

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id PETERBILT 61

Component Diesel Engine

PETRO CANADA DURON HP 15W40 (--- 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.

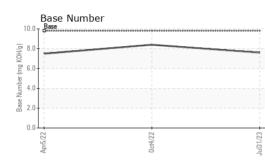
Fluid Condition

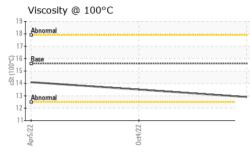
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

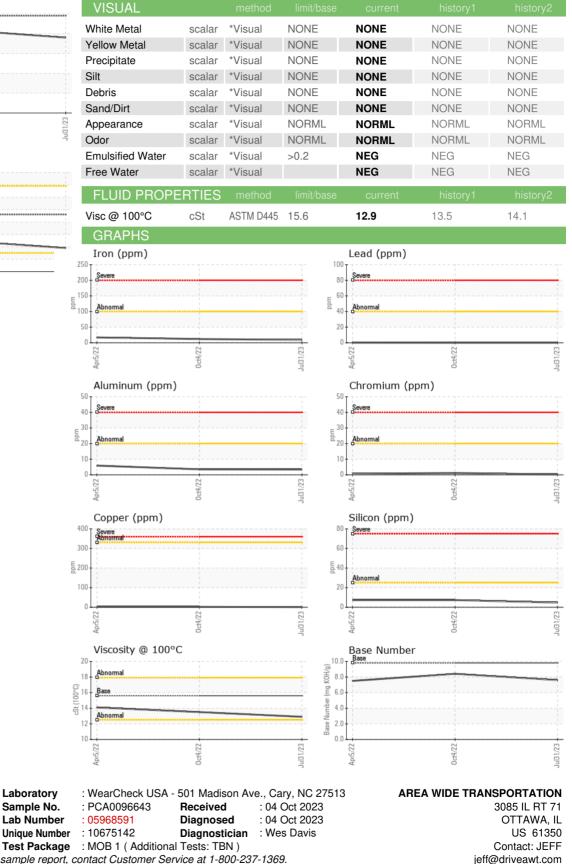
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0096643	PCA0076817	PCA0070765
Sample Date		Client Info		31 Jul 2023	04 Oct 2022	05 Apr 2022
Machine Age	mls	Client Info		213685	193153	167241
Oil Age	mls	Client Info		20532	25912	32286
Oil Changed		Client Info		Changed	Changed	Changed
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	9	12	17
Chromium	ppm	ASTM D5185m	>20	<1	1	<1
Nickel	ppm		>4	0	<1	<1
Titanium	ppm	ASTM D5185m		0	2	<1
Silver	ppm	ASTM D5185m	>3	0	1	<1
Aluminum	ppm	ASTM D5185m	>20	3	4	6
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	<1	2	2
Tin	ppm	ASTM D5185m	>15	0	1	1
Vanadium	ppm	ASTM D5185m		<1	2	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES						
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	Method ASTM D5185m	limit/base	current 4	history1 6	history2 22
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	4	6	22
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	4 0	6 <1	22 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	4 0 62	6 <1 55	22 0 28
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	4 0 62 <1	6 <1 55 1	22 0 28 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	4 0 62 <1 1030	6 <1 55 1 907	22 0 28 <1 719 1644 856
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	4 0 62 <1 1030 1433	6 <1 55 1 907 1233	22 0 28 <1 719 1644
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 ASTM D5185m	limit/base	4 0 62 <1 1030 1433 1144	6 <1 55 1 907 1233 1044	22 0 28 <1 719 1644 856
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	limit/base	4 0 62 <1 1030 1433 1144 1426	6 <1 55 1 907 1233 1044 1258	22 0 28 <1 719 1644 856 999
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 ASTM D5185m		4 0 62 <1 1030 1433 1144 1426 3221	6 <1 55 1 907 1233 1044 1258 3373	22 0 28 <1 719 1644 856 999 2558
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 ASTM D5185m	limit/base	4 0 62 <1 1030 1433 1144 1426 3221 current	6 <1 55 1 907 1233 1044 1258 3373 history1	22 0 28 <1 719 1644 856 999 2558 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 ASTM D5185m	limit/base	4 0 62 <1 1030 1433 1144 1426 3221 current 5	6 <1 55 1 907 1233 1044 1258 3373 history1 7	22 0 28 <1 719 1644 856 999 2558 history2 7
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 method ASTM D5185m ASTM D5185m	limit/base >25	4 0 62 <1 1030 1433 1144 1426 3221 current 5 2	6 <1 55 1 907 1233 1044 1258 3373 history1 7 2	22 0 28 <1 719 1644 856 999 2558 history2 7 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	limit/base >25 >20	4 0 62 <1 1030 1433 1144 1426 3221 current 5 2 2 2	6 <1 55 1 907 1233 1044 1258 3373 history1 7 2 2 2	22 0 28 <1 719 1644 856 999 2558 history2 7 2 2 2
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	limit/base >25 >20 limit/base	4 0 62 <1 1030 1433 1144 1426 3221 current 5 2 2 2 2	6 <1 55 1 907 1233 1044 1258 3373 history1 7 2 2 2 2 history1	22 0 28 <1 719 1644 856 999 2558 history2 7 2 2 2 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	limit/base >25 >20 limit/base >3	4 0 62 <1 1030 1433 1144 1426 3221 current 5 2 2 2 2 current 0.3	6 <1 55 1 907 1233 1044 1258 3373 history1 7 2 2 2 2 history1 0.3	22 0 28 <1 719 1644 856 999 2558 history2 7 2 2 2 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 ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3 >20	4 0 62 <1 1030 1433 1144 1426 3221 <i>current</i> 5 2 2 2 <i>current</i> 0.3 9.4	6 <1 55 1 907 1233 1044 1258 3373 history1 7 2 2 2 history1 0.3 10.2	22 0 28 <1 719 1644 856 999 2558 history2 7 2 2 2 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 ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	limit/base >25 >20 limit/base >3 >20 >30 >30	4 0 62 <1 1030 1433 1144 1426 3221 <i>current</i> 5 2 2 2 <i>current</i> 0.3 9.4 20.3 <i>current</i>	6 <1 55 1 907 1233 1044 1258 3373 history1 7 2 2 2 history1 0.3 10.2 22.8 history1	22 0 28 <1 719 1644 856 999 2558 history2 7 2 2 7 2 2 2 history2 0.5 10.9 20.9 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 TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3 >20 >3 >20	4 0 62 <1 1030 1433 1144 1426 3221 current 5 2 2 2 2 current 0.3 9.4 20.3	6 <1 55 1 907 1233 1044 1258 3373 history1 7 2 2 2 history1 0.3 10.2 22.8	22 0 28 <1 719 1644 856 999 2558 history2 7 2 2 2 history2 0.5 10.9 20.9



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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)

Certificate L2367

Laboratory

Sample No.

Lab Number

Unique Number

T: (815)587-2947

F: