

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Area (89635X) Walgreens - Tractor [Walgreens] 136A68023 Component

Diesel Engine

PETRO CANADA DURON SHP 10W30 (11 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.

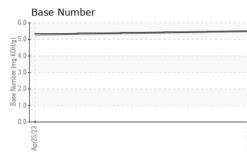
Fluid Condition

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

			Apr2023	Sep2023		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0093528	PCA0096551	
Sample Date		Client Info		11 Sep 2023	25 Apr 2023	
Machine Age	mls	Client Info		161163	150701	
Oil Age	mls	Client Info		10462	150701	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	NORMAL	
CONTAMINATI	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Glycol		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	35	41	
Chromium	ppm	ASTM D5185m	>5	<1	<1	
Nickel	ppm	ASTM D5185m	>2	0	0	
Titanium	ppm	ASTM D5185m		24	32	
Silver	ppm	ASTM D5185m	>3	0	0	
Aluminum	ppm	ASTM D5185m	>30	1	<1	
Lead	ppm	ASTM D5185m	>30	0	0	
Copper	ppm	ASTM D5185m	>150	1	1	
Tin	ppm	ASTM D5185m	>5	0	<1	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 12	history1 29	history2
	ppm ppm					history2
Boron		ASTM D5185m	2	12	29	
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	12 0	29 0	
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	12 0 39	29 0 34	
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	12 0 39 <1	29 0 34 <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	12 0 39 <1 691	29 0 34 <1 602	
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	12 0 39 <1 691 1367	29 0 34 <1 602 1457	
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 39 <1 691 1367 870	29 0 34 <1 602 1457 863	
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	12 0 39 <1 691 1367 870 1114	29 0 34 <1 602 1457 863 1104	
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	12 0 39 <1 691 1367 870 1114 3506	29 0 34 <1 602 1457 863 1104 3486	
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	2 0 50 950 1050 995 1180 2600	12 0 39 <1 691 1367 870 1114 3506 current	29 0 34 <1 602 1457 863 1104 3486 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 method	2 0 50 950 1050 995 1180 2600	12 0 39 <1 691 1367 870 1114 3506 current 7	29 0 34 <1 602 1457 863 1104 3486 history1 8	 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	2 0 50 950 1050 995 1180 2600 limit/base >20	12 0 39 <1 691 1367 870 1114 3506 <u>current</u> 7 7	29 0 34 <1 602 1457 863 1104 3486 history1 8 3	 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 <i>limit/base</i> >20	12 0 39 <1 691 1367 870 1114 3506 current 7 7 7 4	29 0 34 <1 602 1457 863 1104 3486 history1 8 3 4	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	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 >20 limit/base	12 0 39 <1 691 1367 870 1114 3506 current 7 7 4 2	29 0 34 <1 602 1457 863 1104 3486 history1 8 3 4 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 ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >20 20 limit/base >20	12 0 39 <1 691 1367 870 1114 3506 <u>current</u> 7 7 4 <u>current</u> 0.8	29 0 34 <1 602 1457 863 1104 3486 history1 8 3 4 history1 0.8	 history2 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 t ppm ppm pp	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <i>limit/base</i> >20 <i>limit/base</i> >3 >20	12 0 39 <1 691 1367 870 1114 3506 <i>current</i> 7 7 7 4 <i>current</i> 0.8 12.2	29 0 34 <1 602 1457 863 1104 3486 history1 8 3 4 history1 0.8 13.3	 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 t ppm ppm pp	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 imit/base >20 imit/base >3 >20 >3	12 0 39 <1 691 1367 870 1114 3506 <u>current</u> 7 7 4 <u>current</u> 0.8 12.2 24.3	29 0 34 <1 602 1457 863 1104 3486 history1 8 3 4 history1 0.8 13.3 25.8	 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 TS ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624	2 0 0 50 0 950 1050 995 1180 2600 2600 20 20 20 20 20 20 20 20 20 20 20 20 2	12 0 39 <1 691 1367 870 1114 3506 <i>current</i> 7 7 7 4 <i>current</i> 0.8 12.2 24.3 <i>current</i>	29 0 34 <1 602 1457 863 1104 3486 history1 8 3 4 5 4 0.8 13.3 25.8 history1	 history2 history2 history2 history2

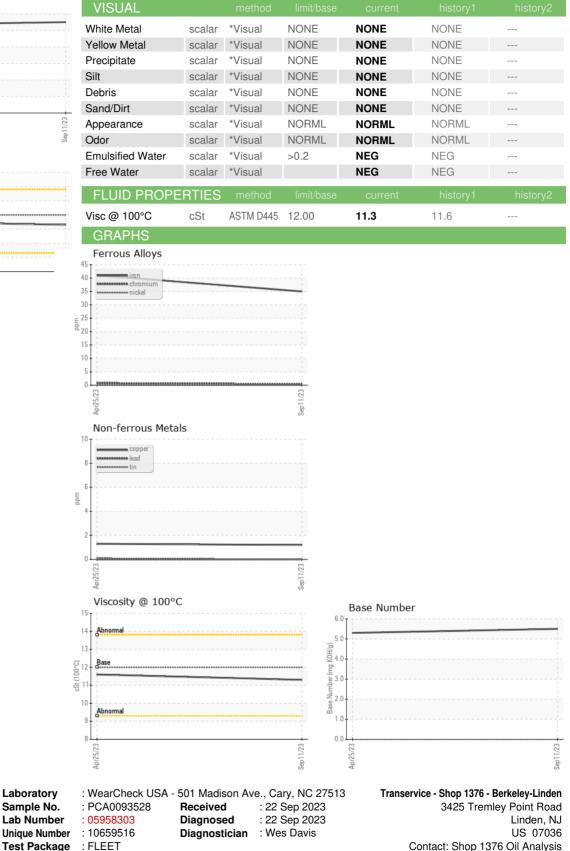


OIL ANALYSIS REPORT



Viscosity @ 100°C







* - 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)

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