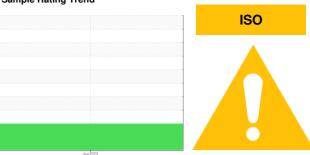


OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

ACL 1 METERING UNIT

Hydraulic System

SHELL TELLUS 46 (--- GAL)

DIAGNOSIS

Recommendation

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

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 acceptable for the time in service.

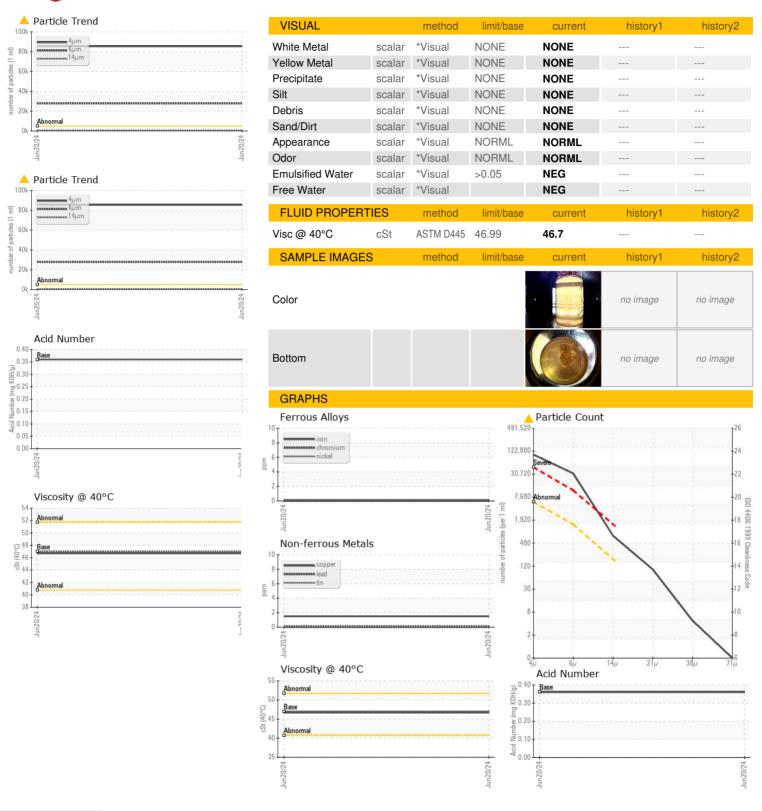
				Jun 2024		
CAMPLE INCOR	AATION		11 11 11			
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		TLC0001844		
Sample Date		Client Info		20 Jun 2024		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				ABNORMAL		
CONTANAINIATION		us a tha a al	line it /le e e e		la i a ta un un d	la i a ta m v O
CONTAMINATION	V	method	limit/base	current	history1	history2
Water		WC Method	>0.05	NEG		
WEAR METALS		method	limit/base	current	history1	history2
					Thotory I	motory
Iron	ppm	ASTM D5185m	>20	0		
Chromium	ppm	ASTM D5185m	>20	0		
Nickel	ppm	ASTM D5185m	>20	<1		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m		0		
Aluminum	ppm	ASTM D5185m	>20	<1		
Lead	ppm	ASTM D5185m	>20	0		
Copper	ppm	ASTM D5185m	>20	2		
Tin	ppm	ASTM D5185m	>20	<1		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/hasa	current	history1	history2
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0.0	3	history1	history2
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	0.0	3 0		
Boron Barium Molybdenum	• •	ASTM D5185m ASTM D5185m ASTM D5185m	0.0	3 0 <1		
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0.0	3 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0.0	3 0 <1		
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.0	3 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	3 0 <1 <1 75		
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	3 0 <1 <1 75 82		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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	3 0 <1 <1 75 82 342		
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	3 0 <1 <1 75 82 342 400 1094		
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	3 0 <1 <1 75 82 342 400 1094 current		
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 limit/base	3 0 <1 <1 75 82 342 400 1094 current		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0.0 0 0 11 35 266 276 1847 limit/base	3 0 <1 <1 75 82 342 400 1094 current <1		 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 limit/base	3 0 <1 <1 75 82 342 400 1094 current	 history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0.0 0 0 11 35 266 276 1847 limit/base >15	3 0 <1 <1 75 82 342 400 1094 current <1 2		
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 limit/base >15 >20	3 0 <1 <1 75 82 342 400 1094 current <1 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 >20 limit/base	3 0 <1 <1 75 82 342 400 1094 current <1 2 2 current ▲ 85443	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	3 0 <1 <1 75 82 342 400 1094 current <1 2 2 current ▲ 85443 ▲ 27688	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm 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	3 0 <1 <1 75 82 342 400 1094 current <1 2 2 current \$ 85443 \$ 27688 \$ 657	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	3 0 <1 <1 75 82 342 400 1094 current <1 2 2 current \$85443 27688 657 87	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	3 0 <1 <1 75 82 342 400 1094 current <1 2 2 current \$5443 \$27688 657 87 4	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >21µm Particles >38µm Particles >71µm	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	3 0 <1 <1 <1 75 82 342 400 1094 current <1 2 2 current \$5443 \$27688 \$657 \$87 4 0	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	3 0 <1 <1 75 82 342 400 1094 current <1 2 2 current \$5443 \$27688 657 87 4	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm 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	3 0 <1 <1 <1 75 82 342 400 1094 current <1 2 2 current \$5443 \$27688 \$657 \$87 4 0	history1 history1	history2 history2

Acid Number (AN)

mg KOH/g ASTM D8045 0.36



OIL ANALYSIS REPORT





Certificate 12367

Sample No.

Laboratory

: TLC0001844 Lab Number : 06218160 Unique Number : 11096357

Test Package : PLANT

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 24 Jun 2024 **Tested** : 25 Jun 2024

Diagnosed

: 25 Jun 2024 - Don Baldridge

US 29803 Contact: JEFFREY WASHICK jeffrey.washick@autoneum.com

1103 POWDERHOUSE RD

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.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

AUTONEUM

AIKEN, SC

T:

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