Foreign Air Operator Validation and Surveillance Course

Bangkok, Thailand
30 June – 2 July 2009

ICAO Ramp Inspection Guidance – Part I

The Annexes to the Chicago Convention

- **Standard:**
  - Any specification for physical characteristics, configuration, material, performance, personnel or procedure, the uniform application of which is recognized as necessary for the safety or regularity of international air navigation and to which contracting States will conform in accordance with the Convention; in the event of impossibility of compliance, notification to the Council is compulsory under Article 38.

Ramp Check

- The items to be checked during a Ramp Check are summarised on the Ramp Inspection Worksheets. Areas included are:

  - **A - Flight Deck**,
  - **B - Safety / Cabin items**,
  - **C - Aircraft Condition**,
  - **D - Cargo and the Cargo Compartment**, and
  - **E - General**

Checklist

- The detailed checklist contains information on the items to be checked and guidance is provided on how to perform the check, including applicable ICAO reference. The references are valid as of the Amendment number indicated below:

  - **Annex 1 to Amendment Number 168**

  - **Annex 6 to Amendment Number 32**

Checklist

- Annex 7 to Amendment Number 5
- Annex 8 to Amendment Number 100
- Annex 9 to Amendment Number 20
- Annex 15 to Amendment Number 34
- Annex 18 to Amendment Number 9

A – Flight Deck

A1. General Condition

* Instructions:

Check cleanliness, tidiness and general condition

* References:

Nil

* Seriousness:

Minor – Dirty and untidy

Major – Large unsecured objects (e.g. cargo or baggage) / Unserviceable flight crew seats

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A – Flight Deck

- **A2. <u>Emergency Exit</u>**

<u>*Instructions:</u>

Check if in compliance with ICAO Standard and Recommended Practices.

<u>* References:</u>

Annex 8, 4.1.7 - Emergency landing provisions

Seat design, Evacuation, Number of exit and ditching.

Generally designed standards of aircraft ensure as these requirements.

<u>* Seriousness:</u>

Minor – Not all exits are serviceable, but properly deferred in accordance with MEL provisions

Significant – Not all exits are serviceable and MEL provisions not applied.

Major – No emergency exits serviceable / no provisions in MEL for continued operation.

The cockpit of KALITTA AIR B747-209B(SF) N714CK. This machine was previously China Airlines B-18753. 17 December 2002. Photo: Lars Wahlstrom

A – Flight Deck

- **A3. <u>Equipment</u>**

<u>* Instructions:</u>

Check for the presence of the following equipment where required:

Two sensitive pressure altimeters with counter drumpointer or equivalent presentation (IFR operations)

- Airborne collision avoidance system (ACAS);
- Cockpit voice recorder (CVR) and Flight data recorder (FDR);
- Flight management computer (FMC) is provided – valid database.
- Emergency Locator Transmitter (ELT)
- Ground proximity warning system (GPWS)

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A – Flight Deck

- **A3. <u>Equipment (cont)</u>**

  *References:

  - Altimeters: Annex 6, Part I, 6.9.1.c)
  - ACAS II: Annex 6, Part I, 6.18
  - CVR and FDR: Annex 6, Part I, 6.3; and Part III, Section II,
  - GPWS: Annex 6, Part I, 6.15
  - ELT: Annex 6, Part I, 6.17 and Pat III, Section II, 4.7
  - Database: Annex 6, Part I, 7.4.2

A – Flight Deck

* Seriousness:

GPWS:

Minor – Inoperative and in accordance with MEL provisions

Significant – Inoperative and MEL provisions not applied

Major – Forward looking GPWS required and not installed

FMC:

Significant – FMS database recently outdated (<28days).

Major – FMS database more than 28 days outdated

ACAS/CVR/FDR/ELT:

Minor – Inoperative and in accordance with MEL provisions

Significant – Inoperative and MEL provisions not applied

Major – Required and not installed

A – Flight Deck

- **A4. <u>Manuals – All requirement manuals</u>**

<u>* Instructions:</u>

Check for presence. Check if manuals are up-to-date and accepted or approved as required. Flight manual data may be included in the operations manual which may itself be in several parts.

<u>* References:</u>

Flight Manual - Annex 6, Part I, 6.2.3, 11.1 and Part III, Section II, 4.2.3, 9.1;

Operations manual - Annex 6, Part I, 4.2.2, 6.2.3 and Appendix 2 and Part III, Section II, 2.2.2, 4.2.3 and Attachment H; and

Aircraft Operating Manual - Annex 6, Part I, 6.1.4 and Appendix 2, 2.2 and Part III, Section II, 4.1.4 and Attachment H, 2.2

A – Flight Deck

- **A4. <u>Manuals – All requirement manuals</u>**

<u>* Seriousness:</u>

<u>Flight manual:</u>

Significant – No evidence of State of Registry approval / Incomplete but performance calculations possible

Major – Not on board and performance calculations not possible

<u>Operations manual:</u>

Significant – Incomplete (see Appendix 2 of ICAO Annex 6) or not approved by State of the Operator or not the current version

Major – Not on board

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A – Flight Deck

- **A5 Checklists**

* Instructions:

Confirm checklists are available and up-to-date. Check if their content is in compliance with the requirement. Normal, non-normal and emergency checklists are sometimes combined in a ‘ ***Quick Reference Handbook*** ’,

Check the availability of an aircraft search procedure checklist; and

Confirm availability of the checklist of emergency and safety equipment.

* References:

Flight crew checklists - Annex 6, Part I, 4.2.5, 6.1.4 and Appendix 2, 2.2.2; and Part III, Section II, 2.2.5, 4.1.4 and Attachment H, 2.2.10

Aircraft search procedure checklist - Annex 6, Part I, 13.3 and Part III, Section II, 11.1

Checklist of emergency and safety equipment - Annex 6, Part I, Appendix 2, 2.2.10 and Part III, Attachment H, 2.2.8

A – Flight Deck

- **A5 Checklists**

* Seriousness:

Minor – Not within reach

Significant – Not readily available and used or not the current version

Major – Not on board

A – Flight Deck

- **A6. <u>Route Guide</u>**

<u>* Instructions:</u>

Check if a route guide, including charts, is available, suitable and up-to-date.

<u>* References:</u>

Annex 6, Part I, 6.2.3 and Appendix 2, 2.3.1; and Part III, Section II, 4.2.3 and Attachment H, 2.3.1

<u>* References:</u>

Minor – Not within reach

Significant – Recently out of date (<=28 days) / Photocopies of current charts

Major – Significantly out of date (> 28 days) / Not on board

A – Flight Deck

- **A 7. <u>Minimum Equipment List (MEL) and deferred defect rectification</u>**

<u>* Instructions:</u>

Check if the MEL is available, up-to-date and approved.

<u>* References:</u>

Annex 6, Part I, 6.1.3, Appendix 2, 2.2.9 and Attachment G; and Part III Section II, 4.1.3, Attachment E and Attachment H, 2.2.7

<u>* Seriousness:</u>

Significant – Not on board or MMEL used, but no deferred defects / MEL content does not reflect aircraft equipment fitted / MEL not approved

Major – Not on board or MMEL used, with deferred defects

A – Flight Deck

- **A8. <u>Documents required to be carried on board</u>**

a) Certificate of registration

<u>* Instructions:</u>

Check for presence and accuracy and format

<u>* References:</u>

Convention on International Civil Aviation, Article 29; and Annex 7, 7

<u>* Seriousness:</u>

Minor – Non-certified copy

Significant – Not on board / No English translation

A8. Documents required to be carried on board (cont)

b) Identification Plate

* Instructions:

Check presence and location

* References:

Annex 7, 8

* Seriousness:

Minor – Not installed or not able to read

A8. Documents required to be carried on board (cont)

- **c) Certificate of Airworthiness**

  * Instructions:

  Check that the Certificate of Airworthiness of the aircraft is on board and valid

  * References:

  Convention on International Civil Aviation, Article 29 and 31; Annex 8 Part II, Chapter 3

  * Seriousness:

  Significant – Not an original or certified true copy / No English translation

  Major – Not on board / Out of date

A8. Documents required to be carried on board (cont)

- **d) Crew Member Licenses**

* Instructions:

Check valid in: date; type rating; instrument rating; competency check; language proficiency endorsement; medical assessment; and format.

* References:

Convention on International Civil Aviation, Article 29; Annex 1; Annex 6, Part I, 9.4.4

* Seriousness:

Minor – Form or content not in compliance with ICAO standard

Significant – No English translation

Major – Not valid for the type of aircraft / Not on board or no proper validation from the registration authority / Expired or no class 1 medical assessment

A8. Documents required to be carried on board (cont)

- **e) Journey log book or technical log and voyage report**

* Instructions:

Check entires up-to-date, validity of maintenance release. Check number of deferred defects (specify in the report where necessary). Check that defect deferments include time limits and comply with the stated time limits. Where applicable, check compliance with the aircraft MEL.

* References:

Convention on International Civil Aviation, Articles 29; Annex 6, Part I, 4.3.1 and 11.4;

* Seriousness:

Minor – Minor defects not documented

Significant – On board but not properly filled in

Major – Not on board or no equivalent document / Maintenance release expired or not valid / Defects MEL deadline expired

A8. <u>Documents required to be carried on board</u> (cont)

- **f) Radio Station licenses**

<u>* Instructions:</u>

Check available and up-to-date

<u>* References:</u>

Convention on International Civil Aviation, Articles 29; and 30; Annex 6, Part I, 7.1; and Part III, Section II, 5.1

<u>* Seriousness:</u>

Minor – Non-certified copy

Significant – Not on board

A8. Documents required to be carried on board (cont)

- **g) Noise certification document of statement, where applicable**

  * Instructions:

  Check available and valid

  * References:

  Annex 6, Part I, 6.13; and Annex 16 Volume I, Parts I and II

  * Seriousness:

  Minor – Not on board / No English translation

A8. Documents required to be carried on board (cont)

h) **Air Operator Certificate** (certified true copy) **and Operations Specifications** (copy)

* Instructions:

Check available, applicable and valid

* References:

Annex 6, Part I, 4.2.1, 6.1.2, Appendix 5, 7 and Appendix 6;

* Seriousness:

Minor – Non-certified copy

Significant – Not accurate (out of date, incorrect operation type/route, incorrect aircraft or operator, etc…) or no English translation

Major – Not on board

A – Flight Deck

- **A9. <u>Operational flight plan</u>**

<u>* Instructions:</u>

Check for presence, accuracy and signature (s), and for adequate fuel and oil

reserve planning and supply on board.

<u>*References:</u>

Annex 6, Part I, 4.3.3 and Appendix 2, 2.1.16;

<u>* Seriousness:</u>

Minor – Copy not retained on ground

Significant – Actual flight calculations but no actual documents / Lack of fuel monitoring data (arrival flight) / Fuel calculation unsatisfactory (departing flight)

Major – No or incomplete flight preparation / Required fuel calculation not available or not up dated for actual conditions

A – Flight Deck

- **A 10. Mass and balance sheet**

  * Instructions:

  Check for presence of load sheet and accuracy.

  * References:

  Annex 6, Part I, 4.3.1 and Appendix 2, 2.1.14;

  * Seriousness:

  Significant – Incorrect but within a/c limits

  Major – Incorrect and outside operational limits or missing / Weight and balance data not available

A – Flight Deck

- **A11. <u>Aircraft performance limitations using current route, airport obstacles and runway analysis data</u>**

<u>* Instructions:</u>

Check for availability of aircraft performance information including limitations and runway performance analysis based on current airport data.

<u>* References:</u>

Annex 6, Part I, 5.1, 5.2 and 5.3;

<u>* Seriousness:</u>

Minor – Incomplete but not affecting the operation on that date (e.g. no contaminated or wet runway data but these conditions are not present)

Significant – Not current data or data validity date not available

Major – Not available

A – Flight Deck

- **A 12. <u>Cargo and manifest and, if applicable, passenger manifest</u>**

<u>* Instructions:</u>

Check for availability of completed cargo manifest and, if required, passenger manifest.

<u>* References:</u>

Annex 9, 2.12, 2.13 and 4.12 and Appendices 2 and 3

<u>* Seriousness:</u>

Significant – Some limited inaccuracy or missing data not affecting safety

Major – Not available or grossly inaccurate/incomplete

A – Flight Deck

- **A 13. <u>Pre-flight inspection</u>**

<u>* Instructions:</u>

Check for presence of pre-flight inspection forms (landing documents, air traffic service flight plan).

<u>* References:</u>

Annex 6, Part I, 4.3;

<u>* Seriousness:</u>

Minor – Form on board but incomplete

Significant – Not performed for inbound flight

Major – Not performed for outbound flight

A – Flight Deck

- **A14. <u>Weather reports and forecasts</u>**

  <u>* Instructions:</u>

  Check for availability of weather reports and forecasts adequate for the flight

  <u>* References:</u>

  Annex 6, Part I 4.3.5.2,

  <u>* Seriousness:</u>

  Minor – Not the latest available data but valid

  Significant – Not printed but handwritten

  Major – Not valid or not available

A – Flight Deck

- **A 15. <u>NOTAM</u>** (Notice to Airman)

  <u>* Instructions:</u>

  Check for availability of NOTAMs for the route of flight.

  <u>* References:</u>

  Annex 15, Chapter 5 and Annex 6, Part I, 4.3.3.1, 4.6.1

  <u>* Seriousness:</u>

  Significant – Some en-route relevant data missing

  Major – Not available

A – Flight Deck

- **A 16. <u>Portable Fire Extinguishers</u>**

<u>* Instructions:</u>

Check for presence, number, condition and expiry date.

<u>* References:</u>

Annex 6, Part I, 6.2.2 b);

<u>* Seriousness:</u>

Minor - Not easily accessible

Significant – Expired / Not properly secured

Major – Empty or insufficient number or missing / Significantly low pressure / Not accessible

A – Flight Deck

- **A 17. <u>Life jackets/ Flotation Devices</u>**

  <u>* Instructions:</u>

  Check for presence, condition and expiry date where applicable

  <u>* References:</u>

  Annex 6, Part I, 6.5;

  <u>* Seriousness:</u>

  Minor – Not directly accessible

  Significant – Expired, as applicable

  Major – Not available for each cockpit crew member on board

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A – Flight Deck

- **A18. Safety Harness**

  * Instructions:

  Check for presence, condition and quantity

  * References:

  Annex 6, Part I, 6.2.2;

  * Seriousness:

  Significant – Seat belt instead of harness

  Major – Not available or serviceable for all flight crew members

A – Flight Deck

- **A19. Oxygen equipment**

  * Instructions:

  Check for presence, quantity and condition

  * References:

  Annex 6, Part I, 4.3.8

  * Seriousness:

  Significant – No direct access

  Major – Not available or serviceable for all flight crew members / Oxygen quantity not sufficient

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A – Flight Deck

- **A20. <u>Emergency flashlight</u>**

<u>* Instructions:</u>

Check for appropriate quantity of emergency. Check their condition if possible

<u>* References:</u>

Annex 6, Part I, 6.10;

<u>* Seriousness:</u>

Minor – Only one available

Significant – Weak battery

Major – Not in cockpit or unserviceable

A – Flight Deck

- **<u>ETOPs requirements</u>** (as required)

  Annex: 6 Part I, Attachment E and air operators approved procedures – if twin engine and an ETOPS route, is the aircraft dispatched in accordance with the procedures

B - Cabin / Safety

- **B1. General Condition**

  * Instructions:

  Check for cleanliness, tidiness and general condition.

  * References:

  Annex 8, Part III, 8.3

  * Seriousness:

  Minor – Dirty, untidy and in bad condition

  Significant – Loose carpet / Loose or damaged floor panel / Unserviceable seats (and not identified as such)

Latch Closed
Emergency Equipment Only
Demo kit

ٹائلیٹ میں تمباکو نوشی نہ کیجئے
No smoking
in lavatory
براے مہربانی چٹخنی لگا لیجئے
PLEASE LOCK DOOR

PLEASE LOCK DOOR
No smoking in lavatory
SOAP

NO CIGARETTE DISPOSAL
NE PAS JETER DE MÉGOT
ASE DO NOT THROW FOREIGN ARTICLES INTO
LUSHING TOILET. THROW WASTE AND TOWELS
INTO DISPOSAL.
NE JETER AUCUN OBJET DANS LES TOILETTES.
DEPOSER LES SERVIETTES OU AUTRES REBUTS
DANS LA POUBELLE.

B – Cabin / Safety

- **B2 Cabin crew seats and safety harness**

  * Instructions:

  Check for presence and compliance with the requirement.

  * References:

  Annex 6, Part I, 6.16;

  * Seriousness:

  Minor – Harness/belt is difficult to operate

  Significant – Strap or buckle worn out or damaged-item is not serviceable

  Major – For any member of the minimum required cabin crew a seat is not available; or proper harness and seat belt not available or not serviceable

PBE

B – Cabin / Safety

- **B3. <u>First Aid kit/Emergency Medical kit</u>**

<u>* Instructions:</u>

Check for presence, condition, location and expiry date if available.

<u>* References:</u>

Annex 6, Part I, 6.2.2;

<u>* Seriousness:</u>

Minor – Expired / Incomplete / Not at the indicated location

Major – Not available

PBE
Demo kit

B – Cabin Safety

- **B4. Portable fire extinguishers**

  * Instructions:

  Check for presence, number, condition and expiry date if available.

  * References:

  Annex 6, Part I, 6.2.2;

  * Seriousness:

  Minor – Not directly accessible

  Significant – Expired / Not correctly secured

  Major – Empty, Significantly low pressure or missing or not serviceable

B – Cabin / Safety

- **B5. Life jackets/Flotation device**

* Instructions:

Check for presence, condition and expiry date as applicable.

* References:

Annex 6, Part I, 6.5;

* Seriousness:

Minor – Not directly accessible

Significant – Expired, as applicable

Major – Not available for each person to be carried

B – Cabin / Safety

- **B6. Seat belts**

  * Instructions:

  Check for presence and condition

  * References:

  Annex 6, Part I, 6.2.2;

  * Seriousness:

  Minor – Strap worn or buckle worn out or damaged / Not available or serviceable for all passenger seats and aircraft dispatched in accordance with MEL

  Significant – Not available or serviceable for all passenger seats and aircraft not dispatched in accordance with MEL

  Major – Not available or not serviceable for any passenger

B – Cabin Safety

- **B7. <u>Emergency exit lighting and marking, emergency flashlights</u>**

<u>* Instructions:</u>

Check for presence of emergency exit signs, lighting and marking, and emergency flashlights.

<u>* References:</u>

Annex 6, Part I, 6.10; and Annex 8, Part III A, 4.1.7.3 and Part IIIB, D.6.3

<u>* Seriousness:</u>

Significant – Some emergency exit signs out of order / Insufficient number of emergency flashlights / Emergency flashlights not correctly located / Emergency flashlight batteries weak or flat.

Major – Emergency facilities defects not acceptable according to MEL provisions

B – Cabin / Safety

- **B8. <u>Slides / Life Rafts and pyrotechnical distress signalling devices</u>** (as required)

  <u>* Instructions:</u>

  Check bottle pressure gauge, slide bar and slide expiration date; Check presence of life raft, when required.

  <u>* References:</u>

  Annex 6, Part I, 6.5 and 6.6; Annex 8 Part III A, 4.1.7 (and Part III D.6.2 to D.6.4)

  <u>* Seriousness:</u>

  Minor – Not in specified location, as established by the State of the Operator

  Significant – Incorrectly installed

  Major – Insufficient number / Not serviceable

OPEN
EXIT
DO NOT SIT HERE

Ramp Inspection Guidance

Continued to Part II