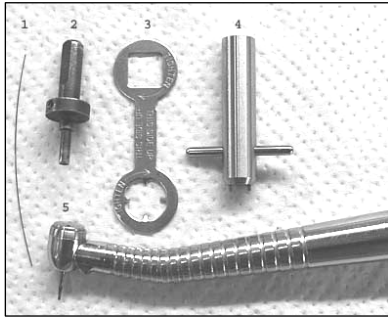


MIDWEST TRADITION & XGT – PB (PUSH BUTTON) REPAIR PROCEDURE



1. Wire Reamer
2. Auto-Chuck Protector Punch (00024 & 00024R)
3. MW T PB/L Deluxe Back Cap Removal Tool (40423A)
4. MW T PB Aftermarket Back Cap Removal Tool (10112)
5. Midwest Tradition – PB Handpiece (XGT not shown)

Many dentists prefer the ease of a push button, auto-chuck style handpiece over the Jacobs Chuck or Lever style handpieces. Recognizing this, the Midwest Corporation introduced a push button style handpiece into their very popular Tradition line. More recently, they have introduced the XGT model. It is more ergonomic and incorporates a 360° swivel coupler, however, the turbine assembly is exactly the same as the Tradition – PB.

Note: Follow the appropriate steps below to convert a Jacobs chuck or lever style Tradition handpiece to a pushbutton style, using the aftermarket conversion kit (40423PBC).

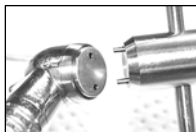
STEP 1 Try to determine the problem before opening the handpiece. Insert a high speed bur, checking that it inserts smoothly and tightens securely. Twist the bur manually to feel how smoothly it turns. Attach it to your air hose and run the handpiece (if you can). Check that air pressure is at 38 p.s.i.. Listen for the appropriate pitch at full speed and for a smooth rundown. Check the water spray – it should be a fine mist. Attempt to cut a shell to test the torque. Disassemble the handpiece following the instructions below.

DISASSEMBLY

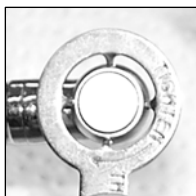


STEP 2
Original Back Cap: Remove the original back cap using the MW T PB/L deluxe back cap removal tool (40423A). The cap unscrews in a counter clockwise direction.

TIP: Sometimes the cap is very tight. Be very careful not to let the tool slip and strip or scratch the back cap.



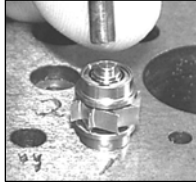
Aftermarket Back Caps: There are two different styles of aftermarket back caps (40415PBO, second picture; 404145PB, third picture) which require different tools for removal. The second picture shows the aftermarket back cap removal tool (10112) removing part #40415PBO. The third picture shows the other end of the MW T PB/L deluxe back cap removal tool (40423A or 40408A) removing part #40415PB.





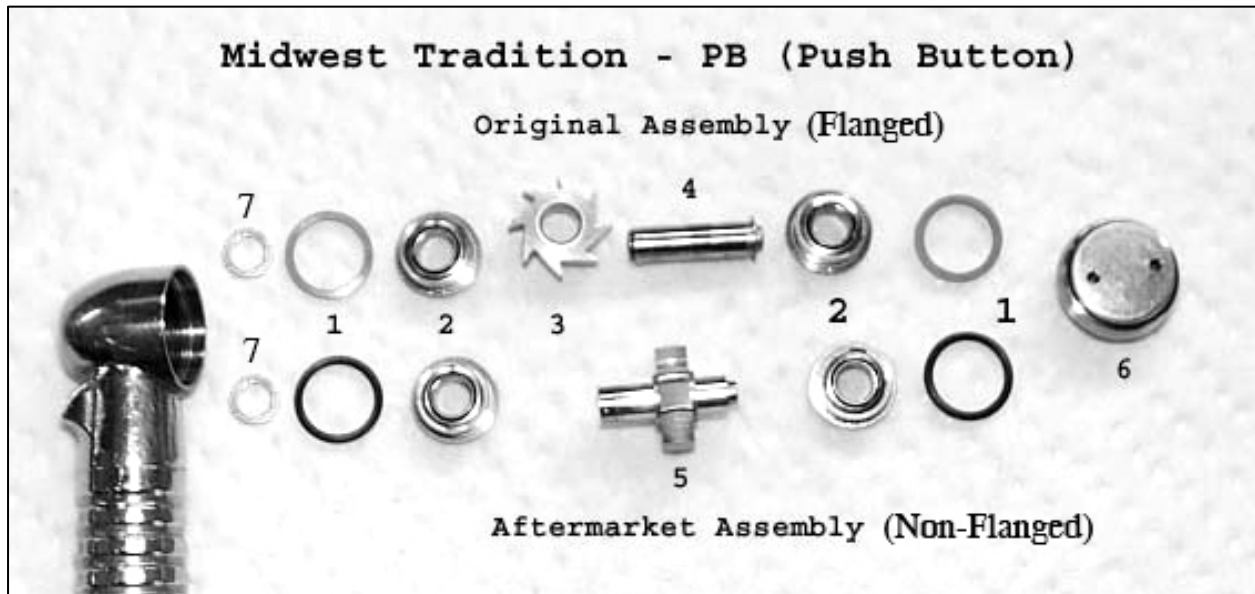
STEP 3

Original Turbine: Place the button and flange on the spindle into hole #4 of the work block. Note: Make sure the flange is completely inside hole #4 and not caught on the edge. This will avoid ruining the spindle when pressing it through the bearings and impeller as you disassemble the unit. Using the auto-chuck protector punch (00024 & 00024A), press the spindle through the bearings and impeller.



Aftermarket Turbine: Since the aftermarket spindle does not have a flange on the spindle it can be placed into hole #7 of the work block with the push button facing upwards, closest to the ram of the press. Using the auto-chuck protector punch (00024 & 00024A), press the spindle through the bearings and impeller.

The following picture shows the exploded view of both the original and aftermarket turbine assemblies for the Midwest Tradition and XGT - PB (not shown) handpiece. Please note that only the aftermarket back cap (40415PBO) is shown.

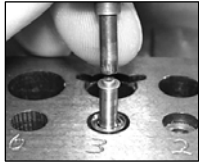


Picture Number	Part Number	Description
1	404071	O-Ring - Blue Square
	404072	O-Ring - Black
2	40405A	Flanged Bearing
3	40498PB	Aftermarket Impeller
4	40498PBS	Original Spindle (Bur Tube)
5	40497PB	Aftermarket Chuck and Spindle Combo
	40497PB-A	Timken Chuck/Spindle Combo
6	40415PBO	After Market Push Button Back Cap
7	40410D	Front Spacer Washer (.015")

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STEP 4 Check the head and back cap to ensure that the o-rings were removed. Set the old bearings and o-rings aside. Put the remaining parts into the ultrasonic cleaner until they are clean. Get the new parts from your inventory. Remember to thoroughly dry all parts after removing them from the ultrasonic cleaner.

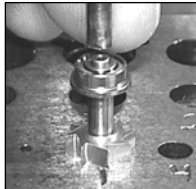
REASSEMBLY



STEP 5
Original Turbine: Place the flanged bearing (40405A) into hole #3 of the work block with the flange facing down into the work block. Place the auto-chuck protector punch squarely over the button of the spindle and press the spindle into the bearing.



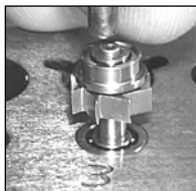
Aftermarket Turbine: Use a Star impeller setting tool (00044). Place the impeller over hole #1 in the work block so it would spin in a clockwise direction when reassembled. Next, place the button of the naked spindle into the Star tool and press it into the impeller until the tool contacts the impeller.



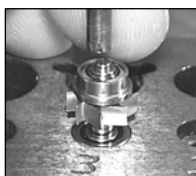
STEP 6
Original Turbine: Place the flange of the original impeller into hole #1 on the work block. Using the auto-chuck protector punch, press the spindle into the impeller.



Aftermarket Turbine: Place the rear bearing into hole #3 in the work block with the flange of the bearing facing upwards towards the ram of the press. Insert the button side of the spindle into the bearing and carefully press into place. Remember to stop pressing as soon as the impeller contacts the bearing to avoid press damage.



STEP 7
Original Turbine: Place the flanged bearing (40405A) into hole #3 of the work block with the flange facing upwards, towards the ram of the press. Place the auto-chuck protector punch squarely over the button of the spindle and press the spindle into the bearing.



Aftermarket Turbine: Place the flanged bearing (40405A) into hole #3 of the work block with the flange facing upwards, towards the ram of the press. Place the auto-chuck protector punch squarely over the button of the spindle and slowly press the spindle into the bearing. **Note:** Once again, be very careful not to press the spindle through the bearing, as there is no flange on the aftermarket spindle.



The picture to the left is a completed push button turbine assembly with both o-rings installed on the flanged bearings.



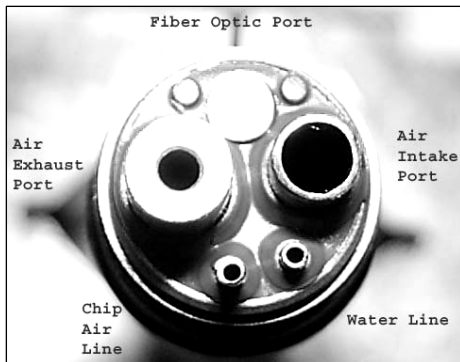
STEP 8

Original and Aftermarket Turbines: Slip the rear bearing of the turbine assembly into the back cap. Insert the entire turbine assembly into the head of the handpiece. Thread the back cap into the head in a clockwise direction, being careful not to cross thread it. Tighten snugly, using the proper back cap removal tool.



STEP 9

Test the handpiece by rotating the bur between your thumb and forefinger. The rotation should be smooth and easy, without drag.



TIP: At first it may not feel as smooth as it should. Squirt a one second blast of The Dentist's Choice "Once a Day" lubrication into the air intake port. Put the handpiece on "air". Hold it at 38 p.s.i. for about 30 seconds. It should start to wind up to full speed. It will whine when it is at full power.

TIP: If it will not turn, recheck for a crimped O-ring! Don't forget to look for dents. Using your air hose, blast any debris out of the handpiece, including all of the water, chip and air lines. Then reinstall the o-rings, turbine and back cap.

When testing the handpiece, flip the water on to make sure the water lines are clear. Always test for torque or cutting power. Use a seashell for testing the handpiece. A piece of plastic does not work, it melts. Remember when testing for torque, a Midwest Tradition - PB will stop at about 6oz to 8oz of pressure. If it is not running properly it will stop the instant you touch something hard. If it cuts well and sounds good, it is done!