



CATERPILLAR 972G 2220400

Component Front Differential

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

Fet UOM Method unition Current Heitory1 Heitory2 Besample at the next service interval to monitor. Sample Number Client Info 1106 202 06 Mar 2023									
Headmino at its hox service interval is monitor. Sample Date Client Info 14 De 2023 65 Mar 2003	RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2	
Sample Date Client Info 19 be 230 Permitted Prime Age No Client Info 1000 1200	Becample at the payt service interval to monitor	Sample Number		Client Info		PC0072622	PC0072421		
Oil Age hrs Client Info 0000 1200	nesample at the next service interval to monitor.	Sample Date		Client Info		14 Dec 2023	06 Mar 2023		
Filte Age OI Changed Client Info O 0 <		Machine Age	hrs	Client Info		24694	23760		
Oil Changed Client Info Changed Changed N/A N/A Bittler Changed Client Info N/A N/A N/A N/A WEAR Normal NORMAL NORMAL NORMAL N/A N/A N/A All component wear rates are normal. Iron pm AStrid Stissin -30 0 0 Silver pm AStrid Stissin -30 0 0 Silver pm AStrid Stissin -30 0 0 Aluminum pm AStrid Stissin -30 1 -1 Aluminum pm AStrid Stissin -30 2 3 Copper pm AStrid Stissin >103 0 0 0 Vanadium pm AStrid Stissin >103 9 181 Veadur pm AStrid Stissin >100 0		Oil Age	hrs	Client Info		1000	1200		
Filter Changed Sample Status Olient Info NA NA NA WEAR Iron ppm AStrid StStin 500 6 12 All component wear rates are normal. Iron ppm AStrid StStin 530 6 12 Nickel ppm AStrid StStin 53 6 1 Mickel ppm AStrid StStin 530 2 0 All minium ppm AStrid StStin 530 2 30 Aluminum ppm AStrid StStin 530 2 30 Auminum ppm AStrid StStin 530 2 30 Copper ppm AStrid StStin 530 0 0 Vanatium ppm AStrid StStin 500 0 0 Vanatium ppm AStrid StStin 500 0 0 Veastur Visual		Filter Age	hrs	Client Info		0	0		
Sample Status NORMAL NORMAL NORMAL WEAR iron ppm ASI/D155/m >500 6 12 All component wear rates are normal. Chromium ppm ASI/D155/m >30 0.0 0.0 Nickel ppm ASI/D155/m >20 0. 0.0 0.0 Nickel ppm ASI/D155/m >20 0.0 0.0 All component wear rates are normal. Silver ppm ASI/D155/m >20 0.0 0.0 All component wear rates are normal. Silver ppm ASI/D155/m >103 9.1 All component wear rates are normal. Comper ppm ASI/D155/m >103 2.4 Lead varadium ppm ASI/D155/m NONE VLITE VLITE Varadium ppm ASI/D155/m NONE NONE NONE <t< th=""><th></th><th>Oil Changed</th><th></th><th>Client Info</th><th></th><th>Changed</th><th>Changed</th><th></th></t<>		Oil Changed		Client Info		Changed	Changed		
Iron ppm 45105186/m >500 6 12 All component wear rates are normal. Othormium ppm 45100586/m >3 0 0 Nickel ppm 45100586/m >3 0 0 Nickel ppm 45100586/m >2 0 0 Nickel ppm 45100586/m >3 0 0 All component wear rates are normal. Nickel ppm 45100586/m >3 0 0 All uminum ppm 45100586/m >30 2 3 All uminum ppm 45100586/m >10 0 0 Vanadium ppm 4510588/m >0 0 0 Vanadium ppm 4510588/m >100 13 24 Vanadium ppm 45105186/m >100 13 24 Vanadiu		Filter Changed		Client Info		N/A	N/A		
All component wear rates are normal. Chromium pp ATM 0518(m) >3 0 0 Nickel ppm ATM 0518(m) >3 <1 <1 Titanium ppm ATM 0518(m) >2 0 <1 Silver ppm ATM 0518(m) >30 2 0 < Aluminum ppm ASM 0518(m) >30 2 3 Aluminum ppm ASM 0518(m) 503 9 18 Copper ppm ASM 0518(m) 503 9 18 Vanatium ppm ASM 0518(m) 503 9 18 Vanatium ppm ASM 0518(m) 500 0 0 Vanatium ppm ASM 0518(m) 500 13 24 Velow Metal scalar Visual* NONE NONE NONE Visual* potanidi		Sample Status				NORMAL	NORMAL		
All component wear rates are normal. Chromium pp ATM 0518/m >3 0 0 Nickel ppm ATM 0518/m >3 <1 <1 Titanium ppm ATM 0518/m >2 0 <1 Silver ppm ATM 0518/m >2 0 0 Aluminum ppm ASM 0518/m >30 2 3 Aluminum ppm ASM 0518/m >30 2 3 Copper ppm ASM 0518/m >10 0 0 Vanatium ppm ASM 0518/m >50 0 0 Vanatium ppm ASM 0518/m >00 0 Vanatium ppm ASM 0518/m >00 13 24 Velow Metal scalar Visual* NONE NONE NONE There is no indication of any con	WEAR	Iron		ACTM D5185(m)	> 500	e	10		
Nickel ppm ASTM D585m >3 <1	WEAR								
Titanium ppm ASTM D5185m >2 0 <1	All component wear rates are normal.			. ,					
Silver ppm ASTM D5185m >2 0 0 Aluminum ppm ASTM D5185m >30 2 3 Lead ppm ASTM D5185m >133 <1 <1 Copper ppm ASTM D5185m >133 9 18 Varadium ppm ASTM D5185m >55 0 0 Varadium ppm ASTM D5185m >55 0 0 Varadium ppm ASTM D5185m >50 0 0 Varadium ppm ASTM D5185m >50 0 0 Varadium ppm ASTM D5185m >100 0 0 Varadium ppm ASTM D5185m >100 13 24 Varadium ppm ASTM D5185m >100 13 24 Solicon ppm ASTM D5185m >100									
Aluminum ppm ASTM D5166m >30 2 3 Lead ppm ASTM D5166m >13 <1 <1 Copper ppm ASTM D5166m >103 9 18 Copper ppm ASTM D5166m >103 9 18 Vanadium ppm ASTM D5166m >103 9 18 Vanadium ppm ASTM D5166m >5 0 0 White Metal scalar Visual* NONE VLITE VLITE There is no indication of any contamination in the oil. Silicon pm ASTM D5166m >20 <1 <1 Water Visual* NONE NONE NONE NONE NONE Debris scalar Visual* NONE NONE NONE Odo scalar Visual* NORM NORML NORML <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>									
Lead pp ASTM 05185m >13 <1				()					
Copper ppm ASTM D5185(m) >103 9 18 Tin ppm ASTM D5185(m) >5 0 0 Vanadium ppm ASTM D5185(m) >5 0 0 White Metal scalar Visual* NONE VLITE VLITE Yellow Metal scalar Visual* NONE NONE NONE NONE There is no indication of any contamination in the oil. Silicon ppm ASTM D5185(m) >20 c1 <1 Water WC Method >.2 NEG NCNE NCNE Silicon scalar Visual* NONE NONE NONE Silicon scalar Visual* NONE NONE NONE Silicon scalar Visual* NORH NORML Sodium scalar Visual* NORH NORML <									
Tin ppm ASTM 2585(m) >5 0 0 Vanadium ppm ASTM 2585(m) NONE VLITE VLITE White Metal scalar Visual* NONE VLITE VLITE Velow Metal scalar Visual* NONE NONE NONE CONTAMINATION Silicon pm ASTM 2585(m) -00 13 2.4 There is no indication of any contamination in the oil. Silicon pm ASTM 2585(m) -00 13 2.4 Water WC Method >.20 <1 <1 Water Visual* NONE NONE NONE NONE Debris scalar Visual* NONE NONE NONE Sand/Dirt scalar Visual* NORM NORML NORML Debris scalar Visual* NORM NORML NORM									
VanadiumppmASTMD5/85/m000White MetalscalarVisual*NONEVLITEVLITEVellow MetalscalarVisual*NONENONENONENONEnonenoneNoneNoneNoneCONTAMINATIONscalarVisual*NONENoneNoneThere is no indication of any contamination in the oil.SiliconppmASTMD5/85/m>-00<1<WaterWC Method>-2NEGNEGSiltscalarVisual*NONENONENONESiltscalarVisual*NONENONENONESand/DirtscalarVisual*NONENONENONE				. ,					
White Metal Yellow MetalScalarVisual*NONEVLITEVIITE···Yellow MetalScalarVisual*NONENONENONENONE···CONTAMINATIONStilconppmASTMD51800>100133243···There is no indication of any contamination in the oil.PotassiumppmASTMD51800>20<1<1···WaterWC Method>.2NEGNONE<···············SiltscalarVisual*NONENONENONENONE············DebrisscalarVisual*NONENONENONENONE·· <t< th=""><th></th><th></th><th></th><th></th><th>>0</th><th></th><th></th><th></th></t<>					>0				
Yellow MetalscalarVisual*NONENONENONECONTAMINATIONThere is no indication of any contamination in the oil.SiliconppmASTM D5/85/m>1001324VatarWaterWC Method>20ASTMNONENONEASTMSiltscalarVisual*NONENONENONENONEDebrisscalarVisual*NONENONENONENONESand/DirtscalarVisual*NONENONENONEOdorscalarVisual*NORMNORMLNORMLOdorscalarVisual*NORMNORMLNORMLThe condition of the oil is acceptable for the time in service.SodiumppmASTM D5/85/m000MarganeseppmASTM D5/85/m00MarganeseppmASTM D5/85/m00MarganeseppmASTM D5/85/m00MarganeseppmASTM D5/85/m10143316PhosphorusppmASTM D5/85/m1143316MarganeseppmASTM D5/85/m124510721291MarganeseppmASTM D5/85/m124510721291 <th></th> <th></th> <th></th> <th>. ,</th> <th></th> <th></th> <th></th> <th></th>				. ,					
Silicon ppm ASTM D5186(m) >100 13 24 Potasium ppm ASTM D5186(m) >20 <1 <1 Water WC WC NCM NCME NCONE NCONE Silt scalar Visual* NONE NONE NONE NONE Sand/Dirt scalar Visual* NONE NONE NONE Appearance scalar Visual* NORM NORML NORML Odor scalar Visual* NORM NORML NORML The condition of the oil is acceptable for the time in service. Sodium ppm ASTM D5186(m) 2 <1 <1 Boron ppm ASTM D5186(m) 0 0 Molybdenum ppm ASTM D5186(m) 0 0 <1 Marganese ppm ASTM D5186(m) 0 0 <1 Marganese <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>									
Potassium ppm ASTM DS185(m) >20 <1		Yellow Metal	scalar	visual	NONE	NONE	NONE		
WaterWC Method >.2NEGNEGSiltscalarVisual*NONENONENONEDebrisscalarVisual*NONENONENONESand/DirtscalarVisual*NONENONENONEAppearancescalarVisual*NORNORMLNORMLOdorscalarVisual*NORNORMLNORMLOdorscalarVisual*NORNORMLNORMLEmulsified WaterscalarVisual*NORNORMLSodiumppmASTM D5186/m2C1<1BoronppmASTM D5186/m00MolybdenumppmASTM D5186/m00MaganeseppmASTM D5186/m00MaganesiumppmASTM D5186/m00MaganesiumppmASTM D5186/m00PhosphorusppmASTM D5186/m10998921168ZincppmASTM D5186/m124510721291SulfurppmASTM D5186/m708639064759	CONTAMINATION	Silicon	ppm	ASTM D5185(m)	>100	13	24		
WaterWC Method ~ 2 NEGNEG \sim SiltscalarVisual*NONENONENONE \sim DebrisscalarVisual*NONENONENONE \sim Sand/DirtscalarVisual*NORENONENONE \sim AppearancescalarVisual*NORENORENORE \sim OdorscalarVisual*NORENORENORE \sim OdorscalarVisual*NORENORE \sim Emulsified WaterscalarVisual*NORENORE \sim SodiumppmASTM DS185(m) \sim \sim $\simMore pressureSodiumppmASTM DS185(m)\sim$	There is no indication of any contamination in the oil	Potassium	ppm	ASTM D5185(m)	>20	<1	<1		
DebrisscalarVisual*NONENONENONESand/DirtscalarVisual*NONENONENONEAppearancescalarVisual*NORMLNORMLNORMLNORMLOdorscalarVisual*NORMLNORMLNORMLNORMLEmulsified WaterscalarVisual*NORMLNORMLNORMLFLUID CONDITIONSodiumppmASTM05185(m)2BoronppmASTM05185(m)000<		Water		WC Method	>.2	NEG	NEG		
Sand/DirtscalarVisual*NONENONENONEAppearancescalarVisual*NORMNORMLNORMLOdorscalarVisual*NORMNORMLNORMLEmulsified WaterscalarVisual*NORMNORMLNORMLFLUID CONDITIONSodiumppmASTM D5185(m)2Ref<1BoronppmASTM D5185(m)2<1<1BariumppmASTM D5185(m)00<1MolybdenumppmASTM D5185(m)00<1ManganeseppmASTM D5185(m)00<1CalciumppmASTM D5185(m)00<1PhosphorusppmASTM D5185(m)10493136ZincppmASTM D5185(m)10491168SulfurppmASTM D5185(m)104912451168		Silt	scalar	Visual*	NONE	NONE	NONE		
Appearance OdorscalarVisual*NORML<		Debris	scalar	Visual*	NONE	NONE	NONE		
Normal CodorscalarVisual*NORMLNORMLNORMLNORMLEmulsified WaterscalarVisual*>.2NEGNEGNEGNEG </th <th></th> <th>Sand/Dirt</th> <th>scalar</th> <th>Visual*</th> <th>NONE</th> <th>NONE</th> <th>NONE</th> <th></th>		Sand/Dirt	scalar	Visual*	NONE	NONE	NONE		
Emulsified WaterscalarVisual*>.2NEGNEGFLUID CONDITIONSodiumppmASTM D5185(m)<		Appearance	scalar	Visual*	NORML	NORML	NORML		
FLUID CONDITION Sodium ppm ASTM D5185(m) 2 <1		Odor	scalar	Visual*	NORML	NORML	NORML		
Boron ppm ASTM D5185(m) 2 <1		Emulsified Water	scalar	Visual*	>.2	NEG	NEG		
Boron ppm ASTM D5185(m) 2 <1	FLUID CONDITION	Sodium	nom	ASTM D5185(m)		<1	<1		
Barium ppm ASTM D5185(m) 0 0 Molybdenum ppm ASTM D5185(m) 0 <1 Manganese ppm ASTM D5185(m) 0 0 <1 Magnesium ppm ASTM D5185(m) 0 0 <1 Calcium ppm ASTM D5185(m) 9 11 17 Phosphorus ppm ASTM D5185(m) 3114 3136 Zinc ppm ASTM D5185(m) 1099 892 1168 Sulfur ppm ASTM D5185(m) 1245 1072 1291					2				
Molybdenum ppm ASTM D5185(m) 0 0 <1	The condition of the oil is acceptable for the time in service.								
Manganese ppm ASTM D5185(m) 0 0 <11									
Magnesium ppm ASTM D5185(m) 9 11 17 Calcium ppm ASTM D5185(m) 3114 3381 3136 Phosphorus ppm ASTM D5185(m) 1099 892 1168 Zinc ppm ASTM D5185(m) 1245 1072 1291 Sulfur ppm ASTM D5185(m) 7086 3906 4759		-							
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Phosphorus ppm ASTM D5185(m) 1099 892 1168 Zinc ppm ASTM D5185(m) 1245 1072 1291 Sulfur ppm ASTM D5185(m) 7086 3906 4759		-							
Zinc ppm ASTM D5185(m) 1245 1072 1291 Sulfur ppm ASTM D5185(m) 7086 3906 4759									
Sulfur ppm ASTM D5185(m) 7086 3906 4759									
		Sulfur					4759		
				. ,			215		

Visc@100°C cSt ASTM D7279(m) 18.26

Viscosity Index (VI) Scale ASTM D2270* 96

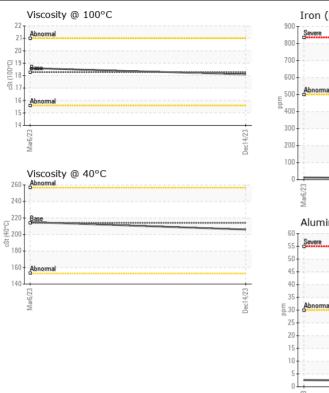
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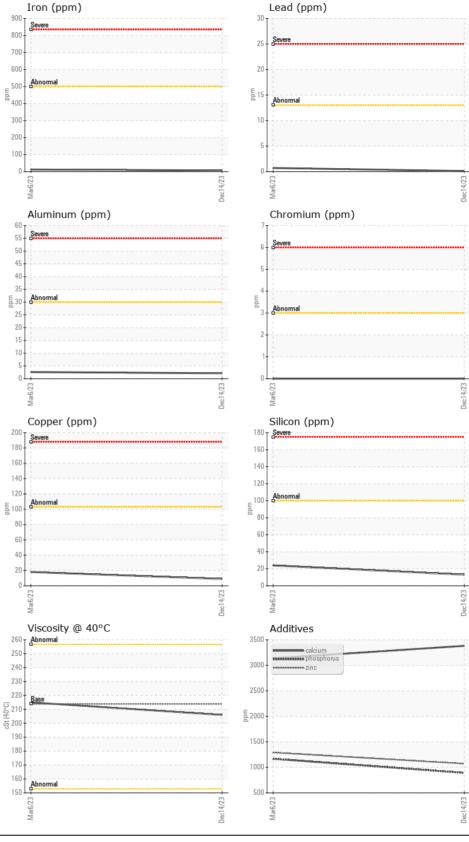
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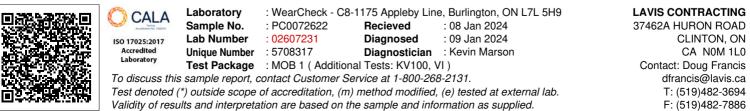
96

18.1

96







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