

OIL ANALYSIS REPORT

Sample Rating Trend



Area (89905X) Walgreens Machine Id [Walgreens] 136A69052

Diesel Engine

PETRO CANADA DURON SHP 10W30 (11 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

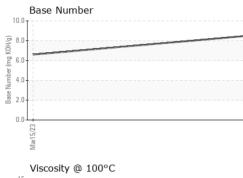
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

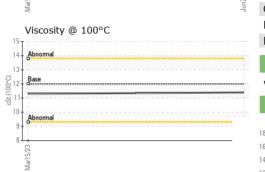
			11 1.4		1.	11.0
SAMPLE INFORM	VIATION	method	limit/base	current	history 1	history 2
Sample Number		Client Info		PCA0100248	PCA0089813	
Sample Date		Client Info		22 Jun 2023	15 Mar 2023	
Machine Age	mls	Client Info		461249	448537	
Oil Age	mls	Client Info		12713	31549	
Oil Changed		Client Info		Not Changd	Changed	
Sample Status				NORMAL	NORMAL	
CONTAMINATI	ION	method	limit/base	current	history 1	history 2
Fuel		WC Method	>5	<1.0	<1.0	
Glycol		WC Method		NEG	NEG	
WEAR METALS	S	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>80	10	17	
Chromium	ppm	ASTM D5185m	>5	1	<1	
Nickel	ppm	ASTM D5185m	>2	0	<1	
Titanium	ppm	ASTM D5185m		0	<1	
Silver	ppm	ASTM D5185m	>3	0	<1	
Aluminum	ppm	ASTM D5185m	>30	3	2	
Lead	ppm	ASTM D5185m	>30	0	0	
Copper	ppm		>150	3	2	
Tin	ppm	ASTM D5185m	>5	<1	<1	
Vanadium	ppm	ASTM D5185m	20	0	0	
Cadmium	ppm	ASTM D5185m		0	0	
	ppiii	No fill Boroom		Ū	0	
ADDITIVES		method	limit/base	current	history 1	history 2
	ppm	method ASTM D5185m	2	current <1	332	history 2
Boron	ppm ppm				332 0	
Boron Barium		ASTM D5185m	2 0 50	<1	332 0 85	
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m	2 0	<1 0	332 0 85 1	
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	<1 0 60	332 0 85	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	<1 0 60 <1	332 0 85 1	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	<1 0 60 <1 914	332 0 85 1 384	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	<1 0 60 <1 914 1113	332 0 85 1 384 1510	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	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	<1 0 60 <1 914 1113 1025	332 0 85 1 384 1510 946	
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	<1 0 60 <1 914 1113 1025 1240	332 0 85 1 384 1510 946 1153	
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	<1 0 60 <1 914 1113 1025 1240 3365	332 0 85 1 384 1510 946 1153 3324	
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	<1 0 60 <1 914 1113 1025 1240 3365 current	332 0 85 1 384 1510 946 1153 3324 history 1	
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 >20	<1 0 60 <1 914 1113 1025 1240 3365 current 3	332 0 85 1 384 1510 946 1153 3324 history 1 7	 history 2
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 ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >20	<1 0 60 <1 914 1113 1025 1240 3365 current 3 <1	332 0 85 1 384 1510 946 1153 3324 history 1 7 2	 history 2
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 imit/base >20 imit/base	<1 0 60 <1 914 1113 1025 1240 3365 current 3 <1 3	332 0 85 1 384 1510 946 1153 3324 history 1 7 2 1	 history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 Imit/base >20 \$20	<1 0 60 <1 914 1113 1025 1240 3365 current 3 <1 3 current	332 0 85 1 384 1510 946 1153 3324 history 1 7 2 1 1 history 1	 history 2 history 2
Boron 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	2 0 50 0 950 1050 995 1180 2600 Imit/base >20 \$20	<1 0 60 <1 914 1113 1025 1240 3365 <u>current</u> 3 <1 3 <u>current</u> 0.3	332 0 85 1 384 1510 946 1153 3324 history 1 7 2 1 7 2 1 history 1 0.7	 history 2 history 2
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 TS ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <i>imit/base</i> >20 <i>imit/base</i> >20	<1 0 60 <1 914 1113 1025 1240 3365 current 3 <1 3 current 0.3 7.0	332 0 85 1 384 1510 946 1153 3324 history 1 7 2 1 7 2 1 history 1 0.7 9.6	 history 2 history 2
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	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 imit/base >20 imit/base >3 >20 >30	<1 0 60 <1 914 1113 1025 1240 3365 <u>current</u> 3 <1 3 <u>current</u> 0.3 7.0 19.6	332 0 85 1 384 1510 946 1153 3324 history 1 7 2 1 7 2 1 1 0.7 9.6 22.4	 history 2 history 2 history 2
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 D7844 *ASTM D7844 *ASTM D7844	2 0 0 50 0 950 1050 995 1180 2600 2600 20 20 20 20 20 3 20 20 20 3 3 20 20 3 3 20 20 3 3 20 20 20 20 20 20 20 20 20 20 20 20 20	<1 0 60 <1 914 1113 1025 1240 3365 Current 3 <1 3 <1 3 Current 0.3 7.0 19.6 Current	332 0 85 1 384 1510 946 1153 3324 history 1 7 2 1 7 2 1 1 0.7 9.6 22.4 history 1	 history 2 history 2 history 2



OIL ANALYSIS REPORT

VISUAL





	VISUAL		method	limit/base	current	nistory i	nistory 2
	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	
- 23	Appearance	scalar	*Visual	NORML	NORML	NORML	
Jun22/23	Odor						
ت ت		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	history 1	history 2
	Visc @ 100°C	cSt	ASTM D445	12.00	11.4	11.3	
	GRAPHS						
	Ferrous Alloys						
	16 iron						
	14 - nickel						
	12						
	E ¹⁰						
	ä 8						
	6						
	4						
	1/23			/23			
	Mar15/23			Jun22/23			
	 Non-ferrous Meta	ls		,			
	¹⁰ T						
	copper						
	8 - tin						
	6.						
	ш dd						
	4						
	2						
	0 L						
	Mar15/23			Jun22/23			
	Mar1			Junî			
	Viscosity @ 100°C	2			Base Number		
	15			9.0	T ;		
	14 - Abnormal			8.0	1		
	13			67.0 H			
	D ₁₂ Base		*****	9 6.0 8 c a			
	0 12 - Base 0 11			(0,7.0 HOX 6.0 Jao du 10 Jao du 10 J	1		
				E 4.0 Z 3.0			
	10- Abnormal			2.0			
	9			1.0			
					L.		
	8			~	C)		
	8			22/23	15/23		
	Mart 5/23			Jun22/23	Mar15/23		

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