

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 2126910

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

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

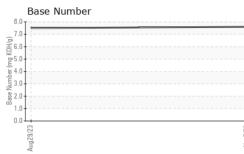
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

TS)			Aug2023	Nov2023		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0106363	PCA0101128	
Sample Date		Client Info		05 Nov 2023	29 Aug 2023	
Vachine Age	mls	Client Info		80000	60421	
Oil Age	mls	Client Info		20000	0	
Oil Changed		Client Info		Changed	N/A	
Sample Status				NORMAL	NORMAL	
CONTAMINATI	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	13	15	
Chromium	ppm	ASTM D5185m	>20	<1	<1	
Nickel	ppm	ASTM D5185m	>4	<1	<1	
Titanium	ppm	ASTM D5185m		<1	<1	
Silver	ppm	ASTM D5185m	>3	0	<1	
Aluminum	ppm	ASTM D5185m	>20	4	11	
Lead	ppm	ASTM D5185m	>40	4	0	
Copper	ppm	ASTM D5185m	>330	224	365	
	ppin		>15	1	2	
Tin	nnm	AS IM US I85m				
	ppm ppm	ASTM D5185m	>15			
Tin Vanadium Cadmium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	>15	0	0	
Vanadium	ppm	ASTM D5185m	limit/base	0	0	
Vanadium Cadmium ADDITIVES	ppm ppm	ASTM D5185m ASTM D5185m method	limit/base	0 0 current	0 0 history1	
Vanadium Cadmium ADDITIVES Boron	ppm ppm	ASTM D5185m ASTM D5185m method ASTM D5185m	limit/base	0 0 current 0	0 0 history1 3	 history2
Vanadium Cadmium ADDITIVES Boron Barium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m	limit/base 2 0	0 0 current 0 0	0 0 history1 3 0	 history2
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m	limit/base 2 0 50	0 0 current 0 0 62	0 0 history1 3 0 71	 history2
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 2 0 50 0	0 0 current 0 0 62 <1	0 0 history1 3 0 71 <1	 history2
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 2 0 50 0 950	0 0 current 0 0 62 <1 968	0 0 history1 3 0 71 <1 1036	 history2
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 2 0 50 0	0 0 current 0 0 62 <1 968 1161	0 0 history1 3 0 71 <1 1036 1193	 history2
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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	limit/base 2 0 50 0 950 1050 995	0 0 current 0 0 62 <1 968 1161 1098	0 0 history1 3 0 71 <1 1036 1193 1085	 history2
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 2 0 50 0 950 1050	0 0 current 0 0 62 <1 968 1161	0 0 history1 3 0 71 <1 1036 1193	 history2
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	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	limit/base 2 0 50 0 950 1050 995 1180	0 0 current 0 0 62 <1 968 1161 1098 1329	0 0 history1 3 0 71 <1 1036 1193 1085 1316	 history2
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base	0 0 0 0 0 62 <1 968 1161 1098 1329 2857	0 0 history1 3 0 71 <1 1036 1193 1085 1316 3678	 history2 -
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	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 D5185m	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base	0 0 0 0 0 62 <1 968 1161 1098 1329 2857 2857 current 5	0 0 history1 3 0 71 <1 1036 1193 1085 1316 3678 history1 8	 history2 history2
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	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 D5185m	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base >25	0 0 current 0 62 <1 968 1161 1098 1329 2857 current	0 0 history1 3 0 71 <1 1036 1193 1085 1316 3678 history1	 history2 history2
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base >25	0 0 0 0 0 62 <1 968 1161 1098 1329 2857 2857 current 5 <1	0 0 history1 3 0 71 <1 1036 1193 1085 1316 3678 history1 8 2	 history2 history2 history2
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20	0 0 current 0 0 62 <1 968 1161 1098 1329 2857 current 5 <1 12	0 0 history1 3 0 71 <1 1036 1193 1085 1316 3678 history1 8 2 29	 history2 history2 history2
Vanadium Cadmium ADDITIVES 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	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >20	0 0 0 0 0 62 <1 968 1161 1098 1329 2857 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 history1 3 0 71 <1 1036 1193 1085 1316 3678 history1 8 2 2 29 history1	 history2 history2 history2 history2 history2
Vanadium Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20	0 0 0 0 0 62 <1 968 1161 1098 1329 2857 0 0 0 5 <1 12 2857 0 0 0 0 3	0 0 history1 3 0 71 <1 1036 1193 1085 1316 3678 history1 8 2 29 history1 0.3	 history2 history2 history2 history2
Vanadium Cadmium ADDITIVES 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	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20	0 0 0 0 0 62 <1 968 1161 1098 1329 2857 current 5 <1 12 2857 0 0.3 8.0	0 0 history1 3 0 71 <1 1036 1193 1085 1316 3678 history1 8 2 29 history1 0.3 7.8	 history2 history2 history2 history2 history2
Vanadium Cadmium ADDITIVES 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	limit/base 2 0 50 0 950 1050 995 1180 2600 limit/base >25 20 limit/base >3 >20 >30 limit/base	0 0 0 current 0 0 62 <1 968 1161 1098 1329 2857 current 5 <1 12 2857 current 0.3 8.0 19.6	0 0 history1 3 0 71 <1 1036 1193 1085 1316 3678 history1 8 2 29 history1 0.3 7.8 19.0	 history2 history2 history2 history2



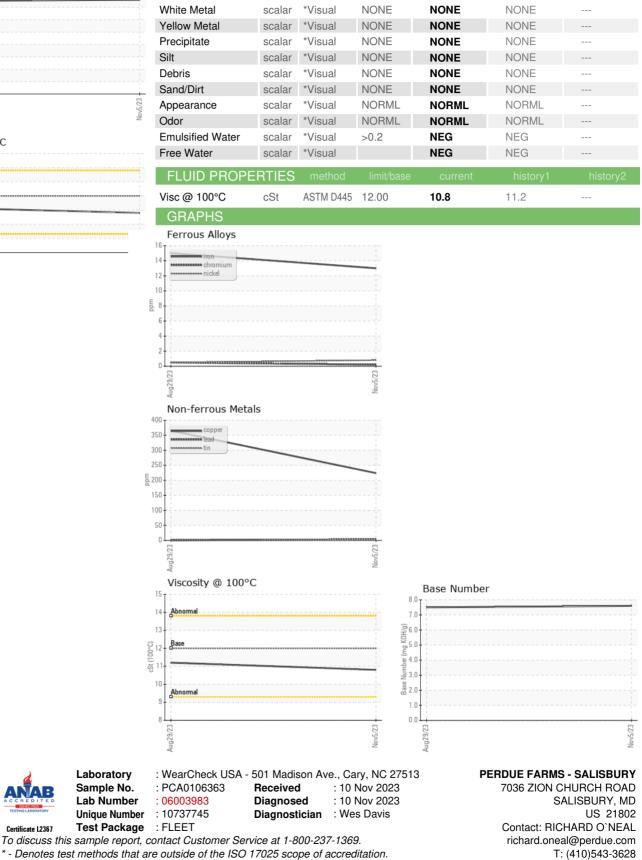
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VISUAL









Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Certificate L2367

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