New engineering solutions are one way to meet customers’ expectations about repair costs.

Cost Pressures Build On Component MRO

Component MRO expenditures will grow faster than other aviation aftermarket segments, but the cost pressure on providers is intense.

Alex Derber | May 16, 2018

Component maintenance is an integral part of the MRO market and a key revenue driver for most large maintenance providers. In the next 10 years, component work will be worth $333 million—or roughly one-third of the total MRO market over that period—Aviation Week estimates.

Furthermore, component spending will grow more quickly than for other types of MRO work during the next five years, according to Oliver Wyman. The consultancy estimates growth of 3.7% from 2017-22, versus 3.5% for line maintenance, 3% for engine support and negative 1% for airframe work.
Yet those encouraging forecasts hide numerous challenges for component maintenance providers, from stiffer competition to higher tooling costs and better reliability of parts.

**Competition**

In 2017, Air France Industries-KLM Engineering & Maintenance (AFI-KLM E&M) posted overall sales of €4.2 billion ($5.2 billion), roughly the same as in the previous year. However, the company’s profits were lower, and it warned of thinner margins for its components business due to increasing competition.
While AFI-KLM E&M was not able to elaborate on this situation, another global MRO provider, AAR, confirms the pressure on pricing. “AAR’s parts supply and aftermarket maintenance experience has allowed us to keep our price increases at a minimum in what is a very competitive market,” says Colin Craig, senior vice president for integrated programs-commercial at AAR.

At Lufthansa Technik, Maria Schraejahr, head of business development for component services, observes that “increasing competition in the MRO component services space will only get more intense over the next years.” She and Craig both point to the growing footprint of aircraft manufacturers in the aftermarket, particularly the OEMs’ component offerings as part of integrated maintenance programs for new-generation aircraft.

“AAR sees the most competition from OEMs in the bidding for new aircraft fleets, but we have still been able to win,” says Craig, pointing to long-term component support contracts for FlyDubai’s Boeing 737 MAX and for Hawaiian Airlines’ Airbus A321neo fleets.
To mitigate this growing competition, large MRO providers are expanding into new markets. In February, AFI-KLM E&M and Sabena Technics jointly inaugurated a new component workshop in Singapore to focus on A320 and ATR parts. AAR has also been busy overseas, last year announcing a new parts warehouse in Shanghai and a doubling of capacity at its existing component facility in Amsterdam. In the same year, Lufthansa Technik doubled the capacity of its Tulsa, Oklahoma, component shop and strengthened the airframe component capabilities of its facility in Shenzhen, China.

“While Lufthansa Technik grew in Europe in line with its home market evolution, the expansion of its subsidiaries in the Americas and Asia-Pacific has been a key success factor for international growth,” says Schraejahr.

Craig, meanwhile, notes that “AAR’s largest growth in component support programs has been outside the U.S."

Over the next decade, Aviation Week forecasts that the leading markets for component maintenance will be Asia, North America and Europe, worth $102 billion, $82 billion and $81 billion, respectively. In the same period, component MRO for Boeing aircraft is set to be worth roughly $158 billion, versus $133 billion for Airbus types.

**Other Pressures**

The success of the low-cost carrier model has forced all airlines to take a hard look at every aspect of their cost base, to which component maintenance is a major contributor. “The growing need for efficiency from our customers has been the main driver behind a series of engineering measures to reduce component repair costs,” says Schraejahr.

Other measures include lean production processes, enhanced logistics and the integration of used serviceable material to push down replacement costs for expensive life-limited parts. However, one trend that MRO providers are powerless
to resist is the increasing reliability of certain components, which is extending service intervals, albeit sometimes with the benefit (for the MRO) of avoiding more complex and expensive repairs.

Component support margins are under pressure at some MRO providers.
“With the introduction of new technologies to improve the reliability of aircraft components throughout their life cycle, the component MRO market will certainly change,” says Schraejahr.

Another shifting dynamic is the provision of testing equipment, which is particularly important for the complex electronics and software of avionic components. Such complexity, combined with the rising cost of test benches, is reported to have already caused certain MRO providers to quit this section of the market.

To cope with all of these changes, large MRO providers are investing more in digitalization to improve their production processes and stock management. “We use software to provide the analytical brainpower, which allows us to develop cost-optimized inventory plans,” says Craig.

Yet digitalization and expanding connectivity is a double-edged sword, since airlines and OEMs can use increasingly sophisticated health monitoring systems to optimize repair intervals or perform cheaper preventive maintenance before more serious problems occur. It is probably too early to judge the net effect on MRO providers, which hold valuable operational data of their own, but the rapidly advancing Internet of Things will surely create ripples in the component aftermarket.