

## **OIL ANALYSIS REPORT**







Machine Id **238274** Component **Diesel Engine** 

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

### DIAGNOSIS

#### Recommendation

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

#### 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.

#### 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.

	<b>NATION</b>	method	limit/base	current	nistory i	history2
Sample Number		Client Info		PCA0093338		
Sample Date		Client Info		06 Nov 2023		
Machine Age	mls	Client Info		13709		
Oil Age	mls	Client Info		0		
Oil Changed		Client Info		Not Changd		
Sample Status				NORMAL		
CONTAMINATI	ON	method	limit/base	current	historv1	historv2
Fuel		WC Mothod	~ 5	-1.0	,	···· ,
Wator		WC Method	>0.2			
Glycol		WC Method	>0.2	NEG		
alycol				NEG		
WEAR METALS	5	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	66		
Chromium	ppm	ASTM D5185m	>20	2		
Nickel	ppm	ASTM D5185m	>4	2		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>20	22		
Lead	ppm	ASTM D5185m	>40	0		
Copper	ppm	ASTM D5185m	>330	26		
Tin	ppm	ASTM D5185m	>15	3		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	44		
Barium	ppm	ASTM D5185m	0	0		
Molybdenum	ppm	ASTM D5185m	50	42		
Manganaga			0			
Manganese	ppm	ASTM D5185m	0	9		
Magnesium	ppm ppm	ASTM D5185m ASTM D5185m	0 950	9 548		
Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	950 1050	9 548 1648		
Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995	9 548 1648 835		
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180	9 548 1648 835 990	  	  
Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180 2600	9 548 1648 835 990 2611	   	  
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	0 950 1050 995 1180 2600 limit/base	9 548 1648 835 990 2611 current	    history1	    history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm FS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	0 950 1050 995 1180 2600 <b>limit/base</b> >25	9 548 1648 835 990 2611 current 10	    history1	    history2 
Magnesium 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 ASTM D5185m	0 950 1050 995 1180 2600 limit/base >25	9 548 1648 835 990 2611 current 10 6	    history1 	    history2 
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm TS ppm ppm	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> >25 >20	9 548 1648 835 990 2611 <u>current</u> 10 6 50	    history1 	   history2 
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm TS 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 Iimit/base >25 >20	9 548 1648 835 990 2611 current 10 6 50 current	   history1   history1	   history2   history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D51854	0 950 1050 995 1180 2600 Iimit/base >25 >20 Iimit/base >3	9 548 1648 835 990 2611 current 10 6 50 current 0.3	    history1   history1	   history2   history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7824	0 950 1050 995 1180 2600 <b>limit/base</b> >20 <b>limit/base</b> >3 >20	9 548 1648 835 990 2611 <u>current</u> 10 6 50 <u>current</u> 0.3 8.1	    history1  history1  history1	   history2   history2 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	0 950 1050 995 1180 2600 <b>limit/base</b> >25 >20 <b>limit/base</b> >3 >20 >30	9 548 1648 835 990 2611 <u>current</u> 10 6 50 <u>current</u> 0.3 8.1 23.0	    history1   history1  history1	    history2   history2  history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm ppm ppm ppm ppm TS ppm ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7844 *ASTM D7624	0 950 1050 995 1180 2600 imit/base >25 >20 imit/base >3 >20 >30 imit/base	9 548 1648 835 990 2611 10 6 50 current 0.3 8.1 23.0 current	    history1   history1  history1   history1	   history2   history2  history2   
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD Oxidation	ppm ppm ppm ppm ppm TS ppm ppm ppm ppm % Abs/cm Abs/1mm Abs/1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7844 *ASTM D7844 *ASTM D7844	0 950 1050 995 1180 2600 imit/base >25 20 imit/base >3 >20 >30 imit/base >25	9 548 1648 835 990 2611 <u>current</u> 10 6 50 <u>current</u> 0.3 8.1 23.0 <u>current</u> 21.0	history1 history1 history1 history1 history1 history1 history1	   history2   history2  history2   history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD Oxidation Base Number (BN)	ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm ppm Abs/cm Abs/cm Abs/.1mm Abs/.1mm mg KOH/g	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844 *ASTM D7415	0 950 1050 995 1180 2600 <b>imit/base</b> >25 >20 <b>imit/base</b> >30 >30 <b>imit/base</b> >25	9 548 1648 835 990 2611 <u>current</u> 10 6 50 <u>current</u> 0.3 8.1 23.0 <u>current</u> 21.0 9.8	    history1   history1    history1   	   history2   history2  history2    history2



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Contact/Location: JAMEY RITZ - MILLEEPA