



# EASA

European Aviation Safety Agency

# Design Changes on Russian Light Aircraft

Michael Düsing

GA Permit to Fly Coordinator and Project Certification Manager

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- **Type Design** – the design of these Russian Light Aeroplanes is not approved nor validated by EASA (i.a.w. Basic Regulation), thus a Type Design does not exist.
- **Logic:** Any design change requires an initially approved type design.
- In this respect no differences do exist between “SAS”-aircraft and “permitted” aircraft.



# Design Changes (Definitions), 21.A.91

- Changes to a type-certificate are classified as minor and major. A 'minor change' is one that has **no appreciable effect** on the mass, balance, structural strength, reliability, operational characteristics, noise, fuel venting, exhaust emission, operational suitability data or other characteristics affecting the airworthiness of the product.
- ..., all other changes are 'major changes' under this Subpart.
- Major and minor changes shall be approved in accordance with paragraphs 21.A.95 or 21.A.97 as appropriate, and shall be adequately identified.



# Aircraft classification

European Light Aircraft (ELA):

Aircraft not classified as complex motor-powered

➤ ELA 1 (MTOM: < 1200 kg):

➤ Yak-54, Yak-55(), Su-26(), Su-31()

➤ ELA 2 (MTOM: >1200 kg, < 2000 kg):

➤ Yak-18T, Su-29



# Major changes (samples)

- Change of Engine type
- Change of Propeller type
- Change of complete avionic suite (introduction of glass cockpit)
- Replacement of complete engine monitoring instruments (e.g. by MVP-50)
- Installation of enhanced avionic (e.g. G600)
- More examples of Major Changes are given in [GM to Part 21.A.101](#) (pg. 105ff)



## Minor design changes on permitted aircraft (PtF)

- The only possibility to accept minor changes is to apply for revision of Flight Conditions (refer to EASA approved FC).
- Practically:
  - Send new EASA Form 37 and 18b to EASA
  - Attach Datasheet (when available already)
  - Attach documents as needed (“Certification Program”, drawings, compliance reports, ...)



## Major design changes on permitted aircraft (PtF)

- The only possibility to accept major changes is to apply for revision of Flight Conditions (refer to EASA approved FC).
- Part 21.A.14 Demonstration of Capability
  - ELA 2 (Yak-18T, Su-29) would require a DOA or ADOA  
(in case the Yak-18T is operated with PtF)
  - ELA 1: an applicant may choose for demonstration of capability by providing the Agency with the Certification Programme.  
(Yak-54, Yak-55(), Su-26(), or Su-29, Su-31() if operated under PtF))





# Minor/major changes to SAS aircraft (Russian)

- Formally, there are no legal provisions in our Basic Regulation or Part 21 to manage any change to aircraft under SAS.
- In the past some changes have been allowed (e.g. automotive sparks) to support the airworthiness.
  - Formally EASA cannot approve design changes to a design for which the “basic” design is not approved. Therefore these cases are limited and decided on a case to case basis. Also the acceptance of the application might not lead to successful approval.



## ➤ Way out:

The (EASA) Permit to Fly option provides more flexibility with changes (that will be managed in the Flight Conditions approval process).

## EASA Form 37, Purpose 15:

For non-commercial flying activity on individual non-complex aircraft or types for which a certificate of airworthiness or restricted certificate of airworthiness is not [more] appropriate.



# Standard Changes (CS-STAN)

- CS-STAN defines the provisions to perform some highly common changes (e.g. radio, transponder, FLARM, DME, ELT)
- These provisions apply to Russian “permitted” or “SAS” aircraft within the appropriate boundaries (as defined in CS-STAN itself).
- Also some repairs are covered.
- The new issue is close to publishing (consultation phase finished on 7<sup>th</sup> Feb 2017)



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**Thank you for your attention.**

**Questions**

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