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| FFS 3 |
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FFS 3 BRIEFING

REVIEW TOPICS

* Normal Procedures Philosophy and Assumptions *(FCOM - Normal Procedures)*
* Amplified Procedures and SOP’s *(FCOM - Normal Procedures)*
* QRH *(QRH -* Checklist Instructions*)*
* DDP Dispatch Deviation Procedures *(Definitions, Abbreviations and Symbols)*
* General Information *(FCTM Chapter 1 (Crew Resource Management) (Display Panel Management) (Maneuver Speeds and Margins) (Command Speed) (Reference Bugs) (Thrust Management) (Callouts) (Flight Management Computer(s) CDUs) (AFDS Guidelines))*
* Takeoff and Initial Climb *(FCTM – Chapter 3 (Takeoff) (Reduced and Derated Takeoff Thrust) (Initial Climb - All Engines) (Crosswind Takeoff))*
* Climb *(FCTM – Chapter 4)*
* FMC Cruise *(FCOM – Chapter 11)*
* Approach and Missed Approach *(FCTM – Chapter 5 (Approach) (Flap Configurations for Approach and Landing) (ILS Approach) (Instrument Approach Using VNAV) (Instrument Approach Using V/S) (Go-Around and Missed Approach – All Approaches))*
* Landing *(FCTM – Chapter 6 (Crosswind Landings) (Flare and Touchdown) (Landing Roll))*.

INTRODUCE

* **Specifications for Pilot Training**

Training Areas of Special Emphasis (TASE)

**Intermittent Warning Horn:**

All B737 models have an intermittent horn that alerts the flight crew to a loss of cabin pressurization when cabin pressure reaches 10,000 feet in flight, or alerts them to an incorrect takeoff configuration on the ground. Flight crews must be trained and checked on the proper response to both situations in accordance with QRH procedures WARNING HORN – CABIN ALTITUDE OR CONFIGURATION and CABIN ALTITUDE WARNING OR RAPID DEPRESSURIZATION. Experience has shown it is imperative for crew members to immediately don oxygen mask when the intermittent horn sounds in flight.

* Doors (NNC .1 – ATA 52)

CARGO DOOR

EQUIPMENT DOOR (CL)

* Air Systems (NNC .2 – ATA 21)

AUTO FAIL or Unscheduled Pressurization Change

**CABIN ALTITUDE WARNING or Rapid Depressurization**

DUCT OVERHEAT (CL)

**Emergency Descent**

ZONE TEMP (NG)

* Anti-Ice, Rain (NNC .3 – ATA 30)

ENGINE COWL VALVE OPEN OR TAI INDICATION

WINDOW OVERHEAT

* Electrical (NNC .6 – ATA 24)

DRIVE (NG)

GENERATOR DRIVE LOW OIL PRESSURE (CL)

* Engines, APU (NNC .7 – ATA 72)

**Aborted Engine Start**

EEC ALTERNATE MODE – DISPLAY SOURCE (NG)

PMC INOPERATIVE (CL)

START VALVE OPEN

* Warning Systems (NNC .15)

PSEU (NG)

SESSION OBJECTIVES

* Practice Normal Procedures and SOP’s
* Practice Control Display Unit (CDU) Procedures
* Practice Autopilot Flight Director (AFDS) Procedures
* Practice Callouts and Crew Task sharing
* Maintain airplane control and navigation using the autopilot
* Task sharing, cross check and crew coordination under abnormal situation
* Apply Crew Resource Management (CRM) attributes while practicing Normal and Non-Normal Procedures.

SESSION PROFICIENCY CRITERIA

* Demonstrate required level to familiarity performing engine start engine start and systems failure
* Demonstrate required level of proficiency in normal in-flight procedures
* Aircraft Handling
* CRM.

FFS 3 ENVIRONMENT

|  |
| --- |
| **SIM 201****(DAY)** |
| Airport | From / To: LFPG | To / From: LFQQ | Altn: EBBR / LFPO |
| Gate | CL: A10NG: D14 | Remote Gate | Remote Gate |
| Dep. Rwy | 26R / 27L | 26 | 24 |
| Arr. Rwy | 26L / 27R | 26 |
| WEATHER & NOTAM |
| Notam | LFPG: NILLFQQ: NILLFPO: NIL |
| Weather | LFPG: 210/10 KT 6000 BKN015 OVC150 21/15 Q1006LFQQ: 210/10 KT 4000 BKN010 OVC150 19/14/1005LFPO: 220/10 KT 5000 RADZ BKN015 OVC150 20/14 Q1005 |
| FLIGHT INFORMATIONS |
| DDP | NIL |
| NADP | 1 |
| Route Part | PART 1: 26R NURMO 3B N874 CMB 5D transition ASBAR 26PART 2: 26 MATIX 6T MATIX 8W transition LORNI 26R |
| FL | 250 |
| Cost Index | 55 |
| LOADSHEET (Kg) |
| Aircraft | B 737 CL | B737 NG |
| ZFW | 48 000 | 58 000 |
| Block Fuel | 7 000 | 7 000 |
| T/O Weight | 55 000 | 65 000 |
| TOStab Trim/CG% | 3.825 | 4.725 |
| PERFORMANCE |
| Flaps | 5 | 15 | 5 | 15 |
| Reduced °C | 50 | 50 | 50 | 50 |
| V1/VR/V2 | 139/141/145 | 133/134/138 | 134/135/148 | 134/135/141 |
| EO ACCEL HT | 1 000’Climb Straight Ahead |
| **NOTES:***TRI may change Airport, Runway in use at this convenience* |

FFS 3 TRACK

 LFPG – LFQQ LFQQ - LFPG

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 ALTN EBBR ALTN LFPO

FFS 3 PROFILE

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| **PART 1**Pilot A is PF |
| ATC | Data121,730 | Gnd121,890 | Twr120,9 | Dep131,2 | PARIS128,1 | Twr118,550 |
| FL |  |  |  | **CABIN ALTITUDE WARNING or Rapid Depressurization****Emergency Descent** |  |
| 260 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 240 |  | AUTO FAIL or Unscheduled Pressurization Change |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 220 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 200 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 180 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 160 |  |  |  WINDOW OVERHEAT |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 140 |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 120 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 100 |  |  |  |  |  |  |  |  |  |  |  |  |
| CL : DUCT OVERHEAT NG: ZONE TEMP *Reset when completed* |  |  |  |  |  |  |
| 80 |  |  |  |  |  |  |
|  |  |  |  |  |  |
| 60 |  |  |  |  |  |  |
| CL : EQUIPMENT DOOR NG: PSEU *Reset when completed* |  |  |  |  |  |  |
| 4000feet |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 2000 feet | START VALVE OPEN #1 |  |  |  |  |  |  |  |  |
| **Aborted Engine Start** #2 |  |  |  ILS Approach  |  |  |
| GND |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| TIME | 00h10 | 00h30 | 00h50 | 01h10 | 01H30 | 01h50 |

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| **PART 2**Pilot B is PF |
| ATC | Twr118,550 | PARIS128,1 | App121,155 | Twr120,9 | Gnd121,890 |
| FL | CL : PMC INOPERATIVENG : EEC ALTERNATE MODE DISPLAY SOURCE*Reset when completed* |  | CARGO DOOR**CABIN ALTITUDE WARNING or Rapid Depressurization****Emergency Descent** |
| 260 |  |
|  |
| 240 |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| 220 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 200 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 180 |  |  |  |  |  |  |  |  |  |  |  |  |
| Icing conditionsENGINE COWL VALVE OPENOR TAI INDICATION |  |  |  |  |  |  |  |  |
| 160 |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 140 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 120 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 100 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| 80 |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 60 |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  | Visual Traffic Pattern |  |
| 4000feet |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | Instrument Approach Using V/S |  |  |  |  |  |
| 2000 feet |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| GND |  |  |  |  Go-Around and Missed Approach |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| TIME | 02h10 | 02h30 | 02h50 | 03h10 | 03H30 | 03h50 |

FFS 3 SYLLABUS

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| **FCL****REF** | **TIME** |  | **TRAINING MANEUVERS / PROCEDURES** | **1** | **2** | **3** | **4** |
| *(Including Multi-Crew Cooperation)* |
| 1. |  | 1 | Flight preparation |  |  |  |  |
| 1.1 |  | 2 | Performance calculation |  |  |  |  |
| PART 1Pilot A is PF |
| **INIT AT THE GATE** |
| DE GAULLE Flight Data 121,730SIM 201 Cleared to LFQQ. Expect Runway 26R NURMO 3B departure, then as filed. Squawk 2135 |
| 1.3 |  | 3 | Preliminary Preflight Procedure and Cockpit inspection |  |  |  |  |
|  |  | 4 | CDU Preflight Procedure |  |  |  |  |
|  |  | 5 | Preflight Procedure – First Officer and Captain |  |  |  |  |
| DE GAULLE Ground 121,890 |
| 1.4 |  | 6 | Before Start Procedure |  |  |  |  |
|  | 00h30 | 7 | Engine Start Procedure |  |  |  |  |
|  |  | 8 | N°2 Engine *(HUNG START)* |  |  |  |  |
|  | CL | ENGINE 2 N1 ROTOR STUCK |  |
| NG | NO N1 ROTATION AT START (ENGINE 2) |
|  | VENYO | HUNG START - ENGINE 2 |  |
| 3.4.0 |  | 9 | **Aborted Engine Start** |  |  |  |  |
|  | *(Reset when completed)* |  |
|  | 00h35 | 10 | Normal Engine Start |  |  |  |  |
|  |  | 11 | N°1 Engine Start |  |  |  |  |
|  | CL | ENGINE START VALVE FAILS OPEN (1) |  |
| NG | START VALVE STUCK OPEN (ENGINE 1) |
|  | VENYO | START VALVE FAILS IN POSITION - ENGINE 1 |  |
| 3.4.0 |  | 12 | START VALVE OPEN |  |  |  |  |
|  | *(Reset when completed)*Discuss the DDP  |  |
|  | 00h40 | 13 | Normal Engine Start |  |  |  |  |
|  |  | 14 | Pushback or Towing Procedure |  |  |  |  |
|  |  | 15 | Before Taxi Procedure |  |  |  |  |
| 1.5 |  | 16 | Taxiing in compliance with air traffic control or instructions of instructorCL: Taxi via TA2, T holding Point T11 26RNG: Taxi via TB3, E, GE5, T holding Point T11 26R |  |  |  |  |
|  | CL | EQUIPMENT DOOR OPEN (Taxiing) |  |
| 3.3 | 00h50 | 17 | EQUIPMENT DOOR |  |  |  |  |
|  | *(Reset when completed)* |  |
|  | NGVENYO | PSEU FAULT |  |
| 3.4.10 |  | 18 | PSEU |  |  |  |  |
|  | *(Reset when completed)* |  |
|  | **REPOSITION AT THE HOLDING POINT** |  |
| DE GAULLE Tower 120,9 |
| 1.6 |  | 19 | Before Takeoff Procedure | *Flaps 5* |  |  |  |  |
| 2.1 |  | 20 | Takeoff Procedure |  |  |  |  |
| 2.3 |  | 21 | Crosswind Takeoff |  |  |  |  |
| DE GAULLE Departure 131,2 |

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|  | 1 | 2 | 3 | 4 |
| 3.8.13.1.4 |  | 22 | Adherence to departure route and ATC instructions | *(AP ON/ FD ON)**VNAV* |  |  |  |  |
|  |  | 23 | Climb Procedure |  |  |  |  |
|  | CL | DUCT OVERHEAT |  |
| NG | ZONE TEMP OVERHEAT (CONT CAB / AFT FWD) |
|  | VENYO | ZONE TEMP OVERHEAT - CONT CAB |  |
| 3.4.1 | 01h10 | 24 | CL | DUCT OVERHEAT |  |  |  |  |
| NG | ZONE TEMP |
|  | *(Reset when completed)* |  |
|  | CL | LEFT FORWARD WINDOW OVERHEAT |  |
| NG | WINDOW OVERHEAT (LEFT-SIDE / LEFT-FWD) |
|  | VENYO | WINDOW OVERHEAT RESETTABLE - LEFT SIDE |  |
| 3.4.7 | 01h20 | 25 | WINDOW OVERHEAT |  |  |  |  |
|  | *(Reset when completed)* |  |
|  |  | 26 | FMC Cruise operations:LNAV Modification: Direct To  |  |  |  |  |
|  |  | 27 | FMS Operation (Vertical Navigation)MCP Speed Intervention due to TurbulenceEnter Speed / Altitude Restriction on LEGS page |  |  |  |  |
| PARIS CONTROL 128,1 |
|  | 01h30 | 28 | Cruise Procedure |  |  |  |  |
|  | CL | AUTO PRESSURE CONTROLLER FAIL |  |
| NG | AUTO PRESSURIZATION FAIL |
|  | VENYO | CABIN PRESSURE AUTO CONTROL FAIL |  |
| 3.4.1 |  | 29 | AUTO FAIL or Unscheduled Pressurization Change |  |  |  |  |
|  | *(Reset when completed)* |  |
|  | Perform a demonstration: |  |
| CL | RAPID DECOMPRESSION (PRESSURIZATION FAILURE) |
| NG | SLOW DEPRESSURIZATION |
|  | VENYO | DECOMPRESSION SLOW |  |
| 3.6.6 | 01h40 | 30 | **CABIN ALTITUDE WARNING or Rapid Depressurization** |  |  |  |  |
| **Emergency Descent** |
|  | Discuss ATC & CCM communications, the fact that if structural integrity is in doubt, limit airspeed and avoid high maneuvering loads during Emergency Descent, CRM & Time constraintDiscuss **Intermittent Warning Horn** (**TASE)** |  |
|  |  | 31 | Descent Procedure*Approach Briefing* | *(AP ON / FD ON)**LVL CHG* |  |  |  |  |
|  |  | 32 | FMC Descent and Approach:Alternate Airport Diversions or Destination modification |  |  |  |  |
| 3.8.13.1.4 |  | 33 | Adherence to arrival route and ATC instructions |  |  |  |  |
| LILLE Tower 118,550 |
|  |  | 34 | Approach Procedure |  |  |  |  |
| 3.8.2 |  | 35 | Holding proceduresFMC operation: Hold on a waypoint / Exit Hold |  |  |  |  |
| 3.8.4 | 01h50 | 36 | Landing ProcedureInstrument Approach using V/S | *LNAV**V/S**(2D)* | *(AP ON / FD ON)++* |  |  |  |  |
| 3.15.3 |  | 37 | Crosswind Landing |  |  |  |  |
|  |  | 38 | Landing Roll Procedure |  |  |  |  |
| **BREAK** |

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| PART 2Pilot B is PF |
| **INIT AT THE HOLDING POINT** |
| Crew BriefingFuel 7 000kg, No DDPReport ready |
| LILLE Tower 118,550 |
|  | 1 | 2 | 3 | 4 |
|  | 02h10 | 39 | CDU Preflight Procedure |  |  |  |  |
| 1.6 |  | 40 | Before Takeoff Procedure | *Flaps 5* |  |  |  |  |
| 2.1 | 02h20 | 41 | Takeoff Procedure |  |  |  |  |
| 2.3 |  | 42 | Crosswind Takeoff |  |  |  |  |
| 3.8.13.1.4 |  | 43 | Adherence to departure route and ATC instructions | *(AP ON / FD ON)* |  |  |  |  |
|  |  | 44 | Climb Procedure |  |  |  |  |
|  | Icing conditionsPassing 15000 feet: |  |
| CL | ENGINE COWL ANTI-ICE VALVE FAILS IN POSITION (1) |
| NG | COWL A/I VALVE FAIL (ENGINE 1) |
|  | VENYO | ENGINE ANTI-ICE VALVE FAILS IN POSITION – ENG 1 |  |
| 3.4.7 | 02h30 | 45 | ENGINE COWL VALVE OPEN OR TAI INDICATION |  |  |  |  |
|  |  | 46 | FMS Operation (Vertical Navigation)MCP Speed Intervention due to Turbulence |  |  |  |  |
| PARIS CONTROL 128,1 |
|  |  | 47 | Cruise Procedure |  |  |  |  |
|  |  | 48 | FMC Cruise operations:Radial/Distance From Fix |  |  |  |  |
|  | CL | ENGINE PMC FAILURE (1) |  |
| NG | DEU FAIL (No.1) CDS Fault Display Source |
|  | VENYO | EEC MAIN MODE FAIL – ENGINE 1 |  |
| 3.4.0 | 02h40 | 49 | CL | PMC INOPERATIVE |  |  |  |  |
| 3.4.03.4.11 | NG | EEC ALTERNATE MODEDISPLAY SOURCE |
|  |  |  | VENYO | EEC ALTERNATE MODE |  |  |  |  |
|  | *(Reset when completed)* |  |
|  | CL | AFT CARGO DOOR OPEN |  |
| NG | CARGO DOOR SWITCH FAILS (AFT), then after 1 minuteRAPID DEPRESSURIZATION |
|  | VENYO | CARGO DOOR ANNUNCIATOR LIGHT ON - AFT, then after 1 minute DECOMPRESSION RAPID |  |
| 3.3 | 02h50 | 50 | CARGO DOOR |  |  |  |  |
| 3.6.6 |  | 51 | **CABIN ALTITUDE WARNING or Rapid Depressurization** |  |  |  |  |
| **Emergency Descent** |  |  |  |  |
|  |  | 52 | Descent Procedure*Approach Briefing* | *(AP ON / FD ON)**LVL CHG* |  |  |  |  |
|  |  | 53 | FMC Descent and Approach:Alternate Airport Diversions or Destination modification if needed |  |  |  |  |
| 3.8.2 |  | 54 | Holding proceduresFMC operation: Hold on a waypoint / Exit Hold |  |  |  |  |
| DE GAULLE Approach 121,155 |
|  | 03h10 | 55 | Approach Procedure |  |  |  |  |

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|  | 1 | 2 | 3 | 4 |
| 3.8.13.1.4 |  | 56 | Adherence to arrival route and ATC instructions |  |  |  |  |
| DE GAULLE Tower 120,9 |
| 3.8.4 | 03h20 | 57 | Landing ProcedureInstrument Approach using V/S | *LNAV**V/S**(2D)* | *(AP ON / FD ON)* |  |  |  |  |
| 4.4 |  | 58 | Go-Around and Missed Approach ProcedureReview Flight Mode Annunciations FMAs | *(AP OFF / FD ON)* |  |  |  |  |
| 3.8.6 | 03h40 | 59 | Visual Traffic Pattern at 1,500 feet AGL |  |  |  |  |
|  |  | 60 | Landing Roll Procedure |  |  |  |  |
| DE GAULLE Ground 121,890 |
|  | 03h50 | 61 | After Landing Procedure |  |  |  |  |
|  |  | 62 | Taxiing in compliance with air traffic control or instructions of instructorCL: From 26RTaxi via W2, TA2, Stand A10NG: From 26R Taxi via W1, N, E, TB12, Stand D14 |  |  |  |  |
|  |  | 63 | Shutdown Procedure |  |  |  |  |
|  |  | 64 | Secure Procedure |  |  |  |  |

FFS 3 DEBRIEFING

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| INSTRUCTOR’S COMMENTS |
|  |
| THREAT AND ERROR MANAGEMENT |
| **TECHNICAL** | 1 | 2 | 3 | 4 | **NON TECHNICAL** | 1 | 2 | 3 | 4 |
| Automatic Flight |  |  |  |  | Communication |  |  |  |  |
| Manual Flight |  |  |  |  | Crew Resource Management |  |  |  |  |
| Lateral and Vertical path |  |  |  |  | Decision making |  |  |  |  |
| Procedure SOP |  |  |  |  | Environment management |  |  |  |  |
| Knowledge |  |  |  |  | Leadership |  |  |  |  |
| Radio Phraseology |  |  |  |  | Priority management |  |  |  |  |
| Task Sharing |  |  |  |  | Situation Awareness |  |  |  |  |
| Date : | Session Final Grading |  |  |  |  |
| TRAINEE’S NAME and SIGNATURE | INSTRUCTOR’S NAME and SIGNATURE |
|  |  |
| *1: Non-Acceptable:**2: Acceptable:* | *Meet a major UAS (Undesired Aircraft State)**Omission or incorrectly treats a threat**Omit or incorrectly process an error**Commits an intentional error**Meet a minor UAS* | *3: Standard:**4: Above Standard:* | *Anticipates or recognizes a threat and contains it**Detects and corrects an error**Demonstrates exemplary performance in the TEM* |