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WEAR NORMAL CONTAMINATION SEVERE FLUID CONDITION ABNORMAL

# 75 EGLINTON AVE W TORONTO CITY OF TORONTO RG125H037980

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### **Rear Diesel Engine**

ESSO XD-3 EXTRA 15W40 (45 LTR)

#### RECOMMENDATION

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

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Metal levels are typical for a new component breaking in.

### CONTAMINATION

**FLUID CONDITION** 

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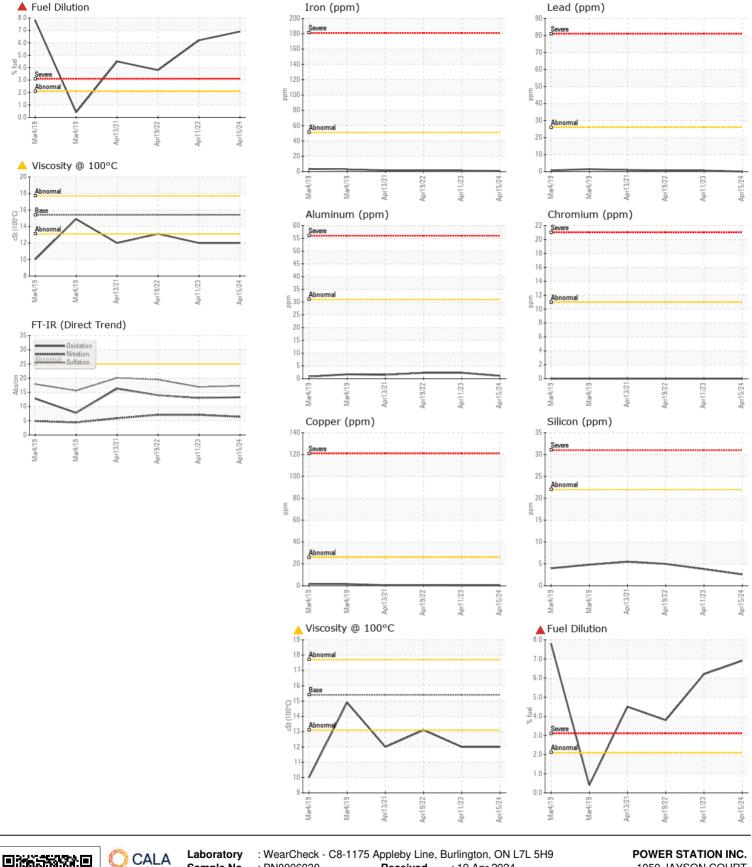
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

The oil is no longer serviceable due to the presence of contaminants.

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Test       UOM       Method       Limit/Abn       Current       History1       History2         Sample Number       Client Info       Client Info       PN0006030       PN0004996       PN0003496         Sample Date       Client Info       15 Apr 2024       11 Apr 2023       19 Apr 2023         Machine Age       hrs       Client Info       267       254       235         Oil Age       hrs       Client Info       0       0       14         Filter Age       hrs       Client Info       Changed       Changed       Changed         Oil Changed       Client Info       Changed       Changed       Changed       Changed         Sample Status       Client Info       Changed       Changed       Changed       Changed         Sample Status       Client Info       SEVERE       ABNORMAL       SEVERE         Iron       ppm       ASTM D5185(m)       >51       <11       1       1         Chromium       ppm       ASTM D5185(m)       >51       0       0       0       0         Silver       ppm       ASTM D5185(m)       >31       1       2       2       2         Lead       ppm       ASTM D5185(m)       >2							
Sample Date         Client Info         Is Apr 2024         11 Apr 2023         19 Apr 2023           Machine Age         hrs         Client Info         267         254         235           Oil Age         hrs         Client Info         0         0         14           Filter Age         hrs         Client Info         0         0         14           Oil Changed         Client Info         Changed         Changed         Changed         Changed           Filter Changed         Client Info         Machine         Changed         Changed         Changed         Changed         Changed           Filter Changed         Client Info         Machine         SEVERE         ABNORMAL         SEVERE           Iron         ppm         ASTM D5185(m)         >51         <1         1         1           Chromium         ppm         ASTM D5185(m)         >51         0         0         0           Nickel         ppm         ASTM D5185(m)         >31         0         0         0           Silver         ppm         ASTM D5185(m)         >26         0         <1         <1           Copper         ppm         ASTM D5185(m)         >26         0							
Machine Age       hrs       Client Info       267       254       235         Oil Age       hrs       Client Info       0       0       14         Filter Age       hrs       Client Info       0       0       14         Oil Changed       Client Info       0       0       14         Oil Changed       Client Info       Changed       Changed       Changed         Filter Changed       Client Info       Changed       Changed       Changed         Sample Status       Client Info       Changed       Changed       Changed         Iron       ppm       ASTM D5185(m)       >51       <1       1       1         Chromium       ppm       ASTM D5185(m)       >51       0       0       0         Nickel       ppm       ASTM D5185(m)       >51       0       0       0         Silver       ppm       ASTM D5185(m)       >31       1       2       2         Lead       ppm       ASTM D5185(m)       >26       0       <1       <1         Copper       ppm       ASTM D5185(m)       >26       0       <1< <td>&lt;1</td> Tin       ppm       ASTM D5185(m)       22	<1						
Oil AgehrsClient InfoImage014Filter AgehrsClient InfoImage014Oil ChangedKClient InfoChangedChangedChangedFilter ChangedImageClient InfoChangedChangedChangedFilter ChangedImageClient InfoChangedChangedChangedSample StatusImageSEVEREABNORMALSEVEREIronppmASTM D5185(m)>51<111ChromiumppmASTM D5185(m)>5100<1NickelppmASTM D5185(m)>500<1SilverppmASTM D5185(m)>3000AluminumppmASTM D5185(m)>31122LeadppmASTM D5185(m)>260<1<1TinppmASTM D5185(m)>260<1<1<NandiumppmASTM D5185(m)>260<1<1<SiliconppmASTM D5185(m)>22345PotassiumppmASTM D5185(m)>22343WaterWC Method0.21NEGNEGNEGGlycolWC Method>0.21NEGNEGNEGSoot %%ASTM D784*33000NitrationAbs/cmASTM D784*>206.47.17.1							
Filter AgehrsClient Info0014Oil ChangedClient InfoChangedChangedChangedChangedFilter ChangedClient InfoChangedChangedChangedChangedSample StatusClient InfoSEVEREABNORMALSEVEREIronppmASTM D5185(m) >51<1111ChromiumppmASTM D5185(m) >51<00<11NickelppmASTM D5185(m) >5500<11TitaniumppmASTM D5185(m) >3000SilverppmASTM D5185(m) >31122LeadppmASTM D5185(m) >260<11<11CopperppmASTM D5185(m) >26<11<1< <td>&lt;11</td> TinppmASTM D5185(m) >26<11<1< <td>&lt;11</td> VanadiumppmASTM D5185(m) >26<11<1< <td>&lt;1</td> VanadiumppmASTM D5185(m) >223<1< <td>&lt;1</td> SiliconppmASTM D5185(m) >223<1<1Fuel%ASTM D5185(m) >223<1<1< <td>&lt;3.8</td> WaterImpMSTM D5185(m) >22Imp<1< <td>&lt;1</td> <1Fuel%ASTM D5185(m) >22Imp<1< <td>&lt;1&lt;</td> <1Fuel%ASTM D5185(m) >22Imp<1<1<1Fuel%ASTM D5185(m) >22Imp<1<1<1Fuel%ASTM D5185(m) >22Imp<1<1	<11	<11	<1	<1	<3.8	<1	<1<
Oil ChangedClient InfoChangedChangedChangedChangedFilter ChangedClient InfoIChangedChangedChangedChangedSample StatusSEVEREABNORMALSEVEREIronppmASTM D5185(m)>51<111ChromiumppmASTM D5185(m)>5100<1NickelppmASTM D5185(m)>500<1TitaniumppmASTM D5185(m)>3000SilverppmASTM D5185(m)>3000AluminumppmASTM D5185(m)>260<1<1CopperppmASTM D5185(m)>260<1<1TinppmASTM D5185(m)>260<1<1SiliconppmASTM D5185(m)>22345PotassiumppmASTM D5185(m)>2234.5Fuel%ASTM D5185(m)>2234.5GlycolppmASTM D5185(m)>223.6,2.3,3WaterQuQuQu.0.5.5.5GlycolWC Method.0,21NEGNEGNEGSoot %%ASTM D7844*>3Qu.0.5NitrationAbs/cmASTM D7624*206.4.1.7,1NitrationAbs/cmASTM D7624*206.4.1.7,1 </th							
Filter Changed       Client Info       Changed       SEVERE       ABNORMAL       SEVERE         Iron       ppm       ASTM D5185(m)       >51       <1       1       1       1         Chromium       ppm       ASTM D5185(m)       >51       <1       1       1       1         Chromium       ppm       ASTM D5185(m)       >51       0       0       <1       1         Nickel       ppm       ASTM D5185(m)       >5       0       0       <1       0							
Sample Status       SEVERE       ABNORMAL       SEVERE         Iron       ppm       ASTM D5185(m) >51       <1       1       1         Chromium       ppm       ASTM D5185(m) >51       0       0       0         Nickel       ppm       ASTM D5185(m) >5       0       0       <11         Titanium       ppm       ASTM D5185(m) >5       0       0       <11         Titanium       ppm       ASTM D5185(m) >5       0       0       0         Silver       ppm       ASTM D5185(m) >3       0       0       0         Aluminum       ppm       ASTM D5185(m) >3       0       <1       <1         Lead       ppm       ASTM D5185(m) >26       0       <1       <1         Tin       ppm       ASTM D5185(m) >26       0       <1<       <1         Tin       ppm       ASTM D5185(m) >26       <1       <1<       <1         Vanadium       ppm       ASTM D5185(m) >26       <1       <1<       <1         Vanadium       ppm       ASTM D5185(m) >22       3       <1       <1       <1         Fuel       %       ASTM D5185(m) >22       3       <1       <1       <1							
Iron         ppm         ASTM D5185(m)         >51         <1							
Chromium         ppm         ASTM D5185(m)         >11         0         0         0           Nickel         ppm         ASTM D5185(m)         >5         0         0         <1           Titanium         ppm         ASTM D5185(m)         >5         0         0         0           Silver         ppm         ASTM D5185(m)         >3         0         0         0           Aluminum         ppm         ASTM D5185(m)         >31         1         2         2           Lead         ppm         ASTM D5185(m)         >26         0         <1         <1           Copper         ppm         ASTM D5185(m)         >26         <1         <1         <1           Tin         ppm         ASTM D5185(m)         >26         <1         <1         <1           Vanadium         ppm         ASTM D5185(m)         >26         <1         <1         <1           Vanadium         ppm         ASTM D5185(m)         >26         <1         <1         <1           Vanadium         ppm         ASTM D5185(m)         >2         3         4         5           Potassium         ppm         ASTM D5185(m)         >20         0							
Chromium         ppm         ASTM D5185(m)         >11         0         0         0           Nickel         ppm         ASTM D5185(m)         >5         0         0         <1           Titanium         ppm         ASTM D5185(m)         >5         0         0         0           Silver         ppm         ASTM D5185(m)         >3         0         0         0           Aluminum         ppm         ASTM D5185(m)         >31         1         2         2           Lead         ppm         ASTM D5185(m)         >26         0         <1         <1           Copper         ppm         ASTM D5185(m)         >26         <1         <1         <1           Tin         ppm         ASTM D5185(m)         >26         <1         <1         <1           Vanadium         ppm         ASTM D5185(m)         >26         <1         <1         <1           Vanadium         ppm         ASTM D5185(m)         >26         <1         <1         <1           Vanadium         ppm         ASTM D5185(m)         >2         3         4         5           Potassium         ppm         ASTM D5185(m)         >20         0							
Nickel         ppm         ASTM D5185(m)         >5         0         0         <1							
Titanium         ppm         ASTM D5185(m) $0$ $0$ $0$ $0$ $0$ Silver         ppm         ASTM D5185(m)         >3 $0$ $0$ $0$ Aluminum         ppm         ASTM D5185(m)         >3 $1$ $2$ $2$ Lead         ppm         ASTM D5185(m)         >26 $0$ $<1$ $<1$ Copper         ppm         ASTM D5185(m)         >26 $4$ $0$ $<1$ $<1$ Tin         ppm         ASTM D5185(m)         >26 $4$ $0$ $<1$ $<1$ Vanadium         ppm         ASTM D5185(m)         >4 $0$ $<1$ $<1$ Silicon         ppm         ASTM D5185(m)         >20 $0$ $0$ $<1$ $<1$ Fuel $\%$ ASTM D5185(m)         >20 $0$ $0$ $<1$ $<1$ Glycol         ppm         ASTM D5185(m)         >20 $0$ $0$ $<1$ $<1$ Vater $\%$							
Silver         ppm         ASTM D5185(m)         >3         0         0         0           Aluminum         ppm         ASTM D5185(m)         >31         1         2         2           Lead         ppm         ASTM D5185(m)         >26         0         <1							
Aluminum         ppm         ASTM D5185(m)         >31         1         2         2           Lead         ppm         ASTM D5185(m)         >26         0         <1							
Lead         ppm         ASTM D5185(m)         >26         0         <1							
Copper         ppm         ASTM D5185(m)         >26         <1							
Tin         ppm         ASTM D5185(m)         >4         0         <1							
Vanadium         ppm         ASTM D5185(m)         0         0         0           Silicon         ppm         ASTM D5185(m)         >22         3         4         5           Potassium         ppm         ASTM D5185(m)         >20         0         0         <1           Fuel         %         ASTM D7593*         >2.1         ▲ 6.9         ▲ 6.2         ▲ 3.8           Water         WC Method         >0.21         NEG         NEG         NEG           Glycol         WC Method         >0.21         NEG         NEG         NEG           Soot %         %         ASTM D7624*         >3         0         0         0           Nitration         Abs/cm         ASTM D7624*         >20         6.4         7.1         7.1							
Silicon         ppm         ASTM D5185(m)         >22         3         4         5           Potassium         ppm         ASTM D5185(m)         >20         0         0         <1							
Potassium         ppm         ASTM D5185(m)         >20         0         0         <1							
Fuel         %         ASTM D7593*         >2.1         ▲ 6.9         ▲ 6.2         ▲ 3.8           Water         WC Method         >0.21         NEG         NEG         NEG           Glycol         WC Method         >3         O         O         O           Soot %         %         ASTM D784*         >3         O         O         O           Nitration         Abs/cm         ASTM D7624*         >20         6.4         7.1         7.1							
Water         WC Method         >0.21         NEG         NEG         NEG           Glycol         WC Method         MEG         NEG         NEG         NEG           Soot %         %         ASTM D7844*         >3         0         0         0           Nitration         Abs/cm         ASTM D7624*         >20         6.4         7.1         7.1							
Glycol         WC Method         NEG         NEG         NEG           Soot %         %         ASTM D7844*         >3         0         0         0           Nitration         Abs/cm         ASTM D7624*         >20         6.4         7.1         7.1							
Soot %         %         ASTM D7844*         >3         0         0         0           Nitration         Abs/cm         ASTM D7624*         >20         6.4         7.1         7.1							
Nitration         Abs/cm         ASTM D7624*         >20         6.4         7.1         7.1							
Sulfation Abc/1mm ASTM D7/15* >30 17.3 16.9 19.5							
Emulsified Water scalar Visual* >0.21 NEG NEG NEG							
Sodium ppm ASTM D5185(m) >192 1 2 2							
Boron ppm ASTM D5185(m) 38 70 72							
Barium ppm ASTM D5185(m) 0 0 0							
Molybdenum ppm ASTM D5185(m) 56 78 76							
Manganese ppm ASTM D5185(m) 0 <1 0							
Magnesium         ppm         ASTM D5185(m)         413         27         84							
Calcium ppm ASTM D5185(m) 3780 <b>1577</b> 2111 2018							
Phosphorus ppm ASTM D5185(m) 1370 934 1020 1003							
Zinc ppm ASTM D5185(m) 1500 <b>1069</b> 1075 1109							
Sulfur         ppm         ASTM D5185(m)         3800         2714         3070         3051							
Oxidation         Abs/.1mm         ASTM D7414*         >25         13.3         13.0         14.0							

Contact/Location: Ryan Udall - POWMIS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 CALA Sample No. : PN0006030 Received : 19 Apr 2024 Lab Number : 02630124 Tested : 22 Apr 2024 ISO 17025:2017 Accredited Laboratory Unique Number : 5763256 Diagnosed : 22 Apr 2024 - Wes Davis Test Package : MOB 1 (Additional Tests: PercentFuel) 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.

POWER STATION INC. 1050 JAYSON COURT MISSISSAUGA, ON CA L4W 2V5 Contact: Ryan Udall rudall@pwrstn.com T: (905)565-1621 F: (905)629-1499