

## The Eye Inside

***Borescopes and videoscopes are providing increasing capabilities to users and can save time and money in the hangar.***

The thing with borescopes is not so much what they do, but how they do it. Here is a look at the industry's latest and greatest ways to check out what is going on inside the critical parts of the aircraft.

Perhaps the biggest news in the borescope industry today is the rapid growth of the videoscope market, which is providing increasing capabilities for people who need to get deep into large engines to find out what is or is not happening in there. But it is also creating two niche markets, one for the big guys and one for the little guys, according to Douglas Kinnard, president of Gradient Lens Corp., a Rochester, N.Y.-based manufacturer of rigid and flexible borescopes.

"The videoscopes are really taking over from fiberscopes in the majority of the market," he said. "But they are very expensive, in the \$30,000 to \$50,000 range. That's fine if you're a United Airlines, but not fine if you're a small MRO or FBO. A good fiberscope these days will only run you about \$10-15 K."

### **Gradient Lens Corp.**

That's one reason that Gradient Lens Corp. is so proud of its newest product, the HawkEye Pro Flexible. Just introduced this year, the latest member of the HawkEye line is a follow-on to the HawkEye Classic Flexible, but with more features such as a directional control and lock, and two-way articulated 240 degree remotely controlled tip.

"That scope has the same quality typically found in a \$10,000 scope, but we're able to offer it for \$5,500. So the hope is that we can reach the smaller FBOs working on smaller planes," Kinnard said. "We've already had some success selling that product to the helicopter market."

The lower price is made possible "because for several years now we've been selling the HawkEye Classic Flexible, which is a gooseneck version," he said. "We've had that on the market for several years and selling it in pretty high volume, hundreds annually. Those were mostly going to the manufacturers. So what we did was take all the optics from the Classic Flex and build them into a good quality articulating scope that can be used by the MROs. So we have economies of scale since the optics are identical. The two products look different on the outside, but things such as the lens and fiber optic bundles are all the same."

Gradient Lens has also introduced its new HawkEye Pro Slim and Pro Hardy rigid borescopes. The Pro Slim is a .165" diameter rigid product as a trade-off between small diameter and length versus bright illumination, while the Pro Hardy .250" diameter is a rugged borescope with twice the brightness of the Pro Slim.

### **Aqua Communications**

Aqua Communications, located in Waltham, Massachusetts, is adding a new version of its successful SnakeEye and SnakeEye II portable video inspection tools, scheduled to be available later this year, according to Bill McCafferty, director of sales and marketing. "This newest version, SnakeEye III, will give the user the ability to record and play back both color images and voice to an 'on board' SD (secure digital) flash memory card," he said. This SD card can be read by most laptop and desktop computers, or the image can be transferred directly to the computer using the USB port.

In addition, a borescope and/or a fiberscope can be connected and will be able to utilize this same recording ability. SnakeEye III comes with an interchangeable camera head that can be attached to a flexible gooseneck, extension cables, telescoping poles and all the standard SnakeEye accessories to give the user the flexibility they need to complete their inspections. Although not yet introduced to the market, the SnakeEye III is expected to cost roughly in the \$3,500 range, McCafferty said. "The SnakeEye III is also designed to meet the IP68 standard," he said.