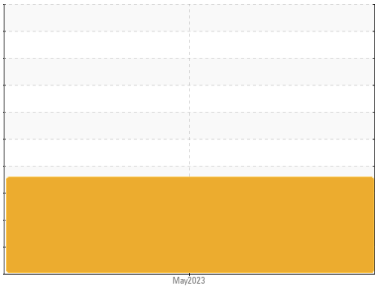
# PROBLEM SUMMARY

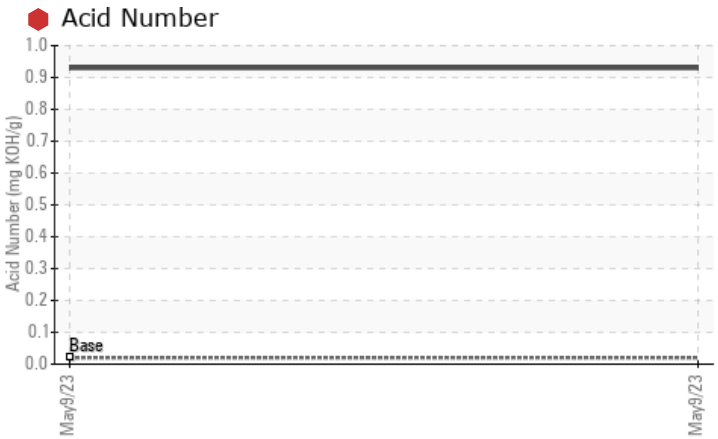
Sample Rating Trend

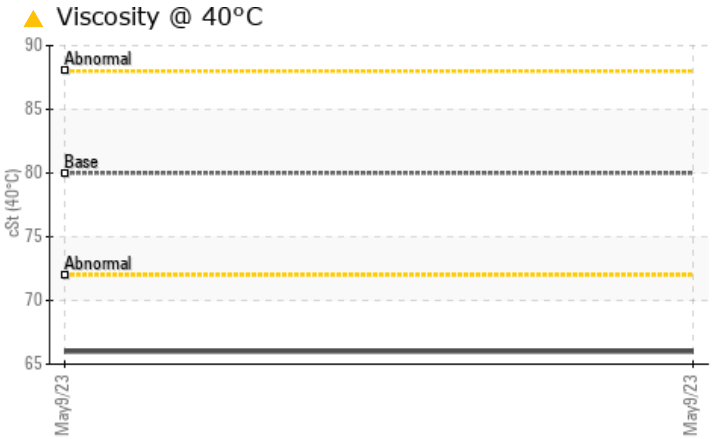



**DEGRADATION**

Area
**[235354/153888]**
Machine Id
**HILL PHOENIX RACK B #1538 (S/N 74204-82)**
Component
**Reciprocating Compressor**
Fluid
**BITZER BSE 85 K (--- LTR)**

## COMPONENT CONDITION SUMMARY




## RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. Please note that this is a corrected copy for data entry updates.

## PROBLEMATIC TEST RESULTS

| | | | | | | |
|---|---|---|---|---|---|---|
| Sample Status | | | | **SEVERE** | --- | --- |
| Acid Number (AN) | mg KOH/g | ASTM D974* | 0.02 | **0.93** | --- | --- |
| Visc @ 40°C | cSt | ASTM D7279(m) | 80 | **66.0** | --- | --- |

**Customer Id:** DISEDM
**Sample No.:** WC0816808
**Lab Number:** 02560224
**Test Package:** IND 2

*To manage this report scan the QR code*

*To discuss the diagnosis or test data:*
Kevin Marson +1 (289)291-4644 x4644
Kevin.Marson@wearcheck.com

*To change component or sample information:*
Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

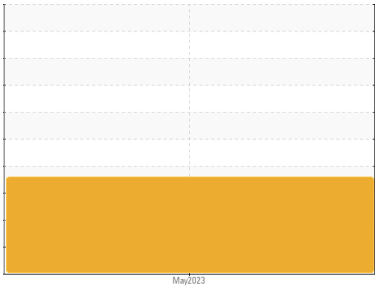
## RECOMMENDED ACTIONS

| Action | Status | Date | Done By | Description |
|---|---|---|---|---|
| Change Fluid | --- | --- | ? | We recommend that you drain the oil from the component if this has not already been done. |
| Resample | --- | --- | ? | We recommend an early resample to monitor this condition. |

## HISTORICAL DIAGNOSIS

# OIL ANALYSIS REPORT

Sample Rating Trend




DEGRADATION

Area
**[235354/153888]**
Machine Id
**HILL PHOENIX RACK B #1538 (S/N 74204-82)**
Component
**Reciprocating Compressor**
Fluid
**BITZER BSE 85 K (--- LTR)**

## DIAGNOSIS

**Recommendation**

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. Please note that this is a corrected copy for data entry updates.

**Wear**

All component wear rates are normal.

**Contamination**

The water content is negligible.

**Fluid Condition**

The oil viscosity is higher than normal. The high AN level of the oil indicates the presence of oxi-polymerized products. The AN level is much higher than the recommended limit. Viscosity of sample indicates oil is within ISO 68 range, advise investigate. The oil is no longer serviceable.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **WC0816808** | --- | --- |
| Sample Date | | Client Info | | **09 May 2023** | --- | --- |
| Machine Age | yrs | Client Info | | **10** | --- | --- |
| Oil Age | yrs | Client Info | | **0** | --- | --- |
| Oil Changed | | Client Info | | **N/A** | --- | --- |
| Sample Status | | | | **SEVERE** | --- | --- |

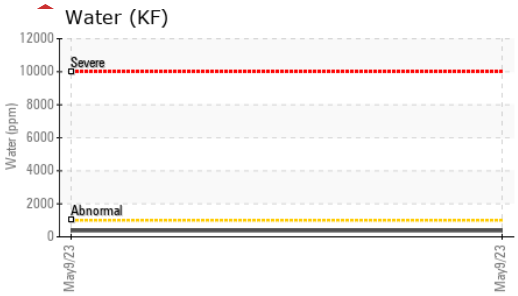
| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| PQ | | ASTM D8184* | | **0** | --- | --- |
| Iron | ppm | ASTM D5185(m) | >50 | **12** | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >10 | **0** | --- | --- |
| Nickel | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Titanium | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Silver | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | >25 | **<1** | --- | --- |
| Lead | ppm | ASTM D5185(m) | >25 | **0** | --- | --- |
| Copper | ppm | ASTM D5185(m) | >50 | **<1** | --- | --- |
| Tin | ppm | ASTM D5185(m) | >15 | **<1** | --- | --- |
| Antimony | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Vanadium | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Beryllium | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Cadmium | ppm | ASTM D5185(m) | | **0** | --- | --- |

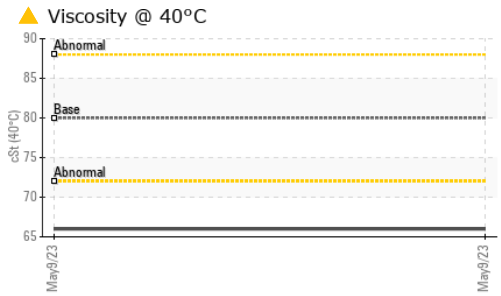
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185(m) | 0 | **<1** | --- | --- |
| Barium | ppm | ASTM D5185(m) | 0 | **0** | --- | --- |
| Molybdenum | ppm | ASTM D5185(m) | 0 | **0** | --- | --- |
| Manganese | ppm | ASTM D5185(m) | 0 | **0** | --- | --- |
| Magnesium | ppm | ASTM D5185(m) | 0 | **0** | --- | --- |
| Calcium | ppm | ASTM D5185(m) | 0 | **0** | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) | 1200 | **1051** | --- | --- |
| Zinc | ppm | ASTM D5185(m) | 0 | **1** | --- | --- |
| Sulfur | ppm | ASTM D5185(m) | 0 | **4** | --- | --- |
| Lithium | ppm | ASTM D5185(m) | | **<1** | --- | --- |

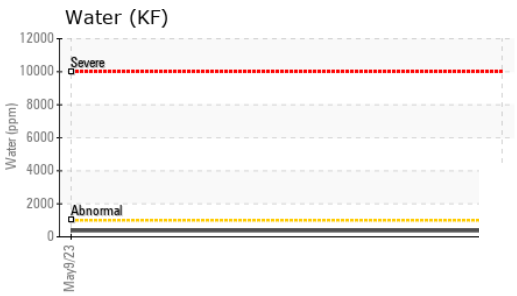
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | >25 | **2** | --- | --- |
| Sodium | ppm | ASTM D5185(m) | | **<1** | --- | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | **<1** | --- | --- |
| Water | % | ASTM D6304* | >0.1 | **0.037** | --- | --- |
| ppm Water | ppm | ASTM D6304* | >1000 | **372.9** | --- | --- |

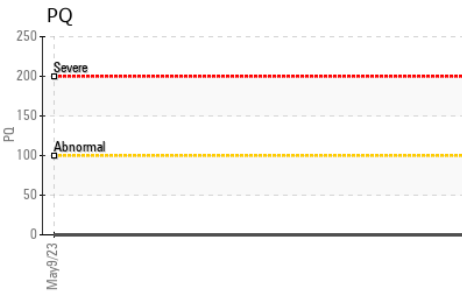
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D974* | 0.02 | **0.93** | --- | --- |

# OIL ANALYSIS REPORT



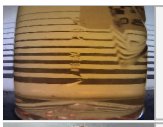



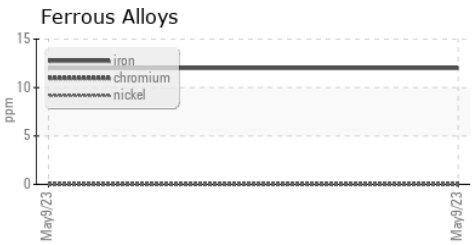



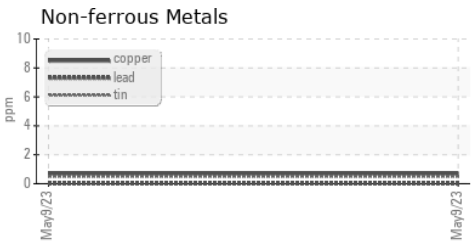

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | Visual* | NONE | **NONE** | --- | --- |
| Yellow Metal | scalar | Visual* | NONE | **NONE** | --- | --- |
| Precipitate | scalar | Visual* | NONE | **NONE** | --- | --- |
| Silt |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

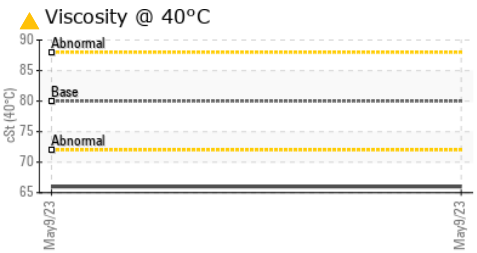
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D7279(m) | 80 | ▲ **66.0** | --- | --- |

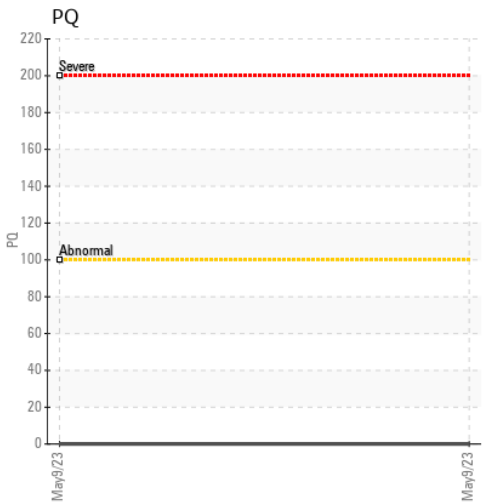
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | *no image* | *no image* |
| Bottom | | |  | *no image* | *no image* |

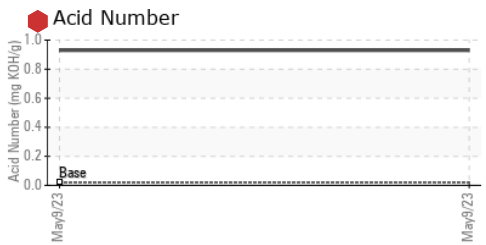
## GRAPHS




ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : WC0816808 **Received** : 29 May 2023
**Lab Number** : 02560224 **Diagnosed** : 05 Jun 2023
**Unique Number** : 5581264 **Diagnostician** : Kevin Marson
**Test Package** : IND 2 ( Additional Tests: KF, TAN Man )

*To discuss this sample report, contact Customer Service at 1-800-268-2131.*
*Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.*
*Validity of results and interpretation are based on the sample and information as supplied.*


**Display Fixtures - Loblaws**
14740-111 Avenue
Edmonton, AB
CA T5M 2P5
Contact: Ross Richards
ross.richards@loblaw.ca
T: (780)232-2699
F: