DISASSEMBLING AND ASSEMBLING HELIUM VALVES ON AN OMEGA WATCH

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1. Recommended tools

Image	Description	Use / Remarks
	Pink, anti-static, talc-free finger cots/720 pcs 5170064 «S» 5170065 «M» 5170066 «L» 5170067 «XL»	Parts protection
	Oiler 5060073	Applying adhesive
	Brass tweezers 5023109998	Handling of components

Image	Description	Use / Remarks
	6-sided key for tube 5022000004	Tightening and loosening the new tubes
	Screwdrivers for watchmaker 5140308	Loosening and tightening screws
	Set extractor to remove tube 5100051	Removing screwed in tubes
	Loctite 586 504W000635	Tubes, pusher corps and helium valve and screwed pushers

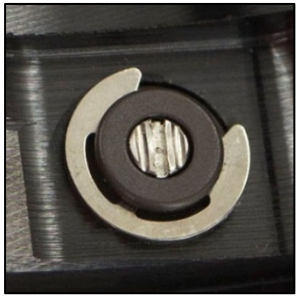
Concerning the monobloc helium valve and monobloc helium valve with corrector, you will find the specific tools references in Extranet with the case reference number.

2. General

This Working Instruction concerns the procedure of «Disassembling and assembling helium valves on an OMEGA watch», in order to ensure that the OMEGA standards for a service are met.

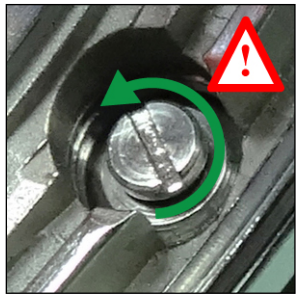
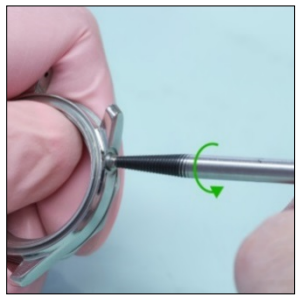
3. Identifying the different helium valves

At this time, 4 different types of helium valves exist:

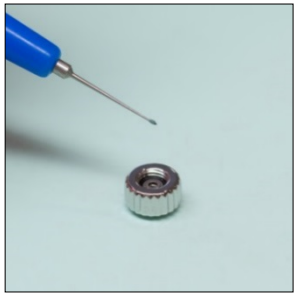
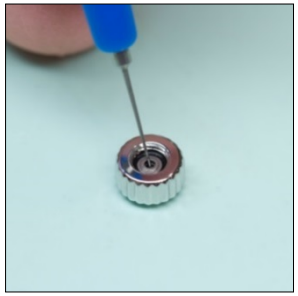
1. Helium valve delivered in a KIT	2. Monobloc helium valve	3. Monobloc helium valve with corrector	4. Deep Black Monobloc helium valve
			
Resembles a crown from the outside. Available in different designs.	Resembles a crown from the outside. Available in different designs.	There is a small "button" with an indentation visible from the outside.	Resembles a crown from the outside.
			
Seen from inside, the head of the screw which holds the valve together has **ONE SLOT.**	Seen from inside, the head of the screw which holds the valve together has **THREE SLOTS.**	Seen from inside, the head of the screw which holds the valve together has **THREE SLOTS.**	Seen from inside, the head of the screw which holds the valve together has **THREE SLOTS.**

4. Disassembling and assembling (A) the helium valve delivered in a kit

4.1. Disassembling the helium valve delivered in a kit

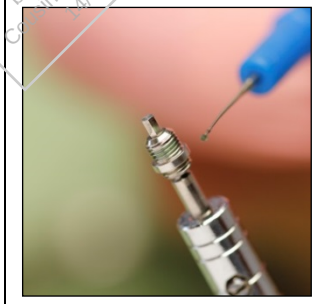
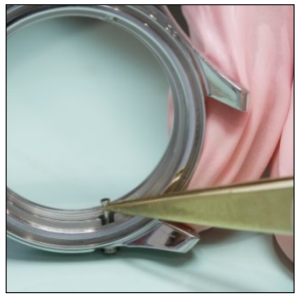
1.	2.	3.
 		 
Unscrew and remove the screw with a screwdriver. **Attention:** Turn in an anti-clockwise direction (left).	Remove the head of the valve and then remove the spring.	Remove the washer and the O-ring gasket from the tube.
4.	**5.**	
 		
Remove the valve tube using the tool Set extractor to remove tubes (ref. 510 0051) and unscrew.		

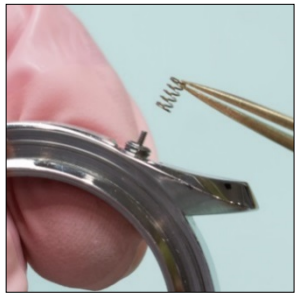
4.2. Assembling the helium valve delivered in a kit

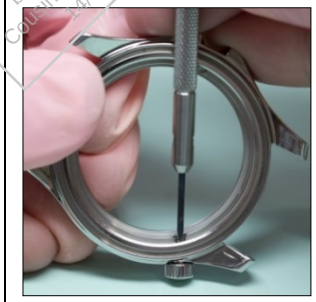
1.	2.	3.
	 	
All of the required components together. The service includes the entire replacement of valve, valve tube and gaskets.	Prepare the Loctite 586 and helium valve head. Place the adhesive in the threading of the smaller diameter hole of the valve head.	Place the tube on the 6-sided key (Ref. 5022000004).

4.	5.	6.		7.
				
The titanium seal should be used if needed to ensure that the tube rests level with the case. Place the titanium seal onto the tube.	Test fit the tube onto the case without Loctite. DO NOT tighten completely.	If the tube sits correctly (as shown), the titanium ring can be used.	If the tube sits too high (as shown), the titanium ring cannot be used.	Remove the tube and if needed, remove the titanium ring.

DISASSEMBLING AND ASSEMBLING HELIUM VALVES ON AN OMEGA WATCH

8.		9.		10.
				
Coat the thread with Loctite 586 according to video "Application Loctite 586" then fit and tighten the tube into the case-middle using the six-sided key.		Place the screw into it's position.	Block the screw with a finger and turn over the case as indicated in the photo above.	Place the O-Ring gasket gently to avoid damaging it on the thread of the screw. The new gasket comes pre-lubricated.

11.		12.	13.	
				
Place the washer over the O-Ring gasket.	Push the O-Ring gasket and the washer down to the bottom.	Fit the spring	Place the valve head on the tube and screw it down.	Turn over the case as shown in the photo above.

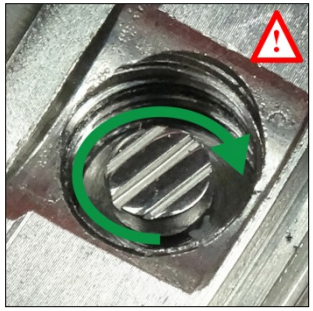
14.	15.			
				
Tighten the screw 2/3, unscrew 1/3, then retighten to the end.	Allow the adhesive to dry (1 hour in the oven at 60° C or in the open air for 6 hours).			

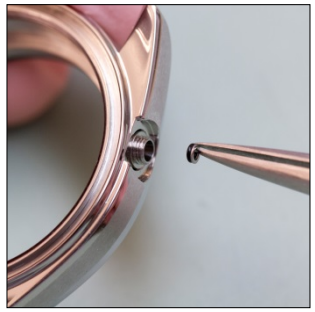
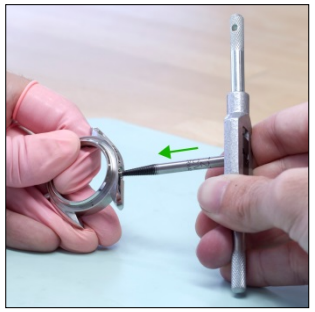
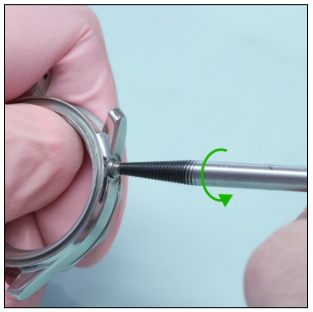
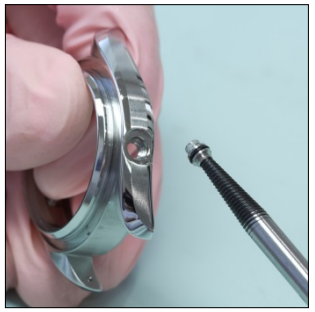
The application of Loctite 586 described under point 8 on page 6 and under point 5 on page 10 as well as the quantity, are also explained in the following video:

4.3. Video: "Application Loctite 586"

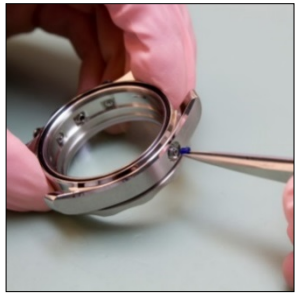
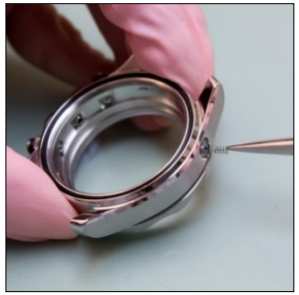
WATCH VIDEO	Video: Application Loctite 586

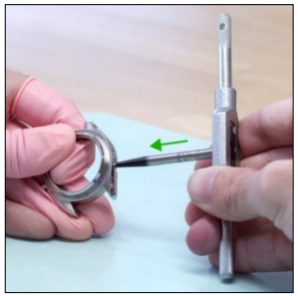
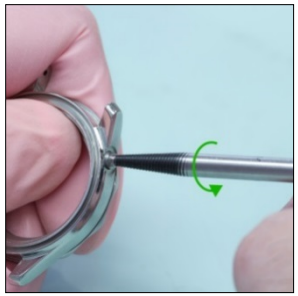
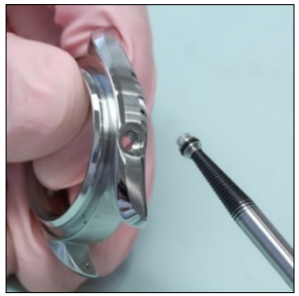
5. Disassembling (B) the monobloc helium valve

1.		2.	3.	
				
Unscrew and remove the screw with a screwdriver. **Attention:** Turn in a clockwise direction (right).		Remove the screw from the valve.	Remove the head of the valve and the spring.	

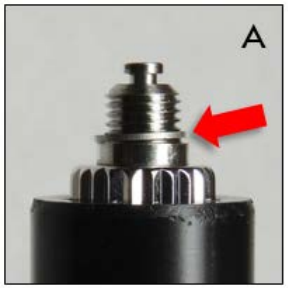
4.	5.			
				
Remove the washer and the O-Ring gasket from the tube.	Remove the valve tube using the tool Set extractor to remove tubes (ref. 5100051) and unscrew.			

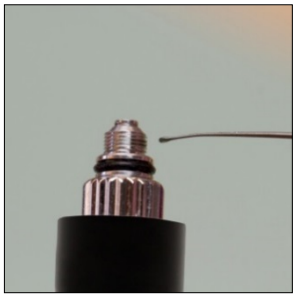
6. Disassembling (C) the monobloc helium valve with corrector

1.		2.		3.	
					
Unscrew and remove the screw with a screwdriver. Attention: Turn in a clockwise direction (right).		Remove the head of the valve and the plastic tube.		Remove the washer and the spring.	

4.	5.				
					
Remove the washer and the O-Ring gasket from the tube.	Remove the valve tube using the tool Set extractor to remove tubes (ref. 5100051) and unscrew.				

7. Assembling (B) the monobloc helium valve & (C) the monobloc helium valve with corrector

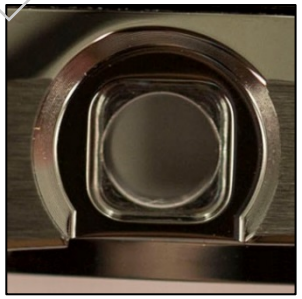
1.	2.	3.	
 			
Place the valve on the specific key. If the valve was supplied with a titanium ring (A), Begin at step 2. The titanium seal should be used if needed to ensure that the tube rests level with the case. If the valve has a black O-Ring (B), Begin at step 5.	Test fit the valve onto the case without Loctite. DO NOT tighten completely.	If the valve sits close to the case (as shown), the titanium ring can be used.	If the valve sits too far from the case (as shown), the titanium ring cannot be used.

4.	5.	6.		
				
Remove the valve and if needed, remove the titanium ring.	Coat the thread with Loctite 586 according to "Application Loctite 586".	Then fit the valve into the case-middle using the suitable tool.	Tighten valve 2/3, unscrew 1/3, then retighten to the end.	Allow the adhesive to dry (1 hour in the oven at 60° C or in the open air for 6 hours). Unscrew the head of the valve only once the adhesive has dried.

8. Disassembling (D) the Deep Black monobloc helium valve

1.	2.	3.	4.	
				
Remove the c-clip which holds the helium valve in place.	Remove the complete helium valve in one piece.	The helium valve has been disassembled from the case.	Attention: The helium valve is monobloc and is not unscrewed or disassembled!	

9. Assembling (D) the Deep Black monobloc helium valve

1.	2.	3.
 		 
The body of the helium valve has a square form which keeps it positioned when fitted into the case.	The "crown" of the helium valve must be fully screwed down. Then fit the helium valve so that the engraved "He" is legible when the watch is in the dial up position. If positioning is OK, continue to step 3. If the positioning is KO, turn the square 90° until it is within OK tolerances.	Fit the c-clip to fix the helium valve in place.

4.	5.
	
Here you find the correct OK tolerances for the position of the helium valve. (see above)	The following positions of the helium valve are not correct KO. (see above)

ATTENTION: In case of water-resistance problems, the complete helium valve must be exchanged !!!

10. History of modifications

CHANGES OF THE DOCUMENT		
Date	Made	Miscellaneous modifications
21.02.2017	breemi	All modifications are highlighted in cyan The document has been adapted at the new layout.