

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Area (97204X) Walgreens Machine Id [Walgreens] 136A62115 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.

SAMPLE INFOR	MATION	method	limit/base	current	history 1	history 2
Sample Number		Client Info		PCA0093840	PCA0093826	
Sample Date		Client Info		22 Jun 2023	22 Mar 2023	
Machine Age	mls	Client Info		466409	441425	
Oil Age	mls	Client Info		25000	21425	
Oil Changed	11113	Client Info		Not Changd	Changed	
Sample Status				NORMAL	NORMAL	
				-		
CONTAMINAT	ION	method	limit/base	current	history 1	history 2
Fuel		WC Method	>5	<1.0	<1.0	
Glycol		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>80	7	8	
Chromium	ppm	ASTM D5185m	>5	1	1	
Nickel	ppm	ASTM D5185m	>2	<1	0	
Titanium	ppm	ASTM D5185m		0	<1	
Silver	ppm	ASTM D5185m	>3	0	0	
Aluminum	ppm	ASTM D5185m	>30	5	7	
Lead	ppm	ASTM D5185m	>30	0	0	
Copper	ppm	ASTM D5185m	>150	4	3	
Tin	ppm	ASTM D5185m	>5	<1	<1	
Vanadium	ppm	ASTM D5185m		<1	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history 1	history 2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 2	current 2	history 1 2	history 2
	ppm ppm					
Boron		ASTM D5185m	2	2	2	
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	2 0	2 0	
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	2 0 59	2 0 57	
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	2 0 59 <1	2 0 57 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	2 0 59 <1 981	2 0 57 1 965	
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	2 0 59 <1 981 1075	2 0 57 1 965 1166	
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 50 950 1050 995	2 0 59 <1 981 1075 1024	2 0 57 1 965 1166 1016	
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	2 0 59 <1 981 1075 1024 1289	2 0 57 1 965 1166 1016 1281	
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	2 0 59 <1 981 1075 1024 1289 3610	2 0 57 1 965 1166 1016 1281 3294	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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 50 950 1050 995 1180 2600	2 0 59 <1 981 1075 1024 1289 3610 current	2 0 57 1 965 1166 1016 1281 3294 history 1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	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 >20	2 0 59 <1 981 1075 1024 1289 3610 <i>current</i> 5	2 0 57 1 965 1166 1016 1281 3294 history 1 5	 history 2
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 >20	2 0 59 <1 981 1075 1024 1289 3610 current 5 1	2 0 57 1 965 1166 1016 1281 3294 history 1 5 2	 history 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	2 0 50 0 950 1050 995 1180 2600 Imit/base >20 >20 Imit/base	2 0 59 <1 981 1075 1024 1289 3610 current 5 1 5 5 1 5 5 current	2 0 57 1 965 1166 1016 1281 3294 history 1 5 2 4 4	 history 2
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 Imit/base >20 20 Imit/base >20	2 0 59 <1 981 1075 1024 1289 3610 <i>current</i> 5 1 5 1 5 <i>current</i> 0.4	2 0 57 1 965 1166 1016 1281 3294 history 1 5 2 4 history 1 0.3	 history 2 history 2
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 Imit/base >20 20 Imit/base >20	2 0 59 <1 981 1075 1024 1289 3610 <i>current</i> 5 1 5 1 5 <i>current</i> 0.4 7.4	2 0 57 1 965 1166 1016 1281 3294 history 1 5 2 4 4	 history 2 history 2
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 0 950 1050 995 1180 2600 imit/base >20 imit/base >3 >20 >3	2 0 59 <1 981 1075 1024 1289 3610 <u>current</u> 5 1 5 5 1 5 <u>current</u> 0.4 7.4 19.6	2 0 57 1 965 1166 1016 1281 3294 history 1 5 2 4 history 1 0.3 7.1 18.8	 history 2 history 2 history 2
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 ppm ppm Abs/cm	ASTM D5185m ASTM D7844 *ASTM D7624	2 0 50 0 950 1050 995 1180 2600 2600 20 20 220 220 20 33 220 330	2 0 59 <1 981 1075 1024 1289 3610 <i>current</i> 5 1 5 1 5 <i>current</i> 0.4 7.4 19.6 <i>current</i>	2 0 57 1 965 1166 1016 1281 3294 history 1 5 2 4 history 1 0.3 7.1 18.8 history 1	 history 2 history 2 history 2 history 2
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 0 950 1050 995 1180 2600 imit/base >20 imit/base >3 >20 >3	2 0 59 <1 981 1075 1024 1289 3610 <u>current</u> 5 1 5 5 1 5 <u>current</u> 0.4 7.4 19.6	2 0 57 1 965 1166 1016 1281 3294 history 1 5 2 4 history 1 0.3 7.1 18.8	 history 2 history 2 history 2



cSt (100°C) Ba

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Abnorm

Mar22/23

OIL ANALYSIS REPORT

scalar

scalar

scalar

scalar

*Visual

*Visual

*Visual

*Visual

scalar *Visual

NONE

VISUAL

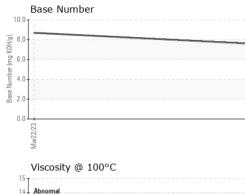
White Metal

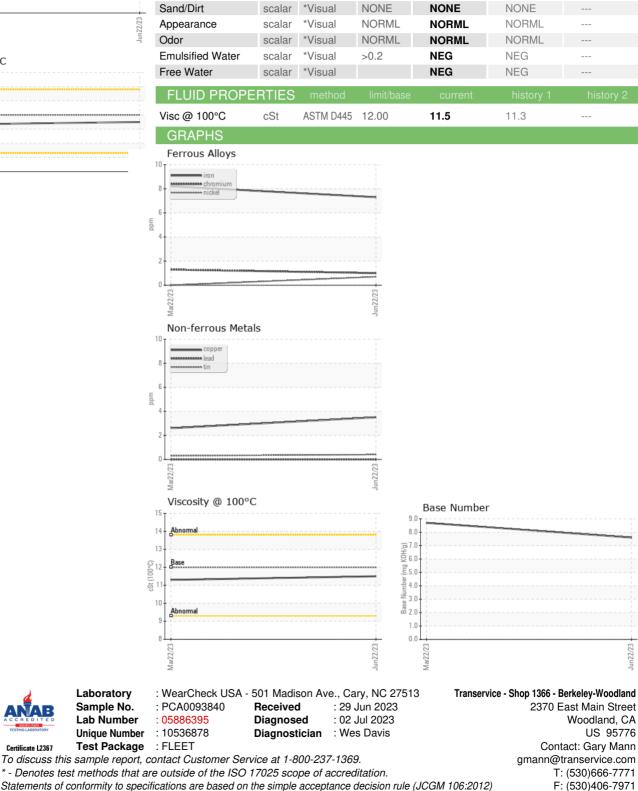
Precipitate

Silt

Debris

Yellow Metal





Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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