

# EDDIE'S CORNER



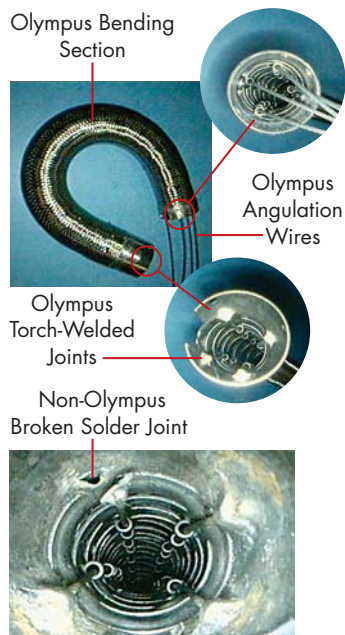
*With more than three decades in the industry, Eddie Garcés, vice president of Olympus Medical Equipment Services America, is our resident guru on all facets of service and repair.*

## Those Critical Angulation Wires

Have you ever wondered why Olympus replaces all of the angulation wires along with the bending section, even when only one wire is broken? Why not just solder the broken wire like some third-party vendors do? Simply put, these wires allow the user to “steer” the distal end of the endoscope at predetermined factory degrees of curvature to navigate within the body. To achieve this vital function, angulation wires must be

properly attached to the bending section. A soldered joint does not produce a strong enough bond (tensile strength of only 10 kgf) to prevent the wire from becoming disconnected from the bending section. The physician could lose angulation capabilities of the scope while it is in a patient’s body. Furthermore, when one wire fails, there is a very real possibility that the other wires are getting worn out as well. To replace just one wire would be analogous to replacing just one brake on your car when they’ve all had the same mileage. It is not safe, practical or economical.

At Olympus, our angulation wires are torch-welded to the bending section (tensile strength of 25 kgf). This process is performed prior to assembly in the endoscope because of the extreme temperatures involved (760°C). So when one wire is broken, we replace the entire unit to ensure maximum safety and reliability. The bottom line is that there are no shortcuts to quality. Either you do it right, or you don’t.

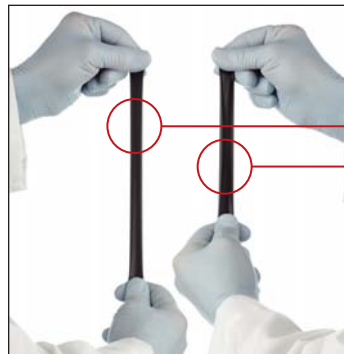


## Can Your Bending Section Coverings Stretch?

The old adage “more is better” does not always apply. Take for example the bending section covering of an endoscope. Every Olympus model has a unique covering specifically designed for the performance of that scope, including our latest generation product that is engineered with incremental elasticity throughout the length of the covering to further enhance flexibility.

may cause them to break. It’s like wrapping thick tape around a finger and then trying to flex it—the effort will increase in proportion to the amount, thickness and location of the tape on the finger.

In addition to flexibility, the physical properties of the bending section covering must also provide maximum strength and durability. When



### Olympus vs. Third Party

Olympus  
Third Party

Elasticity requirements for bending section coverings are important to ensure all performance characteristics associated with proper angulation are achieved.

Olympus does not sell its proprietary bending section coverings to third-party vendors, so they will frequently use a generic or “universal” bending section covering. While these generic coverings may at first appear to be thicker or stronger (“more is better”), they actually cause greater stress on the entire bending section, forcing the angulation mechanism to work harder.

Olympus manufactures the insertion tube assembly, including the bending section covering, all the materials and parts—everything right down to the glue—are fully tested for safety, reliability and biocompatibility. This ensures that all of the parts work well together and protects against adverse reactions. As a further precaution, all Olympus bending section coverings are latex-free. In short, there is no substitute for the real thing!

The end result is premature stretching of the angulation cables, requiring more frequent adjustments, or in some cases, the extra stretch on the cables

*Eddie*