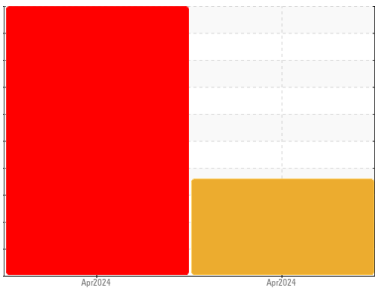
# OIL ANALYSIS REPORT

Sample Rating Trend




**WEAR**

Area
## CAMERON [200009496]
Machine Id
## 45WEA22226
Component
**Hydraulic System**
Fluid
**SHELL TELLUS S2 VX 32 (--- LTR)**

## DIAGNOSIS

**Recommendation**
We recommend you service the filters on this component. Resample at the next service interval to monitor.

**Wear**
The iron level is abnormal. All other component wear rates are normal.

**Contamination**
There is a high amount of particulates present in the oil. There is a moderate amount of visible silt present in the sample.

**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 | | **NX06178738** | NX06178737 | --- |
| Sample Date | | Client Info | | **26 Apr 2024** | 25 Apr 2024 | --- |
| Machine Age | hrs | Client Info | | **0** | 0 | --- |
| Oil Age | hrs | Client Info | | **0** | 0 | --- |
| Oil Changed | | Client Info | | **N/A** | N/A | --- |
| Sample Status | | | | **ABNORMAL** | SEVERE | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| PQ | | ASTM D8184 | | **28** | 15 | --- |
| Iron | ppm | ASTM D5185m | >20 | ▲ **28** | ▲ 29 | --- |
| Chromium | ppm | ASTM D5185m | >20 | **<1** | <1 | --- |
| Nickel | ppm | ASTM D5185m | >20 | **0** | 0 | --- |
| Titanium | ppm | ASTM D5185m | | **0** | 0 | --- |
| Silver | ppm | ASTM D5185m | | **0** | 0 | --- |
| Aluminum | ppm | ASTM D5185m | >20 | **0** | 0 | --- |
| Lead | ppm | ASTM D5185m | >20 | **0** | 0 | --- |
| Copper | ppm | ASTM D5185m | >20 | **0** | 0 | --- |
| Tin | ppm | ASTM D5185m | >20 | **0** | 0 | --- |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | --- |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **0** | 0 | --- |
| Barium | ppm | ASTM D5185m | | **0** | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | | **0** | 0 | --- |
| Manganese | ppm | ASTM D5185m | | **<1** | <1 | --- |
| Magnesium | ppm | ASTM D5185m | | **50** | 51 | --- |
| Calcium | ppm | ASTM D5185m | | **16** | 17 | --- |
| Phosphorus | ppm | ASTM D5185m | | **296** | 299 | --- |
| Zinc | ppm | ASTM D5185m | | **327** | 332 | --- |
| Sulfur | ppm | ASTM D5185m | | **4538** | 4653 | --- |

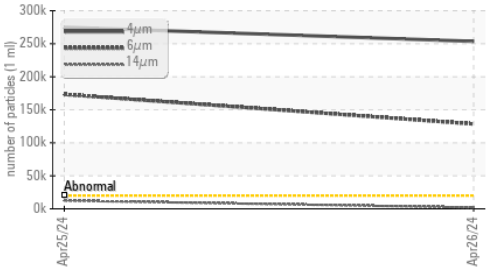
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >15 | **0** | 0 | --- |
| Sodium | ppm | ASTM D5185m | | **<1** | <1 | --- |
| Potassium | ppm | ASTM D5185m | >20 | **<1** | 1 | --- |
| Water | % | ASTM D6304 | >0.05 | **0.011** | 0.008 | --- |
| ppm Water | ppm | ASTM D6304 | >500 | **111** | 90 | --- |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >20000 | ▲ **253585** | ▲ 274894 | --- |
| Particles >6µm | | ASTM D7647 | >2500 | ▲ **128454** | ▲ 173227 | --- |
| Particles >14µm | | ASTM D7647 | >320 | ▲ **1929** | ▲ 12426 | --- |
| Particles >21µm | | ASTM D7647 | >80 | ▲ **168** | ▲ 1955 | --- |
| Particles >38µm | | ASTM D7647 | >20 | **3** | ● 32 | --- |
| Particles >71µm | | ASTM D7647 | >4 | **0** | 0 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >21/18/15 | ▲ **25/24/18** | ▲ 25/25/21 | --- |

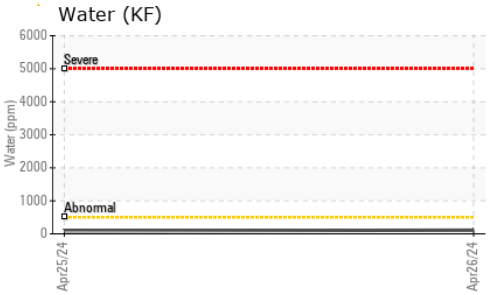
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | **0.39** | 0.40 | --- |

# OIL ANALYSIS REPORT

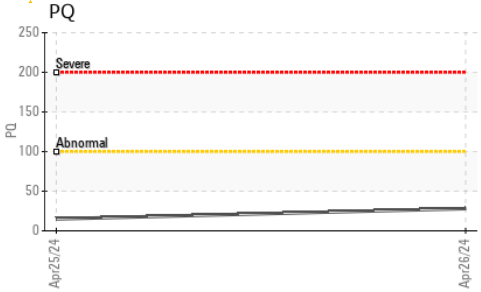
▲ Particle Trend



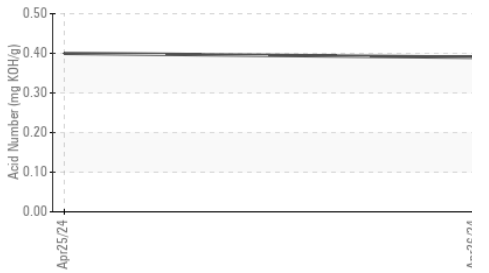

Water (KF)



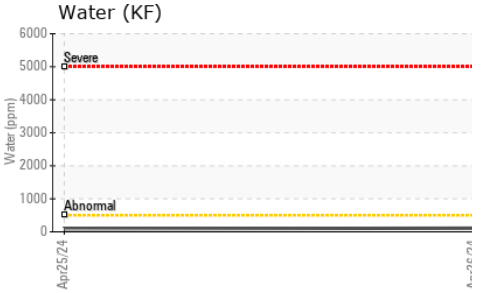

PQ




Acid Number




Water (KF)



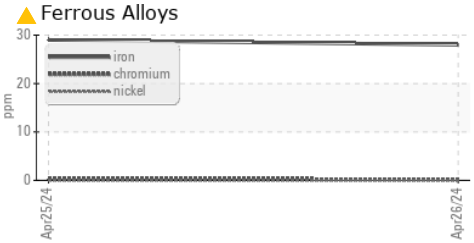

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Silt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

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 32 | **32.4** | ▲ 115 | --- |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  |  | *no image* |
| Bottom | | |  |  | *no image* |

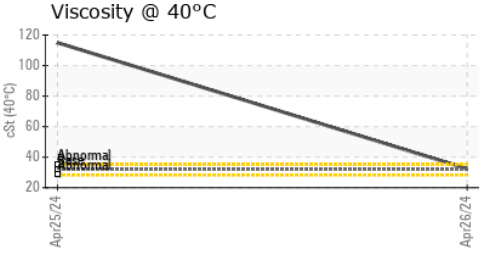
## GRAPHS

▲ Ferrous Alloys

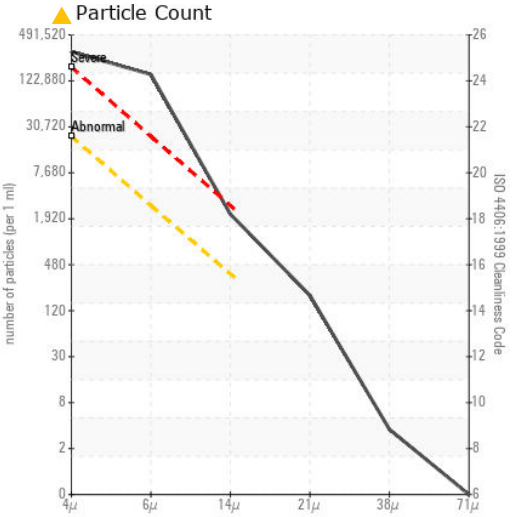



Non-ferrous Metals

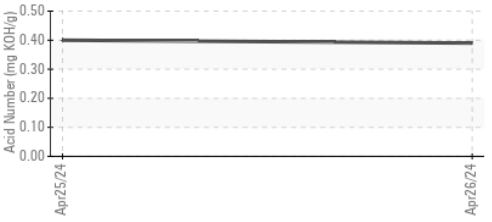

Viscosity @ 40°C




▲ Particle Count




Acid Number





**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : NX06178738
**Lab Number** : 06178738
**Unique Number** : 11030064
**Test Package** : IND 2 ( Additional Tests: KF, PQ )

**Received** : 14 May 2024
**Tested** : 15 May 2024
**Diagnosed** : 16 May 2024 - Angela Borella

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)*


**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