

# **OIL ANALYSIS REPORT**

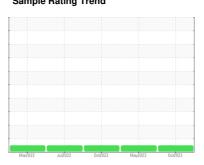
#### Sample Rating Trend

# **NORMAL**

# **ADVANCE MIXER M130 (S/N KCB44227)**

**Diesel Engine** 

PETRO CANADA DURON HP 15W40 (--- QTS)





### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

Metal levels are typical for a new component breaking in.

#### Contamination

There is no indication of any contamination in the

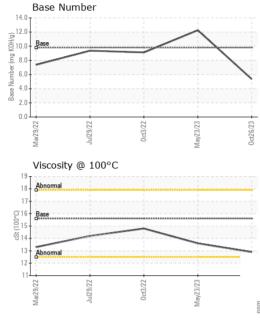
#### **Fluid Condition**

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

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0098503	PCA0098501	WC0594339
Sample Date		Client Info		26 Oct 2023	23 May 2023	03 Oct 2022
Machine Age	mls	Client Info		21629	20824	20266
Oil Age	mls	Client Info		21629	20824	20266
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	13	38	<1
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	1	<1	0
Lead	ppm	ASTM D5185m	>40	1	0	1
Copper	ppm	ASTM D5185m	>330	16	15	0
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 28	history1 14	history2 6
	ppm		limit/base			
Boron		ASTM D5185m	limit/base	28	14	6
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	28 0	14 0	6
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	28 0 60	14 0 64	6 0 49
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	28 0 60 <1	14 0 64 <1	6 0 49 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	28 0 60 <1 1002	14 0 64 <1 984	6 0 49 <1 854
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	28 0 60 <1 1002 1077	14 0 64 <1 984 1098	6 0 49 <1 854 945
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	28 0 60 <1 1002 1077 1004	14 0 64 <1 984 1098 1058	6 0 49 <1 854 945 866
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 ASTM D5185m	limit/base	28 0 60 <1 1002 1077 1004 1294	14 0 64 <1 984 1098 1058	6 0 49 <1 854 945 866 1084
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 ASTM D5185m	limit/base	28 0 60 <1 1002 1077 1004 1294 3361	14 0 64 <1 984 1098 1058 1311 3656	6 0 49 <1 854 945 866 1084 2967
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	28 0 60 <1 1002 1077 1004 1294 3361 current	14 0 64 <1 984 1098 1058 1311 3656 history1	6 0 49 <1 854 945 866 1084 2967 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm	ASTM D5185m	limit/base	28 0 60 <1 1002 1077 1004 1294 3361 current	14 0 64 <1 984 1098 1058 1311 3656 history1	6 0 49 <1 854 945 866 1084 2967 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	ASTM D5185m	limit/base	28 0 60 <1 1002 1077 1004 1294 3361 current 10 8	14 0 64 <1 984 1098 1058 1311 3656 history1 6 3	6 0 49 <1 854 945 866 1084 2967 history2 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m	limit/base >25 >20 limit/base	28 0 60 <1 1002 1077 1004 1294 3361 current 10 8 0	14 0 64 <1 984 1098 1058 1311 3656 history1 6 3	6 0 49 <1 854 945 866 1084 2967 history2 4 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm	ASTM D5185m	limit/base >25 >20 limit/base >3	28 0 60 <1 1002 1077 1004 1294 3361 current 10 8 0	14 0 64 <1 984 1098 1058 1311 3656 history1 6 3 1	6 0 49 <1 854 945 866 1084 2967 history2 4 <1 1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m  Method  *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3	28 0 60 <1 1002 1077 1004 1294 3361 current 10 8 0 current 0.2	14 0 64 <1 984 1098 1058 1311 3656 history1 6 3 1 history1 0.5	6 0 49 <1 854 945 866 1084 2967 history2 4 <1 1 history2 0.1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m  Method ASTM D5185m  Method *ASTM D7844 *ASTM D7624 *ASTM D76145	limit/base >25 >20 limit/base >3 >20	28 0 60 <1 1002 1077 1004 1294 3361 current 10 8 0 current 0.2 5.6	14 0 64 <1 984 1098 1058 1311 3656 history1 6 3 1 history1 0.5 8.5	6 0 49 <1 854 945 866 1084 2967 history2 4 <1 1 history2 0.1 4.8
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m  Method ASTM D5185m  Method *ASTM D7844 *ASTM D7624 *ASTM D76145	limit/base >25 >20 limit/base >3 >20 >30	28 0 60 <1 1002 1077 1004 1294 3361 current 10 8 0 current 0.2 5.6 16.9	14 0 64 <1 984 1098 1058 1311 3656 history1 6 3 1 history1 0.5 8.5 20.3	6 0 49 <1 854 945 866 1084 2967 history2 4 <1 1 history2 0.1 4.8 18.5



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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
	DTIEC	ام مالم مما	li.ee it/le = = =		la i a t a un urd	histom (O

I LOID I ITOI	LITTLO					
Visc @ 100°C	cSt	ASTM D445	15.6	12.9	13.6	14.8

	GRAPHS								
250	Iron (ppm)				100 T	ead (ppm)			
200	Severe				80 -	Severe			
E 150					E 60 -				
	Abnormal			-	40 1	Abnormal			
50				_	20				
	Mar29/22 -	Oct3/22 -	May23/23 -	0ct26/23 -	2000	Jul29/22	Oct3/22 -	May23/23 -	Oct26/23 -
			Мау	Oct		2 '		May	Oct
50	Aluminum (ppm)				50 <sub>T</sub> -	Chromium (	opm)		
40	Severe				40 - 4	Severe			
됩 <sup>30</sup>	Abnormal				E 20 - 6	Abnormal			
10	0				10				
0					0				
	Mar29/22 Jul29/22	Oct3/22 .	May23/23	Oct26/23	M-2007	Jul29/22	0ct3/22	May23/23 -	Oct26/23 -
	E Copper (ppm)		M	O		ilicon (ppm		Ma	0
400	Severe Patronnal					Severe	,		
300					60 -				
Ē 200	-				튭 40 -	Abnormal			
100					20 -	Automa			
0	22	22	23	23	يا ه	77	22	23	- 52
	Mar29/22 Jul29/22	Oct3/22	May23/23	Oct26/23	2000	Jul29/22	Oct3/22 .	May23/23	Oct26/23 -
	Viscosity @ 100°	С	~			- Base Numbe	r	~	
20 18	Abnormal				15.0 P			1	
	Base				Sase Number (mg KOH/g)	Base			
(2-100-CSt (100-C)					nm 5.0				
12	Abnormal				ase N				





Certificate L2367

Laboratory Sample No. Lab Number Test Package : MOB 2

: PCA0098503 : 05995113 Unique Number : 10723473

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 31 Oct 2023 Diagnosed

Diagnostician : Wes Davis

: 01 Nov 2023

**KOBYLUCK TRUCKING** 24 INDUSTRIAL DR WATERFORD, CT US 06385

Contact: GEORGE

F:

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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)