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European Aviation Safety Agency

THE BASICS OF COMPLIANCE MONITORING AND THE NEED FOR APPROPRIATE PROCEDURES

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What is compliance monitoring?



The basics of compliance monitoring

- It is a two-tiered approach
 - First tier
 - Establishment of procedures to ensure standards are transposed into the organisation
 - Second tier
 - Ensure those procedures are followed, through
 - Day-to-day supervision by 'line management'
 - Independent audits/inspections



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Why do we need
procedures?



The first tier

- Describe the organisation
- Contain procedures that secure safe operations
 - Procedures that are the mitigations to the identified risks
- Prescribe to staff how the operator will comply with the requirements
 - ‘This is how I want you to work!’



SO WHO WRITES THE MANUAL?

- » A third party?
 - » Do they know the organisation?

- » The nominated persons?
 - » The person responsible for the processes



The first tier

- The operations manual should only contain information that:
 - Staff **need**;
 - Staff **must understand**;
 - Staff **must comply with**.



- An operations manual should NOT:
 - Be a 'cut and paste' of the requirement;
 - Contain superfluous information:
 - data not relevant to the operation
 - inclusion of too much information may be as damaging to the safety of the operation as the omission of essential data.
- Contradict the limitations of the AOC/OPSPECS



➤ Output of the first tier

➤ Procedures

- providing clarity to staff on how they are expected to work

➤ Compliance checklist (cross reference table)

- demonstrating that all the applicable requirements have been addressed by (transposed into) appropriate procedures



The first tier

- Compliance checklist is the tool for:
 - Demonstrating compliance in the ‘certification’ process
 - Identification on which procedures to ‘change’ when standards are ‘amended’
 - Management of change – ORO.GEN.130 / ORO.GEN.200



The first tier

- So what's behind the procedures, hazard log's, risk assessments etc.
 - Accountability of senior manager – hence 'accountable manager'
 - he signs off on the risks and their implemented mitigations to achieve an acceptable level of safety
- Corporate memory
 - why do we do the things this way
- Unambiguous instructions to staff on what they need to know



Who verifies that
procedures are being
followed?



The second tier

➤ Firstly

- the responsibility of the day-to-day managers/supervisors

➤ Secondly

- Subject to an independent ‘internal’ verification by means of audits/inspections



➤ Independent verification

➤ Starts with the compliance checklist

➤ Referring to the applicable 'standards' that were transposed, such that it can be determined which procedures are subject to the scope of the audit/inspection

➤ Verifies that the procedures are followed

➤ Not by referring to the standard, but by referring to details that describe how and what to check to ensure that procedures are or have been followed



➤ Some examples

➤ Legal requirements state often:

➤ ‘an operator shall ensure that...’

➤ The intent of the legislator in such cases is that it requires the operator to establish a process/procedure.



Examples

- Transport of sporting weapons
 - ‘The operator shall take all reasonable measures to ensure that any sporting weapons intended to be carried by air are reported to the operator.’
- We have seen Operations Manuals that state:
 - *‘EASA Airlines will take all reasonable measures to ensure that any sporting weapons intended to be carried by air are reported to EASA Airlines.’*
 - This statement in the operations manual or ground handling instructions is meaningless.

The operator should define which measures it has taken such that passenger report those sporting weapons to their staff, and what a staff member needs to do when passengers report those weapons to them.



Examples

➤ MMEL

- 'May be unserviceable, provided alternative procedures are established and used.'

➤ This provision cannot be transposed in the MEL verbatim;

these alternative procedures are either:

- established and used, in which case the item may be unserviceable; or
- **not** established, in which case the item must be serviceable.



➤ Recurrent training

➤ What we sometimes see in Operations Manuals:

➤ The aircraft/FSTD training programme is established such that all major failures of aircraft systems and associated procedures will have been covered in the preceding 3-year period.

➤ However, we can't find:

- ▶ The actual syllabus for the recurrent training
- ▶ Which items are considered a 'major failure' for the specific helicopter type



Examples

➤ A GOOD PRACTICE

Note: During a three-year period, all subjects of this list shall be trained as part of the CTP.
If time permits, the OPC-examiner is allowed to check additional emergency items.

Administration			
Date		Helicopter Type	
Pilot			

Subject:		3 YEARS OPC TRAINING/CHECKING PERIOD					
		2015		2016		2017	
		TBT	check	TBT	check	TBT	check
	TBT: to be trained/Check: training is done.						
1.	Engine failure						
1.1	single engine failure hover/taxi / on take- off	X					
1.2	single engine failure in flight			X			
1.3	single engine failure on approach	X					
1.4	twin engine failure (simulated/simulator)					X	
1.5	intentional engine shutdown in flight (simulator)			X			
1.6	relighting an engine in flight	X					
2.	Ditching						
2.1	power on	X					
2.2	power off			X			
3.	Transmission malfunction						
3.1	main rotor t/p			X			
3.2	tail rotor drive/pedal stuck/loss	X					
4.	Chip warning						



Examples

➤ Safety risk register

➤ Sometimes we find a copy of the EHEST SMS toolkit material

Hazard no.	Revised on	Description	Specific nature of hazard	Likelihood	Severity	Result	Defences	Likelihood	Severity	Result	In place Y/N	Documented	REF Documentation	Additional measures or comments
ENV-04		Presence of antenna, electrical lines, wind turbines, etc.	Collisions with obstacles during flights at low altitude or outside recognised routes	Remote	Hazardous	Unacceptable	Study in particular the working environment before the first flight. Prior reconnaissance of the zones before any flight at Remote altitude, or sling, fire bombing. Define approach and clearance lines free of obstacles.	Improbable	Hazardous	Tolerable	Y	Y		

Specific nature of hazard

Collisions with obstacles during flights at low altitude or outside recognised routes

Defences

Study in particular the working environment before the first flight. Prior reconnaissance of the zones before any flight at Remote altitude, or sling, fire bombing. Define approach and clearance lines free of obstacles.



Examples

➤ BUT THIS IS WHAT THE HELICOPTER MAY ACTUALLY LOOK LIKE



- So why wouldn't you mention the installation of the wire-strike kit in the document?



Examples

Requirement	Documented	Implemented
CAT.OP.MPA.280 In-flight fuel management — aeroplanes	<input type="checkbox"/>	<input type="checkbox"/>

➤ not fit-for-purpose in the second tier

➤ Inefficient

- For every verification the ‘auditor/inspector’ needs to examine the documentation to establish where the requirement is being addressed. This is inefficient use of resources, as such verification should be done only once, to assist in the change management process.

➤ Ineffective

- When ticking the boxes it cannot be verified whether the assessor has determined that the rule was appropriately customised for the type of operation. The same applies to the implementation box. What has been verified is not traceable (i.e. only the requirements, or also any additional industry standard and company policies).



Examples

Requirement	Documented
<p>CAT.OP.MPA.280 In-flight fuel management — aeroplanes</p> <p>The operator shall establish a procedure to ensure that in-flight fuel checks and fuel management are carried out according to the following criteria.</p> <p>(a) In-flight fuel checks</p> <p>(1) The commander shall ensure that fuel checks are carried out in-flight at regular intervals. The usable remaining fuel shall be recorded and evaluated to:</p> <p>(i) compare actual consumption with planned consumption;</p> <p>(ii) check that the usable remaining fuel is sufficient to complete the flight, in accordance with (b); and</p> <p>(iii) determine the expected usable fuel remaining on arrival at the destination aerodrome.</p> <p>(2) The relevant fuel data shall be recorded.</p>	<p>OM-A 8.1.10</p> <p>OM-A 8.3.7</p>

➤ fit-for-purpose for the first tier (i.e. the compliance checklist)

➤ OM-A 8.1.10 – Use of Operational Flight Plan

- This procedure will have to include the obligation from the operator to the commander to record the outcome of the in-flight fuel monitoring check on the OFP.

➤ OM-A 8.3.7 – In-flight fuel management

- This procedure should define the regular intervals the operator has set.
 - We expect something like: TOC, TOD and every 30 minutes in between?



Examples

Requirements	Documented	Topic	Questions and Evidences	Implemented
CAT.OP.MPA.150 Fuel policy	OM-A 8.1.7 OM-A 8.1.10 OM-A 8.3.7	Fuel policy and in-flight fuel management	Sample flight preparation documents and check: <ul style="list-style-type: none">- fuel policy;- Preparation / actualisation OFP;- Contents of the Operational Flight Plan.	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Not satisfactory
CAT.OP.MPA.175 Flight preparation				
CAT.OP.MPA.281 In-flight fuel management - helicopters			Sample minimum of two post flight documentation (verify existence and markings on OFP of in-flight fuel checks)	

➤ This is a combination of the two-tiered system, which is believed to be the most efficient way of documenting the whole process, as it combines in one table both tier-one and tier-two.

The above are only examples, to illustrate the principles.

An organisation is free to develop its own documents to ensure verification of compliance can be effectively achieved.



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➤ Now my favourite

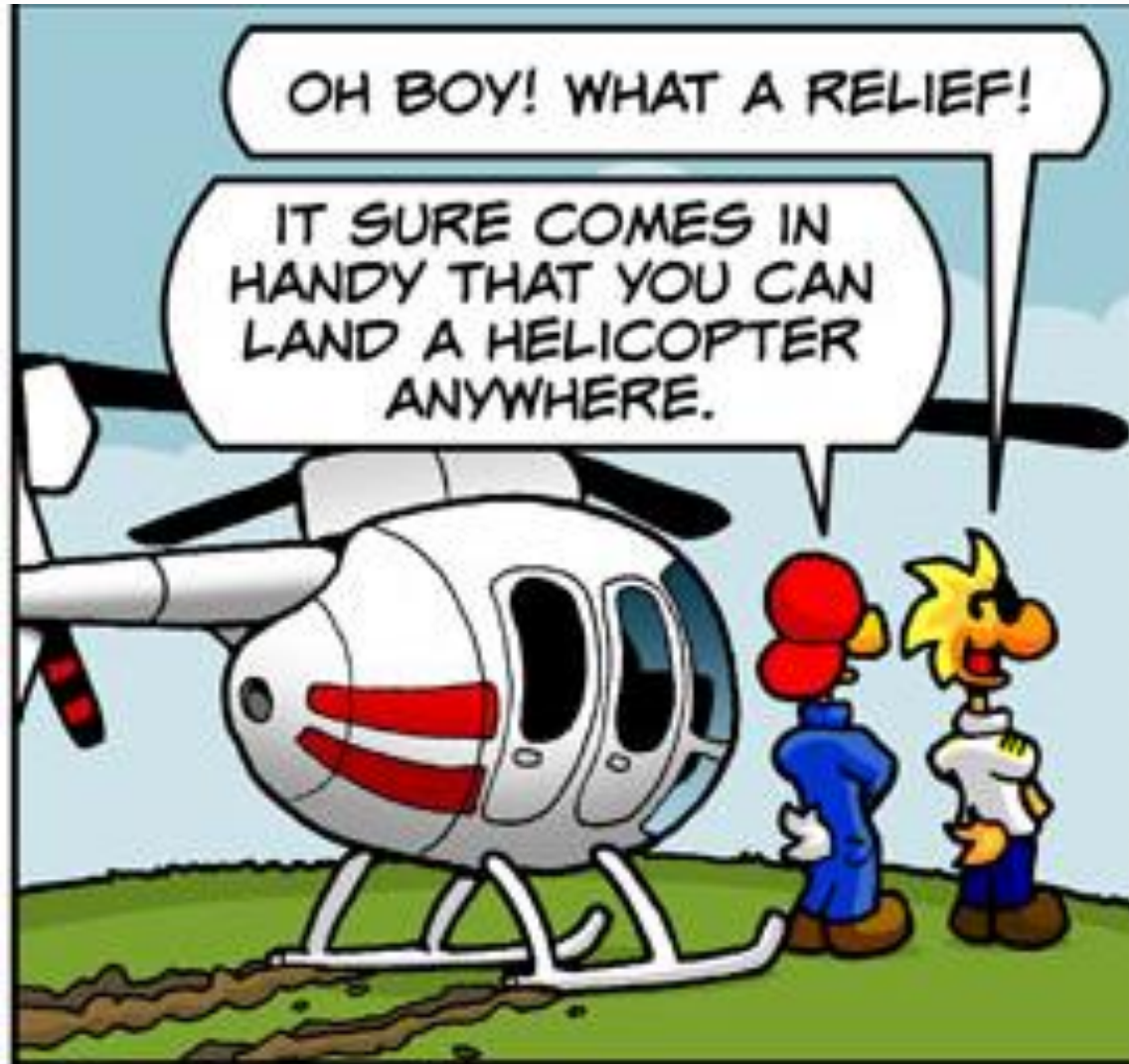
➤ Site selection procedures –
CAT.OP.MPA.105

➤ Do you have them in place?

➤ The 'chickenwings' approach...



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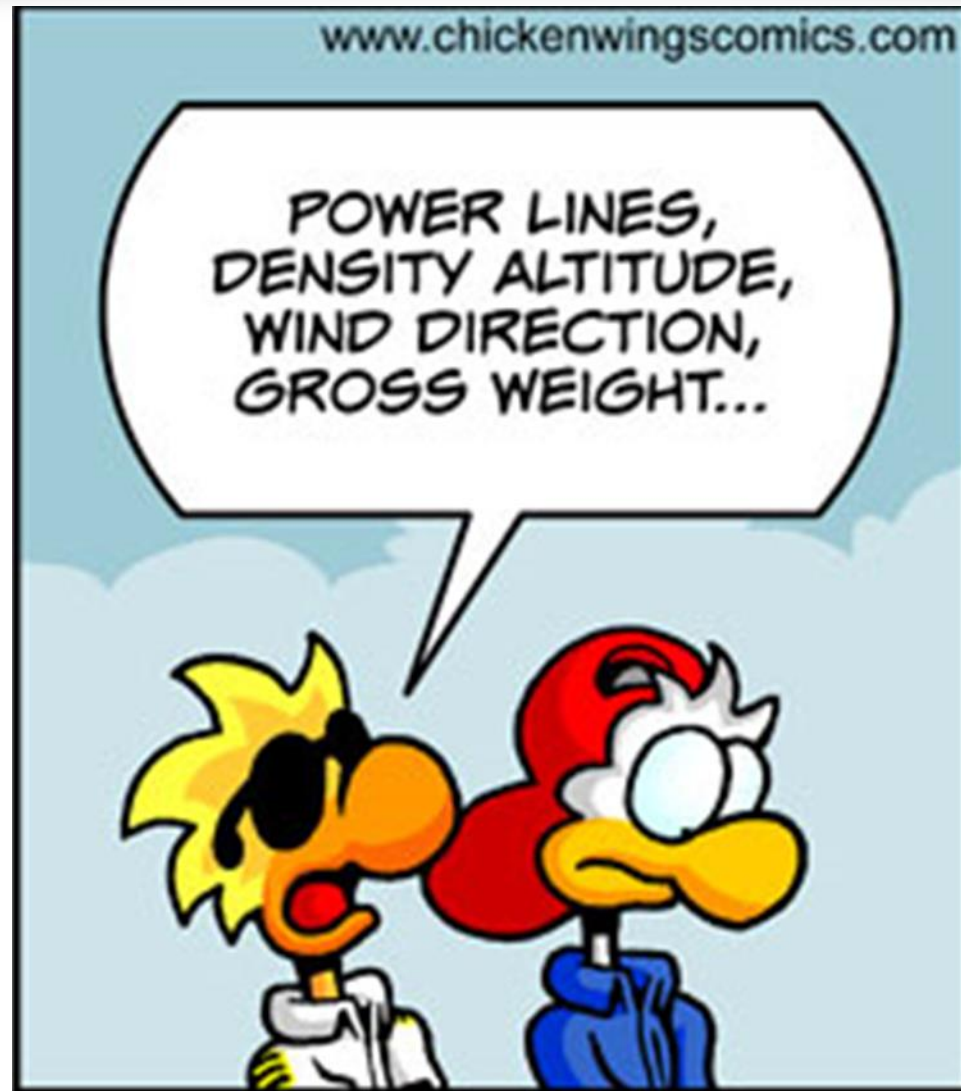


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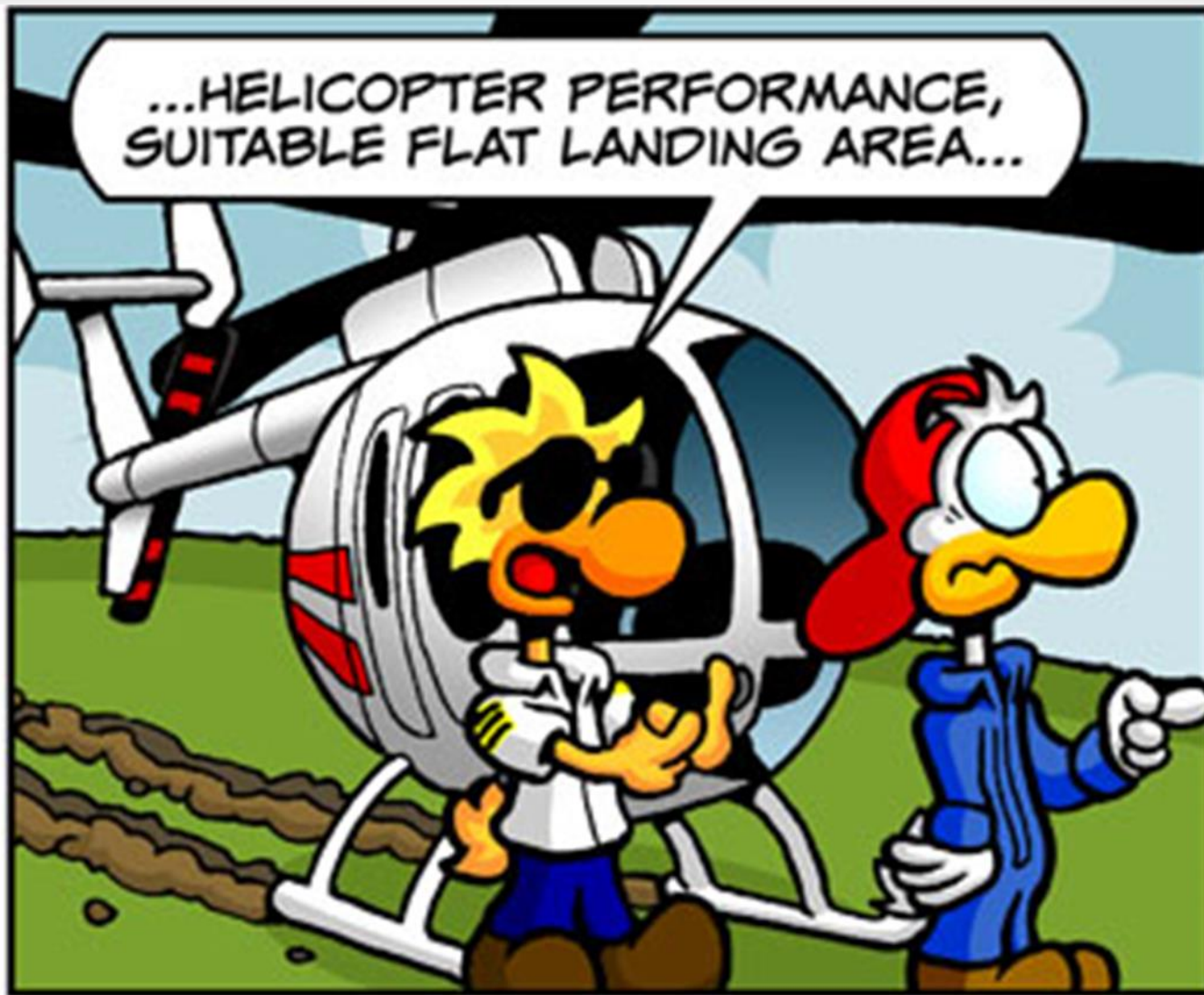


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Check out:

<http://www.chickenwingscomics.com/>

for more cartoons from Michael and Stefan Strasser...



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