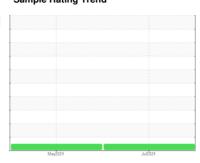


## **OIL ANALYSIS REPORT**

Sample Rating Trend



**NORMAL** 



Machine Id

# **Lick Creek 3**

Natural Gas Engine

PETRO CANADA SENTRON LD 3000 (--- G

### DIAGNOSIS

#### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

#### Wear

All component wear rates are normal.

### Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

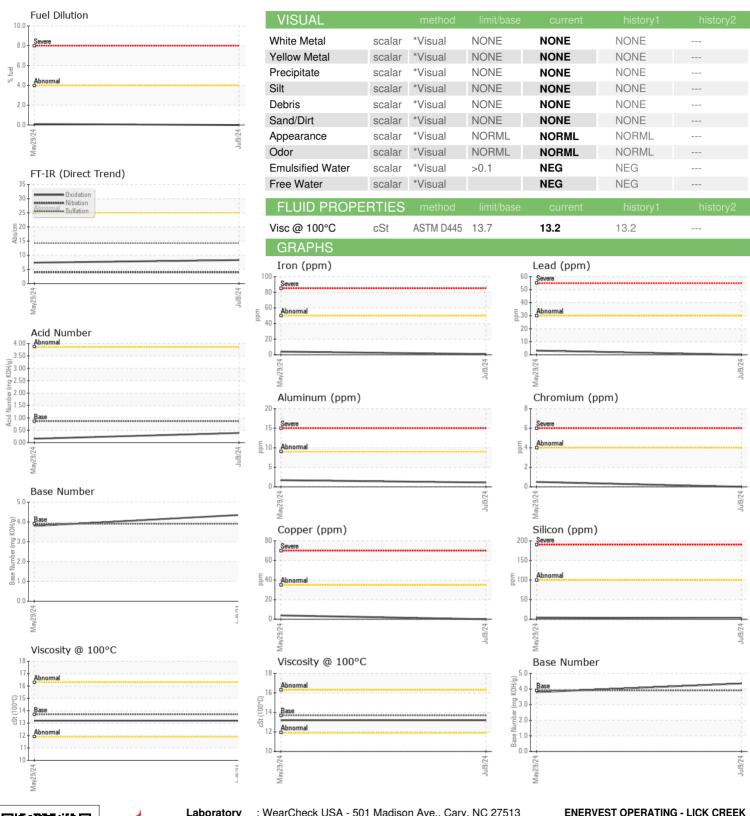
#### **Fluid Condition**

The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Water   WC Method   Imit/base   Current   history1   history2	AL)			May2024	Jul2024		
Containing   Color	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Cample Date   Client Info   Q9 Jul 2024   29 May 2024	Sample Number		Client Info		PCA0117090	PCA0117200	
Machine Age			Client Info		09 Jul 2024	29 May 2024	
Dil Age	•	hrs	Client Info				
Dil Changed   Client Info   Not Changed   NORMAL   NORM		hrs	Client Info		141141	4648	
CONTAMINATION   method   mill/base   current   history1   history2	-		Client Info		Not Changd	Not Changd	
Water         WC Method         >0.1         NEG         NEG            WEAR METALS         method         limit/base         current         history1         history2           ron         ppm         ASTM D5185m         >50         <1	Sample Status				NORMAL	NORMAL	
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         <1	CONTAMINAT	ION	method	limit/base	current	history1	history2
Chromium	Water		WC Method	>0.1	NEG	NEG	
Chromium	WEAR METAL	.S	method	limit/base	current	history1	history2
Nickel	ron	ppm	ASTM D5185m	>50	<1	4	
Description	Chromium	ppm	ASTM D5185m	>4	0	<1	
Silver	Nickel	ppm	ASTM D5185m	>2	0	0	
Astropart   Astr	Titanium	ppm	ASTM D5185m		0	0	
Lead	Silver	ppm	ASTM D5185m	>3	0	0	
Description	Aluminum	ppm	ASTM D5185m	>9	1	2	
Tin	_ead	ppm	ASTM D5185m	>30	0	3	
Vanadium         ppm         ASTM D5185m         0         0            Cadmium         ppm         ASTM D5185m         0         0            ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         5         1         0            Barium         ppm         ASTM D5185m         1         0            Molybdenum         ppm         ASTM D5185m         2         127         14            Manganese         ppm         ASTM D5185m         5         7         6            Magnesium         ppm         ASTM D5185m         5         7         6            Calcium         ppm         ASTM D5185m         1220         1472         1397            Phosphorus         ppm         ASTM D5185m         298         286         305            Zinc         ppm         ASTM D5185m         1995         2865         4260            CONTAMINANTS         method         limit/base         current         history1         history2 </td <td>Copper</td> <td>ppm</td> <td>ASTM D5185m</td> <td>&gt;35</td> <th>0</th> <td>4</td> <td></td>	Copper	ppm	ASTM D5185m	>35	0	4	
Vanadium         ppm         ASTM D5185m         0         0            Cadmium         ppm         ASTM D5185m         0         0            ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         5         1         0            Barium         ppm         ASTM D5185m         1         0            Molybdenum         ppm         ASTM D5185m         2         127         14            Manganese         ppm         ASTM D5185m         2         127         14            Magnesium         ppm         ASTM D5185m         1         <1         2            Calcium         ppm         ASTM D5185m         1220         1472         1397            Phosphorus         ppm         ASTM D5185m         298         286         305            Zinc         ppm         ASTM D5185m         1995         2865         4260            CONTAMINANTS         method         limit/base         current         history1         history2	Tin	ppm	ASTM D5185m	>4	0	1	
ADDITIVES	Vanadium		ASTM D5185m		0	0	
Boron   ppm   ASTM D5185m   5   1   0   0	Cadmium	ppm	ASTM D5185m		0	0	
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         2         127         14            Manganese         ppm         ASTM D5185m         1         <1	Boron	ppm	ASTM D5185m	5	1	0	
Manganese         ppm         ASTM D5185m         1         <1         2            Magnesium         ppm         ASTM D5185m         5         7         6            Calcium         ppm         ASTM D5185m         1220         1472         1397            Phosphorus         ppm         ASTM D5185m         298         286         305            Zinc         ppm         ASTM D5185m         350         335         354            Sulfur         ppm         ASTM D5185m         1995         2865         4260            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >+100         3         4            Sodium         ppm         ASTM D5185m         2         3            Potassium         ppm         ASTM D5185m         >20         0         7            Fuel         %         ASTM D3524         >4.0         0.0         0.1            INFRA-RED         method         limit/base         current <t< td=""><td>Barium</td><td>ppm</td><td>ASTM D5185m</td><td>1</td><th>0</th><td>0</td><td></td></t<>	Barium	ppm	ASTM D5185m	1	0	0	
Magnesium         ppm         ASTM D5185m         5         7         6            Calcium         ppm         ASTM D5185m         1220         1472         1397            Phosphorus         ppm         ASTM D5185m         298         286         305            Zinc         ppm         ASTM D5185m         350         335         354            Sulfur         ppm         ASTM D5185m         1995         2865         4260            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         2         3            Sodium         ppm         ASTM D5185m         2         3            Potassium         ppm         ASTM D5185m         20         0         7            Fuel         %         ASTM D3524         >4.0         0.0         0.1            Soot %         %         *ASTM D7844         0         0            Nitration         Abs/.1mm         *ASTM D7415         >30         14.3         14.3	Molybdenum	ppm	ASTM D5185m	2	127	14	
Calcium         ppm         ASTM D5185m         1220         1472         1397            Phosphorus         ppm         ASTM D5185m         298         286         305            Zinc         ppm         ASTM D5185m         350         335         354            Sulfur         ppm         ASTM D5185m         1995         2865         4260            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >+100         3         4            Sodium         ppm         ASTM D5185m         >2         3            Potassium         ppm         ASTM D5185m         >20         0         7            Fuel         %         ASTM D3524         >4.0         0.0         0.1            Soot %         %         *ASTM D7844         0         0            Nitration         Abs/cm         *ASTM D7624         >20         4.0         4.0            Sulfation         Abs/.1mm         *ASTM D7415         >30         14.3	Manganese	ppm	ASTM D5185m	1	<1	2	
Phosphorus         ppm         ASTM D5185m         298         286         305            Zinc         ppm         ASTM D5185m         350         335         354            Sulfur         ppm         ASTM D5185m         1995         2865         4260            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >+100         3         4            Sodium         ppm         ASTM D5185m         2         3            Potassium         ppm         ASTM D5185m         >20         0         7            Fuel         %         ASTM D3524         >4.0         0.0         0.1            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         0         0            Sulfation         Abs/.1mm         *ASTM D7415         >30         14.3         14.3            FLUID DEGRADATION         method         limit/base         current         history1	Magnesium	ppm	ASTM D5185m	5	7	6	
Zinc   ppm   ASTM D5185m   350   335   354       Sulfur   ppm   ASTM D5185m   1995   2865   4260       CONTAMINANTS   method   limit/base   current   history1   history2     Silicon   ppm   ASTM D5185m   >+100   3   4       Sodium   ppm   ASTM D5185m   2   3       Potassium   ppm   ASTM D5185m   >20   0   7       Fuel   %   ASTM D3524   >4.0   0.0   0.1       INFRA-RED   method   limit/base   current   history1   history2     Soot %   % *ASTM D7844   0   0   0       Nitration   Abs/cm   *ASTM D7624   >20   4.0   4.0       Sulfation   Abs/.1mm *ASTM D7415   >30   14.3   14.3       FLUID DEGRADATION   method   limit/base   current   history1   history2     Oxidation   Abs/.1mm *ASTM D7414   >25   8.3   7.4       Acid Number (AN)   mg KOH/g   ASTM D8045   0.86   0.39   0.16	Calcium	ppm	ASTM D5185m	1220	1472	1397	
Sulfur         ppm         ASTM D5185m         1995         2865         4260            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >+100         3         4            Sodium         ppm         ASTM D5185m         2         3            Potassium         ppm         ASTM D5185m         >20         0         7            Fuel         %         ASTM D5185m         >20         0         7            Fuel         %         ASTM D5185m         >20         0         0         1            Fuel         %         ASTM D5185m         >20         0         0         1            Fuel         %         ASTM D3524         >4.0         0.1             Soot %         %         *ASTM D7844         0         0             Sulfation         Abs/.1mm         *ASTM D7415         >30         14.3         14.3            FLUID DEGRADATION         method         limit/base <t< td=""><td>Phosphorus</td><td>ppm</td><td>ASTM D5185m</td><td>298</td><th>286</th><td>305</td><td></td></t<>	Phosphorus	ppm	ASTM D5185m	298	286	305	
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >+100         3         4            Sodium         ppm         ASTM D5185m         2         3            Potassium         ppm         ASTM D5185m         >20         0         7            Fuel         %         ASTM D5185m         >20         0         0            Fuel         %         ASTM D5185m         >20         0         0            Fuel         %         ASTM D5185m         >20         0         0            Fuel         %         ASTM D5185m         >20         0         0         1           Silicon         ppm         ASTM D5185m         >20         0         0            Silicon         ppm         ASTM D5185m         >20         0         0         1           Silicon         method         limit/base         current         history1            Soot %         %         *ASTM D7415         >30         14.3         14.3 <td>Zinc</td> <td>ppm</td> <td>ASTM D5185m</td> <td>350</td> <th>335</th> <td>354</td> <td></td>	Zinc	ppm	ASTM D5185m	350	335	354	
Solition   ppm   ASTM D5185m   >+100   3   4	Sulfur	ppm	ASTM D5185m	1995	2865	4260	
Sodium	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         0         7            Fuel         %         ASTM D3524         >4.0         0.0         0.1            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         0         0            Nitration         Abs/cm         *ASTM D7624         >20         4.0         4.0            Sulfation         Abs/.1mm         *ASTM D7415         >30         14.3         14.3            FLUID DEGRADATION         method         limit/base         current         history1         history2           Dxidation         Abs/.1mm         *ASTM D7414         >25         8.3         7.4            Acid Number (AN)         mg KOH/g         ASTM D8045         0.86         0.39         0.16	Silicon	ppm	ASTM D5185m	>+100	3	4	
Fuel % ASTM D3524 >4.0 0.0 0.1  INFRA-RED method limit/base current history1 history2  Soot % *ASTM D7844 0 0 0  Nitration Abs/cm *ASTM D7624 >20 4.0 4.0  Sulfation Abs/.1mm *ASTM D7415 >30 14.3 14.3  FLUID DEGRADATION method limit/base current history1 history2  Dxidation Abs/.1mm *ASTM D7414 >25 8.3 7.4  Acid Number (AN) mg KOH/g ASTM D8045 0.86 0.39 0.16	Sodium	ppm	ASTM D5185m		2	3	
INFRA-RED	Potassium	ppm	ASTM D5185m	>20	0	7	
Soot %         %         *ASTM D7844         0         0            Nitration         Abs/cm         *ASTM D7624         >20         4.0         4.0            Sulfation         Abs/.1mm         *ASTM D7415         >30         14.3         14.3            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         8.3         7.4            Acid Number (AN)         mg KOH/g         ASTM D8045         0.86         0.39         0.16	Fuel	%	ASTM D3524	>4.0	0.0	0.1	
Nitration         Abs/cm         *ASTM D7624         >20         4.0            Sulfation         Abs/.1mm         *ASTM D7415         >30         14.3         14.3            FLUID DEGRADATION method limit/base current         history1         history2           Dxidation         Abs/.1mm         *ASTM D7414         >25         8.3         7.4            Acid Number (AN)         mg KOH/g         ASTM D8045         0.86         0.39         0.16	INFRA-RED		method	limit/base	current	history1	history2
Sulfation         Abs/.1mm         *ASTM D7415         >30         14.3         14.3            FLUID DEGRADATION method limit/base current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         8.3         7.4            Acid Number (AN)         mg KOH/g         ASTM D8045         0.86         0.39         0.16	Soot %	%	*ASTM D7844		0	0	
FLUID DEGRADATION         method         limit/base         current         history1         history2           Dxidation         Abs/.1mm         *ASTM D7414         >25         8.3         7.4            Acid Number (AN)         mg KOH/g         ASTM D8045         0.86         0.39         0.16	Nitration	Abs/cm	*ASTM D7624	>20	4.0	4.0	
Oxidation         Abs/.1mm         *ASTM D7414         >25         8.3         7.4            Acid Number (AN)         mg KOH/g         ASTM D8045         0.86         0.39         0.16	Sulfation	Abs/.1mm	*ASTM D7415	>30	14.3	14.3	
Acid Number (AN) mg KOH/g ASTM D8045 0.86 0.39 0.16	FLUID DEGRAI	DATION	method	limit/base	current	history1	history2
. , , , , , , , , , , , , , , , , , , ,	Oxidation	Abs/.1mm	*ASTM D7414	>25	8.3	7.4	
Base Number (BN) mg KOH/g ASTM D2896 3.9 4.35 3.80	Acid Number (AN)	ma KOH/a	ASTM D8045	0.86	0.39	0.16	
		99			0.00		



## **OIL ANALYSIS REPORT**







Laboratory Sample No.

: PCA0117090

Lab Number : 06237977 Unique Number : 11126811

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 16 Jul 2024

Tested : 17 Jul 2024 Diagnosed : 18 Jul 2024 - Sean Felton

**ENERVEST OPERATING - LICK CREEK** 1645 COMPRESSOR STATION ROAD DANTE, VA

US 24237 Contact: Service Manager

Test Package : MOB 2 ( Additional Tests: FuelDilution, PercentFuel ) Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369.

 $^st$  - 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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F: