

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 200610

Component Diesel Engine

PETRO CANADA DURON SHP 10W30 (--- 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.

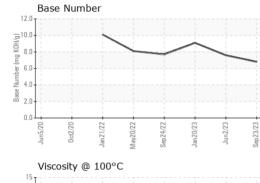
Fluid Condition

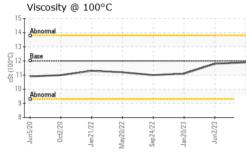
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

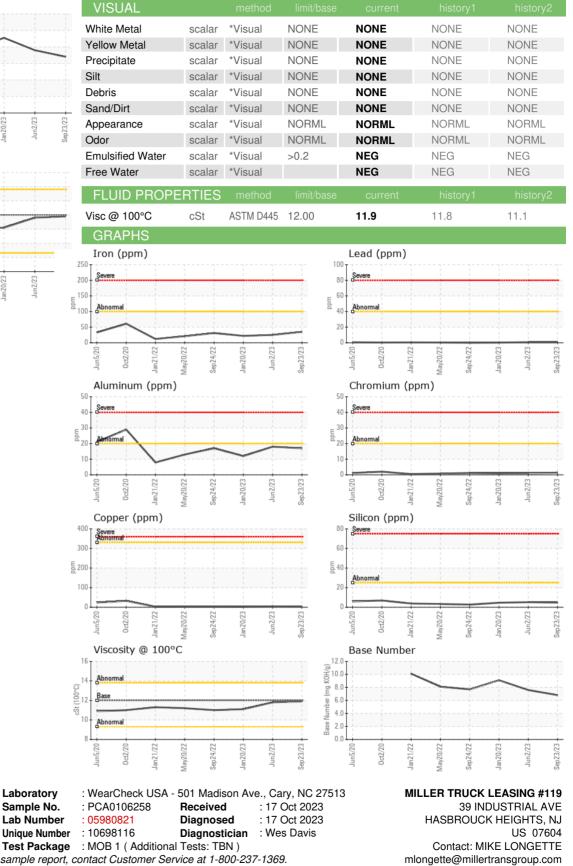
TS)		Jun2020 (0ct2020 Jan2022 May203	22 Sep2022 Jan2023 Jun2023	Sep 2023	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0106258	PCA0097982	PCA0089694
Sample Date		Client Info		23 Sep 2023	02 Jun 2023	20 Jan 2023
Machine Age	mls	Client Info		0	121364	108555
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		N/A	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 METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	35	25	22
Chromium	ppm	ASTM D5185m	>20	1	1	1
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	17	18	12
Lead	ppm	ASTM D5185m	>40	<1	<1	<1
Copper	ppm	ASTM D5185m	>330	3	5	2
Tin	ppm	ASTM D5185m	>15	1	2	1
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
	ppm	method ASTM D5185m	limit/base 2	current	history1 30	history2 13
Boron	ppm ppm		2			
Boron Barium	ppm	ASTM D5185m	2	12	30	13
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	12 0	30 0	13 0
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	12 0 56 1	30 0 52 1	13 0 69
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	12 0 56 1 865	30 0 52 1 814	13 0 69 <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	12 0 56 1	30 0 52 1 814 1457	13 0 69 <1 934 1278
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	12 0 56 1 865 1487 1112	30 0 52 1 814 1457 1091	13 0 69 <1 934 1278 1059
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	2 0 50 0 950 1050	12 0 56 1 865 1487	30 0 52 1 814 1457	13 0 69 <1 934 1278
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	12 0 56 1 865 1487 1112 1459	30 0 52 1 814 1457 1091 1372	13 0 69 <1 934 1278 1059 1264
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 0 950 1050 995 1180 2600 limit/base	12 0 56 1 865 1487 1112 1459 3552	30 0 52 1 814 1457 1091 1372 4097	13 0 69 <1 934 1278 1059 1264 3693
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	2 0 50 0 950 1050 995 1180 2600 limit/base	12 0 56 1 865 1487 1112 1459 3552 current	30 0 52 1 814 1457 1091 1372 4097 history1	13 0 69 <1 934 1278 1059 1264 3693 history2
Boron Barium Molybdenum Magnese 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 ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base	12 0 56 1 865 1487 1112 1459 3552 current 5	30 0 52 1 814 1457 1091 1372 4097 history1 5	13 0 69 <1 934 1278 1059 1264 3693 history2 5
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	2 0 50 0 950 1050 995 1180 2600 limit/base >25	12 0 56 1 865 1487 1112 1459 3552 <u>current</u> 5 < <1	30 0 52 1 814 1457 1091 1372 4097 history1 5 2	13 0 69 <1 934 1278 1059 1264 3693 history2 5 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	2 0 50 0 950 1050 995 1180 2600 limit/base >25	12 0 56 1 865 1487 1112 1459 3552 <u>current</u> 5 <1 20	30 0 52 1 814 1457 1091 1372 4097 history1 5 2 2 19	13 0 69 <1 934 1278 1059 1264 3693 history2 5 2 2 16
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 50 950 1050 995 1180 2600 limit/base >25 >20 limit/base	12 0 56 1 865 1487 1112 1459 3552 current 5 <1 20 current	30 0 52 1 814 1457 1091 1372 4097 history1 5 2 19 history1	13 0 69 <1 934 1278 1059 1264 3693 history2 5 2 16 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 TS ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20	12 0 56 1 865 1487 1112 1459 3552 current 5 <1 20 current 1.1	30 0 52 1 814 1457 1091 1372 4097 history1 5 2 19 history1 0.8	13 0 69 <1 934 1278 1059 1264 3693 history2 5 2 16 history2 0.6
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 >3 >20	12 0 56 1 865 1487 1112 1459 3552 <u>current</u> 5 <1 20 <u>current</u> 1.1 1.1	30 0 52 1 814 1457 1091 1372 4097 history1 5 2 19 history1 0.8 10.3	13 0 69 <1 934 1278 1059 1264 3693 history2 5 2 16 history2 0.6 8.5
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 ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 imit/base >25 	12 0 56 1 865 1487 1112 1459 3552 <u>current</u> 5 <1 20 <u>current</u> 1.1 1.1 11.5 23.2	30 0 52 1 814 1457 1091 1372 4097 history1 5 2 19 history1 0.8 10.3 22.2	13 0 69 <1 934 1278 1059 1264 3693 history2 5 2 16 history2 0.6 8.5 19.3



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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)

F: (201)528-7053

T:

Certificate L2367

Laboratory

Sample No.

Lab Number

Unique Number