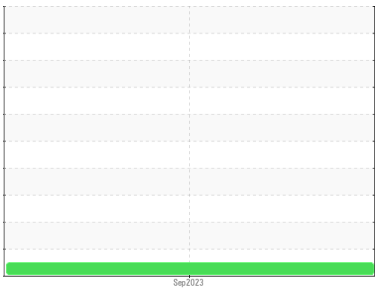
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Machine Id
## MARLEY COOLING TOWER 5
Component
**Gearbox**
Fluid
**GEAR OIL ISO 150 (--- GAL)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

**Wear**
All component wear rates are normal.

**Contamination**
There is no indication of any contamination 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 | | **PC0077139** | --- | --- |
| Sample Date | | Client Info | | **14 Sep 2023** | --- | --- |
| Machine Age | yrs | Client Info | | **0** | --- | --- |
| Oil Age | yrs | Client Info | | **2** | --- | --- |
| Oil Changed | | Client Info | | **N/A** | --- | --- |
| Sample Status | | | | **NORMAL** | --- | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| PQ | | ASTM D8184* | | **0** | --- | --- |
| Iron | ppm | ASTM D5185(m) | >200 | **5** | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >10 | **0** | --- | --- |
| Nickel | ppm | ASTM D5185(m) | >10 | **<1** | --- | --- |
| Titanium | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Silver | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | >25 | **<1** | --- | --- |
| Lead | ppm | ASTM D5185(m) | >50 | **<1** | --- | --- |
| Copper | ppm | ASTM D5185(m) | >200 | **<1** | --- | --- |
| Tin | ppm | ASTM D5185(m) | >10 | **0** | --- | --- |
| Antimony | ppm | ASTM D5185(m) | >5 | **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) | 50 | **0** | --- | --- |
| Barium | ppm | ASTM D5185(m) | 15 | **0** | --- | --- |
| Molybdenum | ppm | ASTM D5185(m) | 15 | **0** | --- | --- |
| Manganese | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Magnesium | ppm | ASTM D5185(m) | 50 | **<1** | --- | --- |
| Calcium | ppm | ASTM D5185(m) | 50 | **<1** | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) | 350 | **260** | --- | --- |
| Zinc | ppm | ASTM D5185(m) | 100 | **172** | --- | --- |
| Sulfur | ppm | ASTM D5185(m) | 12500 | **281** | --- | --- |
| Lithium | ppm | ASTM D5185(m) | | **<1** | --- | --- |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | >50 | **7** | --- | --- |
| Sodium | ppm | ASTM D5185(m) | | **<1** | --- | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | **<1** | --- | --- |
| Water | % | ASTM D6304* | >0.2 | **0.005** | --- | --- |
| ppm Water | ppm | ASTM D6304* | >2000 | **59.0** | --- | --- |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D974* | 0.85 | **0.63** | --- | --- |

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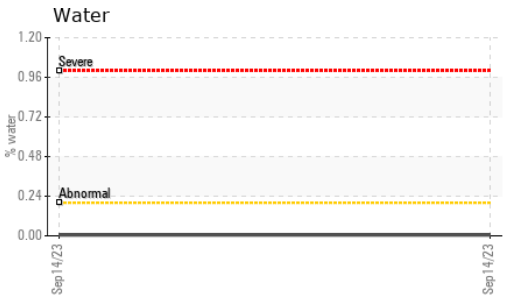
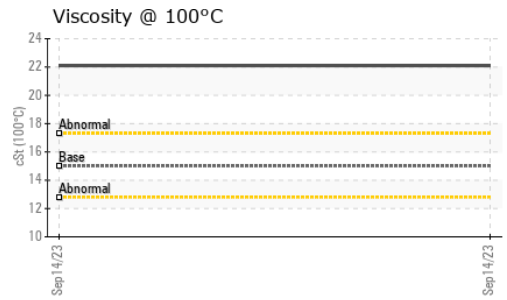
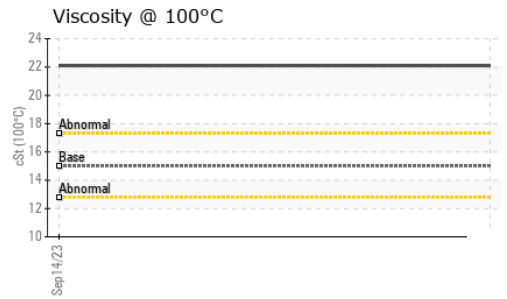
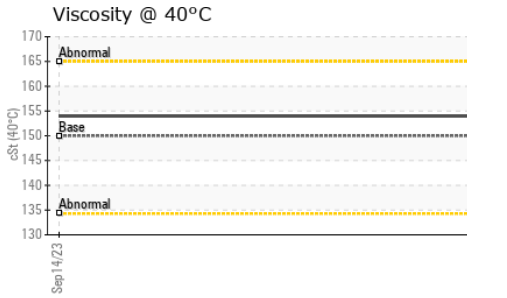
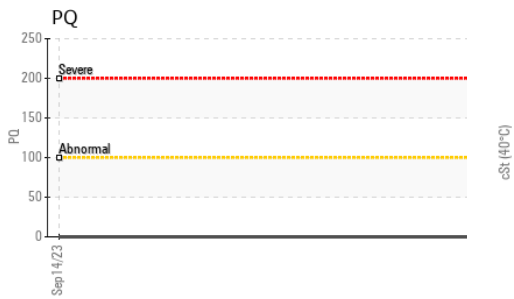


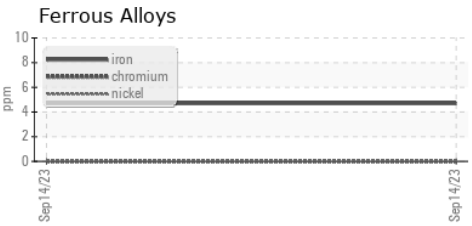



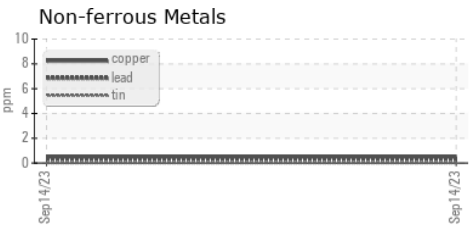

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | Visual* | NONE | **NONE** | --- | --- |
| Yellow Metal | scalar | Visual* | NONE | **NONE** | --- | --- |
| Precipitate | scalar | Visual* | NONE | **NONE** | --- | --- |
| Silt | scalar | Visual* | NONE | **NONE** | --- | --- |
| Debris | scalar | Visual* | NONE | **VLITE** | --- | --- |
| Sand/Dirt | scalar | Visual* | NONE | **NONE** | --- | --- |
| Appearance | scalar | Visual* | NORML | **NORML** | --- | --- |
| Odor | scalar | Visual* | NORML | **NORML** | --- | --- |
| Emulsified Water | scalar | Visual* | >0.2 | **.2%** | --- | --- |
| Free Water | scalar | Visual* | | **NEG** | --- | --- |

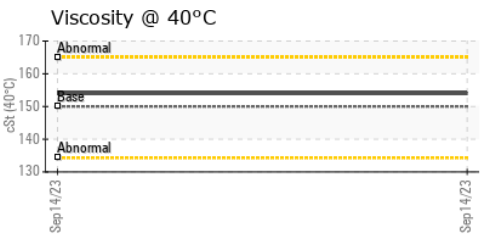
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D7279(m) | 150 | **154** | --- | --- |
| Visc @ 100°C | cSt | ASTM D7279(m) | 15.0 | **22.1** | --- | --- |
| Viscosity Index (VI) | Scale | ASTM D2270* | 99 | **170** | --- | --- |

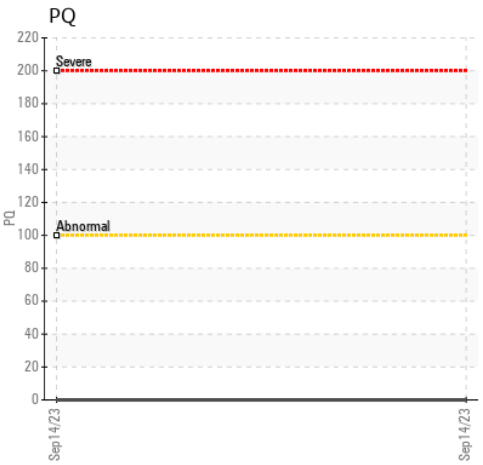
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | *no image* | *no image* |
| Bottom | | |  | *no image* | *no image* |

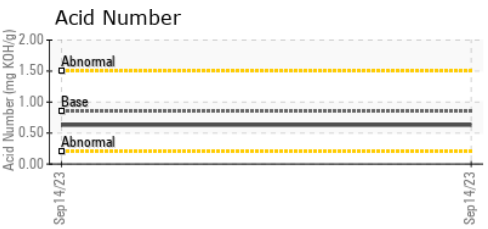
## GRAPHS




CALA Testing Accreditation No. 1005078
ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **ARCHER DANIELS MIDLAND COMPANY (ADM)**
**Sample No.** : PC0077139 **Received** : 15 Sep 2023 5550 MAPLEWOOD DRIVE
**Lab Number** : 02582958 **Diagnosed** : 18 Sep 2023 WINDSOR, ON
**Unique Number** : 5644023 **Diagnostician** : Bill Quesnel CA N9C 0B9
**Test Package** : IND 2 ( Additional Tests: KF, KV100, VI ) Contact: Terry Summerfield

*To discuss this sample report, contact Customer Service at 1-800-268-2131.* terry.summerfield@adm.com
*Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.* T: (519)972-2324
*Validity of results and interpretation are based on the sample and information as supplied.* F: