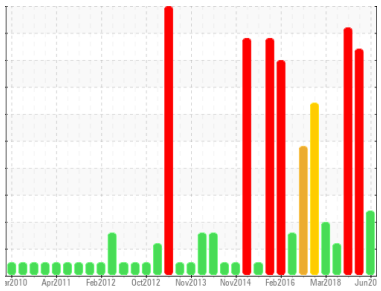
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
TM 5
Machine Id
TM 5 TRANSFER DRIVE ROLL GRBX
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. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Wear
Gear wear is indicated.

Contamination
Appearance is hazy. There is a moderate amount of visible silt present in the sample.

Fluid Condition
The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**RP0038091**	RP0038121	RP0023599
Sample Date		Client Info		**25 Jun 2024**	29 Jan 2024	24 May 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				**ABNORMAL**	SEVERE	SEVERE

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		**98**	141	42
Iron	ppm	ASTM D5185m	>200	▲ **236**	▲ 335	▲ 335
Chromium	ppm	ASTM D5185m	>15	**2**	2	4
Nickel	ppm	ASTM D5185m	>15	**0**	<1	<1
Titanium	ppm	ASTM D5185m		**<1**	<1	<1
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**<1**	2	2
Lead	ppm	ASTM D5185m	>100	**0**	<1	0
Copper	ppm	ASTM D5185m	>200	**<1**	<1	4
Tin	ppm	ASTM D5185m	>25	**0**	0	<1
Antimony	ppm	ASTM D5185m	>5	**---**	---	---
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

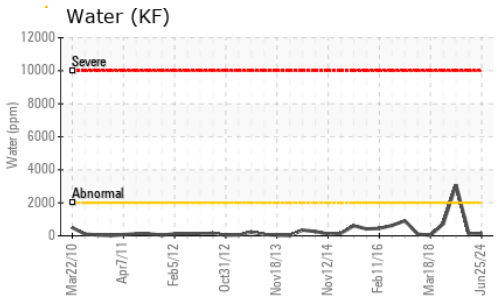
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	**17**	19	6
Barium	ppm	ASTM D5185m	15	**3**	0	3
Molybdenum	ppm	ASTM D5185m	15	**0**	<1	<1
Manganese	ppm	ASTM D5185m		**2**	2	3
Magnesium	ppm	ASTM D5185m	50	**2**	2	2
Calcium	ppm	ASTM D5185m	50	**14**	7	11
Phosphorus	ppm	ASTM D5185m	350	**455**	356	365
Zinc	ppm	ASTM D5185m	100	**41**	57	127

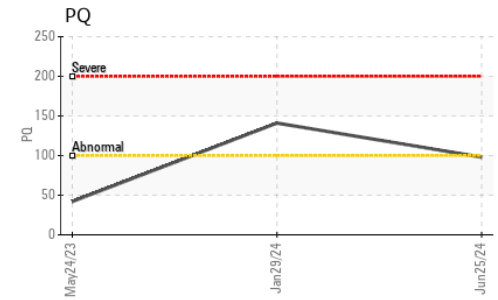
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**6**	6	▲ 107
Sodium	ppm	ASTM D5185m		**2**	0	3
Potassium	ppm	ASTM D5185m	>20	**2**	2	0
Water	%	ASTM D6304	>0.2	**0.014**	0.013	▲ 0.308
ppm Water	ppm	ASTM D6304	>2000	**148**	130	▲ 3080

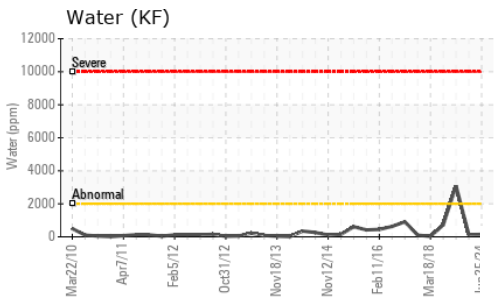
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	**---**	▲ 162585	---
Particles >6µm		ASTM D7647	>5000	**---**	▲ 85289	---
Particles >14µm		ASTM D7647	>640	**---**	▲ 3917	---
Particles >21µm		ASTM D7647	>160	**---**	▲ 591	---
Particles >38µm		ASTM D7647	>40	**---**	7	---
Particles >71µm		ASTM D7647	>10	**---**	1	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	**---**	▲ 25/24/19	---

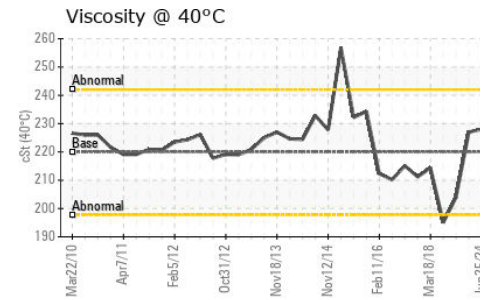
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.85	**1.09**	0.97	0.84

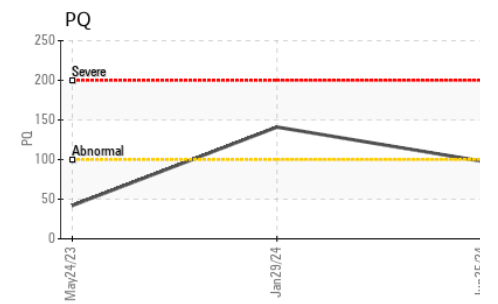
OIL ANALYSIS REPORT





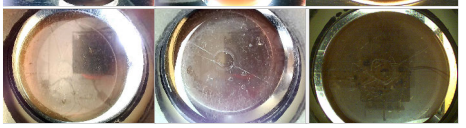




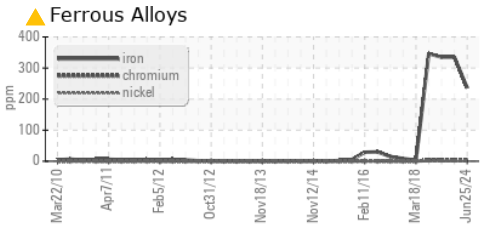


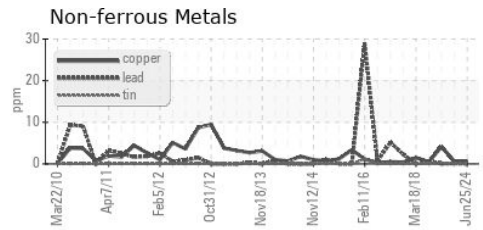
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	▲ **MODER**	NONE	MODER
Debris	scalar	*Visual	NONE	**NONE**	NONE	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	● **HAZY**	MILKY	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	0.2%
Free Water	scalar	*Visual		**NEG**	NEG	▲ 1.0

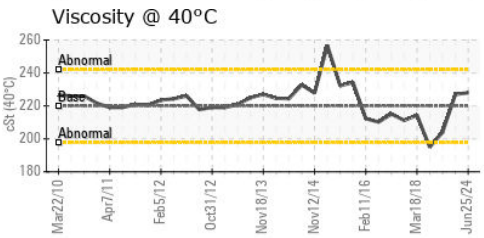
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	220	**228**	227	204

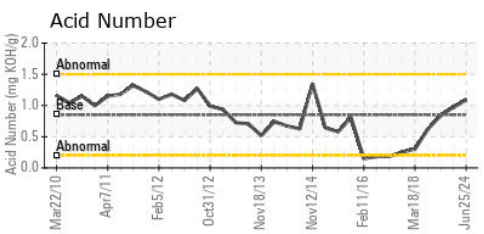
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS









Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0038091
Lab Number : 06221173
Unique Number : 11099370
Test Package : IND 2 (Additional Tests: PQ, PrtCount)

Received : 26 Jun 2024
Tested : 27 Jun 2024
Diagnosed : 27 Jun 2024 - Don Baldridge

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)

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