

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

(AY399B) Supermarket - Tractor Machine Id FREIGHTLINER 107A1814

Component Diesel Engine

PETRO CANADA DURON SHP 10W30 (11 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

Contamination

Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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.

AL)			1	Sep 2023		
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0104811		
Sample Date		Client Info		18 Sep 2023		
Machine Age	mls	Client Info		44149		
Dil Age	mls	Client Info		13878		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Glycol		WC Method		NEG		
WEAR METAL	S	method	limit/base	current	history1	history2
ron	ppm	ASTM D5185m	>80	36		
Chromium	ppm	ASTM D5185m	>5	3		
Nickel	ppm	ASTM D5185m	>2	<1		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>3	<1		
Aluminum	ppm	ASTM D5185m	>30	42		
Lead	ppm	ASTM D5185m	>30	0		
Copper	ppm	ASTM D5185m	>150	247		
Tin	ppm	ASTM D5185m	>5	2		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	8		
	ppm ppm	ASTM D5185m ASTM D5185m		8 0		
Boron Barium Molybdenum						
Barium Molybdenum	ppm	ASTM D5185m	0 50	0		
Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m	0 50	0 58		
Barium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0	0 58 2		
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950	0 58 2 915		
Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050	0 58 2 915 1329		
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050 995	0 58 2 915 1329 995	 	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180	0 58 2 915 1329 995 1258	 	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600	0 58 2 915 1329 995 1258 3019		
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	0 50 950 1050 995 1180 2600	0 58 2 915 1329 995 1258 3019 current	 history1	 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 950 1050 995 1180 2600	0 58 2 915 1329 995 1258 3019 current 5	 history1 	 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	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	0 50 0 950 1050 995 1180 2600 limit/base >20	0 58 2 915 1329 995 1258 3019 current 5 3	 history1	 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 50 950 1050 995 1180 2600 limit/base >20	0 58 2 915 1329 995 1258 3019 current 5 3 111	 history1 	 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600 limit/base >20 >20 limit/base	0 58 2 915 1329 995 1258 3019 current 5 3 111 current	 history1 history1	 history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ypm ypm	ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600 limit/base >20 limit/base >3	0 58 2 915 1329 995 1258 3019 current 5 3 111 current 0.2	 history1 history1 history1	 history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	<pre>ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm</pre>	ASTM D5185m ASTM D5185m	0 50 950 1050 995 1180 2600 imit/base >20 imit/base >3 >20	0 58 2 915 1329 995 1258 3019 <u>current</u> 5 3 111 5 3 111 0.2 9.0	 history1 history1 history1	 history2 history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	<pre>ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm</pre>	ASTM D5185m ASTM D5185m	0 50 950 1050 995 1180 2600 imit/base >20 imit/base >3 >20 >30 >30	0 58 2 915 1329 995 1258 3019 <u>current</u> 5 3 111 0.2 9.0 24.4	 history1 history1 history1	 history2 history2 history2



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OIL ANALYSIS REPORT

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scalar

scalar

scalar

NONE

NONE

NONE

NONE

NONE

NONE

VISUAL

White Metal

Yellow Metal

Precipitate



