



EASA
European Aviation Safety Agency

RMT.0120 Helicopter Ditching Status – December 2014

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TE.GEN.00409-001



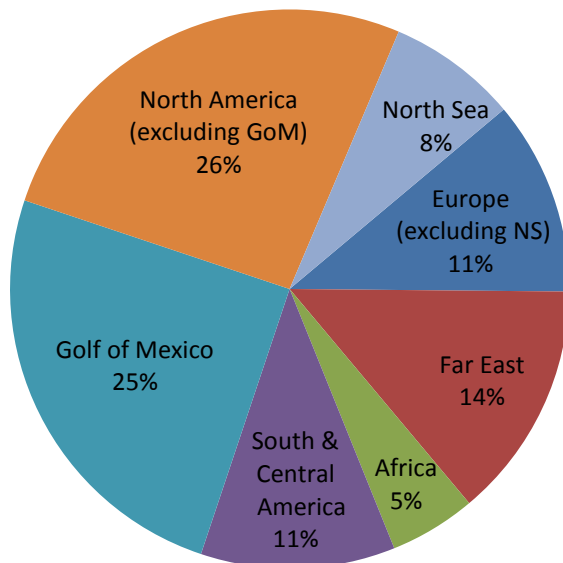
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- Draft Change Proposals
- Next Steps

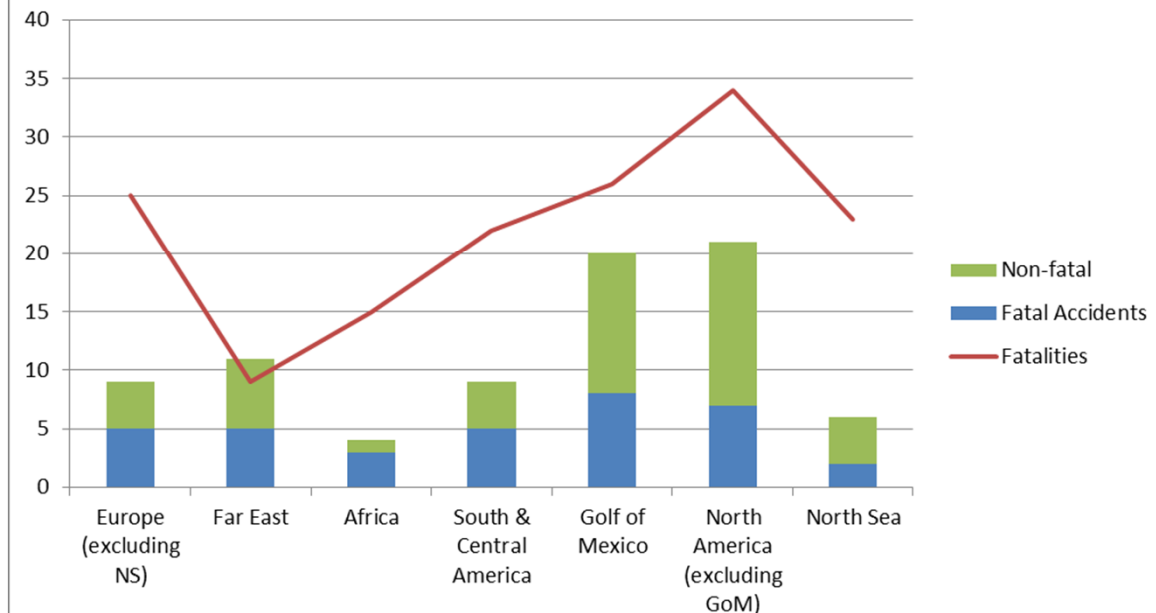


RMT.0120 Background: Is ditching/Water impact a North Sea issue?

Accidents by region



Fatal accidents & No. fatalities by region
2003-2012

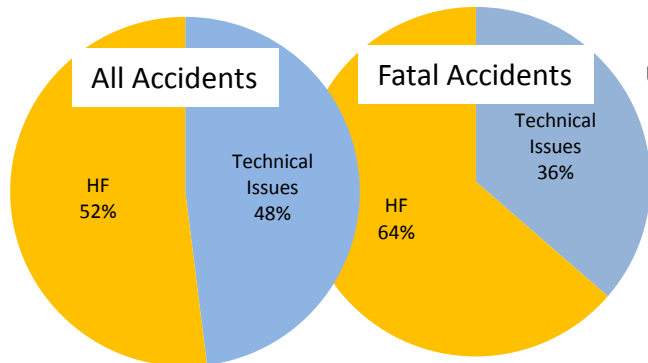


Notes:

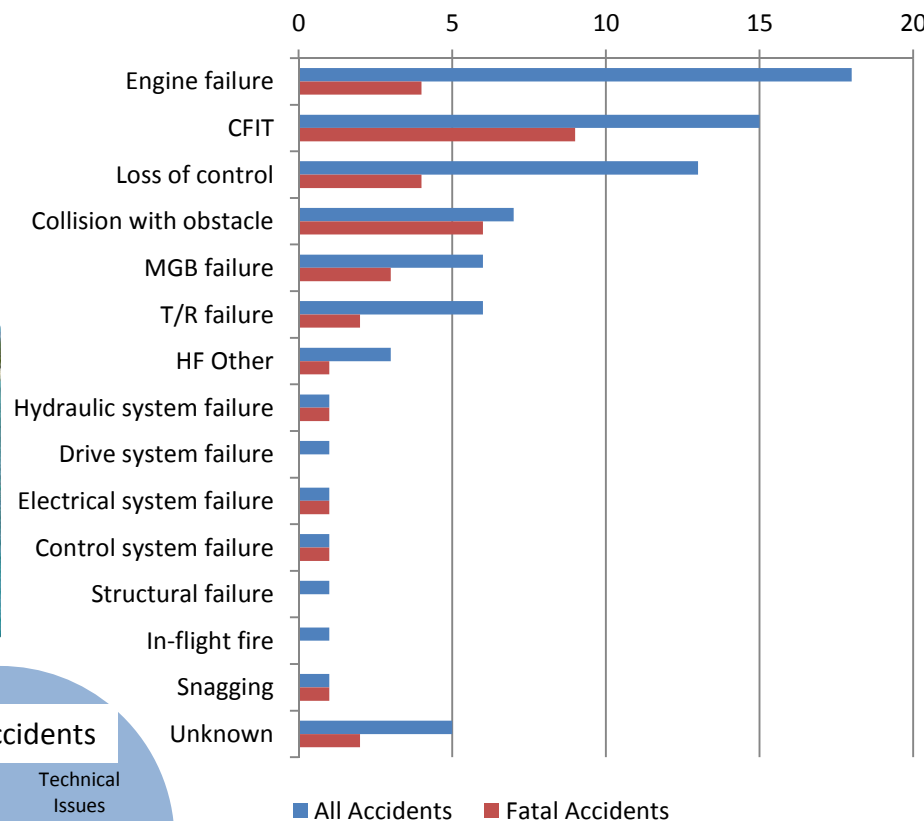
- Worldwide accident data 2003-2012
- Western built helicopters
- Helicopters equipped for overwater operations only



RMT.0120 Background: Why focus on mitigating the consequences of failures?



Primary Causal Factors



Notes:

- Worldwide accident data 2003-2012
- Western built helicopters
- Helicopters equipped for overwater operations only



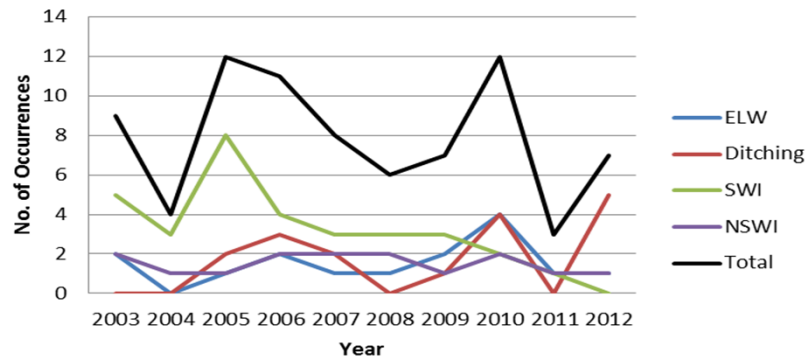
RMT.0120 Background: Task Focus

Based on worldwide data 2003-2012:

- 80 Accidents of which 45 were fatal
- 150 fatalities

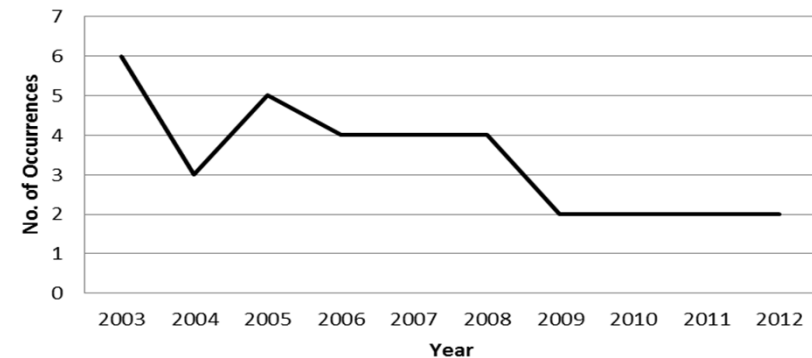
Trend by occurrence type

Worldwide, western built helicopters, equipped for overwater operations



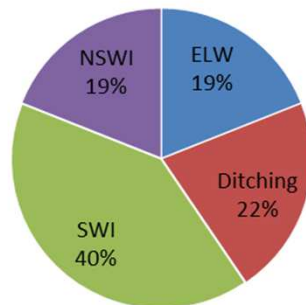
Trend in fatal accidents

Worldwide, western built helicopters, equipped for overwater operations

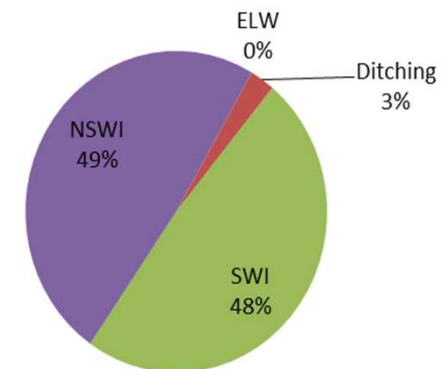


Proportion of Occurrence type

Worldwide, 10 year period



Occurrence Type by No. fatalities



48% of fatalities occur in a SWI



RMT.0120 Status: Schedule

2013

Jan-13	Feb-13	March-13	April-13	May-13	June-13	July-13	Aug-13	Sept-13	Oct-13	Nov-13	Dec-13
1 st Meeting				2nd Meeting					3rd Meeting	NPA drafting	NPA drafting

2014

Jan-14	Feb-14	March-14	April-14	May-14	June-14	July-14	Aug-14	Sept-14	Oct-14	Nov-14	Dec-14
NPA drafting	NPA drafting	4th Meeting	NPA drafting	NPA drafting	NPA drafting	NPA drafting	NPA drafting	NPA drafting	5th Meeting	NPA drafting	NPA drafting

2015

Jan-15	Feb-15	March-15	April-15	May-15	June-15	July-15	Aug-15	Sept-15	Oct-15	Nov-15	Dec-15
6th Meeting	NPA drafting	7th Meeting	NPA drafting	8th Meeting	NPA	Consultation	Consultation	Consultation			Review Group Meeting

2016

Jan-16	Feb-16	March-16	April-16	May-16	June-16	July-16	Aug-16	Sept-16	Oct-16	Nov-16	Dec-16
CRD drafting	CRD drafting	Draft CRD	Consultation + Workshop	Consultation	CRD update + Decision drafting	CRD update + Decision drafting	Decision drafting & Internal consultation	Decision + CRD			



RMT.0120 Status: Group Members/Contributors

➤ Group Members:

- Regulators: EASA, UK-CAA, FAA
- Helicopter Operators: CHC/EHA, Bristow Helicopters
- Helicopter manufacturers: Airbus Helicopters, AgustaWestland, Bell
- Oil & gas industry: Oil & Gas UK, C-NLOPB
- Consultants: BMT Fluid Mechanics, Dr S Coleshaw

➤ Contributors:

- Equipment manufacturers: Ferranti Technologies, Survitec, Zodiac Aerospace (Aerazur), Dart Aerospace, HR Smith.
- Accident Investigators: AAIB



RMT.0120 Working Methods

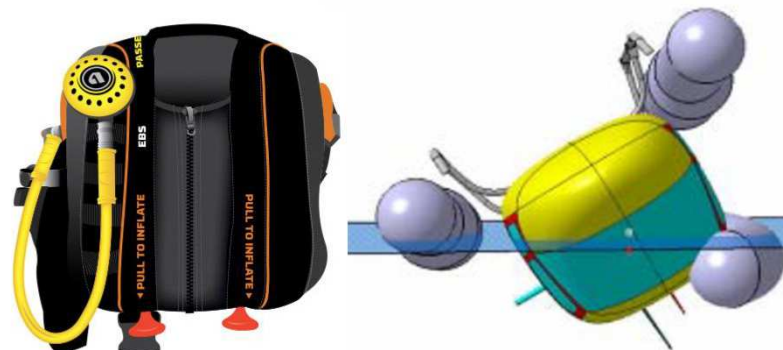
- Holistic Approach
- A database of worldwide ditching/water impact events has been generated:
 - Worldwide 2003-2012 (80 events)
 - North Sea 1976-2012 (36 events)
- Review of, accident reports, safety recs., previous studies and reports, national rules.
- Risk Matrix identifies hazards linked to possible avoidance/mitigation actions.



RMT.0120: Draft Change Proposals

1. New rule on 'survivable water impacts'

- Reduce the risk of sinking
 - EFS automatic arming/disarming/deployment
 - Greater individual flotation unit autonomy
- Provide immediate means to breath
 - Ensure an air gap exists in the cabin (e.g. by providing high-level floats)
 - Extend underwater survival times (e.g. EBS)





RMT.0120: Change Proposals (2)

2. Modify existing Ditching rules

- Simplify water entry rules
- Minimise the risk of capsizing
 - Probabilistic approach to avoiding capsizing
 - Certification for 'hostile' (SS6) or 'non-hostile' (SS4) or defined by applicant as a FM Limitation
 - Water stability based on irregular wave model tests





RMT.0120: Change Proposals (3)



3. Enhance existing cabin safety rules

➤ Increase No. and size of exits

- 1 pair of Type IV sized exits for each unit of 4 passenger seats



➤ Improve the ability to locate and operate exits

- Standardise emergency exit operation.
- Standardise emergency exit marking and lighting.
- Provide hand-holds.
- Operability of exits.





RMT.0120: Change Proposals (4)

4. Enhanced rules for Life raft installation

- External deployment and easily operated
- Direct entry of passengers into the life raft when the helicopter is floating upright.
- Deployable at any helicopter attitude, including inverted.
- Improved damage tolerance

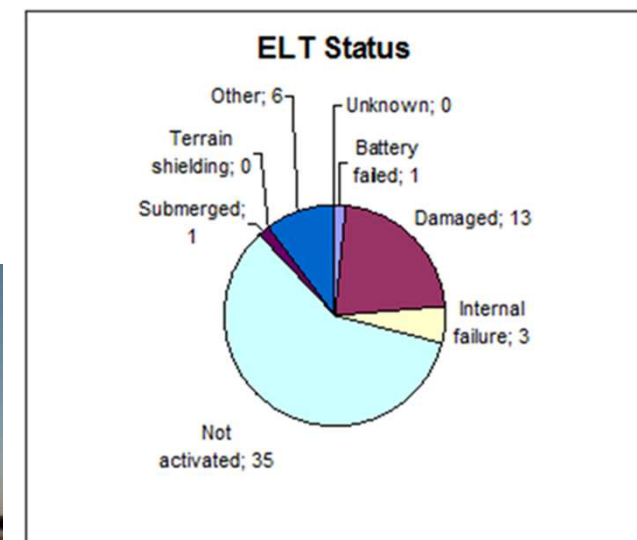




RMT.0120: Change Proposals (5)

5. New rules/guidance on ELT installation

- Where to install it
- Design and installation considerations
- Avoiding inadvertent deployment
- Maintenance instructions





RMT.0120: Other areas being looked at

6. Survival Equipment

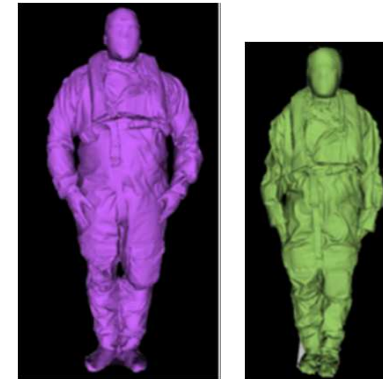
- Review of ETSOs (Immersion Suits, Life Jackets)
- ETSO for EBS

7. Passenger Size & Weight

- Study by Robert Gordon University
Aberdeen

8. Operational Issues

- Training
- Brace Position





Next Steps

- Complete risk analysis
- Develop RIA
 - Ensure proposed changes are proportionate to the risks (i.e. CS 27/29, Hostile/Non-hostile environment)
 - Possible retrofit of some enhancements to the existing fleet
- Complete rule text development
- Publish NPA



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End slide

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