



Machine Id  
**320**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 10W30 (10 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LW0009421</b>	LW0008958	LW0007395
Sample Date		Client Info		<b>27 Jun 2024</b>	05 Mar 2024	11 Aug 2023
Machine Age	mls	Client Info		<b>658379</b>	607322	550000
Oil Age	mls	Client Info		<b>51057</b>	50000	550000
Filter Age	mls	Client Info		<b>25000</b>	25000	550000
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>36</b>	53	41
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	<1
Nickel	ppm	ASTM D5185m	>4	<b>2</b>	4	5
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	1	2
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185m	>20	<b>4</b>	7	4
Lead	ppm	ASTM D5185m	>40	<b>0</b>	2	<1
Copper	ppm	ASTM D5185m	>330	<b>4</b>	7	4
Tin	ppm	ASTM D5185m	>15	<b>2</b>	2	<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**

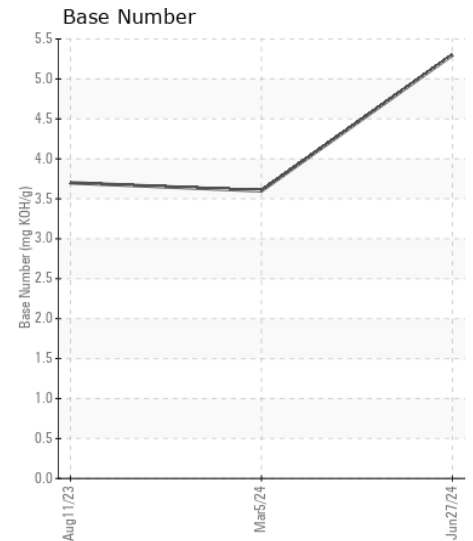
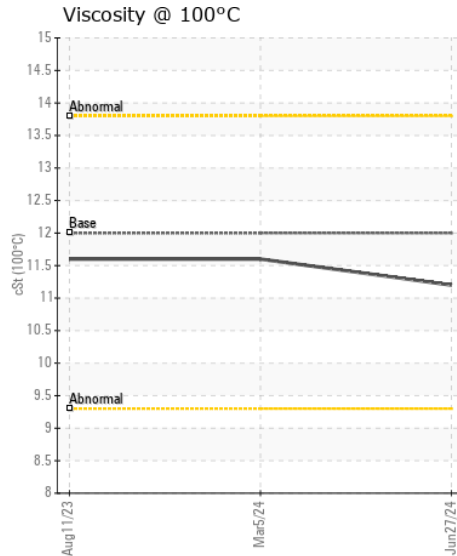
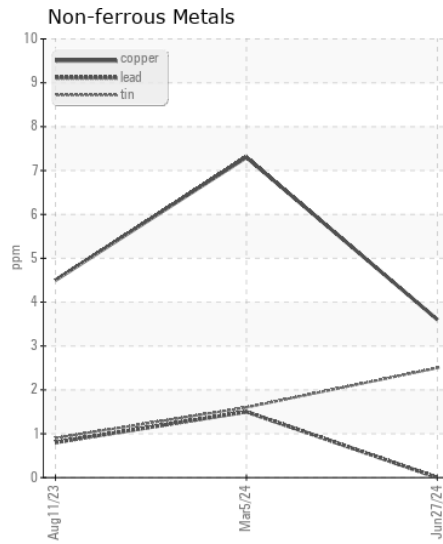
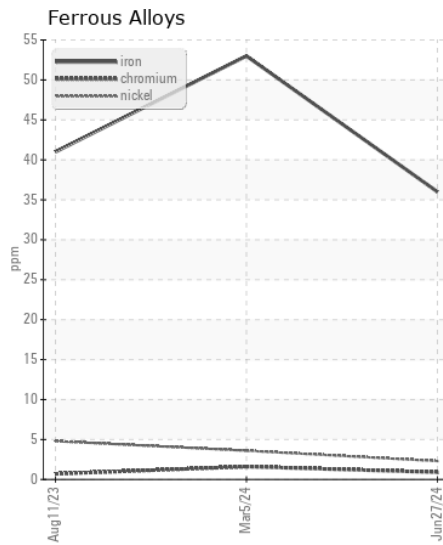
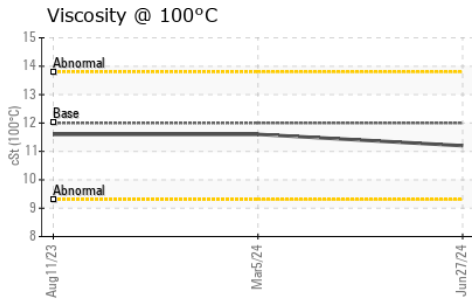
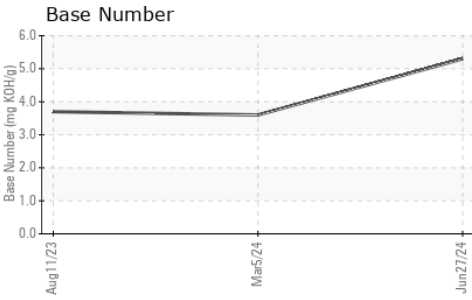
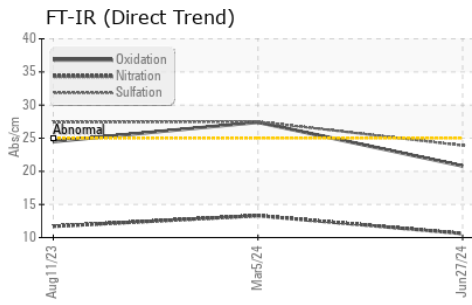
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>9</b>	12	11
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	4	3
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	0.9
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>	0.7	0.6
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.6</b>	13.3	11.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.9</b>	27.5	27.4
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>13</b>	20	16
Boron	ppm	ASTM D5185m	2	<b>2</b>	<1	<1
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	50	<b>56</b>	65	46
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	950	<b>933</b>	1006	759
Calcium	ppm	ASTM D5185m	1050	<b>1126</b>	1161	1202
Phosphorus	ppm	ASTM D5185m	995	<b>1020</b>	1083	956
Zinc	ppm	ASTM D5185m	1180	<b>1267</b>	1298	1160
Sulfur	ppm	ASTM D5185m	2600	<b>2881</b>	2696	2793
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>20.8</b>	27.4	24.5
Base Number (BN)	mg KOH/g	ASTM D2896		<b>5.3</b>	3.6	3.7
Visc @ 100°C	cSt	ASTM D445	12.00	<b>11.2</b>	11.6	11.6



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : LW0009421

**Lab Number** : 06225587

**Unique Number** : 11103784

**Test Package** : FLEET

**Received** : 01 Jul 2024

**Tested** : 03 Jul 2024

**Diagnosed** : 03 Jul 2024 - Wes Davis

**LIV TRANSPORTATION, INC**

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F:

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)