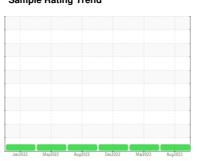


# **OIL ANALYSIS REPORT**

## Sample Rating Trend



NORMAL



Machine Id 120670

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.

#### Wear

Metal levels are typical for a new component breaking in.

## Contamination

There is no indication of any contamination in the oil

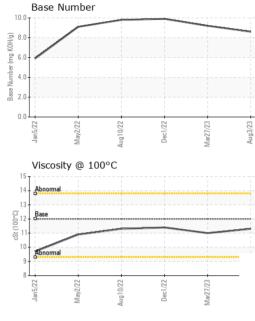
## **Fluid Condition**

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

| J(15)                  |          | Jan 2022    | May2022 Aug2022 | Dec2022 Mar2023 | Aug2023     |             |
|------------------------|----------|-------------|-----------------|-----------------|-------------|-------------|
| SAMPLE INFOR           | MATION   | method      | limit/base      | current         | history1    | history2    |
| Sample Number          |          | Client Info |                 | PCA0103039      | PCA0095871  | PCA0083563  |
| Sample Date            |          | Client Info |                 | 03 Aug 2023     | 27 Mar 2023 | 01 Dec 2022 |
| Machine Age            | mls      | Client Info |                 | 17650           | 15092       | 13451       |
| Oil Age                | mls      | Client Info |                 | 0               | 0           | 0           |
| Oil Changed            |          | Client Info |                 | Changed         | Changed     | N/A         |
| Sample Status          |          |             |                 | NORMAL          | NORMAL      | NORMAL      |
| CONTAMINAT             | ION      | method      | limit/base      | current         | history1    | history2    |
| Fuel                   |          | WC Method   | >5              | <1.0            | <1.0        | <1.0        |
| Glycol                 |          | WC Method   |                 | NEG             | NEG         | NEG         |
| WEAR METAL             | S        | method      | limit/base      | current         | history1    | history2    |
| Iron                   | ppm      | ASTM D5185m | >100            | 14              | 9           | 14          |
| Chromium               | ppm      | ASTM D5185m | >20             | <1              | 0           | <1          |
| Nickel                 | ppm      | ASTM D5185m | >4              | 0               | 0           | 0           |
| Titanium               | ppm      | ASTM D5185m |                 | 0               | 0           | 0           |
| Silver                 | ppm      | ASTM D5185m | >3              | 0               | 0           | 0           |
| Aluminum               | ppm      | ASTM D5185m | >20             | <1              | <1          | 2           |
| Lead                   | ppm      | ASTM D5185m | >40             | <1              | 0           | <1          |
| Copper                 | ppm      | ASTM D5185m | >330            | 5               | 2           | 4           |
| Tin                    | ppm      | ASTM D5185m | >15             | <1              | 0           | 0           |
| Vanadium               | ppm      | ASTM D5185m |                 | <1              | 0           | 0           |
| Cadmium                | ppm      | ASTM D5185m |                 | 0               | 0           | 0           |
| ADDITIVES              |          | method      | limit/base      | current         | history1    | history2    |
| Boron                  | ppm      | ASTM D5185m | 2               | 11              | 18          | 5           |
| Barium                 | ppm      | ASTM D5185m | 0               | 0               | 0           | 1           |
| Molybdenum             | ppm      | ASTM D5185m | 50              | 64              | 65          | 75          |
| Manganese              | ppm      | ASTM D5185m | 0               | <1              | <1          | <1          |
| Magnesium              | ppm      | ASTM D5185m | 950             | 967             | 846         | 880         |
| Calcium                | ppm      | ASTM D5185m | 1050            | 1180            | 1111        | 1124        |
| Phosphorus             | ppm      | ASTM D5185m | 995             | 1055            | 973         | 981         |
| Zinc                   | ppm      | ASTM D5185m | 1180            | 1318            | 1163        | 1213        |
| Sulfur                 | ppm      | ASTM D5185m | 2600            | 3870            | 3219        | 3531        |
| CONTAMINAN             | ITS      | method      | limit/base      | current         | history1    | history2    |
| Silicon                | ppm      | ASTM D5185m | >25             | 4               | 4           | 4           |
| Sodium                 | ppm      | ASTM D5185m |                 | 2               | 1           | <1          |
| Potassium              | ppm      | ASTM D5185m | >20             | 2               | 0           | <1          |
| INFRA-RED              |          | method      | limit/base      | current         | history1    | history2    |
| Soot %                 | %        | *ASTM D7844 | >3              | 0.4             | 0.3         | 0.5         |
| Nitration              | Abs/cm   | *ASTM D7624 | >20             | 7.3             | 6.9         | 8.0         |
| Sulfation              | Abs/.1mm | *ASTM D7415 | >30             | 18.0            | 18.0        | 20.7        |
| FLUID DEGRAI           | OATION   | method      | limit/base      | current         | history1    | history2    |
| Oxidation              | Abs/.1mm | *ASTM D7414 | >25             | 14.3            | 13.9        | 16.0        |
| Base Number (BN)       | mg KOH/g |             |                 | 8.6             | 9.2         | 9.9         |
| = 300 · 10.11001 (D14) |          | 52000       |                 |                 | U           | 0.0         |



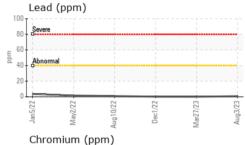
# **OIL ANALYSIS REPORT**

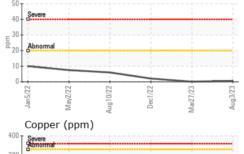


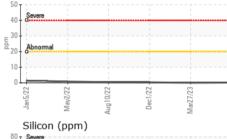
| VISUAL                  |        | method  | limit/base | current | history1 | history2 |
|-------------------------|--------|---------|------------|---------|----------|----------|
| White Metal             | scalar | *Visual | NONE       | NONE    | NONE     | NONE     |
| Yellow Metal            | scalar | *Visual | NONE       | NONE    | NONE     | NONE     |
| Precipitate             | scalar | *Visual | NONE       | NONE    | NONE     | NONE     |
| Silt                    | scalar | *Visual | NONE       | NONE    | NONE     | NONE     |
| Debris                  | scalar | *Visual | NONE       | NONE    | NONE     | NONE     |
| Sand/Dirt               | scalar | *Visual | NONE       | NONE    | NONE     | NONE     |
| Appearance              | scalar | *Visual | NORML      | NORML   | NORML    | NORML    |
| Odor                    | scalar | *Visual | NORML      | NORML   | NORML    | NORML    |
| <b>Emulsified Water</b> | scalar | *Visual | >0.2       | NEG     | NEG      | NEG      |
| Free Water              | scalar | *Visual |            | NEG     | NEG      | NEG      |
| FLUID PROPE             | RTIES  | method  | limit/base | current | history1 | history2 |

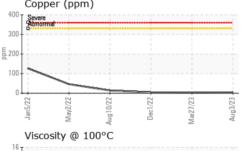
| Visc @ 100°C | cSt | ASTM D445 | 12.00 | 11.3 | 11.0 | 11.4 |
|--------------|-----|-----------|-------|------|------|------|
| CDADUC       |     |           |       |      |      |      |

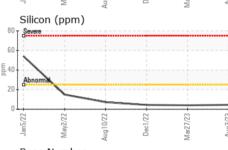
| Iron (         | opm)    |          |         |          |         |
|----------------|---------|----------|---------|----------|---------|
| Severe         |         |          |         |          |         |
|                |         |          |         |          |         |
| 150 - Abnormal |         |          |         |          |         |
| 50             |         |          |         |          |         |
| 0              |         |          | _       |          | _       |
| Jan5/22        | May2/22 | Aug10/22 | Dec1/22 | Mar27/23 | Aug3/23 |
| Alumir         | num (p  | pm)      |         |          |         |
|                |         |          |         |          |         |
| 50 T Severe    |         |          |         |          |         |
| 50 7 7         |         |          |         |          |         |

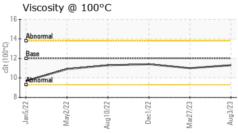


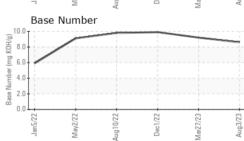














Certificate L2367

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

: PCA0103039 : 05925727 : 10605674

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

: 16 Aug 2023 : 16 Aug 2023

Diagnostician : Wes Davis

Test Package : MOB 1 (Additional Tests: TBN) To discuss this sample report, contact Customer Service at 1-800-237-1369. **MILLER TRUCK LEASING #119** 39 INDUSTRIAL AVE HASBROUCK HEIGHTS, NJ US 07604

Contact: MIKE LONGETTE mlongette@millertransgroup.com

\* - 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)

T: F: (201)528-7053