

OIL ANALYSIS REPORT

Sample Rating Trend





Component

Diesel Engine

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.

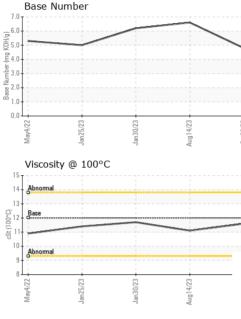
Fluid Condition

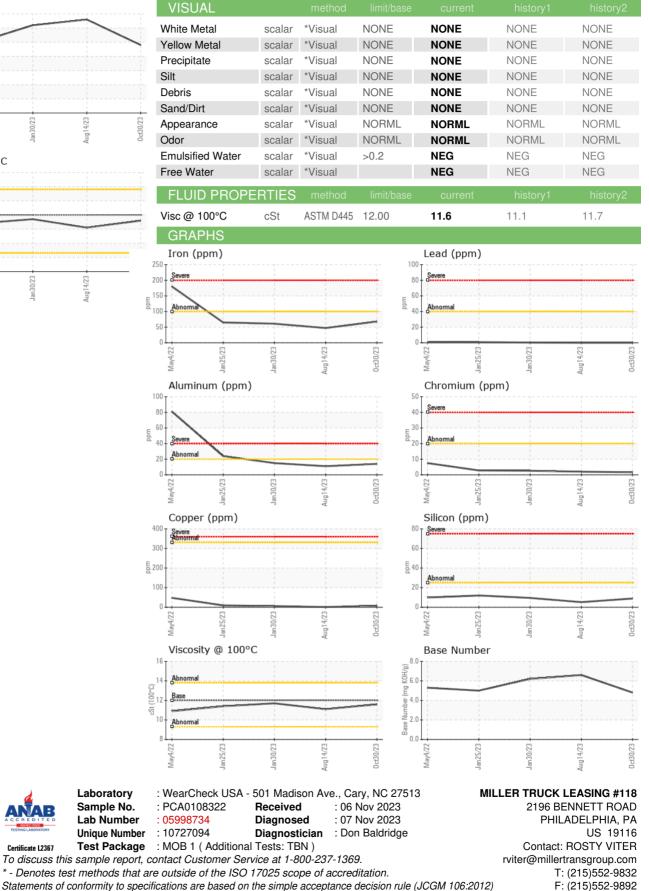
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0108322	PCA0102898	PCA0085240
Sample Date		Client Info		30 Oct 2023	14 Aug 2023	30 Jan 2023
Machine Age	mls	Client Info		243012	266615	26392
Oil Age	mls	Client Info		36397	266615	26392
Oil Changed		Client Info		Changed	Not Changd	Not Changd
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 METALS method limit/base current history1 history2						historv2
		ASTM D5185m	>100	68	47	61
Iron	ppm				2	3
Chromium	ppm	ASTM D5185m		2		
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m	. 0	5	6	29
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m		14	11	15
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m		8	1	6
Tin	ppm		>15	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method				history2
ADDITIVES		methou	iiiiii/base	current	history1	matoryz
Boron	ppm	ASTM D5185m	2	4	10	17
	ppm ppm					
Boron		ASTM D5185m	2	4	10	17
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	4 0	10 0	17 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	4 0 59	10 0 72	17 0 40
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	4 0 59 <1	10 0 72 0	17 0 40 1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	4 0 59 <1 861	10 0 72 0 1077	17 0 40 1 822
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	4 0 59 <1 861 1210	10 0 72 0 1077 1443	17 0 40 1 822 1710
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	4 0 59 <1 861 1210 957	10 0 72 0 1077 1443 1208	17 0 40 1 822 1710 1087
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	2 0 50 0 950 1050 995 1180	4 0 59 <1 861 1210 957 1189	10 0 72 0 1077 1443 1208 1613	17 0 40 1 822 1710 1087 1395
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	2 0 50 950 1050 995 1180 2600	4 0 59 <1 861 1210 957 1189 2373	10 0 72 0 1077 1443 1208 1613 4420	17 0 40 1 822 1710 1087 1395 3351
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	4 0 59 <1 861 1210 957 1189 2373 current	10 0 72 0 1077 1443 1208 1613 4420 history1	17 0 40 1 822 1710 1087 1395 3351 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	4 0 59 <1 861 1210 957 1189 2373 current 9	10 0 72 0 1077 1443 1208 1613 4420 history1 5	17 0 40 1 822 1710 1087 1395 3351 history2 10
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 0 950 1050 995 1180 2600 limit/base >25	4 0 59 <1 861 1210 957 1189 2373 current 9 6	10 0 72 0 1077 1443 1208 1613 4420 history1 5 0	17 0 40 1 822 1710 1087 1395 3351 history2 10 3
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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 imit/base >25 >20	4 0 59 <1 861 1210 957 1189 2373 current 9 6 26	10 0 72 0 1077 1443 1208 1613 4420 history1 5 0 11	17 0 40 1 822 1710 1087 1395 3351 history2 10 3 33
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 Imit/base	4 0 59 <1 861 1210 957 1189 2373 current 9 6 26 26 current	10 0 72 0 1077 1443 1208 1613 4420 history1 5 0 11 1 history1	17 0 40 1 822 1710 1087 1395 3351 history2 10 3 3 33
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	4 0 59 <1 861 1210 957 1189 2373 current 9 6 2373	10 0 72 0 1077 1443 1208 1613 4420 history1 5 0 11 1 history1 0.9	17 0 40 1 822 1710 1087 1395 3351 history2 10 3 33 33 history2 1
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 TS ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 imit/base >25 >20 imit/base >3 >20	4 0 59 <1 861 1210 957 1189 2373 current 9 6 26 26 26 current 1.5 12.8	10 0 72 0 1077 1443 1208 1613 4420 history1 5 0 11 5 0 11 .9 10.5	17 0 40 1 822 1710 1087 1395 3351 history2 10 3 33 33 history2 1 1 11.5
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 TS ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 50 950 1050 995 1180 2600 imit/base >25 20 imit/base >3 >20 >30	4 0 59 <1 861 1210 957 1189 2373 current 9 6 26 26 current 1.5 12.8 26.7	10 0 72 0 1077 1443 1208 1613 4420 history1 5 0 111 5 0 0 111 0.9 10.5 22.9	17 0 40 1 822 1710 1087 1395 3351 history2 10 3 33 3 3 history2 1 1 11.5 25.0
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 50 950 1050 995 1180 2600 imit/base >25 >20 imit/base >3 >20 >30	4 0 59 <1 861 1210 957 1189 2373 current 9 6 26 26 current 1.5 12.8 26.7 current	10 0 72 0 1077 1443 1208 1613 4420 history1 5 0 11 5 0 11 0.9 10.5 22.9 history1	17 0 40 1 822 1710 1087 1395 3351 history2 10 3 33 history2 1 1 11.5 25.0 history2



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Certificate L2367

Contact/Location: ROSTY VITER - MILPHINE