



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



Machine Id  
**426089-402414**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- LTR)**

**RECOMMENDATION**

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter 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>GFL0114639</b>	GFL0092565	GFL0071928
Sample Date		Client Info		<b>22 Apr 2024</b>	06 Dec 2023	11 Aug 2023
Machine Age	hrs	Client Info		<b>20442</b>	19509	18645
Oil Age	hrs	Client Info		<b>600</b>	600	600
Filter Age	hrs	Client Info		<b>600</b>	600	600
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	<b>34</b>	11	8
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	0
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>2</b>	1	4
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>0</b>	8	3
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</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**

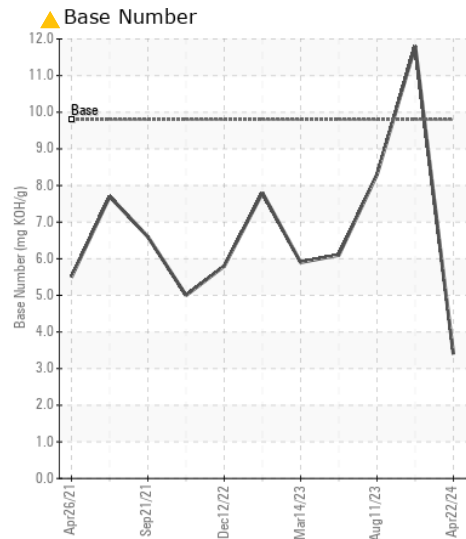
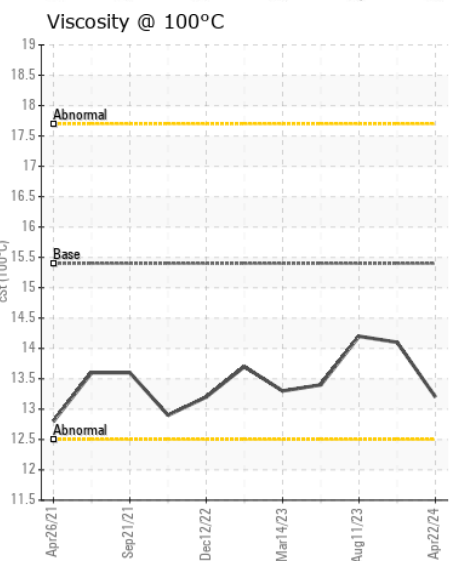
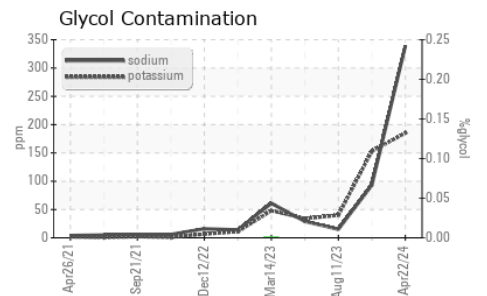
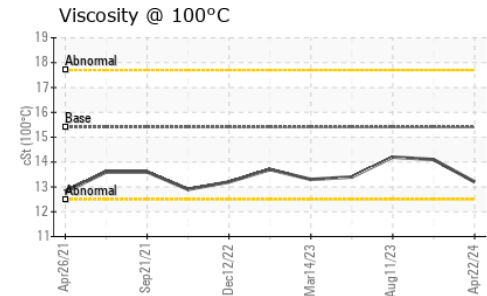
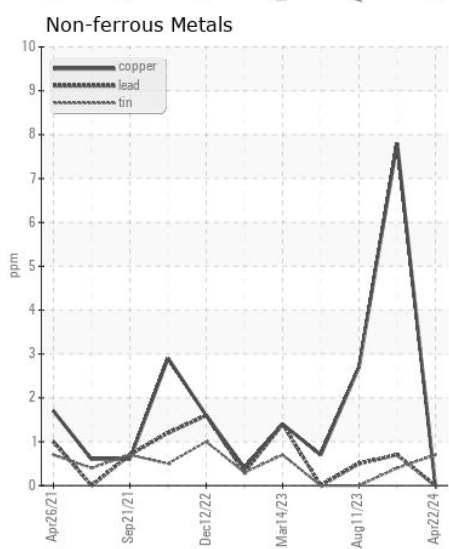
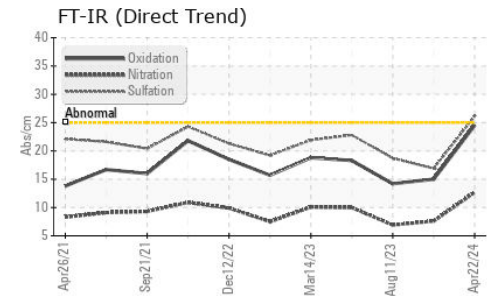
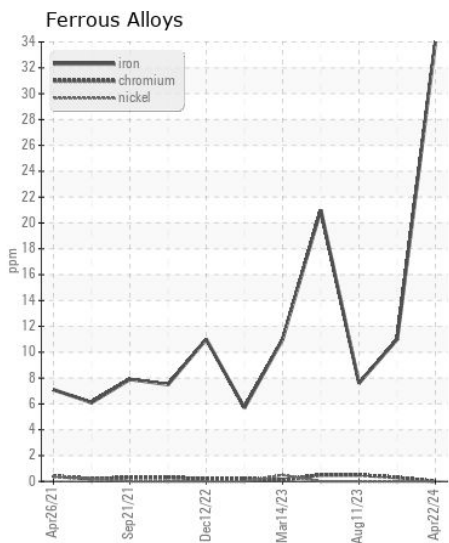
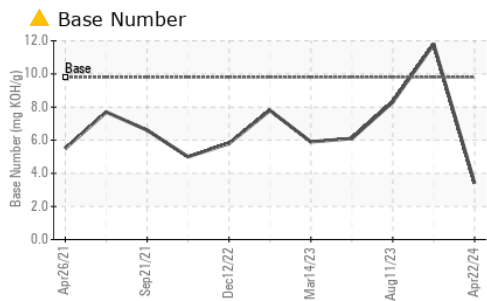
Sodium and/or potassium levels are high.

Silicon	ppm	ASTM D5185m	>25	<b>10</b>	6	2
Potassium	ppm	ASTM D5185m	>20	<b>▲ 185</b>	▲ 153	40
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	%	*ASTM D2982		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>4	<b>0.4</b>	0.2	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>12.7</b>	7.6	6.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>26.1</b>	16.9	18.7
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 level is low.

Sodium	ppm	ASTM D5185m		<b>▲ 339</b>	▲ 93	15
Boron	ppm	ASTM D5185m	0	<b>9</b>	11	1
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>92</b>	82	68
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>837</b>	852	977
Calcium	ppm	ASTM D5185m	1070	<b>1069</b>	999	1231
Phosphorus	ppm	ASTM D5185m	1150	<b>904</b>	989	1080
Zinc	ppm	ASTM D5185m	1270	<b>1162</b>	1224	1382
Sulfur	ppm	ASTM D5185m	2060	<b>2985</b>	2885	4061
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>24.5</b>	15.0	14.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>▲ 3.4</b>	11.8	8.3
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.2</b>	14.1	14.2



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0114639 **Received** : 25 Apr 2024  
**Lab Number** : 06160169 **Tested** : 30 Apr 2024  
**Unique Number** : 10995592 **Diagnosed** : 30 Apr 2024 - Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: Glycol )

**GFL Environmental - 885 - Orlando**  
 1263 W Landstreet Rd  
 Orlando, FL  
 US 32824  
 Contact: DAWN WALLACE

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)

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F: