

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Area (AU205X) Supermarket - Tractor FREIGHTLINER 107A1811

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.

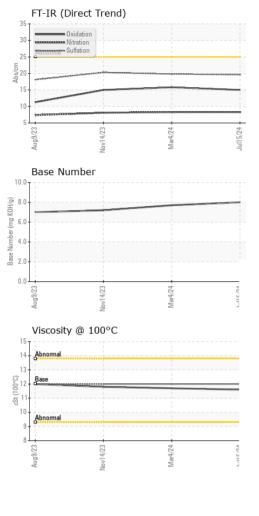
Fluid Condition

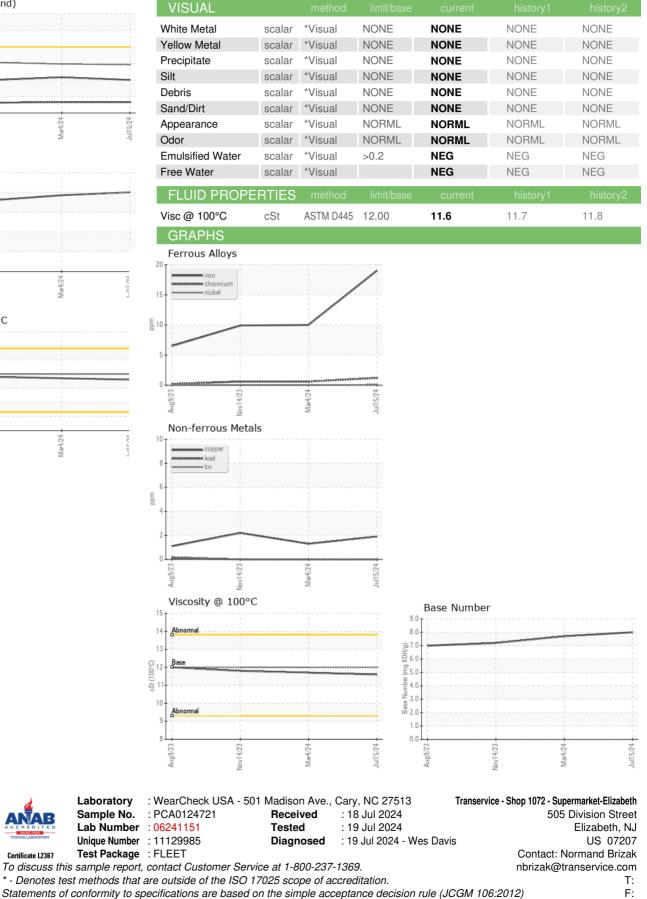
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0124721	PCA0116488	PCA0111527
Sample Date		Client Info		15 Jul 2024	04 Mar 2024	14 Nov 2023
Machine Age	mls	Client Info		411043	393368	373886
Oil Age	mls	Client Info		391561	0	21033
Oil Changed		Client Info		Changed	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATI	ON	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 METALS	5	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	19	10	10
Chromium	ppm	ASTM D5185m	>5	1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	6	5	4
Lead	ppm	ASTM D5185m	>30	0	0	0
Copper	ppm	ASTM D5185m	>150	2	1	2
Tin	ppm	ASTM D5185m	>5	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	nnm	ASTM D5185m	2	3	<1	4
DOIOII	ppm	AGTIVI DJ TOJITI				
Barium	ppm	ASTM D5185m	0	0	0	0
			0 50	0 62	0 51	0 54
Barium	ppm	ASTM D5185m		-		
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	50	62	51	54
Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 0	62 0	51 0	54 0
Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950	62 0 927	51 0 857	54 0 725
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050	62 0 927 1121	51 0 857 1095	54 0 725 1321
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995	62 0 927 1121 906	51 0 857 1095 889	54 0 725 1321 981
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	50 0 950 1050 995 1180	62 0 927 1121 906 1183	51 0 857 1095 889 1083	54 0 725 1321 981 1184
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	50 0 950 1050 995 1180 2600	62 0 927 1121 906 1183 2615	51 0 857 1095 889 1083 3023	54 0 725 1321 981 1184 3015
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 Limit/base	62 0 927 1121 906 1183 2615 current	51 0 857 1095 889 1083 3023 history1	54 0 725 1321 981 1184 3015 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 Limit/base	62 0 927 1121 906 1183 2615 current 6	51 0 857 1095 889 1083 3023 history1 3	54 0 725 1321 981 1184 3015 history2 4
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 Limit/base >20	62 0 927 1121 906 1183 2615 current 6 <	51 0 857 1095 889 1083 3023 history1 3 1	54 0 725 1321 981 1184 3015 history2 4 0
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 limit/base >20	62 0 927 1121 906 1183 2615 current 6 <1 2	51 0 857 1095 889 1083 3023 history1 3 1 <1	54 0 725 1321 981 1184 3015 history2 4 0 4
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm	ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 limit/base >20	62 0 927 1121 906 1183 2615 current 6 <1 2 2	51 0 857 1095 889 1083 3023 history1 3 1 <1 <1 history1	54 0 725 1321 981 1184 3015 history2 4 0 4 kistory2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 limit/base >20 >20 limit/base >3	62 0 927 1121 906 1183 2615 <u>current</u> 6 <1 2 <u>current</u> 0.7	51 0 857 1095 889 1083 3023 history1 3 1 <1 <1 history1 0.7	54 0 725 1321 981 1184 3015 history2 4 0 4 history2 0.7
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	50 0 950 1050 995 1180 2600 limit/base >20 limit/base >3 >20	62 0 927 1121 906 1183 2615 <u>current</u> 6 <1 2 2 <u>current</u> 0.7 8.3	51 0 857 1095 889 1083 3023 history1 3 1 <1 <1 history1 0.7 8.3	54 0 725 1321 981 1184 3015 history2 4 0 4 4 0 4 0 4 0 2 8.1
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	50 0 950 1050 995 1180 2600 limit/base >20 limit/base >3 >20 >30	62 0 927 1121 906 1183 2615 <u>current</u> 6 <1 2 <u>current</u> 0.7 8.3 19.6	51 0 857 1095 889 1083 3023 history1 3 1 <1 <1 0.7 8.3 19.8	54 0 725 1321 981 1184 3015 history2 4 0 4 history2 0.7 8.1 20.3
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624	50 0 950 1050 995 1180 2600 imit/base >20 20 imit/base >3 >20 30 imit/base	62 0 927 1121 906 1183 2615 current 6 <1 2 current 0.7 8.3 19.6 current	51 0 857 1095 889 1083 3023 history1 3 1 <1 <1 history1 0.7 8.3 19.8 history1	54 0 725 1321 981 1184 3015 history2 4 0 4 0 4 history2 0.7 8.1 20.3 history2



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Report Id: TSV1072 [WUSCAR] 06241151 (Generated: 07/21/2024 11:01:33) Rev: 1

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Submitted By: Normand Brizak

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