

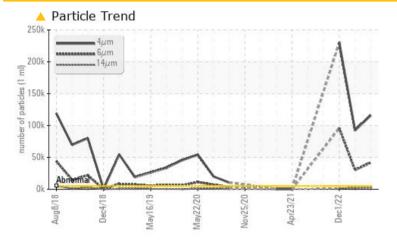
# **PROBLEM SUMMARY**

## Area South Plant-Fermentation A1760D Component

Gearbox

## HIGH PERFORMANCE LUBRICANTS GEAR LIFE 320 (20 GAL)

## COMPONENT CONDITION SUMMARY



## RECOMMENDATION

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

PROBLEMATIC TEST RESULTS							
Sample Status			ABNORMAL	ABNORMAL	ABNORMAL		
Particles >4µm	ASTM D7647	>5000	🔺 115814	<b>92334</b>	<b>A</b> 229739		
Particles >6µm	ASTM D7647	>1300	<u> </u>	<b>A</b> 30317	<b>4</b> 95912		
Particles >14µm	ASTM D7647	>160	<u> </u>	<b>2</b> 094	<b>1</b> 426		
Particles >21µm	ASTM D7647	>40	<u> </u>	<b>A</b> 377	<b>4</b> 5		
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<u> </u>	<u> </u>	▲ 25/24/18		

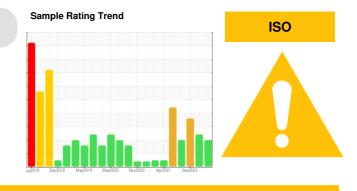
Customer Id: AJIEDD Sample No.: WC0786801 Lab Number: 05928248 Test Package: PLANT



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



RECOMMENDED AC	CTIONS			
Action	Status	Date	Done By	Description
Change Filter			?	We recommend you service the filters on this component if applicable.

## HISTORICAL DIAGNOSIS



10 Feb 2023 Diag: Doug Bogart

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

# view report

view report

### 01 Dec 2022 Diag: Doug Bogart



We advise that you follow the water drain-off procedure for this component. Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of particulates present in the oil. Free water present. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

### 21 Mar 2022 Diag: Don Baldridge

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition. We were unable to perform a particle count due to a high concentration of particles present in this sample.All component wear rates are normal. There is a moderate concentration of water present in the oil. 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.







## **OIL ANALYSIS REPORT**

#### Area South Plant-Fermentation Machine Id A1760D Component

**Gearbox** 

## HIGH PERFORMANCE LUBRICANTS GEAR LIFE 320 (20 GAL)

DIAGNOSIS

## Recommendation

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

## Wear

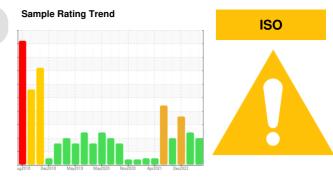
All component wear rates are normal.

## Contamination

There is a high amount of particulates present in the oil.

### **Fluid Condition**

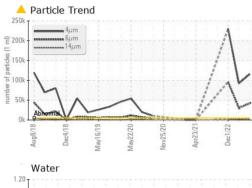
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

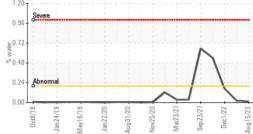


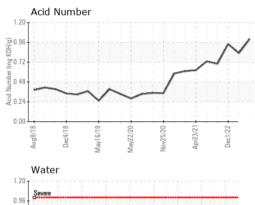
	<b>JATION</b>	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0786801	WC0765988	WC0723609
Sample Date		Client Info		15 Aug 2023	10 Feb 2023	01 Dec 2022
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	6	2	2
Chromium	ppm	ASTM D5185m	>10	0	0	0
Nickel	ppm	ASTM D5185m	>10	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	0	0	<1
Lead	ppm	ASTM D5185m	>50	0	0	0
Copper	ppm	ASTM D5185m		3	3	4
Tin	ppm	ASTM D5185m		0	0	0
Vanadium	ppm	ASTM D5185m	- 10	0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	<1
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		<1	0	0
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m		0	<1	1
Calcium	ppm	ASTM D5185m		0	<1	0
Phosphorus	ppm	ASTM D5185m		10	19	42
Zinc	ppm	ASTM D5185m		0	4	14
Sulfur	ppm	ASTM D5185m		32709	27531	24114
CONTAMINANTS	;	method	limit/base	current	history1	history
				current	Thistory I	history2
Silicon	ppm	ASTM D5185m	>50	5	2	2
Silicon Sodium	ppm ppm	ASTM D5185m ASTM D5185m	>50			
Sodium			>50 >20	5	2	2
Sodium Potassium	ppm	ASTM D5185m	>20	5 0	2 0	2 0
Sodium Potassium Water	ppm ppm	ASTM D5185m ASTM D5185m	>20 >0.2	5 0 0	2 0 <1	2 0 0
Sodium Potassium Water	ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D6304	>20 >0.2	5 0 0 0.013	2 0 <1 0.022	2 0 0 0.167
Sodium Potassium Water ppm Water FLUID CLEANLIN	ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304	>20 >0.2 >2000	5 0 0 0.013 135.2	2 0 <1 0.022 220.9	2 0 0.167 1670
Sodium Potassium Water ppm Water FLUID CLEANLIN Particles >4µm	ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 method	>20 >0.2 >2000 limit/base >5000	5 0 0 0.013 135.2 current	2 0 <1 0.022 220.9 history1	2 0 0.167 1670 history2
Sodium Potassium Water ppm Water FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 method ASTM D7647	>20 >0.2 >2000 limit/base >5000	5 0 0 0.013 135.2 current ▲ 115814	2 0 <1 0.022 220.9 history1 ▲ 92334	2 0 0 0.167 1670 history2 ▲ 229739
Sodium Potassium Water ppm Water FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 <b>method</b> ASTM D7647 ASTM D7647	>20 >0.2 >2000 limit/base >5000 >1300	5 0 0 0.013 135.2 <u>current</u> ▲ 115814 ▲ 41897	2 0 <1 0.022 220.9 history1 ▲ 92334 ▲ 30317	2 0 0 0.167 1670 history2 ▲ 229739 ▲ 95912
Sodium Potassium Water ppm Water FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm	ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 Method ASTM D7647 ASTM D7647 ASTM D7647	>20 >0.2 >2000 limit/base >5000 >1300 >160	5 0 0 0.013 135.2 <u>current</u> ▲ 115814 ▲ 41897 ▲ 2402	2 0 <1 0.022 220.9 history1 ▲ 92334 ▲ 30317 ▲ 2094	2 0 0 0.167 1670 history2 ▲ 229739 ▲ 95912 ▲ 1426
Sodium Potassium Water ppm Water	ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>20 >0.2 >2000 limit/base >5000 >1300 >160 >40 >10	5 0 0 0.013 135.2 <u>current</u> ▲ 115814 ▲ 41897 ▲ 2402 ▲ 404	2 0 <1 0.022 220.9 history1 ▲ 92334 ▲ 30317 ▲ 2094 ▲ 377	2 0 0 0.167 1670 history2 ▲ 229739 ▲ 95912 ▲ 1426 ▲ 45
Sodium Potassium Water ppm Water FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>20 >0.2 >2000 limit/base >5000 >1300 >160 >40 >10	5 0 0 0.013 135.2 current ▲ 115814 ▲ 41897 ▲ 2402 ▲ 404 4	2 0 <1 0.022 220.9 history1 ▲ 92334 ▲ 30317 ▲ 2094 ▲ 377 ▲ 22	2 0 0.167 1670 history2 ▲ 229739 ▲ 95912 ▲ 1426 ▲ 45 1
Sodium Potassium Water ppm Water FLUID CLEANLIN Particles >4µm Particles >6µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm % ppm JESS	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>20 >0.2 >2000 limit/base >5000 >1300 >160 >40 >10 >3	5 0 0 0.013 135.2	2 0 <1 0.022 220.9 history1 ▲ 92334 ▲ 30317 ▲ 2094 ▲ 377 ▲ 22 1	2 0 0.167 1670 ▲ 229739 ▲ 95912 ▲ 1426 ▲ 45 1 0



# **OIL ANALYSIS REPORT**







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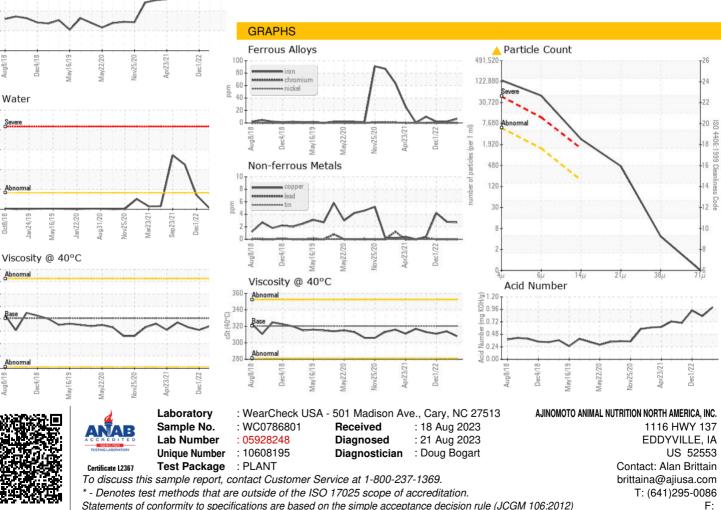
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Oct8/

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	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	>0.2	NEG	NEG	0.2%
Free Water	scalar	*Visual		NEG	NEG	<b>1</b> .0
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	320.4	308	314	311
SAMPLE IMAGES	6	method	limit/base	current	history1	history2
Color				•		

Bottom



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