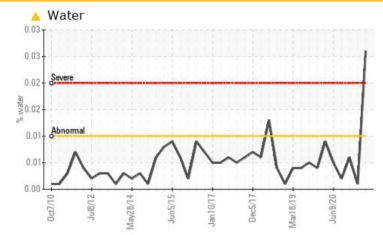


# **PROBLEM SUMMARY**

# **FES TYSSEG 4 FES (S/N R1310)**

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

# COMPONENT CONDITION SUMMARY



# RECOMMENDATION

Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS								
Sample Status				MARGINAL	NORMAL	ABNORMAL		
Water	%	ASTM D6304	>0.01	<b>A</b> 0.026	0.001	0.006		
ppm Water	ppm	ASTM D6304	>100	<u> </u>	0.00	61.8		

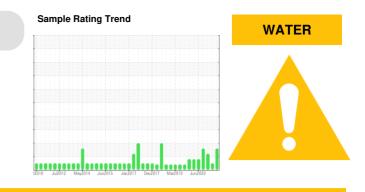
Customer Id: TYSSEG01 Sample No.: USP0000392 Lab Number: 05938331 Test Package: IND 2



To manage this report scan the QR code

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

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



## **RECOMMENDED ACTIONS**

There are no recommended actions for this sample.

## HISTORICAL DIAGNOSIS

## 30 May 2023 Diag: Doug Bogart



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.



#### 31 Dec 2021 Diag: Doug Bogart



We recommend you service the filters on this component. Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.





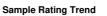
10 Dec 2020 Diag: Doug Bogart

We recommend you service the filters on this component. Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.





# **OIL ANALYSIS REPORT**



# WATER

# Machine Id FES TYSSEG 4 FES (S/N R1310) Component

**Refrigeration Compressor** Fluid

USPI ALT-68 SC (--- QTS)

# DIAGNOSIS

## Recommendation

Resample at the next service interval to monitor.

#### Wear

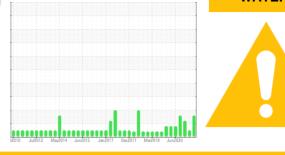
All component wear rates are normal.

#### Contamination

There is a light concentration of water present 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.



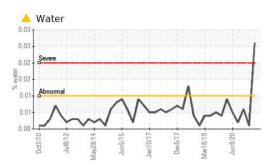
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		USP0000392	USP249945	USP236281
Sample Date		Client Info		24 Aug 2023	30 May 2023	31 Dec 2021
Machine Age	hrs	Client Info		35443	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				MARGINAL	NORMAL	ABNORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>8	<1	<1	1
Chromium	ppm	ASTM D5185m	>2	0	0	0
Nickel	ppm	ASTM D5185m		0	0	0
Titanium	ppm	ASTM D5185m		0	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	0
Copper	ppm	ASTM D5185m	>8	0	0	0
Tin	ppm	ASTM D5185m	>4	0	0	0
Antimony	ppm	ASTM D5185m				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		<1	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	ppm	ASTM D5185m		<1	0	<1
Zinc	ppm	ASTM D5185m		0	0	0
Sulfur	ppm	ASTM D5185m	50	0	21	0
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	1	<1	<1
Sodium	ppm	ASTM D5185m		0	<1	<1
Potassium	ppm	ASTM D5185m	>20	<1	<1	0
Water	%	ASTM D6304	>0.01	<b>A</b> 0.026	0.001	0.006
ppm Water	ppm	ASTM D6304	>100	<b>A</b> 268.9	0.00	61.8
FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	4186	3157	<b>1</b> 47738
Particles >6µm		ASTM D7647	>2500	1040	1068	<b>41648</b>
Particles >14µm		ASTM D7647	>320	37	65	<b>6</b> 20
Particles >21µm		ASTM D7647	>80	7	9	22
Particles >38µm		ASTM D7647	>20	0	0	0
Particles >71µm		ASTM D7647	>4	0	0	0
Oil Cleanliness		ISO 4406 (c)	>20/18/15	19/17/12	19/17/13	▲ 24/23/16
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974	0.005	0.014	0.014	0.014

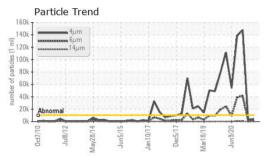
Acid Number (AN) Report Id: TYSSEG01 [WUSCAR] 05938331 (Generated: 08/31/2023 19:02:23) Rev: 1

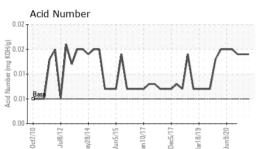
Contact/Location: ALEX DELACRUZ - TYSSEG01



# **OIL ANALYSIS REPORT**







75

7

cSt (40°C)

60

55

160

140

E 120

er of particles () 80k 90k

20

0

umbe 40

At

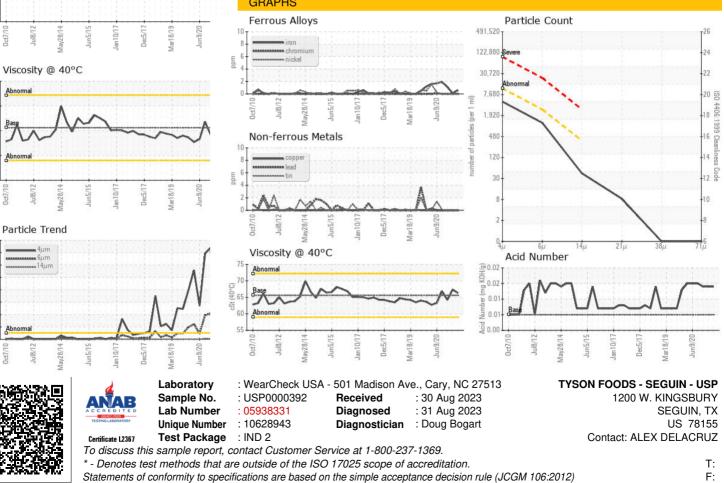
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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 PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	65.6	66.3	67.3	64.2
SAMPLE IMAGES		method	limit/base	current	history1	history2
				R13 - 114 32	20013 2013 201734	E-HA

Color



Bottom





Contact/Location: ALEX DELACRUZ - TYSSEG01