

## **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id

# **ACL 4 PRESS 4**

Hydraulic System

SHELL TELLUS 46 (--- GAL)

## **DIAGNOSIS**

### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

The copper level is abnormal. All other component wear rates are normal.

## Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

### **Fluid Condition**

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

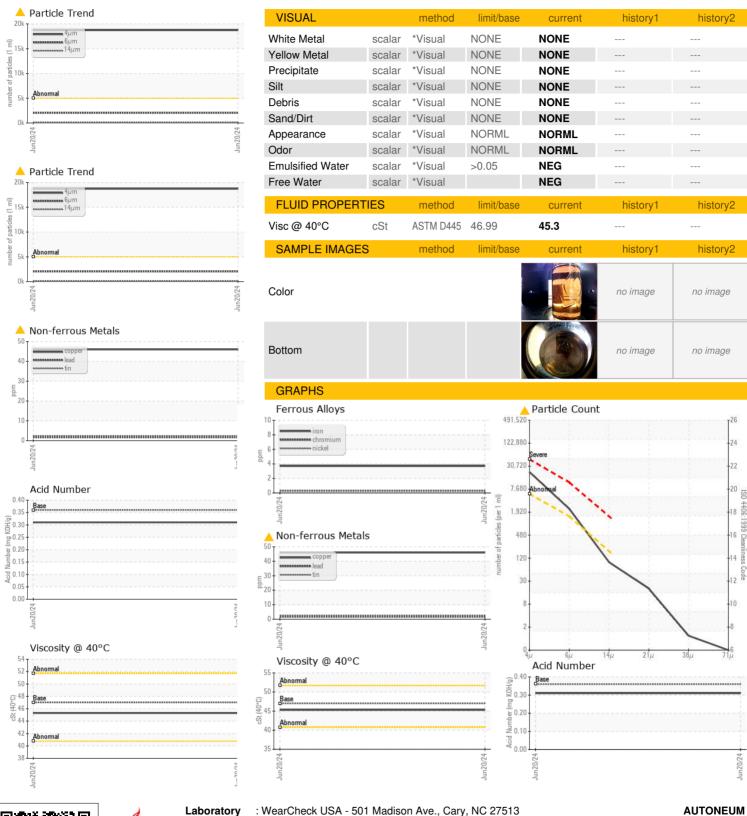
			,	Jun 2024		
CAMPLE INCOR	AATIONI		11 1. //			
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		TLC0001868		
Sample Date		Client Info		20 Jun 2024		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				ABNORMAL		
			11 11/1		1111	111
CONTAMINATION	V	method	limit/base	current	history1	history2
Water		WC Method	>0.05	NEG		
WEAR METALS		method	limit/base	current	history1	history2
					Thotory T	motory
Iron	ppm	ASTM D5185m	>20	4		
Chromium	ppm	ASTM D5185m	>20	<1		
Nickel	ppm	ASTM D5185m	>20	<1		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m		0		
Aluminum	ppm	ASTM D5185m	>20	0		
Lead	ppm	ASTM D5185m	>20	2		
Copper	ppm	ASTM D5185m	>20	<b>46</b>		
Tin	ppm	ASTM D5185m	>20	2		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
		mathad	limit/hooo	a	biotomit	hintown
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 0.0	current 2	history1	history2 
	ppm ppm					
Boron	• •	ASTM D5185m	0.0	2		
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0.0	2 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0.0	2 0 1		
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.0	2 0 1 <1		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.0 0 0	2 0 1 <1 59		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.0 0 0 11 35	2 0 1 <1 59 79		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.0 0 0 11 35 266	2 0 1 <1 59 79 310		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.0 0 0 11 35 266 276 1847	2 0 1 <1 59 79 310 352 889		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.0 0 0 11 35 266 276	2 0 1 <1 59 79 310 352		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.0 0 0 11 35 266 276 1847 limit/base	2 0 1 <1 59 79 310 352 889		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0.0 0 0 11 35 266 276 1847 limit/base	2 0 1 <1 59 79 310 352 889		history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0.0 0 0 11 35 266 276 1847 Iimit/base >15	2 0 1 <1 59 79 310 352 889 current	     history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0.0 0 0 11 35 266 276 1847 limit/base >15	2 0 1 <1 59 79 310 352 889 current <1 2	history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.0 0 0 11 35 266 276 1847 Iimit/base >15 >20	2 0 1 <1 59 79 310 352 889 current <1 2 2	    history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method ASTM D5185m	0.0 0 0 11 35 266 276 1847 limit/base >15	2 0 1 <1 59 79 310 352 889 current <1 2 2 current  18725	history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method ASTM D5185m	0.0 0 0 11 35 266 276 1847 limit/base >15 >20 limit/base >5000 >1300	2 0 1 <1 59 79 310 352 889 current <1 2 2	history1 history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method ASTM D5185m	0.0 0 0 11 35 266 276 1847 limit/base >15	2 0 1 <1 59 79 310 352 889 current <1 2 2 current  18725	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method ASTM D5185m	0.0 0 0 11 35 266 276 1847 limit/base >15 >20 limit/base >5000 >1300	2 0 1 <1 59 79 310 352 889 current <1 2 2 current  18725 2045	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method ASTM D5185m ASTM D7647 ASTM D7647	0.0 0 0 11 35 266 276 1847 limit/base >15 >20 limit/base >5000 >1300 >160	2 0 1 <1 59 79 310 352 889 current <1 2 2 current  18725 2045 83	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	0.0 0 0 11 35 266 276 1847 limit/base >15 >20 limit/base >5000 >1300 >160 >40	2 0 1 <1 59 79 310 352 889 current <1 2 2 current  18725 2045 83 17	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  Method  ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0.0 0 0 11 35 266 276 1847 limit/base >15 >20 limit/base >5000 >1300 >160 >40 >10	2 0 1 <1 59 79 310 352 889 current <1 2 2 current  18725 2045 83 17 1	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >5µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  Method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0.0 0 0 11 35 266 276 1847 limit/base >15 >20 limit/base >5000 >1300 >160 >40 >10 >3	2 0 1 <1 59 79 310 352 889 current <1 2 2 current  18725 2045 83 17 1 0	history1 history1	history2 history2

Acid Number (AN)

mg KOH/g ASTM D8045 0.36



# **OIL ANALYSIS REPORT**





Certificate 12367

Laboratory Sample No.

: TLC0001868 Lab Number : 06218188 Unique Number : 11096385 Test Package : PLANT

Received : 24 Jun 2024 **Tested** : 25 Jun 2024

Diagnosed : 25 Jun 2024 - Don Baldridge

To discuss this sample report, contact Customer Service at 1-800-237-1369.  $^st$  - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

jeffrey.washick@autoneum.com Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Report Id: AUTAIK [WUSCAR] 06218188 (Generated: 06/25/2024 19:25:06) Rev: 1

AIKEN, SC

US 29803

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Contact: JEFFREY WASHICK