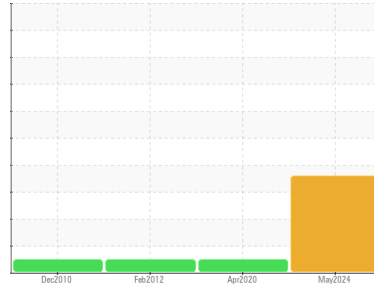


PROBLEM SUMMARY

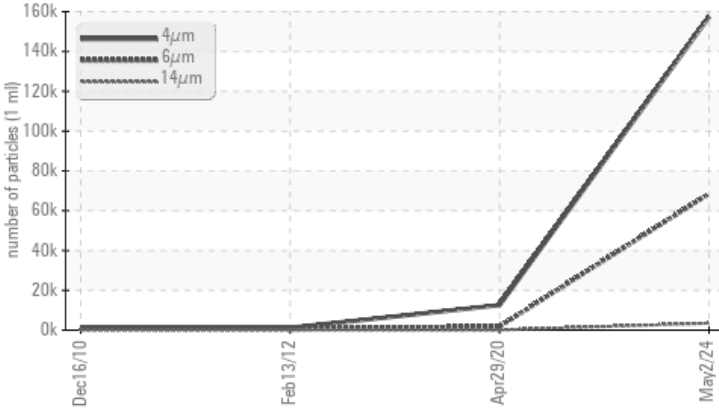
Machine Id
G-03
Component
Wind Turbine Gearbox
Fluid
ROYAL PURPLE SYNFILM GT 320 (65 GAL)

Sample Rating Trend



COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

Replace filter element and resample at later date. In case already attempted and cleanliness was not improved then proceed to replace oil.

PROBLEMATIC TEST RESULTS

Sample Status			SEVERE	NORMAL	NORMAL
Particles >6µm	ASTM D7647	>5000	▲ 68509	1820	635
Particles >14µm	ASTM D7647	>640	▲ 3476	64	108
Particles >21µm	ASTM D7647	>160	▲ 553	24	36
Oil Cleanliness	ISO 4406 (c)	>--/19/16	▲ 24/23/19	21/18/13	17/16/14

Customer Id: MITWHI
Sample No.: MHI026930
Lab Number: 06204581
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
Angela Borella +1 800-237-1369
angela.borella@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	Replace filter element and resample at later date. In case already attempted and cleanliness was not improved then proceed to replace oil.
Resample	---	---	?	Replace filter element and resample at later date. In case already attempted and cleanliness was not improved then proceed to replace oil.

HISTORICAL DIAGNOSIS

NORMAL



29 Apr 2020 Diag: Doug Bogart

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



NORMAL



13 Feb 2012 Diag: Doug Bogart

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the component. The amount and size of particulates present in the system is acceptable. The condition of oil is suitable for further service.

view report



NORMAL



16 Dec 2010 Diag: Don Baldrige

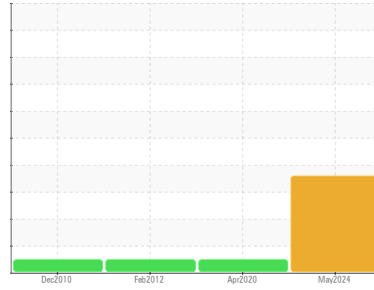
Resample at the next service interval to monitor. All component wear rates are normal. The amount and size of particulates present in the system is acceptable. There is no indication of any contamination in the component. The condition of oil is suitable for further service.

view report



OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
G-03
Component
Wind Turbine Gearbox
Fluid
ROYAL PURPLE SYNFILM GT 320 (65 GAL)

DIAGNOSIS

▲ Recommendation

Replace filter element and resample at later date. In case already attempted and cleanliness was not improved then proceed to replace oil.

Wear

All component wear rates are normal.

▲ Contamination

There is a high amount of particulates present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		MHI026930	MHI022646	RP107348
Sample Date	Client Info		02 May 2024	29 Apr 2020	13 Feb 2012
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	Not Changd	Not Changd
Sample Status			SEVERE	NORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184	>200	28	21	13.0
Iron	ppm	ASTM D5185m	>200	10	9
Chromium	ppm	ASTM D5185m	>3	0	0
Nickel	ppm	ASTM D5185m	>3	<1	<1
Titanium	ppm	ASTM D5185m	>10	0	0
Silver	ppm	ASTM D5185m		0	<1
Aluminum	ppm	ASTM D5185m	>30	<1	<1
Lead	ppm	ASTM D5185m	>15	0	<1
Copper	ppm	ASTM D5185m	>75	1	2
Tin	ppm	ASTM D5185m	>10	0	<1
Antimony	ppm	ASTM D5185m	>5	---	1
Vanadium	ppm	ASTM D5185m		0	0
Cadmium	ppm	ASTM D5185m		0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	<1
Barium	ppm	ASTM D5185m		<1	0
Molybdenum	ppm	ASTM D5185m		0	1
Manganese	ppm	ASTM D5185m		0	<1
Magnesium	ppm	ASTM D5185m	90	46	0
Calcium	ppm	ASTM D5185m		3	0
Phosphorus	ppm	ASTM D5185m		10	12
Zinc	ppm	ASTM D5185m		14	3
Sulfur	ppm	ASTM D5185m		21438	12284

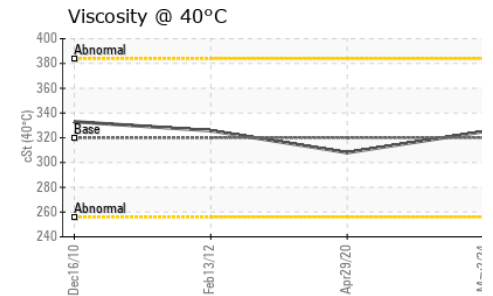
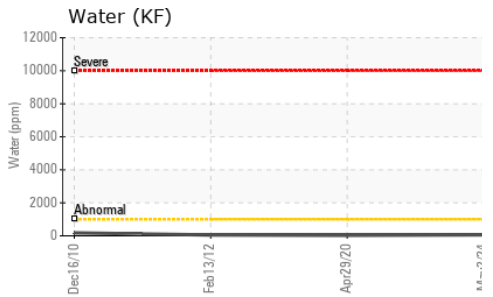
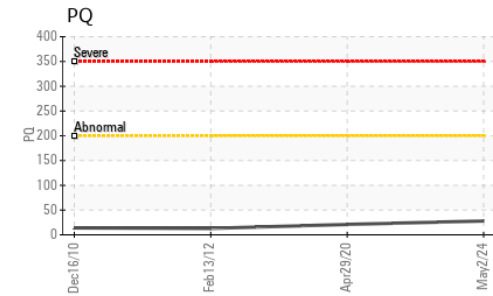
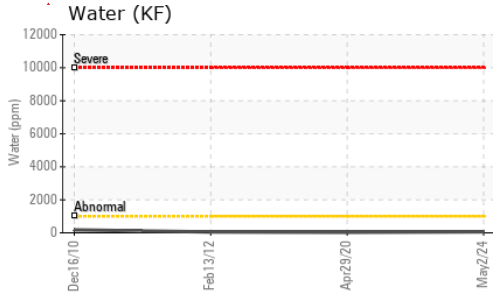
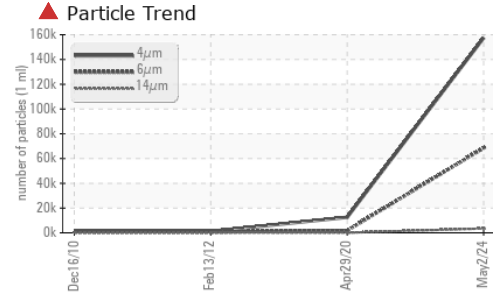
CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>+30	8	2
Sodium	ppm	ASTM D5185m		1	0
Potassium	ppm	ASTM D5185m	>20	2	<1
Water	%	ASTM D6304	>0.1	0.005	0.002
ppm Water	ppm	ASTM D6304	>1000	57	24.7

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		157412	12566	1166
Particles >6µm	ASTM D7647	>5000	▲ 68509	1820	635
Particles >14µm	ASTM D7647	>640	▲ 3476	64	108
Particles >21µm	ASTM D7647	>160	▲ 553	24	36
Particles >38µm	ASTM D7647	>40	11	6	5
Particles >71µm	ASTM D7647	>10	0	2	0
Oil Cleanliness	ISO 4406 (c)	>--/19/16	▲ 24/23/19	21/18/13	17/16/14

OIL ANALYSIS REPORT

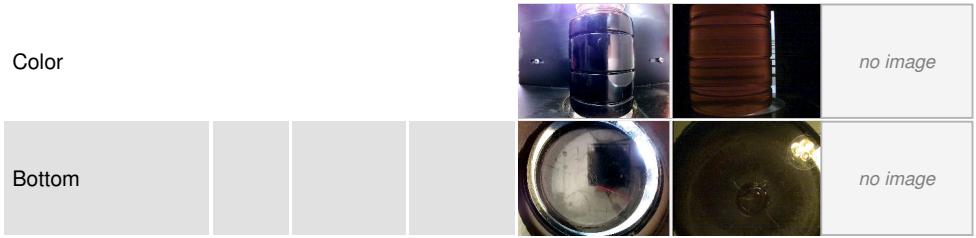


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.25	0.39	0.410	0.533

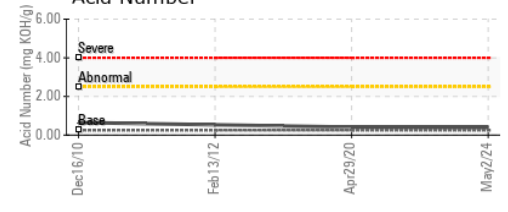
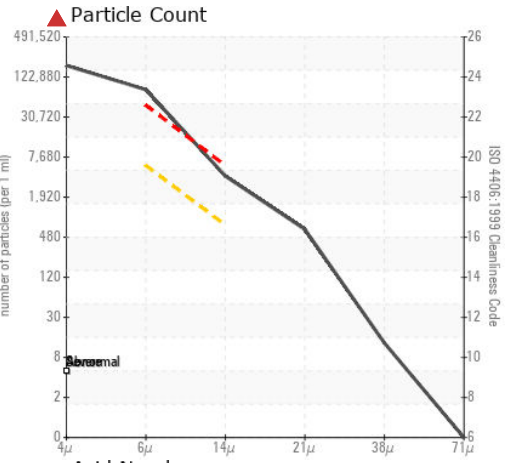
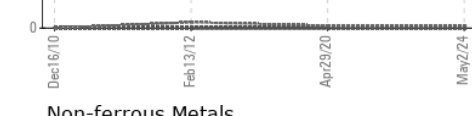
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	VLITE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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	325	308	325.7

SAMPLE IMAGES		method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MHI026930 **Received** : 10 Jun 2024
Lab Number : **06204581** **Tested** : 11 Jun 2024
Unique Number : 11072042 **Diagnosed** : 12 Jun 2024 - Angela Borella
Test Package : IND 2 (Additional Tests: KF, PQ, PrtCount)

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