

OIL ANALYSIS REPORT

Sample Rating Trend



BM-58

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.

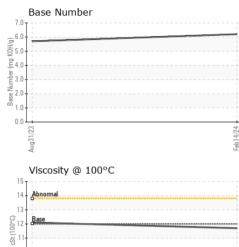
			Aug2023	Feb2024		
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0110802	PCA0103139	
Sample Date		Client Info		14 Feb 2024	31 Aug 2023	
Machine Age	mls	Client Info		256731	238571	
Oil Age	mls	Client Info		18160	22346	
Oil Changed		Client Info		Changed	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
		ASTM D5185m	>100		31	
Iron	ppm			17 <1		
Chromium Nickel	ppm	ASTM D5185m	>20		0	
	ppm	ASTM D5185m	>4	0	0	
Titanium	ppm	ASTM D5185m	0	0	0	
Silver	ppm	ASTM D5185m	>3	0	0	
Aluminum	ppm	ASTM D5185m	>20	4	6	
Lead	ppm	ASTM D5185m	>40	0	0	
Copper	ppm	ASTM D5185m	>330	1	3	
Tin	ppm	ASTM D5185m	>15	0	<1	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 3	history1 <1	history2
	ppm ppm					
Boron		ASTM D5185m	2	3	<1	
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	3 0	<1 0	
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	3 0 61	<1 0 66	
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	3 0 61 <1	<1 0 66 <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 61 <1 952	<1 0 66 <1 1034	
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 61 <1 952 1054	<1 0 66 <1 1034 1158	
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 61 <1 952 1054 1040	<1 0 66 <1 1034 1158 1069	
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	3 0 61 <1 952 1054 1040 1257 2619	<1 0 66 <1 1034 1158 1069 1332	
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	3 0 61 <1 952 1054 1040 1257 2619	<1 0 66 <1 1034 1158 1069 1332 2657	
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 50 950 1050 995 1180 2600	3 0 61 <1 952 1054 1040 1257 2619 current	<1 0 66 <1 1034 1158 1069 1332 2657 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 method	2 0 50 950 1050 995 1180 2600	3 0 61 <1 952 1054 1040 1257 2619 current 10	<1 0 66 <1 1034 1158 1069 1332 2657 history1 9	 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	3 0 61 <1 952 1054 1040 1257 2619 <u>current</u> 10 1	<1 0 66 <1 1034 1158 1069 1332 2657 history1 9 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 50 950 1050 995 1180 2600 limit/base >25	3 0 61 <1 952 1054 1040 1257 2619 current 10 1 2	<1 0 66 <1 1034 1158 1069 1332 2657 history1 9 1 3	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	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 0 61 <1 952 1054 1040 1257 2619 current 10 1 2 2 2 current	<1 0 66 <1 1034 1158 1069 1332 2657 history1 9 1 3 3 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 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 61 <1 952 1054 1040 1257 2619 <u>current</u> 10 1 2 2 <u>current</u> 0.7	<1 0 66 <1 1034 1158 1069 1332 2657 history1 9 1 3 <i>history1</i> 1	 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	3 0 61 <1 952 1054 1040 1257 2619 current 10 1 2 2 0.7 10.6 21.9	<1 0 66 <1 1034 1158 1069 1332 2657 history1 9 1 3 history1 1 1 1 11.6	 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	3 0 61 <1 952 1054 1040 1257 2619 current 10 1 2 2 0.7 10.6 21.9	<1 0 66 <1 1034 1158 1069 1332 2657 history1 9 1 3 history1 1 1 11.6 24.2	 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 TS ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	2 0 0 50 0 950 1050 995 1180 2600 imit/base >25 20 imit/base >3 >20 >30	3 0 61 <1 952 1054 1040 1257 2619 Current 10 1 2 Current 0.7 10.6 21.9 Current	<1 0 66 <1 1034 1158 1069 1332 2657 history1 9 1 3 history1 1 1 11.6 24.2 history1	 history2 history2 history2 history2



10 Abnormal

8 Aug31/23

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		
Feb 14/24	Appearance	scalar	*Visual	NORML	NORML	NORML		
-a-	Odor	scalar	*Visual	NORML	NORML	NORML		
0°C	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG		
	Free Water	scalar	*Visual		NEG	NEG		
	FLUID PROPE	RTIES	method	limit/base	current	history1	history2	
	Visc @ 100°C	cSt	ASTM D445	12.00	11.7	12.1		
1	GRAPHS							
	Ferrous Alloys							
	³⁵							
V C V .	30 - iron							
С. 1 . А	25 -							
	E ²⁰		Contraction of the local division of the loc					
	Ē. 15							
	10-							
	5							
	0							
	Aug31/23			Feb14/24				
	Aug3			Feb1				
	Non-ferrous Metal	s						
	10 copper							
	8 - Reasons lead							
	6							
	4							
	2							
	0							
	Aug31/23			Feb14/24				
				Fel				
	Viscosity @ 100°C	;			Base Numl	ber		
				7.	.0 T			
	14 - Abnormal			6.				
	13 Base			(B),HOX HOX HOX HOX HOX HOX HOX HOX HOX HOX	.0 -			
	10 12 - Base 00 12 - Base 53 11 -			B4.	.0+			
	ත් 11-			qu 3.	.0 -			
	10 - Abnormal			asec 2.	.0 -			
	9 -			1.				
	8				.0 4			
	Aug31/23			Feb14/24	Aug31/23		Feb14/24	
	Aug			10	Auf		Fei	
Laboratory	: WearCheck USA - 50	1 Madier	on Ave Carv	NC 27513		BLUE	IAX TRUCKING	
Sample No.	: PCA0110802	Rece		: 22 Feb 2024		1015 E. WESTINGHOUSE BLVD.		
Lab Number	: 06097575	Teste	ed : 23	3 Feb 2024			CHARLOTTE, NC	
Unique Number		Diagr	1 0sed : 23	23 Feb 2024 - Wes Davis		-	US 28273	
Certificate L2367 Test Package		ico at 1 G	200-227 1260	2			tact: Jody Greer	
To discuss this sample report * - Denotes test methods that							maxtrucking.com : (980)225-9968	
Statements of conformity to s					rule (JCGM		: (704)588-2901	
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