WIZZ AIR - FLIGHT CREW TRAINING DEPARTMENT

COMMAND COURSE

Guidance and material For TRAINEES

Revision 2 / 03-2014

This document is compliant with Wizzair Operations Manual part D

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THE COMMAND COURSE

3 PHASES ALL VALIDATED BY TESTS OR CHECKS

- 1. THE GROUND COURSE
- 2. THE SIMULATOR MODULE
- 3. THE LINE FLYING UNDER SUPERVISION (LFUS).

GROUND COURSE 20 HOURS

Ground school takes place before simulator training and consists of a 3-days classroom course supported by audio-visual means. The course is recorded in the trainee folder. The ground course is conducted by a designated TRI trained in CRM concepts. The topics are the followings:

COMMANDER'S RESPONSIBILITIES

- Organization of the Company and role of the commander in the organisation; safety culture; handling, notifying and reporting occurrences;
- > Authority and responsibilities of the Commander and other Crewmembers;

SOPs - PROCEDURES

- Operating procedures (On-board documents and acceptance of the aeroplane -MEL/CDL procedures, performance calculation, fuel management, adverse weather operations including winter ops and low visibility ops);
- Management of abnormal and emergency situations decision making.

NOTECHS - CRM

- > Human error and human reliability; Situation awareness;
- > Pilot's mental abilities and limitations, alertness, managing interruptions and distractions, workload management
- Chain of command, role of the Commander, management of the Crew, leadership;
- Communication in the cockpit; Leadership, cooperation within the Crew;
- Decision making model, Factors and CRM aspects in Incidents / Accidents;
- Effective Pilot / Controller Communications;
- > Proper use and limitation of automation.



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SIMULATOR MODULE 21 HOURS TRAINING + 7 HOURS LPC/OPC/ST

The training program consists in 6 Full Flight Simulator sessions (FFS).

Trainees are designated as "Trainee 1" or "T1" and "Trainee 2" or "T2" and will equally alternate as Pilot Flying on the left seat.

A FFS session is conducted by a Wizzair approved TRI/TRE.

The objectives of the training module are:

- > LHS HANDING FAMILIARISATION AND CONSOLIDATION IN ALL FLIGHT PHASES.
- > MANAGERIAL SKILLS CONSOLIDATION IN ALL FLIGHT PHASES.
- > PROFICIENCY ASSESSMENT TO BE PRESENTED TO THE WIZZAIR LHS LPC/OPC.

FFS 7 AND 8 "THE CURRENT SIMULATOR CYCLE/COMBINED LPC/OPC"

It takes place within 2 fields of regulations: FCL (licensing) and OPS (operator)

> Licensing check

The Licence Proficiency Check: (LPC) allows the revalidation of the applicant's typerating provided the TRE planned by Wizzair is allowed to carry on the check by the licence holder Authority (see note here after).

> Operator check

Operator Proficiency Check (OPC) Certifies that the applicant has demonstrated the required technical and non-technical level to act as a Commander in Wizzair from the left seat.

LVO refresher Certifies that the applicant is entitled to operate in LVO as a Commander to the lowest authorised Wizzair take-off and landing minima from the left seat.

Narrow Runway Check Certifies that the applicant is proficient to operate on narrow runways at maximum crosswind component allowed by Wizzair.

The candidates are separately crewed with company average experienced first officers to assess their non-technical and managerial skills in a standard crew configuration.

Notes:

For type-rating revalidation and renewal, the Wizzair combined ATPL(A)/Type-Rating skill-test and proficiency check on multi-pilot aeroplane form, might not be accepted by some National Authorities. It is the applicant responsibility to provide the specific form edited by the Authority on its website.

Some National Authorities might require to be approached in time so that they provide a written certificate allowing the TRE to conduct the licensing check . It is the applicant responsibility to clarify the requirements and inform the TRE in case any action is required from him before the check.

If the TRE planned for the check is not allowed to revalidate the Type-rating (LPC); only an OPC can be carried on. In that case, if the applicant holds a non-restricted ATPL and a valid type-rating, the line flying under supervision can be initiated. This case should be exceptional. Match between the OPC and Type-Rating is highly suitable.

Following the check, any delay in getting the valid licensing documents must be immediately reported to Crew-dispatch and Training department via the referent standardisation instructor if the published roster is likely to be disrupted.



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REMEDIAL SIMULATOR SESSIONS

Throughout the module, the level of difficulty in terms of failure and situation-management is progressive and becomes significant after adaptation to the left seat is acquired. Consequently remedial sessions will be only planned following such a simulator failure that the scenario of the current session cannot be covered and the instructor doesn't have a clear picture of the trainees' performance.

FFS SESSIONS PREPARATION, BRIEFINGS

During the command board, the Ground Technical Evaluation and the simulator command evaluation; the applicants have demonstrated their capacity to refer to the operational and training manuals and others various documents that constitute the Wizzair Doc package. Consequently no precise FFS session related reference will be given for self study. Nevertheless here after you will find a list of reference documents and their locations.

The number of airports operated during the simulator training module has been intentionally limited, in order for the trainees to be quickly familiar with them. These main airports are: London-Gatwick/LGW/EGKK, Birmingham/BHX/EGBB, Memmingen/FMM/EDJA.

The OFPs (operational flight plans) required for some sessions (FFS 3, 4 and 5) are sent by email with this document.

The sessions flight folders (weather, NOTAMs, status of aircraft, load-sheet) is provided by the trainer at the time of the briefing.

Briefings cover defined subjects described in the program and should mainly be conducted by the mean of discussions eventually using existing PPT presentation to challenge trainees knowledge; the instructor being the facilitator. All items must be covered.



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STUDY REFERENCES

There are 2 main sources for self-study: the *LPC Browser* and the *OnBoardDB* The respective contents are:

> LPC Browser

Flight Crew Operating Manual
Minimum Equipment List
Airplane Manual (including Configuration Deviation List)
Flight Crew Training Manual
Operational Manual part B

> OnBoardDB by alphabetic order

Airplane Manual (including **Configuration Deviation List**)

Cabin Attendant Manual

Cabin Crew Orders

Flight Deck Crew Info

Flight Deck Crew Orders

Ground Handling Info (delay codes)

LPC approval (Less Paper Cockpit SOP's and Contingency Plan Operational Approval)

LVO Minima (Low Visibility Operations and CAT 1 Autoland Table)

Minimum Equipment List (Fleet MEL)

QRH (Location of the full QRH only→ftp server)

Safety (SAMS ASR Form Template and reporting Guide)

Technical (Flight Operations Transmission, In Flight Landing Performance, Technical Follow-Up, Tires inspection, De-icing guideline, Sharklet Presentation)

Temporary airport charts

TO perf charts (Sharklet Take-Off charts RTOW Regulated Take Off Weight)

Training (NOTECH guide, guide for Line-Training, Wizz LVO Manual)

Weight and balance data (Wizzair fleet DOI, DOW)

Wizz OM (OM parts A to D, WZZ OM part C Airport Briefings, EFRAS22 description, Approach Climb Performance, Operational Flight Plan Description, TR to OM A, Emergency equip loc map)

Notes:

Most of the documents here above and many others interesting Airbus publications are as well located on S drive and ftp server.

- S:\CorporateCommon\FlightOpsDoc\OnBoardDB
- S:\CorporateCommon\FlightOpsDoc\OnBoardDB\Training
- S:\CorporateCommon\FlightOpsDoc\OtherDocs\Flight Operations
- S:\CorporateCommon\FlightOpsDoc\OtherDocs\Training_Docs\Pilots

ftp://193.226.203.73:5466



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OBJECTIVES AND PROGRESS MONITORING

From the earliest stage of the upgrade process, candidates for Command are clearly informed that the Command course is dense and demanding. The Command upgrade course with its sets of practical drills and scenarios gives opportunity to develop and consolidate already existing skills. Once the course has started, there is no room to fix significant gaps and weaknesses. Consequently, to allow a satisfactory progress, a comprehensive preparation is absolutely necessary before starting the course.

All sessions syllabus offer some spare time to repeat drills in first place executed at an unsatisfactory standard. Every session must be ended by a clear statement of the trainee capacity to continue the training. A positive trend must be observed throughout the sessions.

TECHNICAL SKILLS

The training objectives are reached if by the end of the session the trainees have demonstrated in compliance with all the wizzair rules a safe handling and coherent management of all the drills included in the syllabus.

NON TECHNICAL SKILLS

The training objectives are reached if by the end of the session the trainees have demonstrated proper aptitudes in the following fields:

<u>Communications</u>: (aptitude to communicate timely and adequately using standard phraseology, call-outs, formatted briefings and distress messages, aviation vocabulary and Airbus terminology.)

<u>Situational awareness</u>: (aptitude to look for, to collect, to analyze information in order to create, select or eliminate options and anticipate actions.)

<u>Task-load management</u>: (aptitude to plan, to organize, to allocate, to delegate tasks or series of tasks in normal, abnormal and emergency situations in order to spare crew awareness and performance.)

<u>Leadership</u>: (aptitude to anticipate and solve conflicts, to manage crewmembers resources, to detect stress, fatigue, task-overload and minimize its potential negative effect by appropriate decisions and overall management.) (aptitude to balance technical and commercial charges in the interest of safety comfort, cost efficiency and regularity).

LINE-FLYING UNDER SUPERVISION

It is conducted by a approve Wizzair Line Training Captain (LTC) and consists in 40 sectors split into 2 phases of 20 sectors (phase 1 and phase 2); both of them validated by a progress check. The Final Check for Release (FCR) with a wizzair approved TRE on the RHS takes place after the successful phase 2 progress check.

The Annual Route check with a Wizzair approved TRE on the observer seat takes place after the successful FCR. Its purpose is to certify that the new commander is release to operate with a standard crew composition in compliance with Wizzair crewing rules. The annual route check includes a CRM assessment.



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COMMAND COURSE TRAINING AND CHECKING RECORDING

All the phases of the Command course except: The **command board, FFS 7 & 8**, and the **annual route check** are recorded in a unique folder. It is the trainees' responsibility to print and bind this document and to present it to each Examiner or Trainer before the **ground technical evaluation**, the **command evaluation on simulator**, the **ground course**, the **simulator training phase**, until FFS 6 and the **LFUS** until the FCR.

The simulator check and training sessions (FFS7 and 8) and the Annual Route check are recorded on independent forms. It is the TRI/TRE responsibility to provide the training and checking forms.

The folder includes important extracts of OM D. It is absolutely mandatory to read them before commencing any related phase. After the course, the original folder must be forwarded to Base Captains for further archiving.

THE TRAINING DEPARTMENT RECOMMENDATIONS

The dense and demanding simulator training program you are about to undergo has been designed to prepare you to face a variety of critical situations. During FFS session, your capacity to promptly execute all the normal procedures will spare a precious time you need to manage workload during abnormal and emergency situations. Any spared time is a credit to repeat some drills to a better standard. No matter your already existing mental skills; making decisions in series cost a lot of mental energy and generate stress. The DODAR "decision-making" model is the tool you need to maintain you spare mental energy at the optimum level. Use it with rigour, always use it even following an apparently simple situation. Be on time at the briefing and in the simulator, be organised and disciplined, make concise and synthetic briefings, don't make any difference between the simulator and aircraft. Prepare in your head before you speak them, all the radio messages, all the NITS briefings, all the PA to passengers. Don't contest anyone including yourself, don't over-challenge but challenge everything which hitches you. Always keep a general picture using common sense. Don't let anything or anyone's interference deviating you from the correct management and procedural process, prioritize. Don't look back to the trainer except if he/she simulates the Handling agent or cabin attendant in the cockpit. When trainer says: "I have controls", hands off, relax wait for instructions. Respect all the golden rules. If you don't, something goes wrong right away. Don't let your negative impressions poisoning your mind, move on, stay ahead, keep on flying, a mistake brings always some learning after a cool-down period. Don't show up sick in the simulator to the extend your capacities are impaired. Should you be sick immediately report to crewdispatch. Manage your resources get proper food and proper sleep. During the check you are given the opportunity to demonstrate you reached the Wizzair captaincy standard; nothing less nothing more. The final simulator check looks like all the Wizzair OPCs you had before. Stay calm, aim for the standard and you will reach the above standard. Enjoy this great moment of your career.



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SESSION CALL-SIGN DURATION	SESSIONS CONTENT SUMMARY	TRAINER
FFS1 WZZ101	VISUAL CIRCUITS (1500FT AND 1000FT AGL) GO-AROUND 50FT STEEP TURNS MANUAL ILS APPROAGUES AND LANDING MAY Y WIND	
4H	MANUAL ILS APPROACHES AND LANDING MAX X-WIND GO-AROUND 30FT RAW DATA ILS A/THR ON AND OFF AREA NAVIGATION DRILL eg: HOLDING PATTERN BASED ON DME AND RADIAL, RADIAL INTERCEPTION, DME ARC EMER DESCENT	TRI
rrc.	OPC/LPC MANDATORY ITEMS TRAINING	
FFS2 WZZ102	RTO LOW SPEED HIGH SPEED- FAILURE BLW V1 GO EFTO, EO ILS, EO GA, EO NPA, EO LDG EMER EVAC RAW DATA ILS	TRI
3H	GO-AROUND 30FT WIND SHEAR TCAS	
	LVO TRAINING	
FFS3	MEL/CDL DRILLS LVO TAXI LVO TO	
WZZ103	LVO APPROACHES AFS FAILURES	TRI
4H	CAT 2 MANUAL LDG CAT 3 AUTOLAND FLAP FULL & 3 LVO RTO	
	EMERGENCIES IN LVO COMPLEX FAILURES 1 (LOFT)	
FFS4	MEL/CDL DRILLS CARGO SMOKE	
WZZ104	DUAL HYDRAULIC FAILURE BOMB ON BOARD	TRI
3H	FLAPS/SLATS LOCKED OVERWEIGHT LDG EMER EVAC	
FFS5	COMPLEX FAILURES 2 (LOFT) MEL/CDL DRILLS EMER ELEC	
WZZ105	FUEL LEAK SITUATIONS WITH PASSENGERS	TRI
4H	EMER EVAC CIRCLE TO LAND	
FF6	COMPLEX FAILURES 3, NARROW RWY TRAINING, TAKE-OVER MEL/CDL DRILLS UNRELIABLE SPEED INDICATIONS	
WZZ106	LANDING GEAR MALFUNCTION	TRI
3H	NARROW RWY TRAINING TAKE-OVER TECHNIQUE PRESENTATION TO THE SKILL-TEST	

SC 4H	OPC/LPC CURRENT SIM CYCLE	TRE
ST 3H	TRAINING SESSION CURRENT SIM CYCLE	TRI



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COMMAND UPGRADE FFS1 WZZ101 PF time T1/2h10-T2/1h50

TRAINING ORIENTATION: LEFT SEAT FAMILIARISATION

FMS INIT EGKK/EGKK OFP NIL

SYLLABUS DRILLS:

VISUAL CIRCUITS (1500FT AND 1000FT AGL), GO-AROUND 50FT STEEP TURNS MANUAL ILS APPROACHES AND LANDING MAX X-WIND GO-AROUND 30FT RAW DATA ILS A/THR ON AND OFF AREA NAVIGATION DRILL

eg: HOLDING PATTERN BASED ON DME AND RADIAL, RADIALINTERCEPTION, DME ARC EMER DESCENT

OBJECTIVES:

By the end of the session trainees must display the following standard:

Accurate handling without excessive deviations and over-controlling.

Flight controls and thrust inputs coordination in Raw-data flying leading to stable parameters within stabilization criteria.

Proper sequence in GA and rejected landings between pitch, thrust, speed, FMA reading, A/C configuration.

Safe X-wind landing: proper flare technique; lateral control; deceleration.

Basic orientation in raw-data area navigation

Proper actions flow in emergency descent following a cabin depressurization

TIPS AND RECOMMENDATIONS

Adjust your left seat and armrest properly. The setting you need my be significantly different from what you needed on the right seat. Consider re-adjusting your seat \mathbf{up} in case of landing with $\mathbf{flaps} \leq \mathbf{3}$. A higher pitch increases the cockpit cut-off angle.

A smooth manual altitude capture shortly after take-off need 10% of the ROC anticipation.

The average N1 thrust setting fully configured is GW- 10% (eg: 63T N1 53%) consider 3% extra for every 10 Kts head wind component, then adjust.

If aircraft height after take-off doesn't reach 2000 ft RA; Landing memo will only appear passing 800 feet RA.

TOGA 10 is <u>ONLY</u> applicable in case of aborted landing at or below flare high that's to say below 30 feet and before 20 feet. Refer to OMB 2-12-26 aborted landing/ TOGA 10.

RTF Emergency Communications

As soon as there is any doubt as to the safe conduct of a flight, immediately request assistance from ATC. Flight crews should declare the situation early; it can always be cancelled.

A distress call (situation where the aircraft requires immediate assistance) is prefixed: **MAYDAY, MAYDAY, MAYDAY**.



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An urgency message (situation not requiring immediate assistance) is prefixed:

PAN-PAN, PAN-PAN, PAN-PAN.

Make the initial call on the frequency in use, but if that is not possible squawk 7700 and call on 121.5.

The distress/urgency message shall contain (at least) the name of the station addressed, the call-sign, nature of the emergency, fuel endurance and persons on board; and any supporting information such as position, level, (descending), speed and heading, and pilot's intentions.

Situation dictating the distress/urgency message may be passed in 2 steps by order of priority.

Example 1:

PANPAN PANPAN / London / Wizzair ONE ZERO ONE / Hydraulic failure/request direct routing to ABBOT.

Wizzair ONE ZERO ONE/London/ROGER PANPAN/ Proceed to ABBOT heading is two seven zero degree/

London / Wizzair ONE ZERO ONE PANPAN?

Wizzair ONE ZERO ONE PANPAN/ London/PASS YOUR MESSAGE!

London/Wizzair ONE ZERO ONE PANPAN/ONE FIVE ZERO POB/Fuel Endurance three hours and twenty minutes/ request Luton and stanstead weather.

Wizzair ONE ZERO ONE PANPAN/London/ Roger standby.......

Example 2:

PAN MEDICAL PAN MEDICAL/London/Wizzair ONE ZERO ONE/ Request direct routing ABBOT/Passenger heart attack/Medic on board.

Wizzair ONE ZERO ONE/London/ROGER PAN MEDICAL/Proceed ABBOT heading is two seven zero degree.......

Example 3: "All MAYDAY CALLS SHOULD BE ASSOCIATED WITH TRANSPONDER 7700"

MAYDAY MAYDAY/London/Wizzair ONE ZERO ONE/Rapid decompression/descending Flight Level nine zero/Heading three six zero.

Wizzair ONE ZERO ONE/London/ROGER MAYDAY/Heading is good/clear of conflict.

London/Wizzair ONE ZERO ONE MAYDAY?

Wizzair ONE ZERO ONE MAYDAY/London/Pass your message!

London/Wizzair ONE ZERO ONE MAYDAY/ Leveling off flight level nine zero/request/request Luton and stanstead weather!

Wizzair ONE ZERO ONE MAYDAY/London/ROGER/Change squawk 3000.....

Example 4:

MAYDAY MAYDAY/London/Wizzair ONE ZERO ONE/Engine failure/Descending flight two zero zero/Inbound Clacton/Standby.

Wizzair ONE ZERO ONE/LONDON/ROGER MAYDAY.....



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The **NITS** briefings must be addressed in the following order immediately after the DODAR process is completed. For an efficient communication it is recommended to format the NITS briefings to ATC, Cabin and passengers as following:

Example 1: NITS to ATC

London/Wizzair ONE ZERO ONE MAYDAY?

Wizzair ONE ZERO ONE PANPAN/ London/PASS YOUR MESSAGE!

London/Wizzair ONE ZERO ONE MAYDAY/ Nature of the problem: Engine failure with severe damage and fuel leak/Intentions: diversion to Stansted for an ILS runway 22/ Time for the approach 15 minutes/ Special we are planning for an emergency evacuation!

Example 2 : NITS to Cabin

NOTES:

When the SCA comes in the cockpit before you proceed for the NITS get a cabin status regarding any visible, audible, perceptible abnormal parameter and passengers reactions. Take that in account it might trigger a review of DODAR. Don't use complex failure descriptions but stick to the effect of the failure on the cabin environment and the nature of the overall landing phase. Use simple vocabulary or CAM technical terms familiar to cabin crew.

Before the formal NITS briefing is given, the cabin would certainly call to report any abnormal parameter. Process all the cabin reports and give an immediate answer.

This answer can be that you are aware already and dealing. If you were not, thank the cabin for reporting and declare that you are taking action if necessary, and after a while call the cabin back to get a feed-back from actions taken in the cockpit.(eg: fuel leak observed from the cabin)

Are you ready for a NITS briefing?

Nature, one engine failed (point out the engine only), there is a fuel leak, we cannot stop it.

Itentions, landing in standsed

Time: 20 minutes to land

Special, Emergency landing with Evacuation

Questions? Read back! I give you 2 minutes to brief the cabin then I will address to passengers.

NOTE:

It's important that the CA 2, 3 and 4 get in first place the NITS from the Senior cabin attendant and not from the PA to passengers. The content is different. That's why 2 minutes must be given for cabin to brief.

Example 3: NITS to Cabin in case of dual hydraulic

Nature: Braking system failure possible runway overrun or excursion

Itentions: landing in Stansted

Time: 20 minutes to land

Special: Emergency landing with Evacuation in case of runway overrun



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The NITS to passengers must be prepared carefully. Improvising a message might raise the level of stress among the passengers. Stress easily and rapidly pass from a passenger to another. Panic in the cabin can make more casualty than the urgency itself; if the cabin cannot be prepared properly or an uncontrollable evacuation is initiated by passengers. Most of passengers are documented about commercial aviation, via YouTube, Forums, Blogs, TV news, TV dedicated channels, etc. You must have the last word on that.

If the failure can be felt in the cabin, inform the passenger that you are aware and dealing positively with the issue.

Information to passengers might be given in several steps alike with the cabin crew. Before the final formal NITS briefing, intermediate PAs might be necessary to keep the passengers calm. At the time of any PA to passengers; if you don't know yet the destination and time to the landing; just mention that you'll get back to them soon with more details. It is important that the passengers never question the authenticity of what you say. Breath before you speak, keep an appropriate voice tone and a slow words pace.

Example 1:

Ladies and Gentlemen, your attention please, Captain speaking. We just experience an Right engine failure. This engine is now secured and we are flying safely. The bad smell and light smoke in the cabin will soon clear up. I'll get back to you in few minutes with more details. Please remain calm and comply with the cabin crew instructions, thanks a lot for your active cooperation.

Example 2:

Ladies and Gentlemen, your attention please, Captain speaking. The overall situation dictates to fly back to London Gatwick. We will be landing within the next 30 minutes. After landing, I will keep the aircraft on the runway for an quick inspection from the ground services before we can taxi to the gate. You will see then vehicles with flashing lights surrounding us. This is absolutely normal when an aircraft declares technical problems.

Example 3:

Ladies and Gentlemen, your attention please, Captain speaking. We are now flying to London Stansted our new destination. This airport offers better facilities to land the aircraft in such a technical status. Once on the ground you will get all the necessary information and assistance to reach you final destination. Be so kind to comply strictly with the cabin crew instructions.

Example 4:

Ladies and Gentlemen, your attention please, Captain speaking. As you certainly saw we just experienced a right engine fire. We are proceeding for an immediate landing at London Stansted. The cabin crew will give your now all the necessary instructions for the landing and the evacuation. Please remain calm and watchful.



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COMMAND UPGRADE FFS2 WZZ102 PF TIME T2/1H40-T1/1H20

TRAINING ORIENTATION: OPC/LPC MANDATORY ITEMS

FMS INIT EGKK/EGKK OFP NIL

SYLLABUS DRILLS:

RTO LOW SPEED HIGH SPEED, FAILURE BLW V1 GO EFTO, EO ILS, EO GA, EO NPA, EO LDG EMER EVAC RAW DATA ILS GA AROUND 30FT WIND SHEAR TCAS

OBJECTIVES:

By the end of the session trainees must display the following standard:

Positive yaw control during RTO (Prompt rudder input, no oscillation), optimum use of AUTO BRK. Capacity to decide GO safer than RTO at high speed between 100kts and V1

Proper EMER EVAC sequence following a RTO, (situation assessment, communications)

Accurate EFTO and EOGA handling, adapted rudder and pitch inputs leading to prompt Aircraft stabilization and trimming. NO LOW SPEED.

Adapted use of reverse thrust and braking devices to decelerate A/C upon EO landing.

Promptitude to detect and cancel oscillations.

Aptitude to keep a stable and accurate path down to the minimums in Raw Data ILS.

Aptitude to perform optimum maneuvers in WS recovery (reactive WS or self-detected) and TCAS. Appropriate navigation in case of predictive WS.

ECAM and procedural discipline. Fluid use of DODAR and precise and adapted communication with ATC, cabin and passengers. (NITS)

TIPS AND RECOMMENDATIONS

The key of the control of low speed RTO (below 100 kts) is 1/ a prompt thrust cut 2/ an asymmetric braking opposite the aircraft nose direction. Once aircraft steered back on center line, resume a symmetric braking.

For RTO at high speed refer to FCOM/ABN/OPERATING TECHNIOUE/REJECTED TO

Always keep in mind that when stop margin is critical any failure affecting the steering and/or the braking of the aircraft will lead to a runway overrun .

The ECAM warnings and cautions "TO INHIBITION" is active from 80KTS to 1500feet or 2 minutes whichever occurs first. known as well as phase number 4.

To prevent the decision to reject the take-off at high speed , risking consequently a runway overrun, not only ECAM monitored failures not affecting aircraft controllability once in flight are inhibited, but as well the failures preventing the aircraft from stopping within the ASD.

Example: "BRAKES HOT, AUTO BRAKE FAULT, A/SKID NWS FAULT OR OFF, HYD SEL FAULT, SYS 1(2) FAULT, NORM BRK FAULT, ALT BRK FAULT, NORMAL + ALT FAULT......



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In other words, beside the reasons explained in FCOM/ABN/OPERATING TECHNIQUE/REJECTED TO, likely to make a RTO at high speed disastrous. The absence of ECAM prior RTO does not guarantee that the braking system is in optimum configuration. That's why Airbus wrote:

"When the aircraft speed is at or above 100 kt, it may become hazardous to reject a takeoff. Therefore, when the aircraft speed approaches $\underline{V1}$, the Captain should be "Gominded" if none of the main failures quoted below ("Above 100 kt and below $\underline{V1}$ ") have occurred."

These failures are:

Fire Warning or severe damage

Sudden loss of engine thrust

Malfunctions or conditions that give unambiguous indications aircraft will not fly safely

Any RED ECAM

Any AMBER ECAM listed below:

F/CTL SIDESTICK FAULT

ENG FAIL

ENG REVERSER FAULT

ENG REVERSE UNLOCKED

ENG 1(2) THR LEVER FAULT

The key of a good manual EO handling is the aircraft rudder trimming. Between 14° and 16° at TO, between 7° and 9° in approach between 18° and 20° in GA.

The average N1 thrust setting in EO, level flight, Flaps 2 is identical to the thrust setting on final approach EO fully configured, consequently the rudder trim setting as well (7° to 9°). The average EO N1 thrust setting on final approach is approximately GW+ 10% (eg: 60T 70%)

In EO the rudder trim value is related the engine thrust. Upon landing if you press the RUD TRIM reset button after the engine is been set at idle, no further rudder pedal input is needed before eventually de-crabbing the aircraft.

During a Raw Data ILS, don't use the blue index as a flight director for the bird. The primary source of data is the LOC and GS deviation. Once on LOC adjust the bird on the blue index. Once on GS set the bird at the required angle of descent. Minimize corrections Track 2°, FPA 1°.



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COMMAND UPGRADE FFS3 WZZ103 PF time T2/2H10-T1/1h50

TRAINING ORIENTATION: LOW VISIBILITY OPERATIONS

FMS INIT EGKK/EGBB OFP EGKK/EGBB

SYLLABUS DRILLS:

MEL/CDL DRILLS LVO TAXI LVO TO LVO APPROACHES AFS FAILURES CAT 2 MANUAL LDG CAT 3 AUTOLAND FLAP FULL & 3 LVO RTO EMERGENCIES IN LVO

OBJECTIVES:

By the end of the session trainees must display the following standard:

Rigorous and safe management of the LVO environment: Weather, ground facilities degradations, Airport and operator standard procedures, applicable minimums and associated references.

Good understanding of aircraft features and limitations in LVO. Appropriate reactions in case of AFS malfunction.

TIPS AND RECOMMENDATIONS

Use of LOW VISIBILITY BRIEFING GUIDE (checklist card)

For take-off briefing Review aircraft status and local NOTAMS and LVO instructions in the ERM then proceed through the TO LVO briefing guide then through general briefing.

For Landing review aircraft status NOTAMs and last known weather, then proceed through the APP LVO briefing guide. At the item APP briefing proceed for the FMS review ("The hat").

For LVO taxi set ND on NAV rose anticipate heading of the next TWY any doubt stop immediately set parking brake on, inform ATC that may provide a FOLLOW ME car or ground RADAR guidance if any.

LVO callouts must be anticipated: Saying "Entering the RWY" as you already passed the HP is not correct. It has to be done as the RED lights go off. The call-out "airborne" if required not before 400 ft.

The Ground Roll Guidance Command Bar is connected to the localizer signal.

The AFS can engage the ROLLOUT mode even there was no FLARE mode. That was a firm touchdown!!!!

If an Autoland is aborted due to excessive LOC or GS deviation challenge ATC after GA.

If the Autoland is aborted due to the aircraft Auto Flight System failure challenge the aircraft status. The best way is to proceed for A DODAR.



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COMMAND UPGRADE FFS4 WZZ104 PF TIME T2/1H40-T1/1H20

TRAINING ORIENTATION: COMPLEX FAILURES 1 (LOFT)

<u>IMPORTANT</u>: FFS 4, 5 AND 6 INCLUDE COMPLEX FAILURES. THEY REQUIRE A KIND OF HARMONY OR SYNERGY BETWEEN PF AND PNF. BEING FAMILIAR WITH THE CONTENT AND THE ESSENCE OF THE COMPLEX QRH CHECLISTS IS A PLUS.

WHAT LOOKS LIKE SIMPLE IN A STUDYING ENVIRONMENT; ONCE "IN SITU", EXPOSED TO A VARIETY OF STRESS (NIGHT TIME, FATIGUE, TURBULANCES, HAND FLYLING, TIME PRESSURE CABIN AND ATC CALLS ETC...) ALL OF A SUDDEN BECOMES CHALLENGING. PF MANAGE YOUR PNF WORKLOAD, MAKE YOURSELF AVAILABLE FOR A QRH DRILL. PNF CONSTANTLY MONITOR PF, AND CALL-OUT ANY FLIGHT PARAMETER DEVIATION. CHECK THAT YOUR PF IS AVAILABLE BEFORE ADDRESSING HIM/HER COMPLEX INFORMATIONS.

FMS INIT EGKK/EGBB OFP EGKK/EGBB

SYLLABUS DRILLS:

MEL/CDL DRILLS
CARGO SMOKE
DUAL HYDRAULIC FAILURE
BOMB ON BOARD
FLAPS/SLATS LOCKED
OVERWEIGHT LDG
EMER EVAC

OBJECTIVES:

By the end of the session trainees must display the following standard:

Ability to manage a quick return with an EMER EVAC respecting all the necessary steps: (ECAM, C/L, DODAR, NITS)

Following a severe aircraft system degradation, aircraft handling remains with no significant flight parameters deviations observed in any phase.

Ability to manage an heavy failure severely affecting aircraft performance in term of landing distance.

Ability to use and understand complex checklist under time pressure.

Proper use of a QRH Summary, in the general flow of the failure management.

Ability to give to cabin and passenger the necessary attention.

TIPS AND RECOMMENDATIONS

There is in the FCOM ABN useful additional information regarding the management of cargo on ground.

The 3 Dual Hyd failures require landing gear gravity extension. By increasing number of supplied equipments the hydraulic systems are:

BLUE, YELLOW, GREEN. Consequently; if we classify the 3 dual Hyd failures according an a increasing level of deterioration of the flight control and baking systems; we obtain: B+Y, G+B, G+Y.

A summary as its name indicates, gathers in one synthetic QRH check-list a variety of information disseminated in several other QRH check-lists.



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The summaries are use in the following sequence:

- 1. Right after the ECAM in the "cruise" part. The purpose of this part is to highlight 3 main concerns which are the aircraft Handling, the increased fuel consumption, the extraction of the generic landing distance.
- 2. when the PF for the approach brief the approach (PNF in case of EMER ELEC)
- 3. when approach is started; PNF reminds to PF, the key points of the next phase. AT 1000 feet AGL QRH must be aside.

If a bomb actually gets on board there are 2 major options regarding the terrorists' intentions. If they want it to detonate, the risk they succeed is high, except if there is a bomb technical problem, or it is disarmed. No notice might be given, and in no case a notice that can permit to avoid the explosion. This bomb might be sophisticatedly programmed.

If they don't want the bomb to detonate, they want the bomb to be found. A notice will be given.

In both case time is a factor, the best course of action is an immediate landing and evacuation.

The "Bomb on board" QRH is to be applied only if the aircraft cannot be landed within 30 minutes, after the notification. The cabin must be informed and instructed accordingly. Know the principle of the "Bomb on board" check-list.

FLAPS or SLATS LOCKED situations don't require to LAND ASAP performing an OVERWEIGHT landing. By establishing the final configuration (slats/flaps according failure and gear down) in the holding pattern the flight time until max landing weight is significantly reduced.



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COMMAND UPGRADE FFS5 WZZ105 PF time T1/2H20-T2/1h40

TRAINING ORIENTATION: COMPLEX FAILURES 2 (LOFT)

FMS INIT EGKK/EGBB OFP EGKK/EGBB

SYLLABUS DRILLS:

MEL/CDL DRILLS EMER ELEC FUEL LEAK SITUATIONS WITH PASSENGERS EMER EVAC CIRCLE TO LAND

OBJECTIVES:

By the end of the session trainees must display the following standard:

Consolidation of the FFS 4 standards.

TIPS AND RECOMMENDATIONS

The EMER ELEC failure has for trainees a special reputation. It comes from the fact that it's a left seat flying only, in RAW DATA with a cockpit environment severely affected: (Right dome light, Left PFD, ND, MCDU, EWD only; no guidance, Alternate law, landing distance significantly increased).

The ECAM can be stopped at the end of the status. The "Summary" gives a better help than the inoperative systems list. Refer to FFS4 tips for the use of summaries. A fuel leak requires to land ASAP. It's an emergency. When a fuel leak is detected, the associated QRH check-list has priority on any ECAM caution. Only a warning supersedes. For example If a fuel leak is detected following an engine failure the ECAM must be stopped and the QRH applied.

The Fuel Flow in Engine out in level flight at green dot speed is identical to the fuel flow in final approach.



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COMMAND UPGRADE FFS6 WZZ106 PF time T2/1H50-T2/1h10

TRAINING ORIENTATION: COMPLEX FAILURES 3, NARROW RWY TRAINING, TAKE-OVER

FMS INIT EDJA/EDJA OFP NIL

SYLLABUS DRILLS:

MEL/CDL DRILLS UNRELIABLE SPEED INDICATIONS LANDING GEAR MALFUNCTION NARROW RWY TRAINING TAKE-OVER TECHNIQUE

OBJECTIVES:

By the end of the session trainees must display the following standard:

Consolidated complex failure management, fluid use of complex QRH

Ability to safely operate on narrow runways at maximum x-wind component as per Wizzair OM-B limitations and Airbus SPO related FCOM chapter.

Ability to detect and abort an approach at any stage using the proper technique; when stabilization criteria are not acquired or lost, or due to any other sudden or anticipated factor jeopardizing the safety of the approach and landing.

TIPS AND RECOMMENDATIONS

The "Unreliable speed indications" is not an emergency, may be the situation that led to these conditions are eg: Radom destruction, volcanic ashes, severe icing, triple ADR fault. There are other sources of speed the GPS and the IRS. ISIS might provide a correct IAS. In all cases above 60% N1 the aircraft can level off after take-off in any configuration. In cruise remember that pitch 2,5° and 80% N1 looks like level flight.

A Landing gear that cannot be retracted must raise a fuel concern immediately in particular at destination following a Go-Around.

On the wheel page Amber crosses on one triangle indicate that the associated LGCIU is failed. if at least one green triangle is displayed on each landing gear on the *WHEEL* SD page. This is sufficient to confirm that the landing gear is downlocked.

LDG GEAR lights on LDG GEAR control panel remain available if LGCIU 1 is electrically supplied.

After L/G GRVTY EXTN procedure, any configuration not showing at least one LGCIU green triangle for each gear or 3 LDG GEAR lights on LDG GEAR control panel leads to the QRH: LDG WITH ABNORMAL L/G. An ATC tower indication does not constitute a confirmation that the gear is down. The QRH must be applied and a gear-collapse at touch-down anticipated.

<u>Important note</u>: If following the touchdown the abnormally indicated gear does not collapse, do not shut down the engines prior the complete stop. If evacuation not immediately required, wait for Aircraft to be secured by pneumatic devices prior disembarkation of passengers.



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During an approach on a 30 meters width runway, with 20 knots X-wind component, line up on the up wind edge of the runway.

There is no take-over technique without pressing the stick red button. "PRIORITY LEFT or RIGHT" must be heard during that action. "DUAL INPUT" must not.