

Machine Id  
**42 IN MILL 53**  
 Component  
**Gearbox**  
 Fluid  
**GEAR OIL ISO 220 (--- GAL)**

## DIAGNOSIS

**Recommendation**  
 We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. Due to an abnormal test result it is recommended to contact Stauff Corp at (201)-444-7800 for help resolving the issue.

**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 INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>ST43241</b>	ST44459	ST43888
Sample Date	Client Info		<b>26 Mar 2024</b>	19 Dec 2023	28 Sep 2023
Machine Age	hrs	Client Info	<b>0</b>	0	0
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	ABNORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	<b>67</b>	58	55
Chromium	ppm	ASTM D5185m >15	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m >15	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>2</b>	0	0
Lead	ppm	ASTM D5185m >100	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >200	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m >25	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 50	<b>24</b>	21	16
Barium	ppm	ASTM D5185m 15	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 15	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 50	<b>&lt;1</b>	0	<1
Calcium	ppm	ASTM D5185m 50	<b>26</b>	19	20
Phosphorus	ppm	ASTM D5185m 350	<b>347</b>	317	291
Zinc	ppm	ASTM D5185m 100	<b>3</b>	0	1
Sulfur	ppm	ASTM D5185m 12500	<b>16673</b>	14189	14016

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	<b>4</b>	4	5
Sodium	ppm	ASTM D5185m	<b>5</b>	4	4
Potassium	ppm	ASTM D5185m >20	<b>1</b>	0	<1
Water	%	ASTM D6304 >0.2	<b>0.004</b>	0.01	0.006
ppm Water	ppm	ASTM D6304 >2000	<b>47</b>	100	68.7

## FLUID CLEANLINESS

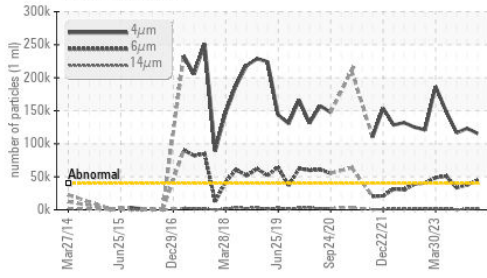
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>40000	<b>▲ 115539</b>	▲ 123329	▲ 116604
Particles >6µm	ASTM D7647	>5000	<b>▲ 44296</b>	▲ 37683	▲ 33450
Particles >14µm	ASTM D7647	>640	<b>▲ 1988</b>	▲ 1279	523
Particles >21µm	ASTM D7647	>160	<b>▲ 226</b>	119	31
Particles >38µm	ASTM D7647	>40	<b>1</b>	1	0
Particles >71µm	ASTM D7647	>10	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>22/19/16	<b>▲ 24/23/18</b>	▲ 24/22/17	▲ 24/22/16

## FLUID DEGRADATION

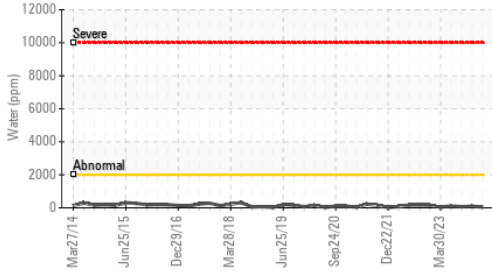
	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.85	<b>0.63</b>	0.56	0.68

# OIL ANALYSIS REPORT

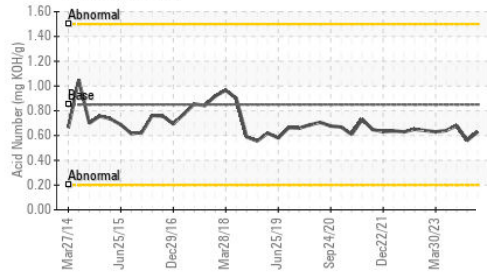
## Particle Trend



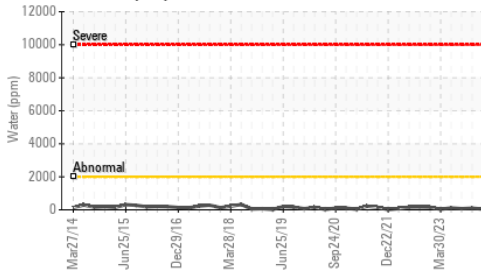
## Water (KF)



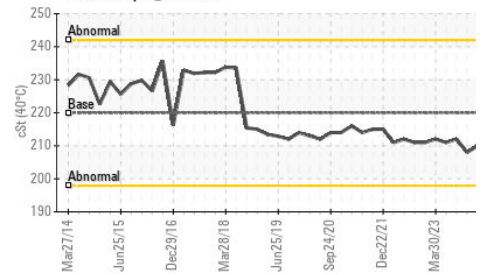
## Acid Number



## 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	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	220	210	208

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color

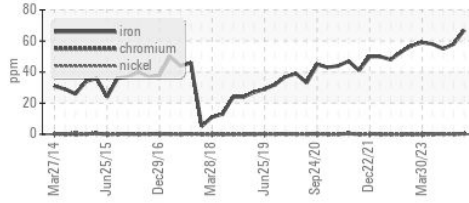


Bottom

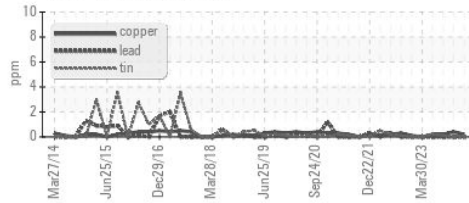


## GRAPHS

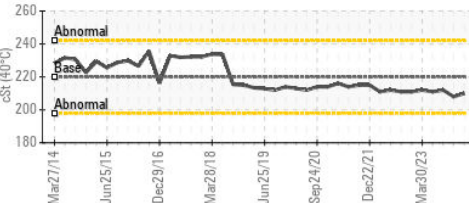
### Ferrous Alloys



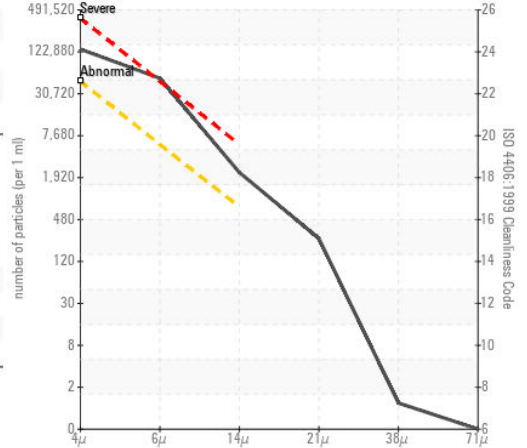
### Non-ferrous Metals



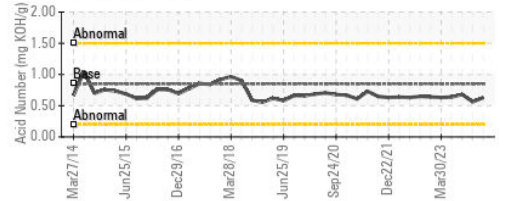
### Viscosity @ 40°C



### Particle Count



### Acid Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : ST43241

**Lab Number** : 06137427

**Unique Number** : 10956892

**Test Package** : IND 2 ( Additional Tests: KF, PrtCount )

**Received** : 03 Apr 2024

**Tested** : 04 Apr 2024

**Diagnosed** : 05 Apr 2024 - Don Baldrige

**ZAPP PRECISION STRIP INC.**

266 SAMUEL BARNET BLVD.

DARTMOUTH, MA

US 02745

Contact: Greg Walton

greg.walton@zapp.com

T:

F: (508)998-6310

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)