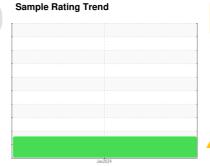


OIL ANALYSIS REPORT







CEY00154 Component

Natural Gas Engine

PETRO CANADA SENT

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. (Customer Sample Comment: Sentron LA 2000 SAE40)

Wear

The iron level is abnormal. The copper level is abnormal.

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.

Sample Number Client Info PCA0116017							
Sample Number Client Info PCA0116017	ON LA 2000 (11	0 GAL)			Jan 2024		
Sample Number Client Info PCA0116017	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Cample Date Client Info 18 Jan 2024		1017 (11101)					,
Machine Age hrs Client Info 3192 Dil Age hrs Client Info 0 Dil Changed Client Info 0 Sample Status Changed CONTAMINATION method limit/base current history1 history WEAR METALS method limit/base current history1 history ron ppm ASTM D5185m >50 4 52 chromium ppm ASTM D5185m >4 <1							
Dil Age	•	bro					
Client Info Changed Client Info Changed ABNORMAL CONTAMINATION method limit/base current history1							
CONTAMINATION method limit/base current history1 hist	•	1115			-		
WEAR METALS	-		Ollerit IIIIO				
Water WC Method >0.1 NEG WEAR METALS method limit/base current history1 history Fron ppm ASTM D5185m >50 ♣ 52 Chromium ppm ASTM D5185m >4 <1 Glickel ppm ASTM D5185m >2 0 Silver ppm ASTM D5185m >3 0 Asluminum ppm ASTM D5185m >9 3 Lead ppm ASTM D5185m >9 3 Lead ppm ASTM D5185m >30 <1 Copper ppm ASTM D5185m >35 \$77 Gradium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 </td <td></td> <td>ION</td> <td>method</td> <td>limit/base</td> <td></td> <td></td> <td></td>		ION	method	limit/base			
WEAR METALS method limit/base current history1 history1 ron ppm ASTM D5185m >50 \$52		ION					1115t01 y 2
Description		C				historyd	hiotom (O
Schromium Description De		3				riistory i	HIStory2
Action A	on	ppm	ASTM D5185m	>50	<u> </u>		
Silver		ppm		>4			
ASTM D5185m >9 3		ppm		>2	-		
ASTM D5185m >9 3	itanium	ppm	ASTM D5185m		0		
December December	Silver	ppm	ASTM D5185m	>3	0		
Description	Aluminum	ppm	ASTM D5185m	>9	3		
Acade Acad	ead	ppm	ASTM D5185m	>30	<1		
Acade Acad	Copper	ppm	ASTM D5185m	>35	<u> </u>		
ADDITIVES	ïn	ppm	ASTM D5185m	>4	<1		
ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 2 0 Barium ppm ASTM D5185m 1 0 Molybdenum ppm ASTM D5185m 1 1 Magnesium ppm ASTM D5185m 5 <1	anadium/	ppm	ASTM D5185m		0		
Soron ppm ASTM D5185m 2 0 Sarium ppm ASTM D5185m 1 0 0 AM AM AM D5185m 1 1 1 AM AM AM D5185m 5 < 1 AM AM AM D5185m 5 < 1 AM AM D5185m 5 < 1 AM AM D5185m 5 < 1 AM AM D5185m 1237 1230 DM D5185m 1237 1230 DM D5185m 270 272 DM D5185m 270 272 DM D5185m 2670 2128 DM D5185m 2670 2128 DM D5185m	Cadmium	ppm	ASTM D5185m		0		
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 1 1 Manganese ppm ASTM D5185m 5 <1 Magnesium ppm ASTM D5185m 1 8 Calcium ppm ASTM D5185m 1237 1230 Phosphorus ppm ASTM D5185m 270 272 Zinc ppm ASTM D5185m 2670 2128 Zinc ppm ASTM D5185m 2670 2128 CONTAMINANTS method limit/base current history1 histor CONTAMINANTS method limit/base current history1 histor CONTAMINANTS method limit/base current history1 histor Coldium ppm ASTM D5185m >20 10 Fuel % ASTM D3524 >4.0	Boron	ppm	ASTM D5185m	2	0		
Manganese ppm ASTM D5185m 5 <1 Magnesium ppm ASTM D5185m 1 8 Calcium ppm ASTM D5185m 1237 1230 Phosphorus ppm ASTM D5185m 270 272 Zinc ppm ASTM D5185m 330 342 Zinc ppm ASTM D5185m 2670 2128 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >+100 3 Cotassium ppm ASTM D5185m >20 10 Fuel % ASTM D5185m >20 10 Fuel % ASTM D5185m >20 10 Fuel % ASTM D5185m >20	Barium	ppm	ASTM D5185m	1	0		
Magnesium ppm ASTM D5185m 1 8 Calcium ppm ASTM D5185m 1237 1230 Phosphorus ppm ASTM D5185m 270 272 Zinc ppm ASTM D5185m 330 342 Sulfur ppm ASTM D5185m 2670 2128 CONTAMINANTS method limit/base current history1 history1 history1 Solicon ppm ASTM D5185m >+100 3 Solicon ppm ASTM D5185m >20 10 Solicum ppm	Nolybdenum	ppm	ASTM D5185m	1	1		
December Part Par	Manganese	ppm	ASTM D5185m	5	<1		
Calcium ppm ASTM D5185m 1237 1230 Phosphorus ppm ASTM D5185m 270 272 Cinc ppm ASTM D5185m 330 342 Sulfur ppm ASTM D5185m 2670 2128 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >+100 3 Sodium ppm ASTM D5185m 6 Potassium ppm ASTM D5185m >20 10 Sodium ppm ASTM D5185m >20 10 Sodium ppm ASTM D3524 >4.0 0.2 Soot % *ASTM D7844 0 Solfation Abs/:1mm *ASTM D7624 >20 4.6	-	ppm	ASTM D5185m	1	8		
Sulfur	Calcium	ppm	ASTM D5185m	1237	1230		
Sulfur	hosphorus		ASTM D5185m	270	272		
Gulfur ppm ASTM D5185m 2670 2128 CONTAMINANTS method limit/base current history1 history Gilicon ppm ASTM D5185m >+100 3 Godium ppm ASTM D5185m 6 Potassium ppm ASTM D5185m >20 10 Guel % ASTM D3524 >4.0 0.2 INFRA-RED method limit/base current history1 history Goot % % *ASTM D7844 0 Goot % % *ASTM D7624 >20 4.6 Gulfation Abs/.1mm *ASTM D7415 >30 14.8 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 9.1	•		ASTM D5185m	330	342		
Solition ppm ASTM D5185m >+100 3	Sulfur				2128		
Sodium ppm ASTM D5185m 6	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 10 Fuel % ASTM D3524 >4.0 0.2 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 0 Bitration Abs/cm *ASTM D7624 >20 4.6 Sulfation Abs/.1mm *ASTM D7415 >30 14.8 FLUID DEGRADATION method limit/base current history1 history Dxidation Abs/.1mm *ASTM D7414 >25 9.1 Acid Number (AN) mg KOH/g ASTM D8045 0.64 0.74	Silicon	ppm	ASTM D5185m	>+100	3		
NFRA-RED method limit/base current history1 history	Sodium	ppm	ASTM D5185m		6		
INFRA-RED	Potassium	ppm	ASTM D5185m	>20	10		
Soot %	uel	%	ASTM D3524	>4.0	0.2		
Abs/cm *ASTM D7624 >20 4.6 Sulfation Abs/.1mm *ASTM D7415 >30 14.8 FLUID DEGRADATION method limit/base current history1 history2 Dxidation Abs/.1mm *ASTM D7414 >25 9.1 Acid Number (AN) mg KOH/g ASTM D8045 0.64 0.74	INFRA-RED		method	limit/base	current	history1	history2
Abs/cm *ASTM D7624 >20 4.6 Sulfation Abs/.1mm *ASTM D7415 >30 14.8 FLUID DEGRADATION method limit/base current history1 history2 Dividation Abs/.1mm *ASTM D7414 >25 9.1 Acid Number (AN) mg KOH/g ASTM D8045 0.64 0.74	Soot %	%	*ASTM D7844		0		
Sulfation Abs/.1mm *ASTM D7415 >30 14.8 FLUID DEGRADATION method limit/base current history1 history Dxidation Abs/.1mm *ASTM D7414 >25 9.1 Acid Number (AN) mg KOH/g ASTM D8045 0.64 0.74	litration	Abs/cm	*ASTM D7624	>20	4.6		
Oxidation Abs/.1mm *ASTM D7414 >25 9.1 Acid Number (AN) mg KOH/g ASTM D8045 0.64 0.74	Sulfation	Abs/.1mm		>30			
Acid Number (AN) mg KOH/g ASTM D8045 0.64 0.74	FLUID DEGRAI	OATION	method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g ASTM D8045 0.64 0.74	Oxidation	Abs/.1mm	*ASTM D7414	>25	9.1		
Base Number (BN) mg KOH/g ASTM D2896 4.4 3.63							



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