



**COMMENT RESPONSE DOCUMENT (CRD)  
TO NOTICE OF PROPOSED AMENDMENT (NPA) 2010-08**

**for amending Decision No 2003/19/RM of the Executive Director of the Agency of 28 November 2003 on acceptable means of compliance and guidance material to Commission Regulation (EC) No 2042/2003 of 20 November 2003 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks**

**'Control of contracted maintenance personnel'**

**EXECUTIVE SUMMARY**

The requirement 145.A.30(e) imposes on the maintenance organisations the need to establish and control the competence of personnel involved in any maintenance, management, and/or quality audits in accordance with a procedure and to a standard agreed by the competent authority. While the rule makes no distinction between employed and contracted personnel in relation to their competence and its assessment, feedback seems to indicate that the common practice in the industry is that contracted personnel are not systematically assessed for their adequate competence. The aim of the Rulemaking task 145.022 is to develop AMC/GM for the control of contracted maintenance personnel. NPA was published in July 2010 and followed the standard consultation process. Some of the comments received supported the proposal and some made positive contributions to amend the text. Two comments requested the withdrawal of the proposal. In accordance with the normal rulemaking procedure, this CRD has been developed after a review group has studied the comments received to the NPA and delivered to the Agency a revised proposed text. The revised text of this CRD contains minor changes compared to the text proposed in the NPA and none is expected to be considered as controversial.

## **Explanatory Note**

### **I. General**

1. The purpose of the Notice of Proposed Amendment (NPA) 2010-08, dated 15 July 2010, was to propose an amendment to Decision 2003/19/RM of the Executive Director of the European Aviation Safety Agency of 28 November 2003<sup>1</sup>.

### **II. Consultation**

2. The NPA 2010-08 was published on the web site (<http://www.easa.europa.eu>) on 19 July 2010.

By the closing date of 19 October 2010, the European Aviation Safety Agency ('the Agency') had received 49 comments from 23 National Aviation Authorities, professional organisations and private companies.

### **III. Publication of the CRD**

3. All comments received have been acknowledged and incorporated into this Comment Response Document (CRD) with the responses of the Agency.
4. In responding to comments, a standard terminology has been applied to attest the Agency's acceptance of the comment. This terminology is as follows:

- **Accepted** – The comment is agreed by the Agency and any proposed amendment is wholly transferred to the revised text.
- **Partially Accepted** – Either the comment is only agreed in part by the Agency, or the comment is agreed by the Agency but any proposed amendment is partially transferred to the revised text.
- **Noted** – The comment is acknowledged by the Agency but no change to the existing text is considered necessary.
- **Not Accepted** - The comment or proposed amendment is not shared by the Agency.

The resulting text highlights the changes as compared to the current rule.

5. The Executive Director Decision on 'Control of contracted maintenance personnel' will be issued at least two months after the publication of this CRD to allow for any reactions of stakeholders regarding possible misunderstandings of the comments received and answers provided.

Such reactions should be received by the Agency not later than 21 September 2011 and should be submitted using the Comment-Response Tool at <http://hub.easa.europa.eu/crt>.

### **IV. Summary of comments received and main changes introduced after the NPA**

6. Some stakeholders have commented in respect of what "sufficient staff" should be in order to ensure organisation stability, with different intentions: while some have requested to consider less than half of the directly employed staff as sufficient or to apply the same proportion to the whole maintenance organisation (instead of every shift and workshop, hangar or flight line), some other stakeholders have on the

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<sup>1</sup> Decision No 2003/19/RM of the Executive Director of the European Aviation Safety Agency of 28 November 2003 on acceptable means of compliance and guidance material to Commission Regulation (EC) No 2042/2003 of 20 November 2003 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks. Decision as last amended by Decision 2011/003/R of 10 May 2011.

contrary requested that more than half of the staff should be directly employed to ensure organisation stability. The CRD has not introduced significant changes compared to the text proposed in the NPA. The review group understands that no changes should be made on the text already proposed in the NPA since the 50-50 ratio between directly employed and contracted staff is considered to be an acceptable means of compliance to ensure organisational stability.

7. Similarly, the comments proposing that this ratio should be measured in terms of duration of the employment of the person within the maintenance organisation have not been accepted since there was no information available to the group that could allow to define this length and consequently to modify the acceptable means of compliance in this respect, preferring to leave the established acceptable ratio measure in terms of directly employed and contract staff.
8. Some comments on the NPA presented particular situations in respect of the use of contract staff by organisations that could provide organisation stability without meeting the acceptable means of the NPA. Without taking a position on whether a proposed approach provides for organisation stability, it is clear that the AMC cannot be tailored for all situations and that the competent authority should assess each case when the circumstances are different from those considered in the final text of the acceptable means of compliance. Nevertheless, the proposed text, compared to today's scenario, should provide flexibility to certain organisations to increase temporarily the fraction of competent contract staff for a specific operational necessity in a controlled safe manner by means of an agreed procedure that should be satisfactory for the competent authority.
9. The text proposed in this CRD has been amended to also consider B1 and B2 support staff in AMC1 to 145.A.30(e) (missing in the NPA text), when establishing which objective the competence assessment should achieve in relation to each personnel category (the list of personnel job functions, roles and titles may be different for different organisations).
10. In respect of human factors continuation training, some existing information was omitted by mistake in the NPA and has been now added thanks to one of the comments received.
11. Also the possibility to postpone the initial human factors training for six months has been more clearly and explicitly limited, in this acceptable means of compliance, to new employees when working under direct supervision.
12. Finally, various comments received in respect of GM2 to 145.A.30 (e), suggested expanding some items to certain job functions. The review group has considered this request together with a proposal to present this data in a table. The result is that the text has been changed in format and content because of the comments received but also while trying to simplify the list of items in the first column of the new table. It is important to stress that this table is only guidance material and variations may be equally valid.
13. The resulting text contained in this CRD is defining changes compared to the current text of Decision No 2003/19/RM as last amended. Depending on the entry into force of the foreseen amendments to Commission Regulation (EC) No 2042/2003 as a consequence of the Agency Opinions 05-2008, 04-2009 and 05-2009, the resulting text of the Agency Decision that would follow this CRD may require minor adjustments.

## V. CRD table of comments, responses and resulting text

(General Comments)		-
comment	<p>1</p> <p>comment by: <i>PeterMarosszekyFRAeS</i></p> <p>I agree with the proposed revision, however the reg. should emphasize that the B1 , B2 Licence holder has to be competent as he has a licence and lgeally, whether he is employed or under contract he is the accountable person...</p>	
response	<p><i>Noted</i></p> <p>No need for change.</p>	
comment	<p>15</p> <p>comment by: <i>Jamie Jones</i></p> <p>I am a certifying B2 engineer. I support the NPA 145-012. I belive it makes clear the requirements for staff involved with the maintenance of aircraft to be verified as competant to carry out thier tasks and thus ensure the safe operation of the aircraft.</p> <p>There is a clearly defined role for the licenced B1 and B2 engineers, who ensure that the standard of maintenance is upheld.</p>	
response	<p><i>Noted</i></p> <p>No need for change.</p>	
comment	<p>16</p> <p>comment by: <i>WayneRowlands</i></p> <p>EC Regulation 2042/2003, Parts 147, 66, 145 and the engineering function of Part M are only of any use if the reasons for certifying an aircraft after maintenance are fully understood.</p> <p>The regulation, EC 2042/2003, must be taken as a whole to ensure reliable levels of flight safety. Should any part/annex be degraded the whole will become less effective thus affecting flight safety.</p> <p>Due to the less intensive training and experience of Part 66 A licence holders category A privileges do not include systems troubleshooting and as such the A licence holder should be limited to certain simple tasks. It should also be perfectly clear that avionic systems troubleshooting should only be certified by appropriately approved Part 66 B2 Licence holders and mechanical systems can only be certified by B1's.</p> <p>The Licence holder must successfully complete Part 147 basic and type/task training whilst their employing company, a Part 145 approved Maintenance Organization, would issue the Licence holder a company authorisation document authorizing the individual to certify on their behalf. The Part 145 Maintenance Organisation should also be bound contractually by a Part M organization to ensure that maintenance is performed to EC Regulation 2042/2003 standards.</p> <p>The main reason for the creation of a legal requirement to certify engineering activity is to synchronize and validate the whole regulatory structure ensuring the public that universally acceptable levels of safety will be maintained at all times.</p>	

The proposed amendment for 145-012 Multiple and Single release will ensure the regulation is unambiguous and there is no compromise to safety. This will ensure all Part 145 organisations harmonise the certification of maintenance processes and the release to service which must remain the final check on safe procedures.

As a Part 66 B1 licence engineer tasked with certifying maintenance on a daily basis I fully support the proposed amendment to the regulation as it is simple, logical and clearly enhances safety at no extra cost to the industry.

response *Not accepted*

This comment was posted on the wrong NPA. For this NPA it has been ignored.

comment 17

comment by: *Gary Fowler*

It is my belief that all parts of EC Regulation 2042/2003, Parts 147, 66, 145 as well as the Engineering function of Part M are worthless if the reasons for certifying an aircraft after maintenance are not fully understood.

Each Part (Annex) of EC Regulation 2042/2003 enhances the next and ensures a tier of compliance that will guarantee acceptable levels of flight safety. Any reduction in the importance or influence of any Part will cause safety to be compromised.

Therefore, it should be perfectly clear that the certification of certain limited task orientated activities can be performed by Category A licence holders. However the Category A privileges do not include systems troubleshooting. It should also be perfectly clear that avionic systems troubleshooting can only be certified by appropriately approved Part 66 B2 Licence holders and that troubleshooting of mechanical systems can only be certified by B1's.

A Licence holder will have successfully completed Part 147 basic and type/task training whilst their employer, a Part 145 approved Maintenance Organization, would have issued the Licence holder a company authorisation document that authorizes the individual to certify on their behalf. The Part 145 Maintenance Organisation itself would also be bound contractually by a Part M organization or airline to ensure that maintenance is performed to the standards set by EC Regulation 2042/2003.

The fundamental reasons behind the creation of a legal requirement to certify any engineering activity is to legitimate and harmonise the whole regulatory structure and offer the travelling public an assurance that common acceptable levels of safety have been maintained at all times.

The proposed amendment for 145-012 Multiple and Single release will remove the current ambiguity contained within the regulation that could compromise safety and in doing so will ensure that all Part 145 organisations harmonise the certification of maintenance process. With outsourcing and third party maintenance work on the increase, harmonisation of the release to service process is a safety issue.

As a Part 66 Licence Engineer tasked with certifying maintenance on a daily basis I fully support the proposed amendment to the regulation as it is simple, logical and clearly enhances safety at no extra cost to industry

response *Not accepted*

This comment was posted on the wrong NPA. For this NPA it has been ignored.

comment

18

comment by: *Bristow (European Operations)*

- 1) I am adding these comment in my role as Technical Chairman of the European Helicopter Association Technical and Maintenance Committee.

Modify the text "...Has sufficient staff means that the organization employs or contracts such staff, as detailed in the man-hour plan, of which at least half the staff that perform maintenance in each workshop, hangar or flight line on any shift should be employed to ensure organizational stability" **into the following text** "Has sufficient staff means that the organization employs or contracts such staff, as detailed in the man-hour plan, of which at least half the staff that perform maintenance ~~in each workshop, hangar or flight line on any shift~~ should be employed to ensure organizational stability"

**Comment 1)** The reason for this amendment is that the maintenance organization can move personnel from one workshop to another, or from one base to another, or from one hangar to another, in order to fulfill the maintenance requirements while keeping organizational stability. The restriction of "50% employed" in EACH base, or EACH hangar, is therefore definitively too restrictive.

**Comment 2)** There are situations where small operators with one aircraft employ only one technician and, instead of setting up their own maintenance organization, they use the support of an established PART 145 maintenance organization in putting their technician (employed by the Operator) into the PART 145 organization. There is a contract in place between the Operator and the PART 145 organization stating clearly that the Operator must made available sufficient technical personnel to manage the daily maintenance of its aircraft, clearly stating that the PART 145 organization has full power on the maintenance activities" of the said technical personnel, and clearly stating that if the Operator will not provide sufficient technical personnel the operations will be stopped and the PART 145 organization will not be liable for the stoppage.

This implies that the operating facilities of the Operator are qualified as "line maintenance base" by the PART 145 organization and the "line maintenance base" is powered by a contracted personnel (the operator's technician via a contract between the Operator and the PART 145 organization).

If there is no amendment to the text as highlighted above, this situation will be "illegal" as 100% of the personnel on the Operator's flight line is contracted and not employed. The only alternative should be that the maintenance organization is "forced" to hire the operator's technician with several legal and fiscal problems.

With the text modified this situation would be legal as long as the PART 145 organization has sufficient employed staff to comply with the "50% requirement".

- 2) Modify the text "...Has sufficient staff means that the organization employs or contracts such staff, as detailed in the man-hour plan, of which at least half the staff that perform maintenance in each workshop, hangar or flight line on any shift should be employed to ensure organizational stability" **into the following text** "Has sufficient staff means that the organization employs or contracts such staff, as detailed in the man-hour plan, of which at least half the staff that perform maintenance ~~in each~~

~~workshop, hangar or flight line on any shift~~ has a long term engagement (longer than xx (i.e. three ) months) with the organization to ensure organizational stability"

**Comment 1)** There are cases , according to the National Labour Contracts, where an employee can resign from the organization with 11 days notice. Even if the employee is formally "employed" his quick departure can create problems to the organizational stability.

There can also be cases where the employee is employed with a "short term" contract , such as one month period.

In both cases the "long term engagement" text should solve such situations.

- 3) Modify the text "... employed means the person is directly employed as an individual by the maintenance organization approved under PART145, ...." into the following text "... employed means the person is directly employed as an individual by the maintenance organization approved under PART145, or employed by an Operator, which signed a maintenance contract with the maintenance organization approved under PART 145, and assigned to work under the said PART145 organization responsibility, ...."

**Comment 1)** There are situations where small operators with one aircraft employ only one technician and, instead of setting up their own maintenance organization, they use the support of an established PART 145 maintenance organization in putting their technician (employed by the Operator) into the PART 145 organization. There is a contract in place between the Operator and the PART 145 organization stating clearly that the Operator must made available sufficient technical personnel to manage the daily maintenance of its aircraft, clearly stating that the PART 145 organization has full power on the maintenance activities" of the said technical personnel, and clearly stating that if the Operator will not provide sufficient technical personnel the operations will be stopped and the PART 145 organization will not be liable for the stoppage.

This implies that the operating facilities of the Operator are qualified as "line maintenance base" by the PART 145 organization and the "line maintenance base" is powered by a contracted personnel (the operator's technician via a contract between the Operator and the PART 145 organization).

If there is no amendment to the text as highlighted above, this situation will be "illegal" as the personnel on the Operator's flight line is contracted and not employed.

- 4) Modify the text "... employed means the person is directly employed as an individual by the maintenance organization approved underPART145, ...." into the following text "... employed means the person is directly employed as an individual by the maintenance organization approved under PART145, or contracted from a "one man" external organization with a long term contract, ...."

**Comment 1)** There are situations where technicians , especially the aged and experienced ones, for legal and fiscal reasons prefer to create their own company, with only one technician employed (themselves) , and contract the man-hours of its employees (again only themselves) to PART 145 organization, instead of being directly employed.



If the contract between the PART145 organization and these "one-man" external organization is a long term contract, the "contracted" technician is managed by the PART 145 organization as an employed technician, and therefore should be considered as "employed" in the meaning of the AMC text.

response *Not accepted*

Response to Comment 1) to 1): Not accepted: The movement of personnel within the organisation is not affected by the "50-50 ratio rule". The NPA is introducing flexibility provisions to adjust the ratio of employed and contracted personnel to the particulars of the organisation.

Response to Comment 2) to 1): Not accepted: The "requirement" does not apply to the operator. In respect of the maintenance organisation, the NPA is introducing flexibility provisions to adjust the ratio of employed and contracted personnel to the particulars of the organisation.

Response to Comment 1) to 2): Not accepted. Long-term engagement does not prevent personnel from leaving the company and thus affecting the organisation stability. The NPA cannot consider all types of labour contracts that could be used by the organisations, but flexibility provisions have been introduced.

Response to Comment 1) to 3): Not accepted. It is not the intention of the AMC to cover all potential arrangements. The AMC is one means of compliance.

Response to Comment 1) to 4): Not accepted. It is not the intention of the AMC to cover all potential arrangements. The AMC is one means of compliance. A Part-145 organisation contracting a one-man organisation should be able, considering its employed staff, to guarantee organisation stability and to show compliance with the regulation.

comment 19

comment by: *Luftfahrt-Bundesamt*

**LBA Comments:**

- The proposed change of the AMC is only based on "feedback received" without any detailed substantiation and statistically-based safety analyses.
- The 50/50 ratio of the current AMC is used with limited individual exemptions. The AMC draft opens these exemptional possibilities "...for the purpose of meeting a specific operational necessity..." without any limitation or further explanation. This indefinite legal term opens the possibility for regular unlimited use. The safety impact assessment states that the risk of a following destabilization of the organization is mitigated by the involvement of the competent authority and the necessity for a control procedure. That means the authority shall take responsibility for the safety in this process by extra involvement in surveillance and approval of procedures, which requires additional personal capacities in the authorities.
- The requested control procedure requires amongst others that managers, planners, mechanics, specialized services staff, supervisors, quality audit staff, certifying staff and B1 and B2 support staff, whether employed or contracted, are assessed for competence before unsupervised work commences and competence is controlled on a continuous basis based on detailed lists (GM 2 145.A.30 (e) which are mentioned as not exhaustive. The intention of the AMC to provide information for control of contracted

	<p>personnel is extended also to employed staff. This is not necessary because EASA states in the background information : "approved maintenance organisations generally fulfil these requirements when referring to personnel directly employed by the company". This proposed AMC creates an additional burden to industry and responsible authorities which is not based on a substantial safety analysis resulting in a safety benefit.</p> <ul style="list-style-type: none"> <li>• Based on these comments the LBA refuses the NPA 2010-08.</li> </ul>
response	<p><i>Noted</i></p> <ul style="list-style-type: none"> <li>• Bullet 1: Noted. As explained in paragraph 12 of the NPA, the impact of the proposed amendment is considered minimal.</li> <li>• Bullet 2: Noted. The possibility to deviate from the 50-50 ratio is intended to provide flexibility to the organisation in a controlled safe manner.</li> <li>• Bullet 3: Noted. The proposed change with this NPA should help organisations to assess the competence of its personnel (directly employed or contracted) in a more structured manner and help authorities to verify compliance. Organisations using this guidance should be able to better develop their own procedure mentioned in MOE chapter 3.14.</li> <li>• Bullet 4: Noted.</li> </ul>
comment	<p>20 <span style="float: right;">comment by: UK CAA</span></p> <p>Please be advised that the UK CAA have no comments to make on NPA 2010-08.</p>
response	<p><i>Noted</i></p>
comment	<p>22 <span style="float: right;">comment by: KLM Engineering &amp; Maintenance</span></p> <p>In general, KLM Engineering &amp; Maintenance supports this NPA. We would however wish to make a plea for keeping this competence assesment a practical thing and integrate as much as possible in current existing systems that address evaluation of personnel in the organization . We currently already practice competence assessment to a fair extent.</p>
response	<p><i>Noted</i></p> <p>The text of the NPA provides guidance to enable the organisation to build or improve the competence assessment procedure.</p>
comment	<p>31 <span style="float: right;">comment by: Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)</span></p> <p>The Swedish Transport Agency, Civil Aviation Department is supporting the content of NPA 2010-08</p>
response	<p><i>Noted</i></p>
comment	<p>44 <span style="float: right;">comment by: DGAC FRANCE</span></p> <p><b>1. <u>AFFECTED PARAGRAPH:</u></b> <b>General improvement</b></p>

**2. COMMENT:**

Part 145.A.35 allows Certifying staff to obtain, a copy of their personal records when leaving a company. It could be useful to do the same for other persons. In this way, they could keep a trace of their training records, experiences which should be used to demonstrate the information recorded in the Form of the GM 3.

Such a requirement shall be introduced in the Part 145 itself (or Part M as well).

response *Noted*

However, this goes beyond the scope of this task.

comment 50 comment by: *Swiss International Airlines / Bruno Pfister*

SWISS Intl Air Lines is not in favour of the proposed changes. Among other points, we believe they will create a more complicated process in Human Factors Training.

response *Not accepted*

The proposed text is not introducing new requirements for Human factors training.

comment 52 comment by: *LHT*

[Attachment#1](#)

The comments are included in the document which is attached.

Generally we want to mention that we welcome this Guideline.

Keeping the flexibility we added some comments.

response *Noted*

Comment 52.1: Noted. Proposed text has the same implications as the existing text. There is no need for changes.

Comment 52.2: Not accepted. Contracted personnel should be positively assessed (and have received HF training if necessary), similarly to employed staff, before commencing actual job function.

Comment 52.3: Not accepted. The target group for FTS training is already defined in Appendix IV to the AMC 145.A.30 (e) and is not in contradiction with the NPA.

Comment 52.4: Noted. Proposed text has the same implications as the existing text. There is no need for change.

**TITLE PAGE**

p. 1

comment 49

comment by: *Cessna Aircraft Company*

[Attachment#2](#)

	Please see attached file for Cessna Aircraft Company comments.
response	<i>Noted</i>

**A. EXPLANATORY NOTE - V. Regulatory Impact Assessment**

p. 6

comment	2	comment by: <i>Association of Dutch Aviation Technicians NVLT</i>
	<p>NVLT cmt.: The NVLT strongly disagrees on the 50-50 ratio of employed and contracted staff, we think that the percentage of 50% contracted staff in a maintenance organization is much too high. Even though the proposed safety feature of a proper assessment of all personnel referred to making no distinction between employed and contracted staff, contracted staff especially certifying or supporting staff will and shall act in most cases differently in comparison of employed staff. Due to the fact that they have in most cases a lesser affinity with the maintenance organization and have different working conditions due to various labor contracts. With respect to contracted staff, "A" safe and healthy conscious mentality in a maintenance organization will take years to achieve.</p>	
response	<i>Noted</i>	
	The possibility to deviate from the 50-50 ratio is intended to provide flexibility to the organisation in a controlled safe manner.	

comment	32	comment by: <i>AIR FRANCE AFI</i>
	<p>the text introduces the application of measures to all maintenance personnel workshop Part 145 with unprecedented accuracy.  the complexity of the subject calls for a comprehensive study:</p> <ul style="list-style-type: none"> <li>- The impact on the organization of work of the staff concerned (it's not just mechanics ...)</li> <li>- The volume of staff concerned</li> <li>- The types of activities concerned</li> <li>- Adaptability, tracking tools used and steps involved (process?)</li> </ul> <p>==&gt; A request for extension of time for analysis of the text is highly expressed : 3 months of extension, at a minimum</p>	
response	<i>Not accepted</i>	
	The request to extend the commenting period for this NPA was an isolated comment. It has been considered that the changes proposed are not difficult to analyse and would not have a great impact, and therefore, the requested extension of the commenting period has been rejected.	

**B. DRAFT DECISION - I. Draft Decision AMC to Part-145 - AMC 145.A.30 (d) - Personnel requirements**

p. 7-9

comment	11	comment by: <i>Association of Dutch Aviation Technicians NVLT</i>
	NVLT cmt.: text proposal	

Has sufficient staff means that the organization employs or contracts such staff, as detailed in the man-hour plan, of which at least 70% of the staff that perform maintenance in each workshop, hangar or flight line on any shift should be employed to ensure organizational stability and a safe and healthy conscious mentality in a maintenance organization.

For the purpose of meeting a specific operational necessity due unforeseen cases, a temporary increase of the proportion of contracted staff may be permitted to the organization by the competent authority, in accordance with an approved procedure which should describe the extent, specific duties, and responsibilities for ensuring adequate organization stability. For the purpose of this subparagraph, employed means the person is directly employed as an individual by the maintenance organization approved under Part-145, whereas contracted means the person is employed by another organization and contracted by that organization to the maintenance organization approved under Part-145.

NVLT cmt.: Could you clarify why contracted staff from a maintenance employment agency or work as a independent contractor who are temporarily contracted by a Part-145 organization are not mentioned in AMC 145.A.30 (d)?

response

*Noted*

The ratio proposed is not supported by any evidence. 50-50 is the established acceptable ratio. Organisations are free to increase the employed staff ratio as appropriate.

*Answer to Question: Personnel not being directly employed by the Part-145 organisation should be considered as contracted staff. Both examples are included in the AMC as employed by another organisation.*

comment

34

comment by: *Francis MATHIEU*

#### **AMC 145.A.30 (d) - Personnel requirements**

##### **NPA proposal :**

Has sufficient staff means that the organisation employs or contracts such staff, as detailed in the man-hour plan, of which at least half the staff that perform maintenance in each workshop, hangar or flight line on any shift should be employed to ensure organisational stability. For the purpose of meeting a specific operational necessity, a temporary increase of the proportion of contracted staff may be permitted to the organisation by the competent authority, in accordance with an approved procedure which should describe the extent, specific duties, and responsibilities for ensuring adequate organisation stability. For the purpose of this subparagraph, employed means the person is directly employed as an individual by the maintenance organisation approved under Part-145, whereas contracted means the person is employed by another organisation and contracted by that organisation to the maintenance organisation approved under Part-145.

##### **SNECMA propose to replace the above 1st sentence by the following :**

Has sufficient staff means that the organisation employs or contracts such staff, as detailed in the man-hour plan, of which when the use of personnel external to the organisation is requested, the following rule applies to ensure organisational stability: Personnel employed by the shop should always represent at least 50 % of the whole personnel, unless temporary personnel has received training such as permanent personnel. This rule applies per

	department or line of product.
response	<p><i>Not accepted</i></p> <p>The text in the NPA already refers to the ratio in each workshop, hangar or flight line. Flexibility of the NPA allows for adjustment to the particulars of each organisation.</p>
comment	<p>38 <span style="float: right;">comment by: <i>Pieter DOYER</i></span></p> <p><a href="#">Attachment#3</a></p> <p>This is an AEI comment:</p> <p>Black text is original. Red strike through text is removed. Green underlined text is new. Blue text is reason for text alteration/comment. The comment is attached as a pdf file.</p>
response	<p><i>Partially accepted</i></p> <p>However, there is no need for a change: the competent authority will have to accept the conditions under which the procedure would allow for an increase of the proportion of contracted staff.</p>
comment	<p>41 <span style="float: right;">comment by: <i>DGAC FRANCE</i></span></p> <p><b>1. <u>AFFECTED PARAGRAPH:</u></b> <b>AMC 145.A.30 (d)</b></p> <p><b>2. <u>COMMENT:</u></b></p> <p>The Part 145 requires having “appropriately qualified” and “sufficient staff” to perform its duties. The AMC145.A.30(d) paragraph already in its previous version introduces a 50/50 criteria of “employed” personnel in order to ensure “organizational stability”. This criteria is furthermore to be met at any time, any place (“each workshop, hangar or flight line on any shift”), so in certain cases for isolated workload increases, this new redaction of this AMC introducing some flexibility to increase temporary the 50% of “contracted” staff is interesting.</p> <p>DGAC France supports the concept to add some flexibility into the concept, <u>but does not support the criteria of 50/50 employed / contracted being a way to implement the requirement of “sufficient and suitable” personnel.</u> This concept is based on an assumption that “employed” personnel can guaranty the organizational stability objective</p> <p>This is a counter example to the above assumption: a person with two years experience in the organization, but being assigned to this duty under a 3 years contract by a third company is certainly a better candidate for “organizational stability” than a employee with 3 months employment in a kind of “temporary” work contract by the Part 145 organization.</p> <p>Therefore, DGAC propose to assess the “organizational stability” by criteria different from “employed / contracted”.</p> <p>The criteria should be based on the fact the staff contributing to the “organizational stability” should be those who are working in a continuous</p>

manner in the maintenance organization, since a minimum of time (6 months for example) and has been assessed in order to perform unsupervised works.

It is nevertheless true that the organization shall pay attention to keep its "key" and "expert" persons over time by a "good" employment policy, and extension or long term contracting relations.

### 3. **Proposal:**

Has sufficient staff means that the organisation employs or contracts such staff, as detailed in the man-hour plan, of which at least half the staff that perform maintenance in each workshop, hangar or flight line on any shift are working in a continuous manner in the maintenance organization, since a minimum of time (6 months for example) and has been assessed in order to perform unsupervised works in order to ensure organisational stability.

For the purpose of meeting a specific operational necessity, a temporary decrease of this proportion may be permitted to the organisation by the competent authority, in accordance with an approved procedure which should describe the extent, specific duties, and responsibilities for ensuring adequate organisation stability.

response *Partially accepted*

The first part of the comment is not accepted: The organisation stability is fundamentally assessed under 145.a.30; the mention of this issue in the context of AMC is referring to the possibility of a negative effect of changing the originally acceptable 50-50 ratio, thereby helping the organisation to mitigate those possible effects in disturbing the terms of the existing approval.

The second part of the comment is accepted: GM has been clarified to consider personnel already known to the company. New AMC clearly states that a satisfactory assessment should have been performed for the person to work unsupervised, regardless of whether the person is contracted or employed.

## **B. DRAFT DECISION - I. Draft Decision AMC to Part-145 - AMC 1 145.A.30 (e) - Personnel requirements**

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comment

10

comment by: *Association of Dutch Aviation Technicians NVLT*

NVLT cmt.: text proposal

"The referenced procedure requires amongst others that planners, mechanics, specialized services staff, supervisors, certifying staff and B1,B2,A and C and support staff B1,B2, whether employed or contracted, are assessed for competence before unsupervised work commences and competence is controlled on a continuous basis."

The NVLT find it very important that the, job descriptions are mandatory for each job function in the organization, this makes it clear for everybody in and outside the organization of 'who is doing what ' and who is responsible for 'what'. That is why the job descriptions must be made in a way that is clear and understandable for everybody about the content, such as responsibilities and tasks. A proper job descriptions will and shall contribute to a safer environment.

NVLT cmt,,: text proposal

4. To assist in the assessment of competence and to establish the training needs analysis, job descriptions are mandatory for each job function in the organization. Job descriptions should contain sufficient criteria to enable the required competence assessment and must be made in a style that responsibilities and tasks are clearly defined.

NVLT cmt.:

In respect of GM 2 145.A.30 (e) is an examination a part of the competence assessment, yes or no?

If yes, what are the criteria to pass this examination?

NVLT cmt.: who is responsible for the competence assessment?

NVLT cmt.:

The word 'supervisor' has been used for different jobs in the REGULATION (EC) No 2042/2003 and the applicable AMC,s, for instance as a certifying staff category C, or regarding practical training according 147. To avoid misunderstandings, give a correct definition of a 'supervisor' in relation to AMC 145.A.30 (e).

Regarding the supervisors as certifying staff category C, the NVLT is we suggesting the following proposal:

NVLT cmt.,: text proposal.

"Supervisors are able to ensure that all required maintenance tasks are properly carried out by the authorized person and, where not completed or where it is evident that a particular maintenance task cannot be carried out to the maintenance data, then such problems shall be reported to the 145.A.30(c) authorized person for appropriate action. In addition, for those supervisors who also carry out maintenance tasks supporting or certifying staff B1 or B2, that they understand such tasks should not be undertaken when incompatible with their management responsibilities."

NVLT cmt.,: text proposal.

Mechanics are able to carry out maintenance tasks to any standard specified in the maintenance data and shall act accordance the M.O.E. of the specific organization and shall notify supervisors according the established procedures of defects or mistakes requiring rectification to re-establish required maintenance standards.

NVLT cmt.,: From the NVLT point of view, it must be absolutely clear for the certifying and or supporting staff that they shall comply with the MOE of the organization and that they shall report occurrences.

NVLT cmt.,:

Could you clarify why are the supporting staff category B1 and B2 not mentioned?

NVLT cmt.,: text proposal

Supporting staff category B1 and B2 Certifying staff are able to ensure that all required maintenance tasks are properly carried out according the procedures mentioned in the MOE of the organization. And shall report mandatory to the organization (and the authority in case of Directive 2003/42/EC) of occurrences who could have or have been a hazard for flight safety.

NVLT cmt.,: text proposal

Certifying staff are able to ensure that all required maintenance tasks are



properly carried out according the procedures mentioned in the MOE of the organization. And are able to determine when the aircraft or aircraft component is ready to release to service and when it should not be released to service and shall report mandatory to the organization (and the authority in case of Directive 2003/42/EC) of occurrences who could have or have been a hazard for flight safety.

NVLT cmt.: text proposal

The referenced procedure requires amongst others that planners, mechanics, specialized services staff, supervisors, certifying staff and B1,B2, A,C and support staff B1,B2, whether employed or contracted, are assessed for competence before unsupervised work commences and competence is controlled on a continuous basis.

response *Partially accepted*

*Referring to the text of the comment:*

NVLT: "The referenced procedure (...) basis."

EASA: Not accepted. No need to differentiate between all categories of certifying staff.

NVLT: "The NVLT find it (...) defined."

EASA: Not accepted. The job descriptions might be functionally "required" depending on the size and complexity of the organisation, but cannot be established as mandatory within AMC/GM.

NVLT: "In respect of (...) examination?"

EASA: An examination can be part of the competence assessment. The criteria for passing the examination should be established in the company's procedure.

NVLT: "who is responsible for the competence assessment?"

EASA: The organisation would need to identify in its procedure the people responsible for this process as proposed in GM2 to 145.A.30 (e).

NVLT: "The word 'supervisor' (...) responsibilities."

EASA: Noted. It was not the intention of this AMC to define all and every function of each role, nor to be exhaustive with the list. Use of "shall" as proposed is not accepted, it is not appropriate for use in AMC.

NVLT: "Mechanics are able (...) report occurrences."

EASA: Not accepted. Use of "shall" and "mandatory" as proposed is not appropriate in AMC.

NVLT: "Could you clarify why are the supporting staff category B1 and B2 not mentioned?"

EASA: Accepted. Text has been modified to refer to B1 and B2 support staff.

NVLT: "Supporting staff (...) flight safety."

EASA: Not accepted. Use of "shall" and "mandatory" as proposed is not appropriate in AMC.

NVLT: "The referenced procedure (...) on a continuous basis."

EASA: Not accepted. There is no need to differentiate between all categories of certifying staff.

comment	23	comment by: <i>KLM Engineering &amp; Maintenance</i>
	"Experience records": is a CV (curriculum vitae) also an experience record?	
response	<i>Noted</i> See comment 25.	
comment	24	comment by: <i>KLM Engineering &amp; Maintenance</i>
	"Which level of on-going supervision would be required"... : is there a definition of levels of supervision?	
response	<i>Noted</i> Organisations would need to establish such levels in their internal procedures. The outcome of the competence assessment determines the amount of unsupervised work allowed. Supervision should be adjusted accordingly.	
comment	25	comment by: <i>KLM Engineering &amp; Maintenance</i>
	If a CV (curriculum vitae) is considered an experience record, how can the organisation verify that which is recorded on the CV by the prospective employee him/her self ?	
response	<i>Noted</i> A CV on its own does not provide evidence of its content. Validation should be established by obtaining supporting evidence of appropriate data as referred in AMC 1 to 145.A.30 (e).	
comment	28	comment by: <i>KLM Engineering &amp; Maintenance</i>
	"On -the-job performance and /or testing of knowledge ...." : A test or assessment before unsupervised work commences in most cases will not be an indication whether a prospective employee is possessing the required competences and skills ; it is rather more an indication of the prospective employees dexterity in handling tests.	
response	<i>Not accepted</i> Although the sentence might be partially true, on-the-job performance and testing of knowledge provide good information to consider while assessing the individual's competence.	
comment	33	comment by: <i>AIR FRANCE AFI</i>
	First comment : Proposed text Competence should be defined as <b>an appropriate</b> skill or standard of performance, ... Justification "Appropriate" mentions more precisely that personnel has the suitable level regarding the intended tasks.	
response	<i>Not accepted</i>	

The intention of the competence assessment is clear and relates to job function. When measurements are performed, comparisons with established values can indicate appropriateness.

comment 36 comment by: *Nayak Aircraft Service NL*

The level to record the assessment is pointed out in too much detail

response *Noted*

See answer to comment 37.

comment 37 comment by: *Nayak Aircraft Service NL*

The current description of competence assessment is of too much detail. It may work as guidance however really too much to be used in this detail per each occasion.

response *Noted*

The AMC and GM developed in the NPA may be too detailed for small organisations where the competence of the personnel may be controlled differently although these organisations could still use it. Authorities should be able to accept other means to control the competence of the staff depending on the complexity of the organisation.

comment 39 comment by: *Pieter DOYER*

Attachment [#4](#)

This is an AEI comment:

Black text is original. Red strike through text is removed. Green underlined text is new. Blue text is reason for text alteration/comment. The comment is attached as a pdf file.

response *Not accepted*

The text proposed in the NPA provides flexibility to the organisations and should be sufficient to collect only trustworthy records.

comment 48 comment by: *AIR FRANCE AFI*

Proposed text ( delete the end of the sentence)

Competence should be defined ... , ~~including attitude and behaviour.~~

Justification :

Both criteria for competence assessment are already defined in GM 2 145.A.30 (e).

response *Partially accepted*

The wording has been changed to accommodate the fact that attitude and behaviour are not necessarily measurable.

**B. DRAFT DECISION - I. Draft Decision AMC to Part-145 - AMC 2 145.A.30  
(e) - Personnel requirements**

p. 10-11

comment	<p>5 <i>comment by: Association of Dutch Aviation Technicians NVLT</i></p> <p>NVLT cmt.: text proposal In respect to the understanding of the application of human factors and human performance issues, all maintenance organisation personnel should have received by classical education ( classroom and instructor) an initial and continuation human factors training. This should concern to a minimum:</p> <p>NVLT cmt.: Could you clarify for what purpose are technicians mentioned, this is confusing in the following phrase? · Certifying staff, technicians, and mechanics;</p> <p>NVLT cmt.: Could you clarify for what purpose are "assessors" and "practical trainers" not mentioned?</p>
response	<p><i>Noted</i></p> <p><i>Referring to the text of the comment:</i></p> <p>NVLT: "In respect to (...) to a minimum:" EASA: Not accepted. HF training may be provided using different means.</p> <p>NVLT: "Could you clarify for what purpose are technicians mentioned, this is confusing in the following phrase? Certifying staff, technicians, and mechanics;" EASA: Accepted. Text has been changed.</p> <p>NVLT: "Could you clarify for what purpose are "assessors" and "practical trainers" not mentioned?" EASA: Not accepted. It was not the intention of this AMC to define all and every function of each role, nor to be exhaustive with the list.</p>
comment	<p>12 <i>comment by: Association of Dutch Aviation Technicians NVLT</i></p> <p>NVLT cmt.: To the NVLT points of view, initial human factors training should be given prior the employee has commenced his job, that is the only way to obtain very conscious professional Staff. To receive training after the employee has been working already 6 months in a maintenance environment is unacceptable and is a hazard for flight safety!</p> <p>NVLT cmt.: text proposal All personnel, including personnel being recruited from any other organization or employed as a in depended contractor shall receive initial human factors training and training in compliance with the organization's training standards in all relevant maintenance organization policies, regulations and procedures before he will start with his job function. New employees (i.e. initial trainee) shall receive training within 1 months after joining the maintenance organization.</p> <p>NVLT cmt.:</p>

	<p>The NVLT considers that all relevant maintenance organization policies, regulations and procedures training are a part of initial human factors training. If employees are familiar and in compliance with the relevant maintenance organization policies, regulations and procedures, the less human factors will occur and that will result in a higher flight safety standard.</p>
response	<p><i>Noted</i></p> <p><i>Referring to the text of the comment:</i>  NVLT: "To the NVLT points of view, (...) after joining the maintenance organization."  EASA: Partially accepted. The text has been changed to refer to new directly employed personnel working under direct supervision of a competent person.</p> <p>NVLT: "The NVLT considers that (...) flight safety standard."  EASA: Noted.</p>
comment	<p>13 <span style="float: right;">comment by: <i>Terence MCSTAY</i></span></p> <p>Dear Sir or Madam</p> <p>With reference the increased vigilance required, by way of on job evaluation of personnel contracted to perform tasks in a Part-145 organisation.</p> <p>I would suggest an area of concern might be where short time contracts and by this I mean days for "specialized services" are required. These specialized services might not be available in the Part-145 organisation capability/scope, to mention a few examples: N.D.T, Welding, Weighing..</p> <p>Typically, specialised personnel would be called in from a recognised Company and the time taken for evaluation of their skills and human factor understanding, as called for by this NPA, could be of detriment not only to the clean flow of the maintenance plan but also impose difficulty on the ability of the Part-145 staff to assess such a specialization .</p> <p>The draft should leave some flexibility for these scenarios.</p> <p>Yours faithfully  Terence McStay</p>
response	<p><i>Not accepted</i></p> <p>The organisation releasing the work is responsible for personnel competence and human factors training.</p>
comment	<p>14 <span style="float: right;">comment by: <i>Faroengineer</i></span></p> <p>AMC 2 145.A.30 (e) - 2: It is stated that the Quality Department should be <u>INVOLVED</u> in the training and furthermore that the QD should receive feedback from trainers to <u>INITIATE</u> action where necessary.</p> <p>According to my own and our organisations understanding of the Quality Department and its duties and responsibilities, the above statement is not directed towards the right department. Rather this should be the Safety Department, or in the absence of such a department, it should be the person responsible for the Quality <u>System</u> - i.e. the <u>NPH</u> of the respective department - who should be involved and responsible for the above. The Quality Assurance Department is under no circumstances to be actively involved in such training activities nor initiating actions in order to maintain its own independency.</p>
response	<p><i>Not accepted</i></p>

The NPA has not changed anything in this respect.

comment

35

comment by: *Francis MATHIEU*

**AMC 2 145.A.30 (e) - Personnel requirements**

**NPA proposal :**

All personnel, including personnel being recruited from any other organisation should receive initial human factors training compliant with the organisation's training standards prior to commencing actual job function, unless their competence assessment justifies that there is no need for such training. New employees (i.e. initial trainee) may receive training within 6 months after joining the maintenance organisation.

**SNECMA question :**

All personnel should receive initial human factors training prior to commencing actual job function. New employees may receive training within 6 months after joining the maintenance organisation.

EASA should clarify the rule applicable to new contract personnel in terms of timing of human factors training.

response

*Partially accepted*

The text has been changed to refer to new directly employed personnel working under direct supervision of a competent person.

comment

45

comment by: *DGAC FRANCE*

**AFFECTED PARAGRAPH:**

**AMC 2 145.A.30 (e) 2**

**2. COMMENT:**

There is no justification to delete on the new AMC the following sentence which is mentioned in the AMC 145.A.30 (e) 8:

*"Human factors continuation training should be of an appropriate duration in each two year period in relation to relevant quality audit findings and other internal/external sources of information available to the organisation on human errors in maintenance."*

response

*Accepted*

This was unintended. Text is reintroduced.

comment

47

comment by: *DGAC FRANCE*

**1. AFFECTED PARAGRAPH:**

**AMC 2 145.A.30 (e) 1**

**2. COMMENT:**

The objectives of this paragraph are not met by the proposed AMC2 145.A.30 (e) 1 revision.

If all staff newly recruited or contracted should be enough trained on HF before being authorized to perform works, it is not justified to impose a formal new FH training before authorizing a person to perform unsupervised works.

An initial assessment on this matter should be done by the organization prior to commencing actual job function.

This assessment could be enough adapted to verify that the person recruited or contracted has received at minimum a formal FH training in the past.

If the person already received an initial training, the person could be authorized to work and should receive the additional customized HF training provided by the maintenance organization within the 6 months.

### 3. **Proposal:**

All personnel, including personnel being recruited or contracted from other organisation, should receive initial human factors training prior to commencing actual job function.

This full HF initial training could be performed by the maintenance organisation.

In certain case, initial human factor training already performed in the past in an other organisation could be acceptable before to authorize a person to work. In that case, the person should receive the additional customized HF training provided by the maintenance organization within the 6 months.

response *Not accepted*

The text proposed in the NPA already says "All personnel [...] should receive initial Human Factor training unless their competence assessment justifies that there is no need for such training". There is no need for change. The initial Human Factor training would include specific topics referring to the particulars of the organisation.

## **B. DRAFT DECISION - I. Draft Decision AMC to Part-145 - AMC 145.A.35 (f) p. 11-12 – Certifying staff and category B1 and B2 support staff**

comment 7 comment by: *Association of Dutch Aviation Technicians NVLT*

NVLT cmt.: text proposal

As stated in 145.A.35 (f), except where any of the unforeseen cases of 145.A.30(j)(5) apply, all prospective certifying staff and category B1,B2 and A and support staff B1,B2 are required to be assessed by the competent assessor or supervisor for competence related to their intended duties in accordance with AMC 145.A.30 (e).

response *Not accepted*

The term "Certifying staff" does not exclude any category of certifying staff.

## **B. DRAFT DECISION - II. Draft Decision GM to Part-145 - GM 2 145.A.30 (e) p. 12-15 – Competence assessment procedure**

comment 8 comment by: *Association of Dutch Aviation Technicians NVLT*

NVLT cmt.:

To the point of view of the NVLT it is illogical that managers need only to have knowledge of Part-M and Part-145 regulations and organization procedures and

do not according GM 145.A.30 (e) need to have any knowledge of all the other relevant rules and regulations which are related to the work the employees have to fulfill? For instance, DIRECTIVE 2003/42/EC, EU OPS-1 and national and international laws and regulations in respect of aviation, labor and environmental matters.

NVLT cmt.: text proposal

Managers need to have knowledge of maintenance organization procedures and national and international laws and regulations in respect of aviation, labor and environmental matters.

NVLT cmt.: text proposal

Supervisors in the role of certifying staff cat C need to have knowledge of maintenance organization procedures and national and international laws and regulations in respect of aviation, labor and environmental matters.

NVLT cmt.: text proposal

Certifying staff B1,B2,A and B1 and B2 support staff need to have knowledge of maintenance organization procedures and national and international laws and regulations in respect of aviation, labor and environmental matters.

NVLT cmt.:

Pls. clarify this phrase.

“Knowledge of reporting system and understanding of the importance of reporting incorrect maintenance data”.

Is EASA referring to 145.A.60. Occurrence Reporting and or the mandatory reporting of occurrences by certifying Staff according DIRECTIVE 2003/42/EC?

NVLT cmt.: text proposal

Certifying staff and B1 and B2 support staff:

“Knowledge of the non and mandatory occurrence reporting system and understanding of the importance of reporting incorrect maintenance data” in respect of 145.A.60 and DIRECTIVE 2003/42/EC.

NVLT cmt.: text proposal

- Proven communication and literacy skills in English and the language of the organization.

NVLT cmt.:

Pls. Clarify what EASA meant by the term “un-airworthy conditions” in the following phrase?

- Ability to indentify and rectify existing and potential un-airworthy conditions.

To the opinion of the NVLT is tremendously important for the sake of aviation flight safety that all interested parties know what “un-airworthy conditions” are, for instance it is for the most people obvious that when a primary flight control of a aircraft has been damaged, that the aircraft is from that moment in a un-airworthy condition and it shall not to be allowed to depart. However when somebody ( this could be employees of the operator or the maintenance organization) has made a administrative and or procedural fault or violation, it is often that those consciously or unconsciously made irregularities are not to be considered as a un-airworthy condition.

Pls. specify what “un-airworthy conditions” are regarding REGULATION (EC) No 2042/2003, REGULATION (EC) No 8/2008 and AMC 20-8.

response

*Noted*



*Referring to the text of the comment:*

NVLT: "To the point of view (...) in respect of aviation, labor and environmental matters."

EASA: Partially accepted: In the proposed text, the item referring to the knowledge of regulations has been reformulated to capture other relevant regulations.

NVLT: "Supervisors (...) in respect of aviation, labor and environmental matters."

EASA: Not accepted: Cat. C certifying staff should fulfil the items identified for certifying staff. When also acting as supervisors they would also need to fulfil the items identified for the supervisors.

NVLT: "Certifying staff (...) in respect of aviation, labor and environmental matters."

EASA: Partially accepted. In the proposed text, the item referring to the knowledge of regulations has been reformulated to capture other relevant regulations.

NVLT: "Pls. clarify this phrase. (...) DIRECTIVE 2003/42/EC?"

EASA: Accepted. In the proposed text, the item referring to the reporting systems has been reformulated.

NVLT: "Certifying staff and (...) in respect of 145.A.60 and DIRECTIVE 2003/42/EC."

EASA: Accepted. In the proposed text, the item referring to the reporting systems has been reformulated.

NVLT: "Proven communication and literacy skills in English and the language of the organization."

EASA: Not accepted. The list is not intended to be exhaustive. It is given as an example and it may be customised.

NVLT: "Pls. Clarify what EASA meant (...) and AMC 20-8."

EASA: Partially accepted. The text has been changed to "unsafe condition". Definition of unsafe condition is available in AMC to 145.A50 (a).

comment

9

comment by: *Association of Dutch Aviation Technicians NVLT*

NVLT cmt.:

Does include "means and methods for the initial assessment" an examination or not.

If yes what are the criteria for this examination?

NVLT cmt.:

Pls. clarify. What does EASA meant with this phrase "actions to be taken when assessment is not satisfactory"?

response

*Noted*

An examination may be one method of assessment, which normally should be used combined with other methods. The criteria for an examination should be established by the organisation. When the assessment is not satisfactory, the means to establish actions to meet the expected level of competence should be in place to avoid a non-competent person (for a certain function) exercising the intended job function: additional training may be a solution, in other cases

denying this role to this person may be also the solution.

comment	26	comment by: <i>KLM Engineering &amp; Maintenance</i>
	Managers: who is the manager? What level of manager is implied in this NPA? We have managers in the maintenance facilities itself, we also have an EVP ,we have quality - and engineering managers etc .	
response	<i>Not accepted</i>	
	See the answer provided to comment 27.	
comment	27	comment by: <i>KLM Engineering &amp; Maintenance</i>
	We observe that this NPA is worded too specific with regard to functionaries and tasks / competences that these functionaries should be able to do and display. We do have the functionaries and we do know the tasks and competences mentioned in the NPA but that does not mean that in our organization we have filled in functionaries and accompanying tasks in the same way as in the NPA.	
response	<i>Not accepted</i>	
	The wording in the GM2 reads "(the list is not exhaustive)", allowing for each organisation to define the list of functionaries and titles used. In addition, bullet 5 of AMC 1 has been amended for clarification.	
comment	29	comment by: <i>KLM Engineering &amp; Maintenance</i>
	Quality Audit Staff: is there a special reason to include quality audit staff in the targeted audience?	
response	<i>Noted</i>	
	The description of the quality audit staff function was already introduced by ED 2010/002/R in AMC 145.A.30 (e).	
comment	40	comment by: <i>CAA-NL</i>
	This GM could well be transferred into a table for easier access of the information.	
response	<i>Accepted</i>	
	The format has been converted into a table for clarity.	
comment	42	comment by: <i>DGAC FRANCE</i>
	<p><b>1. <u>AFFECTED PARAGRAPH:</u></b>  <b>GM2 145.A.30(e)</b></p> <p><b>2. <u>COMMENT:</u></b></p> <p>DGAC France supports this proposal which gives now a bigger importance of the competencies requirements regarding all of the personnel who prepare, perform and control the maintenance in addition of the existing current</p>	

	<p>qualification requirement regarding the « certifying staff » . Proposed criteria are probably a good help for part 145 organizations</p>
response	<p><i>Noted</i></p>
comment	<p>51 <span style="float: right;">comment by: <i>MOT Austria</i></span></p> <p><u>NPA 2010</u></p> <p>We recommend adding the following “knowledge skills” to the listed functions: GM 2 145.A.30 (e)</p> <p>Managers Part 66 should be added to Knowledge of Part-M and Part 145 regulations and organisation procedures</p> <p>Justification: The knowledge of Part 66 is essential for managers</p> <p>Supervisors The Knowledge of Part-M, Part 145 and Part-66 Requirements should be added to the list</p> <p>Justification The supervisors have an integrative role and have to know all the regulative disconnections</p> <p>Mechanics The following should be added to the list of competencies: “Ability to perform applicable techniques to the recognised standards”</p> <p>Certifying staff and B1 and b2 support staff The knowledge of Part M, Part 145 and Part-66 should be added.</p>
response	<p><i>Noted</i></p> <p><i>Referring to the text of the comment:</i></p> <p>MOT Austria: “<u>NPA 2010</u> (...) Part 66 is essential for managers” EASA: Partially accepted: In the proposed text, the item referring the knowledge on regulations has been reformulated to capture other relevant regulations.</p> <p>MOT Austria: “Supervisors (...) all the regulative disconnections” EASA: Partially accepted: In the proposed text, the item referring the knowledge on regulations has been reformulated to capture other relevant regulations.</p> <p>MOT Austria: “Mechanics (...) perform applicable techniques to the recognised standards” EASA: Noted. The ability to perform applicable techniques to a standard is the end result of the competence assessment. For consistency this ability has been deleted from the list referring to specialised service staff in the proposed text.</p> <p>MOT Austria: “Certifying staff (...) Part M, Part 145 and Part-66 should be added.” EASA: Partially accepted: In the proposed text, the item referring the knowledge on regulations has been reformulated to capture other relevant</p>

regulations.

**B. DRAFT DECISION - II. Draft Decision GM to Part-145 - GM 3 145.A.30 (e) p. 15-17**  
**– Template for recording experience/training**

comment 21

comment by: CAA, Denmark, Svend V Madsen

It is our opinion that the template is both too detailed and at the same time is missing essential elements in the documentation of the employee's qualification and assessment process.

The suggested template is more a "front page" to some attached documents including a statement of domain.

We would like to suggest a more generic template where the organisations has more room for "customizing" the content and text and at the same time document the whole qualification evaluation and assessment process.

When using a more generic type of template it will be possible to adopt and alter the format in regard to the job function, organisation size and complexity.

Our suggested template will document the "flow" from hiring of a new employee to authorisation through the essential elements:

Job requirement - Evaluation of the employee - Gab verification - Gab fulfilling – Assessment – Authorization.

1	Organisation name and approval reference.	Sign	Date
2	Job title: Job requirements ref. MOE descriptions (based on NPA no 2010-08, GM 2 145.A.30(e)) Theoretical requirements:  Experience requirements:		
3	Employee: Name, Birth date, Address, Phone, Email.  If applicable: Licence: type of licence, categories, ratings, limitations, exp date.		
4	Employee evaluation in relation to job requirements: theoretical requirements fulfilled:  experience requirements fulfilled:		
5	Gab between job requirements and employee actual qualifications: Missing theoretical elements:  Missing experience/practical elements:		
6	Theoretical "gab" elements fulfilled:		
7	Experience/practical "gab" elements fulfilled:		
8	On job assessment.		

9	(If applicable) Authorization can be issued: Type of qualification, ratings, limitations, expiry date:		
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response *Not accepted*

The template proposed on the NPA provides a means to record the experience and training of a person moving from one organisation to another. This template is an example only and can be customised as necessary. The template in this comment would serve the purpose of controlling the assessment process.

comment

30

comment by: *KLM Engineering & Maintenance*

We welcome this template for recording experience ; it will be of great help in assessing contracted staff

response

*Noted*

comment

43

comment by: *DGAC FRANCE*

**1. AFFECTED PARAGRAPH:**  
**GM3 145.A.30(e)**

**2. COMMENT:**

The template GM3 is a useful tool to help persons who moves to different Part 145 organizations in order to justify for their qualifications. In particular, some structures that provide for interim persons may not have adequate knowledge on the Part 145 qualification requirements.

DGAC France supports this GM3, but would recommend to add a block in this form that would allow to record or to reference experience justifications. So either directly or indirectly through a separate log book, each persons could have its experience recorded and justified.

response

*Not accepted*

The template proposed on the NPA provides a means to record the experience and training of a person moving from one organisation to another. This template is an example only and can be customised as necessary. In particular to refer to experience justifications, the block "details of employment" could be used. In the case of certifying staff, AMC to 66.a.20 (b) already allows for a logbook. It was not the intention of the drafting group to extend the use of the logbook to all staff categories or functions.

comment

46

comment by: *DGAC FRANCE*

**1. AFFECTED PARAGRAPH:**  
**GM 3 145.A.30 (e)**

**2. COMMENT:**

The category of certifying staff is fully detailed concerning certifying staff authorised on aircraft but not enough for the components. There is no reference also for the engines.

Some blocks should be introduced in the form to identify what kind of C and B ratings are concerned.

response

*Not accepted*

The template proposed in the NPA considers components, and the definition of component covers also engines. When identifying in the template the Component type, detailed information for an engine can be added.

## Appendix A — REVISED TEXT AFTER CRD

### B. Draft Decision

The text of the amendment is arranged to show deleted text, new text or new paragraph as shown below:

1. deleted text is shown with a strike through: ~~deleted~~
2. new text is highlighted with grey shading: **new**
3. ... indicates that remaining text is unchanged in front of or following the reflected amendment.

### I Draft Decision AMC and GM to Part-145

#### AMC 145.A.30 (d) - Personnel requirements

~~1. — Has sufficient staff means that the organisation employs or contracts such staff of which at least half the staff that perform maintenance in each workshop, hangar or flight line on any shift should be employed to ensure organisational stability. Contract staff, being part time or full time should be made aware that when working for the organisation they are subjected to compliance with the organisation's procedures specified in the maintenance organisation exposition relevant to their duties. For the purpose of this sub-paragraph, employed means the person is directly employed as an individual by the maintenance organisation approved under Part-145 whereas contracted means the person is employed by another organisation and contracted by that organisation to the maintenance organisation approved under Part-145.~~

1. Has sufficient staff means that the organisation employs or contracts competent staff, as detailed in the man-hour plan, of which at least half the staff that perform maintenance in each workshop, hangar or flight line on any shift should be employed to ensure organisational stability. For the purpose of meeting a specific operational necessity, a temporary increase of the proportion of contracted staff may be permitted to the organisation by the competent authority, in accordance with an approved procedure which should describe the extent, specific duties, and responsibilities for ensuring adequate organisation stability. For the purpose of this subparagraph, employed means the person is directly employed as an individual by the maintenance organisation approved under Part-145, whereas contracted means the person is employed by another organisation and contracted by that organisation to the maintenance organisation approved under Part-145.

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#### AMC 145.A.30 (e) - Personnel requirements

~~1. — The referenced procedure requires amongst others that planners, mechanics, specialised services staff, supervisors and certifying staff are assessed for competence by 'on the job' evaluation and/or by examination relevant to their particular job role within the organisation before unsupervised work is permitted. A record of the qualification and competence assessment should be kept.~~

~~2. — Adequate initial and recurrent training should be provided and recorded to ensure continued competence.~~

~~3. — To assist in the assessment of competence, job descriptions are recommended for each job role in the organisation. Basically, the assessment should establish that:~~

~~a. — Planners are able to interpret maintenance requirements into maintenance tasks, and have an appreciation that they have no authority to deviate from the maintenance data.~~

~~b. — Mechanics are able to carry out maintenance tasks to any standard specified in the maintenance data and will notify supervisors of mistakes requiring rectification to re-establish required maintenance standards.~~

~~e.——Specialised services staff are able to carry out specialised maintenance tasks to the standard specified in the maintenance data and will both inform and await instructions from their supervisor in any case where it is not possible to complete the specialised maintenance in accordance with the maintenance data.~~

~~d.——Supervisors are able to ensure that all required maintenance tasks are carried out and where not completed or where it is evident that a particular maintenance task cannot be carried out to the maintenance data, then such problems will be reported to the 145.A.30(e) person for appropriate action. In addition, for those supervisors who also carry out maintenance tasks, that they understand such tasks should not be undertaken when incompatible with their management responsibilities.~~

~~e.——Certifying staff are able to determine when the aircraft or aircraft component is ready to release to service and when it should not be released to service.~~

~~4.——In the case of planners, specialised services staff, supervisors and certifying staff, a knowledge of organisation procedures relevant to their particular role in the organisation is important. The aforementioned list is not exclusive and may include other categories of personnel.~~

~~5.——Quality audit staff are able to monitor compliance with Part-145 identifying non compliance in an effective and timely manner so that the organisation may remain in compliance with Part-145.~~

~~6.——In respect to the understanding of the application of human factors and human performance issues, maintenance, management, and quality audit personnel should be assessed for the need to receive Initial human factors training, but in any case all maintenance, management, and quality audit personnel should receive human factors continuation training. This should concern to a minimum:~~

~~-Post holders, managers, supervisors;~~

~~-Certifying staff, technicians, and mechanics;~~

~~-Technical support personnel such as, planners, engineers, technical record staff;~~

~~-Quality control/assurance staff;~~

~~-Specialised services staff;~~

~~-Human factors staff/ human factors trainers;~~

~~-Store department staff, purchasing department staff;~~

~~-Ground equipment operators;~~

~~-Contract staff in the above categories.~~

~~7.——Initial human factors training should cover all the topics of the training syllabus specified in GM 145.A.30(e) either as a dedicated course or else integrated within other training. The syllabus may be adjusted to reflect the particular nature of the organisation. The syllabus may also be adjusted to meet the particular nature of work for each function within the organisation. For example:~~

~~——small organisations not working in shifts may cover in less depth subjects related to teamwork and communication;~~

~~——planners may cover in more depth the scheduling and planning objective of the syllabus and in less depth the objective of developing skills for shift working.~~

~~——Depending on the result of the evaluation as specified in paragraph 6, initial training should be provided to personnel within 6 months of joining the maintenance organisation, but temporary staff may need to be trained shortly after joining the organisation to cope with the duration of employment.~~

~~——Personnel being recruited from another maintenance organisation approved under Part-145 and temporary staff should be assessed for the need to receive any additional Human~~



factors training to meet the new maintenance organisation's approved under Part 145 human factors training standard.

8. The purpose of human factors continuation training is primarily to ensure that staff remain current in terms of human factors and also to collect feedback on human factors issues. Consideration should be given to the possibility that such training has the involvement of the quality department. There should be a procedure to ensure that feedback is formally passed from the trainers to the quality department to initiate action where necessary.

Human factors continuation training should be of an appropriate duration in each two year period in relation to relevant quality audit findings and other internal/external sources of information available to the organisation on human errors in maintenance.

9. Human factors training may be conducted by the maintenance organisation itself, or independent trainers or any training organisations acceptable to the competent authority.

10. The Human factors training procedures should be specified in the maintenance organisation exposition.

11. Additional training in fuel tank safety as well as associated inspection standards and maintenance procedures should be required for maintenance organisations' technical personnel, especially technical personnel involved in the compliance of CDGCL tasks

EASA guidance is provided for training to maintenance organisation personnel in Appendix IV to AMC to 145.A.30(e) and 145.B.10(3)

#### **AMC 1 145.A.30 (e) - Personnel requirements**

Competence should be defined as a measurable skill or standard of performance, knowledge and understanding, taking into consideration attitude and behaviour.

The referenced procedure requires amongst others that planners, mechanics, specialised services staff, supervisors, certifying staff and B1 and B2 support staff, whether employed or contracted, are assessed for competence before unsupervised work commences and competence is controlled on a continuous basis.

Competence should be assessed by evaluation of:

- on-the-job performance and/or testing of knowledge by appropriately qualified personnel, and
- records for basic, organisational, and/or product type and differences training, and
- experience records.

Validation of the above could include a confirmation check with the organisation(s) that issued such document(s). For that purpose, experience/training may be recorded in a document such as a log book or based on the suggested template in GM 3 to 145.A.30 (e).

As a result of this assessment, an individual's qualification should determine:

- which level of ongoing supervision would be required or whether unsupervised work could be permitted.
- whether there is a need for additional training.

A record of such qualification and competence assessment should be kept.

This should include copies of all documents that attest to qualification, such as the licence and/or any authorisation held, as applicable.

For a proper competence assessment of its personnel, the organisation should consider that:

1. In accordance with the job function, adequate initial and recurrent training should be provided and recorded to ensure continued competence so that this is maintained throughout the duration of employment/contract.

2. All staff should be able to demonstrate knowledge of and compliance with the maintenance organisation procedures, as applicable to their duties.

3. All staff should be able to demonstrate an understanding of human factors and human performance issues in relation with their job function and be trained as per AMC 2 145.A.30 (e).

4. To assist in the assessment of competence and to establish the training needs analysis, job descriptions are recommended for each job function in the organisation. Job descriptions should contain sufficient criteria to enable the required competence assessment.

5. Criteria should allow the assessment to establish that, among others (titles might be different in each organisation):

- Managers are able to properly manage the work output, processes, resources and priorities described in their assigned duties and responsibilities in a safe compliant manner in accordance with regulations and organisation procedures.
- Planners are able to interpret maintenance requirements into maintenance tasks, and have an understanding that they have no authority to deviate from the maintenance data.
- Supervisors are able to ensure that all required maintenance tasks are carried out and, where not completed or where it is evident that a particular maintenance task cannot be carried out to the maintenance data, then such problems will be reported to the 145.A.30(c) person for appropriate action. In addition, for those supervisors, who also carry out maintenance tasks, that they understand such tasks should not be undertaken when incompatible with their management responsibilities.
- Mechanics are able to carry out maintenance tasks to any standard specified in the maintenance data and will notify supervisors of defects or mistakes requiring rectification to re-establish required maintenance standards.
- Specialised services staff are able to carry out specialised maintenance tasks to the standard specified in the maintenance data. They should be able to communicate with supervisors and report accurately when necessary.
- B1 and B2 support staff are able to determine that relevant tasks or inspections have been carried out to the required standard.
- Certifying staff are able to determine when the aircraft or aircraft component is ready to release to service and when it should not be released to service.
- Quality audit staff are able to monitor compliance with Part-145 identifying non-compliance in an effective and timely manner so that the organisation may remain in compliance with Part-145.

Competence assessment should be based upon the procedure specified in GM 2 to 145.A.30(e).

#### **AMC 2 145.A.30 (e) - Personnel requirements**

In respect to the understanding of the application of human factors and human performance issues, all maintenance organisation personnel should have received an initial and continuation human factors training. This should concern to a minimum:

- Post-holders, managers, supervisors;
- Certifying staff, B1 and B2 support staff and mechanics;
- Technical support personnel such as planners, engineers, technical record staff;
- Quality control/assurance staff;
- Specialised services staff;

- Human factors staff/human factors trainers;
- Store department staff, purchasing department staff;
- Ground equipment operators.

1. Initial human factors training should cover all the topics of the training syllabus specified in GM 145.A.30(e) either as a dedicated course or else integrated within other training. The syllabus may be adjusted to reflect the particular nature of the organisation. The syllabus may also be adjusted to meet the particular nature of work for each function within the organisation. For example:

- small organisations not working in shifts may cover in less depth subjects related to teamwork and communication,
- planners may cover in more depth the scheduling and planning objective of the syllabus and in less depth the objective of developing skills for shift working.

All personnel, including personnel being recruited from any other organisation should receive initial human factors training compliant with the organisation's training standards prior to commencing actual job function, unless their competence assessment justifies that there is no need for such training. Newly directly employed personnel working under direct supervision may receive training within 6 months after joining the maintenance organisation.

2. The purpose of human factors continuation training is primarily to ensure that staff remain current in terms of human factors and also to collect feedback on human factors issues. Consideration should be given to the possibility that such training has the involvement of the quality department. There should be a procedure to ensure that feedback is formally passed from the trainers to the quality department to initiate action where necessary.

Human factors continuation training should be of an appropriate duration in each two year period in relation to relevant quality audit findings and other internal/external sources of information available to the organisation on human errors in maintenance.

3. Human factors training may be conducted by the maintenance organisation itself, or independent trainers or any training organisations acceptable to the competent authority.

4. The human factors training procedures should be specified in the maintenance organisation exposition.

### **AMC 3 145.A.30 (e) - Personnel requirements**

Additional training in fuel tank safety as well as associated inspection standards and maintenance procedures should be required for maintenance organisations' technical personnel, especially technical personnel involved in the compliance of CDCCL tasks.

EASA guidance is provided for training to maintenance organisation personnel in Appendix IV to AMC to 145.A.30(e) and 145.B.10(3).

### **AMC 145.A.35 (f) – Certifying staff and category B1 and B2 support staff**

~~1. As stated in 145.A.35 (f), with one exception, all prospective certifying staff are required to be assessed for competence, qualification and capability related to intended certifying duties. There are a number of ways in which such assessment may be carried out but the following points need to be considered to establish an assessment procedure that fits the particular organisation.~~

~~2. Competence and capability can be assessed by working the person under the supervision of either another certifying person or a quality auditor for sufficient time to arrive at a conclusion. Sufficient time could be as little as a few weeks if the person is fully exposed to relevant work. It is not required to assess against the complete spectrum of intended duties. When the person has been recruited from another approved maintenance organisation~~

and was a certifying person in that organisation then the organisation should accept a written confirmation from the person responsible for running the quality system about the person.

3. Qualification assessment means collecting copies of all documents that attest to qualification, such as the licence and/or any authorisation held. This should be followed by a confirmation check with the organisation(s) that issued such document(s) and finally a comparison check for differences between the product type ratings on the qualification documents and the relevant product types maintained by the organisation. This latter point may reveal a need for product type differences training.

As stated in 145.A.35 (f), except where any of the unforeseen cases of 145.A.30(j)(5) applies, all prospective certifying staff and category B1 and B2 support staff should be assessed for competence related to their intended duties in accordance with AMC 145.A.30 (e).

**II. Draft Decision GM to Part-145**

**GM 1 145.A.30 (e) – Personnel requirements  
(Training syllabus for initial human factors training)**

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**GM 2 145.A.30 (e) – Competence assessment procedure**

The organisation should develop a procedure describing the process of competence assessment of personnel. The procedure should specify:

- responsible persons for this process,
- when the assessment should take place,
- credits from previous assessments
- validation of qualification records,
- means and methods for the initial assessment,
- means and methods for the continuous control of competence including feedback on personnel performance,
- competences to be observed during the assessment in relation with each job function,
- actions to be taken when assessment is not satisfactory,
- recording of assessment results.

For example, according to the job functions and the scope, size and complexity of the organisation, the assessment may consider the following (the table is not exhaustive):

	Managers	Planners	Supervisor	Certifying staff and B1 and B2 support staff	Mechanics	Specialised service staff	Quality audit staff
Knowledge of applicable officially recognised standards						X	X
Knowledge of auditing techniques: planning, conducting and reporting							X
Knowledge of human factors, human performance and limitations	X	X	X	X	X	X	X
Knowledge of logistics processes	X	X	X				
Knowledge of organisation capabilities, privileges and limitations	X	X				X	X

Knowledge of Part-M, Part-145 and any other relevant regulations	X	X	X	X			X
Knowledge of relevant parts of the maintenance organisation exposition and procedures	X	X	X	X	X	X	X
Knowledge of occurrence reporting system and understanding of the importance of reporting occurrences, incorrect maintenance data and existing or potential defects		X	X	X	X	X	
Knowledge of safety risks linked to the working environment	X	X	X	X	X	X	X
Knowledge on CDCCL when relevant	X	X	X	X	X	X	X
Understanding of professional integrity, behaviour and attitude towards safety	X	X	X	X	X	X	X
Understanding of conditions for ensuring continuing airworthiness of aircraft and components				X			X
Understanding of his/her own human performance and limitations	X	X	X	X	X	X	X
Understanding of personnel authorisations and limitations			X	X		X	
Understanding critical task		X	X	X	X		X
Ability to compile and control completed work cards		X	X	X			
Ability to consider human performance and limitations.	X	X	X	X			
Ability to determine required qualifications for task performance		X	X	X			
Ability to identify and rectify existing and potential unsafe conditions			X	X	X	X	X
Ability to manage third parties involved in maintenance activity		X	X				
Ability to confirm proper accomplishment of maintenance tasks			X	X	X	X	
Ability to identify and properly plan performance of critical task		X	X	X			
Ability to prioritise tasks and report discrepancies		X	X	X			
Ability to process the work requested by the operator		X	X	X			
Ability to promote the safety and quality policy	X		X				
	Managers	Planners	Supervisor	Certifying staff and B1 and B2 support staff	Mechanics	Specialised service staff	Quality audit staff
Ability to properly process removed, uninstalled and rejected parts			X	X	X	X	
Ability to properly record and sign for work accomplished			X	X	X	X	
Ability to recognise the acceptability of parts to be installed prior to fitment				X	X		
Ability to split complex maintenance tasks into clear stages		X					
Ability to understand work orders, work cards and refer and use applicable maintenance data		X	X	X	X	X	X
Ability to use information systems	X	X	X	X	X	X	X
Ability to use, control and be familiar with required tooling and/or equipment			X	X	X	X	

Adequate communication and literacy skills	X	X	X	X	X	X	X
Analytical and proven auditing skills (for example, objectivity, fairness, open-mindedness, determination, ...)							X
Maintenance error investigation skills							X
Resources management and production planning skills	X	X	X				
Teamwork, decision making and leadership skills	X		X				

### GM 3 145.A.30 (e) – Template for recording experience/training

The following template may be used to record professional experience and training and be considered during the competence assessment of the individual in another organisation.

<b>Aviation Maintenance personnel experience credential</b>				
Name		Given name		
Address				
Telephone		E-mail		
Independent worker <input type="checkbox"/>				
Trade Group: airframe <input type="checkbox"/> engine <input type="checkbox"/> electric <input type="checkbox"/> avionics <input type="checkbox"/> other (specify) <input type="checkbox"/> .....				
<b>Employer's details (when applicable)</b>				
Name		Address		
Telephone				
<b>Maintenance organisation details</b>				
Name		Address		
Telephone				
Approval Number		Period of employment		
		From:	To:	
<b>Domain of employment</b>				
<input type="checkbox"/> Planning		<input type="checkbox"/> Engineering		<input type="checkbox"/> Technical records
<input type="checkbox"/> Store department		<input type="checkbox"/> Purchasing		
<b>Mechanics/Technician</b>				
<input type="checkbox"/> Line Maintenance		<input type="checkbox"/> Base Maintenance		<input type="checkbox"/> Component Maintenance
<input type="checkbox"/> Servicing		<input type="checkbox"/> Removal/installation		<input type="checkbox"/> Testing/inspection
<input type="checkbox"/> Scheduled Maintenance		<input type="checkbox"/> Inspection		<input type="checkbox"/> Repair
<input type="checkbox"/> Trouble-shooting		<input type="checkbox"/> Trouble-shooting		<input type="checkbox"/> Overhaul
		<input type="checkbox"/> Repair		<input type="checkbox"/> Re-treatment
A/C type		A/C type		Component type
<b>Certifying Staff and support staff</b>				
<input type="checkbox"/> Cat. A		<input type="checkbox"/> Cat. B1		<input type="checkbox"/> Cat. B2
A/C Type		A/C Type		A/C Type
				<input type="checkbox"/> Cat. C
				A/C Type
				<input type="checkbox"/> Component
				Component Type
Certification privileges: Yes <input type="checkbox"/> / No <input type="checkbox"/>				
<input type="checkbox"/> Specialised services		Speciality ( <i>NDT, composites, welding, etc.</i> ):		
<input type="checkbox"/> Skilled personnel		Speciality ( <i>sheet metal, structures, wireman, upholstery, etc.</i> ):		
<input type="checkbox"/> Ground equipment operation				
<input type="checkbox"/> Quality control		<input type="checkbox"/> Quality assurance		<input type="checkbox"/> Training
<b>Total number of check boxes ticked:</b>				<input type="text"/>


<b>Details of employment</b>
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<b>Training received from the contracting organisation</b>	
Date	Nature of training


<b>Certified by:</b>	
<b>Name:</b>	<b>Date:</b>
<b>Position:</b>	<b>Signature:</b>
<b>Contact details:</b>	
<i>Advisory note: A copy of the present credential will be kept for at least 3 years from its issuance by the maintenance organisation.</i>	




**Appendix B**  
**Attachments**

 [NPA 2010-08 - comments Lufthansa Technik AG.pdf](#)  
Attachment #1 to comment [#52](#)


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 [L390-10-3397 Comments.pdf](#)  
Attachment #2 to comment [#49](#)

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 [Comment on AMC 145.A.30 \(d\) saved 18-10-2010.pdf](#)  
Attachment #3 to comment [#38](#)

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 [Comment on AMC 145.A.30 \(e\) saved 18-10-2010.pdf](#)  
Attachment #4 to comment [#39](#)

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