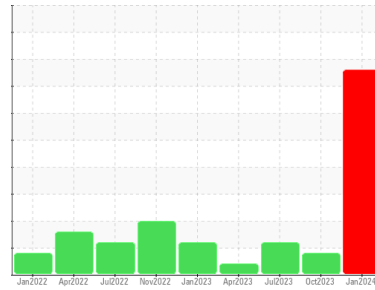




# PROBLEM SUMMARY

Sample Rating Trend



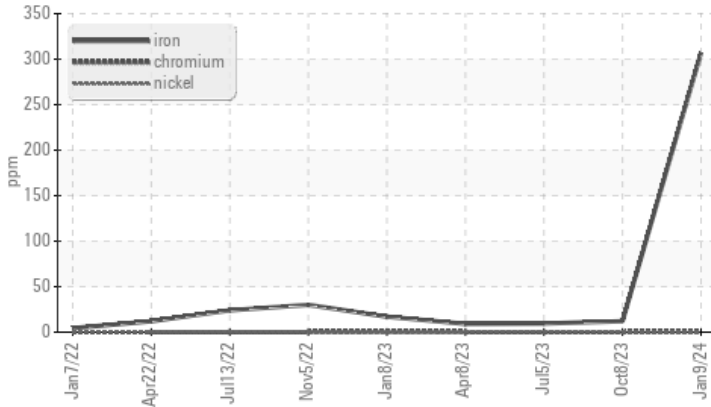
**WEAR**



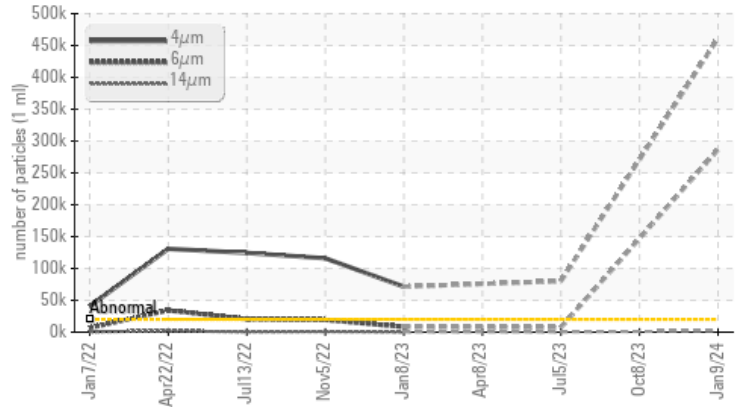
Area  
**FP-010**  
 Machine Id  
**B60365 - CONVEYOR KSI INCLINE SCREW RAW PROD #7**  
 Component  
**Auger**  
 Fluid  
**PETRO CANADA SYNDURO SHB ISO 460 (--- QTS)**

## COMPONENT CONDITION SUMMARY

### Ferrous Alloys



### Particle Trend



## RECOMMENDATION

We recommend you service the filters on this component if applicable. 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   |     |                        | SEVERE   | ABNORMAL | ABNORMAL |
|-----------------|-----|------------------------|----------|----------|----------|
| Iron            | ppm | ASTM D5185m >150       | 307      | 12       | 10       |
| Particles >4µm  |     | ASTM D7647 >20000      | 461819   | ---      | 80135    |
| Particles >6µm  |     | ASTM D7647 >5000       | 286532   | ---      | 7354     |
| Particles >14µm |     | ASTM D7647 >640        | 1826     | ---      | 189      |
| Oil Cleanliness |     | ISO 4406 (c) >21/19/16 | 26/25/18 | ---      | 24/20/15 |

Customer Id: HORAUS  
 Sample No.: WC0808559  
 Lab Number: 06063557  
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Don Baldrige +1  
[don.b505@comcast.net](mailto:don.b505@comcast.net)

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.                 |
| Change Filter       | ---    | ---  | ?       | We recommend you service the filters on this component if applicable. |
| Resample            | ---    | ---  | ?       | We recommend an early resample to monitor this condition.             |

## HISTORICAL DIAGNOSIS

### 08 Oct 2023 Diag: Jonathan Hester

#### VISCOSITY



We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample. All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. The oil viscosity is higher than normal. Confirm oil type. The AN level is acceptable for this fluid.

view report



### 05 Jul 2023 Diag: Jonathan Hester

#### ISO



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 08 Apr 2023 Diag: Don Baldrige

#### VIS DEBRIS



We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample. All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

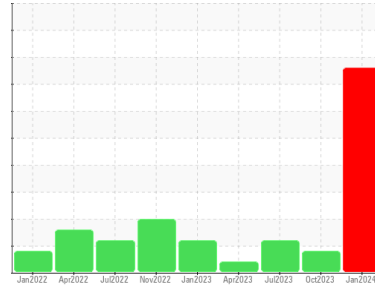
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Area  
**FP-010**  
 Machine Id  
**B60365 - CONVEYOR KSI INCLINE SCREW RAW PROD #7**  
 Component  
**Auger**  
 Fluid  
**PETRO CANADA SYNDURO SHB ISO 460 (--- QTS)**

## DIAGNOSIS

### Recommendation

We recommend you service the filters on this component if applicable. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

### Wear

A sharp increase in the iron level is noted. Gear wear is indicated.

### Contamination

There is a high amount of particulates present in the oil.

### Fluid Condition

The AN level is acceptable for this fluid.

## SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1    | history2    |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info |             | <b>WC0808559</b>   | WC0850226   | WC0820608   |
| Sample Date   | Client Info |             | <b>09 Jan 2024</b> | 08 Oct 2023 | 05 Jul 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>SEVERE</b>      | ABNORMAL    | ABNORMAL    |

## CONTAMINATION

|       | method    | limit/base | current    | history1 | history2 |
|-------|-----------|------------|------------|----------|----------|
| Water | WC Method | >0.1       | <b>NEG</b> | NEG      | NEG      |

## WEAR METALS

|          | method | limit/base       | current      | history1 | history2 |
|----------|--------|------------------|--------------|----------|----------|
| Iron     | ppm    | ASTM D5185m >150 | <b>307</b>   | 12       | 10       |
| Chromium | ppm    | ASTM D5185m >10  | <b>&lt;1</b> | 0        | 0        |
| Nickel   | ppm    | ASTM D5185m >10  | <b>0</b>     | 0        | 0        |
| Titanium | ppm    | ASTM D5185m      | <b>0</b>     | <1       | <1       |
| Silver   | ppm    | ASTM D5185m      | <b>0</b>     | 0        | 0        |
| Aluminum | ppm    | ASTM D5185m >25  | <b>2</b>     | 0        | <1       |
| Lead     | ppm    | ASTM D5185m >100 | <b>0</b>     | 0        | 0        |
| Copper   | ppm    | ASTM D5185m >50  | <b>2</b>     | <1       | <1       |
| Tin      | ppm    | ASTM D5185m >10  | <b>0</b>     | 0        | 0        |
| Vanadium | ppm    | ASTM D5185m      | <b>0</b>     | 0        | <1       |
| Cadmium  | ppm    | ASTM D5185m      | <b>0</b>     | 0        | 0        |

## ADDITIVES

|            | method | limit/base       | current     | history1 | history2 |
|------------|--------|------------------|-------------|----------|----------|
| Boron      | ppm    | ASTM D5185m      | <b>0</b>    | 0        | 0        |
| Barium     | ppm    | ASTM D5185m 5.0  | <b>3</b>    | 1        | 0        |
| Molybdenum | ppm    | ASTM D5185m      | <b>0</b>    | 0        | 0        |
| Manganese  | ppm    | ASTM D5185m      | <b>1</b>    | 0        | <1       |
| Magnesium  | ppm    | ASTM D5185m 5.0  | <b>1</b>    | 3        | 0        |
| Calcium    | ppm    | ASTM D5185m 5.0  | <b>5</b>    | <1       | 0        |
| Phosphorus | ppm    | ASTM D5185m 60   | <b>148</b>  | 108      | 371      |
| Zinc       | ppm    | ASTM D5185m 5.0  | <b>0</b>    | 0        | 0        |
| Sulfur     | ppm    | ASTM D5185m 1900 | <b>2187</b> | 1985     | 1462     |

## CONTAMINANTS

|           | method | limit/base      | current   | history1 | history2 |
|-----------|--------|-----------------|-----------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >50 | <b>4</b>  | <1       | 2        |
| Sodium    | ppm    | ASTM D5185m     | <b>8</b>  | <1       | 0        |
| Potassium | ppm    | ASTM D5185m >20 | <b>12</b> | 0        | <1       |

## FLUID CLEANLINESS

|                 | method       | limit/base | current         | history1 | history2 |
|-----------------|--------------|------------|-----------------|----------|----------|
| Particles >4µm  | ASTM D7647   | >20000     | <b>461819</b>   | ---      | 80135    |
| Particles >6µm  | ASTM D7647   | >5000      | <b>286532</b>   | ---      | 7354     |
| Particles >14µm | ASTM D7647   | >640       | <b>1826</b>     | ---      | 189      |
| Particles >21µm | ASTM D7647   | >160       | <b>69</b>       | ---      | 44       |
| Particles >38µm | ASTM D7647   | >40        | <b>0</b>        | ---      | 0        |
| Particles >71µm | ASTM D7647   | >10        | <b>0</b>        | ---      | 0        |
| Oil Cleanliness | ISO 4406 (c) | >21/19/16  | <b>26/25/18</b> | ---      | 24/20/15 |

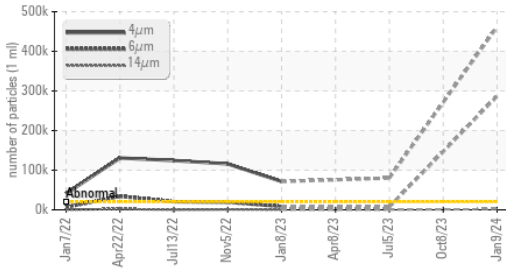
## FLUID DEGRADATION

|                  | method   | limit/base     | current     | history1 | history2 |
|------------------|----------|----------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.3 | <b>0.33</b> | 0.37     | 0.42     |

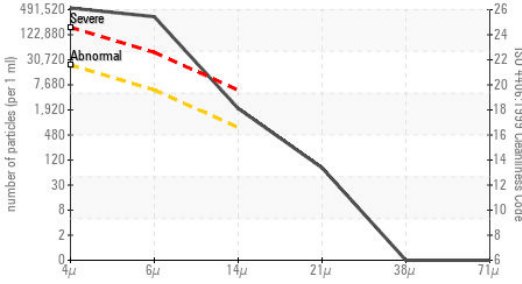


# OIL ANALYSIS REPORT

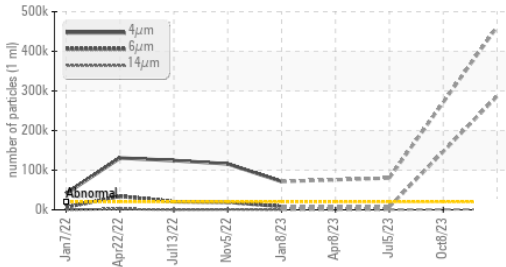
**▲ Particle Trend**



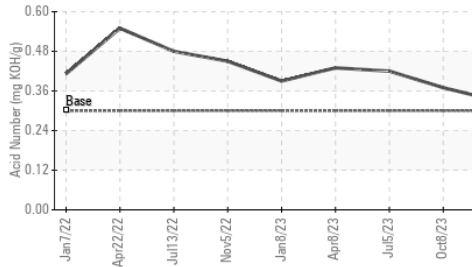
**▲ Particle Count**



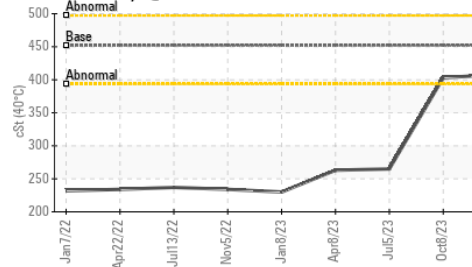
**▲ Particle Trend**



**Acid Number**



**Viscosity @ 40°C**



| 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     | ▲ MODER  |
| Sand/Dirt        | scalar | *Visual    | NONE    | NONE     | NONE     |
| Appearance       | scalar | *Visual    | NORML   | NORML    | NORML    |
| Odor             | scalar | *Visual    | NORML   | NORML    | NORML    |
| Emulsified Water | scalar | *Visual    | >0.1    | NEG      | NEG      |
| Free Water       | scalar | *Visual    |         | NEG      | NEG      |

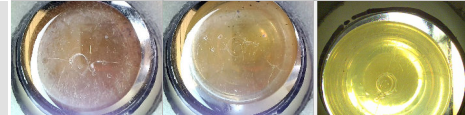
| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |     |
|------------------|--------|------------|---------|----------|----------|-----|
| Visc @ 40°C      | cSt    | ASTM D445  | 452     | 408      | ▲ 403.0  | 265 |

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

Color

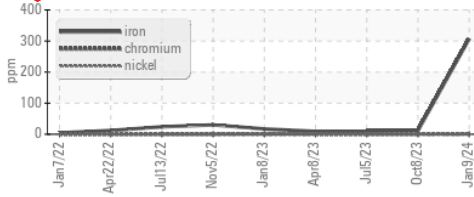


Bottom

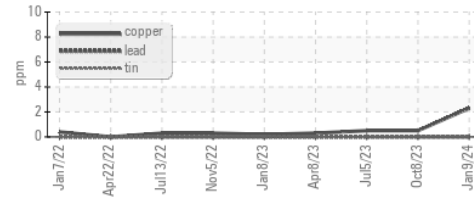


## GRAPHS

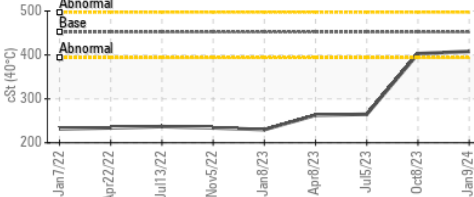
**● Ferrous Alloys**



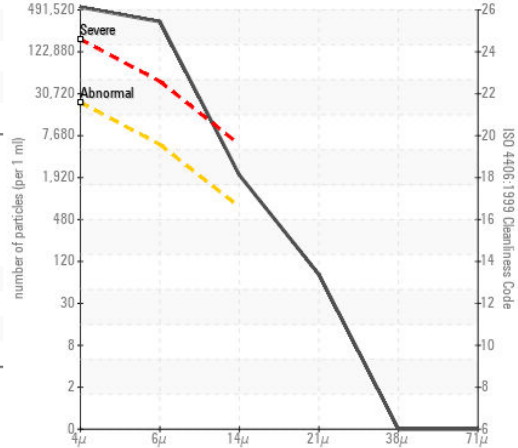
**Non-ferrous Metals**



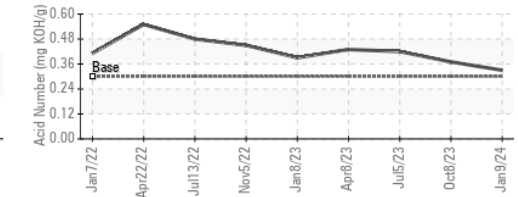
**Viscosity @ 40°C**



**▲ Particle Count**



**Acid Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0808559 **Received** : 17 Jan 2024  
**Lab Number** : 06063557 **Diagnosed** : 19 Jan 2024  
**Unique Number** : 10834939 **Diagnostician** : Don Baldrige

**Test Package** : IND 2 ( Additional Tests: PrtCount )

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)

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