

## **OIL ANALYSIS REPORT**

Sample Rating Trend

### NORMAL

#### Area (AY419B) Supermarket Machine Id FREIGHTLINER 107A1865 Component

Diesel Engine

PETRO CANADA DURON SHP 10W30 (11 GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

Metal levels are typical for a new component breaking in.

#### Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

#### Fluid Condition

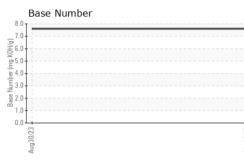
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

AL)			,	Aug2023		
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0104109		
Sample Date		Client Info		30 Aug 2023		
Machine Age	mls	Client Info		35598		
Oil Age	mls	Client Info		18653		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Glycol		WC Method		NEG		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	32		
Chromium	ppm	ASTM D5185m	>5	3		
Nickel	ppm	ASTM D5185m	>2	<1		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>3	<1		
Aluminum	ppm	ASTM D5185m	>30	58		
Lead	ppm	ASTM D5185m	>30	<1		
Copper	ppm	ASTM D5185m	>150	232		
Tin	ppm	ASTM D5185m	>5	2		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	12		
Barium	ppm	ASTM D5185m	0	0		
Molybdenum	ppm	ASTM D5185m	50	62		
-	ppm ppm	ASTM D5185m ASTM D5185m		62 3		
Manganese				-		
Molybdenum Manganese Magnesium Calcium	ppm	ASTM D5185m	0	3		
Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m	0 950	3 891		
Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050	3 891 1333		
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995	3 891 1333 937		
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180	3 891 1333 937 1213	  	  
Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600	3 891 1333 937 1213 2885	  	   
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>Method</b>	0 950 1050 995 1180 2600 limit/base	3 891 1333 937 1213 2885 current	    history1	    history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	0 950 1050 995 1180 2600 limit/base	3 891 1333 937 1213 2885 current 5	    history1 	    history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 limit/base >20	3 891 1333 937 1213 2885 current 5 3	    history1 	    history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 <i>limit/base</i> >20	3 891 1333 937 1213 2885 current 5 3 125	   history1 	    history2  
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 limit/base >20 	3 891 1333 937 1213 2885 current 5 3 125 current	   history1   history1	<ul> <li></li> <li></li> <li></li> <li>history2</li> <li></li> <li></li> <li>history2</li> </ul>
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 <i>limit/base</i> >20 >20 <i>limit/base</i> >3	3 891 1333 937 1213 2885 current 5 3 125 current 0.8	    history1   history1	<ul> <li></li> <li></li> <li></li> <li>history2</li> <li></li> <li></li> <li>history2</li> <li></li> <li></li> </ul>
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 D7844 *ASTM D7624	0 950 1050 995 1180 2600 limit/base >20 limit/base >3 >20	3 891 1333 937 1213 2885 current 5 3 125 current 0.8 8.7	    history1   history1  history1	<ul> <li></li> <li></li> <li></li> <li></li> <li>history2</li> <li></li> <li>history2</li> <li></li> <li>history2</li> </ul>
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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624 *ASTM D7415	0 950 1050 995 1180 2600 imit/base >20 imit/base >3 >20 >3 >20	3 891 1333 937 1213 2885 current 5 3 125 current 0.8 8.7 21.0	    history1   history1  	<ul> <li></li> <li></li> <li></li> <li></li> <li>history2</li> <li></li> <li></li> <li>history2</li> <li></li> <li></li></ul>



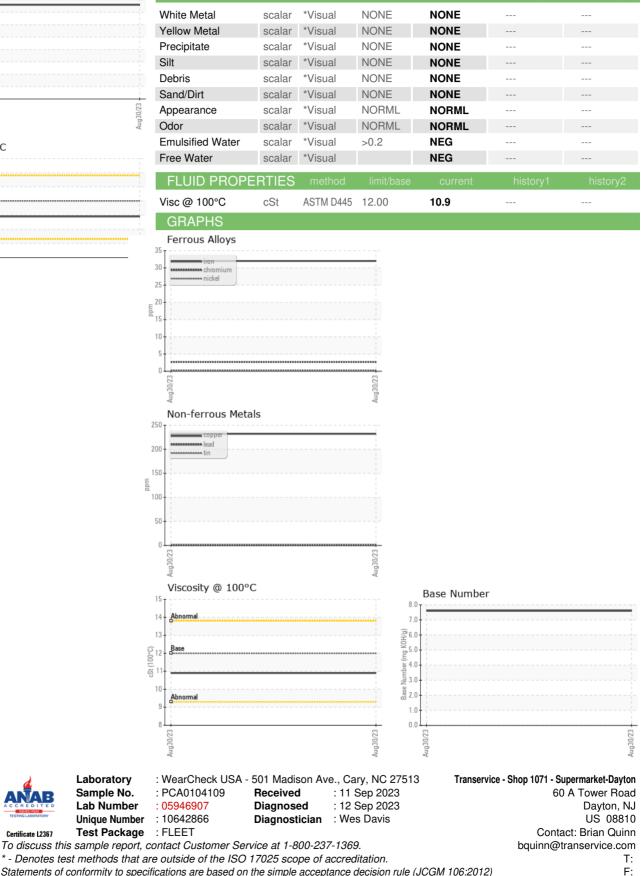
# **OIL ANALYSIS REPORT**

VISUAL









Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Certificate L2367