



Machine Id  
**2325**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

### RECOMMENDATION

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0028559</b>	GFL0088996	GFL0077843
Sample Date		Client Info		<b>06 Mar 2024</b>	28 Aug 2023	15 Apr 2023
Machine Age	hrs	Client Info		<b>22950</b>	22448	22331
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	N/A	N/A
Filter Changed		Client Info		<b>Changed</b>	N/A	N/A
Sample Status				<b>SEVERE</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	<b>17</b>	4	8
Chromium	ppm	ASTM D5185(m)	>20	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>25	<b>3</b>	<1	2
Lead	ppm	ASTM D5185(m)	>40	<b>2</b>	0	0
Copper	ppm	ASTM D5185(m)	>330	<b>2</b>	<1	<1
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

### CONTAMINATION

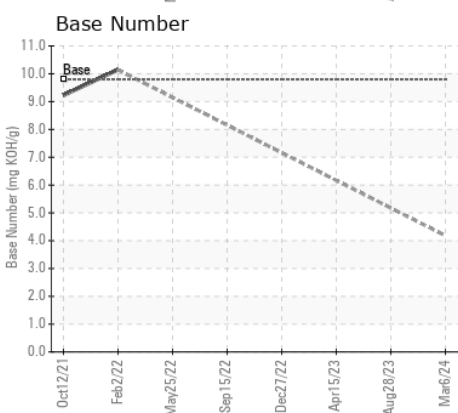
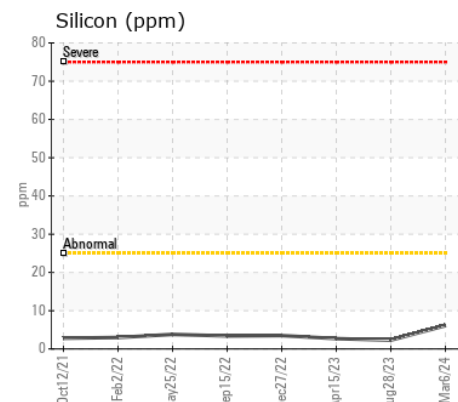
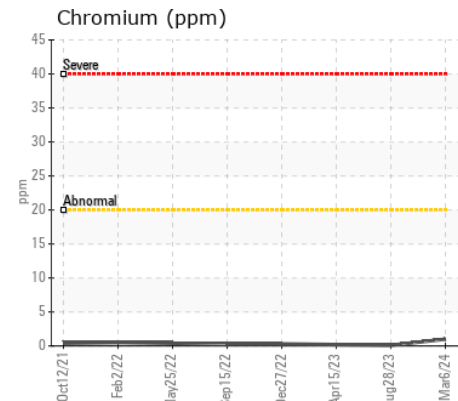
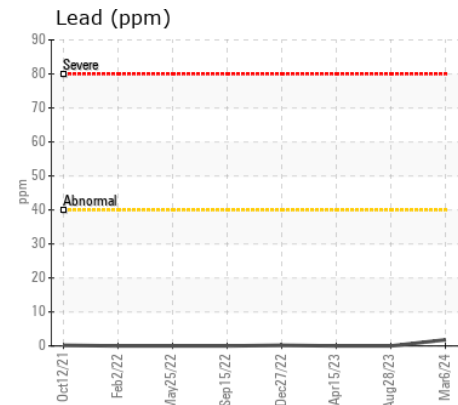
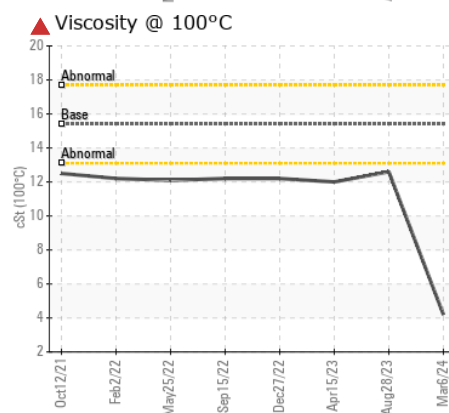
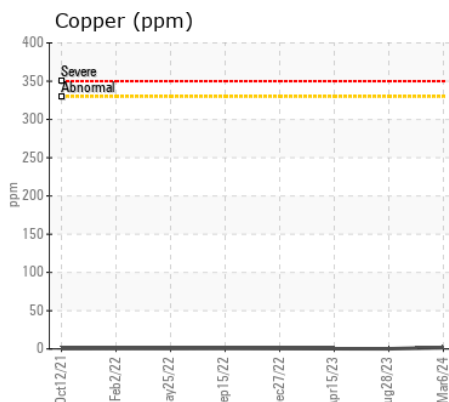
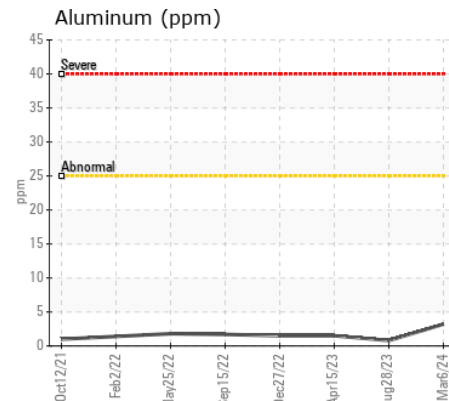
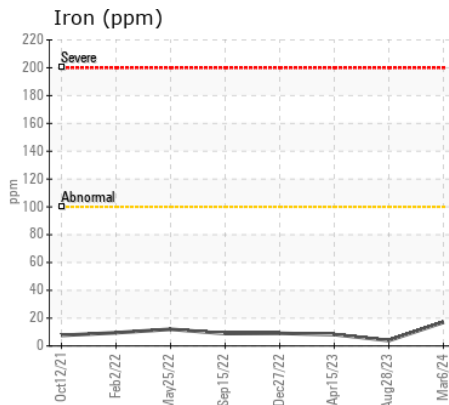
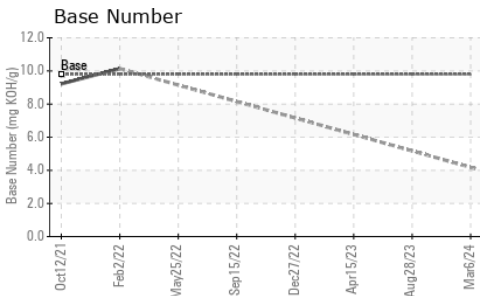
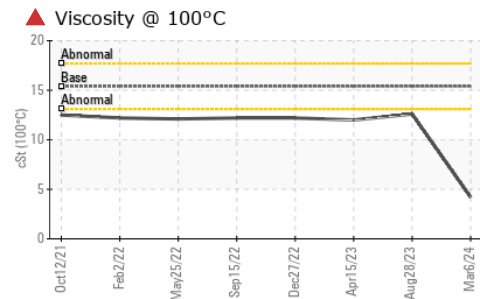
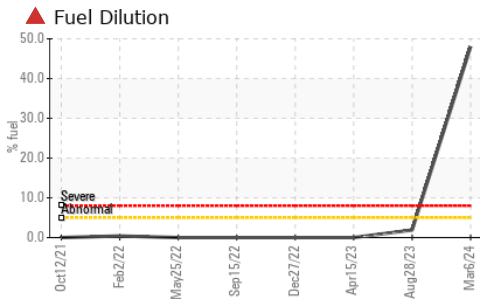
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>6</b>	2	3
Potassium	ppm	ASTM D5185(m)	>20	<b>1</b>	0	0
Fuel	%	ASTM D7593*	>5	<b>▲ 48</b>	1.9	<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>0.1</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.2</b>	5.8	7.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>16.9</b>	19.8	19.2
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. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		<b>&lt;1</b>	1	2
Boron	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	5	4
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>28</b>	58	62
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	<b>452</b>	966	1015
Calcium	ppm	ASTM D5185(m)	1070	<b>511</b>	1022	1144
Phosphorus	ppm	ASTM D5185(m)	1150	<b>489</b>	1065	1149
Zinc	ppm	ASTM D5185(m)	1270	<b>558</b>	1182	1244
Sulfur	ppm	ASTM D5185(m)	2060	<b>1278</b>	2650	2777
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>13.7</b>	14.5	15.4
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	<b>4.18</b>	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	<b>▲ 4.2</b>	12.6	12.0



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0028559 **Received** : 07 Mar 2024  
**Lab Number** : 02620430 **Tested** : 08 Mar 2024  
**Unique Number** : 5737540 **Diagnosed** : 08 Mar 2024 - Wes Davis  
**Test Package** : MOB 2 ( Additional Tests: FuelDilution, PercentFuel )

**GFL Environmental - 207 - Pickering SW**  
 1034 TOY AVENUE, PICKERING YARD  
 PICKERING, ON  
 CA L1W 3P1  
 Contact: Ian Patton  
 ipatton@gflenv.com  
 T: (905)831-6297  
 F: (905)426-3577

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.