



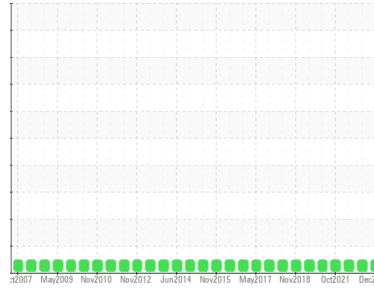
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
Ferndale Phase II SP-13598
 Machine Id
T3 (S/N 23966)
 Component
Hydraulic System
 Fluid
MOBIL AERO HF (280 LTR)



DIAGNOSIS

Recommendation
 Resample at the next service interval to monitor.

Wear
 All component wear rates are normal.

Contamination
 The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable.

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		WC0546237	WC0783129	WC0632631
Sample Date	Client Info		07 Dec 2023	15 May 2023	21 May 2022
Machine Age	yrs	Client Info	0	0	0
Oil Age	yrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			NORMAL	NORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*	>50	0	0	0
Iron	ppm	ASTM D5185(m)	>10	0	<1
Chromium	ppm	ASTM D5185(m)	>15	0	0
Nickel	ppm	ASTM D5185(m)	>10	0	<1
Titanium	ppm	ASTM D5185(m)		0	0
Silver	ppm	ASTM D5185(m)		0	0
Aluminum	ppm	ASTM D5185(m)	>10	<1	<1
Lead	ppm	ASTM D5185(m)	>20	0	0
Copper	ppm	ASTM D5185(m)	>15	<1	0
Tin	ppm	ASTM D5185(m)	>20	0	0
Antimony	ppm	ASTM D5185(m)		0	<1
Vanadium	ppm	ASTM D5185(m)		0	0
Beryllium	ppm	ASTM D5185(m)		0	0
Cadmium	ppm	ASTM D5185(m)		0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		0	<1
Barium	ppm	ASTM D5185(m)		0	0
Molybdenum	ppm	ASTM D5185(m)	0.0	0	0
Manganese	ppm	ASTM D5185(m)		0	0
Magnesium	ppm	ASTM D5185(m)	0.4	<1	<1
Calcium	ppm	ASTM D5185(m)	0.0	<1	0
Phosphorus	ppm	ASTM D5185(m)	426	388	423
Zinc	ppm	ASTM D5185(m)	0.9	5	5
Sulfur	ppm	ASTM D5185(m)	93	122	131
Lithium	ppm	ASTM D5185(m)		<1	<1

CONTAMINANTS

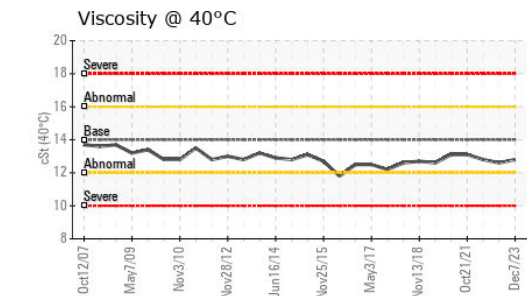
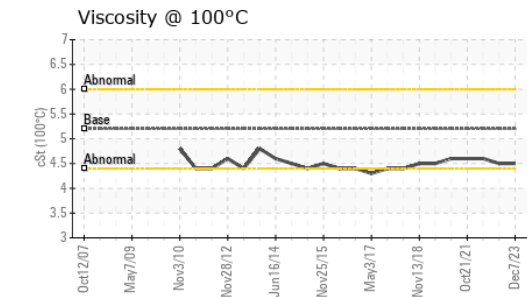
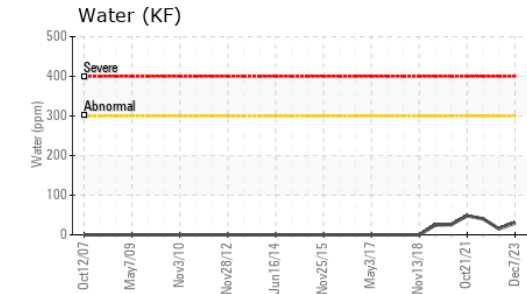
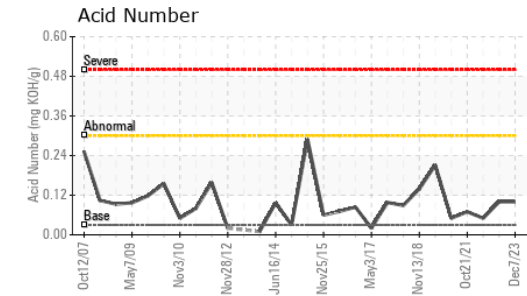
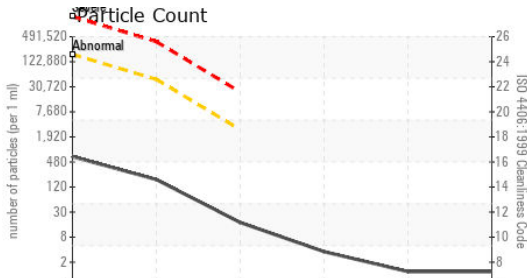
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>10	<1	<1
Sodium	ppm	ASTM D5185(m)	>10	0	<1
Potassium	ppm	ASTM D5185(m)	>20	<1	0
Water	%	ASTM D6304*	>0.03	0.003	0.001
ppm Water	ppm	ASTM D6304*	>300	30	14.9

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		0	0
Nitration	Abs/cm	ASTM D7624*		3.3	3.3
Sulfation	Abs/.1mm	ASTM D7415*		49.7	49.4



OIL ANALYSIS REPORT



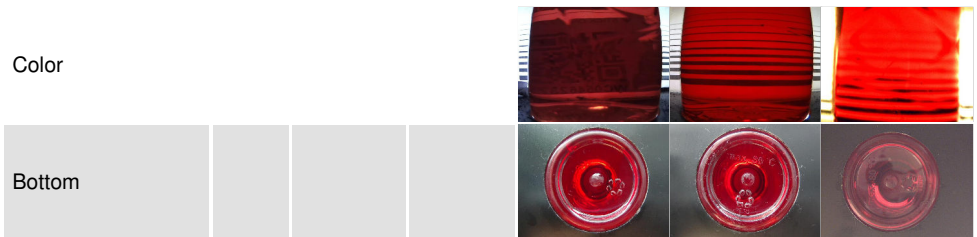
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>160000	567	225	327
Particles >6µm	ASTM D7647	>40000	160	55	57
Particles >14µm	ASTM D7647	>2500	15	8	12
Particles >21µm	ASTM D7647	>640	3	3	5
Particles >38µm	ASTM D7647	>160	1	1	1
Particles >71µm	ASTM D7647	>40	1	0	0
Oil Cleanliness	ISO 4406 (c)	>24/22/18	16/14/11	15/13/10	16/13/11

FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm ASTM D7414*		40.4	40.4	41.2
Acid Number (AN)	mg KOH/g ASTM D974*	.03	0.10	0.10	0.05

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	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*	>0.03	NEG	NEG	NEG
Free Water	scalar Visual*		NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt ASTM D7279(m)	14.0	12.8	12.6	12.8
Visc @ 100°C	cSt ASTM D7279(m)	5.2	4.5	4.5	4.6
Viscosity Index (VI)	Scale ASTM D2270*	370	321	330	337

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color

Bottom



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Vestas American Wind Technology Inc.
Sample No. : WC0546237 **Received** : 12 Jan 2024
Lab Number : **02608576** **Diagnosed** : 15 Jan 2024
Unique Number : 5709662 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: FT-IR, KF, KV100, PQ, TAN Man, VI)

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

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