



# WEAR CHECK

## OIL ANALYSIS REPORT

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

Machine Id

**721**

Component

**Diesel Engine**

Fluid

**PETRO CANADA DURON SHP 15W40 (--- QTS)**

### RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0817210</b>	WC0817199	WC0773735
Sample Date		Client Info		<b>21 Feb 2024</b>	17 Jan 2024	19 Sep 2023
Machine Age	hrs	Client Info		<b>20920</b>	20795	20544
Oil Age	hrs	Client Info		<b>20920</b>	0	0
Filter Age	hrs	Client Info		<b>20920</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>MARGINAL</b>	SEVERE	ABNORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>7</b>	11	5
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>1</b>	<1	0
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

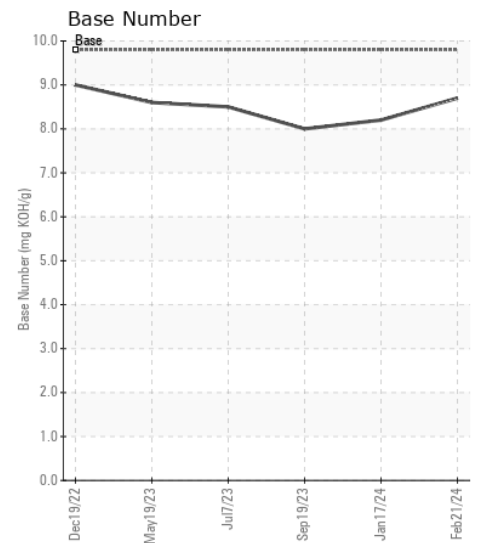
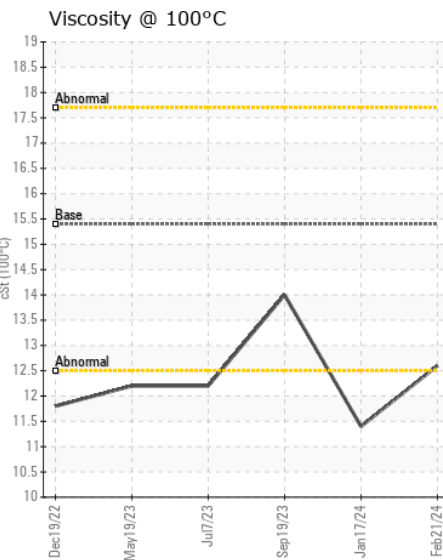
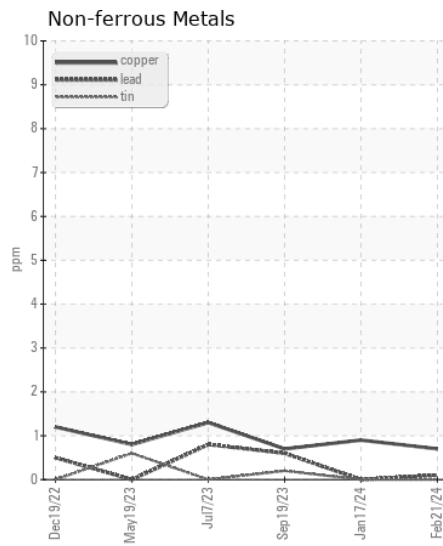
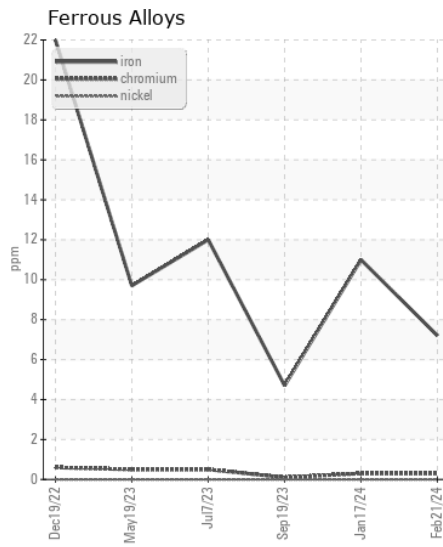
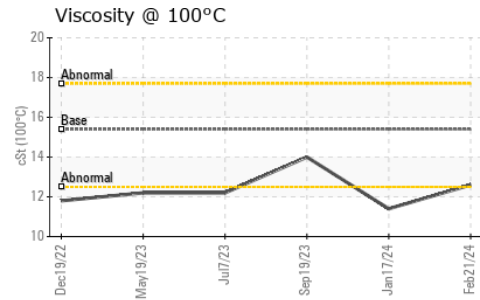
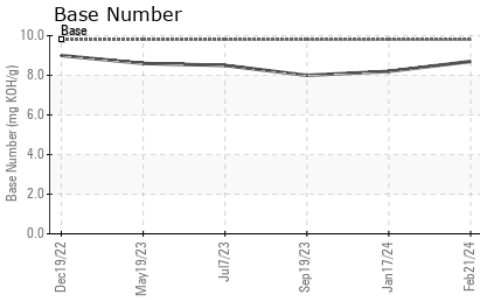
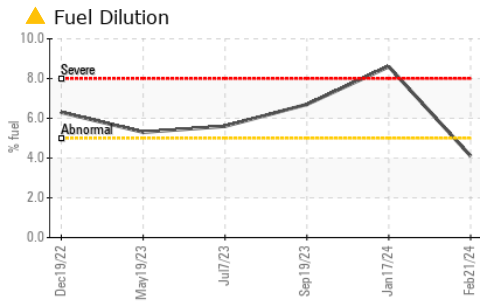
Light fuel dilution occurring. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>3</b>	3	3
Potassium	ppm	ASTM D5185m	>20	<b>11</b>	12	<1
Fuel	%	ASTM D3524	>5	<b>▲ 4.1</b>	▲ 8.6	▲ 6.7
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>	0.5	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.6</b>	8.6	8.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.1</b>	20.7	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>3</b>	3	<1
Boron	ppm	ASTM D5185m	0	<b>8</b>	1	<1
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>62</b>	54	59
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m	1010	<b>965</b>	880	1007
Calcium	ppm	ASTM D5185m	1070	<b>1080</b>	1003	1090
Phosphorus	ppm	ASTM D5185m	1150	<b>1105</b>	933	993
Zinc	ppm	ASTM D5185m	1270	<b>1293</b>	1116	1245
Sulfur	ppm	ASTM D5185m	2060	<b>3269</b>	2815	3643
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.6</b>	19.6	18.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.7</b>	8.2	8.0
Visc @ 100°C	cSt	ASTM D445	15.4	<b>12.6</b>	▲ 11.4	14.0



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0817210 **Received** : 28 Feb 2024  
**Lab Number** : 06103557 **Tested** : 04 Mar 2024  
**Unique Number** : 10901787 **Diagnosed** : 04 Mar 2024 - Wes Davis  
**Test Package** : FLEET ( Additional Tests: PercentFuel )

**AREA TRANSPORTATION AUTHORITY**  
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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)