



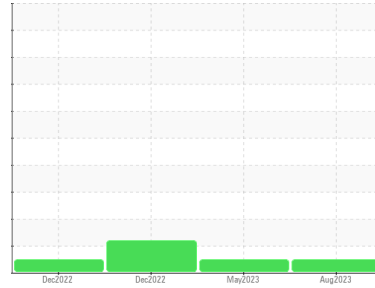
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**1105M**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 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.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0092745</b>	GFL0080792	GFL0048183
Sample Date	Client Info		<b>28 Aug 2023</b>	19 May 2023	22 Dec 2022
Machine Age	hrs	Client Info	<b>8446</b>	8446	600
Oil Age	hrs	Client Info	<b>8446</b>	0	600
Oil Changed	Client Info		<b>Not Chngd</b>	Not Chngd	N/A
Sample Status			<b>NORMAL</b>	NORMAL	ATTENTION

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	<1.0	▲ 3.1
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	<b>8</b>	6	15
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	1	0
Aluminum	ppm	ASTM D5185m >30	<b>5</b>	2	3
Lead	ppm	ASTM D5185m >30	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m >30	<b>2</b>	2	4
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m	<b>0</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>5</b>	4	3
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>68</b>	57	49
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>1053</b>	965	748
Calcium	ppm	ASTM D5185m 1070	<b>1130</b>	1052	925
Phosphorus	ppm	ASTM D5185m 1150	<b>1085</b>	1024	814
Zinc	ppm	ASTM D5185m 1270	<b>1303</b>	1268	1048
Sulfur	ppm	ASTM D5185m 2060	<b>3783</b>	3716	2942

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >30	<b>5</b>	3	5
Sodium	ppm	ASTM D5185m	<b>2</b>	1	11
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	1	6

## INFRA-RED

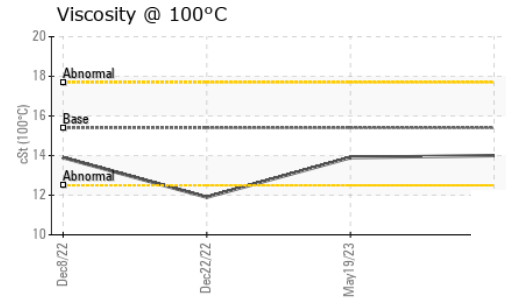
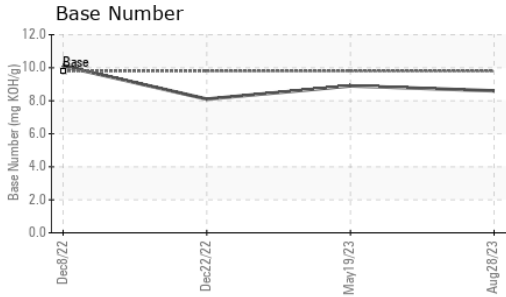
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.2</b>	0.2	0.4
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.1</b>	5.8	7.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>16.8</b>	18.3	18.1

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>12.1</b>	13.6	13.8
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.6</b>	8.9	8.1



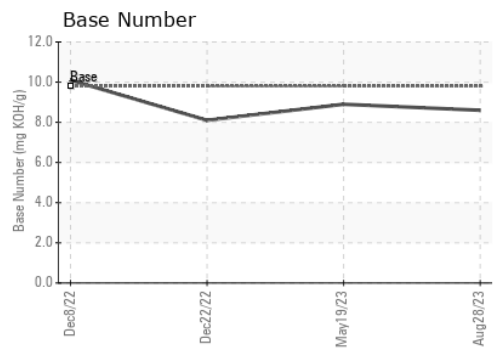
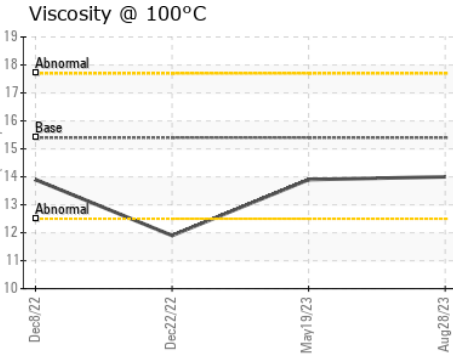
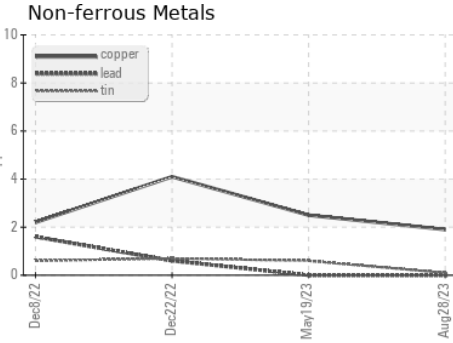
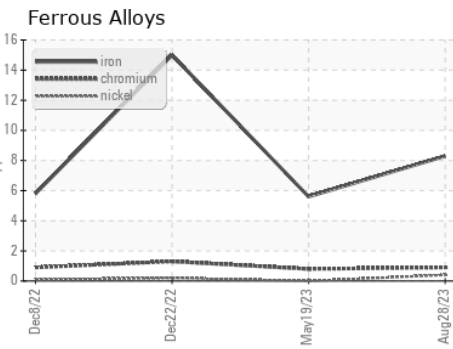
# OIL ANALYSIS REPORT



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>14.0</b>	13.9	▲ 11.9

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0092745 **Received** : 01 Sep 2023  
**Lab Number** : **05940566** **Diagnosed** : 01 Sep 2023  
**Unique Number** : 10631178 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 455 - Flint**  
 2051 W. Bristol Rd  
 Flint Township, MI  
 US 48507  
 Contact: MARK WOMBLE  
 mwomble@gflenv.com  
 T: (586)825-9514  
 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)