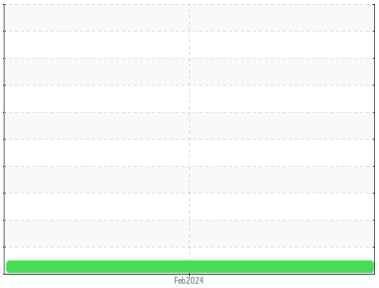
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Area
## Plant US1 Greenville
Machine Id
## BNS-6 - Extruder Gearbox
Component
**Gearbox**
Fluid
**SHELL OMALA 320 (--- GAL)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with 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 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 | | **TLC0001530** | --- | --- |
| Sample Date | | Client Info | | **20 Feb 2024** | --- | --- |
| Machine Age | hrs | Client Info | | **0** | --- | --- |
| Oil Age | hrs | Client Info | | **0** | --- | --- |
| Oil Changed | | Client Info | | **N/A** | --- | --- |
| Sample Status | | | | **NORMAL** | --- | --- |

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

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| PQ | | ASTM D8184 | | **53** | --- | --- |
| Iron | ppm | ASTM D5185m | >200 | **90** | --- | --- |
| Chromium | ppm | ASTM D5185m | >15 | **<1** | --- | --- |
| Nickel | ppm | ASTM D5185m | >15 | **1** | --- | --- |
| Titanium | ppm | ASTM D5185m | | **0** | --- | --- |
| Silver | ppm | ASTM D5185m | | **0** | --- | --- |
| Aluminum | ppm | ASTM D5185m | >25 | **1** | --- | --- |
| Lead | ppm | ASTM D5185m | >100 | **<1** | --- | --- |
| Copper | ppm | ASTM D5185m | >200 | **2** | --- | --- |
| Tin | ppm | ASTM D5185m | >25 | **<1** | --- | --- |
| Vanadium | ppm | ASTM D5185m | | **0** | --- | --- |
| Cadmium | ppm | ASTM D5185m | | **0** | --- | --- |

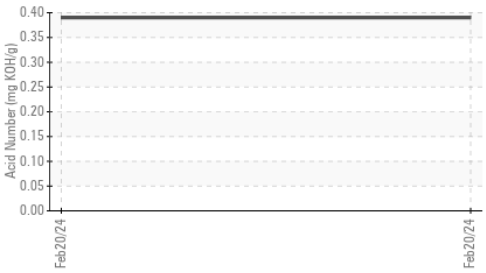
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | 5.5 | **3** | --- | --- |
| Barium | ppm | ASTM D5185m | 0.4 | **2** | --- | --- |
| Molybdenum | ppm | ASTM D5185m | 0.5 | **0** | --- | --- |
| Manganese | ppm | ASTM D5185m | | **2** | --- | --- |
| Magnesium | ppm | ASTM D5185m | 23 | **3** | --- | --- |
| Calcium | ppm | ASTM D5185m | 13 | **17** | --- | --- |
| Phosphorus | ppm | ASTM D5185m | 450 | **291** | --- | --- |
| Zinc | ppm | ASTM D5185m | 9.9 | **6** | --- | --- |
| Sulfur | ppm | ASTM D5185m | 8181 | **13711** | --- | --- |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >50 | **7** | --- | --- |
| Sodium | ppm | ASTM D5185m | | **5** | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | **2** | --- | --- |

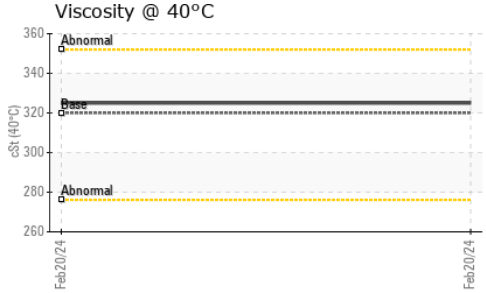
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | **0.39** | --- | --- |

# OIL ANALYSIS REPORT

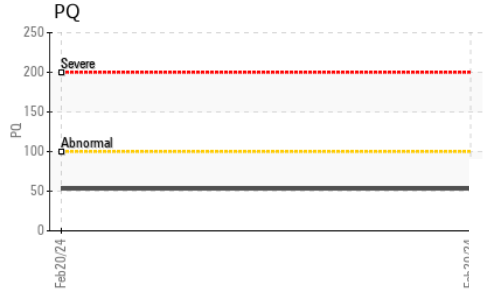
Acid Number




Viscosity @ 40°C




PQ



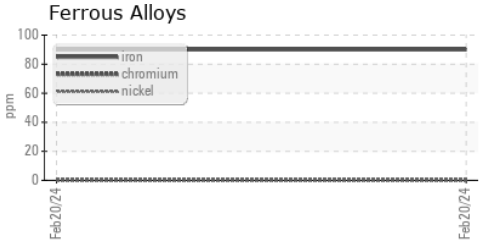

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | --- | --- |
| Precipitate | scalar | *Visual | NONE | **NONE** | --- | --- |
| Silt | scalar | *Visual | NONE | **NONE** | --- | --- |
| Debris | scalar | *Visual | NONE | **NONE** | --- | --- |
| Sand/Dirt | scalar | *Visual | NONE | **NONE** | --- | --- |
| Appearance | scalar | *Visual | NORML | **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 | 320 | **325** | --- | --- |

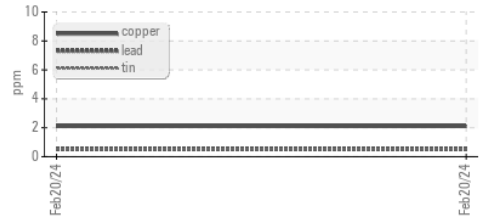
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | *no image* | *no image* |
| Bottom | | |  | *no image* | *no image* |

GRAPHS

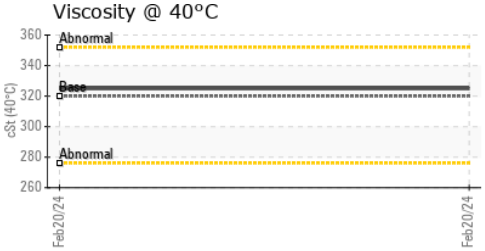
Ferrous Alloys



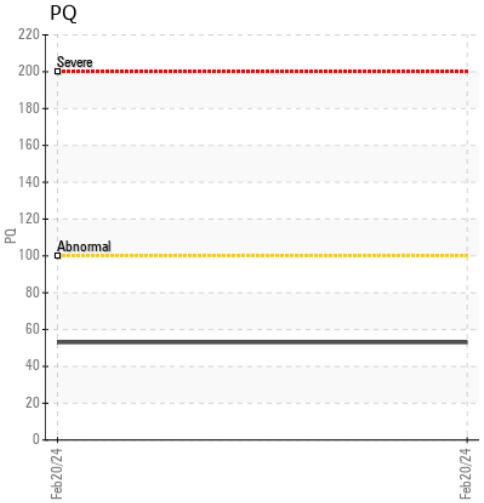

Non-ferrous Metals



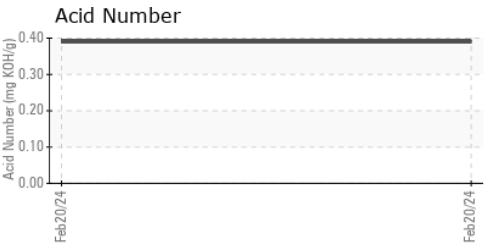

Viscosity @ 40°C




PQ




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : TLC0001530
**Lab Number** : 06098596
**Unique Number** : 10896826
**Test Package** : PLANT

**Received** : 23 Feb 2024
**Tested** : 26 Feb 2024
**Diagnosed** : 26 Feb 2024 - Wes Davis

**MICHELIN TIRE-GREENVILLE US 1 JN DOCK**
1401 ANTIOCH CHURCH ROAD
Greenville, SC
US 29605
Contact: Nicolas Jackson
nicolas.jackson@michelin.com
T:
F:

*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)*