

CHRIS BARBER [MATTHEW DOW] Machine Id VOLVO PENTA 3200000712 Component Port IPS Fluid GEAR OIL SAE 75W90 (15 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

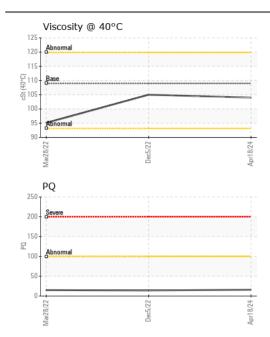
There is no indication of any contamination in the oil.

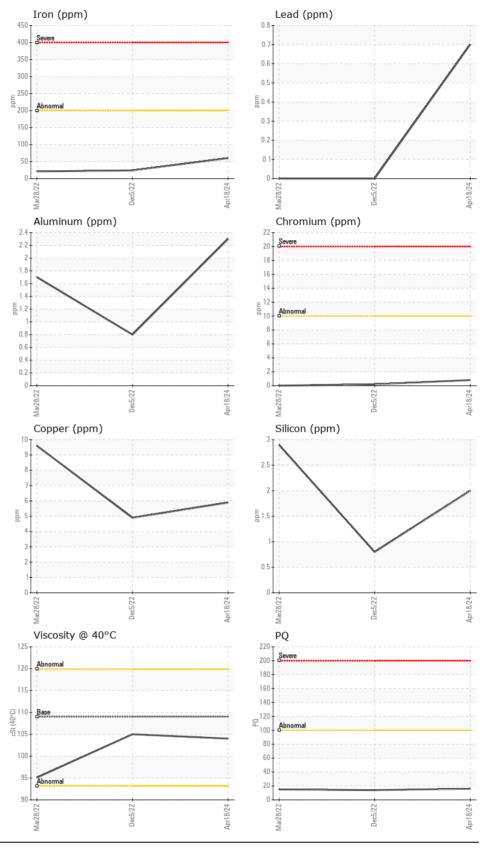
FLUID CONDITION

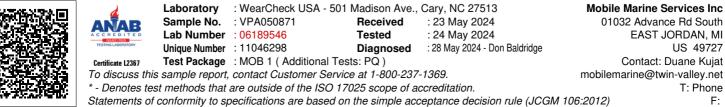
The condition of the oil is acceptable for the time in service.

TestUOMMethodLimit/ADCurrentHistory1History1History2Sample NumberClient InfoIB Apr 202405 Dec 202228 Mar 2022Machine AgehrsClient Info21714087Oil AgehrsClient InfoIT530Filter AgehrsClient InfoICChangedChangedOil ChangedICClient InfoICChangedChangedFilter AgehrsClient InfoICChangedChangedFilter ChangedICClient InfoICChangedChangedFilter ChangedICClient InfoICChangedChangedSample StatusClient InfoICChangedChangedChangedFilter ChangedppmASTM D5185S100C110SimorppmASTM D5185>100c100NickelppmASTM D5185ICc100SilverppmASTM D5185ICc100QuandappmASTM D5185ICc100VanadiumppmASTM D5185ICc100VanadiumppmASTM D5185ICc100VanadiumppmASTM D5185ICc100VanadiumppmASTM D5185ICc100VanadiumppmASTM D5185ICc10 <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>								
Sample DateClient InfoI8 Apr 202495 Dec 202228 Mar 2024Machine AgehrsClient Info21714087Oil AgehrsClient Info77530Filter AgehrsClient Info000Oil ChangedClient InfoChangedChangedChangedFilter ChangedClient InfoCChangedChangedSample StatusClient InfoCChangedChangedPQASTM D818Info1415IronppmASTM D5185>10C1<1NickelppmASTM D5185>10C1<0NickelppmASTM D5185>10C10NickelppmASTM D5185<100SilverppmASTM D5185<100AuminumppmASTM D5185<100SilverppmASTM D5185<100VanadiumppmASTM D5185<100VanadiumppmASTM D5185<100VanadiumppmASTM D5185<100Velow Metalscalar'VisualNONENONENONEVelow Metalscalar'VisualNONENONENONESiltorppmASTM D518522<13Siltorscalar'VisualNONENONENONESiltorscalar<	Test	UOM	Method	Limit/Abn	Current	History1	History2	
Machine AgehrsClient Info21714087Oil AgehrsClient Info77530Filter AgehrsClient Info000Oil ChangedClient InfoChangedChangedChangedFilter ChangedClient InfoChangedChangedChangedSample StatusClient InfoChangedChangedChangedPQASTM D5185m>10C11415IronppmASTM D5185m>10C1210NickelppmASTM D5185m>10C1210NickelppmASTM D5185m>10C100SilverppmASTM D5185m<1000AuminumppmASTM D5185m<2<120QuandumppmASTM D5185m<1000VanadumppmASTM D5185m<1<100VanadumppmASTM D5185m<1<100VanadumppmASTM D5185m<1<100VanadumppmASTM D5185m<2<130Vellow MetalscalarVisualNONENONENONENONESiliconppmASTM D5185m>202<13Vellow MetalscalarVisualNONENONENONENONESiliconppmASTM D5185m>202 </th <th>Sample Number</th> <th></th> <th>Client Info</th> <th></th> <th>VPA050871</th> <th>VPA042825</th> <th>VPA047347</th>	Sample Number		Client Info		VPA050871	VPA042825	VPA047347	
Oil Age Filter AgehrsClient Info77530Filter AgehrsClient Info0000Oil ChangedClient InfoChangedChangedChangedChangedFilter ChangedQClient InfoChangedChangedChangedChangedSample StatusVNORMALNORMALNORMALNORMALPQASTM D5185m<>20060024421ChromiumppmASTM D5185m<>10<1<10NickelppmASTM D5185m<>10<100NickelppmASTM D5185m<1000SilverppmASTM D5185m<1000AluminumppmASTM D5185m<1000VanadiumppmASTM D5185m<1<100VanadiumppmASTM D5185m<1<100VanadiumppmASTM D5185m<1<100VanadiumppmASTM D5185m<1<100VanadiumppmASTM D5185m<2<130Vallow Metalscalar'VisualNONENONENONENONEVallow Metalscalar'VisualNONENONENONENONESiliconppmASTM D5185m>202<13PotassiumppmASTM D5185m>202<13 <td< th=""><th>Sample Date</th><th></th><th>Client Info</th><th></th><th>18 Apr 2024</th><th>05 Dec 2022</th><th>28 Mar 2022</th></td<>	Sample Date		Client Info		18 Apr 2024	05 Dec 2022	28 Mar 2022	
Filter Age OIhrsClient Info000Oil ChangedClient InfoChangedChangedChangedChangedFilter ChangedClient InfoChangedChangedChangedChangedSample StatusVVNORMALNORMALNORMALPQASTM D8184161415IronppmASTM D5185m>2006024421ChromiumppmASTM D5185m>10200NickelppmASTM D5185m10200NickelppmASTM D5185m<<100SilverppmASTM D5185m212212LeadppmASTM D5185m<<100CopperppmASTM D5185m<<100VanadumppmASTM D5185m<<100ValendumppmASTM D5185m<<100Vellow Metalscalar'VisualNONENONENONENONESiliconppmASTM D5185m222< <td><1</td> 3PotassiumppmASTM D5185m>202<13PotassiumppmASTM D5185m>202<13SiliconppmASTM D5185m>202<13PotassiumppmASTM D5185m>202<13SiliconppmASTM D5185m	<1	Machine Age	hrs	Client Info		217	140	87
Oil ChangedClient InfoChangedChange	Oil Age	hrs	Client Info		77	53	0	
Filter Changed Sample Status Client Info Changed NORMAL Changed NORMAL Changed NORMAL Changed NORMAL PQ ASTM D8184 16 14 15 Iron ppm ASTM D5185 >200 60 24 21 Chromium ppm ASTM D5185 >10 <1 <1 0 Nickel ppm ASTM D5185 >10 2 0 0 Titanium ppm ASTM D5185 <1 0 0 Silver ppm ASTM D5185 <1 0 0 Auminum ppm ASTM D5185 <1 0 0 Lead ppm ASTM D5185 <1 0 0 Vanadium ppm ASTM D5185 <1 0 0 Valed scalar 'Visual NONE NONE NONE Yellow Metal scalar 'Visual NONE </th <th>Filter Age</th> <th>hrs</th> <th>Client Info</th> <th></th> <th>0</th> <th>0</th> <th>0</th>	Filter Age	hrs	Client Info		0	0	0	
Sample StatusNORMALNORMALNORMALNORMALPQASTM D8184161415IronppmASTM D5185>200602421ChromiumppmASTM D5185>10<1<10NickelppmASTM D5185>10200TitaniumppmASTM D5185<100SilverppmASTM D5185<100AluminumppmASTM D5185<2<12LeadppmASTM D5185<5100CopperppmASTM D5185<6510TinppmASTM D5185<1<10VanadiumppmASTM D5185<1<10VanadiumppmASTM D5185<1<10Vellow Metalscalar*VisualNONENONENONEYellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185202<13PotassiumppmASTM D5185202<13Solitscalar*VisualNONENONENONENONESiliconppmASTM D5185202<13Debrisscalar*VisualNORENONENONENONESolitscalar*VisualNORENONENONENOREAppearancescalar*VisualNORE <th>Oil Changed</th> <th></th> <th>Client Info</th> <th></th> <th>Changed</th> <th>Changed</th> <th>Changed</th>	Oil Changed		Client Info		Changed	Changed	Changed	
PQ ASTM D8184 16 14 15 iron ppm ASTM D5185 >200 60 24 21 Chromium ppm ASTM D5185 >10 <1 <1 0 Nickel ppm ASTM D5185 >10 2 0 0 Nickel ppm ASTM D5185 <1 0 0 Silver ppm ASTM D5185 <1 0 0 Aluminum ppm ASTM D5185 <1 0 0 Aluminum ppm ASTM D5185 <2 <1 2 Lead ppm ASTM D5185 <6 5 10 Tin ppm ASTM D5185 <6 5 10 Vanadium ppm ASTM D5185 <6 5 10 Vanadium ppm ASTM D5185 <1 0 0 Velow Metal scalar 'Visual NONE NONE NONE NONE Velow Metal scalar 'Visual NONE NONE NONE NONE Silicon ppm ASTM D5185 20 2 <1 3 Potassium ppm ASTM D5185 20 <	Filter Changed		Client Info		Changed	Changed	Changed	
Iron ppm ASTM D5185m >200 60 24 21 Chromium ppm ASTM D5185m >10 2 0 0 Nickel ppm ASTM D5185m <1	Sample Status				NORMAL	NORMAL	NORMAL	
Iron ppm ASTM D5185m >200 60 24 21 Chromium ppm ASTM D5185m >10 2 0 0 Nickel ppm ASTM D5185m <1	PO		ASTM D8184		16	14	15	
Chromium DirppmASTM D5185m ASTM D5185m>10<1		nnm		>200	-			
NickelppmASTM D5185m ASTM D5185m20200TitaniumppmASTM D5185m<100SilverppmASTM D5185m2<12LeadppmASTM D5185m2<12LeadppmASTM D5185m2<10CopperppmASTM D5185m6510TinppmASTM D5185m6510VanadiumppmASTM D5185m<100VanadiumppmASTM D5185m<100Vellow Metalscalar*VisualNONENONENONEYellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m22<13PotassiumppmASTM D5185m>202<13WaterWC Method>0.2NEGNONENONESilitscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNORMLNORMLNORMLNORMLAppearancescalar*VisualNORMNORMLNORMLNORMLAppearancescalar*VisualNORMLNORMLNORMLNORMLModified Waterscalar*VisualNORNORMLNORMLNORMLBoronppmASTM D5185m20 <td< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th></td<>								
TitaniumppmASTM D5185m<1							-	
Number Ppm ASTM D5185m <1				210	_	-		
Aluminum ppm ASTM D5185m 2 <1						-	-	
Lead ppm ASTM D5185m <1						-		
CopperppmASTM D5185m6510TinppmASTM D5185m<1<1<10VanadiumppmASTM D5185m<100White Metalscalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185m22<13PotassiumppmASTM D5185m>202<13WaterWC Method>0.2NEGNEGNONESilitscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLBoronppmASTM D5185m200000MolybdenumppmASTM D5185m121<12MagnesiumppmASTM D5185m121165865CalciumppmASTM D5185m165031524PhosphorusppmASTM D5185m125595SulfurppmASTM D5185m125595SulfurppmASTM D5185m1250271952660618					_		_	
TinppmASTM D5185m<1	-					-		
VanadiumppmASTM D5185m<1					-	-		
White Metalscalar*VisualNONENONENONENONENONEYellow Metalscalar*VisualNONENONENONENONENONESiliconppmASTM D5185m202<13PotassiumppmASTM D5185m>202<13WaterWC Method>0.2NEGNEGNEGSilitscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLMaterscalar*VisualNORMLNORMLNORMLNORMLAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*Visual>0.2NEGNEGNEGSodiumppmASTM D5185m2000BariumppmASTM D5185m1112ManganeseppmASTM D5185m121165865CalciumppmASTM D5185m165031524PhosphorusppmASTM D5185m125595SulfurppmASTM D5185m1250271952660618353 <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>								
Yellow Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185m>202<13PotassiumppmASTM D5185m>202<13WaterWC Method>0.2NEGNEGNEGSiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGSodiumppmASTM D5185m200000MolybdenumppmASTM D5185m200000MolybdenumppmASTM D5185m12112MagnesiumppmASTM D5185m1211655865CalciumppmASTM D5185m150315524PhosphorusppmASTM D5185m125595SulfurppmASTM D5185m125595SulfurppmASTM D5185m1252660618353						÷	Ű	
SiliconppmASTM D5185m202<1					-	-		
PotassiumppmASTM D5185m>202<1			vi50ai					
WaterWC Method>0.2NEGNEGNEGSiltscalar*VisualNONENONENONENONENONEDebrisscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGSodiumppmASTM D5185m2000<13BoronppmASTM D5185m200000MolybdenumppmASTM D5185m11<1<2MagnesiumppmASTM D5185m121165865CalciumppmASTM D5185m15031524PhosphorusppmASTM D5185m125595SulfurppmASTM D5185m125595SulfurppmASTM D5185m1250271952660618353	Silicon	ppm	ASTM D5185m		2	<1	3	
Siltscalar*VisualNONENONENONENONENONEDebrisscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGSodiumppmASTM D5185m400388308614BariumppmASTM D5185m200000MolybdenumppmASTM D5185m121<1<1MagnesiumppmASTM D5185m121165865CalciumppmASTM D5185m15031524PhosphorusppmASTM D5185m125595SulfurppmASTM D5185m125595SulfurppmASTM D5185m22500271952660618353	Potassium	ppm	ASTM D5185m	>20	2	<1	3	
Debrisscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGSodiumppmASTM D5185m400388308614BariumppmASTM D5185m200000MolybdenumppmASTM D5185m200000MagnesiumppmASTM D5185m12112MagnesiumppmASTM D5185m15031524PhosphorusppmASTM D5185m125595SulfurppmASTM D5185m125595SulfurppmASTM D5185m22500271952660618353	Water		WC Method	>0.2	NEG	NEG	NEG	
Sand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGSodiumppmASTM D5185m400388308614BariumppmASTM D5185m200000MolybdenumppmASTM D5185m121<1<1ManganeseppmASTM D5185m121165865CalciumppmASTM D5185m15031524PhosphorusppmASTM D5185m125131312541550ZincppmASTM D5185m125595SulfurppmASTM D5185m22500271952660618353	Silt	scalar	*Visual	NONE	NONE	NONE	NONE	
Appearancescalar*VisualNORML<	Debris	scalar	*Visual	NONE	NONE	NONE	NONE	
Odorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGSodiumppmASTM D5185m400388308614BariumppmASTM D5185m200000MolybdenumppmASTM D5185m121<1<1ManganeseppmASTM D5185m12112MagnesiumppmASTM D5185m15031524PhosphorusppmASTM D5185m1650131312541550ZincppmASTM D5185m125595SulfurppmASTM D5185m22500271952660618353	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE	
Emulsified Waterscalar*Visual>0.2NEGNEGNEGSodiumppmASTM D5185m0<13BoronppmASTM D5185m400388308614BariumppmASTM D5185m200000MolybdenumppmASTM D5185m121<1<1ManganeseppmASTM D5185m121112MagnesiumppmASTM D5185m121165865CalciumppmASTM D5185m15031524PhosphorusppmASTM D5185m125595ZincppmASTM D5185m125595SulfurppmASTM D5185m22500271952660618353	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML	
Sodium ppm ASTM D5185m 0 <1	Odor	scalar	*Visual	NORML	NORML	NORML	NORML	
Boron ppm ASTM D5185m 400 388 308 614 Barium ppm ASTM D5185m 200 0 0 0 Molybdenum ppm ASTM D5185m 12 1 <1 <1 Manganese ppm ASTM D5185m 12 11 1 2 Magnesium ppm ASTM D5185m 12 11 65 865 Calcium ppm ASTM D5185m 12 11 65 24 Phosphorus ppm ASTM D5185m 150 3 15 24 Phosphorus ppm ASTM D5185m 1650 1313 1254 1550 Zinc ppm ASTM D5185m 125 5 9 5 Sulfur ppm ASTM D5185m 22500 27195 26606 18353	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG	
Barium ppm ASTM D5185m 200 0 0 0 Molybdenum ppm ASTM D5185m 12 1 <1	Sodium	ppm	ASTM D5185m		0	<1	3	
Molybdenum ppm ASTM D5185m 12 1 <1	Boron	ppm	ASTM D5185m	400	388	308	614	
Manganese ppm ASTM D5185m 1 1 2 Magnesium ppm ASTM D5185m 12 11 65 865 Calcium ppm ASTM D5185m 150 3 15 24 Phosphorus ppm ASTM D5185m 1650 1313 1254 1550 Zinc ppm ASTM D5185m 125 5 9 5 Sulfur ppm ASTM D5185m 22500 27195 26606 18353	Barium	ppm	ASTM D5185m	200	0	0	0	
Magnesium ppm ASTM D5185m 12 11 65 865 Calcium ppm ASTM D5185m 150 3 15 24 Phosphorus ppm ASTM D5185m 1650 1313 1254 1550 Zinc ppm ASTM D5185m 125 5 9 5 Sulfur ppm ASTM D5185m 22500 27195 26606 18353	Molybdenum	ppm	ASTM D5185m	12	1	<1	<1	
Calcium ppm ASTM D5185m 150 3 15 24 Phosphorus ppm ASTM D5185m 1650 1313 1254 1550 Zinc ppm ASTM D5185m 125 5 9 5 Sulfur ppm ASTM D5185m 22500 27195 26606 18353	Manganese	ppm	ASTM D5185m		1	1	2	
Phosphorus ppm ASTM D5185m 1650 1313 1254 1550 Zinc ppm ASTM D5185m 125 5 9 5 Sulfur ppm ASTM D5185m 22500 27195 26606 18353	Magnesium	ppm	ASTM D5185m	12	11	65	865	
Zinc ppm ASTM D5185m 125 5 9 5 Sulfur ppm ASTM D5185m 22500 27195 26606 18353	Calcium	ppm	ASTM D5185m	150	3	15	24	
Sulfur ppm ASTM D5185m 22500 27195 26606 18353	Phosphorus	ppm	ASTM D5185m	1650	1313	1254	1550	
	Zinc	ppm	ASTM D5185m	125	5	9	5	
Visc @ 40°C cSt ASTM D445 109 104 105 95.1	Sulfur	ppm	ASTM D5185m	22500	27195	26606	18353	
	Visc @ 40°C	cSt	ASTM D445	109	104	105	95.1	

Contact/Location: Duane Kujat - VP443016







Contact/Location: Duane Kujat - VP443016 Page 2 of 2