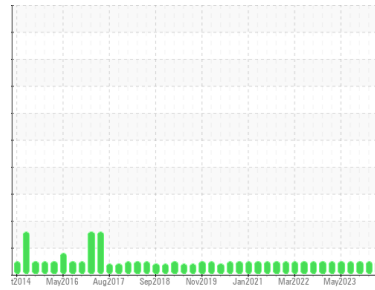




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**FES TYSDER HS-12 (S/N XA0194)**  
 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 no indication of any contamination in the component. The amount and size of particulates present in the system is acceptable.

### 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>USP0006415</b>	USP0005712	USP0003018
Sample Date	Client Info		<b>09 Apr 2024</b>	15 Jan 2024	23 Oct 2023
Machine Age	hrs	Client Info	<b>100310</b>	99170	98003
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## WEAR METALS

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

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	<b>0</b>	1	0
Molybdenum	ppm	ASTM D5185m	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Calcium	ppm	ASTM D5185m	<b>0</b>	0	1
Phosphorus	ppm	ASTM D5185m	<b>0</b>	0	0
Zinc	ppm	ASTM D5185m	<b>0</b>	0	0
Sulfur	ppm	ASTM D5185m 50	<b>0</b>	0	0

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	<b>4</b>	3	3
Sodium	ppm	ASTM D5185m	<b>0</b>	0	0
Potassium	ppm	ASTM D5185m >20	<b>2</b>	<1	1
Water	%	ASTM D6304 >0.01	<b>0.004</b>	0.004	0.003
ppm Water	ppm	ASTM D6304 >100	<b>48</b>	40	39.8

## FLUID CLEANLINESS

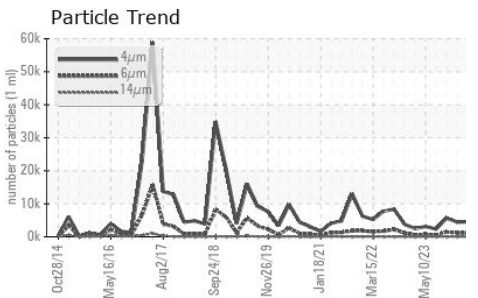
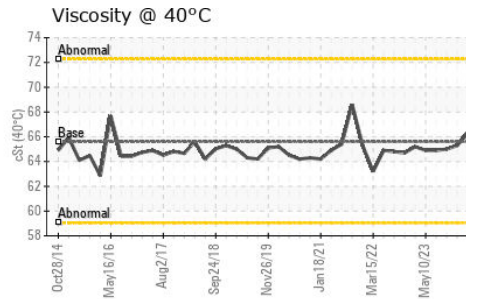
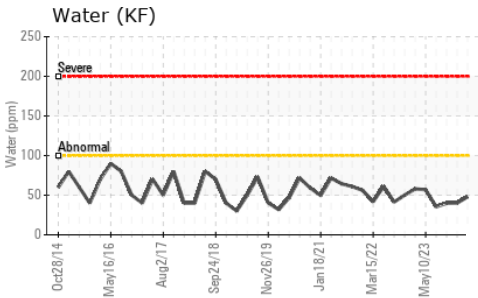
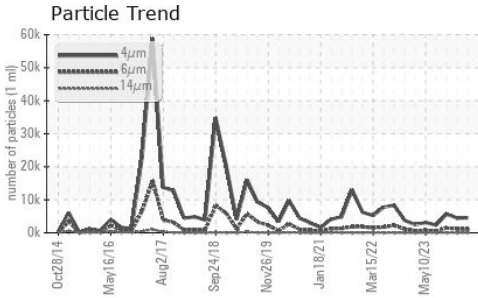
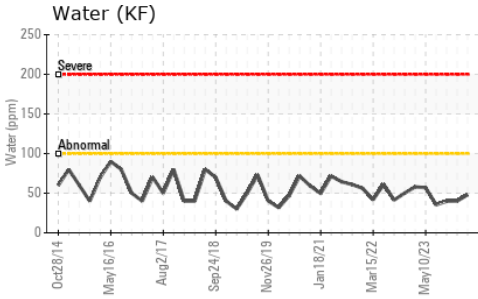
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		<b>4521</b>	4430	5699
Particles >6µm	ASTM D7647	>2500	<b>1073</b>	1136	1464
Particles >14µm	ASTM D7647	>320	<b>15</b>	22	30
Particles >21µm	ASTM D7647	>80	<b>1</b>	3	5
Particles >38µm	ASTM D7647	>20	<b>0</b>	0	1
Particles >71µm	ASTM D7647	>4	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>--/18/15	<b>19/17/11</b>	19/17/12	20/18/12

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974 0.005	<b>0.028</b>	0.014	0.015



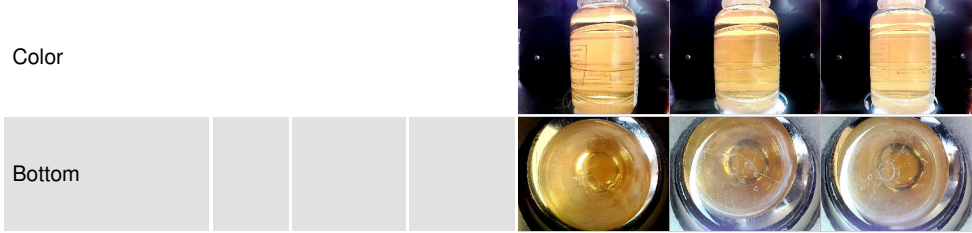
# OIL ANALYSIS REPORT



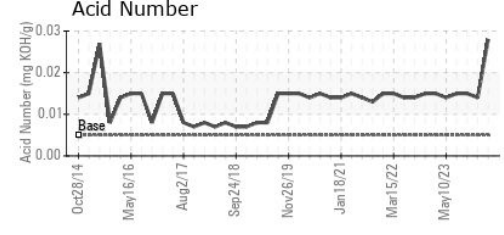
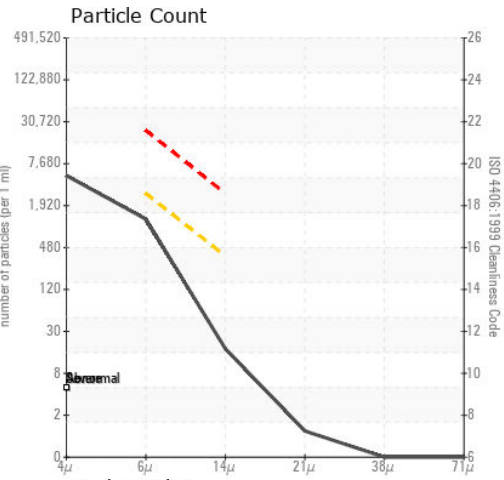
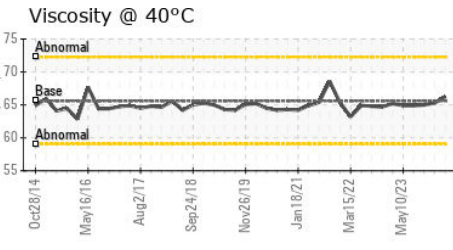
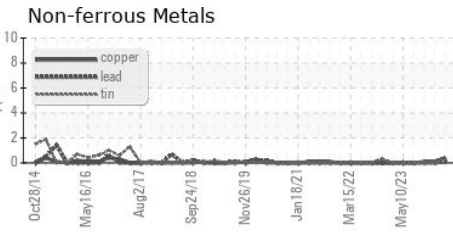
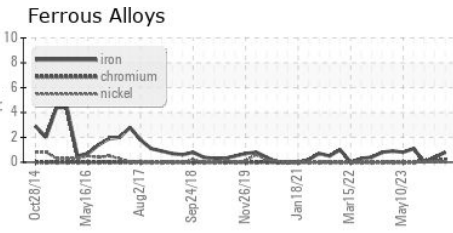
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	66.25	65.3

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : USP0006415      **Received** : 19 Apr 2024  
**Lab Number** : 06154444      **Tested** : 24 Apr 2024  
**Unique Number** : 10989867      **Diagnosed** : 24 Apr 2024 - Jonathan Hester  
**Test Package** : IND 2

**TYSON - BERRYVILLE- USP**  
 110 WEST FREEMAN  
 BERRYVILLE, AR  
 US 72616  
 Contact: MIKE CISCO

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: (870)423-5556

F: (870)423-1602