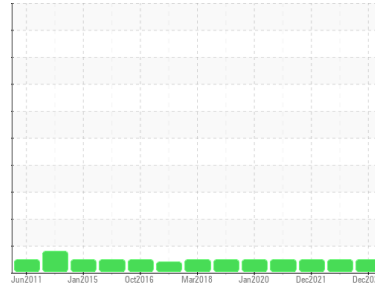


# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Machine Id  
**C105 (S/N 6412-08)**

Component  
**Wind Turbine Gearbox**

Fluid  
**MOBIL MOBILGEAR SHC XMP 320 (74 GAL)**

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

#### 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		<b>MHI026210</b>	MHI019141	MHI017473
Sample Date	Client Info		<b>13 Dec 2023</b>	13 Dec 2022	15 Dec 2021
Machine Age	hrs	Client Info	<b>0</b>	0	0
Oil Age	hrs	Client Info	<b>95067</b>	89901	84094
Oil Changed	Client Info		<b>N/A</b>	Not Changd	Not Changd
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

### WEAR METALS

	method	limit/base	current	history1	history2	
PQ	ASTM D8184	>200	<b>16</b>	10	16	
Iron	ppm	ASTM D5185m	>200	<b>15</b>	7	6
Chromium	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m	>3	<b>0</b>	0	0
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>0</b>	0	<1
Lead	ppm	ASTM D5185m	>15	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>75	<b>1</b>	38	22
Tin	ppm	ASTM D5185m	>10	<b>0</b>	0	<1
Antimony	ppm	ASTM D5185m	>5	<b>---</b>	---	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	0	<b>0</b>	0	2
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Calcium	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	0
Phosphorus	ppm	ASTM D5185m	485	<b>413</b>	338	422
Zinc	ppm	ASTM D5185m	0	<b>9</b>	18	15
Sulfur	ppm	ASTM D5185m		<b>4153</b>	3672	3716

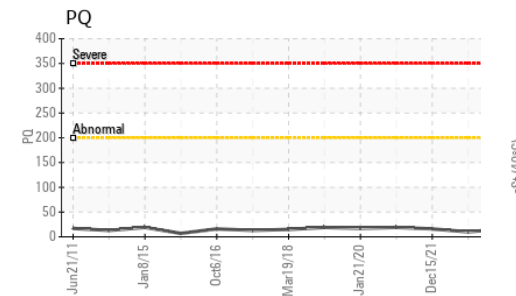
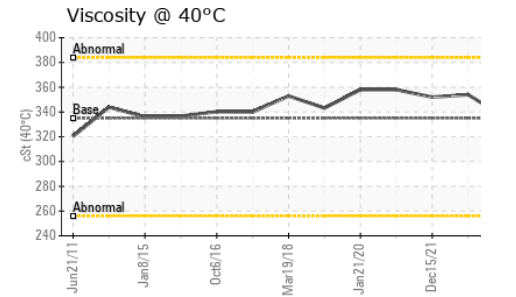
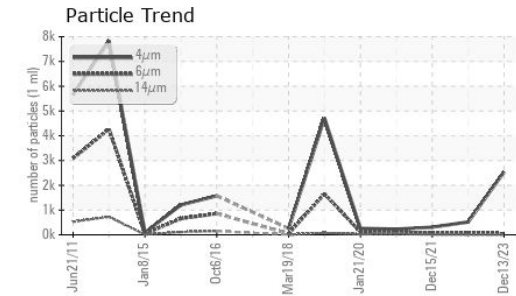
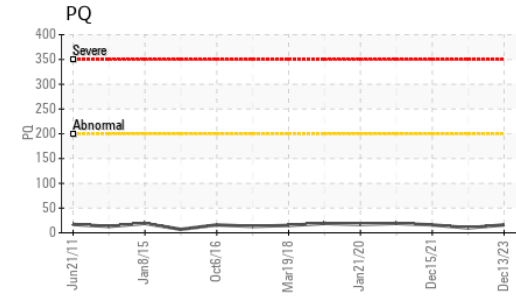
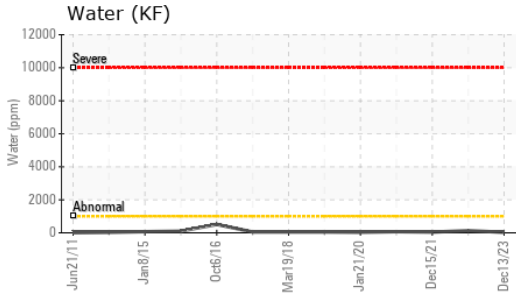
### CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>+30	<b>1</b>	<1	<1
Sodium	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	0
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	<1
Water	%	ASTM D6304	>0.1	<b>0.003</b>	0.012	0.004
ppm Water	ppm	ASTM D6304	>1000	<b>33</b>	129.1	44.0

### FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		<b>2541</b>	517	308
Particles >6µm	ASTM D7647	>5000	<b>40</b>	93	63
Particles >14µm	ASTM D7647	>640	<b>4</b>	6	9
Particles >21µm	ASTM D7647	>160	<b>1</b>	1	4
Particles >38µm	ASTM D7647	>40	<b>0</b>	0	0
Particles >71µm	ASTM D7647	>10	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>--/19/16	<b>19/12/9</b>	16/14/10	15/13/10

# OIL ANALYSIS REPORT

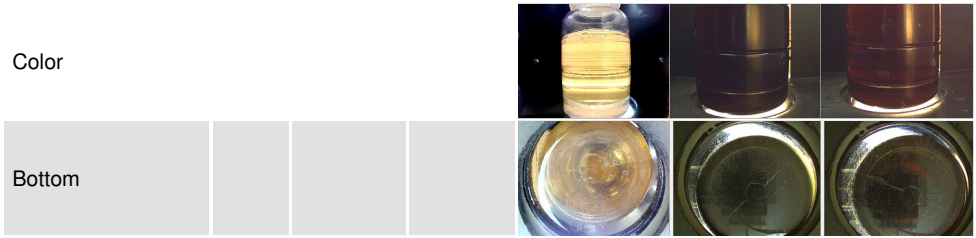


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.85	<b>0.98</b>	1.08	1.22

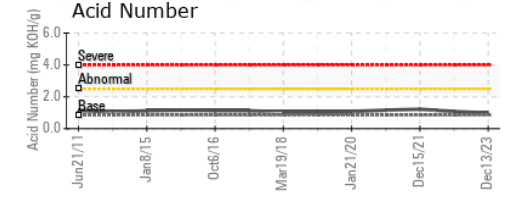
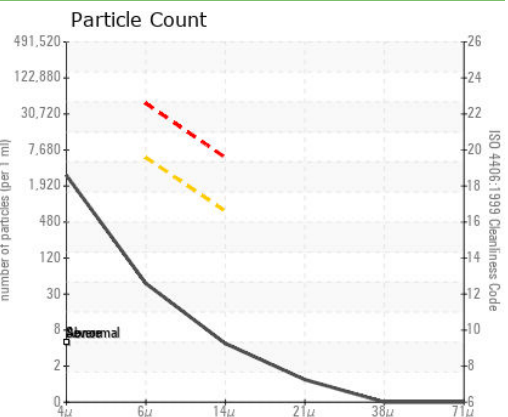
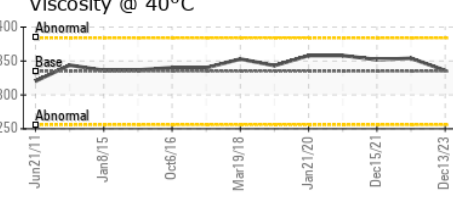
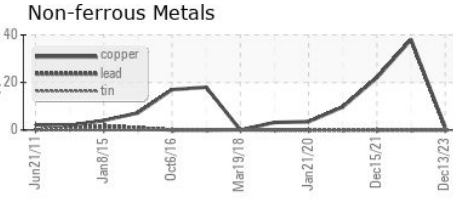
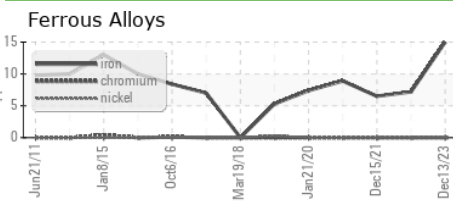
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	<b>NONE</b>	VLITE	VLITE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
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	335	<b>336</b>	354	352

## SAMPLE IMAGES



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MH1026210 **Received** : 08 Jan 2024  
**Lab Number** : 06054893 **Diagnosed** : 10 Jan 2024  
**Unique Number** : 10820842 **Diagnostician** : Jonathan Hester  
**Test Package** : IND 2 ( Additional Tests: KF, PQ, PrtCount )

**DIAMOND WTG - DILLON**  
P.O. BOX 880  
DESERT HOT SPRINGS, CA  
US 92240  
Contact: DANIEL BOYD  
daniel.boyd@diamondwtg.com  
T: (760)329-7171  
F: (760)329-7122

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)