

OIL ANALYSIS REPORT

Area (AU762S) Supermarket - Tractor Machine Id FREIGHTLINER 107A8820 Component

Diesel Engine

PETRO CANADA DURON SHP 10W30 (11 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Fluid

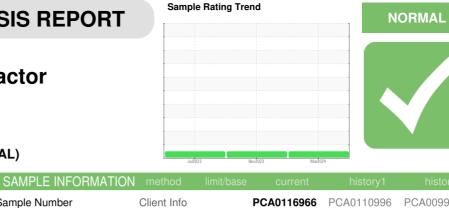
All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

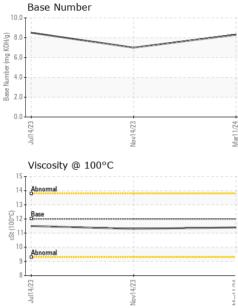
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



Sample Number Sample Date Machine Age Oil Age Oil Changed Sample Status	mls mls	Client Info Client Info Client Info Client Info Client Info		PCA0116966 11 Mar 2024 245132 15375 Changed NORMAL	PCA0110996 14 Nov 2023 229757 14208 Changed NORMAL	PCA0099843 14 Jul 2023 215549 12270 Not Changd 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	ppm	ASTM D5185m	>80	12	16	7
Chromium	ppm	ASTM D5185m	>5	1	1	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	6	6	3
Lead	ppm	ASTM D5185m	>30	0	0	0
Copper	ppm	ASTM D5185m	>150	8	6	3
Tin	ppm	ASTM D5185m	>5	<1	0	0
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 6	history1 3	history2 0
	ppm ppm					
Boron		ASTM D5185m	2	6	3	0
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	6 0	3 0	0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	6 0 70	3 0 61	0 0 67
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	6 0 70 <1	3 0 61 <1	0 0 67 <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	6 0 70 <1 955	3 0 61 <1 869	0 0 67 <1 940
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	6 0 70 <1 955 1166	3 0 61 <1 869 1061	0 0 67 <1 940 1125 1032 1269
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 ASTM D5185m	2 0 50 0 950 1050 995	6 0 70 <1 955 1166 1019	3 0 61 <1 869 1061 938	0 0 67 <1 940 1125 1032
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	6 0 70 <1 955 1166 1019 1227	3 0 61 <1 869 1061 938 1202	0 0 67 <1 940 1125 1032 1269
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 ASTM D5185m	2 0 50 950 1050 995 1180 2600	6 0 70 <1 955 1166 1019 1227 3053	3 0 61 <1 869 1061 938 1202 2429	0 0 67 <1 940 1125 1032 1269 3703
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	6 0 70 <1 955 1166 1019 1227 3053 current	3 0 61 <1 869 1061 938 1202 2429 history1	0 0 67 <1 940 1125 1032 1269 3703 history2
Boron 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 method ASTM D5185m	2 0 50 950 1050 995 1180 2600	6 0 70 <1 955 1166 1019 1227 3053 current 4	3 0 61 <1 869 1061 938 1202 2429 history1 5	0 0 67 <1 940 1125 1032 1269 3703 history2 3
Boron 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 method ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base	6 0 70 <1 955 1166 1019 1227 3053 current 4 2	3 0 61 <1 869 1061 938 1202 2429 history1 5 2	0 0 67 <1 940 1125 1032 1269 3703 history2 3 <
Boron 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	2 0 50 950 1050 995 1180 2600 limit/base >20	6 0 70 <1 955 1166 1019 1227 3053 current 4 2 5	3 0 61 <1 869 1061 938 1202 2429 history1 5 2 2 5	0 0 67 <1 940 1125 1032 1269 3703 history2 3 < 1 2
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	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 imit/base >20 imit/base >3	6 0 70 <1 955 1166 1019 1227 3053 <i>current</i> 4 2 5 <i>current</i> 0.5	3 0 61 <1 869 1061 938 1202 2429 history1 5 2 2 5 history1 0.9	0 0 67 <1 940 1125 1032 1269 3703 history2 3 <1 2 2 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 ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 imit/base >20 imit/base >3	6 0 70 <1 955 1166 1019 1227 3053 current 4 2 5 5	3 0 61 <1 869 1061 938 1202 2429 history1 5 2 2 5 5 history1	0 0 67 <1 940 1125 1032 1269 3703 history2 3 <1 2 3 <1 2 history2 0.4
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	6 0 70 <1 955 1166 1019 1227 3053 <i>current</i> 4 2 5 <i>current</i> 0.5 7.3	3 0 61 <1 869 1061 938 1202 2429 history1 5 2 2 5 history1 0.9 8.7	0 0 67 <1 940 1125 1032 1269 3703 history2 3 3 <1 2 history2 0.4 7.0
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 D7844 *ASTM D7844	2 0 0 50 0 950 1050 995 1180 2600 imit/base >20 imit/base >3 >20 >30 30	6 0 70 <1 955 1166 1019 1227 3053 <i>current</i> 4 2 5 <i>current</i> 0.5 7.3 18.7 <i>current</i>	3 0 61 <1 869 1061 938 1202 2429 history1 5 2 2 5 history1 0.9 8.7 20.9 history1	0 0 67 <1 940 1125 1032 1269 3703 history2 3 < <u>history2</u> 0.4 7.0 18.5 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	6 0 70 <1 955 1166 1019 1227 3053 <i>current</i> 4 2 5 <i>current</i> 0.5 7.3 18.7	3 0 61 <1 869 1061 938 1202 2429 history1 5 2 2 5 <u>history1</u> 0.9 8.7 20.9	0 0 67 <1 940 1125 1032 1269 3703 history2 3 <1 2 3 <1 2 history2 0.4 7.0 18.5



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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
Mar11/24	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Marl	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
	Free Water	scalar	*Visual		NEG	NEG	NEG
	FLUID PROPI	ERTIES	method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445	12.00	11.4	11.3	11.5
	GRAPHS						
	Ferrous Alloys	\sim					
NCI 1	14- iron chromium	/ _					
1 II	12- nickel						
	10						
	He 8						
	6						
	4						
	2 -						
	23 23	23		24			
	Jul14/23	Nov14/23 .		Mar11/24			
	-			\geq			
	Non-ferrous Meta	als					
	copper						
	8 - exercise tin						
	6						
	6- 						
	G udd 4						
	е 4 2-						
	2	~					
	2	14/23		11/24			
	4 2 0 62/F1llPC	Nov14/23		Mart 1/24			
	2	-		Mart 1/24	Base Number	-	
	Viscosity @ 100°	-		9.0 8.0	Base Number		
	Viscosity @ 100°	-		8.0	Base Number	-	
	Viscosity @ 100°	-		8.0	Base Number		
	Viscosity @ 100°	-		8.0	Base Number	-	
	Viscosity @ 100°	-		8.0	Base Number	-	
	Viscosity @ 100°	-		8.0	Base Number		
	Viscosity @ 100°	-			Base Number		
	Viscosity @ 100°	C		8.0 (0,7.0 (0,7.0 (0,17.0 (0,17.0 (0,17.0 (0,17.0 (0,17.0) (0,17.0			
	Viscosity @ 100°	C		8.0 (0,7.0 (0,7.0 (0,17.0 (0,17.0 (0,17.0 (0,17.0 (0,17.0) (0,17.0			
	Viscosity @ 100°	-		8.0 (0.7.0 HO V B 6.0 B 5.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	Base Number	Mov14/23	
Laboratory	Viscosity @ 100°	C EZ/FI/NON	in Ave. Carv	8.0 (0,7.0 (0,HOX bu) =0.0 1.0 0.0 4.0 1.0 1.0 4.0 1.0 0.0	Jul14/23	Nov14/23	
Laboratory Sample No.	Viscosity @ 100°	C EZ/FI/NON		8.0 (0,7.0 (0,HOX bu) =0.0 1.0 0.0 4.0 1.0 1.0 4.0 1.0 0.0	Jul14/23	EZHION rice - Shop 1071 - Su	ıpermarket-Dayt
Sample No. Lab Number	Viscosity @ 100° Viscosity @ 100°	C EZHMAN 01 Madisc Recei Teste	ived : 18 ed : 19	8.0 (1),7.0 (1),100 (1	EZ/H LING	EZHION rice - Shop 1071 - Su	upermarket-Dayt A Tower Roa Dayton, N
Sample No. Lab Number Unique Number	Viscosity @ 100° Viscosity @ 100°	C EZHMAN 01 Madisc Recei Teste	ived : 18 ed : 19	8.0 (B)HOX 6.0 (B)HOX 6.0 (B)HOX 6.0 (B)HOX 6.0 (B) (B) 5.0 (B) 5.0 (B) 5.0 (B) 5.0 (B) 5.0 (B) 5.0 (B) 5.0 (B) 120 (B) 120 (B	EZ/H LING	EZH1000 rice - Shop 1071 - Su 60	A Tower Roa Dayton, N US 088
Sample No. Lab Number Unique Number Test Package	Viscosity @ 100° Viscosity @ 100°	C EZFHINON 01 Madisco Recei Teste Diagr	ived : 18 ed : 19 nosed : 19	8.0 (1), 10, 10, 10, 10, 10, 10, 10, 10, 10, 10	EZ/H LING	EZHIMAN rice - Shop 1071 - Su 60 Conta	upermarket-Dayt A Tower Roa Dayton, N

