

OIL ANALYSIS REPORT

Sample Rating Trend





Diesel Engine

Fluid PETRO CANADA DURON UHP E6 10W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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 INFORI	MATION	method	limit/base	current	history 1	history 2
Sample Number		Client Info		PC0032528		
Sample Date		Client Info		21 Jun 2023		
Machine Age	mls	Client Info		100187		
Oil Age	mls	Client Info		7644		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history 1	history 2
Fuel		WC Method	>5	<1.0		
Glycol		WC Method	20	NEG		
WEAR METAL	S	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>100	19		
Chromium	ppm	ASTM D5185m	>20	<1 0		
Nickel	ppm	ASTM D5185m	>4	-		
Titanium	ppm	ASTM D5185m	0	<1		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>20	3		
Lead	ppm	ASTM D5185m	>40	0		
Copper	ppm	ASTM D5185m	>330	<1		
Tin	ppm	ASTM D5185m	>15	<1		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
			11 1.0			
ADDITIVES		method	limit/base	current	history 1	history 2
ADDITIVES Boron	ppm	ASTM D5185m	limit/base	current 3	history 1	history 2
	ppm ppm				· · · · ·	
Boron		ASTM D5185m	0	3		
Boron Barium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0	3 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	3 0 62		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0	3 0 62 <1		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 80	3 0 62 <1 971		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 80 2400	3 0 62 <1 971 1099	 	
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	0 0 0 80 2400 750	3 0 62 <1 971 1099 1059		
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	0 0 0 0 80 2400 750 840	3 0 62 <1 971 1099 1059 1277		
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	0 0 0 80 2400 750 840 2130	3 0 62 <1 971 1099 1059 1277 3222		
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	0 0 0 80 2400 750 840 2130	3 0 62 <1 971 1099 1059 1277 3222 current		
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 ASTM D5185m	0 0 0 80 2400 750 840 2130 limit/base	3 0 62 <1 971 1099 1059 1277 3222 current 4	 history 1	 history 2
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	0 0 0 80 2400 750 840 2130 limit/base	3 0 62 <1 971 1099 1059 1277 3222 current 4 2	 history 1	 history 2
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	0 0 0 80 2400 750 840 2130 2130 2130 2130 225	3 0 62 <1 971 1099 1059 1277 3222 current 4 2 3	 history 1 	 history 2
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 ppm	ASTM D5185m ASTM D5185m	0 0 0 80 2400 750 840 2130 2130 2130 2130 25 >25 >20 limit/base >3	3 0 62 <1 971 1099 1059 1277 3222 current 4 2 3 3	 history 1 history 1	 history 2 history 2
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	ASTM D5185m ASTM D5185m	0 0 0 80 2400 750 840 2130 2130 2130 2130 25 >25 >20 limit/base >3	3 0 62 <1 971 1099 1059 1277 3222 <u>current</u> 4 2 3 <u>current</u> 0.5	 history 1 history 1 history 1	 history 2 history 2
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	0 0 0 80 2400 750 840 2130 2130 2130 2130 225 220 220 20 20 20 20 20 20 20 20 20 20 2	3 0 62 <1 971 1099 1059 1277 3222 current 4 2 3 current 0.5 9.7	history 1 history 1	 history 2 history 2 history 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	0 0 0 2400 750 840 2130 2130 2130 2130 25 20 220 20 20 20 20 20 20 20 20 20 20 20	3 0 62 <1 971 1099 1059 1277 3222 current 4 2 3 current 0.5 9.7 20.7 current	 history 1 history 1 history 1	 history 2 history 2 history 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 D5185m	0 0 0 2400 750 840 2130 2130 2130 2130 2130 2130 2130 213	3 0 62 <1 971 1099 1059 1277 3222 <u>current</u> 4 2 3 <u>current</u> 0.5 9.7 20.7	 history 1 history 1 history 1 history 1	 history 2 history 2 history 2 history 2



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