

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id **233146** Component **Diesel Engine** Fluid **PETRO CANADA DURON SHP 10W30 (--- QTS)**

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the oil.

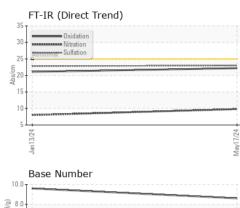
Fluid Condition

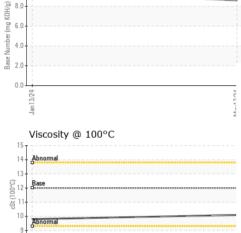
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0126946	PCA0115216	
Sample Date		Client Info		17 May 2024	13 Jan 2024	
Machine Age	mls	Client Info		16823	7787	
Oil Age	mls	Client Info		0	0	
Oil Changed		Client Info		Not Changd	Not Changd	
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		ASTM D5185m	>100	52	35	
Chromium	ppm	ASTM D5185m	>20	1	1	
Nickel	ppm ppm	ASTM D5185m	>20	2	<1	
Titanium	ppm	ASTM D5185m	~	0	0	
Silver	ppm	ASTM D5185m	>3	0	0	
Aluminum	ppm	ASTM D5185m	>20	12	9	
Lead	ppm		>40	<1	<1	
Copper	ppm	ASTM D5185m	>330	47	42	
Tin	ppm		>15	6	5	
Vanadium	ppm	ASTM D5185m		0	<1	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES	1- 1-	method	limit/base	current	history1	history2
Boron	nnm	ASTM D5185m	2	20	42	
Boron	ppm	ASTM D5185m	2	29 0	42	
Barium	ppm	ASTM D5185m	0	0	0	
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	0 50	0 40	0 38	
Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0	0 40 10	0 38 10	
Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950	0 40 10 494	0 38 10 500	
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050	0 40 10 494 1432	0 38 10 500 1524	
Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950	0 40 10 494 1432 659	0 38 10 500 1524 739	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050 995	0 40 10 494 1432	0 38 10 500 1524	
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	0 50 0 950 1050 995 1180	0 40 10 494 1432 659 828	0 38 10 500 1524 739 829	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600	0 40 10 494 1432 659 828 2070	0 38 10 500 1524 739 829 2192	
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	0 50 0 950 1050 995 1180 2600	0 40 10 494 1432 659 828 2070 current	0 38 10 500 1524 739 829 2192 history1	
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	0 50 0 950 1050 995 1180 2600 kimit/base >25	0 40 10 494 1432 659 828 2070 current 24	0 38 10 500 1524 739 829 2192 history1 9	 history2
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	0 50 0 950 1050 995 1180 2600 kimit/base >25	0 40 10 494 1432 659 828 2070 current 24 5	0 38 10 500 1524 739 829 2192 history1 9 6	 history2
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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600 limit/base >25 >20	0 40 10 494 1432 659 828 2070 current 24 5 10	0 38 10 500 1524 739 829 2192 history1 9 6 7	 history2
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	0 50 0 950 1050 995 1180 2600 <i>limit/base</i> >25 >20	0 40 10 494 1432 659 828 2070 current 24 5 10 current	0 38 10 500 1524 739 829 2192 history1 9 6 7 7 history1	 history2 history2
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	ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i>	0 40 10 494 1432 659 828 2070 current 24 5 10 current 0.6	0 38 10 500 1524 739 829 2192 history1 9 6 7 7 history1 0.4	 history2 history2
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	0 50 0 950 1050 995 1180 2600 imit/base >25 >20 imit/base >3 >20	0 40 10 494 1432 659 828 2070 <u>current</u> 24 5 10 <u>current</u> 0.6 9.8	0 38 10 500 1524 739 829 2192 history1 9 6 7 7 history1 0.4 8.0	 history2 history2
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	0 50 0 950 1050 995 1180 2600 imit/base >25 >20 imit/base >3 >20 >30	0 40 10 494 1432 659 828 2070 current 24 5 10 current 0.6 9.8 23.0	0 38 10 500 1524 739 829 2192 history1 9 6 7 history1 0.4 8.0 22.8	 history2 history2



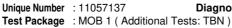
OIL ANALYSIS REPORT





Jan 13/24

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 PROPE	RTIES	method	limit/base	current	history1	history2			
Visc @ 100°C	cSt	ASTM D445	12.00	10.1	9.8				
GRAPHS									
Iron (ppm)				Lead (ppm)					
250 Severe			100	Severe					
200			80	+ 0					
a 150 - Abnormal			60 E 40	Abnormal					
50			20	[-			
0			0						
Jan 13/24 -			May17/24 .	Jan 13/24 -		May17/24 -			
Jan			Mayl	Jan1		May1			
Aluminum (ppm)			50	Chromium (p	pm)				
40 Severe			40	Severe					
e ³⁰			= ³⁰						
20 Abnormal			e ³⁰ 20	Abnormal		-			
10-			10	-					
0				4		4			
Jan 13/24			May17/24	Jan 1 3/2 4		May17/24			
Copper (ppm)			N.	Silicon (ppm)		W			
400 T Severe			80						
300			60						
툴 200 -			틆 40						
100 -			20	Abnormal					
74 10 14			0	724		/24 +			
Jan 13/24			May17/24	Jan 13/24		May17/24			
Viscosity @ 100°C				Base Number	r				
¹⁶									
14 Abnormal			و 8.0 ق 6.0						
(3-00) 12- 8 8 8 8 8 8 8			2 0.0 19 2 4.0						
10 - Abnormal			(10) HON KON Base Number 4.0 2.0						
8			0.0						
Jan 13/24			May17/24	Jan 13/24		May17/24			
Jan			May	Jan		May			
W 0 1 10 1									
: WearCheck USA - 501 : PCA0126946	Madiso Recei		, NC 27513) May 2024	Μ	ILLER TRUCK L	.EASING #119 USTRIAL AVE			
: 06195014	Teste		May 2024 May 2024			HEIGHTS, NJ			
: 11057137 Diagnosed : 31 May 2024 - Sean Felton US 07604									



Diagnosed : 31 May 2 itional Tests: TBN)

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - 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) F: (201)528-7053

Report Id: MILRUT [WUSCAR] 06195014 (Generated: 05/31/2024 14:04:01) Rev: 1

Certificate L2367

Laboratory Sample No. Lab Number

Contact/Location: MIKE LONGETTE - MILRUT

Т:

Contact: MIKE LONGETTE

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