

MRO

Aerospace Magazine

Access Granted, Ownership Optional

A more in-depth look into
component pooling

Mature Engines

The question is to repair
or replace it?

Line Maintenance

Is it worth building
inhouse capabilities?

P2F Conversions

Aircraft availability remains
the key challenge

“By sharing a common pool of spare parts, airlines can achieve several benefits.”

Mike Cazaz, CEO & President, Werner Aero



© Shutterstock

Access Granted, Ownership Optional

AviTrader takes a more in-depth look into component pooling
By David Dundas

In former times, airlines were obliged to hold extensive inventories of aircraft components to sustain their fleet, both at primary stations and at outstations where critical components were vital for Aircraft on Ground (AOG) situations. In instances where an aircraft found itself stranded at a distant location, the process of acquiring the necessary component(s) to restore the aircraft to service often proved to be protracted and cumbersome. Consequently, airlines began extending mutual assistance by loaning parts to one another.

Prompted by financial constraints and the need to manage costs effectively, airlines initiated a formal pooling of their aircraft components. Under this arrangement, components were collectively owned and accessible to members of the airline component pool.

The significant advancement in extensive component pooling occurred when both component original equipment manufacturers (OEMs) and maintenance

providers ventured into this domain. They procured existing airline component inventories and rendered them accessible to their pool members, typically coupled



Mike Cazaz, CEO & President, Werner Aero

with a Maintenance, Repair, and Overhaul (MRO) agreement to service the components removed from the fleet due to unserviceability.

Component pooling is now an indispensable aspect of the aftermarket. There is currently a multitude of providers offering such services. We have conducted market research to gain further insights into this topic and have spoken to industry experts in order to get a more comprehensive understanding of the situation.

How are significant cost savings generated with component pooling?

Our first question involved revealing how component pooling can lead to cost savings both for airlines and maintenance providers. Mike Cazaz, the CEO and president of Werner Aero commented that: “By sharing a common pool of spare parts, airlines can achieve several benefits



Martynas Staknys, Vice President, Trading and Business Development, Setna iO

by reducing their major upfront capital expenditure and the on-going overhead of managing their inventory of spare parts, while guaranteeing availability and predicting costs. Airlines save money if they don't have to spend a significant amount of cash to procure the spares in the pool, outright. They can also save by predicting their monthly costs of spare parts." He added that money can also be saved on reducing personnel and the cost involved in managing spare parts.

Martynas Staknys, Vice President – Trading and Business Development at Setna iO, was keen to highlight the current problem of supply chain issues, stating that: "Component pooling helps to minimize risk of significantly overpaying for parts that are affected by supply chain issues", adding that, "AOG's are unavoidable. There are a number of components that are currently sold at above new material prices as new material is often available only on long lead times."

Toby Clouston, Director of Strategic Business Development, AerFin

“There are a number of components that are currently sold at above new material prices.”

Martynas Staknys, Vice President, Trading and Business Development, Setna iO

focused on the advantage of reallocating capital expenditure away from purchasing and storage of parts, while fixed pooling costs allow for more efficient cashflow management. "Further cost benefits include reduction in operator overheads by outsourcing the management of pool support, providing a single supplier for multiple PN's. AerFin's service includes managing approved suppliers, logistics management and quality assurance." He adds that: "Pooling can include on site stock provisioning, tailored to meet operator AOG requirements and reducing operational impact/restrictions. This has a knock-on effect in the reduction, for example, of exposure to pax compensation schemes. Pool providers such as AerFin have greater economies of scale with their vendor networks, with access to preferential rates and terms, the benefits of which can be passed on to the customer under the related pool providing rates."

How component pooling helps reduce lead times for acquiring critical spare parts

Mike Cazaz highlights that the key to success is data, as this can help to ensure critical parts are always available. "A pool provider utilizes data from airlines to build a model that will ensure on-time inventory replenishment which helps to guarantee TAT to customers," he states.

Martynas Staknys says that Setna iO gives priority to contracted customers. "Companies such as Setna iO, that provide

components pooling agreement, must have a vast inventory of components at their disposal and components pool is strictly reserved for contracted customers; this helps to assure availability of critical components," he comments, while Carlos Garofalo, Manager, Asset Life Cycle and Components at AMROS Global points out that, "by having the part available, if the required part is within the contracted spare part list, then it would be available from the pool provider at an agreed service level (lead time) to the airline operator.

Toby Clouston points out that: "Pool contracts are based around service levels and guaranteed delivery based on criticality as agreed by both parties. The pool provider takes on the responsibility to support pool requests, even where not covered by existing stock (noting certain providers may alternatively have the customer source and recharge back). Pool contracts can include on-site stock, with related composition based on the



Toby Clouston, Director of Strategic Business Development, AerFin

“Pool contracts are based around service levels and guaranteed delivery based on criticality as agreed by both parties.”

Toby Clouston, Director of Strategic Business Development, AerFin

applicable airline MEL and AOG parts removal history. Replenishment service levels are set to restock within an agreed timeframe."

How component pooling can reduce aircraft downtime and increase fleet availability

It's all about availability according to Werner Aero's Mike Cazaz. "Good pool management ensures spares availability 24 hours a day. Guaranteeing availability of spares pretty much guarantees the reduction or non-AOG times. Better upfront planning and prediction help decrease aircraft down time and increases aircraft availability" he advises. Where the availability of aircraft is concerned, AerFin's Toby Clouston comments: "Pool provider pool/part number standard, maintaining high standard of the pool, i.e., modification status, engineering collaboration and interaction with OEM's to keep parts on wing longer, improve availability of aircraft."

Setna iO's Martynas Staknys was more focused on reallocation of funds. "Customers don't need to invest money in building their own component stock, those funds can be invested into their core business such as fleet expansion. Aircrafts downtime risk is also reduced because of granted access to critical inventory at any given time," he points out.

Are there disadvantages to joining a component pool?

The general consensus is that there are few disadvantages. Toby Clouston was keen to point out that as component pools are dominated by OEMs and single sourced, therefore: "there is a higher exposure to cost increases beyond the providers control and ability to negotiate given the lack of alternative solutions." He also noted that: "there is reduced protection from reduction in utilisation below minimum flight hours (e.g. during COVID). An alternative is to select a hybrid model of support, providing pool coverage on a pay per use basis with charging on a time and material basis."

Carlos Garofalo was predominantly

“The pool access fees are calculated based on several factors; it is comparable to taking up insurance to mitigate a risk.”

Carlos Garofalo, Manager Asset Life Cycle and Components, AMROS Global

concerned you might end up paying for something you never need, saying that: "The pool access fees are calculated based on several factors; it is comparable to taking up insurance to mitigate a risk. Mike Cazaz adopts a wholly positive outlook where component pooling is concerned. "I don't see any major disadvantages. But for airlines that like to have full control of their inventory, a pool option does not allow that. However, a good and reliable pool provider can mitigate that risk. Also, airlines must have greater emphasis on contract management and must learn to create and manage strategic supplier relationships," he comments.

What about component quality and compatibility?

Toby Clouston advises that quality assurance is critical. "Quality assurance should be a key tenement in the negotiation of any pool support structure.

Operators should take into consideration, for example, any available data points on pool Mod standard, the age of components, prior history of supporting aircraft type, part number reliability issues and the vendors used for MRO activity. You get what you pay for, and customer should always question deltas in package offerings. That said, pool providers are incentivised to mitigate higher removals by ensuring stock quality to meet the expectations and service levels required by the customer."

Carlos Garofalo conceded that component pooling isn't a suitable solution for everyone: "Depending on the form, fit and function and particular requirements like date of manufacturing, certification or even modification levels, it could be that a pool solution would not fit all," while Mike Cazaz was very much in favour of the benefits of component pooling, commenting that: "There should be no concerns. Pooling contracts outline the conditions and quality of the parts required by the airlines. A good pool provider should ensure they adhere to the contract and manage parts reliability, as well."

How does a component pooling network mitigate problems with spikes in demand or supply chain problems?

Setna iO's Martynas Staknys has concerns over the fact the component pool provider can find themselves at a disadvantage, primarily because: "material replenishment is more difficult and expensive, however at the same time this is the reason why such a contract is beneficial for airlines and MRO's; they minimize risk of overpaying for material or not being able to procure material



Carlos Garofalo, Manager Asset Life Cycle and Components, AMROS Group

“Typically, the cost per tail reg is higher for capital spend for small fleets than larger fleets.”

Toby Clouston, Director of Strategic Business Development, AerFin

at all.” Toby Clouston highlights the importance of careful analysis of usage data. “AerFin has inventory management tools to analyse usage data over set periods to better understand supply and demand requirements. As well as ensuring a healthy pipeline of USM from its whole asset and package purchasing function, AerFin proactively manages its supply chain to mitigate spikes in demand and output.”

AMROS Global’s Carlos Garofalo identifies that in certain circumstances, spikes in demand and lack of supplies are unavoidable. “It is basically the party holding the engineering responsibility over the aircraft that should be proactively checking and communicating with the OEM, and coordinating with the airline operator to foresee and avoid such situations. There are cases where this it could be planned well in advance, like with modification campaigns, but certainly other cases like airworthiness directives are issued providing short or no time to react.”

So, is component pooling more beneficial for those with smaller or larger fleets?

Curiously, this is where we found the answers to one of our questions more diverse. Toby Clouston saw advantages and disadvantages for carriers with small fleets. “Typically, the cost per tail reg is higher for capital spend for small fleets than larger fleets, with economies of scale being a key consideration”, he comments. He then adds: “That said, smaller fleet operators likely will benefit from saving in outsourcing overheads associated with pool management, across multiple suppliers and credit limits, supplier approvals. Operators should, wherever possible, press suppliers to provide

bespoke solutions that fit their needs.”

Carlos Garofalo was more of the opinion that there are too many variables to provide a definitive answer. “It is all relative and depends on a series of jointly factors within the fleet like aircraft type, aircraft age, engine type, fleet planning, historical removal data, expected utilization, etc. Ultimately, it is the pool provider that will have the last word on deciding on the minimum fleet size required to provide a pool service or not.” Conversely, Mike Cazaz was very clear that there was a minimum fleet size below which component pooling is not financially beneficial. “In research that we have done internally at Werner, a few years back, we concluded that a pool is not economically beneficial for airlines with a fleet of under ten aircraft. At this size, we believe the airline is better off owning its inventory since the cost of joining a pool can be too expensive.”

And which, if any, are not suitable categories for component pooling?

The answers we received all made logical sense. For example, Setna iO’s Martynas Staknys pointed out that: “It depends on the customers’ needs. However, exclusions for the most part are for components that are not repairable, are life limited parts, or are major components such as engines, landing gears and APU’s.” To a degree this was confirmed by AMROS Global’s Carlos Garofalo, who mentions that: “Those that have on-condition criteria for removal are typical candidates for being excluded from a pool. For example, wheels and brakes.”

AerFin’s Toby Clouston was very specific, while also commenting on potential alternatives to component

pooling for certain items, indicating that: “Flying controls, insurance spares are standard exemptions and not likely offered as pool solutions.” His suggestions for alternatives are: “Certain ATA chapters and Part classification can be removed from a standard pool structure, although there are PBH or CPAL options for W&B’s, Galley Equipment, IFE, APU’s etc. These will provide same benefits as a pool concept but are tailored more specifically to product, usage and costs. Additionally certain providers offer solutions on consumables and expendables. Certain ATA chapters and part classification can be removed from a standard pool structure, although there are PBH or CPAL options for W&Bs, galley equipment, IFE, and APU’s etc. These will provide the same benefits as a pool concept but are tailored more specifically to product, usage and costs. Additionally certain providers offer solutions on consumables and expendables.”

And finally, we asked our contributors to reveal which aircraft models for which they specialise in providing inventory support.

Toby Clouston confirmed that: “AerFin’s primary component support solutions are focused on the E170/175, E190/195, A320CEO / NEO, A330CEO / NEO, and B737NG.” Martynas Staknys advised that: “Setna iO specializes and has extensive inventory of material for the Airbus A320/A330/A380 families, and the Boeing 737, 747, 767, 777, 787. However, we also have an inventory of ATR and Embraer components.”

AMROS Global’s Carlos Garofalo indicated that his company covers: “Mainly all Airbus, Boeing, ATR and Embraer manufactured aircraft types,” while Mike Cazaz advised that “Werner Aero specializes in three platforms, the A320, B737NG and E-Jet. We carry inventory in stock to support all these models and support them with the pooling option through our NIRVANA program.”