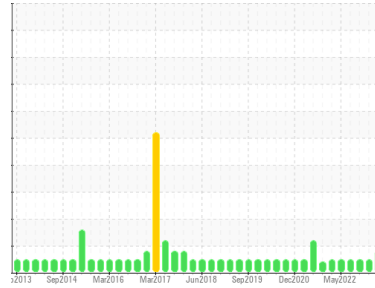




# PROBLEM SUMMARY

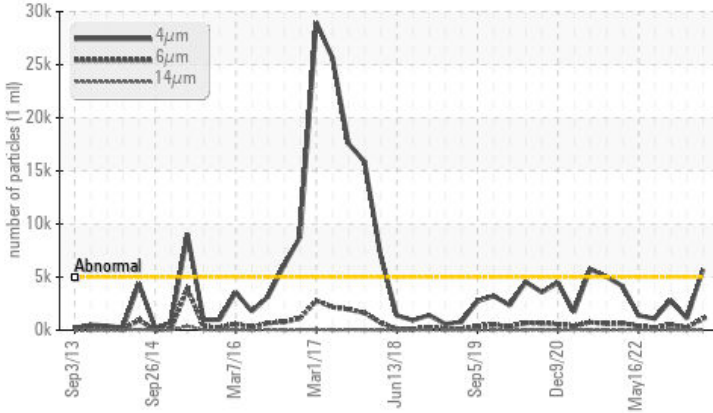
Area  
**CURING/PRESS EFGH**  
 Machine Id  
**101817 Main**  
 Component  
**Hydraulic System**  
 Fluid  
**ESSO TERESSO ISO 68 (5000 LTR)**

Sample Rating Trend



## COMPONENT CONDITION SUMMARY

▲ Particle Trend



## RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

| Sample Status   |                        | ATTENTION  | NORMAL   | NORMAL   |
|-----------------|------------------------|------------|----------|----------|
| Particles >4µm  | ASTM D7647 >5000       | ▲ 5700     | 1102     | 2803     |
| Oil Cleanliness | ISO 4406 (c) >19/17/14 | ▲ 20/17/12 | 17/15/12 | 19/16/12 |

Customer Id: MITWAT  
 Sample No.: WC0799517  
 Lab Number: 02576731  
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Wes Davis +1 905-569-8600 x223  
[wesd@wearcheck.ca](mailto:wesd@wearcheck.ca)

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

RECOMMENDED ACTIONS

| Action        | Status | Date | Done By | Description   |
|---------------|--------|------|---------|---|
| Change Filter | ---    | ---  | ?       | We recommend you service the filters on this component. |

HISTORICAL DIAGNOSIS

28 Feb 2023 Diag: Kevin Marson

NORMAL



Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



06 Dec 2022 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



20 Aug 2022 Diag: Kevin Marson

NORMAL



Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

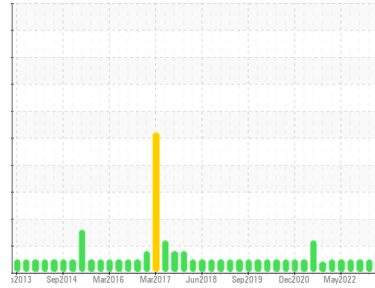
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area  
**CURING/PRESS EFGH**  
 Machine Id  
**101817 Main**  
 Component  
**Hydraulic System**  
 Fluid  
**ESSO TERESSO ISO 68 (5000 LTR)**

## DIAGNOSIS

### Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

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

### Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1    | history2    |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info |             | <b>WC0799517</b>   | WC0763682   | WC0718918   |
| Sample Date   | Client Info |             | <b>15 Aug 2023</b> | 28 Feb 2023 | 06 Dec 2022 |
| 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>ATTENTION</b>   | NORMAL      | NORMAL      |

## WEAR METALS

|           | method | limit/base    | current | history1 | history2 |
|-----------|--------|---------------|---------|----------|----------|
| Iron      | ppm    | ASTM D5185(m) | >20     | <1       | <1       |
| Chromium  | ppm    | ASTM D5185(m) | >20     | 0        | 0        |
| Nickel    | ppm    | ASTM D5185(m) | >20     | 0        | 0        |
| Titanium  | ppm    | ASTM D5185(m) |         | 0        | 0        |
| Silver    | ppm    | ASTM D5185(m) |         | 0        | 0        |
| Aluminum  | ppm    | ASTM D5185(m) | >20     | 0        | 0        |
| Lead      | ppm    | ASTM D5185(m) | >20     | <1       | <1       |
| Copper    | ppm    | ASTM D5185(m) | >20     | <1       | <1       |
| Tin       | ppm    | ASTM D5185(m) | >20     | 0        | 0        |
| Antimony  | ppm    | ASTM D5185(m) |         | 0        | <1       |
| Vanadium  | ppm    | ASTM D5185(m) |         | 0        | 0        |
| Beryllium | ppm    | ASTM D5185(m) |         | 0        | 0        |
| Cadmium   | ppm    | ASTM D5185(m) |         | 0        | 0        |

## ADDITIVES

|            | method | limit/base    | current | history1 | history2 |
|------------|--------|---------------|---------|----------|----------|
| Boron      | ppm    | ASTM D5185(m) | 4.5     | 0        | <1       |
| Barium     | ppm    | ASTM D5185(m) | 0.4     | 0        | 0        |
| Molybdenum | ppm    | ASTM D5185(m) | 0       | 0        | 0        |
| Manganese  | ppm    | ASTM D5185(m) |         | 0        | 0        |
| Magnesium  | ppm    | ASTM D5185(m) | 0       | 0        | <1       |
| Calcium    | ppm    | ASTM D5185(m) | 0       | <1       | 2        |
| Phosphorus | ppm    | ASTM D5185(m) | 0.7     | 2        | 29       |
| Zinc       | ppm    | ASTM D5185(m) | 0       | 3        | 31       |
| Sulfur     | ppm    | ASTM D5185(m) | 1315    | 6466     | 6805     |
| Lithium    | ppm    | ASTM D5185(m) |         | <1       | <1       |

## CONTAMINANTS

|           | method | limit/base    | current | history1 | history2 |
|-----------|--------|---------------|---------|----------|----------|
| Silicon   | ppm    | ASTM D5185(m) | >15     | 0        | 0        |
| Sodium    | ppm    | ASTM D5185(m) |         | <1       | 0        |
| Potassium | ppm    | ASTM D5185(m) | >20     | <1       | 0        |

## FLUID CLEANLINESS

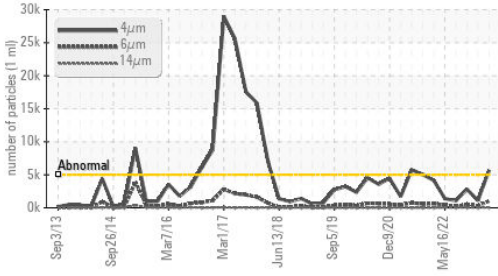
|                 | method       | limit/base | current           | history1 | history2 |
|-----------------|--------------|------------|-------------------|----------|----------|
| Particles >4µm  | ASTM D7647   | >5000      | ▲ <b>5700</b>     | 1102     | 2803     |
| Particles >6µm  | ASTM D7647   | >1300      | <b>1055</b>       | 256      | 528      |
| Particles >14µm | ASTM D7647   | >160       | <b>34</b>         | 30       | 33       |
| Particles >21µm | ASTM D7647   | >40        | <b>10</b>         | 9        | 11       |
| Particles >38µm | ASTM D7647   | >10        | <b>1</b>          | 1        | 1        |
| Particles >71µm | ASTM D7647   | >3         | <b>0</b>          | 0        | 0        |
| Oil Cleanliness | ISO 4406 (c) | >19/17/14  | ▲ <b>20/17/12</b> | 17/15/12 | 19/16/12 |

## FLUID DEGRADATION

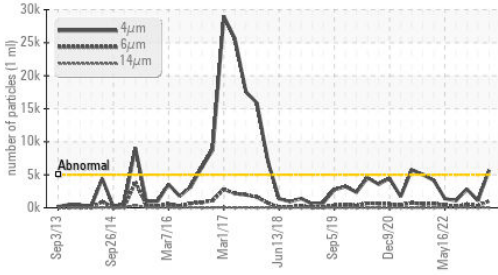
|                  | method   | limit/base | current | history1    | history2 |
|------------------|----------|------------|---------|-------------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D974* | 0.02    | <b>0.04</b> | 0.10     |

# OIL ANALYSIS REPORT

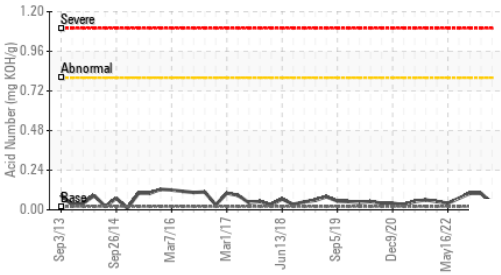
▲ Particle Trend



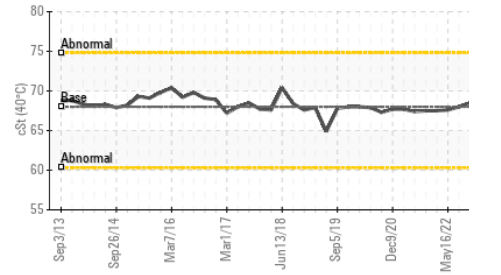
▲ Particle Trend



Acid Number



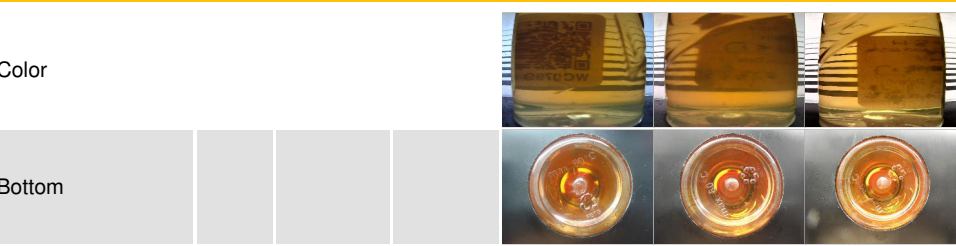
Viscosity @ 40°C



| 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     | NONE     |
| Sand/Dirt        | scalar | Visual*    | NONE    | NONE     | NONE     |
| Appearance       | scalar | Visual*    | NORML   | NORML    | NORML    |
| Odor             | scalar | Visual*    | NORML   | NORML    | NORML    |
| Emulsified Water | scalar | Visual*    | >0.05   | NEG      | NEG      |
| Free Water       | scalar | Visual*    |         | NEG      | NEG      |

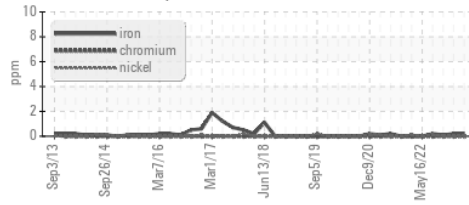
| FLUID PROPERTIES | method | limit/base    | current | history1 | history2 |
|------------------|--------|---------------|---------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D7279(m) | 68      | 65.4     | 66.3     |

SAMPLE IMAGES

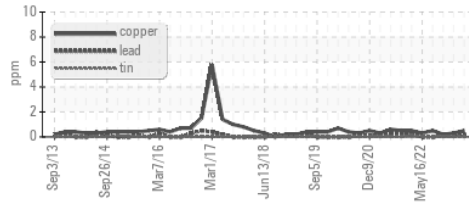


GRAPHS

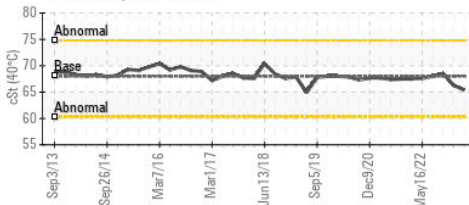
Ferrous Alloys



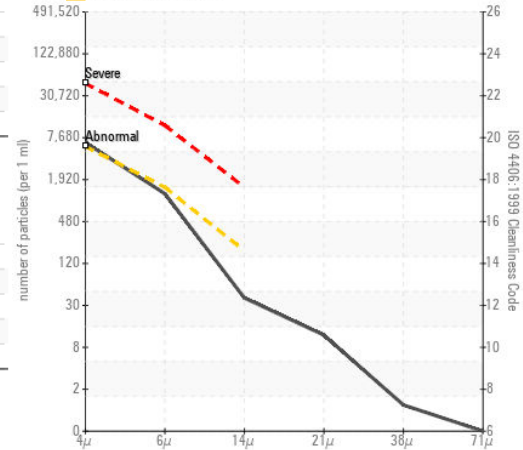
Non-ferrous Metals



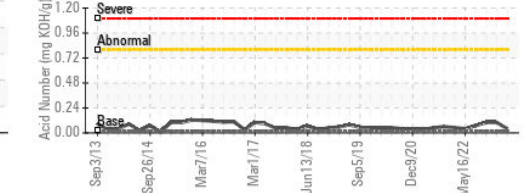
Viscosity @ 40°C



▲ Particle Count



Acid Number



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0799517 **Received** : 18 Aug 2023  
**Lab Number** : 02576731 **Diagnosed** : 21 Aug 2023  
**Unique Number** : 5629791 **Diagnostician** : Wes Davis  
**Test Package** : IND 2 ( Additional Tests: TAN Man )

**MICHELIN TIRE**  
 866 RANDOLPH RD  
 WATERVILLE, NS  
 CA B0P 1V0  
 Contact: Alan Davies  
 alan.davies@michelin.com  
 T: (902)534-3590  
 F: x:

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.