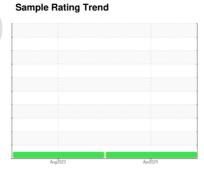


# **OIL ANALYSIS REPORT**

# (89834X) Walgreens - Tractor [Walgreens - Tractor] 136A68046

**Diesel Engine** 

PETRO CANADA DURON SHP 10W30 (11 GAL)





### DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the

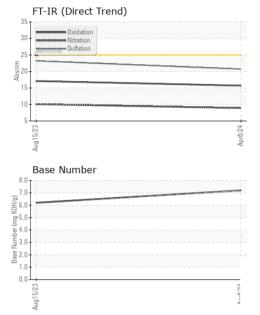
### **Fluid Condition**

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

| Sample Number   Client Info   PCA0107537   PCA0094391  | AAL)             |          |             | Aug2023    | ADTZUZ4     |             |          |
|--|------------------|----------|-------------|------------|-------------|-------------|----------|
| Sample Date   Client Info   08 Apr 2024   15 Aug 2023  | SAMPLE INFOR     | RMATION  | method      | limit/base | current     | history1    | history2 |
| Machine Age   mls   Client Info   502264   477824  | Sample Number    |          | Client Info |            | PCA0107537  | PCA0094391  |          |
| Oil Age         mls         Client Info         502264         477824  | Sample Date      |          | Client Info |            | 08 Apr 2024 | 15 Aug 2023 |          |
| Client Info  | Machine Age      | mls      | Client Info |            | 502264      | 477824      |          |
| NORMAL   NORMAL   NORMAL   CONTAMINATION   method   limit/base   current   history1   history2   history2   water   WC Method   >5   <1.0   <1.0   | Oil Age          | mls      | Client Info |            | 502264      | 477824      |          |
| CONTAMINATION         method         limit/base         current         history1         history2           Fuel         WC Method         >5         <1.0   | Oil Changed      |          | Client Info |            | Changed     | Changed     |          |
| Fuel   | Sample Status    |          |             |            | NORMAL      | NORMAL      |          |
| Water         WC Method         >0.2         NEG         NEG            Glycol         WC Method         NEG         NEG            WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >80         29         24            Chromium         ppm         ASTM D5185m         >5         2         2            Nickel         ppm         ASTM D5185m         >2         <1         <1             Silver         ppm         ASTM D5185m         >30         <1         <1              Aluminum         ppm         ASTM D5185m         >30         <1         <1 <td< th=""><th>CONTAMINA</th><th>TION</th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></td<>   | CONTAMINA        | TION     | method      | limit/base | current     | history1    | history2 |
| WEAR METALS  | Fuel             |          | WC Method   | >5         | <1.0        | <1.0        |          |
| WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >80         29         24            Chromium         ppm         ASTM D5185m         >5         2         2         2           Nickel         ppm         ASTM D5185m         >2         <1   | Water            |          | WC Method   | >0.2       | NEG         | NEG         |          |
| Chromium   | Glycol           |          | WC Method   |            | NEG         | NEG         |          |
| Chromium         ppm         ASTM D5185m         >5         2         2            Nickel         ppm         ASTM D5185m         >2         <1  | WEAR META        | LS       | method      | limit/base | current     | history1    | history2 |
| Nickel   | Iron             | ppm      | ASTM D5185m | >80        | 29          | 24          |          |
| Titanium   | Chromium         | ppm      | ASTM D5185m | >5         | 2           | 2           |          |
| Silver   | Nickel           | ppm      | ASTM D5185m | >2         | <1          | <1          |          |
| Aluminum         ppm         ASTM D5185m         >30         14         13            Lead         ppm         ASTM D5185m         >30         <1  | Titanium         | ppm      | ASTM D5185m |            | <1          | <1          |          |
| Lead   | Silver           | ppm      | ASTM D5185m | >3         | <1          | 0           |          |
| Copper         ppm         ASTM D5185m         >150         13         13            Tin         ppm         ASTM D5185m         >5         1         1            Vanadium         ppm         ASTM D5185m         <1   | Aluminum         | ppm      | ASTM D5185m | >30        | 14          | 13          |          |
| Tin  | Lead             | ppm      | ASTM D5185m | >30        | <1          | <1          |          |
| Vanadium         ppm         ASTM D5185m         <1         <1            Cadmium         ppm         ASTM D5185m         <1         <1            ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         1         2            Barium         ppm         ASTM D5185m         0         0         0            Molybdenum         ppm         ASTM D5185m         0         0         0            Manganese         ppm         ASTM D5185m         0         1         <1            Magnesium         ppm         ASTM D5185m         950         901         964            Calcium         ppm         ASTM D5185m         950         901         964            Phosphorus         ppm         ASTM D5185m         995         1086         982            Zinc         ppm         ASTM D5185m         2600         3138         3164            CONTAMINANTS         method         limit/base         current         history1<   | Copper           | ppm      | ASTM D5185m | >150       | 13          | 13          |          |
| Cadmium         ppm         ASTM D5185m         <1         <1            ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         1         2            Barium         ppm         ASTM D5185m         0         0         0            Molybdenum         ppm         ASTM D5185m         50         59         62            Manganese         ppm         ASTM D5185m         0         1         <1  | Tin              | ppm      | ASTM D5185m | >5         | 1           | 1           |          |
| ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         1         2            Barium         ppm         ASTM D5185m         0         0         0            Molybdenum         ppm         ASTM D5185m         50         59         62            Manganese         ppm         ASTM D5185m         0         1         <1   | Vanadium         | ppm      | ASTM D5185m |            | <1          | <1          |          |
| Boron  | Cadmium          | ppm      | ASTM D5185m |            | <1          | <1          |          |
| Barium         ppm         ASTM D5185m         0         0         0            Molybdenum         ppm         ASTM D5185m         50         59         62            Manganese         ppm         ASTM D5185m         0         1         <1  | ADDITIVES        |          | method      | limit/base | current     | history1    | history2 |
| Molybdenum         ppm         ASTM D5185m         50         59         62            Manganese         ppm         ASTM D5185m         0         1         <1  | Boron            | ppm      | ASTM D5185m | 2          | 1           | 2           |          |
| Manganese         ppm         ASTM D5185m         0         1         <1            Magnesium         ppm         ASTM D5185m         950         901         964            Calcium         ppm         ASTM D5185m         1050         1089         1237            Phosphorus         ppm         ASTM D5185m         995         1086         982            Zinc         ppm         ASTM D5185m         1180         1237         1283            Sulfur         ppm         ASTM D5185m         2600         3138         3164            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         5         4            Sodium         ppm         ASTM D5185m         >20         14         8            Potassium         ppm         ASTM D5185m         >20         14         8            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         <                          | Barium           | ppm      | ASTM D5185m | 0          | 0           | 0           |          |
| Magnesium         ppm         ASTM D5185m         950         901         964            Calcium         ppm         ASTM D5185m         1050         1089         1237            Phosphorus         ppm         ASTM D5185m         995         1086         982            Zinc         ppm         ASTM D5185m         1180         1237         1283            Sulfur         ppm         ASTM D5185m         2600         3138         3164            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         5         4            Sodium         ppm         ASTM D5185m         >20         14         8            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1         1.4            Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         23.2            FL   | Molybdenum       | ppm      | ASTM D5185m | 50         | 59          | 62          |          |
| Calcium         ppm         ASTM D5185m         1050         1089         1237            Phosphorus         ppm         ASTM D5185m         995         1086         982            Zinc         ppm         ASTM D5185m         1180         1237         1283            Sulfur         ppm         ASTM D5185m         2600         3138         3164            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         5         4            Sodium         ppm         ASTM D5185m         >20         14         8            Potassium         ppm         ASTM D5185m         >20         14         8            INFRA-RED         method         limit/base         current         history1         history2           Soot %         "ASTM D7844         >3         1         1.4            Nitration         Abs/cm         "ASTM D7415         >30         20.7         23.2            FLUID DEGRADATION         "ASTM D7414         >25                               | Manganese        | ppm      | ASTM D5185m | 0          | 1           | <1          |          |
| Phosphorus         ppm         ASTM D5185m         995         1086         982            Zinc         ppm         ASTM D5185m         1180         1237         1283            Sulfur         ppm         ASTM D5185m         2600         3138         3164            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         5         4            Sodium         ppm         ASTM D5185m         >20         14         8            Potassium         ppm         ASTM D5185m         >20         14         8            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1         1.4            Nitration         Abs/cm         *ASTM D7624         >20         8.9         10.1            Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         23.2            FLUID DEGRADATION         met                                    | Magnesium        | ppm      | ASTM D5185m | 950        | 901         | 964         |          |
| Zinc         ppm         ASTM D5185m         1180         1237         1283            Sulfur         ppm         ASTM D5185m         2600         3138         3164            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         5         4            Sodium         ppm         ASTM D5185m         >20         14         8            Potassium         ppm         ASTM D5185m         >20         14         8            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1         1.4            Nitration         Abs/cm         *ASTM D7624         >20         8.9         10.1            Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         23.2            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7 | Calcium          | ppm      | ASTM D5185m | 1050       | 1089        | 1237        |          |
| Sulfur         ppm         ASTM D5185m         2600         3138         3164            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         5         4            Sodium         ppm         ASTM D5185m         <1   | Phosphorus       | ppm      | ASTM D5185m | 995        | 1086        | 982         |          |
| CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         5         4            Sodium         ppm         ASTM D5185m         <1  | Zinc             | ppm      | ASTM D5185m | 1180       | 1237        | 1283        |          |
| Silicon         ppm         ASTM D5185m         >20         5         4            Sodium         ppm         ASTM D5185m         <1         3            Potassium         ppm         ASTM D5185m         >20         14         8            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1         1.4            Nitration         Abs/cm         *ASTM D7624         >20         8.9         10.1            Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         23.2            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         15.7         17.1   | Sulfur           | ppm      | ASTM D5185m | 2600       | 3138        | 3164        |          |
| Sodium         ppm         ASTM D5185m         <1         3            Potassium         ppm         ASTM D5185m         >20         14         8            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1         1.4            Nitration         Abs/cm         *ASTM D7624         >20         8.9         10.1            Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         23.2            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         15.7         17.1  | CONTAMINA        | NTS      | method      | limit/base | current     | history1    | history2 |
| Potassium         ppm         ASTM D5185m         >20         14         8            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1         1.4            Nitration         Abs/cm         *ASTM D7624         >20         8.9         10.1            Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         23.2            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         15.7         17.1   | Silicon          | ppm      | ASTM D5185m | >20        | 5           | 4           |          |
| INFRA-RED  | Sodium           | ppm      | ASTM D5185m |            | <1          | 3           |          |
| Soot %         %         *ASTM D7844         >3         1         1.4            Nitration         Abs/cm         *ASTM D7624         >20         8.9         10.1            Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         23.2            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         15.7         17.1   | Potassium        | ppm      | ASTM D5185m | >20        | 14          | 8           |          |
| Nitration         Abs/cm         *ASTM D7624         >20         8.9         10.1            Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         23.2            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         15.7         17.1  | INFRA-RED        |          | method      | limit/base | current     | history1    | history2 |
| Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         23.2            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         15.7         17.1   | Soot %           | %        | *ASTM D7844 | >3         | 1           | 1.4         |          |
| FLUID DEGRADATION method limit/base current history1 history2  Oxidation Abs/.1mm *ASTM D7414 >25 15.7 17.1  | Nitration        | Abs/cm   | *ASTM D7624 | >20        | 8.9         | 10.1        |          |
| Oxidation Abs/.1mm *ASTM D7414 >25 <b>15.7</b> 17.1  | Sulfation        | Abs/.1mm | *ASTM D7415 | >30        | 20.7        | 23.2        |          |
|  | FLUID DEGRA      | ADATION  | method      | limit/base | current     | history1    | history2 |
| Base Number (BN) mg KOH/g ASTM D2896 7.2 6.2   | Oxidation        | Abs/.1mm | *ASTM D7414 | >25        | 15.7        | 17.1        |          |
|  | Base Number (BN) | mg KOH/g | ASTM D2896  |            | 7.2         | 6.2         |          |

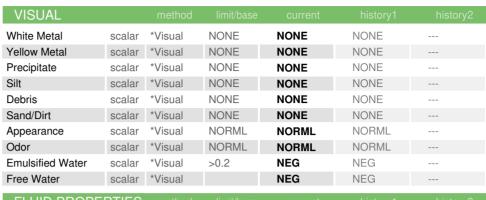


## **OIL ANALYSIS REPORT**



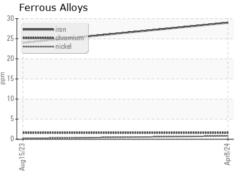
Viscosity @ 100°C

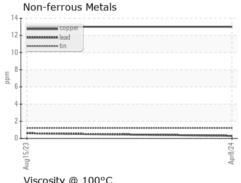
cSt (100°C)

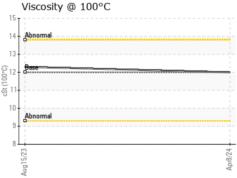


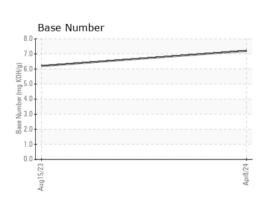
| FLUID PROPI  | ERITES | method    | limit/base |      | nistory1 | history2 |
|--------------|--------|-----------|------------|------|----------|----------|
| Visc @ 100°C | cSt    | ASTM D445 | 12.00      | 12.0 | 12.3     |          |

### **GRAPHS**













Certificate 12367

Laboratory Sample No.

: PCA0107537 Lab Number : 06156680 Unique Number : 10992103 Test Package : FLEET

To discuss this sample report, contact Customer Service at 1-800-237-1369.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 22 Apr 2024 **Tested** 

: 23 Apr 2024 Diagnosed : 23 Apr 2024 - Wes Davis

Transervice - Shop 1367 - Berkeley-Jupiter

15998 Walgreens Drive Jupiter, FL US 33478

Contact: Manny Gonzalez egonzalez@transervice.com T: (561)776-0755

 $^st$  - 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)

F: (561)776-0799