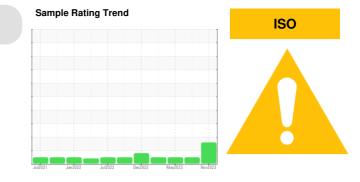


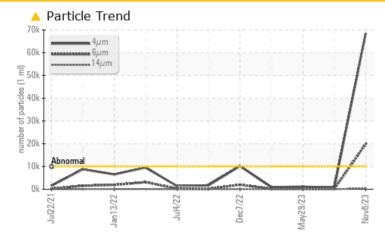
# **PROBLEM SUMMARY**



### Machine Id MS-2 (S/N 09302-004-1-01-07) Component

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

# COMPONENT CONDITION SUMMARY



### RECOMMENDATION

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

PROBLEMATIC TEST RESULTS						
Sample Status		ABNORMAL	NORMAL	NORMAL		
Particles >4µm	ASTM D7647 >100	00 🔺 <b>68499</b>	709	1145		
Particles >6µm	ASTM D7647 >250	0 🔺 <b>19834</b>	154	201		
Particles >14µm	ASTM D7647 >320	<b>A</b> 375	16	17		
Oil Cleanliness	ISO 4406 (c) >20/1	8/15 🔺 <b>23/21/16</b>	17/14/11	17/15/11		

Customer Id: TYSHUM Sample No.: USP0003752 Lab Number: 06007001 Test Package: IND 2



To manage this report scan the QR code

*To discuss the diagnosis or test data:* Doug Bogart +1 (800)237-1369 x4016 <u>dougb@wearcheckusa.com</u>

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

RECOMMENDED ACTIONS						
Action	Status	Date	Done By	Description		
Change Filter			?	We recommend you service the filters on this component.		

## HISTORICAL DIAGNOSIS

### NORMAL



Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



view report

### 29 May 2023 Diag: Doug Bogart

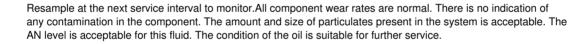
16 Aug 2023 Diag: Doug Bogart

#### NORMAL



Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the component. The amount and size of particulates present in the system is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

02 Mar 2023 Diag: Doug Bogart









# **OIL ANALYSIS REPORT**



ISO

### Machine Id MS-2 (S/N 09302-004-1-01-07) Component

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.

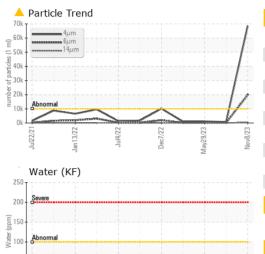
### **Fluid Condition**

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

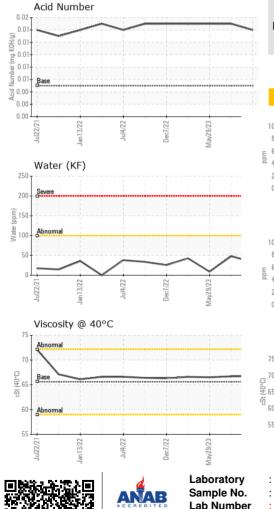
SAMPLE INFORM	<b>IATION</b>	method	limit/base	current	history1	history2
Sample Number		Client Info		USP0003752	USP244627	USP245850
Sample Date		Client Info		08 Nov 2023	16 Aug 2023	29 May 2023
Machine Age	hrs	Client Info		11356	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>8	1	0	0
Chromium	ppm	ASTM D5185m	>2	<1	0	<1
Nickel	ppm	ASTM D5185m		0	0	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>3	1	0	0
Lead	ppm	ASTM D5185m	>2	0	0	<1
Copper	ppm	ASTM D5185m	>8	0	0	0
Tin	ppm	ASTM D5185m	>4	0	0	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		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m		<1	0	0
Calcium	ppm	ASTM D5185m		0	0	0
Phosphorus	ppm	ASTM D5185m		0	0	1
Zinc	ppm	ASTM D5185m		0	0	0
Sulfur	ppm	ASTM D5185m	50	0	0	0
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	1	2	<1
Sodium	ppm	ASTM D5185m		0	<1	<1
Potassium	ppm	ASTM D5185m	>20	<1	<1	1
Water	%	ASTM D6304	>0.01	0.003	0.004	0.001
ppm Water	ppm	ASTM D6304	>100	33.1	48.1	8.9
FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	<u> </u>	709	1145
Particles >6µm		ASTM D7647	>2500	<u> </u>	154	201
Particles >14µm		ASTM D7647	>320	<b>A</b> 375	16	17
Particles >21µm		ASTM D7647	>80	33	4	4
Particles >38µm		ASTM D7647	>20	0	0	1
Particles >71µm		ASTM D7647	>4	0	0	0
Oil Cleanliness		ISO 4406 (c)	>20/18/15	<b>4</b> 23/21/16	17/14/11	17/15/11
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974	0.005	0.014	0.015	0.015



# **OIL ANALYSIS REPORT**

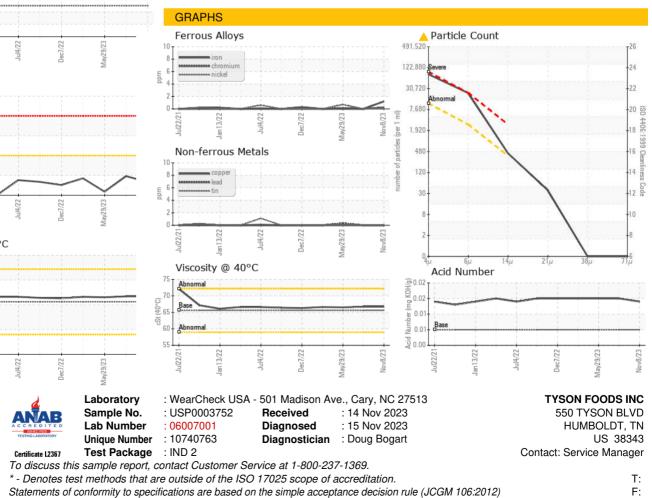






VISUAL		method	limit/base	current	history1	history2
VISUAL		memou	IIIIII/Dase	current	history i	TIIStOLY2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*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 PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	65.6	66.7	66.7	66.5
SAMPLE IMAGES	S	method	limit/base	current	history1	history2
Color						

Bottom



Contact/Location: Service Manager - TYSHUM