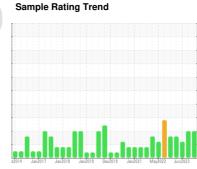


OIL ANALYSIS REPORT

ENG RM 4 4B4 (S/N 0135)

Refrigeration Compressor

USPI ALT-68 SC (--- GAL)





DIAGNOSIS

Recommendation

We recommend you service the filters on this component. 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.

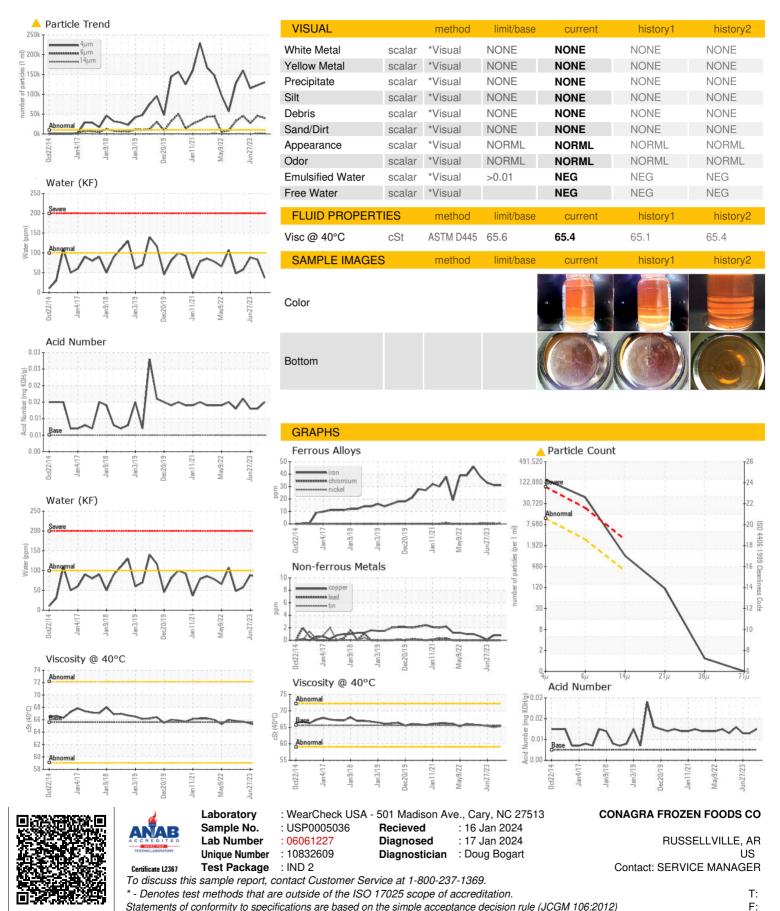
Fluid Condition

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

		:t2014 Jan2	017 Jan2018 Jan2019	Dec2019 Jan2021 May2022	Jun2023	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		USP0005036	USP0001631	USP255219
Sample Date		Client Info		02 Jan 2024	26 Sep 2023	27 Jun 2023
Machine Age	hrs	Client Info		0	0	55474
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	>8	31	31	33
Chromium	ppm	ASTM D5185m	>2	<1	0	0
Nickel	ppm	ASTM D5185m		<1	<1	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>3	0	0	<1
Lead	ppm	ASTM D5185m	>2	0	0	0
Copper	ppm	ASTM D5185m	>8	<1	<1	<1
Tin	ppm	ASTM D5185m	>4	0	0	<1
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		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		0	0	0
Calcium	ppm	ASTM D5185m		0	0	0
Phosphorus	ppm	ASTM D5185m		0	<1	0
Zinc	ppm	ASTM D5185m		0	<1	0
Sulfur	ppm	ASTM D5185m	50	0	0	2
CONTAMINANTS	3	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	0	<1	<1
Sodium	ppm	ASTM D5185m		0	0	0
Potassium	ppm	ASTM D5185m	>20	<1	0	2
Water	%	ASTM D6304	>0.01	0.003	0.008	0.008
ppm Water	ppm	ASTM D6304	>100	37	83.3	88.7
FLUID CLEANLIN	NESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	130098	<u>▲</u> 122997	<u> </u>
Particles >6µm		ASTM D7647	>2500	40142	<u>▲</u> 45508	27369
Particles >14µm		ASTM D7647	>320	4 857	<u> </u>	202
Particles >21µm		ASTM D7647	>80	<u> 100</u>	<u>▲</u> 128	18
Particles >38µm		ASTM D7647	>20	1	0	0
Particles >71µm		ASTM D7647	>4	0	0	0
Oil Cleanliness		ISO 4406 (c)	>20/18/15	<u>4</u> 24/23/17	4 24/23/17	2 4/22/15
FLUID DEGRADA	ATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974	0.005	0.015	0.013	0.013



OIL ANALYSIS REPORT



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