Comment Response Document (CRD)
to Notice of Proposed Amendment (NPA) 20/2005

For amending Executive Director Decision No. 2003/1/RM of 17 October 2003 on acceptable means of compliance and guidance material for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations ("AMC and GM to Part 21")

And

For amending Executive Director Decision No. 2003/19/RM 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

STANDARD PARTS

Explanatory Note

I. General

1. The purpose of Notice of Proposed Amendment (NPA) 20/2005, dated 17 February 2006, was to propose an amendment to Executive Director Decision No. 2003/01/RM of 17 October 2003 on acceptable means of compliance and guidance material for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations ("AMC and GM to Part 21"), and an amendment to Executive Director Decision No. 2003/19/RM 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.

II. Consultation

1. The draft Executive Director Decision amending Decisions 2003/01/RM and 2003/19/RM was published on the web site (www.easa.europa.eu) on 21 February 2006.

   By the closing date of 21 May 2006, the Agency had received 22 comments from 6 national authorities, professional organisations and private companies.

III. Publication of the CRD

2. All comments received have been acknowledged and incorporated into a Comment Response Document (CRD). This CRD contains a list of all persons and/or organisations that have provided comments and the answers of the Agency.

3. In responding to comments, a standard terminology has been applied to attest EASA'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 is not shared by the Agency

4. The Agency's Decision will be issued at least two months after the publication of this CRD to allow for any possible reactions of stakeholders regarding possible misunderstandings of the comments received and answers provided.

5. Such reactions should be received by EASA not later than **1 November 2006** and should be sent by the following link: CRD@easa.europa.eu;

Com-ment #	Para	Comment provider	Comment/Justification	Response	Resulting text
1.	General comment	CAA-CZ	From the proposed wording of the NPA No 20/2005 it is not evident, how the approval of the non-required instrument and/or equipment in question will be dealt with. Generally, it is necessary for the installation of part or appliance in an aircraft (product) that part or appliance is covered in the Type Design. The CAA CZ is of an opinion that more specific guidance material should be developed. The CAA CZ considers the classification of the non-required instruments and/or equipment in Standard Parts category as not fully appropriate. Although classified according to the CS 22.1301(b) as instrument or equipment, which does not in itself, or by its effect upon the sailplane and its operation, constitute a safety hazard, the inappropriate installation, location or defect of the non-required instrument and/or equipment may, under certain circumstances, still constitute a hazard to safe operation of the aircraft or a risk for other aircraft operations and persons on ground. The introduction of a new category of parts, as indicated in question 1 of Part VI of the NPA No 20/2005, seems to be more appropriate, long-term solution. Such category of parts is for example already mentioned in GM 21A.133(a) – parts identified in the product support documentation as "industry supply" or "no hazard", in which case the production organisation approval is not required. All parts, however, have to be part of the approved Type Design. Finally, we would like to provide our answers to the questions the NPA No 20/2005 has raised in Part VI: 1. Should a new category of parts be introduced in Part 21 and Part M for parts which do not require	Noted. This NPA only deals with the production (or conformity) aspect. The design approval of non-required equipment is subject to the normal design approval procedures of subpart B, D or E, using the applicable Certification Specification for sailplanes (CS-22). Noted. The installation (design) of the non-required equipment is subject to approval in accordance with Part 21. The physical installation will have to be done in accordance with Part M. The only element which is missing is the EASA Form 1, but the parts still need to be accompanied by a conformity statement. Noted. This will be subject to further rulemaking	

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			a Form 1, but which are not standard parts (e.g. "commercial parts")? The CAA CZ answer is Yes. In this case it is necessary to clearly determine what parts would be classified in this category and the means of their approval as well. It should be absolutely obvious, that this provision may not apply for aircraft equipment, for which ETSO standards exist. 2. Is the current definition of "parts and appliances" (see 1592/2002 art. 3(d)) satisfactory for determining the applicability of Part 21 production rules and Part M maintenance rules? (issues to be considered: what means "installed" or "attached to"; what means "used in operating or controlling an aircraft") The CAA CZ answer is No. Especially the term „used in operating or controlling an aircraft" requires further clarification to avoid misinterpretation. Furthermore, fire extinguishers and emergency and rescue equipment should not be classified or referred to as "parts". 3. Should the definition of "standard parts" be further extended? The CAA CZ answer is No. From the CAA CZ point of view it is not necessary to further extend the definition of standard parts. Justification: Please see above	Noted. This will be taken into account in the implementation of rulemaking task 21.026 (Mandatory Form One for installation of parts & appliances / Definition of Standard Part). This could introduce a new category of parts which may include the non-required glider equipment. Noted. This will be taken into account in the implementation of rulemaking task 21.026. Noted. This will be taken into account in the implementation of rulemaking task 21.026.	

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2.	Draft Decision AMC and GM to Part 21 Draft Decision AMC and GM to Part M	FAA	Establish another class of parts that reflect that intent of this proposal and prepare for eventual recognition of commercial parts in aircraft regulation. Justification: The proposal dilutes the meaning of standard. It circumvents creating another class of parts. Restricting this expanded view to sailplanes confines the impact to a small segment of aviation. Some of the cited parts may not comply with any standard. They may have their main applications outside aviation, but are adapted to sailplane use. If this principle applies to all categories, then we would call them commercial parts. ARAC developed a recommendation for rulemaking dealing with commercial parts. This can be the starting point for you rulemaking.	Noted. This will be subject to further rulemaking Partially accepted. The Agency believes that these parts can be put within the Part 21 and Part M definition of standard parts, but recognises that this may not be fully in line with the definition of standard parts as used by other authorities. Further rulemaking may introduce a new category of parts which may include the non-required glider equipment. The Agency will consider the ARAC recommendation as an input to its further rulemaking.	
3.	Complete NPA	CAA-UK	The NPA proposes to exempt equipment fitted on a non-hazard basis from the requirement for an EASA Form 1 release by revising the definition of a standard part within Part 21 AMC and GM. The definition of a standard part within Part 21 was intended to cover items such as nuts, bolts etc. which are manufactured in accordance with published specifications. The glider equipment referenced in the NPA does not conform to a published design standard and it is not appropriate to extend the definition of a standard part to cover these items. The glider equipment is accepted on a no-hazard basis for installation in a particular aircraft as a result of investigations and compliance finding by the DOA holder. As this equipment is manufactured by non-POA organisations, where the design standard of the equipment is not controlled to the same rigour as aviation products, DOA involvement is needed to	Partially accepted. The equipment concerned will have to be certified in accordance with CS 22.1301(b) meaning that the equipment may not in itself, or by its effect upon the sailplane, constitute a hazard to safe operation. The evaluation will have to take into account the less rigorous control of the manufacture of the equipment and mitigating factors such as avoiding interference of systems by isolation of the system from other essential systems. Control of production parameters by the design approval holder may therefore not be required.	

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			ensure continued compliance with the airworthiness requirements, i.e. continued no-hazard status. We would expect the DOA to define the qualification testing required for such commercial equipment. A POA may then release the item on a Form 1, with a statement of conformity to type design, after satisfactory completion of the qualification testing.		
4.	NPA Section I General	CAA-UK	The NPA implies that this issue is applicable to sailplanes and powered sailplanes which have non-required equipment fitted. This issue is considered may be applicable all other aircraft types since it relates to the use of commercial equipment	Partially agreed. Other categories of products have standards for certification of equipment that are different from 22.1301(b) and therefore the same approach cannot be used for those products.	
5.	AMC 21A.303 (c)	CAA-UK	To better align the text in AMC M.A.501(c) and AMC 21A.303 (c) it is proposed that AMC 21A.303 (c) should include the wording from AMC M.A.501(c) 3 & 4.	Not accepted AMC M.A.501(c)3&4 is guidance to an installation requirement whereas AMC 21A.303(c) is related to the showing of compliance (certifi-cation), therefore the Part M AMC is not entirely relevant for Part 21.	
6.	Special Request for Comments 1	CAA-UK	Yes a new category of parts for introduction into Part 21 should be considered. The UK CAA has experience going back many years where operators have requested approval to install equipment into aircraft that is not required for either certification of the aircraft or operational purpose. Much of the equipment and parts were commercial including television receivers and radio equipment for the use other than operational purposes. The CAA produced guidance material in Airworthiness Information Leaflets that set out the criteria for the acceptance of the non-aviation approved equipment and its installation on the aircraft. It is important that	Noted. This will be taken into account in the implementation of rulemaking task 21.026. This could introduce a new category of parts which may include the non-required glider equipment.	

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			guidance ensures that the installation and functioning of this type of equipment on aircraft does not constitute a safety hazard.		
7.	Special Request for Comments 2	CAA-UK	Article 3 (d) is open to interpretation. It also needs to be considered together with Annex 1 1.c.2, which makes a distinction between systems, equipment and appliances required for TC or by operating rules and other systems, equipment and appliances not required for TC or by operating rules.	Noted. This will be taken into account in the implementation of rulemaking task 21.026.	
8.	Special Request for Comments 3	CAA-UK	Suggest that Standard Parts is not extended further as this terminology is in worldwide usage. The more practical option would appear to suggest a new category for parts that recognises that certain commercial parts may be installed subject to criteria to ensure no safety hazard to the aircraft is caused. This would still involve an approved modification by a Part 21 DOA to ensure safe installation. This would also need to recognise that no EASA Form 1 would be required for these parts and acceptance would be by a commercial conformity document or similar.	Noted. This will be taken into account in the implementation of rulemaking task 21.026.	
9.	AMC M.A.501(c) - Installation, para b	CAA-UK	'Air Traffic Management' requirements in the UK are prescribed in the Air Navigation Order/Rules of the Air regulations, but it may be different elsewhere. A suggested amendment is: AMC MA 501(c) b. For sailplanes and powered sailplanes, non-required instruments and/or equipment certified under the provision of CS 22.1301(b), if those instruments or equipment, when installed, functioning, functioning improperly or not functioning at all, do not in itself, or by its effect upon the sailplane and its operation, constitute a safety hazard.	Accepted	……. "Required" in the term "non-required" as used above means required by the applicable airworthiness code (CS 22.1303, 22.1305 and 22.1307) or required by the relevant operating regulations and the applicable Rules of the Air ~~for certain operations (e.g. an artificial horizon for cloud flying)~~ or as required by Air Traffic Management (e.g. a transponder in certain controlled airspace). ……

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			"Required" in the term "non-required" as used above means required by the applicable airworthiness code (CS 22.1303, 22.1305 and 22.1307) or required by the relevant operating regulations and the applicable Rules of the Air ~~for certain operations (e.g. an artificial horizon for cloud flying)~~ or as required by Air Traffic Management (e.g. a transponder in certain controlled airspace). Examples of equipment which can be considered standard parts are electrical variometers, total energy probes, capacity bottles (for variometers), final glide calculators, navigation computers, data logger / barograph /turnpoint camera and bug-wipers. Equipment which must be approved in accordance to the airworthiness code shall comply with the applicable ETSO or equivalent and is not considered a standard part (e.g. oxygen equipment).		
10.	Explanatory Note 10.a	Finnish Aeronautical Association	The definition of std parts to be extended to include non req.equipmet is best solution now for the beginning and later option 2. to establish another category for those parts. List of equipments should be as complete as possible Justification: Safety and economical advantages will be achieved completely	Noted.	
11.	Explanatory Note VI.Special request for comments	Finnish Aeronautical Association	1. Not necessary as long as standard parts category extended. 2. Yes 3. Yes.	Noted. This will be taken into account in the implementation of rulemaking task 21.026.	

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12.	Draft Decision AMC and GM to Part 21 2. Standard parts	Finnish Aeronautical Association	Examples of equipments should be sufficient Including bank indicators ball type, loudspeakers, microfones, batteries, voltage indicator, clock Justification: Safety and economical advantages will be achieved completely	Partially accepted. Voltage indicators and clocks are already considered standard parts according to the current definitions. A battery may be used to power a required system (e.g. transponder) and can then not be certified on a purely non-hazard basis. It is then not considered a standard part. Moreover specific requirements are applicable to batteries in CS-22 (CS-22.1353). Loudspeakers and microphones can be part of a communication system which is required for certain operations and cannot be considered standard parts. Bank (or slip) indicators ball type can be added to the list of examples	…….. Examples of equipment which can be considered standard parts are electrical variometers, <u>bank/slip indicators ball type,</u> total energy probes, capacity bottles (for variometers), final glide calculators, navigation computers, data logger / barograph /turnpoint camera and bug-wipers. ……..
13.	Draft Decision AMC and GM to **Part M** AMC M.A.501(c) - Installation Paragraph 1. b.	European Sailplane Manufacturers	modify text: For sailplanes and powered sailplanes, non-required instruments and/or equipment.... and ...or by its effect upon the sailplane and its operation,... to read: For sailplanes<u>, balloons</u> and powered sailplanes, non-required instruments and/or equipment.... and ...or by its effect upon the sailplane <u>or balloon</u> and its operation,... Justification: During the survey in the gliding community it was learnt that the known problems also exist in ballooning. The main difference is the fact that	Not accepted. During the discussions on the scope of this rulemaking task, the majority of the interested parties have indicated that the concept proposed in this NPA had to be limited to sailplanes and powered sailplanes. Moreover balloons are often used for commercial purposes contrary to sailplanes.	

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			nearly all equipment beside the required minimum equipment in a balloon could be considered as "portable personal equipment of the pilot" i.e. not belonging to the balloon. Nevertheless some type of these instruments / equipment are carried along in the same way as the minimum equipment (which is already covered by the TC and/or (E)TSO rules). Despite the NPA was "made to solve the problems from the existing situation for gliders" it would make sense also to include balloons.		
14.	Draft Decision AMC and GM to **Part 21** AMC 21A.303(c) Standard Parts Paragraph 2.	European Sailplane Manufacturers	modify text … for certain operation (e.g. an artificial horizon for cloud flying) or … to read … for certain operation by national or international regulations (e.g. an artificial horizon for cloud flying) or … Justification: The concept of the NPA should be to "allow everything which does not pose a hazard and is not already regulated by the airworthiness regulations or other rules by official authorities." The term "for certain operation" is not specific enough.	Noted. The gist of the comment is accepted: see response to comment No. 9.	
15.	Draft Decision AMC and GM to **Part 21** AMC 21A.303(c) Standard Parts Paragraph 2.	European Sailplane Manufacturers	modify text: Examples of equipment which can be considered standard parts are electrical variometers, total energy probes, capacity bottles (for variometers), final glide calculators, navigation computers, data logger / barograph /turnpoint camera and bug-wipers. to read: Examples of equipment which can be considered standard parts are electrical variometers, total energy probes, capacity bottles (for variometers),	Partially accepted. Because this is a list of examples the addition "etc." is not needed.	…….. Examples of equipment which can be considered standard parts are electrical variometers, bank/slip indicators ball type, total energy probes, capacity bottles (for variometers), final glide calculators, navigation computers, data logger / barograph /turnpoint camera ~~and~~ bug-wipers and anti-collision systems. ……..

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			final glide calculators, navigation computers, data logger / barograph /turnpoint camera, ~~and~~ bug-wipers, anti-collision systems, etc.. Justification: The listed examples are all valid but only point into the direction of "special equipment for competition gliding" (which definitely is one main motivation for this NPA). Nevertheless another direction should be "safety enhancing equipment" like the already cited FLARM anti-collision device or new developments of strobe lights (not to be confused with existing ACL) and high-visibility markings. Either such "safety devices" should also be listed in the wording and/or the list has to be opened to "other directions" by adding the "etc.".		
16.	Draft Decision AMC and GM to **Part 21** AMC 21A.303(c) Standard Parts Paragraph 2.	European Sailplane Manufacturers	modify text: For sailplanes and powered sailplanes, non-required instruments and/or equipment.... and ...or by its effect upon the sailplane and its operation,... to read: For sailplanes, balloons and powered sailplanes, non-required instruments and/or equipment.... and ...or by its effect upon the sailplane or balloon and its operation,... Justification: During the survey in the gliding community it was learnt that the known problems also exist in ballooning. The main difference is the fact that nearly all equipment beside the required minimum equipment in a balloon could be considered as "portable personal equipment of the pilot" i.e. not belonging to the balloon. Nevertheless some type of	Not accepted During the discussions on the scope of this rulemaking task, the majority of the interested parties have indicated that the concept proposed in this NPA had to be limited to sailplanes and powered sailplanes. Moreover balloons are often used for commercial purposes contrary to sailplanes.	

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18.	Draft Decision AMC and GM to **Part M** AMC M.A.501(c) - Installation Paragraph 1. b.	European Sailplane Manufacturers	modify text: Examples of equipment which can be considered standard parts are electrical variometers, total energy probes, capacity bottles (for variometers), final glide calculators, navigation computers, data logger / barograph /turnpoint camera and bug-wipers. to read: Examples of equipment which can be considered standard parts are electrical variometers, total energy probes, capacity bottles (for variometers), final glide calculators, navigation computers, data logger / barograph /turnpoint camera, ~~and~~ bug-wipers, anti-collision systems, etc..	Partially accepted. Because this is a list of examples the addition "etc." is not needed.	…….. Examples of equipment which can be considered standard parts are electrical variometers, bank/slip indicators ball type, total energy probes, capacity bottles (for variometers), final glide calculators, navigation computers, data logger / barograph /turnpoint camera ~~and~~ bug-wipers and anti-collision systems. ……..

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			Justification: The listed examples are all valid but only point into the direction of "special equipment for competition gliding" (which definitely is one main motivation for this NPA). Nevertheless another direction should be "safety enhancing equipment" like the already cited FLARM anti-collision device or new developments of strobe lights (not to be confused with existing ACL) and high-visibility markings. Either such "safety devices" should also be listed in the wording and/or the list has to be opened to "other directions" by adding the "etc.".		
19.	Draft Decision AMC and GM to **Part M** AMC M.A.501(c) - Installation Paragraph 1. b.	European Gliding Union (EGU)	modify text: Examples of equipment which can be considered standard parts are electrical variometers, total energy probes, capacity bottles (for variometers), final glide calculators, navigation computers, data logger / barograph /turnpoint camera and bug-wipers. to read: Examples of equipment which can be considered standard parts are electrical variometers, total energy probes, capacity bottles (for variometers), final glide calculators, navigation computers, data logger / barograph /turnpoint camera, ~~and~~ bug-wipers, safety enhancing equipment, etc.. Justification: The listed examples are all valid but only point into the direction of "special equipment for competition gliding" (which definitely is one main motivation for this NPA). Nevertheless another direction should be "safety enhancing equipment" like the already cited FLARM anti-collision device or new developments of strobe lights (not to be confused with existing ACL) and high-visibility markings.	Not accepted. The examples are provided for illustration of the principle as described in the main text. The examples provided should be precise enough to help in the understanding of the principle. The proposed example is too generic for this purpose. In any case it is not an exhaustive list. See also response to comments No. 12, 15 and 18.	

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			Either such "safety devices" should also be listed in the wording and/or the list has to be opened to "other directions" by adding the "etc.".		
20.	Draft Decision AMC and GM to **Part 21** AMC 21A.303(c) Standard Parts Paragraph 2.	European Gliding Union (EGU)	modify text … for certain operation (e.g. an artificial horizon for cloud flying) or … to read … for certain operation by national or international regulations (e.g. an artificial horizon for cloud flying) or … Justification: The concept of the NPA should be to "allow everything which does not pose a hazard and is not already regulated by the airworthiness regulations or other rules by official authorities." The term "for certain operation" is not specific enough.	Noted. The gist of the comment is accepted: see response to comment No. 9.	
21.	Draft Decision AMC and GM to **Part 21** AMC 21A.303(c) Standard Parts Paragraph 2.	European Gliding Union (EGU)	modify text: Examples of equipment which can be considered standard parts are electrical variometers, total energy probes, capacity bottles (for variometers), final glide calculators, navigation computers, data logger / barograph /turnpoint camera and bug-wipers. to read: Examples of equipment which can be considered standard parts are electrical variometers, total energy probes, capacity bottles (for variometers), final glide calculators, navigation computers, data logger / barograph /turnpoint camera, ~~and~~ bug-wipers, safety enhancing devices, etc.. Justification: The listed examples are all valid but only point into	Not accepted. The examples are provided for illustration of the principle as described in the main text. The examples provided should be precise enough to help in the understanding of the principle. The proposed example is too generic for this purpose. In any case it is not an exhaustive list. See also response to comments No. 12, 15 and 18.	

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22.	Draft Decision AMC and GM to **Part M** AMC M.A.501(c) - Installation Paragraph 1. b.	European Gliding Union (EGU)	modify text … for certain operation (e.g. an artificial horizon for cloud flying) or … to read … for certain operation by national or international regulations (e.g. an artificial horizon for cloud flying) or … Justification: The concept of the NPA should be to "allow everything which does not pose a hazard and is not already regulated by the airworthiness regulations or other rules by official authorities." The term "for certain operation" is not specific enough.	Noted. The gist of the comment is accepted: see response to comment No. 9.	