

### **OIL ANALYSIS REPORT**

Sample Rating Trend



# FLORY SWP-44V62 SV-06 (S/N 305317)

Diesel Engine

PETRO CANADA DURON HP 15W40 (--- GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

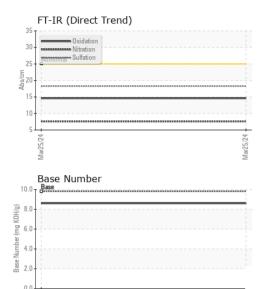
#### Fluid Condition

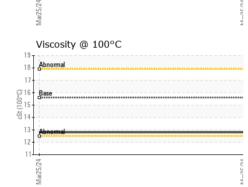
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

|   | MATION   | method   | limit/base  | current  | history1  | history2   |
|---|--|--|---|--|---|--|
| Sample Number   |  | Client Info  |   | PCA0118122   |   |  |
| Sample Date   |  | Client Info  |   | 25 Mar 2024  |   |  |
| Machine Age   | hrs  | Client Info  |   | 3661   |   |  |
| Oil Age   | hrs  | Client Info  |   | 250  |   |  |
| Oil Changed   |  | Client Info  |   | Changed  |   |  |
| Sample Status   |  |  |   | NORMAL   |   |  |
| CONTAMINAT  | ION  | method   | limit/base  | current  | history1  | history2   |
| Fuel  |  | WC Method  | >5  | <1.0   |   |  |
| Water   |  | WC Method  | >0.2  | NEG  |   |  |
| Glycol  |  | WC Method  |   | NEG  |   |  |
| WEAR METAL  | S  | method   | limit/base  | current  | history1  | history2   |
| Iron  | ppm  | ASTM D5185m  | >100  | 28   |   |  |
| Chromium  | ppm  | ASTM D5185m  | >20   | <1   |   |  |
| Nickel  | ppm  | ASTM D5185m  | >4  | 0  |   |  |
| Titanium  | ppm  | ASTM D5185m  |   | <1   |   |  |
| Silver  | ppm  | ASTM D5185m  | >3  | 0  |   |  |
| Aluminum  | ppm  | ASTM D5185m  | >20   | 13   |   |  |
| Lead  | ppm  | ASTM D5185m  | >40   | 0  |   |  |
| Copper  | ppm  | ASTM D5185m  | >330  | 2  |   |  |
| Tin   | ppm  | ASTM D5185m  | >15   | 0  |   |  |
| Vanadium  | ppm  | ASTM D5185m  |   | <1   |   |  |
|   |  |  |   |  |   |  |
| Cadmium   | ppm  | ASTM D5185m  |   | 0  |   |  |
| ADDITIVES   | ppm  | ASTM D5185m<br>method  | limit/base  | 0<br>current   | <br>history1  | <br>history2   |
|   | ppm<br>ppm   |  | limit/base  | -  |   |  |
| ADDITIVES   |  | method   | limit/base  | current  | history1  | history2   |
| ADDITIVES<br>Boron  | ppm  | method<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m  | limit/base  | current<br>2   | history1  | history2   |
| ADDITIVES<br>Boron<br>Barium  | ppm<br>ppm   | method<br>ASTM D5185m<br>ASTM D5185m   | limit/base  | current<br>2<br>0  | history1<br>  | history2<br>   |
| ADDITIVES<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium  | ppm<br>ppm<br>ppm  | method<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m  | limit/base  | current<br>2<br>0<br>65<br><1<br>1057  | history1<br><br>  | history2<br><br>   |
| ADDITIVES<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium   | ppm<br>ppm<br>ppm<br>ppm   | method<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m   | limit/base  | current<br>2<br>0<br>65<br><1  | history1<br><br><br>  | history2<br><br>   |
| ADDITIVES<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium<br>Phosphorus   | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm  | method<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m   | limit/base  | current           2           0           65           <1           1057           1215           1131   | history1<br><br><br>  | history2   |
| ADDITIVES<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium<br>Phosphorus<br>Zinc   | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm  | method<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m  | limit/base  | current           2           0           65           <1           1057           1215           1131           1351  | history1  | history2   |
| ADDITIVES<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium<br>Phosphorus<br>Zinc<br>Sulfur   | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm                                   | method<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m   | limit/base  | current           2           0           65           <1           1057           1215           1131   | history1  | history2   |
| ADDITIVES<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium<br>Phosphorus<br>Zinc   | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm                                   | method<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m  | limit/base  | current           2           0           65           <1           1057           1215           1131           1351  | history1  | history2   |
| ADDITIVES<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium<br>Phosphorus<br>Zinc<br>Sulfur<br>CONTAMINAN<br>Silicon  | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm                            | method           ASTM D5185m   |   | current           2           0           65           <1           1057           1215           1131           1351           3742           current           22  | history1  | history2   |
| ADDITIVES<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium<br>Phosphorus<br>Zinc<br>Sulfur<br>CONTAMINAN<br>Silicon<br>Sodium  | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm                            | method           ASTM D5185m   | limit/base  | current           2           0           65           <1           1057           1215           1131           1351           3742           current           22           1  | history1 history1   | history2 history2  |
| ADDITIVES<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium<br>Phosphorus<br>Zinc<br>Sulfur<br>CONTAMINAN<br>Silicon<br>Sodium<br>Potassium                                     | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm                            | method           ASTM D5185m   | limit/base  | current           2           0           65           <1           1057           1215           1131           1351           3742           current           22  | history1 history1   | history2 history2  |
| ADDITIVES<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium<br>Phosphorus<br>Zinc<br>Sulfur<br>CONTAMINAN<br>Silicon<br>Sodium  | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm                     | method           ASTM D5185m   | limit/base  | current           2           0           65           <1           1057           1215           1131           1351           3742           current           22           1  | history1  | history2   |
| ADDITIVES<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium<br>Phosphorus<br>Zinc<br>Sulfur<br>CONTAMINAN<br>Silicon<br>Sodium<br>Potassium<br>INFRA-RED<br>Soot %              | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br><b>TS</b><br>ppm<br>ppm | method         ASTM D5185m   | limit/base<br>>25<br>>20<br>limit/base<br>>3        | current           2           0           65           <1           1057           1215           1131           1351           3742           current           22           1           1           current           0.2                  | history1 history1 history1  | history2 history2 history2   |
| ADDITIVES<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium<br>Phosphorus<br>Zinc<br>Sulfur<br>CONTAMINAN<br>Silicon<br>Sodium<br>Potassium<br>INFRA-RED<br>Soot %<br>Nitration | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br><b>TS</b><br>ppm<br>ppm | method           ASTM D5185m   | limit/base<br>>25<br>>20<br>limit/base<br>>3<br>>20 | current           2           0           65           <1           1057           1215           1131           1351           3742           current           22           1           current           0.2           7.6                | history1                        history1            history1            history1               history1 | history2 history2 history2 history2  |
| ADDITIVES<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium<br>Phosphorus<br>Zinc<br>Sulfur<br>CONTAMINAN<br>Silicon<br>Sodium<br>Potassium<br>INFRA-RED<br>Soot %              | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br><b>TS</b><br>ppm<br>ppm | method         ASTM D5185m   | limit/base<br>>25<br>>20<br>limit/base<br>>3        | current           2           0           65           <1           1057           1215           1131           1351           3742           current           22           1           1           current           0.2                  | history1 history1 history1 history1 history1  | history2 history2 history2 history2  |
| ADDITIVES<br>Boron<br>Barium<br>Molybdenum<br>Manganese<br>Magnesium<br>Calcium<br>Phosphorus<br>Zinc<br>Sulfur<br>CONTAMINAN<br>Silicon<br>Sodium<br>Potassium<br>INFRA-RED<br>Soot %<br>Nitration | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm                     | method           ASTM D5185m   | limit/base<br>>25<br>>20<br>limit/base<br>>3<br>>20 | current           2           0           65           <1           1057           1215           1131           1351           3742           current           22           1           current           0.2           7.6                | history1   history1               history1                    | history2   history2                     history2 |
| ADDITIVES 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                     | method           ASTM D5185m           ASTM D5185m | Imit/base >25 >20 Imit/base >3 >20 >3 >20 >30       | current           2           0           65           <1           1057           1215           1131           1351           3742           current           22           1           current           0.2           7.6           18.3 | history1                              history1            history1               history1               | history2 history2 history2 history2 history2 history2                                      |



## **OIL ANALYSIS REPORT**





| VISUAL                   |                | method    |   | current                   | history1    | history2                |
|--------------------------|----------------|-----------|---|---------------------------|-------------|-------------------------|
|                          |                |           |   |                           | - History F | - mstoryz               |
| White Metal              | scalar         | *Visual   | NONE                                    | NONE                      |             |                         |
| Yellow Metal             | scalar         | *Visual   | NONE                                    | NONE                      |             |                         |
| Precipitate              | scalar         | *Visual   | NONE                                    | NONE                      |             |                         |
| Silt                     | scalar         | *Visual   | NONE                                    | NONE                      |             |                         |
| Debris                   | scalar         | *Visual   | NONE                                    | NONE                      |             |                         |
| Sand/Dirt                | scalar         | *Visual   | NONE                                    | NONE                      |             |                         |
| Appearance               | scalar         | *Visual   | NORML                                   | NORML                     |             |                         |
| Odor                     | scalar         | *Visual   | NORML                                   | NORML                     |             |                         |
| Emulsified Water         | scalar         | *Visual   | >0.2                                    | NEG                       |             |                         |
| Free Water               | scalar         | *Visual   |   | NEG                       |             |                         |
| FLUID PROPE              | RTIES          | method    | limit/base                              | current                   | history1    | history2                |
| Visc @ 100°C             | cSt            | ASTM D445 | 15.6                                    | 12.8                      |             |                         |
| GRAPHS                   |                |           |   |                           |             |                         |
| Iron (ppm)               |                |           |   | Lead (ppm)                |             |                         |
| <sup>0</sup> T ,         |                |           | 100                                     | T ;                       |             |                         |
| Severe                   |                |           | 80                                      | Severe                    |             |                         |
| D-                       |                |           | E 60                                    |                           |             |                         |
| 0 - Abnormal             |                |           | 40                                      | Abnormal                  |             |                         |
| D                        |                |           | 20                                      | •                         |             |                         |
| 0<br>4<br>1              |                |           | 0                                       | 42                        |             |                         |
| Mar25/24                 |                |           | Mar25/24                                | Mar25/24                  |             |                         |
|                          |                |           | ≥                                       |                           | nm)         |                         |
| Aluminum (ppm)           |                |           | 50                                      | Chromium (p               | pm)         |                         |
| 0 - Severe               |                |           | 40                                      | Severe                    |             |                         |
| 0-                       |                |           | = 30                                    |                           |             |                         |
| 0 - Abnormal             |                |           | 20                                      | Abnormal                  |             | **********              |
| D -                      |                |           | 10                                      | +                         |             |                         |
|                          |                |           |   |                           |             |                         |
| Mar25/24                 |                |           | Mar25/24                                | Mar25/24                  |             |                         |
|                          |                |           | M                                       |                           |             |                         |
| Copper (ppm)             |                |           | 80                                      | Silicon (ppm)<br>⊤ Severe |             |                         |
| Abitomal                 |                |           |   |                           |             |                         |
| D                        |                |           | 60                                      |                           |             |                         |
| D                        |                |           | 틆 40                                    | Abnormal                  |             |                         |
| D <b>-</b>               |                |           | 20                                      | + -                       |             |                         |
| 0                        |                |           | 0                                       | L                         |             |                         |
| Mar25/24                 |                |           | Mar25/24                                | Mar25/24                  |             |                         |
|                          |                |           | Mai                                     |                           |             |                         |
| ) <sub>T</sub> ,         |                |           | Base Number                             |                           |             |                         |
| 8 - Abnormal             |                |           | ( <sup>B</sup> /HO) 8.0                 |                           |             |                         |
| 6 Base                   |                |           | (8)(HOX 8.0<br>Base Winnber<br>Base 2.0 |                           |             |                         |
| 6 - Base<br>4 - Abnormal |                |           | 4.0                                     |                           |             |                         |
| 2 - 7                    |                |           | 2.0                                     |                           |             |                         |
|                          |                |           | 0.0                                     |                           |             |                         |
| Mar25/24                 |                |           | Mar25/24                                | Mar25/24                  |             |                         |
| Ma                       |                |           | PW                                      | M                         |             |                         |
|                          |                |           | NO 0                                    |                           |             |                         |
| VearCheck USA - 501      |                |           |   |                           |             | TAS FARMIN              |
| CA0118122<br>6142699     | Recei<br>Teste |           | ) Apr 2024<br>) Apr 2024                |                           |             | PANOCHE R<br>REBAUGH, C |
| 0967507                  |                |           | ) Apr 2024<br>Apr 2024 - W              | es Davis                  | C II        | US 9362                 |



Unique Number : 10967507 Diagnosed : 09 Apr 2024 - Wes Davis Test Package : MOB 1 (Additional Tests: TBN) Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. spencer.cooper@trinitasfarming.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)

Report Id: TRIFIR [WUSCAR] 06142699 (Generated: 04/09/2024 18:46:23) Rev: 1

Laboratory Sample No. Lab Number

Contact/Location: SPENCER COOPER - TRIFIR

Contact: SPENCER COOPER

F:

T: (209)493-2999