

Topics:

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Modifications

The majority of aircraft leases allow operators to embody modifications as long as the modifications are approved and accepted under the regulations of the current governing airworthiness authority. Unfortunately, the requirements of airworthiness authorities vary all around the world and what is acceptable to one airworthiness authority is not always acceptable to another. If an aircraft is transferred between different airworthiness jurisdictions there may be some modifications that require additional approvals. Therefore, it is becoming more and more important not only to determine how modifications are approved, but also to determine whether or not the current approval for a modification would be acceptable to other airworthiness authorities.

Historically, major modifications have generally been given the most attention, but recently Charles Taylor aviation (asset management) Limited, who have recently been involved in project managing a number of aircraft lease returns, have found that the most problematic modifications seem to be local modifications that are designed and embodied under a maintenance organisations own approval. Maintenance organisation's can be given this approval by their governing airworthiness authority and it may allow both major and minor modifications to be locally approved. These modifications may need further approvals before the aircraft can be issued a certificate of airworthiness on another registration. It is sometimes difficult to know exactly which modifications need further approval as commonly it can depend upon an airworthiness inspector's personal perception of the regulations, especially within the US Federal Aviation Authority (FAA).

It is important to know that just because a modification is approved for use by one airworthiness authority, does not mean that the modification will automatically be accepted by another airworthiness authority without any further analysis. One example is that a FAA Supplemental Type Certificate (STC) will need an additional approval from the European Aviation



Safety Agency (EASA) before it can be embodied on EU registered aircraft. This is because an FAA STC is not automatically accepted by EASA. Occasionally an EASA STC will be issued on the basis of an FAA STC, but in some cases the complete research and analysis needs to be repeated before the approval is granted.

During the aircraft redelivery process it is important to distinguish early which modifications may need further approvals. Sometimes the easier and most effective method is to de-modify any problematic modifications, so that the aircraft can be returned back into a standard configuration. If the decision is made to get the additional required approvals for the problematic modifications, then during the aircraft redelivery or transition process it is imperative to ensure that all supporting documentation for modifications are kept within the aircraft technical records, or to ensure that they are made available through another suitable method.

Did You Know...

...that Charles Taylor aviation (asset management) carry out maintenance reserve monitoring and produce detailed and accurate invoices for maintenance reserve payments. We will also provide assistance when maintenance reserves are drawn from.

The supporting documentation does not just include the relevant Engineering Order that instructs the embodiment of the modification, but also the referenced material that forms the basis of the modification. This can include any referenced material such as, Manufacturer's drawings, Vendor drawings, Vendor Service Bulletins, Boeing Telex's etc.

This referenced data forms part of the substantiation package to enable the approval process to proceed swiftly. Other additional documentation that may be required as part of this package are any relevant Aircraft Flight Manual (AFM) or Aircraft Maintenance Manual (AMM) amendments, along with any additional Illustrated Parts Catalogues (IPC's). Some applicable data, such as stress analysis, may not be referenced in the Engineering Order, but may be vital for getting the required approval for a specific modification.

Approving a modification for another airworthiness authority can be a costly and time consuming process, so it is very important to know how each modification is approved.

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Charles Taylor aviation (asset management) is an aviation consulting company specialising in the management of commercial aircraft operating leases. Charles Taylor aviation (asset management) is a Charles Taylor adjusting company. We offer technical support and management that is specifically geared to aircraft operators, owners and financiers. Our commitment is to provide a highly flexible service that can be individually tailored to suit your requirements. We have designed our services to ensure your financial risk is minimised, your assets are secure and values are maintained. Charles Taylor aviation (asset management) is able to assess all risk factors and draw the right conclusions for your investments. Whether we are appointed to make a comprehensive inspection of an aircraft for lease termination, prospective purchase, investment or sale, or whether we manage the aircraft you have leased, we will adapt our approach entirely to meet your needs.

Charles Taylor aviation (asset management) Limited services comprise of the following disciplines:

- *Aircraft Build and Pre-Purchase Inspections*
- *Technical Records Audits*
- *Aircraft Operating Lease Technical Management Services*
- *Airline Technical Audits and Risk Surveys*
- *Maintenance Check Technical Representation*
- *Repossessions, Extractions and Lease Termination Inspections*
- *Airline Quality and Safety Audits*