



AFI Flight Operations Safety Awareness Seminar (FOSAS)

Upset Prevention and Recovery Training (UPRT)

ICAO/Airbus
Nairobi, 19-21 Sep. 2017

AIRBUS

Upset Prevention and Recovery Training (UPRT)



Context: LOC-I around 28% of Accident

Despite:

+ Design evolution:

Flight envelope protections, Improved alerting & automation

+ Flight Crew Training

Stall training, CRM, Flight crew proficiency, Simulator Fidelity

LOC-I remains the single biggest cause of fatal accidents over the last 20 years

Percentage of fatal accidents by accident category 1997-2016



Agenda

Upset Prevention and Recovery Training

AUPRTA Revision 3

Undesired Aircraft
State

Agenda

Upset Prevention and Recovery Training

AUPRTA Revision 3

Undesired Aircraft
State

Upset Prevention and Recovery Training Aid (UPRTA) Revision 3



Why a Revision 3?

LOCART group was tasked to provide guidance to regulators:

- + ICAO wanted to include all transport airplanes
- + Format more user-friendly
- + Published as ICAO doc

AUPRTA Rev3



Upset Prevention and Recovery Training Aid (UPRTA) Revision 3



Format and Content Changes



- + Includes Turboprop and Regional jet Transport Aircraft
- + Changed Definition of an UPSET
- + Electronic Format
- + Three Levels of Content
- + Improved Graphics
- + Embedded Videos
- + Element of Startle



Upset Prevention and Recovery Training Aid (UPRTA) Revision 3



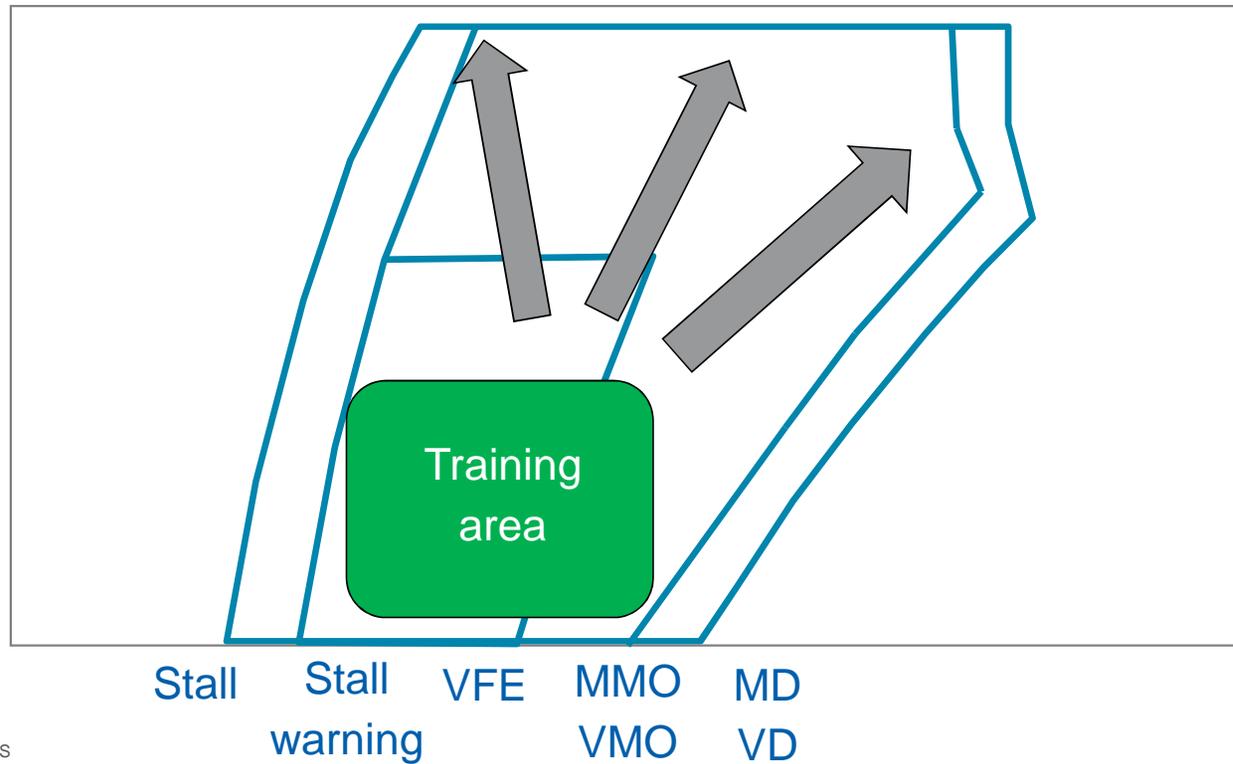
Training Recommendations

- + ATOs will define their training programs
- + Airbus recommend what to train, with rationale
- + Clear emphasis on awareness and avoidance
- + Correct, incorrect assumptions

Upset Prevention and Recovery Training Aid (UPRTA) Revision 3



Training Recommendations



Agenda

Upset Prevention and Recovery Training

AUPRTA Revision 3

Undesired Aircraft
State

Undesired Aircraft State



Definitions

Undesired Aircraft State LOSA definition:

+ An outcome in which the aircraft is unnecessarily placed in a compromising situation that poses an increased risk to safety

Airplane Upset UPRTA definition:

+ An airplane upset is an undesired airplane state characterized by unintentional divergences from parameters normally experienced during operations.



Undesired Aircraft State



Airbus Recommendations

OPERATIONS TRAINING TRANSMISSION - OTT

TO: All A318,A319,A320,A321,A330,A340,A350,A380 Operators

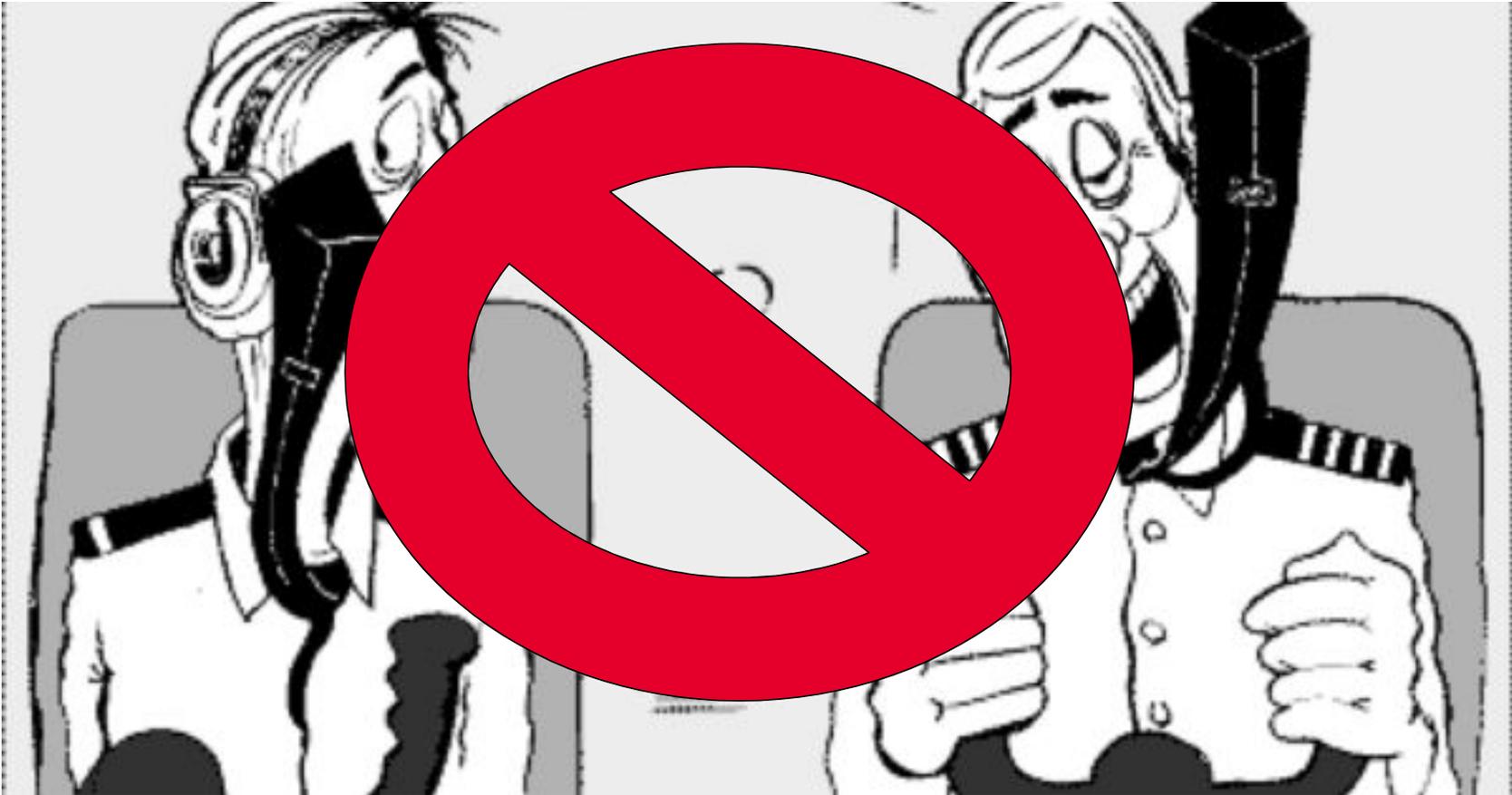
SUBJECT: ATA 00 – Undesired Aircraft State - Training Recommendations

OUR REF.: 999.0012/17 Rev 00 dated 10-FEB-2017.

APPLICABLE AIRCRAFT: This OTT is applicable to A318, A319, A320, A321, A330, A340, A340-500, A340-600, A350, and A380.

•**Notice:** This OTT provides Operators with recommendations on training techniques or training programs. These training recommendations aim to enhance the efficiency or safety of operations. It is each Operator's responsibility to distribute the information contained in this OTT to ensure application of the training recommendations in the Operator's own training department or any training organization where their crews are trained.

Undesired Aircraft State



Undesired Aircraft State



Training Recommendations

- + Instructor led exercises
- + Manoeuvre base training, where prevention has failed
- + Alternate law training
- + No motion if risk of manoeuvre beyond FSTD normal law flight envelope
- + Instructor training needed
- + Exercises in OTT



Undesired Aircraft State



Skills in simulator

- + Fly in the whole flight envelope
Start in the middle and work towards the edges
- + Raw data flight
AP/ FD / ATHR / FPV OFF flights
- + Day / Night
- + Adverse weather conditions

Undesired Aircraft State



Skills in simulator

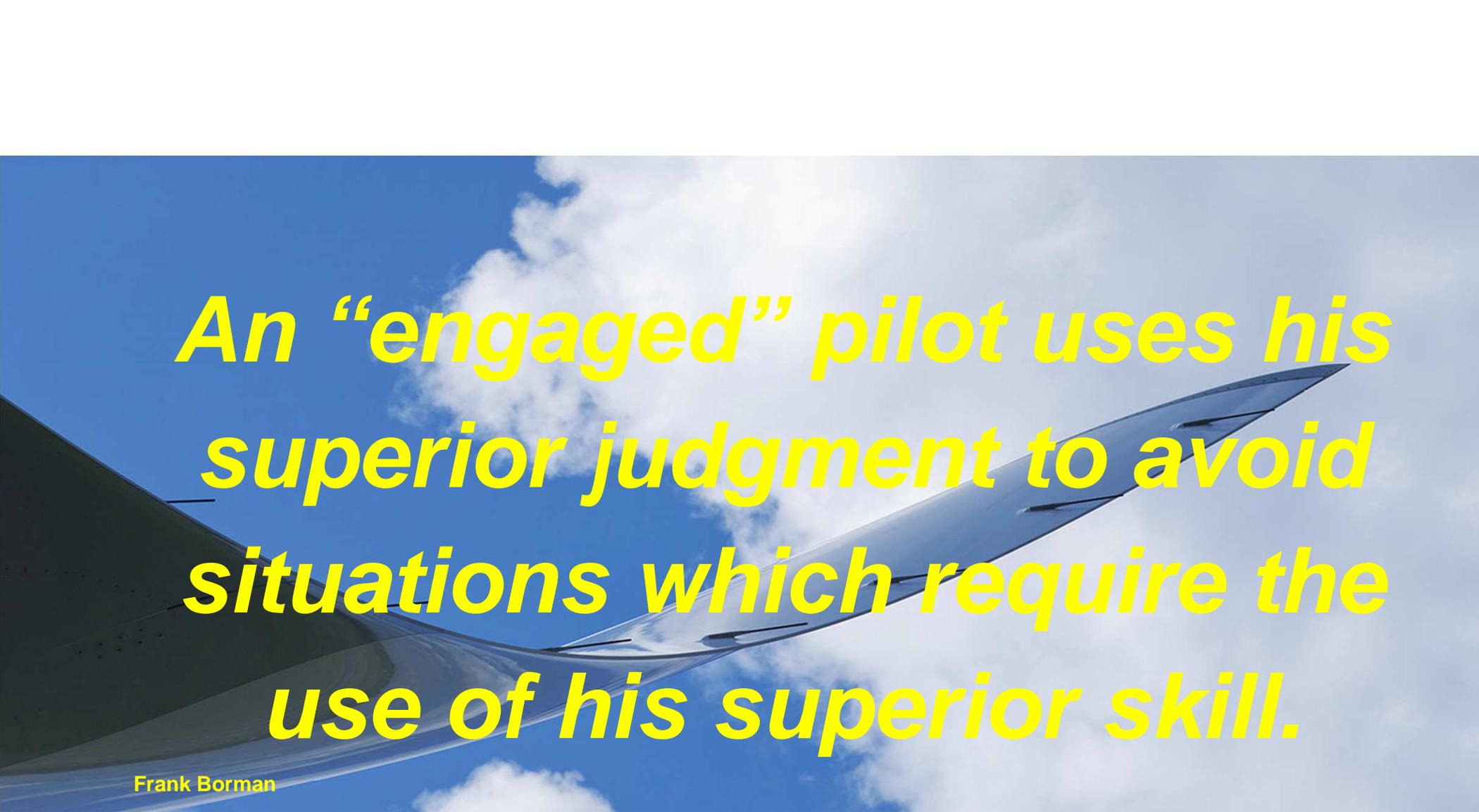
- + Stall and Upset training : refer to OTT
- + Incorporate OEM into scenario if needed
- + Do not change simulator models without OEM cooperation
- + Do not experiment

Conclusion



Conclusion

- + Prevention is a key
- + Recovery skill need to be maintained
- + Do not set artificial requirements
- + Simulators at the highest fidelity
- + Share experience and scenarios
- + It is an industry problem that we must solve together
- + Contact your OEM and do not experiment



An “engaged” pilot uses his superior judgment to avoid situations which require the use of his superior skill.

Frank Borman

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