

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id **301446** Component **Diesel Engine** Fluid **PETRO CANADA DURON SHP 10W30 (--- GAL)**

DIAGNOSIS

Recommendation

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

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

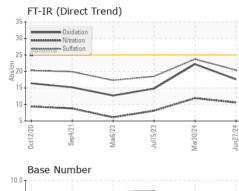
Fluid Condition

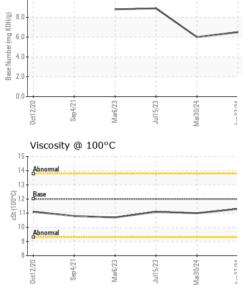
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0125175	PCA0121416	PCA0100810
Sample Date		Client Info		27 Jun 2024	30 Mar 2024	15 Jul 2023
Machine Age	mls	Client Info		122821	114711	4234
Oil Age	mls	Client Info		122821	114711	4234
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
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	12	24	16
Chromium	ppm	ASTM D5185m	>20	0	0	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		6	23	6
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	2	2	<1
Lead	ppm	ASTM D5185m	>40	1	<1	<1
Copper	ppm	ASTM D5185m	>330	14	2	19
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	method ASTM D5185m	limit/base	current 6	history1 14	history2 8
	ppm ppm					
Boron		ASTM D5185m	2	6	14	8
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	6 0	14 0	8 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	6 0 54	14 0 43	8 0 55
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	6 0 54 <1	14 0 43 <1	8 0 55 <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	6 0 54 <1 875	14 0 43 <1 777	8 0 55 <1 904
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	6 0 54 <1 875 1183	14 0 43 <1 777 1325	8 0 55 <1 904 1260
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	6 0 54 <1 875 1183 987	14 0 43 <1 777 1325 966	8 0 55 <1 904 1260 1034
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 0 950 1050 995 1180	6 0 54 <1 875 1183 987 1265	14 0 43 <1 777 1325 966 1176	8 0 55 <1 904 1260 1034 1241
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	6 0 54 <1 875 1183 987 1265 3777 current 4	14 0 43 <1 777 1325 966 1176 3533 history1 5	8 0 55 <1 904 1260 1034 1241 3825 history2 3
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	6 0 54 <1 875 1183 987 1265 3777 current	14 0 43 <1 777 1325 966 1176 3533 history1	8 0 55 <1 904 1260 1034 1241 3825 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 ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25	6 0 54 <1 875 1183 987 1265 3777 current 4	14 0 43 <1 777 1325 966 1176 3533 history1 5	8 0 55 <1 904 1260 1034 1241 3825 history2 3
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 method ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25	6 0 54 <1 875 1183 987 1265 3777 current 4 5	14 0 43 <1 777 1325 966 1176 3533 history1 5 6	8 0 55 <1 904 1260 1034 1241 3825 history2 3 4
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 0 950 1050 995 1180 2600 imit/base >25 >20	6 0 54 <1 875 1183 987 1265 3777 current 4 5 3	14 0 43 <1 777 1325 966 1176 3533 history1 5 6 1	8 0 55 <1 904 1260 1034 1241 3825 history2 3 4 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 -20 limit/base	6 0 54 <1 875 1183 987 1265 3777 current 4 5 3 3	14 0 43 <1 777 1325 966 1176 3533 history1 5 6 1 1 history1	8 0 55 <1 904 1260 1034 1241 3825 history2 3 4 4 4 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	6 0 54 <1 875 1183 987 1265 3777 current 4 5 3 3 <i>current</i> 0.6	14 0 43 <1 777 1325 966 1176 3533 history1 5 6 1 1 history1 0.9	8 0 55 <1 904 1260 1034 1241 3825 history2 3 4 4 4 history2 0.4
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 <i>imit/base</i> >25 >20 <i>imit/base</i> >3 >20	6 0 54 <1 875 1183 987 1265 3777 <i>current</i> 4 5 3 <i>current</i> 0.6 10.6	14 0 43 <1 777 1325 966 1176 3533 history1 5 6 1 1 history1 0.9 11.9	8 0 55 <1 904 1260 1034 1241 3825 history2 3 4 4 4 history2 0.4 8.1
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 0 950 1050 995 1180 2600 imit/base >25 >20 imit/base >3 >20 >30	6 0 54 <1 875 1183 987 1265 3777 current 4 5 3 3 <i>current</i> 0.6 10.6 20.4	14 0 43 <1 777 1325 966 1176 3533 history1 5 6 1 1 <u>history1</u> 0.9 11.9 23.7	8 0 55 <1 904 1260 1034 1241 3825 history2 3 4 4 4 history2 0.4 8.1 18.5



OIL ANALYSIS REPORT





	VISUAL	me	thod limit/bas	se current	history	1 history2	
	White Metal	scalar *Visu	ual NONE	NONE	NONE	NONE	
	Yellow Metal	scalar *Visu	ual NONE	NONE	NONE	NONE	
\sim	Precipitate	scalar *Visu	ual NONE	NONE	NONE	NONE	
	Silt	scalar *Visu	ual NONE	NONE	NONE	NONE	
AN ^{R A^{ARR}ANDERSTREESE AND A ARRAY}	Debris	scalar *Visu	ual NONE	NONE	NONE	NONE	
	Sand/Dirt	scalar *Visu		NONE	NONE	NONE	
Mar30/24 Jun27/24	Appearance	scalar *Visu		NORML	NORML	NORML	
Ju Ju	Odor	scalar *Visu		NORML	NORML	NORML	
	Emulsified Water Free Water	scalar *Visu scalar *Visu		NEG NEG	NEG NEG	NEG NEG	
	FLUID PROPE		thod limit/bas		history		
	Visc @ 100°C		1 D445 12.00	11.3	11.0	11.1	
	GRAPHS						
	Iron (ppm)			Lead (ppm)			
0/24	200 - Severe			80 - Severe		-	
Mar30/24	150 Abnormal			60 Abnormal			
	B 100 - Abnormal			40 - Abnormal		-	
	50			20-			
	421	(23 -	/24	oct12/20	/23	/23 -	
	0ct12/20 Sep4/21	Jul15/23	Mar30/24 Jun27/24	0ct12/20 Sep4/2	Mar6/23	Juli 5/23 Mar30/24 Jun27/24	
	Aluminum (ppm)			Chromium (ppm)		
1	40 - Severe			40 - Severe			
	e ³⁰			Abnormal			
Mar30/24	E 20 - Abnormal			abnormal			
M	10-			10-			
	Sep 4/21	5/23 -	7/24	ct12/20	5/23	o/24	
	0ct12/20 Sep4/21	Jul15/23	Mar30/24 Jun27/24	0ct12/20 Sep4/2	Mar6/23	Juli 5/23 Mar30/24 Jun27/24	
	Copper (ppm)			Silicon (ppm)			
	400 - Severe			60	1		
	E 300			툪 40			
	E 200			Abnormal	1		
	100						
	0ct12/20	Jul15/23	Mar30/24 -	0ct12/20	Mar6/23 -	Jull 5/23	
	0		Mar3 Jun2	0		Jull Mar3 Jun2	
	Viscosity @ 100°(10.0	Base Number			
	S14 Abnormal		Base Mumber (non KOH/a)	8.0-		\backslash	
	C Base Base tg		ber (m	6.0			
	75 10 - Abnormal		u v	4.0			
	8			0.0			
	Oct12/20	Jul15/23 -	Mar30/24 - Jun27/24 -	0ct12/20	Mar6/23 -	Jull 5/23 - Mar30/24 - Jun27/24 -	
	See See	Inf	Mar. Junź	Sel	Ma	Jul Marć Jun2	
Laboratory Sample No. Lab Number Unique Number	: WearCheck USA - 50 : PCA0125175 : 06234443 : 11123277	1 Madison Ave Received Tested Diagnosed	: 12 Jul 2024 : 12 Jul 2024		2196	CK LEASING #118 BENNETT ROAD HILADELPHIA, PA US 19116	



Unique Number : 11123277 Diagnosed : 12 Jul 2024 - Wes Davis Test Package : MOB 1 (Additional Tests: TBN) Certificate 12367 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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