



OIL ANALYSIS REPORT

| | |
|-----------------|-----------|
| WEAR | NORMAL |
| CONTAMINATION | ATTENTION |
| FLUID CONDITION | NORMAL |

Area

Funicular

Machine Id

Drive RM Hyd

Component

Hydraulic System

Fluid

TUXTON PREMIUM HYDRAULIC AW 22 (15 LTR)

RECOMMENDATION

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

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | WC0868692 | WC0717183 | WC0627556 |
| Sample Date | | Client Info | | 03 Jan 2024 | 24 Jan 2023 | 03 Feb 2022 |
| Machine Age | hrs | Client Info | | 2058 | 1741 | 10 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Not Changd | Not Changd | N/A |
| Filter Changed | | Client Info | | None | None | N/A |
| Sample Status | | | | ATTENTION | ABNORMAL | ABNORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|---------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185(m) | >20 | 5 | <1 | <1 |
| Chromium | ppm | ASTM D5185(m) | >10 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185(m) | >10 | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185(m) | | 0 | <1 | 0 |
| Silver | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >10 | <1 | 0 | <1 |
| Lead | ppm | ASTM D5185(m) | >10 | <1 | <1 | 2 |
| Copper | ppm | ASTM D5185(m) | >75 | 2 | 2 | 3 |
| Tin | ppm | ASTM D5185(m) | >10 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| White Metal | scalar | Visual* | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | Visual* | NONE | NONE | NONE | NONE |

CONTAMINATION

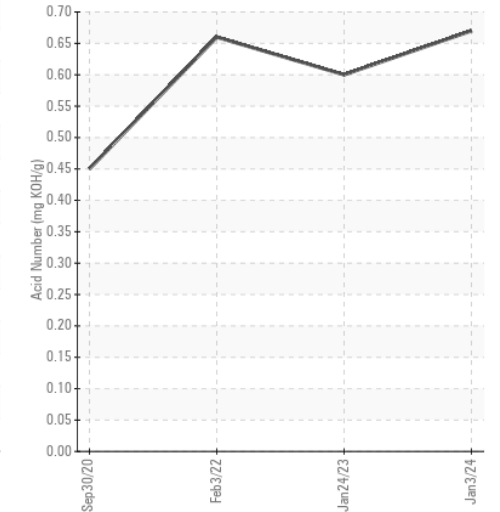
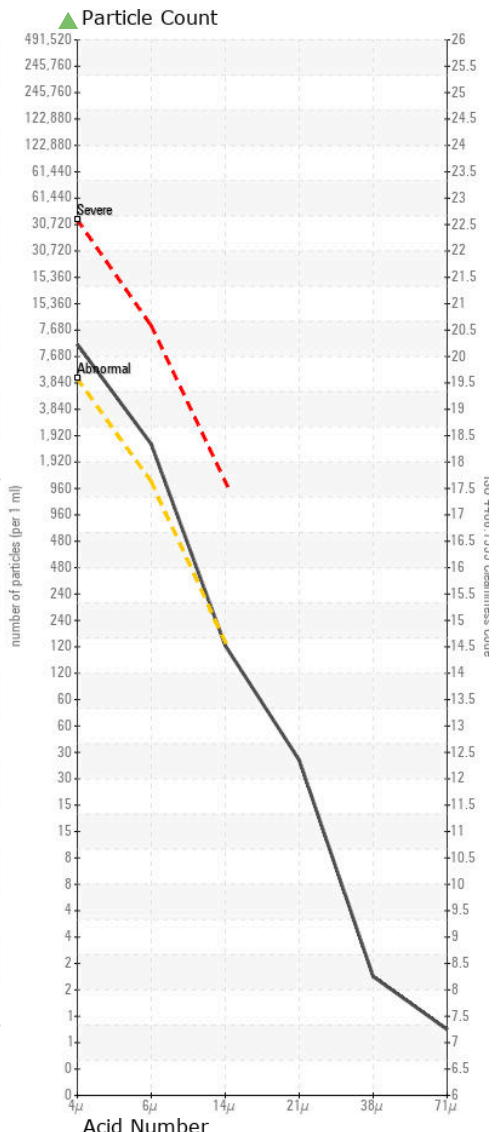
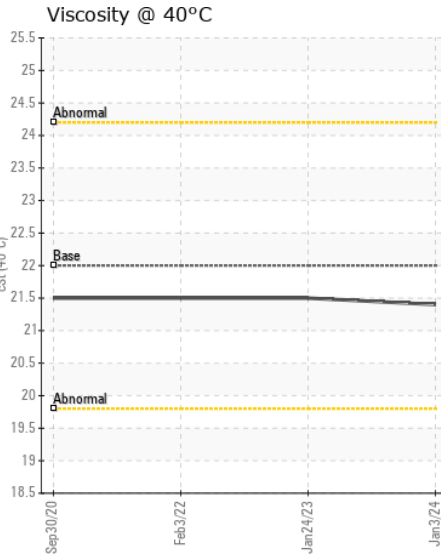
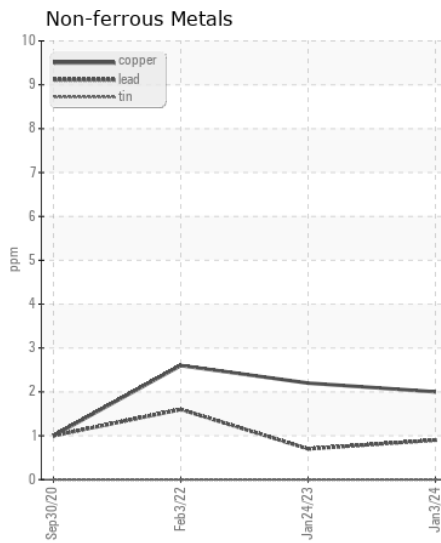
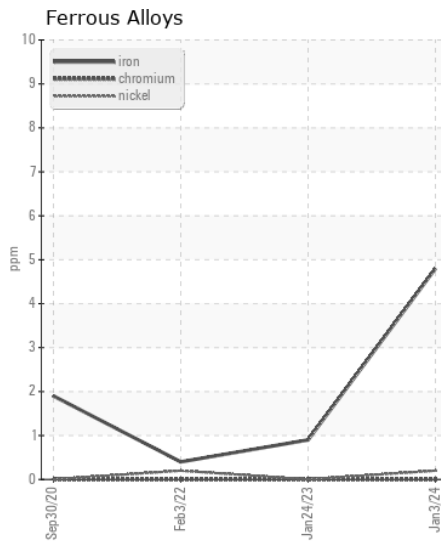
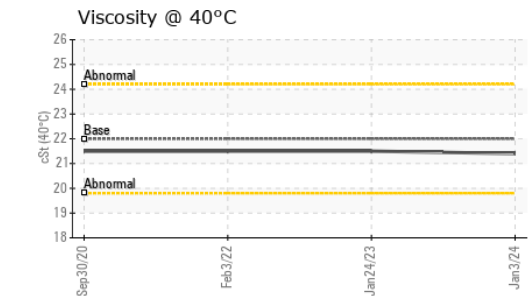
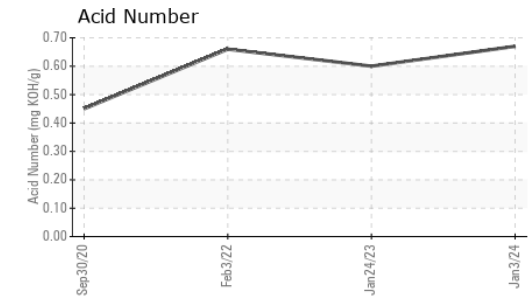
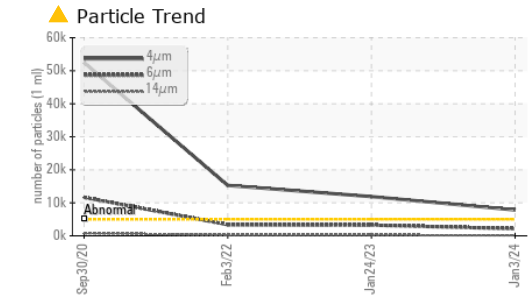
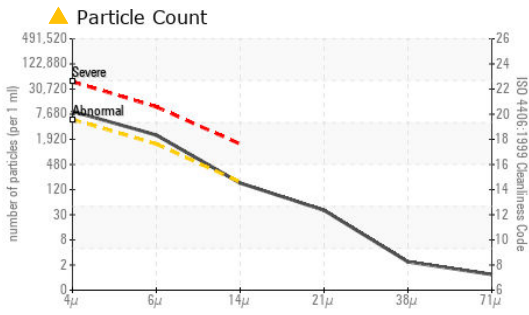
There is a light amount of silt (particulates < 14 microns in size) present in the oil.

| | | | | | | |
|------------------|--------|---------------|-----------|-------------------|------------|------------|
| Silicon | ppm | ASTM D5185(m) | >20 | <1 | <1 | <1 |
| Potassium | ppm | ASTM D5185(m) | >20 | 1 | 0 | <1 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Particles >4µm | | ASTM D7647 | >5000 | ▲ 7841 | ▲ 11879 | ▲ 15272 |
| Particles >6µm | | ASTM D7647 | >1300 | ▲ 2123 | ▲ 3247 | ▲ 3374 |
| Particles >14µm | | ASTM D7647 | >160 | 152 | ▲ 190 | ▲ 193 |
| Particles >21µm | | ASTM D7647 | >40 | 34 | 45 | 40 |
| Particles >38µm | | ASTM D7647 | >10 | 2 | 3 | 2 |
| Particles >71µm | | ASTM D7647 | >3 | 1 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | ▲ 20/18/14 | ▲ 21/19/15 | ▲ 21/19/15 |
| Silt | scalar | Visual* | NONE | NONE | NONE | NONE |
| Debris | scalar | Visual* | NONE | NONE | NONE | NONE |
| Sand/Dirt | scalar | Visual* | NONE | NONE | NONE | NONE |
| Appearance | scalar | Visual* | NORML | NORML | NORML | NORML |
| Odor | scalar | Visual* | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | Visual* | >0.1 | NEG | NEG | NEG |

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|---------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185(m) | | <1 | <1 | <1 |
| Boron | ppm | ASTM D5185(m) | | 0 | <1 | <1 |
| Barium | ppm | ASTM D5185(m) | | 0 | 0 | <1 |
| Molybdenum | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185(m) | | <1 | <1 | 0 |
| Calcium | ppm | ASTM D5185(m) | | 8 | 7 | 10 |
| Phosphorus | ppm | ASTM D5185(m) | | 402 | 432 | 409 |
| Zinc | ppm | ASTM D5185(m) | | 492 | 486 | 496 |
| Sulfur | ppm | ASTM D5185(m) | | 1152 | 1123 | 1145 |
| Acid Number (AN) | mg KOH/g | ASTM D974* | | 0.67 | 0.60 | 0.66 |
| Visc @ 40°C | cSt | ASTM D7279(m) | 22.0 | 21.4 | 21.5 | 21.5 |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0868692
Lab Number : 02608182
Unique Number : 5709268
Test Package : MAR 2

Niagara City Cruises (Hornblower)
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 Niagara Falls, ON
 CA L2G 3K9
 Contact: Evan Dubblestyn
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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.