

# 9970 - DIESEL ENGINE

Sample No: GFL0111778

Oil Type: PETRO CANADA DURON SHP 15W40

## SAMPLE INFORMATION

Sample Number	<b>GFL0111778</b>	GFL0063205	GFL0039077	GFL0028693
Sample Date	<b>11 Apr 2024</b>	06 Dec 2022	22 Dec 2021	06 Jul 2021
Machine Hours	<b>4169</b>	2683	1595	708
Oil Hours	<b>550</b>	200	600	0
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>ABNORMAL</b>	NORMAL	MARGINAL	SEVERE

**GFL Environmental - 557 - Edson**

6615 - 4th Ave,

Edson, AB

CA T7E 1M5

Contact: GFL Tech

wcgfldemo@gmail.com

T:

F:

## OIL CONDITION

Visc @ 100°C	cSt	<b>▲ 12.3</b>	■ 11.7	■ 13.0	<b>▲ 10.7</b>
Oxidation (PA)	%	<b>80</b>	83	31	94

## CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	■ <b>1.2</b>	■ 1.1	■ 0	■ 0.5
Nitration (PA)	%	<b>120</b>	99	38	77
Sulfation (PA)	%	<b>65</b>	68	40	65
Glycol	%	<b>▲ 0.026</b>	■ 0.0	NEG	NEG
Fuel	%	<b>▲ 1.6</b>	<1.0	<b>▲ 2.9</b>	<b>▲ 6.2</b>
Silicon	ppm	■ <b>9</b>	■ 11	■ 5	■ 6
Sodium	ppm	<b>● 1104</b>	■ 28	■ 9	■ 7
Potassium	ppm	<b>▲ 106</b>	■ 10	■ 0	■ 2

## WEAR METALS

Iron	ppm	■ <b>56</b>	■ 38	■ 31	■ 22
Copper	ppm	■ <b>19</b>	■ 3	■ 2	■ 6
Lead	ppm	■ <b>2</b>	■ 1	■ 1	■ 2
Tin	ppm	■ <b>0</b>	■ <1	■ <1	■ <1
Aluminum	ppm	■ <b>8</b>	■ 4	■ 3	■ 2
Chromium	ppm	■ <b>3</b>	■ 2	■ 2	■ 2
Molybdenum	ppm	■ <b>103</b>	■ 58	■ 66	■ 47
Nickel	ppm	■ <b>&lt;1</b>	■ <1	■ <1	■ <1
Titanium	ppm	■ <b>0</b>	■ <1	■ 0	■ 0
Silver	ppm	■ <b>0</b>	■ 0	■ <1	■ <1
Manganese	ppm	■ <b>&lt;1</b>	■ <1	■ <1	■ <1
Vanadium	ppm	<b>0</b>	0	0	0

## ADDITIVES

Calcium	ppm	■ <b>945</b>	■ 1114	1741	■ 959
Magnesium	ppm	■ <b>812</b>	■ 910	375	■ 793
Zinc	ppm	■ <b>1049</b>	■ 1151	■ 1214	■ 1023
Phosphorus	ppm	<b>741</b>	■ 1034	■ 1048	■ 893
Barium	ppm	■ <b>0</b>	■ 0	■ 0	■ 0
Boron	ppm	■ <b>2</b>	■ 2	■ 11	■ 2

## Diagnosis

We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. No other corrective action is recommended at this time. All component wear rates are normal. Test for glycol is positive. Light fuel dilution occurring. There is a light concentration of glycol present in the oil. No other contaminants were detected in the oil. Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The oil is no longer serviceable due to the presence of contaminants.

**Depot:** GFL557

**Unique No:** 5773880

**Signed:** Kevin Marson

**Report Date:** 03 May 2024

Contact/Location: GFL Tech - GFL557

# GRAPHS

