

# **OIL ANALYSIS REPORT**

#### Area SHARP BUS LINES Machine Id INTERNATIONAL 1406 Component

Diesel Engine

PETRO CANADA 15W40 (--- GAL)

## DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

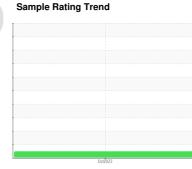
All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

The condition of the oil is acceptable for the time in service.





NORMAL

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PC0081556		
Sample Date		Client Info		16 Oct 2023		
Machine Age	kms	Client Info		264083		
Oil Age	kms	Client Info		3000		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>2.0	<1.0		
Glycol		WC Method		NEG		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron		ASTM D5185(m)	>127	17		
Chromium	ppm ppm	ASTM D5185(m)		<1		
Nickel	ppm	ASTM D5185(m)	>30	0		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)	>2	۰ <1		
Aluminum	ppm	ASTM D5185(m)	>59	3		
Lead	ppm	ASTM D5185(m)	>29	<1		
Copper	ppm	ASTM D5185(m)	>135	<1		
Tin	ppm	ASTM D5185(m)	>2	0		
Antimony	ppm	ASTM D5185(m)		0		
Vanadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185(m)	limit/base	current 2	history1	history2
	ppm ppm		limit/base			history2 
Boron		ASTM D5185(m)	limit/base	2		history2  
Boron Barium	ppm	ASTM D5185(m) ASTM D5185(m)	limit/base	2 <1		
Boron Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	2 <1 58		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	2 <1 58 0		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	2 <1 58 0 925		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	2 <1 58 0 925 986	  	  
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	2 <1 58 0 925 986 973	   	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	2 <1 58 0 925 986 973 1123	    	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	2 <1 58 0 925 986 973 1123 2435	    	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		2 <1 58 0 925 986 973 1123 2435 <1		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	2 <1 58 0 925 986 973 1123 2435 <1 current	      history1	      history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	2 <1 58 0 925 986 973 1123 2435 <1 current 3	      history1 	      history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	limit/base	2 <1 58 0 925 986 973 1123 2435 <1 <i>current</i> 3 2	       history1	      history2 
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	limit/base >18 >20	2 <1 58 0 925 986 973 1123 2435 <1 current 3 2 2 3 2 2	       history1  	      history2  
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	ASTM D5185(m) ASTM D5185(m)	limit/base >18 >20 limit/base	2 <1 58 0 925 986 973 1123 2435 <1 <i>current</i> 3 2 2 3 2 <1 <i>current</i>	       history1   history1	     history2  history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185(m) ASTM D5185(m)	limit/base >18 >20 limit/base >3	2 <1 58 0 925 986 973 1123 2435 <1 <i>current</i> 3 2 2 3 2 2 <1 <i>current</i> 0.7	      history1  history1  history1	     history2  history2  history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7844* ASTM D7624*	limit/base >18 >20 limit/base >3 >20	2 <1 58 0 925 986 973 1123 2435 <1 <i>current</i> 3 2 2 3 2 <1 <i>current</i> 0.7 7.7	      history1   history1  history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7844* ASTM D7624*	Imit/base >18 >20 Imit/base >3 >20 >3 >20	2 <1 58 0 925 986 973 1123 2435 <1 <u>current</u> 3 2 2 <1 <u>current</u> 0.7 7.7 21.0	         history1  history1	     history2  history2  history2

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Contact/Location: Doug Hall - ICSB902



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# **OIL ANALYSIS REPORT**

