



PERFORMANCE
UNDER
PRESSURE

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Area
TM 5
Machine Id
TM 5 SUNDAY DRIVE GRBX

Component
Gearbox
Fluid
{not provided} (--- GAL)

RECOMMENDATION

The oil is near the end of it's useful service life, recommend schedule an oil change. 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 oil. The amount and size of particulates present in the system are acceptable.

FLUID CONDITION

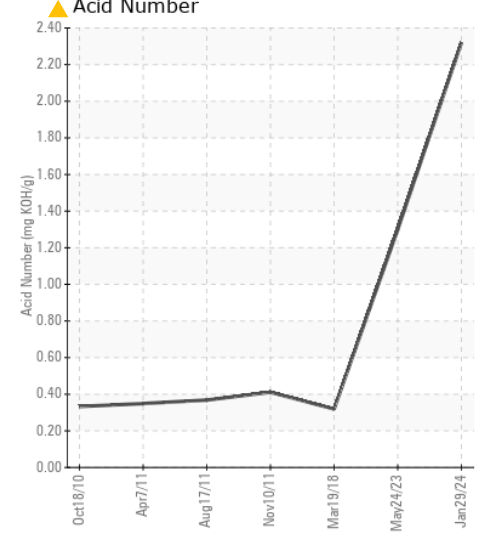
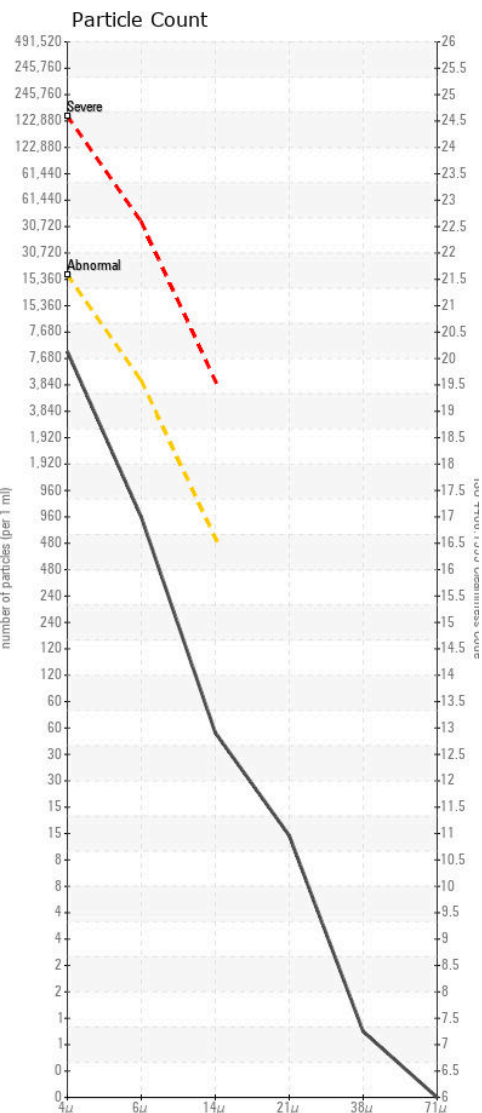
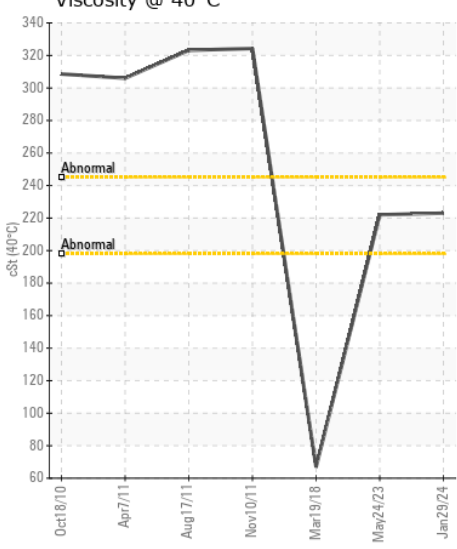
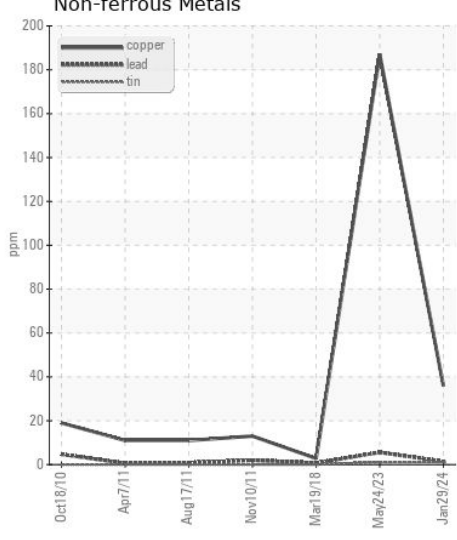
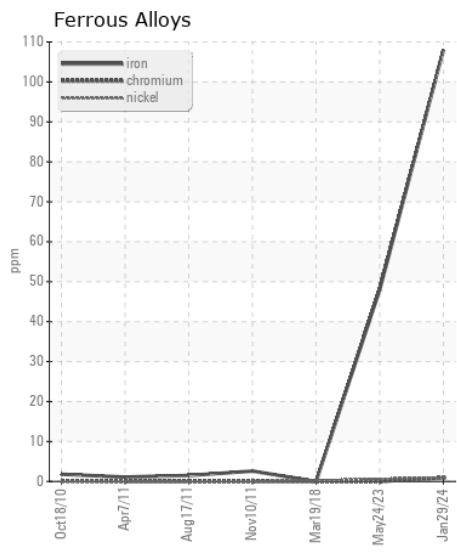
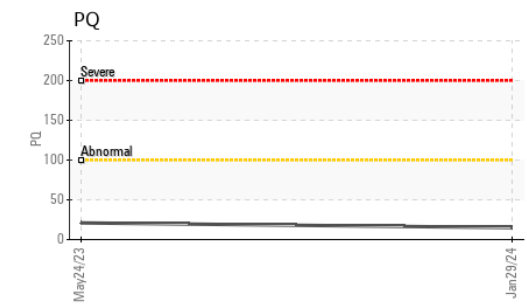
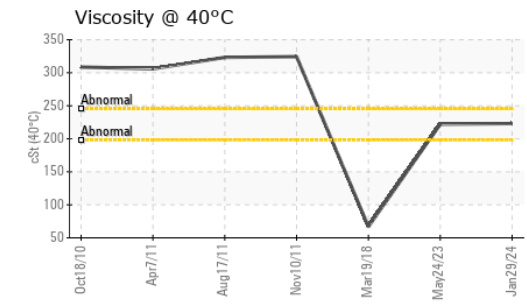
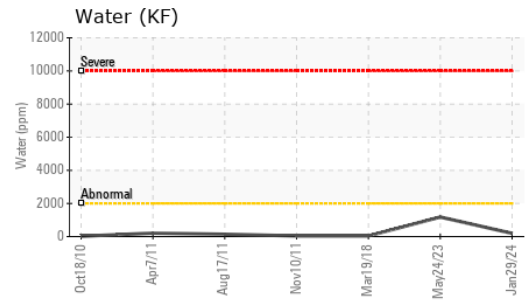
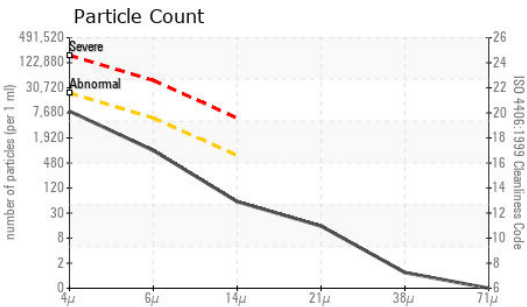
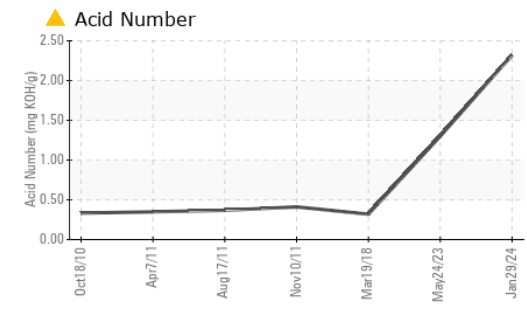
The AN level is at the top-end of the recommended limit.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		RP0038115	RP0023600	RP190849
Sample Date		Client Info		29 Jan 2024	24 May 2023	19 Mar 2018
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	NORMAL

PQ		ASTM D8184		15	21	---
Iron	ppm	ASTM D5185m	>200	108	48	0
Chromium	ppm	ASTM D5185m	>15	<1	0	0
Nickel	ppm	ASTM D5185m	>15	1	<1	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	2	1	0
Lead	ppm	ASTM D5185m	>100	1	6	<1
Copper	ppm	ASTM D5185m	>200	36	▲ 187	3
Tin	ppm	ASTM D5185m	>25	1	1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

Silicon	ppm	ASTM D5185m	>50	10	10	<1
Potassium	ppm	ASTM D5185m	>20	2	<1	0
Water	%	ASTM D6304	>0.2	0.019	0.118	0.004
ppm Water	ppm	ASTM D6304	>2000	195	1180	40
Particles >4µm		ASTM D7647	>20000	7334	---	210
Particles >6µm		ASTM D7647	>5000	839	---	73
Particles >14µm		ASTM D7647	>640	50	---	11
Particles >21µm		ASTM D7647	>160	13	---	3
Particles >38µm		ASTM D7647	>40	1	---	0
Particles >71µm		ASTM D7647	>10	0	---	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	20/17/13	---	15/13/11
Silt	scalar	*Visual	NONE	NONE	MODER	NONE
Debris	scalar	*Visual	NONE	NONE	▲ MODER	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	▲ HAZY	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	0.2%	NEG

Sodium	ppm	ASTM D5185m		0	0	1
Boron	ppm	ASTM D5185m		25	31	<1
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		<1	0	<1
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		0	0	6
Calcium	ppm	ASTM D5185m		0	<1	38
Phosphorus	ppm	ASTM D5185m		381	463	234
Zinc	ppm	ASTM D5185m		197	245	308
Acid Number (AN)	mg KOH/g	ASTM D8045		▲ 2.32	1.30	0.319
Visc @ 40°C	cSt	ASTM D445		223	222	66.94



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0038115 **Received** : 30 Jan 2024
Lab Number : 06074715 **Diagnosed** : 01 Feb 2024
Unique Number : 10856806 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: PQ, PrtCount)

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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)