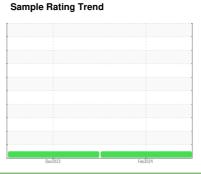


# **OIL ANALYSIS REPORT**

# (P1021275) Dixon Transport-Tractor [Dixon Transport-Tractor] 325A325536

**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

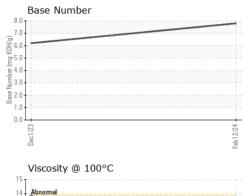
### **Fluid Condition**

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

| SAMPLE INFORMATION   method   limit/base   current   history1   history2   Sample Number   Client Info   PCA0114345   PCA0114321     Sample Date   Client Info   543441   522919     Client Info   Client Info   543441   522919     Client Info   Client Info   Client Info   Client Info   Colinge   mis   Client Info   Colinge   Mis   Client Info   Not Changd   Changed     Changed   Client Info   Not Changd   Changed     Contains   Changed     Contains   Contains   Changed     Contains   Contains | GAL)             |          |             | Dec2023    | Feb 2024    |             |          |
|---|------------------|----------|-------------|------------|-------------|-------------|----------|
| Sample Date   | SAMPLE INFOR     | RMATION  | method      | limit/base | current     | history1    | history2 |
| Sample Date   Client Info   12 Feb 2024   01 Dec 2023   | Sample Number    |          | Client Info |            | PCA0114345  | PCA0114321  |          |
| Machine Age         mls         Client Info         243441         522919            Oil Age         mls         Client Info         20522         40251            Oil Changed         Client Info         Not Changed         Changed            Sample Status         method         Imitibase         current         history1         history2           Fuel         WC Method         >5         <1.0  | •                |          | Client Info |            | 12 Feb 2024 | 01 Dec 2023 |          |
| Oil Age         mls         Client Info         Not Changed                   | •                | mls      | Client Info |            | 543441      | 522919      |          |
| Sample Status         Morand Method         Imitibase         current         history1         history2           Fuel         WC Method         >5         <1.0         <1.0            Water         WC Method         >0.2         NEG         NEG            WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >80         17         21            Chromium         ppm         ASTM D5185m         >80         17         21            Nickel         ppm         ASTM D5185m         >5         2         1         -1            Nickel         ppm         ASTM D5185m         >2         1         <1            Silver         ppm         ASTM D5185m         >30         8         6            Aluminum         ppm         ASTM D5185m         >30         <1         <1            Lead         ppm         ASTM D5185m         >30         <1         <1            Copper         ppm         ASTM D5185m         >5         <1         0<  |                  | mls      | Client Info |            | 20522       | 40251       |          |
| Sample Status         Morand Method         Imitibase         current         history1         history2           Fuel         WC Method         >5         <1.0         <1.0            Water         WC Method         >0.2         NEG         NEG            WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >80         17         21            Chromium         ppm         ASTM D5185m         >80         17         21            Nickel         ppm         ASTM D5185m         >5         2         1         -1            Nickel         ppm         ASTM D5185m         >2         1         <1            Silver         ppm         ASTM D5185m         >30         8         6            Aluminum         ppm         ASTM D5185m         >30         <1         <1            Lead         ppm         ASTM D5185m         >30         <1         <1            Copper         ppm         ASTM D5185m         >5         <1         0<  | Oil Changed      |          | Client Info |            | Not Changd  | Changed     |          |
| Fuel   WC Method   S5   C1.0   C1.0   C1.0   C2.0   | Sample Status    |          |             |            | NORMAL      | NORMAL      |          |
| Water Glycol         WC Method         >0.2         NEG         NEG            WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >80         17         21            Chromium         ppm         ASTM D5185m         >5         2         1         <1   | CONTAMINA        | TION     | method      | limit/base | current     | history1    | history2 |
| WEAR METALS   method   limit/base   current   history1   history2   | Fuel             |          | WC Method   | >5         | <1.0        | <1.0        |          |
| WEAR METALS   | Water            |          | WC Method   | >0.2       | NEG         | NEG         |          |
| Iron  | Glycol           |          | WC Method   |            | NEG         | NEG         |          |
| Chromium         ppm         ASTM D5185m         >5         2         1            Nickel         ppm         ASTM D5185m         >2         1         <1   | WEAR METAI       | LS       | method      | limit/base | current     | history1    | history2 |
| Nickel  | Iron             | ppm      | ASTM D5185m | >80        | 17          | 21          |          |
| Titanium  | Chromium         | ppm      | ASTM D5185m | >5         | 2           | 1           |          |
| Silver  | Nickel           | ppm      | ASTM D5185m | >2         | 1           | <1          |          |
| Aluminum  | Titanium         | ppm      | ASTM D5185m |            | 0           | 0           |          |
| Lead  | Silver           | ppm      | ASTM D5185m | >3         | 0           | 0           |          |
| Copper         ppm         ASTM D5185m         >150         5         4            Tin         ppm         ASTM D5185m         >5         <1  | Aluminum         | ppm      | ASTM D5185m | >30        | 8           | 6           |          |
| Tin         ppm         ASTM D5185m         >5         <1         0            Vanadium         ppm         ASTM D5185m         <1         0            Cadmium         ppm         ASTM D5185m         0         0         0            ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         6         0            Barium         ppm         ASTM D5185m         0         0         0            Molybdenum         ppm         ASTM D5185m         50         60         59            Magnaese         ppm         ASTM D5185m         950         1007         1066            Magnesium         ppm         ASTM D5185m         950         1050         1085            Phosphorus         ppm         ASTM D5185m         995         1050         1085            Zinc         ppm         ASTM D5185m         2600         2844         2700            CONTAMINANTS         method         limit/base         current   | Lead             | ppm      | ASTM D5185m | >30        | <1          | <1          |          |
| Vanadium         ppm         ASTM D5185m         <1         0            Cadmium         ppm         ASTM D5185m         0         0            ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         6         0            Barium         ppm         ASTM D5185m         0         0         0            Molybdenum         ppm         ASTM D5185m         50         60         59            Magnesium         ppm         ASTM D5185m         0         <1         0            Magnesium         ppm         ASTM D5185m         950         1007         1066            Calcium         ppm         ASTM D5185m         950         1007         1066            Phosphorus         ppm         ASTM D5185m         995         1050         1085            Zinc         ppm         ASTM D5185m         995         1050         1085            Sulfur         ppm         ASTM D5185m         2600         2844         2700   | Copper           | ppm      | ASTM D5185m | >150       | 5           | 4           |          |
| Cadmium         ppm         ASTM D5185m         0         0            ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         6         0            Barium         ppm         ASTM D5185m         0         0         0            Molybdenum         ppm         ASTM D5185m         50         60         59            Manganese         ppm         ASTM D5185m         0         <1         0            Magnesium         ppm         ASTM D5185m         950         1007         1066            Calcium         ppm         ASTM D5185m         1050         1132         1225            Phosphorus         ppm         ASTM D5185m         995         1050         1085            Zinc         ppm         ASTM D5185m         2600         2844         2700            Sulfur         ppm         ASTM D5185m         >20         5         7            Sodium <td>Tin</td> <td>ppm</td> <td>ASTM D5185m</td> <td>&gt;5</td> <th>&lt;1</th> <td>0</td> <td></td>   | Tin              | ppm      | ASTM D5185m | >5         | <1          | 0           |          |
| ADDITIVES   | Vanadium         | ppm      | ASTM D5185m |            | <1          | 0           |          |
| Boron         ppm         ASTM D5185m         2         6         0            Barium         ppm         ASTM D5185m         0         0         0            Molybdenum         ppm         ASTM D5185m         50         60         59            Manganese         ppm         ASTM D5185m         0         <1  | Cadmium          | ppm      | ASTM D5185m |            | 0           | 0           |          |
| Barium         ppm         ASTM D5185m         0         0         0            Molybdenum         ppm         ASTM D5185m         50         60         59            Manganese         ppm         ASTM D5185m         0         <1   | ADDITIVES        |          | method      | limit/base | current     | history1    | history2 |
| Molybdenum         ppm         ASTM D5185m         50         60         59            Manganese         ppm         ASTM D5185m         0         <1   | Boron            | ppm      | ASTM D5185m | 2          | 6           | 0           |          |
| Manganese         ppm         ASTM D5185m         0         <1         0            Magnesium         ppm         ASTM D5185m         950         1007         1066            Calcium         ppm         ASTM D5185m         1050         1132         1225            Phosphorus         ppm         ASTM D5185m         995         1050         1085            Zinc         ppm         ASTM D5185m         1180         1287         1264            Sulfur         ppm         ASTM D5185m         2600         2844         2700            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         5         7            Sodium         ppm         ASTM D5185m         >20         2         <1  | Barium           | ppm      | ASTM D5185m | 0          | 0           | 0           |          |
| Magnesium         ppm         ASTM D5185m         950         1007         1066            Calcium         ppm         ASTM D5185m         1050         1132         1225            Phosphorus         ppm         ASTM D5185m         995         1050         1085            Zinc         ppm         ASTM D5185m         1180         1287         1264            Sulfur         ppm         ASTM D5185m         2600         2844         2700            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         5         7            Sodium         ppm         ASTM D5185m         >20         2         <1  | Molybdenum       | ppm      | ASTM D5185m | 50         | 60          | 59          |          |
| Calcium         ppm         ASTM D5185m         1050         1132         1225            Phosphorus         ppm         ASTM D5185m         995         1050         1085            Zinc         ppm         ASTM D5185m         1180         1287         1264            Sulfur         ppm         ASTM D5185m         2600         2844         2700            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         5         7            Sodium         ppm         ASTM D5185m         2         <1   | Manganese        | ppm      | ASTM D5185m | 0          | <1          | 0           |          |
| Phosphorus         ppm         ASTM D5185m         995         1050         1085            Zinc         ppm         ASTM D5185m         1180         1287         1264            Sulfur         ppm         ASTM D5185m         2600         2844         2700            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         5         7            Sodium         ppm         ASTM D5185m         2         <1   | Magnesium        | ppm      | ASTM D5185m | 950        | 1007        | 1066        |          |
| Zinc         ppm         ASTM D5185m         1180         1287         1264            Sulfur         ppm         ASTM D5185m         2600         2844         2700            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         5         7            Sodium         ppm         ASTM D5185m         2         <1   | Calcium          | ppm      | ASTM D5185m | 1050       | 1132        | 1225        |          |
| Sulfur         ppm         ASTM D5185m         2600         2844         2700            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         5         7            Sodium         ppm         ASTM D5185m         2         <1  | Phosphorus       | ppm      | ASTM D5185m | 995        | 1050        | 1085        |          |
| CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         5         7            Sodium         ppm         ASTM D5185m         2         <1   | Zinc             | ppm      | ASTM D5185m | 1180       | 1287        | 1264        |          |
| Silicon         ppm         ASTM D5185m         >20         5         7            Sodium         ppm         ASTM D5185m         2         <1            Potassium         ppm         ASTM D5185m         >20         2         <1            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.4         0.7            Nitration         Abs/cm         *ASTM D7624         >20         8.0         9.4            Sulfation         Abs/.1mm         *ASTM D7415         >30         19.3         22.0            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         15.5         18.8   | Sulfur           | ppm      | ASTM D5185m | 2600       | 2844        | 2700        |          |
| Sodium         ppm         ASTM D5185m         2         <1            Potassium         ppm         ASTM D5185m         >20         2         <1   | CONTAMINA        | NTS      | method      | limit/base | current     | history1    | history2 |
| Potassium         ppm         ASTM D5185m         >20         2         <1            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.4         0.7            Nitration         Abs/cm         *ASTM D7624         >20         8.0         9.4            Sulfation         Abs/.1mm         *ASTM D7415         >30         19.3         22.0            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         15.5         18.8   | Silicon          | ppm      | ASTM D5185m | >20        | 5           | 7           |          |
| INFRA-RED   | Sodium           | ppm      | ASTM D5185m |            | 2           | <1          |          |
| Soot %         %         *ASTM D7844         >3         0.4         0.7            Nitration         Abs/cm         *ASTM D7624         >20         8.0         9.4            Sulfation         Abs/.1mm         *ASTM D7415         >30         19.3         22.0            FLUID DEGRADATION method limit/base current history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         15.5         18.8   | Potassium        | ppm      | ASTM D5185m | >20        | 2           | <1          |          |
| Nitration         Abs/cm         *ASTM D7624         >20         8.0         9.4            Sulfation         Abs/.1mm         *ASTM D7615         >30         19.3         22.0            FLUID DEGRADATION method limit/base current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         15.5         18.8  | INFRA-RED        |          | method      | limit/base | current     | history1    | history2 |
| Sulfation         Abs/.1mm         *ASTM D7415 >30         19.3         22.0            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414 >25         15.5         18.8  | Soot %           | %        | *ASTM D7844 | >3         | 0.4         | 0.7         |          |
| FLUID DEGRADATION method limit/base current history1 history2  Oxidation Abs/.1mm *ASTM D7414 >25 15.5 18.8   | Nitration        | Abs/cm   | *ASTM D7624 | >20        | 8.0         | 9.4         |          |
| Oxidation   | Sulfation        | Abs/.1mm | *ASTM D7415 | >30        | 19.3        | 22.0        |          |
|   | FLUID DEGRA      | DATION   | method      | limit/base | current     | history1    | history2 |
|   | Oxidation        | Abs/.1mm | *ASTM D7414 | >25        | 15.5        | 18.8        |          |
|   | Base Number (BN) | mg KOH/g |             |            | 7.8         | 6.2         |          |



# **OIL ANALYSIS REPORT**

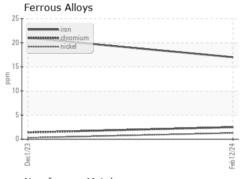


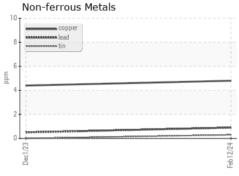
| VISUAL                  |        | method  |                   |       |                 | history2      |
|-------------------------|--------|---------|-------------------|-------|-----------------|---------------|
| White Metal             | scalar | *Visual | NONE              | NONE  | NONE            |               |
| Yellow Metal            | scalar | *Visual | NONE              | NONE  | NONE            |               |
| Precipitate             | scalar | *Visual | NONE              | NONE  | NONE            |               |
| Silt                    | scalar | *Visual | NONE              | NONE  | NONE            |               |
| Debris                  | scalar | *Visual | NONE              | NONE  | NONE            |               |
| Sand/Dirt               | scalar | *Visual | NONE              | NONE  | NONE            |               |
| Appearance              | scalar | *Visual | NORML             | NORML | NORML           |               |
| Odor                    | scalar | *Visual | NORML             | NORML | NORML           |               |
| <b>Emulsified Water</b> | scalar | *Visual | >0.2              | NEG   | NEG             |               |
| Free Water              | scalar | *Visual |                   | NEG   | NEG             |               |
|                         | DTIEO  | l       | Proc 24 /leanning |       | In the Language | la la la va O |

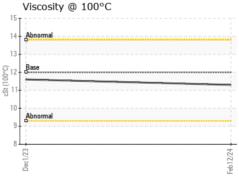
| 131<br>612 - Base<br>27 11 | 14-  | Abnormal | <br> | <br> | <br> | <br> | <br> |   | <br>  | <br> |   | <br> |  |
|----------------------------|------|----------|------|------|------|------|------|---|-------|------|---|------|--|
|                            | 13-  | Base     |      |      |      |      |      |   |       |      |   |      |  |
| 10                         | E 12 |          | <br> |      |      | _    |      | _ | <br>- | <br> | _ | <br> |  |
|                            | 10-  |          |      |      |      |      |      |   |       |      |   |      |  |

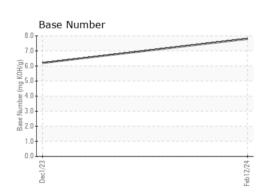
Visc @ 100°C cSt ASTM D445 12.00 11.3 11.6

## **GRAPHS**











Certificate L2367

Laboratory Sample No.

Lab Number : 06100722

: PCA0114345

**Unique Number** : 10898952

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 26 Feb 2024 **Tested** 

: 27 Feb 2024 Diagnosed : 27 Feb 2024 - Wes Davis

Transervice - Shop 3250 - Dixon Transport

1124 E. River Road Dixon, IL US 61021 Contact: Mike Shoemaker

Test Package : FLEET 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)

T:

Report Id: TSV3250 [WUSCAR] 06100722 (Generated: 02/27/2024 16:38:27) Rev: 1

Shop3250@transervice.com

F: