



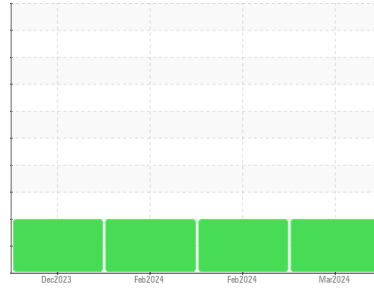
# OIL ANALYSIS REPORT

Sample Rating Trend

DIRT



Machine Id  
**814025**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (8 GAL)**



## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Elemental level of silicon (Si) above normal indicating ingress of seal material.

### Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GFL0105124</b>	GFL0105306	GFL0105222
Sample Date	Client Info	<b>19 Mar 2024</b>	26 Feb 2024	02 Feb 2024
Machine Age	hrs	<b>580</b>	390	249
Oil Age	hrs	<b>580</b>	390	249
Oil Changed	Client Info	<b>Changed</b>	Not Changd	Not Changd
Sample Status		<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

## CONTAMINATION

method	limit/base	current	history1	history2	
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185m	>120	<b>30</b>	26	20
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	<1
Nickel	ppm	ASTM D5185m	>5	<b>4</b>	4	2
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Aluminum	ppm	ASTM D5185m	>20	<b>6</b>	6	6
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>162</b>	44	11
Tin	ppm	ASTM D5185m	>15	<b>2</b>	3	2
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Cadmium	ppm	ASTM D5185m		<b>0</b>	<1	0

## ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185m	0	<b>347</b>	317	393
Barium	ppm	ASTM D5185m	0	<b>0</b>	2	0
Molybdenum	ppm	ASTM D5185m	60	<b>121</b>	123	122
Manganese	ppm	ASTM D5185m	0	<b>5</b>	5	4
Magnesium	ppm	ASTM D5185m	1010	<b>707</b>	626	662
Calcium	ppm	ASTM D5185m	1070	<b>1435</b>	1350	1405
Phosphorus	ppm	ASTM D5185m	1150	<b>752</b>	596	689
Zinc	ppm	ASTM D5185m	1270	<b>892</b>	764	803
Sulfur	ppm	ASTM D5185m	2060	<b>2434</b>	2375	2375

## CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>25	<b>▲ 67</b>	▲ 90	▲ 75
Sodium	ppm	ASTM D5185m		<b>1</b>	3	4
Potassium	ppm	ASTM D5185m	>20	<b>6</b>	6	6
Fuel	%	ASTM D3524	>3.0	<b>&lt;1.0</b>	<1.0	<1.0

## INFRA-RED

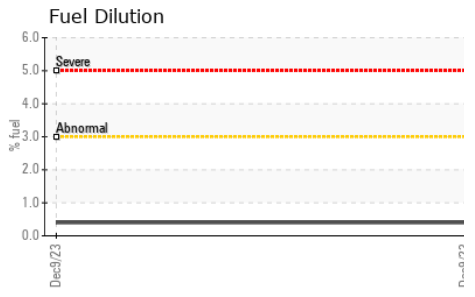
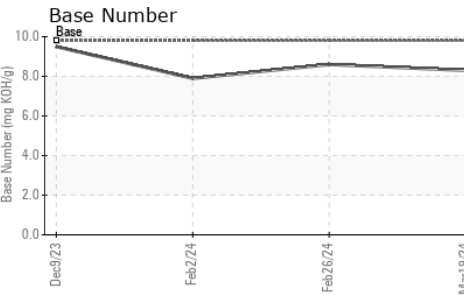
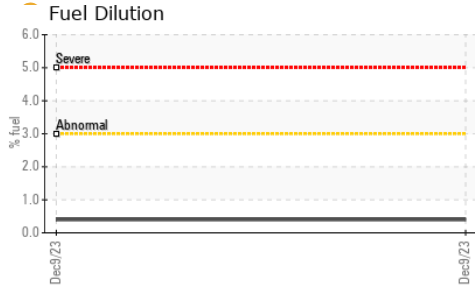
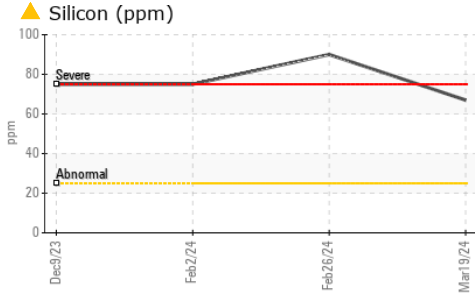
method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844	>4	<b>0.2</b>	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.7</b>	8.0	7.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>24.7</b>	25.7	25.2

## FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>21.6</b>	21.7	20.6
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.3</b>	8.6	7.9



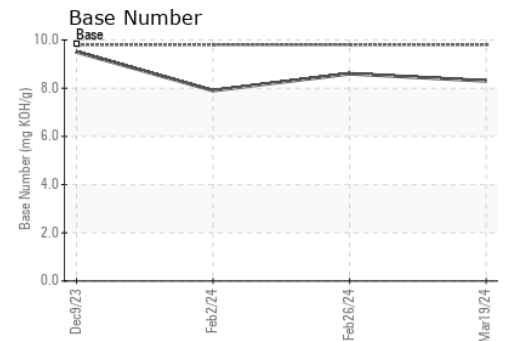
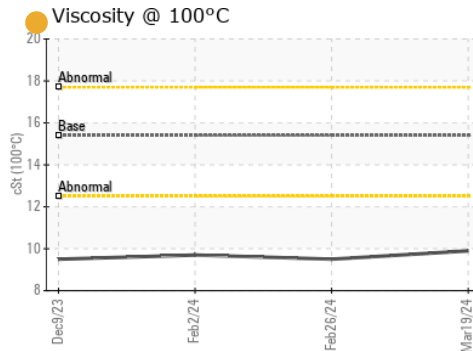
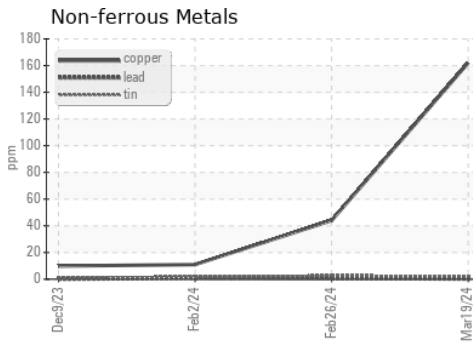
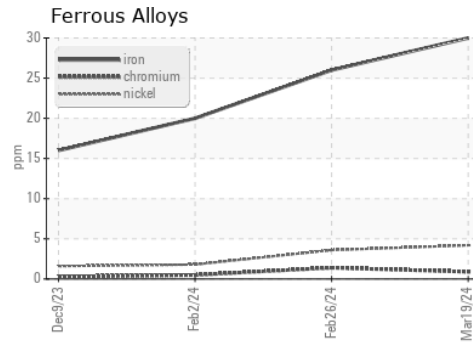
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	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
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	9.9	9.5

## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0105124 Received : 22 Mar 2024  
 Lab Number : 06126153 Tested : 25 Mar 2024  
 Unique Number : 10940304 Diagnosed : 26 Mar 2024 - Don Baldrige  
 Test Package : FLEET ( Additional Tests: FuelDilution )

GFL Environmental - 821 - Ozarks Hauling  
 33924 Olath Drive  
 Lebanon, MO  
 US 65536  
 Contact: Landen Johnson  
 landen.johnson@gflenv.com  
 T: (417)664-0010  
 F:

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)