

# 901148 - DIESEL ENGINE

**Sample No:** GFL0111772

**Oil Type:** PETRO CANADA DURON SHP 10W30

## SAMPLE INFORMATION

|               |                    |             |             |             |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | <b>GFL0111772</b>  | GFL0111767  | GFL0039028  | GFL0028109  |
| Sample Date   | <b>13 Apr 2024</b> | 08 Feb 2024 | 11 Nov 2021 | 21 Jun 2021 |
| Machine Hours | <b>9413</b>        | 0           | 0           | 0           |
| Oil Hours     | <b>360</b>         | 0           | 0           | 0           |
| Oil Changed   | <b>Changed</b>     | N/A         | Changed     | Changed     |
| Sample Status | <b>NORMAL</b>      | NORMAL      | NORMAL      | NORMAL      |

**GFL Environmental - 557 - Edson**

6615 - 4th Ave,

Edson, AB

CA T7E 1M5

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## OIL CONDITION

|                |     |             |      |      |      |
|----------------|-----|-------------|------|------|------|
| Visc @ 100°C   | cSt | <b>11.2</b> | 11.4 | 11.7 | 11.2 |
| Oxidation (PA) | %   | <b>59</b>   | 62   | 46   | 88   |

## CONTAMINATION

|                |     |                |      |      |      |
|----------------|-----|----------------|------|------|------|
| Water          | %   | <b>NEG</b>     | NEG  | NEG  | NEG  |
| Soot %         | %   | <b>0.4</b>     | 0.6  | 0.4  | 0.8  |
| Nitration (PA) | %   | <b>61</b>      | 67   | 50   | 128  |
| Sulfation (PA) | %   | <b>53</b>      | 55   | 51   | 58   |
| Glycol         | %   | <b>NEG</b>     | NEG  | NEG  | NEG  |
| Fuel           | %   | <b>&lt;1.0</b> | <1.0 | <1.0 | <1.0 |
| Silicon        | ppm | <b>3</b>       | 4    | 4    | 4    |
| Sodium         | ppm | <b>2</b>       | 3    | 3    | 5    |
| Potassium      | ppm | <b>&lt;1</b>   | <1   | 2    | 2    |

## Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

## WEAR METALS

|            |     |              |    |    |    |
|------------|-----|--------------|----|----|----|
| Iron       | ppm | <b>7</b>     | 10 | 13 | 13 |
| Copper     | ppm | <b>&lt;1</b> | <1 | 1  | <1 |
| Lead       | ppm | <b>0</b>     | <1 | <1 | 2  |
| Tin        | ppm | <b>0</b>     | <1 | <1 | <1 |
| Aluminum   | ppm | <b>2</b>     | 2  | 3  | 2  |
| Chromium   | ppm | <b>0</b>     | <1 | <1 | <1 |
| Molybdenum | ppm | <b>61</b>    | 59 | 59 | 58 |
| Nickel     | ppm | <b>0</b>     | <1 | <1 | <1 |
| Titanium   | ppm | <b>0</b>     | 0  | 0  | 0  |
| Silver     | ppm | <b>0</b>     | 0  | <1 | <1 |
| Manganese  | ppm | <b>&lt;1</b> | 0  | <1 | <1 |
| Vanadium   | ppm | <b>0</b>     | 0  | 0  | 0  |

## ADDITIVES

|            |     |             |      |      |      |
|------------|-----|-------------|------|------|------|
| Calcium    | ppm | <b>1058</b> | 1055 | 1056 | 1067 |
| Magnesium  | ppm | <b>975</b>  | 956  | 1006 | 964  |
| Zinc       | ppm | <b>1144</b> | 1150 | 1218 | 1237 |
| Phosphorus | ppm | <b>970</b>  | 973  | 1019 | 952  |
| Barium     | ppm | <b>0</b>    | 0    | 0    | 0    |
| Boron      | ppm | <b>6</b>    | 1    | 3    | 2    |

**Depot:** GFL557

**Unique No:** 5773881

**Signed:** Wes Davis

**Report Date:** 02 May 2024

# GRAPHS

