

PROBLEM SUMMARY

PRESS EAST TRACKBOUND

Tank Hydraulic System

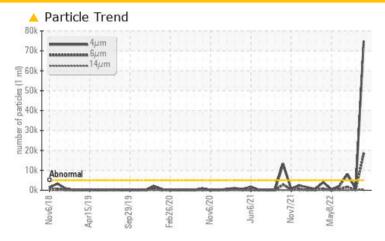
CHEVRON RANDO HD 46 (500 GAL)

V2018 Apr2019 Ser2019 Feb2020 Mass2020 La_2021 Mass2020 La_2021 Mass2020 Feb2020 Mass2020 Mass20 Mass2020 Mass2

Sample Rating Trend



COMPONENT CONDITION SUMMARY



RECOMMENDATION

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

PROBLEMATIC TEST RESULTS								
Sample Status				ABNORMAL	NORMAL	ATTENTION		
Particles >4µm		ASTM D7647	>5000	A 74957	783	▲ 8089		
Particles >6µm		ASTM D7647	>1300	18426	123	▲ 1675		
Particles >14µm		ASTM D7647	>160	4 549	14	47		
Particles >21µm		ASTM D7647	>40	108	3	4		
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<u>23/21/16</u>	17/14/11	2 0/18/13		
Silt	scalar	*Visual	NONE	MODER	NONE	NONE		

Customer Id: ALLMONSAF **Sample No.:** WC0829309 Lab Number: 05899306 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data: Jonathan Hester +1 919-379-4092 x4092 ihester@wearcheckusa.com

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

RECOMMENDED ACTIONS

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

HISTORICAL DIAGNOSIS

02 Apr 2023 Diag: Don Baldridge

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



01 Mar 2023 Diag: Jonathan Hester

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 moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

02 Oct 2022 Diag: Doug Bogart

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.





OIL ANALYSIS REPORT

PRESS **EAST TRACKBOUND**

Tank Hydraulic System

CHEVRON RANDO HD 46 (500 GAL)

Sample Rating Trend



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 oil. There is a moderate amount of visible silt present in the sample.

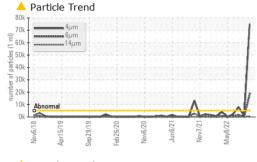
Fluid Condition

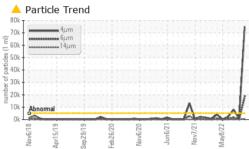
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

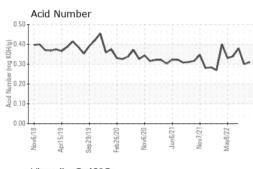
SAMPLE INFORMATION	CAMPLE INFORM	AATIONI	v2018 Apr20	19 Sep2019 Feb2020		May2022		
Sample Date Client Info 21 Jun 2023 02 Apr 2023 01 Mar 2023 Machine Age hrs Client Info 0 0 0 0 Oil Age hrs Client Info 0 0 0 0 Oil Olanged Client Info N/A N/A N/A N/A Sample Status Method limit/base Current history1 history2 Iron ppm ASTM D5185m >20 <1	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2	
Machine Age hrs Client Info 0 0 0 Oil Age hrs Client Info 0 0 0 Oil Changed Client Info N/A N/A N/A Sample Status method limit/base current history1 history2 Iron ppm ASTM D5185m ≥20 <1 0 0 Chromium ppm ASTM D5185m >20 <1 0 0 Nickel ppm ASTM D5185m >20 0 0 0 Silver ppm ASTM D5185m >20 0 0 0 Silver ppm ASTM D5185m >20 0 0 0 Aluminum ppm ASTM D5185m >20 0 0 0 Copper ppm ASTM D5185m >20 0 0 0 Copper ppm ASTM D5185m >20 0 0 0 Tin ppm	•		Client Info		WC0829309	WC0685682	WC0586278	
Oil Age hrs Client Info N/A	Sample Date		Client Info		21 Jun 2023	02 Apr 2023	01 Mar 2023	
Oil Changed Sample Status Client Info N/A N/A N/A N/A WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 <1 0 0 Chromium ppm ASTM D5185m >20 <1 0 0 Nickel ppm ASTM D5185m >20 0 0 0 Titanium ppm ASTM D5185m >20 0 0 0 Aluminum ppm ASTM D5185m >20 0 0 0 Aluminum ppm ASTM D5185m >20 0 0 0 Caded ppm ASTM D5185m >20 0 0 0 Capper ppm ASTM D5185m >20 0 0 0 Cadium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1	Machine Age	hrs	Client Info		0	0		
Sample Status	Oil Age	hrs	Client Info		0	0	0	
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 <1	Oil Changed		Client Info		N/A	N/A	N/A	
Iron	Sample Status				ABNORMAL	NORMAL	ATTENTION	
Chromium ppm ASTM D5185m >20 <1	WEAR METALS		method	limit/base	current	history1	history2	
Nickel ppm ASTM D5185m >20 0 0 0 Titanium ppm ASTM D5185m <1	Iron	ppm	ASTM D5185m	>20	<1	0	0	
Titanium	Chromium	ppm	ASTM D5185m	>20	<1	0	0	
Stilver	Nickel	ppm	ASTM D5185m	>20	0	0	0	
Aluminum ppm ASTM D5185m >20 <1 0 0 Lead ppm ASTM D5185m >20 0 0 0 Copper ppm ASTM D5185m >20 3 1 <1	Titanium	ppm	ASTM D5185m		<1	0	0	
Lead ppm ASTM D5185m >20 0 0 0 Copper ppm ASTM D5185m >20 3 1 <1 Tin ppm ASTM D5185m >20 0 0 0 Vanadium ppm ASTM D5185m •1 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 0 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	Silver	ppm	ASTM D5185m		0	0	0	
Copper ppm ASTM D5185m >20 3 1 <1 Tin ppm ASTM D5185m >20 0 0 0 Vanadium ppm ASTM D5185m <1	Aluminum	ppm	ASTM D5185m	>20	<1	0	0	
Tin ppm ASTM D5185m >20 0 0 0 Vanadium ppm ASTM D5185m <1 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 <1 <1 <1 Manganese ppm ASTM D5185m 0 <1 <1 0 Manganesium ppm ASTM D5185m 1 <1 <1 0 Calcium ppm ASTM D5185m 322 48 43 Phosphorus ppm ASTM D5185m 285 349 294 Zinc ppm ASTM D5185m 1072 941 784 CONTAMINATS	Lead	ppm	ASTM D5185m	>20	0	0	0	
Vanadium ppm ASTM D5185m <1 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 <1 <1 0 Magnesium ppm ASTM D5185m 0 <1 <1 0 Calcium ppm ASTM D5185m 32 48 43 Phosphorus ppm ASTM D5185m 339 435 367 Sulfur ppm ASTM D5185m 1072 941 784 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 <1 0 <1 Sodium ppm	Copper	ppm	ASTM D5185m	>20	3	1	<1	
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 0 <1	Tin	ppm	ASTM D5185m	>20	0	0	0	
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 0 <1	Vanadium	ppm	ASTM D5185m		<1	0	0	
Boron ppm ASTM D5185m 0 0 0 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 0 <1 <1 Manganese ppm ASTM D5185m 0 <1 0 Magnesium ppm ASTM D5185m 32 48 43 Phosphorus ppm ASTM D5185m 285 349 294 Zinc ppm ASTM D5185m 339 435 367 Sulfur ppm ASTM D5185m 1072 941 784 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 <1 0 <1 Sodium ppm ASTM D5185m >20 0 0 <1 Potassium ppm ASTM D5185m >20 0 0 <1 FLUID CLEANLINESS method limit/base <th< td=""><td>Cadmium</td><td>ppm</td><td>ASTM D5185m</td><td></td><th>0</th><td>0</td><td>0</td></th<>	Cadmium	ppm	ASTM D5185m		0	0	0	
Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 0 <1	ADDITIVES		method	limit/base	current	history1	history2	
Molybdenum ppm ASTM D5185m 0 <1 <1 Manganese ppm ASTM D5185m 0 <1 0 Magnesium ppm ASTM D5185m 1 <1 0 Calcium ppm ASTM D5185m 32 48 43 Phosphorus ppm ASTM D5185m 285 349 294 Zinc ppm ASTM D5185m 339 435 367 Sulfur ppm ASTM D5185m 1072 941 784 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 <1 0 <1 Sodium ppm ASTM D5185m >20 0 0 <1 Potassium ppm ASTM D5185m >20 0 0 <1 Patticles >4µm ASTM D7647 >5000 74957 783 8089 Patticles >6µm ASTM D7647 >160<	Boron	ppm	ASTM D5185m		0	0	0	
Manganese ppm ASTM D5185m 0 <1 0 Magnesium ppm ASTM D5185m 1 <1 0 Calcium ppm ASTM D5185m 32 48 43 Phosphorus ppm ASTM D5185m 285 349 294 Zinc ppm ASTM D5185m 339 435 367 Sulfur ppm ASTM D5185m 1072 941 784 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 <1 0 <1 Sodium ppm ASTM D5185m >20 0 0 <1 Potassium ppm ASTM D5185m >20 0 0 <1 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >5000 74957 783 8089 <th co<="" td=""><td>Barium</td><td>ppm</td><td>ASTM D5185m</td><td></td><th>0</th><td>0</td><td>0</td></th>	<td>Barium</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <th>0</th> <td>0</td> <td>0</td>	Barium	ppm	ASTM D5185m		0	0	0
Magnesium ppm ASTM D5185m 1 <1 0 Calcium ppm ASTM D5185m 32 48 43 Phosphorus ppm ASTM D5185m 285 349 294 Zinc ppm ASTM D5185m 339 435 367 Sulfur ppm ASTM D5185m 1072 941 784 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 <1 0 <1 Sodium ppm ASTM D5185m >20 0 0 <1 Potassium ppm ASTM D5185m >20 0 0 <1 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >5000 74957 783 8089 Particles >14µm ASTM D7647 >1300 18426 123 1675 Particles >21µm	Molybdenum	ppm	ASTM D5185m		0	<1	<1	
Magnesium ppm ASTM D5185m 1 <1 0 Calcium ppm ASTM D5185m 32 48 43 Phosphorus ppm ASTM D5185m 285 349 294 Zinc ppm ASTM D5185m 339 435 367 Sulfur ppm ASTM D5185m 1072 941 784 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 <1	Manganese	ppm	ASTM D5185m		0	<1	0	
Phosphorus ppm ASTM D5185m 285 349 294 Zinc ppm ASTM D5185m 339 435 367 Sulfur ppm ASTM D5185m 1072 941 784 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 <1	Magnesium		ASTM D5185m		1	<1	0	
Zinc ppm ASTM D5185m 339 435 367 Sulfur ppm ASTM D5185m 1072 941 784 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 <1 0 <1 Sodium ppm ASTM D5185m >20 0 0 0 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >5000 74957 783 8089 Particles >6µm ASTM D7647 >1300 18426 123 1675 Particles >14µm ASTM D7647 >160 549 14 47 Particles >21µm ASTM D7647 >40 108 3 4 Particles >71µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 23/21/16 17/14/11 20/18/13 FL	Calcium	ppm	ASTM D5185m		32	48	43	
Sulfur ppm ASTM D5185m 1072 941 784 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 <1	Phosphorus	ppm	ASTM D5185m		285	349	294	
Sulfur ppm ASTM D5185m 1072 941 784 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 <1			ASTM D5185m		339	435	367	
Silicon ppm ASTM D5185m >15 <1 0 <1 Sodium ppm ASTM D5185m <1 0 <1 Potassium ppm ASTM D5185m >20 0 0 0 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >5000 ↑74957 783 ♠ 8089 Particles >6μm ASTM D7647 >1300 ♠ 18426 123 ♠ 1675 Particles >14μm ASTM D7647 >160 ♠ 549 14 47 Particles >21μm ASTM D7647 >40 ♠ 108 3 4 Particles >38μm ASTM D7647 >10 2 0 0 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 ♠ 23/21/16 17/14/11 ♠ 20/18/13 FLUID DEGRADATION method limit/base current history1 history2 <td>Sulfur</td> <td></td> <td>ASTM D5185m</td> <td></td> <th>1072</th> <td>941</td> <td>784</td>	Sulfur		ASTM D5185m		1072	941	784	
Sodium ppm ASTM D5185m <1	CONTAMINANTS		method	limit/base	current	history1	history2	
Potassium ppm ASTM D5185m >20 0 0 0 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >5000 74957 783 Δ8089 Particles >6μm ASTM D7647 >1300 Δ18426 123 Δ1675 Particles >14μm ASTM D7647 >160 Δ549 14 47 Particles >21μm ASTM D7647 >40 Δ108 3 4 Particles >38μm ASTM D7647 >10 2 0 0 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 23/21/16 17/14/11 Δ20/18/13 FLUID DEGRADATION method limit/base current history1 history2	Silicon	ppm	ASTM D5185m	>15	<1	0	<1	
FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >5000 ▲ 74957 783 ▲ 8089 Particles >6μm ASTM D7647 >1300 ▲ 18426 123 ▲ 1675 Particles >14μm ASTM D7647 >160 ▲ 549 14 47 Particles >21μm ASTM D7647 >40 ▲ 108 3 4 Particles >38μm ASTM D7647 >10 2 0 0 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 ▲ 23/21/16 17/14/11 ▲ 20/18/13 FLUID DEGRADATION method limit/base current history1 history2	Sodium	ppm	ASTM D5185m		<1	0	<1	
Particles >4μm ASTM D7647 >5000 74957 783 ▲ 8089 Particles >6μm ASTM D7647 >1300 ▲ 18426 123 ▲ 1675 Particles >14μm ASTM D7647 >160 ▲ 549 14 47 Particles >21μm ASTM D7647 >40 ▲ 108 3 4 Particles >38μm ASTM D7647 >10 2 0 0 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 23/21/16 17/14/11 ▲ 20/18/13 FLUID DEGRADATION method limit/base current history1 history2	Potassium	ppm	ASTM D5185m	>20	0	0	0	
Particles >6μm ASTM D7647 >1300 18426 123 1675 Particles >14μm ASTM D7647 >160 549 14 47 Particles >21μm ASTM D7647 >40 108 3 4 Particles >38μm ASTM D7647 >10 2 0 0 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 23/21/16 17/14/11 20/18/13 FLUID DEGRADATION method limit/base current history1 history2	FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2	
Particles >14μm ASTM D7647 >160 ▲ 549 14 47 Particles >21μm ASTM D7647 >40 ▲ 108 3 4 Particles >38μm ASTM D7647 >10 2 0 0 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 ▲ 23/21/16 17/14/11 ▲ 20/18/13 FLUID DEGRADATION method limit/base current history1 history2	Particles >4µm		ASTM D7647	>5000	4957	783	▲ 8089	
Particles >21μm ASTM D7647 >40 ▲ 108 3 4 Particles >38μm ASTM D7647 >10 2 0 0 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 ▲ 23/21/16 17/14/11 ▲ 20/18/13 FLUID DEGRADATION method limit/base current history1 history2	Particles >6µm		ASTM D7647	>1300	<u> </u>	123	<u>▲</u> 1675	
Particles >38μm ASTM D7647 >10 2 0 0 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 23/21/16 17/14/11 Δ 20/18/13 FLUID DEGRADATION method limit/base current history1 history2	Particles >14µm		ASTM D7647	>160	<u></u> 549	14	47	
Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 ▲ 23/21/16 17/14/11 ▲ 20/18/13 FLUID DEGRADATION method limit/base current history1 history2	Particles >21µm		ASTM D7647	>40	<u> 108</u>	3	4	
Oil Cleanliness ISO 4406 (c) >19/17/14 ▲ 23/21/16 17/14/11 ▲ 20/18/13 FLUID DEGRADATION method limit/base current history1 history2	Particles >38µm		ASTM D7647	>10	2	0	0	
Oil Cleanliness ISO 4406 (c) >19/17/14 ▲ 23/21/16 17/14/11 ▲ 20/18/13 FLUID DEGRADATION method limit/base current history1 history2	•		ASTM D7647	>3	0	0	0	
	·			>19/17/14		17/14/11	<u>^</u> 20/18/13	
Acid Number (AN) mg KOH/g ASTM D8045 0.31 0.30 0.38	FLUID DEGRADA	TION	method	limit/base	current	history1	history2	
	Acid Number (AN)	mg KOH/g	ASTM D8045		0.31	0.30	0.38	

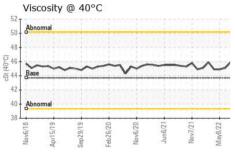


OIL ANALYSIS REPORT









VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	▲ MODER	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERTIES		method	limit/base	current	history1	history2
PLUID PROPERT	IES	A OTA DA 45	IIIIII/Dase	current	HISTORY	111510172

/isc @ 40°C	cSt	ASTM D445	43.7	45.7	45.4	45.9

SAMPLE IMAGES

limit/base

current

Particle Count

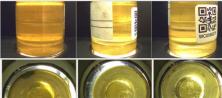
method

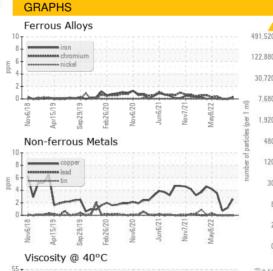
history1

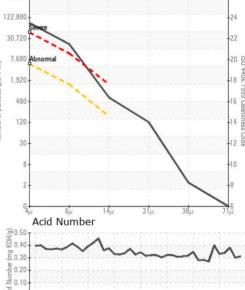
history2



Bottom











Certificate L2367

Laboratory Sample No. Lab Number

Unique Number Test Package : IND 2

: WC0829309 : 05899306 : 10560662

To discuss this sample report, contact Customer Service at 1-800-237-1369.

SS 40

35

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received Diagnosed

: 18 Jul 2023 Diagnostician

: 14 Jul 2023 : Jonathan Hester

0.00 G

ALLVAC SAF CONDITIONING 3750 ALLOY WAY MONROE, NC US 28110

Contact: BRIAN THORNTON brian.thornton@atimetals.com T: (704)289-4511

* - 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)

Contact/Location: BRIAN THORNTON - ALLMONSAF

F: