

OIL ANALYSIS REPORT

Sample Rating Trend





Component Diesel Engine

Fluid

PETRO CANADA DURON SHP 10W30 (18 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

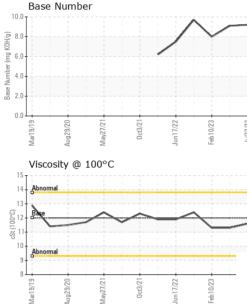
Fluid Condition

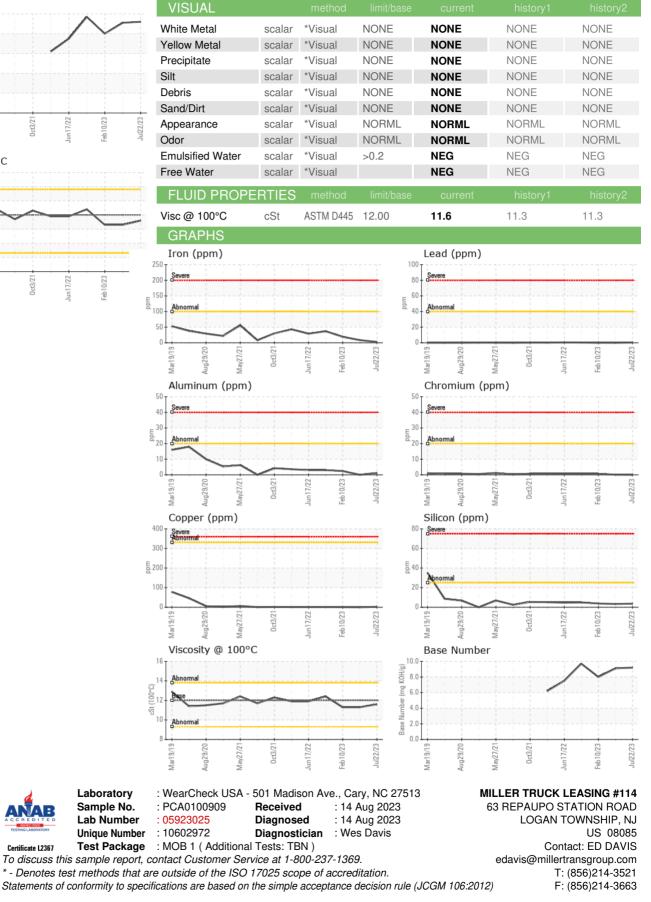
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

TS)		Mar2019	Aug2020 May2021	0ct2021 Jun2022 Feb2023	Jui2023	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0100909	PCA0097817	PCA0090009
Sample Date		Client Info		22 Jul 2023	06 Jun 2023	10 Feb 2023
Machine Age	mls	Client Info		128801	128473	0
Oil Age	mls	Client Info		10000	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATI	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	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m ASTM D5185m	>100	3	8	19
Chromium	ppm		>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m		1	0	2
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	2	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES				current	المرسم فيعالما	1-1-1-1-1-0
		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	16	36	16
	ppm ppm		2			
Boron		ASTM D5185m	2	16	36	16
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m	2 0 50	16 <1	36 11	16 0
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	16 <1 60	36 11 71	16 0 71
Boron Barium Molybdenum	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	16 <1 60 <1	36 11 71 <1	16 0 71 <1
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	16 <1 60 <1 864 1156	36 11 71 <1 888 1129	16 0 71 <1 945 1250
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	16 <1 60 <1 864 1156 1004	36 11 71 <1 888 1129 1001	16 0 71 <1 945 1250 1092
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	16 <1 60 <1 864 1156	36 11 71 <1 888 1129	16 0 71 <1 945 1250
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 50 950 1050 995 1180	16 <1 60 <1 864 1156 1004 1217	36 11 71 <1 888 1129 1001 1226	16 0 71 <1 945 1250 1092 1348
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	16 <1 60 <1 864 1156 1004 1217 3709	36 11 71 <1 888 1129 1001 1226 3600	16 0 71 <1 945 1250 1092 1348 3355
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	16 <1 60 <1 864 1156 1004 1217 3709 current	36 11 71 <1 888 1129 1001 1226 3600 history1	16 0 71 <1 945 1250 1092 1348 3355 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	2 0 50 950 1050 995 1180 2600 limit/base >25	16 <1 60 <1 864 1156 1004 1217 3709 current 4	36 11 71 <1 888 1129 1001 1226 3600 history1 3	16 0 71 <1 945 1250 1092 1348 3355 history2 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	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	16 <1 60 <1 864 1156 1004 1217 3709 current 4 2	36 11 71 <1 888 1129 1001 1226 3600 history1 3 1	16 0 71 <1 945 1250 1092 1348 3355 history2 4 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25	16 <1 60 <1 864 1156 1004 1217 3709 current 4 2 3	36 11 71 <1 888 1129 1001 1226 3600 history1 3 1 1	16 0 71 <1 945 1250 1092 1348 3355 history2 4 2 3
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 limit/base >25 >20 limit/base	16 <1 60 <1 864 1156 1004 1217 3709 current 4 2 3 3	36 11 71 <1 888 1129 1001 1226 3600 history1 3 1 1 1 history1	16 0 71 945 1250 1092 1348 3355 history2 4 2 3 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	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 >20	16 <1 60 <1 864 1156 1004 1217 3709 <u>current</u> 4 2 3 3 <u>current</u> 0.1	36 11 71 <1 888 1129 1001 1226 3600 history1 3 1 1 1 history1 0.2	16 0 71 945 1250 1092 1348 3355 history2 4 2 3 history2 0.5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20	16 <1 60 <1 864 1156 1004 1217 3709 current 4 2 3 current 0.1 4.7	36 11 71 <1 888 1129 1001 1226 3600 history1 3 1 1 history1 0.2 6.8	16 0 71 <1 945 1250 1092 1348 3355 history2 4 2 3 history2 0.5 10.9
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 TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 0 50 0 950 1050 995 1180 2600 i mit/base >25 20 i mit/base >3 20 30	16 <1 60 <1 864 1156 1004 1217 3709 <u>current</u> 4 2 3 3 <u>current</u> 0.1 4.7 16.6	36 11 71 <1 888 1129 1001 1226 3600 history1 3 1 1 history1 0.2 6.8 18.9	16 0 71 <1 945 1250 1092 1348 3355 history2 4 2 3 history2 0.5 10.9 21.5



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Certificate L2367