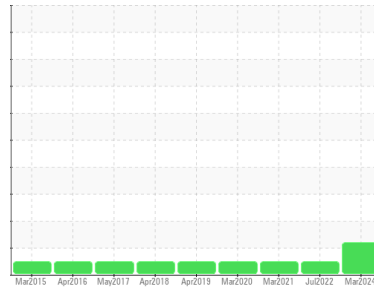




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
FOUR MILE RIDGE [200009521]
 Machine Id
83440 SITE 15
 Component
Hydraulic System
 Fluid
SHELL TELLUS S4 VX 32 (--- LTR)

DIAGNOSIS

Recommendation

The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		NX015248	NX004178	NX004936
Sample Date	Client Info		28 Mar 2024	07 Jul 2022	16 Mar 2021
Machine Age	hrs	Client Info	71712	62643	49236
Oil Age	hrs	Client Info	71712	62643	49236
Oil Changed	Client Info		Not Changed	Not Changed	Not Changed
Sample Status			ABNORMAL	NORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184		20	9	17
Iron	ppm	ASTM D5185m >20	2	13	4
Chromium	ppm	ASTM D5185m >20	<1	<1	0
Nickel	ppm	ASTM D5185m >20	0	0	0
Titanium	ppm	ASTM D5185m	<1	0	0
Silver	ppm	ASTM D5185m	0	0	<1
Aluminum	ppm	ASTM D5185m >20	2	<1	0
Lead	ppm	ASTM D5185m >20	<1	3	1
Copper	ppm	ASTM D5185m >20	0	<1	<1
Tin	ppm	ASTM D5185m >20	<1	2	<1
Antimony	ppm	ASTM D5185m	---	---	0
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	0	0	0
Molybdenum	ppm	ASTM D5185m	0	2	0
Manganese	ppm	ASTM D5185m	0	<1	0
Magnesium	ppm	ASTM D5185m	<1	2	0
Calcium	ppm	ASTM D5185m	0	7	0
Phosphorus	ppm	ASTM D5185m	581	529	610
Zinc	ppm	ASTM D5185m	34	86	67
Sulfur	ppm	ASTM D5185m	396	1007	441

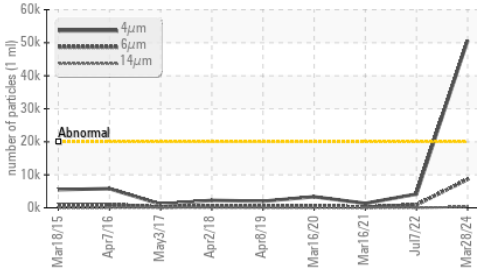
CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	1	3	<1
Sodium	ppm	ASTM D5185m	0	2	0
Potassium	ppm	ASTM D5185m >20	<1	0	0
Water	%	ASTM D6304 >0.05	0.010	0.006	0.009
ppm Water	ppm	ASTM D6304 >500	104	62.1	90.7

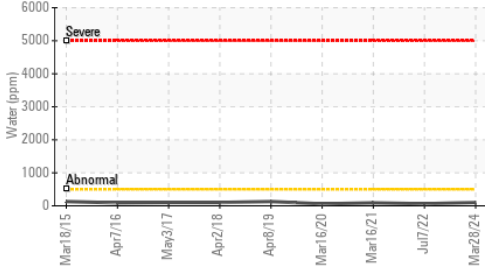
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	▲ 50700	4146	1345
Particles >6µm	ASTM D7647	>2500	▲ 8632	910	209
Particles >14µm	ASTM D7647	>320	270	37	22
Particles >21µm	ASTM D7647	>80	53	7	9
Particles >38µm	ASTM D7647	>20	6	1	0
Particles >71µm	ASTM D7647	>4	0	0	0
Oil Cleanliness	ISO 4406 (c)	>21/18/15	▲ 23/20/15	19/17/12	18/15/12

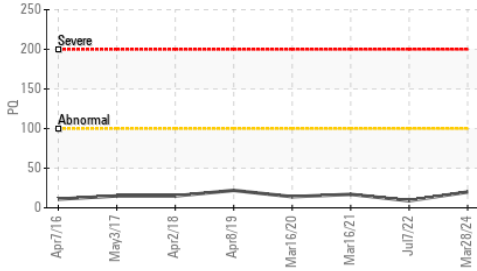
Particle Trend



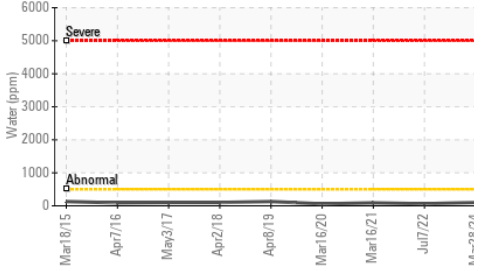
Water (KF)



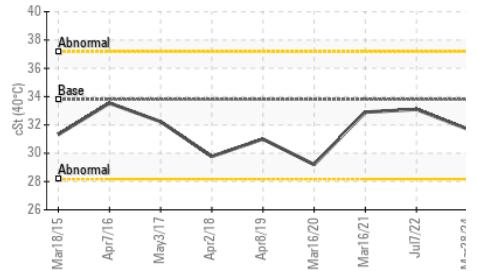
PQ



Water (KF)



Viscosity @ 40°C



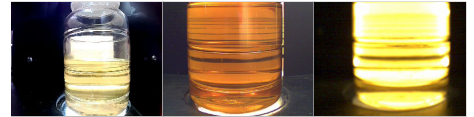
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.112	0.17	0.122

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	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

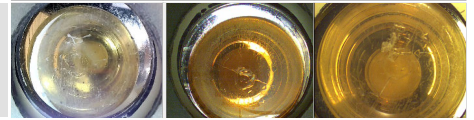
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	33.8	31.7	33.1	32.9

SAMPLE IMAGES		method	limit/base	current	history1	history2
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Color

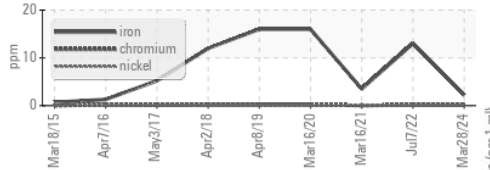


Bottom

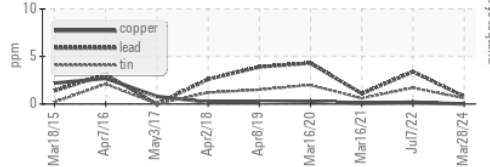


GRAPHS

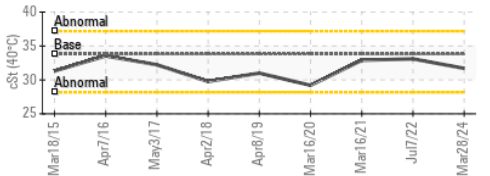
Ferrous Alloys



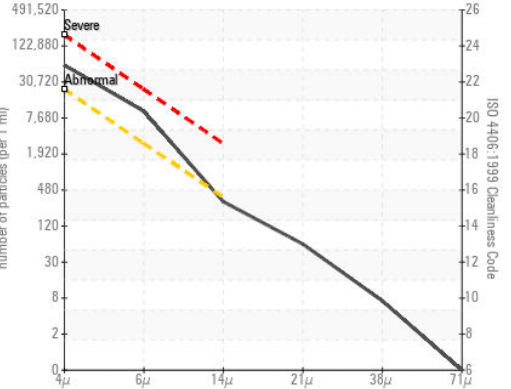
Non-ferrous Metals



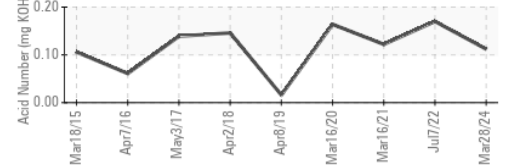
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

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

Sample No. : NX015248

Lab Number : 06209213

Unique Number : 11076674

Test Package : IND 2 (Additional Tests: KF, PQ)

Received : 13 Jun 2024

Tested : 17 Jun 2024

Diagnosed : 17 Jun 2024 - Angela Borella

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)