

## **OIL ANALYSIS REPORT**

Sample Rating Trend

### Area (AY418B) Supermarket - Tractor **FREIGHTLINER 107A1852**

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.

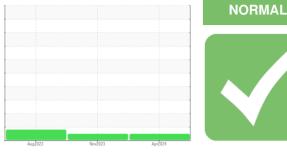
#### Contamination

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.

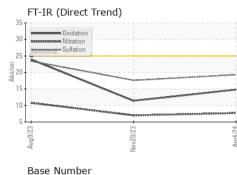
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0116456	PCA0111545	PCA0100410
Sample Date		Client Info		04 Apr 2024	20 Nov 2023	09 Aug 2023
Machine Age	hrs	Client Info		63305	46462	33551
Oil Age	hrs	Client Info		16843	12911	33551
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL
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	20	14	60
Chromium	ppm	ASTM D5185m	>5	2	<1	4
Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	<1	<1	0
Aluminum	ppm	ASTM D5185m	>30	10	9	53
Lead	ppm	ASTM D5185m	>30	<1	0	2
Copper	ppm	ASTM D5185m	>150	30	38	<u> </u>
Tin	ppm	ASTM D5185m	>5	1	<1	4
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	4	16	30
Barium	ppm	ASTM D5185m	0	0	2	0
Molybdenum	ppm	ASTM D5185m	50	52	20	50
Manganese	ppm	ASTM D5185m	0	<1	0	4
Magnesium	ppm	ASTM D5185m	950	792	184	662
Calcium	ppm	ASTM D5185m	1050	1381	2103	1821
Phosphorus						
	ppm	ASTM D5185m	995	974	819	815
Zinc	ppm ppm	ASTM D5185m ASTM D5185m	995 1180	974 1216	819 1035	815 1059
Zinc Sulfur				-		
-	ppm ppm	ASTM D5185m	1180	1216	1035	1059
Sulfur	ppm ppm	ASTM D5185m ASTM D5185m	1180 2600	1216 2932	1035 4216	1059 2562
Sulfur CONTAMINAN	ppm ppm TS	ASTM D5185m ASTM D5185m method	1180 2600 limit/base	1216 2932 current	1035 4216 history1	1059 2562 history2
Sulfur CONTAMINAN Silicon	ppm ppm TS ppm	ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	1180 2600 limit/base	1216 2932 current 6	1035 4216 history1 4	1059 2562 history2 7
Sulfur CONTAMINAN Silicon Sodium	ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m	1180 2600 limit/base >20	1216 2932 current 6 <1	1035 4216 history1 4 0	1059 2562 history2 7 5
Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m	1180 2600 limit/base >20 >20	1216 2932 current 6 <1 26	1035 4216 history1 4 0 31	1059 2562 history2 7 5 158
Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	1180 2600 limit/base >20 >20 limit/base	1216 2932 current 6 <1 26 current	1035 4216 history1 4 0 31 history1	1059 2562 history2 7 5 158 history2
Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> *ASTM D7844	1180 2600 imit/base >20 >20 imit/base >3	1216 2932 current 6 <1 26 current 0.5	1035 4216 history1 4 0 31 history1 0.3	1059 2562 history2 7 5 158 history2 0.8
Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm TS ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> *ASTM D7844 *ASTM D7624	1180 2600 <b>imit/base</b> >20 >20 <b>imit/base</b> >3 >20	1216 2932 current 6 <1 26 current 0.5 7.7	1035 4216 history1 4 0 31 history1 0.3 7.0	1059 2562 history2 7 5 158 history2 0.8 10.8
Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm TS ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7844 *ASTM D7624	1180 2600 >20 >20 20 <u>limit/base</u> >3 >20 >30	1216 2932 current 6 <1 26 current 0.5 7.7 19.3	1035 4216 history1 4 0 31 history1 0.3 7.0 17.6	1059 2562 7 5 158 history2 0.8 10.8 23.4
Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm ppm TS ppm ppm ppm ppm % Abs/cm Abs/cm Abs/1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7624	1180 2600 >20 >20 >20 Imit/base >3 >20 >30 >30	1216 2932 current 6 <1 26 current 0.5 7.7 19.3 current	1035 4216 history1 4 0 31 history1 0.3 7.0 17.6 history1	1059 2562 history2 7 5 158 history2 0.8 10.8 23.4 history2

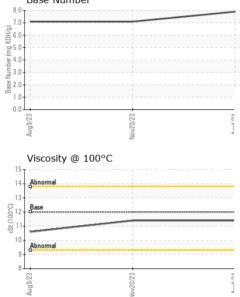






# **OIL ANALYSIS REPORT**





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	11.4	11.4	10.6
GRAPHS						
Ferrous Alloys						
iron 1						
) - chromium						
,						
J	1					
D						
Aug9/23	Vov20/23		Apr4/24			
			4			
Non-ferrous Metal	5					
copper						
0 - advances tin						
	23		24			
Aug9/23	Vov20/23		Apr4/24			
Viscosity @ 100°C				Base Number		
5 			8.0		1	
4 - Abnormal			7.0	1		
3			B/HO)	+		
Base						
2 Base			a 4.0			
2 - Base			10 4.0 Mm 3.0			
2 - Base 1-			(0)HOX 5.0 Bul) 1a qummu 3.0 888 2.0			
2 - Base 			1.0			
2 - Base 1- Abnormal	Nov20/23				Nov20/23	

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Transervice - Shop 1072 - Supermarket-Elizabeth Sample No. : PCA0116456 Received 505 Division Street : 08 Apr 2024 Lab Number : 06140867 Tested : 08 Apr 2024 Elizabeth, NJ Unique Number : 10965675 : 08 Apr 2024 - Wes Davis US 07207 Diagnosed Test Package : FLEET Contact: Normand Brizak Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. nbrizak@transervice.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F:

Submitted By: Normand Brizak