



OIL ANALYSIS REPORT

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

Machine Id

239

Component

Transmission (Auto)

Fluid

CASTROL TRANSYND (--- GAL)

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 | | WC0889101 | WC0866639 | WC0816367 |
| Sample Date | | Client Info | | 03 Jan 2024 | 15 Nov 2023 | 19 Sep 2023 |
| Machine Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Age | hrs | Client Info | | 46723 | 37734 | 28546 |
| Filter Age | hrs | Client Info | | 46723 | 37734 | 28546 |
| Oil Changed | | Client Info | | Not Changd | Not Changd | Not Changd |
| Filter Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | ATTENTION | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|---------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185(m) | >230 | 104 | 99 | 89 |
| Chromium | ppm | ASTM D5185(m) | >2 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185(m) | >5 | <1 | <1 | <1 |
| Titanium | ppm | ASTM D5185(m) | >2 | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | >5 | 0 | <1 | <1 |
| Aluminum | ppm | ASTM D5185(m) | >65 | 33 | 30 | 26 |
| Lead | ppm | ASTM D5185(m) | >55 | 8 | 7 | 7 |
| Copper | ppm | ASTM D5185(m) | >85 | 11 | 10 | 9 |
| Tin | ppm | ASTM D5185(m) | >5 | 3 | 3 | 3 |
| 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

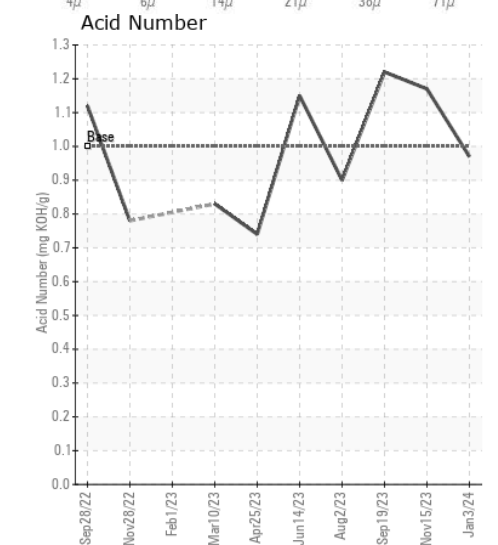
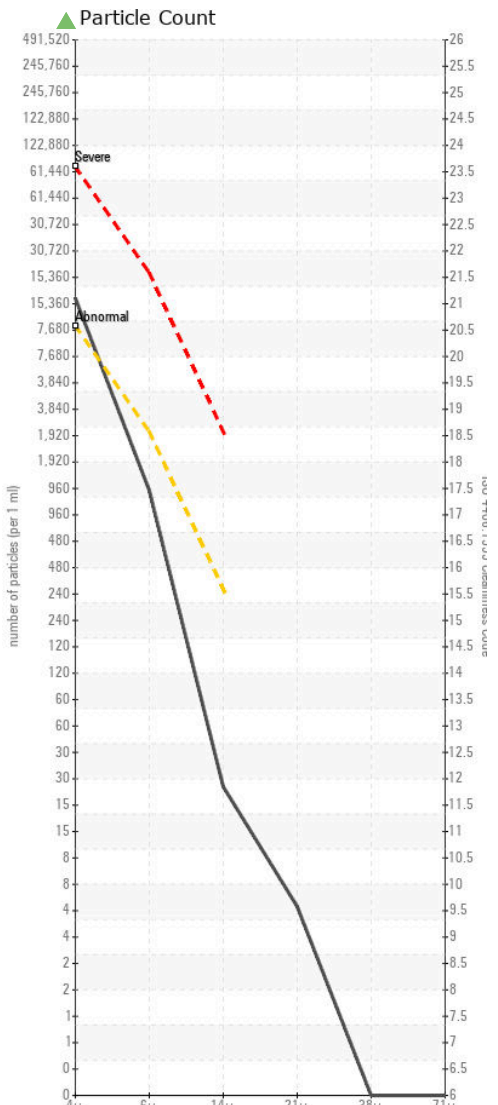
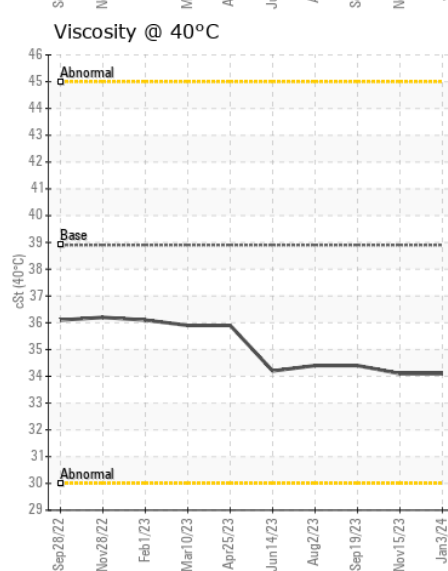
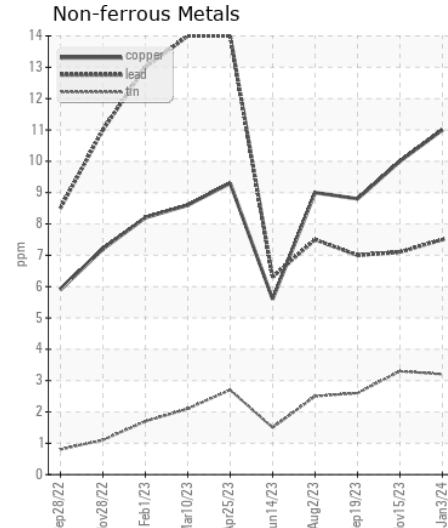
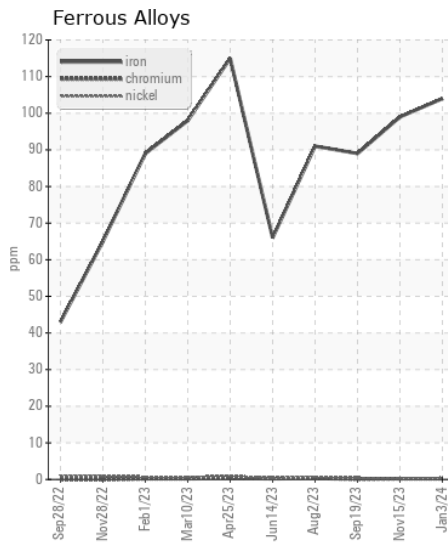
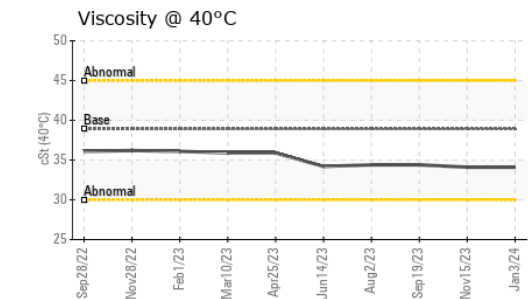
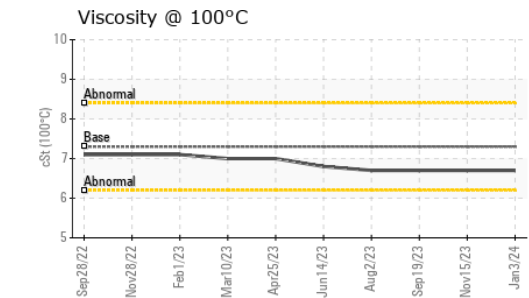
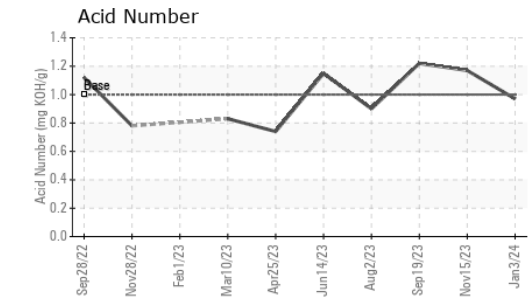
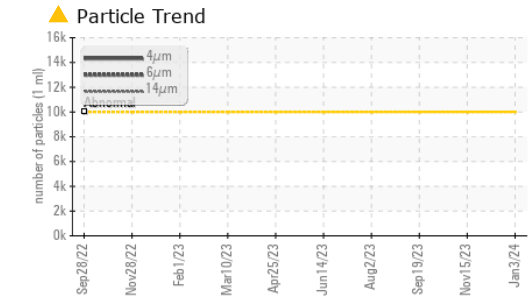
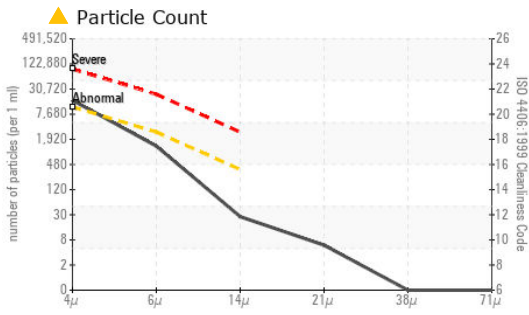
There is a light amount of silt (particulates < 14 microns in size) present in the fluid.

| | | | | | | |
|------------------|--------|---------------|-----------|-------------------|-------|-------|
| Silicon | ppm | ASTM D5185(m) | >20 | 7 | 7 | 6 |
| Potassium | ppm | ASTM D5185(m) | >20 | 2 | 1 | 14 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Particles >4µm | | ASTM D7647 | >10000 | ▲ 14362 | --- | --- |
| Particles >6µm | | ASTM D7647 | >2500 | 1160 | --- | --- |
| Particles >14µm | | ASTM D7647 | >320 | 24 | --- | --- |
| Particles >21µm | | ASTM D7647 | >80 | 5 | --- | --- |
| Particles >38µm | | ASTM D7647 | >20 | 0 | --- | --- |
| Particles >71µm | | ASTM D7647 | >4 | 0 | --- | --- |
| Oil Cleanliness | | ISO 4406 (c) | >20/18/15 | ▲ 21/17/12 | --- | --- |
| 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 fluid is suitable for further service.

| | | | | | | |
|----------------------|----------|---------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185(m) | | 5 | 6 | 6 |
| Boron | ppm | ASTM D5185(m) | 150 | 58 | 61 | 60 |
| Barium | ppm | ASTM D5185(m) | 0 | <1 | <1 | <1 |
| Molybdenum | ppm | ASTM D5185(m) | 0 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185(m) | | 1 | 1 | 1 |
| Magnesium | ppm | ASTM D5185(m) | 0 | 1 | <1 | <1 |
| Calcium | ppm | ASTM D5185(m) | 40 | 100 | 100 | 98 |
| Phosphorus | ppm | ASTM D5185(m) | 320 | 226 | 227 | 222 |
| Zinc | ppm | ASTM D5185(m) | 5 | 6 | 6 | 6 |
| Sulfur | ppm | ASTM D5185(m) | 1050 | 1212 | 1146 | 1141 |
| Acid Number (AN) | mg KOH/g | ASTM D974* | 1.0 | 0.97 | 1.17 | 1.22 |
| Visc @ 40°C | cSt | ASTM D7279(m) | 38.9 | 34.1 | 34.1 | 34.4 |
| Visc @ 100°C | cSt | ASTM D7279(m) | 7.3 | 6.7 | 6.7 | 6.7 |
| Viscosity Index (VI) | Scale | ASTM D2270* | 168 | 157 | 157 | 155 |



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0889101 **Received** : 12 Jan 2024
Lab Number : 02608601 **Diagnosed** : 16 Jan 2024
Unique Number : 5709687 **Diagnostician** : Wes Davis
Test Package : MOB 2 (Additional Tests: KV100, PrtCount, VI)

CITY OF THUNDER BAY
 AUTO MAINTENANCE STORES, 570 FORT WILLIAM ROAD
 THUNDER BAY, ON
 CA P7B 2Z8
 Contact: Sean Malcolm
 sean.malcolm@thunderbay.ca
 T: (807)684-2716
 F: (807)344-0237

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.