

OIL ANALYSIS REPORT

Area (AU692W) Supermarket - Tractor FREIGHTLINER 107A1868

Diesel Engine

Fluid PETRO CANADA DURON SHP 10W30 (11 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

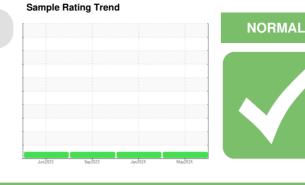
All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

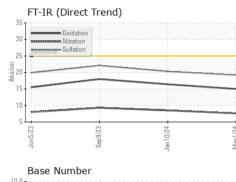
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

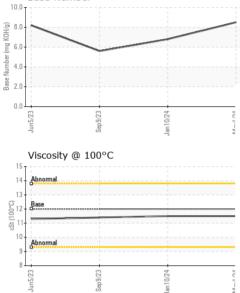


SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0124092	PCA0111019	PCA0104087
Sample Date		Client Info		01 May 2024	10 Jan 2024	09 Sep 2023
Machine Age	mls	Client Info		273198	257607	235120
Oil Age	mls	Client Info		15591	22487	19909
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron		ASTM D5185m	>80	12	14	23
Chromium	ppm	ASTM D5185m		2	<1	2
Nickel	ppm	ASTM D5185m	>0	2 <1	< 1	<1
Titanium	ppm ppm	ASTM D5185m	26	<1	0	0
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m		8	8	13
Lead	ppm	ASTM D5185m	>30	ہ <1	<1	0
Copper		ASTM D5185m		4	6	6
Tin	ppm ppm	ASTM D5185m	>5	1	<1	1
Vanadium	ppm	ASTM D5185m	20	، <1	0	0
				~1	()	()
	ppm	ASTM D5185m	limit/baca	<1	0 bistory1	0 bistory2
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	2	current 3	history1 14	history2 4
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	2 0	current 3 0	history1 14 0	history2 4 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	current 3 0 65	history1 14 0 61	history2 4 0 69
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	current 3 0 65 <1	history1 14 0 61 <1	history2 4 0 69 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	current 3 0 65 <1 972	history1 14 0 61 <1 885	history2 4 0 69 <1 1026
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	current 3 0 65 <1 972 1135	history1 14 0 61 <1 885 1063	history2 4 0 69 <1 1026 1213
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	current 3 0 65 <1 972 1135 1105	history1 14 0 61 <1 885 1063 1063	history2 4 0 69 <1 1026 1213 1078
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180	current 3 0 65 <1 972 1135 1105 1278	history1 14 0 61 <1 885 1063 1063 1261	history2 4 0 69 <1 1026 1213 1078 1368
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method 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	current 3 0 65 <1 972 1135 1105 1278 3474	history1 14 0 61 <1 885 1063 1063 1261 2802	history2 4 0 69 <1 1026 1213 1078 1368 3340
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	method 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	current 3 0 65 <1 972 1135 1105 1278 3474 current	history1 14 0 61 <1 885 1063 1261 2802 history1	history2 4 0 69 <1 1026 1213 1078 1368 3340 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method 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	current 3 0 65 <1 972 1135 1105 1278 3474 current 6	history1 14 0 61 <1 885 1063 1261 2802 history1 4	history2 4 0 69 <1 1026 1213 1078 1368 3340 history2 6
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >20	current 3 0 65 <1 972 1135 1105 1278 3474 current 6 <1	history1 14 0 61 <1 885 1063 1261 2802 history1 4 <1	history2 4 0 69 <1 1026 1213 1078 1368 3340 history2 6 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method 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	current 3 0 65 <1 972 1135 1105 1278 3474 current 6	history1 14 0 61 <1 885 1063 1261 2802 history1 4	history2 4 0 69 <1 1026 1213 1078 1368 3340 history2 6
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >20	current 3 0 65 <1 972 1135 1105 1278 3474 current 6 <1	history1 14 0 61 <1 885 1063 1261 2802 history1 4 <1	history2 4 0 69 <1 1026 1213 1078 1368 3340 history2 6 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 imit/base >20	current 3 0 65 <1 972 1135 1105 1278 3474 current 6 <1 4	history1 14 0 61 <1 885 1063 1261 2802 history1 4 <1 3	history2 4 0 69 <1 1026 1213 1078 1368 3340 history2 6 2 5
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	method ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 Imit/base >20 -20	current 3 0 65 <1 972 1135 1105 1278 3474 current 6 <1 4 current	history1 14 0 61 <1 885 1063 1063 1261 2802 history1 4 <1 3 history1	history2 4 0 69 <1 1026 1213 1078 1368 3340 history2 6 2 5 history2
ADDITIVES 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 TS ppm ppm	method ASTM D5185m	2 0 50 950 1050 995 1180 2600 imit/base >20 20 imit/base >20	current 3 0 65 <1 972 1135 1105 1278 3474 current 6 <1 4 current 0.5	history1 14 0 61 <1 885 1063 1261 2802 history1 4 <1 3 history1 0.6	history2 4 0 69 <1 1026 1213 1078 1368 3340 history2 6 2 5 history2 0.9
ADDITIVES 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	method ASTM D5185m	2 0 50 950 1050 995 1180 2600 imit/base >20 20 imit/base >20	current 3 0 65 <1 972 1135 1105 1278 3474 current 6 <1 4 current 0.5 7.6	history1 14 0 61 <1 885 1063 1261 2802 history1 4 <1 3 history1 0 6 8.5	history2 4 0 69 <1 1026 1213 1078 1368 3340 history2 6 2 5 history2 0.9 9.3
ADDITIVES 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	method ASTM D5185m ASTM D5185m	2 0 50 50 950 1050 995 1180 2600 imit/base >20 imit/base >3 >20 >30	Current 3 0 65 <1 972 1135 1105 1278 3474 current 6 <1 4 current 0.5 7.6 19.2	history1 14 0 61 <1 885 1063 1063 1261 2802 history1 4 <1 3 history1 0.6 8.5 20.3	history2 4 0 69 <1 1026 1213 1078 1368 3340 history2 6 2 5 history2 0.9 9.3 22.1

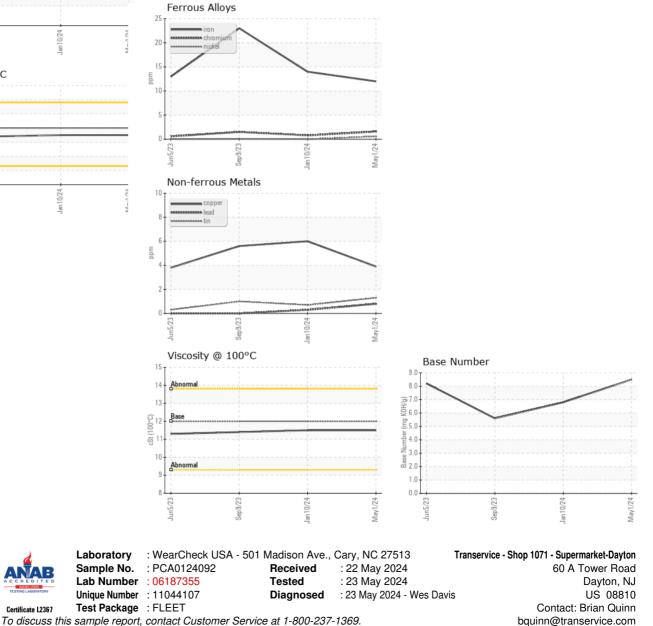


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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	11.5	11.5	11.4
GRAPHS						





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Submitted By: Brian Quinn Page 2 of 2

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