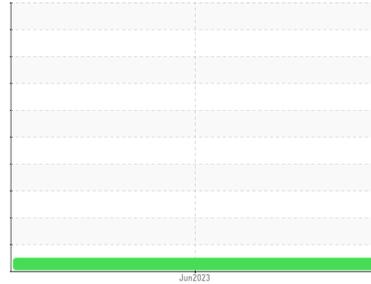




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
#10 CONVERTOR DRIVE
 Component
Drive
 Fluid
{not provided} (--- GAL)

DIAGNOSIS

Recommendation

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

Wear

{not applicable}

Contamination

{not applicable}

Fluid Condition

{not applicable}

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|--------------------|-------------|-------------|------------|--------------------|----------|----------|
| Sample Number | Client Info | | | WC | --- | --- |
| Sample Date | Client Info | | | 11 Jun 2023 | --- | --- |
| Machine Age | hrs | Client Info | | 0 | --- | --- |
| Oil Age | hrs | Client Info | | 0 | --- | --- |
| Oil Changed | Client Info | | | N/A | --- | --- |
| Sample Status | | | | NORMAL | --- | --- |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---------------|-----------|--------|------------|------------|----------|----------|
| Water | WC Method | | >0.2 | NEG | --- | --- |

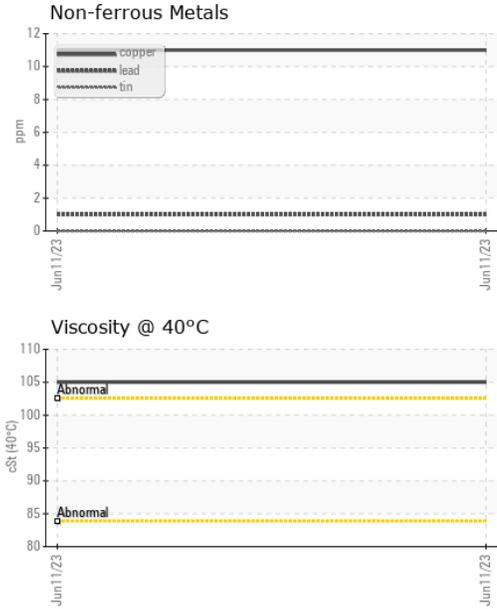
| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|---------------|------------|-----------|----------|----------|
| Iron | ppm | ASTM D5185(m) | >200 | 30 | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >10 | 0 | --- | --- |
| Nickel | ppm | ASTM D5185(m) | >10 | 0 | --- | --- |
| Titanium | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Silver | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Lead | ppm | ASTM D5185(m) | | 1 | --- | --- |
| Copper | ppm | ASTM D5185(m) | | 11 | --- | --- |
| Tin | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Antimony | ppm | ASTM D5185(m) | >5 | 0 | --- | --- |
| Vanadium | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Beryllium | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Cadmium | ppm | ASTM D5185(m) | | 0 | --- | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|---------------|------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Barium | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Manganese | ppm | ASTM D5185(m) | | <1 | --- | --- |
| Magnesium | ppm | ASTM D5185(m) | | <1 | --- | --- |
| Calcium | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) | | 11 | --- | --- |
| Zinc | ppm | ASTM D5185(m) | | 8 | --- | --- |
| Sulfur | ppm | ASTM D5185(m) | | 433 | --- | --- |
| Lithium | ppm | ASTM D5185(m) | | <1 | --- | --- |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|---------------|------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185(m) | | <1 | --- | --- |
| Sodium | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | <1 | --- | --- |



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 | VLITE | --- |
| Sand/Dirt | scalar | Visual* | NONE | NONE | --- |
| Appearance | scalar | Visual* | NORML | NORML | --- |
| Odor | scalar | Visual* | NORML | NORML | --- |
| Emulsified Water | scalar | Visual* | >0.2 | NEG | --- |
| Free Water | scalar | Visual* | | NEG | --- |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|---------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D7279(m) | 105 | --- | --- |

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

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

| GRAPHS |
|--------|
|--------|



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC
Lab Number : 02563508
Unique Number : 5592549
Test Package : TEST (Additional Tests: ICP, KV40, Spat)

Vale - Copper Cliff Smelter
 COPPER CLIFF SMELTER WAREHOUSE, 155 BALSAM ST.
 COPPER CLIFF, ON
 CA P0M 1N0
 Contact: Jacynthe Gelinat
 jacynthe.gelinat@vale.com
 T: (705)682-5980
 F: (705)682-6535

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.