WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL



Machine Id
MACK 23101
Component
Diesel Engine

PETRO CANADA DURON SAE 10W30 (--- GAL)

| PETRO CANADA DURON 3/   | 001100   C              | <u> </u>   |                                |           |             |          |          |
|---|-------------------------|------------|--------------------------------|-----------|-------------|----------|----------|
| RECOMMENDATION  | Test                    | UOM        | Method                         | Limit/Abn | Current     | History1 | History2 |
| Resample at the next service interval to monitor.               | Sample Number           |            | Client Info                    |           | PC0083093   |          |          |
|   | Sample Date             |            | Client Info                    |           | 14 Feb 2024 |          |          |
|   | Machine Age             | hrs        | Client Info                    |           | 1015419     |          |          |
|   | Oil Age                 | hrs        | Client Info                    |           | 1991        |          |          |
|   | Filter Age              | hrs        | Client Info                    |           | 1991        |          |          |
|   | Oil Changed             |            | Client Info                    |           | N/A         |          |          |
|   | Filter Changed          |            | Client Info                    |           | N/A         |          |          |
|   | Sample Status           |            |                                |           | NORMAL      |          |          |
| WEAR All component wear rates are normal.                       | Iron                    | ppm        | ASTM D5185(m)                  | >120      | 2           |          |          |
|   | Chromium                | ppm        | ASTM D5185(m)                  |           | 0           |          |          |
|   | Nickel                  | ppm        | ASTM D5185(m)                  | >5        | 0           |          |          |
|   | Titanium                | ppm        | ASTM D5185(m)                  |           | 0           |          |          |
|   | Silver                  | ppm        | ASTM D5185(m)                  |           | 0           |          |          |
|   | Aluminum                | ppm        | ASTM D5185(m)                  |           | <1          |          |          |
|   | Lead                    | ppm        | ASTM D5185(m)                  | >40       | 0           |          |          |
|   | Copper                  | ppm        | ASTM D5185(m)                  |           | 2           |          |          |
|   | Tin                     | ppm        | ASTM D5185(m)                  |           | 0           |          |          |
|   | Vanadium                | ppm        | ASTM D5185(m)                  |           | 0           |          |          |
|   | White Metal             | scalar     | Visual*                        | NONE      | NONE        |          |          |
|   | Yellow Metal            | scalar     | Visual*                        | NONE      | NONE        |          |          |
| CONTANUNATION   | 0.11                    |            | AOTM DE40E()                   | 05        |             |          |          |
| CONTAMINATION   | Silicon                 | ppm        | ASTM D5185(m)                  | >25       | 2           |          |          |
| There is no indication of any contamination in the oil.         | Potassium               | ppm        | ASTM D5185(m)                  |           | <1          |          |          |
|   | Fuel                    |            | WC Method                      |           | <1.0        |          |          |
|   | Water                   |            | WC Method                      | >0.2      | NEG         |          |          |
|   | Glycol<br>Soot %        | %          | WC Method<br>ASTM D7844*       | - 1       | NEG<br>0    |          |          |
|   | Nitration               | Abs/cm     | ASTM D7644*                    | >4        | 1.9         |          |          |
|   | Sulfation               | Abs/.1mm   | ASTM D7024 ASTM D7415*         | >30       | 9.0         |          |          |
|   | Silt                    | scalar     | Visual*                        | NONE      | NONE        |          |          |
|   | Debris                  | scalar     | Visual*                        | NONE      | VLITE       |          |          |
|   | Sand/Dirt               | scalar     | Visual*                        | NONE      | NONE        |          |          |
|   | Appearance              | scalar     | Visual*                        | NORML     | NORML       |          |          |
|   | Odor                    | scalar     | Visual*                        | NORML     | NORML       |          |          |
|   | <b>Emulsified Water</b> | scalar     | Visual*                        | >0.2      | NEG         |          |          |
|   |                         |            |                                |           |             |          |          |
| FLUID CONDITION   | Sodium                  | ppm        | ASTM D5185(m)                  |           | 2           |          |          |
| The condition of the oil is acceptable for the time in service. | Boron                   | ppm        | ASTM D5185(m)                  |           | 12          |          |          |
|   | Barium                  | ppm        | ASTM D5185(m)                  |           | 0           |          |          |
|   | Molybdenum              | ppm        | ASTM D5185(m)                  |           | 59          |          |          |
|   | Manganese               | ppm        | ASTM D5185(m)                  |           | 0           |          |          |
|   | Magnesium<br>Calcium    | ppm        | ASTM D5185(m)                  |           | 941         |          |          |
|   | Phosphorus              | ppm        | ASTM D5185(m)<br>ASTM D5185(m) |           | 1024<br>981 |          |          |
|   | Zinc                    | ppm<br>ppm | ASTM D5185(m)                  | 1351      | 1132        |          |          |
|   | Sulfur                  | ppm        | ASTM D5185(m)                  |           | 2622        |          |          |
|   | Oxidation               | Abs/.1mm   | ASTM D3163(III) ASTM D7414*    |           | 2.4         |          |          |
|   | Visc @ 40°C             | cSt        | ASTM D7279(m)                  |           | 70.7        |          |          |
|   | Visc @ 100°C            | cSt        | ASTM D7279(m)                  | 11.4      | 10.9        |          |          |
|   | Viscosity Index (VI)    |            | ASTM D2270*                    |           | 144         |          |          |
|   | Tiboodity illuon (VI)   | Oddio      | . TO THE DELIG                 | 1 10      |             |          |          |





ISO 17025:2017 Accredited Laboratory **Laboratory**: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **Sample No.**: PC0083093 **Received**: 12 Apr 2024

 Lab Number
 : 02628376
 Tested
 : 12 Apr 2024

 Unique Number
 : 5761508
 Diagnosed
 : 12 Apr 2024 - Wes Davis

Test Package: MOB 1 (Additional Tests: KV40, VI, Visual)

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.

Wasteco
147 Heartlake Rd.
Brampton, ON
CA L6W 3K1
Contact: Serdar Okur
sokur@wasteco.com
T: (905)459-2716
F: (905)452-9786