

# **OIL ANALYSIS REPORT**



V3506

Component Diesel Engine

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

## DIAGNOSIS

#### Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

### 🔺 Wear

The aluminum level is abnormal. All other component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

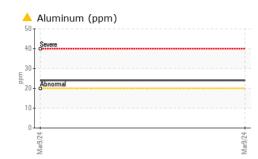
#### Fluid Condition

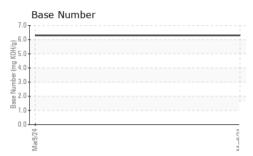
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

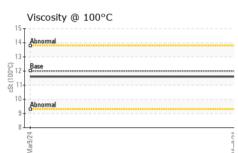
			h	Aar2024		
SAMPLE INFORM	<b>MATION</b>	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0099368		
Sample Date		Client Info		09 Mar 2024		
Machine Age	mls	Client Info		131089		
Dil Age	mls	Client Info		0		
Dil Changed		Client Info		Changed		
Sample Status				ABNORMAL		
CONTAMINATIO	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METALS	3	method	limit/base	current	history1	history2
ron	ppm	ASTM D5185m	>100	77		
Chromium	ppm	ASTM D5185m	>20	3		
Nickel	ppm	ASTM D5185m	>4	1		
Titanium	ppm	ASTM D5185m		5		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>20	<b>2</b> 4		
Lead	ppm	ASTM D5185m	>40	0		
Copper	ppm	ASTM D5185m	>330	6		
Tin	ppm	ASTM D5185m	>15	2		
Vanadium	ppm	ASTM D5185m		- <1		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	13		
Barium	ppm	ASTM D5185m	0	0		
Volybdenum	ppm	ASTM D5185m	50	82		
Vanganese			0	1		
	ppm	ASTM D5185m	0			
Magnesium		ASTM D5185m ASTM D5185m	950	1199		
U U	ppm	ASTM D5185m				
Calcium	ppm ppm	ASTM D5185m ASTM D5185m	950 1050	1199 1991		
Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995	1199 1991 1413		
Calcium Phosphorus Zinc	ppm ppm	ASTM D5185m ASTM D5185m	950 1050	1199 1991		
Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180	1199 1991 1413 1848		
Calcium Phosphorus Zinc Sulfur CONTAMINANT	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180 2600	1199 1991 1413 1848 4691		  
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	950 1050 995 1180 2600 limit/base	1199 1991 1413 1848 4691 current	   history1	   history2
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180 2600 limit/base	1199 1991 1413 1848 4691 current 11	   history1	   history2
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm TS ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180 2600 limit/base >25	1199 1991 1413 1848 4691 <u>current</u> 11 3	   history1 	   history2 
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm TS ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180 2600 limit/base >25	1199 1991 1413 1848 4691 <u>current</u> 11 3 14	   history1  	   history2  
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm <b>TS</b> ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180 2600 limit/base	1199 1991 1413 1848 4691 current 11 3 14 current	   history1   history1	  history2   history2
Silicon Sodium Potassium	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	950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	1199 1991 1413 1848 4691 current 11 3 14 current 0.9	   history1   history1	  history2   history2
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot % Nitration	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	950 1050 995 1180 2600 <b>limit/base</b> >25 >20 <b>limit/base</b> >3 >20	1199 1991 1413 1848 4691 <u>current</u> 11 3 14 <u>current</u> 0.9 13.4	   history1   history1	   history2  history2
Calcium Phosphorus Zinc Sulfur CONTAMINANT 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	950 1050 995 1180 2600 <b>limit/base</b> >25 >20 <b>limit/base</b> >3 >20	1199 1991 1413 1848 4691 <u>current</u> 11 3 14 <u>current</u> 0.9 13.4 25.6	  history1   history1  history1	  history2  history2  history2

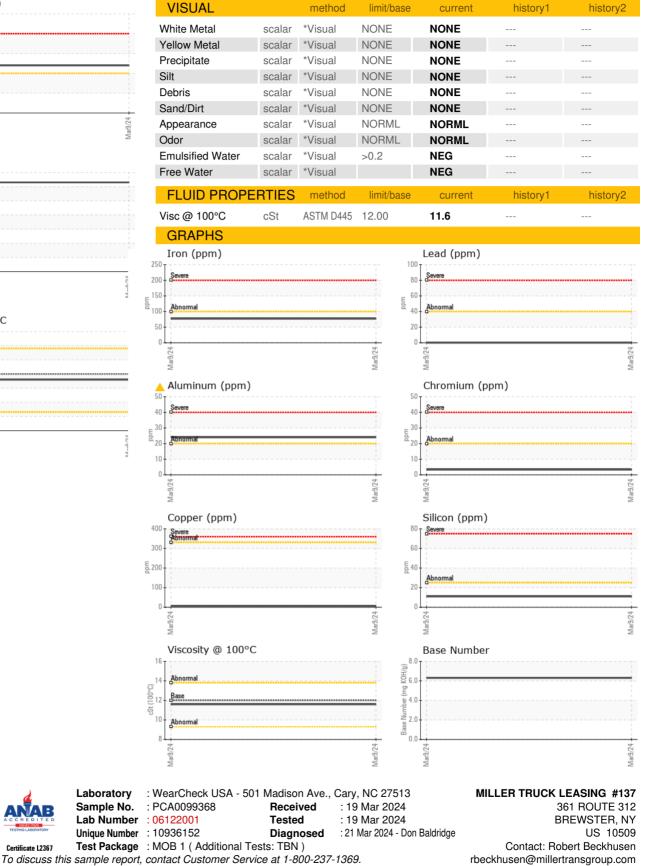


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\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Certificate L2367

Laboratory

Sample No.

F:

T: (845)779-1064