

# **OIL ANALYSIS REPORT**

Sample Rating Trend



## Machine Id 311590

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.

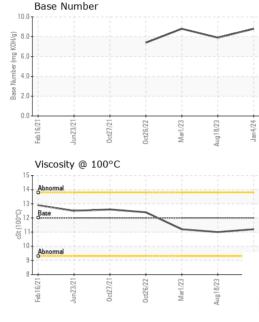
#### Fluid Condition

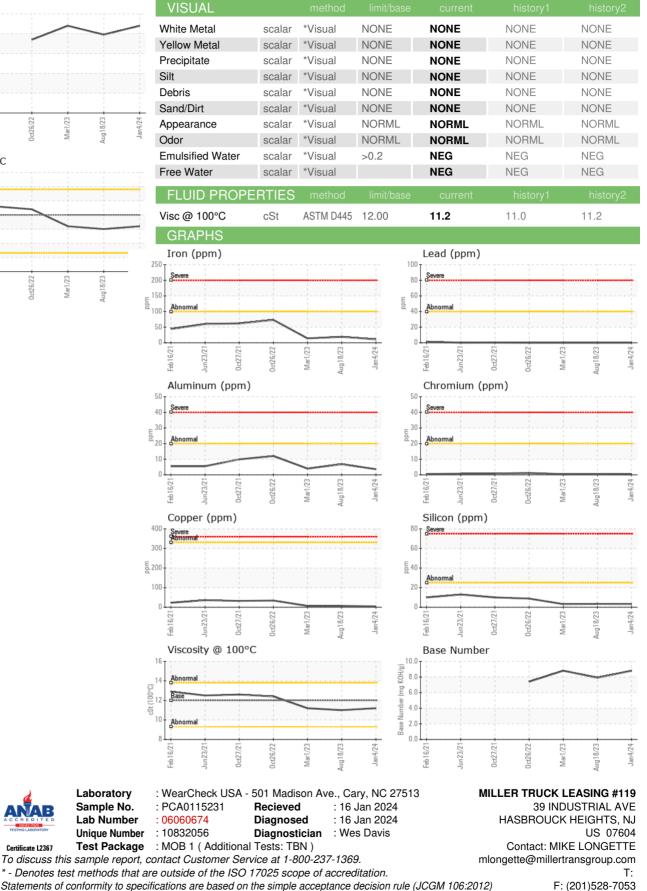
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| TS)                      |                    | Feb2021               | Jun2021 Oct2021 | Oct2022 Mar2023 Aug2023 | Jan2024          |                  |
|--------------------------|--------------------|-----------------------|-----------------|-------------------------|------------------|------------------|
| SAMPLE INFOR             | MATION             | method                | limit/base      | current                 | history1         | history2         |
| Sample Number            |                    | Client Info           |                 | PCA0115231              | PCA0104244       | PCA0094193       |
| Sample Date              |                    | Client Info           |                 | 04 Jan 2024             | 18 Aug 2023      | 01 Mar 2023      |
| Machine Age              | mls                | Client Info           |                 | 21024                   | 18149            | 15147            |
| Dil Age                  | mls                | Client Info           |                 | 0                       | 0                | 0                |
| Oil Changed              |                    | Client Info           |                 | N/A                     | Changed          | Not Changd       |
| Sample Status            |                    |                       |                 | NORMAL                  | NORMAL           | NORMAL           |
| CONTAMINAT               | ION                | method                | limit/base      | current                 | history1         | history2         |
| Fuel                     |                    | WC Method             | >5              | <1.0                    | <1.0             | <1.0             |
| Water                    |                    | WC Method             | >0.2            | NEG                     | NEG              | NEG              |
| Glycol                   |                    | WC Method             |                 | NEG                     | NEG              | NEG              |
| WEAR METAL               | S                  | method                | limit/base      | current                 | history1         | history2         |
| ron                      | ppm                | ASTM D5185m           | >100            | 11                      | 19               | 14               |
| Chromium                 | ppm                | ASTM D5185m           | >20             | <1                      | <1               | <1               |
| Nickel                   | ppm                | ASTM D5185m           | >4              | 0                       | 0                | <1               |
| Titanium                 | ppm                | ASTM D5185m           |                 | 0                       | 0                | 0                |
| Silver                   | ppm                | ASTM D5185m           | >3              | 0                       | 0                | 0                |
| Aluminum                 | ppm                | ASTM D5185m           | >20             | 4                       | 7                | 4                |
| Lead                     | ppm                | ASTM D5185m           | >40             | 0                       | 0                | 0                |
| Copper                   | ppm                | ASTM D5185m           | >330            | 4                       | 7                | 7                |
| Гin                      | ppm                | ASTM D5185m           | >15             | <1                      | 2                | 1                |
| Vanadium                 | ppm                | ASTM D5185m           |                 | 0                       | 0                | 0                |
| Cadmium                  | ppm                | ASTM D5185m           |                 | 0                       | 0                | 0                |
| ADDITIVES                |                    | method                | limit/base      | current                 | history1         | history2         |
| Boron                    | ppm                | ASTM D5185m           | 2               | 20                      | 16               | 19               |
| Barium                   | ppm                | ASTM D5185m           | 0               | 0                       | 0                | 0                |
| Molybdenum               | ppm                | ASTM D5185m           | 50              | 62                      | 55               | 55               |
| Manganese                | ppm                | ASTM D5185m           | 0               | <1                      | 1                | 1                |
| Magnesium                | ppm                | ASTM D5185m           | 950             | 862                     | 890              | 789              |
| Calcium                  | ppm                | ASTM D5185m           | 1050            | 1164                    | 1166             | 1167             |
| Phosphorus               | ppm                | ASTM D5185m           | 995             | 1034                    | 990              | 957              |
| Zinc                     | ppm                | ASTM D5185m           | 1180            | 1208                    | 1217             | 1113             |
| Sulfur                   | ppm                | ASTM D5185m           | 2600            | 3099                    | 3817             | 2676             |
| CONTAMINAN               | NTS                | method                | limit/base      | current                 | history1         | history2         |
| Silicon                  | ppm                | ASTM D5185m           | >25             | 3                       | 3                | 3                |
| Sodium                   | ppm                | ASTM D5185m           |                 | 2                       | 1                | 1                |
| Potassium                | ppm                | ASTM D5185m           | >20             | 0                       | 3                | 3                |
| INFRA-RED                |                    | method                | limit/base      | current                 | history1         | history2         |
| Soot %                   | %                  | *ASTM D7844           | >3              | 0.4                     | 0.5              | 0.3              |
| Nitration                | Abs/cm             | *ASTM D7624           | >20             | 8.0                     | 9.3              | 7.2              |
| Sulfation                | Abs/.1mm           | *ASTM D7415           | >30             | 18.8                    | 18.7             | 18.6             |
|                          |                    |                       |                 |                         |                  |                  |
| FLUID DEGRA              | DATION             | method                | limit/base      | current                 | history1         | history2         |
| FLUID DEGRA<br>Oxidation | DATION<br>Abs/.1mm | method<br>*ASTM D7414 |                 | current<br>14.7         | history1<br>14.6 | history2<br>14.0 |



# **OIL ANALYSIS REPORT**





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

Certificate L2367

Laboratory

Sample No.

Lab Number

Contact/Location: MIKE LONGETTE - MILRUT