



EUROPEAN AVIATION SAFETY AGENCY
AGENCE EUROPÉENNE DE LA SÉCURITÉ AÉRIENNE
EUROPÄISCHE AGENTUR FÜR FLUGSICHERHEIT

7th EASA Rotorcraft Symposium

EASA Update on Initial Airworthiness Rulemaking Tasks

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 - Yawing Conditions
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- CS-27 & CS-29 Amdt 3 Published Dec 2012
- **CS-27 Main Changes:**
 - New CS 27.573: DT & FE of Composites
- **CS-29 Main Changes:**
 - Update to CS 29.571: FE of Metallic Structure
 - New CS 29.573: DT & FE of Composites
 - New CS 29.1465 + AMC: VHM
 - New AMC 29.851/1197: Halon replacement

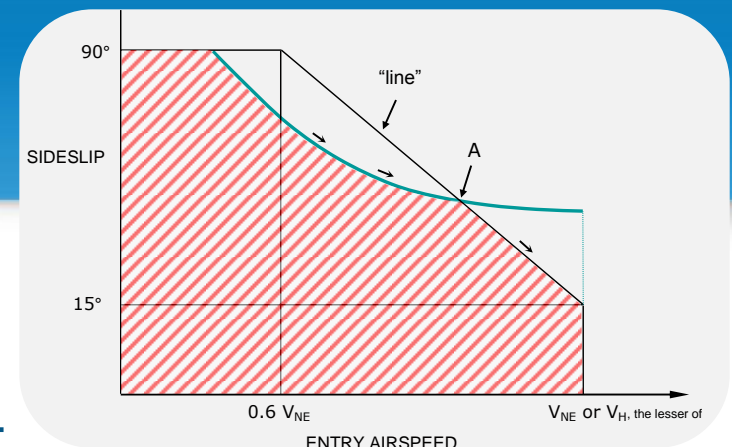


On-going Rotorcraft Rulemaking Tasks

Task No.	Title	Status
RMT.0119 (27&29.003)	Yawing Conditions	<ul style="list-style-type: none">NPA 2013-12 published Nov 2013Comment period closes 06/01/2014
RMT.0120 (27&29.008)	Ditching	<ul style="list-style-type: none">Working Group activeNPA planned for Summer 2014
RMT.0132 (27&29.027)	H-V Limitation	<ul style="list-style-type: none">Being progressed by Ops.
RMT.0134 (27&29.029)	Rotorcraft AMC Revision	<ul style="list-style-type: none">Group 1 (NPA 2013-04) 14/03/2013Group 2 (NPA 2013-18) 11/09/2013Comment period closes 09/12/2013
RMT.0223 (MDM.024)	HIRF & Lightning	<ul style="list-style-type: none">Draft NPA in development. Publication expected Q1/2014
RMT.0235 (MDM.030)	UAS further regulation	<ul style="list-style-type: none">JARUS CS-LURS Iss 1 published Nov 13JARUS AMC RPAS.1309 ~Q1/2014
RMT.0364 (MDM.089)	Volcanic Ash	<ul style="list-style-type: none">Complete. Awaiting next Decision



Yawing Conditions



- Background:
 - Relates to FAR/CS xx.351
 - Defines structural loads of tailboom, fin, etc.
 - Being interpreted in very different ways
 - Safety concerns raised by EASA
- JAA group created in 2000
 - No consensus reached. Issues raised included:
 - Interpretation of "resulting sideslip angle"
 - Scope of structure applicable
 - Environmental conditions
 - The use of yaw limiters
- EASA RMT.0119 started 2006



Yawing Conditions

Agreed Issues:

- For structure subject to a combination of t/r thrust, inertia and aerodynamics – to the line.
- Need new rule for structure subject only to aero loads (e.g. cowlings, fairings, doors, fin?)
- S/L ISA conditions can be used to show compliance

New Amendment to FAA AC 27/29.351



Yawing Conditions

EASA Differences:

- Parts subject to aero loads must demonstrate overswing angle
- Interaction systems/structure (yaw limiter)

AMC VLR/27/29.351 is maintained

➤ Background:

- Harmonised task with FAA taking the lead
- Periodic update of FAA AC 27-1B & AC 29-2C
- AMC to CS-VLR/27/29 makes direct reference to FAA ACs
- Paragraphs to be changed identified following a call for proposals to Authorities and Industry
- Changed text developed by individuals, small teams or groups
- Proposed changes packaged into 2 Groups due to the amount of material. Each Group has then undergone consultation under a separate NPA



AMC/AC Revision – Group 1 (NPA 2013-04)

Para.	Change
27&29.29	Clarify "empty weight"
27&29.45	OEI power & tailwind for H-V testing
29.49	OGE hover performance
27&29.79	H-V above 2000ft
27&29.141	Control forces
27&29.143	yaw control flight testing
27&29.151	Flight control characteristics
27&29.561	Rearward load factors
27&29.610	Reference to SAE standard
29.801	Emergency exit visibility
27&29.903B	Engine restart capability

Para.	Change
29.923B	Alternate lubricants
27&29.939	FADEC flight assessment
27&29.1093	Inadvertent Ops in snow
27&29.1309	Editorial
27&29.1316	New AC on lightning
27&29.1317	New AC on HIRF
27&29.1329	Minimum use height
27&29.1337	Fuel gauge for Aux tanks
27&29.1357	CB as switches
27&29.1543	Editorial
27&29 MG22	New MG - OEI training



AMC/AC Revision – Group 2 (NPA 2013-18)

Paragraph	Change
27&29.865	Further clarification on external loads
CS 27&29.865	Clean-up
AMC 27.865	HEC for Ops within Europe
29.1303	Useable ADI
27&29.1321	Primary & Secondary Field-of-View added
27&29 App B	Pilot response times to AFCS failures. Flight below Vmini.
27&29 MG1	Update to include integration of GPS
27&29 MG16	Extensive revision on NVIS
27&29 MG19	New MG on Electronic Display Systems
27&29 MG20	New MG on HF
27&29 MG21	New MG on system level FHA



Future Rotorcraft Rulemaking Tasks

Task No.	Title	Proposed Start Date
RMT.0122 27&29.017	Rotor & transmission	2015/Q3
RMT.0123 (27&29.018)	Helicopter tailrotor failures	2013/Q4
RMT.0127 27&29.022	Pilot compartment view	2015
RMT.0128 (27&29.023)	Incorporation of SC	2015/Q1
RMT.0454	Windshield Bird Strike	2015
RMT.0608	Helicopter G/B Lubrication	2014/Q1

Currently Under Review



Future Rotorcraft Rulemaking Tasks

Priority rulemaking tasks from EHSIT ST-R:

1. Aircraft Data Recording & Analysis
2. Inadvertent Entry into DVE
3. Authority Oversight
4. Safety Equipment Requirements
5. Ditching, Water Impact & Survivability
6. Helicopter Stability & Handling Qualities
7. ADEL T
8. Airworthiness Procedures & Documentation
9. Intervention Times
- =10. Radio Altimeter Provision
- =10. Wire Strike Protection



- EASA.2011.OP.14: *RIA to support future rulemaking on single engine helicopters with increased pilot intervention times following power failure.*
- Study concluded September 2013
- Findings:
 - Acknowledged that the response time available to pilots is inadequate
 - Change to 2s to give high safety benefit is not economically viable



Food for thought!





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Questions?

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