

OIL ANALYSIS REPORT

Sample Rating Trend





Machine Id MACK 427116 Component

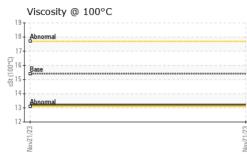
Diesel Engine

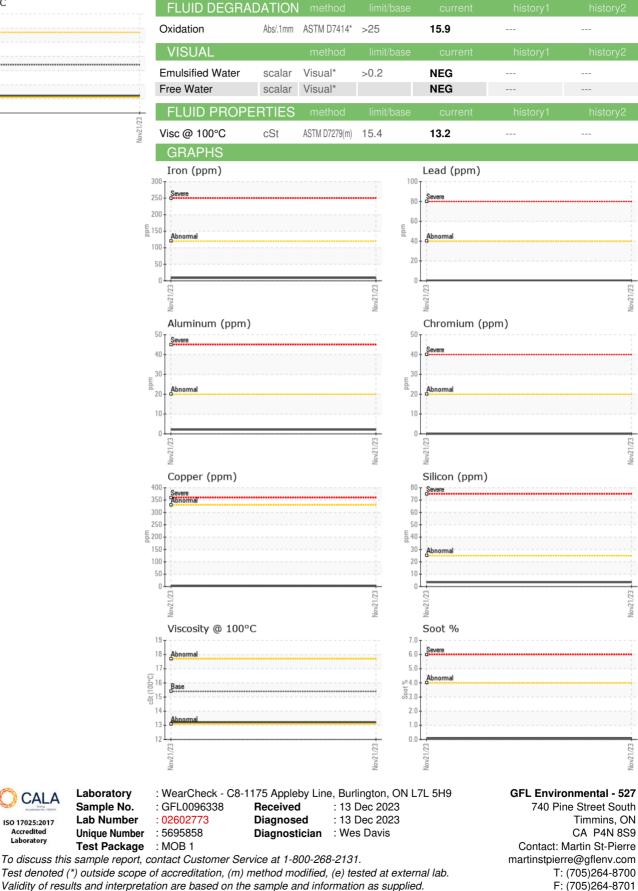
PETRO CANADA DURON SHP 15W40 (--- GAL)

| Resample at the next service interval to monitor.Sample DateClient Info21 Nov 2023WearMachine AgehrsClient Info12489All component wear rates are normal.Oil AgehrsClient Info600Oil ChangedClient InfoClient InfoChanged | DIACNOSIS | | | mothe el- | linoit/le e e e | | biotewit | histowy |
|---|--|---------------|-------|---------------|-----------------|---------|-------------|-----------|
| Mean propertion Client Info 21 Nov 2023 | | | | | limit/base | | nistory i | nistory2 |
| Weak All colmon Auge hrs Client info 1280 | Recommendation | | | | | | | |
| All component wear rates are normal. Contanged Citent Info 600 There is no indication of any contamination in the oil. There is no indication of any contamination in the oil. NOTMAL Fluid Condition The condition of the oil is acceptable for the time is service. NOTMAL Fluid Condition of any contamination in the oil. The condition of any contamination in the oil. Not Method >3.0 <1.0 | | | | | | | | |
| Containation Clean I and contain of any containants in it has Clean I and contain of any containants in it has Containants Conta | Wear | • | | | | | | |
| Sample Status NORMAL Club Condition The condition of the oil is acceptable for the time in service. MC Mendol 3.0 <1.0 | All component wear rates are normal. | - | hrs | | | | | |
| Oil. CONTAMINATION method limit/base current History1 History2 Fuel WC Method >3.0 <1.0 | Contamination | - | | Client Info | | - | | |
| Fuild Condition The condition of the oil is acceptable for the time in in interface Nick of the oil is acceptable for the time in interface Nick of the oil is acceptable for the time in interface Nick of the oil is acceptable for the time in interface Nick of the oil is acceptable for the time in interface Nick of the oil is acceptable for the time in interface Nick of the oil is acceptable for the time in interface Nick of the oil is acceptable for the time in interface Nick of the oil is acceptable for the time in interface Nick of the oil is acceptable for the time in interface Nick of the oil is acceptable for the time in interface Nick of the oil is acceptable for the time in interface Nick of the oil is acceptable for the time in interface Nick of the oil is acceptable for the time in interface Nick of the oil is acceptable for the time in interface Nick of the oil is acceptable for the time in interface Nick of the oil is acceptable for the time in interface Nick of the oil is acceptable for the time interface Nick of the oil is acceptable for the time interface Nick of the oil is acceptable for the time interface Nick of the oil is acceptable for the time interface Nick of the oil is acceptable for the time interface Nick of the oil is acceptable for the time interface Nick of the oil is acceptable for the time interface Nick of the oil is acceptable for the time interface Nick of the oil is acceptable for the time interface Nick of the oil is acceptable for the time interface Nick of the oil is acceptable for the | There is no indication of any contamination in the | Sample Status | | | | NORMAL | | |
| The condition of the oil is acceptable for the time is envice. Fuel WC Method <1.0 Water WC Method So.2 NEG WEAR METALS method Imit/base current history1 history2 Iron ppm ASTM SISKing >2.0 9 Nickel ppm ASTM SISKing >2.0 0 Auminum ppm ASTM SISKing >2.0 0 Nickel ppm ASTM SISKing >3.0 Auminum ppm ASTM SISKing >3.0 Copper ppm ASTM SISKing <td></td> <td>CONTAMINAT</td> <td>ION</td> <td>method</td> <td>limit/base</td> <td>current</td> <td>history1</td> <td>history2</td> | | CONTAMINAT | ION | method | limit/base | current | history1 | history2 |
| Water Glycol WC Method >0.2 NEG Glycol WC Method NEG WEAR METALS method linit/basis current History1 History2 Iron ppm ASTM (SERIII) >20 0 Nickel ppm ASTM (SERIII) >20 0 Nickel ppm ASTM (SERIII) >20 0 Silver ppm ASTM (SERIII) >20 2 Bardinum ppm ASTM (SERIII) >40 -1 Lead ppm ASTM (SERIII) >40 -1 Vanadum ppm ASTM (SERIII) >40 Copper ppm ASTM (SERIII) 0 Dorn ppm ASTM (SERIIII) 0 | | Fuel | | WC Method | >3.0 | <1.0 | | |
| Glycol WC Method NEG WEAR METALS method init/base current history1 history2 Iron ppm ASTM 0516(m) >120 9 Chromium ppm ASTM 0516(m) >20 0 Nickel ppm ASTM 0516(m) >2 0 Silver ppm ASTM 0516(m) >2 0 Aluminum ppm ASTM 0516(m) >2 0 Aluminum ppm ASTM 0516(m) >2 0 Aluminum ppm ASTM 0516(m) >40 <1 | | Water | | WC Method | >0.2 | | | |
| WEAR METALS method limit/base current History1 History2 Iron ppm ASTM 2518(m) >120 9 Chronnium ppm ASTM 2518(m) >50 0 Nickel ppm ASTM 2518(m) >2 0 Silver ppm ASTM 2518(m) >2 0 Aluminum ppm ASTM 2518(m) >20 2 Lead ppm ASTM 2518(m) >40 <1 | Service. | | | | | | | |
| Iron ppm ASTU D5185(n) >120 9 Chromium ppm ASTU D5185(n) >20 0 Nickal ppm ASTU D5185(n) >20 0 Titanium ppm ASTU D5185(n) >20 0 Aluminium ppm ASTU D5185(n) >20 2 Lead ppm ASTU D5185(n) >40 <-1 | | - | S | method | limit/base | current | historv1 | history2 |
| Chromium ppm ASTN 0585(m) >20 0 Nickel ppm ASTN 0585(m) >2 0 Tatanium ppm ASTN 0585(m) >2 0 Aluminum ppm ASTN 0585(m) >20 2 Lead ppm ASTN 0585(m) >20 2 Copper ppm ASTN 0585(m) >20 2 Tin ppm ASTN 0585(m) >330 2 ASTN 0585(m) >15 0 ASTN 0585(m) >15 0 ASTN 0585(m) >15 0 Cadmium ppm ASTN 0585(m) 0 Barium ppm ASTN 0585(m) 0 5 Marganese | | | | | | | | |
| Nickel ppm ASTM 25183/m >5 0 Titanium ppm ASTM 25183/m >2 0 Aluminum ppm ASTM 25183/m >2 0 Lead ppm ASTM 25183/m >40 <1 | | | | | | | | |
| Titanium ppm ASTM D518(m) >2 0 Silver ppm ASTM D518(m) >20 2 Auminum ppm ASTM D518(m) >20 2 Lead ppm ASTM D518(m) >40 <1 | | | | | | | | |
| Silver ppm ASTM D5185(m) >>2 0 Aluminum ppm ASTM D5185(m) >>0 2 Lead ppm ASTM D5185(m) >>0 2 Copper ppm ASTM D5185(m) >330 2 Tin ppm ASTM D5185(m) >15 0 Antimony ppm ASTM D5185(m) - 4 Vanadium ppm ASTM D5185(m) - 0 Beryllium ppm ASTM D5185(m) 0 5 ADDTIVES methodistim 0 Molybdenum ppm ASTM D5185(m) 0 5 Marganese ppm ASTM D5185(m) 0 5 Marganese ppm ASTM D5185(m) 1010 904 Marganesium </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | | |
| Aluminum ppm ASTM D518(m) >20 2 Lead ppm ASTM D518(m) >30 2 Copper ppm ASTM D518(m) >15 0 Antimony ppm ASTM D518(m) >15 0 Antimony ppm ASTM D518(m) 0 Vanadium ppm ASTM D518(m) 0 Beryllium ppm ASTM D518(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D518(m) 0 5 Magnesium ppm ASTM D518(m) 0 0 Magnesium ppm ASTM D518(m) 0 0 Magnesium ppm ASTM D518(m) 0 0 Magnesium ppm ASTM D518(m) | | | | | | | | |
| Lead ppm ASTM D5185(m) >40 <1 | | | | | | | | |
| Copper ppm ASTM D5185m >330 2 Tin ppm ASTM D5185m >15 0 Antimony ppm ASTM D5185m 0 Vanadium ppm ASTM D5185m 0 0 Beryllium ppm ASTM D5185m 0 0 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 Marganese ppm ASTM D5185m 0 Magnesium ppm ASTM D5185m 1010 904 Magnesium ppm ASTM D5185m 1070 1135 Sulfur ppm ASTM D518 | | | | . , | | | | |
| Tin ppm ASTM D5185(m) >15 0 Antimony ppm ASTM D5185(m) <1 | | | | | | | | |
| Antimony ppm ASTM D5185(m) <1 | | | | | | | | |
| Vanadium ppm ASTM D5185(m) 0 Beryllium ppm ASTM D5185(m) 0 Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 0 5 Barium ppm ASTM D5185(m) 0 5 Molybdenum ppm ASTM D5185(m) 0 5 Maganese ppm ASTM D5185(m) 0 0 Calcium ppm ASTM D5185(m) 1010 904 Magnesium ppm ASTM D5185(m) 1150 965 Vifur ppm ASTM D5185(m) 2060 2488 Sulfur ppm ASTM D5185(m) 260 248 Sulfur ppm ASTM D5185(m) 260 24 | | | | | >10 | | | |
| Beryllium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 0 5 Barium ppm ASTM D5185(m) 0 <1 | | | | | | | | |
| Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 0 5 Barium ppm ASTM D5185(m) 0 <1 Molybdenum ppm ASTM D5185(m) 0 0 <1 Manganese ppm ASTM D5185(m) 0 0 Magnesium ppm ASTM D5185(m) 0 0 0 Magnesium ppm ASTM D5185(m) 1010 904 Phosphorus ppm ASTM D5185(m) 1150 965 Sulfur ppm ASTM D5185(m) 1270 1165 Sulfur ppm ASTM D5185(m) 2060 2488 Sulfur ppm ASTM D5185(m) >20 4 So | | | | | | | | |
| ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185(m)05BariumppmASTM D5185(m)0<1 | | | | | | | | |
| Boron ppm ASTM D5185(m) 0 5 Barium ppm ASTM D5185(m) 0 <1 Molybdenum ppm ASTM D5185(m) 60 57 Manganese ppm ASTM D5185(m) 0 0 Magnesium ppm ASTM D5185(m) 1010 904 Calcium ppm ASTM D5185(m) 1070 1135 Phosphorus ppm ASTM D5185(m) 1070 1165 Zinc ppm ASTM D5185(m) 1270 1165 Sulfur ppm ASTM D5185(m) 2060 2488 Sulfur ppm ASTM D5185(m) >25 4 Sodium ppm ASTM D5185(m) >20 <1 Sodium ppm ASTM D5185(m) >20 <1 INFRA-R | | | le le | | | | la internet | biotom .O |
| Barium ppm ASTM D5185(m) 0 <1 | | | | | | | nistory i | nistory2 |
| Molybdenum ppm ASTM D5185(m) 60 57 Manganese ppm ASTM D5185(m) 0 0 Magnesium ppm ASTM D5185(m) 1010 904 Calcium ppm ASTM D5185(m) 1070 1135 Phosphorus ppm ASTM D5185(m) 1150 965 Zinc ppm ASTM D5185(m) 1270 1165 Sulfur ppm ASTM D5185(m) 2060 2488 Lithium ppm ASTM D5185(m) 206 2488 Sulfur ppm ASTM D5185(m) 206 2488 Sulfur ppm ASTM D5185(m) >25 4 Sulfur ppm ASTM D5185(m) >20 <1 | | | | , | | | | |
| Manganesse ppm ASTM D5185(m) 0 0 Magnesium ppm ASTM D5185(m) 1010 904 Calcium ppm ASTM D5185(m) 1070 1135 Phosphorus ppm ASTM D5185(m) 1150 965 Zinc ppm ASTM D5185(m) 1270 1165 Sulfur ppm ASTM D5185(m) 2060 2488 Sulfur ppm ASTM D5185(m) 2060 2488 Lithium ppm ASTM D5185(m) 2060 2488 Solicon ppm ASTM D5185(m) >20 <1 | | | ppm | | | | | |
| Magnesium ppm ASTM D5185(m) 1010 904 Calcium ppm ASTM D5185(m) 1070 1135 Phosphorus ppm ASTM D5185(m) 1150 965 Zinc ppm ASTM D5185(m) 1270 1165 Sulfur ppm ASTM D5185(m) 2060 2488 Sulfur ppm ASTM D5185(m) 206 4 Sulfur ppm ASTM D5185(m) >225 4 Sodium ppm ASTM D5185(m) >20 <1 | | | | () | | | | |
| Calcium ppm ASTM D5185(m) 1070 1135 Phosphorus ppm ASTM D5185(m) 1150 965 Zinc ppm ASTM D5185(m) 1270 1165 Sulfur ppm ASTM D5185(m) 2060 2488 Lithium ppm ASTM D5185(m) 2060 2488 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 4 Sodium ppm ASTM D5185(m) >20 <1 | | - | ppm | | | | | |
| Phosphorus ppm ASTM D5185(m) 1150 965 Zinc ppm ASTM D5185(m) 1270 1165 Sulfur ppm ASTM D5185(m) 2060 2488 Lithium ppm ASTM D5185(m) 2060 2488 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 4 Sodium ppm ASTM D5185(m) >20 <1 Ntrasium ppm ASTM D5185(m) >20 <1 Sodium ppm ASTM D5185(m) >20 <1 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >4 0.1 Nitration Abs/cm ASTM D7624* >20 8.6 | | 0 | | , | | | | |
| Zinc ppm ASTM D5185(m) 1270 1165 Sulfur ppm ASTM D5185(m) 2060 2488 Lithium ppm ASTM D5185(m) 2060 2488 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 4 Sodium ppm ASTM D5185(m) >25 4 Potassium ppm ASTM D5185(m) >20 <1 | | | | | | | | |
| SulfurppmASTM D5185(m)20602488LithiumppmASTM D5185(m)C<1CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185(m)>254SodiumppmASTM D5185(m)>206PotassiumppmASTM D5185(m)>20<1INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%ASTM D7844*>40.1NitrationAbs/cmASTM D7624*>208.6 | | | | . , | | | | |
| LithiumppmASTM D5185(m)<1CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185(m)>254SodiumppmASTM D5185(m)6PotassiumppmASTM D5185(m)>20<1 | | | | | | | | |
| CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185(m)>254SodiumppmASTM D5185(m)6PotassiumppmASTM D5185(m)>20<1 | | | | | 2060 | | | |
| Silicon ppm ASTM D5185(m) >25 4 Sodium ppm ASTM D5185(m) 6 Potassium ppm ASTM D5185(m) >20 <1 | | | | ASTM D5185(m) | | <1 | | |
| Sodium ppm ASTM D5185(m) 6 Potassium ppm ASTM D5185(m) >20 <1 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >4 0.1 Nitration Abs/cm ASTM D7624* >20 8.6 | | CONTAMINAN | TS | method | limit/base | current | history1 | history2 |
| Potassium ppm ASTM D5185(m) >20 <1 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >4 0.1 Nitration Abs/cm ASTM D7624* >20 8.6 | | Silicon | ppm | ASTM D5185(m) | >25 | 4 | | |
| INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%ASTM D7844*>40.1NitrationAbs/cmASTM D7624*>208.6 | | Sodium | ppm | ASTM D5185(m) | | 6 | | |
| Soot % % ASTM D7844* >4 0.1 Nitration Abs/cm ASTM D7624* >20 8.6 | | Potassium | ppm | ASTM D5185(m) | >20 | <1 | | |
| Nitration Abs/cm ASTM D7624* >20 8.6 | | INFRA-RED | | method | limit/base | current | history1 | history2 |
| Nitration Abs/cm ASTM D7624* >20 8.6 | | Soot % | % | ASTM D7844* | >4 | 0.1 | | |
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ISO 17025:2017 Accredited Laboratory

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