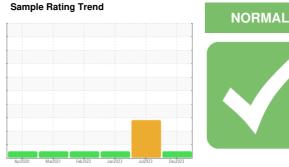


# **OIL ANALYSIS REPORT**

SAMPLE INFORMATION method





## PIERCE 806 (S/N 4P1BCAGF1GA015960) Component

**Diesel Engine** Fluid

PETRO CANADA DURON HP 15W40 (34 GAL)

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

Metal levels are typical for a new component breaking in.

#### Contamination

There is no indication of any contamination in the oil.

#### Fluid Condition

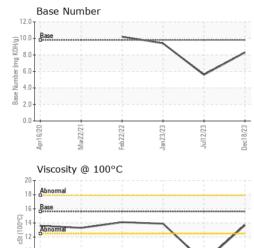
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM		method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0112913	PCA0100371	PCA0074332
Sample Date		Client Info		18 Dec 2023	12 Jul 2023	23 Jan 2023
Machine Age	mls	Client Info		18878	17971	17163
Oil Age	mls	Client Info		907	808	1740
Oil Changed	11110	Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL
				NORIVIAL	ADIVORIVIAL	NORIVIAL
CONTAMINAT	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<b>2</b> .0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	4	3	8
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	1	6
Lead	ppm	ASTM D5185m	>40	1	0	<1
Copper	ppm		>330	20	4	19
Tin		ASTM D5185m	>15	20	0	2
Vanadium	ppm	ASTM D5185m	>15	0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
Gaumum	ppm	ASTIVI DOTODIII		U	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	limit/base	15	▲ 96	4
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	limit/base	15 0	▲ 96 0	4
Boron Barium Molybdenum		ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	15 0 61	<ul> <li>96</li> <li>0</li> <li>61</li> </ul>	4 0 62
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	15 0	<ul> <li>▶ 96</li> <li>0</li> <li>61</li> <li>&lt;1</li> </ul>	4 0 62 <1
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	15 0 61 <1 880	<ul> <li>▶ 96</li> <li>0</li> <li>61</li> <li>&lt;1</li> <li>▲ 467</li> </ul>	4 0 62 <1 962
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	15 0 61 <1	<ul> <li>▶ 96</li> <li>0</li> <li>61</li> <li>&lt;1</li> </ul>	4 0 62 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	15 0 61 <1 880	<ul> <li>▶ 96</li> <li>0</li> <li>61</li> <li>&lt;1</li> <li>▲ 467</li> </ul>	4 0 62 <1 962
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	15 0 61 <1 880 972	<ul> <li>▶ 96</li> <li>0</li> <li>61</li> <li>&lt;1</li> <li>▲ 467</li> <li>1298</li> </ul>	4 0 62 <1 962 1075
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	15 0 61 <1 880 972 1009	<ul> <li>▶ 96</li> <li>0</li> <li>61</li> <li>&lt;1</li> <li>▲ 467</li> <li>1298</li> <li>▲ 688</li> </ul>	4 0 62 <1 962 1075 1051
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	15 0 61 <1 880 972 1009 1126	<ul> <li>▶ 96</li> <li>0</li> <li>61</li> <li>&lt;1</li> <li>▲ 467</li> <li>1298</li> <li>▲ 688</li> <li>▲ 820</li> </ul>	4 0 62 <1 962 1075 1051 1301
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	15 0 61 <1 880 972 1009 1126 2995	<ul> <li>▶ 96</li> <li>0</li> <li>61</li> <li>&lt;1</li> <li>▲ 467</li> <li>1298</li> <li>▲ 688</li> <li>▲ 820</li> <li>3103</li> </ul>	4 0 62 <1 962 1075 1051 1301 3847
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	15 0 61 <1 880 972 1009 1126 2995 current	<ul> <li>▶ 96</li> <li>0</li> <li>61</li> <li>&lt;1</li> <li>▲ 467</li> <li>1298</li> <li>▲ 688</li> <li>▲ 820</li> <li>3103</li> <li>history1</li> </ul>	4 0 62 <1 962 1075 1051 1301 3847 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b>	limit/base	15 0 61 <1 880 972 1009 1126 2995 current 3	<ul> <li>▶ 96</li> <li>0</li> <li>61</li> <li>&lt;1</li> <li>▲ 467</li> <li>1298</li> <li>▲ 688</li> <li>▲ 820</li> <li>3103</li> <li>history1</li> <li>11</li> </ul>	4 0 62 <1 962 1075 1051 1301 3847 history2 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	15 0 61 <1 880 972 1009 1126 2995 current 3 3	<ul> <li>▶ 96</li> <li>0</li> <li>61</li> <li>&lt;1</li> <li>▲ 467</li> <li>1298</li> <li>▲ 688</li> <li>▲ 820</li> <li>3103</li> <li>history1</li> <li>11</li> <li>6</li> </ul>	4 0 62 <1 962 1075 1051 1301 3847 history2 3 1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base	15 0 61 <1 880 972 1009 1126 2995 current 3 3 3 3 3	<ul> <li>▶ 96</li> <li>0</li> <li>61</li> <li>&lt;1</li> <li>▲ 467</li> <li>1298</li> <li>▲ 688</li> <li>▲ 820</li> <li>3103</li> <li>history1</li> <li>11</li> <li>6</li> <li>0</li> <li>history1</li> </ul>	4 0 62 <1 962 1075 1051 1301 3847 history2 3 1 3 3 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3	15 0 61 <1 880 972 1009 1126 2995 current 3 3 3 3 2 0.2	<ul> <li>▶ 96</li> <li>0</li> <li>61</li> <li>&lt;1</li> <li>▲ 467</li> <li>1298</li> <li>▲ 688</li> <li>▲ 820</li> <li>3103</li> <li>history1</li> <li>11</li> <li>6</li> <li>0</li> <li>history1</li> <li>0.1</li> </ul>	4 0 62 <1 962 1075 1051 1301 3847 <b>history2</b> 3 1 3 <b>history2</b> 0.3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3 >20	15 0 61 <1 880 972 1009 1126 2995 current 3 3 3 3 current 0.2 5.4	<ul> <li>▶ 96</li> <li>0</li> <li>61</li> <li>&lt;1</li> <li>▲ 467</li> <li>1298</li> <li>▲ 688</li> <li>▲ 820</li> <li>3103</li> <li>history1</li> <li>11</li> <li>6</li> <li>0</li> <li>history1</li> <li>0.1</li> <li>7.4</li> </ul>	4 0 62 <1 962 1075 1051 1301 3847 history2 3 1 3 3 history2 0.3 6.6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3	15 0 61 <1 880 972 1009 1126 2995 current 3 3 3 3 2 0.2	<ul> <li>▶ 96</li> <li>0</li> <li>61</li> <li>&lt;1</li> <li>▲ 467</li> <li>1298</li> <li>▲ 688</li> <li>▲ 820</li> <li>3103</li> <li>history1</li> <li>11</li> <li>6</li> <li>0</li> <li>history1</li> <li>0.1</li> </ul>	4 0 62 <1 962 1075 1051 1301 3847 <b>history2</b> 3 1 3 <b>history2</b> 0.3 6.6 18.0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3 >20	15 0 61 <1 880 972 1009 1126 2995 current 3 3 3 3 current 0.2 5.4	<ul> <li>▶ 96</li> <li>0</li> <li>61</li> <li>&lt;1</li> <li>▲ 467</li> <li>1298</li> <li>▲ 688</li> <li>▲ 820</li> <li>3103</li> <li>history1</li> <li>11</li> <li>6</li> <li>0</li> <li>history1</li> <li>0.1</li> <li>7.4</li> </ul>	4 0 62 <1 962 1075 1051 1301 3847 history2 3 1 3 3 history2 0.3 6.6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	Imit/base >25 >20 Imit/base >3 >20 >3 >20 >30	15 0 61 <1 880 972 1009 1126 2995 <u>current</u> 3 3 3 3 3 <u>current</u> 0.2 5.4 17.2	<ul> <li>▶ 96</li> <li>0</li> <li>61</li> <li>&lt;1</li> <li>▲ 467</li> <li>1298</li> <li>▲ 688</li> <li>▲ 820</li> <li>3103</li> <li>history1</li> <li>11</li> <li>6</li> <li>0</li> <li>history1</li> <li>0.1</li> <li>7.4</li> <li>17.1</li> </ul>	4 0 62 <1 962 1075 1051 1301 3847 <b>history2</b> 3 1 3 <b>history2</b> 0.3 6.6 18.0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	limit/base >25 >20 limit/base >3 >20 >30 >30	15 0 61 <1 880 972 1009 1126 2995 Current 3 3 3 3 Current 0.2 5.4 17.2 Current	<ul> <li>▶ 96</li> <li>0</li> <li>61</li> <li>&lt;1</li> <li>▲ 467</li> <li>1298</li> <li>▲ 688</li> <li>▲ 820</li> <li>3103</li> <li>history1</li> <li>11</li> <li>6</li> <li>0</li> <li>history1</li> <li>0.1</li> <li>7.4</li> <li>17.1</li> <li>history1</li> </ul>	4 0 62 <1 962 1075 1051 1301 3847 history2 3 1 3 history2 0.3 6.6 18.0 history2



Apr16/20

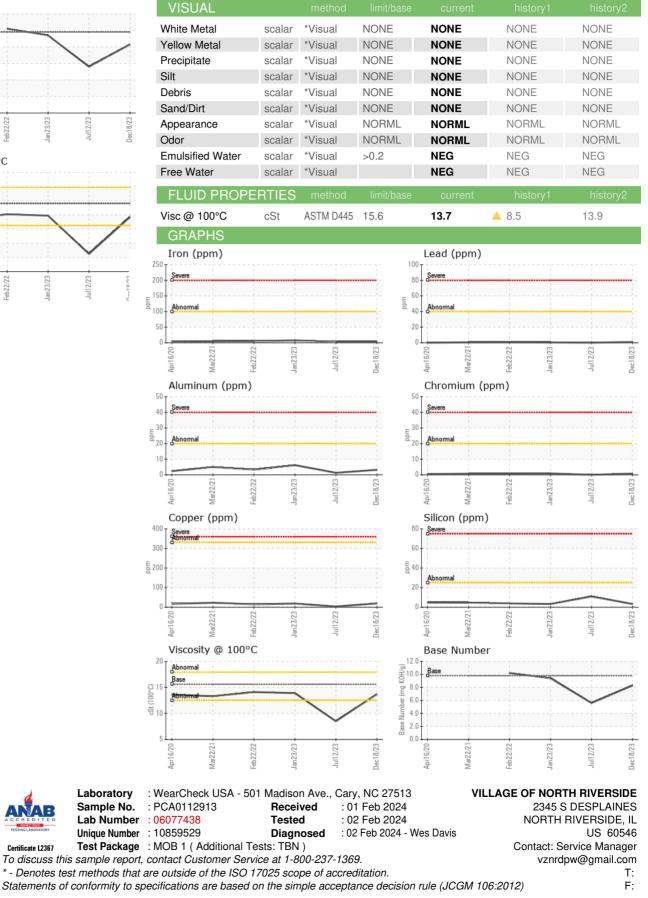
# **OIL ANALYSIS REPORT**



eb22/22

Mar22/21

an23/23



Certificate L2367

Laboratory

Sample No.