

## WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL

Limit/Abn Current

History1



RECOMMENDATION

## **FREIGHTLINER 810056**

**Diesel Engine** 

PETRO CANADA DURON SHP 15W40 (--- GAL)

Test

LIOM

Method

| Test             | UOM   | Method   | Limit/Abn  | Current  | History1  | History2   |
|------------------|---|--|--|--|---|--|
| Sample Number    |   | Client Info  |  | GFL0093965   | GFL0056300  | GFL0056309   |
| Sample Date      |   | Client Info  |  | 22 Apr 2024  | 04 Apr 2024   | 27 Dec 2023  |
| Machine Age      | kms   | Client Info  |  | 5552   | 106608  | 89521  |
| Oil Age          | kms   | Client Info  |  | 0  | 0   | 0  |
| Filter Age       | kms   | Client Info  |  | 0  | 0   | 0  |
| Oil Changed      |   | Client Info  |  | N/A  | Changed   | Changed  |
| Filter Changed   |   | Client Info  |  | N/A  | Changed   | Changed  |
| Sample Status    |   |  |  | NORMAL   | NORMAL  | NORMAL   |
| Iron             | <br>maa   | ASTM D5185(m)  | >75  | 19   | 45  | 81   |
| Chromium         | ppm   | ASTM D5185(m)  | >5   | <1   | 2   | 4  |
| Nickel           | ppm   | ASTM D5185(m)  | >4   | <1   | <1  | <1   |
| Titanium         | ppm   | ASTM D5185(m)  | >2   | 0  | 0   | 0  |
| Silver           | ppm   | ASTM D5185(m)  | >2   | 0  | 0   | <1   |
| Aluminum         | ppm   | ASTM D5185(m)  | >15  | 6  | 8   | 15   |
| Lead             | ppm   | ASTM D5185(m)  | >25  | 0  | 0   | 1  |
| Copper           | ppm   | ASTM D5185(m)  | >100   | 2  | 3   | 5  |
| Tin              | ppm   | ASTM D5185(m)  | >4   | 0  | 0   | <1   |
| Vanadium         | ppm   | ASTM D5185(m)  |  | 0  | 0   | 0  |
| Silicon          | ppm   | ASTM D5185(m)  | >25  | 6  | 4   | 10   |
| Potassium        | ppm   | ASTM D5185(m)  | >20  | 7  | 7   | 22   |
| Fuel             |   | WC Method  | >3.0   | <1.0   | <1.0  | <1.0   |
| Water            |   | WC Method  | >0.2   | NEG  | NEG   | NEG  |
| Glycol           |   | WC Method  |  | NEG  | 0.0   | NEG  |
| Soot %           | %   | ASTM D7844*  | >6   | 0.3  | 0.7   | 1.3  |
| Nitration        | Abs/cm  | ASTM D7624*  | >20  | 10.1   | 9.3   | 12.1   |
| Sulfation        | Abs/.1mm  | ASTM D7415*  | >30  | 21.6   | 20.5  | 24.8   |
| Emulsified Water | scalar  | Visual*  | >0.2   | NEG  | NEG   | NEG  |
| Sodium           | ppm   | ASTM D5185(m)  |  | 8  | 6   | 8  |
| Boron            | ppm   | ASTM D5185(m)  | 0  | 6  | 10  | 4  |
| Barium           | ppm   | ASTM D5185(m)  | 0  | 0  | 0   | 0  |
| Molybdenum       | ppm   | ASTM D5185(m)  | 60   | 60   | 64  | 63   |
|                  | TestSample NumberSample DateMachine AgeOil AgeFilter AgeOil ChangedFilter ChangedSample StatusIronChromiumNickelTitaniumSilverAluminumLeadCopperTinVanadiumFuelWaterGlycolSoot %NitrationSulfationEmulsified WaterSodiumBoronBariumMolybdenum | TestUOMSample NumberSample DateSample DateKmsMachine AgekmsOil AgekmsOil AgekmsFilter AgekmsOil ChangedSample StatusIronppmChromiumppmNickelppmSilverppmSilverppmLeadppmCopperppmTinppmSiliconppmFuelppmSufationppmFuelypmSuiterppmSoot %%NitrationAbs/.nmEmulsified WaterscalarSodiumppmBoronppmMolybdenumppm | TestUOMMethodSample NumberClient InfoSample DateClient InfoMachine AgekmsClient InfoOil AgekmsClient InfoOil AgekmsClient InfoOil ChangedClient InfoFilter AgekmsClient InfoOil ChangedClient InfoFilter ChangedClient InfoSample StatusClient InfoChromiumppmASTM D5185(m)NickelppmASTM D5185(m)SilverppmASTM D5185(m)LeadppmASTM D5185(m)LeadppmASTM D5185(m)CopperppmASTM D5185(m)VanadiumppmASTM D5185(m)FuelWC MethodSoliconppmASTM D5185(m)FuelWC MethodSoot %%ASTM D7185(m)SulfationAbs/cmASTM D7415*Emulsified WaterscalarVisual*SodiumppmASTM D5185(m)BoronppmASTM D5185(m)MolybdenumppmASTM D5185(m)MolybdenumppmASTM D5185(m) | TestUOMMethodLimit/AbnSample NumberClient InfoClient InfoSample DateClient InfoMachine AgeKmsOil AgekmsClient InfoClient InfoFilter AgekmsClient InfoClient InfoFilter AgekmsClient InfoClient InfoFilter ChangedClient InfoSample StatusSample StatusIronppmASTM D5185(m)>75ChromiumppmASTM D5185(m)>2NickelppmASTM D5185(m)>2SilverppmASTM D5185(m)>2LeadppmASTM D5185(m)>25CopperppmASTM D5185(m)>25CopperppmASTM D5185(m)>25SiliconppmASTM D5185(m)>25PotassiumppmASTM D5185(m)>20FuelWC Method>3.0WWaterimpASTM D5185(m)>20SulfationAbs:/mASTM D7844*>6NitrationAbs:/mASTM D7844*>20SulfationAbs:/mASTM D7844*>30Emulsified WaterscalarVisual*>0.2SodiumppmASTM D5185(m)0BoronppmASTM D5185(m)0BariumppmASTM D5185(m)0MolybdenumppmASTM D5185(m)0 | TestUOMMethodLimit/AbnCurrentSample NumberClient InfoGFL0093965Sample DateClient Info22 Apr 2024Machine AgekmsClient Info0Filter AgekmsClient Info0Oil AgekmsClient Info0Filter AgekmsClient InfoN/AFilter ChangedClient InfoN/AFilter ChangedClient InfoN/ASample StatusClient InfoN/AIronppmASTM D5185(m)>75PotromiumppmASTM D5185(m)>2NickelppmASTM D5185(m)>2NickelppmASTM D5185(m)>2SilverppmASTM D5185(m)>2QpperppmASTM D5185(m)>25CopperppmASTM D5185(m)>2SiliconppmASTM D5185(m)>2SiliconppmASTM D5185(m)>2VanadiumppmASTM D5185(m)>2SiliconppmASTM D5185(m)>2SiliconppmASTM D5185(m)>2VanadiumppmASTM D5185(m)>2SulfationAbs/cmASTM D7844'>6SulfationAbs/cmASTM D7844'>0SulfationAbs/cmASTM D5185(m)0SulfationppmASTM D5185(m)0SulfationppmASTM D5185(m)0SulfationppmASTM D5185(m)0< | TestUOMMethodLimit/AbnCurrentHistory1Sample NumberClient InfoGFL00393065GFL00393065GFL0056300Sample DateClient Info22 Apr 202404 Apr 2024Machine AgekmsClient Info00Oil AgekmsClient Info00Filter AgekmsClient InfoN/AChangedOil ChangedClient InfoN/AChangedFilter ChangedQClient InfoN/AChangedSample StatusClient InfoN/AChangedIronppmASTMD5185(m)>751945ChromiumppmASTMD5185(m)>200NickelppmASTMD5185(m)>200SilverppmASTMD5185(m)>200CopperppmASTMD5185(m)>2500VanadiumppmASTMD5185(m)>10023TinppmASTMD5185(m)>2564PotassiumppmASTMD5185(m)>2077FuelWC Method>3.0<1.0<1.0<1.0VanadiumppmASTMD5185(m)>2077FuelWC Method>3.0<1.0<1.0<1.0VanadiumppmASTMD5185(m)>2077FuelWC Method>3.0<1.0<1.0<1.0VistoriMSTMD5185(m)>20NEG0.0 |

Manganese

Magnesium

Phosphorus

Calcium

Zinc

Sulfur

Oxidation

Visc @ 100°C

ppm

ppm

ppm

ppm

ppm

ppm

cSt

Abs/.1mm

ASTM D5185(m) O

ASTM D5185(m)

ASTM D5185(m)

ASTM D5185(m)

ASTM D7414\*

ASTM D5185(m) 1010

ASTM D5185(m) 1150

ASTM D7279(m) 15.4

1070

1270

2060

>25

Contact/Location: Jason Haman - GFL255

<1

949

1080

981

1169

2423

16.1

13.2

<1

965

1117

981

1167

2366

19.6

13.3

<1

964

1110

963

1190

2357

21.1

13.3







: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 255 - Blind River Laboratory CALA Sample No. 9 Industrial Park Road East : GFL0093965 Received : 02 May 2024 Lab Number : 02632725 Blind River, ON Tested : 02 May 2024 ISO 17025:2017 Accredited Unique Number : 5773878 : 02 May 2024 - Wes Davis CA POR 1B0 Diagnosed Laboratory Test Package : MOB 1 Contact: Jason Haman To discuss this sample report, contact Customer Service at 1-800-268-2131. jhaman@gflenv.com Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab. T: (705)356-4118 Validity of results and interpretation are based on the sample and information as supplied. F:

Report Id: GFL255 [WCAMIS] 02632725 (Generated: 05/02/2024 13:33:16) Rev: 1

Contact/Location: Jason Haman - GFL255 Page 2 of 2