

## **OIL ANALYSIS REPORT**

#### Area South Plant-Fermentation A1760D Component Gearbox

Gearbox Fluid

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

#### DIAGNOSIS

#### Recommendation

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample at the next service interval to monitor.

#### Wear

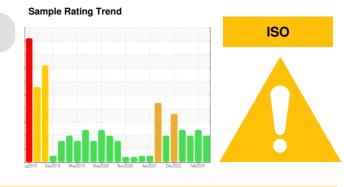
All component wear rates are normal.

#### Contamination

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

#### Fluid Condition

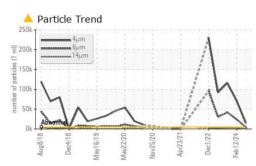
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

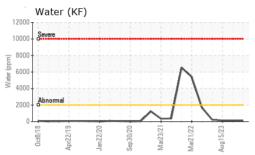


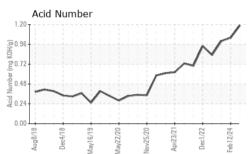
SAMPLE INFORM	<b>MATION</b>	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0941392	WC0870636	WC0786801
Sample Date		Client Info		24 May 2024	12 Feb 2024	15 Aug 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	<1	1	6
Chromium	ppm	ASTM D5185m	>10	<1	0	0
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	2	0	0
Lead	ppm	ASTM D5185m	>50	<1	0	0
Copper	ppm	ASTM D5185m		8	4	3
Tin	ppm	ASTM D5185m	>10	<1	<1	0
Vanadium	ppm	ASTM D5185m	-	0	0	0
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		<1	0	0
Molybdenum	ppm	ASTM D5185m		<1	0	<1
Manganese	ppm	ASTM D5185m		0	<1	0
Magnesium	ppm	ASTM D5185m		<1	0	0
Calcium	ppm	ASTM D5185m		0	0	0
Phosphorus	ppm	ASTM D5185m		61	10	10
Zinc	ppm	ASTM D5185m		2	0	0
Sulfur	ppm	ASTM D5185m		28439	25929	32709
CONTAMINANTS	6	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	2	12	5
Sodium	ppm	ASTM D5185m		0	0	0
Potassium	ppm	ASTM D5185m	>20	1	0	0
Water	%	ASTM D6304	>0.2	0.012	0.013	0.013
ppm Water	ppm	ASTM D6304		128	134	135.2
FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	<b>4</b> 14514	A 71577	▲ 115814
Particles >6µm		ASTM D7647	>1300	<u> </u>	<u> </u>	<b>4</b> 1897
Particles >14µm		ASTM D7647	>160	9 317	<b>A</b> 2639	<b>4</b> 2402
Particles >21µm		ASTM D7647	>40	75	<b>A</b> 774	<u> </u>
Particles >38µm		ASTM D7647	>10	3	<b>1</b> 9	4
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>A</b> 21/19/15	▲ 23/22/19	4/23/18
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		1.19	1.04	1.00



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1000

600

4000

360 350

340

() 330 € 320 ₹ 310

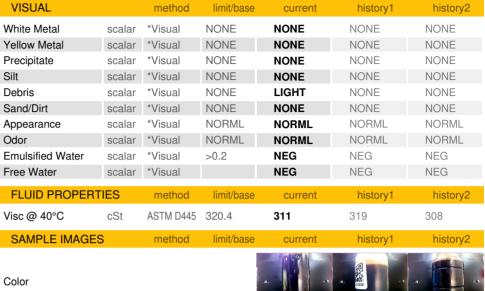
300

290

28

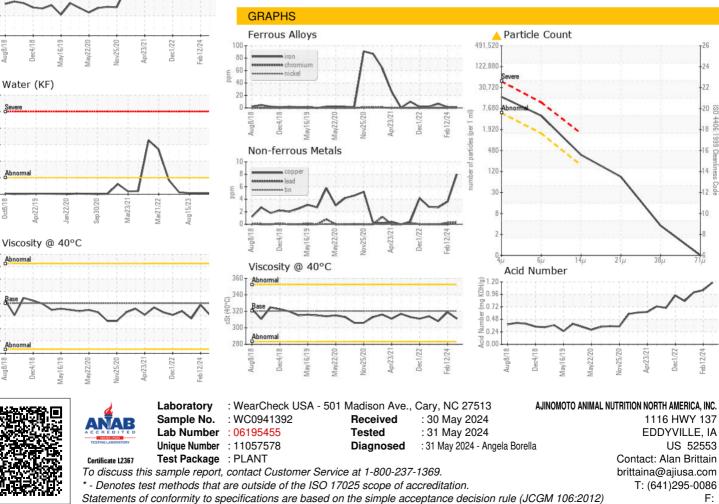
2000 - A

Water (ppm)





Bottom



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Submitted By: Alan Brittain

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