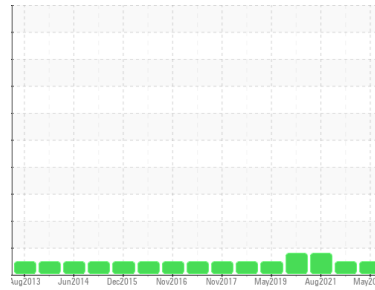




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**HIGHLAND [600380493]**  
 Machine Id  
**15WEA80822**  
 Component  
**Hydraulic System**  
 Fluid  
**SHELL TELLUS ARTIC 32 (--- LTR)**

## 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 component. The amount and size of particulates present in the system 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		<b>NX05928175</b>	NX05602777	NX05387336
Sample Date	Client Info		<b>17 May 2023</b>	09 May 2022	02 Aug 2021
Machine Age	mths	Client Info	<b>0</b>	0	0
Oil Age	mths	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>NORMAL</b>	NORMAL	ABNORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184		<b>12</b>	18	20
Iron	ppm	ASTM D5185m >20	<b>17</b>	14	▲ 37
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	2
Nickel	ppm	ASTM D5185m >20	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	<1
Lead	ppm	ASTM D5185m >20	<b>3</b>	2	8
Copper	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	1
Tin	ppm	ASTM D5185m >20	<b>0</b>	<1	<1
Antimony	ppm	ASTM D5185m	<b>---</b>	---	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	<1	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 5	<b>0</b>	<1	2
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 0	<b>0</b>	0	<1
Manganese	ppm	ASTM D5185m 0	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	2
Calcium	ppm	ASTM D5185m 5	<b>3</b>	5	17
Phosphorus	ppm	ASTM D5185m 600	<b>615</b>	593	596
Zinc	ppm	ASTM D5185m 50	<b>83</b>	58	139
Sulfur	ppm	ASTM D5185m 900	<b>820</b>	873	1188

## CONTAMINANTS

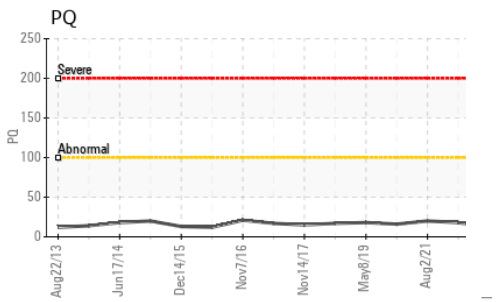
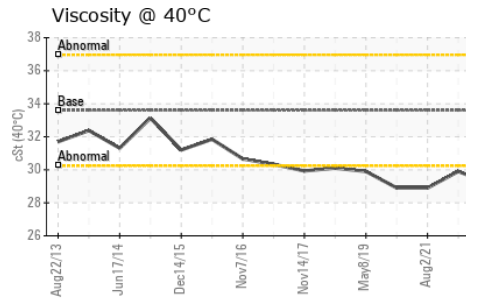
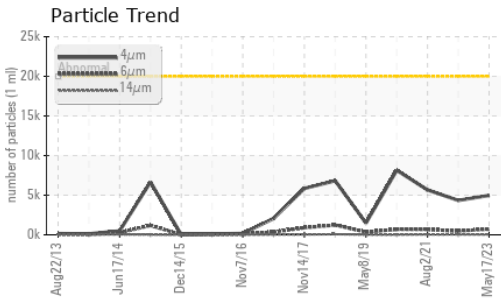
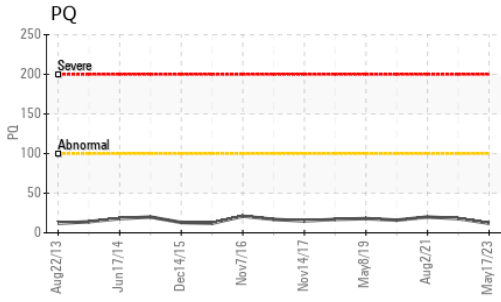
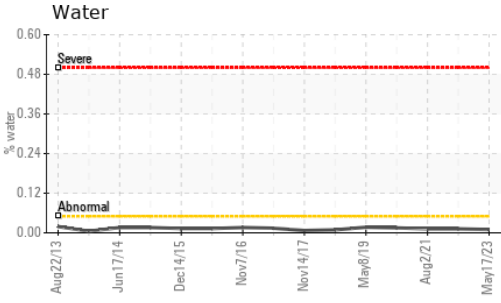
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	<b>2</b>	1	3
Sodium	ppm	ASTM D5185m	<b>0</b>	0	2
Potassium	ppm	ASTM D5185m >20	<b>0</b>	0	1
Water	%	ASTM D6304 >0.05	<b>0.010</b>	0.012	0.012
ppm Water	ppm	ASTM D6304 >500	<b>107.2</b>	127.2	128.6

## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	<b>4970</b>	4340	5667
Particles >6µm	ASTM D7647	>2500	<b>722</b>	473	677
Particles >14µm	ASTM D7647	>320	<b>39</b>	44	38
Particles >21µm	ASTM D7647	>80	<b>10</b>	15	7
Particles >38µm	ASTM D7647	>20	<b>0</b>	0	0
Particles >71µm	ASTM D7647	>4	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>21/18/15	<b>19/17/12</b>	19/16/13	20/17/12



# OIL ANALYSIS REPORT

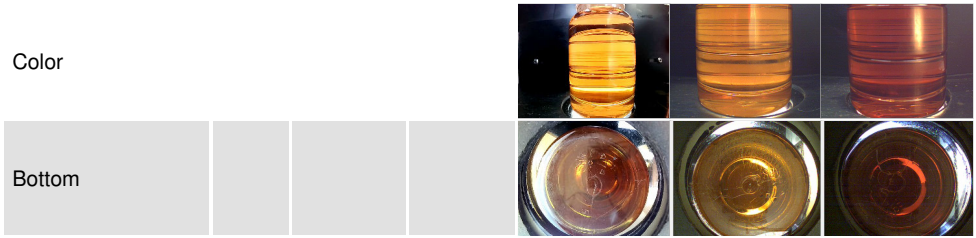


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.20	<b>0.15</b>	0.16	0.245

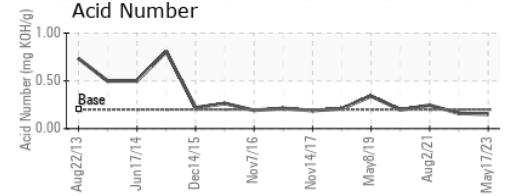
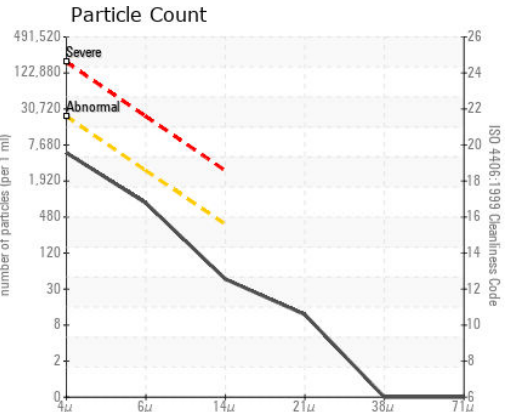
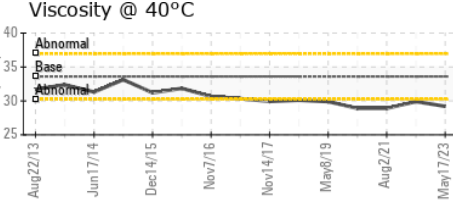
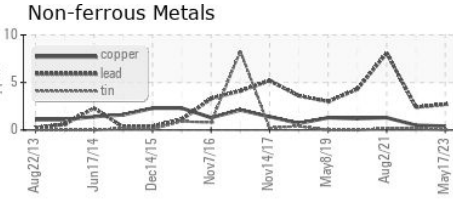
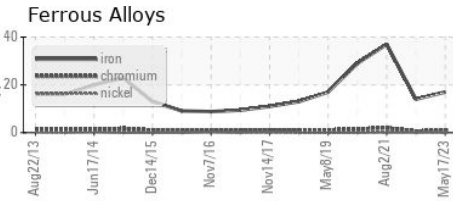
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	<b>LIGHT</b>	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	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	>0.05	<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	33.6	<b>29.2</b>	29.9	28.9

SAMPLE IMAGES		method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : NX05928175  
**Lab Number** : **05928175**  
**Unique Number** : 10608122  
**Test Package** : IND 2 ( Additional Tests: KF, PQ )

**NORDEX USA - HIGHLAND & HIGHLAND NORTH**  
 300 SOUTH WACKER DRIVE, SUITE 1500  
 CHICAGO, IL  
 US 60606

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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 T: x:  
 F: x: