

# AN APPROACH FOR COST REDUCTION IN THE AVIATION INDUSTRY

Those of you who are in the airline industry know that operation costs are rising year-over-year, in spite of the fact that suppliers are continually making improvements in process efficiency. Suppliers continue to raise their prices at a rate that exceeds the rate of inflation. The only reprieve to the industry of late has been fuel prices which have been somewhat stable for the last 8 or so months.

So, why is it that despite manufacturing improvements in efficiency, that the savings aren't passed down to the airline operators? The over simplified answer would be that the suppliers have margins to meet and shareholders to satisfy. This statement is also true for airline operators as they have customers who can be very vocal on social media.

What options do the airlines have to keep the prices from skyrocketing and thereby keep the flying customers from posting rants in a social media frenzy? Airlines often resort to pressuring the suppliers and service providers to get better pricing, but even that has its limits. Thus, airlines are forced to raise their prices to suit. There is no way around the increase. Or is there?

Part manufacturer approval (PMA) parts are the aftermarket of the aviation industry. Just like aftermarket parts can reduce the cost for the automotive maintenance industry, so can PMA parts for the aviation maintenance industry. PMA parts are typically 40 to 60 percent less expensive than the corresponding OEM part. You may be asking yourself, "but what about the quality and reliability issue?" The answer to this is quite simple: just like OEM produced parts, the Federal Aviation Authority (FAA) also approves PMA parts before they are manufactured. This ensures that the quality and integrity of the aftermarket PMA part is the same or better than the OEM part. If you are wondering if you read that last sentence correctly, yes, I did write better. How is that

possible? To answer this, I would like to use the following case study.

If a small regional airline (5 - 10 aircraft) only operates in a particular geographic area (for this example, the Pacific Islands), they would be subjected to particular conditions more frequently than airlines that operate in different geographical areas, such as central USA.

Experience has shown that salt water often leads to accelerated corrosion on metal components. It isn't difficult to image then that the small regional airline may develop certain conditions on their aircraft and engines that are more prominent and frequent than other airlines that operate in non-coastal regions. But because the regional airline is small, they do not have the same clout with the OEM to address the issue immediately. As a result, the small airline is forced to pay for replacement OEM parts at a higher frequency than other airlines operating the same aircraft.

Maybe the OEM offers a discount, maybe they don't. If the cost of this OEM component is significant and/or not accessible for replacement on-wing, then time off wing compounded with the cost of the replacement parts can definitely be significant enough to cause a smaller airline to fold.

In this generic and hypothetical situation, the vexed airline could engage a PMA company to solve their issue. Using the "lessons learned" from the OEM part and then tweaking the component material properties or design to address their needs (i.e. increased corrosion resistance). Thereby winning on two fronts: a part that is less expensive than the OEM part and secondly replacing the part less frequently. Thereby solving their problem and potentially saving the airline.

If the reliability and quality are not reason for concern and there is a benefit for cost savings, why is it that PMA parts aren't more widely used? There isn't really a quick answer to this.

A good portion of it stems from the unknown. There is a saying that, "Better the devil you know than the devil you don't." This parallel is drawn to illustrate human nature and that often people will stick with what they know rather than try something different. In this case, the different choice could be a significant cost saving. This is especially true as airlines and PMA companies are starting to whet their appetite in life-limited parts, which could present a six or even seven figure savings for a complete life-limited parts replacement event.

## ABOUT THE AUTHOR

### TRAVIS GUENTHER, AEROSPACE PRODUCT MANAGER

Before joining Lucideon, Travis spent 9 years as an engineer in the maintenance, repair and overhaul segment of the aerospace industry. Travis graduated from the University of Manitoba, with a Bachelor of Science in Mechanical Engineering, focusing his studies on the aerospace stream of this degree. As a product manager, Travis is responsible for identifying market needs and developing new service offerings.

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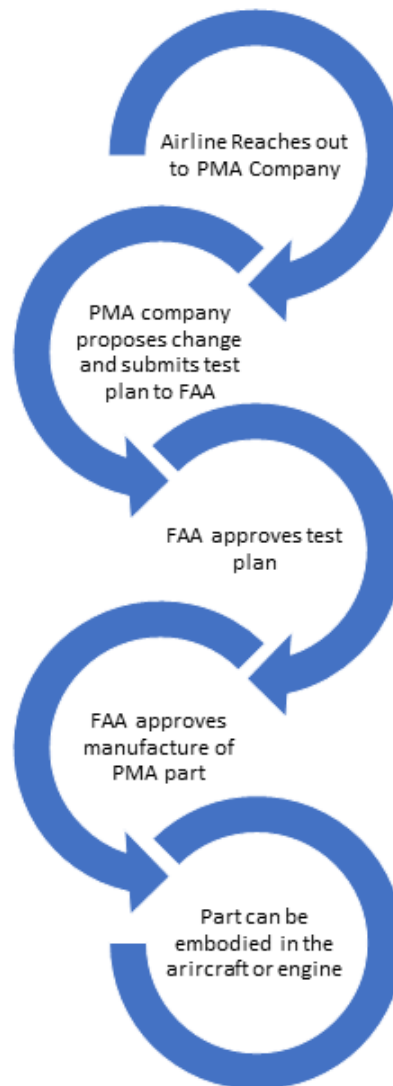


Figure 1: Simplified PMA Process Flow