

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id **133330** Component **Diesel Engine** Fluid **PETRO CANADA DURON SHP 10W30 (--- QTS)**

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the oil.

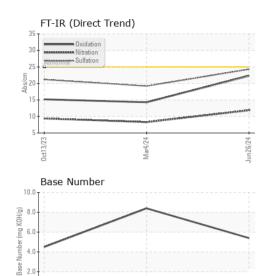
Fluid Condition

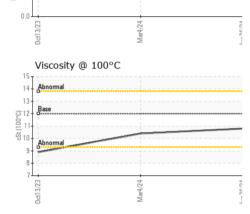
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0125173	PCA0119018	PCA0108386
Sample Date		Client Info		26 Jun 2024	04 Mar 2024	13 Oct 2023
Machine Age	mls	Client Info		12832	12777	10045
Oil Age	mls	Client Info		12832	12777	10045
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	ATTENTION
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	1.9
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	11	8	16
Chromium	ppm		>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		12	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m		3	4	9
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	4	10	45
Tin	ppm	ASTM D5185m	>15	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium						
Caumum	ppm	ASTM D5185m		0	0	0
ADDITIVES	ppm	ASIM D5185m method	limit/base	0 current	0 history1	0 history2
			limit/base		-	-
ADDITIVES	ppm ppm ppm	method		current	history1	history2
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m	2	current 14	history1 12	history2 33
ADDITIVES Boron	ppm	method ASTM D5185m ASTM D5185m	2 0	current 14 0	history1 12 0	history2 33 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	current 14 0 47	history1 12 0 69	history2 33 0 136
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	current 14 0 47 2	history1 12 0 69 <1	history2 33 0 136 10
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 14 0 47 2 771	history1 12 0 69 <1 846	history2 33 0 136 10 356
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	current 14 0 47 2 771 1134	history1 12 0 69 <1 846 1188	history2 33 0 136 10 356 1211
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm 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 14 0 47 2 771 1134 905	history1 12 0 69 <1 846 1188 1052	history2 33 0 136 10 356 1211 624
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 14 0 47 2 771 1134 905 1156	history1 12 0 69 <1 846 1188 1052 1193	history2 33 0 136 10 356 1211 624 742
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	2 0 50 950 1050 995 1180 2600	current 14 0 47 2 771 1134 905 1156 3498	history1 12 0 69 <1 846 1188 1052 1193 3275	history2 33 0 136 10 356 1211 624 742 2969
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 14 0 47 2 771 1134 905 1156 3498 current	history1 12 0 69 <1 846 1188 1052 1193 3275 history1	history2 33 0 136 10 356 1211 624 742 2969 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 50 950 1050 995 1180 2600 limit/base >25	current 14 0 47 2 771 1134 905 1156 3498 current 10	history1 12 0 69 <1 846 1188 1052 1193 3275 history1 16	history2 33 0 136 10 356 1211 624 742 2969 history2 49
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 50 950 1050 995 1180 2600 limit/base >25	current 14 0 47 2 771 1134 905 1156 3498 current 10 3	history1 12 0 69 <1 846 1188 1052 1193 3275 history1 16 1	history2 33 0 136 10 356 1211 624 742 2969 history2 49 8
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 0 950 1050 995 1180 2600 imit/base >25 >20	current 14 0 47 2 771 1134 905 1156 3498 current 10 3 4	history1 12 0 69 <1 846 1188 1052 1193 3275 history1 16 1 4 history1 0.1	history2 33 0 136 10 356 1211 624 742 2969 history2 49 8 6 history2 0
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 14 0 47 2 771 1134 905 1156 3498 current 10 3 4 current	history1 12 0 69 <1 846 1188 1052 1193 3275 history1 16 1 4 history1	history2 33 0 136 10 356 1211 624 742 2969 history2 49 8 6 history2 0 9.4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN 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 Imit/base >25 >20 Imit/base >3	current 14 0 47 2 771 1134 905 1156 3498 current 10 3 4 current 0.1	history1 12 0 69 <1 846 1188 1052 1193 3275 history1 16 1 4 history1 0.1	history2 33 0 136 10 356 1211 624 742 2969 history2 49 8 6 history2 0
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 ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <i>imit/base</i> >25 >20 <i>imit/base</i> >3 >20	current 14 0 47 2 771 1134 905 1156 3498 current 10 3 4 current 0.1 11.9	history1 12 0 69 <1 846 1188 1052 1193 3275 history1 16 1 4 history1 0.1 8.3	history2 33 0 136 10 356 1211 624 742 2969 history2 49 8 6 history2 0 9.4
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 <i>imit/base</i> >25 >20 <i>imit/base</i> >3 >20 >30	current 14 0 47 2 771 1134 905 1156 3498 current 10 3 4 current 0.1 11.9 24.3	history1 12 0 69 <1 846 1188 1052 1193 3275 history1 16 1 4 history1 0.1 8.3 19.2	history2 33 0 136 10 356 1211 624 742 2969 history2 49 8 6 history2 0 9.4 21.2



OIL ANALYSIS REPORT





Laboratory Sample No. Lab Number

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual	20.L	NEG	NEG	NEG
			limit/base			
FLUID PROPE		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	10.8	10.4	8.9
GRAPHS				Load (ppm)		
Iron (ppm)			100	Lead (ppm)		
00 - Severe			80	Severe		
50			e 60			
00 - Abnormal			40	Abnormal		
50 -			20	+		
				L		
0ct13/23	Mar4/24		Jun26/24	0ct13/23	Mar4/24	
	2		ηr			
Aluminum (ppm)			50	Chromium (p	рш) 	
40 - Severe			40	Severe		
30 -			= ³⁰			
20 Abnormal			E 20	Abnormal		
10-			10	+		
0			0			
0ct13/23	Mar4/24		Jun26/24	0ct13/23	Mar4/24	
_	2		μĻ		2	
Copper (ppm)			80	Silicon (ppm)		
Abnormal						
00 -			60	-		
00-			톱 40	Abnormal	_	
DO			20			
0						
0ct13/23	Mar4/24		Jun26/24	0ct13/23	Mar4/24	
			որ	_		-
Viscosity @ 100°	C		10.0	Base Number		
14 Abnormal			(B/HO) 8.0	1		
12 Base			у с. Щ 6.0			
10 - Abnormal			(b)(H0) 8.0 (b)(H0) 6.0 (b)(H0) 8.0 (b)(H0)(H0)(H0)(H0)(H0)(H0)(H0)(H0)(H0)(H0			
8-						
6			0.0			
0ct13/23 -	Mar4/24 -		Jun26/24 -	0ct13/23 -	Mar4/24 -	5 6 7
0ct1	Mar		Jun2	0ct1	Mar	-
VearCheck USA - 50	1 Madieo	n Ave Carv	NC 27513	M		LEASING #11
PCA0125173	Recei		2 Jul 2024	IVI		BENNETT ROA
6234439	Teste		2 Jul 2024			ILADELPHIA, P.
11123273			lul 2024 - W	oc Davic		115 1011

Unique Number : 11123273 Diagnosed : 12 Jul 2024 - Wes Davis Test Package : MOB 1 (Additional Tests: TBN) Certificate L2367 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)

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Contact/Location: ROSTY VITER - MILPHINE

US 19116

Contact: ROSTY VITER

T: (215)552-9832

F: (215)552-9892

rviter@millertransgroup.com