

OIL ANALYSIS REPORT

Sample Rating Trend



FREIGHTLINER 097

Diesel Engine

PETRO CANADA DURON SHP 10W30 (--- 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

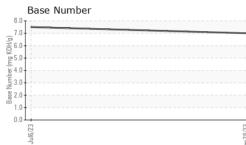
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

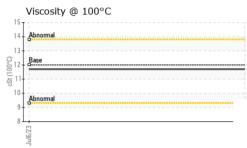
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0097428	PCA0097651	
Sample Date		Client Info		28 Sep 2023	06 Jul 2023	
Machine Age	mls	Client Info		545000	519000	
Oil Age	mls	Client Info		0	0	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	NORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	
Glycol		WC Method	20.0	NEG	NEG	
WEAR METAL	c	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	17	30 1	
Chromium	ppm	ASTM D5185m	>6	<1		
Nickel	ppm	ASTM D5185m	>3	0	<1	
Titanium	ppm	ASTM D5185m	>2	0	<1	
Silver	ppm	ASTM D5185m	>2	0	0 7	
Aluminum	ppm	ASTM D5185m	>50	6		
Lead	ppm		>10	0	0	
Copper	ppm	ASTM D5185m	>50	4	4	
Tin	ppm	ASTM D5185m	>6	<1	<1	
Vanadium	ppm	ASTM D5185m		0	<1	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 8	history1 0	history2
Boron Barium	ppm ppm					
Boron		ASTM D5185m	2	8	0	
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	8 0	0	
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	8 0 57	0 0 68	
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	8 0 57 <1	0 0 68 <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	8 0 57 <1 878	0 0 68 <1 1119	
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	8 0 57 <1 878 1101	0 0 68 <1 1119 1232	
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	8 0 57 <1 878 1101 997	0 0 68 <1 1119 1232 1148	
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	8 0 57 <1 878 1101 997 1225	0 0 68 <1 1119 1232 1148 1398	
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	8 0 57 <1 878 1101 997 1225 3061	0 0 68 <1 1119 1232 1148 1398 3652	
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	8 0 57 <1 878 1101 997 1225 3061 current	0 0 68 <1 1119 1232 1148 1398 3652 history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm 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 limit/base >50	8 0 57 <1 878 1101 997 1225 3061 current 4	0 0 68 <1 1119 1232 1148 1398 3652 history1 4	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm 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 50 950 1050 995 1180 2600 limit/base >50	8 0 57 <1 878 1101 997 1225 3061 current 4 <	0 0 68 <1 1119 1232 1148 1398 3652 history1 4 2	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >50	8 0 57 <1 878 1101 997 1225 3061 <i>current</i> 4 <1 3	0 0 68 <1 1119 1232 1148 1398 3652 history1 4 2 4	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 Imit/base >50 >20 Imit/base >3	8 0 57 <1 878 1101 997 1225 3061 current 4 <1 3 current	0 0 68 <1 1119 1232 1148 1398 3652 history1 4 2 4 4 2 4	 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 TS ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 Imit/base >50 >20 Imit/base >3	8 0 57 <1 878 1101 997 1225 3061 <i>current</i> 4 <1 3 <i>current</i> 0.5	0 0 68 <1 1119 1232 1148 1398 3652 history1 4 2 4 4 history1 0.5	 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 ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <i>limit/base</i> >50 >20 <i>limit/base</i> >3 >20	8 0 57 <1 878 1101 997 1225 3061 <i>current</i> 4 <1 3 <i>current</i> 0.5 9.0	0 0 68 <1 1119 1232 1148 1398 3652 history1 4 2 4 4 <u>history1</u> 0.5 9.3	 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 ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 imit/base >20 imit/base >3 >20 >3 >20	8 0 57 <1 878 1101 997 1225 3061 <i>current</i> 4 <1 3 <i>current</i> 0.5 9.0 20.2	0 0 68 <1 1119 1232 1148 1398 3652 history1 4 2 4 4 2 4 history1 0.5 9.3 20.8	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAM	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	2 0 50 0 950 1050 995 1180 2600 imit/base >50 >20 >3 >20 >30 imit/base	8 0 57 <1 878 1101 997 1225 3061 <i>current</i> 4 <1 3 <i>current</i> 0.5 9.0 20.2 <i>current</i>	0 0 68 <1 1119 1232 1148 1398 3652 history1 4 2 4 4 2 4 4 0.5 9.3 20.8 history1	 history2 history2 history2 history2

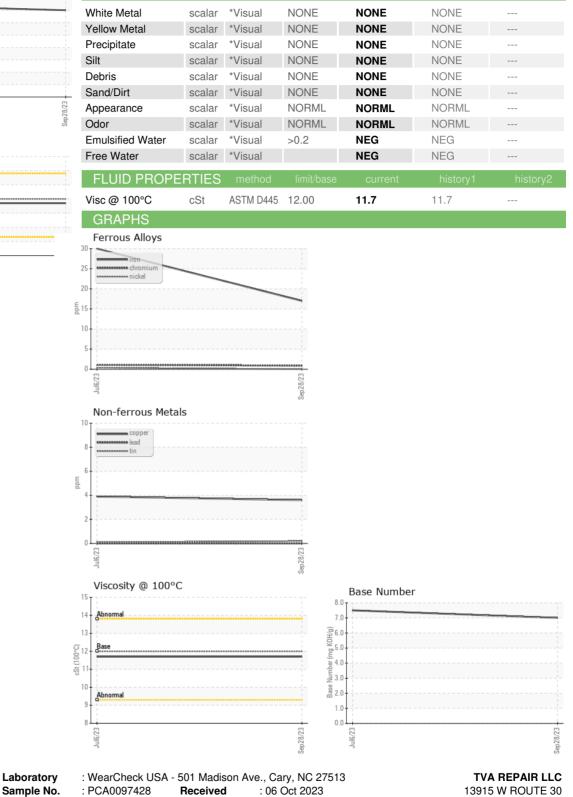


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VISUAL









13915 W ROUTE 30 PLAINFIELD, IL US 60544 Contact: JOSHUA HUBBARD joshua@tvarepairllc.com T: (815)306-0330 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F:

Certificate L2367

Laboratory

Lab Number

Unique Number

Test Package : FLEET

: 05971971

: 10683921

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.

Diagnosed

Diagnostician

: 09 Oct 2023 : Wes Davis

Submitted By: Wes Davis