



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

Machine Id  
**CHUCK B**  
Component  
**Port Main Engine**  
Fluid  
**PETRO CANADA DURON MARINE SAE 40 (19 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0066776</b>	MW0035993	MW0035991
Sample Date		Client Info		<b>15 Feb 2024</b>	29 Nov 2023	14 Sep 2023
Machine Age	hrs	Client Info		<b>4231</b>	3209	2562
Oil Age	hrs	Client Info		<b>1022</b>	647	477
Filter Age	hrs	Client Info		<b>1022</b>	647	477
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	>120	<b>6</b>	2	4
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>5</b>	<1	3
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	<1	0
Lead	ppm	ASTM D5185m	>40	<b>1</b>	<1	0
Copper	ppm	ASTM D5185m	>300	<b>4</b>	5	4
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	<1
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**

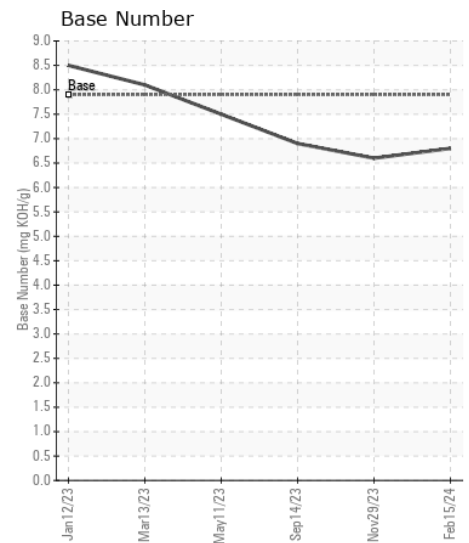
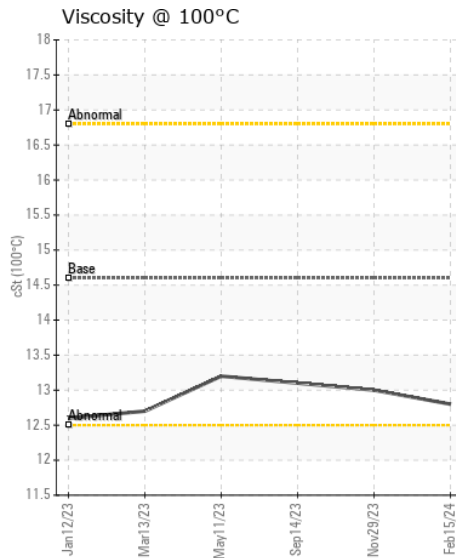
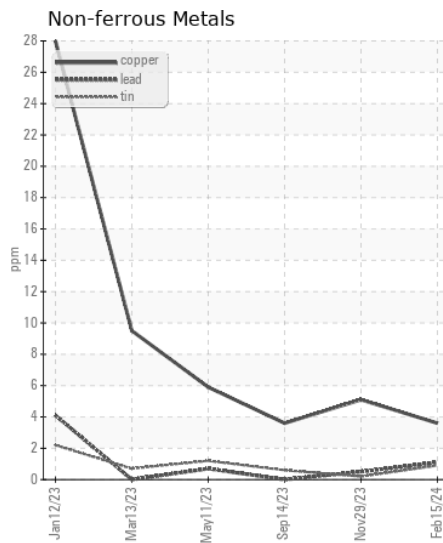
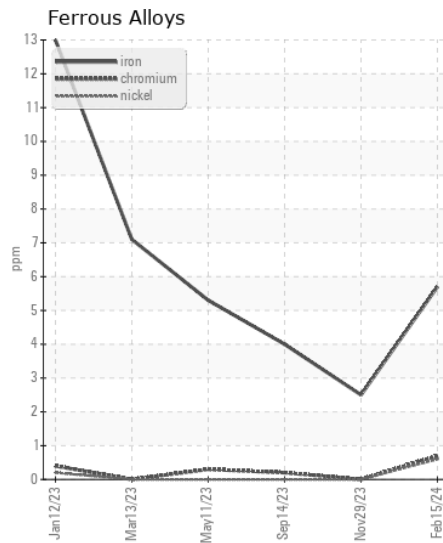
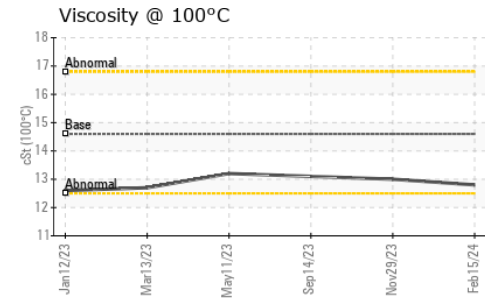
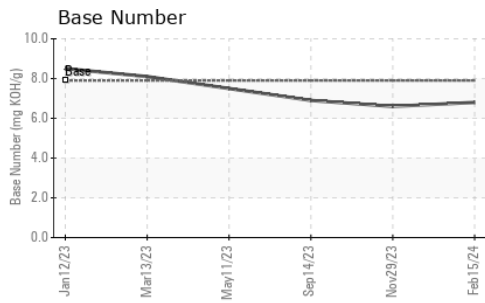
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	2	3
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	0	1
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.6</b>	6.4	6.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>16.8</b>	16.8	15.4
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	>0.1	<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>2</b>	3	2
Boron	ppm	ASTM D5185m	1.0	<b>21</b>	3	14
Barium	ppm	ASTM D5185m	1.0	<b>34</b>	0	0
Molybdenum	ppm	ASTM D5185m	1.0	<b>9</b>	<1	6
Manganese	ppm	ASTM D5185m	1	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	15	<b>841</b>	909	890
Calcium	ppm	ASTM D5185m	2540	<b>1110</b>	1064	1153
Phosphorus	ppm	ASTM D5185m	1000	<b>941</b>	1129	1050
Zinc	ppm	ASTM D5185m	1110	<b>1177</b>	1318	1234
Sulfur	ppm	ASTM D5185m	3700	<b>3345</b>	3172	3719
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>11.3</b>	11.9	9.7
Base Number (BN)	mg KOH/g	ASTM D2896	7.9	<b>6.8</b>	6.6	6.9
Visc @ 100°C	cSt	ASTM D445	14.6	<b>12.8</b>	13.0	13.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0066776  
**Lab Number** : 06099906  
**Unique Number** : 10898136  
**Test Package** : MAR 2

**Received** : 26 Feb 2024  
**Tested** : 27 Feb 2024  
**Diagnosed** : 27 Feb 2024 - Wes Davis

**AMERICAN RIVER TRANSPORTATION**  
 1495 EAST ILLINOIS RT 71  
 OTTAWA, IL  
 US 61350  
 Contact: Jackson Hayes  
 jackson.hayes@adm.com  
 T:  
 F: (815)434-5571

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)