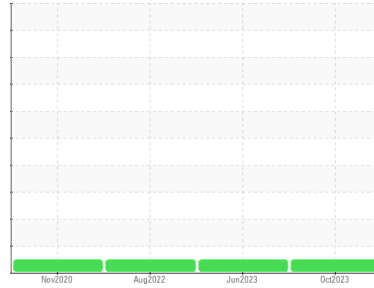




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**RIPPEY [200005325]**  
 Machine Id  
**82215 SITE 14**  
 Component  
**Hydraulic System**  
 Fluid  
**SHELL TELLUS S4 VX 32 (60 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>NX05999818</b>  | NX05913492  | NX05672223  |
| Sample Date   | Client Info |             | <b>19 Oct 2023</b> | 27 Jun 2023 | 25 Aug 2022 |
| 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      | NORMAL      |

## WEAR METALS

|          | method     | limit/base      | current      | history1 | history2 |
|----------|------------|-----------------|--------------|----------|----------|
| PQ       | ASTM D8184 |                 | <b>9</b>     | 12       | 7        |
| Iron     | ppm        | ASTM D5185m >20 | <b>&lt;1</b> | 2        | 2        |
| Chromium | ppm        | ASTM D5185m >20 | <b>0</b>     | 0        | 0        |
| Nickel   | ppm        | ASTM D5185m >20 | <b>0</b>     | 0        | 0        |
| Titanium | ppm        | ASTM D5185m     | <b>0</b>     | 0        | 0        |
| Silver   | ppm        | ASTM D5185m     | <b>0</b>     | 0        | 0        |
| Aluminum | ppm        | ASTM D5185m >20 | <b>0</b>     | <1       | 0        |
| Lead     | ppm        | ASTM D5185m >20 | <b>3</b>     | 2        | 2        |
| Copper   | ppm        | ASTM D5185m >20 | <b>0</b>     | <1       | <1       |
| Tin      | ppm        | ASTM D5185m >20 | <b>2</b>     | 2        | 2        |
| Antimony | ppm        | ASTM D5185m     | <b>---</b>   | ---      | ---      |
| Vanadium | ppm        | ASTM D5185m     | <b>0</b>     | <1       | 0        |
| Cadmium  | ppm        | ASTM D5185m     | <b>0</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>0</b>   | 0        | 0        |
| Manganese  | ppm    | ASTM D5185m | <b>0</b>   | <1       | <1       |
| Magnesium  | ppm    | ASTM D5185m | <b>0</b>   | 0        | 1        |
| Calcium    | ppm    | ASTM D5185m | <b>0</b>   | 0        | <1       |
| Phosphorus | ppm    | ASTM D5185m | <b>599</b> | 563      | 526      |
| Zinc       | ppm    | ASTM D5185m | <b>135</b> | 164      | 158      |
| Sulfur     | ppm    | ASTM D5185m | <b>524</b> | 697      | 624      |

## CONTAMINANTS

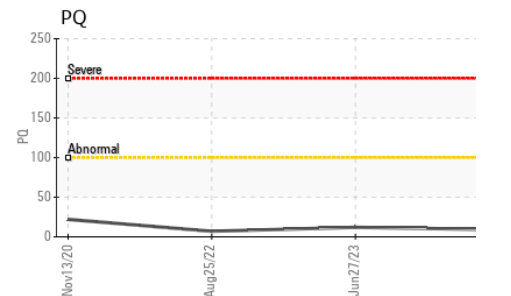
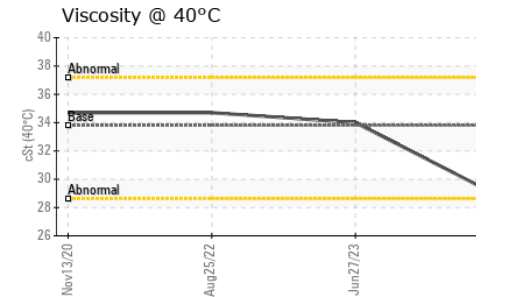
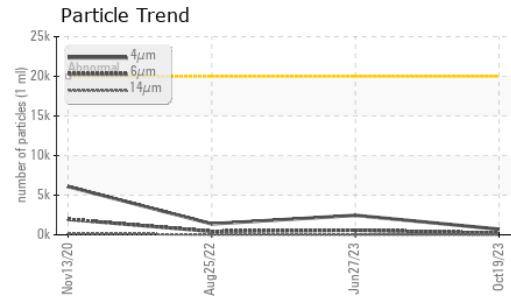
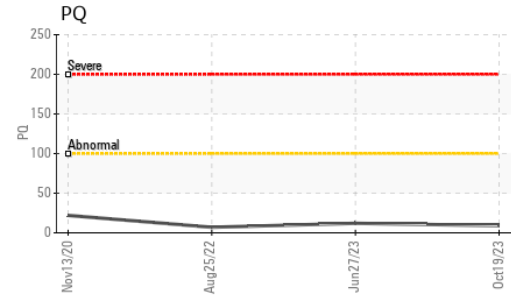
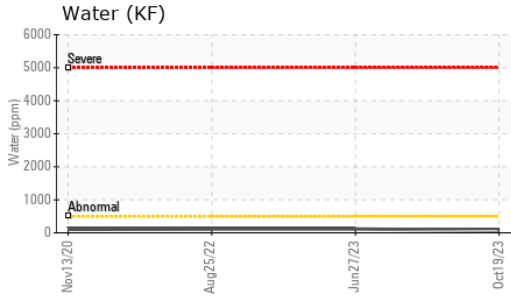
|           | method | limit/base       | current      | history1 | history2 |
|-----------|--------|------------------|--------------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >15  | <b>3</b>     | 3        | 4        |
| Sodium    | ppm    | ASTM D5185m      | <b>&lt;1</b> | <1       | 0        |
| Potassium | ppm    | ASTM D5185m >20  | <b>0</b>     | 0        | <1       |
| Water     | %      | ASTM D6304 >0.05 | <b>0.007</b> | 0.011    | 0.011    |
| ppm Water | ppm    | ASTM D6304 >500  | <b>78.7</b>  | 114.9    | 114.8    |

## FLUID CLEANLINESS

|                 | method       | limit/base | current         | history1 | history2 |
|-----------------|--------------|------------|-----------------|----------|----------|
| Particles >4µm  | ASTM D7647   | >20000     | <b>709</b>      | 2459     | 1382     |
| Particles >6µm  | ASTM D7647   | >2500      | <b>205</b>      | 579      | 431      |
| Particles >14µm | ASTM D7647   | >320       | <b>16</b>       | 23       | 34       |
| Particles >21µm | ASTM D7647   | >80        | <b>5</b>        | 7        | 7        |
| Particles >38µm | ASTM D7647   | >20        | <b>1</b>        | 0        | 1        |
| Particles >71µm | ASTM D7647   | >4         | <b>0</b>        | 0        | 0        |
| Oil Cleanliness | ISO 4406 (c) | >21/18/15  | <b>17/15/11</b> | 18/16/12 | 18/16/12 |



# OIL ANALYSIS REPORT

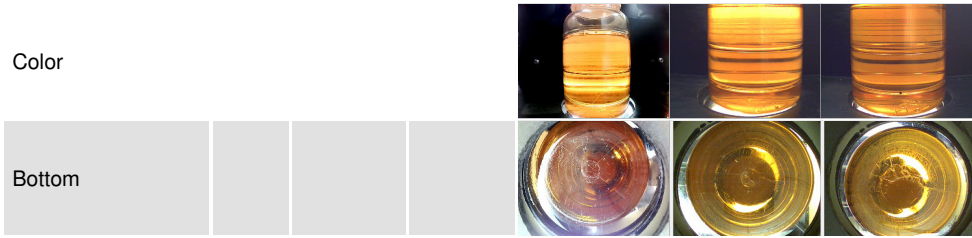


| FLUID DEGRADATION |          | method     | limit/base | current     | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN)  | mg KOH/g | ASTM D8045 |            | <b>0.15</b> | 0.23     | 0.21     |

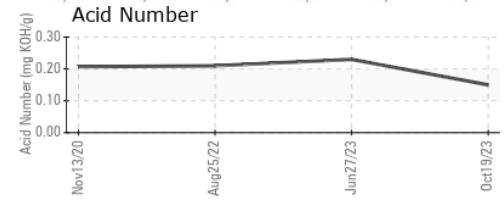
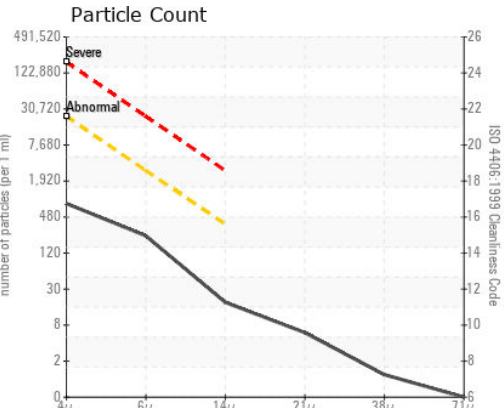
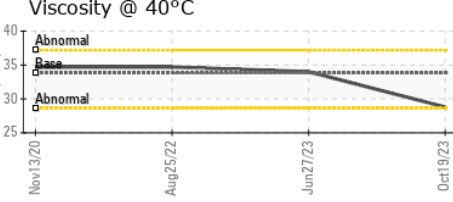
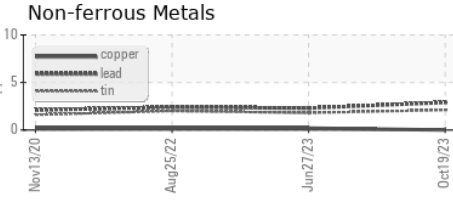
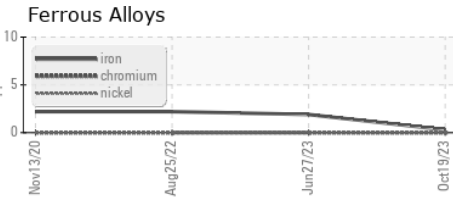
| VISUAL           |        | method  | limit/base | current      | history1 | history2 |
|------------------|--------|---------|------------|--------------|----------|----------|
| White Metal      | scalar | *Visual | NONE       | <b>NONE</b>  | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual | 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>28.8</b> | 34.0     | 34.7     |

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



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : NX05999818 **Received** : 06 Nov 2023  
**Lab Number** : 05999818 **Diagnosed** : 08 Nov 2023  
**Unique Number** : 10728178 **Diagnostician** : Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: KF, PQ )

**NORDEX USA - Chicago**  
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 CHICAGO, IL  
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 Contact: DEVIN LINEHAN  
 DLinehan@nordex-online.com  
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 F: (312)386-7102

Certificate L2367  
 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)