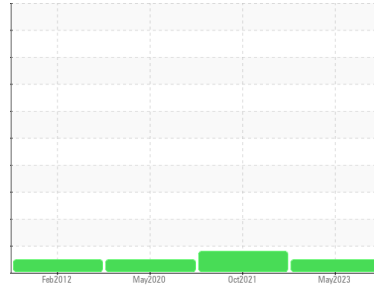


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
H-07
Component
Wind Turbine Gearbox
Fluid
ROYAL PURPLE SYNFILM GT 320 (65 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 oil. The amount and size of particulates present in the system are 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			MHI020769	MHI017108	MHI022651
Sample Date	Client Info			24 May 2023	22 Oct 2021	13 May 2020
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	111807
Oil Changed	Client Info			N/A	N/A	Not Changd
Sample Status				NORMAL	ABNORMAL	NORMAL

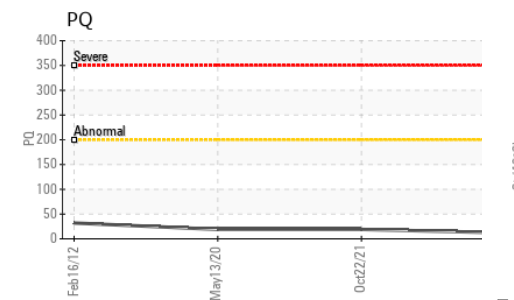
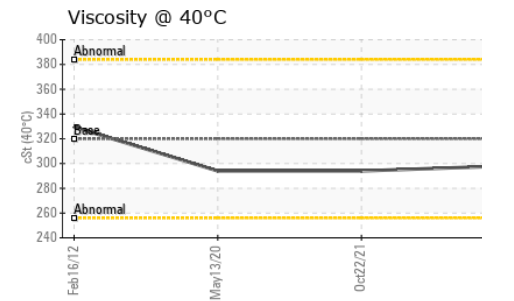
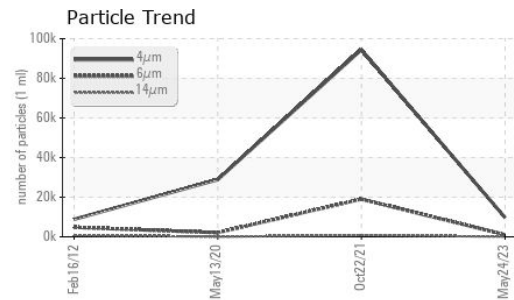
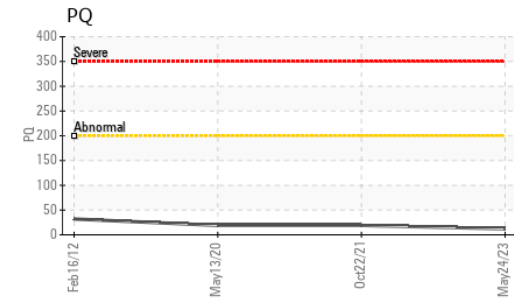
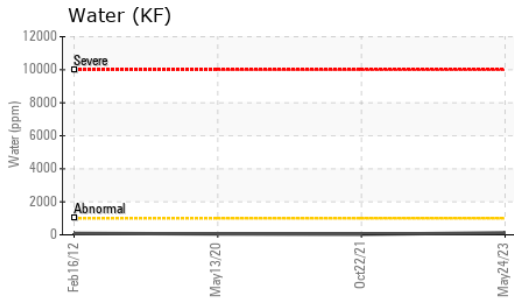
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184	>200	12	19	19
Iron	ppm	ASTM D5185m	>200	4	5	4
Chromium	ppm	ASTM D5185m	>3	<1	0	0
Nickel	ppm	ASTM D5185m	>3	0	<1	<1
Titanium	ppm	ASTM D5185m	>10	<1	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>30	2	0	0
Lead	ppm	ASTM D5185m	>15	0	0	0
Copper	ppm	ASTM D5185m	>75	11	9	8
Tin	ppm	ASTM D5185m	>10	0	0	0
Antimony	ppm	ASTM D5185m	>5	---	<1	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		0	<1	<1
Barium	ppm	ASTM D5185m		0	0	<1
Molybdenum	ppm	ASTM D5185m		<1	<1	<1
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m	90	<1	0	0
Calcium	ppm	ASTM D5185m		0	0	<1
Phosphorus	ppm	ASTM D5185m		0	18	10
Zinc	ppm	ASTM D5185m		0	0	0
Sulfur	ppm	ASTM D5185m		18943	14468	12378

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>+30	2	2	3
Sodium	ppm	ASTM D5185m		0	0	<1
Potassium	ppm	ASTM D5185m	>20	1	0	0
Water	%	ASTM D6304	>0.1	0.012	0.003	0.005
ppm Water	ppm	ASTM D6304	>1000	122	31.8	54.2

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		9676	94422	28878
Particles >6µm		ASTM D7647	>5000	1040	▲ 19011	2093
Particles >14µm		ASTM D7647	>640	31	▲ 832	30
Particles >21µm		ASTM D7647	>160	10	146	9
Particles >38µm		ASTM D7647	>40	2	0	0
Particles >71µm		ASTM D7647	>10	1	0	0
Oil Cleanliness		ISO 4406 (c)	>--/19/16	20/17/12	▲ 24/21/17	22/18/12

OIL ANALYSIS REPORT

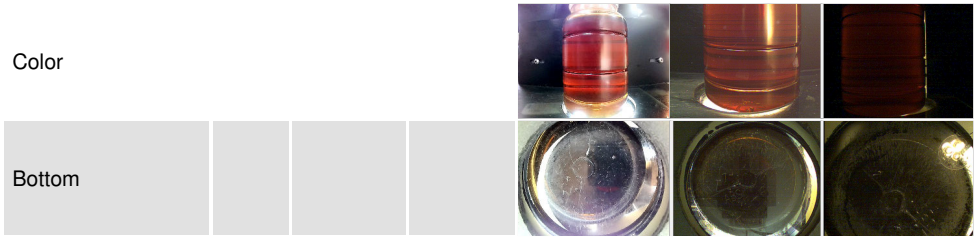


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.25	0.40	0.42	0.328

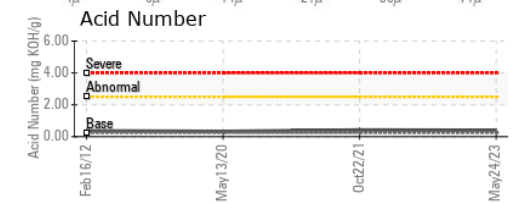
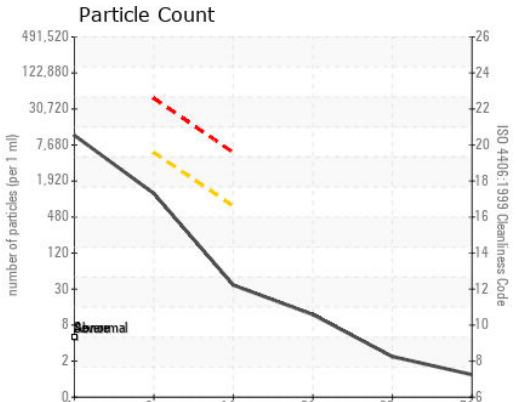
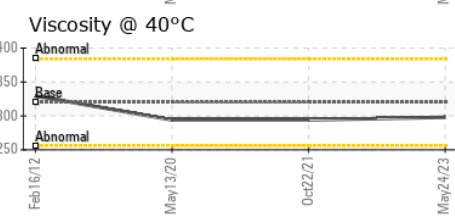
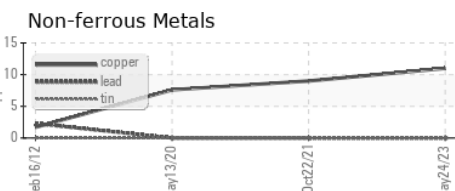
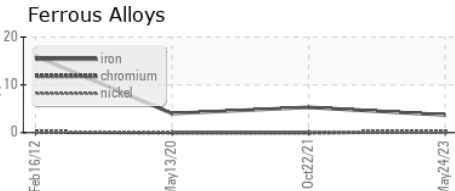
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	LIGHT	MODER
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	320	298	294	294

SAMPLE IMAGES		method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MH1020769 **Received** : 24 Nov 2023
Lab Number : 06016363 **Diagnosed** : 28 Nov 2023
Unique Number : 10755507 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: KF, PQ, PrtCount)
 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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