

# **OIL ANALYSIS REPORT**



# NOT GIVEN PCA0093299

Component

**Diesel Engine** 

PETRO CANADA DURON SHP 10W30 (--- QTS)

# DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

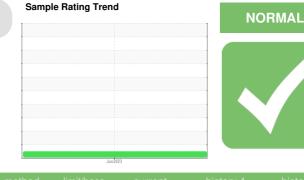
Metal levels are typical for a new component breaking in.

## Contamination

There is no indication of any contamination in the

### **Fluid Condition**

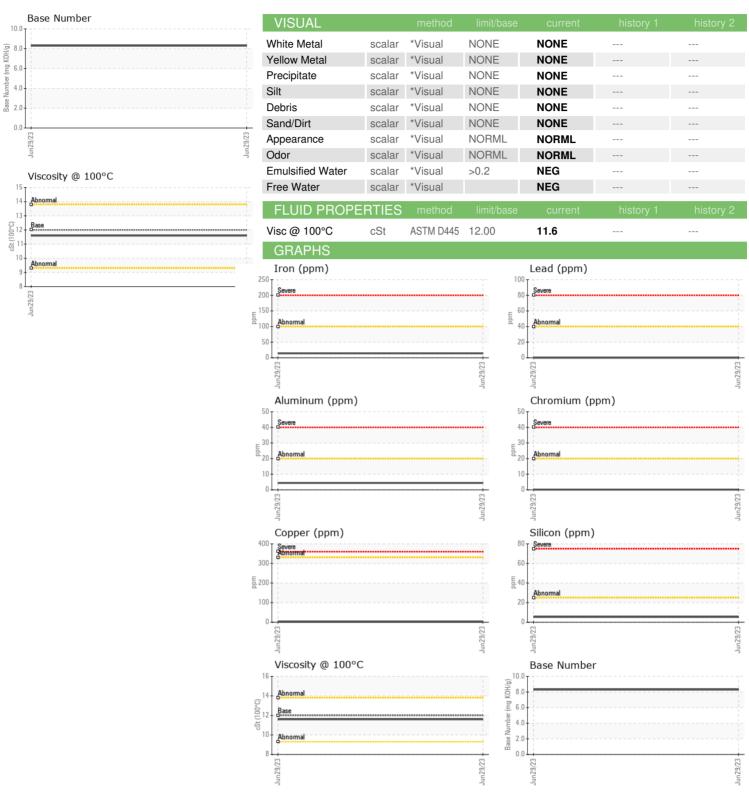
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



| <u> </u>  |  |  |   | Jun 2023   |                               |                     |
|---|--|--|---|--|-------------------------------|---------------------|
| SAMPLE INFORM   | MATION   | method   | limit/base  | current  | history 1                     | history 2           |
| Sample Number   |  | Client Info  |   | PCA0093299   |                               |                     |
| Sample Date   |  | Client Info  |   | 29 Jun 2023  |                               |                     |
| Machine Age   | mls  | Client Info  |   | 64001  |                               |                     |
| Oil Age   | mls  | Client Info  |   | 0  |                               |                     |
| Oil Changed   |  | Client Info  |   | Changed  |                               |                     |
| Sample Status   |  |  |   | NORMAL   |                               |                     |
| CONTAMINATI   | ON   | method   | limit/base  | current  | history 1                     | history 2           |
| Fuel  |  | WC Method  | >5  | <1.0   |                               |                     |
| Glycol  |  | WC Method  |   | NEG  |                               |                     |
| WEAR METALS   | S  | method   | limit/base  | current  | history 1                     | history 2           |
| Iron  | ppm  | ASTM D5185m  | >100  | 14   |                               |                     |
| Chromium  | ppm  | ASTM D5185m  | >20   | <1   |                               |                     |
| Nickel  | ppm  | ASTM D5185m  | >4  | <1   |                               |                     |
| Titanium  | ppm  | ASTM D5185m  |   | <1   |                               |                     |
| Silver  | ppm  | ASTM D5185m  | >3  | <1   |                               |                     |
| Aluminum  | ppm  | ASTM D5185m  | >20   | 4  |                               |                     |
| Lead  | ppm  | ASTM D5185m  | >40   | 0  |                               |                     |
| Copper  | ppm  | ASTM D5185m  | >330  | 2  |                               |                     |
| Tin   | ppm  | ASTM D5185m  | >15   | <1   |                               |                     |
| Vanadium  | ppm  | ASTM D5185m  |   | <1   |                               |                     |
| Cadmium   | ppm  | ASTM D5185m  |   | <1   |                               |                     |
|   |  |  |   | • •  |                               |                     |
| ADDITIVES   |  | method   | limit/base  | current  | history 1                     | history 2           |
| ADDITIVES<br>Boron  | ppm  | method<br>ASTM D5185m  | limit/base  |  | history 1                     | history 2           |
|   |  |  |   | current  | history 1                     | history 2           |
| Boron   | ppm  | ASTM D5185m  | 2   | current<br>14  |                               |                     |
| Boron<br>Barium<br>Molybdenum<br>Manganese  | ppm<br>ppm   | ASTM D5185m<br>ASTM D5185m   | 2   | current<br>14<br>0   |                               |                     |
| Boron<br>Barium<br>Molybdenum   | ppm<br>ppm   | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m  | 2<br>0<br>50  | current 14 0 55  |                               |                     |
| Boron<br>Barium<br>Molybdenum<br>Manganese  | ppm<br>ppm<br>ppm  | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m   | 2<br>0<br>50<br>0   | current 14 0 55 <1   |                               |                     |
| Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium   | ppm<br>ppm<br>ppm<br>ppm   | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m  | 2<br>0<br>50<br>0<br>950  | current  14  0  55  <1  879  |                               |                     |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc   | ppm<br>ppm<br>ppm<br>ppm<br>ppm                                    | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m   | 2<br>0<br>50<br>0<br>950<br>1050  | current  14  0  55  <1  879  1184  |                               |                     |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm               | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m   | 2<br>0<br>50<br>0<br>950<br>1050<br>995   | current  14  0  55  <1  879  1184  927   | <br><br><br>                  |                     |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc   | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm               | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m  | 2<br>0<br>50<br>0<br>950<br>1050<br>995<br>1180   | current  14  0  55  <1  879  1184  927  1182   | <br><br><br>                  |                     |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon   | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185m  | 2<br>0<br>50<br>0<br>950<br>1050<br>995<br>1180<br>2600   | current  14  0  55  <1  879  1184  927  1182  3546  current  5                                 | <br><br><br><br>              |                     |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium  | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185m  | 2<br>0<br>50<br>0<br>950<br>1050<br>995<br>1180<br>2600<br>limit/base<br>>25  | current  14  0  55  <1  879  1184  927  1182  3546  current  5                                 | <br><br><br><br><br>history 1 | history 2           |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon   | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185m  | 2<br>0<br>50<br>0<br>950<br>1050<br>995<br>1180<br>2600   | current  14  0  55  <1  879  1184  927  1182  3546  current  5                                 | <br><br><br><br><br>history 1 | history 2           |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium  | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185m  | 2<br>0<br>50<br>0<br>950<br>1050<br>995<br>1180<br>2600<br>limit/base<br>>25  | current  14  0  55  <1  879  1184  927  1182  3546  current  5                                 | history 1                     | history 2           |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium                                      | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185m  | 2<br>0<br>50<br>0<br>950<br>1050<br>995<br>1180<br>2600<br>limit/base<br>>25<br>>20                                   | current  14  0  55  <1  879  1184  927  1182  3546  current  5  2  9  current  0.4             | history 1                     |                     |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED                            | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185m  | 2<br>0<br>50<br>0<br>950<br>1050<br>995<br>1180<br>2600<br>limit/base<br>>25<br>>20                                   | current  14  0  55  <1  879  1184  927  1182  3546  current  5  2  9  current                  | history 1 history 1           | history 2           |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %                     | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185m  method  *ASTM D5185m  ASTM D5185m                                      | 2<br>0<br>50<br>0<br>950<br>1050<br>995<br>1180<br>2600<br>limit/base<br>>25<br>>20<br>limit/base                     | current  14  0  55  <1  879  1184  927  1182  3546  current  5  2  9  current  0.4             | history 1 history 1           | history 2 history 2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration           | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185m  method  *ASTM D5185m  *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m  *ASTM D5185m  *ASTM D7844  *ASTM D7624  *ASTM D76185m | 2<br>0<br>50<br>0<br>950<br>1050<br>995<br>1180<br>2600<br>limit/base<br>>25<br>>20                                   | current  14  0  55  <1  879  1184  927  1182  3546  current  5  2  9  current  0.4  10.8       | history 1 history 1           | history 2 history 2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185m  method  *ASTM D5185m  *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m  *ASTM D5185m  *ASTM D7844  *ASTM D7624  *ASTM D76185m | 2<br>0<br>50<br>0<br>950<br>1050<br>995<br>1180<br>2600<br>limit/base<br>>25<br>>20<br>limit/base<br>>3<br>>20<br>>30 | current  14  0  55  <1  879  1184  927  1182  3546  current  5  2  9  current  0.4  10.8  21.0 | history 1 history 1           | history 2 history 2 |



# **OIL ANALYSIS REPORT**







Laboratory Sample No. Lab Number **Unique Number** 

: PCA0093299 : 05894821

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : 10550631

Received : 11 Jul 2023 Diagnosed : 11 Jul 2023 Diagnostician : Wes Davis

Test Package : MOB 1 (Additional Tests: TBN)

To discuss this sample report, contact Customer Service at 1-800-237-1369. \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

**MILLER TRUCK LEASING #117** 

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