



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
DAKOTA RANGE III [200006928]
 Machine Id
17WEA87745 - C-06
 Component
Wind Turbine Gearbox
 Fluid
FUCHS RENOLIN UNISYN CLP 320 (--- LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		NX015954	NX015975	NX05852431
Sample Date		Client Info		12 Jun 2024	24 Apr 2024	17 Mar 2023
Machine Age	hrs	Client Info		21939	20601	11492
Oil Age	hrs	Client Info		21939	7840	0
Filter Age	hrs	Client Info		2120	0	0
Oil Changed		Client Info		Not Changd	Not Changd	N/A
Filter Changed		Client Info		Not Changd	Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	14	15	18
Iron	ppm	ASTM D5185m	>30	16	24	19
Chromium	ppm	ASTM D5185m	>3	<1	0	0
Nickel	ppm	ASTM D5185m	>3	<1	0	0
Titanium	ppm	ASTM D5185m	>10	<1	0	0
Silver	ppm	ASTM D5185m		<1	0	0
Aluminum	ppm	ASTM D5185m	>30	3	0	<1
Lead	ppm	ASTM D5185m	>15	1	0	0
Copper	ppm	ASTM D5185m	>10	<1	0	0
Tin	ppm	ASTM D5185m	>10	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

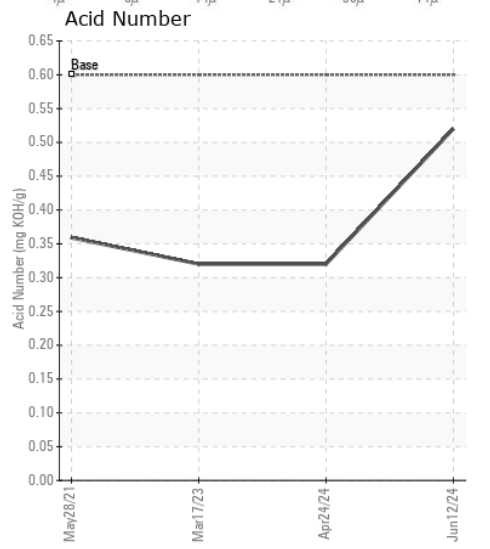
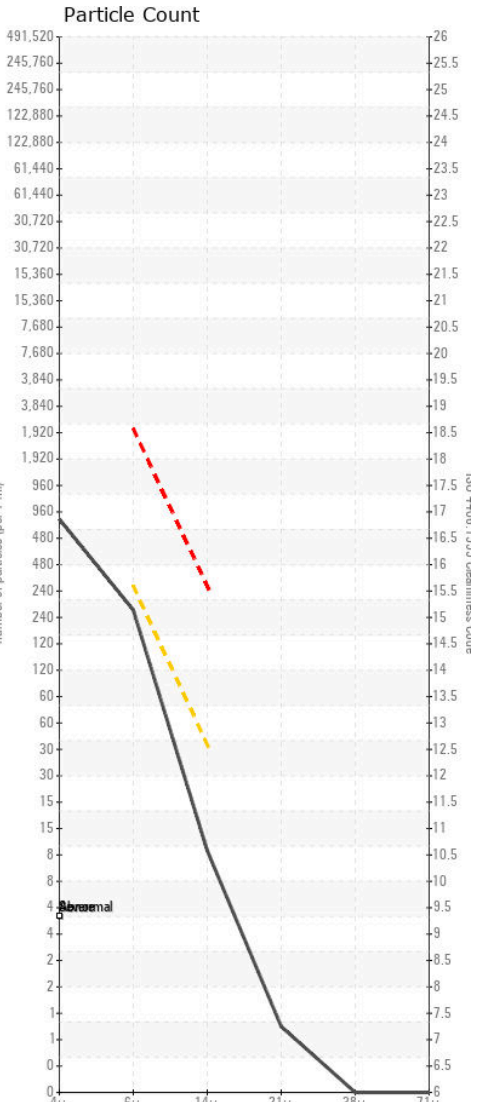
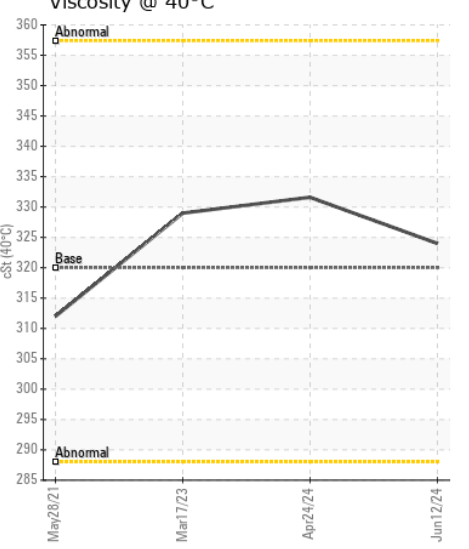
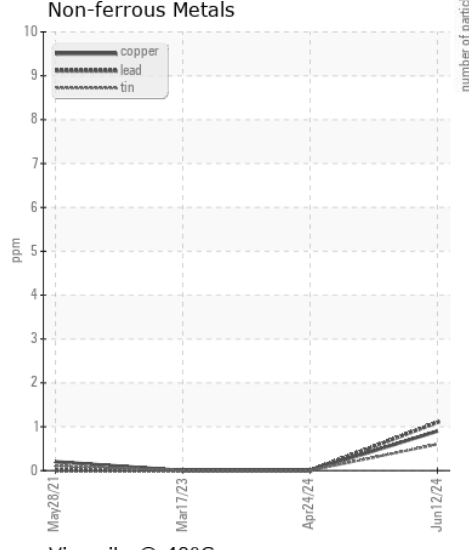
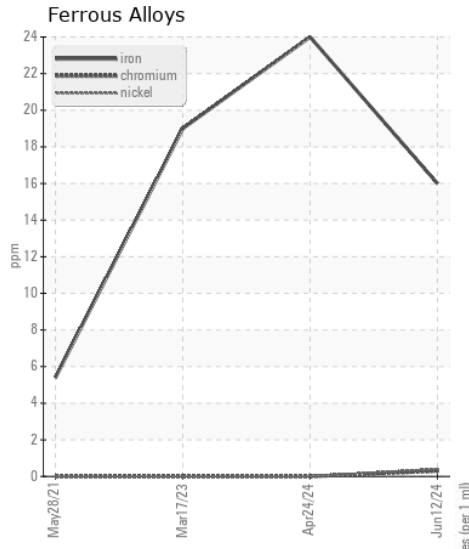
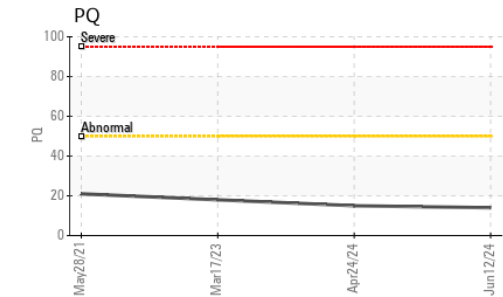
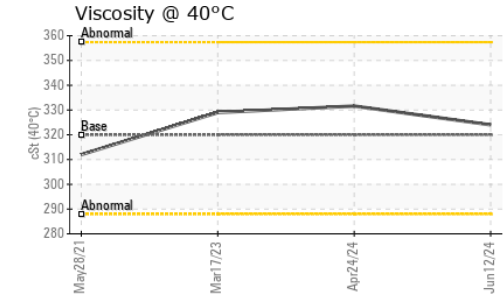
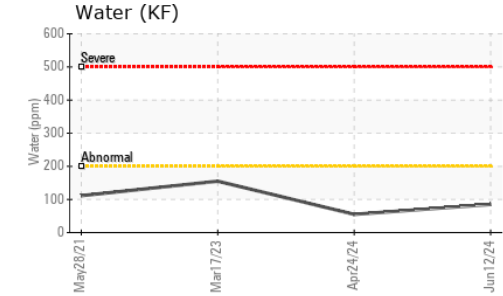
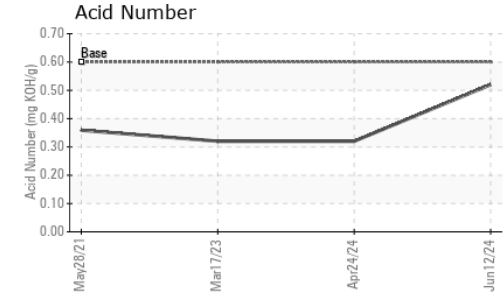
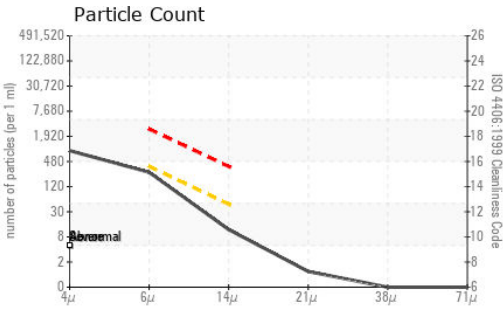
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>+15	2	<1	1
Potassium	ppm	ASTM D5185m	>20	2	0	<1
Water	%	ASTM D6304	>0.02	0.008	0.005	0.015
ppm Water	ppm	ASTM D6304	>200	85	55	155.1
Particles >4µm		ASTM D7647		765	405	17060
Particles >6µm		ASTM D7647	>320	233	121	813
Particles >14µm		ASTM D7647	>40	10	17	15
Particles >21µm		ASTM D7647	>10	1	6	3
Particles >38µm		ASTM D7647	>3	0	0	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>-/15/12	17/15/10	16/14/11	21/17/11
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	>0.02	NEG	NEG	NEG

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	3	1
Boron	ppm	ASTM D5185m		8	7	6
Barium	ppm	ASTM D5185m		1	<1	0
Molybdenum	ppm	ASTM D5185m		2	0	0
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		1	0	0
Calcium	ppm	ASTM D5185m		17	23	8
Phosphorus	ppm	ASTM D5185m		241	194	208
Zinc	ppm	ASTM D5185m		9	4	2
Sulfur	ppm	ASTM D5185m		4974	5283	5647
Acid Number (AN)	mg KOH/g	ASTM D8045	0.6	0.52	0.32	0.32
Visc @ 40°C	cSt	ASTM D445	320	324	331.6	329



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : NX015954 **Received** : 21 Jun 2024
Lab Number : 06216851 **Tested** : 24 Jun 2024
Unique Number : 11089715 **Diagnosed** : 24 Jun 2024 - Don Baldrige
Test Package : IND 2 (Additional Tests: KF, PQ, PrtCount)

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 T:

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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