

## TJF-Q180V

### Visual inspection checklist

The probability of failure of the endoscope and ancillary equipment increases as the number of procedures performed and/or the total operating hours increase. In addition to the inspection before each procedure, the person in charge of medical equipment maintenance in each hospital should inspect the items specified in operation manual periodically. An endoscope with an observed irregularity should not be used. If the irregularity is still observed after inspection, contact Olympus. (see also Olympus TJF-Q180V Instruction Manual, « maintenance management »).

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#### About

Facility name

Serial number

Inspection date

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#### Inspector

Customer name

Customer signature

Date

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#### Summary

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## Technical inspection

Inspection of the endoscope		Normal Condition	Abnormal condition: Service required	
<b>Inspection of the endoscope</b>				
1	Inspect the control section and the endoscope connector	OK	excessive scratching	
			deformation	
			loose parts	
			other irregularities	
2	Inspect the boot and the insertion section near the boot section	OK	bends	
			twists	
			other irregularities	
3	Inspect the external surface of the entire insertion section, including the bending section and the distal end	OK	dents	transformation
			bulges	bends
			swelling	adhesion of foreign bodies
			scratches	missing parts
			holes	protruding objects
			sagging	other irregularities
4	Inspect the forceps elevator and the area which can be visually accessible in elevator recess, while raising and lowering the forceps elevator	OK	foreign material such as debris and fluids etc.	


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## Technical inspection

5	Holding the control section with one hand, carefully run your other hand back and forth over the entire length of the insertion tube	OK	objects or metallic wire protrude from the insertion section
			abnormally rigid
			abnormally soft
6	Using both hands, bend the insertion tube of the endoscope into a semicircle, then move your hands as shown by the arrows in the picture	OK 	insertion tube cannot be easily bent to a semicircle
			insertion tube is too flexible
7	Gently hold the midpoint of the bending section, with the other hand hold a point 20 cm from the distal end, gently push and pull	OK	connection between bending section and insertion tube is loose
8	Inspection of objective lens and the light guide lens at the distal end of the endoscope insertion section	OK	scratches
			cracks
			stain
			other irregularities
9	Inspect the air/water nozzle at the distal end of the endoscope's insertion section	OK	dents
			crushing
			other irregularities
10	Inspect the guidewire-locking groove of the forceps elevator	OK	stains

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## Technical inspection

Inspection of bending mechanism		
11	Confirm that both the UP/DOWN and RIGHT/LEFT angulation locks move all the way in the "F" direction	Yes No
12	Turn the UP/DOWN and RIGHT/LEFT angulation control knobs slowly in each direction until they stop, and return them to their respective neutral positions	OK the bending section does not angulate smoothly maximum angulation cannot be achieved the bending section does not return to its neutral position
13	The UP/DOWN and RIGHT/LEFT angulation knobs can be turned to their respective neutral positions as shown in the image	OK  the bending section does not return smoothly to a neutral position
14	Move the UP/DOWN angulation lock all the way in the opposite direction of the "F" mark. Then turn the UP/DOWN angulation control knob in the "U" or "D" direction until it stops	OK the angle of the bending section is not sufficient when the UP/DOWN angulation control knob is released the bending section does not straighten out when the UP/DOWN angulation lock is moved all the way in the "F" direction and the UP/DOWN angulation knob is released
15	Turn the RIGHT/LEFT angulation knob all the way in the opposite direction of the "F" mark. Then turn the RIGHT/LEFT angulation control knob in the "R" or the "L" direction until it stops	OK the angle of the bending section is not sufficient when the RIGHT/LEFT control knob is released the bending section does not straighten out when the RIGHT/LEFT angulation lock is turned in the "F" direction

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### Inspection of the forceps elevator

<b>16</b> Perform the following inspections while the bending section is straight. Move the elevator control lever slowly all the way in the opposite direction of "U". While observing the forceps elevator at the distal end of the insertion section, slowly move the elevator control lever in the "U" direction until the operator feels heavy	OK	the lever cannot be operated smoothly the forceps elevator is not raised smoothly the forceps elevator does not remain stationary when pushed from behind while holding the elevator control lever stationary
<b>17</b> Then move again smoothly the elevator control lever in the opposite direction of "U"	OK	the lever cannot be operated smoothly the forceps elevator does not lower smoothly

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## Technical inspection

Inspection of endoscope system		
	Normal condition	Abnormal condition: Service required
<b>Inspection of endoscopic image</b>		
<b>18</b> Turn on the video system center, light source and monitor, and inspect the WLI and NBI endoscopic image as described in their respective instruction manuals	OK	the light source is not outputting from the endoscopes's distal end  the endoscopic image projected into the palm of your hand is deformed, noisy, blurred, foggy, or display any other irregularities
<b>19</b> Angulate the endoscope and confirm that the WLI and NBI endoscopic images do not momentarily disappear or display any other irregularities	OK	the WLI and NBI endoscopic image disappear momentarily or display any other irregularities
<b>Inspection of remote switches</b>		
<b>20</b> Depress every remote switch	OK	they do not function normally
<b>Inspection of air-feeding function</b>		
<b>21</b> Set the airflow regulator on the light source to "HIGH" or "3". Immerse the distal end of the insertion section in sterile water to a depth of 10 cm	OK	air bubbles are emitted while air/water valve is not in operation
<b>22</b> Cover the hole in the air/water valve with your finger. Confirm that air is continuously emitted from the air/water nozzle	OK	no air bubbles exit from the air/water nozzle
<b>23</b> Uncover the hole in the air/water valve	OK	air bubbles are emitted from air/water nozzle

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## Technical inspection

### Inspection of the lens cleaning function

24	Keep the air/water valve's hole covered with your finger and depress the valve	OK	no water is flowing over the whole objective lens
25	Release the air/water valve	OK	while observing the endoscopic image the emission of water does not stop while observing the endoscopic image, the valve does not return back smoothly to its original position
26	While observing the endoscopic image, feed air after feeding water by covering the hole in the air/water valve with your finger. Confirm that the emitted air removes the remaining water from the objective lens and clears the endoscopic image	OK	the insufflated air does not eliminate residual water from the objective lens

### Inspection of suction function

27	Place a container with sterile water and the endoscope at the same level. For control purposes connect the suction. Immerse the distal end of the insertion tube into sterile water with the opening of the working channel of the endoscope being immersed. Push the suction valve	OK	no water is aspirated into the suction jar
28	Release the suction valve	OK	the suction does not stop and the valve does not return to its original position
29	Press the suction valve and draw water for one second. Then release the suction valve for one second. Repeat this several times	OK	water leaks out of the biopsy valve



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### Inspection of the working channel and forceps elevator

<b>30</b>	Confirm that the forceps elevator is lowered, then insert EndoTherapy accessory through the biopsy valve	OK	EndoTherapy accessory does not extend smoothly from the distal end foreign objects come out of the distal end
<b>31</b>	Extend EndoTherapy accessory approximately 3 cm from the distal end. Move the forceps elevator control lever in the "U" direction	OK	the forceps elevator does not raise smoothly
<b>32</b>	Check the movement of the EndoTherapy accessory by operating the elevator control lever several times to raise the forceps elevator	the Endo Therapy accessory is easy to move	the EndoTherapy accessory is difficult to move
<b>33</b>	Move the elevator control lever in the opposite direction of the "U" direction	OK	forceps elevator is not lowered
<b>34</b>	Confirm that the EndoTherapy accessory can be withdrawn smoothly from the biopsy valve	easy withdrawal	withdrawal is difficult

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## Technical inspection

### Leakage testing and inspection of glue at distal end

Normal condition    Abnormal condition: Service required

#### Leakage testing of the endoscope

Observe leakage in the following conditions for approximately 30 seconds

<b>35</b>	Slowly turn the UP/DOWN and RIGHT/LEFT angulation control knobs to confirm that there are no leakages	OK	not OK
<b>36</b>	Slowly raise and lower the forceps elevator to verify that there are no leakages	OK	not OK

#### Condition at the distal end

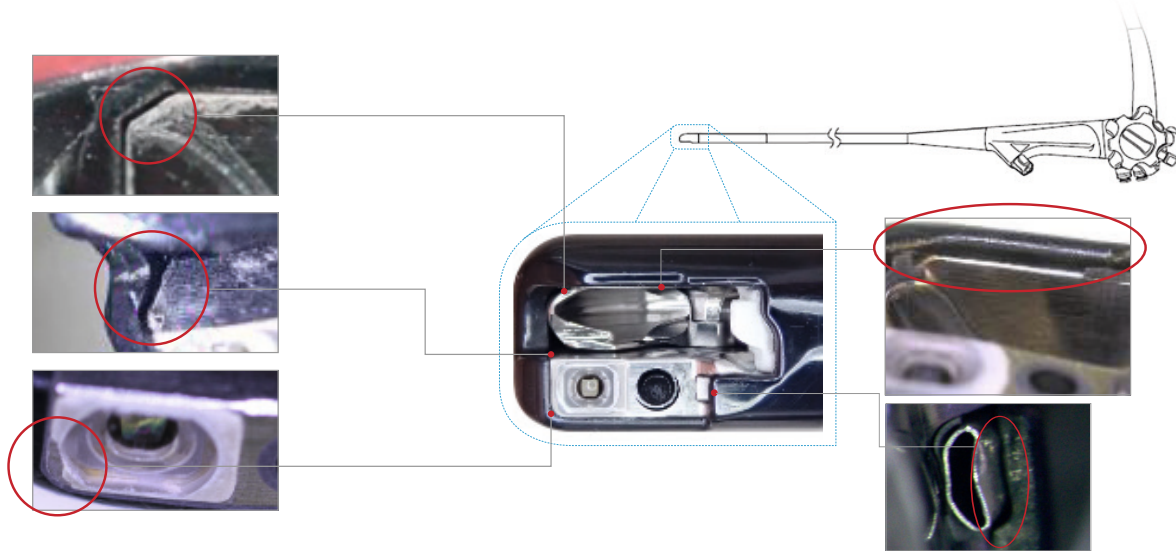
<b>37</b>	Status of glue	good	missing
<b>38</b>	Cracking	no	yes
<b>39</b>	Holes	no	yes
<b>40</b>	Air/water nozzle	glue intact	glue missing
<b>41</b>	Color	no discoloration	discoloration

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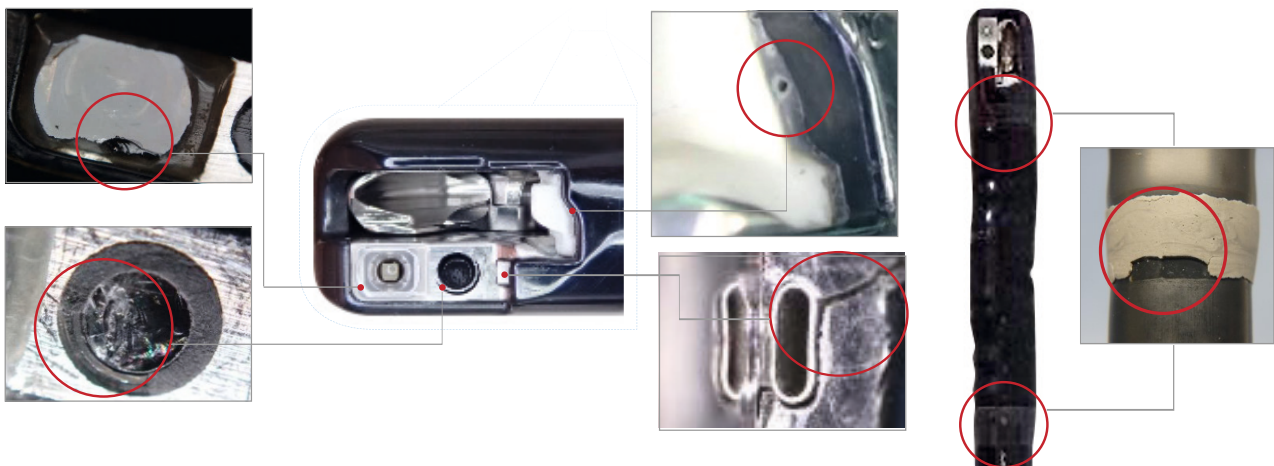
## Technical inspection - reference photos

The following reference photos are intended to provide examples of some irregularities Olympus service departments have observed. Additional irregularities not pictured here may occur, and Olympus reminds customers to please contact Olympus for service and/or repair should any irregularity be observed upon inspection.

### References for status of glue (37) and air/water nozzle (40): Missing



### References for cracking (38) and holes (39): Crack / Scratch / Hole



### References for color (41): Stain / Discoloration



This sheet is for quick reference only. Please refer to the relevant User's Manual(s) for instructions, warnings and cautions. Nothing in this presentation is meant to supersede or replace the instructions for use applicable to each specific device, or the processes and procedures in place at your facility.

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