

# **OIL ANALYSIS REPORT**

#### Sample Rating Trend



# Machine Id 738608

Component Diesel Engine

Fluid PETRO CANADA DURON SHP 10W30 (--- GAL)

## DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

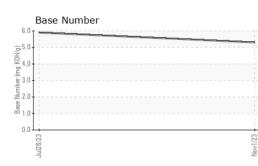
#### Fluid Condition

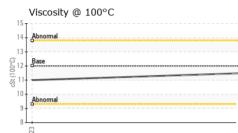
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

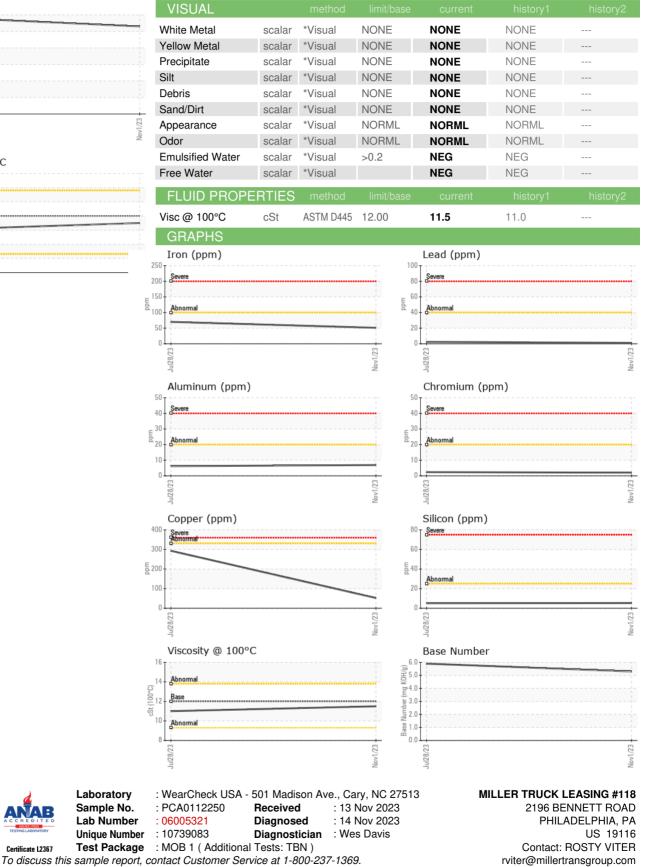
AL)			Jul2023	Nov2023		
SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0112250	PCA0100786	
Sample Date		Client Info		01 Nov 2023	28 Jul 2023	
Machine Age	mls	Client Info		229096	35886	
Oil Age	mls	Client Info		229096	35886	
Oil Changed		Client Info		Changed	Not Changd	
Sample Status				NORMAL	NORMAL	
CONTAMINA	ΓΙΟΝ	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Glycol		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	51	70	
Chromium	ppm	ASTM D5185m	>20	2	2	
Nickel	ppm	ASTM D5185m	>4	<1	<1	
Titanium	ppm	ASTM D5185m		<1	<1	
Silver	ppm	ASTM D5185m	>3	0	0	
Aluminum	ppm	ASTM D5185m	>20	7	6	
Lead	ppm	ASTM D5185m	>40	1	2	
Copper	ppm	ASTM D5185m	>330	52	293	
Tin	ppm	ASTM D5185m	>15	2	2	
Vanadium	ppm	ASTM D5185m		0	<1	
Cadmium	ppm	ASTM D5185m		0	<1	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	8	30	
Barium	ppm	ASTM D5185m	0	0	0	
Molybdenum	ppm	ASTM D5185m	50	51	30	
	pp	ASTIVI DOTODIII	50	•	30	
Manganese	ppm	ASTM D5185m		2	3	
-				-		
Magnesium	ppm	ASTM D5185m	0	2	3	
Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m	0 950	2 777	3 246	
Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050	2 777 1463	3 246 2109	
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995	2 777 1463 1059	3 246 2109 992	
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	2 777 1463 1059 1333	3 246 2109 992 1237	
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 limit/base	2 777 1463 1059 1333 2480	3 246 2109 992 1237 3163	  
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAI Silicon	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	2 777 1463 1059 1333 2480 current	3 246 2109 992 1237 3163 history1	   history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm NTS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	0 950 1050 995 1180 2600 limit/base	2 777 1463 1059 1333 2480 current 5	3 246 2109 992 1237 3163 history1 5	   history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm NTS	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 >25	2 777 1463 1059 1333 2480 current 5 2	3 246 2109 992 1237 3163 history1 5 7	   history2 
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm NTS	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 >25 >20	2 777 1463 1059 1333 2480 current 5 2 14	3 246 2109 992 1237 3163 history1 5 7 26	   history2  
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm vTS	ASTM D5185m 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 >25 >20 limit/base >3	2 777 1463 1059 1333 2480 current 5 2 14 current	3 246 2109 992 1237 3163 history1 5 7 26 history1	  history2   history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm vTS ppm ppm	ASTM D5185m 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 >25 >20 limit/base >3 >20	2 777 1463 1059 1333 2480 current 5 2 14 current 1	3 246 2109 992 1237 3163 history1 5 7 26 history1 0.9	  history2  history2
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 >25 >20 limit/base >3 >20	2 777 1463 1059 1333 2480 current 5 2 14 current 1 1 12.1	3 246 2109 992 1237 3163 history1 5 7 26 history1 0.9 13.2	   history2   history2  history2
Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624	0 950 1050 995 1180 2600 limit/base >25 	2 777 1463 1059 1333 2480 <u>current</u> 5 2 14 <u>current</u> 1 1 12.1 25.1	3 246 2109 992 1237 3163 history1 5 7 26 history1 0.9 13.2 26.5	   history2   history2  history2



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Certificate L2367

Laboratory

Sample No.

Lab Number

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

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

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