ACJ OPS 1.430 CONTINUOUS DESCENT FINAL APPROACH (CDFA)
See Appendix 1 (New) to JAR-OPS 1.430

[This ACJ is new text]

1. Introduction

1.1 Controlled-Flight-Into-Terrain (CFIT) is a major causal category of accident and hull loss in commercial aviation. Most CFIT accidents occur in the final approach segment of non-precision approaches; the use of stabilised-approach criteria on a continuous descent with a constant, pre-determined vertical path is seen as a major improvement in safety during the conduct of such approaches. Operators should ensure that the following techniques are adopted as widely as possible, for all approaches.

1.2 The elimination of level flight segments at Minimum Descent Altitude (MDA) close to the ground during approaches, and the avoidance of major changes in attitude and power / thrust close to the runway which can destabilise approaches, are seen as ways to reduce operational risks significantly.

1.3 For completeness this ACJ also includes criteria which should be considered to ensure the stability of an approach (in terms of the aeroplane's energy and approach-path control).

1.4 The term Continuous Descent Final Approach (CDFA) has been selected to cover a technique for any type of non-precision approach

1.5 Non-precision approaches operated other than using a constant pre-determined vertical path or when the facility requirements and associated conditions do not meet the conditions specified in Para 2.4 below RVR penalties apply. However, this should not preclude an operator from applying CDFA technique to such approaches. Those operations should be classified as special letdown procedures, since it has been shown that such operations, flown without additional training, may lead to inappropriately steep descent to the MDA(H), with continued descent below the MDA(H) in an attempt to gain (adequate) visual reference.

1.6 The advantages of CDFA are:

(a) The technique enhances safe approach operations by the utilisation of standard operating practices;

(b) The profile reduces the probability of infringement of obstacle-clearance along the final approach segment and allows the use of MDA as DA;

(c) The technique is similar to that used when flying an ILS approach, including when executing the missed approach and the associated go-around manoeuvre;

(d) The aeroplane attitude may enable better acquisition of visual cues;

(e) The technique may reduce pilot workload;

(f) The Approach profile is fuel efficient;

(g) The Approach profile affords reduced noise levels;

(h) The technique affords procedural integration with APV approach operations;

(i) When used and the approach is flown in a stabilised manner is the safest approach technique for all approach operations.

2. CDFA (Continuous Descent Final Approach)

2.1 Continuous Descent Final Approach. A specific technique for flying the final approach segment of a non-precision instrument approach procedure as a continuous descent, without level-

off, from an altitude/height at or above the final approach fix altitude/height to a point approximately 15m (50 ft) above the landing runway threshold or the point where the flare manoeuvre should begin for the type of aircraft flown.

2.2 An approach is only suitable for application of CDFA technique when it is flown along a predetermined vertical slope (see sub- paragraph (a) below) which follows a designated or nominal vertical profile (see sub-paragraphs (b) and (c) below):

(a) Predetermined Approach Slope: Either the designated or nominal vertical profile of an approach.

(i) Designated Vertical Profile: A continuous vertical approach profile which forms part of the approach procedure design. APV is considered to be an approach with a designated vertical profile.

(ii) Nominal Vertical Profile: A vertical profile not forming part of the approach procedure design, but which can be flown as a continuous descent.

Note: The nominal vertical profile information may be published or displayed (on the approach chart) to the pilot by depicting the nominal slope or range / distance vs height.

Approaches with a nominal vertical profile are considered to be:

(i) NDB, NDB/DME;
(ii) VOR, VOR/DME;
(iii) LLZ, LLZ/DME;
(iv) VDF, SRA or
(v) RNAV/LNAV.

2.3 Stabilised Approach (SAp). An approach which is flown in a controlled and appropriate manner in terms of configuration, energy and control of the flight path from a pre-determined point or altitude/height down to a point 50 feet above the threshold or the point where the flare manoeuvre is initiated if higher.

(a) The control of the descent path is not the only consideration when using the CDFA technique. Control of the aeroplane's configuration and energy is also vital to the safe conduct of an approach.

(b) The control of the flight path, described above as one of the requirements for conducting an SAp, should not be confused with the path requirements for using the CDFA technique. The pre-determined path requirements for conducting SAp are established by the operator and published in the Operations Manual (OM) Part B; guidance for conducting SAp operations is given in paragraph 5 below.

(c) The predetermined approach slope requirements for applying the CDFA technique are established by:

(i) The instrument-procedure design when the approach has a designated vertical profile;
(ii) The published 'nominal' slope information when the approach has a nominal vertical profile;
(iii) The designated final-approach segment minimum of 3nm, and maximum, when using timing techniques, of 8nm.

(d) A Stabilised Approach will never have any level segment of flight at DA(H) (or MDA(H) as applicable). This enhances safety by mandating a prompt go-around manoeuvre at DA(H) (or MDA(H))

(e) An approach using the CDFA technique will always be flown as an SAp, since this is a requirement for applying CDFA; however, an SAp does not have to be flown using the CDFA technique, for example a visual approach.

2.4 Approach with a designated vertical profile using the CDFA technique:

(a) The optimum angle for the approach slope is 3 degrees, and the gradient should preferably not exceed 6.5 percent which equates to a slope of 3.77 degrees, (400 ft/NM) for procedures intended for conventional aeroplane types/classes and/or operations. In any case, conventional approach slopes should be limited to 4.5 degrees for Category A and B aeroplanes and 3.77 degrees for Category C and D aeroplanes, which are the upper limits for applying the CDFA technique. A 4.5 degree approach slope is the upper limit for certification of conventional aeroplanes

(b) The approach is to be flown utilising operational flight techniques and onboard navigation system(s) and navigation aids to ensure it can be flown on the desired vertical path and track in a stabilised manner, without significant vertical path changes during the final-segment descent to the runway. APV is included.

(c) The approach is flown to a DA(H).

(d) No MAPt is published for these procedures.

2.5 Approach with a nominal vertical profile using the CDFA technique:

(a) The optimum angle for the approach slope is 3 degrees, and the gradient should preferably not exceed 6.5 percent which equates to a slope of 3.77 degrees, (400 ft/NM) for procedures intended for conventional aeroplane types / class and / or operations. In any case, conventional approaches should be limited to 4.5 degrees for Category A and B aeroplanes and 3.77 degrees for Category C and D aeroplanes, which are the upper limits for applying CDFA technique. A 4.5 degree approach slope is the upper limit for certification of conventional aeroplanes.

(b) The approach should meet at least the following facility requirements and associated conditions. NDB, NDB/DME, VOR, VOR/DME, LLZ, LLZ/DME, VDF, SRA, RNAV(LNAV) with a procedure which fulfils the following criteria:

(i) The final approach track off-set $\leq$ 5degrees except for Category A and B aeroplanes, where the approach-track off-set is $\leq$ 15 degrees; and

(ii) A FAF, or another appropriate fix where descent is initiated is available; and

(iii) The distance from the FAF to the THR is less than or equal to 8 NM in the case of timing; or

(iv) The distance to the threshold (THR) is available by FMS/RNAV or DME; or

(v) The minimum final-segment of the designated constant angle approach path should not be less than 3 NM from the THR unless approved by the Authority.

(c) CDFA may also be applied utilising the following:

(i) RNAV/LNAV with altitude/height cross checks against positions or distances from the THR; or

(ii) Height crosscheck compared with DME distance values.

(d) The approach is flown to a DA(H).

(e) The approach is flown as an SAp.

Note: Generally, a MAPt is published for these procedures.

3 Operational Procedures

3.1 A MAPt should be specified to apply CDFA with a nominal vertical profile as for any non-precision approach.

3.2 The flight techniques associated with CDFA employ the use of a predetermined approach slope. The approach, in addition, is flown in a stabilised manner, in terms of configuration, energy and control of the flight path. The approach should be flown to a DA(H) at which the decision to land or go-around is made immediately. This approach technique should be used when conducting:

(a) All non-precision approaches (NPA) meeting the specified CDFA criteria in Para 2.4; and
(b) All approaches categorised as APV.

3.3 The flight techniques and operational procedures prescribed above should always be applied; in particular with regard to control of the descent path and the stability of the aeroplane on the approach prior to reaching MDA(H). Level flight at MDA(H) should be avoided as far as practicable. In addition appropriate procedures and training should be established and implemented to facilitate the applicable elements of paragraphs 4, 5 and 8. Particular emphasis should be placed on subparagraphs 4.8, 5.1 to 5.7 and 8.4.

3.4 In cases where the CDFA technique is not used with high MDA(H), it may be appropriate to make an early descent to MDA(H) with appropriate safeguards to include the above training requirements, as applicable, and the application of a significantly higher RVR/Visibility.

3.5 For Circling Approaches (Visual Manoeuvring), all the applicable criteria with respect to the stability of the final descent path to the runway should apply. In particular, the control of the desired final nominal descent path to the threshold should be conducted to facilitate the techniques described in paragraphs 4 and 5 of this ACJ.

3.5.1 Stabilisation during the final straight-in segment for a circling approach should ideally be accomplished by 1000 ft above aerodrome elevation for turbo-jet aeroplanes.

3.5.2 For a circling approach where the landing runway threshold and appropriate visual landing aids may be visually acquired from a point on the designated or published procedure (prescribed tracks), stabilisation should be achieved not later than 500 ft above aerodrome elevation. It is however recommended that the aeroplane be stabilised when passing 1000 ft above aerodrome elevation.

3.5.3 When a low-level final turning manoeuvre is required in order to align the aeroplane visually with the landing runway, a height of 300 ft above the runway threshold elevation, or aerodrome elevation as appropriate, should be considered as the lowest height for approach stabilisation with wings level.

3.5.4 Dependent upon aeroplane type/class the operator may specify an appropriately higher minimum stabilisation height for circling approach operations.

3.5.5 The operator should specify in the OM the procedures and instructions for conducting circling approaches to include at least:

(a) The minimum required visual reference; and
(b) The corresponding actions for each segment of the circling manoeuvre; and
(c) The relevant go-around actions if the required visual reference is lost.

(d) The visual reference requirements for any operations with a prescribed track circling manoeuvre to include the MDA(H) and any published MAPt.

3.6 Visual Approach. All the applicable criteria with respect to the stability of the final descent path to the runway should apply to the operation of visual approaches. In particular, the control of the desired final nominal descent path to the threshold should be conducted to facilitate the appropriate techniques and procedures described in paragraphs 6 and 7 of this proposed ACJ.

3.6.1 Stabilisation during the final straight-in segment for a visual approach should ideally be accomplished by 500 ft above runway threshold elevation for turbo-jet aeroplanes.

3.6.2 When a low level final turning manoeuvre is required in order to align the aeroplane with the landing runway, a minimum height of 300 ft above the runway threshold elevation (or aerodrome elevation as appropriate) should be considered as the lowest height for visual approach stabilisation with wings level.

3.6.3 Dependent upon aeroplane type/class, the operator may specify an appropriately higher minimum stabilisation height for visual approach operations.

3.6.4 The operator should specify in the OM the procedures and instructions for conducting visual approaches to include at least:

(a) The minimum required visual reference; and

(b) The corresponding actions if the required visual reference is lost during a visual approach manoeuvre; and

(c) The appropriate go around actions.

3.7 The control of the descent path using the CDFA technique ensures that the descent path to the runway threshold is flown using either:

(a) A variable descent rate or flight path angle to maintain the desired path, which may be verified by appropriate crosschecks; or

(b) A pre-computed constant rate of descent from the FAF, or other appropriate fix which is able to define a descent point and/or from the final approach segment step-down fix; or

(c) Vertical guidance, including APV.

The above techniques also support a common method for the implementation of flight-director-guided or auto-coupled RNAV(VNAV) or GLS approaches.

3.8 Missed Approach - The manoeuvre associated with the vertical profile of the missed approach should be initiated not later than reaching the MAPt or the DA(H) specified for the approach, whichever occurs first. The lateral part of the missed approach procedure must be flown via the MAPt unless otherwise stated on the approach chart.

3.9 In case the CDFA technique is not used the approach should be flown to an altitude/height at or above the MDA(H) where a level flight segment at or above MDA(H) may be flown to the MAPt.

3.10 In case the CDFA technique is not used when flying an approach, an operator should implement procedures to ensure that early descent to the MDA(H) will not result in a subsequent flight below MDA(H) without adequate visual reference. These procedures could include:

(a) Awareness of radio altimeter information with reference to the approach profile;

(b) Enhanced Ground Proximity Warning System and / or Terrain Awareness information;

(c) Limitation of rate of descent;

(d) Limitation of the number of repeated approaches;

(e) Safeguards against too early descents with prolonged flight at MDA(H);

(f) Specification of visual requirements for the descent from the MDA(H).

4. Flight techniques

4.1 The CDFA technique can be used on almost any published non-precision approach when the control of the descent path is aided by either:

4.1.1 A recommended descent rate, based on estimated ground speed, which may be provided on the approach chart; or

4.1.2 The descent path as depicted on the chart.

4.2 In order to facilitate the requirement of paragraph 4.1.2 above, the operator should either provide charts which depict the appropriate cross check altitudes/heights with the corresponding appropriate range information, or such information should be calculated and provided to the flight-crew in an appropriate and useable format.

4.3 For approaches flown coupled to a designated descent path using computed electronic glide-slope guidance (normally a 3 degree path), the descent path should be appropriately coded in the flight management system data base and the specified navigational accuracy (RNP) should be determined and maintained throughout the operation of the approach.

4.4 With an actual or estimated ground speed, a nominal vertical profile and required descent rate, the approach should be flown by crossing the FAF configured and on-speed. The tabulated or required descent rate is established and flown to not less than the DA(H), observing any step-down crossing altitudes if applicable.

4.5 To assure the appropriate descent path is flown, the pilot not-flying should announce crossing altitudes as published fixes and other designated points are crossed, giving the appropriate altitude or height for the appropriate range as depicted on the chart. The pilot flying should promptly adjust the rate of descent as appropriate.

4.6 With the required visual reference requirements established, the aeroplane should be in position to continue descent through the DA(H) or MDA(H) with little or no adjustment to attitude or thrust/power.

4.7 When applying CDFA on an approach with a nominal vertical profile to a DA(H), it may be necessary to apply an add-on to the published minima (vertical profile only) to ensure sufficient obstacle clearance. The add on, if applicable, should be published in the OM – (Aerodrome Operating Minima). However, the resulting procedure minimum will still be referred to as the DA(H) for the approach.

4.8 Operators should establish a procedure to ensure that an appropriate callout (automatic or oral) is made when the aeroplane is approaching DA(H). If the required visual references are not established at DA(H), the missed-approach procedure is to be executed promptly. Visual contact with the ground alone is not sufficient for continuation of the approach. With certain combinations of DA(H), RVR and approach slope, the required visual references may not be achieved at the DA(H) in spite of the RVR being at or above the minimum required for the conduct of the approach. The safety benefits of CDFA are negated if prompt go-around action is not initiated.

4.9 The following bracketing conditions in relation to angle of bank, rate of descent and thrust /power management are considered to be suitable for most aeroplane types/class to ensure the predetermined vertical path approach is conducted in a stabilised manner:

(a) Bank angle: As prescribed in the AOM, should generally be less than 30 degrees;

(b) Rate of descent (ROD): The target ROD should not exceed 1000 fpm. The ROD should deviate by no more than ± 300 feet per minute (fpm) from the target ROD. Prolonged rates of descent which differ from the target ROD by more than 300 fpm indicate that the vertical path is not being maintained in a stabilised manner. The ROD should not exceed 1200 fpm except under exceptional circumstances, which have been anticipated and briefed prior to commencing the approach; for example, a strong tailwind.

> Note: zero rate of descent may be used when the descent path needs to be regained from below the profile. The target ROD may need to be initiated prior to reaching the required descent point (typically 0.3NM before the descent point, dependent upon ground speed, which may vary for each type/class of aeroplane). See (c) below.

(c) Thrust/power management : The limits of thrust/power and the appropriate range should be specified in the OM, Part B or equivalent documents

4.10 Transient corrections/ Overshoots: The above-specified range of corrections should normally be used to make occasional momentary adjustments in order to maintain the desired path and energy of the aeroplane. Frequent or sustained overshoots should require the approach to be abandoned and a go-around initiated. A correction philosophy should be applied similar to that described in paragraph 5 below.

4.11 The relevant elements of paragraph 4 above should, in addition, be applied to approaches not flown using the CDFA technique; the procedures thus developed, thereby ensure a controlled flight path to MDA(H). Dependent upon the number of step down fixes and the aeroplane type/class, the aeroplane should be appropriately configured to ensure safe control of the flight path prior to the final descent to MDA(H).

5 Stabilisation of energy/speed and configuration of the aeroplane on the approach

5.1 The control of the descent path is not the only consideration. Control of the aeroplane's configuration and energy is also vital to the safe conduct of an approach.

5.2 The approach should be considered to be fully stabilised when the aeroplane is:

(a) tracking on the required approach path and profile; and
(b) in the required configuration and attitude; and
(c) flying with the required rate of descent and speed; and
(d) flying with the appropriate thrust/power and trim.

5.3 The following flight path control criteria should be met and maintained when the aeroplane passes the gates described in paragraphs 5.6 and 5.7 below.

5.4 The aeroplane is considered established on the required approach path at the appropriate energy for stable flight using the CDFA technique when:

(a) It is tracking on the required approach path with the correct track set, approach aids tuned and identified as appropriate to the approach type flown and on the required vertical profile; and

(b) It is at the appropriate attitude and speed for the required target ROD with the appropriate thrust/power and trim.

5.5 It is recommended to compensate for strong wind/gusts on approach by speed increments given in the Aeroplane Operations Manual (AOM). To detect windshear and magnitude of winds aloft, all available aeroplane equipment such as FMS, INS, etc. should be used.

5.6 It is recommended that stabilisation during any straight-in approach without visual reference to the ground should be achieved at the latest when passing 1,000 ft above runway threshold elevation. For approaches with a designated vertical profile applying CDFA, a later stabilisation in speed may be acceptable if higher than normal approach speeds are required by ATC procedures or allowed by the OM. Stabilisation should, however, be achieved not later than 500 ft above runway threshold elevation.

5.7 For approaches where the pilot has visual reference with the ground, stabilisation should be achieved not later than 500 ft above aerodrome elevation. However, it is recommended that the aeroplane should be stabilised when passing 1,000 ft above runway threshold elevation.

5.8 The relevant elements of paragraph 5 above should in addition be applied to approaches not flown using the CDFA technique; the procedures thus developed ensure that a controlled and stable path to MDA(H) is achieved. Dependent upon the number of step down fixes and the aeroplane type/class, the aeroplane should be appropriately configured to ensure safe and stable flight prior to the final descent to MDA(H).

6 Visual Reference and path-control below MDA(H) when not using the CDFA technique

6.1 In addition to the requirements stated in Appendix 1 to JAR-OPS 1.430, the pilot should have attained a combination of visual cues to safely control the aeroplane in roll and pitch to maintain the final approach path to landing. This must be included in the standard operating procedures and reflected in the OM.

7 Operational Procedures and Instructions for using the CDFA technique or not

7.1 The operator should establish procedures and instructions for flying approaches using the CDFA technique and not. These procedures should be included in the OM and should include the duties of the flight crew during the conduct of such operations.

(a) The operator should publish in the OM the requirements stated in paragraphs 4 and 5 above, as appropriate to the aeroplane type or class to be operated.

(b) The checklists should be completed as early as practicable and preferably before commencing final descent towards the DA(H).

7.2 The operator's manuals should at least specify the maximum ROD for each aeroplane type/class operated and the required visual reference to continue the approach below:

(a) The DA(H) when applying CDFA;

(b) MDA(H) when not applying CDFA.

7.3 The operator should establish procedures which prohibit level flight at MDA(H) without the flight crew having obtained the required visual references.

> Note: It is not the intention of this paragraph to prohibit level flight at MDA(H) when conducting a circling approach, which does not come within the definition of the CDFA technique.

7.4 The operator should provide the flight crew with:

(a) Unambiguous details of the technique used (CDFA or not).

(b) The corresponding relevant minima should include:

(i) Type of decision, whether DA(H) or MDA(H);
(ii) MAPt as applicable;
(iii) Appropriate RVR/Visibility for the approach classification and aeroplane category.

7.5 Specific types/class of aeroplane, in particular certain Performance Class B and Class C aeroplanes, may be unable to comply fully with the requirements of this ACJ relating to the operation of CDFA. This problem arises because some aeroplanes must not be configured fully into the landing configuration until required visual references are obtained for landing, because of inadequate missed-approach performance engine out. For such aeroplanes, the operator should either:

(a) Obtain approval from the Authority for an appropriate modification to the stipulated procedures and flight techniques prescribed herein; or

(b) Increase the required minimum RVR to ensure the aeroplane will be operated safely during the configuration change on the final approach path to landing.

8.0 Training

8.1 The operator should ensure that, prior to using the CDFA technique or not (as appropriate), each flight crew member undertakes:

8.1.1 The appropriate training and checking as required by Subpart N. Such training should cover the techniques and procedures appropriate to the operation which are stipulated in paragraphs 4 and 5 of this ACJ

8.1.2 The operator's proficiency check should include at least one approach to a landing or go around as appropriate using the CDFA technique or not. The approach should be operated to the lowest appropriate DA(H) or MDA(H) as appropriate; and, if conducted in a Simulator, the approach should be operated to the lowest approved RVR.

Note. The approach required by paragraph 8.1.2 is not in addition to any manoeuvre currently required by either JAR-FCL or JAR-OPS 1. The requirement may be fulfilled by undertaking any currently required approach (engine out or otherwise) other than a precision approach, whilst using the CDFA technique.

8.2 The policy for the establishment of constant predetermined vertical path and approach stability are to be enforced both during initial and recurrent pilot training and checking. The relevant training procedures and instructions should be documented in the OM.

8.3 The training should emphasise the need to establish and facilitate joint crew procedures and CRM to enable accurate descent path control and the requirement to establish the aeroplane in a stable condition as required by the operator's operational procedures. If barometric vertical navigation is used the crews should be trained in the errors associated with these systems.

8.4 During training emphasis should be placed on the flight crew's need to:

(a) Maintain situational awareness at all times, in particular with reference to the required vertical and horizontal profile;
(b) Ensure good communication channels throughout the approach;
(c) Ensure accurate descent-path control particularly during any manually-flown descent phase. The non-operating/non-handling pilot should facilitate good flight path control by:

(i) Communicating any altitude/height crosschecks prior to the actual passing of the range/altitude or height crosscheck;
(ii) Prompting, as appropriate, changes to the target ROD;

(iii) Monitoring flight path control below DA/MDA.

(d) Understand the actions to be taken if the MAPt is reached prior to the MDA(H).

(e) Ensure that the decision to go around must, at the latest, have been taken upon reaching the DA(H) or MDA(H).

(f) Ensure that prompt go around action is taken immediately when reaching DA(H) if the required visual reference has not been obtained as there may be no obstacle protection if the go-around manoeuvre is delayed.

(g) Understand the significance of using the CDFA technique to a DA(H) with an associated MAPt and the implications of early go around manoeuvres.

(h) Understand the possible loss of the required visual reference (due to pitch-change/climb) when not using the CDFA technique for aeroplane types/classes which require a late change of configuration and/or speed to ensure the aeroplane is in the appropriate landing configuration.

8.5 Additional specific training when not using the CDFA technique with level flight at or above MDA(H).

8.5.1 The training should detail:

(a) The need to facilitate good CRM; with good flight-crew communication in particular.

(b) The additional known safety risks associated with the 'dive-and-drive' approach philosophy which may be associated with non-CDFA.

(c) The use of DA(H) during approaches flown using the CDFA technique.

(d) The significance of the MDA(H) and the MAPt where appropriate.

(e) The actions to be taken at the MAPt and the need to ensure the aeroplane remains in a stable condition and on the nominal and appropriate vertical profile until the landing.

(f) The reasons for increased RVR/Visibility minima when compared to the application of CDFA.

(g) The possible increased obstacle infringement risk when undertaking level flight at MDA(H) without the required visual references.

(h) The need to accomplish a prompt go around manoeuvre if the required visual reference is lost.

(j) The increased risk of an unstable final approach and an associated unsafe landing if a rushed approach is attempted either from:

(i) Inappropriate and close-in acquisition of the required visual reference;

(ii) Unstable aeroplane energy and or flight path control.

(k) The increased risk of CFIT (see introduction).

9. Approvals

9.1 The procedures which are flown with level flight at/or above MDA(H) must be approved by the Authority and listed in the OM.

9.2 Operators should classify aerodromes where there are approaches which require level flight at/or above MDA(H) as being B and C categorised. Such aerodrome categorisation will depend upon the operator's experience, operational exposure, training programme(s) and flight crew qualification(s).

9.3 Exemptions granted in accordance with JAR-OPS 1.430, paragraph (d)(2) should be limited to locations where there is a clear public interest to maintain current operations. The exemptions should be based on the operators experience, training programme and flight crew qualification. The exemptions should be reviewed at regular intervals and should be terminated as soon as facilities are improved to allow SAp or CDFA.

- END -