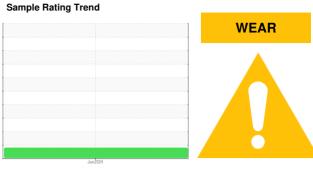


OIL ANALYSIS REPORT



Machine Id 339975

Diesel Engine

PETRO CANADA DURON SHP 10W30 (--- G

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

Cylinder, crank, or cam shaft wear is indicated. All other metal levels are typical for a new component breaking in.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components.

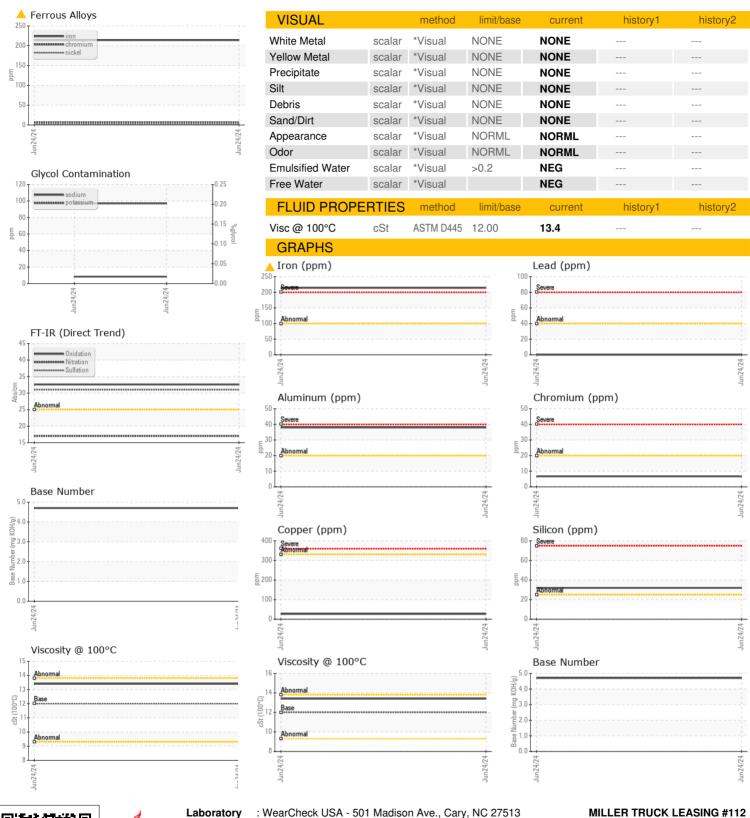
Fluid Condition

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.

AL)		Jun 2 024					
SAMPLE INFOR	ΜΔΤΙΩΝ	method	limit/base	current	history1	history2	
	WATION	Client Info	mm base	PCA0121734		ĺ	
Sample Number Sample Date		Client Info		24 Jun 2024			
Machine Age	mls	Client Info		39670			
Dil Age	mls	Client Info		39670			
Oil Changed	11115	Client Info		Changed			
Sample Status		Ciletit iiiio		ABNORMAL			
CONTAMINAT	ION	method	limit/base				
	ION			current	history1	history2	
Fuel		WC Method	>5	<1.0			
Water		WC Method	>0.2	NEG			
Glycol		WC Method		NEG			
WEAR METAL	.S	method	limit/base	current	history1	history2	
ron	ppm	ASTM D5185m	>100	<u>^</u> 214			
Chromium	ppm	ASTM D5185m	>20	7			
Nickel	ppm	ASTM D5185m	>4	1			
- itanium	ppm	ASTM D5185m		<1			
Silver	ppm	ASTM D5185m	>3	0			
Aluminum	ppm	ASTM D5185m	>20	38			
₋ead	ppm	ASTM D5185m	>40	0			
Copper	ppm	ASTM D5185m	>330	27			
īn	ppm	ASTM D5185m	>15	2			
/anadium	ppm	ASTM D5185m		<1			
Cadmium	ppm	ASTM D5185m		0			
ADDITIVES		method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	2	31			
Barium	ppm	ASTM D5185m	0	<1			
/lolybdenum	ppm	ASTM D5185m	50	113			
Manganese	ppm	ASTM D5185m	0	8			
/lagnesium	ppm	ASTM D5185m	950	777			
Calcium	ppm						
Phosphorus	PPIII	ASTM D5185m	1050	1384			
	ppm	ASTM D5185m ASTM D5185m	1050 995	1384 896			
Zinc							
-	ppm	ASTM D5185m	995 1180	896			
-	ppm ppm	ASTM D5185m ASTM D5185m	995 1180	896 1046		 	
Sulfur CONTAMINAN	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	995 1180 2600	896 1046 3308		 	
Sulfur CONTAMINAN Silicon	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method	995 1180 2600 limit/base	896 1046 3308 current	 history1	 history2	
Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	995 1180 2600 limit/base	896 1046 3308 current 32	 history1	history2	
Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm VTS ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	995 1180 2600 limit/base >25	896 1046 3308 current 32 8	 history1 	history2	
Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm VTS ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	995 1180 2600 limit/base >25 >20	896 1046 3308 current 32 8 97	 history1 	history2	
Gulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm JTS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	995 1180 2600 limit/base >25 >20 limit/base	896 1046 3308 current 32 8 97	history1	history2	
Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm JTS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844	995 1180 2600 limit/base >25 >20 limit/base >3	896 1046 3308 current 32 8 97 current 1.6	history1 history1 history1	history2	
Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm JTS ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	995 1180 2600 limit/base >25 >20 limit/base >3 >20	896 1046 3308 current 32 8 97 current 1.6 17.0	history1 history1 history1	history2	
Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm JTS ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	995 1180 2600 limit/base >25 >20 limit/base >3 >20 >30	896 1046 3308 current 32 8 97 current 1.6 17.0 31.0	history1 history1 history1	history2	



OIL ANALYSIS REPORT





Certificate 12367

Laboratory Sample No.

Lab Number : 06231967 Unique Number : 11115460

: PCA0121734

Received **Tested** Diagnosed

: 10 Jul 2024 : 10 Jul 2024 : 11 Jul 2024 - Don Baldridge

Test Package : MOB 1 (Additional Tests: TBN)

To discuss this sample report, contact Customer Service at 1-800-237-1369. st - 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: Rob Powell - MILPEN

US 08077

1504 MAINLINE DR

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Contact: Rob Powell

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