Gearing Up for a New Helicopter

Edward Jerin – Contributing Author

At some point in your aviation career, you may be tasked to become part of a team to help in determining what new type aircraft your organization should acquire and put into service. I recently was part of such a team and was tasked to help evaluate various helicopter replacement models for our organization. Here are some of my experiences I would like to share with you.

Boston Med Flight EC-145

Whatever your expertise level is, you can get a compelling and practical review of every major aircraft buying phase through research and/or purchasing tools to help with your plan. These planning tools cover information such as:

- Evaluation of aircraft needs
- Defining key missions and analyzing alternatives
- Aviation finance
- Trading aircraft
- Selling aircraft
- Writing the acquisition plan

An aircraft replacement plan can take several months or even years to accomplish. Regardless of the time line you have, the same thought process has to apply.

Although this is all very important information for the plan overall in determining what aircraft best suits our mission needs, what I didn't find were planning tools to help me figure out how this will affect the maintenance department. The best advice I can share with you is to leave yourself as much time as you can afford to do this. I'm not going to go into every detail about my experience; I figured it would be best to just cover some experiences that will affect the maintenance department and its personnel. Some of the questions I needed to answer were:

- How will we support the new aircraft?
- How will it affect current staffing?

- How will it affect training needs?
- How will we support the current fleet while transitioning to the new aircraft?
- How will this affect the maintenance budget?
- How will this affect technicians and their families?
- Do we have the correct tooling needed to support the new aircraft?

How will we support the new aircraft?

What we needed to ask ourselves is what maintenance can and cannot be handled in-house? For maintenance or components that needed to be outsourced, did we have all the available support shop information ready and verified that they can provide the services we required? Can these services give us what we need in a timely manner? All our customer wants is an available aircraft, not excuses.

How will it affect current staffing?

Whether replacing a current aircraft with a new model or adding an additional aircraft, this will drive additional questions. The bottom line here is to make sure staffing is sufficient to support the new acquisition. If not, this will need to be brought up during the planning stages.

How will it affect training needs?

Typically every new aircraft purchase includes airframe and engine training courses. A review of our staffing experience was a must as was making a list of our training needs. What I learned here is very important. Typically the new aircraft purchase price may or may not include training. However, you should work diligently to get some of your maintenance training needs thrown in on the sale acquisition at this point. Ask for the moon and take what you can from it. If you don't ask, they definitely won't offer. If this isn't a new aircraft acquisition, then training needs and costs should be addressed at budget planning sessions.

How will we support the current fleet while transitioning to the new aircraft?

What I learned here was that I had plenty of time to transition into the new aircraft, and support the current fleet while the entire pilot group and crew were doing their training and had their check rides completed. The aircraft was put on 135 certificate operations specification prior to arriving at home base. This was a great time to get to know the aircraft configuration and get familiar with its layout and how lights and other systems work on the ground. It was also very helpful to send some of our technicians through the needed schools prior to aircraft delivery.


Green EC-145

How will this affect the budget?

This is obviously the most important piece of the planning stage. Typically accounting will already have all the direct operating and maintenance costs built into the initial acquisition. It's very important at this point to make sure you have in your budget all the items I'm laying out here. Not every operation is going to have the same budget, so do the best with what you are given. If it's possible, try and budget larger, expensive items in the following year's capital purchase budget. Remember to have justification for your requests and show that what you need is the best way to make your department more efficient and safer. It's never easy to have to go back later and ask for more money after the fact.

How will this affect technicians and their families?

Training is not only required, but does not happen in an instant. Typically, the average manufacturer's initial training course is two weeks long. Each additional module can be another one to two weeks in length. Depending on the training needed, a technician can spend up to five weeks of training away from the shop and their family. As much as we want all our technicians to have the most experience, it's important to our troops to consider their families. What I did, was to schedule techs that didn't have as many concerns or family considerations to go for training together, and for longer periods of time, and worked with the other techs that had other obligations and considerations.

Do we have the correct tooling needed to support new aircraft?

Have a plan in place that details what is needed and why to support the new aircraft and keep it in service. What seemed to work for me was a plan where I budgeted for different tooling needs in intervals as follows:

- Need now
- Need in 3 months
- Need in 6 months

This seemed to go over well with accounting, with the tooling acquisitions spread out and not purchased all at once. This is also a place where you can try and get the manufacturer to either

give you tooling or at least get a discount on provisional purchases. It's also a prime time to budget for things you never had or needed before.

Lessons learned

With all the planning and all the different departments involved, there were lessons learned along the way. Here are some I encountered:

Purchase and Sales agreement

After the long process of determining an aircraft model, it's now time to build an aircraft to meet all your operational needs. This is where you should really look at the aircraft (green configuration), and determine what types of equipment come from the factory and if that meets your needs. We happened to pick a completion center that works directly with the aircraft manufacturer, so it was easy for me to get with both parties to determine what modifications were available from both the manufacturer and the completion center that were either a Supplemental Type Certificate (STC) or Type Certificate (TC) modification. Take the time to review these available modifications and make a list of those items that you think will add value to the purchase and safety to the operation.

Look at these using a maintenance point of view also; some of these modifications can save time and money in the long run even if they add cost up front, engine barrier filters as an example. These add cost to the overall purchase price, but can ultimately save huge bill back repairs in the future that can easily outweigh the initial investment.

Some modifications can be ordered at the time of the initial purchase at the factory and be cheaper to install there instead of later at the completion center. This could end up saving you money. Make sure you ask the sales representative these types of questions. Ask for discounts at every negotiation stage.

Do your homework; make as many connections as you can with other operators who fly the model you have chosen. If it's within your budget, take the time to go to an operator and see an aircraft first hand. Talk with the operator's maintenance personnel who used the completion center you have chosen as well. It's a good way to see what others have experienced and see what's working and what isn't, both with completions and modifications. This will help justify your choices during the purchase and sales review.

Double check all purchase and sales agreements for accuracy and completeness.

Completion

The choice of a completion center is another topic that is very important to you as the maintenance department voice during the process. I can't stress enough the value again of talking with others. This will give you a huge advantage with your choices and ultimately end up with what you want and what your customer expects.

At The Completion Center

Express your expectations at your initial completion briefing meeting. Ask about any concerns you found during your planning stages. Take advantage of any invitation to visit their facilities and take a tour. Get to know the completion center's employees who will be working your aircraft. Set up a plan to do periodic checks, and have conference calls between visits to keep everyone updated. Have all revisions and deviations in writing; don't accept verbal agreements for anything. Make sure there are penalties in place on the sales agreement for not delivering on time. Ask the avionics manager what subscriptions have been activated or not. Get a list of all subscriptions that need set up and turned on.

Training

Training is very expensive; ask for additional slots during your purchase and sales agreement negotiating. You could get a huge discount or even free training slots!

Have all your expectations for training on the purchase and sales agreement. If this includes travel, make sure it is also clear and spelled out. One good lesson we learned for sure; the manufacturer's expectation is for you to send everyone for the entire length of the training at one time. In other words if all your modules total 5 weeks, then they will fly you one time. Most of us can't leave for 5 weeks at a clip, so there were additional costs in the training budget that weren't expected. Additional flights, rental cars, parking, luggage fees, lodging and meals were additional because of a change that was over looked. It may prove better for you to do your own scheduling for training.

Tooling and Parts:

Ask for an initial provisional set up for tooling and parts at this stage. Try and get as much free stuff as you can. Just remember if you don't ask they will never offer. Ask about consignment parts, are they willing to stock parts at your facility. Are they willing to give discounts on tooling and parts if purchased as a provisional set up?

Parts consignment can come at a cost, so be prepared for this. One way around no fees is to negotiate. Are you going to have the aircraft on a warranty program? This was how we

negotiated no fees; as long as we had a paid subscription for warranty they wouldn't charge consignment fees. Tooling is also a huge investment; do your research, find other resources to purchase tools outside of the manufacturer and you can save a ton of money. This was another value when visiting other operators and paying attention to their maintenance department and asking questions.

Delivery

Delivery

Don't sign over the final deposit unless you are 100% satisfied. This is where your maintenance training will be most valuable. Inspect the aircraft and have all items that don't meet your expectations corrected. Go through all documentation and paperwork and audit for completeness and accuracy. You don't want surprises when you're back at home base and trying to get the aircraft on line. The delivery is usually the last time you will get the completion center and the aircraft manufacturer personnel in the same place to get everything corrected that was found not right. Stick to your guns; if you are not comfortable or do not understand something, don't accept the aircraft. This experience should be a win for the aircraft manufacturer, the completion center and of course you, the end user.

Edward joined Era Med LLC in 2008 as the Aviation Maintenance Manager for their Boston Med Flight critical care transport service contract.