



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

Machine Id  
**300**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 10W30 (10 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LW0009171</b>	LW0009158	LW0008976
Sample Date		Client Info		<b>16 May 2024</b>	03 Apr 2024	08 Mar 2024
Machine Age	mls	Client Info		<b>695207</b>	656108	630493
Oil Age	mls	Client Info		<b>39099</b>	25615	50000
Filter Age	mls	Client Info		<b>39099</b>	25615	25000
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>15</b>	13	25
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>4	<b>2</b>	2	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	4
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>4</b>	5	7
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>3</b>	2	4
Tin	ppm	ASTM D5185m	>15	<b>1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	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.

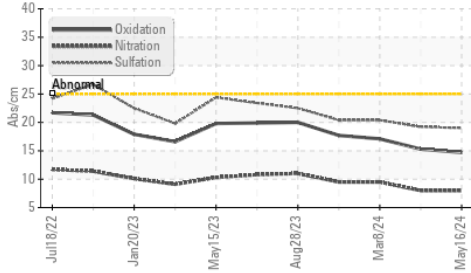
Silicon	ppm	ASTM D5185m	>25	<b>6</b>	4	7
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	23	8
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.0</b>	8.0	9.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.0</b>	19.2	20.4
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**

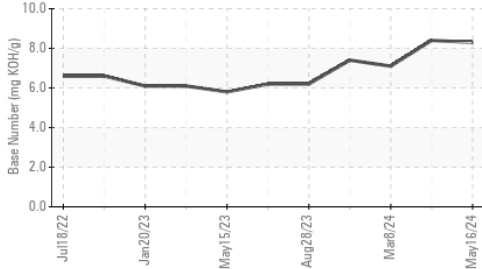
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	10	<1
Boron	ppm	ASTM D5185m	2	<b>2</b>	1	2
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	50	<b>62</b>	63	60
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185m	950	<b>1007</b>	994	978
Calcium	ppm	ASTM D5185m	1050	<b>1198</b>	1141	1179
Phosphorus	ppm	ASTM D5185m	995	<b>1109</b>	1096	1146
Zinc	ppm	ASTM D5185m	1180	<b>1350</b>	1324	1310
Sulfur	ppm	ASTM D5185m	2600	<b>3596</b>	3674	3301
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.7</b>	15.3	17.1
Base Number (BN)	mg KOH/g	ASTM D2896		<b>8.3</b>	8.4	7.1
Visc @ 100°C	cSt	ASTM D445	12.00	<b>11.3</b>	11.5	11.3

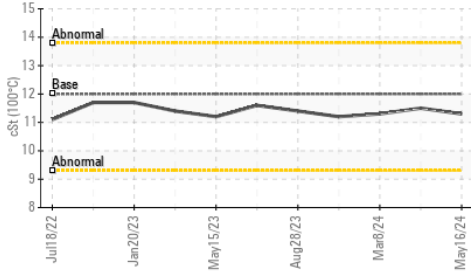
**FT-IR (Direct Trend)**



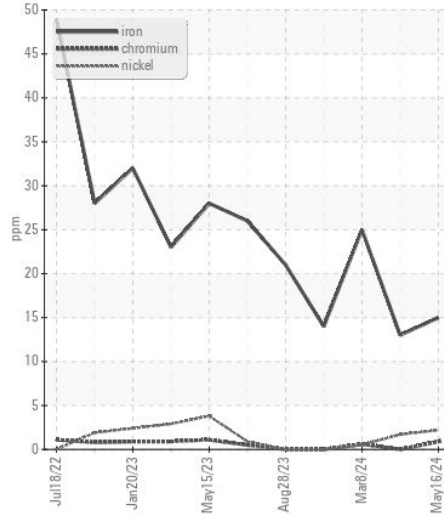
**Base Number**



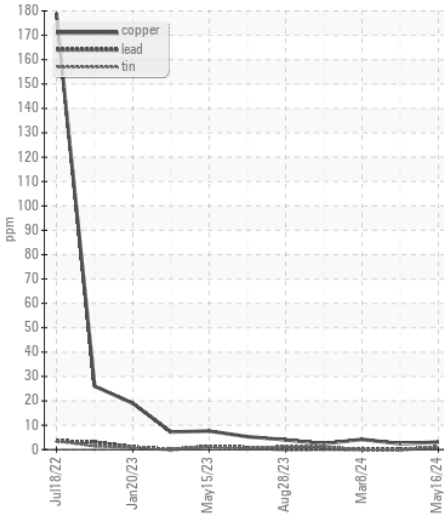
**Viscosity @ 100°C**



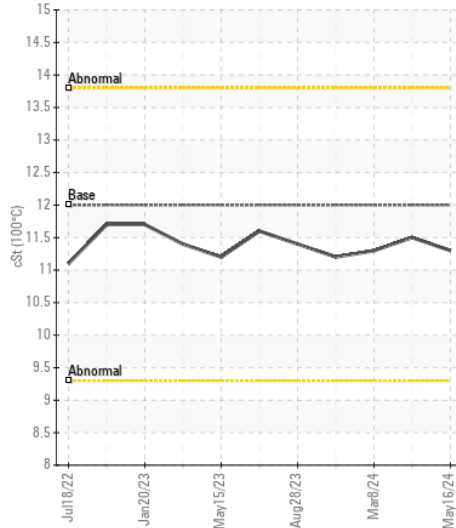
**Ferrous Alloys**



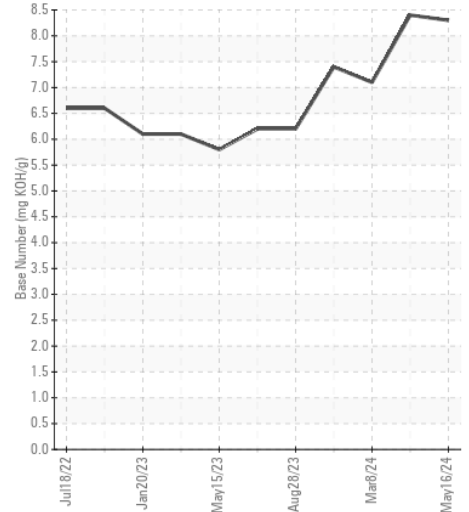
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LW0009171  
**Lab Number** : 06189929  
**Unique Number** : 11046681  
**Test Package** : FLEET  
**Received** : 23 May 2024  
**Tested** : 25 May 2024  
**Diagnosed** : 29 May 2024 - Sean Felton

**LIV TRANSPORTATION, INC**  
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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)