



OIL ANALYSIS REPORT

Sample Rating Trend

DEGRADATION

Area
Coloring
 Machine Id
LN2 Kiln
 Component
Drive End Gearbox
 Fluid
NOT GIVEN (--- GAL)



DIAGNOSIS

▲ Recommendation

The oil is near the end of its useful service life, recommend schedule an oil change. Resample at the next service interval to monitor. 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 at the top-end of the recommended limit. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|------------|--------------------|----------|----------|
| Sample Number | Client Info | | WC0738818 | --- | --- |
| Sample Date | Client Info | | 14 Jan 2023 | --- | --- |
| Machine Age | Client Info | | 0 | --- | --- |
| Oil Age | Client Info | | 0 | --- | --- |
| Oil Changed | Client Info | | N/A | --- | --- |
| Sample Status | | | ABNORMAL | --- | --- |

CONTAMINATION

| | method | limit/base | current | history1 | history2 |
|-------|-----------|------------|------------|----------|----------|
| Water | WC Method | >0.2 | NEG | --- | --- |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|------------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m >200 | 80 | --- | --- |
| Chromium | ppm | ASTM D5185m >15 | <1 | --- | --- |
| Nickel | ppm | ASTM D5185m >15 | <1 | --- | --- |
| Titanium | ppm | ASTM D5185m | <1 | --- | --- |
| Silver | ppm | ASTM D5185m | <1 | --- | --- |
| Aluminum | ppm | ASTM D5185m >25 | 3 | --- | --- |
| Lead | ppm | ASTM D5185m >100 | 1 | --- | --- |
| Copper | ppm | ASTM D5185m >200 | 12 | --- | --- |
| Tin | ppm | ASTM D5185m >25 | 1 | --- | --- |
| Vanadium | ppm | ASTM D5185m | 0 | --- | --- |
| Cadmium | ppm | ASTM D5185m | 0 | --- | --- |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|-------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | 79 | --- | --- |
| Barium | ppm | ASTM D5185m | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185m | 350 | --- | --- |
| Manganese | ppm | ASTM D5185m | 1 | --- | --- |
| Magnesium | ppm | ASTM D5185m | 2 | --- | --- |
| Calcium | ppm | ASTM D5185m | 35 | --- | --- |
| Phosphorus | ppm | ASTM D5185m | 918 | --- | --- |
| Zinc | ppm | ASTM D5185m | 28 | --- | --- |
| Sulfur | ppm | ASTM D5185m | 20316 | --- | --- |

CONTAMINANTS

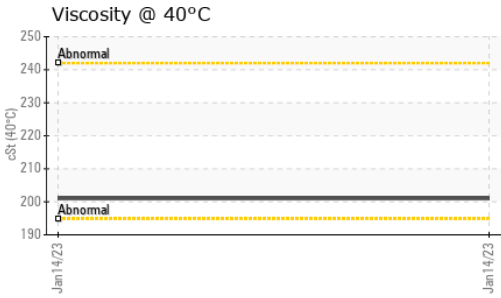
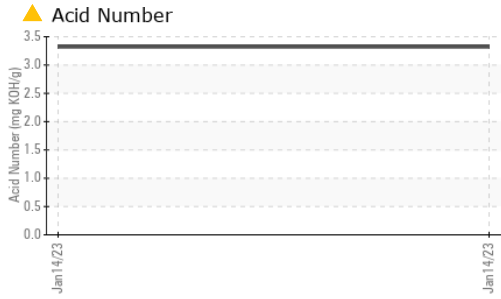
| | method | limit/base | current | history1 | history2 |
|-----------|--------|-----------------|-----------|----------|----------|
| Silicon | ppm | ASTM D5185m >50 | 22 | --- | --- |
| Sodium | ppm | ASTM D5185m | 6 | --- | --- |
| Potassium | ppm | ASTM D5185m >20 | 0 | --- | --- |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|------------|---------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | ▲ 3.32 | --- | --- |



OIL ANALYSIS REPORT



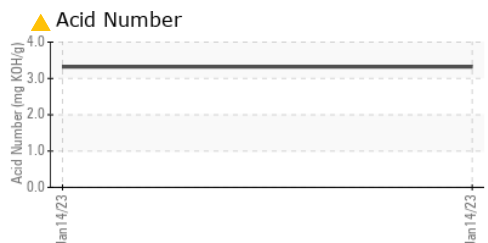
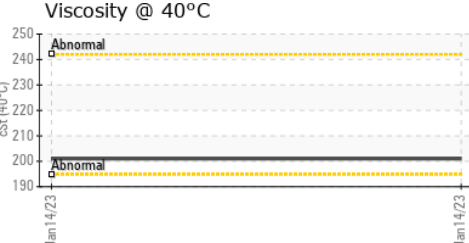
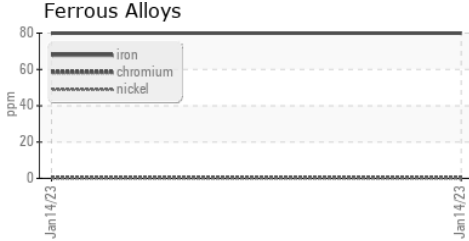
| VISUAL | method | limit/base | current | history1 | history2 | |
|------------------|--------|------------|---------|--------------|----------|-----|
| White Metal | scalar | *Visual | NONE | LIGHT | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Precipitate | scalar |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

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|------------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 201 | --- | --- |

| 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. : WC0738818 **Received** : 17 Jan 2023
Lab Number : **05740706** **Diagnosed** : 18 Jan 2023
Unique Number : 10295305 **Diagnostician** : Don Baldrige
Test Package : IND 2

3M - PITTSBORO
 4191 NC 87 S
 MONCURE, NC
 US 27559
 Contact: General Account
 bapoe@mmm.com

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)

T: x:

F: x: