



民航處 Civil Aviation Department

Introduction of Hong Kong Parts Manufacturer Approval HPMA

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Content

- HKAR-21 Subpart K – HPMA
- HKAR-21 Subpart Q – Identification of Products, Parts and Appliances
- HKAR-21 Subpart A – General Provisions
- Initial Approval & Supplements



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History of HPMA

- Feb 2007: HKAR-21 published
- April 2007: HKAR-21 Rev. 1 to include subpart K
- Based on FAA PMA System (FAR 21.303)



What is HPMA?

- H = Hong Kong
- P = Parts
- M = Manufacturer
- A = Approval



HKAR 21.301 Scope

Replacement parts

- Replace existing OEM parts
- Form, Fit & Function

Covers approval of:

- Design
- Production



HKAR 21.303 Applicability

HPMA does not apply to:

- Parts produced under HKAR-21G POA
- Parts produced under HKAR-21O HTSO
- Standard parts (such as bolts and nuts) conforming to officially recognised Standards.



Usage of HPMA

- Use on HK registered aircraft
- Use on foreign aircraft subject to acceptance by State of Registry
- Use on mainland China registered aircraft covered by Cooperation Arrangement between CAD/CAAC



Basic Requirements

- Quality System
 - Exposition
 - FIS
- Design System
- Production System



HKAR 21.303(c) Application

- Form DCA532: Application for HPMA, available on CAD website
- The identity of the product on which the part is to be installed
- The name and address of the manufacturing facilities



HKAR 21.303(c) Application

- The design of the part:
 - drawings and specifications necessary to show the configuration of the part
 - information on dimensions, materials, and processes
- Compliance with airworthiness requirements:
 - Test reports
 - Computations



HKAR 21.303(e) Inspection & Test

Applicant shall allow CAD:

- to make any inspection
- to witness any test



HKAR 21.303(f) Why Inspection/Test?

Applicant's responsibility:

- Compliance with the applicable airworthiness requirements
- Materials conform to the specifications in the design
- Part conforms to the drawings in the design
- Fabrication processes, construction, and assembly conform to those specified in the design



HKAR 21.303(g) Business Location

- Should be located in HK
- If outside HK, the location should not place burden on CAD in administering applicable airworthiness requirements.



HKAR 21.303(h) FIS

Fabrication inspection system:

1. Incoming materials conformity
2. Incoming materials identification
3. Materials storage & protection
4. Process specifications
5. QC of parts in process
6. Control & availability of design drawings.
7. Management and approval of design changes being incorporated in the finished part.
8. Segregation of rejected materials and components
9. Retention of inspection records for 2 years



HKAR 21.303(i) Transferability

- HPMA is not transferable
- HPMA is effective until surrendered or withdrawn or otherwise terminated by CAD



HKAR 21.303(j) Relocation

- Relocation or expansion
- Notify the CAD
- In writing within 10 days



HKAR 21.303(k) Conformity

- Holder shall ensure that each completed part conforms to design data
- Safe for installation



HKAR 21.307 Release for installation

- Authorised Release Certificate (CAD Form One) by certifying staff
- Parts marked per Subpart Q.



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HKAR 21.804 – Identification for Parts

- Permanently and legibly mark the part with:
 - Manufacturer's name, trademark, or symbol
 - P/N
 - The letters HPA
- If part too small, mark on label
- Serial number if critical parts



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HKAR 21.2 Undertaking by others

- Actions and obligations may be undertaken by other persons
- Agreement in place
- Obligations will be properly discharged
- Responsibility cannot be delegated



HKAR 21.3 Defects

- System for Collection, Investigation and Analysis of Data
- Reporting possible unsafe conditions to CAD within 72 hours
- Responsible for investigation of Reported Occurrences



HKAR 21.2B AD

- Propose corrective action/required inspections for CAD approval
- Inform all known operators or owners of the parts in question



HKAR 21.4 Design/Production Coordination

- Satisfactory coordination of design and production
- Proper support of continued airworthiness of part



HKAR 21.8 – Charges

- Fee Regulations, CAP. 448 sub. leg. D
- Charge for initial organisation approval
– \$5,330 to \$133,400
- Charge of annual fee for organisation
– \$5,330 to \$133,400
- Charge for each supplement approval of parts
– up to \$266,800



HKAR 21.8 – Charges (Cont'd)

- Cost recovery basis (working hour + travelling cost)
- Deposit required upon application
- Refund of un-used portion
- Hourly rate is approximately \$1000



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Initial Approval

- HPMA Organisation Approval
- Letter of Intent
- Formal Application DCA532
- Application Fee deposit
- HPMA Exposition (FIS)
- Compliance Report
- Self-audit report
- CAD audit
- Management/Certifying Staff assessment
- Approval Grant



Supplement Approval

- Product Approval
- Supplement to HPMA organisation approval
- A supplement may contain multiple related parts
- Application form with application fee deposit
- Test, if any, may be witnessed by CAD
- Compliance report
 - PMA Parts
 - Manufacturing aspects (equipment, tools, operator, process, etc)
- CAD review/comment/approval
- CAD on-site survey may happen



Useful Information

- HPMa Application Form DCA 532
 - <http://www.cad.gov.hk/application/DCA%20532.pdf>
- Hong Kong Aviation Requirements HKAR-21
 - <http://www.cad.gov.hk/english/HKAR-21.html>
- FAA PMA Procedures (FAA Order 8110.42C)
 - [http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgOrders.nsf/0/d1d550bbc2c82dd386257472005724ef/\\$FILE/Order%208110.42C.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgOrders.nsf/0/d1d550bbc2c82dd386257472005724ef/$FILE/Order%208110.42C.pdf)



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Thank you.