

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id BM-44

Component Diesel Engine

Fluid PETRO CANADA DURON SHP 10W30 (10 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.

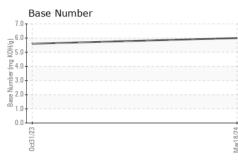
Fluid Condition

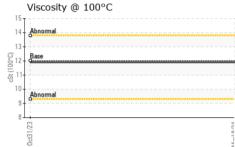
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

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SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0110727	PCA0110774	
Sample Date		Client Info		18 Mar 2024	31 Oct 2023	
Machine Age	hrs	Client Info		52362	28279	
Oil Age	hrs	Client Info		24083	28279	
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	37	50	
Chromium	ppm	ASTM D5185m	>20	<1	<1	
Nickel	ppm	ASTM D5185m	>4	0	0	
Titanium	ppm	ASTM D5185m		0	<1	
Silver	ppm	ASTM D5185m	>3	0	<1	
Aluminum	ppm	ASTM D5185m	>20	10	33	
Lead	ppm	ASTM D5185m	>40	<1	0	
Copper	ppm	ASTM D5185m	>330	11	60	
Tin	ppm	ASTM D5185m	>15	<1	2	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	
oddinidini	ppm	AGTIVI DJ TOJITI		U	0	
ADDITIVES	ppin	method	limit/base	current	history1	history2
	ppm		limit/base			
ADDITIVES		method		current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	2	current 2	history1 16	history2
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	2 0	current 2 0	history1 16 0	history2
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	current 2 0 59	history1 16 0 14	history2
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	current 2 0 59 <1	history1 16 0 14 2	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	current 2 0 59 <1 1057	history1 16 0 14 2 848	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	Current 2 0 59 <1 1057 1319	history1 16 0 14 2 848 1351	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	Current 2 0 59 <1 1057 1319 1133	history1 16 0 14 2 848 1351 860	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180	current 2 0 59 <1 1057 1319 1133 1386	history1 16 0 14 2 848 1351 860 996	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m 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	Current 2 0 59 <1 1057 1319 1133 1386 3742	history1 16 0 14 2 848 1351 860 996 2867	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method 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 2 0 59 <1 1057 1319 1133 1386 3742 current	history1 16 0 14 2 848 1351 860 996 2867 history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base	current 2 0 59 <1 1057 1319 1133 1386 3742 current 10	history1 16 0 14 2 848 1351 860 996 2867 history1 21	history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base	current 2 0 59 <1 1057 1319 1133 1386 3742 current 10 1	history1 16 0 14 2 848 1351 860 996 2867 history1 21 3	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25	current 2 0 59 <1 1057 1319 1133 1386 3742 current 10 1 2 2 4	history1 16 0 14 2 848 1351 860 996 2867 history1 21 3 99	history2 history2
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	method ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 -20 limit/base	current 2 0 59 <1 1057 1319 1133 1386 3742 current 10 1 24 current	history1 16 0 14 2 848 1351 860 996 2867 history1 21 3 99 history1	history2 history2 history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	current 2 0 59 <1 1057 1319 1133 1386 3742 current 10 1 24 current 0.5	history1 16 0 14 2 848 1351 860 996 2867 history1 21 3 99 history1 0.3	history2 history2 history2 history2
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	method ASTM D5185m	2 0 50 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >3 >20	current 2 0 59 <1 1057 1319 1133 1386 3742 current 10 1 24 current 0.5 10.6	history1 16 0 14 2 848 1351 860 996 2867 history1 21 3 99 history1 0.3 10.9	history2 history2 </th
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	method ASTM D5185m ASTM D7185M ASTM D7624 *ASTM D7415 method	2 0 0 50 0 950 1050 995 1180 2600 imit/base >25 >20 >20 >30 >30 imit/base	current 2 0 59 <1 1057 1319 1133 1386 3742 current 10 1 24 current 0.5 10.6 22.1	history1 16 0 14 2 848 1351 860 996 2867 history1 21 3 99 history1 0.3 10.9 23.3 history1	history2 history2 history2
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	method ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 imit/base >25 imit/base >3 >20	current 2 0 59 <1 1057 1319 1133 1386 3742 current 10 1 24 current 0.5 10.6 22.1	history1 16 0 14 2 848 1351 860 996 2867 history1 21 3 99 history1 0.3 10.9 23.3	history2 history2 history2 history2 history2 history2 -



OIL ANALYSIS REPORT





	VISUAL		method	limit/base	current	history1	history2
	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
	Precipitate	scalar	*Visual	NONE	NONE	NONE	
	Silt	scalar	*Visual	NONE	NONE	NONE	
	Debris	scalar	*Visual	NONE	NONE	NONE	
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
	Appearance	scalar	*Visual	NORML	NORML	NORML	
	Odor	scalar	*Visual	NORML	NORML	NORML	
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
	Free Water	scalar	*Visual		NEG	NEG	
	FLUID PROP	ERTIES	method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445	12.00	11.9	11.9	
	GRAPHS						
	Ferrous Alloys						
	50 iron						
	40 - neessaa chromium						
	30-						
bpm							
	20						
	10-						
	0		V				
	0ct31/23			Mar18/24			
	00			Ma			
	Non-ferrous Met	als					
	copper						
	50 - management lead						
	40						
bpm	30-						
	20						
	10						
				5			
	2/			Mar18/24			
	ct31						
	Viceocity @ 1009	C.		Ma			
	Viscosity @ 100°	C			Base Number		
	Viscosity @ 100°	C		7.0	Base Number		
	Viscosity @ 100°	C		7.0	Base Number		
	Viscosity @ 100°	C		7.0	Base Number		
	Viscosity @ 100°	Ċ		7.0	Base Number		
	Viscosity @ 100°	С		7.0	Base Number		
cSt (100°C)	Viscosity @ 100°	C		7.0	Base Number		
cSt (100°C)	Viscosity @ 100°	с		7.0	Base Number		
cSt (100°C)	Viscosity @ 100° Abnormal	c		7.0 6.0 (0) HOX But 4.0 9 um/N 3.0 2.0 2.0	Base Number		
cSt (100°C)	Viscosity @ 100°	c		7.0 6.0 (0) HOX 5.0 10 4.0 8 8 2.0 1.0 0.0			
cSt (100°C)	Viscosity @ 100° Abnormal	c		7.0 6.0 (0) HOX 5.0 4.0 4.0 40 4.0 2.0 8 8 2.0	Base Number		
cSt (100°C)	Viscosity @ 100°			7.0 6.0 (b)HOX b(1) 4.0 4.0 9 8 8 8 8 9 8 9 8 9 8 9 1.0 0.0			
cSt (100°C)	Viscosity @ 100°	01 Madisc		7.0 6.0 (0)(D)(D)(5.0 9)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)	0ct31/23	BLUE M/	
cSt (100°C)	Viscosity @ 100°		ved : 19	7.0 6.0 (b)HOX b(1) 4.0 4.0 9 8 8 8 8 9 8 9 8 9 8 9 1.0 0.0	0ct31/23	BLUE M/ 15 E. WESTING	AX TRUCKIN HOUSE BLV ARLOTTE, N



 Unique Number
 : 10937208
 Diagnosed
 : 20 Mar 2024 - Wes Davis
 US 28273

 Certificate L2367
 Test Package
 : FLEET
 Contact: Jody Greer

 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)
 F: (704)588-2901