# CONSTRUCTION EQUIPMENT

## R22504 GEORGE HARMS MANITOWOC MLC300 607788 - HYDRAULIC SYSTEM

**Sample No:** VCP390282
**Oil Type:** MANITOWC 46
**Job No:** R22504 GEORGE HARMS


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### SAMPLE INFORMATION

| | | | | | |
|---|---|---|---|---|---|
| Sample Number | | **VCP390282** | VCP399092 | --- | --- |
| Sample Date | | **10 Jul 2023** | 05 Dec 2022 | --- | --- |
| Machine Hours | | **5764** | 6606 | --- | --- |
| Oil Hours | | **0** | 0 | --- | --- |
| Oil Changed | | **Not Changd** | Not Changd | --- | --- |
| Sample Status | | **NORMAL** | ABNORMAL | --- | --- |

### OIL CONDITION

| | | | | | |
|---|---|---|---|---|---|
| Visc @ 40°C | cSt | **97.4** | 42.9 | --- | --- |
| Acid Number (AN) | mg KOH/g | **1.51** | 0.59 | --- | --- |

### CONTAMINATION

| | | | | | |
|---|---|---|---|---|---|
| Particles >4µm | | **374451** | ▲ 23296 | --- | --- |
| Particles >6µm | | **145972** | ▲ 4769 | --- | --- |
| Particles >14µm | | **167** | 53 | --- | --- |
| ISO 4406:1999 (c) | | **26/24/15** | 22/19/13 | --- | --- |
| Silicon | ppm | **2** | 5 | --- | --- |
| Sodium | ppm | **<1** | 0 | --- | --- |
| Potassium | ppm | **2** | 2 | --- | --- |

### WEAR METALS

| | | | | | |
|---|---|---|---|---|---|
| Iron | ppm | **3** | 4 | --- | --- |
| Copper | ppm | **<1** | 5 | --- | --- |
| Lead | ppm | **0** | <1 | --- | --- |
| Tin | ppm | **<1** | 0 | --- | --- |
| Aluminum | ppm | **1** | <1 | --- | --- |
| Chromium | ppm | **0** | 0 | --- | --- |
| Molybdenum | ppm | **62** | 3 | --- | --- |
| Nickel | ppm | **0** | 0 | --- | --- |
| Titanium | ppm | **<1** | 0 | --- | --- |
| Silver | ppm | **0** | 0 | --- | --- |
| Manganese | ppm | **<1** | <1 | --- | --- |
| Vanadium | ppm | **<1** | 0 | --- | --- |

### ADDITIVES

| | | | | | |
|---|---|---|---|---|---|
| Calcium | ppm | **1157** | 2137 | --- | --- |
| Magnesium | ppm | **1039** | 27 | --- | --- |
| Zinc | ppm | **1329** | 1012 | --- | --- |
| Phosphorus | ppm | **1076** | 781 | --- | --- |
| Barium | ppm | **0** | 0 | --- | --- |
| Boron | ppm | **<1** | 64 | --- | --- |

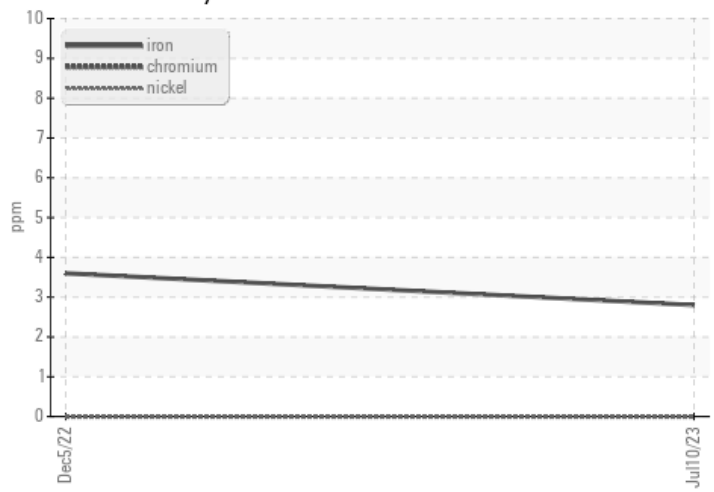
## Diagnosis

We recommend you service the filters on this component. Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of particulates present in the oil. Confirm oil type. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

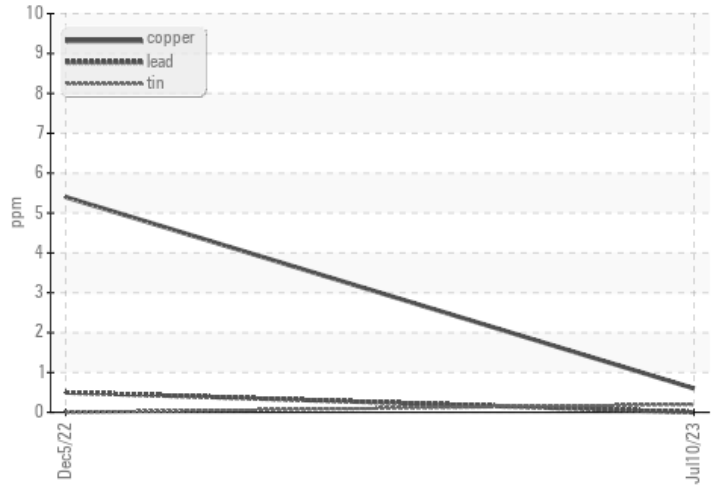
**Depot:** HOFPISNJ
**Unique No:** 10562578
**Signed:** Doug Bogart
**Report Date:** 20 Jul 2023

## GRAPHS

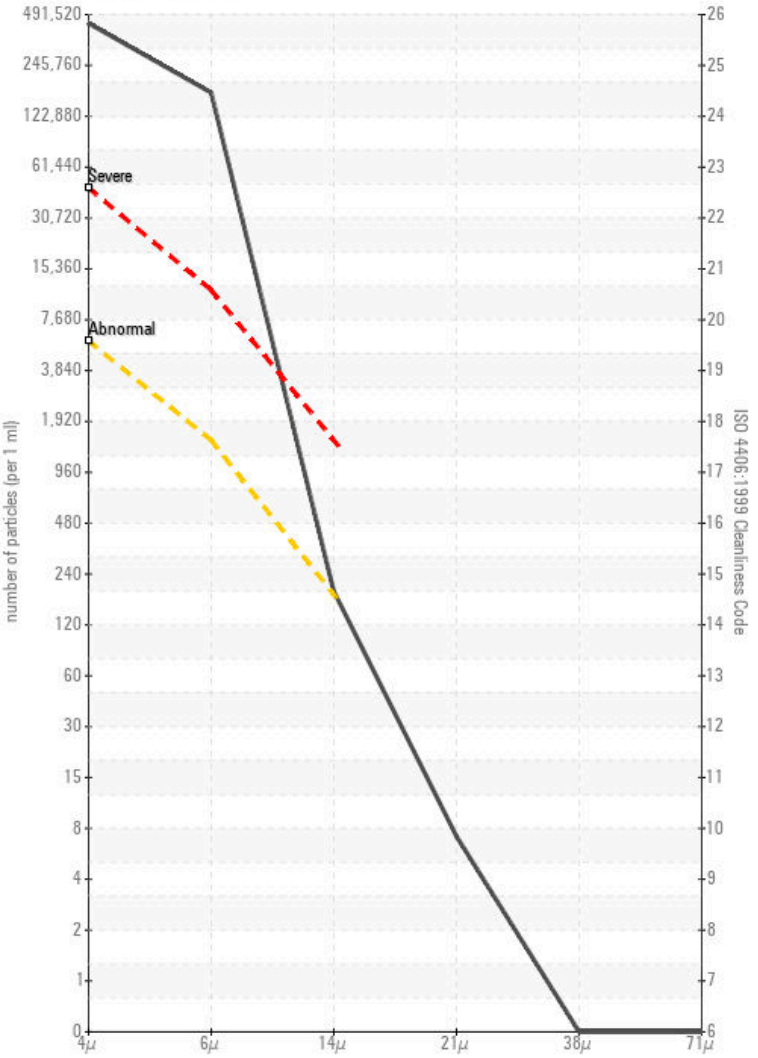
### Ferrous Alloys



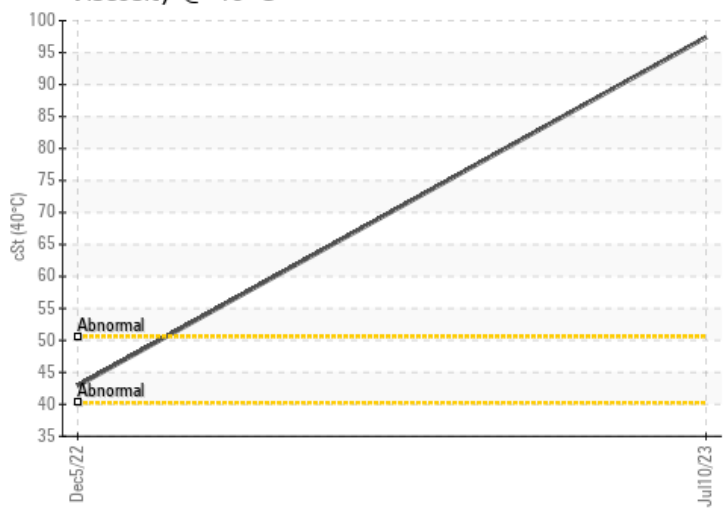

### Non-ferrous Metals




### Particle Count




### Viscosity @ 40°C




### Acid Number