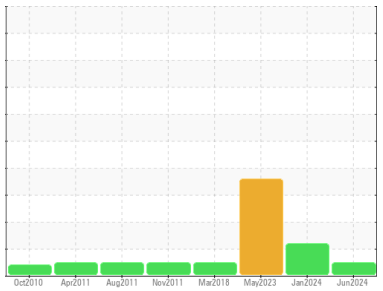
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Area
TM 5
Machine Id
TM 5 SUNDAY DRIVE GRBX
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
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination 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		**RP0030497**	RP0038115	RP0023600
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				**NORMAL**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		**12**	15	21
Iron	ppm	ASTM D5185m	>200	**40**	108	48
Chromium	ppm	ASTM D5185m	>15	**0**	<1	0
Nickel	ppm	ASTM D5185m	>15	**0**	1	<1
Titanium	ppm	ASTM D5185m		**0**	<1	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**<1**	2	1
Lead	ppm	ASTM D5185m	>100	**0**	1	6
Copper	ppm	ASTM D5185m	>200	**8**	36	▲ 187
Tin	ppm	ASTM D5185m	>25	**0**	1	1
Antimony	ppm	ASTM D5185m	>5	**---**	---	---
Vanadium	ppm	ASTM D5185m		**0**	<1	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	**19**	25	31
Barium	ppm	ASTM D5185m	15	**0**	0	0
Molybdenum	ppm	ASTM D5185m	15	**0**	<1	0
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	50	**<1**	0	0
Calcium	ppm	ASTM D5185m	50	**2**	0	<1
Phosphorus	ppm	ASTM D5185m	350	**466**	381	463
Zinc	ppm	ASTM D5185m	100	**69**	197	245

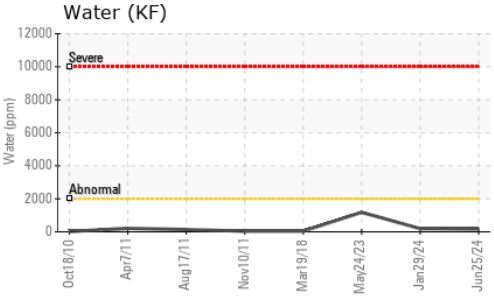
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**5**	10	10
Sodium	ppm	ASTM D5185m		**<1**	0	0
Potassium	ppm	ASTM D5185m	>20	**2**	2	<1
Water	%	ASTM D6304	>0.2	**0.016**	0.019	0.118
ppm Water	ppm	ASTM D6304	>2000	**167**	195	1180

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	**17055**	7334	---
Particles >6µm		ASTM D7647	>5000	**1314**	839	---
Particles >14µm		ASTM D7647	>640	**35**	50	---
Particles >21µm		ASTM D7647	>160	**5**	13	---
Particles >38µm		ASTM D7647	>40	**0**	1	---
Particles >71µm		ASTM D7647	>10	**0**	0	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	**21/18/12**	20/17/13	---

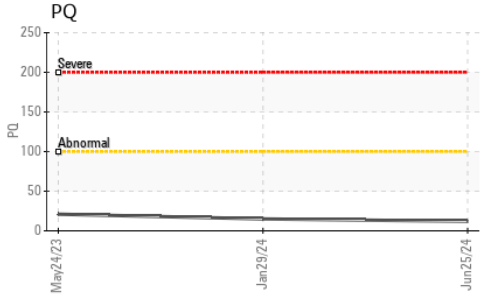
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.85	**1.42**	▲ 2.32	1.30

OIL ANALYSIS REPORT

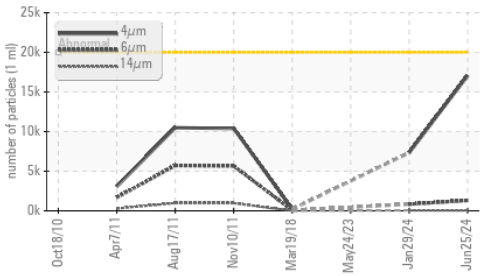
Water (KF)



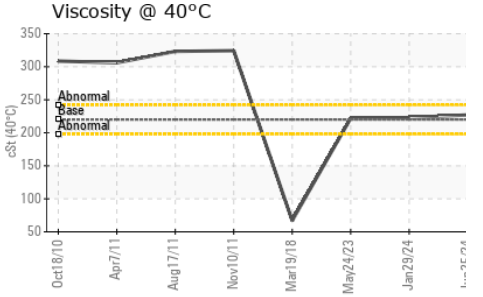
PQ



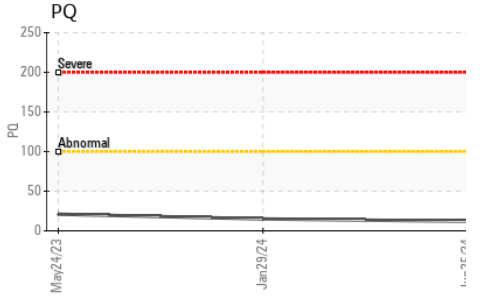
Particle Trend



Viscosity @ 40°C



PQ



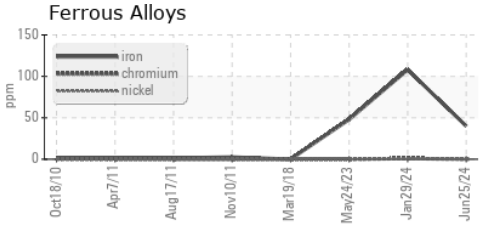
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	MODER
Debris	scalar	*Visual	NONE	**NONE**	NONE	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	● HAZY
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	**227**	223	222

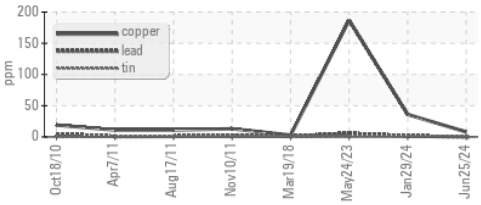
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

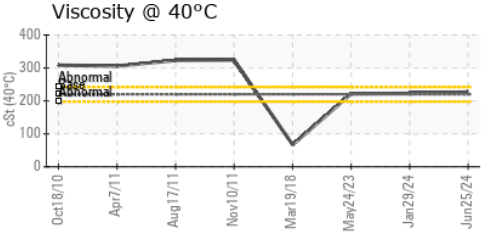
Ferrous Alloys



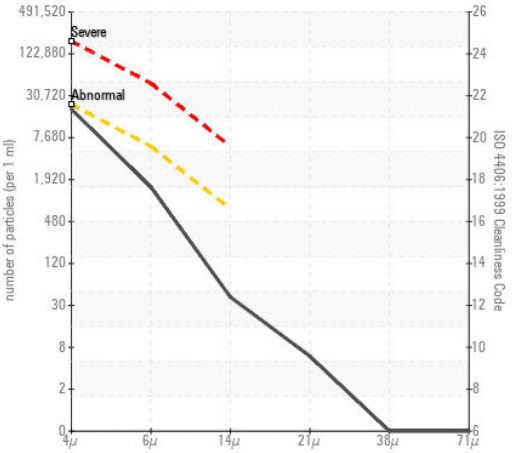
Non-ferrous Metals



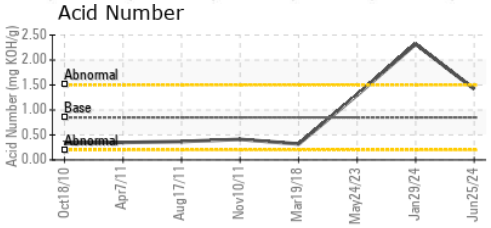
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0030497
Lab Number : 06221170
Unique Number : 11099367
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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