



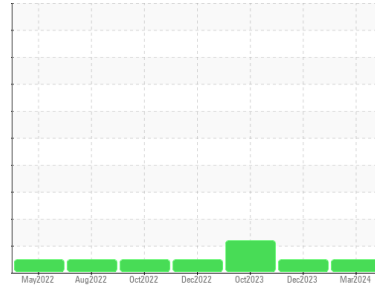
# OIL ANALYSIS REPORT

## Sample Rating Trend

**NORMAL**



Machine Id  
**1100M**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (9 GAL)**



## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. ( Customer Sample Comment: Early sampled )

### 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.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0115173</b>	GFL0097747	GFL0097709
Sample Date	Client Info		<b>28 Mar 2024</b>	04 Dec 2023	15 Oct 2023
Machine Age	hrs	Client Info	<b>18364</b>	17535	17245
Oil Age	hrs	Client Info	<b>228</b>	640	495
Oil Changed	Client Info		<b>Not Chngd</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	NORMAL	ABNORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
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 >200	<b>17</b>	30	12
Chromium	ppm	ASTM D5185m >20	<b>1</b>	2	<1
Nickel	ppm	ASTM D5185m >2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >30	<b>7</b>	13	3
Lead	ppm	ASTM D5185m >30	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >30	<b>4</b>	7	<1
Tin	ppm	ASTM D5185m >15	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>1</b>	2	6
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>60</b>	59	66
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m 1010	<b>915</b>	934	891
Calcium	ppm	ASTM D5185m 1070	<b>1147</b>	1115	1053
Phosphorus	ppm	ASTM D5185m 1150	<b>984</b>	944	1015
Zinc	ppm	ASTM D5185m 1270	<b>1240</b>	1237	1210
Sulfur	ppm	ASTM D5185m 2060	<b>3188</b>	2436	3264

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >30	<b>4</b>	7	8
Sodium	ppm	ASTM D5185m	<b>2</b>	5	▲ 169
Potassium	ppm	ASTM D5185m >20	<b>4</b>	14	5

## INFRA-RED

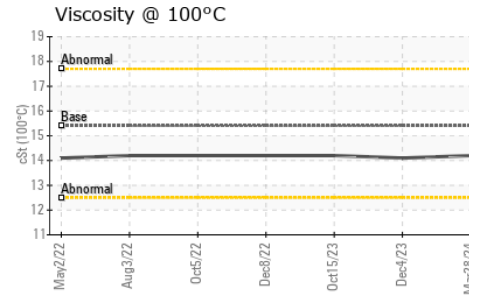
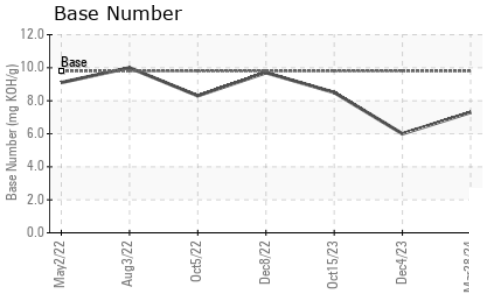
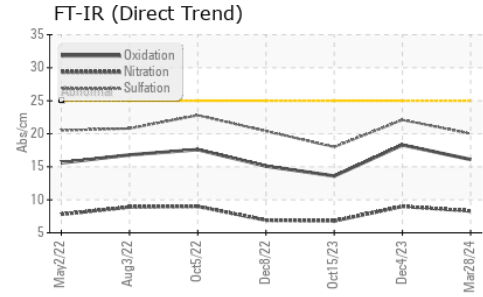
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.8</b>	1.3	0.2
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.3</b>	9.0	6.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.0</b>	22.1	18.0

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>16.1</b>	18.3	13.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.3</b>	6.0	8.5



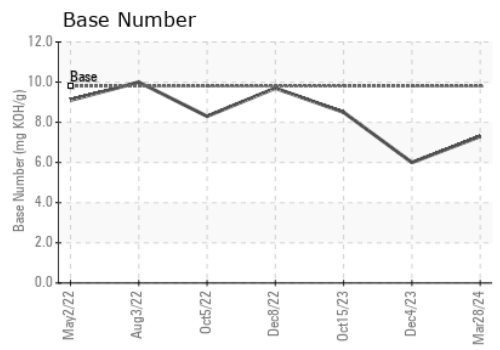
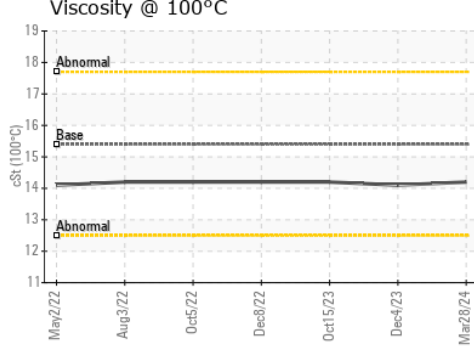
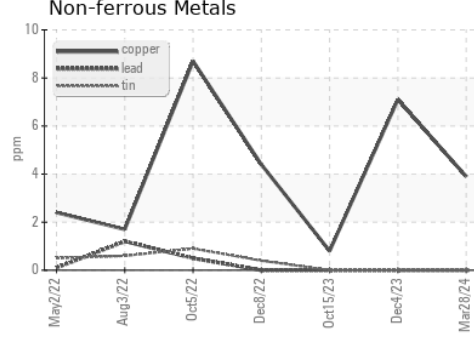
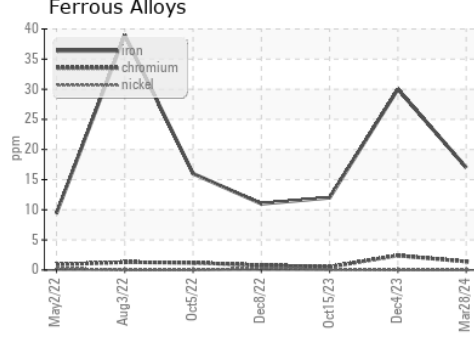
# OIL ANALYSIS REPORT



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	<b>14.2</b>	14.1	14.2

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0115173  
**Lab Number** : **06136797**  
**Unique Number** : 10956262  
**Test Package** : FLEET  
**Received** : 02 Apr 2024  
**Tested** : 03 Apr 2024  
**Diagnosed** : 04 Apr 2024 - Sean Felton

**GFL Environmental - 405 - Arbor Hills**  
 7811 Chubb Rd  
 NORTHVILLE, MI  
 US 48168  
 Contact: John Nahal  
 jnahal@gflenv.com  
 T:  
 F:

Certificate L2367  
 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)