

OIL ANALYSIS REPORT

Sample Rating Trend





Diesel Engine

Fluid PETRO CANADA DURON SHP 10W30 (10 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.

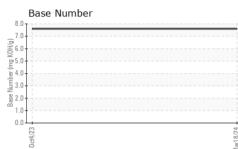
Fluid Condition

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

			0ct2023	Mar2024		
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0117759	PCA0105197	
Sample Date		Client Info		18 Mar 2024	04 Oct 2023	
Machine Age	mls	Client Info		133382	115386	
Oil Age	mls	Client Info		18197	27191	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	ABNORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	43	32	
Chromium	ppm	ASTM D5185m	>20	<1	<1	
Nickel	ppm	ASTM D5185m	>4	0	<1	
Titanium	ppm	ASTM D5185m	- 1	0	0	
Silver	ppm	ASTM D5185m	>3	0	<1	
Aluminum	ppm	ASTM D5185m	>20	14	11	
Lead	ppm	ASTM D5185m	>40	<1	0	
Copper	ppm	ASTM D5185m		1	1	
Tin		ASTM D5185m	>15	0	<1	
Vanadium	ppm ppm	ASTM D5185m	>15	0	0	
Cadmium	ppm	ASTM D5185m		0	0	
Gaumum		ASTIVI DJTOJII				
	1-1-			-	-	
ADDITIVES	1- 1-	method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base		-	history2
		ASTM D5185m		current	history1	· · · · ·
Boron	ppm	ASTM D5185m	2	current <1	history1 4	
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	2 0 50	current <1 0	history1 4 0 79 <1	
Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	current <1 0 69	history1 4 0 79	
Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	<pre>current <1 0 69 <1</pre>	history1 4 0 79 <1	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	current <1 0 69 <1 1073	history1 4 0 79 <1 1013	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	Current <1 0 69 <1 1073 1217	history1 4 0 79 <1 1013 1124	
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	2 0 50 0 950 1050 995	<1069<1107312171161	history1 4 0 79 <1 1013 1124 1000	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180	<1 0 69 <1 1073 1217 1161 1382	history1 4 0 79 <1 1013 1124 1000 1368	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	<pre>current <1 0 69 <1 1073 1217 1161 1382 3833</pre>	history1 4 0 79 <1 1013 1124 1000 1368 3049	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	current <1 0 69 <1 1073 1217 1161 1382 3833 current	history1 4 0 79 <1 1013 1124 1000 1368 3049 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm 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	2 0 50 950 1050 995 1180 2600	<1 0 69 <1 1073 1217 1161 1382 3833 current 9	history1 4 0 79 <1 1013 1124 1000 1368 3049 history1 11	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm 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 ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base	<1 0 69 <1 1073 1217 1161 1382 3833 current 9 62	history1 4 0 79 <1 1013 1124 1000 1368 3049 history1 11 ▲ 196	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25	<1 0 69 <1 1073 1217 1161 1382 3833 current 9 62 9 9 9 9 9 9	history1 4 0 79 <1 1013 1124 1000 1368 3049 history1 11 ▲ 196 20	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 imit/base >25 >20 imit/base >3	<1 0 69 <1 1073 1217 1161 1382 3833 current 9 62 9 62 9 current	history1 4 0 79 <1 1013 1124 1000 1368 3049 history1 11 ▲ 196 20 history1 0.7	 history2 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 ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 imit/base >25 >20 imit/base >3	current <1 0 69 <1 1073 1217 1161 1382 3833 current 9 62 9 current 0 0.8	history1 4 0 79 <1 1013 1124 1000 1368 3049 history1 11 196 20 history1	 history2 history2
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	2 0 50 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >3 >20	current <1 0 69 <1 1073 1217 1161 1382 3833 current 9 62 9 62 9 62 9 62 9 52 9 9 62 9 62 9 62 9 5	history1 4 0 79 <1 1013 1124 1000 1368 3049 history1 11 196 20 history1 0.7 9.9 	 history2 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 TS ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	2 0 50 0 950 1050 995 1180 2600 imit/base >25 >20 imit/base >3 >20 >30	<1 0 69 <1 1073 1217 1161 1382 3833 current 9 62 9 62 9 62 9 62 9 20.7 current	history1 4 0 79 <1 1013 1124 1000 1368 3049 history1 11 196 20 history1 0.7 9.9 21.2 history1 	 history2 history2 history2 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	2 0 50 950 1050 995 1180 2600 imit/base >25 imit/base >3 >20	<1 0 69 <1 1073 1217 1161 1382 3833 current 9 62 9 62 9 62 9 0.8 9.5 20.7	history1 4 0 79 <1 1013 1124 1000 1368 3049 history1 11 ▲ 196 20 history1 0.7 9.9 21.2	 history2 history2 history2

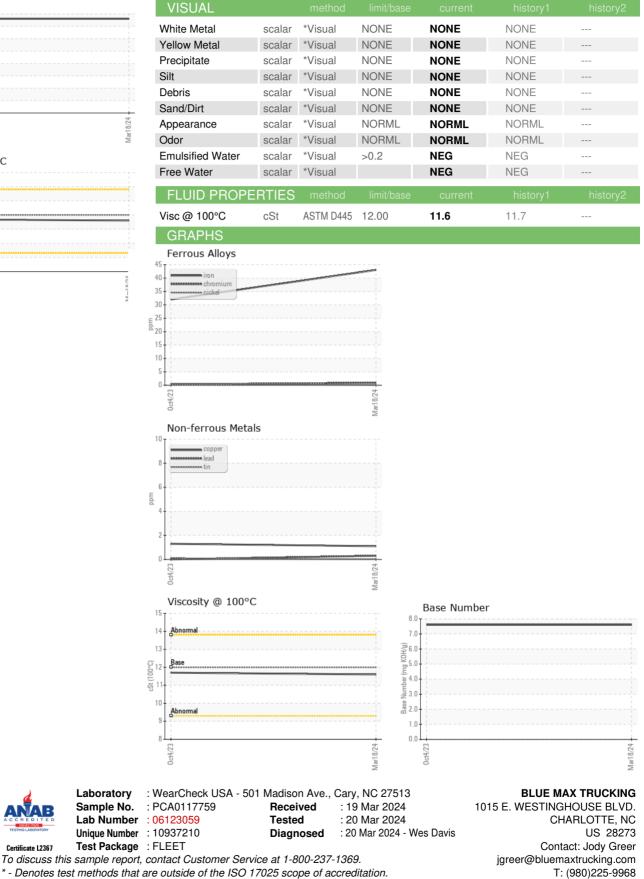


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Viscosity @ 100°C 15





Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Certificate L2367

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