

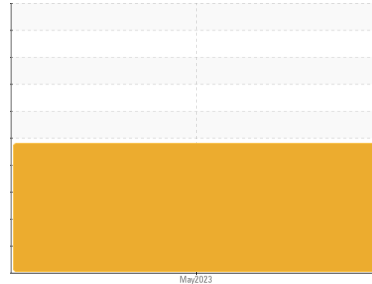
PROBLEM SUMMARY

Sample Rating Trend

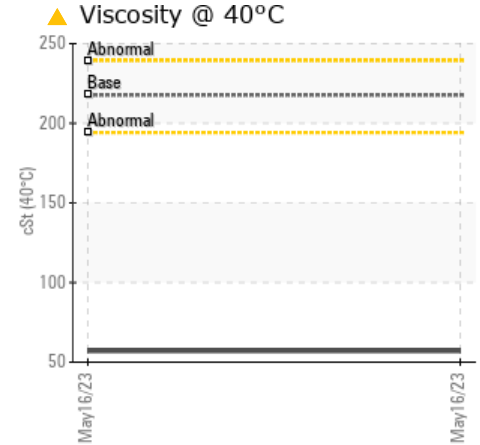
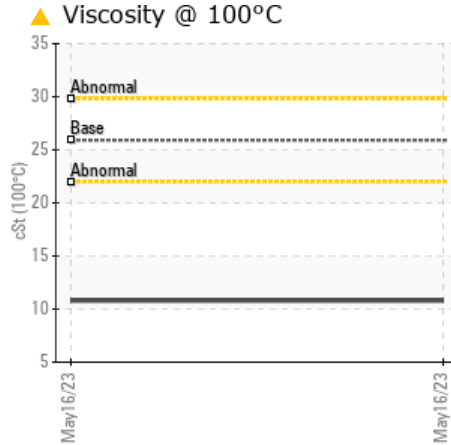
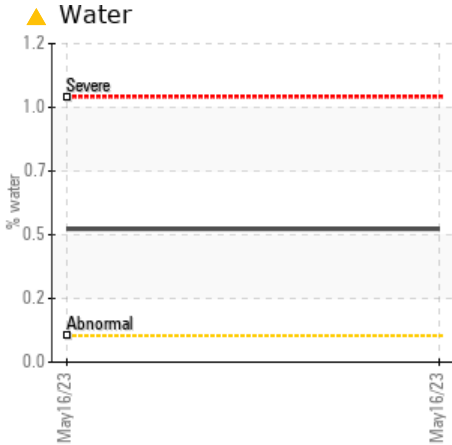
WATER



Area
[BEFORE FILTER]
Machine Id
OIL-RITE MRX II
Component
Circulating System
Fluid
MOBIL SHC 630 (30 GAL)



COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

| Sample Status | | | | ABNORMAL | --- | --- |
|------------------|--------|------------|-------|-----------------|-----|-----|
| Water | % | ASTM D6304 | | ▲ 0.502 | --- | --- |
| ppm Water | ppm | ASTM D6304 | | ▲ 5020 | --- | --- |
| Appearance | scalar | *Visual | NORML | ▲ SOLID | --- | --- |
| Emulsified Water | scalar | *Visual | | ▲ 0.2% | --- | --- |
| Free Water | scalar | *Visual | | ▲ 10.0 | --- | --- |
| Visc @ 40°C | cSt | ASTM D445 | 217.7 | ▲ 57.02 | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | 25.9 | ▲ 10.8 | --- | --- |

Customer Id: 3MBBRO
Sample No.: TO60000779
Lab Number: 05850815
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
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 |
|--------------------|--------|-------------|---------|---|
| Resample | MISSED | May 24 2023 | ? | We recommend an early resample to monitor this condition. |
| Check Water Access | MISSED | May 24 2023 | ? | We advise that you check for the source of water entry. |

HISTORICAL DIAGNOSIS

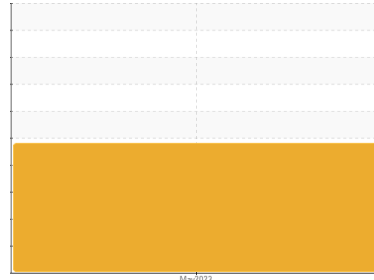
OIL ANALYSIS REPORT

Sample Rating Trend

WATER



Area
[BEFORE FILTER]
 Machine Id
OIL-RITE MRX II
 Component
Circulating System
 Fluid
MOBIL SHC 630 (30 GAL)



DIAGNOSIS

Recommendation

We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a moderate concentration of water present in the oil. Sample is layered with different type/density oil.

Fluid Condition

The oil viscosity is lower than normal. Confirm oil type.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|----------|----------|
| Sample Number | Client Info | | TO60000779 | --- | --- |
| Sample Date | Client Info | | 16 May 2023 | --- | --- |
| Machine Age | hrs | Client Info | 16 | --- | --- |
| Oil Age | hrs | Client Info | 1 | --- | --- |
| Oil Changed | Client Info | | Changed | --- | --- |
| Sample Status | | | ABNORMAL | --- | --- |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|------------|-------------|--------------|----------|----------|
| PQ | ASTM D8184 | | 45 | --- | --- |
| Iron | ppm | ASTM D5185m | 16 | --- | --- |
| Chromium | ppm | ASTM D5185m | <1 | --- | --- |
| Nickel | ppm | ASTM D5185m | 0 | --- | --- |
| Titanium | ppm | ASTM D5185m | 0 | --- | --- |
| Silver | ppm | ASTM D5185m | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185m | 0 | --- | --- |
| Lead | ppm | ASTM D5185m | 0 | --- | --- |
| Copper | ppm | ASTM D5185m | <1 | --- | --- |
| Tin | ppm | ASTM D5185m | 0 | --- | --- |
| Vanadium | ppm | ASTM D5185m | 0 | --- | --- |
| Cadmium | ppm | ASTM D5185m | <1 | --- | --- |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|-------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | 0 | --- | --- |
| Barium | ppm | ASTM D5185m | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185m | <1 | --- | --- |
| Manganese | ppm | ASTM D5185m | <1 | --- | --- |
| Magnesium | ppm | ASTM D5185m | <1 | --- | --- |
| Calcium | ppm | ASTM D5185m | 5 | --- | --- |
| Phosphorus | ppm | ASTM D5185m | 20 | --- | --- |
| Zinc | ppm | ASTM D5185m | 0 | --- | --- |
| Sulfur | ppm | ASTM D5185m | 131 | --- | --- |

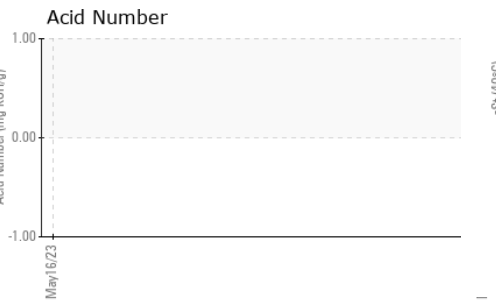
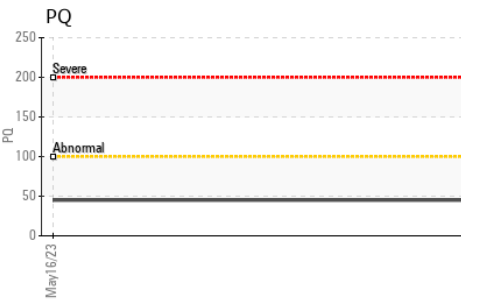
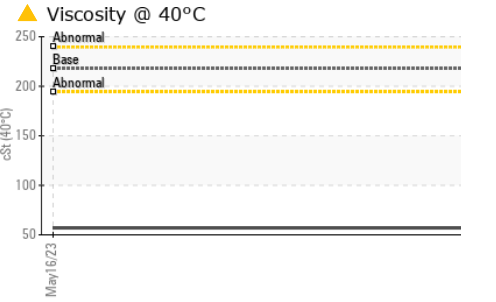
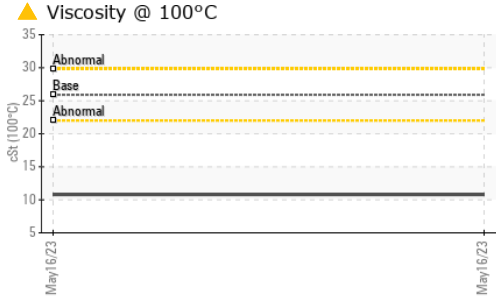
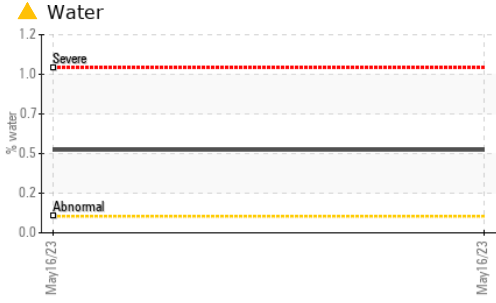
CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-----------------|----------------|----------|----------|
| Silicon | ppm | ASTM D5185m | 14 | --- | --- |
| Sodium | ppm | ASTM D5185m | <1 | --- | --- |
| Potassium | ppm | ASTM D5185m >20 | 2 | --- | --- |
| Water | % | ASTM D6304 | ▲ 0.502 | --- | --- |
| ppm Water | ppm | ASTM D6304 | ▲ 5020 | --- | --- |

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 | NONE | --- |
| Sand/Dirt | scalar | *Visual | NONE | NONE | --- |
| Appearance | scalar | *Visual | NORML | ▲ SOLID | --- |
| Odor | scalar | *Visual | NORML | NORML | --- |
| Emulsified Water | scalar | *Visual | | ▲ 0.2% | --- |
| Free Water | scalar | *Visual | | ▲ 10.0 | --- |

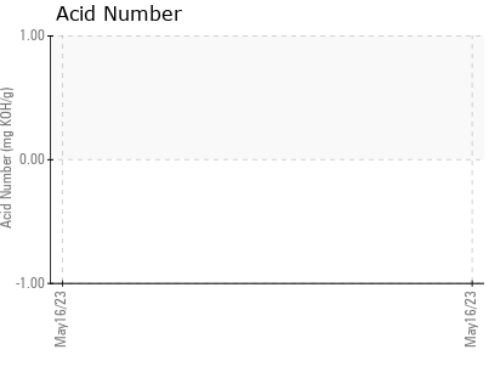
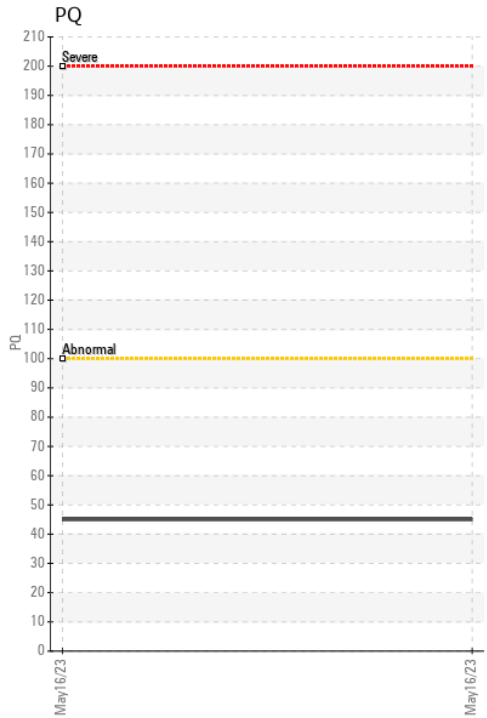
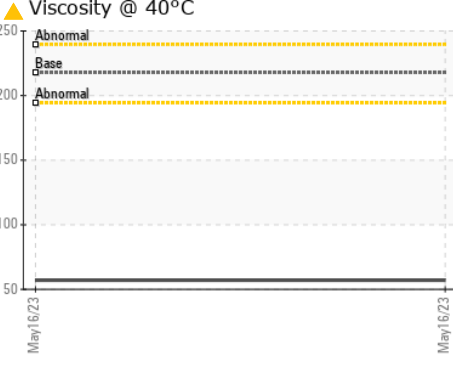
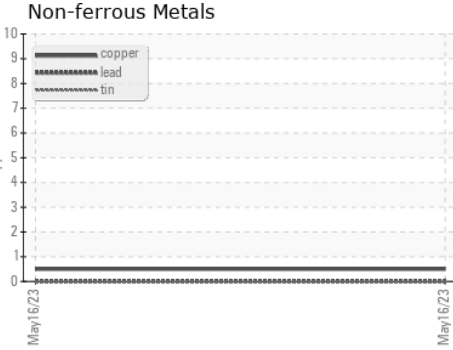
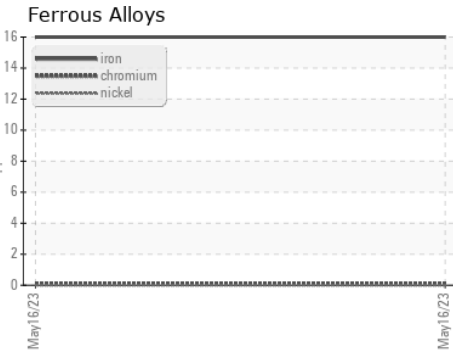
OIL ANALYSIS REPORT



| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|----------------------|--------|-----------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 217.7 | ▲ 57.02 | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 25.9 | ▲ 10.8 | --- | --- |
| Viscosity Index (VI) | Scale | ASTM D2270 152 | 183 | --- | --- |

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

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO60000779 **Received** : 18 May 2023
Lab Number : 05850815 **Diagnosed** : 24 May 2023
Unique Number : 10480170 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: KF, KV100, PQ, VI)

3M BROWNWOOD
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 US 76801
 Contact: RICKY GOTCHER
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 T:
 F:

To discuss this sample report, contact Customer Service at 1-800-237-1369.
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 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)