

OIL ANALYSIS REPORT

NORMAL

Machine Id

GEA/FES NORTH RC-4 (S/N S

Refrigeration Compressor

USPI ALT-68 SC (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Fluid Condition

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

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SAMPLE INFORM	MATION	method	limit/base	current	history1	history2			
Sample Number		Client Info		USP0013097	USP0005940	USP0005128			
Sample Date		Client Info		23 Jun 2024	13 Mar 2024	04 Jan 2024			
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				NORMAL	NORMAL	NORMAL			
WEAR METALS		method	limit/base	current	history1	history2			
Iron	ppm	ASTM D5185m	>8	0	<1	0			
Chromium	ppm	ASTM D5185m	>2	0	<1	<1			
Nickel	ppm	ASTM D5185m		0	0	0			
Titanium	ppm	ASTM D5185m		0	<1	0			
Silver	ppm	ASTM D5185m	>2	0	<1	0			
Aluminum	ppm	ASTM D5185m	>3	0	0	1			
Lead	ppm	ASTM D5185m	>2	0	1	0			
Copper	ppm	ASTM D5185m	>8	0	0	0			
Tin	ppm	ASTM D5185m	>4	0	<1	<1			
Vanadium	ppm	ASTM D5185m		0	<1	0			
Cadmium	ppm	ASTM D5185m		0	<1	0			
ADDITIVES		method	limit/base	current	history1	history2			
Boron	ppm	ASTM D5185m		0	0	0			
Barium	ppm	ASTM D5185m		0	0	0			
Molybdenum	ppm	ASTM D5185m		0	0	0			
				•					
-	ppm	ASTM D5185m		0	<1	0			
-	ppm ppm	ASTM D5185m ASTM D5185m		0	<1 0	0 <1			
Magnesium				0					
Magnesium Calcium Phosphorus	ppm	ASTM D5185m ASTM D5185m ASTM D5185m		0 0 <1	0 0 0	<1 0 0			
Magnesium Calcium Phosphorus Zinc	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 0 <1 0	0 0 0 0	<1 0 0 0			
Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50	0 0 <1 0 0	0 0 0 0 0	<1 0 0 0 0			
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	limit/base	0 0 <1 0 0 current	0 0 0 0 0 history1	<1 0 0 0 0 history2			
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	limit/base	0 0 <1 0 0 current 2	0 0 0 0 history1 2	<1 0 0 0 0 history2 1			
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 <1 0 0 <u>current</u> 2 <1	0 0 0 0 0 history1 2 1	<1 0 0 0 0 history2 1 0			
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >15 >20	0 0 <1 0 0 <u>current</u> 2 <1 0	0 0 0 0 0 history1 2 1 1	<1 0 0 0 0 history2 1 0 1			
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >15 >20 >0.01	0 0 <1 0 0 <u>current</u> 2 <1 0 0 0.002	0 0 0 0 0 history1 2 1 1 1 0.002	<1 0 0 0 0 history2 1 0 1 0.001			
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water opm Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >15 >20	0 0 <1 0 0 <u>current</u> 2 <1 0	0 0 0 0 0 history1 2 1 1	<1 0 0 0 0 history2 1 0 1			
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >15 >20 >0.01	0 0 <1 0 0 <u>current</u> 2 <1 0 0 0.002	0 0 0 0 0 history1 2 1 1 1 0.002	<1 0 0 0 0 history2 1 0 1 0.001			
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water ppm Water FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304	limit/base >15 >20 >0.01 >100 limit/base >10000	0 0 <1 0 0 0 2 <1 0 0 0.002 24 24 current 3169	0 0 0 0 0 <u>history1</u> 2 1 1 0.002 16 <u>history1</u> 5486	<1 0 0 0 0 history2 1 0 0 1 0.001 10 10 5326			
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water ppm Water FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304	limit/base >15 >20 >0.01 >100 limit/base >10000	0 0 <1 0 0 0 <u>current</u> 2 <1 0 0.002 24 24 <u>current</u> 3169 692	0 0 0 0 0 <u>history1</u> 2 1 1 1 0.002 16 <u>history1</u> 5486 1039	<1 0 0 0 0 history2 1 0 1 0.001 10 10 history2 5326 1329			
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water ppm Water FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647	limit/base >15 >20 >0.01 >100 limit/base >10000 >2500 >320	0 0 <1 0 0 0 <u>current</u> 2 <1 0 0.002 24 <u>current</u> 3169 692 21	0 0 0 0 0 <u>history1</u> 2 1 1 0.002 16 <u>history1</u> 5486 1039 28	<1 0 0 0 1 0 1 0 1 0.001 10 history2 5326 1329 21			
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water ppm Water FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	limit/base >15 >20 >0.01 >100 limit/base >10000 >2500 >320 >80	0 0 <1 0 0 0 current 2 <1 0 0.002 24 current 3169 692 21 4	0 0 0 0 0 <u>history1</u> 2 1 1 1 0.002 16 <u>history1</u> 5486 1039 28 3	<1 0 0 0 1 0 1 0.001 10 history2 5326 1329 21 4			
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water ppm Water FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5047 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	limit/base >15 >20 >0.01 >100 limit/base >10000 >2500 >320 >80 >20	0 0 <1 0 0 0 2 <1 0 0.002 24 24 3169 692 21 4 0	0 0 0 0 0 history1 2 1 1 1 0.002 16 history1 5486 1039 28 3 0	<1 0 0 0 1 0 1 0 1 0.001 10 history2 5326 1329 21 4 0			
Silicon Sodium Potassium Water ppm Water FLUID CLEANLIN Particles >4µm Particles >4µm Particles >14µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	limit/base >15 >20 >0.01 >100 limit/base >10000 >2500 >320 >320 >80 >20 >4	0 0 <1 0 0 0 2 <1 0 0.002 24 24 24 24 24 24 24 21 3169 692 21 4 0 0 0	0 0 0 0 0 history1 2 1 1 1 0.002 16 history1 5486 1039 28 3 0 0 0	<1 0 0 0 0 history2 1 0 1 0 0 1 0.001 10 history2 5326 1329 21 4 0 0 0 0 0 0			
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water ppm Water FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5047 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	limit/base >15 >20 >0.01 >100 limit/base >10000 >2500 >320 >80 >20	0 0 <1 0 0 0 2 <1 0 0.002 24 24 3169 692 21 4 0	0 0 0 0 0 history1 2 1 1 1 0.002 16 history1 5486 1039 28 3 0	<1 0 0 0 0 history2 1 0 1 0 0 1 1 0.001 10 10 5326 1329 21 4 0			

Acid Number (AN)

mg KOH/g ASTM D974 0.005

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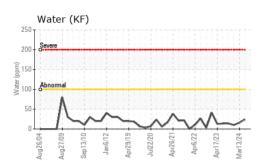
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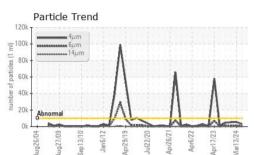
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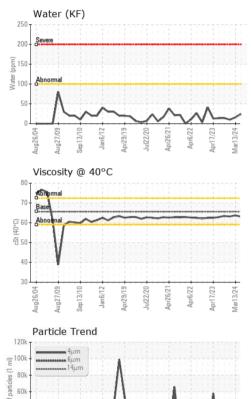


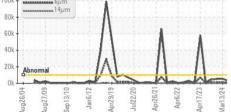
OIL ANALYSIS REPORT





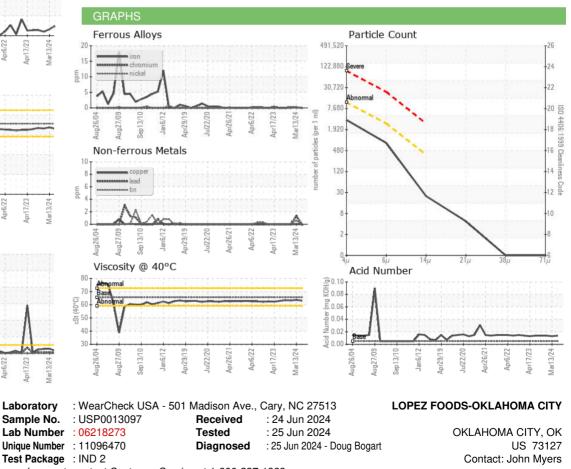
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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*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	>0.01	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPER	TIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	65.6	63.0	63.7	63.2
SAMPLE IMAGE	S	method	limit/base	current	history1	history2
Color						
Bottom				(0)		



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

* - 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) T: (405)789-7500 F: (405)499-0128

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