



# OIL ANALYSIS REPORT

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

Area  
**WCLSNC**  
Machine Id  
**QC230801DE**  
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>WC0916217</b>	WC0916216	WC0916215
Sample Date		Client Info		<b>21 Mar 2024</b>	20 Mar 2024	19 Mar 2024
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>11	<b>12</b>	11	9
Chromium	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>5	<b>3</b>	2	<1
Lead	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>7	<b>6</b>	4	4
Tin	ppm	ASTM D5185m	>2	<b>&lt;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

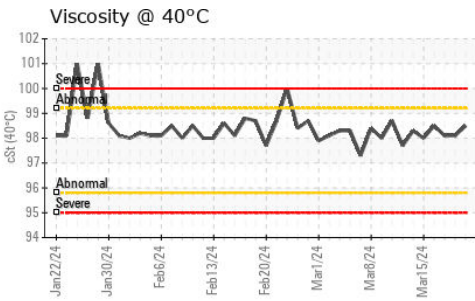
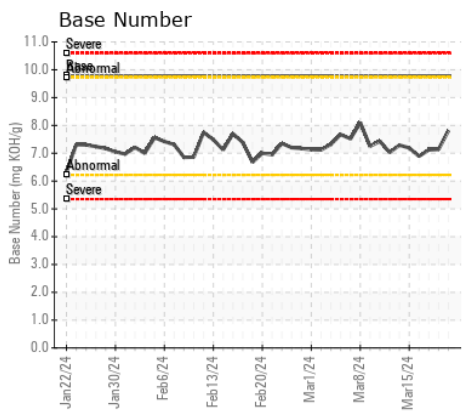
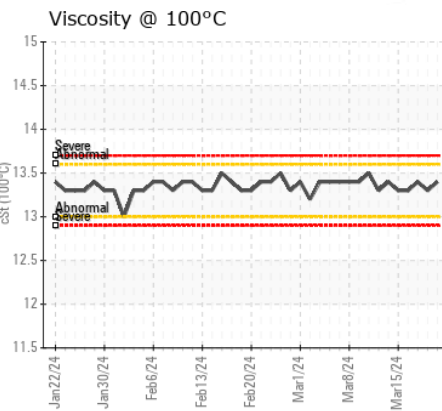
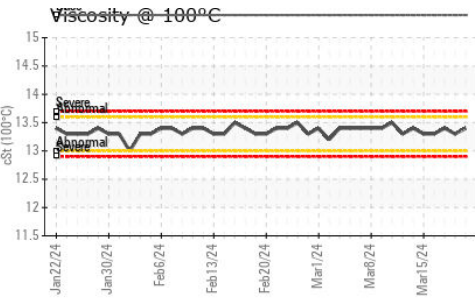
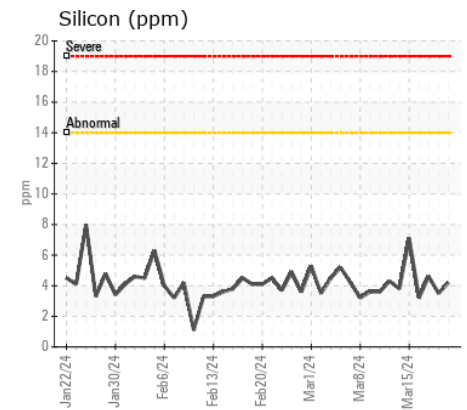
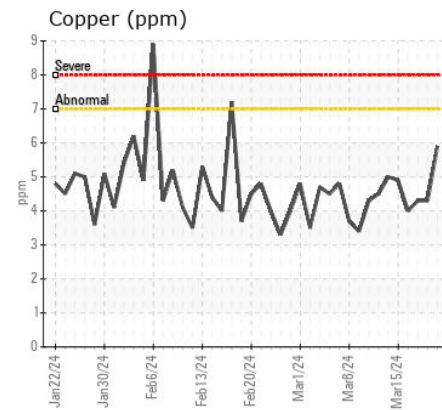
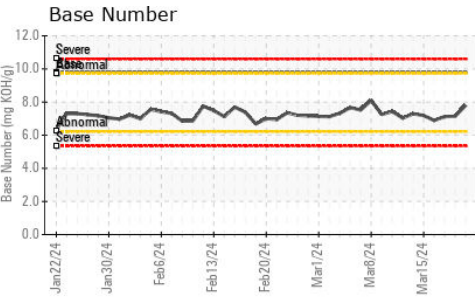
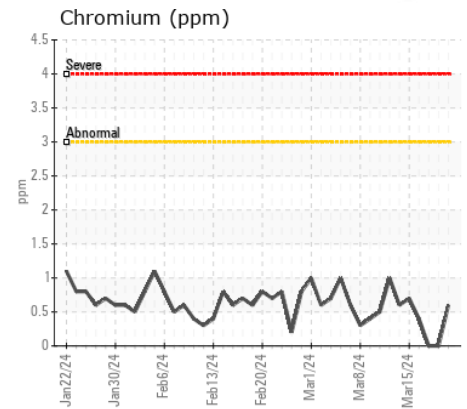
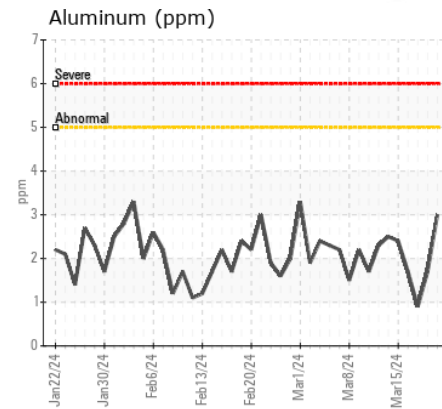
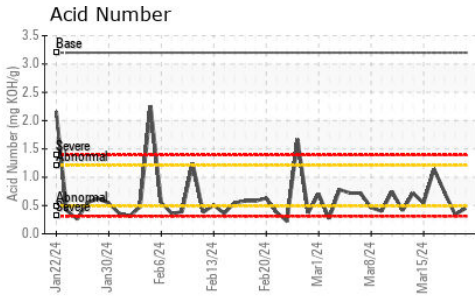
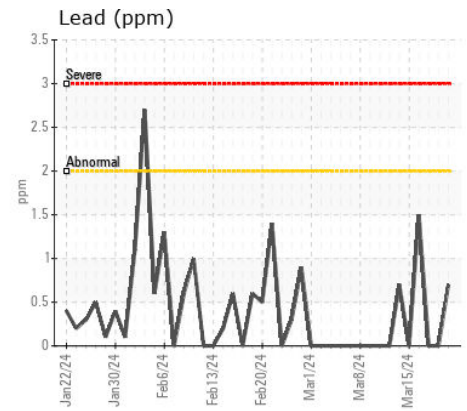
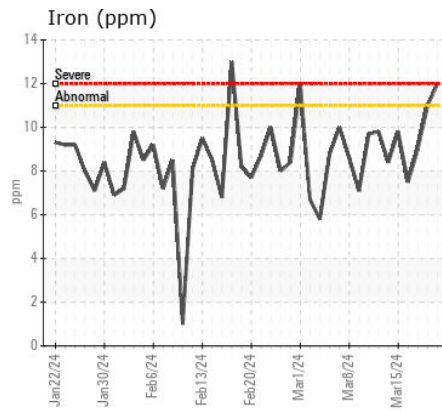
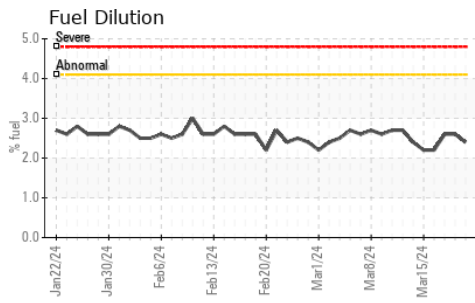
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>14	<b>4</b>	4	5
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	1	0
Fuel	%	ASTM D3524	>4.1	<b>2.4</b>	2.6	2.6
Water	%	ASTM D6304	>0.2	<b>NEG</b>	NEG	NEG
Glycol	%	*ASTM D2982		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>0.3	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>10.8	<b>10.4</b>	10.4	10.4
Sulfation	Abs/.1mm	*ASTM D7415	>20.8	<b>20.1</b>	20.1	20.1
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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>13	<b>6</b>	7	6
Boron	ppm	ASTM D5185m	0	<b>9</b>	7	6
Barium	ppm	ASTM D5185m	0	<b>2</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>53</b>	50	46
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185m	1010	<b>514</b>	587	543
Calcium	ppm	ASTM D5185m	1070	<b>1505</b>	1626	1483
Phosphorus	ppm	ASTM D5185m	1150	<b>638</b>	755	627
Zinc	ppm	ASTM D5185m	1270	<b>906</b>	1020	879
Sulfur	ppm	ASTM D5185m	2060	<b>2444</b>	2935	3373
Oxidation	Abs/.1mm	*ASTM D7414	>17.9	<b>17.5</b>	17.5	17.5
Acid Number (AN)	mg KOH/g	ASTM D8045	3.2	<b>0.45</b>	0.341	0.732
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>7.81</b>	7.14	7.12
Visc @ 40°C	cSt	ASTM D445	113.9	<b>98.5</b>	98.1	98.1
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.4</b>	13.3	13.4
Viscosity Index (VI)	Scale	ASTM D2270	142	<b>135</b>	134	136



Certificate L2367

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

**Sample No.** : WC0916217

**Lab Number** : 06125105

**Unique Number** : 10939256

**Test Package** : MOB 2 ( Additional Tests: FuelDilution, Glycol, KF, KV40, PercentFuel, VI )

**Received** : 21 Mar 2024

**Tested** : 27 Mar 2024

**Diagnosed** : 27 Mar 2024 - Jonathan Hester

**WEARCHECK LUBRICATION SERVICES QA ACCOUNT**

501 Madison Ave

Cary, NC

US 27513

Contact: WCLS CARY NC

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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