



OIL ANALYSIS REPORT

Sample Rating Trend

ISO



Area
P3

Machine Id

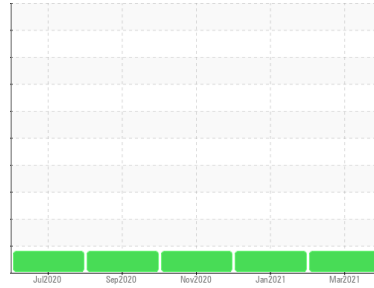
3543-D Crystallizer Gearbox (S/N N/A)

Component

Agitator Gearbox

Fluid

Mobilgear 629 (44 QTS)



DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a high amount of silt (particulates < 14 microns in size) present 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 | | WC0556418 | WC0536891 | WC0506427 |
| Sample Date | Client Info | | 02 Mar 2021 | 12 Jan 2021 | 02 Nov 2020 |
| Machine Age | hrs | Client Info | 0 | 0 | 0 |
| Oil Age | hrs | Client Info | 0 | 0 | 0 |
| Oil Changed | Client Info | | N/A | N/A | Not Changd |
| Sample Status | | | ABNORMAL | ABNORMAL | ABNORMAL |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|------------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m >150 | 4 | 14 | 2 |
| Chromium | ppm | ASTM D5185m >10 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m >10 | <1 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | <1 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m >25 | 0 | <1 | 0 |
| Lead | ppm | ASTM D5185m >100 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m >50 | 0 | 0 | 0 |
| Tin | ppm | ASTM D5185m >10 | 0 | 0 | 0 |
| Antimony | ppm | ASTM D5185m | 0 | 0 | 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 | 22 | 37 | 36 |
| 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 | <1 |
| Phosphorus | ppm | ASTM D5185m | 325 | 371 | 308 |
| Zinc | ppm | ASTM D5185m | 0 | 0 | 0 |
| Sulfur | ppm | ASTM D5185m | 14041 | 16557 | 12854 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|------------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m >50 | 0 | 0 | 0 |
| Sodium | ppm | ASTM D5185m | <1 | 0 | <1 |
| Potassium | ppm | ASTM D5185m >20 | 0 | 0 | 0 |
| Water | % | ASTM D6304 >0.1 | 0.016 | 0.009 | 0.024 |
| ppm Water | ppm | ASTM D6304 >1000 | 162.1 | 97.7 | 245.0 |

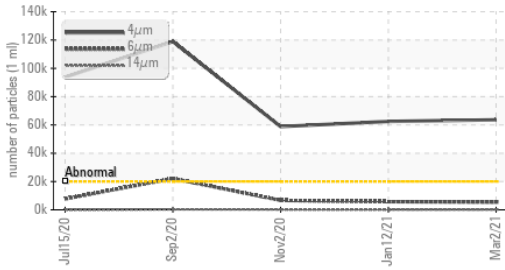
FLUID CLEANLINESS

| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-------------------|------------|------------|
| Particles >4µm | ASTM D7647 | >20000 | ▲ 63608 | ▲ 62482 | ▲ 58840 |
| Particles >6µm | ASTM D7647 | >5000 | ▲ 5468 | ▲ 5756 | ▲ 6663 |
| Particles >14µm | ASTM D7647 | >640 | 140 | 142 | 213 |
| Particles >21µm | ASTM D7647 | >160 | 29 | 27 | 42 |
| Particles >38µm | ASTM D7647 | >40 | 0 | 0 | 1 |
| Particles >71µm | ASTM D7647 | >10 | 0 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >21/19/16 | ▲ 23/20/14 | ▲ 23/20/14 | ▲ 23/20/15 |

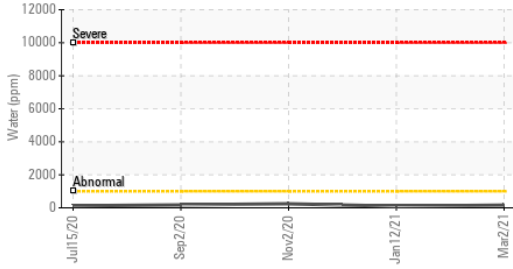
FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|------------|--------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.760 | 0.818 | 0.770 |

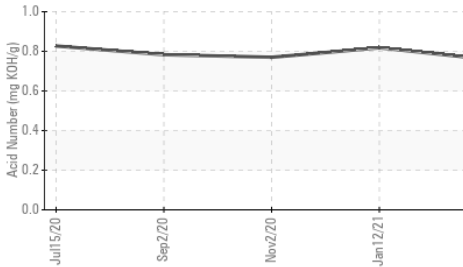
Particle Trend



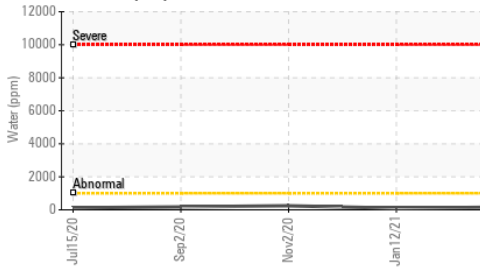
Water (KF)



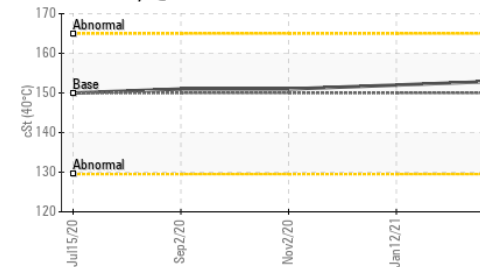
Acid Number



Water (KF)



Viscosity @ 40°C

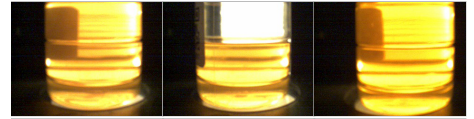


| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE |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

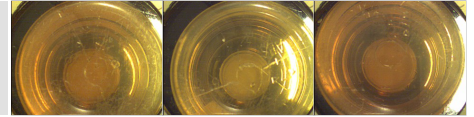
| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|---------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 150 | 153 | 152 | 151 |

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

Color

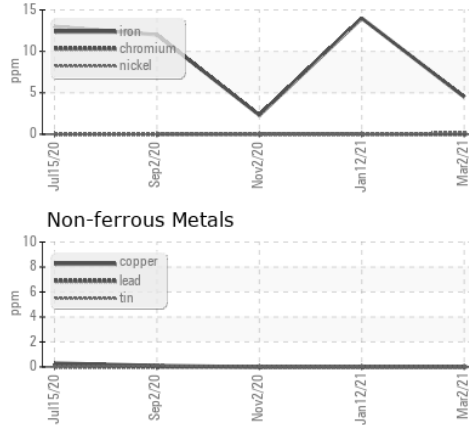


Bottom

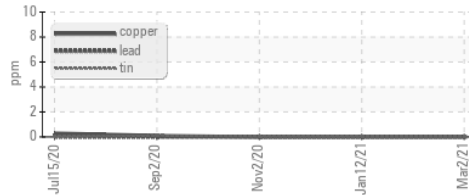


GRAPHS

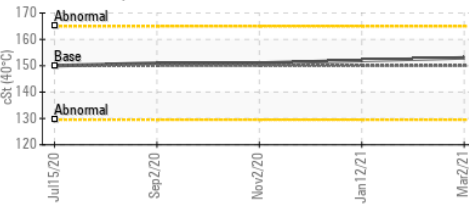
Ferrous Alloys



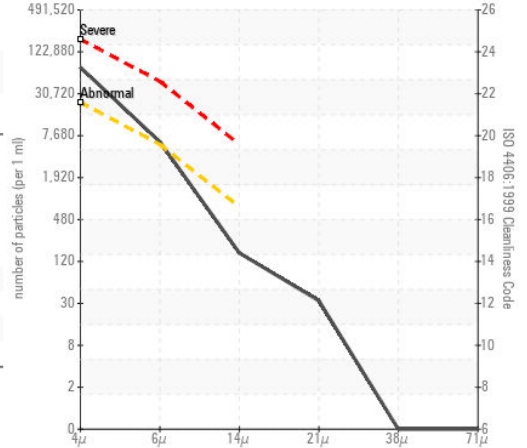
Non-ferrous Metals



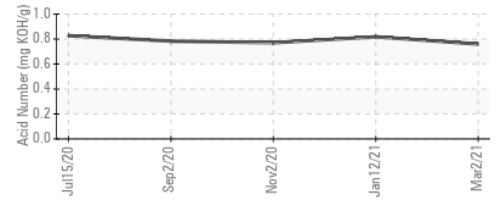
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0556418 **Received** : 15 Mar 2021
Lab Number : 05203834 **Diagnosed** : 16 Mar 2021
Unique Number : 9405243 **Diagnostician** : Don Baldrige
Test Package : IND 2 (Additional Tests: KF, PrtCount)

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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T:
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