

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 333166

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.

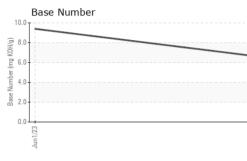
Fluid Condition

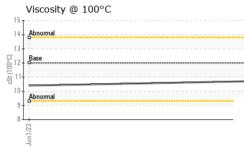
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

			Jun2023	Nov2023		
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0099701	PCA0091463	
Sample Date		Client Info		10 Nov 2023	01 Jun 2023	
Machine Age	mls	Client Info		44258	0	
Oil Age	mls	Client Info		20000	10000	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	NORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	19	24	
Chromium	ppm	ASTM D5185m	>20	<1	<1	
Nickel	ppm	ASTM D5185m	>4	2	<1	
Titanium	ppm	ASTM D5185m	~7	<1	0	
Silver		ASTM D5185m	>3	0	0	
Aluminum	ppm	ASTM D5185m	>20	6	1	
	ppm	ASTM D5185m		-	2	
Lead	ppm		>40	4	2	
Copper	ppm	ASTM D5185m	>330	26		
Tin	ppm		>15	2	<1	
Vanadium	ppm	ASTM D5185m		0	<1	
Cadmium	ppm	ASTM D5185m		<1	0	
					-	
ADDITIVES	••	method	limit/base		history1	history2
ADDITIVES Boron	ppm		limit/base			history2
				current	history1	
Boron	ppm	ASTM D5185m	2	current 335	history1 26	
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	2 0 50	current 335 0	history1 26 0	
Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	current 335 0 113	history1 26 0 73	
Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	current 335 0 113 1	history1 26 0 73 <1	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	current 335 0 113 1 616	history1 26 0 73 <1 819	
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	Current 335 0 113 1 616 1514	history1 26 0 73 <1 819 1106	
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	Current 335 0 113 1 616 1514 774	history1 26 0 73 <1 819 1106 926	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm 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	Current 335 0 113 1 616 1514 774 902 3185	history1 26 0 73 <1 819 1106 926 1112	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm 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	Current 335 0 113 1 616 1514 774 902 3185	history1 26 0 73 <1 819 1106 926 1112 3213	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	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	2 0 50 950 1050 995 1180 2600	Current 335 0 113 1 616 1514 774 902 3185 Current	history1 26 0 73 <1 819 1106 926 1112 3213 history1	 history2
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	2 0 50 950 1050 995 1180 2600	Current 335 0 113 1 616 1514 774 902 3185 Current 23	history1 26 0 73 <1 819 1106 926 1112 3213 history1 4	 history2
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 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	Current 335 0 113 1 616 1514 774 902 3185 Current 23 1 4	history1 26 0 73 <1 819 1106 926 1112 3213 history1 4 4	 history2
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	2 0 50 950 1050 995 1180 2600 limit/base >25	Current 335 0 113 1 616 1514 774 902 3185 Current 23 1 4	history1 26 0 73 <1 819 1106 926 1112 3213 history1 4	 history2
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	2 0 50 0 950 1050 995 1180 2600 limit/base >25 -20 limit/base	Current 335 0 113 1 616 1514 774 902 3185 Current 23 1 4 X	history1 26 0 73 <1 819 1106 926 1112 3213 history1 4 4 4 4 4 41 history1	 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 ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	Current 335 0 113 1 616 1514 774 902 3185 current 23 1 4 current 0.9	history1 26 0 73 <1 819 1106 926 1112 3213 history1 4 4 4 4 4 0.8	 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 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20	current 335 0 113 1 616 1514 774 902 3185 current 23 1 4 current 0.9 13.5 25.0	history1 26 0 73 <1 819 1106 926 1112 3213 history1 4 4 4 4 0.8 9.8	 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 TS ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	2 0 0 50 0 950 1050 995 1180 2600 imit/base >25 20 imit/base >3 >20 >30	Current 335 0 113 1 616 1514 774 902 3185 Current 23 1 4 Current 0.9 13.5 25.0 Current	history1 26 0 73 <1 819 1106 926 1112 3213 history1 4 4 4 0.8 9.8 19.0 history1	 history2 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 50 950 1050 995 1180 2600 imit/base >25 imit/base >3 >20	current 335 0 113 1 616 1514 774 902 3185 current 23 1 4 current 0.9 13.5 25.0	history1 26 0 73 <1 819 1106 926 1112 3213 history1 4 4 4 0.8 9.8 19.0	 history2 history2 history2



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Laboratory

Sample No.

Certificate L2367

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F: (732)400-8475