

# MRO

Aerospace Magazine

## Spare Parts: Planning amid supply chain disruptions



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A stylized illustration of a woman with dark hair in a ponytail, wearing large black sunglasses, a red earring, and a dark blue business suit with a red pocket square. She is holding a red and blue handbag. The background features a large blue gear and a stylized globe. The overall design is modern and professional.

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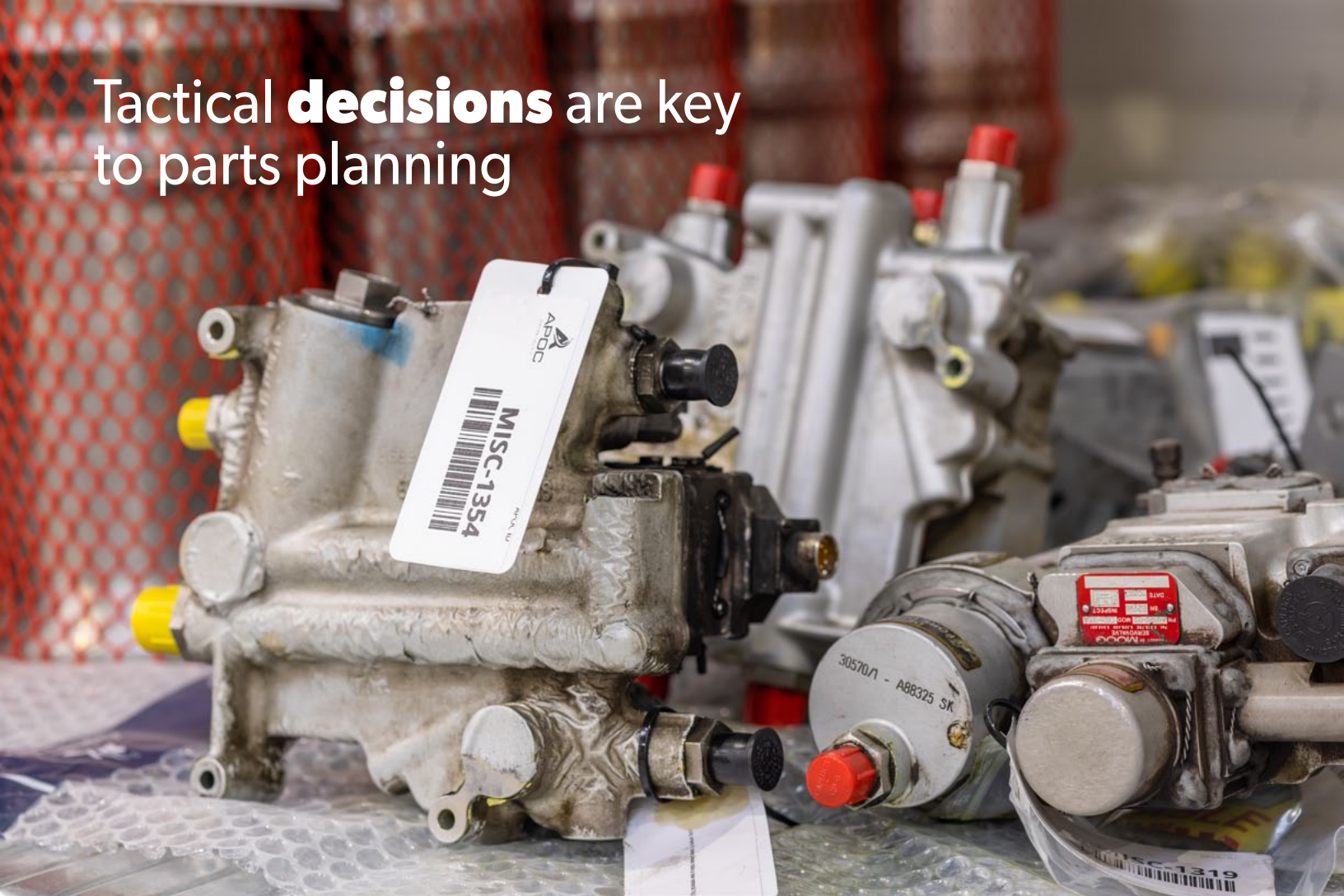
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# Tactical **decisions** are key to parts planning



Correctly identifying present and future market requirements for parts is vital.

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With supply chains facing disruptions, *AviTrader MRO* scans the market to unveil how MROs and component suppliers are altering their strategies for parts planning and inventory.

By Keith Mwanalushi

**M**ROs, parts suppliers and component repair shops will likely be reviewing their investment strategies in line with the ongoing challenges affecting the aftermarket supply chain. In fact, at AJW, one of the primary ways they aim to mitigate the continued supply chain disruptions on behalf of customers is to continue investing in inventory - "The cost

of doing so is extremely high, especially on new generation aircraft," comments Scott Symington, Chief Commercial Officer at AJW Group.

For example, AJW has invested \$13 million of capital on a single line item and holds hundreds of thousands of line items. "There are very few market players who can match that level of inventory and therefore our level of support, but

**“Digital transformation has been a necessity and the most significant development brought about by supply chain disruptions. It has allowed us to streamline our procurement processes and operational efficiency.**

*Scott Symington, AJW Group*



Scott Symington, Chief Commercial Officer at AJW

that is the advantage of our scale and how we stay relevant in the market,” says Symington.

He says the disruptions in the aviation industry's supply chain and inflationary environment, have highlighted the importance of having both multiple suppliers and having strong relationships with the OEMs and building strong and collaborative relationships with suppliers. “An example of this is the recent expansion of our global distributorship agreement with Honeywell,” Symington mentions. The agreement makes AJW Group the sole aftermarket distributor for Honeywell Mechanical and Avionic Line Replacement Units (LRUs) fitted to current and new generation Boeing and Airbus aircraft – “We’re investing in our customers’ success by investing in parts,” he adds.

“We are seeking to reduce the burden of tied-up capital and free up cash flow,” states Tracey Downes, Head of Component Sales – APOC Aviation. She says by identifying the parts procurement cycles in advance, while ensuring precise budget and capital flow planning, APOC is optimising operations and making funds available for other investments.

At APOC, the use of AI-driven tools to increase efficiency in parts ordering and handling is key in the decision-making for potential investments. “Our IT system shows real-time stock levels and actual live requirements, backed up with minimum or maximum stock level control. As we continue to invest in narrowbody airframes, we use historic data to predict future requirements and ensure the typical units are in stock and ready to go, in line with our customers’ needs,” Downes indicates.

Back at AJW, they have diversified the supplier base to reduce reliance on a single source. “We drive a sophisticated pooling strategy with inventory placed purposefully around the globe, allowing easy access and distribution to our regional customers, and have established offices within regions to allow for added support and expansion,” Symington states.



Steven Ades, Chief Strategy Officer at AerFin

The strategy at AJW is to continue to develop stock management and logistics solutions by investing in advanced inventory tracking systems and data analytics tools, such as dynamic pricing models, procurement forecasting, blockchain, and RFID (radio frequency identification) tracking. Symington says digital transformation has been a necessity and the most significant development brought about by supply

chain disruptions – “It has allowed us to streamline our procurement processes and operational efficiency.”

In order to maintain high levels of customer fulfilment and RFQ conversion, UK-based AerFin has actively uplifted its inventory hold of high demand items, “we have increased investment throughput and expanded our global repair network to help manage turnaround times. The increase in demand for used serviceable material [USM] has also enabled us to branch out into new product lines,” reveals Steven Ades, Chief Strategy Officer at AerFin.

In addition, Ades says AerFin was well vested in inventory heading into the pandemic which has given the company a tailwind of cost competitiveness as the industry recovers and OEM escalation rates kick in. “The Volumatic strategy of our inventory purchasing has also allowed us to secure long term repair agreements giving access to market leading repair rates and grant our customers an element of protection. We rely heavily on our algorithms and forecasting tools to forecast target inventory hold levels so we can continually hit high rates of customer fulfilment,” he says.



Tracey Downes, Head of Component Sales, APOC Aviation



**“The organisations within the industry that seem to be handling fluctuating demand the best are the ones with the best communication and collaboration throughout the supply chain and subsequently updating their forecasting models based on updated information.”**

*Chris Hedien, Jet Parts Engineering*

Meanwhile, at Kellstrom Aerospace, they are being much more tactical in their decision-making. “We understand the importance of staying ahead of market trends and consumer demands and leverage our state-of-the-art forecasting methodologies to gain valuable insights into emerging needs, facilitating a forward-thinking approach,” tells Michael Garcia, Vice President of Commercial.

Garcia says Kellstrom’s robust financial backing plays a pivotal role in successfully overcoming challenges caused by high interest rates and extended turnaround times, which can significantly constrain organisations. “Nevertheless, our commitment to effective communication with all stakeholders ensures positive outcomes and ultimately leads to satisfied customers.”

Werner Aero Services don’t see much

significant change in investment decisions and are sticking to their core business, which is narrowbody and regional jets. President and CEO Mike Cazaz believes the supply chain disruptions are temporary and will eventually be corrected and they will get back to normal. “We are probably looking at another 12 to 16 months until problems will be corrected. Therefore, we at Werner are not looking to change our investment strategy currently.”

### **Cost reduction strategies**

However, Werner Aero Services are putting major emphasis on planning and cost reductions and use sophisticated programmes that analyse airlines’ utilisation reports to ensure they have just-in-time inventory to support customers. To reduce costs, Werner Aero seeks to partner with MROs that will help reduce the cost of shop visits of spare parts. Cazaz says this helps to predict cost and offer better solutions to operators.

As lead-times have lengthened, and raw material has become more difficult to procure, Jets Parts Engineering (JPE) in Seattle are willing to take on larger blanket orders to help manufacturing partners smooth out their own supply chains.

“Increasing costs is a pain being felt by manufacturers, suppliers, and end customers,” comments Chris Hedien, Vice President of Supply Chain and Operations at JPE. Jet Parts Engineering is big on saving airline customers cash through alternative solutions (PMA, DER repairs, and MRO services). “As an aftermarket supplier we are very sensitive to price increases both internally and externally, so we strive to keep pricing stable.” Hedien hints one way to keep pricing stable is by placing larger quantity orders often



Chris Hedien, Vice President of Supply Chain and Operations at Jet Parts Engineering

allowing for larger price breaks as well as being willing to invest in raw materials through partner manufacturers when price fluctuations are in favour.

Patrick Markham, Vice President, HPG Technical Services at HEICO notes that the costs of component repairs are being driven by material costs for the details that are consumed in the repairs. He says since the price of OEM parts has been increasing substantially, they are needing to pass on that additional cost for their standard OEM repairs.

Even prior to the pandemic, Markham reports that HEICO Repair Group’s focus has been focused on developing solutions to reduce costs and TATs; utilising DER repairs, USM and/or PMA parts to keep repair costs low. He says with the supply challenges, the use of DER repairs, USM and PMA parts has become even more important in keeping the cost and TATs of repair stable.

“PMA parts and DER repairs are much more in demand,” Markham observes. “In the post-pandemic era, the availability and TAT has become even more important than the cost savings. Even before the pandemic, operators had been more open to using PMA parts and DER repairs. Through the pandemic and into



Mike Cazaz, CEO at Werner Aero Services



Businesses have had to take labour inflation into account when looking at costs.

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## Forecasting parts demand

Predicting parts supply as accurately as possible can be complex, especially in times of irregular demand in the market.

Garcia feels the industry demand profile is subject to various influences. He says understanding the root causes of these issues is crucial as they directly impact both the supply chain constraints and the resulting demand. "To enhance our operations, it is imperative to recognise the drivers influencing the demand profile, understanding the key drivers as well as the supply effectivity and communicating with all stakeholders up and down the supply chain allows for better predictability."

Kellstrom are relying on cutting-edge forecasting tools, reinforced by the integration of AI technology and the wealth of historical data at their disposal, to enhance the accuracy and efficacy of forecasting capabilities.

Ades from AerFin admits predicting demand for non-scheduled maintenance and non-life limited parts is a very difficult task unless there is access to removal rate data, and even then, he reckons it can only serve as a guideline. "We have experienced some customers manage their fleets through predictive maintenance where early removal can increase the

the post-pandemic era, this trend of increased usage and acceptance has only accelerated," he stresses.

Symington from AJW notes that labour costs have risen due to shortages in the skilled workforce, and businesses have had to take labour inflation into account when looking at costs. He says with airlines' procurement departments being leaner it requires suppliers of size and scale to act as a department store or a one-stop shop – "Our contracted services allow airlines to reduce the cost of capital for holding inventory and reduce the cost and cash flow of in-house repair management."

And Downes from APOC advises that the best way to address cost reduction for parts planning and inventory is not with short-term fixes but by taking the long-term perspective, and correctly identifying present and future market requirements for parts. "This ties in with APOC's longer-term company objectives and forward-looking approach aimed at supporting our customers with the right parts, in the right place, at the right time. This in turn enables airlines to avoid the financial burden and risk of holding expensive parts inventory themselves, leaving them free to focus on their daily operations safe in the knowledge that at any given time we have the unit they need available," she explains.

To address the cost issue, Kellstrom

Aerospace are actively working with partners to develop and implement cost-cutting initiatives that yield long-term benefits. "We present a comprehensive solutions package encompassing technical support by providing light maintenance services while avoiding extensive and expensive full overhauls; and also, strategic OEM partnerships by working exclusively with OEM partners to reduce long lead times," Garcia details.



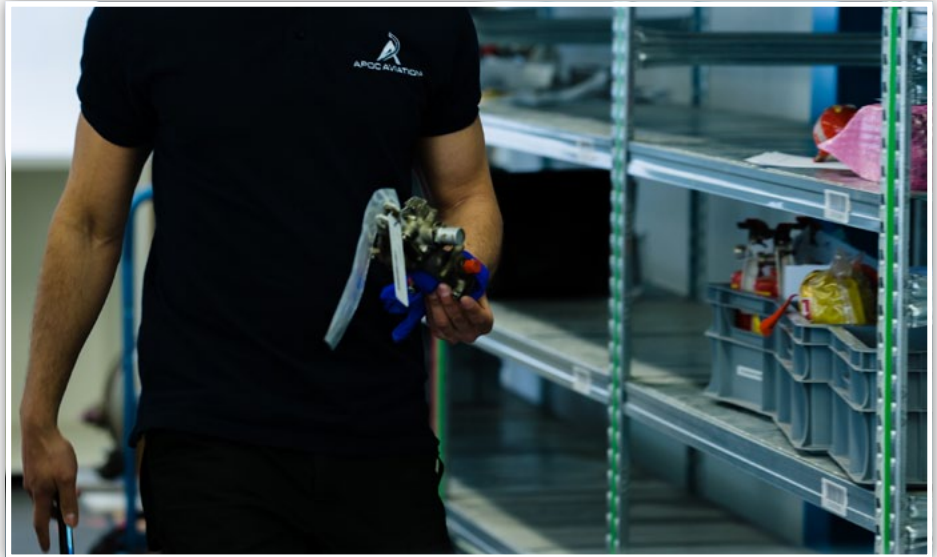
Michael Garcia, Vice President of Commercial at Kellstrom Aerospace



number of 'no fault found' inspections and can lead to increased costs, as inspection tolerances on bench may be lower than on wing thus in turn driving up inventory hold requirements." Ades further explains that without access to all customer fit list and MTBUR (Mean Time Between Unit Removal) data, there is heavy reliance on the strength of customer relationships and demand, and inventory turn analysis to ensure the right part is in the right place at the right price.

Airlines, MROs, and lessors need to consider a multiplicity of sourcing scenarios, indicates Downes. She says some airlines that have traditionally heavily outsourced through pooling, or PBHs [flight-hour] or repair cycle management are now looking at longer-term component repair arrangements.

For example, Boeing created a component services programme as a low-risk method for airlines to reduce aircraft maintenance costs. The programme provides around-the-clock access to a dedicated inventory pool of selected high-value, dispatch-critical components, such as avionics, actuators, and precision mechanical assemblies. This allows participating airlines to shrink their inventory of dispatch-critical, high-value line replaceable units – "APOC is reviewing closely and monitoring such programmes



Airlines, MROs, and lessors need to consider a multiplicity of sourcing scenarios.

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to ensure we can offer alternative solutions for those operators that wish to remain flexible with their choice of provider.

"Furthermore, APOC's continual investment in software guides our decision making with accurate planning and forecasting data, ensuring that we are ready and well equipped to support the renewed growth in the USM market," Downes continues.

All supply chain organisations have a slightly different method for handling irregular demand with some doing a

much better job than others. Hedien for JPE feels the easiest way to handle this irregular demand is to simply have more inventory on the shelf, but that isn't always financially feasible. "The organisations within the industry that seem to be handling fluctuating demand the best are the ones with the best communication and collaboration throughout the supply chain and subsequently updating their forecasting models based on updated information," he says.

At AJW Technique, the Montreal based MRO facility uses digital tools to better understand demand variation to predict future requirements. Symington says this enables them to allocate parts for future requirements well in advance, allowing them to mitigate the increase in lead times.

According to AJW, this dynamic forecasting using AI supported digital tools captures the historical parts usage information at the lowest level and allows them to construct a detailed forecast using a macro-level demand forecast at a component level - "This is then fed to our supply chain team to ensure parts are provisioned as early as possible in the process. The information is updated on a real-time basis and as a result, we have achieved fill rates of 90% plus, giving the team more time to manually focus on finding solutions for the remaining issues," Symington concludes.



At APOC, IT systems shows real-time stock levels and actual live requirements.

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