



# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**Plant US1 Greenville**  
 Machine Id  
**MAF2 - Roller Nose Gearbox**  
 Component  
**Gearbox**  
 Fluid  
**SHELL MORLINA S4 B 460 (12 GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### 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	<b>TLC0001438</b>	---	---
Sample Date	Client Info	<b>19 Feb 2024</b>	---	---
Machine Age	hrs	Client Info	<b>0</b>	---
Oil Age	hrs	Client Info	<b>0</b>	---
Oil Changed	Client Info	<b>N/A</b>	---	---
Sample Status		<b>NORMAL</b>	---	---

## CONTAMINATION

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

## WEAR METALS

method	limit/base	current	history1	history2	
PQ	ASTM D8184	<b>15</b>	---	---	
Iron	ppm	ASTM D5185m	>200	<b>31</b>	---
Chromium	ppm	ASTM D5185m	>15	<b>0</b>	---
Nickel	ppm	ASTM D5185m	>15	<b>1</b>	---
Titanium	ppm	ASTM D5185m		<b>0</b>	---
Silver	ppm	ASTM D5185m		<b>0</b>	---
Aluminum	ppm	ASTM D5185m	>25	<b>&lt;1</b>	---
Lead	ppm	ASTM D5185m	>100	<b>0</b>	---
Copper	ppm	ASTM D5185m	>200	<b>&lt;1</b>	---
Tin	ppm	ASTM D5185m	>25	<b>&lt;1</b>	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	---
Cadmium	ppm	ASTM D5185m		<b>0</b>	---

## ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		<b>11</b>	---
Barium	ppm	ASTM D5185m		<b>0</b>	---
Molybdenum	ppm	ASTM D5185m		<b>0</b>	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	---
Magnesium	ppm	ASTM D5185m		<b>2</b>	---
Calcium	ppm	ASTM D5185m		<b>22</b>	---
Phosphorus	ppm	ASTM D5185m		<b>401</b>	---
Zinc	ppm	ASTM D5185m		<b>&lt;1</b>	---
Sulfur	ppm	ASTM D5185m		<b>5173</b>	---

## CONTAMINANTS

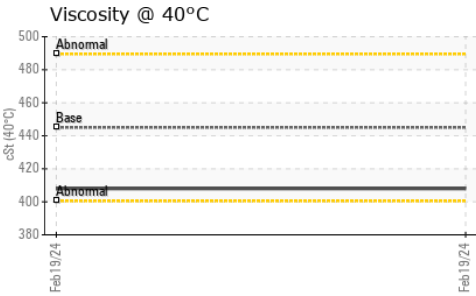
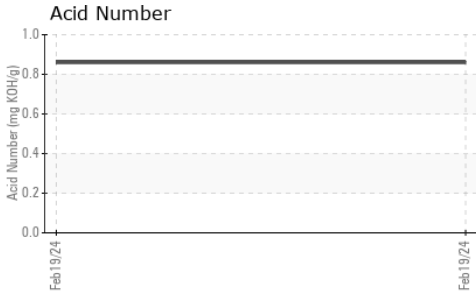
method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>50	<b>6</b>	---
Sodium	ppm	ASTM D5185m		<b>4</b>	---
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	---

## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.86</b>	---



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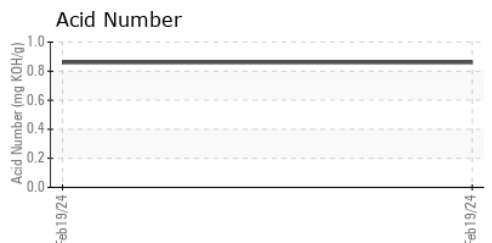
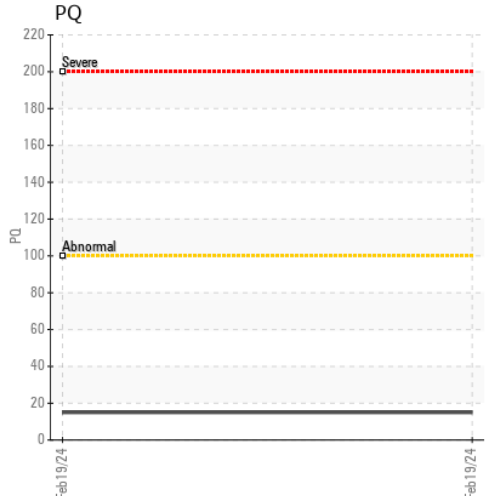
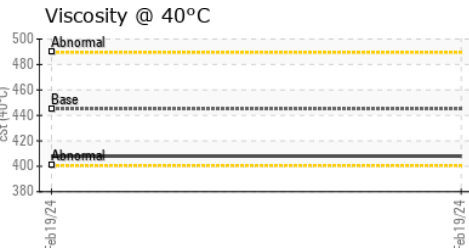
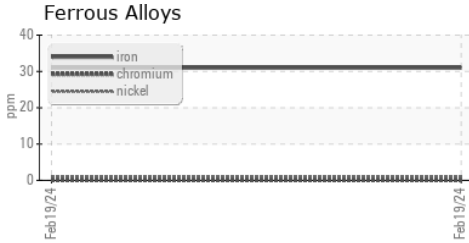
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Precipitate	scalar	*Visual	NONE	NONE	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
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	445	<b>408</b>	---	---

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

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TLC0001438      **Received** : 23 Feb 2024  
**Lab Number** : 06098582      **Tested** : 26 Feb 2024  
**Unique Number** : 10896812      **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  
 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)