

OIL ANALYSIS REPORT

Sample Rating Trend

Area (AU206X) Supermarket - Tractor FREIGHTLINER 107A1812

Diesel Engine

Fluid 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 INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0124698	PCA0111516	PCA0100417
Sample Date		Client Info		06 May 2024	11 Dec 2023	24 Aug 2023
Machine Age	mls	Client Info		300338	282664	267709
Oil Age	mls	Client Info		17674	14955	15071
Oil Changed	IIIIO	Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT		method	limit/base	current	history1	history2
		WC Method				
Fuel			>5	<1.0 NEG	<1.0 NEG	<1.0 NEG
Water		WC Method	>0.2			
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	13	3	22
Chromium	ppm	ASTM D5185m	>5	1	<1	1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	6	3	7
Lead	ppm	ASTM D5185m	>30	<1	0	0
Copper	ppm	ASTM D5185m	>150	6	0	5
Tin	ppm	ASTM D5185m	>5	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 2	history1 4	history2 4
	ppm ppm					
Boron		ASTM D5185m	2	2	4	4
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	2 2	4 0	4
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	2 2 68	4 0 58	4 0 69
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	2 2 68 <1	4 0 58 0	4 0 69 <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 2 68 <1 961	4 0 58 0 951	4 0 69 <1 1032
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 2 68 <1 961 1163	4 0 58 0 951 1037	4 0 69 <1 1032 1228
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	2 2 68 <1 961 1163 1164	4 0 58 0 951 1037 1056	4 0 69 <1 1032 1228 1119
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	2 2 68 <1 961 1163 1164 1244	4 0 58 0 951 1037 1056 1244	4 0 69 <1 1032 1228 1119 1356
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	2 2 68 <1 961 1163 1164 1244 3491	4 0 58 0 951 1037 1056 1244 3095	4 0 69 <1 1032 1228 1119 1356 3810
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	2 2 68 <1 961 1163 1164 1244 3491 current	4 0 58 0 951 1037 1056 1244 3095 history1	4 0 69 <1 1032 1228 1119 1356 3810 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	2 2 68 <1 961 1163 1164 1244 3491 current 5	4 0 58 0 951 1037 1056 1244 3095 history1 3	4 0 69 <1 1032 1228 1119 1356 3810 history2 4
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	2 0 50 950 1050 995 1180 2600 limit/base >20	2 2 68 <1 961 1163 1164 1244 3491 <u>current</u> 5 0	4 0 58 0 951 1037 1056 1244 3095 history1 3 0	4 0 69 <1 1032 1228 1119 1356 3810 history2 4 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	2 0 50 950 1050 995 1180 2600 limit/base >20	2 2 68 <1 961 1163 1164 1244 3491 current 5 0 4	4 0 58 0 951 1037 1056 1244 3095 history1 3 0 0	4 0 69 <1 1032 1228 1119 1356 3810 history2 4 2 1
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 limit/base >20 limit/base	2 2 68 <1 961 1163 1164 1244 3491 current 5 0 4 current	4 0 58 0 951 1037 1056 1244 3095 history1 3 0 0 0	4 0 69 <1 1032 1228 1119 1356 3810 history2 4 2 1 1 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 ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >20 limit/base >20	2 2 68 <1 961 1163 1164 1244 3491 <i>current</i> 5 0 4 <i>current</i> 0.5	4 0 58 0 951 1037 1056 1244 3095 history1 3 0 0 0 history1 0.2	4 0 69 <1 1032 1228 1119 1356 3810 history2 4 2 1 history2 0.7
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 0 950 1050 995 1180 2600 <i>limit/base</i> >20 <i>limit/base</i> >20	2 2 68 <1 961 1163 1164 1244 3491 <i>current</i> 5 0 4 <i>current</i> 0.5 7.3	4 0 58 0 951 1037 1056 1244 3095 history1 3 0 0 0 history1 0.2 5.3	4 0 69 <1 1032 1228 1119 1356 3810 history2 4 2 1 history2 0.7 7.9
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAI	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	2 0 0 50 0 950 1050 995 1180 2600 2600 20 20 20 20 20 20 20 20 20 20 20 20 2	2 2 68 <1 961 1163 1164 1244 3491 <u>current</u> 5 0 4 <u>current</u> 0.5 7.3 18.9 <u>current</u>	4 0 58 0 951 1037 1056 1244 3095 history1 3 0 0 history1 0.2 5.3 17.8 history1	4 0 69 <1 1032 1228 1119 1356 3810 history2 4 2 1 history2 0.7 7.9 20.0 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 >30	2 2 68 <1 961 1163 1164 1244 3491 <u>current</u> 5 0 4 <u>current</u> 0.5 7.3 18.9	4 0 58 0 951 1037 1056 1244 3095 history1 3 0 0 history1 0.2 5.3 17.8	4 0 69 <1 1032 1228 1119 1356 3810 history2 4 2 1 history2 0.7 7.9 20.0





NORMAL

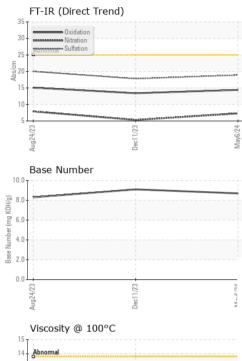


cSt (100°C)

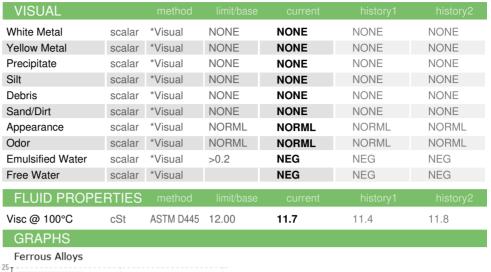
Abnorma

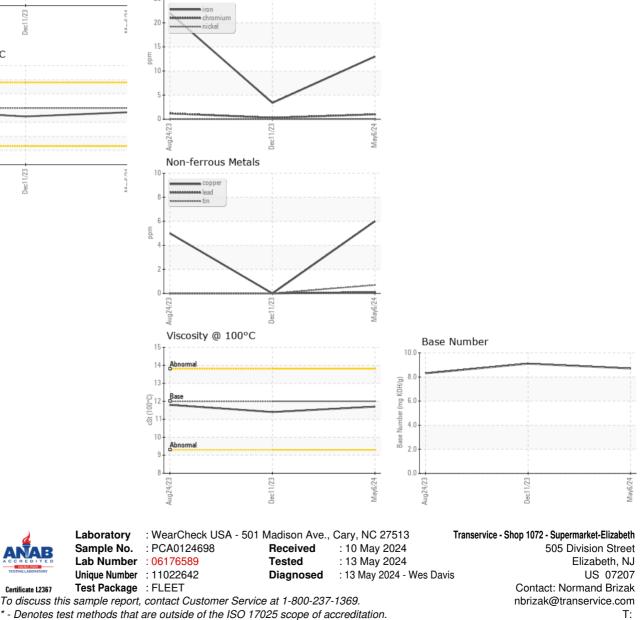
Aug24/23

OIL ANALYSIS REPORT



Dec11/23





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