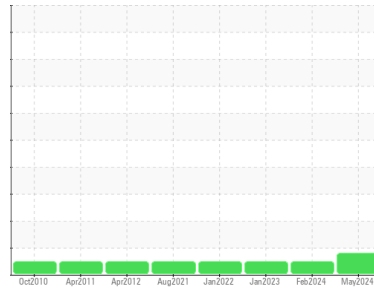


OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
B-05
Component
Wind Turbine Gearbox
Fluid
ROYAL PURPLE SYNFILM GT 320 (65 GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of silt (particulates < 14 microns in size) 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			MHI026395	MHI021588	MHI020604
Sample Date	Client Info			14 May 2024	21 Feb 2024	10 Jan 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	97187
Oil Changed	Client Info			N/A	N/A	Not Changd
Sample Status				ATTENTION	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184	>200	20	15	15
Iron	ppm	ASTM D5185m	>200	4	4	7
Chromium	ppm	ASTM D5185m	>3	0	<1	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	21	10	7
Tin	ppm	ASTM D5185m	>10	0	0	0
Antimony	ppm	ASTM D5185m	>5	---	---	---
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

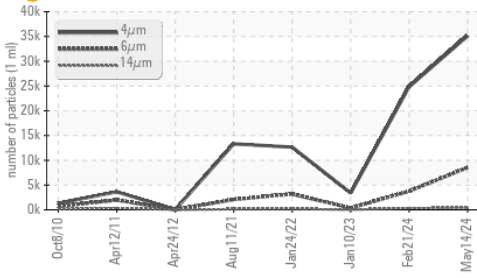
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		6	6	11
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	90	<1	0	<1
Calcium	ppm	ASTM D5185m		1	35	0
Phosphorus	ppm	ASTM D5185m		30	28	31
Zinc	ppm	ASTM D5185m		9	6	0
Sulfur	ppm	ASTM D5185m		20381	20088	19708

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>+30	2	1	1
Sodium	ppm	ASTM D5185m		1	0	0
Potassium	ppm	ASTM D5185m	>20	3	<1	0
Water	%	ASTM D6304	>0.1	0.002	0.001	0.003
ppm Water	ppm	ASTM D6304	>1000	22	15	33.3

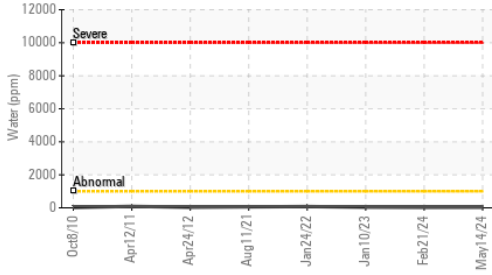
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		35120	24854	3385
Particles >6µm		ASTM D7647	>5000	8549	3775	344
Particles >14µm		ASTM D7647	>640	369	343	12
Particles >21µm		ASTM D7647	>160	74	93	4
Particles >38µm		ASTM D7647	>40	2	3	0
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>--/19/16	22/20/16	22/19/16	19/16/11

OIL ANALYSIS REPORT

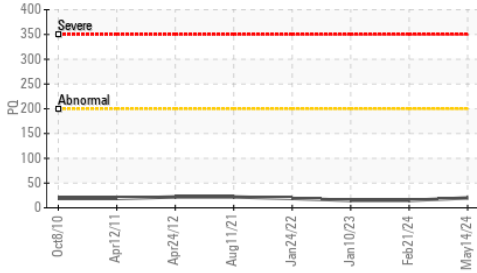
Particle Trend



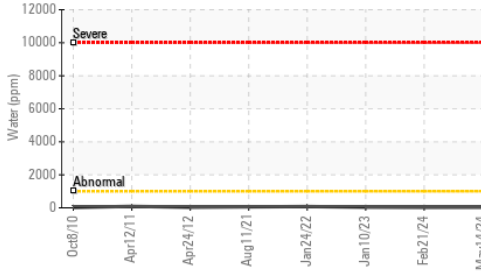
Water (KF)



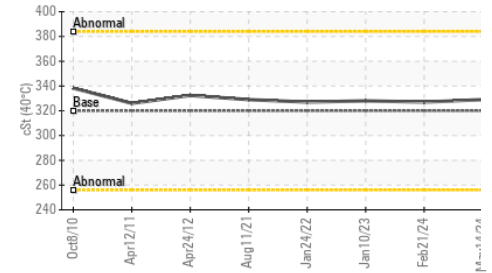
PQ



Water (KF)



Viscosity @ 40°C



FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	0.25	0.52	0.48	0.49

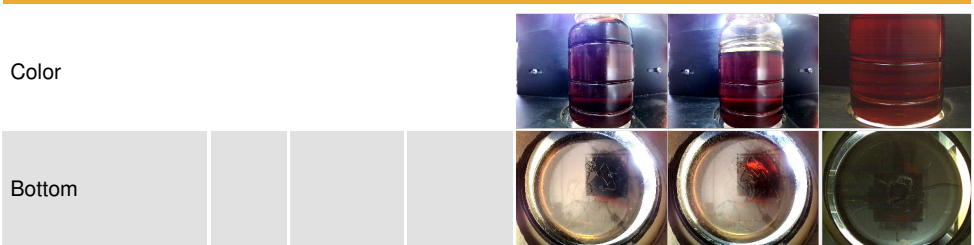
VISUAL

	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
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	LIGHT	LIGHT	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

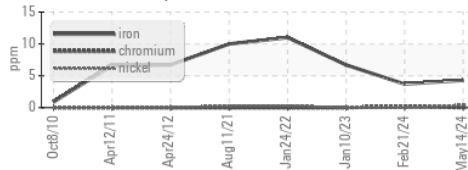
	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	320	329	327	328

SAMPLE IMAGES

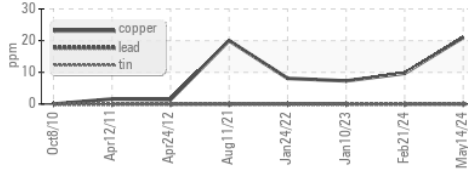


GRAPHS

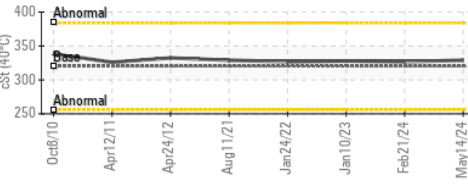
Ferrous Alloys



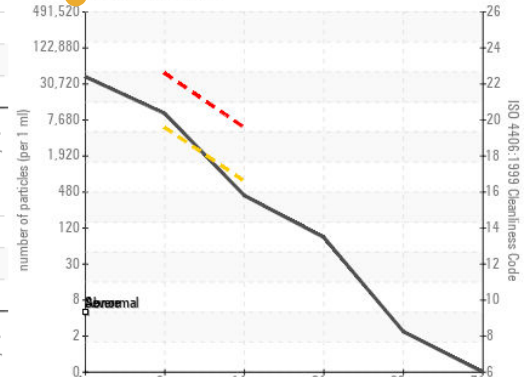
Non-ferrous Metals



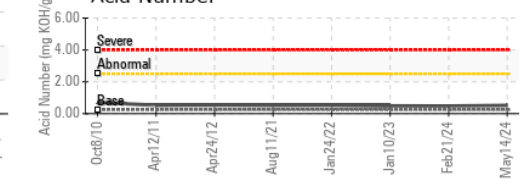
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : MHI026395

Lab Number : 06204580

Unique Number : 11072041

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)

Received : 10 Jun 2024

Tested : 12 Jun 2024

Diagnosed : 12 Jun 2024 - Angela Borella

DIAMOND WTG - WHITE DEER SITE - MPS WD

PO BOX 872

WHITE DEER, TX

US 79097

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