

OIL ANALYSIS REPORT

Sample Rating Trend



Area KEMP QUARRIES / PRYOR STONE [57827] OHT101

Rear Differential

PETRO CANADA PRODURO TO-4 SAE 50 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: $\mbox{PM-4}$ changed fluid)

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

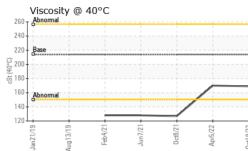
Fluid Condition

The condition of the oil is acceptable for the time in service.

Sample DateClient Into19 Oct 202305 Apr 202208 Oct 2021Machine AgehrsClient Into172731693516717Oil AgehrsClient Into172731693516717Oil ChangedClient Into172731671716717Oil ChangedClient IntoN/ANot ChangedSample StatusnormN/ANorMALNORMALWEAR METALSmethodImit/basecurrenthistory1IronppmASTM D5185n>5006944169ChromiumppmASTM D5185n>2<1<11NickelppmASTM D5185n>200<1AluminumppmASTM D5185n>200<1AluminumppmASTM D5185n>130<10CopperppmASTM D5185n>52<12AntimonyppmASTM D5185n>52<12AntimonyppmASTM D5185n50VanadiumppmASTM D5185n0000ADDITIVESmethodImit/basecurrentHistory1History2BoronppmASTM D5185n06418MaiganeseppmASTM D5185n06418MaiganeseppmASTM D5185n109131316CalciumppmASTM D5185n109 <th>SAMPLE INFORM</th> <th>NATION</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	SAMPLE INFORM	NATION	method	limit/base	current	history1	history2
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Titanium ppm ASTM D5185m >2 <1	Nickel		ASTM D5185m	>3	<1	0	0
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Copper ppm ASTM D5185m >103 29 6 14 Tin ppm ASTM D5185m >5 2 <1 2 Antimony ppm ASTM D5185m >5 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 2 45 38 189 Boron ppm ASTM D5185m 2 45 38 189 Barium ppm ASTM D5185m 0 19 0 0 Molybdenum ppm ASTM D5185m 0 1 <1 2 Magnese ppm ASTM D5185m 0 13 13 16 Calcium ppm ASTM D5185m 104 2941 2828 346 Phosphorus ppm ASTM D5185m 1099 1086	Lead		ASTM D5185m	>13	0	<1	0
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Boron ppm ASTM D5185m 2 45 38 189 Barium ppm ASTM D5185m 0 19 0 0 Molybdenum ppm ASTM D5185m 0 6 4 18 Manganese ppm ASTM D5185m 0 1 <1 2 Magnesium ppm ASTM D5185m 0 1 <1 2 Magnesium ppm ASTM D5185m 9 13 13 16 Calcium ppm ASTM D5185m 3114 2941 2828 346 Phosphorus ppm ASTM D5185m 1099 1086 1027 1066 Zinc ppm ASTM D5185m 1245 1075 1055 167 Sulfur ppm ASTM D5185m 7086 10573 6966 23065 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m 20 <th>Cadmium</th> <th>ppm</th> <th>ASTM D5185m</th> <th></th> <th>0</th> <th>0</th> <th>0</th>	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 0 19 0 0 Molybdenum ppm ASTM D5185m 0 6 4 18 Manganese ppm ASTM D5185m 0 1 <1 2 Magnesium ppm ASTM D5185m 9 13 13 16 Calcium ppm ASTM D5185m 9 13 13 16 Calcium ppm ASTM D5185m 3114 2941 2828 346 Phosphorus ppm ASTM D5185m 1099 1086 1027 1066 Zinc ppm ASTM D5185m 1245 1075 1055 167 Sulfur ppm ASTM D5185m 7086 10573 6966 23065 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >100 35 18 8 Sodium ppm ASTM D5185m >20<	ADDITIVES		method	limit/base	current	history1	history2
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Magnesium ppm ASTM D5185m 9 13 13 13 16 Calcium ppm ASTM D5185m 3114 2941 2828 346 Phosphorus ppm ASTM D5185m 1099 1086 1027 1066 Zinc ppm ASTM D5185m 1245 1075 1055 167 Sulfur ppm ASTM D5185m 7086 10573 6966 23065 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >100 35 18 8 Sodium ppm ASTM D5185m >20 1 2 0 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE IGHT MODER Yellow Metal scalar *Visual NONE NONE NONE NONE NONE	Molybdenum	ppm	ASTM D5185m	0	6	4	18
Calcium ppm ASTM D5185m 3114 2941 2828 346 Phosphorus ppm ASTM D5185m 1099 1086 1027 1066 Zinc ppm ASTM D5185m 1245 1075 1055 167 Sulfur ppm ASTM D5185m 7086 10573 6966 23065 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >100 35 18 8 Sodium ppm ASTM D5185m >20 1 2 0 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE LIGHT MODER Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE	Manganese	ppm	ASTM D5185m	0	1	<1	2
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Yellow Metalscalar*VisualNONENONENONENONEPrecipitatescalar*VisualNONENONENONENONE	VISUAL		method	limit/base	current	history1	history2
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	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris scalar *Visual NONE NONE NONE NONE	Debris	scalar	*Visual	NONE		NONE	NONE
Sand/Dirt scalar *Visual NONE NONE NONE NONE	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance scalar *Visual NORML NORML NORML NORML	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor scalar *Visual NORML NORML NORML NORML	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water scalar *Visual >.2 NEG NEG NEG	Emulsified Water	scalar	*Visual	>.2	NEG	NEG	NEG
Free Water scalar *Visual NEG NEG NEG	Free Water	scalar	*Visual		NEG	NEG	NEG



OIL ANALYSIS REPORT



	Visc @ 40°C SAMPLE IMAC		cSt			213.9		169		170			127			
	SAMF	JES	me	ethod limit/b		/base	Cl	current		history1		history2				
23	Color							no i	mage		no image		no ima	ge		
Apra/22 0ct19/23	Bottom							no i	mage		no image		no ima	ge		
	GRAF	GRAPHS														
1	Iron (p	pm)			Lead (ppm)											
	800 - Severe						25.	Severe		1						
udd	600 Abnormal						20 • اط 15 •									
dd	400						읍 15· 10·	Abnorm	nal							
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			Jur	00	Api	0ct1						00	Api			
		Aluminum (ppm)								Chromium (ppm)						
	50						6 - 5 -	Severe								
	40 30 Abnormal				1	1	щ4.	Abnorm	val							
	20-						⊡_3. 2-									
							1- 0-					-				
	Jan 21/19	Aug 13/19 - Feb 4/21	Jun7/21-	0ct8/21-	Apr5/22 -	0ct19/23 -	0-	Jan21/19	Aug13/19 -	Feb4/21-	Jun7/21-	0ct8/21-	Apr5/22 -			
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	150						150.									
mag	100 - Abnormal						튭. 100 -	Abnorm	nal			1	1			
	50						50-									
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	Jan 21/19	Aug13/19 . Feb4/21	Jun7/21	0ct8/21	Apr5/22	0ct19/23		Jan21/19	Aug13/19	Feb4/21	Jun7/21	0ct8/21	Apr5/22			
	Viscosit	∝ ty @ 40°C				0		⊸ Addit								
	260 Abnormal						3000 - 2500 -		calciun				Г			
(j	220 - Base		1				2000 •		nnn phospl	horus			/			
cSt (40°	200						톱 1500 - 1000 -	Augusta					/			
	160 - Abnormal 140 -			/			500-									
	120	/19+-	-/21-	121	22	(23	0.	61/	61/	/21	121-	1/21	22			
	Jan21,	Feb4	Jun7	Oct8	Apr5,	0ct19,		Jan21	Aug 13,	Feb4	Jun7	Oct6	Apr5,			
ratory ole No. Number le Number Package	: WearChe : PCA008 : 0599384 : 1072220 : MOB 1	2	Receive Diagno Diagnos	ed sed stician	: 30 (: 01 f : Sea	Oct 2023 Nov 2023 In Felton	7513 3	Jan 21/19 -	- 81/818 Kem	p Qua	rries - P	10	itone - I 50 E 52 Pryo US 7 Cor vorstone	2(r. '4		



Certificate L2367