------|-----|-----|
| Iron             | ppm      | ASTM D5185m  | >20       | <b>▲ 88</b>       | --- | --- |
| Particles >4µm   |          | ASTM D7647   | >5000     | <b>▲ 33988</b>    | --- | --- |
| Particles >6µm   |          | ASTM D7647   | >1300     | <b>▲ 1322</b>     | --- | --- |
| Oil Cleanliness  |          | ISO 4406 (c) | >19/17/14 | <b>▲ 22/18/10</b> | --- | --- |
| Acid Number (AN) | mg KOH/g | ASTM D8045   |           | <b>▲ 2.39</b>     | --- | --- |

Customer Id: INTMAT  
Sample No.: ST43265  
Lab Number: 06014542  
Test Package: IND 2



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

| Action               | Status | Date | Done By | Description  |
|----------------------|--------|------|---------|--|
| Inspect Wear Source  | ---    | ---  | ?       | We advise that you inspect for the source(s) of wear.                                  |
| Service/change Fluid | ---    | ---  | ?       | The oil is near the end of it's useful service life, recommend schedule an oil change. |
| Resample             | ---    | ---  | ?       | We recommend an early resample to monitor this condition.                              |

## HISTORICAL DIAGNOSIS

# OIL ANALYSIS REPORT

Sample Rating Trend

DEGRADATION



Machine Id  
**575 P74465**

Component  
**Hydraulic System**

Fluid  
**CHEVRON HYDRAULIC OIL AW ISO 46 (475 GAL)**

## DIAGNOSIS

### ▲ Recommendation

The oil is near the end of its useful service life, recommend schedule an oil change. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

### ▲ Wear

The iron level is abnormal.

### ▲ Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

### ▲ Fluid Condition

The AN level is at the top-end of the recommended limit.

## SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1 | history2 |
|---------------|-------------|-------------|--------------------|----------|----------|
| Sample Number | Client Info |             | <b>ST43265</b>     | ---      | ---      |
| Sample Date   | Client Info |             | <b>16 Nov 2023</b> | ---      | ---      |
| Machine Age   | hrs         | Client Info | <b>0</b>           | ---      | ---      |
| Oil Age       | hrs         | Client Info | <b>0</b>           | ---      | ---      |
| Oil Changed   | Client Info |             | <b>N/A</b>         | ---      | ---      |
| Sample Status |             |             | <b>ABNORMAL</b>    | ---      | ---      |

## WEAR METALS

|          | method | limit/base      | current      | history1 | history2 |
|----------|--------|-----------------|--------------|----------|----------|
| Iron     | ppm    | ASTM D5185m >20 | <b>▲ 88</b>  | ---      | ---      |
| Chromium | ppm    | ASTM D5185m >20 | <b>&lt;1</b> | ---      | ---      |
| Nickel   | ppm    | ASTM D5185m >20 | <b>&lt;1</b> | ---      | ---      |
| Titanium | ppm    | ASTM D5185m     | <b>&lt;1</b> | ---      | ---      |
| Silver   | ppm    | ASTM D5185m     | <b>0</b>     | ---      | ---      |
| Aluminum | ppm    | ASTM D5185m >20 | <b>2</b>     | ---      | ---      |
| Lead     | ppm    | ASTM D5185m >20 | <b>&lt;1</b> | ---      | ---      |
| Copper   | ppm    | ASTM D5185m >20 | <b>2</b>     | ---      | ---      |
| Tin      | ppm    | ASTM D5185m >20 | <b>0</b>     | ---      | ---      |
| Vanadium | ppm    | ASTM D5185m     | <b>0</b>     | ---      | ---      |
| Cadmium  | ppm    | ASTM D5185m     | <b>&lt;1</b> | ---      | ---      |

## ADDITIVES

|            | method | limit/base  | current      | history1 | history2 |
|------------|--------|-------------|--------------|----------|----------|
| Boron      | ppm    | ASTM D5185m | <b>5</b>     | ---      | ---      |
| Barium     | ppm    | ASTM D5185m | <b>0</b>     | ---      | ---      |
| Molybdenum | ppm    | ASTM D5185m | <b>&lt;1</b> | ---      | ---      |
| Manganese  | ppm    | ASTM D5185m | <b>&lt;1</b> | ---      | ---      |
| Magnesium  | ppm    | ASTM D5185m | <b>3</b>     | ---      | ---      |
| Calcium    | ppm    | ASTM D5185m | <b>65</b>    | ---      | ---      |
| Phosphorus | ppm    | ASTM D5185m | <b>209</b>   | ---      | ---      |
| Zinc       | ppm    | ASTM D5185m | <b>57</b>    | ---      | ---      |
| Sulfur     | ppm    | ASTM D5185m | <b>849</b>   | ---      | ---      |

## CONTAMINANTS

|           | method | limit/base       | current      | history1 | history2 |
|-----------|--------|------------------|--------------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >15  | <b>5</b>     | ---      | ---      |
| Sodium    | ppm    | ASTM D5185m      | <b>0</b>     | ---      | ---      |
| Potassium | ppm    | ASTM D5185m >20  | <b>2</b>     | ---      | ---      |
| Water     | %      | ASTM D6304 >0.05 | <b>0.030</b> | ---      | ---      |
| ppm Water | ppm    | ASTM D6304 >500  | <b>310</b>   | ---      | ---      |

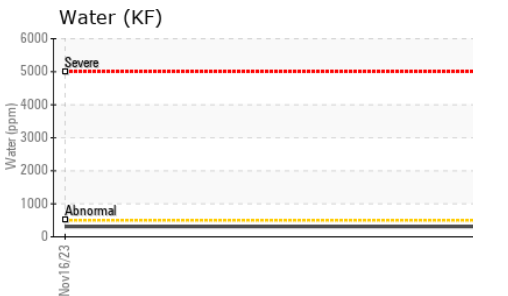
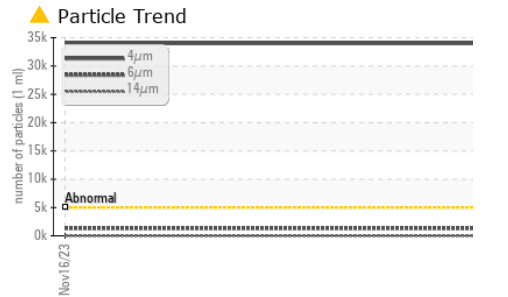
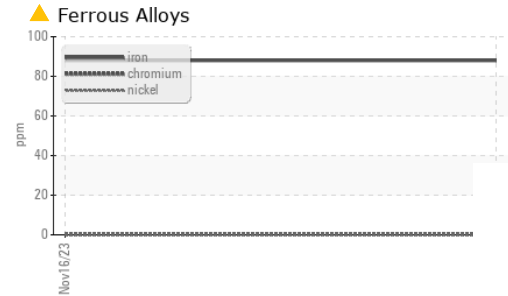
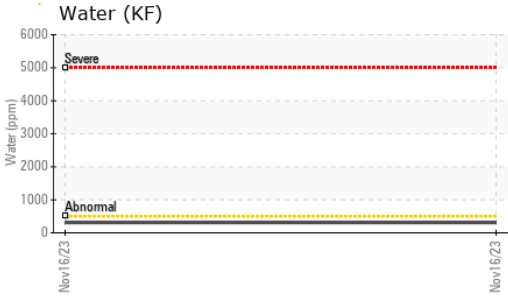
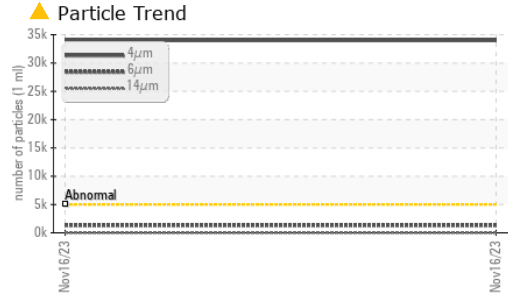
## FLUID CLEANLINESS

|                 | method       | limit/base | current           | history1 | history2 |
|-----------------|--------------|------------|-------------------|----------|----------|
| Particles >4µm  | ASTM D7647   | >5000      | <b>▲ 33988</b>    | ---      | ---      |
| Particles >6µm  | ASTM D7647   | >1300      | <b>▲ 1322</b>     | ---      | ---      |
| Particles >14µm | ASTM D7647   | >160       | <b>10</b>         | ---      | ---      |
| Particles >21µm | ASTM D7647   | >40        | <b>3</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>▲ 22/18/10</b> | ---      | ---      |

## FLUID DEGRADATION

|                  | method   | limit/base | current       | history1 | history2 |
|------------------|----------|------------|---------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | <b>▲ 2.39</b> | ---      | ---      |

# OIL ANALYSIS REPORT



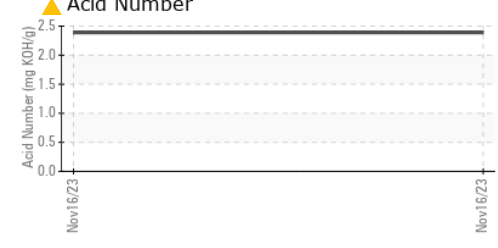
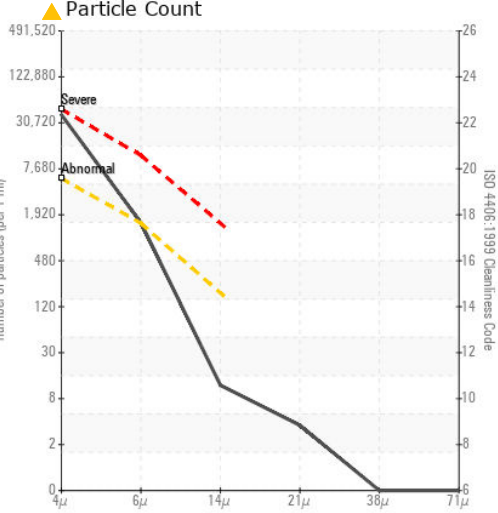
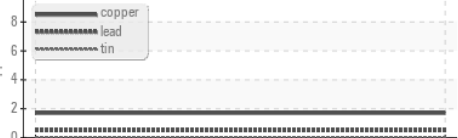
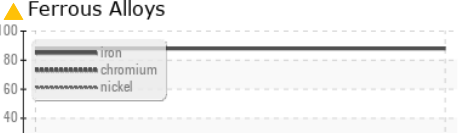
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | ---      |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | ---      |
| 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  | 43.7    | 39.9     | ---      |

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

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

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ST43265 **Received** : 21 Nov 2023  
**Lab Number** : 06014542 **Diagnosed** : 27 Nov 2023  
**Unique Number** : 10753686 **Diagnostician** : Jonathan Hester  
**Test Package** : IND 2 ( Additional Tests: KF )

**INTERNATIONAL CONSTRUCTION EQUIPMENT**  
 301 WAREHOUSE DR  
 MATTHEWS, NC  
 US 28104  
 Contact: TYLER WALTERS  
 ncservice@iceusa.com  
 T: (704)221-0367  
 F: (704)821-8201

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)