



# PROBLEM SUMMARY

Sample Rating Trend



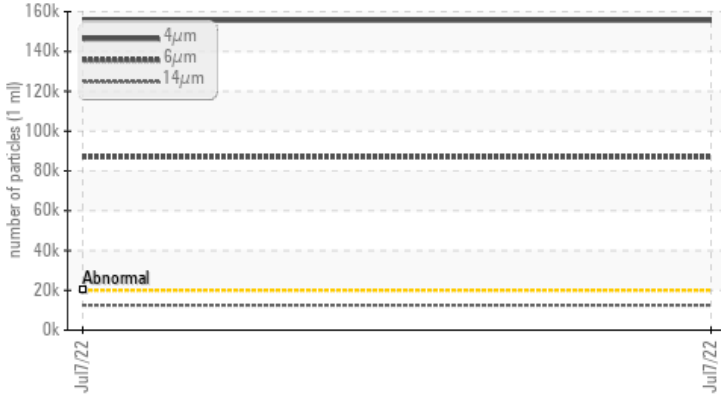
ISO



Machine Id  
**FL-30**  
 Component  
**Gearbox**  
 Fluid  
**SHELL MORLINA S4 B 220 (1 GAL)**

## COMPONENT CONDITION SUMMARY

### ▲ Particle Trend



## RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status			<b>ABNORMAL</b>	---	---
Particles >4µm	ASTM D7647	>20000	▲ <b>155613</b>	---	---
Particles >6µm	ASTM D7647	>5000	▲ <b>86960</b>	---	---
Particles >14µm	ASTM D7647	>640	▲ <b>12505</b>	---	---
Particles >21µm	ASTM D7647	>160	▲ <b>2753</b>	---	---
Particles >38µm	ASTM D7647	>40	▲ <b>51</b>	---	---
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ <b>24/24/21</b>	---	---

Customer Id: MONHAL  
 Sample No.: SBP0000920  
 Lab Number: 05593707  
 Test Package: PLANT



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Jonathan Hester +1 919-379-4092 x4092  
[jhester@wearcheckusa.com](mailto:jhester@wearcheckusa.com)

To change component or sample information:  
 Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

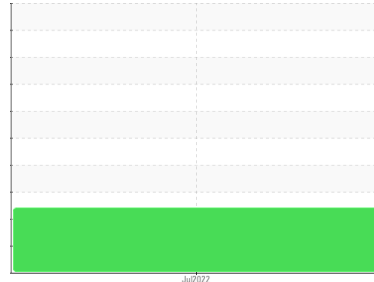
Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component if applicable.

## HISTORICAL DIAGNOSIS



# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id  
**FL-30**

Component  
**Gearbox**

Fluid  
**SHELL MORLINA S4 B 220 (1 GAL)**

## DIAGNOSIS

### Recommendation

The oil change at the time of sampling has been noted. We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of particulates 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		<b>SBP0000920</b>	---	---
Sample Date	Client Info		<b>07 Jul 2022</b>	---	---
Machine Age	yrs	Client Info	<b>2</b>	---	---
Oil Age	yrs	Client Info	<b>1</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>ABNORMAL</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>36</b>	---	---
Iron	ppm	ASTM D5185m >200	<b>&lt;1</b>	---	---
Chromium	ppm	ASTM D5185m >15	<b>0</b>	---	---
Nickel	ppm	ASTM D5185m >15	<b>0</b>	---	---
Titanium	ppm	ASTM D5185m	<b>0</b>	---	---
Silver	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Aluminum	ppm	ASTM D5185m >25	<b>0</b>	---	---
Lead	ppm	ASTM D5185m >100	<b>&lt;1</b>	---	---
Copper	ppm	ASTM D5185m >200	<b>5</b>	---	---
Tin	ppm	ASTM D5185m >25	<b>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>1</b>	---	---
Barium	ppm	ASTM D5185m	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Manganese	ppm	ASTM D5185m	<b>0</b>	---	---
Magnesium	ppm	ASTM D5185m	<b>5</b>	---	---
Calcium	ppm	ASTM D5185m	<b>6</b>	---	---
Phosphorus	ppm	ASTM D5185m	<b>57</b>	---	---
Zinc	ppm	ASTM D5185m	<b>3</b>	---	---
Sulfur	ppm	ASTM D5185m	<b>237</b>	---	---

## CONTAMINANTS

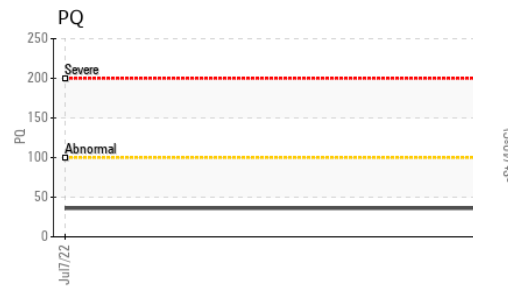
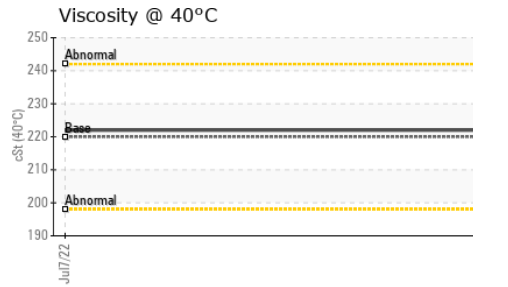
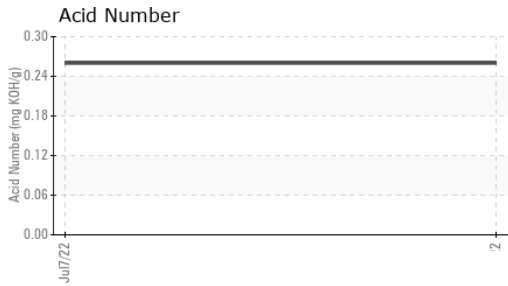
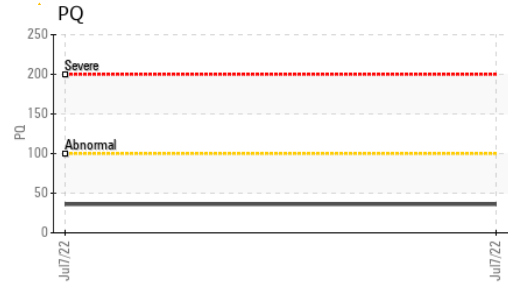
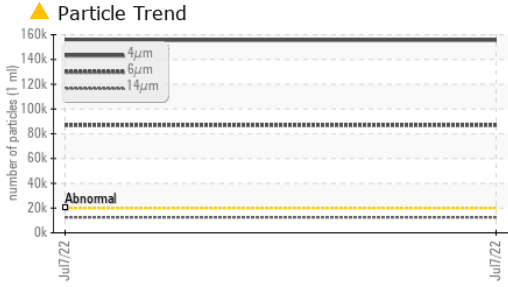
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	<b>16</b>	---	---
Sodium	ppm	ASTM D5185m	<b>0</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	---	---

## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	<b>▲ 155613</b>	---	---
Particles >6µm	ASTM D7647	>5000	<b>▲ 86960</b>	---	---
Particles >14µm	ASTM D7647	>640	<b>▲ 12505</b>	---	---
Particles >21µm	ASTM D7647	>160	<b>▲ 2753</b>	---	---
Particles >38µm	ASTM D7647	>40	<b>▲ 51</b>	---	---
Particles >71µm	ASTM D7647	>10	<b>2</b>	---	---
Oil Cleanliness	ISO 4406 (c)	>21/19/16	<b>▲ 24/24/21</b>	---	---



# OIL ANALYSIS REPORT



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.26</b>	---	---

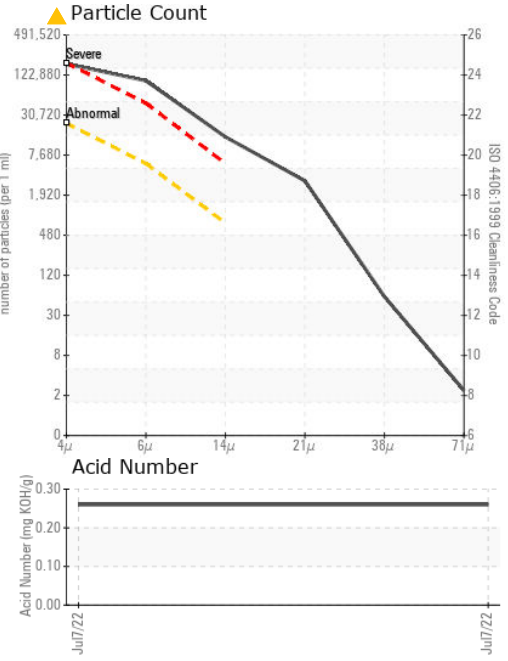
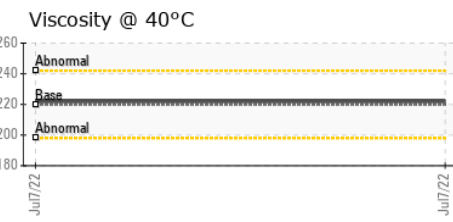
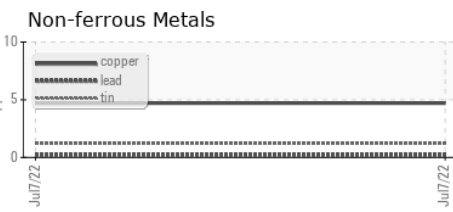
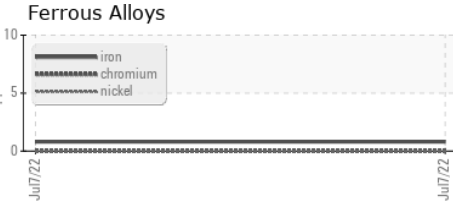
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	---	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	---	---
Debris	scalar	*Visual	NONE	<b>LIGHT</b>	---	---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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	220	<b>222</b>	---	---

### 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.** : SBP0000920 **Received** : 18 Jul 2022  
**Lab Number** : 05593707 **Diagnosed** : 20 Jul 2022  
**Unique Number** : 10058187 **Diagnostician** : Jonathan Hester  
**Test Package** : PLANT

**MONOLITH**  
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 HALLAM, NE  
 US 68368  
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Certificate L2367  
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 \* - 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)