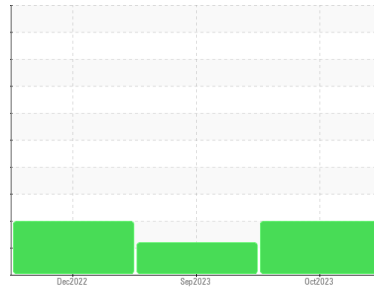




# PROBLEM SUMMARY

## Sample Rating Trend



ISO



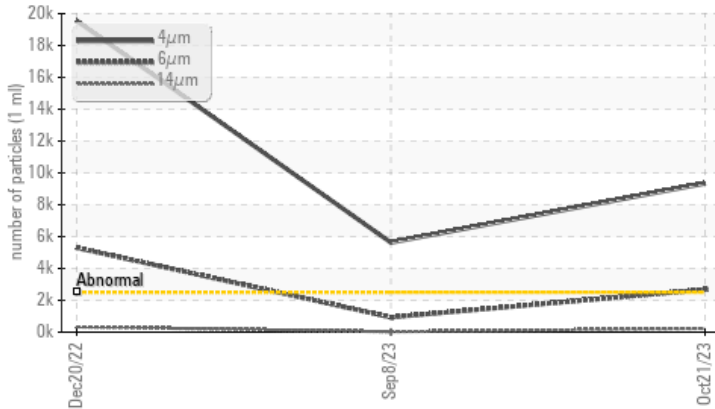
Machine Id  
**ENDEAVOR**

Component  
**1 Steering**

Fluid  
**SHELL TELLUS T46 (--- QTS)**

## COMPONENT CONDITION SUMMARY

### ▲ Particle Trend



## RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status	ASTM D7647	>	ABNORMAL	ABNORMAL	ABNORMAL
Particles >4µm	ASTM D7647	>2500	▲ <b>9339</b>	▲ 5627	▲ 19549
Particles >6µm	ASTM D7647	>640	▲ <b>2673</b>	▲ 934	▲ 5300
Particles >14µm	ASTM D7647	>80	▲ <b>228</b>	23	▲ 332
Particles >21µm	ASTM D7647	>20	▲ <b>64</b>	4	▲ 72
Oil Cleanliness	ISO 4406 (c)	>18/16/13	▲ <b>20/19/15</b>	▲ 20/17/12	▲ 21/20/16

Customer Id: CITSANUS  
Sample No.: WC0847401  
Lab Number: 06013236  
Test Package: MAR 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Don Baldrige +1  
[don.b505@comcast.net](mailto:don.b505@comcast.net)

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.

## HISTORICAL DIAGNOSIS

### 08 Sep 2023 Diag: Don Baldrige

ISO



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the fluid. The AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.

view report



### 20 Dec 2022 Diag: Angela Borella

ISO



Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of particulates present in the fluid. The AN level is acceptable for this fluid. The condition of the fluid is acceptable for the time in service.

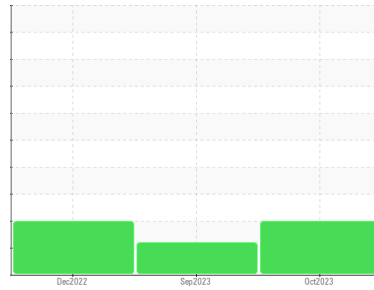
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id  
**ENDEAVOR**

Component  
**1 Steering**

Fluid  
**SHELL TELLUS T46 (--- QTS)**

## DIAGNOSIS

### Recommendation

We recommend you service the filters on this component. 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 fluid.

### Fluid Condition

The AN level is acceptable for this fluid. The condition of the fluid is acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0847401</b>	WC0834555	WC0754313
Sample Date	Client Info		<b>21 Oct 2023</b>	08 Sep 2023	20 Dec 2022
Machine Age	hrs	Client Info	<b>4850</b>	6000	4046
Oil Age	hrs	Client Info	<b>0</b>	6000	0
Oil Changed	Client Info		<b>Not Chngd</b>	Not Chngd	N/A
Sample Status			<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

## CONTAMINATION

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

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >60	<b>4</b>	6	2
Chromium	ppm	ASTM D5185m >12	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >6	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >4	<b>0</b>	0	0
Lead	ppm	ASTM D5185m >12	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m >30	<b>16</b>	17	17
Tin	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>0</b>	0	0
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m 0	<b>1</b>	3	0
Calcium	ppm	ASTM D5185m 48	<b>64</b>	71	67
Phosphorus	ppm	ASTM D5185m 337	<b>367</b>	371	366
Zinc	ppm	ASTM D5185m 426	<b>472</b>	458	448
Sulfur	ppm	ASTM D5185m 2280	<b>1628</b>	1906	1809

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >10	<b>&lt;1</b>	<1	0
Sodium	ppm	ASTM D5185m	<b>&lt;1</b>	2	<1
Potassium	ppm	ASTM D5185m >20	<b>0</b>	1	0

## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	<b>▲ 9339</b>	▲ 5627	▲ 19549
Particles >6µm	ASTM D7647	>640	<b>▲ 2673</b>	▲ 934	▲ 5300
Particles >14µm	ASTM D7647	>80	<b>▲ 228</b>	23	▲ 332
Particles >21µm	ASTM D7647	>20	<b>▲ 64</b>	4	▲ 72
Particles >38µm	ASTM D7647	>4	<b>3</b>	0	1
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>18/16/13	<b>▲ 20/19/15</b>	▲ 20/17/12	▲ 21/20/16

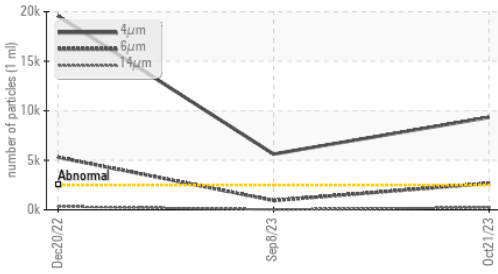
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 .6	<b>0.33</b>	0.37	0.41

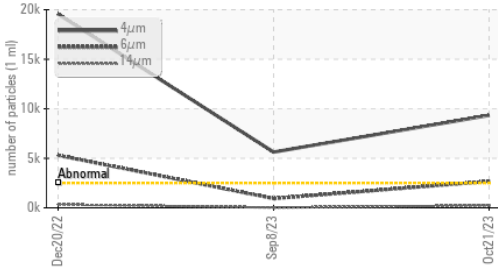


# OIL ANALYSIS REPORT

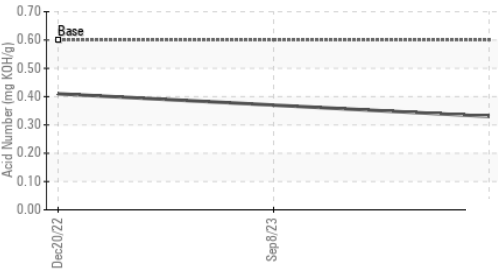
### ▲ Particle Trend



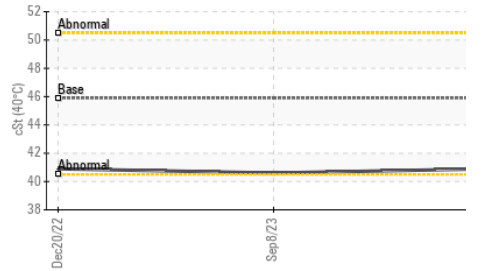
### ▲ Particle Trend



### Acid Number



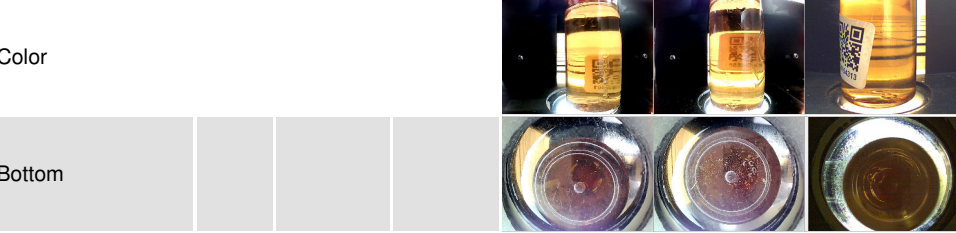
### Viscosity @ 40°C



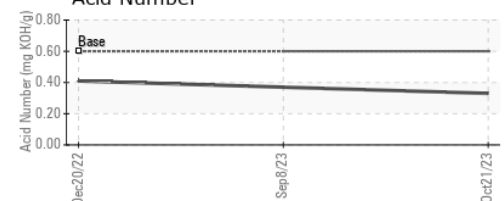
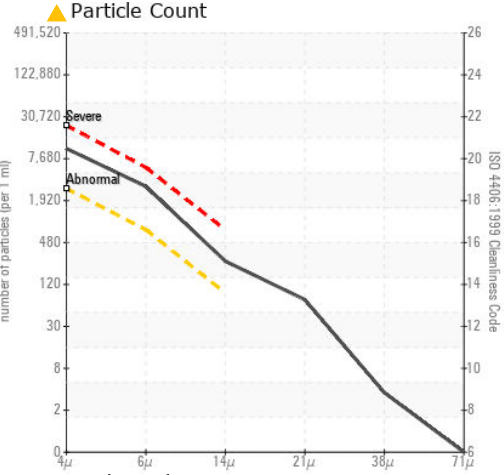
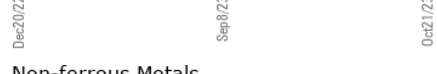
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	45.9	40.9	40.6

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0847401 **Received** : 20 Nov 2023  
**Lab Number** : 06013236 **Diagnosed** : 22 Nov 2023  
**Unique Number** : 10752380 **Diagnostician** : Don Baldrige  
**Test Package** : MAR 2 ( Additional Tests: PrtCount )

**CITY EXPERIENCES - SEAWARD EXPLORER**  
 2825 5TH AVENUE  
 SAN DIEGO, CA  
 US 92103  
 Contact: Service Manager

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: