CENTRAL
JOINT AVIATION AUTHORITIES
JOINT OPERATION EVALUATION BOARD REPORT

Boeing B767- 400 ER

(12 Nov 03 - V0912)

Contents

Annexes (available on Request to the National Aviation Authority)

Document Approval Signatures

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Executive Summary

The process of JAA Operational Evaluation (OE) was based, partly, on the United States' Federal Aviation Administration (FAA) evaluation and determination, which was administered under the auspices of FAA Advisory Circular (AC) 120-53. The final B767-400 FAA Flight Standardization Board (FSB) findings were validated by prior experience held by the JOEB, together with additional investigations by the members of the JOEB in concert with the Boeing Aeroplane Validation and Flight Crew Operations Division.

Under JAA Rules, Boeing proposed that the B767-400 variant and the B757 and B767 "classic" variants were eligible to share the "same" type rating, and should therefore have a single, type-rating, license endorsement namely "B757/767" which would cover all variants within the B757 and B767 fleet family (B757-200, B757-300, B767-200, B767-300, B767-400). The base aircraft variants for comparison purposes for the OE were the B757-200 and B767-200.

The B767-400 Differences Training curriculum submitted by Boeing assumes the applicant has previously obtained an initial B757/767 Type Rating on a "classic" aeroplane variant. Boeing proposed a number of optional differences training methods (involving the use of different types of training devices, and extent of training events) to achieve the B767-400 /endorsement.

The JOEB recommends that Central JAA adopts the Boeing-proposed Differences Training course, ODR Tables, as published in this report.

From its investigations the JOEB also recommends that Central JAA adopts a single type rating license endorsement for all B757 and B767 aeroplane variants, **provided** the initial type rating is obtained on a "classic" aeroplane variant with Differences Training to the B767-400 variant. NOTE: At the time of drafting of this report, no B767-400 Transition Training curriculum or "reverse" Differences Training Curriculum from the B767-400 variant to a B757 or B767 "Classic" variant has been developed or approved either by the United States FAA or European JAA.

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Preamble

Boeing requested a JOEB process for evaluation of the B767-400. Due to the various subjects, subgroups were established as follows:

- MMEL Subgroup
- FCL & OPS Subgroup

The enclosed report only covers the activities of the FCL & OPS subgroup. No specific report will be issued for the MMEL, as the MMEL is the actual document recommended for approval by the JAA.

This Joint Operation Evaluation has been performed using the following methods:

- Review of the FAA Flight Standardization Board (FSB) Report;
- Discussions with the FAA FSB Chairman;
- JAA Familiarization flying for validation of the FAA Type Certificate;
- Attendance at a B767-400 Differences Training course recommended by Boeing, with a subsequent Proficiency Check (PC);
- Interviews and observations with two U. S. B767-400 fleet operators.
- Conduct of an agreed flight and simulator program to evaluate the elements of an Operator Proficiency Check (OPC)

As no JAA JOEB report was available to cover the B757 and B767 “classic” aeroplane variants, this report is issued to provide adoption of standards for the B767-400 in accordance with the JAA Process defined as the “Catch-up Procedure.” The Boeing B757-200, B757-300, B767-200, or B767-300 aeroplane variants are herein known in this report as the “classic” variants.

The report specifies the JAA type rating endorsement, the B767-400 Differences Training course, the Proficiency Checking, and the Recent Experience requirements for flight crew members already qualified on any B757 or B767 “classic” variant and requiring Differences Training to the B767-400 variant.

This Evaluation has been made in compliance with the JAA JOEB Terms of Reference. The OE was conducted in accordance with the processes detailed in the JAA JOEB Handbook, dated December 2002.

JAR requirements as in JAR-OPS 1 (1.940, 1.945, 1.950, 1.965, 1.970 and 1.980 including associated appendices, AMCs and IEMs), JAR-FCL 1 (1.215, 1.220, 1.225, 1.230 1.235,and 1.261 including associated appendices, AMCs and IEMs) have been considered.

Evaluation Process and Findings

The first phase of the evaluation of the Boeing B767-400 aircraft by the JAA was accomplished by a review of the FAA Flight Standardization Board (FSB) Report. Boeing provided the OE team with proposed Master Difference Requirements (MDR) and Operator Differences Requirements (ODR) tables to be used as a basis for the evaluation. One JOEB member had conducted a series of familiarization flights, as part of the JAA validation of the FAA Type Certificate. B767-400 Airframe Systems' differences, Normal and Supplementary procedures, the Normal and Non-Normal checklists were reviewed and compared between the B757/B767 "classic" variants and the B767-400 variant. Sample ODR Tables were examined as proposed by The Boeing Company, and proposed optional methods of training were reviewed. No additional B767-400 flying was considered necessary to determine any differences that might have existed in the handling qualities. These handling qualities were considered to be sufficiently similar to the existing B767 "classic" variants, which are already approved under the B757/B767 same type rating.

The second phase of the evaluation of the Boeing B767-400 aircraft by the JAA was conducted during June 2001 by one JOEB member qualified on both 767-"classic" variants. Together with an FAA pilot test subject, the JOEB member completed the Boeing-proposed B767-400 Differences Training curriculum. In January 2003, the JOEB member visited and conducted a flight operations observation at the home bases of Delta Air Lines and Continental Airlines. Delta Air Lines and Continental Airlines are the two U. S. operators of the B767-400, at the time of issuing this report. In addition, the JOEB member visited and interviewed the FAA Aircrew Program Manager (APM) at the FAA field office in Houston, Texas.

The third phase of the evaluation was conducted in April 2003. The two aforementioned pilot test subjects (one FAA; one JAA) still qualified and current on either or both the B757/B767 "classic" aeroplane variants shared an agreed simulator program to evaluate the elements of an Operator Proficiency Check (OPC). Neither pilot test subject had received any prior recurrent training or other exposure to the B767-400 in the preceding 21-months. The evaluation was administered by the B767 FAA FSB Chairman (FAA Aircrew Inspector) and observed by a JAA flight examiner and the other member of the JOEB. This exercise served to confirm to the JOEB that the B767-400 was suitable for inclusion under the "B757/767" same type rating endorsement only if the initial type rating was accomplished on a B757/767 "classic" variant. If a future B767-400 Transition Training course is developed and approved, any flight crew member completing it would only be entitled to receive a licence endorsement of "B767-400". At the time of drafting of this report, no B767-400 Transition Training curriculum or "reverse" Differences Training Curriculum from the B767-400 variant to a B757/767 "classic" variant has been developed or approved either by the United States FAA or European JAA.

The OE Team noted the Boeing recommended 7 optional methods (see Annex 1) for achieving the required Differences training; however the team considered that, despite the flexibility offered, there was a potential for creating confusion in selecting the combinations of training device and flight familiarization for training and checking. Therefore, the Team recommends that only two alternatives be permitted:

a. <u>If a Full Flight Simulator (FFS) is Used:</u>
Two 4-hour training sessions would be required, followed by a proficiency check in an approved B767-400 FFS, and one Line Flight Under Supervision (LIFUS).

b. <u>If a Flight Training Device – Level 2 (FTD-2) is Used:</u>
Two 4-hour training sessions would be required, followed by a proficiency check in an FTD-2, and three Line Flights Under Supervision (LIFUS).

Finally, the JOEB members have determined the Boeing-proposed and FAA FSB-endorsed training/checking/currency levels were correctly assigned at D/C/C, respectively.

Operational Evaluation Report / FCL & OPS Subgroup

1. Purpose and Applicability

This report:

- Defines the Type Rating assigned to the B757/767 models.
- Proposes Master Common Requirements (MCR).
- Describes Master Differences Requirements (MDR) for crews requiring differences training
- Provides reference of acceptable Operator Difference Requirements (ODR tables).
- Provides recommendations for initial (transition) Training
- Provides recommendations for differences training course
- Provides recommendations for checking
- Provides recommendations for currency

2. Pilot Type Rating Requirements

In reference to JAR FCL1 Subpart F and to the JOEB evaluation procedure, the same Type Rating and, consequently the same Licence Endorsement may be assigned to the B757-200, B757-300, B767-200, B767-300, and B767-400, provided that an initial B757/767 Type Rating endorsement has been obtained on a "classic" variant with subsequent successful completion of an approved B767-400 Differences Training and Checking Course. The licence endorsement should be assigned "B757/767". If, at some time in the future, it becomes possible, due to the formulation of a suitable course, for a pilot to complete initial qualification on the B767-400 variant, per JAR- FCL 1 Subpart F, the licence endorsement should be assigned "B767-400". With a licensing endorsement of "B767-400", if the flight crew member subsequently completes an approved "B767-400"-to-"B757/B767-'classic'" Differences Training course, the "B767-400" endorsement can be replaced with a "B757/767" license endorsement.

3. Master Common Requirements

These Master Common Requirements have been determined through the evaluation process.

MCRs are requirements common to the B757/767-"Classic" variants and the B767-400.

Although they have a very high level of commonality in terms of:

1) airframe systems architecture and operation; and,
2) handling characteristics,

there is a major difference to the flight deck of the B767-400, which has a direct and significant impact on the definition of the training programs. Boeing introduced a Flight Deck Upgrade (FDU) on the B767-

400, which incorporates many 777-style flight instrument displays, Thrust Management functionality, FMC operation, and automatic Radio Tuning capability. The FDU incorporates significantly more system automation than is inherent on the “Classic” B757 and B767 variants.

3.1 Aircraft Approach and Circling Categories:

Aircraft	Category
B757-200, B757-300, B767-200	C
B767-200 IGW, B767-300, B767-400	D

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4. Master Differences Requirements Tables

Master Difference Requirements for the B757/767 aircraft are shown in the table below and represents the result of work performed in the evaluation.

Definitions of the various levels for Training/ Checking/ Currency are the ones from the JOEB handbook, and the relevant definitions are included after the table for reference.

	Aeroplane Type Rating B757/767	FROM AEROPLANE							
		B757-200	B757-200PF	B757-300	B767-200	B767-300	B767-300F	B767-300GMF	B767-400ER
TO AEROPLANE	B757-200		B*/A/B (1)(2)(3)(4)(5)(6)	A/A/B (4)(5)(6)	B*/A/B (1)(2)(3)(4)(5)(6)	B*/A/B (1)(2)(3)(4)(5)(6)	B*/A/B (1)(2)(3)(4)(5)(6)	B*/A/B (1)(2)(3)(4)(5)(6)	(TBD)
	B757-200PF	B*/A/B (1)(2)(3)(4)(5)(6)		B*/A/B (1)(2)(3)(4)(5)(6)(7)	B*/A/B (1)(2)(3)(4)(5)(6)	B*/A/B (1)(2)(3)(4)(5)(6)	B*/A/B (1)(2)(3)(4)(5)(6)	B*/A/B (1)(2)(3)(4)(5)(6)	(TBD)
	B757-300	A/A/B (4)(5)(6)	B*/A/B (1)(2)(3)(4)(5)(6)(7)		B*/A/B (1)(2)(3)(4)(5)(6)	B*/A/B (1)(2)(3)(4)(5)(6)	B*/A/B (1)(2)(3)(4)(5)(6)(7)	B*/A/B (1)(2)(3)(4)(5)(6)(7)	(TBD)
	B767-200	B*/A/B (1)(2)(3)(4)(5)(6)	B*/A/B (1)(2)(3)(4)(5)(6)	B*/A/B (1)(2)(3)(4)(5)(6)		A/A/B (4)(5)(6)	B*/A/B (1)(2)(3)(4)(5)(6)	B*/A/B (1)(2)(3)(4)(5)(6)	(TBD)
	B767-300	B*/A/B (1)(2)(3)(4)(5)(6)	B*/A/B (1)(2)(3)(4)(5)(6)	B*/A/B (1)(2)(3)(4)(5)(6)	A/A/B (4)(5)(6)		B*/A/B (1)(2)(3)(4)(5)(6)	B*/A/B (1)(2)(3)(4)(5)(6)	(TBD)
	B767-300F	B*/A/B (1)(2)(3)(4)(5)(6)(7)	B*/A/B (1)(2)(3)(4)(5)(6)(7)	B*/A/B (1)(2)(3)(4)(5)(6)(7)	B*/A/B (1)(2)(3)(4)(5)(6)(7)	B*/A/B (1)(2)(3)(4)(5)(6)(7)		A/A/B (5)(6)	(TBD)
	B767-300GMF	B*/A/B (1)(2)(3)(4)(5)(6)(7)	B*/A/B (1)(2)(3)(4)(5)(6)(7)	B*/A/B (1)(2)(3)(4)(5)(6)(7)	B*/A/B (1)(2)(3)(4)(5)(6)(7)	B*/A/B (1)(2)(3)(4)(5)(6)(7)	A/A/B (5)(6)		(TBD)
	B767-400ER	D/C/C (5)(6)(7)(8)(9)(10)	D/C/C (5)(6)(7)(8)(9)(10)	D/C/C (5)(6)(7)(8)(9)(10)	D/C/C (5)(6)(7)(8)(9)(10)	D/C/C (5)(6)(7)(8)(9)(10)	D/C/C (5)(6)(7)(8)(9)(10)	D/C/C (5)(6)(7)(8)(9)(10)	(TBD)

NOTES:
(1) B* TRAINING MAY BE ACCOMPLISHED VIA A HOME STUDY COURSE WHICH CAN BE DEMONSTRATED TO THE PRINCIPAL OPERATIONS INSPECTOR TO PRODUCE RESULTS EQUIVALENT TO A FORMAL (e.g. CLASSROOM, CBT) ACADEMIC TRAINING COURSE. A MEANS MUST BE INCLUDED FOR THE CREWMEMBER TO CERTIFY THAT THEY HAVE COMPLIED WITH THE REQUIRED TRAINING AND FULLY UNDERSTAND THE DIFFERENCES BETWEEN VARIANTS FLOWN (WRITTEN TEST, etc.).

(2) TRAINING IN GENERAL IS SET AT LEVEL B, AND ASSUMES THAT CREWMEMBERS RECEIVE EXPOSURE TO OPERATION OF DOORS/EMERGENCY EXITS ON STATIC AIRCRAFT OR OTHER SUITABLE MEANS. IF THIS IS NOT ACCOMPLISHED, THEN C/A/B APPLIES, WHERE C IS BASED ON AN ODR-SPECIFIED ITEM FOR EMERGENCY EQUIPMENT/DOORS.

(3) B/A/B IS BASED ON EQUIVALENT OPERATING POLICIES FOR BOTH AIRCRAFT. IF POLICIES DIFFER, e.g. ONLY ONE VARIANT IS USED FOR SINGLE ENGINE TAXI, CAT III FAIL PASSIVE OPERATIONS, etc., THEN LEVEL C/A/B MAY BE NEEDED TO ADDRESS SPECIFIED MANEUVERS IDENTIFIED BY ODR TABLES.

(4) ADDITIONAL TRAINING/CHECKING/CURRENCY REQUIREMENTS MAY EXIST (B/A/B) FOR MIXED FLYING OF ER AND NON-ER AEROPLANES DUE TO SYSTEM AND OPERATIONAL DIFFERENCES.

(5) INSTALLATION OF FANS/DATA LINK/RNP REQUIRES ADDITIONAL TRAINNG, CHECKING AND CURRENCY AS SPECIFIED IN MDR TABLE.

(6) PREDICTIVE WINDSHEAR (PWS) TRAINING, CHECKING AND CURRENCY HAS BEEN ASSESSED BY THE FSB AT B/B/B. ENHANCED GROUND PROXIMITY WARNING SYSTEM (EGPWS) TRAINING, CHECKING AND CURRENCY HAS ALSO BEEN ASSESSED B/B/B.

(7) TRAINING ON EMERGENCY EGRESS AND EMERGENCY EQUIPMENT IS REQUIRED.

(8) LEVEL-D TRAINING REQUIREMENTS MAY BE SATISFIED BY AN APPROVED TRAINING CURRICULUM CONSISTENT WITH THE PROVISIONS OF THIS JOEB REPORT AND ACCOMPLISHED IN A MINIMUM LEVEL-2 FLIGHT TRAINING DEVICE (FTD-2). REDUCTIONS IN THE NUMBER OF LIFUS LEGS MAY BE AUTHORIZED IF FULL FLIGHT SIMULATOR IS USED TO CONDUCT TRAINING.

(9) LEVEL-C CHECKING INVOLVING **SYSTEMS DIFFERENCES ONLY** MAY BE SATISFIED BY “INTERACTIVE CBT”. LEVEL-C CHECKING IN AN FTD-2 OR HIGHER REQUIRES A PROFICIENCY CHECK (PC) BY A JAA LICENSED FLIGHT EXAMINER.

(10) LEVEL-C CURRENCY FOR THE B767-400 AND OTHER B757/B767 VARIANTS REQUIRES TWO LINE SEGMENTS IN RELEVANT AEROPLANES OR APPROVED SIMULATOR(S) EVERY 90 DAYS FOR THE PURPOSE OF ROUTE SECTOR CURRENCY. TAKE-OFF AND LANDING CURRENCY MAY BE SATISFIED IN ANY VARIANT. (REFERENCE PARAGRAPHS 6.4.1, 6.4.2, AND 8OF THIS JOEB REPORT)

Difference level definitions Training/Checking/Currency extracted from the JOEB handbooks:

Level D Training. *Level D training can only be accomplished with devices capable of performing flight manoeuvres and addressing full task differences affecting knowledge, skills, and/or abilities. Devices capable of flight manoeuvres address full task performance in a dynamic "real time" environment and enable integration of knowledge, skills and abilities in a simulated flight environment, involving combinations of operationally oriented tasks and realistic task loading for each relevant phase of flight. At Level D knowledge and skills to complete necessary normal/ abnormal/emergency procedures are fully addressed for each variant.*

Level D training requires mastery of interrelated skills that cannot be adequately addressed by separate acquisition of a series of knowledge areas or skills that are interrelated. The differences are not, however, so significant that a full transition-training course is required. If demonstrating interrelationships between the systems is important, use of a series of separate devices for systems training would not suffice. Training for Level D differences requires a training device that has correct integration of systems and controls and realistic instrument indications but for some manoeuvres visual cues, motion cues, dynamics, control loading or environmental conditions may be required. Weather phenomenon such as low visibility, Cat III, or wind shear may or may not be incorporated. Where simplified or generic characteristics of a type are used in devices used to satisfy difference training Level D, significant negative training must not occur as a result of the simplification .

Devices acceptable to satisfy Level D training range from those devices where relevant elements of aircraft flight manoeuvring, performance, and handling qualities are incorporated, even though in a simplified or generic fashion, such as fixed base non-visual simulation, and fixed base visual simulation to Level C/D simulators at the upper end.

Devices acceptable for Level D training:

a. FTD2 (JAA) are the minimum acceptable training media;
b. FFS certified to Level D or lower may also be necessary to satisfy manoeuvre/handling differences.
c. At the discretion of the JOEB, FS or aircraft training may be specified within level D training for the conduct of a specific manoeuvre. Examples: HUD training or a single manoeuvre such as a no-flap landing when T2 is otherwise successfully completed.

Level C Checking*. Level C checking indicates a proficiency check using a device suitable for meeting Level C differences training requirements (or higher) is required following transition and recurring differences training. The proficiency check is conducted relative to particular manoeuvres or systems designated by the JOEB.*

An example of a Level C check would be evaluation of a sequence of manoeuvres demonstrating a pilot's ability to use a flight guidance control system or flight management system. An acceptable scenario would include each relevant phase of flight but would not necessarily address manoeuvres that do not relate to set up or use of the FGCS or FMS.

Level C Currency*. Level C currency is applicable to one or more designated systems or procedures, and relates to skill as well as knowledge requirements. An example would be establishment of INS currency, FMS currency, flight guidance control system currency, or other particular currency that is necessary for safe operation of a variant. Establishment of Level C for a variant with a flight management system (FMS) would typically require a crewmember to fly that variant within the specified period or re-establish currency. Currency constraints for level C typically are 90 days. However, some systems or procedures may require shorter time limits while others may be longer than the normal interval for proficiency checks if the pertinent items are not always addressed by these checks. When level C currency applies, any pertinent lower level currency also is addressed.*

Examples of methods acceptable for addressing level C currency are:

a. Crew scheduling practices resulting in a crewmember being scheduled to fly a variant with the pertinent system/procedure within the specified period;

b. Tracking of an individual crewmember's flying of variants having the particular system/procedure within the specified period;

c. Use of a higher level method (level D or E currency); or

d. Other methods as designated or found acceptable by the JOEB.

5. Operator Differences Requirements Tables

ODR tables are used to show an operator's compliance method. Detailed Boeing generic ODR tables are on file with the Central JAA. Copies are available on request. These ODR tables are provided as Boeing generic, and therefore may not include optional features that are applicable to specific operators. The ODR tables assume that flight crewmembers are qualified, current, and experienced in operating the base aircraft.

The Boeing ODR tables have been developed in accordance with AMC 1.980(b) & IEM 1.980(b) of JAR-OPS 1 Subpart N. These ODR tables have been found acceptable by JAA. They represent an acceptable means of compliance with MDR provisions for the aircraft evaluated based on those differences and compliance methods shown. These tables do not necessarily represent the only means of compliance for operators with aircraft having other differences.

Operators flying more than one B757/767 variant within a fleet must have approved ODR tables pertinent to their fleet.

6. Specification for Training

6.1 B767-400 Differences Training Course

6.1.1 Curriculum Scope and Purpose

The Differences training course is designed to familiarize the B757-200, B757-300, B767-200, and/or B767-300 Type-Rated and qualified flight crew member with the differences incorporated in the B767-400 aeroplane variant with the Flight Deck Upgrade (FDU) configuration with Primary Flight Display (PFD) / Navigation Display (ND) flight instrument format. The only JOEB-endorsed curriculum, currently, is applicable to type rated and qualified B757 or B767 flight crew members requiring Differences Training to the B767-400 aeroplane variant. NOTE: Due to the fact that no JOEB report exists for the B757 or B767 "classic" variants, the JOEB has not evaluated or endorsed a full B767-400 Transition Training course or a Differences Training course applicable to B767-400 type rated and qualified flight

crew members requiring qualification to the B757-200, B757-300, B767-200, or B767-300 “Classic” aeroplane variants.

In light of the unique features of the B767-400 FDU configuration, the JOEB has determined that certain aspects of knowledge, skills, and abilities must be emphasized during the B757-B767-“Classic” to B767-400 Differences Training curriculum:

- Normal operating procedures and checklists
  - Knowledge by memory of preliminary pre-flight, pre-flight, before engine start, engine start, after engine start, before takeoff, takeoff, after takeoff, climb and cruise, descent and approach, landing and rollout, taxi-in and parking, shutdown, and secure procedures.
  - Familiarization of normal checklists’ usage.

- Airframe systems
  - Flight deck lighting, IRS, electrical, fuel jettison, equipment cooling, pneumatic, air conditioning,

- Communications and navigation radio and audio control panel
  - Automation of communications radio and navigation radio systems and audio control panel functionality

- Flight crew oxygen mask and boom/mask microphone switching
  - Full-face oxygen mask functionality and operation
  - Automation of boom/mask microphone switching

- Pegasus-FMC/MCDU
  - Navigation radio tuning: ILS (auto, manual), VOR (auto, manual, procedure, route), ADF via MCDU
  - Thrust management functions
  - Pegasus-FMC functionality for large display formats (as required, depending upon previous FMC versions’ experience level)
- EFIS control panel location, format, and functionality
  - PFD/ND display format
    - Airspeed tape format/symbology
    - Altitude tape format/symbology
    - Flight mode annunciation location and format
    - Autoland status location and format

- Instrument scan
- Multi-function display units format and functionality
- Display unit switching
- Display unit failures

➢ EICAS display format

- Engine indication/alert message field relocation
- Assumed temperature and climb derate indications and functionality
- Status page format
- Synoptic displays' format
- Display select panel (DSP) location and function
- Cancel/Recall function
- Display unit switching
- Display unit failures

For a flight crew member to achieve endorsement to operate the B767-400, the following standard has been endorsed by the JOEB:

Qualification to the B767-400 aeroplane variant:

- Flight crew member possesses a B757 or B767 "Classic" Type Rating endorsement (i. e. B757-200, B757-300, B767-200, B767-300),
- 8-hours (minimum) "Interactive" Computer-Based Training (CBT) systems differences knowledge training,
- 2 four-hour flight-training sessions preceded by appropriate lesson briefing and succeeded by appropriate de-briefing.

The minimum JOEB-approved training device is a Flight Training Device – Level 2 (FTD-2)*. "Interactive" CBT is defined as a student-interactive compliant CBT, i.e. touch-screen or similar interactive capability with student-controlled lesson pacing allowing question testing and answer recording capability, etc.). The FTD must be of the configuration inherent to the operator's B767-400 FDU configuration. Flight training in a B757 or B767 "Classic" FTD or simulator is not endorsed for use in training a B767-400 flight crew member applicant.

*NOTE: FTD-2 (JAA) is equivalent to FTD Level 6 (FAA).

6.2 Line Flying Under Supervision (LIFUS)

6.2.1 Purpose of Line Flying Under Supervision (LIFUS)

There are a variety of reasons why the JOEB may specify LIFUS in conjunction with Master Difference Requirements (MDRs). One or more of the reasons described below may apply:

a. Introduction of new aircraft types or variants;

b. Introduction of new systems (e.g., FMS, TCAS);

c. Introduction of new operations (e.g. oceanic operations);

d. Experience for a particular crew position (e.g. PIC, SIC, F/E);

e. Post qualification skill refinement (e.g. refining alternate or multiple ways to use particular equipment to increase operating efficiency, operating flexibility, or convenience);

f. Special characteristics (e.g. unique airports, mountainous areas, unusual weather, special air traffic control procedures, non-standard runway surfaces, etc.).

6.2.2 LIFUS in conjunction with B767-400 Differences Training:

In the case of Differences Training to the B767-400 aeroplane variant, a minimum of 1-leg (which may include a line check by an approved B767-400 qualified licensed flight examiner) is recommended for Line Flying Under Supervision (LIFUS). This recommendation may be increased to 3-legs (of which 1-leg may include a line check by an approved B767-400 qualified captain selected by the operator and accepted by the national authority), depending upon the type of flight training device used for the training lessons and proficiency check (PC).

A minimum of 3-legs of LIFUS is recommended, of which one leg may include a line check by an approved B767-400 qualified line licensed flight examiner, if a B767-400 FTD-2 device is used for the flight training lessons and PC event. A minimum of 1-leg of LIFUS is recommended, of which one leg may include a line check by an approved B767-400 qualified captain selected by the operator and accepted by the national authority, if a B767-400 Full Flight Simulator (FFS) device is used for the flight training lessons and PC event. In the event one lesson is conducted in a B767-400 FFS device and another lesson and/or PC event is conducted in a B767-400 FTD-2 device, then 3-legs LIFUS is recommended, due to the reduction in simulation fidelity for the portion of training, or PC, conducted in the FTD-2 device.

6.3 Differences Training Courses & Familiarization Flights

6.3.1 Differences Training courses

JOEB and CJAA recommend approval of the Boeing B767-400 Differences Training courses, as follows:

- Between the B757-200 variant and the B767-400 variant is assessed at Level-D.
- Between the B757-300 variant and the B767-400 variant is assessed at Level-D.
- Between the B767-200 variant and the B767-400 variant is assessed at Level-D.
- Between the B767-300 variant and the B767-400 variant is assessed at Level-D.

Boeing Differences Training courseware provided under "Interactive"-CBT (Computer based training) have been assessed and found acceptable by the JOEB. Boeing flight training lesson and proficiency check profiles have been assessed and found acceptable by the JOEB.

6.3.2 Familiarization flights

Because the JOEB has determined the handling characteristics of the B767-400 variant are within the scope of minor handling differences between the existing B757-200, B757-300, B767-200, and B767-300 variant family, no familiarization flights are recommended as a requirement.

6.4 Recurrent Training and Operation of B757 Or B767 "Classic" Variant and the B767-400 Variant

The recurrent training program, when flying different variants within a single licence endorsement, must comply with JAR-OPS 1.965 and with the ODR tables, defined under JAR-OPS 1.980. All B757 and B767 variants are recommended under the same license endorsement.

6.4.1 Landing currency

The B767-400 pilot qualification endorsement is under the same-type rating, and is considered equivalent to the B757-200, B757-300, B767-200, and B767-300 variants. Accordingly, any three landings in a 90-day period in any B757 or B767 aeroplane variant, including the B767-400ER variant, is considered acceptable for meeting landing currency provisions on all other B757 and B767 aeroplane variants.

6.4.2 Route sector currency

B757 and B767 "classic" variants do not require separate route sector currency. Recent experience in the B767-400 and B757 and B767 "classic" aeroplane variants requires that a minimum of two segments be flown in the B767-400 variant (aeroplane or approved simulator) and two segments in either a B757 or B767 "classic" aeroplane variant (aeroplane or approved simulator) during a 90-day period. Route sector requirements may be increased if mission and operational procedures are assessed to be different (e.g., oceanic, polar, ETOPS, etc. vs. short haul domestic routes/operations). NOTE: Reference JAR-FCL 1.001 for definition of route sector.

7. Specification for Checking

7.1 Skill Test Following Differences Training Course

In addition to the mandatory items from the skill test as per Appendix 2 to of JAR-FCL 1.240, the features described in Section 6.1.1 of this report must be included during the Proficiency Check (PC). The minimum training device requirement for the PC is an FTD-2.

The Central JAA is in possession of a JOEB-endorsed PC.

7.2 Recurrent Checking - Licence Proficiency Checks (LPC) and Operator Proficiency Checks (OPC)

LPC and OPC must be conducted in compliance with JAR-FCL 1.245 and JAR-OPS 1.965, respectively.

7.2.1. Licence Proficiency Check.

LPCs may be conducted on either a B757/B767-"classic" variant or the B767-400 variant.

7.2.2 Operator Proficiency Check.

OPCs should alternate for all flight crew members between "classic" aeroplane variants and the B767-400 variant. The B767-400 variant OPC should be accomplished on an annual basis with the "classic" variants alternated between a B757/B767-"classic" variant, also on annual basis, if applicable to the operator's fleet constituency.

Example: Fleet of B757-200 and B767-400 only
OPC Event 1: B757-200 aeroplane or approved simulator
OPC Event 2: B767-400 aeroplane or approved simulator
OPC Event 3: B757-200 aeroplane or approved simulator
(Etc., Etc.)

Example: Fleet of B757-200, B767-200, and B767-400
OPC Event 1: B757-200 aeroplane or approved simulator;
OPC Event 2: B767-400 aeroplane or approved simulator;
OPC Event 3: B767-200 aeroplane or approved simulator;
OPC Event 4: B767-400 aeroplane or approved simulator;
OPC Event 5: B757-200 aeroplane or approved simulator.
(Etc., Etc.)

7.3 Line checks

Line checks must be conducted in compliance with JAR-OPS 1.965(c). Line checks may be accomplished on any B757 or B767 variant.

8. Currency / Recent Experience

Compliance with JAR-OPS 1.970 or JAR-FCL 1.026 as appropriate is required for recent experience.

Concerning the B757 and B767 family, JOEB concluded that take off and landings performed on one B757 or B767 variant are valid for all variants, including the B767-400 variant. This means that for flight crew members operating a fleet intermix of any B757 or B767 variant, the recent experience requirement is satisfied as soon as they achieve 3 take-offs and 3 landings, as handling pilot, regardless of the variant flown.

9. Operational Recommendations

JOEB recommends operator fleets of different B757 and B767 variants use, whenever possible, a common cockpit configuration for the following safety related items:

- Unit system (metric or non-metric) on all displays.
- Altimeter settings (QNH/QFE)
- GPWS Voice Callouts
- FMS specifications and functions (software and hardware)