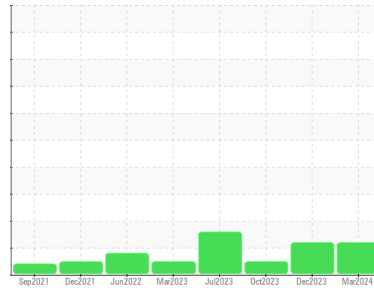




# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id  
**FES-1 (S/N V0501)**  
 Component  
**Refrigeration Compressor**  
 Fluid  
**USPI 1009-68 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>USP0007865</b>	USP0004952	USP0003712
Sample Date	Client Info		<b>26 Mar 2024</b>	16 Dec 2023	18 Oct 2023
Machine Age	hrs	Client Info	<b>160028</b>	158040	157243
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>ABNORMAL</b>	ABNORMAL	NORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >8	<b>20</b>	38	37
Chromium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >3	<b>0</b>	0	0
Lead	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m >8	<b>&lt;1</b>	0	<1
Tin	ppm	ASTM D5185m >4	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
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>	0	0
Molybdenum	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Calcium	ppm	ASTM D5185m	<b>0</b>	0	0
Phosphorus	ppm	ASTM D5185m	<b>0</b>	0	0
Zinc	ppm	ASTM D5185m	<b>7</b>	8	6
Sulfur	ppm	ASTM D5185m 50	<b>0</b>	0	18

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	<b>2</b>	<1	<1
Sodium	ppm	ASTM D5185m	<b>0</b>	0	<1
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	<1
Water	%	ASTM D6304 >0.01	<b>0.001</b>	0.003	0.004
ppm Water	ppm	ASTM D6304 >100	<b>9</b>	32	40.8

## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	<b>▲ 31966</b>	▲ 43143	6574
Particles >6µm	ASTM D7647	>2500	<b>▲ 7465</b>	▲ 6293	1621
Particles >14µm	ASTM D7647	>320	<b>225</b>	157	65
Particles >21µm	ASTM D7647	>80	<b>29</b>	21	11
Particles >38µm	ASTM D7647	>20	<b>1</b>	0	0
Particles >71µm	ASTM D7647	>4	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>20/18/15	<b>▲ 22/20/15</b>	▲ 23/20/14	20/18/13

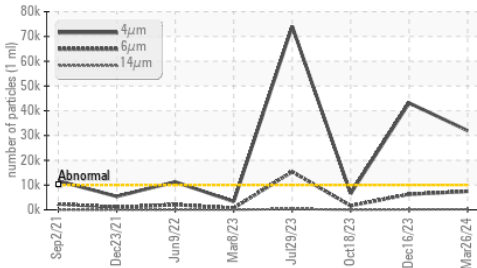
## FLUID DEGRADATION

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

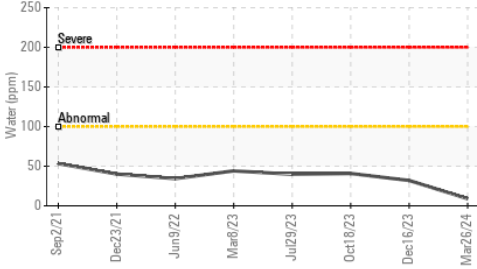


# OIL ANALYSIS REPORT

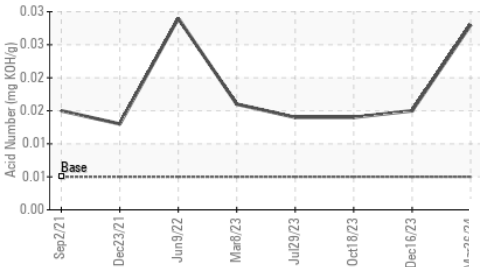
## Particle Trend



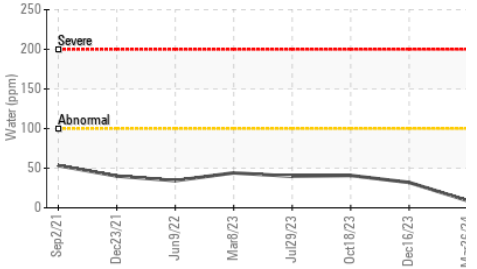
## Water (KF)



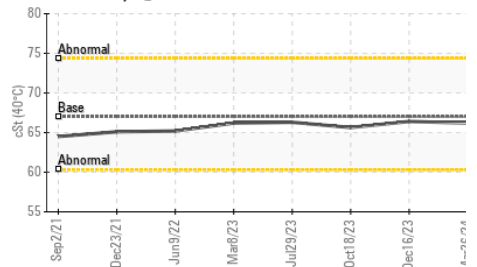
## Acid Number



## Water (KF)



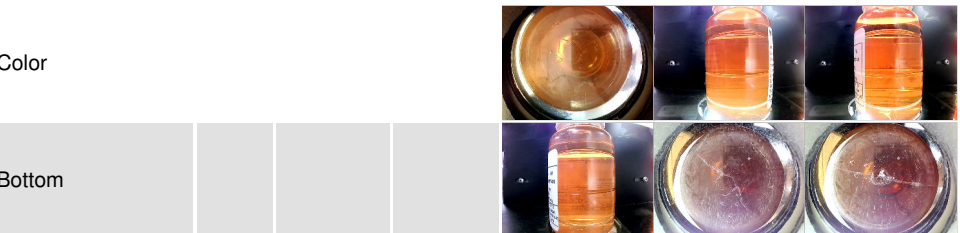
## Viscosity @ 40°C



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

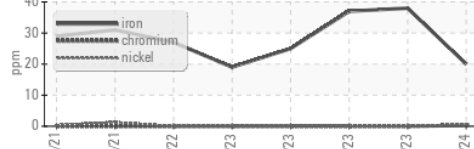
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 67	66.2	66.4	65.64

SAMPLE IMAGES	method	limit/base	current	history1	history2
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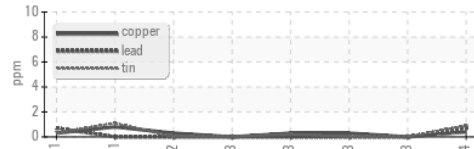


## GRAPHS

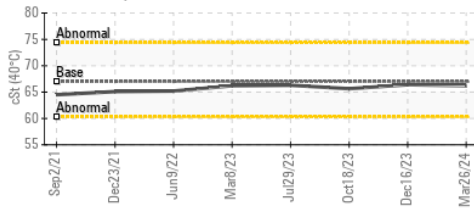
### Ferrous Alloys



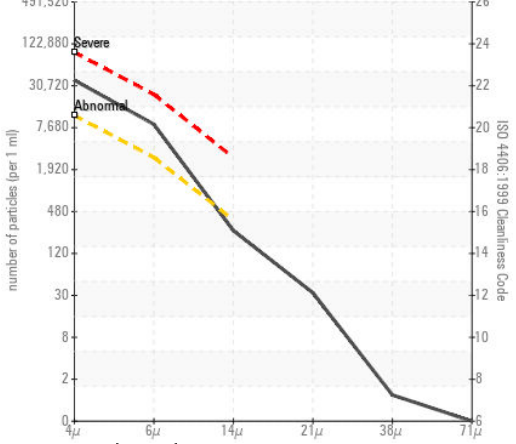
### Non-ferrous Metals



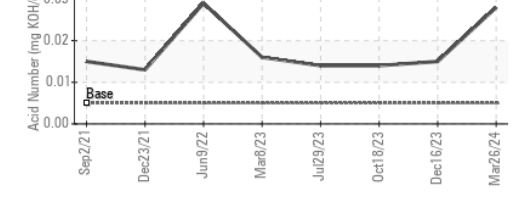
### Viscosity @ 40°C



### Particle Count



### Acid Number



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : USP0007865  
**Lab Number** : 06144318  
**Unique Number** : 10969126  
**Test Package** : IND 2  
**Received** : 10 Apr 2024  
**Tested** : 11 Apr 2024  
**Diagnosed** : 11 Apr 2024 - Doug Bogart

**SMITHFIELD - LINCOLN**  
 200 S 2ND ST  
 LINCOLN, NE  
 US 68508  
 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)