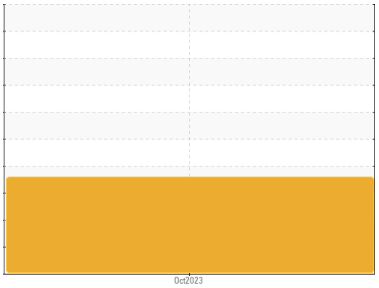
# PROBLEM SUMMARY

Sample Rating Trend

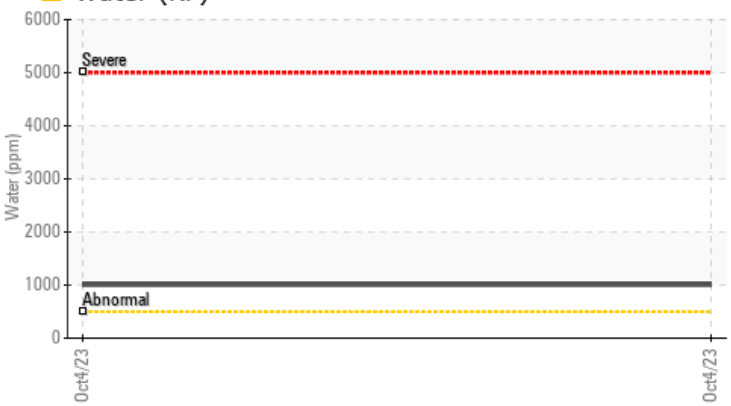


**WATER**

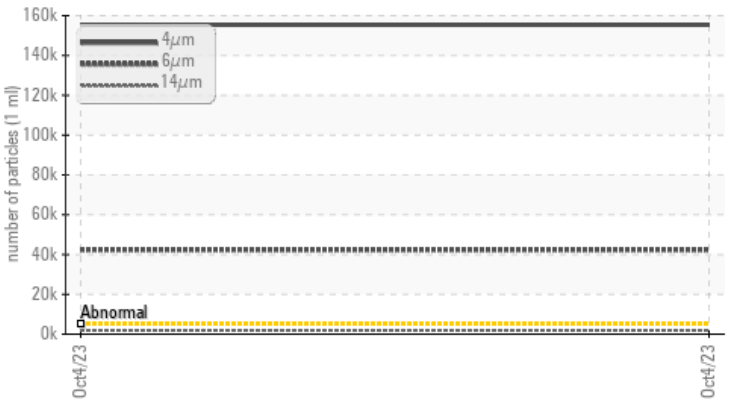
Area
## Core Molding - C16700
Machine Id
## M1 3324
Component
**Hydraulic System**
Fluid
**NOT GIVEN (--- GAL)**

## COMPONENT CONDITION SUMMARY

▲ Water (KF)




▲ Particle Trend




## RECOMMENDATION

This is a baseline read-out on the submitted sample.

## PROBLEMATIC TEST RESULTS

| | | | | | | |
|---|---|---|---|---|---|---|
| Sample Status | | | | **ABNORMAL** | --- | --- |
| Water | % | ASTM D6304* | >0.05 | ▲ **0.100** | --- | --- |
| ppm Water | ppm | ASTM D6304* | >500 | ▲ **1006.5** | --- | --- |
| Particles >4µm | | ASTM D7647 | >5000 | ▲ **155425** | --- | --- |
| Particles >6µm | | ASTM D7647 | >1300 | ▲ **42357** | --- | --- |
| Particles >14µm | | ASTM D7647 | >160 | ▲ **1904** | --- | --- |
| Particles >21µm | | ASTM D7647 | >40 | ▲ **312** | --- | --- |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | ▲ **24/23/18** | --- | --- |

**Customer Id:** CHECOB
**Sample No.:** E30000492
**Lab Number:** 02588620
**Test Package:** IND 2

*To manage this report scan the QR code*

*To discuss the diagnosis or test data:*
Tatiana Sorkina +1 (800)263-3939
tsorkina@e360s.ca

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

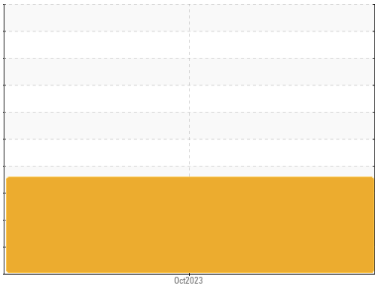
## RECOMMENDED ACTIONS

*There are no recommended actions for this sample.*

## HISTORICAL DIAGNOSIS

# OIL ANALYSIS REPORT

Sample Rating Trend




**WATER**

Area
## Core Molding - C16700
Machine Id
## M1 3324
Component
**Hydraulic System**
Fluid
**NOT GIVEN (--- GAL)**

## DIAGNOSIS

**Recommendation**
This is a baseline read-out on the submitted sample.

**Wear**
Copper and iron ppm levels are noted.

**Contamination**
Water and ppm water contamination levels are abnormal. Oil Cleanliness are abnormally high. Particles >14µm are abnormally high. Particles >4µm are abnormally high. Particles >6µm are abnormally high. Particles >21µm are abnormally high.

**Fluid Condition**
{not applicable}

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Batch # | | Client Info | | **Mobile** | --- | --- |
| Machine ID | | Client Info | | **M13324** | --- | --- |
| Department | | Client Info | | **Production** | --- | --- |
| Sample From | | Client Info | | **Machine** | --- | --- |
| Production Stage | | Client Info | | **Initial** | --- | --- |
| Sent to WC | | Client Info | | **10/10/2023** | --- | --- |
| Sample Number | | Client Info | | **E30000492** | --- | --- |
| Sample Date | | Client Info | | **04 Oct 2023** | --- | --- |
| Machine Age | hrs | Client Info | | **0** | --- | --- |
| Oil Age | hrs | Client Info | | **0** | --- | --- |
| Oil Changed | | Client Info | | **N/A** | --- | --- |
| Sample Status | | | | **ABNORMAL** | --- | --- |

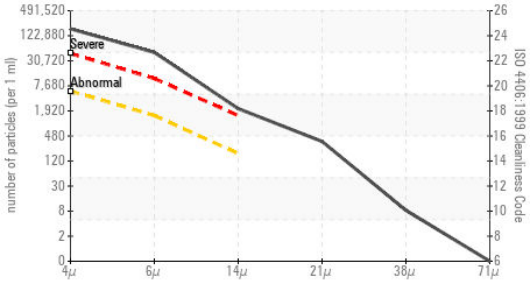
| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| PQ | | ASTM D8184* | | **0** | --- | --- |
| Iron | ppm | ASTM D5185(m) | >20 | **24** | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >20 | **0** | --- | --- |
| Nickel | ppm | ASTM D5185(m) | >20 | **<1** | --- | --- |
| Titanium | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Silver | ppm | ASTM D5185(m) | | **<1** | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | >20 | **3** | --- | --- |
| Lead | ppm | ASTM D5185(m) | >20 | **3** | --- | --- |
| Copper | ppm | ASTM D5185(m) | >20 | **33** | --- | --- |
| Tin | ppm | ASTM D5185(m) | >20 | **<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) | | **<1** | --- | --- |
| Barium | ppm | ASTM D5185(m) | | **<1** | --- | --- |
| Molybdenum | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Manganese | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Magnesium | ppm | ASTM D5185(m) | | **2** | --- | --- |
| Calcium | ppm | ASTM D5185(m) | | **31** | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) | | **836** | --- | --- |
| Zinc | ppm | ASTM D5185(m) | | **465** | --- | --- |
| Sulfur | ppm | ASTM D5185(m) | | **2632** | --- | --- |
| Lithium | ppm | ASTM D5185(m) | | **<1** | --- | --- |

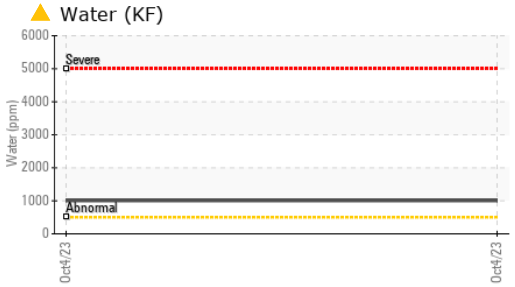
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | >15 | **11** | --- | --- |
| Sodium | ppm | ASTM D5185(m) | | **<1** | --- | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | **0** | --- | --- |
| Water | % | ASTM D6304* | >0.05 | ▲ **0.100** | --- | --- |
| ppm Water | ppm | ASTM D6304* | >500 | ▲ **1006.5** | --- | --- |

# OIL ANALYSIS REPORT

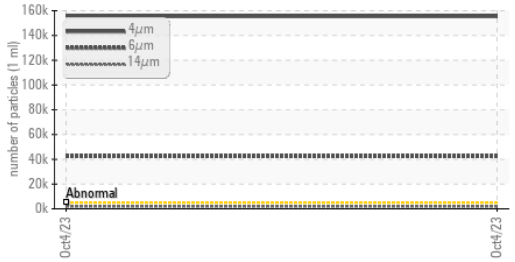
Particle Count



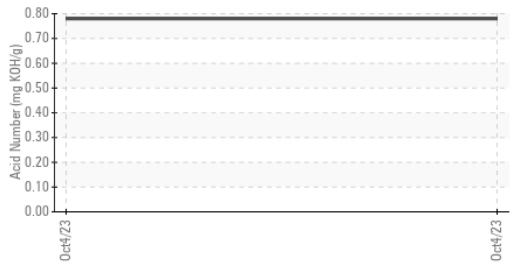

Water (KF)



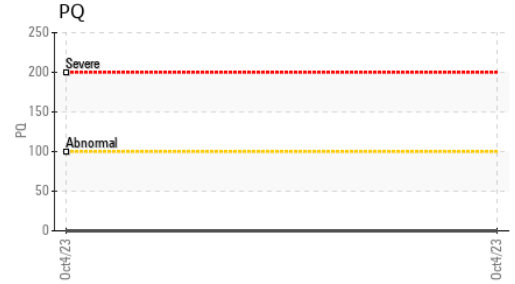

Particle Trend




Acid Number




PQ




| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >5000 | ▲ **155425** | --- | --- |
| Particles >6µm | | ASTM D7647 | >1300 | ▲ **42357** | --- | --- |
| Particles >14µm | | ASTM D7647 | >160 | ▲ **1904** | --- | --- |
| Particles >21µm | | ASTM D7647 | >40 | ▲ **312** | --- | --- |
| Particles >38µm | | ASTM D7647 | >10 | **7** | --- | --- |
| Particles >71µm | | ASTM D7647 | >3 | **0** | --- | --- |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | ▲ **24/23/18** | --- | --- |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D974* | | **0.78** | --- | --- |

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | Visual* | NONE | **NONE** | --- | --- |
| Yellow Metal | scalar | Visual* | NONE | **NONE** | --- | --- |
| Precipitate | scalar | Visual* | NONE | **VLITE** | --- | --- |
| Silt | scalar | Visual* | NONE | **VLITE** | --- | --- |
| 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 | **.2%** | --- | --- |
| Free Water | scalar | Visual* | | **NEG** | --- | --- |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D7279(m) | | **71.2** | --- | --- |
| Visc @ 100°C | cSt | ASTM D7279(m) | | **9.3** | --- | --- |
| Viscosity Index (VI) | Scale | ASTM D2270* | | **106** | --- | --- |

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

ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : E30000492 **Received** : 12 Oct 2023
**Lab Number** : 02588620 **Diagnosed** : 17 Oct 2023
**Unique Number** : 5657686 **Diagnostician** : Tatiana Sorkina
**Test Package** : IND 2 ( Additional Tests: KF, KV100, PQ, TAN Man, VI )

*To discuss this sample report, contact Customer Service at 1-905-372-2251.*
*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.*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