

OIL ANALYSIS REPORT







Machine Id BM-21 Component

Diesel Engine

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

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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 INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0110744		
Sample Date		Client Info		24 Jan 2024		
Machine Age	hrs	Client Info		1982		
Oil Age	hrs	Client Info		1005		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	31		
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		>20	25		
Lead	ppm	ASTM D5185m	>40	2		
Copper	ppm	ASTM D5185m	>330	6		
Tin	ppm	ASTM D5185m	>15	2		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	3		
Barium	ppm	ASTM D5185m	0	<1		
Molybdenum	ppm	ASTM D5185m	50	49		
Manganese	ppm	ASTM D5185m	0	<1		
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Magnesium	ppm	ASTM D5185m	950	845		
Magnesium Calcium		ASTM D5185m ASTM D5185m	950 1050			
0	ppm			845		
Calcium	ppm ppm	ASTM D5185m	1050	845 1008		
Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m	1050 995	845 1008 932		
Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180	845 1008 932 1121		
Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180 2600 limit/base	845 1008 932 1121 2515	 	
Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	1050 995 1180 2600 limit/base	845 1008 932 1121 2515 current	 history1	 history2
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180 2600 limit/base	845 1008 932 1121 2515 current 8	 history1	 history2
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm TTS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180 2600 limit/base >25	845 1008 932 1121 2515 current 8 3	 history1 	 history2
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm TTS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180 2600 limit/base >25 >20	845 1008 932 1121 2515 current 8 3 73	 history1 	 history2
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm tTS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180 2600 limit/base >25 >20 limit/base	845 1008 932 1121 2515 current 8 3 3 73 current	 history1 history1	 history2 history2
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180 2600 limit/base >25 >20 limit/base >3	845 1008 932 1121 2515 current 8 3 73 current 0.5	 history1 history1 	 history2 history2
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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D51854 ASTM D7844	1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20	845 1008 932 1121 2515 current 8 3 73 current 0.5 10.4	 history1 history1 history1	 history2 history2 history2
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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D584m *ASTM D7844 *ASTM D7844	1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20 >30	845 1008 932 1121 2515 current 8 3 73 current 0.5 10.4 21.3	 history1 history1 	 history2 history2 history2
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	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 D7844 *ASTM D7844 *ASTM D7624	1050 995 1180 2600 imit/base >25 >20 imit/base >3 >20 >30 imit/base	845 1008 932 1121 2515 current 8 3 73 current 0.5 10.4 21.3 current	 history1 history1 history1	 history2 history2 history2



OIL ANALYSIS REPORT

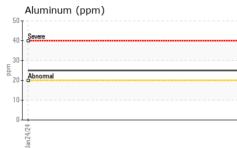
scalar

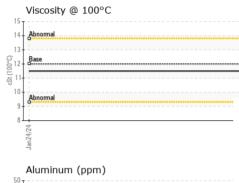
*Visual

NONE

NONE

VISUAL White Metal









Yellow Metal *Visual NONE NONE scalar Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris *Visual NONE NONE scalar Sand/Dirt NONE scalar *Visual NONE an24/24 NORML Appearance *Visual NORML scalar Odor *Visual NORML NORML scalar **Emulsified Water** scalar *Visual >0.2 NEG Free Water scalar *Visual NEG **FLUID PROPERTIES** Visc @ 100°C cSt ASTM D445 12.00 11.5 GRAPHS Ferrous Alloys 3! 30 ickel 25 20 10 5 an 24/7/ Non-ferrous Metals lead Jan24/24 Viscosity @ 100°C Base Number 7. 14 6. (B/HO) 5.0 13 cSt (100°C) E 4.0 - e 3.0 10 器 2.0 Abnorma 1.0 0.0 Jan24/24 Jan24/24 Jan 24/24 **BLUE MAX TRUCKING** Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. :01 Feb 2024 1015 E. WESTINGHOUSE BLVD. : PCA0110744 Recieved Lab Number : 01 Feb 2024 CHARLOTTE, NC :06076529 Diagnosed : Wes Davis Unique Number : 10858620 Diagnostician US 28273 Test Package : FLEET Contact: Jody Greer Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. jgreer@bluemaxtrucking.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (980)225-9968

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

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