

PROBLEM SUMMARY

Area **FAB** [10-1487422] MX A NORTH 2 Component

Gearbox Fluid GEAR OIL (PAG) ISO 220 (--- GAL)

COMPONENT CONDITION SUMMARY

80k -	Particle Trer	nd				
70k	4μm 6μm		 			
Ê 60k -	14μm					
(m () sappated for a discrete state of the second state of the sec						
1 40k						
ja 30k -						
2 20k -	Abnormal		 	 		
10k -						
0k⊥	Nov10/23		 		Nov10/23	and in a state

RECOMMENDATION

Resample at the next service interval to monitor.

PROBLEMATIC TE	ST RESULTS			
Sample Status			ABNORMAL	
Particles >4µm	ASTM D7647	>20000	<u> </u>	
Particles >6µm	ASTM D7647	>5000	🔺 12647	
Oil Cleanliness	ISO 4406 (c)	>21/19/16	<u> </u>	

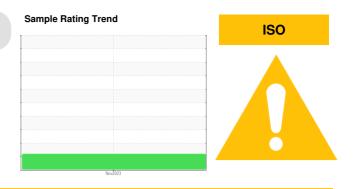
Customer Id: TYSWAV Sample No.: USP242309 Lab Number: 06010865 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data: Doug Bogart +1 (800)237-1369 x4016 <u>dougb@wearcheckusa.com</u>

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



There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS



OIL ANALYSIS REPORT

FAB [10-1487422] **MX A NORTH 2** Component

Gearbox

Fluid GEAR OIL (PAG) ISO 220 (--- GAL)

DIAGNOSIS

A Recommendation

Resample at the next service interval to monitor.

Wear

All 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 suitable for further service.

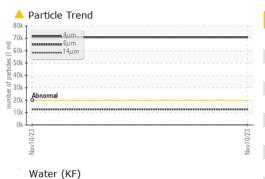
						Ŏ
				Nov2023		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		USP242309		
Sample Date		Client Info		10 Nov 2023		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				ABNORMAL		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	57		
Chromium	ppm	ASTM D5185m	>15	0		
Nickel	ppm	ASTM D5185m	>15	0		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m		0		
Aluminum	ppm	ASTM D5185m	>25	0		
Lead	ppm	ASTM D5185m	>100	0		
Copper	ppm	ASTM D5185m	>200	0		
Tin	ppm	ASTM D5185m	>25	0		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
			initia babb	ourront		
Boron	ppm	ASTM D5185m	5	0		
	ppm ppm	ASTM D5185m ASTM D5185m				
Barium			5	0		
Barium Molybdenum	ppm	ASTM D5185m	5 5	0 0		
Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m	5 5	0 0 0		
Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	5 5 5	0 0 0		
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 5 5	0 0 0 0 0		
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 5 5 5	0 0 0 0 0	 	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 5 5 5 5 5 775	0 0 0 0 0 0 443		
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	5 5 5 5 5 5 775 5	0 0 0 0 0 0 443 2	 	
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	5 5 5 5 5 5 775 5 2000	0 0 0 0 0 443 2 875		
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 5 5 5 5 775 5 2000	0 0 0 0 0 443 2 875 current	 history1	 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 5 5 5 5 775 5 2000 Limit/base	0 0 0 0 0 443 2 875 current 2	 history1	 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	5 5 5 5 5 775 5 2000 limit/base >50	0 0 0 0 0 443 2 875 current 2 <1	 history1	 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	5 5 5 5 5 775 5 2000 limit/base >50 \$	0 0 0 0 0 443 2 875 <u>current</u> 2 <1 0	 history1	 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	5 5 5 5 5 5 5 775 5 2000 limit/base >50 \$ 200 >20 \$ 20	0 0 0 0 0 443 2 875 <u>current</u> 2 <1 0 0 0.015	 history1 	 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water opm Water FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304	5 5 5 5 5 775 5 2000 limit/base >20 200 2 2000 limit/base >2000	0 0 0 0 0 443 2 875 current 2 <1 0 0.015 153.8 current 1 53.8	 history1 	 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water opm Water FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304	5 5 5 5 5 5 775 5 2000 limit/base >20 >20 >20 2 0.2 >2000 limit/base	0 0 0 0 0 443 2 875 current 2 <1 0 0 0.015 153.8 current	 history1 in -	 history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water opm Water FLUID CLEANLIN Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647	5 5 5 5 5 5 775 5 2000 Imit/base >20 20 20 20 20 20 20 20 20 20 20 20 20 2	0 0 0 0 0 443 2 875 <u>current</u> 2 <1 0 0.015 153.8 <u>current</u> 4 70745 ▲ 70745	 history1 history1	 history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water opm Water FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	5 5 5 5 5 5 5 775 5 2000 imit/base >200 >0.2 >2000 imit/base >2000 >5000 >2000 >2000	0 0 0 0 443 2 875 current 2 <1 0 0.015 153.8 current 153.8 current 154 29	 history1 history1	 history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water opm Water FLUID CLEANLIN Particles >4µm Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	5 5 5 5 5 5 775 5 2000 Imit/base >20 2000 >20 2000 Imit/base >20000 >2000 >640 >160 >40	0 0 0 0 443 2 875 current 2 <1 0 0.015 153.8 current 153.8 € current 154 29 1	 history1 history1	 history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water ppm Water FLUID CLEANLIN Particles >4µm Particles >4µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	5 5 5 5 5 5 775 5 2000 Imit/base >20 2000 >20 2000 >20 2000 S 2000 >20 2000 S 20000 >20 2000 S 20000 S 20000 S 20000 S 20000 S 20000 S 20000 S 20000 S 20000 S 20000 S 20000 S 20000 S 20000 S 20000 S 200 S 20 S 200 S 200 S 200 S 200 S 200 S 200 S 20 S 200 S 200 S 200 S 200 S 200 S 200 S 200 S 200 S 200 S 200 S 200 S 200 S 2 S 2	0 0 0 0 443 2 875 current 2 <1 0 0.015 153.8 current 153.8 € current 154 29 1 0	history1	 history2 history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water ppm Water FLUID CLEANLIN Particles >4µm Particles >4µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	5 5 5 5 5 5 775 5 2000 Imit/base >20 2000 >20 2000 Imit/base >20000 >2000 >640 >160 >40	0 0 0 0 443 2 875 current 2 <1 0 0.015 153.8 current 153.8 € current 154 29 1		 history2 history2 history2
Silicon Sodium Potassium Water ppm Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	5 5 5 5 5 5 775 5 2000 Imit/base >20 2000 >20 2000 >20 2000 S 2000 >20 2000 S 20000 >20 2000 S 20000 S 20000 S 20000 S 20000 S 20000 S 20000 S 20000 S 20000 S 20000 S 20000 S 20000 S 20000 S 20000 S 200 S 20 S 200 S 200 S 200 S 200 S 200 S 200 S 20 S 200 S 200 S 200 S 200 S 200 S 200 S 200 S 200 S 200 S 200 S 200 S 200 S 2 S 2	0 0 0 0 443 2 875 current 2 <1 0 0.015 153.8 current 153.8 € current 154 29 1 0	 history1 	 history2 -

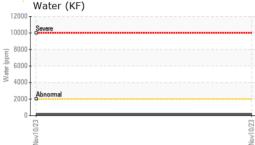
Sample Rating Trend

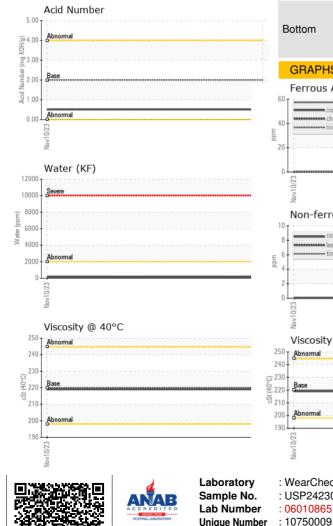


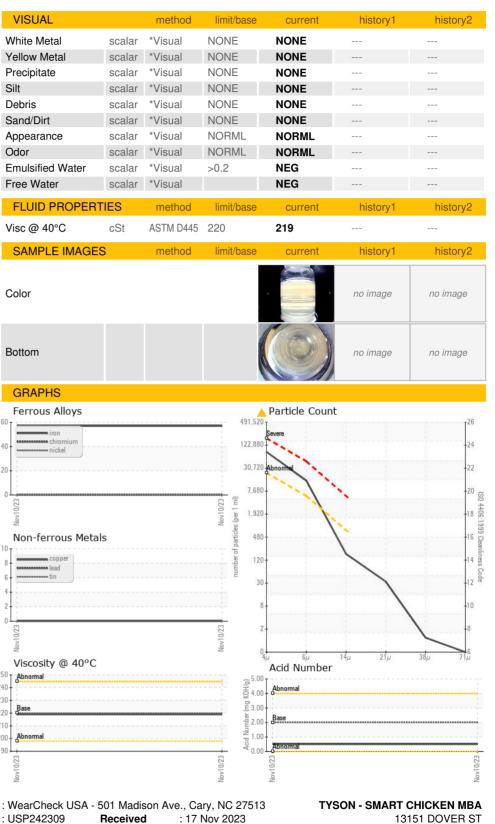


OIL ANALYSIS REPORT









* - 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)

Diagnosed

Diagnostician

: 20 Nov 2023

: Doug Bogart

Certificate L2367

Contact/Location: KURT CONRADT - TYSWAV

F:

WAVERLY, NE US 68462

T: (402)786-1072

Contact: KURT CONRADT

kconradt@smartchicken.com