B737 NG CBT - EMERGENCY EQUIPMENT, DOORS & WINDOWS

COURSE OUTLINES

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COURSE START

1-The material contained in this training program is based on the information obtained from current state, local and company regulations and it is to be used for training purposes only. At the time of designing this program contained then current information. In the event of conflict between data provided herein and that in publications issued by the authority, the authority shall take precedence.

DOORS, EMERGENCY EQUIPMENT AND EMERGENCY ESCAPE

2-This chapter deals with the airplane doors, emergency equipment and emergency evacuation routes. Here is the chapter outline: * Exterior doors * Cabin door * Emergency equipment * Emergency escape

EXTERIOR DOORS

3-The airplane has forward and aft passenger entry doors, forward and aft galley service doors and cargo doors. In addition, there are miscellaneous access doors such as a center electrical and electronic (E/E) equipment access door and an equipment compartment access door on the bottom of the airplane.

4-The airplane also incorporates two emergency exit doors over each wing.

5-Passenger door can be operated from inside and outside of the airplane. Let’s take a look at operation of the doors.

6-To open the door from outside, you pull the handle an turn it in the OPEN direction. As the door unlatches, pressure gate opens to equalize cabin and ambient pressure. The door is then pushed through the door frame until it is fully open. A lock mechanism in the upper hinge locks the door in the fully open position.

7-To close the door, first release the hinge lock and then do the open operations in reverse order. When the door is latched, the pressure gates seal the door.

8-Interior control handle is used to open the door from the inside the airplane. A pennant, when secured across the viewing window, provides a visual indication to someone outside the airplane that the door slide is armed.

9-To open the door from inside of airplane, turn the handle in the OPEN direction and push the door until it latches in the full open position. To close the door, release the hinge lock and pull the door. The handle is turned to seal and latch the door.

10-Two plug-type cargo compartment doors are on the lower right side of the fuselage. The doors are similar in shape, design, and operation, but they are slightly different in size. Seals around the door edge and door handle shaft prevent pressurization loss.The doors have hinges on their upper edges and open inward. A counterbalance mechanism in the door helps lift the door and holds it in an uplock position. You open and close the cargo door manually from inside or outside of the cargo compartment.

11-Note that entry or cargo doors should not be operated in winds more than 40 knots.

12-In addition, the doors should not be kept open when winds are more than 65 knots; otherwise a damage to the airplane structure may occur.

13-Overwing emergency exit doors supply additional exits for the passengers in the event of an emergency. There are two emergency exit doors above each wing. The doors can be operated from inside or outside the airplane. You will learn more about the emergency exit doors in the section dealing with the emergency evacuation.

14-A door annunciator panel on the forward overhead panel gives the flight crew a visual indication when a door is not correctly closed and latched.

15-When forward or aft passenger entry door is not secure, FORWARD ENTRY or AFT ENTRY door open light comes on. If forward or aft service door is not latched, FORWARD SERVICE or AFT SERVICE door open light illuminates. You will see FORWARD CARGO or AFT CARGO open light illuminating when forward or aft cargo door is not latched. EQUIPMENT open light illuminates when forward access door or EE compartment door is not latched. If an overwing emergency exit door is not latched or in an uncommanded condition, the associated OVERWING EXIT open light comes on. When a door open light comes on, the MASTER CAUTION and DOORS annunciator lights also come on.

CABIN DOOR

16-The cabin door separates the flight compartment from the passenger compartment. A door handle with a key-lock permits the door to be opened, closed and locked mechanically from either side.

17-The door can also be locked or unlocked electrically by pushing the door lock switch on the control stand. With the door unlocked, the switch illuminates. When the switch is pushed, the cabin door locks and CABIN DOOR UNLOCKED light extinguishes. Entrance from the passenger cabin requires a key when the door is electrically locked.

18-There are four blowout panels on the cabin door. If there is a rapid depressurization of flight deck, the blowout panels open into the flight deck and equalize the pressure between the flight deck and the passenger compartment.

19-The upper two blowout panels also form an emergency exit for the flight crew. You can operate the emergency exit panels through emergency exit handle. When you pull on the emergency exit handle, the upper two blowout panels come out of the door. This provides the crew with a means of emergency exit if the door is blocked or jammed shut.

EMERGENCY EQUIPMENT

20-The flight deck and passenger compartment are equipped with a variety of emergency equipment.

21-Emergency equipment found on the flight deck includes life vests, flashlights, smoke googles and crash axe as well as a halon extinguisher.

22-The emergency equipment in the passenger compartment are life vests, flashlights, first aid kits, megaphones, protective breathing equipments, portable oxygen cylinders and portable fire extinguishers.

23-The portable fire extinguishers are used to extinguish fires inside the airplane. Two types of portable fire extinguishers are available on the aircraft: water-type and halon.

24-Fire extinguishers are located throughout the flight deck and passenger cabin with locations designed for easy access in an emergency.

25-Water-type fire extinguishers contain a mixture of water and anti-freeze. To operate the water-type extinguisher, turn the handle clockwise, aim at the base of fire and push the trigger.

26-Water-type extinguishers should be used on fabric, paper or wood fires only. Do not use water-type extinguishers on electrical or grease type fires.

27-Halon fire extinguishers store a gas as liquid under pressure. The green range on pressure indicator shows the acceptable pressure range. A bracket with a pull ring prevents accidental operation when the extinguisher is stowed.

28-To use halon fire extinguisher press trigger handle. The liquefied gas agent vaporizes and extinguishes the fire. The halon extinguishers are primarily for electrical and fuel and grease fires.

29-If a halon fire extinguisher is to be discharged in the flight deck, then all crew members are to don oxygen masks and use 100% oxygen with emergency selected.

Emergency locator transmitter

30-Emergency locator transmitters (ELT) automatically send a radio signal that helps rescue crews find airplanes which land away from an airport.

31-Emergency locator transmitters are located suitably in the airplane.

32-A toggle switch on the aft overhead panel controls the operation of emergency locator transmitter.

33-The switch is guarded to ARM position. With the switch in ARM position, ELT transmits automatically when it reaches its predetermined G–Load limit. ON position lets you manually activate the emergency locator transmitter. An ELT light illuminates when emergency locator transmitter has been activated and is simultaneously transmitting on frequencies of 121.5, 243.0 and 406.0 MHz.

EMERGENCY ESCAPE

34-The airplane incorportes a variety of escape and evacuation routes for passengers, flight attendants and flight crew.

Flight deck evacuation

35-In an emergency you normally escape from the flight deck through the cabin door.

36-You may also evacuate the airplane through two sliding flight deck side windows which can be opened on the ground

or in flight. To open the window, squeeze the trigger in the handle, turn the handle inward and move the window back until it locks in the open position.

37-In order to facilitate side window evacuation, escape lanyards are provided in the compartments above and aft of the side windows. One end of the escape lanyard attaches to the airplane structure. The other end is coiled and stored in a stowage compartment.

38-When you must use the flight deck side window for emergency egress; open the side window, unlatch the escape lanyard compartment cover, ensure the escape lanyard is securely attached to the airplane. Throw the free end of the escape lanyard out of the window.Then use the exit method illustrated. This method of exit is probably the easiest for most crew members. However, departure through the side window is difficult and should be used only in extreme emergency.

Escape slides

39-Escape slide in each entry and service door helps passengers and crew evacuate the airplane in an emergency.

40-An escape slide is in a compartment at the lower inboard face of each entry and service door. A pressure indicator lets you make visual check of slide inflation cylinder pressure. If the pointer is within the green band, the cylinder pressure is correct and the slide is ready for use. Girt bar is used to arm the escape slide.

41-To operate the escape slide, remove the girt bar from the stowage hooks on the door and install it in the floor brackets to arm the escape slide. Put the slide warning pennant across the door window to warn people outside the airplane that the slide is armed. Open the door as usual until it is fully open. As you open the door, the escape slide is pulled from its compartment.

42-As the slide pack falls, it will start the slide inflation. The escape slide will fully inflate in approximately six seconds.

43-If the escape slide does not inflate automatically, pull the manual inflation handle sharply to inflate the escape slide manually.

44-The escape slide has not been certified to be part of the water landing emergency equipment.

45-However, if properly inflated, the slides can be used as flotation devices for passengers in the water. Red hand grips are positioned along the sides of the slide.

46-Near the top of the escape slide, a release handle with a cover flap let you disconnect the slide from the airplane. You need to remove the slide from the airplane when the escape slide is used as a flotation device or when the deployed slide blocks the exit. To disconnect the slide from the airplane, lift the cover flap and pull the release handle.

Emergency exit doors

47-Two emergency exit doors are installed in the passenger cabin over each wing.

48-The doors can be opened from inside or outside the airplane.

49-To open the door from the inside, you must pull the interior handle down to start the door open sequence. The door opens out and up automatically.

50-To open the door from the outside, observe the instructions on the placards. Hold your knee against lower portion of door and push the emergency exit panel inward. The door opens out and up automatically.

51-Overwing emergency exit door incorporates flight lock system which is designed to prevent the operation of the emergency door during takeoff, in-flight, and landing. The flight lock system also ensures that emergency door unlocks on the ground to allow for opening of the door in emergency situations.

52-The emergency exit doors lock when all of these conditions are present: Three or more of the entry/service doors are closed, either engine is running, air ground logic indicates that airplane is in the air or both the left and right thrust levers are advanced.

53-When an emergency exit door is not fully closed and locked or when the flight lock is not engaged, either during the takeoff roll or in-flight, the associated OVERWING warning lights, DOORS annunciator, and MASTER CAUTION light illuminate.

54-When an emergency exit door is locked when it should be unlocked or a fault is detected, the proximity switch electronics Unit (PSEU) light on aft overhead panel, the OVERHEAD annunciator, and the MASTER CAUTION lights illuminate.

Escape straps

55-Overwing escape straps provide a handhold in a ditching emergency for passengers to move safely over the wing prior to getting into a life raft or to keep their balance on the wing while waiting for rescue.

56-Overwing escape straps are installed in stowage tubes above each aft emergency exit door.

57-The exit door must be open to gain access to the straps. One end of the strap is attached to the door frame. To use, pull the strap free from its stowage and attach the hook to a ring on the wing.

COURSE END

58-End of the course. ?