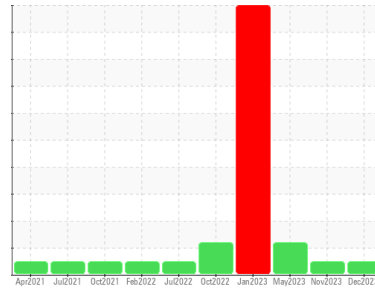




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**587M**  
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>GFL0105626</b>	GFL0101607	GFL0081457
Sample Date	Client Info		<b>08 Dec 2023</b>	16 Nov 2023	10 May 2023
Machine Age	hrs	Client Info	<b>10100</b>	10032	9177
Oil Age	hrs	Client Info	<b>10032</b>	9177	8548
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
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	<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 >90	<b>37</b>	34	25
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m >2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>3</b>	2	2
Lead	ppm	ASTM D5185m >40	<b>0</b>	0	1
Copper	ppm	ASTM D5185m >330	<b>33</b>	42	75
Tin	ppm	ASTM D5185m >15	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>2</b>	<1	7
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>58</b>	60	59
Manganese	ppm	ASTM D5185m 0	<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>934</b>	857	866
Calcium	ppm	ASTM D5185m 1070	<b>1058</b>	1015	971
Phosphorus	ppm	ASTM D5185m 1150	<b>981</b>	893	891
Zinc	ppm	ASTM D5185m 1270	<b>1289</b>	1124	1190
Sulfur	ppm	ASTM D5185m 2060	<b>2521</b>	2391	2796

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>6</b>	6	9
Sodium	ppm	ASTM D5185m	<b>54</b>	43	▲ 227
Potassium	ppm	ASTM D5185m >20	<b>2</b>	3	10

## INFRA-RED

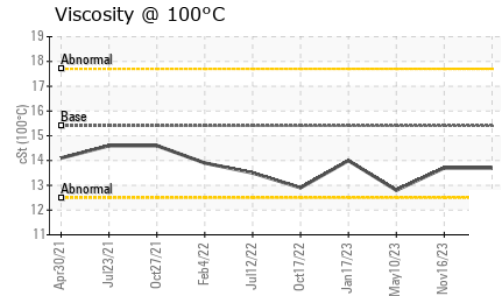
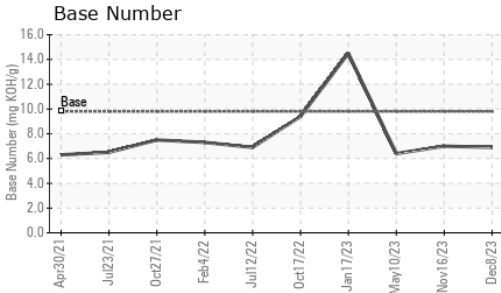
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	<b>0.7</b>	0.7	0.5
Nitration	Abs/cm	*ASTM D7624 >20	<b>10.2</b>	9.6	9.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>21.8</b>	21.2	22.2

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>19.2</b>	18.4	18.5
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>6.9</b>	7.0	6.4



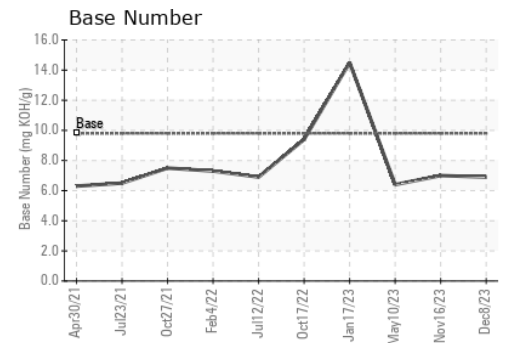
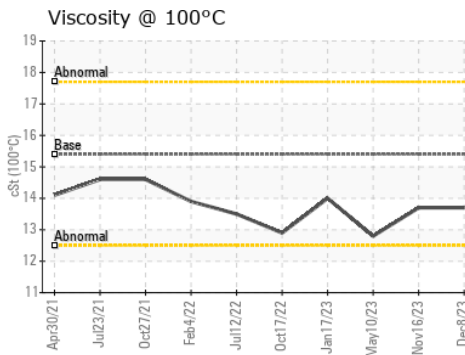
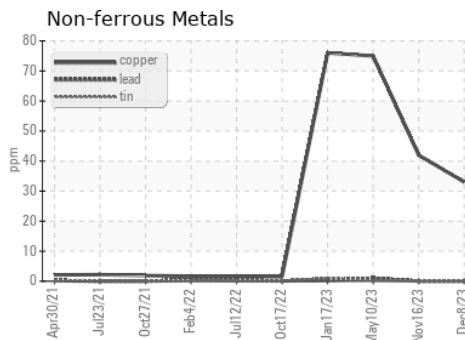
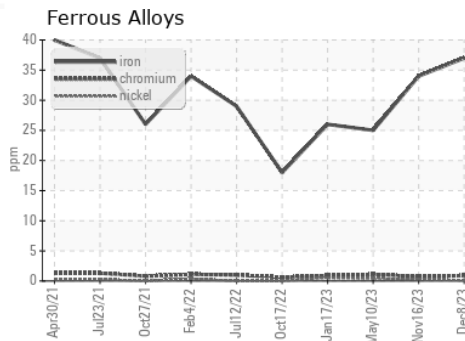
# OIL ANALYSIS REPORT



PARAMETER	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	13.7	12.8

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0105626 **Received** : 12 Dec 2023  
**Lab Number** : 06032242 **Diagnosed** : 13 Dec 2023  
**Unique Number** : 10782033 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 415 - Michigan East**  
 6200 Elmridge  
 Sterling Heights, MI  
 US 48313  
 Contact: Frank Wolak  
 fwolak@gflenv.com  
 T: (586)825-9514  
 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)