



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

Machine Id  
**428059-402379**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0121560</b>	GFL0121559	GFL0105247
Sample Date		Client Info		<b>25 Jun 2024</b>	20 Jun 2024	13 Jun 2024
Machine Age	hrs	Client Info		<b>14551</b>	14513	14387
Oil Age	hrs	Client Info		<b>600</b>	150	150
Filter Age	hrs	Client Info		<b>600</b>	150	150
Oil Changed		Client Info		<b>Changed</b>	Not Changed	Not Changed
Filter Changed		Client Info		<b>Cleaned</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>110	<b>13</b>	12	13
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>25	<b>3</b>	3	2
Lead	ppm	ASTM D5185m	>45	<b>2</b>	2	2
Copper	ppm	ASTM D5185m	>85	<b>&lt;1</b>	1	1
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
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 no indication of any contamination in the oil.

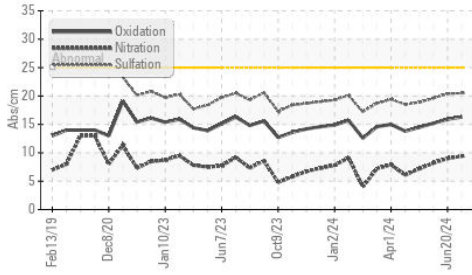
Silicon	ppm	ASTM D5185m	>30	<b>4</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	3	2
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.6</b>	0.6	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.4</b>	9.0	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.5</b>	20.4	19.6
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**

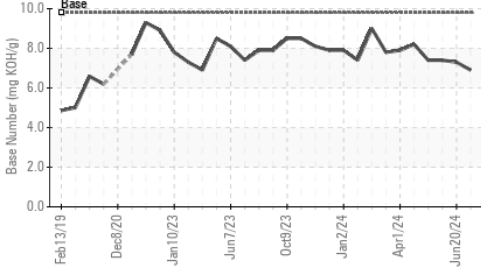
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>7</b>	5	6
Boron	ppm	ASTM D5185m	0	<b>2</b>	<1	<1
Barium	ppm	ASTM D5185m	0	<b>0</b>	1	0
Molybdenum	ppm	ASTM D5185m	60	<b>56</b>	56	55
Manganese	ppm	ASTM D5185m	0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>888</b>	884	879
Calcium	ppm	ASTM D5185m	1070	<b>1028</b>	1033	1002
Phosphorus	ppm	ASTM D5185m	1150	<b>1040</b>	1058	965
Zinc	ppm	ASTM D5185m	1270	<b>1223</b>	1215	1193
Sulfur	ppm	ASTM D5185m	2060	<b>3337</b>	2989	3235
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.3</b>	15.9	15.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>6.9</b>	7.3	7.4
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.5</b>	13.5	13.7

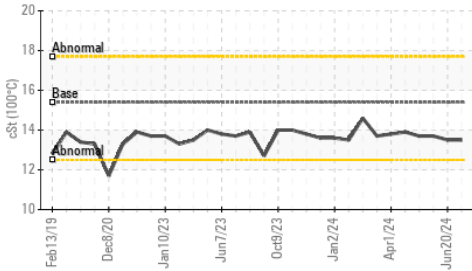
**FT-IR (Direct Trend)**



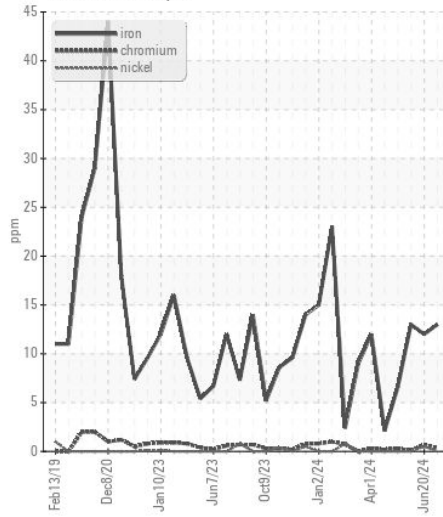
**Base Number**



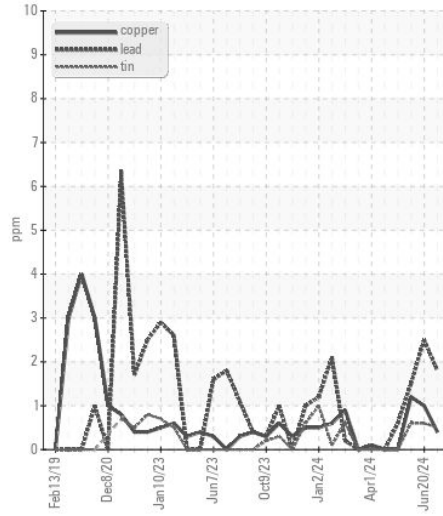
**Viscosity @ 100°C**



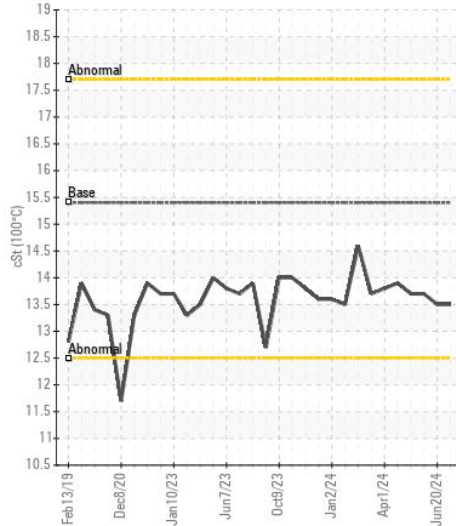
**Ferrous Alloys**



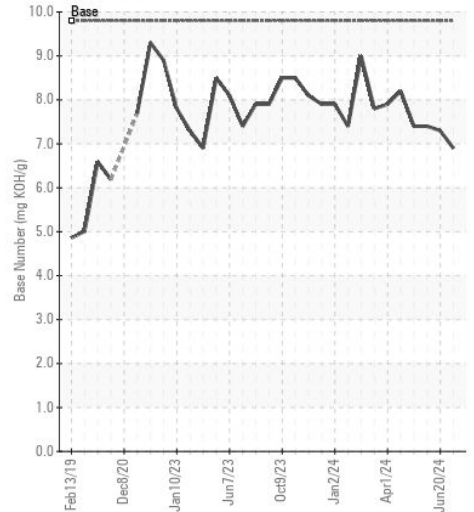
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0121560  
**Lab Number** : 06231992  
**Unique Number** : 11115485  
**Test Package** : FLEET

**Received** : 10 Jul 2024  
**Tested** : 10 Jul 2024  
**Diagnosed** : 10 Jul 2024 - Wes Davis

**GFL Environmental - 821 - Ozarks Hauling**  
 33924 Olath Drive  
 Lebanon, MO  
 US 65536

Contact: Landen Johnson  
 landen.johnson@gflenv.com

T: (417)664-0010

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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