



WEAR	<b>ABNORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**786M**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0108908</b>	GFL0105740	GFL0105579
Sample Date		Client Info		<b>27 Feb 2024</b>	19 Dec 2023	08 Dec 2023
Machine Age	hrs	Client Info		<b>19411</b>	18804	18724
Oil Age	hrs	Client Info		<b>0</b>	0	18724
Filter Age	hrs	Client Info		<b>0</b>	0	18724
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	NORMAL	ABNORMAL

**WEAR**

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>18</b>	54	47
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	2	2
Nickel	ppm	ASTM D5185m	>4	<b>4</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>1</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	6	11
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	1
Copper	ppm	ASTM D5185m	>330	<b>▲ 247</b>	2	3
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

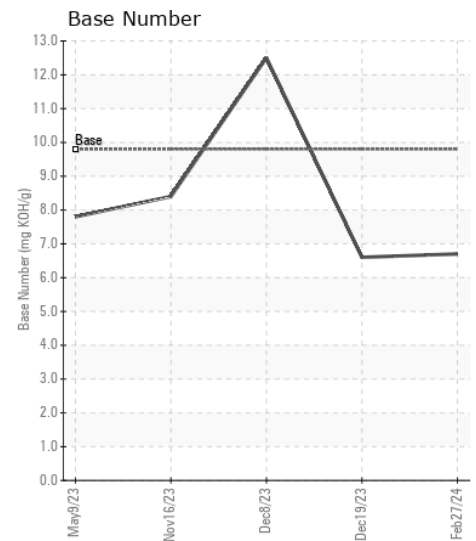
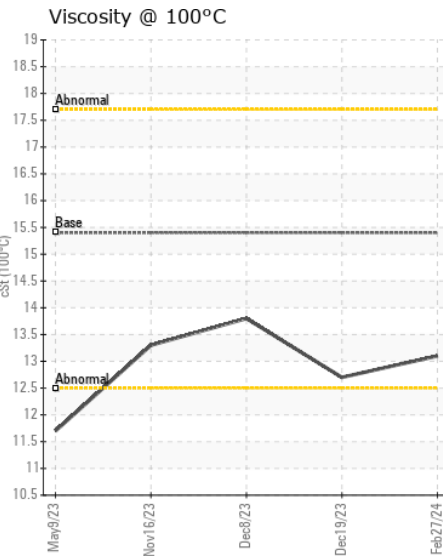
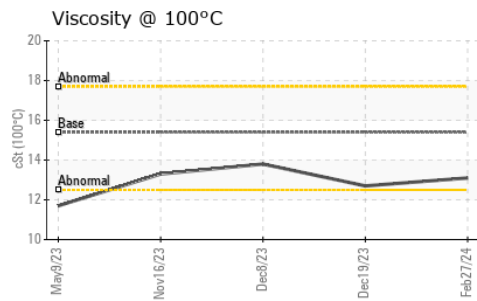
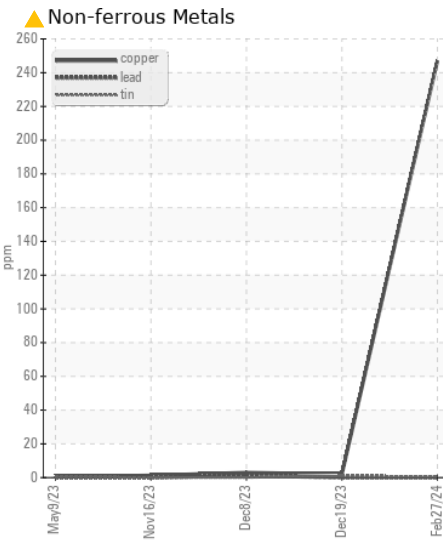
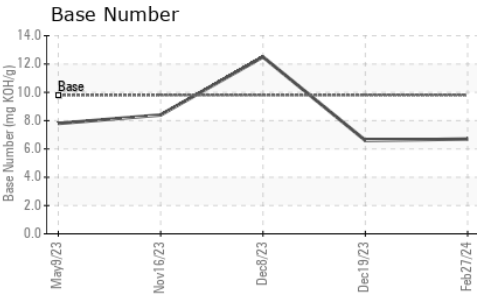
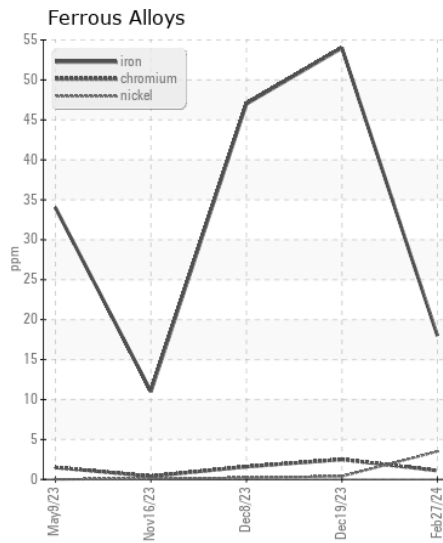
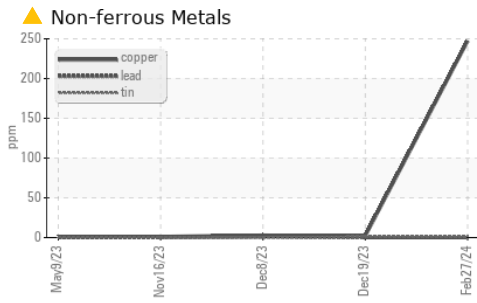
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>9</b>	5	▲ 39
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	8	▲ 22
Fuel		WC Method	>5	<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
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	1.1	1
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.2</b>	11.6	15.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.1</b>	21.5	22.5
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

**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.

Sodium	ppm	ASTM D5185m		<b>3</b>	7	▲ 1730
Boron	ppm	ASTM D5185m	0	<b>11</b>	0	52
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>66</b>	57	120
Manganese	ppm	ASTM D5185m	0	<b>1</b>	<1	1
Magnesium	ppm	ASTM D5185m	1010	<b>906</b>	892	941
Calcium	ppm	ASTM D5185m	1070	<b>1009</b>	1016	1058
Phosphorus	ppm	ASTM D5185m	1150	<b>991</b>	950	1065
Zinc	ppm	ASTM D5185m	1270	<b>1196</b>	1181	1317
Sulfur	ppm	ASTM D5185m	2060	<b>2713</b>	2908	3301
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.3</b>	18.4	17.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>6.7</b>	6.6	12.5
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.1</b>	12.7	13.8



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0108908  
**Lab Number** : 06105713  
**Unique Number** : 10903943  
**Test Package** : FLEET

**Received** : 01 Mar 2024  
**Tested** : 01 Mar 2024  
**Diagnosed** : 04 Mar 2024 - Sean Felton

**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)