

NORMAL



Machine Id
42 IN FURNACE 45
 Component
Gearbox
 Fluid
GEAR OIL ISO 220 (--- 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		ST46363	ST43714	ST43880
Sample Date	Client Info		25 Mar 2024	20 Dec 2023	26 Sep 2023
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			NORMAL	NORMAL	ATTENTION

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	22	19	21
Chromium	ppm	ASTM D5185m >15	<1	0	<1
Nickel	ppm	ASTM D5185m >15	0	0	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >25	2	0	0
Lead	ppm	ASTM D5185m >100	0	0	0
Copper	ppm	ASTM D5185m >200	<1	<1	<1
Tin	ppm	ASTM D5185m >25	0	0	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 50	7	8	8
Barium	ppm	ASTM D5185m 15	3	<1	0
Molybdenum	ppm	ASTM D5185m 15	0	0	0
Manganese	ppm	ASTM D5185m	0	0	<1
Magnesium	ppm	ASTM D5185m 50	2	0	<1
Calcium	ppm	ASTM D5185m 50	26	18	19
Phosphorus	ppm	ASTM D5185m 350	330	336	308
Zinc	ppm	ASTM D5185m 100	11	3	9
Sulfur	ppm	ASTM D5185m 12500	10034	8548	8561

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	3	4	5
Sodium	ppm	ASTM D5185m	5	4	4
Potassium	ppm	ASTM D5185m >20	1	0	1
Water	%	ASTM D6304 >0.2	0.004	0.011	0.011
ppm Water	ppm	ASTM D6304 >2000	46	115	110.7

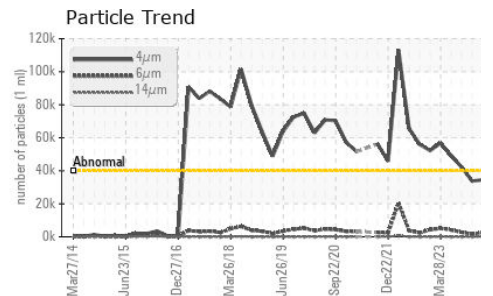
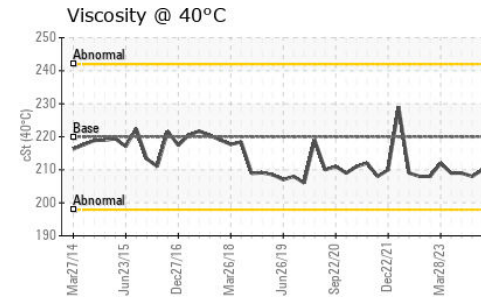
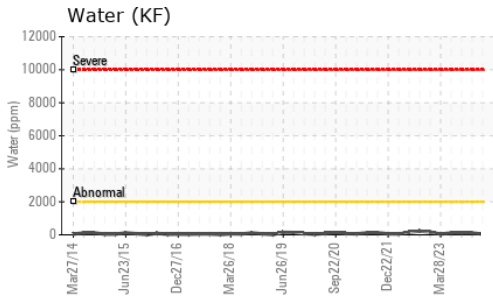
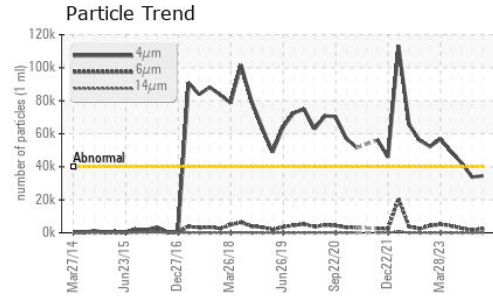
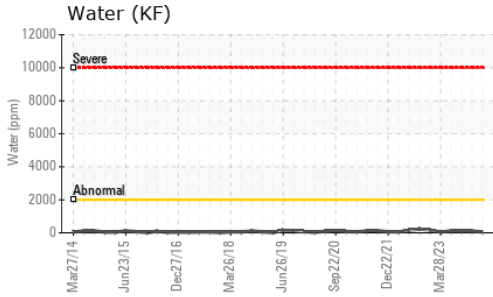
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>40000	34542	33749	42235
Particles >6µm	ASTM D7647	>5000	2329	1732	2765
Particles >14µm	ASTM D7647	>640	70	27	20
Particles >21µm	ASTM D7647	>160	15	5	3
Particles >38µm	ASTM D7647	>40	0	0	1
Particles >71µm	ASTM D7647	>10	0	0	1
Oil Cleanliness	ISO 4406 (c)	>22/19/16	22/18/13	22/18/12	23/19/11

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.85	0.58	0.50	0.54

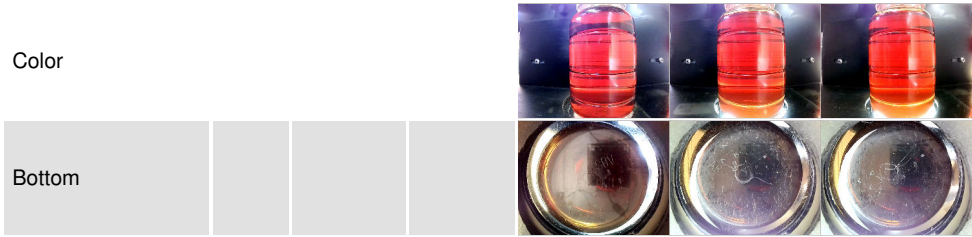
OIL ANALYSIS REPORT



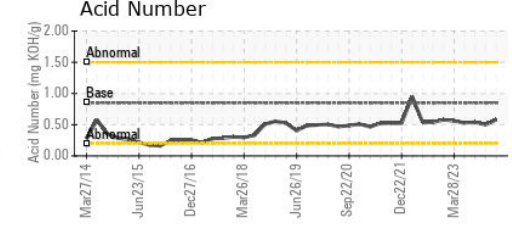
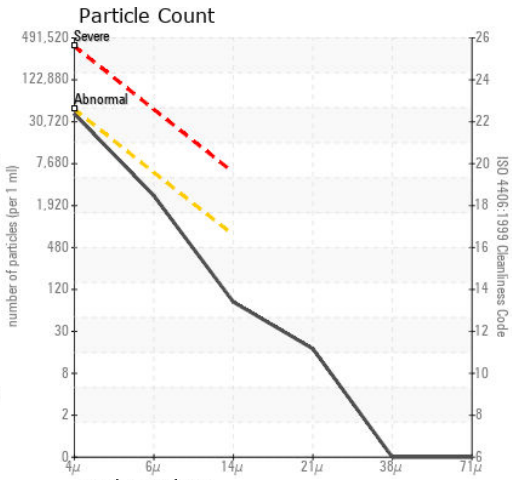
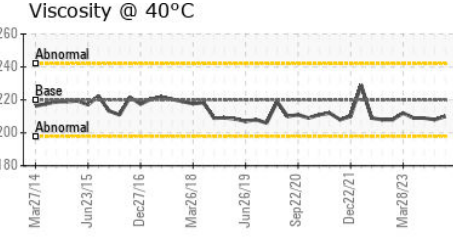
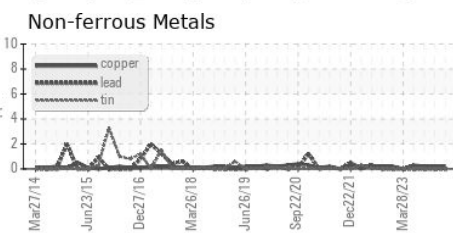
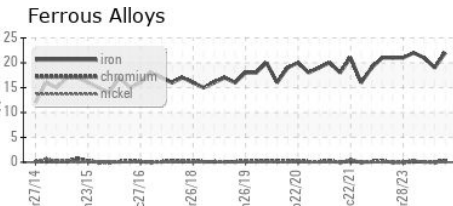
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	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	209

SAMPLE IMAGES	method	limit/base	current	history1	history2
---------------	--------	------------	---------	----------	----------



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ST46363
Lab Number : 06137425
Unique Number : 10956890
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

Certificate L2367
 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)