

IDENTIFYING MAINTENANCE MANAGEMENT CHALLENGES FACED BY CHARTER OPERATORS

**SUHAIL NASIR
GENERAL MANAGER QUALITY ASSURANCE
PRINCELY JET (PVT) LTD**

1. INTRODUCTION

Aviation maintenance can be rightly termed as one of the most demanding profession. Besides fulfilling stringent technical and quality requirements, the regulatory compliance has to be accorded highest priority. In the prevailing economic environment, maintenance managers are called upon to ensure safety and reliability at optimal cost. Supporting a charter operation poses still greater challenges. Based on my experience, I shall identify practical challenges that are to be surmounted for survival.

2. CHALLENGES

Unlike regular maintenance charter maintenance is un-predictable. By itself this intrinsic factor generates serious challenges if operations are spread over regions lacking in support facilities. Providing repair support at a location far away from base if aircraft goes technical can wipe out any expected revenue. It is of paramount importance to given due weight-age to this aspect, when selling a charter.

3. TRENDS

Charter trends in the Middle East have a profound effect in the region. For most part, Middle East has been experiencing slow, inconsistent growth in last three years. The fluctuations in demand can be attributed to certain events, like domestic uprisings and disturbances in the region as well as the Hajj season.

Charter requests in Middle East by aircraft category, is as shown in this slide. The ratio, between heavy to midsize Jets stand at 60 to 30. Light Jet representation is very small.

UAE is the dominant market in this region. Currently market is seeing long haul traffic with clients coming from China to UAE and moving on to Africa or Europe. The aim of highlighting these trends is that small charter operators like my company, are operating in a competitive environment. Our maintenance management challenges are further compounded due to existing regulations applicable to Aviation Industry

4. SPECIFIC TO PAKISTAN

I shall present some case studies which will illustrate following challenges that are specific to Pakistan.

- a. Managing maintenance support from base.
- b. Regulatory requirements
- c. Balancing the safety, regulatory compliance and cost equation.

5. MAINTENANCE MANAGEMENT FROM PAKISTAN

The area of operation of Princely Jets, my company, includes South East Asia, Middle East, Europe and Africa. We are based in Karachi, Pakistan. Most of our charter originates from UAE. In their effort to get charter, the marketing team requirements keep changing. During charter, it is demanded from us to keep maintenance ferry flight to minimum and carry out the line

maintenance on location as far as possible. From the next three case studies of aircraft going technical in faraway locations, the challenges posed to maintenance manager will stand out. Any Charter management may face such like situations.

6. STUDY-I, CHALLENGER 604- TOKYO

On 13 Aug 2008, a flight of Challenger originating from Dubai was to return after three days stay in Tokyo. After landing, the Pilot reported right thrust reverser unlock 'light on'. Through the good offices of the manufacturer's regional representative, a qualified engineer was flown from Metro Jet (Hong Kong), after obtaining Pakistan Civil Aviation Authority (PCAA) approval. Aircraft was made available to client for return flight at scheduled time.

7. STUDY-II, CHALLENGER 601- ROME

On 27 August 2008 in Rome, while landing the Challenger 60's Landing gear 'down and locked' light did not come on. The Crew executed emergency procedure. Due to non-availability of approved facility, aircraft was flown to Basel; with gears down under OEM's specified limitations. Since move of own engineer to Rome was not possible due to administrative problems, we went for an expensive option to ensure quick recovery of aircraft.

8. STUDY-III, CHALLENGER 604- CAPE TOWN

Challenger 604 while on charter flight to Cape Town, South Africa reported a crack in front left windshield and generator fail light on. Whereas Minimum Equipment list permits flights with limitations for cracked windshield, but the Generator had to be replaced. Efforts were made for quick recovery. Required parts costing 134,000 USD covered under 'smart parts program' were moved to location. Qualified engineer for windshield replacement was flown from Johannesburg and PCAA approvals were obtained on fact track. This time aircraft could not be made available to the VVIP client. According to my marketing team beside financial loss we lost a very high profit customer.

9. REGULATORY REQUIREMENTS

For an aircraft registered in Pakistan, its repair/ maintenance can only be performed at PCAA approved center. Only PCAA licensed or approved engineers can work on the aircraft. There is a provision for one time approval for maintenance organization for specific tasks and limited duration. Following are three challenges of conforming to regulatory requirement even when all other aspects were catered for.

10. REGULATORY STUDY I - TIRE CHANGE

A worn out nose wheel tire required replacement on Challenger 604, in Abuja Nigeria. Spare wheel was on-board. B1 & B2 engineer was also available in Lagos. Flying own licensed engineer required 4-5 days. To meet this challenge a special onetime approval for an engineer in Lagos was obtained from PCAA, after completing all formalities within one day. We not only saved on cost and time but regulatory compliance was ensured. Such like approvals within hours are not routine. May I admit that we were lucky.

11. REGULATORY STUDY-II - CITATION BRAVO

The Phase-V of Cessna Bravo was due on 31 Jan 2011. Two months before the due date the quotations was obtained from PCAA approved organization (in Riyadh & Zurich). These were extremely high. Quotation from Cessna Certified and EASA approved MRO were obtained.

ATLAS Aviation Germany was finally selected. Special PCAA approval was obtained with condition to send an inspector to ATLAS Aviation during the inspection at our expense. This unusual effort by maintenance management saved the company over 100,000 USD.

12. COST SAVINGS BY SPECIAL ARRANGEMENT

100 hours of challenger 604 was due at 5544 hours. Part of an airworthiness directive (AD-CF-200-39) was due at 5539 hours. Aircraft reached Riyadh on 30 Nov 2009. Marketing had received advance payment for another 4 flying hours.

To save cost and ensure compliance (Technical and Regulatory): under guidance of Execu- Jet engineer in Dubai (PCAA approved), an Arabsco engineer carried out required visual check of hydraulic accumulator. The Aircraft was cleared for flight after endorsement by ExecuJet engineer. Here also please appreciate an unusual arrangement enabled us to ensure compliance and save cost.

13. COST SAVING- BRAVO PHASE-21, DUBAI

Phase -21 was due on 31 Dec 2011. A PCAA approved facility in Riyadh regretted a slot due non availability of qualified engineer just two weeks before the due date. Taking aircraft to PCAA approved facility in Zurich was an expensive option. Jet Aviation Dubai had PCAA approval till Feb 2011. Special approval of PCAA was obtained for own licensed engineers to use facility and equipment of Jet Aviation Dubai that resulted in substantial saving of maintenance cost.

14. COST –FERRY FOR MINOR INSPECTION

Maintenance Managers of charter operators are not always successful in saving cost. At times for minor inspection, aircraft has to be ferried to nearest MRO as moving an engineer is not possible due to visa problems. As can be seen in this slide, for the monthly inspection of Challengers 604 there are only three simple tasks. On one instance we had no option but to ferry aircraft from Riyadh to Dubai for carrying out the inspection. In this case despite every effort, loss of revenue had to be absorbed, to ensure regulatory compliance.

15. MISCELLANEOUS

Maintenance manager cannot lower his guards to some of the other challenges (threats), faced by all operators, more so the charter operators. One of these is SAFA (Safety Assessment of Foreign Aircraft). Last year one of our aircraft on charter in France was checked. A Cat 'G' finding, "MEL items not fully customized" was noted. The response could not reach the correct address. After seven days same observation was made at another location in France. For this a detailed explanation was given to PCAA, before we were let off the hook.

The audits by regulatory authorities and also by firms hired by some of the multinational companies cannot be taken lightly. Maintenance managers are tasked to keep this front also fully covered.

16. MUST HAVE.

My dear colleagues, for those who dare to venture into maintenance management of charter operations, you must have the following minimum tools or aids:

- a) Computerized Aircraft maintenance programs subscription.
- b) Also be supported by spare programs.
- c) System in place for round the clock monitoring of flying.
- d) Work hand in glove with marketing, a daunting task at times.

e) Arrangement with MROs in areas of operations.

17. CONCLUSION

Charter air Operators have to weather the existing adverse market conditions. A lean organization is of immense help in cutting cost. This can make significant contribution. The key however is cost effective, safe and compliant maintenance handled by engineering professionals having deep understanding of operations and marketing. Pakistan CAA is all set to adopt the EASA standards by December 2013. Whereas this may be a tall order, but once our system switches over to EASA regulations, it will be of great help for Charter Operations.