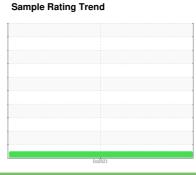


OIL ANALYSIS REPORT



NORMAL



Machine Id Component **Unknown Component** EP 320 (--- GAL)

Recommendation

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) EP 320. Please confirm. Please provide more complete information on your next sample. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the sample.

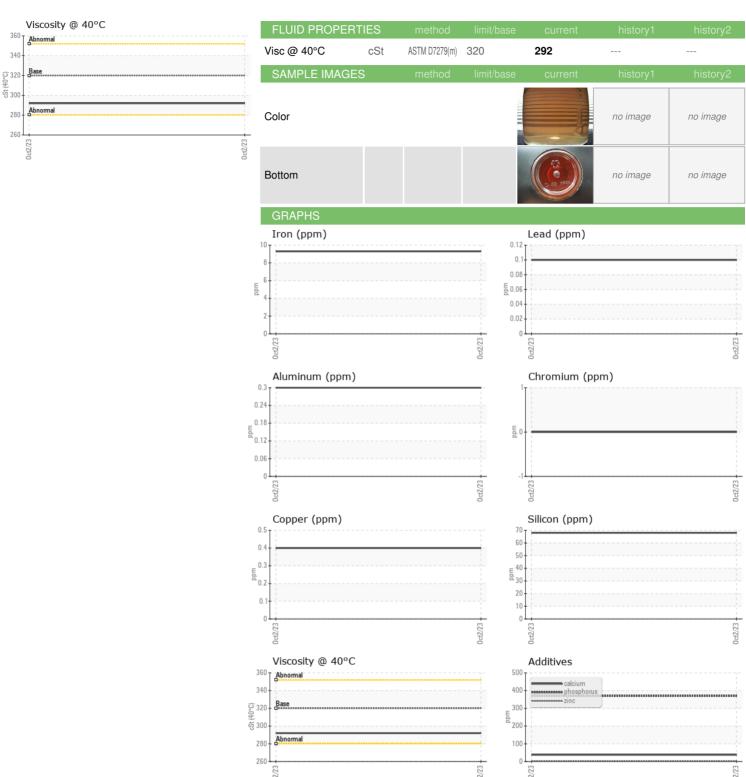
Fluid Condition

The condition of the sample is acceptable for the time in service.

| | | | | 0ct2023 | | |
|------------------|--------|---------------|--------------|-------------|----------|----------|
| SAMPLE INFORM | MATION | method | limit/base | current | history1 | history2 |
| | IATION | | IIIIIIIIIIII | | • | Historyz |
| Sample Number | | Client Info | | WC0799294 | | |
| Sample Date | la una | Client Info | | 02 Oct 2023 | | |
| Machine Age | hrs | Client Info | | 0 | | |
| Oil Age | hrs | Client Info | | N/A | | |
| Oil Changed | | Cilent inio | | NORMAL | | |
| Sample Status | | | | NORWAL | | |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185(m) | | 9 | | |
| Chromium | ppm | ASTM D5185(m) | | 0 | | |
| Nickel | ppm | ASTM D5185(m) | | <1 | | |
| Titanium | ppm | ASTM D5185(m) | | 0 | | |
| Silver | ppm | ASTM D5185(m) | | <1 | | |
| Aluminum | ppm | ASTM D5185(m) | | <1 | | |
| Lead | ppm | ASTM D5185(m) | | <1 | | |
| Copper | ppm | ASTM D5185(m) | | <1 | | |
| Tin | ppm | ASTM D5185(m) | | 0 | | |
| Antimony | ppm | ASTM D5185(m) | | 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) | | 26 | | |
| Barium | ppm | ASTM D5185(m) | | <1 | | |
| Molybdenum | ppm | ASTM D5185(m) | | 0 | | |
| Manganese | ppm | ASTM D5185(m) | | 0 | | |
| Magnesium | ppm | ASTM D5185(m) | | <1 | | |
| Calcium | ppm | ASTM D5185(m) | | 38 | | |
| Phosphorus | ppm | ASTM D5185(m) | | 370 | | |
| Zinc | ppm | ASTM D5185(m) | | 3 | | |
| Sulfur | ppm | ASTM D5185(m) | | 4344 | | |
| Lithium | ppm | ASTM D5185(m) | | <1 | | |
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185(m) | | 68 | | |
| Sodium | ppm | ASTM D5185(m) | | 8 | | |
| Potassium | ppm | ASTM D5185(m) | >20 | 0 | | |
| 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 | VLITE | | |
| Appearance | scalar | Visual* | NORML | NORML | | |
| Odor | scalar | Visual* | NORML | NORML | | |
| Emulsified Water | scalar | Visual* | | NEG | | |
| Free Water | scalar | Visual* | | NEG | | |



OIL ANALYSIS REPORT





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number

: WC0799294

: 02587346 : 5656412 Test Package : MOB 1

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 : 05 Oct 2023 Received Diagnosed : 06 Oct 2023

Diagnostician : Kevin Marson

Vale - Copper Cliff Smelter COPPER CLIFF SMELTER WAREHOUSE, 155 BALSAM ST.

COPPER CLIFF, ON CA P0M 1N0 Contact: Jacynthe Gelinas

jacynthe.gelinas@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.