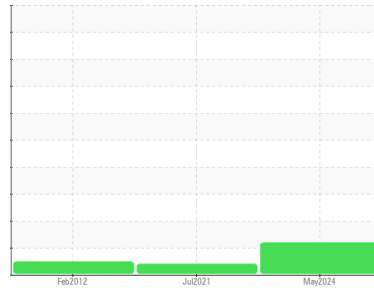


# OIL ANALYSIS REPORT

## Sample Rating Trend



ISO



Machine Id  
**I-07**  
 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		<b>MHI026416</b>	MHI022529	RP106545
Sample Date	Client Info		<b>09 May 2024</b>	07 Jul 2021	24 Feb 2012
Machine Age	hrs	Client Info	<b>0</b>	0	0
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	Not Changd
Sample Status			<b>ABNORMAL</b>	ABNORMAL	NORMAL

### WEAR METALS

	method	limit/base	current	history1	history2	
PQ	ASTM D8184	>200	<b>17</b>	21	17.0	
Iron	ppm	ASTM D5185m	>200	<b>10</b>	11	8
Chromium	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>30	<b>&lt;1</b>	0	2
Lead	ppm	ASTM D5185m	>15	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>75	<b>17</b>	3	2
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Antimony	ppm	ASTM D5185m	>5	<b>---</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

### ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		<b>0</b>	<1	0
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>3</b>	4	119
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185m	90	<b>2</b>	0	71
Calcium	ppm	ASTM D5185m		<b>2</b>	0	0
Phosphorus	ppm	ASTM D5185m		<b>20</b>	22	437
Zinc	ppm	ASTM D5185m		<b>54</b>	0	116
Sulfur	ppm	ASTM D5185m		<b>20054</b>	13876	16645

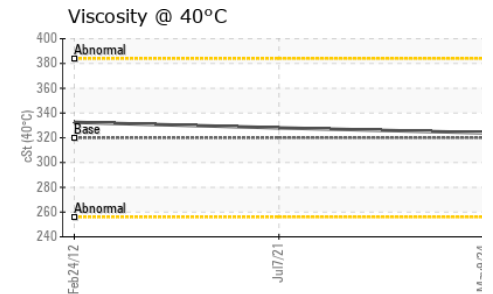
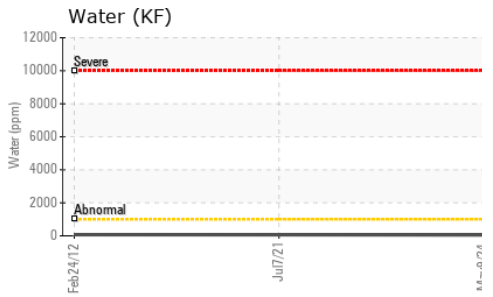
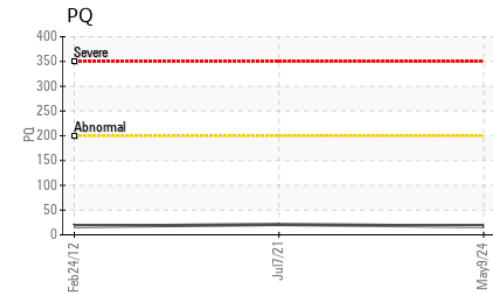
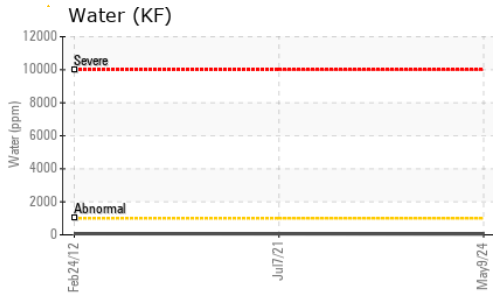
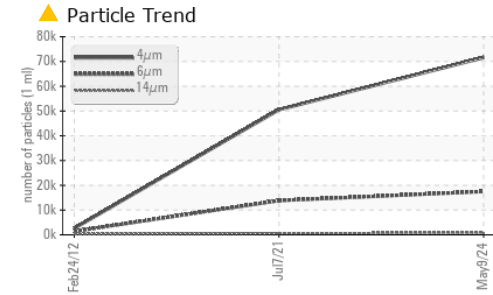
### CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>+30	<b>5</b>	4	0
Sodium	ppm	ASTM D5185m		<b>1</b>	0	0
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	0	0
Water	%	ASTM D6304	>0.1	<b>0.005</b>	0.006	0.007
ppm Water	ppm	ASTM D6304	>1000	<b>52</b>	63.1	70

### FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		<b>71574</b>	50530	2615
Particles >6µm	ASTM D7647	>5000	<b>▲ 17504</b>	▲ 13841	1424
Particles >14µm	ASTM D7647	>640	<b>● 824</b>	610	242
Particles >21µm	ASTM D7647	>160	<b>174</b>	73	81
Particles >38µm	ASTM D7647	>40	<b>6</b>	3	12
Particles >71µm	ASTM D7647	>10	<b>1</b>	0	1
Oil Cleanliness	ISO 4406 (c)	>--/19/16	<b>▲ 23/21/17</b>	▲ 23/21/16	19/18/15

# OIL ANALYSIS REPORT

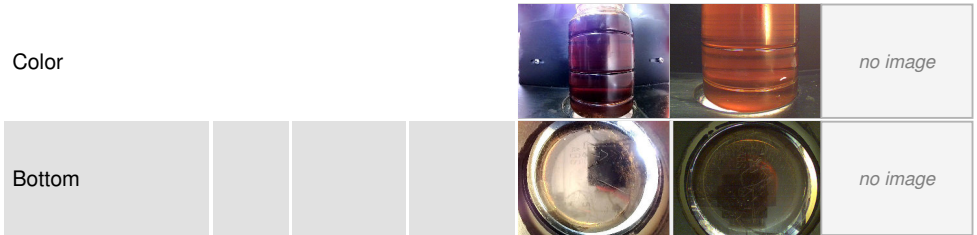


FLUID DEGRADATION	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	0.25	<b>0.48</b>	0.45	0.551

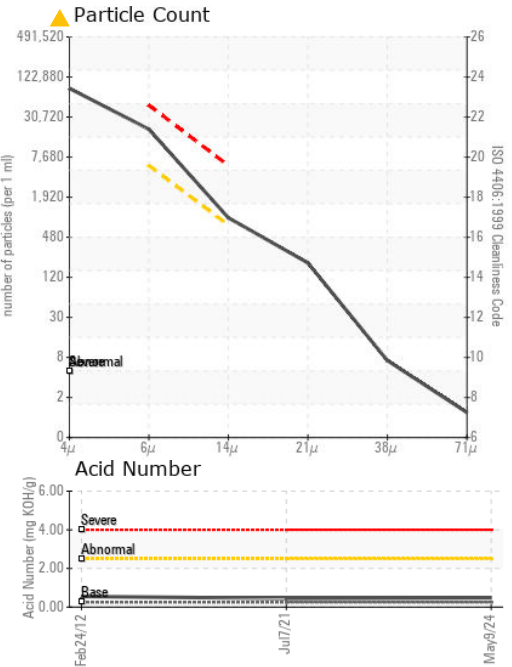
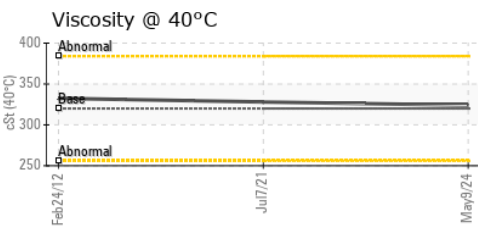
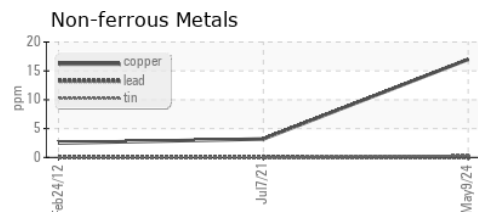
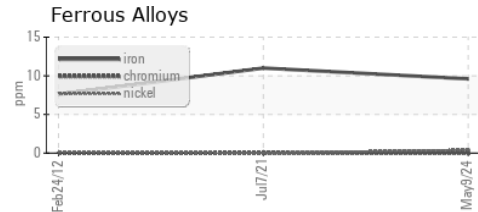
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	<b>NONE</b>	LIGHT	LIGHT
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>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

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	320	<b>324</b>	328	332.5

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MHI026416  
**Lab Number** : 06204578  
**Unique Number** : 11072039  
**Test Package** : IND 2 ( Additional Tests: KF, PQ, PrtCount )  
**Received** : 10 Jun 2024  
**Tested** : 11 Jun 2024  
**Diagnosed** : 12 Jun 2024 - Angela Borella

**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)

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