



# Aircraft Production Inspection Program – APIP

**Drawing on decades of experience, Lufthansa Technik offers aircraft operators and owners an in-depth Aircraft Production Inspection Program. The early detection, documentation and rectification of production defects enhances reliability in later operation and ultimately adds to the value retention of the aircraft.**

## The situation

Every aircraft manufacturer has established its own, precisely defined control system in order to guarantee the quality of its production. However, experience suggests it is sensible to supplement the manufacturer's own system with an independent production inspection which is tailored to the quality requirements of the particular aircraft buyer or future operator concerned.

## The solution

Marketed under the name of Aircraft Production Inspection Program (APIP), Lufthansa Technik is offering this service to both airlines and leasing companies. While APIP does not assume that there are any shortcomings in the quality assurance system of the manufacturer, it is a separate program that pursues the same goal of attaining the very best production quality and hence maximizing the safety and reliability of the aircraft in operation. APIP is a modular product under which, if the customer so requests, the entire production process is scrutinized, from the start of the final assembly to the documentation of final acceptance. The portfolio covers all phases of the final assembly including section inspections of sub-assemblies.

## Unique operational expertise

As the world's leading manufacturer-independent MRO provider, Lufthansa Technik has been monitoring the final assembly of Lufthansa and other customer aircraft since 1969. What's more, Lufthansa Technik experience and know-how from looking after customer fleets worldwide on a day-to-day basis mean it receives continuous feedback in the areas of technical quality and operational flexibility. This unique operational expertise is reflected in all product areas of the Aircraft Production Inspection Program. APIP inspectors are stationed permanently at all major Airbus (Toulouse, Hamburg) and Boeing (Everett, Renton, North Charleston) final assembly sites.

## Improving reliability and maintaining value

Both the aircraft operator/owner and the manufacturer benefit from the Aircraft Production Inspection Program, for example by avoiding a possible delay to the aircraft delivery and associated costs. Production defects are caught in time, reducing maintenance-induced ground times later-on in operation and contributing towards cost-efficient and safe flight operations. Just one day of production-related ground time may already exceed the investment for the APIP. Ultimately, such an in-depth inspection of the final assembly contributes to maintaining the value of the flying assets.



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## Customer advantages

- Maximum safety and reliability
- Reduced maintenance costs and aircraft downtime
- Improved aircraft performance
- Aircraft value retention
- Maintenance background results in strong awareness for critical spots
- Continuous reporting to the customer

## Capabilities

- Airbus (all a/c types)
- Boeing (all a/c types)
- ATR
- Embraer ERJ
- Bombardier

## Lufthansa Technik experience

- more than 40 years overall
- more than 320 aircraft during the last five years
- more than 220 section presentations (Airbus) every year

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To meet specific customer requirements Lufthansa Technik established a portfolio of complementing inspection services. In line with the individual requirements, the services can be adjusted as to level of performance, ranging from basic customer assistance to a complete inspection program on behalf of the customer.

### Section Inspection

Supplementing the aircraft manufacturers' own presentations of sub-assemblies at different manufacturing units, Lufthansa Technik offers to perform selective inspections of these aircraft sub-assemblies at the various production locations on a schedule based on Lufthansa Technik's wide experience. This is the only chance to inspect certain important areas of the aircraft before they get closed off.

### Final Assembly Inspection

Lufthansa Technik offers continuous monitoring of production to ensure the production quality of new aircraft and to oversee the procedures and methods employed at the final assembly lines. This is the basic module of the Aircraft Production Inspection Program. Experienced Lufthansa Technik inspectors are based directly at the assembly line, performing a multitude of inspections such as section mating, installations, cabin and paint checks and attending various function tests.

### Final Acceptance

The final acceptance of the aircraft is the highlight of the production process and concludes the assembly. With the final acceptance being the customer's responsibility, it is the last chance to detect possible defects and non-conformities. Up to this point irregularities can still be rectified before aircraft delivery or, in the case of items which cannot be resolved in time, they can still be included in the commitment letter. Lufthansa Technik's final acceptance service offers customer assistance and the performance of some recommended additional tests not included in the standard manufacturer acceptance procedure.

#### Final Acceptance Assistance

Lufthansa Technik can support the customer's acceptance team with experienced staff, scrutinizing the manufacturer's final acceptance inspection in a consultative manner.

#### Final Acceptance Execution

Lufthansa Technik can perform the complete technical part of the final acceptance on behalf of the customer, drawing on the experience of more than 320 aircraft deliveries in the last 5 years and decades of day-to-day aircraft maintenance for fleets of any mix and size.

### Supplementary services

#### Concession Assessment

Lufthansa Technik offers a solid concession assessment, thus evaluating the impact of non-conformities during production which might have an impact on the operation, maintenance or value retention of the aircraft. The customer gains the assurance of knowing whether any guaranteed attributes of the aircraft are affected, further or corrective action is necessary or there is need for a warranty extension.

#### Acceptance Flight Crews

Especially trained and highly experienced pilots can perform the acceptance flight in accordance with the airline and owner requirements and provide professional airworthiness advice. After each acceptance flight Lufthansa Technik issues a comprehensive acceptance flight report documenting all the acceptance flight results and observed discrepancies.

#### Aircraft delivery, ferry and positioning flights

Lufthansa Technik and its partners provide on-time and dependable ferry flight services including flight crew provisioning, flight planning and overflight permits as well as custom clearances. In addition, Lufthansa Technik can arrange to install temporary navigation and communication equipment as well as ferry systems to increase flexibility and economy.