

From: Gary Ashley
To: Kathy Carrington
Subject: Aircraft Replacement

I plan to use the narrative format for purposes of this discussion as I simply find it easier. Attached will be recommendations of specific airplanes Charter should consider as the company goes forward. The search if it reaches fruition should not be limited to any specific airplane as there may be a fire sale on an airplane outside the scope of this paper that would also provide all the needs for Charter.

The general aviation market is depressed from a price perspective, and has been since the recession began. It is likely to remain soft for the next 2-3 years according industry sources. An efficient method to measure the price support for any model is to look at a ratio of the total airplanes of that model manufactured to the number currently on the market. This gives a good measure of price support for that specific model. For example if we use the Hawker 800xp there are 73 airplanes available out of a total of 346 this gives a ratio of .21. There were 305 Challenger 300's manufactured and 20 currently on the market. This gives a ratio of .07. There were 363 Challenger 604's manufactured with 43 currently on the market with a ratio of .12. This is an excellent indication of price pressure on that specific airplane. The 800xp has the least price pressure while the Challenger 300 would have a tendency to maintain its asking price. Also, the Challenger 300 is the only aircraft in this paper currently in production.

There are 3 specific categories of airplanes Charter may consider, and they are generally speaking small, medium, and large cabin sizes. Currently, the Hawker 800xp is considered a medium cabin airplane. Each aircraft manufacturer builds airplanes in all categories in their total product line. They obviously need to have products across the complete line for potential sales. There are some things to keep in mind when going through this decision making process. For purposes of this discussion I think we can safely eliminate the small cabin line of bizjets and focus primarily on medium and large cabin airplanes. I want to discuss some of the differences in medium cabin versus large cabin as far as design and engineering standards from a purely manufacturing process. The large cabin airplanes are designed for more flight hours over the projected life time of the airframe. This is a simple concept if you project them as true international airplanes for range and average flight time per flight. Therefore, the designer must use different criteria when considering engines and other components. For example most of their engines are "on condition" rather than a given number of hours between inspections. This means the end user does not put the airplane down for a major engine inspection, but rather does a simple inspection, usually a boroscope of certain components such as a specific bearing to determine if further inspections are necessary. This keeps the airplane flying for much longer times between periods of down time. This does not mean they are cheaper to operate but does imply they are manufactured to a more rigorous standard. This is comforting when operating over hostile environments such as deep blue water for much of their flight time. When Bombardier's challenger line of airplanes was being considered for commuter airlines the first change the airlines demanded was to make the engines on condition. Other components are also given a different standard of design such as more redundancy on their backup systems. This could be discussed in detail if we get to a specific airplane under consideration, but is not necessary at this time. This does not make the midsize cabin airplanes unsafe. They simply do not have the designed redundancy and lifespan requirements of airplanes that are expected to fly longer legs and more frequently. One does not purchase a GIV to go between St. Louis and Chicago unless you are using OPM.

Our current airplane needs to be discussed in great detail as to price, asset longevity, and long term usage. I do not believe there is a bizjet flying that has received more scrutiny in the past five years than Charter's Hawker. The accident of 08 created a situation where in order to get Hawker Beechcraft engineers to sign any document related to airworthiness they implemented an inspection plan that insured the airplane was indeed airworthy. Therefore, this is of no concern going forward. However, in today's bizjet market it has certainly done no favors to the marketability of the airplane and thus has diminished the asset value of N800CC. Depending on who you discuss this with the price varies, but is currently seen to be less than 3 million. There are just too many Hawker 800XP models on the market at the moment.

Perhaps, more important than the perception of this specific airplane is the age of our Hawker. Many technological gains in airplanes have found their way into the bizjet market. There are three main areas to be discussed: wing aerodynamics, engine performance, and avionics. FAR part 25 is the certification process a manufacturer must comply in order to get their product on the market in the US. It is a detailed and most importantly expensive process. When an airplane has been flying for a few years the manufacturer in order to keep up with newer airplanes they will offer updates, but will avoid the recertification process like the plague. Therefore, the wing is one part of the airframe that is usually avoided. The wing on our plane has not had any appreciable changes in 25 plus years and is not very efficient aerodynamically speaking when compared to more recently designed airplanes. On newer models HBC has added winglets which will increase efficiency about 5% on average. But other manufacturers have passed HBC by in the technology of the super critical wing and manufacturing processes. Also, new materials have greatly added to the advances. Engines used on bizjets have improved dramatically from a pure power production to efficiency. Again, manufacturing processes, materials, and improved engineering are all in play in the process. For purposes of this discussion I am not going to get into any details other than to state the obvious. The greatest example of aircraft advances have occurred in the cockpit where dramatic and in your face technology has made itself obvious. This has dramatically improved situational awareness, cockpit resource management, and specifically safety. After all, that is the most important improvement money can purchase. I could discuss each of these in greater detail but would get verbose and boring. Charter is in the technology business and everyone should understand that given a technology that is now twenty years old in the front end of our airplane it should be easy to put in perspective as related to where the cable and television industry were twenty years ago. Suffice it to say, our airplane has had very few of these advanced engineering and technology improvements. This goes directly to understanding the value of our asset. It is generally understood when a bizjet reaches twenty years of age it is not worth anything of real value. The world has simply passed it by. These airplanes then become targets of bottom feeders and end up in countries south of the border and on other continents. Having stated the above, it does not mean the airplane all of a sudden becomes unsafe. It is simply not an asset of value. Also, other considerations in the operating scheme become more acute. Maintenance becomes more expensive as inspections become more frequent. As we go forward, many of the inspection items in the recently completed sixteen year inspection decrease in flight hours between inspections and calendar days between inspections. Ultimately this increases cost and creates more frequent down times. These items start in an insidious manner, but eventually will have an impact on the bottom line. Our engines and wings do not all of a sudden gain any efficiencies of thrust or lift respectively. There is a fine line between being parsimonious and cheap. In our daily lives the decision to keep the old clunker for a few more years or get something newer is the best analogy to this process. I understand you are acutely aware of this process as you frequently are required to make the decision to stay with a pat hand or move forward for the good of the company. As the person on the pointy end of the aluminum tube, I

naturally want a newer and more efficient product, but I also live in the real world and am personally driving a clunker down the road.

The Challenger 300 aircraft is being discussed because it presents itself as an all new airplane relatively speaking. It was certified in 2003 and has been in production ever since. Bombardier is the manufacturer, and being the newest of my three proposed airplanes the Challenger 300 has the latest technologies in the three main components I have discussed, (wing, engines, and avionics). The downside is the airplane is in demand even in today's market, thus presenting a pricing issue for a potential buyer. There will be fewer airplanes on the market at any given time compared to the total manufactured. The attached data will provide an accurate picture of price vs. demand. The airplane is a medium class airplane, but resides in the so called "super medium spectrum" of the medium class. The advantages are perhaps obvious given its age. The cabin will comfortably sit eight in two club arrangements. When looking at the diagrams the numbers do not tell the complete story. If you compare our airplane which also sits eight, it does so in a not so comfortable fashion. The Hawker has the lowered floor where one must step up to the seat, where the Challenger has a true flat floor. Another important consideration of comparing apples to apples is the diameter and height of the cabin itself. Again while trying to compare apples to apples, one must imagine sitting in a seat of the Hawker vs. either of the Challengers. The Hawker cabin begins its curve into your shoulder almost immediately where the Challenger models do not have the extreme closeness to the cabin wall. The bottom line it is just bigger. However, the numbers do not represent the increase in size as does the reality of being in the cabin. Either of the Challengers have access to outside baggage storage, and plenty of it. One of the biggest issues with the Hawker is the lack of baggage space when traveling with more than 3-4 passengers for a protracted travel period. I am not for the purposes of this paper going to get into any of the technical advantages of the Challenger 300, as these can be discussed while looking at the attached data.

The Challenger 604 is an interesting airplane to consider for Charter. I know it is considerable larger than our current airplane and thus has a higher operating cost, the numbers available and operational advantages of the 604 make it interesting. A derivative of the 604 is being used with the commuter airline industry, so this speaks volumes for its reliability and long term use. It is often called the flying living room for its wide body concept.

I am going to speak in general terms before going into the specifics of the Challenger 604. The bizjet market is entering its third year of excess inventory with sales remaining sluggish. Also, it is no secret that business aircraft are selling at values up to half of what they would have sold at their peak price in 2007 before oversupply turned into value collapse. The temptation to consider changing planes can be very tempting as these buyers-market prices hold huge appeal. The opportunity to move up to that fantasy aircraft now priced within reach may never be seen again. The real question to be asked is if you remove the buyers-market pricing, are you still interested in acquiring a new or previously owned aircraft. While I think the answer to the question going forward of do we want to retain an airplane is definitely yes, do we want to upgrade at this time? While I may think there are plenty of good reasons to upgrade do exist, there are also many considerations to fully explore should Charter decide to proceed with a replacement project. One gentleman with Conklin de Decker put it simply: "If you wouldn't consider a particular airplane without the depressed price maybe you shouldn't consider it now." I think that is a pretty succinct statement and should be always in the recesses of our brain as we move forward.

What does the Challenger 604 bring to the table for Charter and why do I consider it a plausible replacement airplane. If Charter continues to grow and the foot print continues to enlarge, the demand for moving people will also expand. The 604, in short is a hell of an airplane. It has what every operator wants, (cabin size, range, and reasonable speed). It has in round numbers 4000 nm range. While Charter has very little use for this type of range, it will allow the ability to tanker fuel when going into airports with expensive fuel prices. It provides the space for 9 passengers to travel and work in total comfort regardless of baggage constraints. It is built like a tank with multiple redundancies for all aircraft systems. However, this does come at a higher operating cost factor. In the previous paragraph I discussed how price should not be the overriding factor when considering an aircraft replacement, but it should be a factor. The 604 has been around for awhile and there are quite a few currently on the market. Even in this depressed market corporations are replacing their aircraft with new airplanes. Some are moving to the Challenger 605 and others are moving to a Gulfstream. They are in many cases taking advantage of today's market. Purchasing a 604 will present certain challenges as many of them are certificated in foreign countries. This is not a problem in a general sense as most are managed and operated by reputable companies with US or UK pilots. However, it does present certain challenges. Also, there are little gotchas that must be known. For example, it is important to insure the latest upgrade on the APU has been accomplished. The engines are started with air from the APU and the original APU was taxed beyond what it should have been thus increasing the overhaul frequency of the APU which ultimately leads to higher operating costs

This leads me to my final topic. There is a need for specialized information and experience to judge the condition and worth of older business aircraft. There is no place for casual knowledge, general familiarity, and certainly emotion to be involved in a business aircraft transaction. In short you need an expert on your side, one who works on your behalf, and has no financial stake in the outcome. The chief pilot and chief mechanic may very well know the airplane you are selling, but not be versed in the airplane under final consideration. You ultimately want an independent expert on the aircraft under consideration who can look at the big picture with only the company's interest at heart.

The current Charter airplane became a part of the business for a number of reasons and these same logical reasons will provide the direction as we move further into this process. While the current airplane meets the current demand, it is getting longer in the tooth and the operating costs will go up as the airplane continues to age. A newer airplane may realize many benefits, some that are tangible such as efficiencies of scale and cost. There are intangibles such as comfort and size that are difficult to put real metrics to the tests. The bottom line the airplane should match up to filling the majority of the mission needs the majority of the time. Most say you should be in the 75th percentile matching of needs vs. mission profile. Today we have the ability to blend gains from one or more of the reasons that your airplane is your airplane with today's market prices. Now if you fold in the value of some temporary high dollar tax benefits, you have gone a long way toward operationally and financially weighing the options and wisdom of the upgrade. This is of course unless you are Mr. Marsico, who can spend 60 million on an airplane just because he can. Rick is going through an interesting process. At the end of the day, you do not want to saddle Charter with paying for airplane capabilities needed only a fraction of the time.

My recommendation for Charter with the following assumptions would be the Challenger 300.

1. The company is in for the long haul.
2. The company will continue to grow in footprint.
3. The load factor will continue to increase.
4. Airline travel will continue to be difficult.

Kathy, there are many more topics to discuss, but hopefully I have provided some insight to the project as we go forward. Please do not hesitate to call at any time as questions arise. If I do not know the answer, I am sure I know someone who does. I am not an expert in aircraft sales, but was involved in one project in the past. The one thing I do know and remember is there are a lot of knowledgeable people out there that will provide the expertise.