

OIL ANALYSIS REPORT



Machine Id BM-11 Component Diesel Engine Fluid PETRO CANADA DURON SHP 10W30 (11 GAL)

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

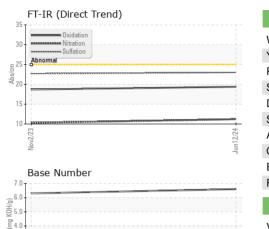
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0113987	PCA0105268	
Sample Date		Client Info		12 Jun 2024	02 Nov 2023	
Machine Age	hrs	Client Info		14673	13458	
Oil Age	hrs	Client Info		1215	13458	
Oil Changed		Client Info		Changed	N/A	
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	36	34	
Chromium	ppm	ASTM D5185m	>20	1	<1	
Nickel	ppm	ASTM D5185m	>4	<1	0	
Titanium	ppm	ASTM D5185m		1	<1	
Silver	ppm	ASTM D5185m	>3	<1	0	
Aluminum	ppm	ASTM D5185m	>20	7	5	
Lead	ppm	ASTM D5185m	>40	<1	0	
Copper	ppm	ASTM D5185m	>330	4	3	
Tin	ppm	ASTM D5185m	>15	<1	<1	
Vanadium	ppm	ASTM D5185m		<1	0	
Cadmium	ppm	ASTM D5185m		<1	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 2	current 3	history1 6	history2
	ppm ppm					
Boron		ASTM D5185m	2	3	6	
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0 50	3 0	6 0	
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	3 0 65	6 0 67	
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	3 0 65 1	6 0 67 <1	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	3 0 65 1 1029	6 0 67 <1 1010	
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	3 0 65 1 1029 1243	6 0 67 <1 1010 1223	
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	3 0 65 1 1029 1243 1114	6 0 67 <1 1010 1223 1092	
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 0 950 1050 995 1180	3 0 65 1 1029 1243 1114 1413	6 0 67 <1 1010 1223 1092 1425	
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 0 950 1050 995 1180 2600 limit/base	3 0 65 1 1029 1243 1114 1413 2951	6 0 67 <1 1010 1223 1092 1425 2917	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	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 0 950 1050 995 1180 2600 limit/base	3 0 65 1 1029 1243 1114 1413 2951 current	6 0 67 <1 1010 1223 1092 1425 2917 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm 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	3 0 65 1 1029 1243 1114 1413 2951 current 12	6 0 67 <1 1010 1223 1092 1425 2917 history1 11	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm 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	3 0 65 1 1029 1243 1114 1413 2951 current 12 2	6 0 67 <1 1010 1223 1092 1425 2917 history1 11 1	 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 0 950 1050 995 1180 2600 limit/base >25	3 0 65 1 1029 1243 1114 1413 2951 current 12 2 5	6 0 67 <1 1010 1223 1092 1425 2917 history1 11 11 1 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 TS ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	3 0 65 1 1029 1243 1114 1413 2951 current 12 2 5 5 current	6 0 67 <1 1010 1223 1092 1425 2917 history1 11 1 1 4 history1 0.9 10.3	 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 TS ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	3 0 65 1 1029 1243 1114 1413 2951 current 12 2 5 current 1	6 0 67 <1 1010 1223 1092 1425 2917 history1 11 1 4 <i>h</i> istory1 0.9	 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 TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 0 50 0 950 1050 995 1180 2600 limit/base >25 limit/base >20	3 0 65 1 1029 1243 1114 1413 2951 <i>current</i> 12 2 5 <i>current</i> 1 1 1 1 1.2	6 0 67 <1 1010 1223 1092 1425 2917 history1 11 1 1 4 history1 0.9 10.3	 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 TS ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	2 0 50 0 950 1050 995 1180 2600 limit/base >25 -20 limit/base >3 >20 >30	3 0 65 1 1029 1243 1114 1413 2951 <u>current</u> 12 2 5 <u>current</u> 1 1 11.2 23.0	6 0 67 <1 1010 1223 1092 1425 2917 history1 11 1 1 4 <u>history1</u> 0.9 10.3 22.7	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAI	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	2 0 50 0 950 1050 995 1180 2600 imit/base >25 	3 0 65 1 1029 1243 1114 1413 2951 current 12 2 5 current 1 1 1.2 2 3 0 current	6 0 67 <1 1010 1223 1092 1425 2917 history1 11 1 1 4 history1 0.9 10.3 22.7 history1	 history2 history2 history2 history2

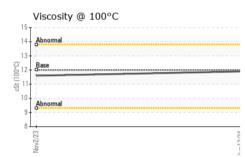


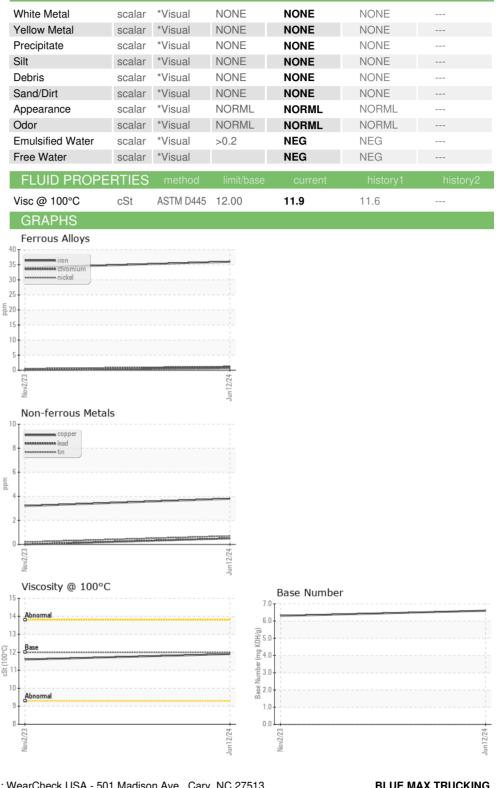
OIL ANALYSIS REPORT

VISUAL









Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 **BLUE MAX TRUCKING** Sample No. : PCA0113987 Received : 08 Jul 2024 1015 E. WESTINGHOUSE BLVD. Lab Number : 06229747 Tested : 09 Jul 2024 CHARLOTTE, NC Diagnosed Unique Number : 11113240 : 09 Jul 2024 - Wes Davis US 28273 Test Package : FLEET Contact: Jody Greer Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. jgreer@bluemaxtrucking.com T: (980)225-9968 * - 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)

Submitted By: Jody Greer

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