

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 1031 Component **Diesel Engine**

Elui

PETRO CANADA SYNTHETIC BLEND SAE 10W30 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: Normal change)

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

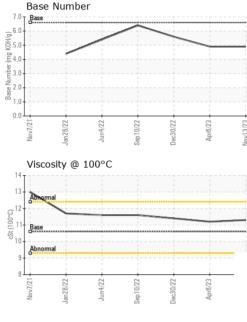
Fluid Condition

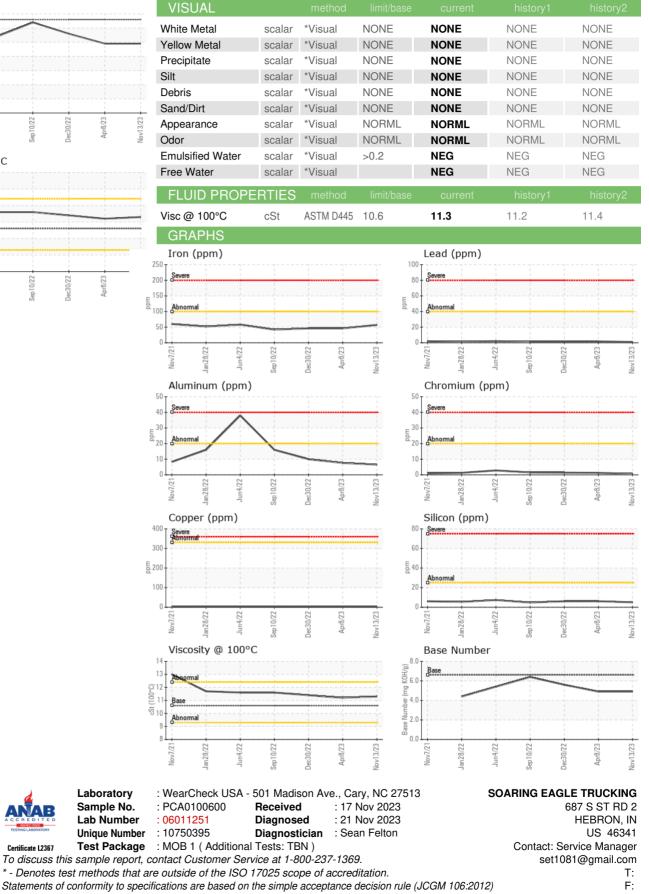
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0100600	PCA0073060	PCA0073059
Sample Date		Client Info		13 Nov 2023	08 Apr 2023	30 Dec 2022
Machine Age	mls	Client Info		979706	912609	882008
Oil Age	mls	Client Info		33524	30601	32393
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
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	57	46	46
Chromium	ppm	ASTM D5185m	>20	<1	1	1
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	6	8	10
Lead	ppm	ASTM D5185m	>40	<1	2	1
Copper	ppm	ASTM D5185m	>330	2	2	2
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 0	history1 0	history2 0
	ppm ppm		limit/base			
Boron Barium		ASTM D5185m	limit/base	0	0	0
Boron	ppm	ASTM D5185m ASTM D5185m		0 <1	0	0 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		0 <1 61	0 0 63	0 0 61
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 <1 61 0	0 0 63 <1	0 0 61 <1
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50	0 <1 61 0 944	0 0 63 <1 975	0 0 61 <1 957
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 1870	0 <1 61 0 944 1031	0 0 63 <1 975 1099	0 0 61 <1 957 1062
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	50 1870 930	0 <1 61 0 944 1031 941	0 0 63 <1 975 1099 1029	0 0 61 <1 957 1062 968
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	50 1870 930 1020	0 <1 61 0 944 1031 941 1200	0 0 63 <1 975 1099 1029 1265	0 0 61 <1 957 1062 968 1236
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	50 1870 930 1020 2520	0 <1 61 0 944 1031 941 1200 2642	0 0 63 <1 975 1099 1029 1265 2749	0 0 61 <1 957 1062 968 1236 2913
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	50 1870 930 1020 2520 limit/base	0 <1 61 0 944 1031 941 1200 2642 current	0 0 63 <1 975 1099 1029 1265 2749 history1	0 0 61 <1 957 1062 968 1236 2913 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	50 1870 930 1020 2520 limit/base >25	0 <1 61 0 944 1031 941 1200 2642 <u>current</u> 5	0 0 63 <1 975 1099 1029 1265 2749 history1 6	0 0 61 <1 957 1062 968 1236 2913 history2 6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 1870 930 1020 2520 limit/base >25	0 <1 61 0 944 1031 941 1200 2642 <u>current</u> 5 <	0 0 63 <1 975 1099 1029 1265 2749 history1 6 4	0 0 61 <1 957 1062 968 1236 2913 history2 6 6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	50 1870 930 1020 2520 limit/base >25 >20	0 <1 61 0 944 1031 941 1200 2642 current 5 < <1 8	0 0 63 <1 975 1099 1029 1265 2749 history1 6 4 10	0 0 61 <1 957 1062 968 1236 2913 history2 6 6 6 13
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	50 1870 930 1020 2520 limit/base >25 >20 limit/base	0 <1 61 0 944 1031 941 1200 2642 current 5 <1 8	0 0 63 <1 975 1099 1029 1265 2749 history1 6 4 10 history1	0 0 61 <1 957 1062 968 1236 2913 history2 6 6 6 13 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	50 1870 930 1020 2520 limit/base >25 >20 limit/base >3	0 <1 61 0 944 1031 941 1200 2642 <i>current</i> 5 <1 8 <i>current</i>	0 0 63 <1 975 1099 1029 1265 2749 history1 6 4 10 history1 0.9	0 0 61 <1 957 1062 968 1236 2913 history2 6 6 6 13 13 history2 0.8
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	50 1870 930 1020 2520 limit/base >25 >20 limit/base >3 >20	0 <1 61 0 944 1031 941 1200 2642 <i>current</i> 5 <1 8 <i>current</i> 1 10.8	0 0 63 <1 975 1099 1029 1265 2749 history1 6 4 10 history1 0.9 11.8	0 0 61 <1 957 1062 968 1236 2913 history2 6 6 6 6 13 history2 0.8 11.2
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 D7844 *ASTM D7844 *ASTM D7844	50 1870 930 1020 2520 limit/base >25 >20 s3 >20 >30 limit/base	0 <1 61 0 944 1031 941 1200 2642 <i>current</i> 5 <1 8 <i>current</i> 1 10.8 24.1 <i>current</i>	0 0 63 <1 975 1099 1029 1265 2749 history1 6 4 10 history1 0.9 11.8 24.8 history1	0 0 61 <1 957 1062 968 1236 2913 history2 6 6 6 6 13 history2 0.8 11.2 22.8 history2
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	50 1870 930 1020 2520 limit/base >25 limit/base >3 >20 limit/base >3	0 <1 61 0 944 1031 941 1200 2642 <u>current</u> 5 <1 8 <u>current</u> 1 10.8 24.1	0 0 63 <1 975 1099 1029 1265 2749 history1 6 4 10 history1 0.9 11.8 24.8	0 0 61 <1 957 1062 968 1236 2913 history2 6 6 6 6 13 history2 0.8 11.2 22.8



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Certificate L2367

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