

# WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL

#### Area TOM MEYERS [PATRICK/503010-7250] VOLVO PENTA 3950003862 Component Port IPS Fluid GEAR OIL SAE 75W90 (7 GAL)

### RECOMMENDATION

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

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# **WEAR**

All component wear rates are normal.

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## CONTAMINATION

There is no indication of any contamination in the oil.

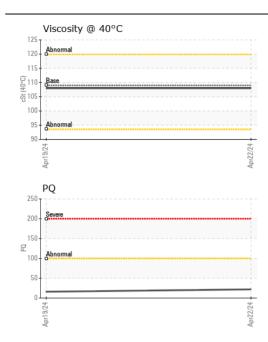
# **FLUID CONDITION**

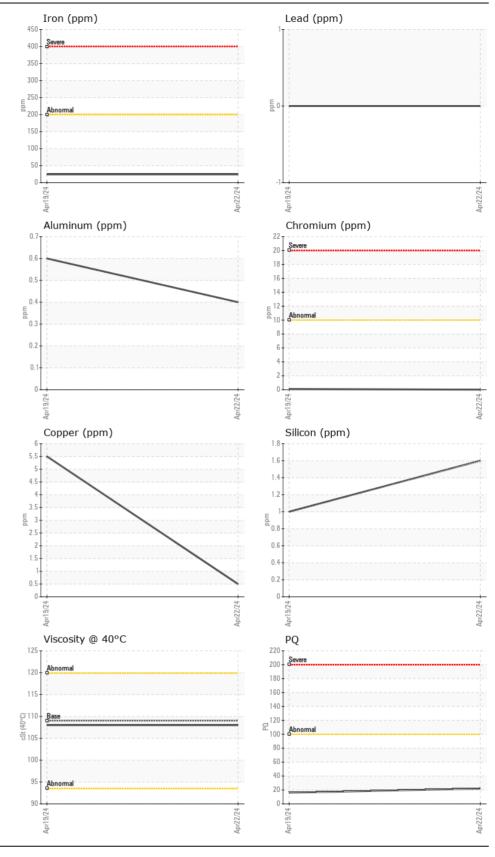
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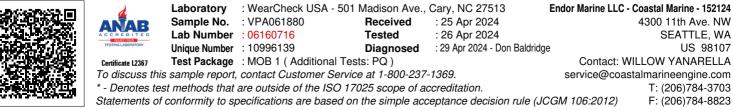
The condition of the oil is acceptable for the time in service.

Test     UOM     Method     LimitAbn     Current     History1     History2       Sample Number     Client Info     22 Apr 2024     19 Apr 2024        Machine Age     hrs     Client Info     0     0        Machine Age     hrs     Client Info     0     0        Oil Age     hrs     Client Info     0     0        Oil Age     hrs     Client Info     Changed     Not Changed        Oil Changed     Client Info     Changed     Not Changed        Sample Status     Client Info     Changed     Not Changed        PQ     ASTM D8184     22     16        Iron     ppm     ASTM D8185     200     24     24        Nickel     ppm     ASTM D5185     0     0         Nickel     ppm     ASTM D5185     <-1     <1         Aluminum     ppm     ASTM D5185							
Sample DateClient Info22 Apr 202419 Apr 2024Machine AgehrsClient Info735735Oil AgehrsClient Info00Filter AgehrsClient InfoChangedNot ChangedCil ChangedClient InfoChangedNot ChangedFilter ChangedClient InfoChangedNot ChangedSample StatusVNORMALNORMALPQASTM D81842216IronppmASTM D5185>2002424ChromiumppmASTM D518500NickelppmASTM D5185>100SilverppmASTM D518500AluminumppmASTM D5185<1<1VanadiumppmASTM D5185<1<1<VanadiumppmASTM D5185<1<1<Yellow Metalscalar'VisualNONENONENONESiliconppmASTM D51852001Yellow Metalscalar'VisualNONENONENONESiliconppmASTM D51852001Yellow Metalscalar'VisualNONENONENONESiliconppmASTM D51852001Potassium<	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machine Age     hrs     Client Info     735     735        Oil Age     hrs     Client Info     0     0        Filter Age     hrs     Client Info     0     0        Oil Changed     Client Info     Changed     Not Changed        Filter Changed     Client Info     Changed     Not Changed        Sample Status     Vistad     NORMAL     NORMAL        PQ     ASTM D8185     220     24     24        Iron     ppm     ASTM D5185     >10     0         Nickel     ppm     ASTM D5185     >10     0     0        Silver     ppm     ASTM D5185     0     0         Lead     ppm     ASTM D5185     0     0         Vandimun     pm     ASTM D5185     0     0         Yandimun     pm     ASTM D5185     0<	Sample Number		Client Info		VPA061880	VPA061585	
Oil Age Filter Age hrsClient Info00Filter Age hrsClient InfoChangedNot ChangedOil ChangedClient InfoChangedNot ChangedFilter ChangedClient InfoChangedNot ChangedSample StatusClient InfoChangedNot ChangedPQASTM D81842216IronppmASTM D5185m>2002424ChromiumppmASTM D5185m>100NickelppmASTM D5185m>100NickelppmASTM D5185m00AluminumppmASTM D5185m00AluminumppmASTM D5185m<116LeadppmASTM D5185m<116CopperppmASTM D5185m<116VanadiumppmASTM D5185m000VanadiumppmASTM D5185m2001Yellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m2001Yellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m2001PotassiumppmASTM D5185m>2001	Sample Date		Client Info		22 Apr 2024	19 Apr 2024	
Filter Age   hrs   Client Info   0   0      Gil Changed   Client Info   Changed   Not Changd      Filter Changed   Client Info   Changed   Not Changd      Sample Status   NORIMAL   NORIMAL   NORIMAL      PQ   ASTM D8186   22   16      Iron   ppm   ASTM D5185m   >10   0   <1      Nickel   ppm   ASTM D5185m   0   0   0      Silver   ppm   ASTM D5185m   0   0   0      Aluminum   ppm   ASTM D5185m   0   0   0      Aluminum   ppm   ASTM D5185m   0   0   0      Vaadium   ppm   ASTM D5185m   0   0       Vanadium   ppm   ASTM D5185m   1   6       Vaadium   ppm   ASTM D5185m   0   0       Valoutum   ppm   ASTM D5185m<	Machine Age	hrs	Client Info		735	735	
Oil Changed Filter ChangedClient InfoChanged ChangedNot ChangedFilter Changed Sample StatusClient InfoChanged Not ChangedNot ChangedPQASTM D81842216IronppmASTM D8185>2002424ChromiumppmASTM D5185>100<1NickelppmASTM D5185>1000SilverppmASTM D5185000AluminumppmASTM D5185000AluminumppmASTM D5185<1<1<1LeadppmASTM D5185<16VanadiumppmASTM D5185<1<1<1VanadiumppmASTM D5185<1<1<1VanadiumppmASTM D5185<00<White Metalscalar*VisualNONENONENONE<SiliconppmASTM D51852001Yellow Metalscalar*VisualNONENONENONE<Silitscalar*VisualNONENONENONEAppearancescalar*VisualNORMNORMNONEAppearancescalar*VisualNORMNORMNORMNORM<Sodi	Oil Age	hrs	Client Info		0	0	
Filter Changed Sample Status Client Info Changed NORMAL Not Changed    PQ ASTM D8184 22 16    Iron ppm ASTM D5185m >200 24 24    Chromium ppm ASTM D5185m >10 0 <1    Nickel ppm ASTM D5185m >10 0 <1    Nickel ppm ASTM D5185m >10 0 0    Silver ppm ASTM D5185m 0 0    Auminum ppm ASTM D5185m <1 <1    Lead ppm ASTM D5185m <11 <1    Vanadium ppm ASTM D5185m <1 <1    Vanadium ppm ASTM D5185m <1 <1    Yellow Metal scalar *Visual NONE NONE    Yellow Metal scalar *Visual NONE NONE    Yellow Metal scalar *Visual NONE NONE    Silicon ppm ASTM D5185m 20 0 1    Yellow Metal	Filter Age	hrs	Client Info		0	0	
Sample StatusNORMALNORMALPQASTM D81842216IronppmASTM D5185m>2002424ChromiumppmASTM D5185m>100<1NickelppmASTM D5185m>1000TitaniumppmASTM D5185m00SilverppmASTM D5185m00AluminumppmASTM D5185m<1<1<1LeadppmASTM D5185m<16CopperppmASTM D5185m<16VanadiumppmASTM D5185m<1<1<1VanadiumppmASTM D5185m00Yellow Metalscalar*VisualNONENONENONEYellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m>2001Yellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m>2001PotassiumppmASTM D5185m>20NONENONESolidumppmASTM D5185m20NONESolidumppmASTM D5185m>20NONESolidumppmASTM D5185m>0.2NOREAppearance </th <th>Oil Changed</th> <th></th> <th>Client Info</th> <th></th> <th>Changed</th> <th>Not Changd</th> <th></th>	Oil Changed		Client Info		Changed	Not Changd	
PQ     ASTM D8184     22     16        Iron     ppm     ASTM D5185m     >200     24     24        Chromium     ppm     ASTM D5185m     >10     0     <1        Nickel     ppm     ASTM D5185m     >10     0     0        Titanium     ppm     ASTM D5185m     >10     0     0        Silver     ppm     ASTM D5185m     0     0     0        Aluminum     ppm     ASTM D5185m      4     1        Lead     ppm     ASTM D5185m      4     0     0        Vanadium     ppm     ASTM D5185m      4     1        Vanadium     ppm     ASTM D5185m      0     0        Vanadium     ppm     ASTM D5185m     2     1        Vanadium     ppm     ASTM D5185m     20     0     1	Filter Changed		Client Info		Changed	Not Changd	
Iron     ppm     ASTM D5185m     >200     24     24        Chromium     ppm     ASTM D5185m     >10     0     <1        Nickel     ppm     ASTM D5185m     >10     0     0        Titanium     ppm     ASTM D5185m     0     0     0        Silver     ppm     ASTM D5185m     0     0     0        Aluminum     ppm     ASTM D5185m      1     <1        Lead     ppm     ASTM D5185m      1     6        Vanadium     ppm     ASTM D5185m      1     <1        Vanadium     ppm     ASTM D5185m      0     0        Vanadium     ppm     ASTM D5185m     2     1        Yellow Metal     scalar     *Visual     NONE     NONE     NONE        Silicon     ppm     ASTM D5185m     >20     0     1	Sample Status				NORMAL	NORMAL	
Iron     ppm     ASTM D5185m     >200     24     24        Chromium     ppm     ASTM D5185m     >10     0     <1        Nickel     ppm     ASTM D5185m     >10     0     0        Titanium     ppm     ASTM D5185m     0     0     0        Silver     ppm     ASTM D5185m     0     0     0        Aluminum     ppm     ASTM D5185m      1     <1        Lead     ppm     ASTM D5185m      1     6        Vanadium     ppm     ASTM D5185m      1     <1        Vanadium     ppm     ASTM D5185m      0     0        Yellow Metal     scalar     *Visual     NONE     NONE     NONE        Silicon     ppm     ASTM D5185m     >20     0     1        Yellow Metal     scalar     *Visual     NONE							
Chromium     ppm     ASTM D5185m     >10     0     <1							
Nickel     ppm     ASTM D5185m     >10     0     0        Titanium     ppm     ASTM D5185m     0     0     0        Silver     ppm     ASTM D5185m     0     0     0        Aluminum     ppm     ASTM D5185m      1     <1        Lead     ppm     ASTM D5185m      0     0        Copper     ppm     ASTM D5185m      <1     6        Vanadium     ppm     ASTM D5185m      <1     <1        Vanadium     ppm     ASTM D5185m     0     0     0        Vanadium     ppm     ASTM D5185m     2     1        Yellow Metal     scalar     *Visual     NONE     NONE     NONE        Silicon     ppm     ASTM D5185m     >20     0     1        Solit     scalar     *Visual     NONE     NONE     NONE	-						
Titanium     ppm     ASTM D5185m     0     0				_	-		
SilverppmASTM D5185m00AluminumppmASTM D5185m<1<1LeadppmASTM D5185m000CopperppmASTM D5185m<16TinppmASTM D5185m<1<1VanadiumppmASTM D5185m000White Metalscalar*VisualNONENONENONEYellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m201PotassiumppmASTM D5185m>2001WaterWC Method>0.2NEGNONESilitscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLAppearancescalar*VisualNORMLNORMLNORMLGodorscalar*VisualNORMLNORMLNORMLSodiumppmASTM D5185m2001BoronppmASTM D5185m20001MagnesiumppmASTM D5185m1200MagnesiumppmASTM D5185m1213Magnesiu				>10			
AluminumppmASTM D5185m<1					-		
LeadppmASTM D5185m00CopperppmASTM D5185m<16TinppmASTM D5185m00VanadiumppmASTM D5185m00White Metalscalar*VisualNONENONENONEYellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m201PotassiumppmASTM D5185m>2001WaterWC Method>0.2NEGNEGSilitscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNORMLNORMLNORMLAppearancescalar*VisualNORMLNORMLNORMLGodorscalar*VisualNORMLNORMLNORMLSodiumppmASTM D5185m2001BariumppmASTM D5185m20001MolybdenumppmASTM D5185m1200MagnesiumppmASTM D5185m1213Astm D5185m1213SodiumppmASTM D5185m1211Magnesiumppm					-		
CopperppmASTM D5185m<1		ppm					
TinppmASTM D5185m<1	Lead	ppm	ASTM D5185m		0	0	
VanadiumppmASTM D5185m00White Metalscalar*VisualNONENONENONEYellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m21PotassiumppmASTM D5185m>2001WaterWC Method>0.2NEGNEGSilitscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLSodiumppmASTM D5185m2001BoronppmASTM D5185m20001MolybdenumppmASTM D5185m1200MagnesiumppmASTM D5185m1213	Copper	ppm	ASTM D5185m		<1	6	
White Metalscalar*VisualNONENONENONEYellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m21PotassiumppmASTM D5185m>2001WaterWC Method>0.2NEGNEGSiliscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLSodiumppmASTM D5185m99BoronppmASTM D5185m20001MolybdenumppmASTM D5185m13MagnesiumppmASTM D5185m1214	Tin	ppm	ASTM D5185m		<1	<1	
Yellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m21PotassiumppmASTM D5185m>2001WaterWC Method>0.2NEGNEGSiltscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGSodiumppmASTM D5185m400323322BariumppmASTM D5185m1200MagnesiumppmASTM D5185m113	Vanadium	ppm	ASTM D5185m		0	0	
SiliconppmASTM D5185m21PotassiumppmASTM D5185m>2001WaterWC Method>0.2NEGNEGSiltscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLGodorscalar*VisualNORMLNORMLNORMLSodiumppmASTM D5185m99BoronppmASTM D5185m20001MolybdenumppmASTM D5185m13MagnesiumppmASTM D5185m121314	White Metal	scalar	*Visual	NONE	NONE	NONE	
PotassiumppmASTM D5185m>2001WaterWC Method>0.2NEGNEGSiltscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLCodorscalar*VisualNORMLNORMLNORMLSodiumppmASTM D5185m99BoronppmASTM D5185m20001MalganeseppmASTM D5185m13MagnesiumppmASTM D5185m121314	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
PotassiumppmASTM D5185m>2001WaterWC Method>0.2NEGNEGSiltscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLCodorscalar*VisualNORMLNORMLNORMLSodiumppmASTM D5185m99BoronppmASTM D5185m20001MalganeseppmASTM D5185m13MagnesiumppmASTM D5185m121314	Silicon	nnm	ASTM D5185m		9	1	
WaterWC Method>0.2NEGNEGSiltscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGSodiumppmASTM D5185m20001BariumppmASTM D5185m20001MalganeseppmASTM D5185m113MagnesiumppmASTM D5185m1214				>20			
Siltscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGSodiumppmASTM D5185m400323322BariumppmASTM D5185m20001MalganeseppmASTM D5185m1133MagnesiumppmASTM D5185m121314		ppin			-		
Debrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGSodiumppmASTM D5185m400323322BoronppmASTM D5185m20001MalganeseppmASTM D5185m1200MagnesiumppmASTM D5185m1214		scalar		-			
Sand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGSodiumppmASTM D5185m400323322BoronppmASTM D5185m20001BariumppmASTM D5185m1200MalganeseppmASTM D5185m121314				_	-		
Appearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGSodiumppmASTM D5185m400323322BoronppmASTM D5185m20001BariumppmASTM D5185m12001MolybdenumppmASTM D5185m1213ManganeseppmASTM D5185m121314				_	-		
Odorscalar*VisualNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGSodiumppmASTM D5185m99BoronppmASTM D5185m400323322BariumppmASTM D5185m20001MolybdenumppmASTM D5185m1200ManganeseppmASTM D5185m121314				_			
Emulsified Water     scalar     *Visual     >0.2     NEG     NEG        Sodium     ppm     ASTM D5185m     9     9        Boron     ppm     ASTM D5185m     400     323     322        Barium     ppm     ASTM D5185m     200     0     1        Molybdenum     ppm     ASTM D5185m     12     0     0        Manganese     ppm     ASTM D5185m     12     13     14				_	-		
Sodium     ppm     ASTM D5185m     9     9        Boron     ppm     ASTM D5185m     400     323     322        Barium     ppm     ASTM D5185m     200     0     1        Molybdenum     ppm     ASTM D5185m     12     0     0        Manganese     ppm     ASTM D5185m     12     13     14				-	-		
Boron     ppm     ASTM D5185m     400     323     322        Barium     ppm     ASTM D5185m     200     0     1        Molybdenum     ppm     ASTM D5185m     12     0     0        Manganese     ppm     ASTM D5185m     12     1     3        Magnesium     ppm     ASTM D5185m     12     13     14				20.2			
Barium     ppm     ASTM D5185m     200     0     1        Molybdenum     ppm     ASTM D5185m     12     0     0        Manganese     ppm     ASTM D5185m     12     1     3        Magnesium     ppm     ASTM D5185m     12     13     14	Sodium	ppm	ASTM D5185m		9	9	
Molybdenum     ppm     ASTM D5185m     12     0     0        Manganese     ppm     ASTM D5185m     1     3        Magnesium     ppm     ASTM D5185m     12     13     14	Boron	ppm	ASTM D5185m	400	323	322	
Manganese     ppm     ASTM D5185m     1     3        Magnesium     ppm     ASTM D5185m     12     13     14	Barium	ppm	ASTM D5185m	200	0	1	
Magnesium     ppm     ASTM D5185m     12     13     14	Molybdenum	ppm	ASTM D5185m	12	0	0	
	Manganese	ppm	ASTM D5185m		1	3	
Calcium nom ASTM D5185m 150 73 11	Magnesium	ppm	ASTM D5185m	12	13	14	
	Calcium	ppm	ASTM D5185m	150	73	11	
Phosphorus     ppm     ASTM D5185m     1650     1474     1417	Phosphorus	ppm	ASTM D5185m	1650	1474	1417	
Zinc ppm ASTM D5185m 125 30 6	Zinc	ppm	ASTM D5185m	125	30	6	
Sulfur     ppm     ASTM D5185m     22500     27382     27771	Sulfur	ppm	ASTM D5185m	22500	27382	27771	
Visc @ 40°C cSt ASTM D445 109 108 108	Visc @ 40°C	cSt	ASTM D445	109	108	108	

Contact/Location: WILLOW YANARELLA - VP794951







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