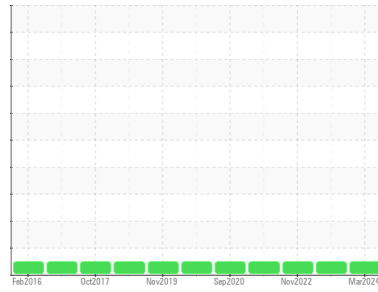




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**THUNDER SPIRIT [200009532]**  
 Machine Id  
**25WEA84002 (S/N 45432)**  
 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			<b>NX015568</b>	NX014800	NX011664
Sample Date	Client Info			<b>20 Mar 2024</b>	19 Oct 2023	29 Nov 2022
Machine Age	hrs	Client Info		<b>58277</b>	55243	49618
Oil Age	hrs	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	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		<b>11</b>	9	12
Iron	ppm	ASTM D5185m	>20	<b>2</b>	0	2
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	<1	<1
Lead	ppm	ASTM D5185m	>20	<b>3</b>	2	2
Copper	ppm	ASTM D5185m	>20	<b>1</b>	0	<1
Tin	ppm	ASTM D5185m	>20	<b>2</b>	1	1
Antimony	ppm	ASTM D5185m		<b>---</b>	---	---
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0

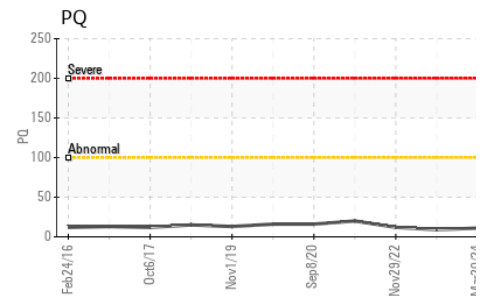
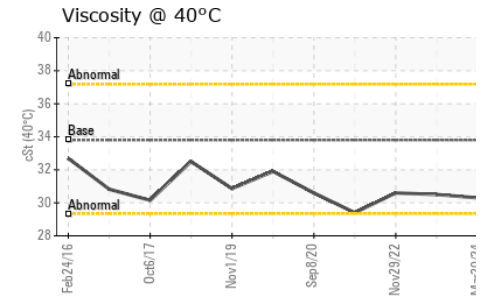
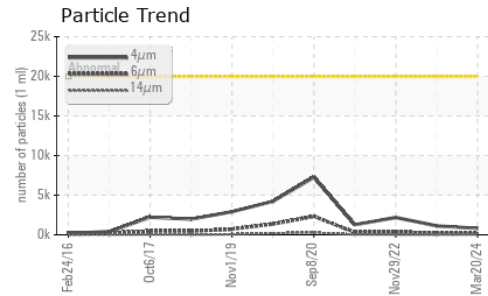
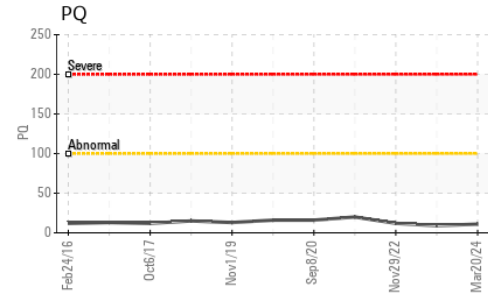
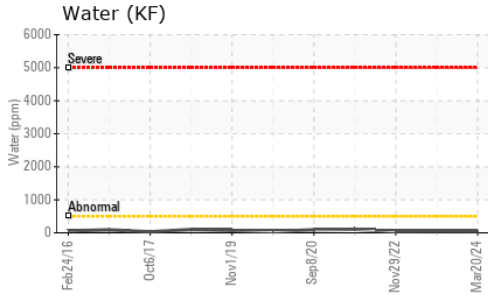
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>0</b>	0	0
Barium	ppm	ASTM D5185m		<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m		<b>1</b>	0	0
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	2
Calcium	ppm	ASTM D5185m		<b>4</b>	2	2
Phosphorus	ppm	ASTM D5185m		<b>639</b>	606	595
Zinc	ppm	ASTM D5185m		<b>89</b>	76	107
Sulfur	ppm	ASTM D5185m		<b>539</b>	557	509

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	<b>3</b>	2	2
Sodium	ppm	ASTM D5185m		<b>0</b>	0	<1
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	1	0
Water	%	ASTM D6304	>0.05	<b>0.004</b>	0.004	0.003
ppm Water	ppm	ASTM D6304	>500	<b>43</b>	49	37.1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	<b>813</b>	1127	2187
Particles >6µm		ASTM D7647	>2500	<b>151</b>	185	374
Particles >14µm		ASTM D7647	>320	<b>11</b>	10	20
Particles >21µm		ASTM D7647	>80	<b>2</b>	2	3
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>17/14/11</b>	17/15/10	18/16/11



# OIL ANALYSIS REPORT

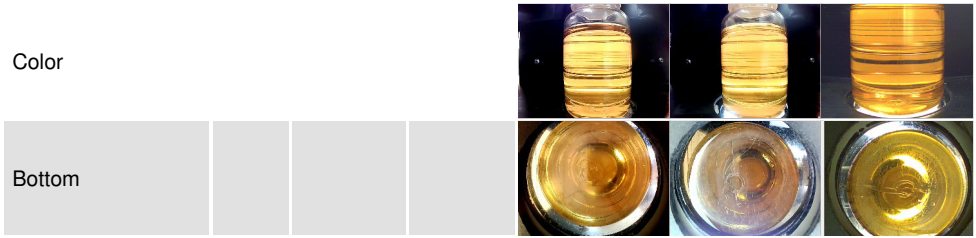


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.13</b>	0.14	0.14

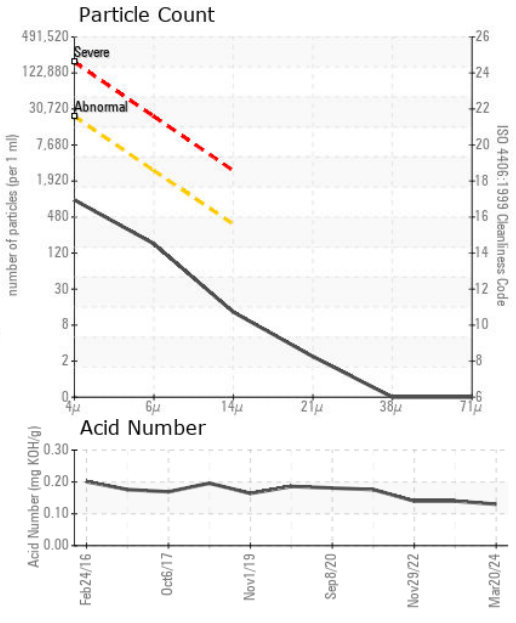
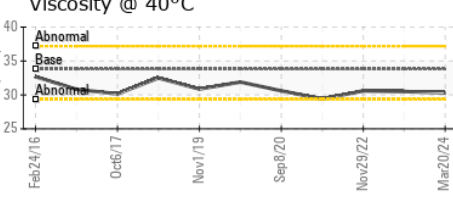
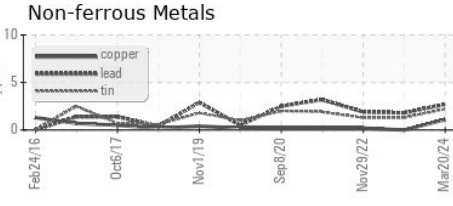
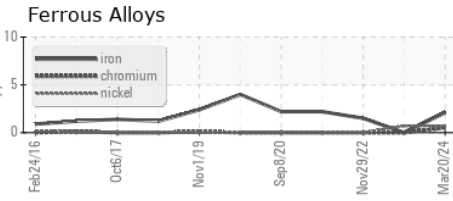
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	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	33.8	<b>30.3</b>	30.5	30.6

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : NX015568 **Received** : 01 Apr 2024  
**Lab Number** : **06135634** **Tested** : 04 Apr 2024  
**Unique Number** : 10955099 **Diagnosed** : 04 Apr 2024 - Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: KF, PQ )

**NORDEX USA - Chicago**  
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 CHICAGO, IL 60606  
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 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)