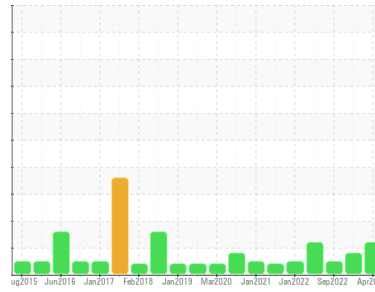




# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id  
**FES TYSVIE MSC-4 (S/N 00392-003-1-01-01)**  
 Component  
**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 INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>USP0006775</b>	USP234229	USP231675
Sample Date	Client Info	<b>15 Apr 2024</b>	15 Jan 2024	09 Sep 2022
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>ABNORMAL</b>	ATTENTION	NORMAL

## WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >8	<1	0	1
Chromium	ppm	ASTM D5185m >2	0	<1	0
Nickel	ppm	ASTM D5185m	2	<1	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m >2	0	0	<1
Aluminum	ppm	ASTM D5185m >3	<1	0	<1
Lead	ppm	ASTM D5185m >2	0	0	<1
Copper	ppm	ASTM D5185m >8	2	0	<1
Tin	ppm	ASTM D5185m >4	<1	0	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	<1

## 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	1	0	0
Magnesium	ppm	ASTM D5185m	<1	0	<1
Calcium	ppm	ASTM D5185m	1	0	2
Phosphorus	ppm	ASTM D5185m	0	0	0
Zinc	ppm	ASTM D5185m	0	0	3
Sulfur	ppm	ASTM D5185m 50	<1	0	9

## CONTAMINANTS

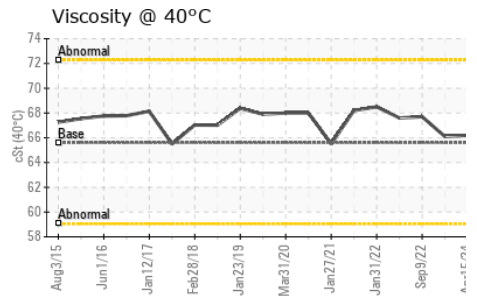
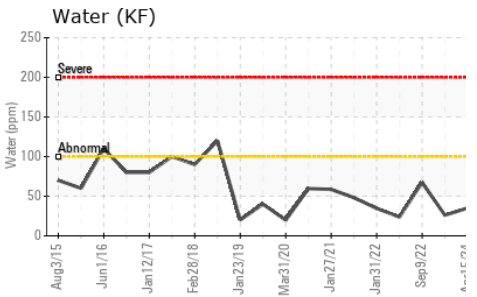
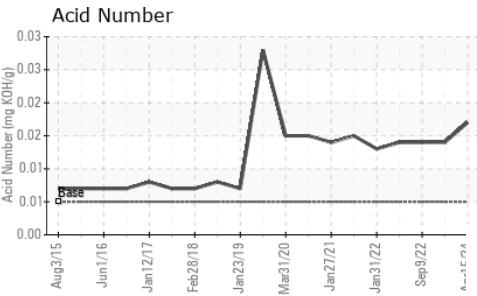
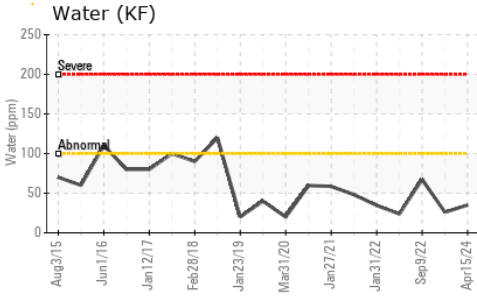
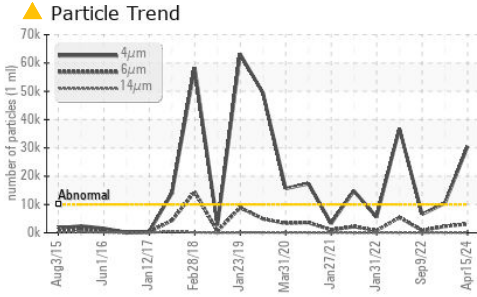
method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >15	<1	<1	7
Sodium	ppm	ASTM D5185m	2	0	0
Potassium	ppm	ASTM D5185m >20	2	<1	<1
Water	%	ASTM D6304 >0.01	<b>0.003</b>	0.003	0.006
ppm Water	ppm	ASTM D6304 >100	<b>35</b>	26	67.4

## FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >10000	▲ <b>30522</b>	● 10486	6566
Particles >6µm	ASTM D7647 >2500	● <b>3100</b>	2289	811
Particles >14µm	ASTM D7647 >320	<b>59</b>	95	41
Particles >21µm	ASTM D7647 >80	<b>7</b>	25	10
Particles >38µm	ASTM D7647 >20	<b>0</b>	2	1
Particles >71µm	ASTM D7647 >4	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c) >20/18/15	▲ <b>22/19/13</b>	● 21/18/14	20/17/13

## FLUID DEGRADATION

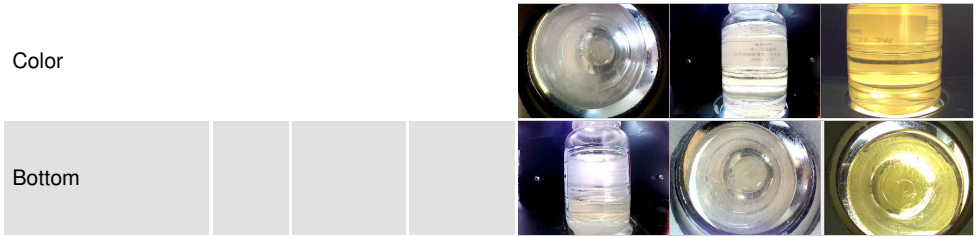
method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D974 0.005	<b>0.017</b>	0.014	0.014



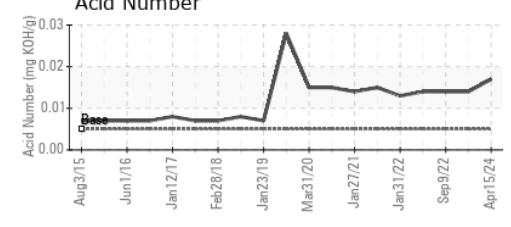
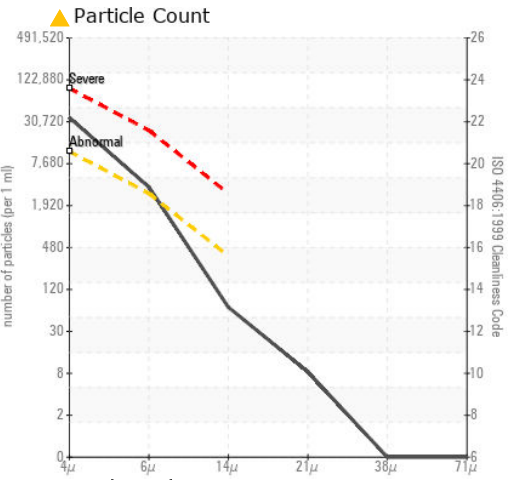
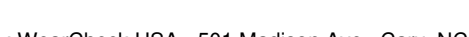
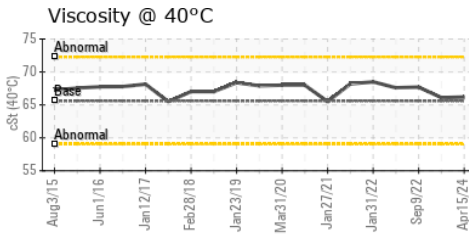
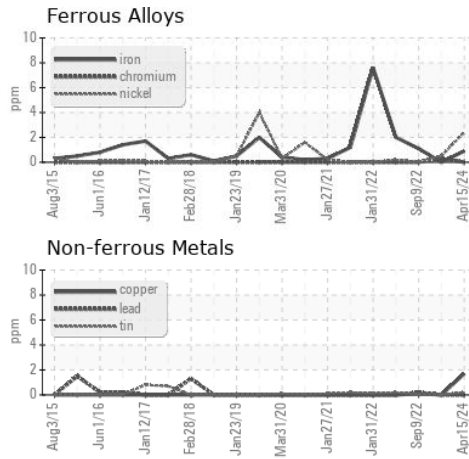
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.01	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	65.6	66.2	66.1

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : USP006775  
 Lab Number : 06150490  
 Unique Number : 10980568  
 Test Package : IND 2

Received : 16 Apr 2024  
 Tested : 17 Apr 2024  
 Diagnosed : 17 Apr 2024 - Doug Bogart

TYSON- VIENNA - USP

VIENNA, GA  
 US

Contact: SERVICE MANAGER

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:  
 F: