

Outsourcing trends

More airlines are choosing to outsource engine maintenance and maintenance management. While OEMs are hoovering up some of this work, new deals covering the aftermarket present significant opportunities for third-party providers as well as cost savings for airlines, writes *Christopher Whiteside*, CEO and president of AJW Group.

Engine repairs can quickly generate bills that run into the hundreds of thousands of dollars for an airline and this is the case whether repairs are carried out in-house or by a third-party provider. Unfortunately for airlines, the time off-wing and huge cost of these visits are unavoidable.

However, in recent times, many airlines around the world have streamlined their engine departments. Although able to carry out basic maintenance, today's airlines are not usually equipped to perform heavier work in-house. Because of the relative infrequency of engine shop visits, many commercial airlines have made the strategic decision to outsource engine overhauls to third-party providers to help them keep costs to a minimum while they seek to maximize the savings of every shop visit.

In the modern commercial aviation environment, it is not just the substantial cost of engine repairs that makes an in-house engine department unsustainable; the mounting cost of engine parts, which typically rise between three and seven per cent per year, and the hundreds of man-hours involved in repairs, maintenance and sourcing material, mean that external providers such as AJW are a cost-effective option for airlines to carry out engine MRO work.

SHAPING THE MARKET

Lower fuel prices have meant that airlines are spending more money on the maintenance of older aircraft to keep them in service. However, a more diverse and mature range of aircraft and engines in the market brings extra challenges for MROs and airlines alike. For example, booming demand for engine parts has driven up prices and OEMs have seized the opportunity to capitalise on this demand. This has led to much higher material costs as engine parts are sold at a premium worldwide.

As a result, although many MROs are primed to support customers, it is not always possible to do so in a cost-effective manner because of OEM pricing in the aftermarket. This has placed pressure on MROs to become more innovative and for airlines to become savvier about repairs. In turn, this has increased demand for both half-life and other used life-limited parts, with some airlines happy to pay a premium for access to these.

However, this highly commoditised and overpriced market may well change. In 2018 the International Air Transport Association (IATA) entered into an agreement with CFM International that should lead to increased competition in the market for maintenance, repair and overhaul services (MRO) on engines manufactured by CFM. Under the agreement, CFM has adopted a set of "Conduct Policies" that will enhance the opportunities available to third-party providers of engine parts and MRO services on the CFM56 and the new LEAP-series engines.

Despite increasing competition in the engine MRO market, the agreement will improve the opportunities available to maintenance providers. It will enable new relationships to be forged in the market and successful third-party specialists will be able to offer airlines a wider range of services beyond the engine shop. Furthermore, it should also mean a reduction in the cost of engine shop visits for airlines, which will in turn reduce their operating costs. A reduction in operating costs means that these savings will in time benefit passengers, who should reap the rewards of lower air fares.

NEW OPPORTUNITIES

There will come a time when despite skilled technicians carrying out essential maintenance on a regular basis to keep older aircraft in service, there is no further restoration that can be carried

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out on an engine. For example, the CFM56-3 engine powers some 13,400 single-aisle aircraft flying today, but these ageing platforms will eventually become obsolete, and sooner rather than later if fuel prices continue to rise.

Yet new opportunities will arise for the aviation industry as old ones disappear. By 2022 there is expected to be a six per cent growth in the global aircraft fleet. At first the new aircraft and engines will require little maintenance, but in time the first waves of shop visits will break and the market for engine parts will begin to reshape itself.

When this happens the significance of external providers for parts and maintenance will probably have grown. More airlines than ever before are taking note of the savings they offer and the industry is projecting huge growth over the next decade. In 2017 the engine MRO aftermarket accounted for \$23 billion of the total \$74 billion spent on MRO. By 2027 total MRO spend is expected to reach \$118 billion with \$37 billion of that directed towards engine MRO.

REGIONAL DIFFERENCES

Growth in the engine maintenance market varies between regions, with some slower to adopt third party services than others. For example, in the Asia-Pacific market airline fleets are relatively young. What's more, today's engines are built to stay on wing for at least the first 15,000 to 25,000 hours, so many will not be due a shop visit for at least the first six years of their lives.

However, with fleets in Asia gradually starting to mature, the first wave of engine shop visits is now coming through, although carriers in the region are understandably cautious when it comes to maintenance. Due to strict regulation and the quality-control checks that airlines must abide by, many believe that only an OEM can adhere to the necessary standards, and that by using one they will not be at fault if anything goes wrong. But, as with any commercial aviation market, Asia-Pacific is subject to supply-and-demand pressures and it is expected that in time the market will open up to third-party engine specialists.

Of all the major markets, Europe is one of the most advanced when it comes to driving cost savings using third-party solutions. With a mature network of commercial carriers and a diverse range of engine types, it has come to realise the benefits of outsourcing engine MRO. European third-party providers such as AJW have developed strategic partnerships with OEMs worldwide as well as relationships with global third-party MROs. This means that greater economies of scale can be achieved, resulting in maximum cost savings for airlines.

GENERATING COST SAVINGS

Airlines which are not used to contracting third-party providers often ask how the latter generate cost savings. They also want reassurances that work will be of the same quality as that carried out by the OEMs or by their in-house departments.

It goes without saying that third-party specialists that carry out or oversee engine shop visits use highly-skilled technical staff. Furthermore, specialists such as AJW challenge engine MRO providers to squeeze more out of their shop visits, plus many now offer services that stretch far beyond maintenance and repairs. Experienced specialists are well-equipped to offer an airline bespoke advice that is tailored to their fleet and engine types. They will spend time assessing an airline's needs, before designing and implementing a long-term maintenance plan that will best meet

an operator's individual requirements and generate substantial savings.

Beyond that, third-party specialists ensure numerous other requirements are met. These include: that the required work is correctly scoped out and is priced competitively at market rates; that the contract and related invoices fully reflect the work undertaken; that material purchases are planned in advance to maximize savings, and that insights are provided into best choices when a variety of solutions arise. With this combined portfolio of services and skills at an airline's disposal, not only can they trust that their engine work is carried out to the highest standards, but advance planning will ensure they benefit from the best market rates for materials and parts. By planning engine material purchases in advance, securing access to engine parts that are otherwise difficult to come by, and

offering the combined expertise of a team of engineers, specialist third-party providers pass on much more than just their expertise to an airline.

For example, during a managed customer shop visit for a CFM56-7B engine, an MRO provider was unable to provide replacement of used material as per the agreed contract, and instead procured new parts and charged additional fees above the agreed maintenance agreement. AJW challenged this extra fee and was able to supply material, resulting in a saving of over \$1 million across the shop visit.

As airlines increasingly divest certain aftermarket activities in order to streamline their workforces and make cost savings, providers like AJW are primed to support them. The diversification of the engine market brings fresh opportunities for airlines and aircraft manufacturers alike. ■



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