



OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
Plant US1 Greenville
 Machine Id
BD-5 - Plastifier
 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 | TLC0001476 | --- | --- |
| Sample Date | Client Info | 19 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 | 32 | --- | --- |
| Iron | ppm ASTM D5185m >200 | 79 | --- | --- |
| 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 | 0 | --- | --- |
| Copper | ppm ASTM D5185m >200 | 1 | --- | --- |
| 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 | 11 | --- | --- |
| Barium | ppm ASTM D5185m 0.4 | 0 | --- | --- |
| Molybdenum | ppm ASTM D5185m 0.5 | 0 | --- | --- |
| Manganese | ppm ASTM D5185m | 2 | --- | --- |
| Magnesium | ppm ASTM D5185m 23 | 1 | --- | --- |
| Calcium | ppm ASTM D5185m 13 | 6 | --- | --- |
| Phosphorus | ppm ASTM D5185m 450 | 255 | --- | --- |
| Zinc | ppm ASTM D5185m 9.9 | 5 | --- | --- |
| Sulfur | ppm ASTM D5185m 8181 | 12693 | --- | --- |

CONTAMINANTS

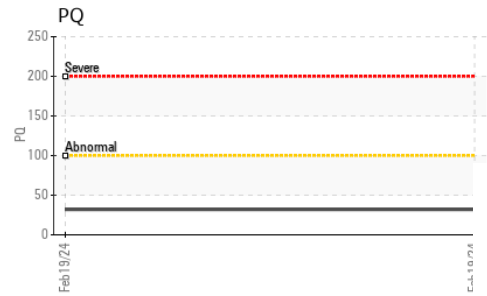
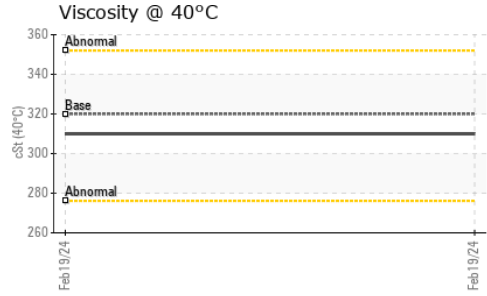
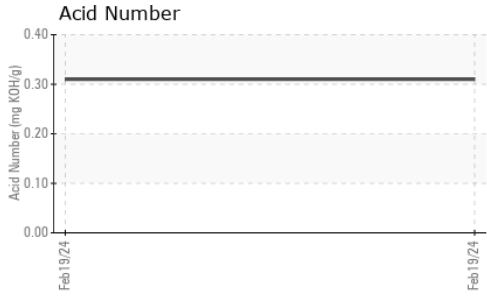
| method | limit/base | current | history1 | history2 |
|-----------|---------------------|----------|----------|----------|
| Silicon | ppm ASTM D5185m >50 | 2 | --- | --- |
| Sodium | ppm ASTM D5185m | 1 | --- | --- |
| Potassium | ppm ASTM D5185m >20 | 3 | --- | --- |

FLUID DEGRADATION

| method | limit/base | current | history1 | history2 |
|------------------|---------------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g ASTM D8045 | 0.31 | --- | --- |



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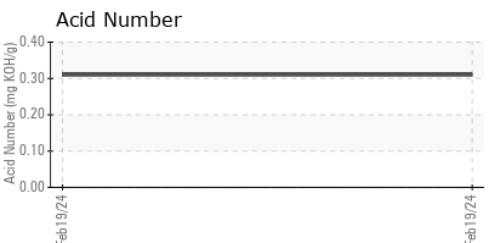
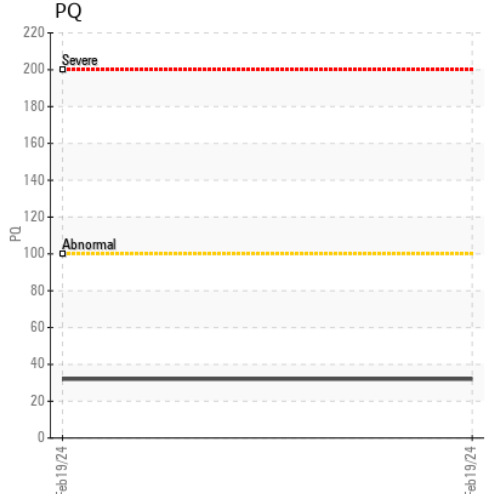
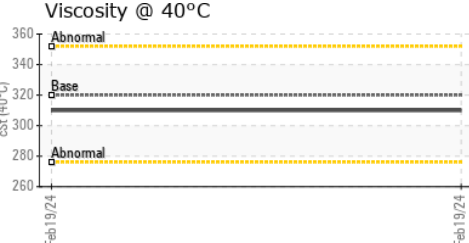
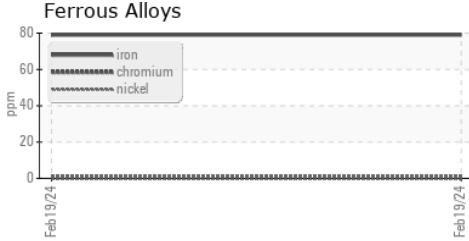
| VISUAL | method | limit/base | current | history1 | history2 | |
|------------------|--------|------------|---------|--------------|----------|-----|
| White Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Precipitate | scalar | *Visual | 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 | 310 | --- | --- |

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

| | | | | | |
|--------|--|--|--|----------|----------|
| Color | | | | no image | no image |
| Bottom | | | | no image | no image |

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TLC0001476 **Received** : 23 Feb 2024
Lab Number : **06098555** **Tested** : 26 Feb 2024
Unique Number : 10896785 **Diagnosed** : 26 Feb 2024 - Wes Davis
Test Package : PLANT

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