

OIL ANALYSIS REPORT

Area INDEPENDENCE Machine Id Unit 05 DB200105E Component

Natural Gas Engine

PETRO CANADA DURON MONOGRADE HD 40W (250 GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

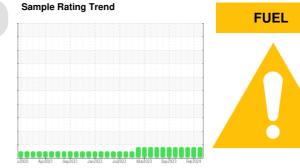
All component wear rates are normal.

Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

Fluid Condition

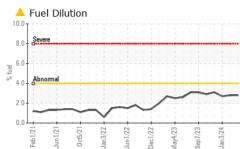
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

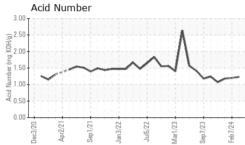


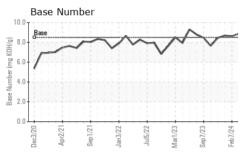
SAMPLE INFORMATIONmethodlimit/basecurrenthistory1history1Sample NumberClient InfoPCA0097015PCA0097017PCA0097017PCA0097017Sample DateClient Info08 Mar 202407 Feb 202403 Jan 20Machine AgehrsClient Info280027172626Oil AgehrsClient Info280027172626Oil ChangedhrsClient Info280027172626Oil ChangedhrsClient Info280027172626Oil ChangedClient InfoMARGINALMARGINALMARGINALSample StatusImethodIimit/basecurrenthistory1history1CONTAMINATIONmethodiimit/basecurrenthistory1history1WetarWC Method>0.1NEGNEGNEGWEAR METALSmethodlimit/basecurrenthistory1history1IronppmASTM D5185m>5081010ChromiumppmASTM D5185m>200<1NickelppmASTM D5185m>3000AluminumppmASTM D5185m>30212LeadppmASTM D5185m>30212CopperppmASTM D5185m>352222TinppmASTM D5185m>352222LeadppmASTM D5185m<
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WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >50 8 10 10 Chromium ppm ASTM D5185m >4 <1 <1 <1 Nickel ppm ASTM D5185m >2 0 0 <1 Titanium ppm ASTM D5185m >2 0 0 <1 Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >9 2 1 2 Lead ppm ASTM D5185m >30 2 1 2 Copper ppm ASTM D5185m >35 2 2 2
Iron ppm ASTM D5185m >50 8 10 10 Chromium ppm ASTM D5185m >4 <1 <1 <1 Nickel ppm ASTM D5185m >2 0 0 <1 Titanium ppm ASTM D5185m >2 0 0 <1 Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >3 0 0 0 Lead ppm ASTM D5185m >30 2 1 2 Copper ppm ASTM D5185m >30 2 1 2
Chromium ppm ASTM D5185m >4 <1
Nickel ppm ASTM D5185m >2 0 0 <1 Titanium ppm ASTM D5185m 0 <1
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Copper ppm ASTM D5185m >35 2 2 2 2
Vanadium ppm ASTM D5185m 0 0 0
Cadmium ppm ASTM D5185m O 0 <1
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Boron ppm ASTM D5185m 4 4 6
Barium ppm ASTM D5185m 0 0 0
Molybdenum ppm ASTM D5185m 4 4 7
Manganese ppm ASTM D5185m 0 <1
Magnesium ppm ASTM D5185m 882 943 929
Calcium ppm ASTM D5185m 1036 1032 1076
Phosphorus ppm ASTM D5185m 1045 993 1015
Zinc ppm ASTM D5185m 1245 1326 1293
Sulfur ppm ASTM D5185m 3039 2804 3426
CONTAMINANTS method limit/base current history1 histor
Silicon ppm ASTM D5185m >+100 5 6 6
Sodium ppm ASTM D5185m 2 <1 0
Sodium ppm ASTM D5185m 2 <1 0 Potassium ppm ASTM D5185m >20 1 2 2
Sodium ppm ASTM D5185m 2 <1 0 Potassium ppm ASTM D5185m >20 1 2 2 Fuel % ASTM D3524 >4.0 2.8 2 .8 2 .7
Sodium ppm ASTM D5185m 2 <1 0 Potassium ppm ASTM D5185m >20 1 2 2 Fuel % ASTM D5185m >20 1 2 2 INFRA-RED method limit/base current history1 history1
Sodium ppm ASTM D5185m 2 <1 0 Potassium ppm ASTM D5185m >20 1 2 2 Fuel % ASTM D3524 >4.0 ▲ 2.8 ▲ 2.7 ▲ 2.7 INFRA-RED method limit/base current history1 history1 Soot % % *ASTM D7844 0.1 0.1 0
Sodium ppm ASTM D5185m 2 <1 0 Potassium ppm ASTM D5185m >20 1 2 2 Fuel % ASTM D3524 >4.0 ▲ 2.8 ▲ 2.8 ▲ 2.7 INFRA-RED method limit/base current history1 history1 Soot % % *ASTM D7844 0.1 0.1 0 Nitration Abs/cm *ASTM D7624 >20 4.6 4.6 4.5
Sodium ppm ASTM D5185m 2 <1 0 Potassium ppm ASTM D5185m >20 1 2 2 Fuel % ASTM D3524 >4.0 ▲ 2.8 ▲ 2.7 ▲ 2.7 INFRA-RED method limit/base current history1 history1 Soot % % *ASTM D7844 0.1 0.1 0
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Sodium ppm ASTM D5185m 2 <1 0 Potassium ppm ASTM D5185m >20 1 2 2 Fuel % ASTM D3524 >4.0 ▲ 2.8 ▲ 2.8 ▲ 2.7 INFRA-RED method limit/base current history1 history1 Soot % % *ASTM D7844 0.1 0.1 0 Nitration Abs/cm *ASTM D7624 >20 4.6 4.6 4.5 Sulfation Abs/.1mm *ASTM D7415 >30 13.4 13.5 13.4
Sodium ppm ASTM D5185m 2 <1 0 Potassium ppm ASTM D5185m >20 1 2 2 Fuel % ASTM D3524 >4.0 ▲ 2.8 ▲ 2.7 INFRA-RED method limit/base current history1 histor Soot % % *ASTM D7844 0.1 0.1 0 Nitration Abs/cm *ASTM D7624 >20 4.6 4.6 4.5 Sulfation Abs/.1mm *ASTM D7415 >30 13.4 13.5 13.4

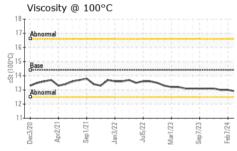


OIL ANALYSIS REPORT









		VISUAL			methoo	d limit/ba	ise current	histo	i y i	histo	ory2
		White Metal		scalar	*Visual	NONE	NONE	NONE		NONE	E
		Yellow Meta	al	scalar	*Visual	NONE	NONE	NONE		NONE	E
		Precipitate		scalar	*Visual	NONE	NONE	NONE		NONE	E
	~	Silt		scalar	*Visual	NONE	NONE	NONE		NONE	E
\sim		Debris		scalar	*Visual	NONE	NONE	NONE		NONE	E
		Sand/Dirt		scalar	*Visual	NONE	NONE	NONE		NONE	E
Jun1/22 Dec1/22 May4/23	Jan3/24	Appearance	;	scalar	*Visual	NORML	NORML	NORM	IL	NOR	ML
Jur Mar	Jar	Odor		scalar	*Visual	NORML	NORML	NORM	L	NOR	ML
		Emulsified \	Nater	scalar	*Visual	>0.1	NEG	NEG		NEG	
		Free Water		scalar	*Visual		NEG	NEG		NEG	
٨		FLUID F	ROPE	RTIES	method	d limit/ba	ise current	histo	ry1	histo	ory2
M		Visc @ 100	°C	cSt	ASTM D4	45 14.4	12.9	13.0		13.0	
	~	GRAPH	S								
		Iron (ppm	1)				Lead (ppm) ⁶⁰ T Severe				
Jul5/22 - Mar1/23 -	Sep7/23 -	80 - Severe					50 -				
Jul Mar	Sep Feb	60 Abnormal					40 - Abnormal				
	L.	40-					20				
		20	\neg	<u> </u>	~~		10	^			\sim
\sim		Dec3/20 Apr2/21	Sep1/21	Jul5/22	Mar1/23 Sep7/23	Feb 7/24	Dec3/20 Apr2/21	Sep 1/21 Jan 3/22	Jul5/22 Mar1/23	Sep 7/23	Feb7/24
				5 7	N S	LE.			~ ≥	õ	Ľ.
		Aluminum	(ppm)				Chromium ⁸ T	(ppm)			
		15 - Severe					6 - Severe				
		a 10 - Abnormal					Abnormal				
Jul5/22 Mar1/23	Sep 7/23 Feb 7/24										
, 2	00 L	5	~			\sim					
		2/21	121	Jul5/22 -	/23	/24	521	1/21	22	/23	124
		Dec3/20 Apr2/21	Sep1/21	Jan 3/22 Jul5/22	Mar1/23 Sep7/23	Feb7/24	Dec3/20 Apr2/21	Sep 1/21 Jan 3/22	Jul5/22 Mar1/23	Sep 7/23	Feb7/24
		Copper (p	opm)				Silicon (ppn	n)			
		60 Severe					200 Severe				
~~~											
		Abnormal	1				E 100 - Abnormal				
22	23	20-					50				
Jul5/22 Mar1/23	Sep7/23 Feb7/24	2/20	1/21	122	/23	/24	720-0	722	123	/23	124
		Dec3/20	Sep 1/21	Jan3/22 Jul5/22	Mar1/23 Sep7/23	Feb7/24	Dec3/20 Apr2/21	Sep 1/21 Jan 3/22	Jul5/22 Mar1/23	Sep7/23	Feb7/24
		Viscosity (	@ 100°C	2			Base Numb	er			
		Abnormal					(a) 8.0 6.0 4.0 2.0	~~~	57	~	-
	0	Base					E 6.0		V		
	017-53	Base Abnormal	$\sim$				a 4.0				
		12-					2.0				
		10		5			0.0	2	2+		
		Dec3/20 Apr2/21	Sep1/21	Jan 3/22 Jul5/22	Mar1/23 Sep7/23	Feb7/24	Dec3/20 Apr2/21	Sep 1/21 Jan 3/22	Jul5/22 Mar1/23	Sep7/23	Feb7/24
Laboratory Sample No. Lab Number		: WearCheck USA - 501 Madison A : PCA0097015 Receiver : 06115388 Tested			ived :	ary, NC 275 : 11 Mar 202 : 13 Mar 202	24	agellan Midstream LP - Independend 836 South Rosser Roa Independence, K			
ISO/ICC (7025	que Number :				13 Mar 2024 -			nue	US (		
1.0.0		: MOB 2 (Additional Tests: FuelDilution, Per						Contact: Heath Jame			
	st Package		itional Te	ests: Fue	IDilution, F	PercentFuel	)	C	ontact:	Heath .	Jame

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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