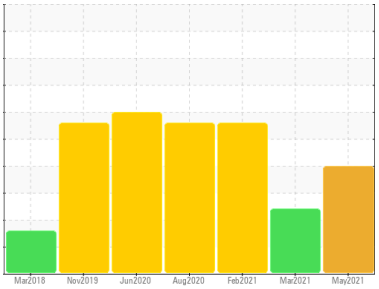
# PROBLEM SUMMARY

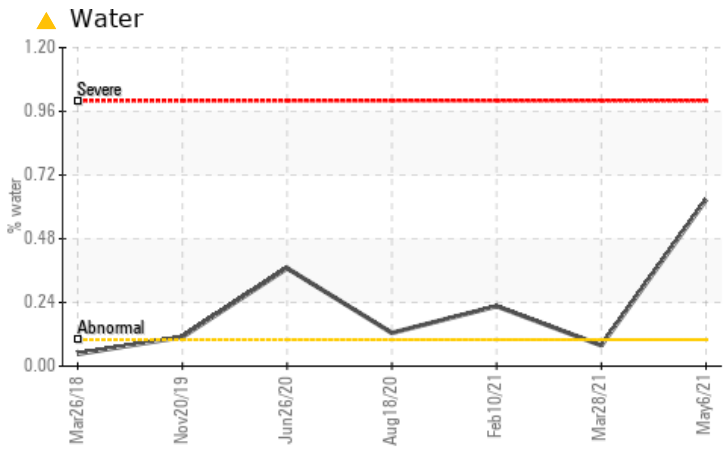
Sample Rating Trend

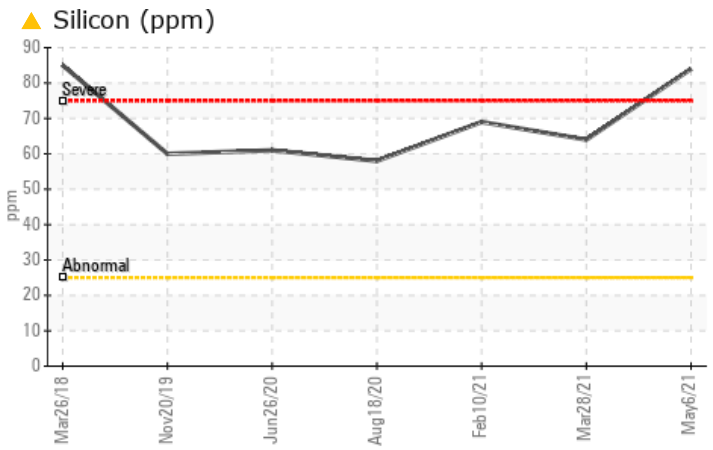



**WATER**

Machine Id
## VILTER B
Component
**Compressor**
Fluid
**VILTER METHANE PAO 100 (--- GAL)**

## COMPONENT CONDITION SUMMARY




## RECOMMENDATION

The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

## PROBLEMATIC TEST RESULTS

| Sample Status | | | | **ABNORMAL** | ABNORMAL | ABNORMAL |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >25 | ▲ **84** | ▲ 64 | ▲ 69 |
| Water | % | ASTM D6304 | >0.1 | ▲ **0.627** | 0.078 | ▲ 0.226 |
| ppm Water | ppm | ASTM D6304 | >1000 | ▲ **6270** | 780.4 | ▲ 2260 |
| Silt | scalar | *Visual | NONE | ▲ **MODER** | ▲ MODER | NONE |


**Customer Id:** MELMELTX
**Sample No.:** TO50000090
**Lab Number:** 05251613
**Test Package:** IND 2

*To manage this report scan the QR code*

*To discuss the diagnosis or test data:*
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jhester@wearcheckusa.com

*To change component or sample information:*
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

## RECOMMENDED ACTIONS

| Action | Status | Date | Done By | Description |
|---|---|---|---|---|
| Alert | --- | --- | ? | We were unable to perform a particle count due to a high concentration of particles present in this sample. |

## HISTORICAL DIAGNOSIS

**28 Mar 2021 Diag: Jonathan Hester**

DIRT

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.All component wear rates are normal. There is a moderate amount of visible silt present in the sample. Elemental level of silicon (Si) above normal indicating ingress of seal material. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

**10 Feb 2021 Diag: Don Baldridge**

WATER

We advise that you follow the  water drain-off procedure for this component. We recommend you service the filters on this component. We recommend an early resample to monitor this condition.All component wear rates are normal. There is a high amount of particulates present in the oil. There is a light concentration of water present in the oil. Elemental level of silicon (Si) above normal indicating ingress of seal material. The AN level is acceptable for this fluid.

view report

**18 Aug 2020 Diag: Doug Bogart**

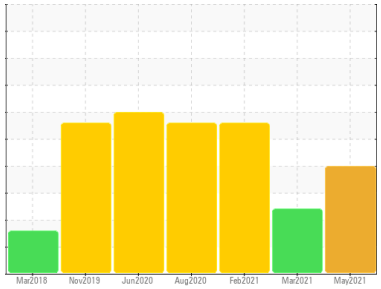
WATER

The oil is near the end of it`s useful service life, recommend schedule an oil change. We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.An increase in the iron level is noted. All component wear rates are normal. There is a trace of moisture present in the oil. Moderate concentration of visible dirt/debris present in the oil. Elemental level of silicon (Si) above normal indicating ingress of seal material. The AN level is at the top-end of the recommended limit.

view report

# OIL ANALYSIS REPORT

Sample Rating Trend




**WATER**

Machine Id
## VILTER B
Component
**Compressor**
Fluid
**VILTER METHANE PAO 100 (--- GAL)**

## DIAGNOSIS

**Recommendation**

The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

**Wear**

All component wear rates are normal.

**Contamination**

There is a moderate concentration of water present in the oil. There is a moderate amount of visible silt present in the sample.

**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 | | **TO50000090** | TO205215534 | TO205180879 |
| Sample Date | | Client Info | | **06 May 2021** | 28 Mar 2021 | 10 Feb 2021 |
| Machine Age | mths | Client Info | | **0** | 0 | 0 |
| Oil Age | mths | Client Info | | **0** | 0 | 0 |
| Oil Changed | | Client Info | | **N/A** | N/A | N/A |
| Sample Status | | | | **ABNORMAL** | ABNORMAL | ABNORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >50 | **29** | 27 | ▲ 116 |
| Chromium | ppm | ASTM D5185m | >10 | **0** | 0 | 0 |
| Nickel | ppm | ASTM D5185m | | **1** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Silver | ppm | ASTM D5185m | | **<1** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | **<1** | 0 | 0 |
| Lead | ppm | ASTM D5185m | >25 | **0** | 0 | 0 |
| Copper | ppm | ASTM D5185m | >50 | **0** | 0 | 0 |
| Tin | ppm | ASTM D5185m | >15 | **0** | <1 | <1 |
| Antimony | ppm | ASTM D5185m | | **2** | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **<1** | <1 | 1 |
| Barium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | **<1** | <1 | 1 |
| Magnesium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Calcium | ppm | ASTM D5185m | | **<1** | 0 | 0 |
| Phosphorus | ppm | ASTM D5185m | | **5** | <1 | 6 |
| Zinc | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Sulfur | ppm | ASTM D5185m | | **2086** | 2173 | 2513 |

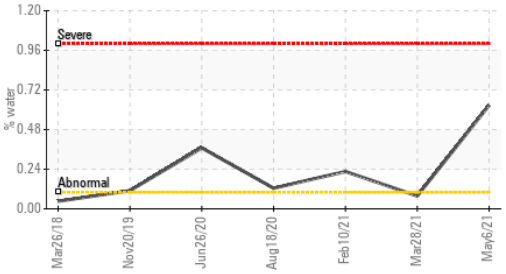
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >25 | ▲ **84** | ▲ 64 | ▲ 69 |
| Sodium | ppm | ASTM D5185m | | **2** | 0 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | **0** | <1 | <1 |
| Water | % | ASTM D6304 | >0.1 | ▲ **0.627** | 0.078 | ▲ 0.226 |
| ppm Water | ppm | ASTM D6304 | >1000 | ▲ **6270** | 780.4 | ▲ 2260 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >10000 | **---** | --- | ▲ 46187 |
| Particles >6µm | | ASTM D7647 | >2500 | **---** | --- | ▲ 7634 |
| Particles >14µm | | ASTM D7647 | >320 | **---** | --- | ▲ 425 |
| Particles >21µm | | ASTM D7647 | >80 | **---** | --- | ▲ 132 |
| Particles >38µm | | ASTM D7647 | >20 | **---** | --- | 16 |
| Particles >71µm | | ASTM D7647 | >4 | **---** | --- | 3 |
| Oil Cleanliness | | ISO 4406 (c) | >20/18/15 | **---** | --- | ▲ 23/20/16 |

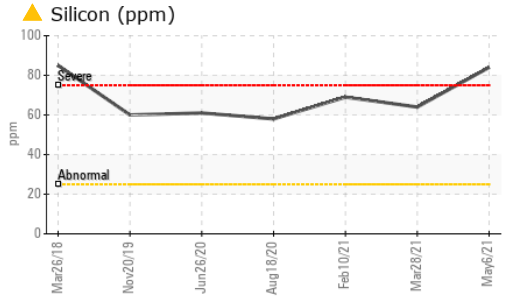
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | **0.857** | 0.132 | 0.959 |

# OIL ANALYSIS REPORT

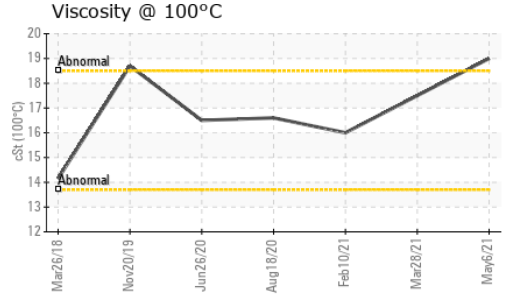
Water



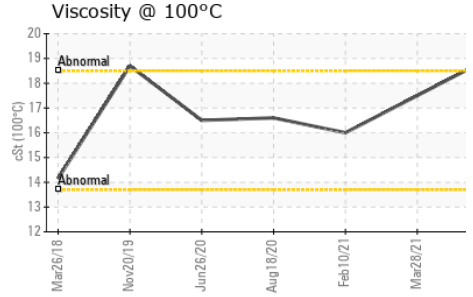

Silicon (ppm)



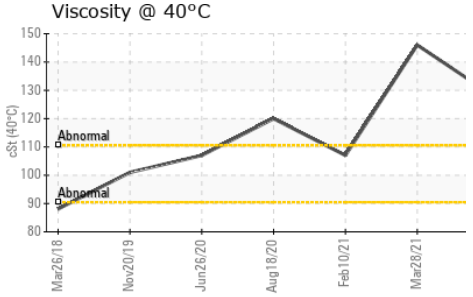

Viscosity @ 100°C




Viscosity @ 100°C




Viscosity @ 40°C



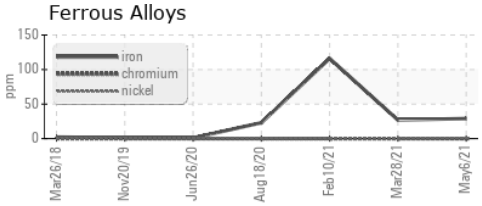

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | LIGHT |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
|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

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | | **129** | 146 | 107 |
| Visc @ 100°C | cSt | ASTM D445 | | **19.0** | 17.5 | 16.0 |
| Viscosity Index (VI) | Scale | ASTM D2270 | | **166** | 131 | 160 |

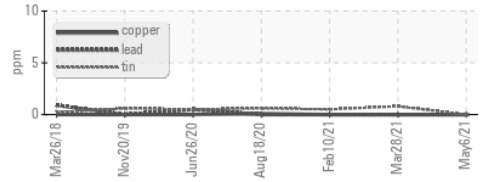
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | |
| Bottom | | |  | | |

## GRAPHS

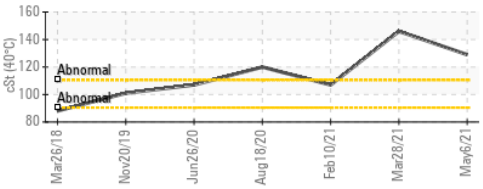
Ferrous Alloys



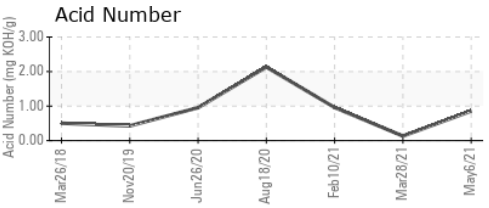

Non-ferrous Metals




Viscosity @ 40°C




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : TO50000090 **Received** : 11 May 2021
**Lab Number** : 05251613 **Diagnosed** : 13 May 2021
**Unique Number** : 9500523 **Diagnostician** : Jonathan Hester
**Test Package** : IND 2 ( Additional Tests: KF, KV100, PrtCount, VI )

*To discuss this sample report, contact Customer Service at 1-800-237-1369.*
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
*Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)*

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