

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id **171** Component **Diesel Engine** Fluid **DETRO CANADA DUPON**

PETRO CANADA DURON SHP 10W30 (--- 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.

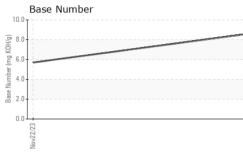
Fluid Condition

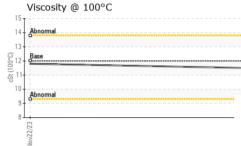
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

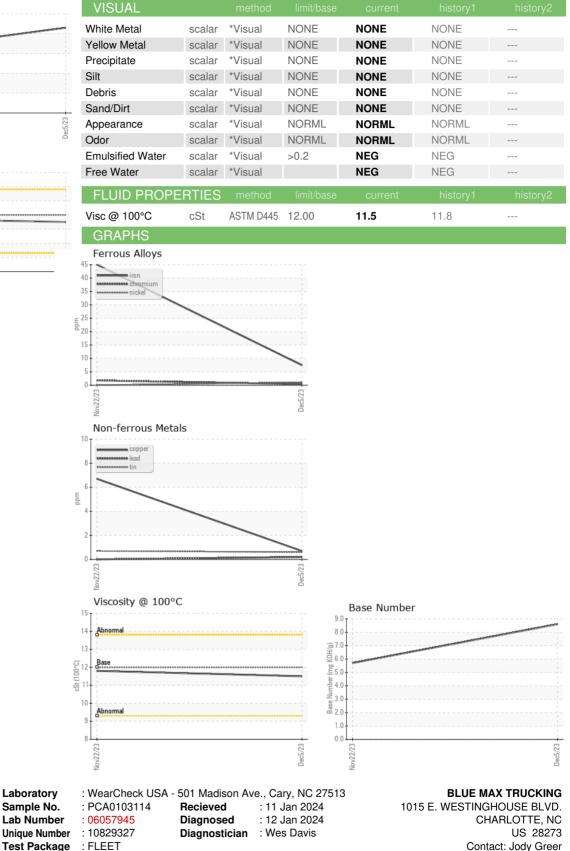
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0103114	PCA0103096	
Sample Date		Client Info		05 Dec 2023	22 Nov 2023	
Machine Age	hrs	Client Info		2310	2216	
Oil Age	hrs	Client Info		94	1081	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	NORMAL	
CONTAMINAT	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method	20.2	NEG	NEG	
	0			-		history O
WEAR METAL	5	method	limit/base	current	history1	history2
Iron	ppm		>100	8	45	
Chromium	ppm	ASTM D5185m	>20	<1	2	
Nickel	ppm	ASTM D5185m	>4	1	0	
Titanium	ppm	ASTM D5185m	0	0	<1	
Silver	ppm	ASTM D5185m	>3	<1	<1	
Aluminum	ppm	ASTM D5185m	>20	6	30	
Lead	ppm	ASTM D5185m	>40	<1	0	
Copper	ppm	ASTM D5185m	>330	<1	7	
Tin	ppm	ASTM D5185m	>15	<1	<1	
Vanadium	ppm	ASTM D5185m		<1	<1	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 2	current 5	history1 3	history2
	ppm ppm			5 0		
Boron		ASTM D5185m	2 0 50	5	3	
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	5 0	3 <1	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	5 0 58 <1 913	3 <1 54	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	5 0 58 <1 913 998	3 <1 54 <1 889 1148	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	5 0 58 <1 913	3 <1 54 <1 889 1148 963	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	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	5 0 58 <1 913 998 1005 1236	3 <1 54 <1 889 1148 963 1116	
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	5 0 58 <1 913 998 1005	3 <1 54 <1 889 1148 963	
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	5 0 58 <1 913 998 1005 1236	3 <1 54 <1 889 1148 963 1116	
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 0 950 1050 995 1180 2600	5 0 58 <1 913 998 1005 1236 3112	3 <1 54 <1 889 1148 963 1116 2594	
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	2 0 50 950 1050 995 1180 2600	5 0 58 <1 913 998 1005 1236 3112 current	3 <1 54 <1 889 1148 963 1116 2594 history1	 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 ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25	5 0 58 <1 913 998 1005 1236 3112 current 4	3 <1 54 <1 889 1148 963 1116 2594 history1 10	 history2
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	2 0 50 950 1050 995 1180 2600 limit/base >25	5 0 58 <1 913 998 1005 1236 3112 current 4 0	3 <1 54 <1 889 1148 963 1116 2594 history1 10 4	 history2
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	2 0 50 950 1050 995 1180 2600 limit/base >25 >20	5 0 58 <1 913 998 1005 1236 3112 current 4 0 9	3 <1 54 <1 889 1148 963 1116 2594 history1 10 4 89	 history2
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	2 0 50 0 950 1050 995 1180 2600 Imit/base >25 >20	5 0 58 <1 913 998 1005 1236 3112 current 4 0 9 9	3 <1 54 <1 889 1148 963 1116 2594 history1 10 4 89 history1	 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 TS ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	5 0 58 <1 913 998 1005 1236 3112 current 4 0 9 9 current 0.1	3 <1 54 <1 889 1148 963 1116 2594 history1 10 4 89 history1 0.5	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus 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>imit/base</i> >25 >20 <i>imit/base</i> >3 >20	5 0 58 <1 913 998 1005 1236 3112 <i>current</i> 4 0 9 <i>current</i> 0.1 6.2	3 <1 54 <1 889 1148 963 1116 2594 history1 10 4 89 history1 0.5 11.6	 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	5 0 58 <1 913 998 1005 1236 3112 current 4 0 9 current 0.1 6.2 17.9	3 <1 54 <1 889 1148 963 1116 2594 history1 10 4 89 history1 0.5 11.6 24.5	 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 D7844 *ASTM D7844	2 0 0 50 0 950 1050 995 1180 2600 imit/base >25 20 >20 >30 >30 imit/base	5 0 58 <1 913 998 1005 1236 3112 <i>current</i> 4 0 9 <i>current</i> 0.1 6.2 17.9	3 <1 54 <1 889 1148 963 1116 2594 history1 10 4 89 history1 0.5 11.6 24.5 history1	 history2 history2 history2 history2



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Certificate L2367 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)

jgreer@bluemaxtrucking.com

T: (980)225-9968

F: (704)588-2901