

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Area Walgreens - Yard Horse [Walgreens - Yard Horse] 136A83003

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.

				Aug2023		
SAMPLE INFORM	ΛΑΤΙΟΝ	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0099930		
Sample Date		Client Info		27 Aug 2023		
Machine Age	hrs	Client Info		3560		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINATI	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Glycol		WC Method		NEG		
WEAR METALS	5	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	31		
Chromium	ppm	ASTM D5185m	>20	1		
Nickel	ppm	ASTM D5185m	>4	0		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>20	4		
Lead	ppm	ASTM D5185m	>40	0		
Copper	ppm	ASTM D5185m	>330	2		
Tin	ppm	ASTM D5185m	>15	<1		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 6	history1	history2
	ppm ppm					
Boron		ASTM D5185m	2	6		
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	6 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	6 0 61		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	6 0 61 <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 61 <1 971		
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 61 <1 971 1087	 	
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 61 <1 971 1087 1055	 	
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	6 0 61 <1 971 1087 1055 1272	 	
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 61 <1 971 1087 1055 1272 3767		
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 ASTM D5185m	2 0 50 950 1050 995 1180 2600	6 0 61 <1 971 1087 1055 1272 3767 current	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm	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 Limit/base >25	6 0 61 <1 971 1087 1055 1272 3767 current 5	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	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 61 <1 971 1087 1055 1272 3767 <u>current</u> 5 <	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25	6 0 61 <1 971 1087 1055 1272 3767 current 5 <1 0	 history1 	 history2
Boron 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	2 0 50 0 950 1050 995 1180 2600 Imit/base >25 >20 Imit/base >3	6 0 61 <1 971 1087 1055 1272 3767 current 5 <1 0 current	 history1 history1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 Imit/base >25 >20 Imit/base >3	6 0 61 <1 971 1087 1055 1272 3767 current 5 <1 0 current 1.3	 history1 history1 	 history2 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 rS ppm ppm ppm ppm ppm spm ppm spm ppm spm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >3 >20	6 0 61 <1 971 1087 1055 1272 3767 <i>current</i> 5 <1 0 <i>current</i> 1.3 9.2	 history1 history1 history1	 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 rS ppm ppm ppm ppm ppm spm ppm spm ppm spm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 imit/base >25 >20 imit/base >3 >20 >30	6 0 61 <1 971 1087 1055 1272 3767 <i>current</i> 5 <1 0 <i>current</i> 1.3 9.2 20.4	 history1 history1 history1	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm ppm ppm ppm ppm ppm ppm rs ppm ppm ppm ppm ppm ppm ppm spm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	2 0 50 0 950 1050 995 1180 2600 imit/base >25 >20 imit/base >3 >20 >30	6 0 61 <1 971 1087 1055 1272 3767 <i>current</i> 5 <1 0 <i>current</i> 1.3 9.2 20.4 <i>current</i>	 history1 history1 history1 history1	 history2 history2 history2 history2

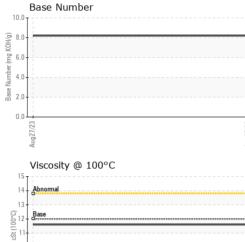


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OIL ANALYSIS REPORT



	VISUAL		method		current	history1	history2
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
	Precipitate	scalar	*Visual	NONE	NONE		
	Silt	scalar	*Visual	NONE	NONE		
	Debris	scalar	*Visual	NONE	NONE		
	Sand/Dirt	scalar	*Visual	NONE	NONE		
Aug27/23	Appearance	scalar	*Visual	NORML	NORML		
Augi	Odor	scalar	*Visual	NORML	NORML		
	Emulsified Water	scalar	*Visual	>0.2	NEG		
	Free Water	scalar	*Visual		NEG		
	FLUID PROPE	RTIES	method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445	12.00	11.6		
	GRAPHS						
	Ferrous Alloys						
	³⁵ T						
	30 - chromium						
	25 - nickel						
	E ²⁰						
	Ē. 15-						
	10						
	5+						
				7/23 -			
	Aug27/23			Aug27/23			
	Non-ferrous Meta	s					
	10 T						
	1						
	copper						
	copper						
	8 - copper lead						
	8 copper lead						
	8 - copper lead						
	8 - copper lead						
	8 6 4 2						
	8 - copper lead						
	8 - copper lead						
	8 copper 6 copper 6 copper 1 copp			Aug27/23			
	8 - copper lead				Base Number		
	B Copper Bead Copper Fead Fead			Aug27/23	°T.		
	8 6 4 2 0 EZ/ZZ 14 Abnormal			.e .e			
	Viscosity @ 100°C			.9 .000 .10 .000 .10 .000 .000 .000 .000			
	Viscosity @ 100°C			на 19 19 19 19 19 10 10 10 10 10 10 10 10 10 10 10 10 10			
	s copper lead d d d d d d d d d d d d d			на 19 19 19 19 19 10 10 10 10 10 10 10 10 10 10 10 10 10			
	Base Copper Viscosity @ 100°C 15 14 Abnomal 13 10			1.6 Mumber (mg K0H(g) 1.9 1.9 1.9 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0			
	8 6 4 2 0 EZ/ZZ ^{IN} Viscosity @ 100°C 15 14 Abnormal 13 5 10 11 11 11 11 10 10 10 10 10			на 19 19 19 19 19 10 10 10 10 10 10 10 10 10 10 10 10 10			
	Copper a b copper b copper b copper b copper b copper b copper b copper b copper b copper b copper coppe			.е В. В. В. В. В. В. В. В. В. В. В. В. В.			
	Copper a b copper b copper b copper b copper b copper b copper b copper b copper b copper b copper coppe			.е В. В. В. В. В. В. В. В. В. В. В. В. В.			
	Copper a b copper b copper b copper b copper b copper b copper b copper b copper b copper b copper b copper co			9.1 8.1 (9,17.1 1,1 9,17.1 1,1 9,17.1			
Laboratory Sample No. Lab Number Unique Number	Viscosity @ 100°C		son Ave., Ca 1 : 25 / ed : 28 /	9.1 8.1 (6) (10) (10) (10) (10) (10) (10) (10) (10)	Aug2//23	i ce - Shop 1374 - 80 Int	Berkeley-Hartfo ernational Dri Windsor, O US 0609
Sample No. Lab Number Unique Number Test Package	Viscosity @ 100°C	501 Madia Received Diagnost	son Ave., Ca 1 : 25 / ed : 28 / iician : Wea	ez//20my 9.1 (0,H0) 6.1 (0,H0) 6.1 (0,H0) 6.1 (0,H0) 6.1 (0,1 (0,1) (0,1	Aug2//23	80 Int Contact:	ernational Dri Windsor, (US 060 Paul Santane
Sample No. Lab Number Unique Number	Viscosity @ 100°C	501 Madia Received Diagnost Diagnost	son Ave., Ca d : 25 / ed : 28 / iician : Wes	ez//20my 9. 0. 1. 0. 1. 0. 1. 0. 1. 0. 1. 0. 1. 0. 1. 0. 1. 0. 1. 0. 1. 0. 1. 0. 1. 0. 1. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0	Aug2//23	80 Int Contact: psantanella@	ernational Dri Windsor, (US 060 Paul Santane

Contact/Location: Paul Santanella - TSV1374