



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

Machine Id  
**721072**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**RECOMMENDATION**

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0116026</b>	GFL0092887	GFL0092882
Sample Date		Client Info		<b>04 Apr 2024</b>	26 Jan 2024	08 Jan 2024
Machine Age	hrs	Client Info		<b>7989</b>	7583	7442
Oil Age	hrs	Client Info		<b>64346</b>	0	64346
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>ABNORMAL</b>	ABNORMAL	SEVERE

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>18</b>	21	30
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	2	1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>25	<b>0</b>	3	2
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>0</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

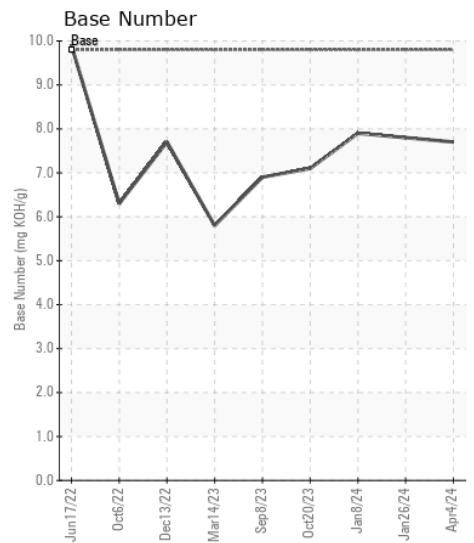
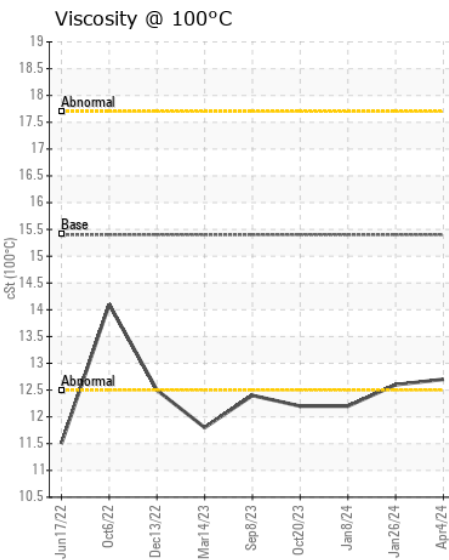
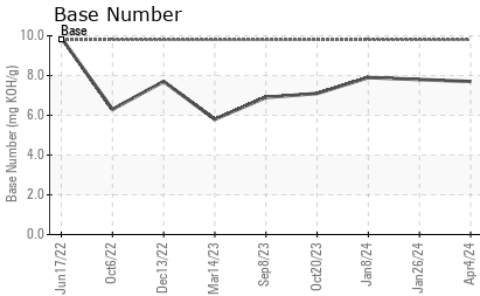
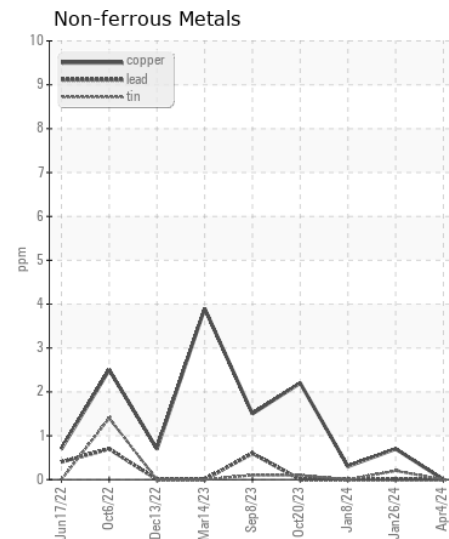
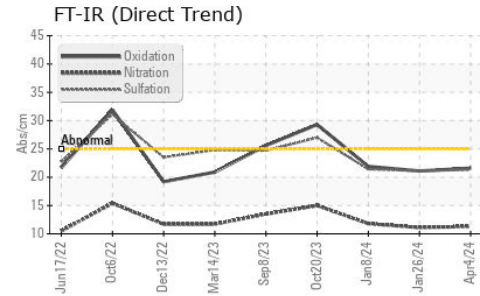
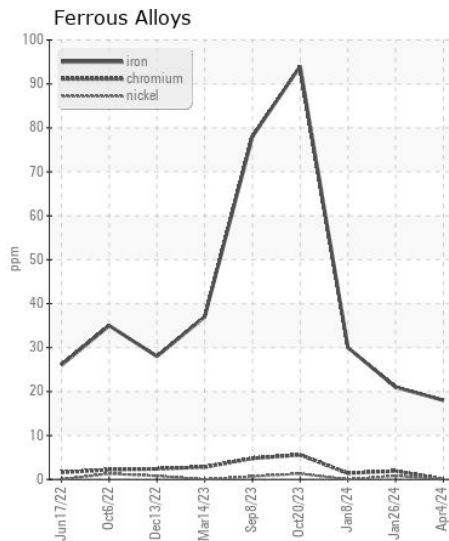
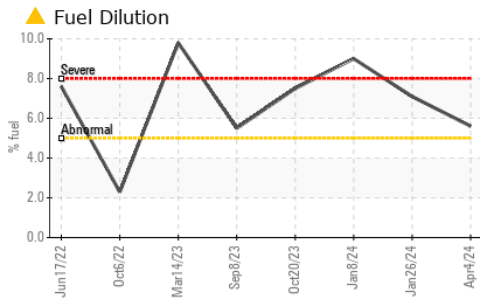
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	7	9
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	2	1
Fuel	%	ASTM D3524	>5	<b>▲ 5.6</b>	▲ 7.1	▲ 9.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.3</b>	11.1	11.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.3</b>	21.1	21.4
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 oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		<b>5</b>	7	6
Boron	ppm	ASTM D5185m	0	<b>21</b>	24	21
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>60</b>	60	54
Manganese	ppm	ASTM D5185m	0	<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m	1010	<b>1170</b>	1007	1004
Calcium	ppm	ASTM D5185m	1070	<b>889</b>	744	724
Phosphorus	ppm	ASTM D5185m	1150	<b>1120</b>	962	879
Zinc	ppm	ASTM D5185m	1270	<b>1317</b>	1160	1172
Sulfur	ppm	ASTM D5185m	2060	<b>4035</b>	3046	2908
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>21.6</b>	21.1	21.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>7.7</b>	7.8	7.9
Visc @ 100°C	cSt	ASTM D445	15.4	<b>12.7</b>	12.6	▲ 12.2



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0116026 **Received** : 12 Apr 2024  
**Lab Number** : 06146960 **Tested** : 17 Apr 2024  
**Unique Number** : 10977038 **Diagnosed** : 17 Apr 2024 - Wes Davis  
**Test Package** : FLEET ( Additional Tests: PercentFuel )

**GFL Environmental - 641 - Alpena**  
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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)