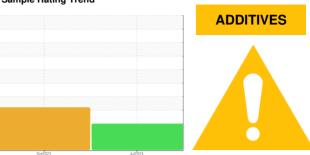


OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

EX OVEN 2 DRUM (NORTH PLANT)

Component Gearbox

JAX SYNGEAR INDUSTRIAL GEAR ISO 320 (

DIAGNOSIS

Recommendation

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

An increase in the iron level is noted.

Contamination

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

Fluid Condition

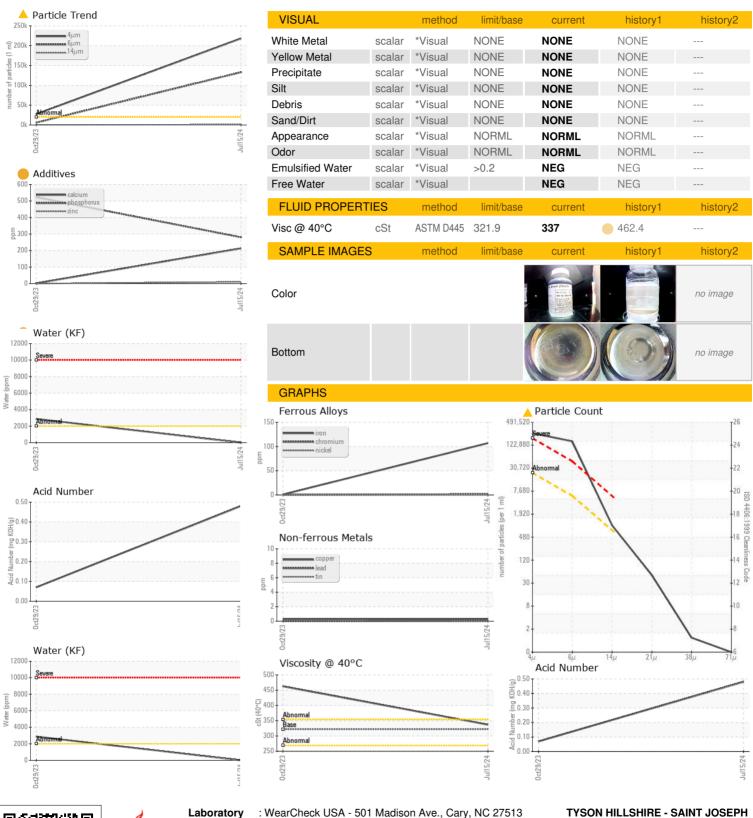
Additive levels indicate the addition of a different brand or type of oil. Confirmed. The AN level is acceptable for this fluid.

Sample Number Client Info USP0012362 USP0002886	(GAL)			0et2023	Jul2024		
Sample Number Sample Date Client Info USP0012362 USP0002886	SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Date Client Info 0 15 Jul 2024 29 Oct 2023	Sample Number		Client Info		USP0012362	,	
Machine Age hrs Client Info 0 0							
Oil Age hrs Client Info N/A N/A Sample Status Client Info N/A N/A WEAR METALS method limit/base current history1 his Iron ppm ASTM D5185m >2200 107 <1		hrs					
Oil Changed Sample Status							
Sample Status method limit/base current history1 history1 Iron ppm ASTM D5185m >200 107 <1		0			· ·		
WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >200 107 <1			Olichi illio				
Tron	· ·		method	limit/base	current	history1	history2
Chromium ppm ASTM D5185m >15 1 <1	ron	maa	ASTM D5185m	>200	107	<1	
Nickel	Chromium		ASTM D5185m	>15	1	<1	
Titanium ppm ASTM D5185m 0 0 -1 Silver ppm ASTM D5185m 0 0 0 Aluminum ppm ASTM D5185m >25 1 2 Lead ppm ASTM D5185m >100 0 0 Copper ppm ASTM D5185m >200 <1 -1 Tin ppm ASTM D5185m >200 <1 -1 Tin ppm ASTM D5185m 0 0 -1 Vanadium ppm ASTM D5185m 0 0 -1 Cadmium ppm ASTM D5185m 0 0 -1 Cadmium ppm ASTM D5185m 0 0 -1 Boron ppm ASTM D5185m 0 0 -1 Boron ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 0 0 0 Magnesium ppm ASTM D5185m 1 0 Calcium ppm ASTM D5185m 1 0 0 Sulfur ppm ASTM D5185m 280 523 Sulfur ppm ASTM D5185m 280 523 CONTAMINANTS method limit/base current history1 his Silicon ppm ASTM D5185m 95 724 CONTAMINANTS method limit/base current history1 his Sodium ppm ASTM D5185m >50 8 2 Sodium ppm ASTM D5185m 20 0 0 0 Sulfur ppm ASTM D5185m 20 0 0 0 Sulfur ppm ASTM D5185m 10 0 0 0 CONTAMINANTS method limit/base current history1 his Silicon ppm ASTM D5185m >50 8 2 Sodium ppm ASTM D5185m >0 0 0 0 Sodium ppm ASTM D5185m >0 0 0 0 Sodium ppm ASTM D5185m >0 0 0 0 0 Sodium ppm ASTM D5185m >0 0 0 0 0 0 Sodium ppm ASTM D5185m >0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0							
Silver				710			
Aluminum					-		
Lead ppm ASTM D5185m >100 0 0				> 25			
Copper ppm ASTM D5185m >200 <1 <1							
Tin ppm ASTM D5185m >25 0 <1 Vanadium ppm ASTM D5185m 0 <1 Vanadium ppm ASTM D5185m 0 <1 Cadmium ppm ASTM D5185m 0 <1 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 0 0 0 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 Magnese ppm ASTM D5185m 1 0 0 Magnesium ppm ASTM D5185m 1 0 0 Calcium ppm ASTM D5185m 1 0 0 Calcium ppm ASTM D5185m 1 0 0 Sulfur ppm ASTM D5185m 280 523 Phosphorus ppm ASTM D5185m 10 0 0 Sulfur ppm ASTM D5185m 95 724 CONTAMINANTS method limit/base current history1 history1 CONTAMINANTS method limit/base current history1 history1 CONTAMINANTS method limit/base current history1 history1 Potassium ppm ASTM D5185m >50 8 2 Water % ASTM D5185m >20 6 2 Water % ASTM D5185m >20 6 2 Water % ASTM D6304 >0.2 0.001					_		
Vanadium ppm ASTM D5185m 0 <1 Cadmium ppm ASTM D5185m 0 <1 ADDITIVES method limit/base current history1 his Boron ppm ASTM D5185m 2 <1 Barium ppm ASTM D5185m 0 0 Molybdenum ppm ASTM D5185m 0 0 Magnesium ppm ASTM D5185m 1 0							
Cadmium ppm ASTM D5185m 0 <1 ADDITIVES method limit/base current history1 his Boron ppm ASTM D5185m 2 <1				>25			
ADDITIVES method limit/base current history1 his Boron ppm ASTM D5185m 2 <1	√anadium	ppm	ASTM D5185m		-		
Boron ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 0 0 0 Magnesium ppm ASTM D5185m 1 0 0 Calcium ppm ASTM D5185m 1 0 0 Calcium ppm ASTM D5185m 1 0 0 Phosphorus ppm ASTM D5185m 280 523 Zinc ppm ASTM D5185m 10 0 0 Sulfur ppm ASTM D5185m 95 724 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >50 8 2 CONTAMINANTS method limit/base current history1 history1 Potassium ppm ASTM D5185m >20 6 2 Water % ASTM D5185m >20 6 2 Water % ASTM D6304 >0.2 0.001 △ 0.287 ppm Water ppm ASTM D6304 >0.2 0.001 △ 0.287 FLUID CLEANLINESS method limit/base current history1 history1 Particles >4μm ASTM D7647 >20000 △ 218165 ○ 27350 Particles >4μm ASTM D7647 >5000 △ 132983 ○ 5849 Particles >21μm ASTM D7647 >640 △ 860 365 Particles >221μm ASTM D7647 >40 1 9 Particles >38μm ASTM D7647 >40 1 9 Particles >71μm ASTM D7647 >40 1 9 Particles >71μm ASTM D7647 >40 1 9	Cadmium	ppm	ASTM D5185m		0	<1	
Sarium ppm ASTM D5185m 0	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 0 0	Boron	ppm	ASTM D5185m		2	<1	
Manganese ppm ASTM D5185m <1 0	Barium	ppm	ASTM D5185m		0	0	
Magnesium ppm ASTM D5185m 1 0 Calcium ppm ASTM D5185m 213 1 Phosphorus ppm ASTM D5185m 280 523 Zinc ppm ASTM D5185m 10 0 Sulfur ppm ASTM D5185m 95 724 CONTAMINANTS method limit/base current history1 his Silicon ppm ASTM D5185m >50 8 2 Sodium ppm ASTM D5185m >20 6 2 Potassium ppm ASTM D5185m >20 6 2 Water % ASTM D6304 >0.2 0.001 △ 0.287	Molybdenum	ppm	ASTM D5185m		0	0	
Magnesium ppm ASTM D5185m 1 0	Manganese	ppm	ASTM D5185m		<1	0	
Phosphorus ppm ASTM D5185m 280 523	Magnesium	ppm	ASTM D5185m		1	0	
Phosphorus ppm ASTM D5185m 280 523	Calcium	ppm	ASTM D5185m		<u>213</u>	1	
Zinc ppm ASTM D5185m 95 724 Sulfur ppm ASTM D5185m 95 724 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >50 8 2 Sodium ppm ASTM D5185m 4 4 Potassium ppm ASTM D5185m >20 6 2 Water % ASTM D6304 >0.2 0.001 ▲ 0.287 Opm Water ppm ASTM D6304 >2000 1 ▲ 2875.2 FLUID CLEANLINESS method limit/base current history1 history1 Particles >4μm ASTM D7647 >20000 ▲ 218165 27350 Particles >6μm ASTM D7647 >5000 ▲ 132983 5849 Particles >21μm ASTM D7647 >640 ▲ 860 365 Particles >38μm ASTM D7647 >40 1 9 Particles >71μm ASTM D7647 >40 1 9 Particles >71μm ASTM D7647 >10 0 3	Phosphorus				280	523	
Sulfur ppm ASTM D5185m 95 724 CONTAMINANTS method limit/base current history1 history1 history1 history1 history1 history1 history1 history1 history2 history2 history2 Name Popm ASTM D5185m > 20 6 2 Popm ASTM D6304 > 0.2 0.0011 △ 0.287 Popm ASTM D6304 > 20000 1 △ 2875.2 Popm ASTM D7647 > 20000 △ 218165 ○ 27350 Popm Popm Popm ASTM D7647 > 5000					10		
CONTAMINANTS method limit/base current history1 history2 history3 history4 history4							
Solition ppm ASTM D5185m >50 8 2		pp		limit/hase			history2
Sodium ppm ASTM D5185m 4 4							HISTOTYZ
Potassium ppm ASTM D5185m >20 6 2 Water % ASTM D6304 >0.2 0.001 Δ 0.287 ppm Water ppm ASTM D6304 >2000 1 Δ 2875.2 FLUID CLEANLINESS method limit/base current history1 his Particles >4μm ASTM D7647 >20000 Δ 218165 27350 Particles >6μm ASTM D7647 >5000 Δ 132983 5849 Particles >14μm ASTM D7647 >640 Δ 860 365 Particles >21μm ASTM D7647 >160 43 112 Particles >38μm ASTM D7647 >40 1 9 Particles >71μm ASTM D7647 >10 0 3				>50			
Water % ASTM D6304 >0.2 0.001 Δ 0.287 opm Water ppm ASTM D6304 >2000 1 Δ 2875.2 FLUID CLEANLINESS method limit/base current history1 his Particles >4μm ASTM D7647 >20000 Δ 218165 27350 Particles >6μm ASTM D7647 >5000 Δ 132983 5849 Particles >14μm ASTM D7647 >640 Δ 860 365 Particles >21μm ASTM D7647 >160 43 112 Particles >38μm ASTM D7647 >40 1 9 Particles >71μm ASTM D7647 >10 0 3							
Opm Water ppm ASTM D6304 >2000 1 Δ 2875.2							
FLUID CLEANLINESS method limit/base current history1 history2 history2 history2 history2 Particles >6µm ASTM D7647 >640 4360 365 Particles >38µm ASTM D7647 >40 1 9 Particles >71µm ASTM D7647 >10 0 3	Water	%	ASTM D6304	>0.2	0.001	△ 0.287	
Particles >4μm ASTM D7647 >20000 Δ 218165 27350 Particles >6μm ASTM D7647 >5000 Δ 132983 5849 Particles >14μm ASTM D7647 >640 Δ 860 365 Particles >21μm ASTM D7647 >160 43 112 Particles >38μm ASTM D7647 >40 1 9 Particles >71μm ASTM D7647 >10 0 3	opm Water	ppm	ASTM D6304	>2000	1	<u>▲</u> 2875.2	
Particles >6μm ASTM D7647 >5000 Δ 132983 5849 Particles >14μm ASTM D7647 >640 Δ 860 365 Particles >21μm ASTM D7647 >160 43 112 Particles >38μm ASTM D7647 >40 1 9 Particles >71μm ASTM D7647 >10 0 3	FLUID CLEANLINI	ESS	method	limit/base	current	history1	history2
Particles >14μm ASTM D7647 >640 ▲ 860 365 Particles >21μm ASTM D7647 >160 43 112 Particles >38μm ASTM D7647 >40 1 9 Particles >71μm ASTM D7647 >10 0 3	·						
Particles >21μm ASTM D7647 >160 43 112 Particles >38μm ASTM D7647 >40 1 9 Particles >71μm ASTM D7647 >10 0 3	Particles >6µm		ASTM D7647	>5000	<u> </u>	5849	
Particles >38μm ASTM D7647 >40 1 9 Particles >71μm ASTM D7647 >10 0 3	Particles >14µm			>640	<u>▲</u> 860	365	
Particles >71μm ASTM D7647 >10 0 3	Particles >21µm		ASTM D7647	>160	43	112	
	Particles >38µm		ASTM D7647	>40	1	9	
	Particles >71µm		ASTM D7647	>10	0	3	
				>21/19/16	<u>\$\text{\scale}\$ 25/24/17</u>		
FLUID DEGRADATION method limit/base current history1 his	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g ASTM D8045 0.48 0.07	Acid Number (AN)	mg KOH/g	ASTM D8045		0.48	0.07	

Contact/Location: ? ? - TYSSAI



OIL ANALYSIS REPORT





Certificate 12367

Sample No. Lab Number : 06237827 Unique Number : 11126661

: USP0012362 Test Package : IND 2

Received : 16 Jul 2024 **Tested** : 19 Jul 2024

Diagnosed : 19 Jul 2024 - Doug Bogart 5807 MITCHELL AVE SAINT JOSEPH, MO

US 64507 Contact:

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

 st - 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)

Report Id: TYSSAI [WUSCAR] 06237827 (Generated: 07/21/2024 13:59:01) Rev: 1

Contact/Location: ? ? - TYSSAI

T:

F: