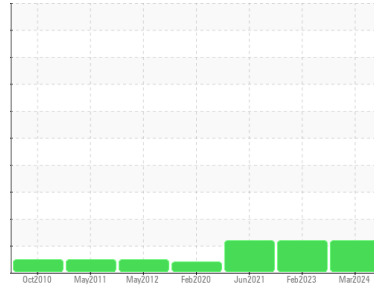


OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
C-08
 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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		MHI021595	MHI021774	MHI023875
Sample Date	Client Info		22 Mar 2024	08 Feb 2023	24 Jun 2021
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	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2	
PQ	ASTM D8184	>200	19	10	41	
Iron	ppm	ASTM D5185m	>200	5	17	11
Chromium	ppm	ASTM D5185m	>3	0	0	0
Nickel	ppm	ASTM D5185m	>3	<1	0	0
Titanium	ppm	ASTM D5185m	>10	0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>30	0	0	0
Lead	ppm	ASTM D5185m	>15	0	0	0
Copper	ppm	ASTM D5185m	>75	3	3	2
Tin	ppm	ASTM D5185m	>10	<1	0	0
Antimony	ppm	ASTM D5185m	>5	---	---	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	0	<1
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		0	1	1
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m	90	<1	4	0
Calcium	ppm	ASTM D5185m		<1	0	0
Phosphorus	ppm	ASTM D5185m		11	11	19
Zinc	ppm	ASTM D5185m		6	0	0
Sulfur	ppm	ASTM D5185m		20700	20021	14891

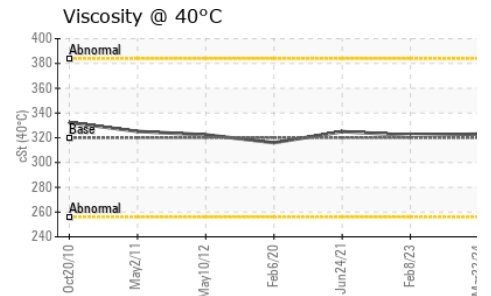
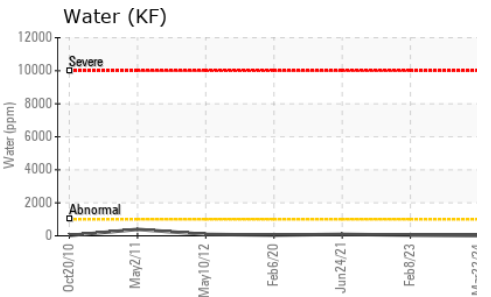
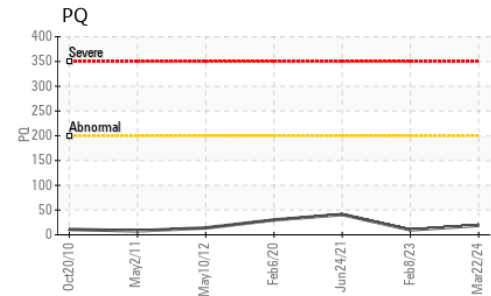
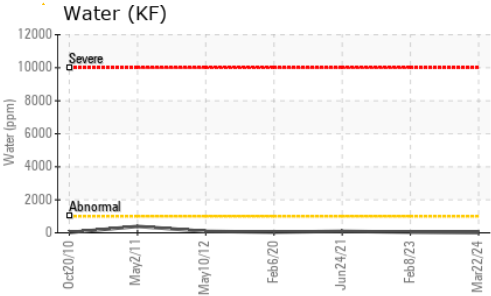
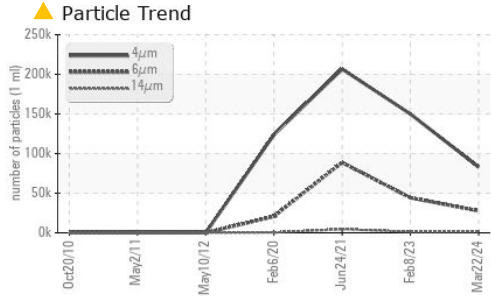
CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>+30	2	1	2
Sodium	ppm	ASTM D5185m		<1	0	0
Potassium	ppm	ASTM D5185m	>20	2	0	0
Water	%	ASTM D6304	>0.1	0.001	0.003	0.009
ppm Water	ppm	ASTM D6304	>1000	12	39.4	91.5

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		82942	149868	206587
Particles >6µm	ASTM D7647	>5000	▲ 27713	▲ 44248	▲ 88692
Particles >14µm	ASTM D7647	>640	▲ 1378	● 1207	▲ 4570
Particles >21µm	ASTM D7647	>160	220	195	▲ 567
Particles >38µm	ASTM D7647	>40	5	2	21
Particles >71µm	ASTM D7647	>10	0	0	2
Oil Cleanliness	ISO 4406 (c)	>--/19/16	▲ 24/22/18	▲ 24/23/17	▲ 25/24/19

OIL ANALYSIS REPORT

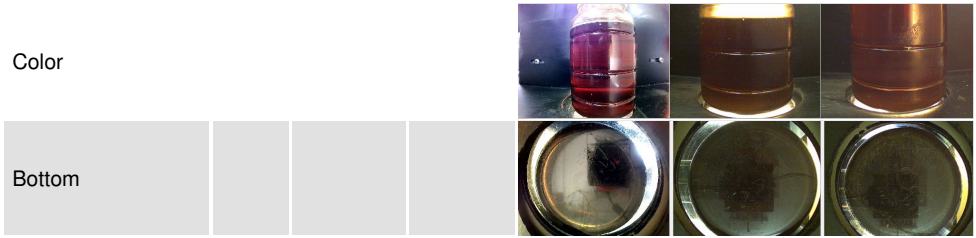


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.25	0.41	0.43	0.43

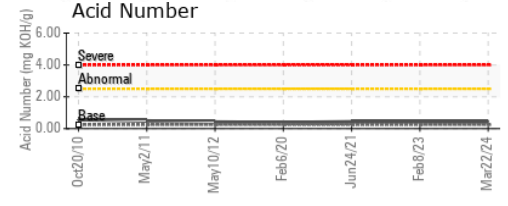
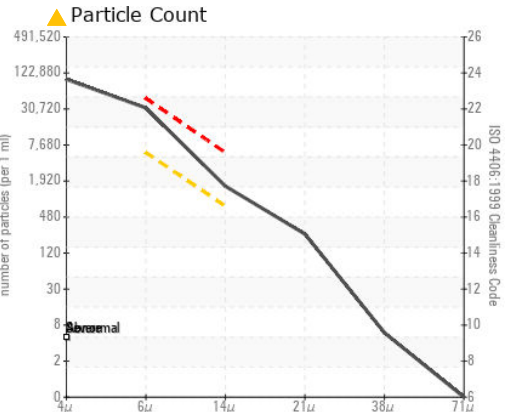
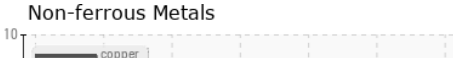
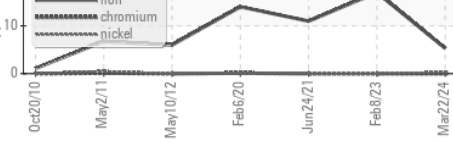
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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	323	322	325

SAMPLE IMAGES		method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MHI021595 **Received** : 10 Jun 2024
Lab Number : **06204593** **Tested** : 11 Jun 2024
Unique Number : 11072054 **Diagnosed** : 12 Jun 2024 - Angela Borella
Test Package : IND 2 (Additional Tests: KF, PQ, PrtCont)

DIAMOND WTG - WHITE DEER SITE - MPS WD
 PO BOX 872
 WHITE DEER, TX
 US 79097
 Contact: WESLEY CAMPBELL
 wesley.campbell@diamondwtg.com

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)