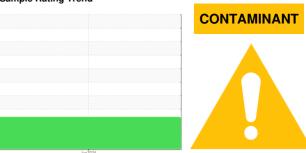


OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

NVH 1-2 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. Appearance is hazy.

Fluid Condition

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

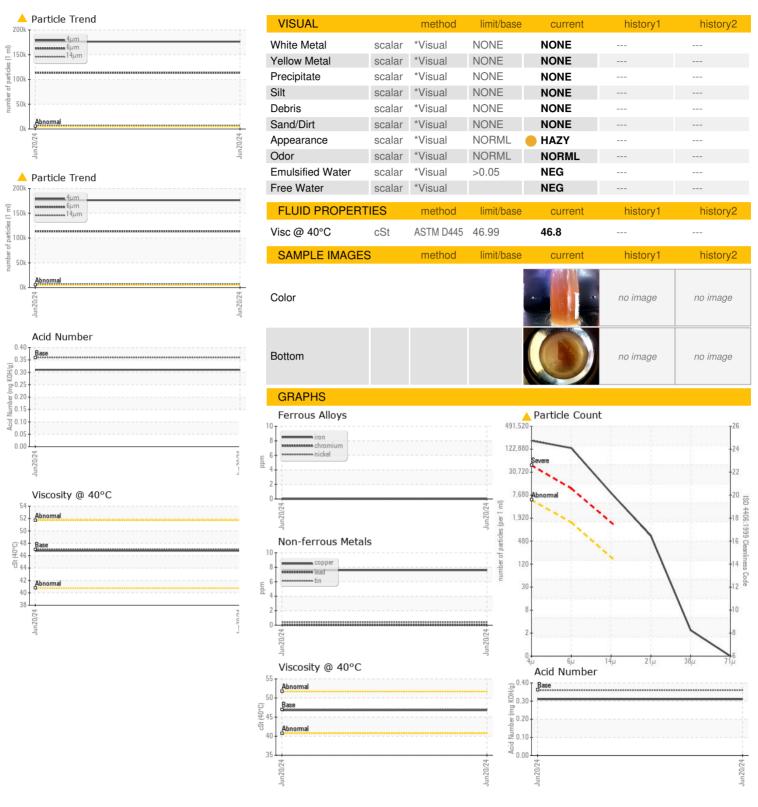
				Jun 2024		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		TLC0001893		
Sample Date		Client Info		20 Jun 2024		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Oil Changed	1113	Client Info		N/A		
Sample Status		Oliciti iiilo		ABNORMAL		
				ADITOTIMAL		
CONTAMINATION	N	method	limit/base	current	history1	history2
Water		WC Method	>0.05	NEG		
WEAR METALS		method	limit/base	current	history1	history2
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	0		
Lead	ppm	ASTM D5185m	>20	0		
Copper	ppm	ASTM D5185m	>20	8		
Tin	ppm	ASTM D5185m	>20	<1		
Vanadium	ppm	ASTM D5185m	•	0		
Cadmium	ppm	ASTM D5185m		0		
	1-1-					
A D D ITIV/E O		and a Albana at	12 24 /le		for the Alexander and	India Assumption
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 0.0	current 0	history1	history2
	ppm ppm					
Boron	• •	ASTM D5185m	0.0	0 0 <1		
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0.0	0 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0.0	0 0 <1		
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.0	0 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	0 0 <1 <1 28	 	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.0 0 0 11 35	0 0 <1 <1 28 48		
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	0 0 <1 <1 28 48 287	 	
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	0 0 <1 <1 28 48 287 298	 	
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	0.0 0 0 11 35 266 276 1847	0 0 <1 <1 28 48 287 298 821		
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	0 0 <1 <1 28 48 287 298 821 current	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	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	0 0 <1 <1 28 48 287 298 821 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	0 0 <1 <1 28 48 287 298 821 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	0.0 0 0 11 35 266 276 1847 limit/base >15 >20	0 0 <1 <1 28 48 287 298 821 current <1 2	history1 history1	history2 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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0.0 0 0 11 35 266 276 1847 limit/base >15 >20 limit/base	0 0 <1 <1 28 48 287 298 821 current <1 2 2 current	history1 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	0 0 <1 <1 28 48 287 298 821 current <1 2 2 current ▲ 176276 ▲ 113398	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	0 0 -1 -1 -28 48 -287 -298 821	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	0 0 <1 <1 <28 48 287 298 821 current <1 2 2 current 176276 113398 7622 587	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 D5185m ASTM D5185m ASTM D5185m ASTM D5185m 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	0 0 <1 <1 28 48 287 298 821 current <1 2 2 current ▲ 176276 ▲ 113398 ▲ 7622 587 2	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 D5185m ASTM D5185m ASTM D5185m ASTM D5185m 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	0 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 D5185m ASTM D5185m ASTM D5185m ASTM D5185m 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	0 0 <1 <1 28 48 287 298 821 current <1 2 2 current ▲ 176276 ▲ 113398 ▲ 7622 587 2	history1 history1	history2 history2

Acid Number (AN)

mg KOH/g ASTM D8045 0.36



OIL ANALYSIS REPORT





Certificate 12367

Laboratory Sample No.

Lab Number : 06218205 Unique Number : 11096402

: TLC0001893

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

Diagnosed : 25 Jun 2024 - Don Baldridge

Test Package : PLANT 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.

AUTONEUM

1103 POWDERHOUSE RD AIKEN, SC

US 29803

T:

Contact: JEFFREY WASHICK jeffrey.washick@autoneum.com

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