

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 336658

Component Diesel Engine

Fluid 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

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.

ITS)			Feb2023	Jun2023		
SAMPLE INFORM	MATION	method	limit/base	current	history 1	history 2
Sample Number		Client Info		PCA0078761	PCA0078793	
Sample Date		Client Info		28 Jun 2023	28 Feb 2023	
Machine Age	mls	Client Info		60153	46598	
Oil Age	mls	Client Info		0	0	
Oil Changed		Client Info		Not Changd	Changed	
Sample Status				NORMAL	NORMAL	
CONTAMINATI	ION	method	limit/base	current	history 1	history 2
Fuel		WC Method	>5	<1.0	<1.0	
Glycol		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>100	22	100	
Chromium	ppm	ASTM D5185m	>20	1	4	
Nickel	ppm	ASTM D5185m	>4	<1	1	
Titanium	ppm	ASTM D5185m		6	<1	
Silver	ppm	ASTM D5185m	>3	0	0	
Aluminum	ppm	ASTM D5185m	>20	13	42	
Lead	ppm	ASTM D5185m	>40	0	0	
Copper	ppm	ASTM D5185m	>330	7	35	
Tin	ppm	ASTM D5185m	>15	1	4	
Vanadium	ppm	ASTM D5185m		<1	<1	
Cadmium	ppm	ASTM D5185m		<1	0	
ADDITIVES		method	limit/base	current	history 1	history 2
	ppm	method ASTM D5185m	limit/base	current 7	history 1 13	history 2
Boron	ppm ppm					
Boron Barium		ASTM D5185m	2	7	13	
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0	7 0	13 0	
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	7 0 54	13 0 52	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	7 0 54 2	13 0 52 9	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	7 0 54 2 849	13 0 52 9 641	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	7 0 54 2 849 1229	13 0 52 9 641 1635	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	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	7 0 54 2 849 1229 937	13 0 52 9 641 1635 815	
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	7 0 54 2 849 1229 937 1207	13 0 52 9 641 1635 815 1078	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600	7 0 54 2 849 1229 937 1207 3569	13 0 52 9 641 1635 815 1078 2285	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	7 0 54 2 849 1229 937 1207 3569 current	13 0 52 9 641 1635 815 1078 2285 history 1	 history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	2 0 50 950 1050 995 1180 2600 limit/base >25	7 0 54 2 849 1229 937 1207 3569 current 4	13 0 52 9 641 1635 815 1078 2285 history 1 10	 history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm TS	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 limit/base >25	7 0 54 2 849 1229 937 1207 3569 current 4 2 15	13 0 52 9 641 1635 815 1078 2285 history 1 10 6	 history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <i>limit/base</i> >25	7 0 54 2 849 1229 937 1207 3569 current 4 2 15	13 0 52 9 641 1635 815 1078 2285 history 1 10 6 82	 history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	7 0 54 2 849 1229 937 1207 3569 current 4 2 15 current	13 0 52 9 641 1635 815 1078 2285 history 1 10 6 82 82 history 1	 history 2 history 2
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 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	7 0 54 2 849 1229 937 1207 3569 <u>current</u> 4 2 15 <u>current</u> 0.5	13 0 52 9 641 1635 815 1078 2285 history 1 10 6 82 history 1 1	 history 2 history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm TS 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>	7 0 54 2 849 1229 937 1207 3569 <i>current</i> 4 2 15 <i>current</i> 0.5 9.4	13 0 52 9 641 1635 815 1078 2285 history 1 10 6 82 history 1 1 1 1 1 3.9	 history 2 history 2 history 2
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 TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 imit/base >25 imit/base >3 >20	7 0 54 2 849 1229 937 1207 3569 current 4 2 15 current 0.5 9.4 20.4	13 0 52 9 641 1635 815 1078 2285 history 1 10 6 82 history 1 1 1 3.9 25.6	 history 2 history 2



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cSt (100°C) Ba

Abnorma

Feb28/23

OIL ANALYSIS REPORT

scalar

scalar

scalar

scalar

*Visual

*Visual

*Visual

*Visual

scalar *Visual

NONE

VISUAL

White Metal

Yellow Metal

Precipitate

Silt

Debris



