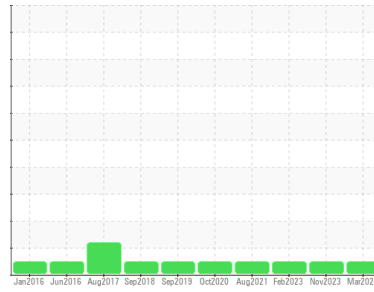




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
THUNDER SPIRIT [200009532]
 Machine Id
43WEA84009 (S/N 45423)
 Component
Hydraulic System
 Fluid
SHELL TELLUS S4 VX 32 (--- QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are 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			NX015556	NX014799	NX011637
Sample Date	Client Info			19 Mar 2024	06 Nov 2023	07 Feb 2023
Machine Age	hrs	Client Info		60565	57846	52704
Oil Age	hrs	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		17	12	16
Iron	ppm	ASTM D5185m	>20	2	0	1
Chromium	ppm	ASTM D5185m	>20	<1	0	0
Nickel	ppm	ASTM D5185m	>20	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	<1	0
Lead	ppm	ASTM D5185m	>20	3	2	2
Copper	ppm	ASTM D5185m	>20	1	0	0
Tin	ppm	ASTM D5185m	>20	2	2	<1
Antimony	ppm	ASTM D5185m		---	---	---
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0

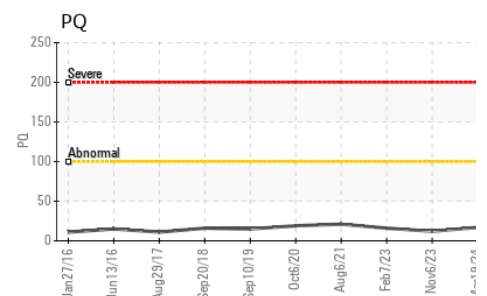
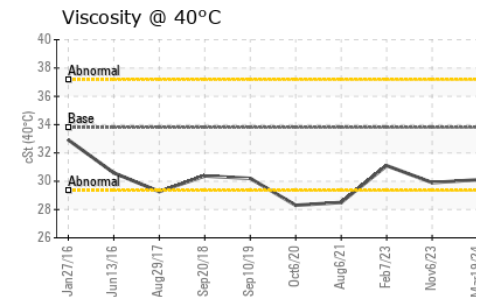
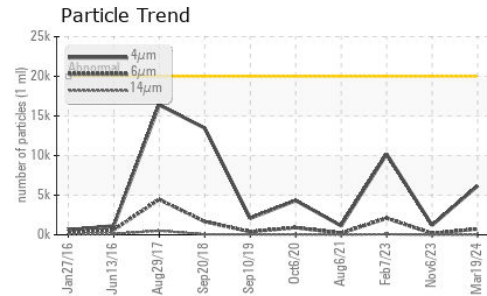
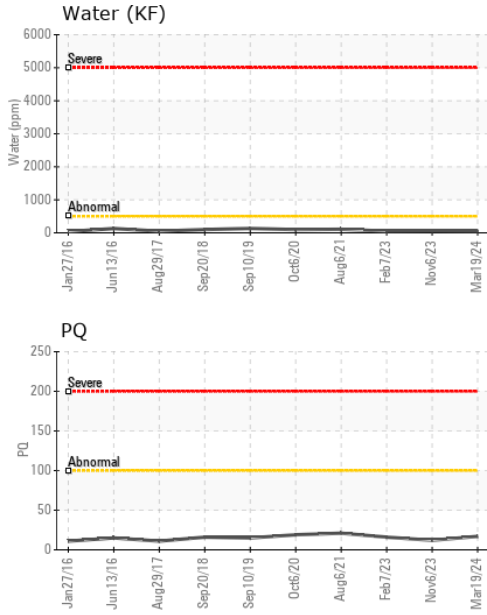
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		1	0	0
Manganese	ppm	ASTM D5185m		<1	0	0
Magnesium	ppm	ASTM D5185m		<1	2	0
Calcium	ppm	ASTM D5185m		4	2	0
Phosphorus	ppm	ASTM D5185m		613	564	530
Zinc	ppm	ASTM D5185m		74	71	84
Sulfur	ppm	ASTM D5185m		524	577	542

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	2	2	<1
Sodium	ppm	ASTM D5185m		<1	0	0
Potassium	ppm	ASTM D5185m	>20	2	1	0
Water	%	ASTM D6304	>0.05	0.005	0.006	0.005
ppm Water	ppm	ASTM D6304	>500	51	61	50.6

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	6171	1207	10184
Particles >6µm		ASTM D7647	>2500	749	166	2107
Particles >14µm		ASTM D7647	>320	30	7	78
Particles >21µm		ASTM D7647	>80	6	2	10
Particles >38µm		ASTM D7647	>20	0	0	0
Particles >71µm		ASTM D7647	>4	0	0	0
Oil Cleanliness		ISO 4406 (c)	>21/18/15	20/17/12	17/15/10	21/18/13



OIL ANALYSIS REPORT

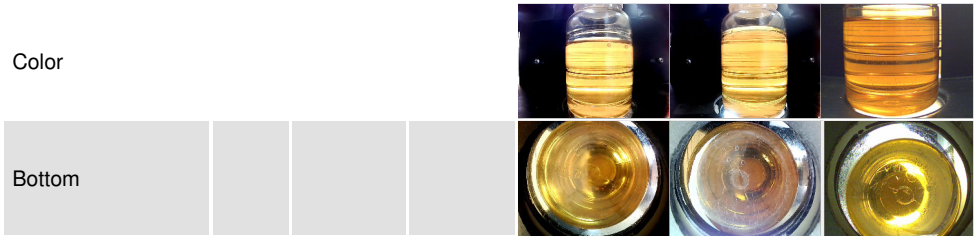


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.08	0.10	0.15

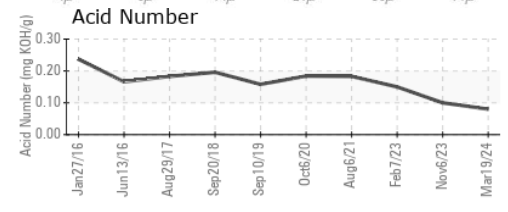
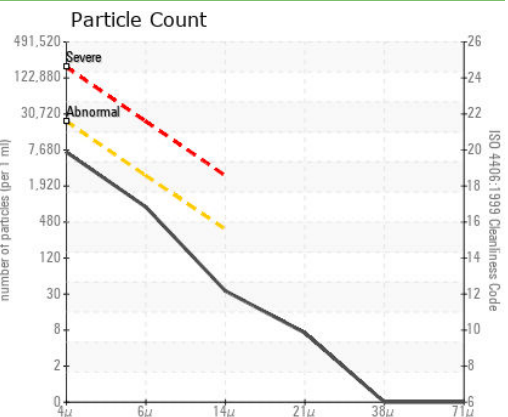
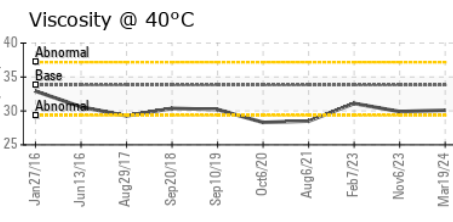
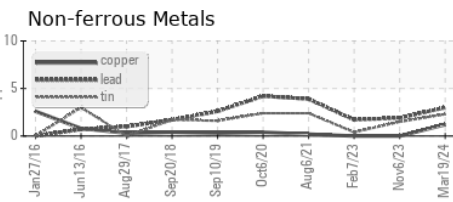
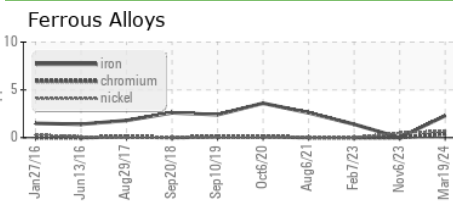
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	33.8	30.1	29.9	31.1

SAMPLE IMAGES		method	limit/base	current	history1	history2
---------------	--	--------	------------	---------	----------	----------



GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : NX015556
 Lab Number : 06135633
 Unique Number : 10955098
 Test Package : IND 2 (Additional Tests: KF, PQ)

Received : 01 Apr 2024
 Tested : 03 Apr 2024
 Diagnosed : 04 Apr 2024 - Don Baldrige

NORDEX USA - Chicago
 300 SOUTH WACKER DRIVE, SUITE 1500
 CHICAGO, IL
 US 60606

Contact: DEVIN LINEHAN
 DLinehan@nordex-online.com

T: (312)386-4124
 F: (312)386-7102

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)