



OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area

40 MILE [46004111]

Machine Id

TGY001232 - SHELL OMALA S5 WIND 320 (S/N BM0053)

Component

New (Unused) Oil

Fluid

{not provided} (--- LTR)

DIAGNOSIS

Recommendation

This is a baseline read-out on the submitted sample.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|--------------------|-------------|-------------|------------|--------------------|----------|----------|
| Sample Number | Client Info | | | NX014220 | --- | --- |
| Sample Date | Client Info | | | 18 Jun 2024 | --- | --- |
| Machine Age | hrs | Client Info | | 0 | --- | --- |
| Oil Age | hrs | Client Info | | 0 | --- | --- |
| Oil Changed | Client Info | | | Not Chngd | --- | --- |
| Sample Status | | | | NORMAL | --- | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|-------------|------------|-----------|----------|----------|
| PQ | | ASTM D8184 | | 20 | --- | --- |
| Iron | ppm | ASTM D5185m | | 0 | --- | --- |
| Chromium | ppm | ASTM D5185m | | 0 | --- | --- |
| Nickel | ppm | ASTM D5185m | | 0 | --- | --- |
| Titanium | ppm | ASTM D5185m | | 0 | --- | --- |
| Silver | ppm | ASTM D5185m | | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185m | | 0 | --- | --- |
| Lead | ppm | ASTM D5185m | | 0 | --- | --- |
| Copper | ppm | ASTM D5185m | | 0 | --- | --- |
| Tin | ppm | ASTM D5185m | | 0 | --- | --- |
| Vanadium | ppm | ASTM D5185m | | 0 | --- | --- |
| Cadmium | ppm | ASTM D5185m | | 0 | --- | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | | 0 | --- | --- |
| Barium | ppm | ASTM D5185m | | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185m | | 0 | --- | --- |
| Manganese | ppm | ASTM D5185m | | 0 | --- | --- |
| Magnesium | ppm | ASTM D5185m | | <1 | --- | --- |
| Calcium | ppm | ASTM D5185m | | 3 | --- | --- |
| Phosphorus | ppm | ASTM D5185m | | 501 | --- | --- |
| Zinc | ppm | ASTM D5185m | | 0 | --- | --- |
| Sulfur | ppm | ASTM D5185m | | 3982 | --- | --- |

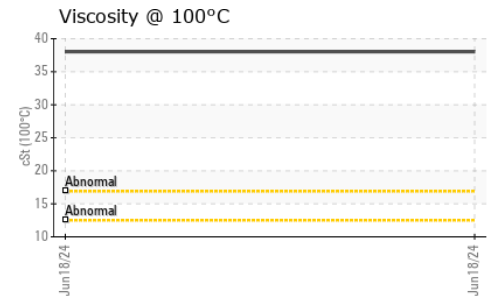
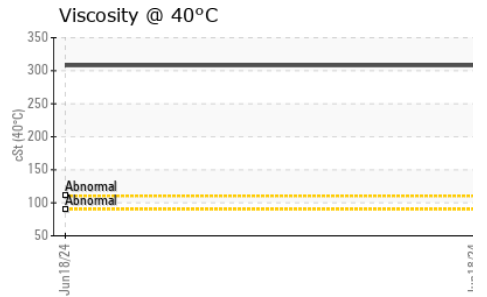
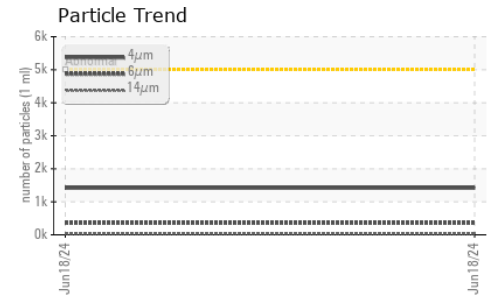
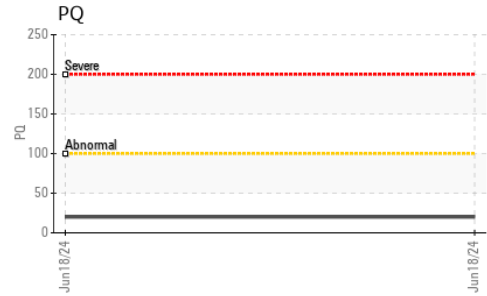
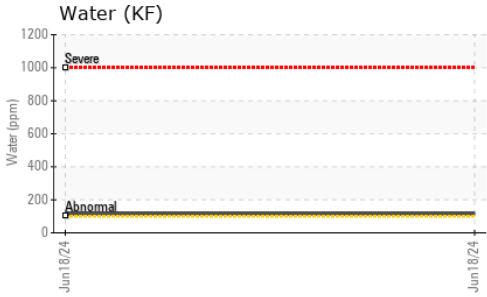
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m | | 2 | --- | --- |
| Sodium | ppm | ASTM D5185m | | 1 | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | 0 | --- | --- |
| Water | % | ASTM D6304 | | 0.011 | --- | --- |
| ppm Water | ppm | ASTM D6304 | | 114 | --- | --- |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|-------------------|--|--------------|------------|-----------------|----------|----------|
| Particles >4µm | | ASTM D7647 | >5000 | 1418 | --- | --- |
| Particles >6µm | | ASTM D7647 | >1300 | 358 | --- | --- |
| Particles >14µm | | ASTM D7647 | >160 | 34 | --- | --- |
| Particles >21µm | | ASTM D7647 | >40 | 11 | --- | --- |
| Particles >38µm | | ASTM D7647 | >10 | 5 | --- | --- |
| Particles >71µm | | ASTM D7647 | >3 | 0 | --- | --- |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | 18/16/12 | --- | --- |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 0.96 | --- | --- |



OIL ANALYSIS REPORT



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

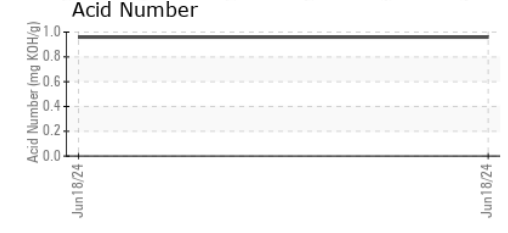
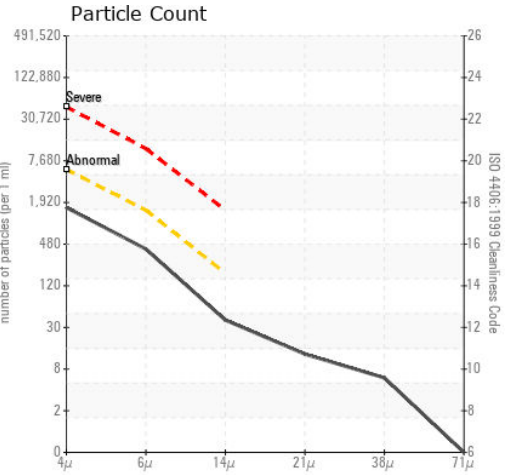
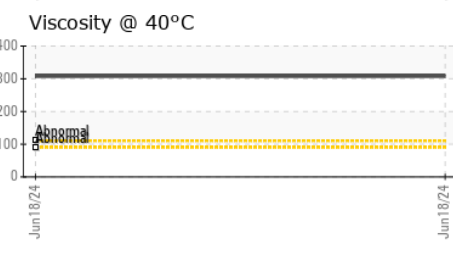
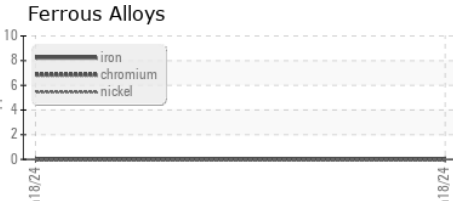
| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|----------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 307.9 | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | 38.03 | --- | --- |
| Viscosity Index (VI) | Scale | ASTM D2270 | 174 | --- | --- |

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

Color

| | | |
|---------------|----------|----------|
| | no image | no image |
| Bottom | | no image |

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : NX014220
Lab Number : 06234383
Unique Number : 11123217
Test Package : IND 2 (Additional Tests: FT-IR, ICP-NewOil, KF, KV100, PQ, PrtCount, VI)

NORDEX USA - Chicago
 300 SOUTH WACKER DRIVE, SUITE 1500
 CHICAGO, IL 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)