

# **OIL ANALYSIS REPORT**



Refrigeration Compressor Fluid USPI ALT-68 SC (--- GAL)

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

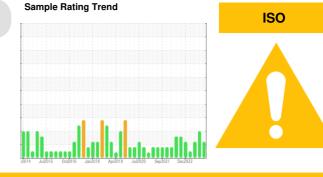
All component wear rates are normal.

#### Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

## Fluid Condition

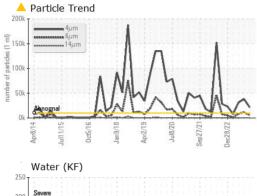
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

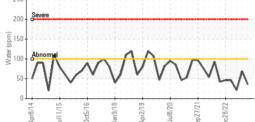


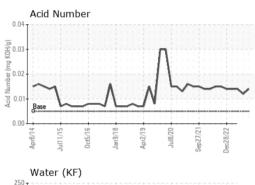
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		USP0005044	USP0001637	USP255223
Sample Date		Client Info		02 Jan 2024	26 Sep 2023	27 Jun 2023
Machine Age	hrs	Client Info		0	0	19592
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>8	3	4	3
Chromium	ppm	ASTM D5185m	>2	<1	0	0
Nickel	ppm	ASTM D5185m		<1	2	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>3	0	0	0
Lead	ppm	ASTM D5185m	>2	0	0	0
Copper	ppm	ASTM D5185m		۰ <1	0	<1
Tin	ppm		>4	0	0	0
Vanadium	ppm	ASTM D5185m	~ 7	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	0	0
Magnesium	ppm	ASTM D5185m		0	0	0
Calcium	ppm	ASTM D5185m		0	0	0
Phosphorus		ASTM D5185m		0	<1	0
Zinc	ppm	ASTM D5185m		0	0	0
Sulfur	ppm ppm	ASTM D5185m	50	0	0	0
				-	-	-
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	2	3	3
Sodium	ppm	ASTM D5185m		0	0	0
Potassium	ppm	ASTM D5185m	>20	<1	<1	<1
Water	%	ASTM D6304	>0.01	0.003	0.006	0.002
ppm Water	ppm	ASTM D6304	>100	36	69.0	21.2
FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	🔺 21595	<b>A</b> 38092	<b>A</b> 31402
Particles >6µm		ASTM D7647	>2500	<u> </u>	<b>1</b> 1184	▲ 8645
Particles >14µm		ASTM D7647	>320	281	<b>5</b> 38	243
Particles >21µm		ASTM D7647	>80	46	<b>9</b> 1	29
Particles >38µm		ASTM D7647	>20	2	3	0
Particles >71µm		ASTM D7647	>4	0	1	0
Oil Cleanliness		ISO 4406 (c)	>20/18/15	<b>A</b> 22/20/15	A 22/21/16	▲ 22/20/15
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974	0.005	0.014	0.012	0.014

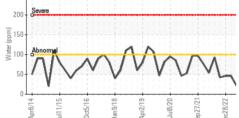


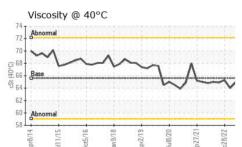
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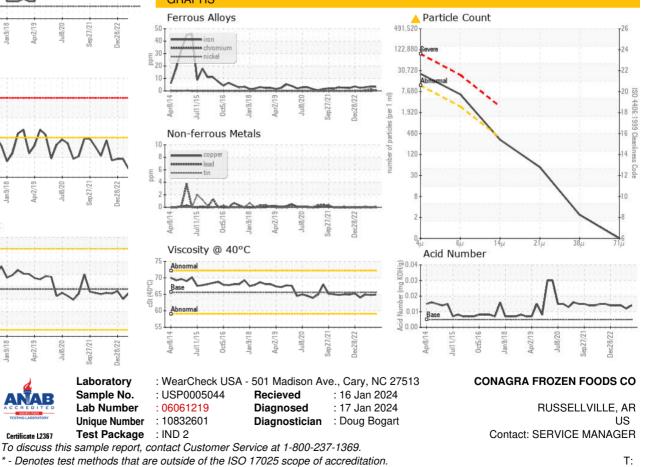


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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 PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	65.6	64.9	64.8	64.9
SAMPLE IMAGES		method	limit/base	current	history1	history2
Color				a.		NH3 4MC1 D: 275994 AGRUS



Bottom





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

F:

Certificate L2367