IV. CRD table of comments, responses and resulting text

(General Comments)	-

comment	*2* comment by: *LBA* **LBA:** The LBA has no comments
response	**Noted.** Thank you for you input.

comment	*3* comment by: *Norwegian Helikopter Employee Association* This Flight Crew Alerting CRI consultation paper and it`s content of 10 identified abnormal conditions, where crew should have warnings, should not only apply for aeroplanes, it should also apply for IFR rated helicopters.
response	**Noted**. Thank you for your comment. EASA acknowledges the comment but will not change the text as EASA prepared this Consultation Paper on the basis of the alerting requirement in CS25, which is significantly different from the one included Certification Specifications applicable to rotorcraft (CS27.1322 and CS29.1322).

comment	*6* comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)* **General** Thank you for the opportunity to comment on Proposed Deviation ref. DEV-F25.1322-01 Issue 01 on 'Flight Crew Alerting'. Please be advised that there are no comments from the Swedish Transport Agency.
response	**Noted**. Thank you for you input.

comment	*7* comment by: *Swiss Air-Ambulance Rega* Swiss Air-Rescue Rega has neither objections nor proposals for improvement. Thank you for the opportunity to review and comment the Consultation Paper DEV-F25.1322-01.
response	**Noted**. Thank you for you input.

SUBJECT	p. 1

comment	*4* comment by: *Dassault-Aviation* In order to clarify the requested changes, DA proposes to reword § 1.2 Pre-Conditions for Application of the Deviation: • Current wording: "Exceptional deviation with a limited number of CS 25.1322 non-compliances that can be well covered by adequate mitigations. Full CS 25.1322 Amdt. 20 or higher Amdt. compliance required with the next change to Type Certificate that affects those functions." • Proposed wording: "Exceptional deviation with a limited number of CS 25.1322 non-compliances that can be well covered by adequate mitigations. Full CS 25.1322 Amdt. 20 or higher Amdt. compliance **will be restored** with the next change to Type Certificate **that affects alerting functions (i.e. CAT2 implementation)."**
response	**Partially accepted** Thank you for your comment. The text will be revised clarifying that the full compliance will be required with the next change to the alerting functions. (*Updated text not to be included in the CRD:* *Exceptional deviation with a limited number of CS 25.1322 non-compliances that can be well covered by adequate mitigations. Full CS 25.1322 Amdt. 20 or higher Amdt. compliance will be required with the next change to Type Certificate that affects alerting function"*

IDENTIFICATION OF ISSUE:	p. 2

comment	*1* comment by: *Stefano Maruelli* e) Visual alert indications must: • (1) conform to the following colour convention: • (i) Red for Warning alert indications. • (ii) Amber or yellow for Caution alert indications. • (iii) Any colour except red or green for Advisory alert indications. (…) Seems "(iii) Any colour except red or green for Advisory alert indications. (…)"

Yellow must not be included

it seems to leave too much room for personal interpretation of the color type, so to an "uncertain" color/danger situation: due to pilot / environement, for example old and/or dirty surface etc.

So bright white or blue / light blue seems the only non-confusing options

response

Noted. Thank you for your comment. EASA acknowledges the comment and understand that the comment does not propose changes to the deviation. EASA will not change the text as the scope of this Consultation Paper is not to update the current CS25.1322 text.

comment *8* comment by: *FOCA (Switzerland)*

Page 3, first section:
FOCA has noted that in the present draft there is no root cause mentioned why the operator deviates from CS.25.1322 during initial certification and asks itself, if there is there a risk assessment addressing the deviations?

response

Noted. Thank you for your comment. EASA acknowledges the comment but will not change the text. The root cause identified is included in this section of the Deviation.

Risk assessment has been performed and has concluded that AFM update (memory items and information) provides for adequate mitigations also in the most demanding cases, since attention-getting cues are assured in case of aircraft systems failures. The only case when the dual sense is not assured will be mitigated via additional limitation.

comment *9* comment by: *FOCA (Switzerland)*

Page 7, first section:
Is there is a date or deadline by which the operator must comply with the certification standard discussed here?

response

Noted. Thank you for your comment. EASA acknowledges the comment, but will not change the text as a time limit has not been identified to support the proposed mitigations for this Deviation. Nevertheless, agreement with the Applicant has been reached for compliance restoration in the next change that will impact the alerting functions.

comment *12* comment by: *Transport Canada Civil aviation*

Editorial: airpeed should be airspeed

response	**Accepted**. Thank you for your comment. EASA has revised the text as proposed at Page 2.

1. APPLICABILITY p. 8

comment	*11* comment by: *Transport Canada Civil aviation* Section 1.2 *Exceptional deviation with a limited number of CS 25.1322 non-compliances that can be well covered by adequate mitigations.* suggested resolution: As stated in this statement, should these non-compliances be still a non-compliant with the associated requirement from certification standards perspective although an adequate mitigation of AFM found to be adequately acceptable which serves as alternative means of compliance? Why would EASA not consider going back to the previous amdt level instead of going through such deviation on this? Section 1.2 *Full CS 25.1322 Amdt. 20 or higher Amdt. compliance required with the next change to Type Certificate that affects those functions.* *suggested resolution:* What is the EASA rationale if the affected non compliances could go to elect using higher Amdt with the next change to Type Cert? Could fully compliance of Amdt 20 be skipped by then applying to the later Amdt?
response	**Noted**. Thank you for your comment. EASA acknowledges the comment but will not change the text. The EU regulatory system (Regulation (EU) No 748/2012 – Annex I 21.B.80) does not allow to set the Certification Basis an amendment level antecedent to the Application Date. Equivalent Safety Findings (ESF) and Deviations are the only two means that allow derogation from the CS 25 requirements defined in the EASA certification Basis. The current Certification Basis of the aircraft has been set to CS25 Amdt 20. An assessment of the certification basis in line with point 21.a.101 will be done when the applicant will apply for the relevant design change affecting those functions. This may result in an amendment later

than amendment 20 depending on the result of the point 21.a.101 assessment (e.g. for a significant change).

3. MITIGATING FACTORS p. 9

comment

5 comment by: *Dassault-Aviation*

ILS CAT1 mitigation
For the deviation n°8 (manual LOC, B/C or LOC/DME) and n°9 (ILS CAT1):
The proposed AFM procedure (higher minima) seems not relevant as there is no agreed rationale to determine this decision height penalty in such conditions. For some ILS approaches (or LOC, B/C or LOC/DME), prior to the runway threshold, minimum altitude constraints for obstacle clearance may exist. An increased decision height may not correctly address these types of approaches.
In fact, the idea for higher minima was to ensure that the pilot not having a second means of alerting would take longer to detect the situation, "loss of ILS Beam detecting the red LOC and/or GS flags".
For Dassault an alternate mitigation factor would be the head-down IPFD SVS removal (including the synthetic runway) that would increase the saliency of the visual cues indicating the loss of ILS data when flying a manual ILS CAT 1 approach (or manual LOC, B/C or LOC/DME).
Therefore, Dassault proposes to replace higher minima mitigation by a specific AFM limitation to remove the SVS layer in case of manual CAT1 approach (or manual LOC, B/C or LOC/DME).

response

Accepted. Thank you for your comment. EASA acknowledges the comment and will change the text.

EASA is convinced about the positive safety benefit of the SVS imagery in the PFD, nevertheless after careful consideration, it is ready to accept the rational proposed in this comment as proper mitigating factor for this (and only) specific case.

The text of the mitigation will be modified as follow:

Addition of dedicated mention in the AFM to detail the flight deck effect (removal of Flight Director / Raw data) which may stop the procedure.
and
Removal of the SVS (including the synthetic runway) on PFD to emphasizes the visual cues indicating the loss of ILS data in case of manual CAT1 approach (or manual LOC, B/C or LOC/DME).

comment

10 comment by: *Transport Canada Civil aviation*

table 4, item 9, column "abnormal condition", p.11

	Loss of ILS beam refers to footnote #2, which is not on this page. suggested resolution: Reference should be to footnote #3 instead. table 4, items 8 and 9, column “mitigation”, p.11 The proposed text “Addition of dedicated mention in the AFM to detail the flight deck effect (removal of Flight Director / Raw data) which **may stop the procedure**…” does not imply a resolution to the abnormal condition. If the crew removes the flight director / raw data, which procedure may stop? The alert? The actual approach? Mitigation should be clear and unambiguous suggested resolution: The outcome of removing the FD/Raw data must be specific. EASA to define what is the outcome and complete the suggested text: “Addition of dedicated mention in the AFM to detail the flight deck effect (removal of Flight Director / Raw data) which will table 4, item 10, column “mitigation”, p.11 The proposed text “Addition of dedicated mention in the AFM to detail the flight deck effect (amber CAS message) which **may stop the procedure**…” does not imply a resolution to the abnormal condition. Mitigation should be clear and unambiguous to allow for an equivalent level of safety. As per proposed, it is ambiguous and may or may not stop the procedure leaving the crew in doubt. suggested resolution: The mitigation needs to have a clear outcome EASA to define what is the outcome and complete the suggested text: “Addition of dedicated mention in the AFM to detail the flight deck effect (amber CAS message) which will Tables 3 and 4, p.10 and 11 Tables 3 and 4 should match the proposed numbering in Tables 1 and 2 as per previous comment. suggested resolution: Table 3 should address mitigations for cases in Table 1 and Table 4 in cases for Table 2 with the new numbering proposed in the previous comment. Tables 2 and 4, p.6 and 11 Footnotes 2 and 3 give the same information suggested resolution: Only one number should be used as the content is the same or replace the foot notes by a Note at the end of the tables. Is there a different flag or CAS message when the loss of ILS is due to a system failure?
response	**Partially accepted** Thank you for your comment. The editorial comments have been accepted and the text revised the accordingly.

Regarding the comments to table 4, items 8, 9 and 10, column “mitigation”, EASA has the following response: the mitigating factor is based on inclusion of a mention in the AFM (potentially a table) summarizing the Flight Deck Effect (FDE) and expected crew reaction in function of the altitude. In this way the procedure will be stopped, however at higher altitude, the crew can reconfigure the approach and switch to another type. For this reason, EASA believes the wording in the proposed deviation is clear and the mitigating action will not be ambiguous for the crew. The text will not be changed.