

UPRT Workshop

**How we are Implementing the New
UPRT Requirements**



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Capt. Mark Dwyer, TRE, Ryanair



- History of UPRT in Ryanair
- Changes Required
- Part ORO
- New Entry Pilots
- Changes Required
 - Theoretical Knowledge Course
 - Simulator Training Course
 - Instructor Training
 - Aircraft Training
- Simulator Upgrades
- Review



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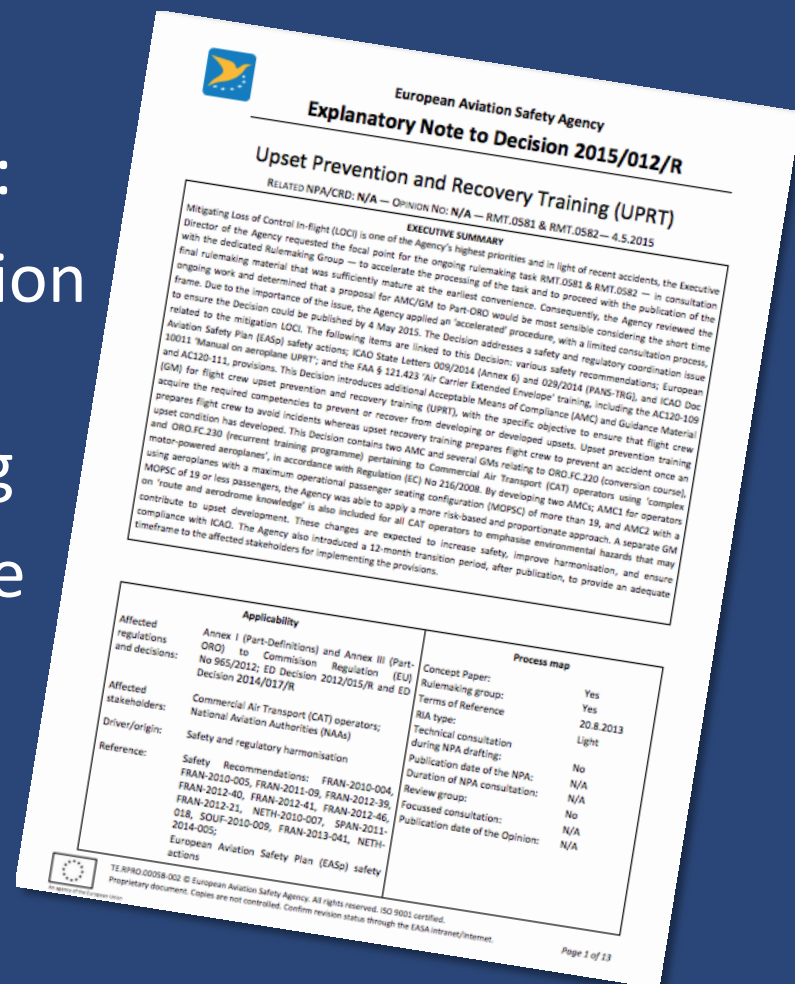




EASA ED Decision 2015/12/R
published in May 2015 changed:

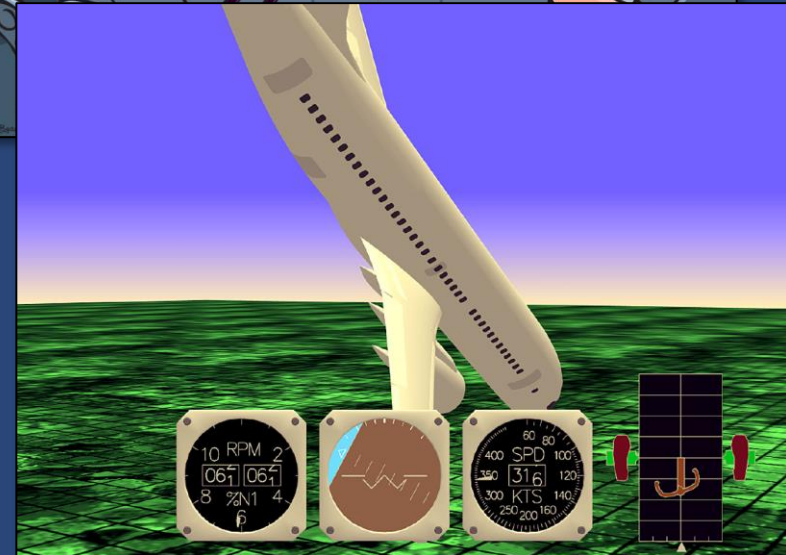
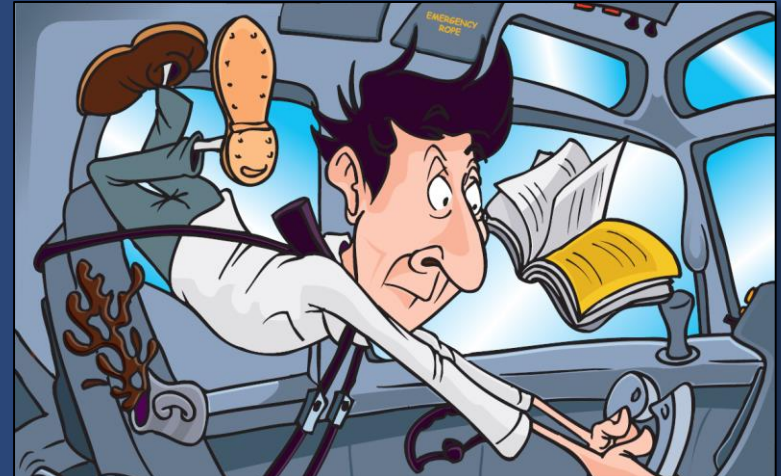
- ORO.FC.220 Operator Conversion Course
- ORO.FC.230 Recurrent Training
- FSTD Instructor Training Course

Additionally, Type Rating, Transition
Type Rating and Command Upgrade
Courses also complete UPRT





- Decision published May 2015
- New UPRT course rolled out for OCC Courses in May 2016
- New Recurrent UPRT in 2016
- In advance of this regulation, new UPRT course for
 - Type Rating,
 - Transition Type Rating
 - Command Upgrade in June 2016
- 4390 pilots have completed the course up to 9th June 2019





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UPRT Workshop – June 2019

All new Entry Pilots in Ryanair receive UPRT

All new entry pilots in Ryanair have completed the new UPRT Course since June 2016





- Regulation 2018/1974
- Various AMC and GM to Part-ORO, Part-ORA, Part-FCL
- CS-FSTD(A) Issue 2





Most requirements already implemented in 2016

Areas Identified where Changes are Required:

- Recruitment
- Type Rating Theoretical Knowledge Training
- Type Rating Simulator Training
- Type Rating Instructor Training
- Aircraft Training
- Simulator Upgrades



Applicants will need to provide evidence that the FCL.745.A (Advanced UPRT) course was completed

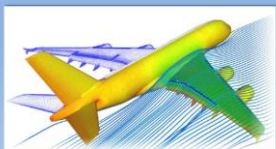




- eLearning course as per AMC1 ORO.FC.220&230 comprising of 8 Modules

UPRT - Aerodynamics

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Upset Prevention & Recovery Training
Module 1 - Aerodynamics

UPRT - Causes

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Upset Prevention & Recovery Training
Module 2 - Causes

UPRT – G Awareness

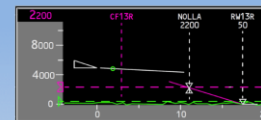
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Upset Prevention & Recovery Training
Module 3 – G Awareness

UPRT – Energy Management

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Upset Prevention & Recovery Training
Module 4 – Energy Management

UPRT – Flight Path Management

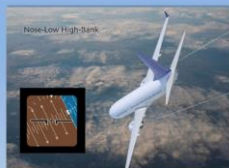
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Upset Prevention & Recovery Training
Module 5 – Flight Path Management

UPRT – Recognition

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Upset Prevention & Recovery Training
Module 6 – Recognition

UPRT – System Malfunction

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Upset Prevention & Recovery Training
Module 7 – System Malfunction

UPRT – Manual Handling Skills

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Upset Prevention & Recovery Training
Module 8 – Manual Handling Skills

Safety Review of Accidents and Incidents is integrated throughout the 8 modules



- Structure is almost identical to ‘AMC2 to Appendix 3; AMC1 to Appendix 5
- Review of content planned to cover updated guidance in
 - Airplane Upset Prevention & Recovery Training Aid Revision 3
 - IATA Guidance Material and Best Practices for the Implementation of Upset Prevention and Recovery Training Revision 2
 - Review of Line Events



- Major Changes Implemented in 2016
- Dedicated UPRT sim which includes;
 - Approach to stall in takeoff, cruise, approach and landing configurations
 - Steep turns
 - Recovery from Nose High and Nose Low Upsets
 - Angle of Attack awareness
 - High Altitude Operations
 - Aeroplane Stability
 - G-Loading
 - Windshear
 - Go-Arounds



- We have a dedicated UPRT Simulator Session in each new entry course
- In seat instruction used for Nose High/Low Upsets
- Full Flight Level D Simulator
 - 4 Hour Session UPRT specific for Type Rating
 - 5 Hour Session for OCC / TTR / Command Upgrade





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Changes Required – Type Rating Simulator Course

EXERCISE	*S/D/R LST MPA REF		EXERCISE	*S/D/R LST MPA REF	
TAKEOFF & CLIMB (Instructor Setup)			AEROPLANE STABILITY		
NO FD TAKEOFF LEVEL OFF AT 3000'			APPROACH TO STALL INDICATIONS	3.4.9	
MANEUVER MARGINS (PFD)			APPROACH TO STALL RECOVERY HIGH ALTITUDE (WITH AND WITHOUT STICK SHAKER)		
CONTROL SURFACE FUNDAMENTALS			DESCENT		
SLOW FLIGHT (F40 VREF)			DEMONSTRATE EFFECT OF G-LOAD ON MINIMUM AND MAXIMUM SPEED BARS (ONCE PER CREW)		
APPROACH TO STALL IN TAKE OFF CONFIG			DEMONSTRATE THE EXCHANGE OF ENERGY (KINETIC VS. POTENTIAL VS. CHEMICAL) (ONCE PER CREW)		
APPROACH TO STALL IN CLEAN CONFIG			TCAS EVENT	3.6.9	
FL100 250KTS			APPROACH		
STEEP TURNS (45 DEGREES OF BANK)	3.7		APPROACH TO STALL ON BASE	3.8.1	
USE OF TRIMS			APPROACH TO STALL IN LANDING CONFIGURATION	3.8	
RECOVERY FROM NOSE HIGH UPSET (VARIOUS BANK ANGLES)			GO-AROUND FROM F5 MAA -1000' USING REDUCED GA THRUST		
RECOVERY FROM NOSE LOW UPSET (AT HIGH BANK ANGLE)			VISUAL APPROACH		
CRUISE (AT FMC OPT ALTITUDE)			WINDSHEAR		
ANGLE OF ATTACK AND STALL AWARENESS			PREDICTIVE WINDSHEAR (RTO)		
MANEUVER MARGINS (PFD)			WINDSHEAR ON TAKE OFF RECOVERY	3.6.5	
TURNS (EFFECT ON STALL SPEED) WITH AND WITHOUT SPOILERS	3.1		WINDSHEAR ON APPROACH RECOVERY	4.2	
THRUST LIMIT & ENGINE ACCELERATION					
MACH BUFFET	3.2				

* S = SATISFACTORY

R = REPEAT

D = DEFERRED

**CRM LEARNING
OBJECTIVES:**

RESILIENCE, AUTOMATION PHILOSOPHY, LEADERSHIP AND TEAMWORK
(In accordance with Type Rating Workbook)



- AMC1 FCL.930.TRI specifies the requirements to teach UPRT
- These are almost identical to GM5 ORO.FC.220&230 – **already implemented in 2016**
 - eLearning Course for Instructors
 - Highlighted key areas such as
 - Negative Training
 - Negative Transfer of Training
 - FFS Limitations
 - FSTD Training Envelope
 - IOS Features for assessing recovery manoeuvres
 - In seat instruction and practice for new instructors
- Practical training already completed during initial SFI/TRI In House Training Course





- New Issue 2 related software changes to be included in our updated Instructor eLearning Course, due in September 2019
- No additional changes required to our in house TRI course (all SFI/TRI training includes UPRT for new instructors)





- AMC2 ORA.ATO.125
- Training Should include
 - A. at least four landings in the case of MPAs where the student pilot has more than 500 hours of MPA experience in aeroplanes of similar size and performance or, in all other cases, at least six landings;
 - B. at least one full-stop landing; and
 - C. **one go-around with all engines operating.**





Ryanair Training Centres

- **East Midlands, UK**

- 3 x Level D
- 2 x FTD2

- **Stansted, UK**

- 2 x Level B
- 5 x Level D
- 3 x FTD1

- **Bergamo, Italy**

- 2 x Level D
- 1 x FTD1

- **Dublin, Ireland**

- 1 x FTD1





- All FFS being upgraded to FSTD(A) Issue 2
- Upgrades begin 2nd September 2019
- All Level D upgrades complete by 20th December
- Awaiting details from CAE on updates to the UPRT IOS Features
- New Issue 2 features include:
 - Improved flight modelling at High Altitude
 - Engine and Airframe Icing
 - Recovery from a Bounced Landing (**Optional - FAA Directive 2**)
 - Takeoff and Landing with Gusting Crosswinds (**Optional - FAA Directive 2**)



- **Most UPRT Requirements Already in Place**
- All FFS Level D being upgraded to FSTD(A) Issue 2 by 20th December
- Instructor eLearning course to be updated to take into account Issue 2 changes
- Slight changes to student eLearning to match industry best practice (IATA GM, AUPRTA Rev 3)
- Additional All Engines Operating Go Around during Aircraft Training



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Thanks for Watching!

