

### **OIL ANALYSIS REPORT**

#### Sample Rating Trend



# Machine Id 2126908

#### Component Diesel Engine

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

#### 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

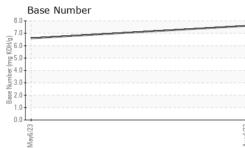
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0088721	PCA0092456	
Sample Date		Client Info		04 Aug 2023	06 May 2023	
Machine Age	mls	Client Info		0	29138	
Oil Age	mls	Client Info		20000	20000	
Oil Changed		Client Info		N/A	Changed	
Sample Status				NORMAL	ABNORMAL	
CONTAMINAT	ION	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	18	43	
Chromium	ppm	ASTM D5185m	>20	<1	1	
Nickel	ppm	ASTM D5185m	>4	0	2	
Titanium	ppm	ASTM D5185m		<1	<1	
Silver	ppm	ASTM D5185m	>3	2	<1	
Aluminum	ppm	ASTM D5185m	>20	8	18	
Lead	ppm	ASTM D5185m	>40	1	4	
Copper	ppm	ASTM D5185m	>330	137	230	
Tin	ppm		>15	2	9	
Vanadium	ppm	ASTM D5185m	>15	0	<1	
Cadmium	ppm	ASTM D5185m		0	0	
	ррпі			U	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 4	history1 105	history2
	ppm ppm					
Boron		ASTM D5185m	2	4	105	
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0 50	4 0	105 0	
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	4 0 66	105 0 119	
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	4 0 66 1	105 0 119 5	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	4 0 66 1 851	105 0 119 5 708	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	4 0 66 1 851 1159	105 0 119 5 708 1465	  
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	4 0 66 1 851 1159 947	105 0 119 5 708 1465 664	   
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180	4 0 66 1 851 1159 947 1128	105 0 119 5 708 1465 664 819	    
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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	2 0 50 950 1050 995 1180 2600	4 0 66 1 851 1159 947 1128 2693	105 0 119 5 708 1465 664 819 2699	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	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	2 0 50 950 1050 995 1180 2600	4 0 66 1 851 1159 947 1128 2693 current	105 0 119 5 708 1465 664 819 2699 history1	      history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b>	2 0 50 950 1050 995 1180 2600	4 0 66 1 851 1159 947 1128 2693 current 8	105 0 119 5 708 1465 664 819 2699 history1 ▲ 35	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25	4 0 66 1 851 1159 947 1128 2693 current 8 0	105 0 119 5 708 1465 664 819 2699 history1 ▲ 35 6	      history2 
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>limit/base</b> >25	4 0 66 1 851 1159 947 1128 2693 current 8 0 27	105 0 119 5 708 1465 664 819 2699 history1 ▲ 35 6 54	     history2  
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>Imit/base</b> >25 >20 <b>Imit/base</b> >3	4 0 66 1 851 1159 947 1128 2693 current 8 0 27 current	105 0 119 5 708 1465 664 819 2699 bistory1 35 6 54 54	      history2   history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	4 0 66 1 851 1159 947 1128 2693 <i>current</i> 8 0 27 27 <i>current</i> 0.3	105 0 119 5 708 1465 664 819 2699 history1 ▲ 35 6 54 54 history1 0.5	     history2  history2
Boron Barium Molybdenum 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 D5185m	2 0 50 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >3 >20	4 0 66 1 851 1159 947 1128 2693 <i>current</i> 8 0 27 <i>current</i> 0.3 8.0	105 0 119 5 708 1465 664 819 2699 history1 ▲ 35 6 54 54 history1 0.5 11.4	      history2   history2  history2
Boron Barium Molybdenum 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	2 0 50 1050 955 1050 995 1180 2600 <b>imit/base</b> >25 <b>imit/base</b> >3 >20	4 0 66 1 851 1159 947 1128 2693 <u>current</u> 8 0 27 <u>current</u> 0.3 8.0 19.0	105 0 119 5 708 1465 664 819 2699 history1 ▲ 35 6 54 54 0.5 history1 0.5 11.4 24.2	     history2  history2  history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	2 0 0 50 0 950 1050 995 1180 2600 2600 25 20 220 20 20 3 20 20 3 3 20 3 3 20 3 3 20 3 3 20 3 3 20 3 3 20 3 3 20 3 3 20 20 3 3 20 3 3 20 3 3 20 20 20 20 20 20 20 20 20 20 20 20 20	4 0 66 1 851 1159 947 1128 2693 <i>current</i> 8 0 27 <i>current</i> 0.3 8.0 19.0 <i>current</i>	105 0 119 5 708 1465 664 819 2699 history1 ▲ 35 6 54 54 0.5 11.4 24.2 history1	     history2  history2  history2  history2

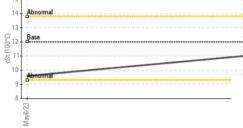


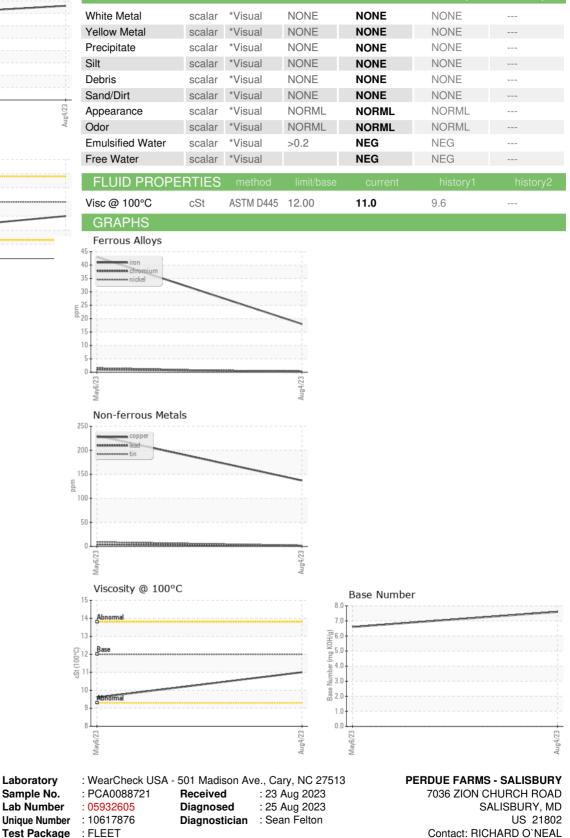
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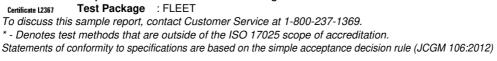
VISUAL



## Viscosity @ 100°C







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