

# WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL

#### Machine Id **223-1605** Component **Transmission (Manual)** Filuid **TDTO FLUID SAE 20 (--- 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) TDTO FLUID SAE 20. Please confirm.

Please specify the component make and model with your next sample.

### **WEAR**

All component wear rates are normal.

### CONTAMINATION

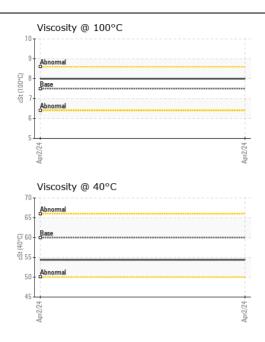
There is no indication of any contamination in the fluid.

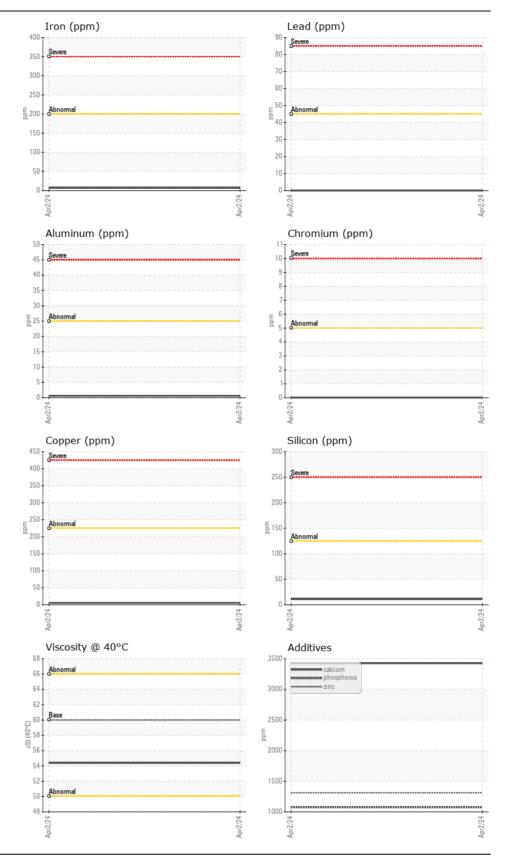
# **FLUID CONDITION**

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

| Test   | UOM  | Method  | Limit/Abn  | Current   | History1     | History2  |
|--|--|---|--|---|--------------|---|
| Sample Number  |  | Client Info   |  | PC0088748   |              |   |
| Sample Date  |  | Client Info   |  | 02 Apr 2024   |              |   |
| Machine Age  | hrs  | Client Info   |  | 13710   |              |   |
| Oil Age  | hrs  | Client Info   |  | 0   |              |   |
| Filter Age   | hrs  | Client Info   |  | 0   |              |   |
| Oil Changed  |  | Client Info   |  | N/A   |              |   |
| Filter Changed   |  | Client Info   |  | N/A   |              |   |
| Sample Status  |  |   |  | NORMAL  |              |   |
| lron   |  |   | . 000  |   |              |   |
| Iron   | ppm  | ASTM D5185(m)   | >200   | 7   |              |   |
| Chromium   | ppm  | ASTM D5185(m)   | >5   | 0   |              |   |
| Nickel   | ppm  | ASTM D5185(m)   | >5   | 0   |              |   |
| Titanium   | ppm  | ASTM D5185(m)   | 7  | 0   |              |   |
| Silver   | ppm  | ASTM D5185(m)   | >7   | 0   |              |   |
| Aluminum   | ppm  | ASTM D5185(m)   | >25  | <1  |              |   |
| Lead   | ppm  | ASTM D5185(m)   | >45  | 0   |              |   |
| Copper   | ppm  | ASTM D5185(m)   | >225   | 6   |              |   |
| Tin  | ppm  | ASTM D5185(m)   | >10  | 0   |              |   |
| Vanadium   | ppm  | ASTM D5185(m)   | NONE   | 0   |              |   |
| White Metal  | scalar   | Visual*   | NONE   | NONE  |              |   |
| Yellow Metal   | scalar   | Visual*   | NONE   | NONE  |              |   |
|  |  |   |  |   |              |   |
| Silicon  | ppm  | ASTM D5185(m)   | >125   | 11  |              |   |
| Silicon<br>Potassium   | ppm<br>ppm   | ASTM D5185(m)<br>ASTM D5185(m)  | >125<br>>20  | 11<br><1  |              |   |
|  | ppm<br>ppm   |   |  |   |              |   |
| Potassium  |  | ASTM D5185(m)   | >20  | <1  |              |   |
| Potassium<br>Water   | ppm  | ASTM D5185(m)<br>WC Method  | >20<br>>0.1  | <1<br>NEG   |              |   |
| Potassium<br>Water<br>Silt   | ppm<br>scalar  | ASTM D5185(m)<br>WC Method<br>Visual*   | >20<br>>0.1<br>NONE  | <1<br>NEG<br>NONE   |              |   |
| Potassium<br>Water<br>Silt<br>Debris   | ppm<br>scalar<br>scalar  | ASTM D5185(m)<br>WC Method<br>Visual*<br>Visual*  | >20<br>>0.1<br>NONE<br>NONE  | <1<br>NEG<br>NONE<br>NONE   | <br>         | <br><br>  |
| Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt  | ppm<br>scalar<br>scalar<br>scalar  | ASTM D5185(m)<br>WC Method<br>Visual*<br>Visual*<br>Visual*   | >20<br>>0.1<br>NONE<br>NONE  | <1<br>NEG<br>NONE<br>NONE<br>NONE   |              | <br><br>  |
| Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance  | ppm<br>scalar<br>scalar<br>scalar<br>scalar  | ASTM D5185(m)<br>WC Method<br>Visual*<br>Visual*<br>Visual*<br>Visual*  | >20<br>>0.1<br>NONE<br>NONE<br>NONE  | <1<br>NEG<br>NONE<br>NONE<br>NONE<br>NORML  | <br><br><br> | <br><br><br>  |
| Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance<br>Odor<br>Emulsified Water  | ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar  | ASTM D5185(m)<br>WC Method<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>Visual*   | >20<br>>0.1<br>NONE<br>NONE<br>NORML<br>NORML  | <1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG  | <br><br><br> | <br><br><br>  |
| Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance<br>Odor<br>Emulsified Water<br>Sodium  | ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar  | ASTM D5185(m)<br>WC Method<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>ASTM D5185(m)   | >20<br>>0.1<br>NONE<br>NONE<br>NORML<br>NORML<br>>0.1  | <1<br>NEG<br>NONE<br>NONE<br>NONE<br>NORML<br>NORML   | <br><br><br> | <br><br><br>  |
| Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance<br>Odor<br>Emulsified Water  | ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar  | ASTM D5185(m)<br>WC Method<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>ASTM D5185(m)<br>ASTM D5185(m)  | >20<br>>0.1<br>NONE<br>NONE<br>NORML<br>NORML<br>>0.1  | <1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG  | <br><br><br> | <br><br><br>  |
| Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance<br>Odor<br>Emulsified Water<br>Sodium<br>Boron<br>Barium   | ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>ppm<br>ppm  | ASTM D5185(m)<br>WC Method<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>ASTM D5185(m)<br>ASTM D5185(m)  | >20<br>>0.1<br>NONE<br>NONE<br>NORML<br>NORML<br>>0.1<br>37<br>7   | <1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br>2<br>71<br><1   | <br><br><br> | <br><br><br>  |
| Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance<br>Odor<br>Emulsified Water<br>Sodium<br>Boron<br>Barium<br>Molybdenum   | ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>ppm<br>ppm  | ASTM D5185(m)<br>WC Method<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)  | >20<br>>0.1<br>NONE<br>NONE<br>NORML<br>NORML<br>>0.1  | <1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br>2<br>71<br><1   |              |   |
| Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance<br>Odor<br>Emulsified Water<br>Sodium<br>Boron<br>Barium<br>Molybdenum<br>Manganese  | ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>ppm<br>ppm  | ASTM D5185(m)<br>WC Method<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)  | >20<br>>0.1<br>NONE<br>NONE<br>NORML<br>>0.1<br>37<br>7<br>5   | <1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br>2<br>71<br><1<br>1<br>0   |              |   |
| Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance<br>Odor<br>Emulsified Water<br>Sodium<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium   | ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>ppm<br>ppm<br>ppm   | ASTM D5185(m)<br>WC Method<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)  | >20<br>>0.1<br>NONE<br>NONE<br>NORML<br>NORML<br>>0.1<br>37<br>7   | <1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br>2<br>71<br><1   |              |   |
| Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance<br>Odor<br>Emulsified Water<br>Sodium<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium   | ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>ppm<br>ppm<br>ppm<br>ppm  | ASTM D5185(m)<br>WC Method<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)   | >20<br>>0.1<br>NONE<br>NONE<br>NORML<br>NORML<br>>0.1<br>37<br>7<br>5<br>5<br>40<br>2650   | <1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br>2<br>71<br><1<br>1<br>0<br>27<br>3427                                 |              |   |
| Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance<br>Odor<br>Emulsified Water<br>Sodium<br>Boron<br>Barium<br>Malybdenum<br>Manganese<br>Magnesium<br>Calcium  | ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm                                   | ASTM D5185(m)<br>WC Method<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)  | <ul> <li>&gt;20</li> <li>&gt;0.1</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>&gt;0.1</li> <li>&gt;0.1</li> <li>37</li> <li>37</li> <li>37</li> <li>5</li> <li>40</li> <li>2650</li> <li>1050</li> </ul>  | <1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br>2<br>71<br><1<br>1<br>0<br>27<br>3427<br>1076                         |              |   |
| Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance<br>Odor<br>Emulsified Water<br>Sodium<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium  | ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm                            | ASTM D5185(m)<br>WC Method<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)   | >20<br>>0.1<br>NONE<br>NONE<br>NONL<br>0.0<br>105<br>37<br>37<br>37<br>37<br>37<br>40<br>2650<br>1050<br>1055  | <1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br>2<br>71<br><1<br>(1)<br>(1)<br>27<br>3427<br>1076<br>1312             |              |   |
| Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance<br>Odor<br>Emulsified Water<br>Sodium<br>Boron<br>Barium<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium<br>Phosphorus<br>Zinc<br>Sulfur | ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm              | ASTM D5185(m)<br>WC Method<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)  | <ul> <li>&gt;20</li> <li>&gt;0.1</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>&gt;0.1</li> <li>&gt;0.1</li> <li>37</li> <li>37</li> <li>37</li> <li>5</li> <li>40</li> <li>2650</li> <li>1050</li> </ul>  | <1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br>2<br>71<br><1<br>(1)<br>0<br>27<br>3427<br>1076<br>1312<br>6330       |              |   |
| Potassium<br>Water<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance<br>Odor<br>Emulsified Water<br>Sodium<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium<br>Phosphorus<br>Zinc<br>Sulfur<br>Visc @ 40°C     | ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>pp | ASTM D5185(m)<br>WC Method<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>ASTM D5185(m)<br>ASTM D5185(m) | <ul> <li>&gt;20</li> <li>&gt;0.1</li> <li>NONE</li> <li>NONE</li> <li>NORML</li> <li>NORML</li> <li>&gt;0.1</li> <l< th=""><th>&lt;1<br/>NEG<br/>NONE<br/>NONE<br/>NORML<br/>NORML<br/>NEG<br/>2<br/>71<br/>&lt;1<br/>1<br/>0<br/>27<br/>3427<br/>1076<br/>1312<br/>6330<br/>54.4</th><th></th><th></th></l<></ul> | <1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br>2<br>71<br><1<br>1<br>0<br>27<br>3427<br>1076<br>1312<br>6330<br>54.4 |              |   |
| PotassiumWaterSiltDebrisSand/DirtAppearanceOdorEmulsified WaterSodiumBoronBariumMolybdenumManganeseMagnesiumCalciumPhosphorusZincSulfur  | ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm              | ASTM D5185(m)<br>WC Method<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>Visual*<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)<br>ASTM D5185(m)  | >20<br>>0.1<br>NONE<br>NONE<br>NORML<br>>0.1<br>37<br>37<br>37<br>5<br>37<br>40<br>2650<br>1050<br>1055<br>5750  | <1<br>NEG<br>NONE<br>NONE<br>NORML<br>NORML<br>NEG<br>2<br>71<br><1<br>(1)<br>0<br>27<br>3427<br>1076<br>1312<br>6330       |              | Image: selection selectio |

2 **114** --- ---Contact/Location: Doug Francis - LAVCLI





LAVIS CONTRACTING Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 CALA Sample No. : PC0088748 Received 37462A HURON ROAD : 03 Apr 2024 Lab Number : 02626450 Tested : 03 Apr 2024 CLINTON, ON ISO 17025:2017 Accredited Unique Number : 5759582 Diagnosed : 03 Apr 2024 - Wes Davis CA NOM 1L0 Laboratory Test Package : MOB 1 (Additional Tests: KV100, VI) Contact: Doug Francis To discuss this sample report, contact Customer Service at 1-800-268-2131. dfrancis@lavis.ca T: (519)482-3694 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab. F: (519)482-7886 Validity of results and interpretation are based on the sample and information as supplied.

Contact/Location: Doug Francis - LAVCLI Page 2 of 2