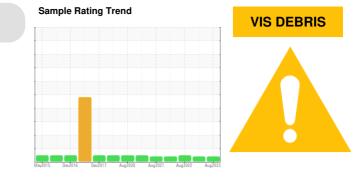


PROBLEM SUMMARY



LINE 9 SIDE (S/N X56A0100046)

Gearbox Fluid SHELL OMALA 320 (15 GAL)

COMPONENT CONDITION SUMMARY

No relevant graphs to display

RECOMMENDATION

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

PROBLEMATIC TEST RESULTS						
Sample Status				ABNORMAL	ABNORMAL	NORMAL
Debris	scalar	*Visual	NONE		A MODER	LIGHT

Customer Id: TAPFRA Sample No.: RP0021642 Lab Number: 05922268 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data: Angela Borella +1 800-237-1369 angela.borella@wearcheckusa.com

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

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

06 Feb 2023 Diag: Angela Borella



No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



15 Aug 2022 Diag: Don Baldridge



Resample at the next service interval to monitor.All component wear rates are normal. The water content is negligible. 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.



02 Feb 2022 Diag: Jonathan Hester

We suspect abnormal contamination may be due to sampling method. No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. The water content is negligible. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.





view report



OIL ANALYSIS REPORT

SAMPLE INFORMATION method

Sample Rating Trend

VIS DEBRIS



history2

history1

current

limit/base

	9	SIDE	(S/N	X56A0	0100046	5)
Component						

Gearbox Fluid

SHELL OMALA 320 (15 GAL)

DIAGNOSIS

A Recommendation

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

Wear

All component wear rates are normal.

Contamination

Moderate concentration of visible dirt/debris present in the oil.

Fluid Condition

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

Sample Number		Client Info		RP0021642	RP0029316	RP0016264
Sample Date		Client Info		07 Aug 2023	06 Feb 2023	15 Aug 2022
Machine Age	mths	Client Info		0	0	0
Oil Age	mths	Client Info		0	0	18
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				ABNORMAL	ABNORMAL	NORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	21	24	19
Chromium	ppm	ASTM D5185m	>15	0	<1	0
Nickel	ppm	ASTM D5185m	>15	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	1
Aluminum	ppm	ASTM D5185m	>25	1	0	1
Lead	ppm	ASTM D5185m	>100	0	0	0
Copper	ppm	ASTM D5185m	>200	<1	<1	<1
Tin	ppm	ASTM D5185m	>25	0	<1	<1
Antimony	ppm	ASTM D5185m	>5			
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
				•	•	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm		limit/base 5.5	current 0		
		method	5.5		history1	history2
Boron	ppm	method ASTM D5185m	5.5	0	history1 0	history2 <1
Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	5.5 0.4	0 0	history1 0 0	<mark>history2</mark> <1 0
Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	5.5 0.4	0 0 0	history1 0 0 0	history2 <1 0 0 0 0 0 1
Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5.5 0.4 0.5	0 0 0 1	history1 0 0 0 <1	history2 <1 0 0 0
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5.5 0.4 0.5 23	0 0 0 1 0	history1 0 0 0 <1 <1	history2 <1 0 0 0 0 0 1
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5.5 0.4 0.5 23 13	0 0 1 0 4	history1 0 0 0 <1 <1 2	history2 <1 0 0 0 <1 1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5.5 0.4 0.5 23 13 450	0 0 1 0 4 305	history1 0 0 0 <1 <1 2 2 260	history2 <1 0 0 0 <1 1 242
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5.5 0.4 0.5 23 13 450 9.9	0 0 1 0 4 305 0	history1 0 0 <1 <1 2 260 0	<1 0 0 0 1 242 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5.5 0.4 0.5 23 13 450 9.9 limit/base	0 0 1 0 4 305 0 current	history1 0 0 0 0 <1 <1 2 260 0 history1	<1 0 0 0 0 242 2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m	5.5 0.4 0.5 23 13 450 9.9 limit/base	0 0 1 0 4 305 0 <i>current</i> 2	history1 0 0 0 2 260 0 history1	<1 0 0 0 0 242 2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m	5.5 0.4 0.5 23 13 450 9.9 Limit/base >50	0 0 1 0 4 305 0 <u>current</u> 2 1	history1 0 0 0 <1 <1 2 260 0 history1 1 0 0	<1 0 0 0 0 1 242 2 history2 1 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5.5 0.4 0.5 23 13 450 9.9 Limit/base >50	0 0 0 1 0 4 305 0 <u>current</u> 2 1 0	history1 0 0 0 <1 <1 2 260 0 history1 1 0 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	<1 0 0 0 0 242 2 history2 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINANTS Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm	methodASTM D5185mASTM D5185m	5.5 0.4 0.5 23 13 450 9.9 Limit/base >50 >20 >0.2	0 0 0 1 0 4 305 0 <u>current</u> 2 1 0 0 0.011	history1 0 0 0 0 0 <1 2 260 0 history1 1 0 <1 0 -1 0 -1 0 <1 0 <1 0 <1 0.004	<1 0 0 0 0 1 242 2 history2 1 0 0 0.005

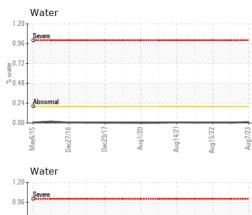


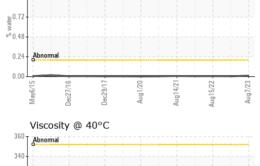
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OIL ANALYSIS REPORT





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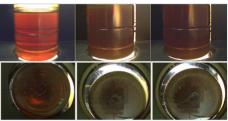
Dec27/16

Aug1/20

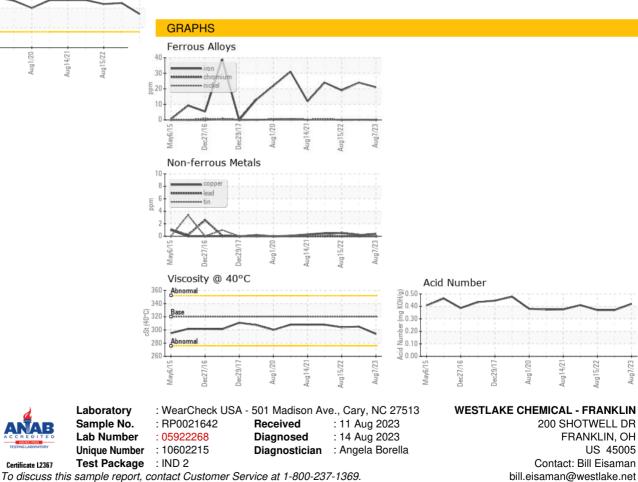
Aug14/21,

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	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	A MODER	🔺 MODER	LIGHT
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	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	FIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	320	294	305	304
SAMPLE IMAGES		method	limit/base	current	history1	history2

Color



Bottom



* - 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)

Certificate L2367

Submitted By: GREG HESTER

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