

## Machine Id **TOLE\_U5 TOLE\_U5\_P5** Component **Non-Drive End Pump** Fluid **ROYAL PURPLE SYNFILM GT 32 (2 QTS)**

## RECOMMENDATION

No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

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Bearing and/or bushing wear is indicated.

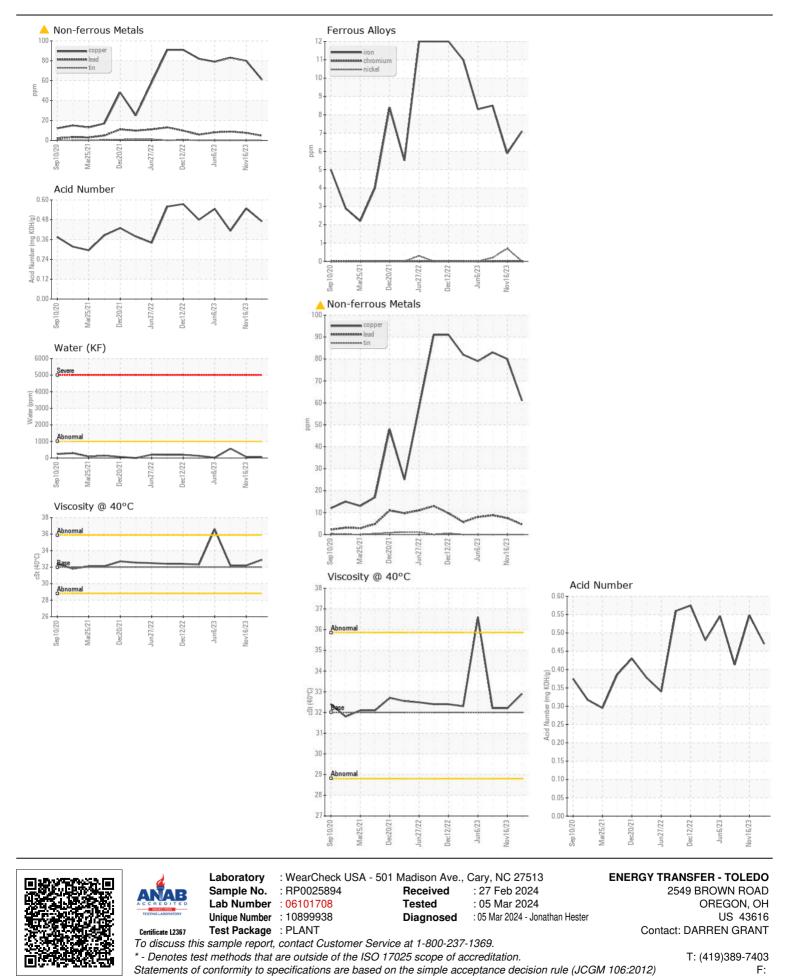
## CONTAMINATION

The water content is negligible. There is no indication of any contamination in the oil.

## FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sample DateClient Info21 Feb 202416 Nov 202325 Sep 2024Machine AgehrsClient Info000Oil AgehrsClient Info000Filter AgehrsClient Info000Oil ChangedClient InfoN/AN/AN/AFilter ChangedClient InfoN/AN/AN/A							
Sample DateClient Info21 Feb 202416 Nov 202325 Sep 202Machine AgehrsClient Info0000Gli AgehrsClient Info0000Gli AgehrsClient Info0000Gli ChangedClient InfoN/AN/AN/AN/AFilter ChangedClient InfoN/AN/AN/AN/ASample StatusClient InfoN/AN/AABNORMALIronppmASTM D5185>0768ChromiumppmASTM D5185>50<	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machine AgehrsClient InfoOOOOil AgehrsClient InfoOOOFilter AgehrsClient InfoN/AN/AN/AFilter ChangedClient InfoN/AN/AN/ASample StatusClient InfoN/AN/AN/AIronppmASTM D5185m>0768ChromiumppmASTM D5185m>5000NickelppmASTM D5185m>3000SilverppmASTM D5185m>3000SilverppmASTM D5185m>3000LeadppmASTM D5185m>3000AuminumppmASTM D5185m>13000LeadppmASTM D5185m>90000VanadiumppmASTM D5185m>90000VanadiumppmASTM D5185m>0<1<110ValadiumppmASTM D5185m>0<1<1<10ValadiumppmASTM D5185m>0<1<1<10ValadiumppmASTM D5185m>0<1<1<10ValadiumppmASTM D5185m>0<1<1<1<10ValadiumppmASTM D5185m>0<1<1<1<1<1 <th>Sample Number</th> <th></th> <th>Client Info</th> <th></th> <th>RP0025894</th> <th>RP0034029</th> <th>RP0026203</th>	Sample Number		Client Info		RP0025894	RP0034029	RP0026203
Oil Age Filter Age (inter Age)hrsClient Info000Filter Age (inter Changed)Client InfoN/AN/AN/AFilter ChangedClient InfoN/AN/AN/AFilter ChangedClient InfoN/AN/AN/ASample StatusMARGINALABNORMALABNORMALABNORMALIronppmASTM D5185n>900768ChromiumppmASTM D5185n>50000NickelppmASTM D5185n>3000SilverppmASTM D5185n>3000GopperppmASTM D5185n>30Å G1\$89CopperppmASTM D5185n>10000VanadiumppmASTM D5185n>60100VanadiumppmASTM D5185n>30Å G1\$89VanadiumppmASTM D5185n>60000VanadiumppmASTM D5185n>60111PotassiumppmASTM D5185n>60<1111Vater%ASTM D5185n>60<1111PotassiumppmASTM D5185n>60<1111PotassiumppmASTM D5185n>60<1111PotassiumppmASTM D5185n>60<1111 <trr<tr>Siliconppm</trr<tr>	Sample Date		Client Info		21 Feb 2024	16 Nov 2023	25 Sep 2023
Filter Age OhrsClient Info0000Oil ChangedClient InfoN/AN/AN/AN/AFilter ChangedClient InfoN/AN/AN/ASample StatusMARGINALABNORMALABNORMALABNORMALIronppmASTM D5185m<>50000NickelppmASTM D5185m<>500<1<1TitaniumppmASTM D5185m<>50000SilverppmASTM D5185m<>70000AuminumppmASTM D5185m<>71000LeadppmASTM D5185m<>72000LeadppmASTM D5185m<>79000VanadiumppmASTM D5185m<>99000VanadiumppmASTM D5185m<>70000VanadiumppmASTM D5185m<>70000VanadiumppmASTM D5185m<>70000VanadiumppmASTM D5185m<>70000VanadiumppmASTM D5185m<>70000VanadiumppmASTM D5185m<>70000VanadiumppmASTM D5185m<>70000VanadiumppmASTM D5185m<>70000VanadiumppmASTM D5185m<>70000VanadiumppmASTM D5185m20000	Machine Age	hrs	Client Info		0	0	0
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Filter ChangedClient InfoNANANASample StatusClient InfoNAANAABNORMALABNORMALIronppmASTM DS185m>90768ChromiumppmASTM DS185m>50000NickelppmASTM DS185m>500<1<1TitaniumppmASTM DS185m>3000SilverppmASTM DS185m>7000LeadppmASTM DS185m>7000CopperppmASTM DS185m>9000VanadiumppmASTM DS185m>9000VanadiumppmASTM DS185m>9000VanadiumppmASTM DS185m>0000VanadiumppmASTM DS185m>0000VanadiumppmASTM DS185m>0000VanadiumppmASTM DS185m>0000VanadiumppmASTM DS185m>0000VanadiumppmASTM DS185m>0000VanadiumppmASTM DS185m>0000VanadiumppmASTM DS185m>0000VanadiumppmASTM DS185m>0000VanadiumppmASTM DS185m>10.00	Filter Age	hrs	Client Info		0	0	0
Sample StatusMARGINALABNORMALABNORMALABNORMALIronppmASTM D5185m>90768ChromiumppmASTM D5185m>50<1<1NickelppmASTM D5185m>3000NickelppmASTM D5185m>3000SilverppmASTM D5185m>3000AluminumppmASTM D5185m>7000LeadppmASTM D5185m>30A 61800830CopperppmASTM D5185m>9000VanadiumppmASTM D5185m>9000White Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185m>60<1<1<1Water%ASTM D5185m>200<11Water%ASTM D5185m>200<11Water%ASTM D5185m>200<11Water%ASTM D5185m>200<11Water%ASTM D5185m>200<11Water%ASTM D5185m>200<11Water%ASTM D5185m>200<11Water%ASTM D5185m>200<11Water%ASTM D5185m>200	Oil Changed		Client Info		N/A	N/A	N/A
Iron ppm ASTM D5185m >90 7 6 8   Chromium ppm ASTM D5185m >5 0 0 0   Nickel ppm ASTM D5185m >5 0 <1 <1   Titanium ppm ASTM D5185m >3 0 0 0   Silver ppm ASTM D5185m >3 0 0 0   Aluminum ppm ASTM D5185m >3 0 0 0   Lead ppm ASTM D5185m >12 5 8 9 0   Vanadium ppm ASTM D5185m >12 5 8 9 0   Vanadium ppm ASTM D5185m >10 0 0 0 0   Vanadium ppm ASTM D5185m >0 <1 1 1   Vanadium ppm ASTM D5185m >20 0 <1 1   Vallow NONE NONE NONE <th>Filter Changed</th> <th></th> <th>Client Info</th> <th></th> <th>N/A</th> <th>N/A</th> <th>N/A</th>	Filter Changed		Client Info		N/A	N/A	N/A
Implementation ASTM D5185m >5 0 0 0   Nickel ppm ASTM D5185m >5 0 <1 <1   Titanium ppm ASTM D5185m >3 0 0 0   Silver ppm ASTM D5185m >3 0 0 0   Aluminum ppm ASTM D5185m >7 0 0 0   Lead ppm ASTM D5185m >12 5 8 9   Copper ppm ASTM D5185m >9 0 0 0   Vanadium ppm ASTM D5185m >9 0 0 0   Vanadium ppm ASTM D5185m >9 0 0 0 0   Vanadium ppm ASTM D5185m >9 0 0 0 0   Vanadium ppm ASTM D5185m >60 <1 <1 <1 <1   Vanadium ppm ASTM D5185m >60	Sample Status				MARGINAL	ABNORMAL	ABNORMAL
Nickel ppm ASTM D5185m >5 0 <1	Iron	ppm	ASTM D5185m	>90	7	6	8
Titanium ppm ASTM D5185m >3 0 0 0   Silver ppm ASTM D5185m >3 0 0 0   Aluminum ppm ASTM D5185m >7 0 0 0   Lead ppm ASTM D5185m >72 0 0 0   Copper ppm ASTM D5185m >30 ▲ 61 ▲ 80 ▲ 83   Tin ppm ASTM D5185m >9 0 0 0   Vanadium ppm ASTM D5185m >9 0 0 0   Vanadium ppm ASTM D5185m >60 <1 <1 <1   Vanadium ppm ASTM D5185m >60 <1 <1 <1   Vellow Metal scalar *Visual NONE NONE NONE NONE   Silicon ppm ASTM D5185m >20 0 <1 1 <1   Water % ASTM D5185m >20 <	Chromium	ppm	ASTM D5185m	>5	0	0	0
Silver ppm ASTM D5185m >3 0 0 0   Aluminum ppm ASTM D5185m >7 0 0 0   Lead ppm ASTM D5185m >12 5 8 9   Copper ppm ASTM D5185m >30 ▲ 61 ▲ 80 ▲ 83   Tin ppm ASTM D5185m >9 0 0 0 0   Vanadium ppm ASTM D5185m >9 0 0 0 0 0   Vanadium ppm ASTM D5185m >60 <1 <1 <1 0 <th>Nickel</th> <th>ppm</th> <th>ASTM D5185m</th> <th>&gt;5</th> <th>0</th> <th>&lt;1</th> <th>&lt;1</th>	Nickel	ppm	ASTM D5185m	>5	0	<1	<1
Aluminum ppm ASTM D5185m >7 0 0 0   Lead ppm ASTM D5185m >12 5 8 9   Copper ppm ASTM D5185m >30 ▲ 61 ▲ 80 ▲ 83   Tin ppm ASTM D5185m >9 0 0 0   Vanadium ppm ASTM D5185m >9 0 0 0 0   White Metal scalar *Visual NONE NONE NONE NONE NONE   Yellow Metal scalar *Visual NONE NONE NONE NONE NONE   Silicon ppm ASTM D5185m >60 <1 <1 <1 <1   Water % ASTM D5185m >20 0 <1 1 <1   Water % ASTM D5185m >20 0 <1 1 <1   Water ppm ASTM D5185m >20 0 <1 1 0 </th <th>Titanium</th> <th>ppm</th> <th>ASTM D5185m</th> <th>&gt;3</th> <th>0</th> <th>0</th> <th>0</th>	Titanium	ppm	ASTM D5185m	>3	0	0	0
Lead ppm ASTM D5185m >12 5 8 9   Copper ppm ASTM D5185m >300 ▲ 61 ▲ 80 ▲ 83   Tin ppm ASTM D5185m >9 0 0 0   Vanadium ppm ASTM D5185m >9 0 0 0   White Metal scalar *Visual NONE NONE NONE NONE   Yellow Metal scalar *Visual NONE NONE NONE NONE NONE   Silicon ppm ASTM D5185m >60 <1 <1 <1   Water % ASTM D5185m >20 0 <11 1   Water % ASTM D5185m >20 0 <11 1   Water % ASTM D5185m >20 0 <11 1   Debris scalar *Visual NONE NONE NONE NORM   Appearance scalar *Visual <t< th=""><th>Silver</th><th>ppm</th><th>ASTM D5185m</th><th>&gt;3</th><th>0</th><th>0</th><th>0</th></t<>	Silver	ppm	ASTM D5185m	>3	0	0	0
Copper ppm ASTM D5185m >30 ▲ 61 ▲ 80 ▲ 83   Tin ppm ASTM D5185m >9 0 0 0   Vanadium ppm ASTM D5185m >9 0 0 0   White Metal scalar *Visual NONE NONE NONE NONE NONE   Yellow Metal scalar *Visual NONE NONE NONE NONE NONE   Silicon ppm ASTM D5185m >60 <1 <1 <1   Water ppm ASTM D5185m >20 0 <1 1   Water % ASTM D6304 >.1 0.003 0.006 0.056   ppm Water ppm ASTM D6304 >.100 36 69 567.7   Silt scalar *Visual NONE NONE NONE NONE   Debris scalar *Visual NOR NORM NORM NORM   Appearance <	Aluminum	ppm	ASTM D5185m	>7	0	0	0
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Vanadium ppm ASTM D5185m O O O   White Metal scalar *Visual NONE NONE NONE NONE NONE   Yellow Metal scalar *Visual NONE NONE NONE NONE NONE   Silicon ppm ASTM D5185m >60 <1 <1 <1   Potassium ppm ASTM D5185m >20 0 <1 1   Water % ASTM D6304 >.1 0.003 0.006 0.056   ppm Water ppm ASTM D6304 >.10 36 69 567.7   Silt scalar *Visual NONE NONE NONE NONE   Debris scalar *Visual NONE NORE NONE NONE   Appearance scalar *Visual NORM NORML NORM NORM   Odor scalar *Visual NORM NORM NORM NORM   Boron ppm	Copper	ppm	ASTM D5185m	>30	<b>6</b> 1	<b>a</b> 80	<mark>\</mark> 83
White Metal scalar *Visual NONE NONE NONE NONE NONE NONE   Yellow Metal scalar *Visual NONE NONE NONE NONE NONE   Silicon ppm ASTM D5185m >60 <1 <1 <1   Potassium ppm ASTM D5185m >20 0 <1 1   Water % ASTM D5185m >20 0 <10 36 69 567.7   Silt scalar *Visual NONE NONE NONE NONE NONE   Debris scalar *Visual NONE NONE NONE NONE NONE   Appearance scalar *Visual NORM NORML NORML NORML NORML   Odor scalar *Visual NORE NORML NORML NORML NORML   Barom ppm ASTM D5185m  0 0 0 0   Barium	Tin	ppm	ASTM D5185m	>9	0	0	0
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Silicon ppm ASTM D5185m >60 <1	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Potassium ppm ASTM D5185m >20 0 <1	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Potassium ppm ASTM D5185m >20 0 <1	0""						
Vater % ASTM D6304 >.1 0.003 0.006 0.056   ppm Water ppm ASTM D6304 >.100 36 69 567.7   Silt scalar *Visual NONE NONE NONE NONE NONE   Debris scalar *Visual NONE LIGHT NONE NONE   Sand/Dirt scalar *Visual NONE NONE NONE NONE   Appearance scalar *Visual NORML NORML NORML NORML NORML   Odor scalar *Visual NORML NORML NORML NORML NORML   Emulsified Water scalar *Visual NORM NORML NORML NORML NORML   Boron ppm ASTM D5185m  <1 1 0   Boron ppm ASTM D5185m 0 0 0 0   Molybdenum ppm ASTM D5185m 0 0 0							
ppm Water ppm ASTM D6304 >1000 36 69 567.7   Silt scalar *Visual NONE NONE NONE NONE   Debris scalar *Visual NONE LIGHT NONE NONE   Sand/Dirt scalar *Visual NONE NONE NONE NONE   Appearance scalar *Visual NORM NORML NORML NORML NORML   Odor scalar *Visual NORM NORML NORML NORML NORML   Emulsified Water scalar *Visual >.1 NEG NEG NEG   Sodium ppm ASTM D5185m  0 0 0   Barium ppm ASTM D5185m 0 0 0 0   Magnesium ppm ASTM D5185m 0 0 0 0   Magnesium ppm ASTM D5185m 0 <11 0 1   Phosphorus							
Siltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONELIGHTNONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*VisualNORNORMLNORMLNORMLNORMLBoronppmASTM D5185m<1100BariumppmASTM D5185m000<1MolybdenumppmASTM D5185m0000ManganeseppmASTM D5185m0000MagnesiumppmASTM D5185m0<1422CalciumppmASTM D5185m10<130PhosphorusppmASTM D5185m1013Acid Number (AN)mg KOHgASTM D80450.4470.5480.413							
Debrisscalar*VisualNONELIGHTNONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.1NEGNEGNEGSodiumppmASTM D5185m000BoronppmASTM D5185m0000BariumppmASTM D5185m0000ManganeseppmASTM D5185m0000MagnesiumppmASTM D5185m000PhosphorusppmASTM D5185m0<10PhosphorusppmASTM D5185m10133Acid Number (AN)mg KOH/gASTM D80450.4170.5480.413							
Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.1NEGNEGNEGSodiumppmASTM D5185m<110BoronppmASTM D5185m0000BariumppmASTM D5185m0000MalganeseppmASTM D5185m0000MagnesiumppmASTM D5185m0000PhosphorusppmASTM D5185m0<1422CalciumppmASTM D5185m10133Acid Number (AN)mg KOHgASTM D5185m10.5480.413					-		
Appearancescalar*VisualNORML<					-		
Odorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.1NEGNEGNEGSodiumppmASTM D5185m<110BoronppmASTM D5185m0000BariumppmASTM D5185m000<1MolybdenumppmASTM D5185m0000ManganeseppmASTM D5185m0000MagnesiumppmASTM D5185m0<1422CalciumppmASTM D5185m0<100PhosphorusppmASTM D5185m1013ZincppmASTM D5185m10.5480.413							
Emulsified Water scalar *Visual >.1 NEG NEG NEG   Sodium ppm ASTM D5185m <1 1 0 0 0   Boron ppm ASTM D5185m <0 0 0 0   Barium ppm ASTM D5185m <0 0 0 <1   Molybdenum ppm ASTM D5185m <0 0 0 0   Manganese ppm ASTM D5185m <0 0 0 0   Magnesium ppm ASTM D5185m <0 0 0 0   Phosphorus ppm ASTM D5185m <0 <14 2 2   Calcium ppm ASTM D5185m <0 <10 <10 <14   Phosphorus ppm ASTM D5185m <0 <14 8 <13   Zinc ppm ASTM D5185m <0 <10 13 <13   Acid Number (AN) mg KOH/g ASTM D8045					-		
Sodium ppm ASTM D5185m <1							
Boron ppm ASTM D5185m 0 0 0   Barium ppm ASTM D5185m 0 0 <1   Molybdenum ppm ASTM D5185m 0 0 0   Manganese ppm ASTM D5185m 0 0 0   Magnesium ppm ASTM D5185m 0 0 0   Magnesium ppm ASTM D5185m 0 0 0   Phosphorus ppm ASTM D5185m 0 <1 0   Phosphorus ppm ASTM D5185m 0 <1 0   Phosphorus ppm ASTM D5185m 0 <1 0   Zinc ppm ASTM D5185m 1 0 13   Acid Number (AN) mg KOH/g ASTM D8045 0.47 0.548 0.413	Emulsified Water	scalar	^Visual	>.1	NEG	NEG	NEG
Barium ppm ASTM D5185m 0 0 <1	Sodium	ppm	ASTM D5185m		<1	1	0
Molybdenum ppm ASTM D5185m 0 0 0   Manganese ppm ASTM D5185m 0 0 0   Magnesium ppm ASTM D5185m 0 0 0   Magnesium ppm ASTM D5185m 14 2 2   Calcium ppm ASTM D5185m 0 <1 0   Phosphorus ppm ASTM D5185m 4 4 8   Zinc ppm ASTM D5185m 1 0 13   Acid Number (AN) mg KOH/g ASTM D8045 0.47 0.548 0.413	Boron	ppm	ASTM D5185m		0	0	0
Manganese ppm ASTM D5185m 0 0 0   Magnesium ppm ASTM D5185m 14 2 2   Calcium ppm ASTM D5185m 0 <1	Barium	ppm			0	0	<1
Magnesium ppm ASTM D5185m 14 2 2   Calcium ppm ASTM D5185m 0 <1	Molybdenum	ppm	ASTM D5185m		0	0	0
Calcium ppm ASTM D5185m 0 <1	Manganese	ppm	ASTM D5185m		0	0	0
Phosphorus ppm ASTM D5185m 4 8   Zinc ppm ASTM D5185m 1 0 13   Acid Number (AN) mg KOH/g ASTM D8045 0.47 0.548 0.413	Magnesium	ppm	ASTM D5185m		14	2	2
Zinc ppm ASTM D5185m 1 0 13   Acid Number (AN) mg KOH/g ASTM D8045 0.47 0.548 0.413	Calcium	ppm	ASTM D5185m		0	<1	0
Acid Number (AN) mg KOH/g ASTM D8045 0.47 0.548 0.413	Phosphorus	ppm	ASTM D5185m		4	4	8
	Zinc	ppm	ASTM D5185m		1	0	13
Visc @ 40°C cSt ASTM D445 32 32.9 32.2 32.2	Acid Number (AN)	mg KOH/g	ASTM D8045		0.47	0.548	0.413
	Visc @ 40°C	cSt	ASTM D445	32	32.9	32.2	32.2



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Submitted By: JOE BLAZEY

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