

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id CB936

Component Diesel Engine

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

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

Elui

All component wear rates are normal.

Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

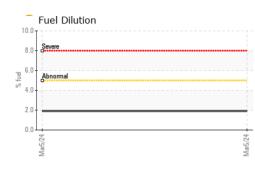
Fluid Condition

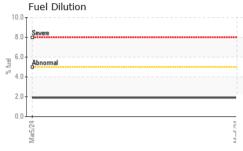
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

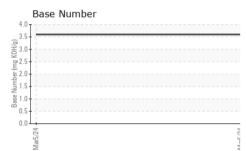
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0116925		
Sample Date		Client Info		05 Mar 2024		
Machine Age	mls	Client Info		0		
Oil Age	mls	Client Info		0		
Oil Changed		Client Info		Changed		
Sample Status				ATTENTION		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
,						
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	15		
Chromium	ppm	ASTM D5185m	>20	<1		
Nickel	ppm	ASTM D5185m	>4	0		
Titanium	ppm	ASTM D5185m		<1		
Silver	ppm	ASTM D5185m	>3	<1		
Aluminum	ppm	ASTM D5185m	>20	3		
Lead	ppm	ASTM D5185m	>40	0		
Copper	ppm	ASTM D5185m	>330	7		
Tin	ppm	ASTM D5185m	>15	<1		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	limit/base	current 53	history1	history2
	ppm ppm					
Boron		ASTM D5185m	2	53		
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0 50	53 2		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	53 2 64		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	53 2 64 2		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	53 2 64 2 433		
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	53 2 64 2 433 834	 	
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	53 2 64 2 433 834 565	 	
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	53 2 64 2 433 834 565 614	 	
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	2 0 50 950 1050 995 1180 2600	53 2 64 2 433 834 565 614 2475		
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 50 950 1050 995 1180 2600	53 2 64 2 433 834 565 614 2475 current		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	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	53 2 64 2 433 834 565 614 2475 current 7	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	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 limit/base >25	53 2 64 2 433 834 565 614 2475 current 7 3	 history1	 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 limit/base >25	53 2 64 2 433 834 565 614 2475 current 7 3 4	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 kimit/base >25 >20 >5	53 2 64 2 433 834 565 614 2475 current 7 3 4 1.9	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm %	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25 >20 >5 limit/base >3	53 2 64 2 433 834 565 614 2475 <i>current</i> 7 3 4 1.9 <i>current</i> 0	 history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25 >20 >5 limit/base >3	53 2 64 2 433 834 565 614 2475 current 7 3 4 1.9 current	 history1 history1 	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524 method *ASTM D7844	2 0 50 0 950 1050 995 1180 2600 <i>limit/base</i> >20 >5 <i>limit/base</i> >3 >20	53 2 64 2 433 834 565 614 2475 <i>current</i> 7 3 4 1.9 <i>current</i> 0 9.5	 history1 history1 	history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D51854 *ASTM D7844	2 0 50 950 1050 995 1180 2600 imit/base >25 >20 >5 imit/base >3 >20 >3 >20	53 2 64 2 433 834 565 614 2475 current 7 3 4 1.9 current 0 9.5 19.1	 history1 history1	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel 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 >20 >20 >5 imit/base >3 >20 >30 >30	53 2 64 2 433 834 565 614 2475 current 7 3 4 1.9 current 0 9.5 19.1 current	 history1 history1 history1 history1 history1 	 history2 history2 history2 history2



OIL ANALYSIS REPORT







VISUAL		method	limit/base	current	history1	history2			
White Metal	scalar	*Visual	NONE	NONE					
Yellow Metal	scalar	*Visual	NONE	NONE					
Precipitate	scalar	*Visual	NONE	NONE					
Silt	scalar	*Visual	NONE	NONE					
Debris	scalar	*Visual	NONE	NONE					
Sand/Dirt	scalar	*Visual	NONE	NONE					
Appearance	scalar	*Visual	NORML	NORML					
Odor	scalar	*Visual	NORML	NORML					
Emulsified Water	scalar	*Visual	>0.2	NEG					
Free Water	scalar	*Visual		NEG					
FLUID PROPE	RTIES	method	limit/base	current	history1	history2			
Visc @ 100°C	cSt	ASTM D445	12.00	7 .9					
GRAPHS									
Iron (ppm)			10	Lead (ppm)					
250 Severe				Severe					
200			6	0					
Abnormal			L.	Abnormal					
50				0					
0				o L					
Mar5/24			Mar5/24	Mar5/24		Mar5/24			
W			Ma			Ma			
Aluminum (ppm)			-	Chromium (p	opm)				
50 40 Severe				Severe					
E 30 20 Abnormal			۳. ۳. ۲.	Abnormal					
10-				0					
0				0					
Mar5/24			Mar5/24	Mar5/24		Mar5/24			
W			Ma	Ma		Ma			
Copper (ppm)				Silicon (ppm))				
400 Severe			8	⁰ Severe					
300				0					
툡 200			E 4	0					
100 -				Abnormal					
0				o L					
Mar5/24			Mar5/24	Mar5/24		Mar5/24			
			Ma			Wa			
Viscosity @ 100°C			4	Base Numbe	r				
14 Abnormal			(B/HO						
3.00 12 Base			y Bm)						
은 경 ¹⁰ - <mark>Abnormal</mark>			(8) 3. 2. 1. 888 8	.0+					
8+			I ase No	0					
6				0		+			
Mar5/24			Mar5/24	Mar5/24		Mar5/24			
2			2	2		2			
: WearCheck USA - 50	1 Madiso	n Ave., Carv	. NC 27513	M	ILLER TRUCK	LEASING #114			
WearCheck USA - 501 Madison Ave., Cary, NC 27513 MILLER TRUCK LEASING #114 : PCA0116925 Received : 21 Mar 2024 63 REPAUPO STATION ROAD									
: 06124535 Tested : 22 Mar 2024 LOGAN TOWNSHIP, NJ									
: 10938686 Diagnosed : 23 Mar 2024 - Don Baldridge US 08085									

Unique Number : 10938686 : 23 Mar 2024 - Don Baldridge Diagnosed Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, TBN) Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. edavis@millertransgroup.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Laboratory Sample No. Lab Number

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