

# WEAR NORMAL CONTAMINATION ABNORMAL FLUID CONDITION NORMAL

#### Machine Id **2227006** Component **Transmission (Manual)** Fluid **{not provided} (--- QTS)**

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

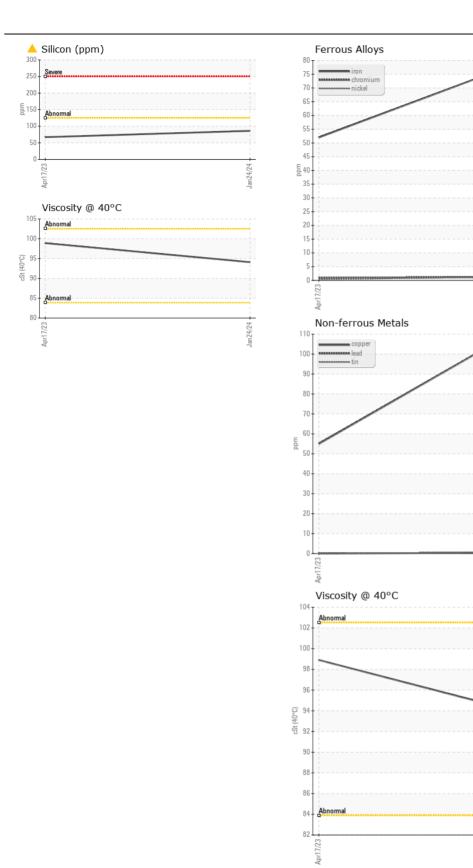
Elemental level of silicon (Si) above normal indicating ingress of seal material.

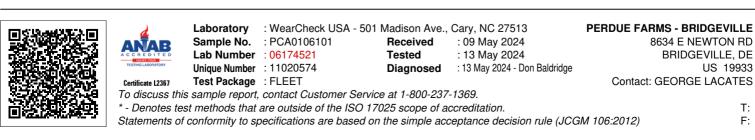
## FLUID CONDITION

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

TestUOMMethodLimit/MoCurrentHistory1History2Sample NumeerClient Info24 Jan 202017 Apr 2023Sample DateClient Info6657530298Machine AgemlsClient Info665750Filter AgemlsClient Info665750Oil ChangetClient InfoK66775NotchangeFilter AgemlsClient InfoKNotChangeNotChangeSample StatusClient InfoKNotChangeNotChangeTornpmASTM 5186>20078480 (Anderse)NickelpmASTM 5186>501NickelpmASTM 5186>700SilverpmASTM 5186>700SilverpmASTM 5186>700AuminumpmASTM 5186>700NamepmASTM 5186>1010VandaumpmASTM 5186>1010NonepmASTM 5186>1011SilcorpmASTM 5186>1011NamepmASTM 5186>1011SilcorpmASTM 5186>1011Nonepm </th <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>							
Sample DateClient Info24 Jan 202017 Apr 2023Machine AgemlsClient Info6657530298Oil AgemlsClient Info665750Filter AgemlsClient InfoMot ChangeMot ChangeOil ChangedClient InfoNot ChangeNot ChangeFilter ChangedClient InfoNot ChangeNot ChangeSample StatusClient InfoNot ChangeNot ChangeIronppmASTM D5185>2007852IronppmASTM D5185>2007852NickelppmASTM D5185>2007852NickelppmASTM D5185>51NickelppmASTM D5185>700SilverppmASTM D5185>700AuminumppmASTM D5185>2011055YanadiumppmASTM D5185>10<110YandiumppmASTM D5185>10<110YandiumppmASTM D5185>10<110YandiumppmASTM D5185>10<110YandiumppmASTM D5185>10<110YandiumppmASTM D5185>10<110Yandium </th <th>Test</th> <th>UOM</th> <th>Method</th> <th>Limit/Abn</th> <th>Current</th> <th>History1</th> <th>History2</th>	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machine AgemisClient Info6657530298Oil AgemisClient Info665750Filter AgemisClient InfoNot ChangdNot ChangdOil ChangedClient InfoNot ChangdNot ChangdFilter ChangedClient InfoNot ChangdNot ChangdSample StatusClient InfoNot ChangdASTM DS185m>2007852IronppmASTM DS185m>501<1<NickelppmASTM DS185m>501<1NickelppmASTM DS185m>501<1SilverppmASTM DS185m>20700AluminumppmASTM DS185m>25100QanadiumppmASTM DS185m>25100VanadiumppmASTM DS185m>25100VanadiumppmASTM DS185m>25100ValorppmASTM DS185m>202-10VanadiumppmASTM DS185m>202-10ValorppmASTM DS185m>202-1ValorppmASTM DS185m>202-1ValorppmAST	Sample Number		Client Info		PCA0106101	PCA0095537	
Oil Age Filter AgeIniseClient Info665750Filter AgerniseClient InfoNot ChangdNot ChangdOil ChangedColient InfoNot ChangdNot ChangdFilter ChangedQClient InfoNot ChangdNot ChangdSample StatusASNORMALASNORMALIronppmASTM D5185m>2007852ChromiumppmASTM D5185m>51<NickelppmASTM D5185m>51<SilverppmASTM D5185m>700AluminumppmASTM D5185m>700AgeppmASTM D5185m>700CopperppmASTM D5185m>20584VandardumppmASTM D5185m>10<10VandardumppmASTM D5185m>10<10Valderscalar'VisualNONEInONEInONEInoneValderscalar'VisualNONEInONEInoneInoneSiliconppmASTM D5185m>202<1InoneSiliconppmASTM D5185m>20InoneInoneInoneSiliconppmASTM D5185m>20InoneInoneInoneSiliconppmASTM D5185m>20	Sample Date		Client Info		24 Jan 2024	17 Apr 2023	
Filter Age nls Client Info 66575 0    Oil Changed Client Info Not Changd Not Changd Not Changd    Filter Changed Client Info Not Changd Not Changd Not Changd    Sample Status Filter Changed Client Info Not Changd ABNORMAL    Iron ppm ASTM D5185 >200 78 52    Chromium ppm ASTM D5185 >5 1 <1    Nickel ppm ASTM D5185 >5 1 <1    Silver ppm ASTM D5185 >25 8 4    Aluminum ppm ASTM D5185 >25 10 0    Copper ppm ASTM D5185 >21 10     Vanadium ppm ASTM D5185 >21 10     Valeadum ppm ASTM D5185 >210 4 0    Vanadium ppm ASTM D5185 <td< th=""><th>Machine Age</th><th>mls</th><th>Client Info</th><th></th><th>66575</th><th>30298</th><th></th></td<>	Machine Age	mls	Client Info		66575	30298	
Oil ChangedClient InfoNot ChangdNot ChangdFilter ChangedClient InfoNot ChangdNot ChangdSample StatusABNORMALABNORMALIronppmASTM D518sn>2007852ChromiumppmASTM D518sn>501<1NickelppmASTM D518sn>501<1SilverppmASTM D518sn>501<1AluminumppmASTM D518sn>2584LeadppmASTM D518sn>225110555CopperppmASTM D518sn>210<10VanadiumppmASTM D518sn>10<10Vellow Metalscalar'VisualNONENONENONESiliconppmASTM D518sn>125 <b>A</b> 86 <b>A</b> 67ValdervovoNONENONENONESiliconppmASTM D518sn>125 <b>A</b> 86A 67SiliconppmASTM D518snNONENONENONESiliconppmASTM D518snNONENONENONESiliconppmASTM D518snNONENONESoliconppmASTM D518snNONENONESiliconscalar'visual <th>Oil Age</th> <th>mls</th> <th>Client Info</th> <th></th> <th>66575</th> <th>0</th> <th></th>	Oil Age	mls	Client Info		66575	0	
Filter ChangedClient InfoNot ChangedNot Cha	Filter Age	mls	Client Info		66575	0	
Sample StatusASTM D5185>200ABNORMALABNORMALABNORMALIronppmASTM D5185>2007852ChromiumppmASTM D5185>51<1NickelppmASTM D5185>51<1TitaniumppmASTM D5185>51<1SilverppmASTM D5185>700AluminumppmASTM D5185>700LeadppmASTM D5185>25844CopperppmASTM D5185>10<10YanadiumppmASTM D5185>10<10VanadiumppmASTM D5185>10<10Yellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185>202<1Yellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185>202<1SiliconppmASTM D5185>202<1SiliconppmASTM D5185>202<1SiliconppmASTM D5185>202<1SoliconppmASTM D5185>20NONENONESoliconppmASTM D5185>20NONE	Oil Changed		Client Info		Not Changd	Not Changd	
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ChromiumppmASTM D5185m>51<1	Sample Status				ABNORMAL	ABNORMAL	
ChromiumppmASTM D5185m>51<1	Iron	nnm	ΔSTM D5185m	<u>_200</u>	78	52	
NickelpmASTM D5185m>501<1					-		
TitaniumppmASTM D5185m<					-		
SilverppmASTM D5185m>700AluminumppmASTM D5185m>2584LeadppmASTM D5185m>45<10CopperppmASTM D5185m>225110555TinppmASTM D5185m>10<10VanadiumppmASTM D5185m>10<10White Metalscalar*VisualNONENONENONEYellow Metalscalar*VisualNONEMONENONESiliconppmASTM D5185m>202<1WaterWC Method>0.1NEGNEGSilitscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORNORMLNORMLSodiumppmASTM D5185m<223BoronppmASTM D5185m<230SodiumppmASTM D5185m<223ManganeseppmASTM D5185m<223ManganeseppmASTM D5185m<23025ManganeseppmASTM D5185m<311ManganeseppmASTM D5185m<311 </th <th></th> <th></th> <th></th> <th>&gt;0</th> <th>-</th> <th></th> <th></th>				>0	-		
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LeadppmASTM D5185m>45<1					-		
Copper   ppm   ASTM D5185m   >225   110   55      Tin   ppm   ASTM D5185m   >10   <1   0      Vanadium   ppm   ASTM D5185m   >10   <1   0      White Metal   scalar   *Visual   NONE   NONE   NONE      Yellow Metal   scalar   *Visual   NONE   NONE   NONE      Silicon   ppm   ASTM D5185m   >125 <b>A</b> 86   67      Potassium   ppm   ASTM D5185m   >125 <b>A</b> 86   MCF      Silicon   ppm   ASTM D5185m   >125 <b>A</b> 86   MCF      Water   WC Method   >0.1   NEG   NEG      Silit   scalar   *Visual   NONE   ILIGHT   NONE      Sand/Dirt   scalar   *Visual   NORH   NORML   NORML      Qdor   scalar					-		
TinppmASTM D5185m>10<1							
VanadiumppmASTM D5185m<1							
White Metalscalar*VisualNONENONENONENONEIYellow Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185m>125 <b>A</b> 86 <b>A</b> 67PotassiumppmASTM D5185m>20 <b>2</b> <1WaterWC Method>0.1 <b>NEG</b> NONESilitscalar*VisualNONE <b>NONE</b> NONEDebrisscalar*VisualNONE <b>NONE</b> NONESand/Dirtscalar*VisualNONE <b>NONE</b> NONEAppearancescalar*VisualNORMNORMLNORMLOdorscalar*VisualNORMNORMLNORMLSodiumppmASTM D5185mS <b>2</b> 3BariumppmASTM D5185mI <b>1</b> 1ManganeseppmASTM D5185m <b>33</b> 1ManganesiumppmASTM D5185m <b>33</b> 1PhosphorusppmASTM D5185m <b>33</b> 1ManganesiumppmASTM D5185m <b>33</b> 11ManganesiumppmASTM D5185m <b>3</b> 11PhosphorusppmASTM D5185m <b>3</b> 11SulfurppmASTM D5185m <b>3</b> 11Manganesium				>10			
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PotassiumppmASTM D5185m>202<1		Scalal	visuai	NONL			
WaterWC Method>0.1NEGNEGSiltscalar*VisualNONENONENONEDebrisscalar*VisualNONELIGHTNONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGSodiumppmASTM D5185m23BariumppmASTM D5185m200MolybdenumppmASTM D5185m23025MagnesiumppmASTM D5185m10218466PhosphorusppmASTM D5185m10218466PhosphorusppmASTM D5185m33511SulfurppmASTM D5185m635780	Silicon	ppm	ASTM D5185m	>125	<b>a</b> 86	<b>6</b> 7	
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Odorscalar*VisualNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGSodiumppmASTM D5185m23BoronppmASTM D5185m111BariumppmASTM D5185m00MolybdenumppmASTM D5185m220ManganeseppmASTM D5185m300255MagnesiumppmASTM D5185m331PhosphorusppmASTM D5185m10218466PhosphorusppmASTM D5185m3511SulfurppmASTM D5185m63578	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Emulsified Waterscalar*Visual>0.1NEGNEGSodiumppmASTM D5185m23BoronppmASTM D5185m111BariumppmASTM D5185m00MolybdenumppmASTM D5185m20ManganeseppmASTM D5185m3025MagnesiumppmASTM D5185m311CalciumppmASTM D5185m10218466PhosphorusppmASTM D5185m3511ZincppmASTM D5185m353511SulfurppmASTM D5185m6488853780	Appearance	scalar	*Visual	NORML	NORML	NORML	
Sodium   ppm   ASTM D5185m   2   3      Boron   ppm   ASTM D5185m   11   1      Barium   ppm   ASTM D5185m   0   0      Barium   ppm   ASTM D5185m   0   0      Molybdenum   ppm   ASTM D5185m   2   0      Manganese   ppm   ASTM D5185m   30   25      Magnesium   ppm   ASTM D5185m   33   1      Calcium   ppm   ASTM D5185m   1021   846      Phosphorus   ppm   ASTM D5185m   908   704      Zinc   ppm   ASTM D5185m   35   11      Sulfur   ppm   ASTM D5185m   35378   0	Odor	scalar	*Visual	NORML	NORML	NORML	
Boron   ppm   ASTM D5185m   11   1      Barium   ppm   ASTM D5185m   0   0      Molybdenum   ppm   ASTM D5185m   2   0      Manganese   ppm   ASTM D5185m   30   25      Magnesium   ppm   ASTM D5185m   33   1      Calcium   ppm   ASTM D5185m   1021   8466      Phosphorus   ppm   ASTM D5185m   908   704      Zinc   ppm   ASTM D5185m   35   11      Sulfur   ppm   ASTM D5185m   6488   5378	Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	
Boron   ppm   ASTM D5185m   11   1      Barium   ppm   ASTM D5185m   0   0      Molybdenum   ppm   ASTM D5185m   2   0      Manganese   ppm   ASTM D5185m   30   25      Magnesium   ppm   ASTM D5185m   33   1      Calcium   ppm   ASTM D5185m   1021   8466      Phosphorus   ppm   ASTM D5185m   908   704      Zinc   ppm   ASTM D5185m   35   11      Sulfur   ppm   ASTM D5185m   6488   5378	Sodium	0000	ACTM DE10Em				
Barium   ppm   ASTM D5185m   0   0      Molybdenum   ppm   ASTM D5185m   2   0      Manganese   ppm   ASTM D5185m   30   25      Magnesium   ppm   ASTM D5185m   30   25      Calcium   ppm   ASTM D5185m   13   1      Phosphorus   ppm   ASTM D5185m   1021   8466      Phosphorus   ppm   ASTM D5185m   908   704      Zinc   ppm   ASTM D5185m   35   11      Sulfur   ppm   ASTM D5185m   6488   5378		muqu			2	3	
Molybdenum   ppm   ASTM D5185m   2   0      Manganese   ppm   ASTM D5185m   30   25      Magnesium   ppm   ASTM D5185m   30   10      Calcium   ppm   ASTM D5185m   1021   846      Phosphorus   ppm   ASTM D5185m   908   704      Zinc   ppm   ASTM D5185m   35   11      Sulfur   ppm   ASTM D5185m   6488   5378							
Manganese   ppm   ASTM D5185m   30   25      Magnesium   ppm   ASTM D5185m   3   1      Calcium   ppm   ASTM D5185m   1021   846      Phosphorus   ppm   ASTM D5185m   908   704      Zinc   ppm   ASTM D5185m   35   11      Sulfur   ppm   ASTM D5185m   6488   5378	Boron	ppm	ASTM D5185m		11	1	
Magnesium   ppm   ASTM D5185m   3   1      Calcium   ppm   ASTM D5185m   1021   846      Phosphorus   ppm   ASTM D5185m   908   704      Zinc   ppm   ASTM D5185m   35   11      Sulfur   ppm   ASTM D5185m   6488   5378	Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m		11 0	1 0	
Calcium   ppm   ASTM D5185m   1021   846      Phosphorus   ppm   ASTM D5185m   908   704      Zinc   ppm   ASTM D5185m   35   11      Sulfur   ppm   ASTM D5185m   6488   5378	Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		11 0 2	1 0 0	
Phosphorus   ppm   ASTM D5185m   908   704      Zinc   ppm   ASTM D5185m   35   11      Sulfur   ppm   ASTM D5185m   6488   5378	Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		11 0 2 30	1 0 0 25	
Zinc   ppm   ASTM D5185m   35   11      Sulfur   ppm   ASTM D5185m   6488   5378	Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		11 0 2 30 3	1 0 0 25 1	  
Sulfur   ppm   ASTM D5185m   6488   5378	Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		11 0 2 30 3 1021	1 0 25 1 846	  
	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 ASTM D5185m		11 0 2 30 3 1021 908	1 0 25 1 846 704	    
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