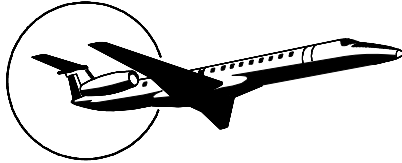


# EMB145

← EMBRAER



## FLIGHT ATTENDANT MANUAL

**EMBRAER S.A.**

This manual is applicable to the EMB-145, ERJ-140 and EMB-135 airplanes models and operating under ANAC, FAA and EASA certifications.

REVISION 2 IS A FULL REISSUE OF THIS MANUAL.

**FAM-145/1713**

**DECEMBER 30, 2002**

**REVISION 5 – JUNE 06, 2013**





# ***CUSTOMER COMMENT FORM***

**Flight Attendant Manual  
FAM-145/1713**

Please use this Customer Comment Form to notify us of any discrepancies or problems you find in the Flight Attendant Manual. We would also welcome constructive suggestions on how we can further improve our documentation or service.

Your feedback will be acknowledged, and we will advise you of the action we intend to take.

Sincerely,  
Embraer Flight Operations Support

**Please return this form to:**

Embraer - VAC/DA9/GSO - PC176  
Av. Brigadeiro Faria Lima, 2170  
CEP 12227-901  
São José dos Campos - SP - BRASIL  
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# FLIGHT ATTENDANT MANUAL

## INTRODUCTION

This Flight Attendant Manual provides useful information in order to familiarize flight attendants with the EMB-145/ERJ-140/EMB-135 models.

The information herein is presented in an introductory level, giving the fact that the Flight Attendant Manual is intended to be used for guidance purposes only.

Should more detailed or certified technical information made necessary, it is advisable to consult the Airplane Flight Manual (AFM) and the Airplane Operations Manual (AOM) for the EMBRAER 145 family, remembering that, in case of any discrepancy, the information contained in the AFM and AOM must prevail over this publication.

**FLIGHT  
ATTENDANT  
MANUAL**



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## SECTION 1

# AIRPLANE DESCRIPTION

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# FLIGHT ATTENDANT MANUAL

AIRPLANE  
DESCRIPTION

## AIRPLANE GENERAL

### AIRPLANE BASIC DATA

The EMB-145, ERJ-140 and EMB-135 models are a low wing, T-tail pressurized airplanes, powered by two high by-pass ratio rear mounted turbofan engines. The tricycle landing gear is all retractable, with twin tires in each leg.

The typical passenger configuration consists of three seats abreast, with front galley and rear toilet, permitting to carry up to 50 passengers for the EMB-145 model, up to 44 passengers for the ERJ-140 model and up to 37 passengers for the EMB-135 model. Convenient accommodation is provided for the flight crew.

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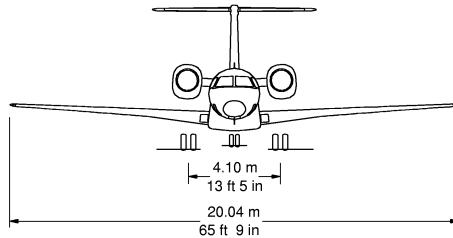
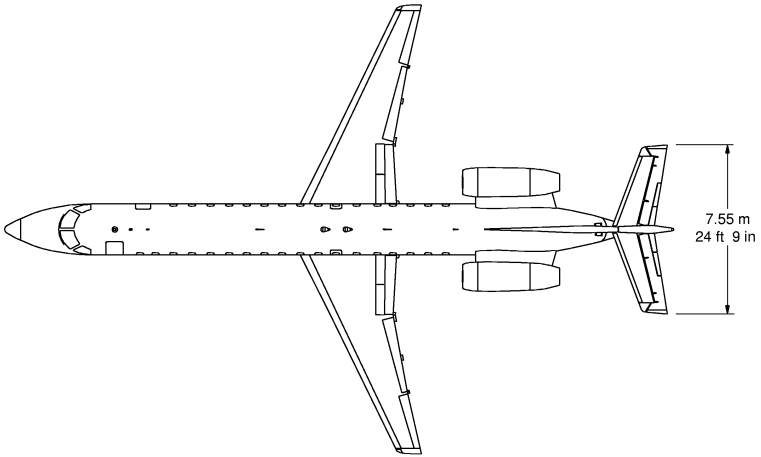
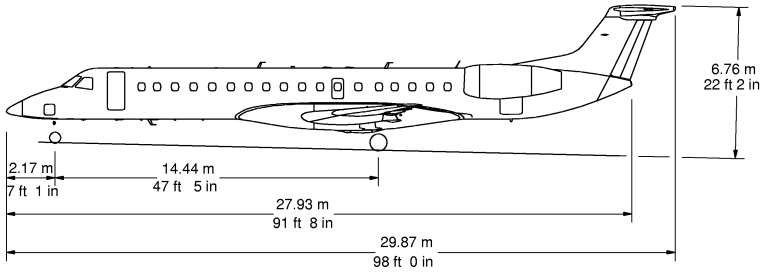


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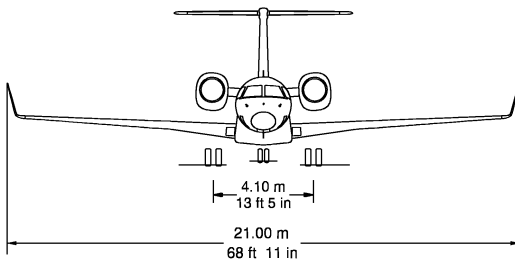
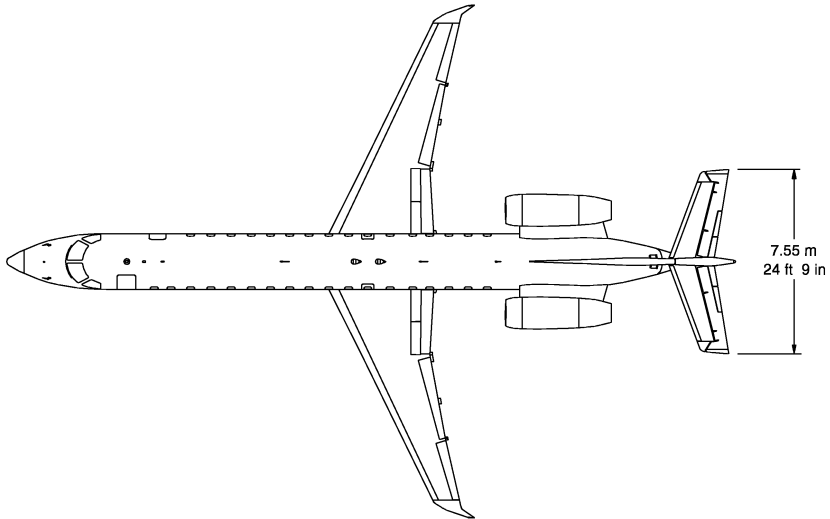
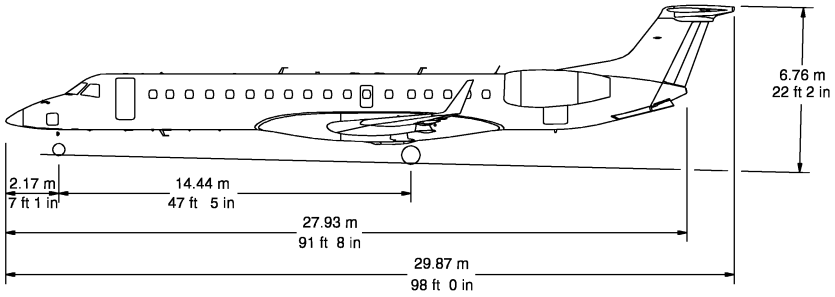
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**DIMENSIONS**

**EXTERNAL DIMENSIONS (EMB-145 MODELS)**



EXTERNAL DIMENSIONS (EMB-145 XR MODEL)

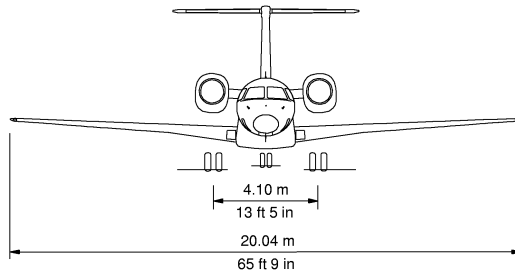
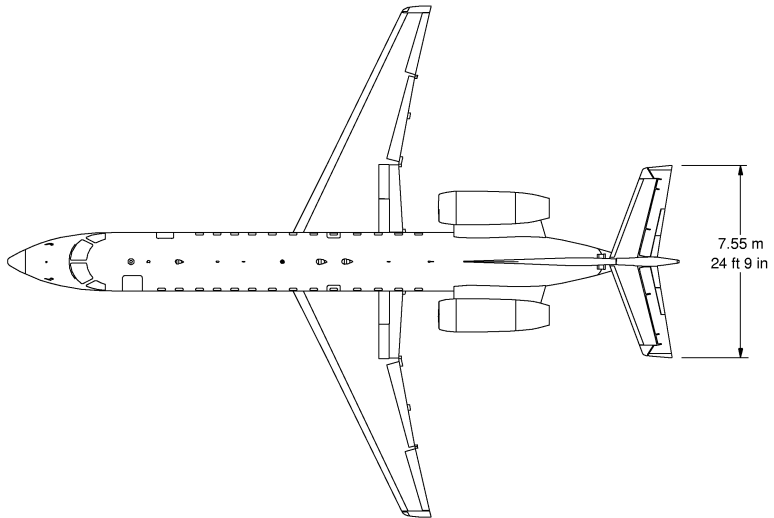
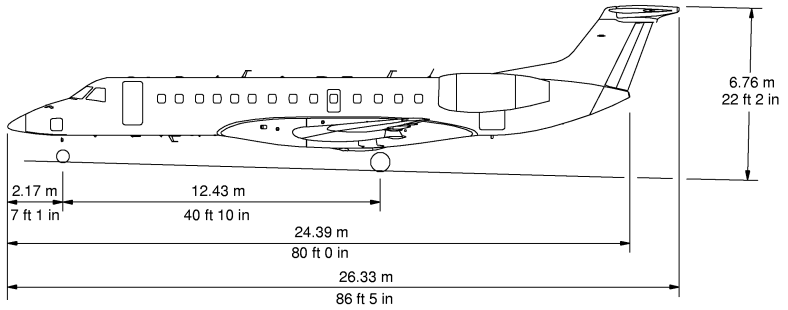


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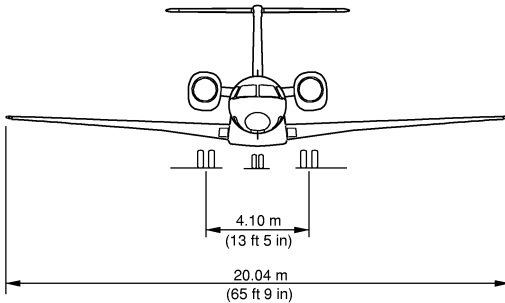
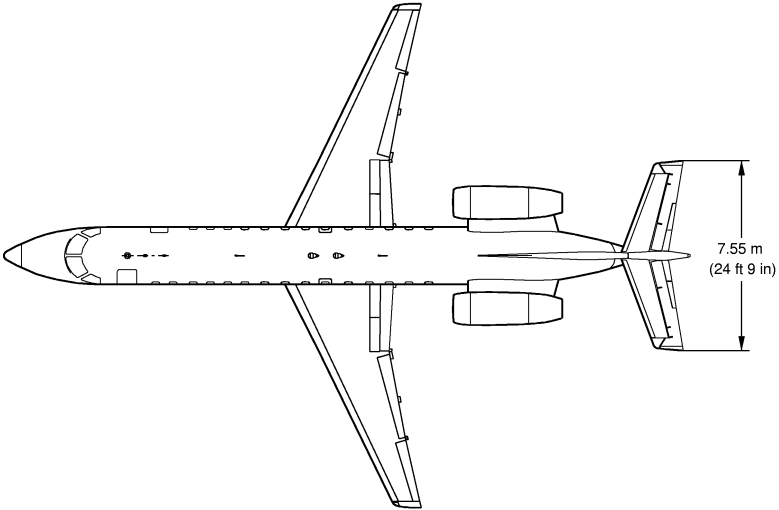
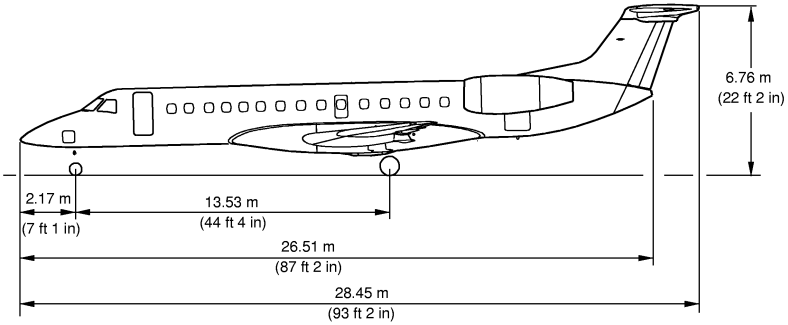
**EXTERNAL DIMENSIONS (EMB-135 MODELS)**



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EXTERNAL DIMENSIONS (ERJ-140 MODELS)



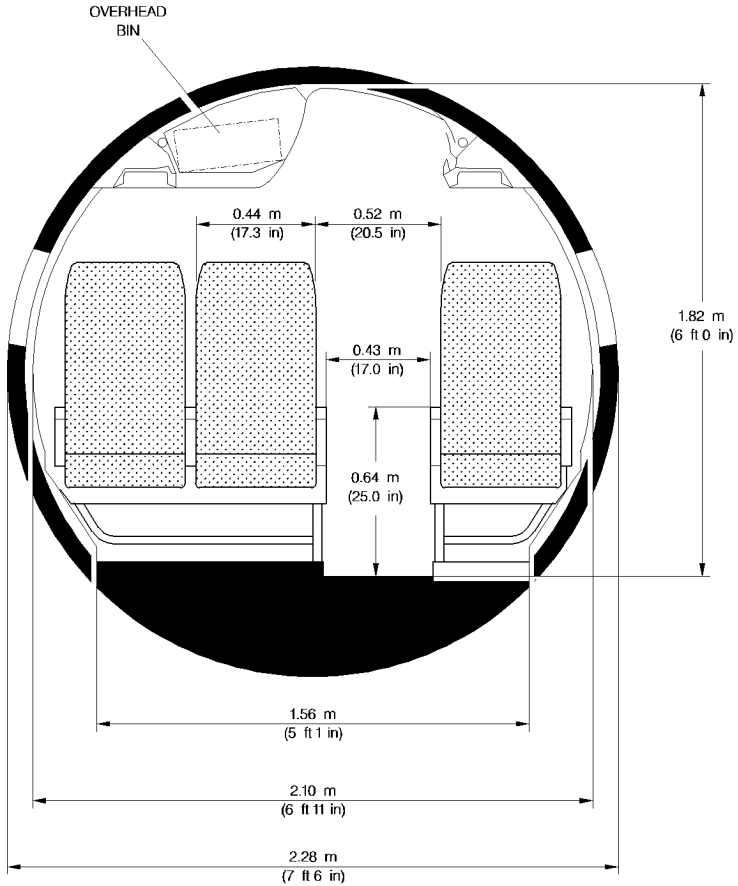
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CROSS SECTION (TYPICAL)



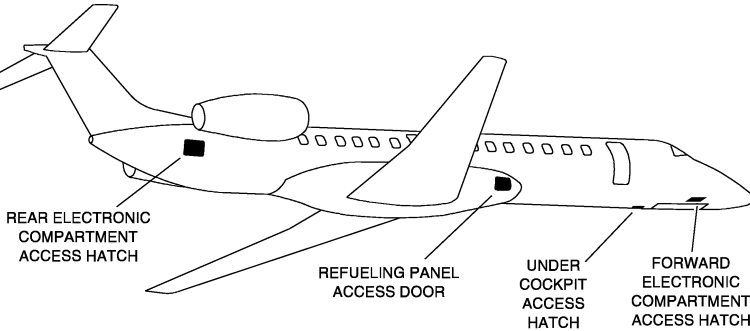
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## CREW

The minimum crew to safely operate the EMB-145/ERJ-140/EMB-135 consists of 2 pilots and 1 flight attendant.

## MAIN SERVICE POINTS

A number of access doors, which provides access for servicing the airplane's systems and equipment, can be found along the fuselage, such as fueling, water and waste access doors. One service door located on the right side of the fuselage allow resupply of general stores, food and beverages.

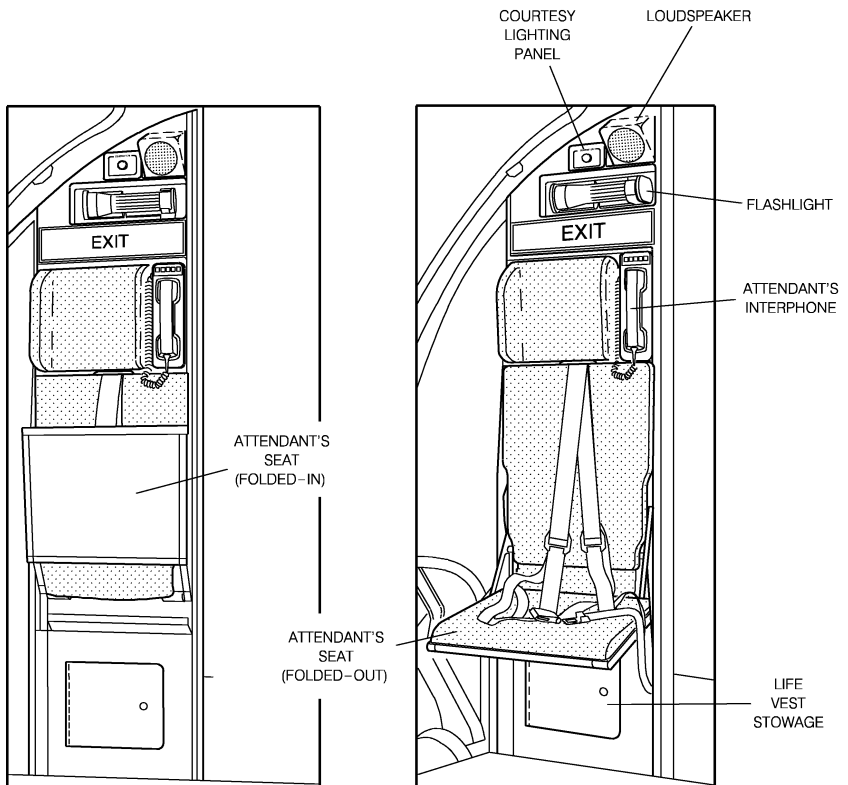


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## ATTENDANT STATIONS AND SEATS

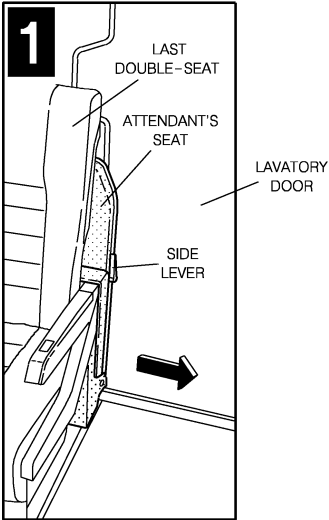
The standard flight attendant station is positioned at the cockpit partition, close to the main door. The seat is of the fold-away type, to prevent passageway blockage.

An optional second flight attendant seat is available at the aft end of the aisle in front of the lavatory door. When not in use, an adequate mechanism allows its sliding against the lavatory wall, behind the last double seat row.

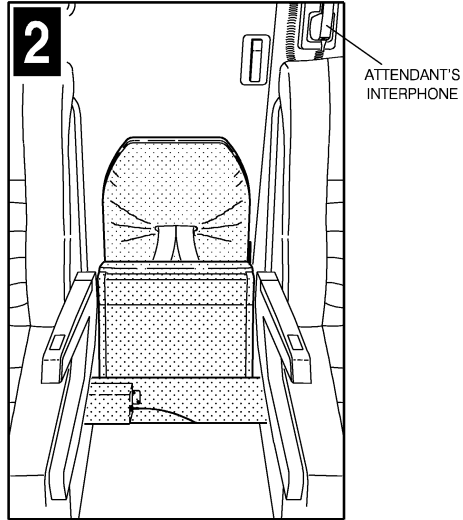


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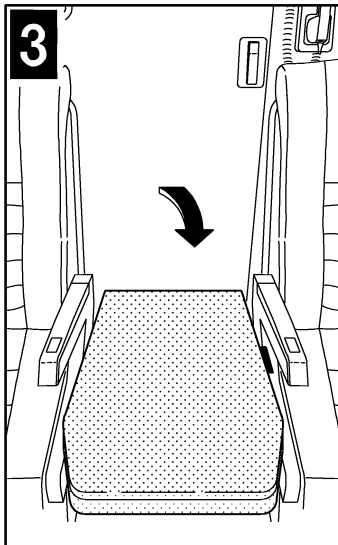
## FORWARD FLIGHT ATTENDANT STATION



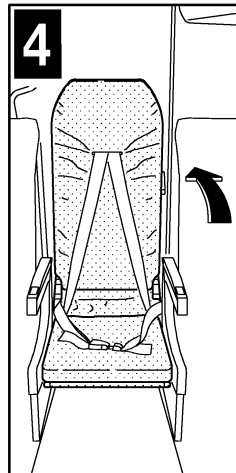
OPERATE THE SIDE LEVER  
TO RELEASE THE SEAT



LET THE SEAT LOCK IN POSITION



OPERATE THE SIDE LEVER AND BRING  
THE SEAT TO A HORIZONTAL POSITION



OPERATE THE SIDE LEVER AND MOVE  
THE BACKREST UNTIL IT LOCKS IN POSITION

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### AFT FLIGHT ATTENDANT SEAT (OPTIONAL)

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## **PASSENGER ADDRESS AND CABIN INTERPHONE SYSTEM**

The Passenger Address System (PAS) provides communication between pilots, observer and flight attendants, and provides also announcements from cockpit or flight attendants to the passenger cabin.

The following functions are available through the PAS:

- Voice announcement transmission (speech) to the PAX cabin.
- Call function from captain, copilot and observer to flight attendant and vice-versa through chime tone.
- Call function from passenger to attendant, through chime tone.
- Chime tone for NO SMOKING and FASTEN SEAT BELTS signals.
- Interface to boarding music and passenger briefing.

## **PASSENGER ADDRESS OPERATING MODES**

### **MUTED MODE**

The Muted Mode is automatically selected during power up and when no other mode is selected. In this mode there will be no chimes, no lights and no microphones enabled during power up or power supply transients.

### **PILOT-TO-PASSENGER MODE**

The Pilot-to-Passenger Mode is enabled by momentarily pressing the Passenger Button, labeled PAX, on the Digital Audio Panel, located in the cockpit. When this mode is enabled, the captain, copilot or observer may transmit announcements to the passengers, by pressing the respective PTT/HOT-MIC switches. The priority of the transmission through the system is the following: captain, copilot, observer. There are no chimes in this mode.

### **ATTENDANT-TO-PASSENGER MODE**

The Attendant-to-Passenger Mode is enabled by pressing the PA Button in the Attendant Handset. When this mode is enabled the flight attendant may transmit announcements to the passengers, by pressing the Attendant Handset PTT. If the PAX Button is selected on the Digital Audio Panel in the cockpit, besides listening the attendant announcements in the cockpit speaker or headphones, the pilots and observer take priority over the attendant announcements.

Some airplanes have a knob installed in the main panel which allows to adjust the volume of the PA announcements in the flight deck.

In the passenger address system the following components are found:

- Attendant handset
- Passenger Service Unit (PSU)
- Prerecorded Announcement (Optional)
- Attendant Control Panels
- Audio Entertainment (Optional)

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## ATTENDANT HANDSET

The Attendant handset permits intercommunication with the flight crew members and/or with the passengers.

### CONTROLS AND INDICATORS

#### 1 - PRESS TO TALK BUTTON

- When pressed allows flight attendant to address the passengers, or communicate with the other flight attendant station or pilots, depending on the channel selected.

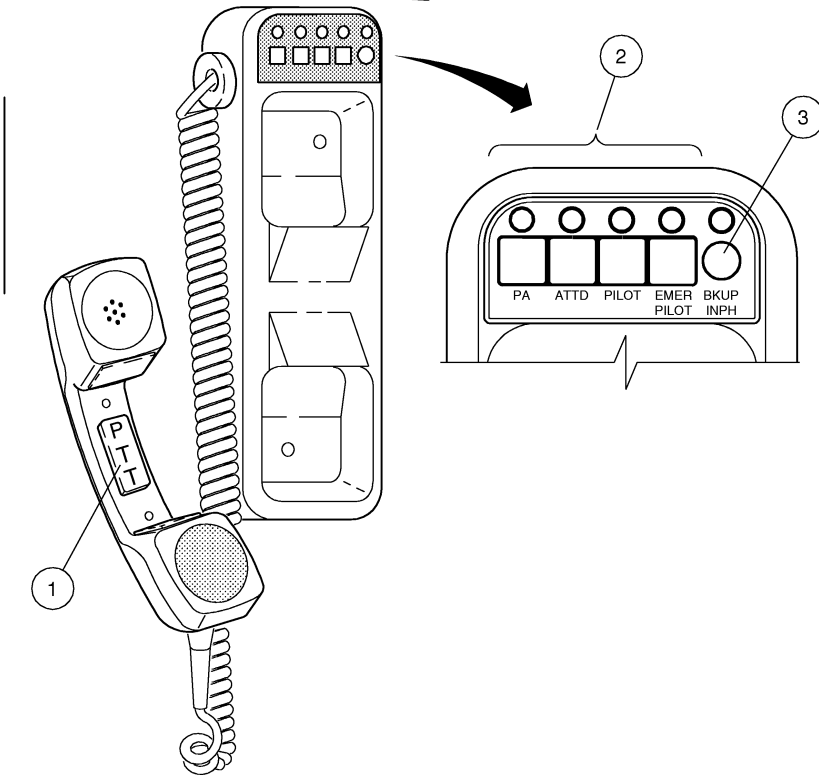
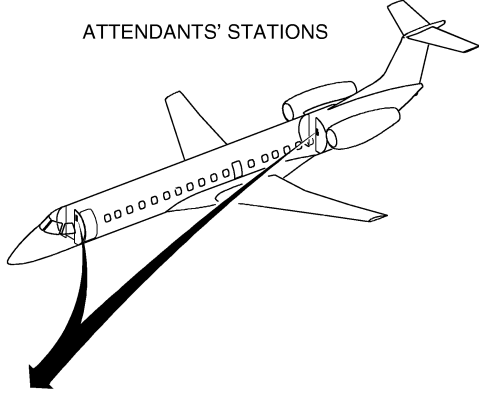
#### 2 - BUTTONS AND ANNUNCIATORS

- When pressed and according to the selected channel it allows the flight attendant to address the passengers (PA), or to communicate with the other attendant station (ATTD) or pilots (PILOT and EMER PILOT). The associated annunciator illuminates to indicate which button is pressed.
- Annunciator colors:
  - ATTD, PILOT and PA: green.
  - EMER PILOT: red.

#### 3 - BACKUP INTERPHONE BUTTON

- When pressed, establishes a permanent communication between pilots and flight attendant, in case of normal mode failure.
- When pressed, BKUP INPH, EMER PILOT, and PILOT annunciators of the station which commanded the backup mode remains illuminated.
- BKUP INPH annunciator is amber.

ATTENDANTS' STATIONS



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ATTENDANT HANDSET

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REVISION 2

## **PASSENGER SERVICE UNIT**

The Passenger Service Unit (PSU) provides the following services:

- Reading light with associated control button at each passenger seat.
- Passenger information sign informing the passenger of NO SMOKING and FASTEN SEAT BELTS instructions.
- Pushbutton and indicator for attendant call.
- Air gasper for each individual passenger seat.
- Oxygen Masks Dispensing unit.
- Loudspeaker for internal communication.

## **CONTROLS AND INDICATORS**

### **1 - ATTENDANT CALL INDICATOR LIGHT (AMBER)**

- It also illuminates whenever the associated Attendant Call Button is pressed (attendant call is activated), for quick identification of the passenger by the flight attendant.

### **2 - INDIVIDUAL READING LIGHT CONTROL BUTTON**

- Turns on/off the associated individual reading light.

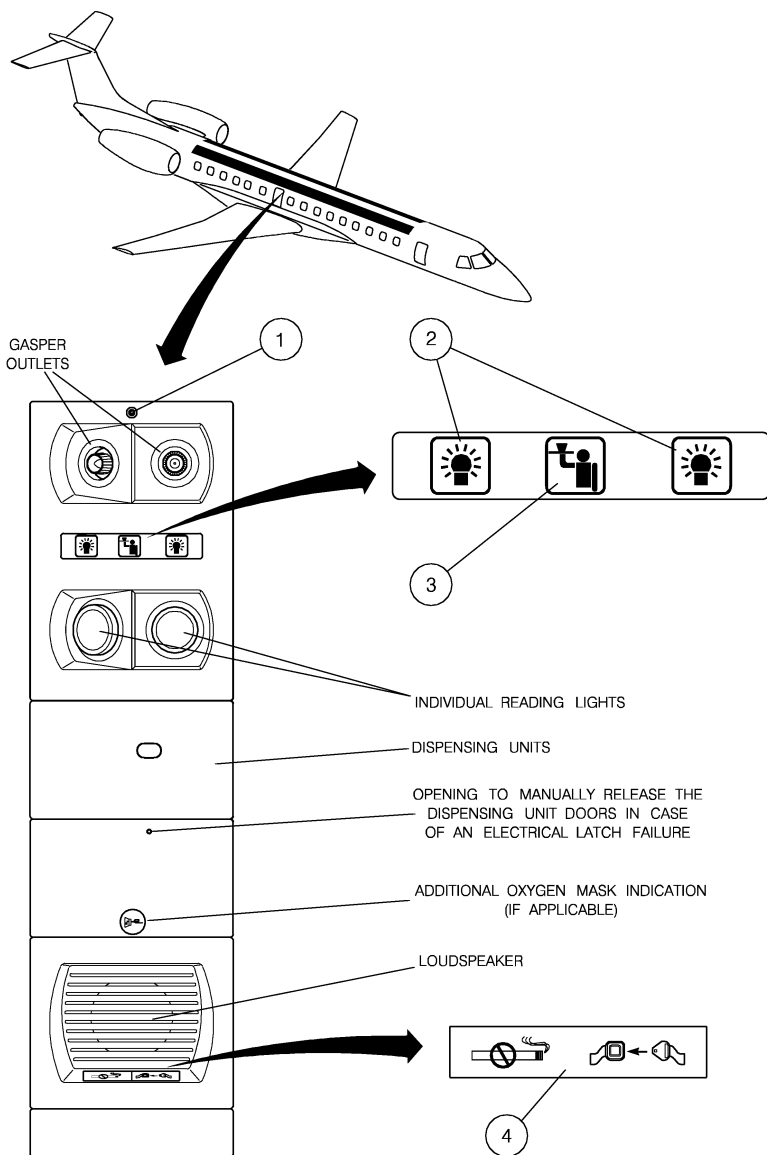
### **3 - ATTENDANT CALL BUTTON**

- When pressed, it activates the attendant call.
- When pressed again, it deactivates the attendant call.
- When the attendant call is activated:
  - An associated chime will be heard in all cabin loudspeakers.
  - The PA indication, located on the Attendant Control Panel, will illuminate.
  - The associated zone attendant call annunciator will illuminate to provide easy identification to the flight attendant. There are four zone attendant call annunciators distributed in the passenger cabin ceiling.

### **4 - NO SMOKING/FASTEN SEAT BELT SIGNS**

- These passenger-warning signs are commanded by two separate switches, located on the Overhead Panel. Refer to Section 2-6 – Lighting.
- An associated chime, activated by the passenger address system, will be heard whenever any passenger warning signs is turned on or off by the pilot.
- The signs may also be activated by the automatic oxygen relay activation whenever sudden cabin depressurization occurs above 14000 ft cabin altitude.

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**PASSENGER SERVICE UNIT**

## **PRERECORDED ANNOUNCEMENT (OPTIONAL)**

The Prerecorded Announcement (PRA) system provides the flight crew and passengers with safety and flight information and can also play music. The PRA system also provides the passengers with safety instructions and other airline information. The system is digital. A real human voice is digitally recorded and stored directly in the computer memory. Up to four languages can be pre-programmed. The system's messages can be changed by downloading a new message from a laptop computer. The PRA control panel provides all control buttons and display messages.

### **OPERATION**

Push and release the push button labeled ON to turn the Prerecorded Announcement (PRA) system on. The LED display momentarily shows TESTING to indicate the self-test has been initiated. Push and release the ON push button to turn the PRA system off when desired. Scroll through the list of messages, displayed on the LED display, with the UP/DOWN push button. Push the PLAY push button to start a message or to pause it. Push the associated language select push button to select or deselect a language. Language are spoken in the order that they are entered, with the most recently activated language (last to be spoken) in the right.

To calibrate the PRA system volume hold down the UP push button and push the ON/OFF push button to turn the system on. The LED display shows CALIBRATE to indicate the calibrate mode. Using the UP/DOWN push button select a message for which the volume is to be adjusted and push the PLAY push button. While the message is speaking adjust the volume of it using the UP/DOWN push buttons.

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## **CONTROLS AND INDICATORS**

### **1 - ON PUSH BUTTON**

- Turns the unit on/off.

### **2 - PHOTOSENSOR**

- Photosensor Automatically controls the intensity of the LED display.

### **3 - LED DISPLAY**

- Shows diagnostic messages, available messages titles, active language and whether or not the unit is currently speaking.

### **4 - UP PUSH BUTTON**

- Used to scroll through the list of available messages.

### **5 - LANGUAGE SELECT**

- Select/Deselect languages for subsequent play.

### **6 - PLAY PUSH BUTTON**

- Starts or pauses a messages. Pushing the PLAY push button when the message is paused will return the message from its beginning.

### **7 - DOWN PUSH BUTTON**

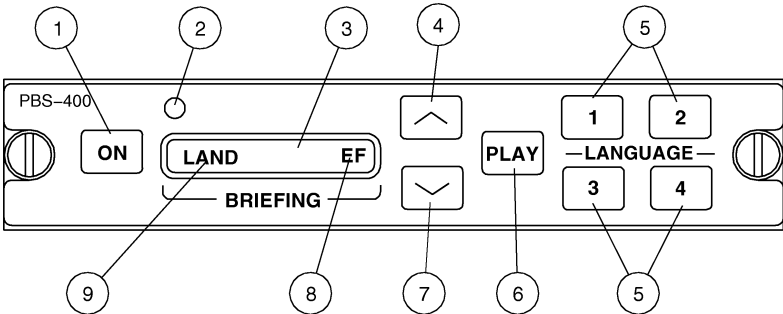
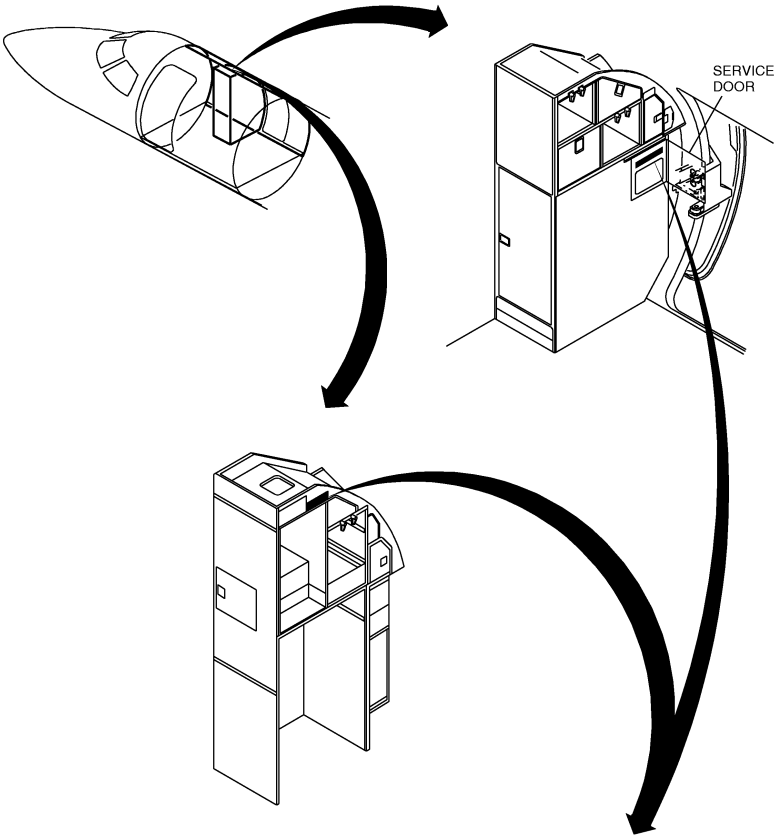
- Used to scroll through the list of available messages.

### **8 - ACTIVE LANGUAGE**

- Shows the symbols of the available languages.

### **9 - ACTIVE MESSAGE**

- Shows the titles of the available messages.



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**PRERECORDED ANNOUNCEMENT (OPTIONAL)**

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REVISION 2

## **ATTENDANT'S CONTROL PANELS**

The Forward Attendant Control Panel is located on the passenger cabin divider opposite the forward attendant seat, in the entry area. This panel provides controls and indications for some functions of the Lighting System, Air Conditioning temperature control, Attendant Call System and Passenger Service Unit (PSU).

The Aft Attendant Call Panel is located on the left face of the lavatory wall and consists of four attendant call indication lights.

## **FORWARD ATTENDANT CONTROL PANEL (OPTION 1)**

### **1 - ATTENDANT CALL INDICATION LIGHTS**

LAV (Amber) - Illuminates when the call is from the lavatory.

PA (Green) - Illuminates when the call is from the passenger cabin.

### **2 - PSU TEST BUTTON**

– When pressed, provides PSU test, illuminating all the PSU's reading lights and attendant call lights. The associated attendant call chimes are also activated.

### **3 - PSU RESET BUTTON**

– When pressed after test, allows resetting all PSUs to the initial state.

### **4 - CALL RESET BUTTON**

– When pressed, clears all attendant call signals.

## **AFT ATTENDANT CALL PANEL**

### **1 - ATTENDANT CALL INDICATION LIGHTS**

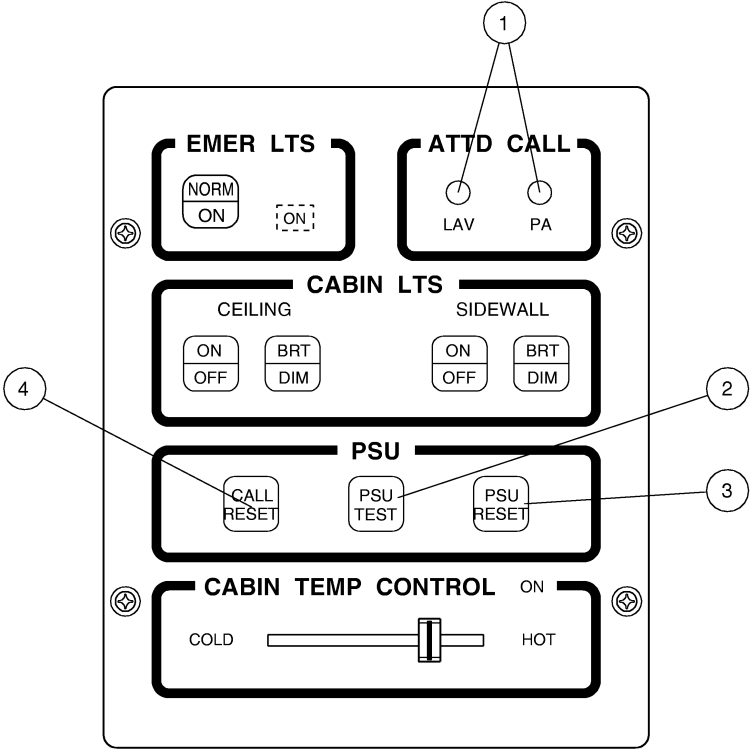
LAV (Amber) - Illuminates when the call is from the lavatory.

PA (Green) - Illuminates when the call is from the passenger cabin.

PILOT (Green) - Illuminates continuously when the call is from the cockpit (a bell discrete tone is heard).

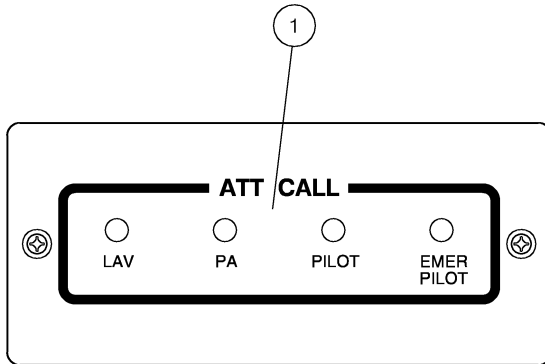
EMER PILOT (Red) - Illuminates blinking when an emergency call to the attendant is from the cockpit (a bell discrete tone is heard).

1-10	Code 01	Page 12
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**FORWARD ATTENDANT CONTROL PANEL (OPTION 1)**



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**AFT ATTENDANT CALL PANEL**

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REVISION 2

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## **FORWARD ATTENDANT CONTROL PANEL (OPTION 2)**

### **1 - ATTENDANT CALL INDICATION LIGHTS**

LAV (Red) - Illuminates when the call is from the lavatory.

PAX (Amber) - Illuminates when the call is from the passenger cabin.

### **2 - PSU TEST BUTTON**

- When pressed, provides PSU test, illuminating all the PSU's reading lights and attendant call lights. The associated attendant call chimes are also activated.

### **3 - PSU RESET BUTTON**

- When pressed after test, allows resetting all PSUs to the initial state.

### **4 - CALL RESET BUTTON**

- When pressed, clears all attendant call signals.

## **AFT ATTENDANT CALL PANEL**

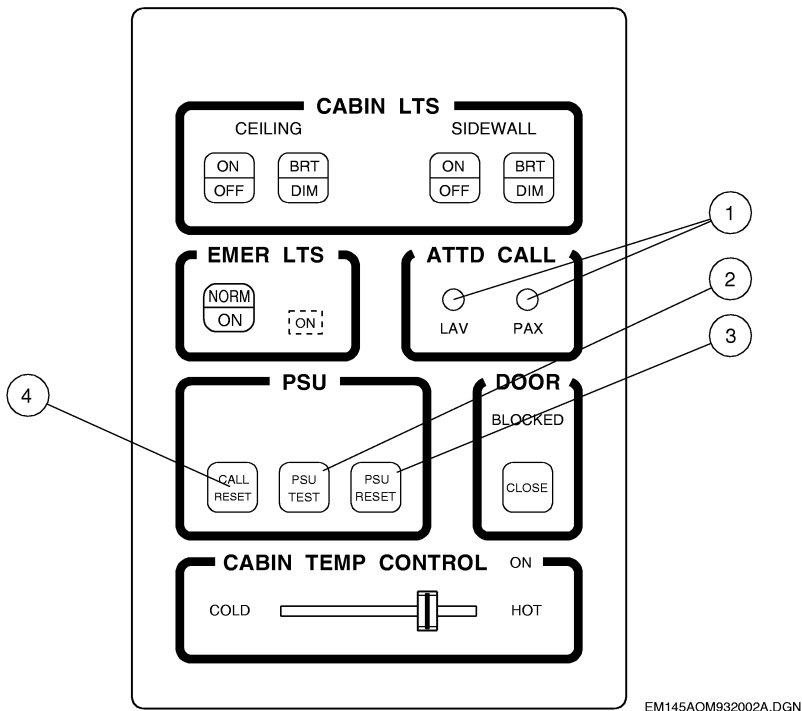
### **1 - ATTENDANT CALL INDICATION LIGHTS**

LAV (Red) - Illuminates when the call is from the lavatory.

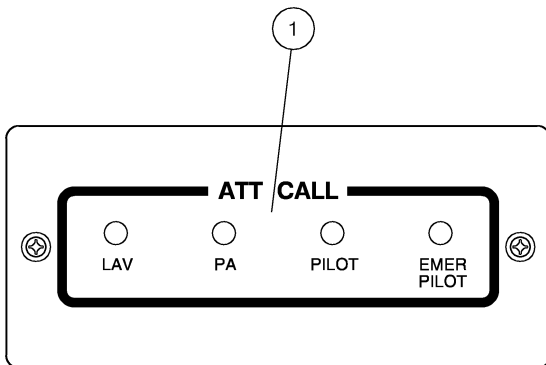
PA (Amber) - Illuminates when the call is from the passenger cabin.

PILOT (Green) - Illuminates continuously when the call is from the cockpit (a bell discrete tone is heard).

EMER PILOT (Red) - Illuminates blinking when an emergency call to the attendant is from the cockpit (a bell discrete tone is heard).



**FORWARD ATTENDANT CONTROL PANEL (OPTION 2)**



**AFT ATTENDANT CALL PANEL**

## **FORWARD ATTENDANT CONTROL PANEL (OPTION 3)**

### **1 - ATTENDANT CALL INDICATION LIGHTS**

LAV (Red) - Illuminates when the call is from the lavatory.

PAX (Amber) - Illuminates when the call is from the passenger cabin.

### **2 - PSU TEST BUTTON**

- When pressed, provides PSU test, illuminating all the PSU's reading lights and attendant call lights. The associated attendant call chimes are also activated.

### **3 - PSU RESET BUTTON**

- When pressed after test, allows resetting all PSUs to the initial state.

### **4 - CALL RESET BUTTON**

- When pressed, clears all attendant call signals.

## **AFT ATTENDANT CALL PANEL**

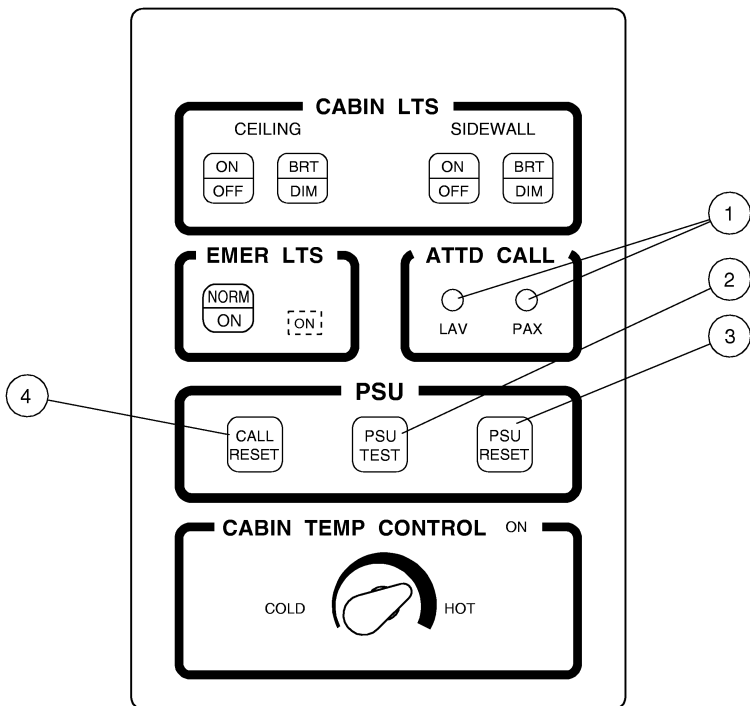
### **1 - ATTENDANT CALL INDICATION LIGHTS**

LAV (Red) - Illuminates when the call is from the lavatory.

PA (Amber) - Illuminates when the call is from the passenger cabin.

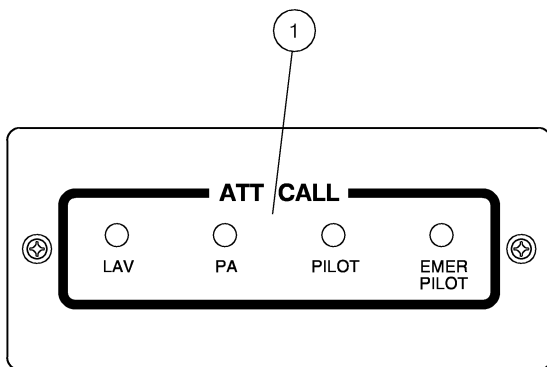
PILOT (Green) - Illuminates continuously when the call is from the cockpit (a bell discrete tone is heard).

EMER PILOT (Red) - Illuminates blinking when an emergency call to the attendant is from the cockpit (a bell discrete tone is heard).



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**FORWARD ATTENDANT CONTROL PANEL (OPTION 3)**



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**AFT ATTENDANT CALL PANEL**

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REVISION 2

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## **FORWARD ATTENDANT CONTROL PANEL (OPTION 4)**

### **1 - ATTENDANT CALL INDICATION LIGHTS**

LAV (Red) - Illuminates when the call is from the lavatory.

PAX (Amber) - Illuminates when the call is from the passenger cabin.

### **2 - PSU TEST BUTTON**

- When pressed, provides PSU test, illuminating all the PSU's reading lights and attendant call lights. The associated attendant call chimes are also activated.

### **3 - PSU RESET BUTTON**

- When pressed after test, allows resetting all PSUs to the initial state.

### **4 - CALL RESET BUTTON**

- When pressed, clears all attendant call signals.

## **AFT ATTENDANT CALL PANEL**

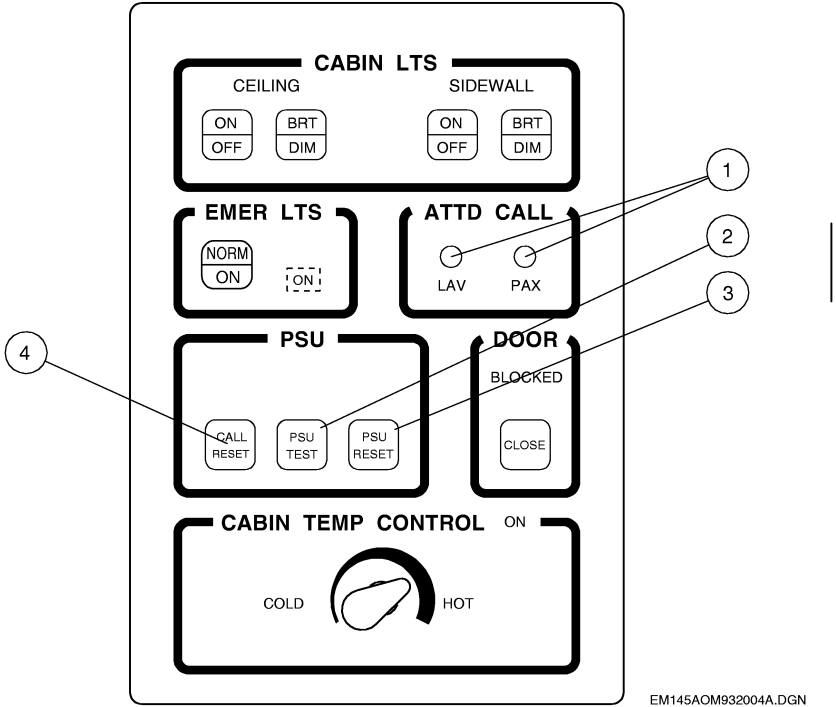
### **1 - ATTENDANT CALL INDICATION LIGHTS**

LAV (Red) - Illuminates when the call is from the lavatory.

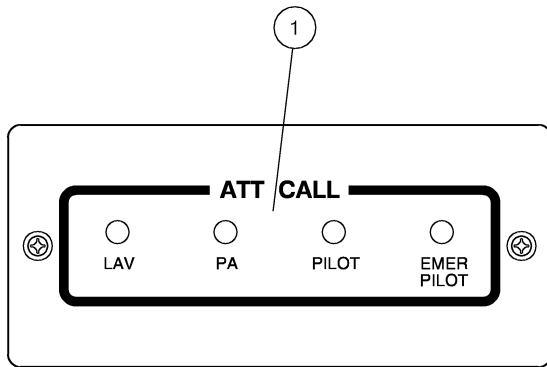
PA (Amber) - Illuminates when the call is from the passenger cabin.

PILOT (Green) - Illuminates continuously when the call is from the cockpit (a bell discrete tone is heard).

EMER PILOT (Red) - Illuminates blinking when an emergency call to the attendant is from the cockpit (a bell discrete tone is heard).



**FORWARD ATTENDANT CONTROL PANEL (OPTION 4)**



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**AFT ATTENDANT CALL PANEL**

## AUDIO ENTERTAINMENT (OPTIONAL) - EXAMPLE

The Audio system provides selectable audio entertainment to passengers, from a CD Player. The system also provides priority interruption capability that enables a passenger address to simultaneously override all audio channels.

### CONTROLS AND INDICATORS

#### 1 - SHIFT PUSH BUTTON

- Pushed one time - Balance adjustment.
- Pushed two times - Bass/Treble adjustment.

#### 2 - MENU BUTTON

- ON - Track search.
- OFF - Fast-forward/Reverse operations.

#### 3 - SELECT PUSH BUTTON 1

- Adjustment functions and to scroll through adjustment modes.

#### 4 - SELECT PUSH BUTTON 2

- Adjustment functions and to scroll through adjustment modes.

#### 5 - DISPLAY

- Shows all indications and controls of the CD player.

#### 6 - LOUD

- ON - Loudness function enabled.
- OFF - Loudness function disabled.

#### 7 - EJECT

- Ejects the compact disc from the CD player.

#### 8 - SCAN

- Enable/Disable the scan play.

#### 9 - RANDOM

- Enable/Disable the random play.

#### 10 - REPEAT

- Enable/Disable the repeat function.

#### 11 - PAUSE

- Pauses the playback temporarily.

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**12 - UP BUTTON**

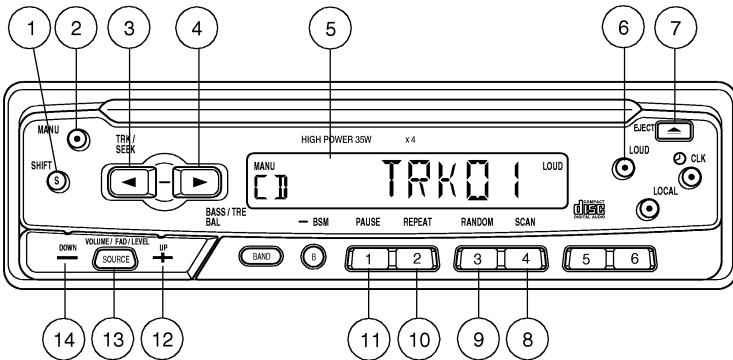
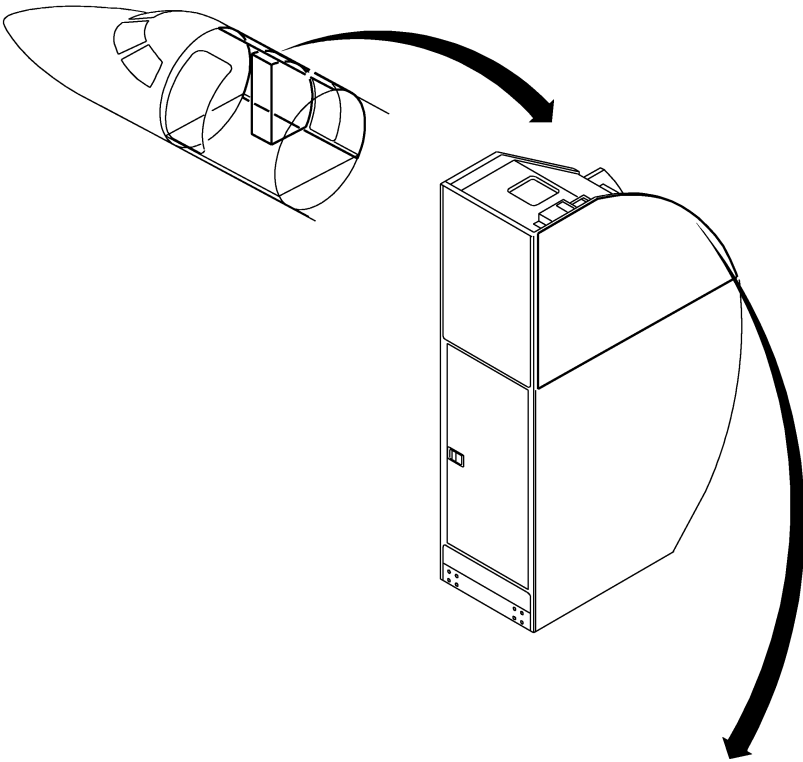
- Functions of adjustment.

**13 - SOURCE**

- Not used.

**14 - DOWN**

- Functions of adjustment.



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**AUDIO ENTERTAINMENT (OPTIONAL) - EXAMPLE**

1-10	Code 01	Page 22
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REVISION 2

## **MP3 PLAYER (OPTIONAL)**

The DMP-200 Digital Media Player provides music to passengers and it is an effective tool to advise the passengers about some flight conditions.

Both the music files and the Passenger Briefing files are storage in memory cards. The content of the memory card can be easily up-date.

The speakers are located throughout the passenger main cabin (PSUs), entrance areas, flight attendant stations and lavatories.

The audio tracks are encoded in MPEG format.

Audio files are stored in a removable Compact Flash memory card which is prepared and installed by the user.

### **OPERATION**

The DMP-200 uses only a single rotary knob with a push-button action for all front panel functions. Press ON/OFF button to turn ON the unit.

#### **To Select languages**

Rotate the knob fully counterclock wise until “CHOOSE LANGUAGES” is displayed. If “RETURN TO MENU” is displayed at the most counterclock wise position, push the knob and then rotate fully counterclock wise.

Push the knob to enter language selection menu.

Rotate the knob to scroll through the list of languages found in the memory card. Push the knob to toggle selection of the displayed language.

When finish, rotate the knob fully clock wise or fully counterclock wise until “END OF LIST-RETURN TO MENU” is displayed and push the knob to return to the main menu.

## **To Play a Speech file**

Rotate the knob clock wise or counterclock wise until the title of the desired file is displayed. If “RETURN TO MENU” is displayed at either position, push the knob and then rotate fully clock wise or counterclock wise.

Push the knob to begin playback. The file will be played once for each language enabled, if the file exists in those languages.

The display indicates the playback is in progress. This display can either be elapsed playback time, or can be cycling user prompts. Please see the DMP-200 Installation Manual for more information.

When playback is complete, the audio stops and the display points to the NEXT speech file, as if the knob had been turned clock wise once.

## **To Play a Music File**

Rotate the knob clock wise or counterclock wise until the name of the desired music list is displayed. If “RETURN TO MENU” is displayed at either end, push the knob and then rotate clock wise or counterclock wise to select.

Push the knob to select the music list. Then rotate the knob to select either “PLAY WHOLE LIST” or the desired music track. Push the knob to begin playback. The display can either be elapsed playback time, or can be cycling user prompts. Please see the DMP-200 Installation Manual for more information.

Instead of explicitly choosing a music list and music track, can select “CONTINUOUS MIX” at the top-level menu. This will play a continuous random selection of all music tracks on the card.

## **To Pause Playback**

Press the knob. This will put the playback into “PAUSED” mode.

To resume playback, press the knob again.

## **To Cancel Playback**

Press and hold the knob for at least 3 seconds.

## **To Change Volume Level**

Push and turn the knob in either direction. The volume can be adjusted even if no track is playing. When adjusting the volume, the display will temporarily display: “Volume: XX where XX” is a number between 10 (min volume) and 100 (max volume).

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## To Change Selection While Playing

Simply make your new track selection and push the knob (note that if the knob is not turned for 4 seconds while you are selecting the new track, the display will revert to the "PLAYING" screen). The currently-playing audio will fade down and your new selection will begin. If so configured in Card Prep, the original track will resume when the new track has finished.

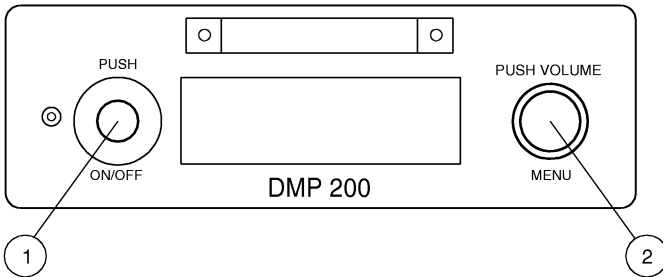
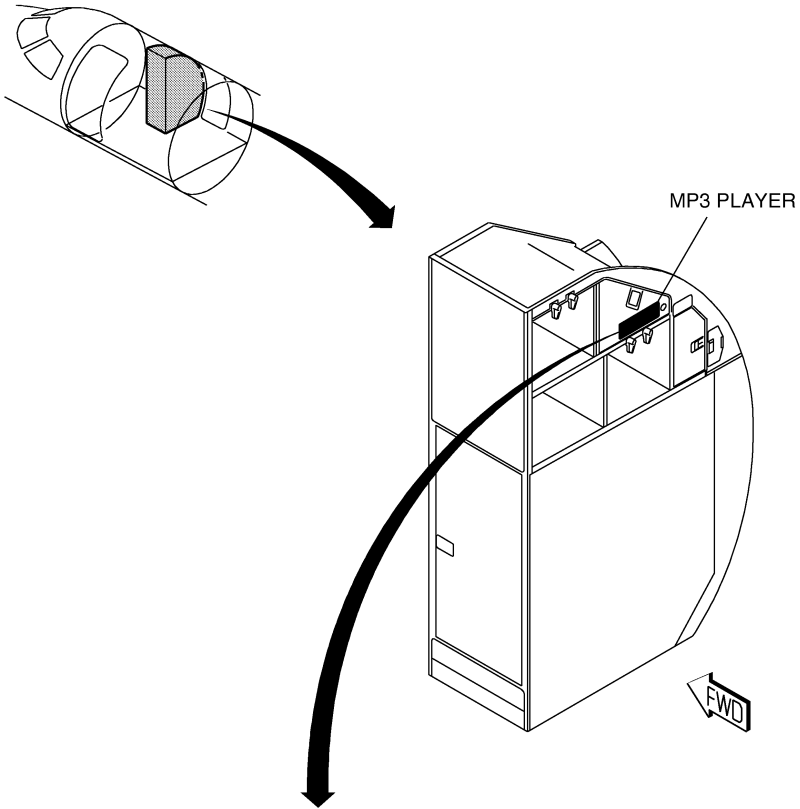
## CONTROLS AND INDICATORS

### 1 - ON/OFF BUTTON

- Power button.

### 2 - VOLUME - MENU BUTTON

- Multifunction button.



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**MP3 PLAYER (OPTIONAL)**

## DOORS AND EXITS

### AIRSTAIR MAIN DOOR

The airplane is provided with one main entry door, designed as type I door, located on the left forward fuselage section.

The main door, incorporating folding airstairs, is hinged at its lower edge. The door is raised in normal operation by two hydraulic door actuators powered by hydraulic system 1 or by an accumulator with sufficient capacity for four complete door operation cycle.

The door opening operation is manual. The hydraulic circuit damping function allows a smooth operation when the door is lowered.

The system may be controlled from inside or outside, through the entrance panel or through the exterior main door control panel, respectively.

The door may also be closed and locked raising it manually, by an outside ground attendant, and actuating either the inner or the outer handle.

An alternative opening valve is provided in the cockpit to allow the main door to be lowered if it is blocked by hydraulic system pressure (solenoid valve failure).

**NOTE:** No more than three persons should be standing on the doorsteps simultaneously.

## **CONTROLS AND INDICATORS**

### **1 - EXTERIOR MAIN DOOR CONTROL BUTTON**

- When pressed, a solenoid valve is energized, allowing hydraulic power to raise the main door.

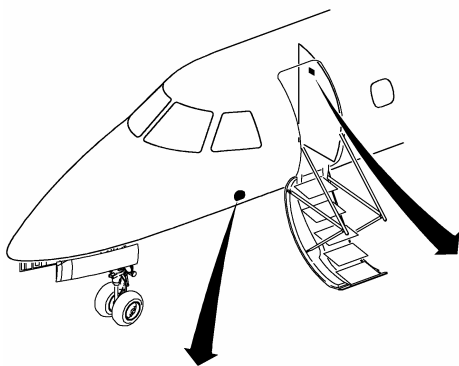
### **2 - INTERIOR MAIN DOOR CONTROL BUTTON**

- When pressed, a solenoid valve is energized, allowing hydraulic power to raise the main door.
- A **BLOCKED** inscription illuminates when the main door actuator hydraulic line remains pressurized after door closing. In this case, the main door is hydraulically blocked.

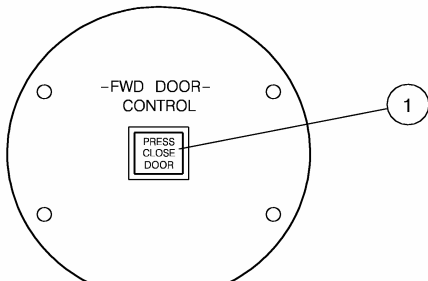
### **3 - MAIN DOOR ALTERNATIVE OPENING VALVE**

- When actuated for 2 minutes, it depressurizes the door close line, allowing the main door to be lowered when blocked by hydraulic system pressure, provided Hydraulic System 1 is depressurized.

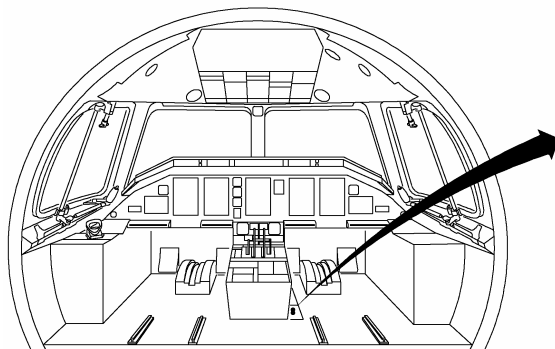
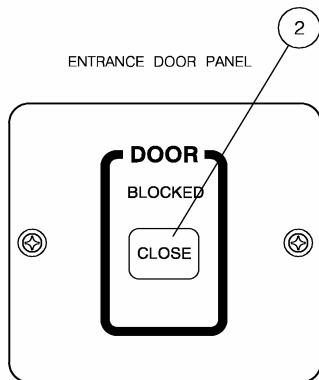
1-15	Code 01	Page 2
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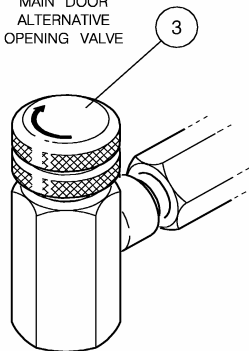
EXTERIOR MAIN DOOR  
CONTROL PANEL



ENTRANCE DOOR PANEL



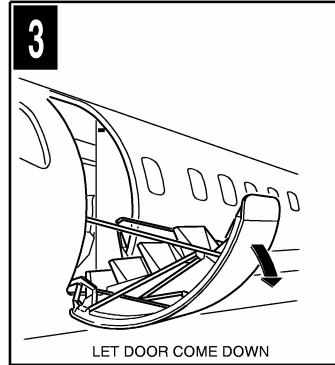
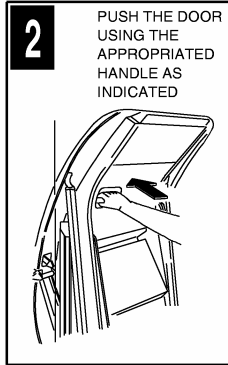
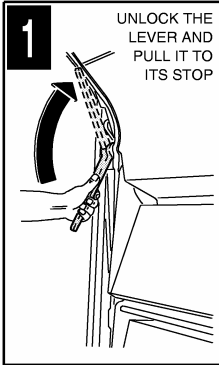
MAIN DOOR  
ALTERNATIVE  
OPENING VALVE



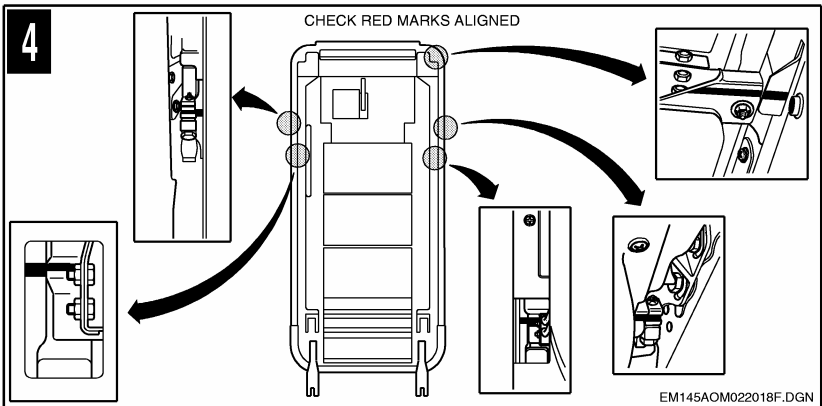
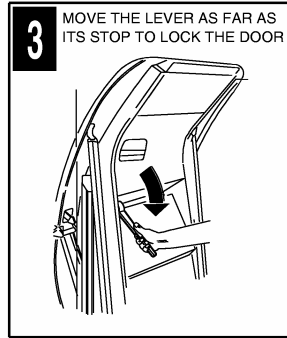
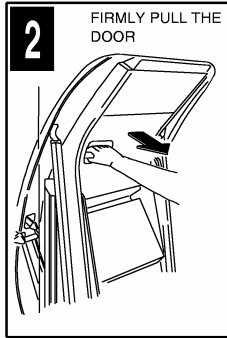
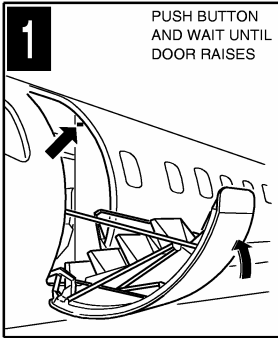
1451114217.MCE

**AIRSTAIR MAIN DOOR CONTROLS AND INDICATORS**

**TO OPEN:**



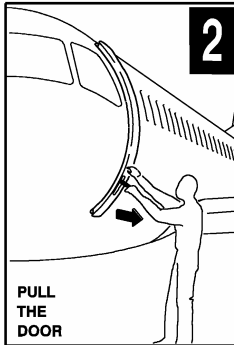
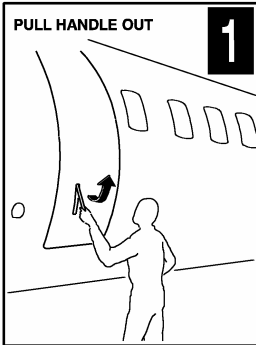
**TO CLOSE:**



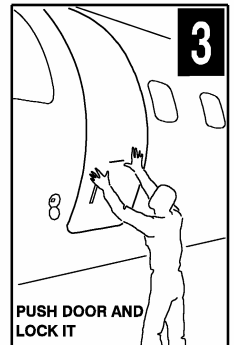
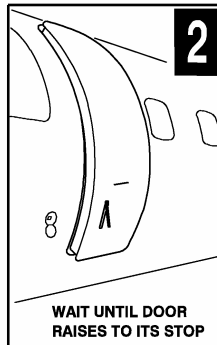
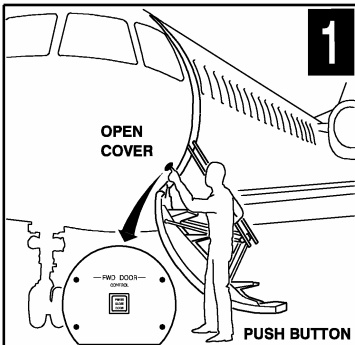
**AIRSTAIR DOOR OPERATION (INSIDE CABIN)**

**NOTE:** The number of red marks may vary with the airplane configuration.

**TO OPEN:**



**TO CLOSE:**



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**AIRSTAIR DOOR OPERATION (OUTSIDE CABIN)**

INTENTIONALLY BLANK

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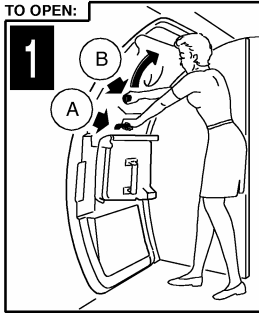
## JETWAY MAIN DOOR

The airplane is provided with one main entry door, designed as type I door, located on the left forward fuselage section.

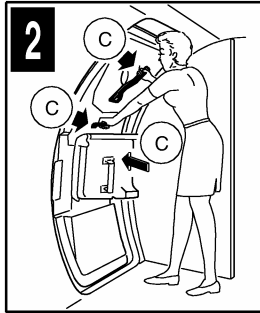
Some airplanes may be optionally equipped with a main door without handrails and stairs. This door will allow docking at jetway terminals. The door opening operation is manual. The system is mechanical and the door swings opens laterally and toward the airplane's front end.

The door movement is operated by internal and external handles. The door remains against the airplane fuselage when fully open, leaving the entrance completely free for the airport's jetway.

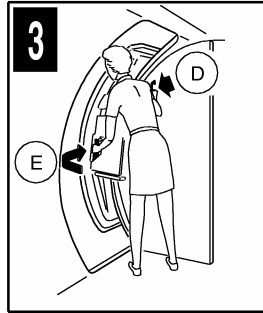
TO OPEN:



- A** HOLD THE ASSISTANCE HANDLE
- B** TURN THE LEVER CLOCKWISE TO UNLOCK THE DOOR

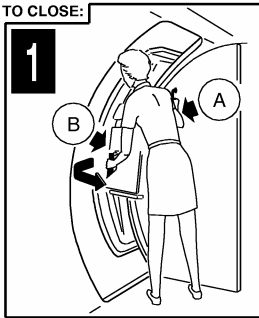


- C** HOLDING HANDLE AND LEVER, PUSH THE DOOR

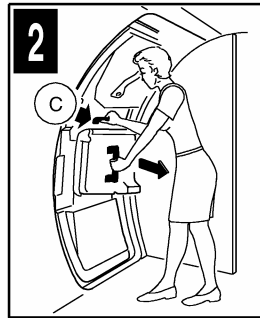


- D** HOLD THE PARTITION HANDLE
- E** PUSH THE DOOR HANDLE UNTIL THE DOOR LOCKS IN THE OPEN POSITION

TO CLOSE:



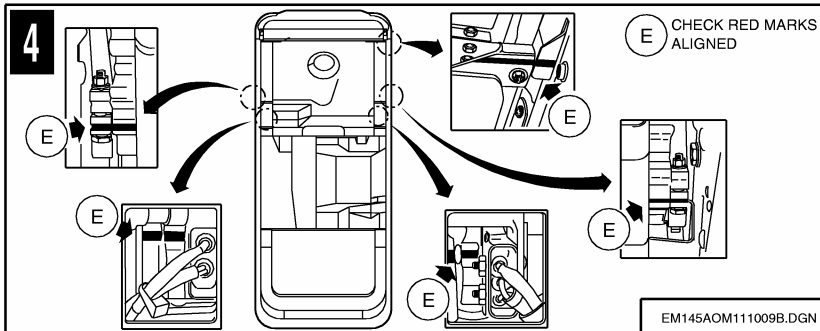
- A** HOLD THE PARTITION HANDLE  
PULL THE DOOR HANDLE TO UNLOCK THE DOOR AND BRING IT TO CLOSURE POSITION
- B** PULL THE DOOR HANDLE TO UNLOCK THE DOOR AND BRING IT TO CLOSURE POSITION



- C** HOLDING THE HANDLES, PULL THE DOOR TO THE CLOSURE POSITION



- D** TURN THE LEVER COUNTERCLOCKWISE TO LOCK THE DOOR CLOSED



- E** CHECK RED MARKS ALIGNED

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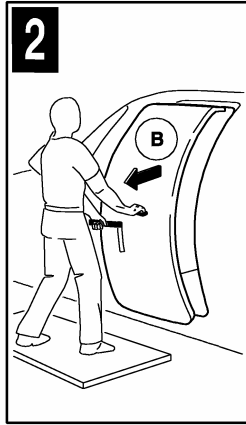
**JETWAY DOOR OPERATION (INSIDE CABIN)**

**NOTE:** The number of red marks may vary with the airplane configuration.

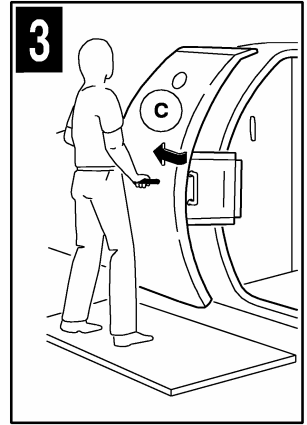
TO OPEN:



**A** LIFT THE LEVER TO UNLOCK THE DOOR

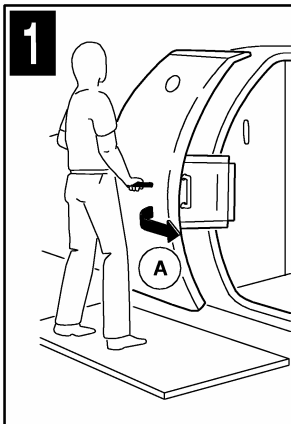


**B** PULL THE DOOR TO OPEN POSITION

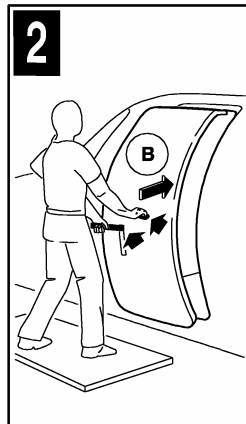


**C** FULLY OPEN THE DOOR AND LOCK IT OPENED

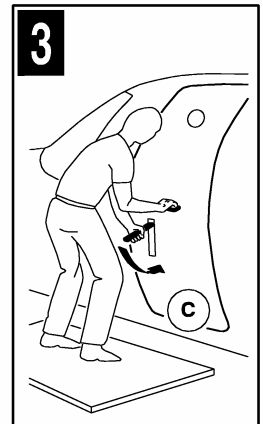
TO CLOSE:



**A** HOLD THE DOOR HANDLE TO UNLOCK THE DOOR AND BRING IT TO CLOSURE POSITION



**B** PULL THE DOOR TO THE CLOSED POSITION



**C** LOWER THE LEVER TO LOCK THE DOOR CLOSED

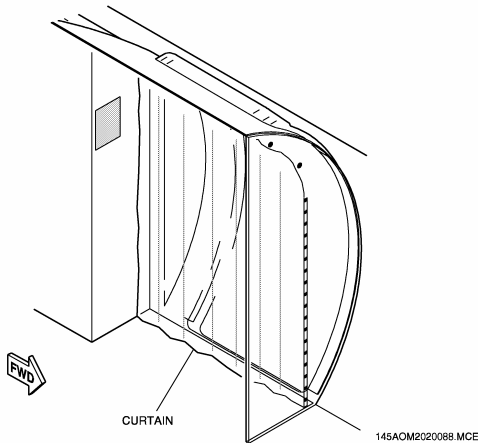
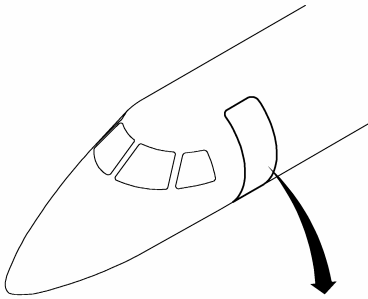
145114317.MCE

JETWAY DOOR OPERATION (OUTSIDE CABIN)

## MAIN DOOR ACOUSTIC CURTAIN

The airplane is equipped with an acoustic curtain at the main door area. The acoustic curtain reduces noise level in the forward passenger cabin area when in the closed position.

- NOTE:** - The acoustic curtain must be closed during flights with passengers.
- The acoustic curtain should be rolled-up with the ultraleather facing outward. Thus, in case of rain, snow, wind or other weather conditions, the ultraleather will be the exposed material.
  - The acoustic curtain must be rolled-up during taxi, takeoff and landing.



## **ACCESS DOORS AND HATCHES**

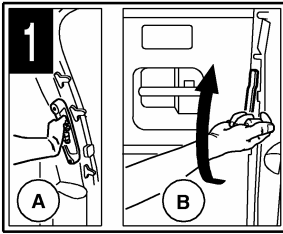
The airplane is provided with one service door on the right side. Two passenger cabin emergency escape hatches are located over the wings. Finally, a number of access doors and hatches for different airplane systems can be found along the fuselage.

### **SERVICE DOOR**

The service door on the right side of the forward fuselage section is used for galley servicing and cabin cleaning between flights. It may also be used as an emergency exit.

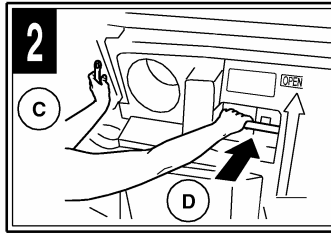
The door is manually operated by internal and external handles. Open the service door by lifting the handle and moving the door outward, followed by a forward rotation.

TO OPEN:



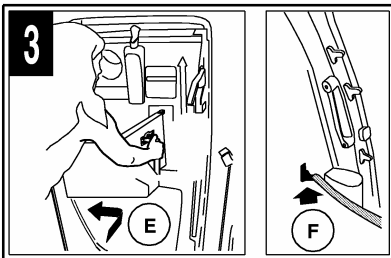
**A** HOLD THE ASSISTANCE HANDLE

**B** LIFT THE LEVER TO UNLOCK THE DOOR



**C** KEEP HOLDING THE ASSISTANCE HANDLE

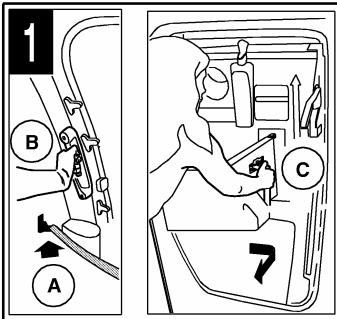
**D** PUSH THE DOOR TO OPEN



**E** MOVE THE DOOR UNTIL IT LOCKS IN THE OPEN POSITION

**F** MAKE SURE THAT THE SAFETY STRAP IS IN ITS CORRECT POSITION

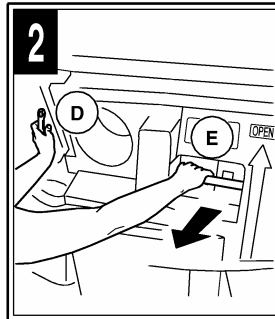
TO CLOSE:



**A** REMOVE THE SAFETY STRAP

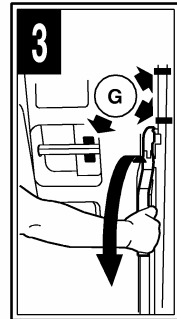
**B** HOLD THE ASSISTANCE HANDLE

**C** PULL THE LOWER HANDLE TO UNLOCK THE DOOR FROM THE OPEN POSITION AND BRING IT TO THE CLOSED POSITION



**D** KEEP HOLDING THE ASSISTANCE HANDLE

**E** FIRMLY PULL THE DOOR



**F** LOWER THE LEVER TO LOCK THE DOOR

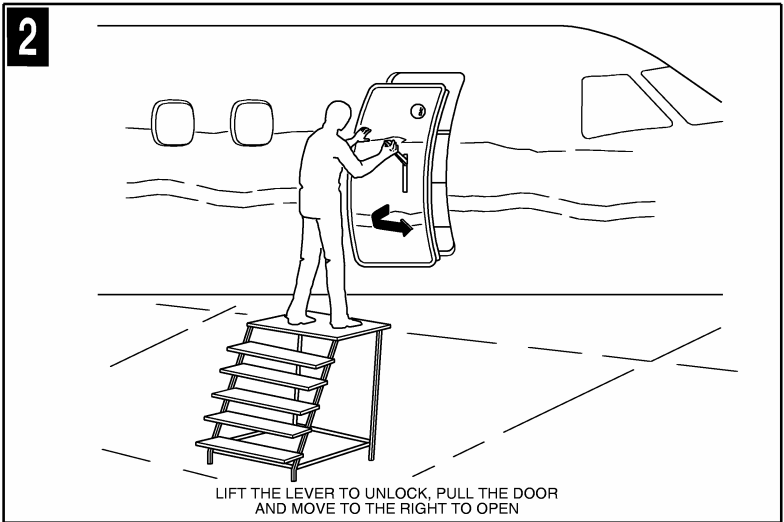
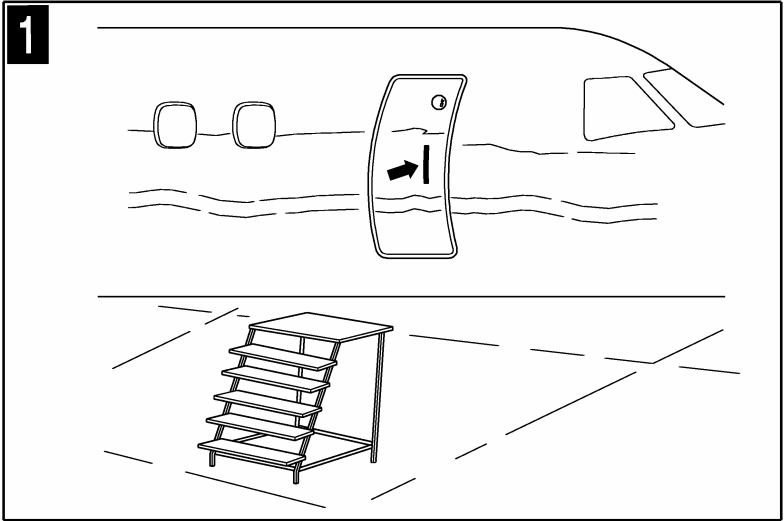
**G** CHECK RED MARKS ALIGNED

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**SERVICE DOOR OPERATION (INSIDE CABIN)**

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REVISION 4



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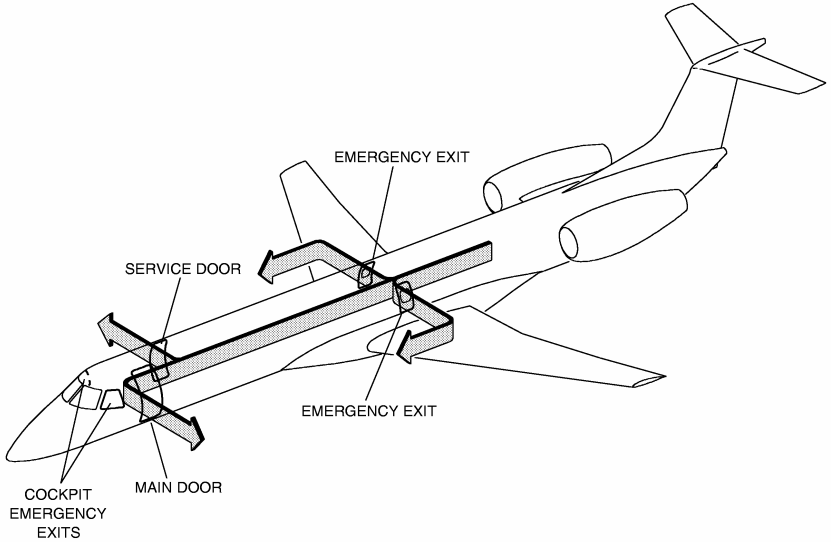
## SERVICE DOOR OPERATION (OUTSIDE CABIN)

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1-15	Code 01	Page 14
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## EMERGENCY EXITS

There are two forward doors (main and service), two over-wing exits and two cockpit windows, one each side, that can be used for emergency evacuation.

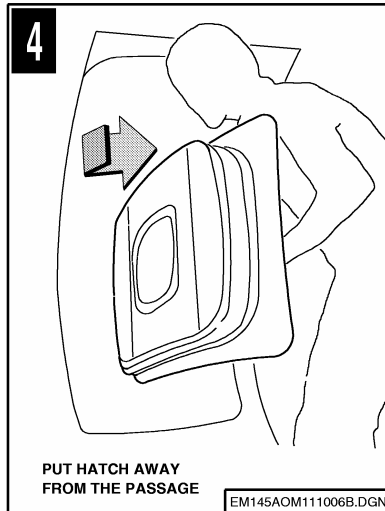
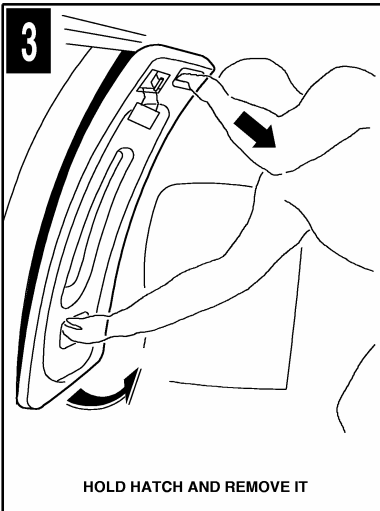
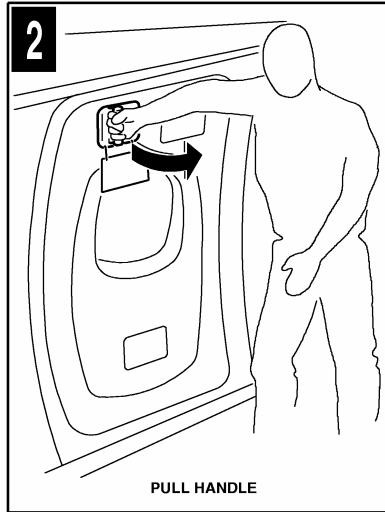
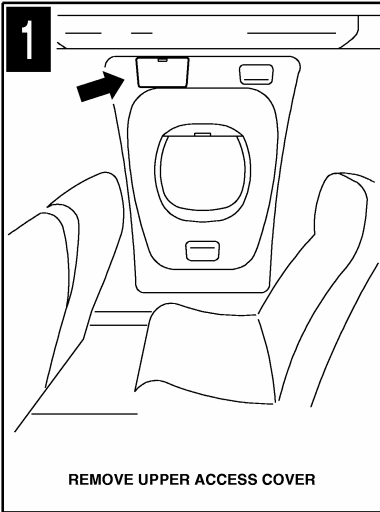


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## DOORS AND EXITS LOCATION

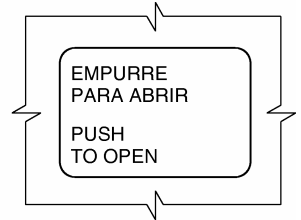
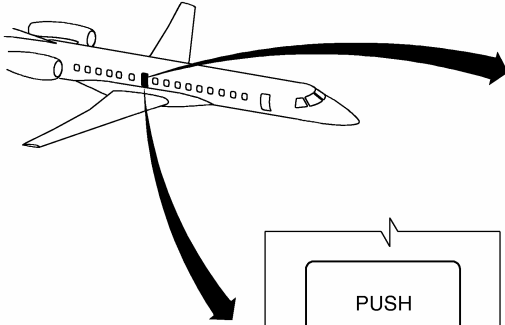
## EMERGENCY OVERWING EXITS

Two emergency exit hatches exist for passenger evacuation in the event of an emergency. They are located one on each side of the airplane, centered over the wings.

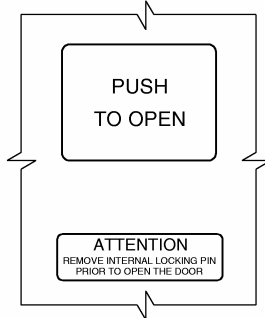


## EMERGENCY EXIT OPERATION (INSIDE CABIN)

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PRE-MOD SB 145-52-0040



POST-MOD SB 145-52-0040



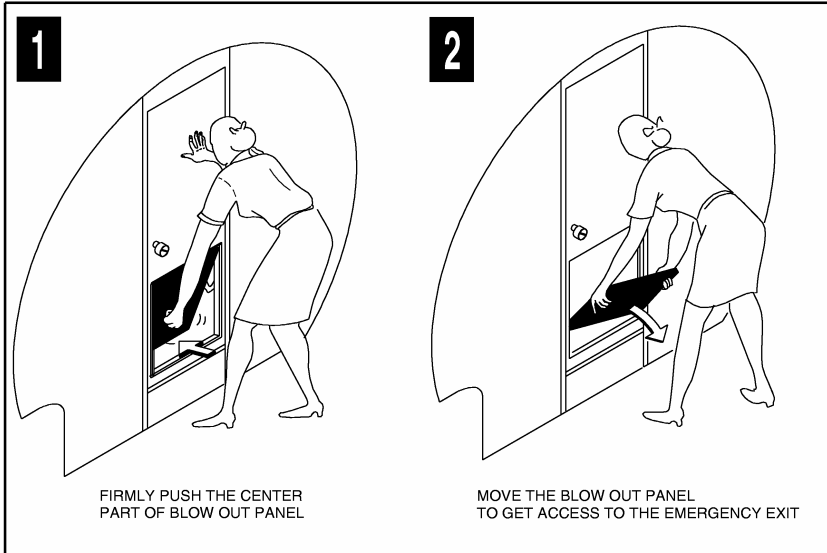
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**EMERGENCY EXIT OPERATION (OUTSIDE CABIN)**

## COCKPIT EVACUATION

### COCKPIT DOOR

Cockpit door located between passengers cabin and cockpit is provided with an emergency exit. This emergency exit is accessible when the blow-out panel is removed.

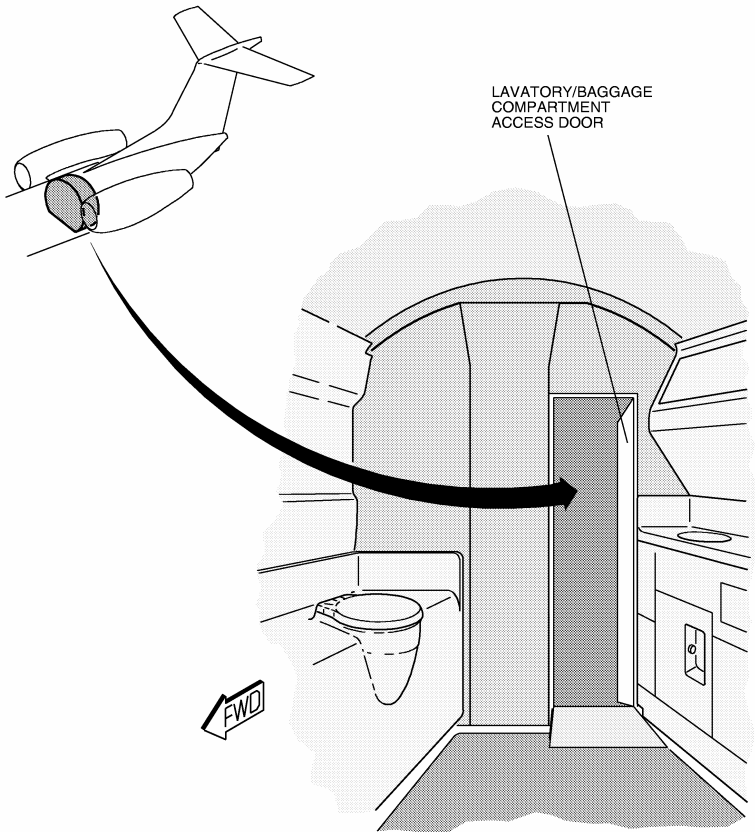


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## LAVATORY/BAGGAGE COMPARTMENT ACCESS DOOR (OPTIONAL)

The lavatory/baggage compartment access door is located in the lavatory/baggage compartment partition, and provides in-flight access to the baggage compartment.

This access door must be closed for takeoffs and landings.



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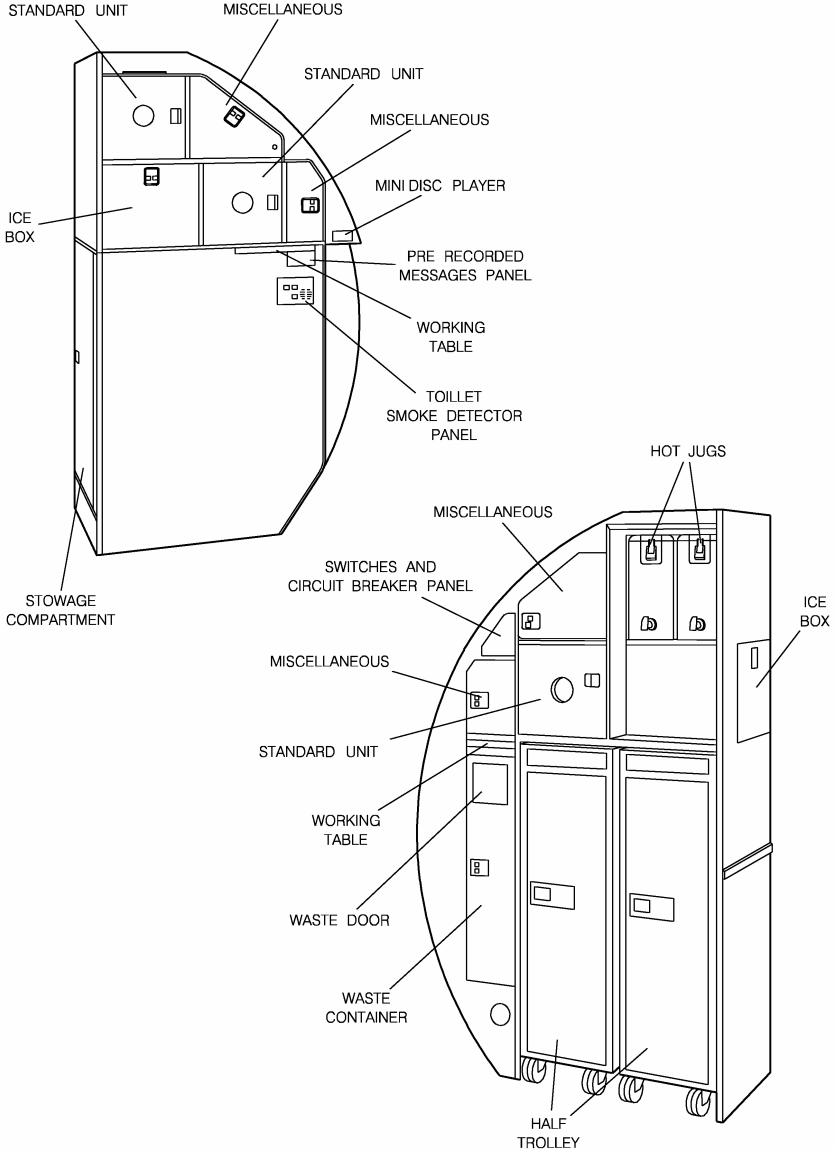
## GALLEY

The galley can be positioned in different locations of the forward area in passenger cabin.

The galley has many compartments that can be configured in different ways and can be equipped with different optional equipment to facilitate and provide an appropriate flight service to passengers.

The following items can equip the galley:

- Switches and Circuit Breaker Panel (Galley Control Panel).
- CD player.
- Toilet Smoke Detector Panel.
- Pre-Recorded Messages Control Panel.
- Half Trolleys.
- Waste Compartment.
- Ice Box.
- Hot Jugs.
- Pull-out Working Table.
- Stowage Compartment.
- Miscellaneous Compartment.
- Literature Pocket.



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**GALLEY (STANDARD)**

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REVISION 4

FAM-145/1713

## CONTROLS AND INDICATORS

### GALLEY CONTROL PANEL

#### 1 - AREA LIGHTING BUTTON

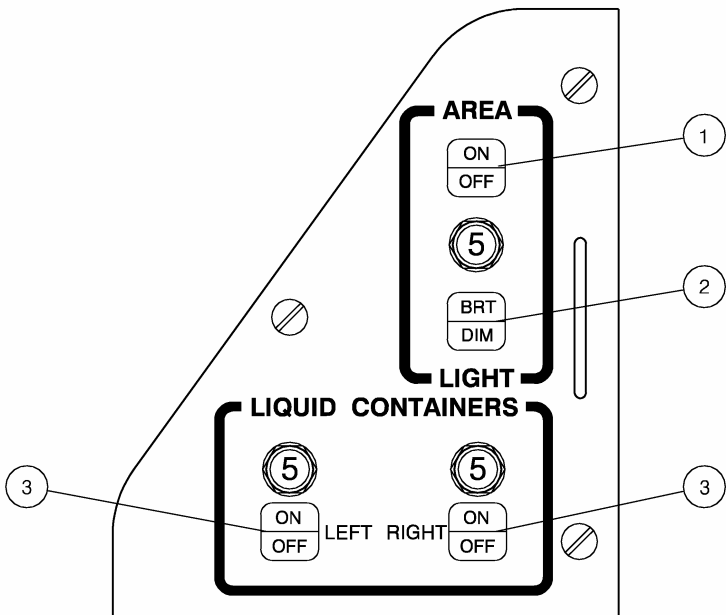
- When alternately pressed, turns on or off the galley area lighting.

#### 2 - AREA LIGHTING BRIGHT/DIM BUTTON

- When alternately pressed, selects the bright or dim mode for galley area lighting.

#### 3 - LEFT AND RIGHT LIQUID CONTAINERS BUTTON

- When alternately pressed turns on or off heating for the associated liquid container.
- When the heating is turned on, the respective left or right indication is lit.



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### GALLEY CONTROL PANEL

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## LAVATORY

The lavatory spans the rear of the passenger cabin, between the last row of seats and the baggage compartment. It provides an odorless operation by providing adequate ventilation in the toilet bowl and waste tank. Other features are:

- External servicing capability.
- Smoke detection and fire protection.
- Waste compartment automatic fire extinguishing system.
- Enclosed waste compartment with removable waste container.
- Potable water tank.
- Two ashtrays (one outside lavatory and one inside lavatory) – (typical).
- Two handles to assist disabled persons (three handles in case of customer option).
- Two mask chemical oxygen dispenser.
- Hanger.
- Mirrors.
- Automatic lighting.
- Fold away baby diaper changing shelf.
- Hidden knob for unlocking the lavatory door from the passenger cabin.

Dispensers for the following items:

- Toilet paper.
- Facial tissues.
- Toilet seat covers.
- Air sickness bags.

## LAVATORY DOOR

When the lavatory door becomes jammed or hard to open, the procedures that should be followed by the cabin crew to open it from outside the lavatory can be:

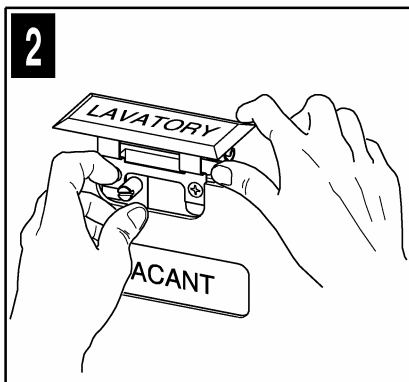
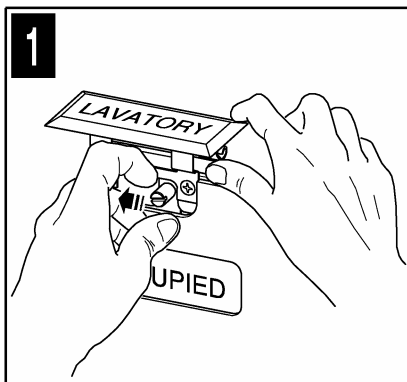
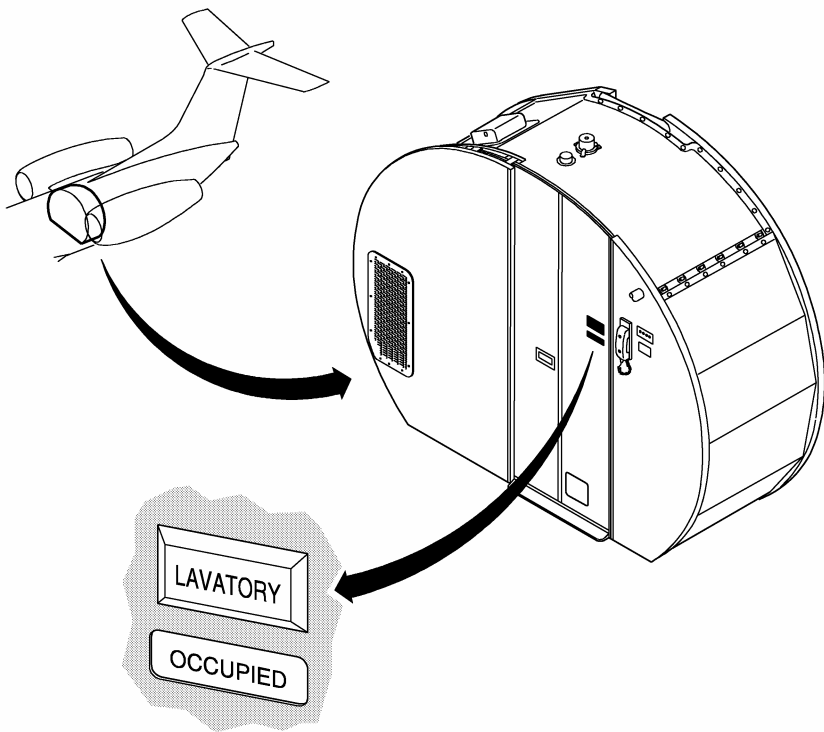
– **Using the slide latch:**

Under the LAVATORY placard, which is located on the lavatory door just above the “OCCUPIED/VACANT” display, there is an alternative mechanism to unlock the door in case of difficulty to open it from inside the lavatory.

To unlock the door, the Flight Attendant must lift this placard and, holding the placard lifted, slide the latch to the left position, until the display inscription changes from “OCCUPIED” to “VACANT” (see figure on the next page). Then, the door should be opened normally.

This mechanism is the same for both Slide and Bi-fold doors.

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**SLIDE LATCH**

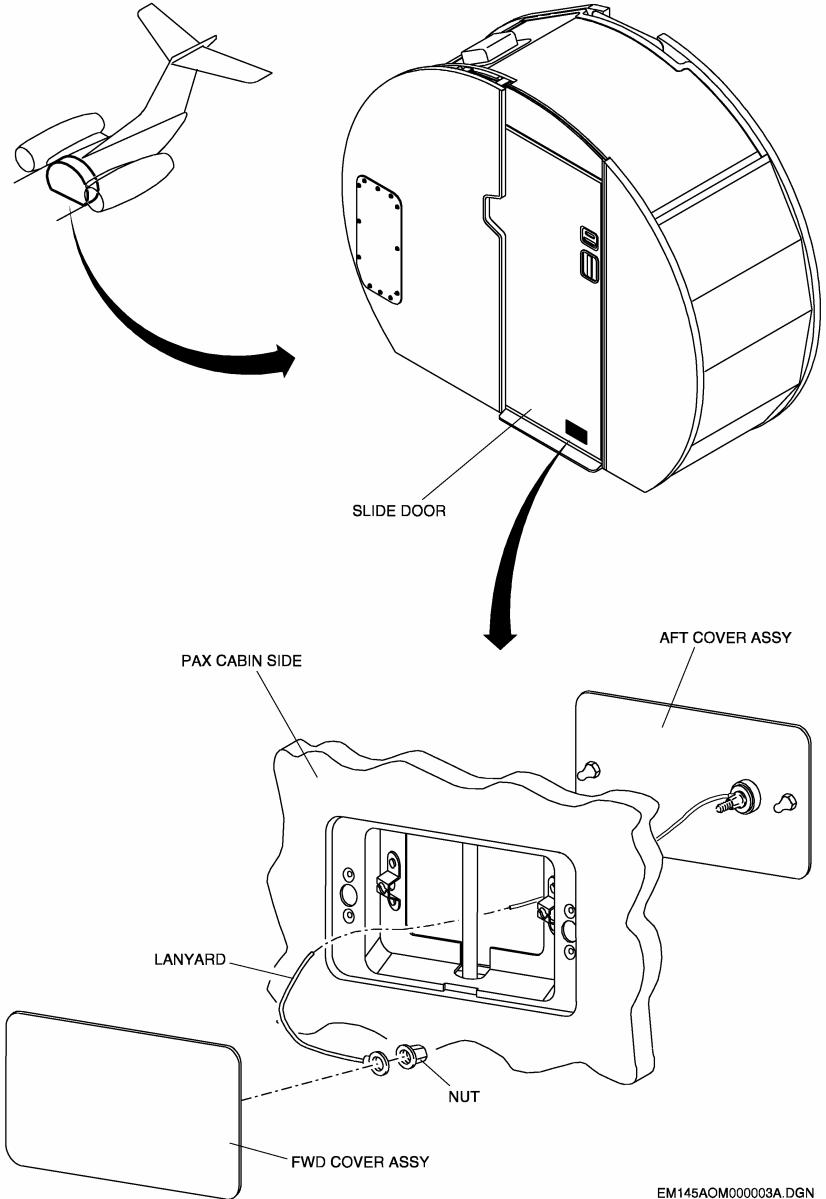
– **Using the cut-out access:**

For airplanes Post-Mod. SB 145-25-0287 (Slide Door) or Post-Mod. SB 145-25-0302 (Bi-fold Door) or equipped with an equivalent modification factory incorporated, there is an access box that can be used to unlock the door from outside the Lavatory.

To unlock the door, the flight attendant must remove the cover and move the rod upward and downward repeatedly.

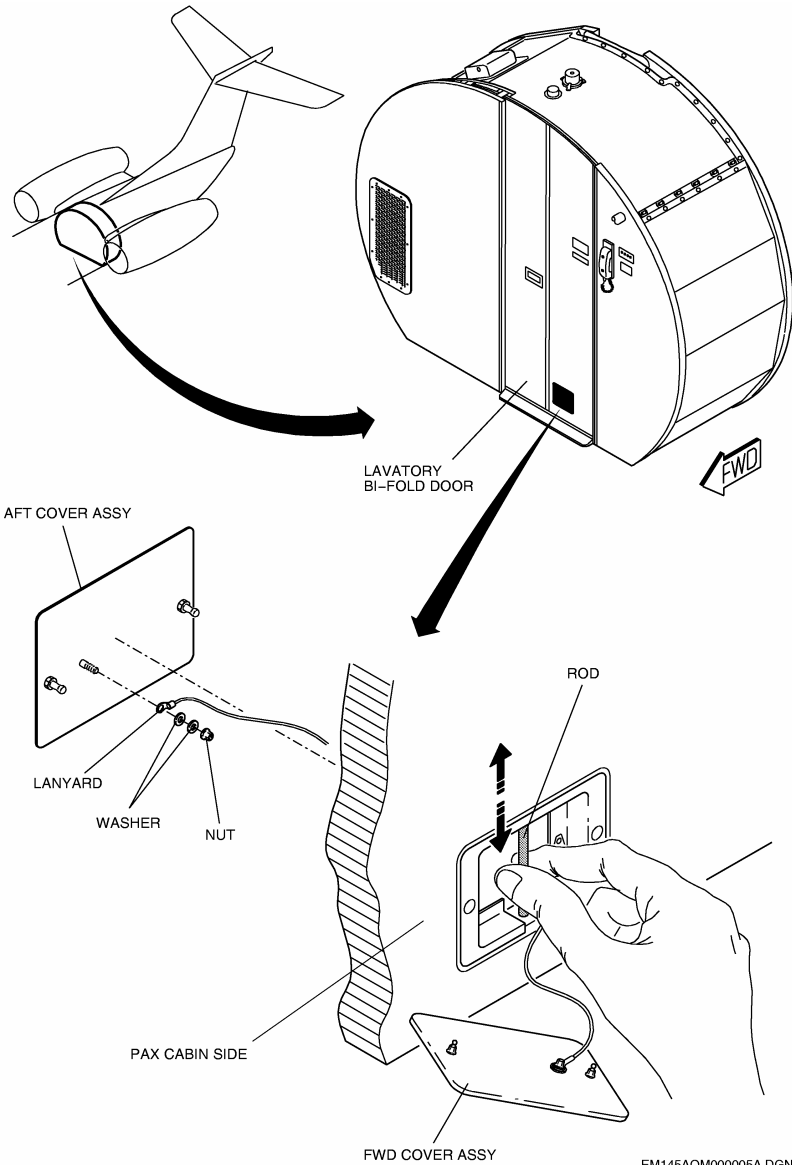
In case of difficulty to move the rod, the flight attendant should hold the lavatory handle and move the door up and down or side to side with quick short movements, at the same time that moves the rod up and downward repeatedly until the door is unlocked (see figures on the next pages).

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**LAVATORY SLIDE DOOR (POST-MOD. SB 145-25-0287)**



**LAVATORY BIFOLD DOOR (POST-MOD. SB 145-25-0302)**

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## LAVATORY WATER SYSTEM

Water service is provided to the washbasin for crew members and passenger hygiene.

The water supply consists of a tank, a faucet, drain valves and required tubing.

The faucet is installed on the washbasin and supplies water from the tank (4.4 gallons or 7.9 gallons, according to airplane configuration) when the valve is pressed.

A lever beside the faucet actuates a valve to drain accumulated washbasin water into the atmosphere. Draining is performed by gravity on the ground or by differential pressure while in flight. A heater at the end of the drain line prevents its obstruction by ice formation. The heater is activated whenever the DC BUS 1 is energized.

The wash basin drain line is also connected to the exterior by a muffler providing ventilation of the lavatory.

A potable water service control panel on the lower rear right side of the wing-to-fuselage fairing allows the supply of water to the tank and to draining it, if necessary.

## LAVATORY WASTE SYSTEM

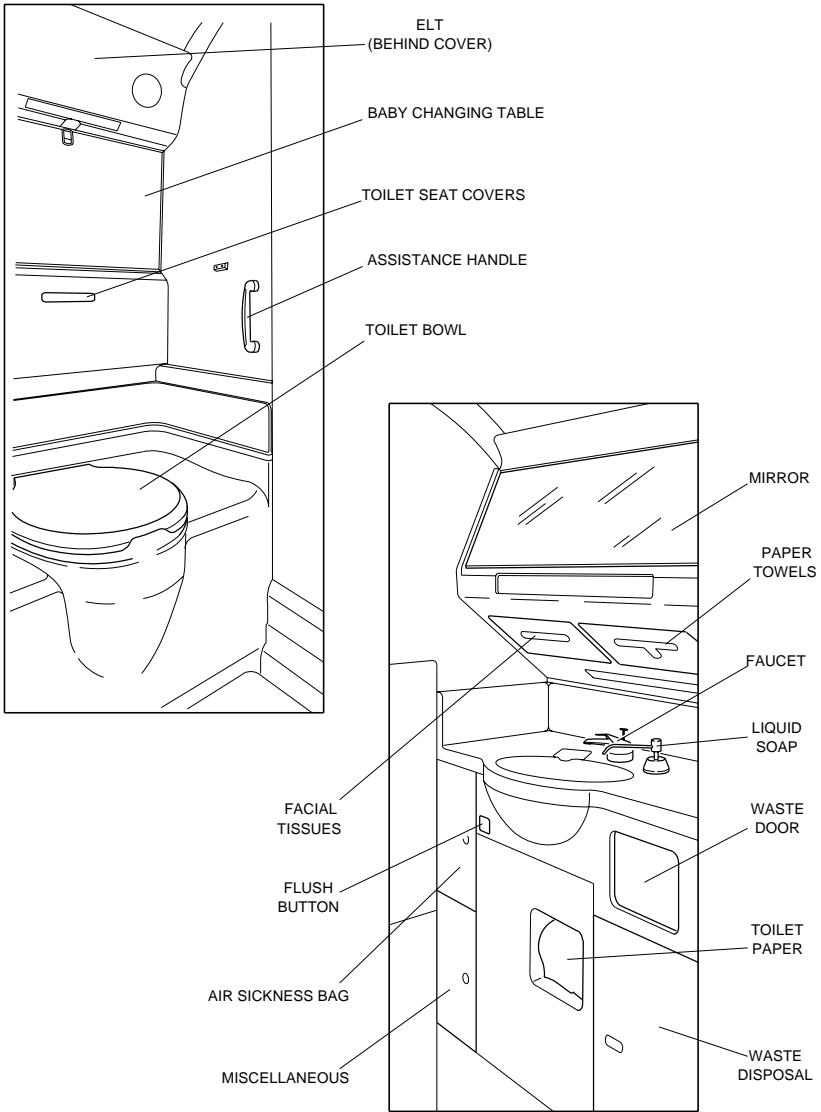
The waste system consists of an electrically-operated self-contained recirculation toilet unit, which collects and stores human waste in an internal holding tank (9.2 gallons). Adequate chemical products are used to disinfect and deodorize the waste holding tank.

A vent line connecting the waste holding tank to the exterior performs its ventilation (odors exhaust) by means of differential pressure.

Toilet flushing is initiated by pressing and releasing the flush button adjacent to the toilet. This button actuates a motor-driven pump and filter, which delivers flushing fluid for a pre-timed interval.

A restrictor at the bowl bottom prevents waste material return when it is carried directly to the tank.

A waste service panel on the lower rear right side of the fuselage is equipped with a control cable, a waste drain valve and a rinse nipple with cap, and allows the waste system to be serviced.



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## LAVATORY

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REVISION 5

FAM-145/1713

## **LAVATORY FIRE PROTECTION SYSTEM**

### **LAVATORY SMOKE DETECTION**

The lavatory smoke detection system consists of a smoke sensor installed in the lavatory ceiling and a Smoke Detector Panel located near the forward galley.

Upon detection of smoke inside the lavatory, the smoke detector signals the panel to activate a red alarm light and a horn. In addition, a warning message is presented on the EICAS. The smoke sensor is less sensitive to smoke from cigarettes.

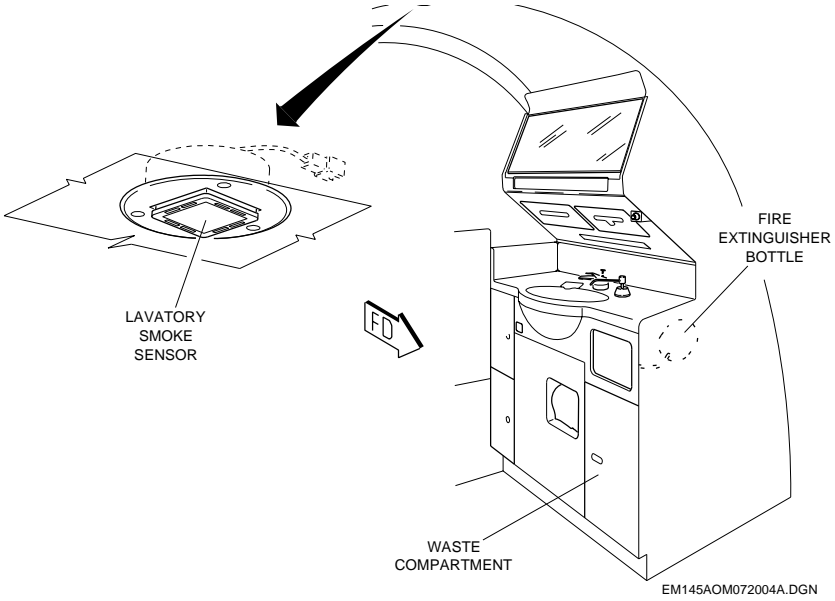
The EMB-135 has an additional horn, installed in the aft cabin section on the ceiling panel, right in front of the lavatory door.

### **LAVATORY FIRE EXTINGUISHING**

A single fire extinguisher bottle is installed for fire protection of the lavatory waste container.

The bottle discharging tube outlets are fitted to the waste container, and are provided with temperature sensitive heads. Discharge of the extinguishing agent is accomplished by sensitive heads melting under high temperatures (78°C), which opens an outlet passage.

No warning is provided in the cockpit when the waste container extinguisher bottle is discharged.



**LAVATORY FIRE PROTECTION SYSTEM  
(PRE-MOD. SB 145-26-0014)**

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## CONTROLS AND INDICATORS

### LAVATORY SMOKE DETECTOR PANEL (PRE-MOD. SB 145-26-0014)

#### 1 - LAVATORY SMOKE DETECTOR OPERATION LIGHT (GREEN)

- Illuminates during normal system operation.

#### 2 - LAVATORY SMOKE DETECTOR ALARM LIGHT (RED)

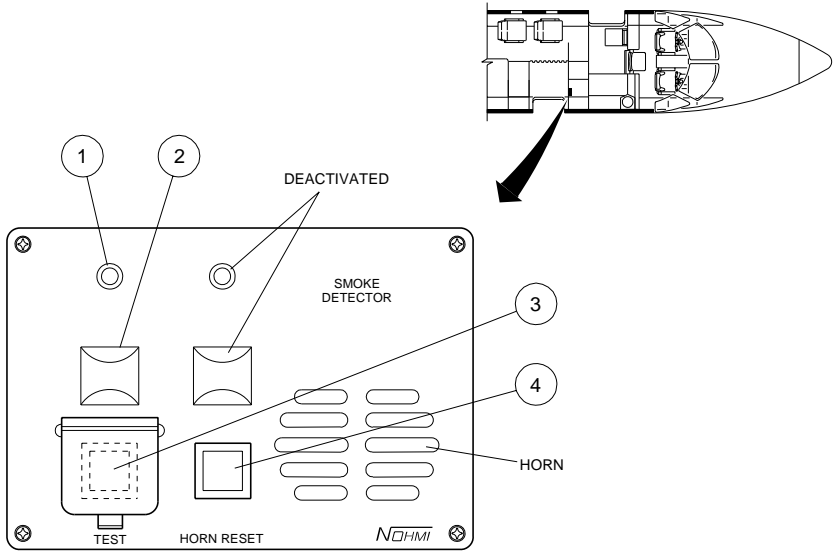
- Flashes in case of smoke detection inside the lavatory. In this case, a horn is also activated.

#### 3 - LAVATORY SMOKE DETECTOR TEST BUTTON (GUARDED)

- When pressed (momentarily), simulates a smoke detection condition and activates all associated alarms (horn, red alarm light and EICAS message).
- During test, the green operation light extinguishes.

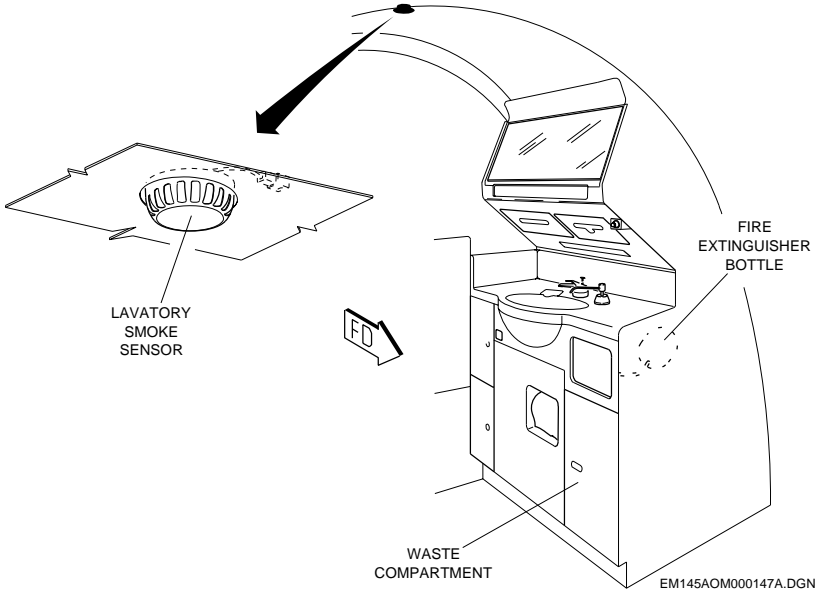
#### 4 - LAVATORY SMOKE DETECTOR RESET BUTTON

- Cancels the horn and resets the system for operation.



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**LAVATORY SMOKE DETECTOR PANEL  
(PRE-MOD. SB 145-26-0014)**



**LAVATORY FIRE PROTECTION SYSTEM  
(POST-MOD. SB 145-26-0014)**

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## CONTROLS AND INDICATORS

### LAVATORY SMOKE DETECTOR PANEL (POST-MOD. SB 145-26-0014)

#### 1 - LAVATORY SMOKE DETECTOR ALARM LIGHT (RED)

- Flashes in case of smoke detection inside the lavatory. In this case, a horn is also activated.

#### 2 - LAVATORY SMOKE DETECTOR HORN OFF BUTTON

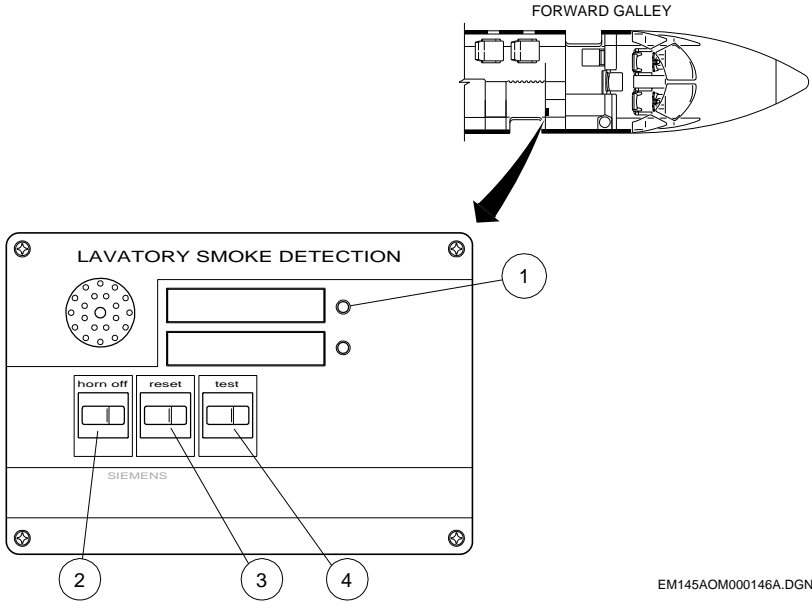
- Turns off the horn alarm when pressed.

#### 3 - LAVATORY SMOKE DETECTOR RESET BUTTON

- Cancels the horn and resets the system for operation.

#### 4 - LAVATORY SMOKE DETECTOR TEST BUTTON (GUARDED)

- When pressed (momentarily), simulates a smoke detection condition and activates all associated alarms (horn, red alarm light and EICAS message).



**LAVATORY SMOKE DETECTOR PANEL  
(POST-MOD. SB 145-26-0014)**

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## LIGHTING

Passenger cabin lighting includes general illumination, reading lights, lavatory, galley lights and cabin signs.

### GENERAL PASSENGER CABIN ILLUMINATION

General passenger cabin illumination is provided by fluorescent tubes fitted in the fuselage ceiling and sidewall. These lights are controlled by control buttons located on the Attendant Panel.

### READING LIGHTS

A separate reading light and control is provided above each passenger seat, on the Passenger Service Unit (PSU). For PSU details, refer to Section 1-10.

### LAVATORY

The lavatory lights are automatically controlled through a microswitch installed in the latch assembly of the door. When the airplane is powered up and the toilet door is open or closed, the lavatory lights turn on in dim mode. If the toilet door is closed and locked, the lavatory lights turn on in the bright mode.

Two illuminated LAVATORY OCCUPIED signs indicate when the lavatory is in use. A RETURN TO SEAT sign in the lavatory illuminates in conjunction with the FASTEN SEAT BELTS sign.

### PASSENGER CABIN SIGNS

The passenger warning signs are illuminated signs that will be clearly visible under normal daylight lighting conditions. They provide passengers and flight attendants with:

- NO SMOKING.
- FASTEN SEAT BELTS.
- RETURN TO SEAT.
- LAVATORY OCCUPIED.

The NO SMOKING and FASTEN SEAT BELTS signs are controlled through respective switches located on the overhead panel. The signs are repeated on every Passenger Service Unit. An aural signal sounds whenever any passenger sign is turned on or off by the pilot. The NO SMOKING and FASTEN SEAT BELTS signs are also activated when the oxygen dispensing units are open. For PSU details refer to Section 1-10.

## GALLEY LIGHT

The galley light illuminates the galley area between forward and aft galleys. The light is controlled through two buttons, located on the Galley Control Panel. For Galley Control Panel details refer to Section 1-20.

## STERILE LIGHT (OPTIONAL)

A blue sterile light, located on the cockpit/pax partition, indicates, when lit, that entry into the cockpit is not allowed. It is commanded through a switch located at the overhead panel.

## COURTESY AND STAIRS LIGHTING

The courtesy and stair lights provide lighting for safe boarding of crewmembers and passengers. The courtesy and stair lights consist of the main door light (entry area), service door light (galley area), stairway lights and cockpit step light as follows:

- Main door light: A light is installed on the main door ceiling panel, above the entry area of the airplane, to illuminate the stair, entry area, aisle toward cockpit and passenger cabin.
- Service door light: A light is installed on the service door ceiling panel in order to light the galley area.
- Stairway lights: Airplanes equipped with airstair main doors have stair lights installed in each step of the main door stair to provide adequate step illumination.
- Cockpit step light: A red light is installed in the step between the passenger cabin and the cockpit to provides light for safe entry into the cockpit. This light is illuminated simultaneously with the main door light.

These lights are controlled by a main door microswitch and a control knob, located on the Entrance Panel, above the standard flight attendant seat on the cockpit partition.

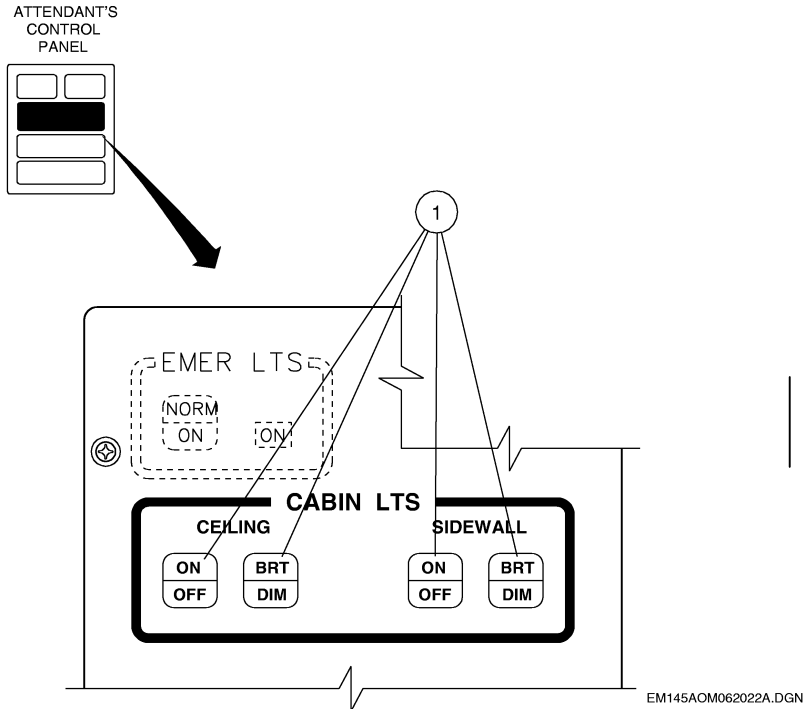
1-30	Code 01	Page 2
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## CONTROLS AND INDICATORS

### ATTENDANT'S PANEL

#### 1 - CABIN LIGHTING CONTROL BUTTONS

- ON - All associated cabin lights are turned on.
- OFF - All associated cabin lights are turned off.
- BRT - All associated cabin lights are set to full brightness.
- DIM - All associated cabin lights are set to reduced brightness.



### ATTENDANT'S PANEL

## COURTESY LIGHTING PANEL

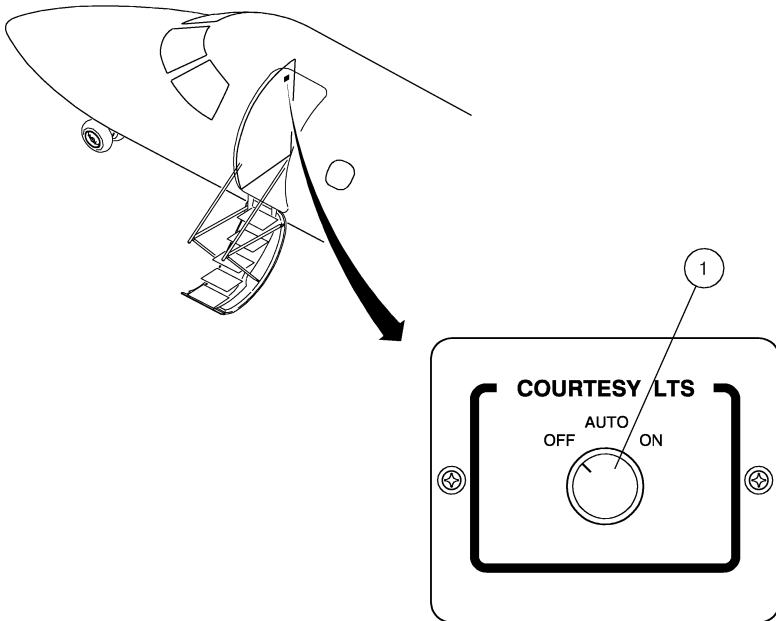
### 1 - COURTESY AND STAIRS LIGHTING CONTROL KNOB

OFF - All courtesy and stair lights are turned off.

AUTO - All courtesy and stair lights are extinguished when the main door is closed and lit when the main door is open.

**NOTE:** The cockpit dome lights may be commanded through the Courtesy and Stairs Lighting Control Knob provided the airplane is deenergized and the Cockpit Dome Lights Switch is set to the ON position.

ON - All courtesy and stair lights are turned on, when the main door is open. When the main door is closed, only the overdoor light remains on, to illuminate the main door area in flight.



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## COURTESY LIGHTING PANEL

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REVISION 2

## EMERGENCY LIGHTING

The emergency lighting consists of internal and external lights that provide proper illumination for emergency cabin evacuation. These lights are powered by four dedicated batteries charged through the Essential Bus. Batteries power is sufficient to supply all internal and external emergency lights for approximately 15 minutes.

The exterior emergency lights installed are as follows:

- Two lights installed on each side of the wing-to-fuselage fairing in order to illuminate the wing escape route and the ground area.
- One emergency light installed in the main door and in the service door provides illumination of the external main door and service door areas, when the door is open.

Internal emergency lights consist of the cockpit light, aisle lights, main door lights, galley service door lights, overwing emergency exit lights, floor proximity lights and EXIT signs as follows:

- Cockpit light: This light is located on the cockpit ceiling to provide general cockpit emergency illumination.
- Aisle lights: Four dome lights are located along the aisle for general emergency cabin illumination.
- Main door, galley service door and overwing emergency exits lights: Four lights are installed for the purpose of illuminating the passageway leading from the main aisle to each of the exit openings.
- Floor proximity emergency lights: Either electroluminescent or photoluminescent strips are installed along the passenger cabin floor to provide a means of identifying the emergency escape path even in conditions of dense smoke.

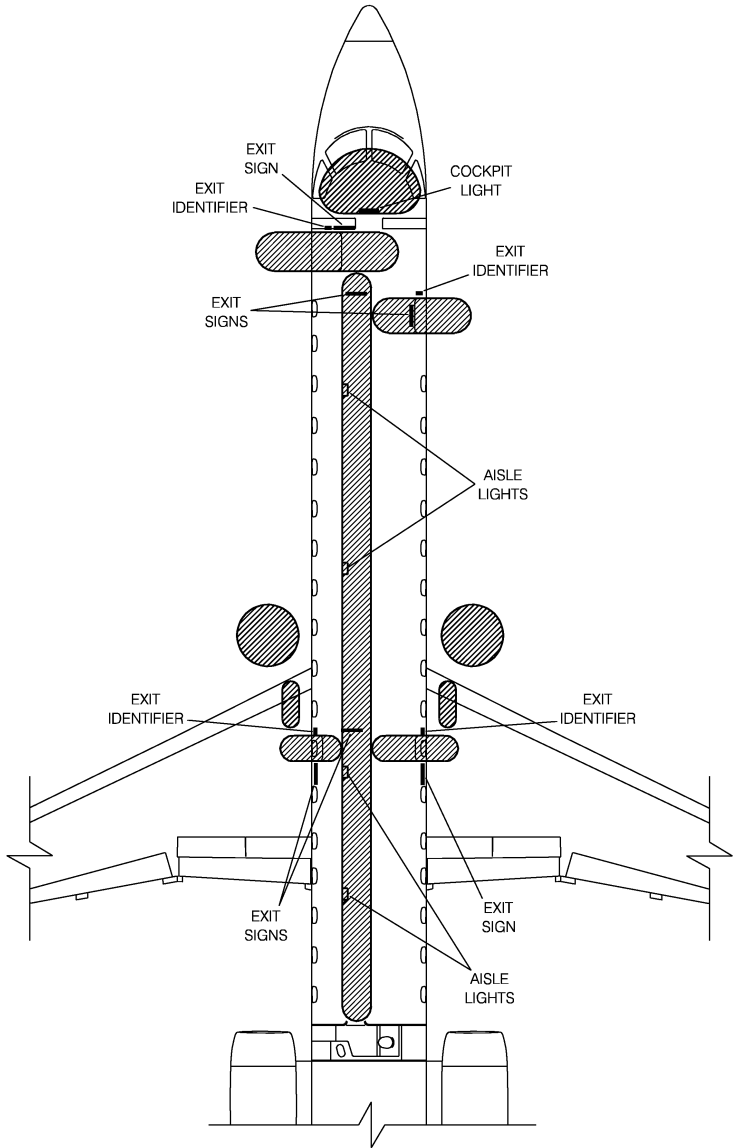
**NOTE:** The Photoluminescent escape path system strips must be charged prior to the first flight of the day. Charging is provided by the interior cabin lighting being the charging time defined by the table bellow. It should be pointed that during such time, cabin activity is limited to minor aisle traffic of crew and personnel and that operational duration is not limited if daylight ambient conditions exist throughout flight or if cabin lighting is operated on the ON or BRIGHT settings.

Charge	Bin door position	Charge duration (minutes)	Operational duration (when lights are extinguished)
<b>Initial</b>	Closed	15	4.75 hours
		30	6.5 hours
<b>Subsequent</b>	Closed	15	6.75 hours
		30	9 hours
	Open	30	5 hours

– Illuminated EXIT signs: They are installed near each door and emergency exits.

Emergency lighting is controlled through the Emergency Lighting Switch, located on the overhead panel, and through the Attendant Emergency Lighting Button, located on the Attendant’s Panel.

A caution message is presented on the EICAS if the system is not armed.



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**AREA ILLUMINATED BY EMERGENCY LIGHTING**

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REVISION 2

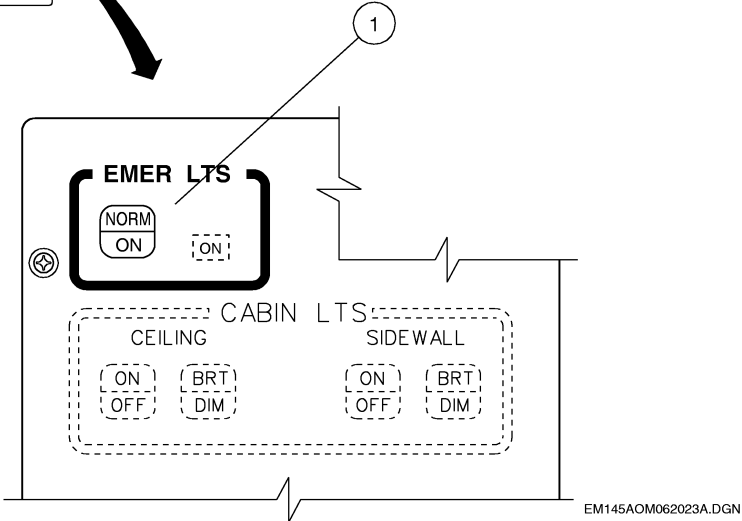
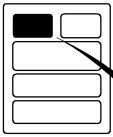
1-30	Code 01	Page 7
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## ATTENDANT'S PANEL

### 1 - ATTENDANT EMERGENCY LIGHTING CONTROL BUTTON

- ON** - Setting the NORM/ON switch to ON position the check of the emergency lights can be performed. The legend ON comes on and the emergency lights are turned on with power supplied by dedicated batteries, regardless of Emergency Lighting Switch position on the cockpit.
- NORM** - Setting the NORM/ON switch to NORM position the legend ON goes off and the emergency lights remain in the mode selected by Emergency Lighting Switch position in the cockpit .

ATTENDANT'S  
CONTROL  
PANEL



## ATTENDANT'S PANEL

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REVISION 2

**SECTION 2**

**EMERGENCY EQUIPMENT**

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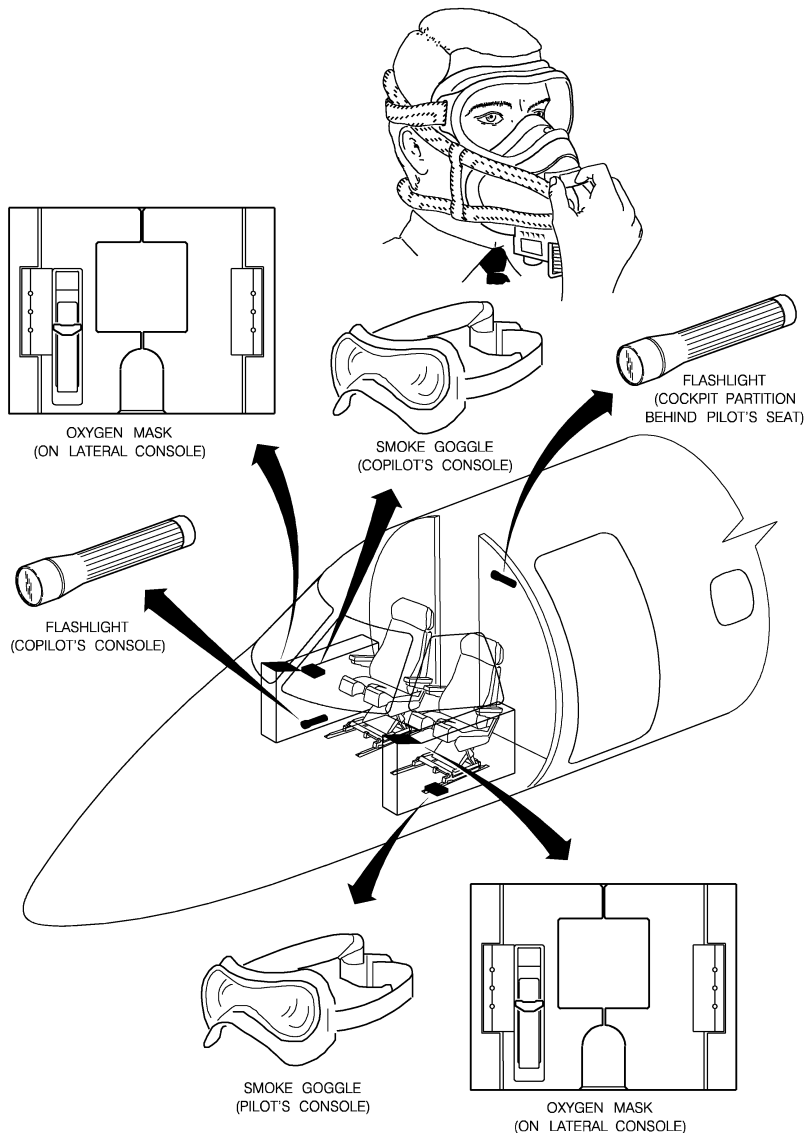
	Block	Page
Equipment Layout .....	2-05	01
Fire Extinguisher .....	2-10	01
Passenger Floatable Seat and Life Jacket .....	2-15	01
Oxygen .....	2-20	01
Emergency Locator Transmitter (ELT) .....	2-25	01
Least Risk Location.....	2-30	01
Emergency Rescue Charts .....	2-35	01

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# EQUIPMENT LAYOUT

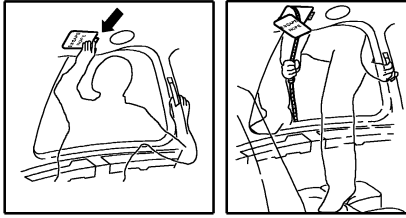
## EMERGENCY EQUIPMENT LAYOUT (TYPICAL)



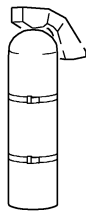
### COCKPIT AREA (1 OF 3)

1451114387.MCE

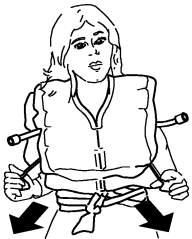
FAM-145/1713




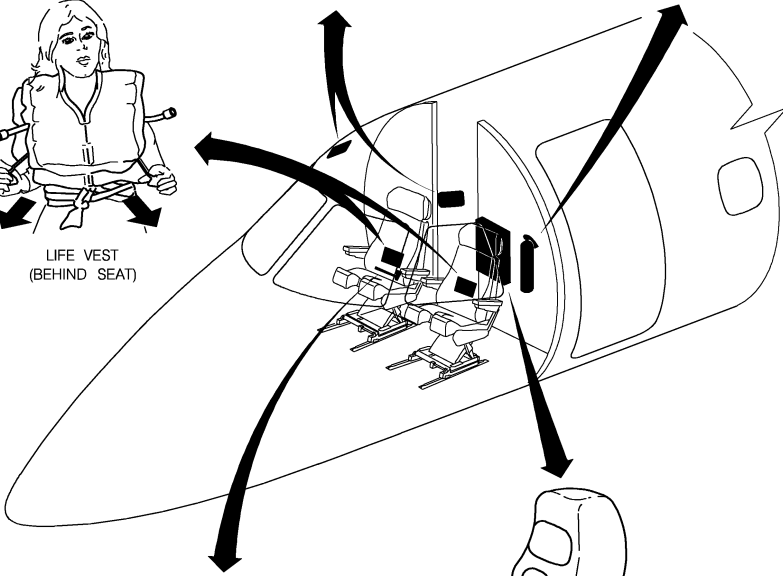
ESCAPE HOPE  
(CEILING)



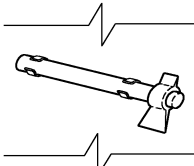
FIRE EXTINGUISHER  
(COCKPIT PARTITION  
BEHIND PILOT'S SEAT)



LIFE VEST  
(BEHIND SEAT)



PROTECTIVE BREATHING  
EQUIPMENT (PBE)  
(COCKPIT PARTITION  
BEHIND PILOT'S SEAT)



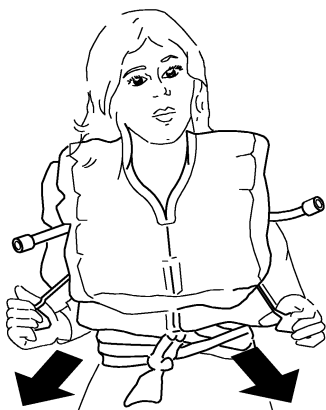
HATCHET  
(BEHIND COPILOT'S SEAT)

1451114388.MCE

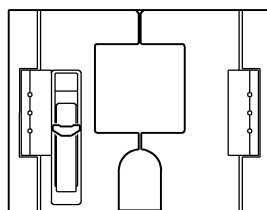
COCKPIT AREA (2 OF 3)

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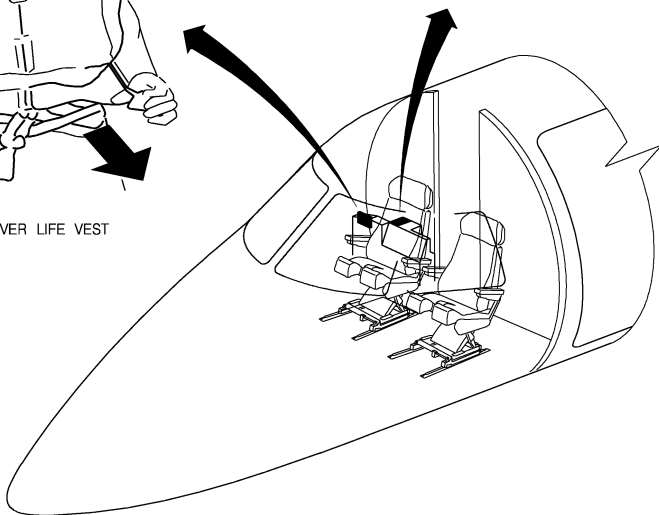
REVISION 2



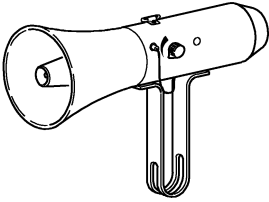
OBSERVER LIFE VEST



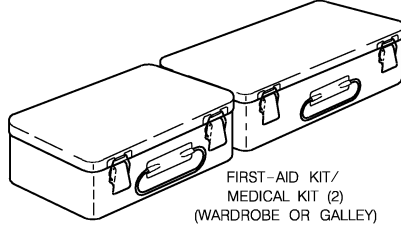
OBSERVER OXYGEN MASK



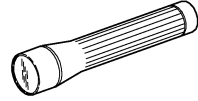
1451114389.MCE



MEGAPHONE (OPTIONAL)  
(WARDROBE OR GALLEY)



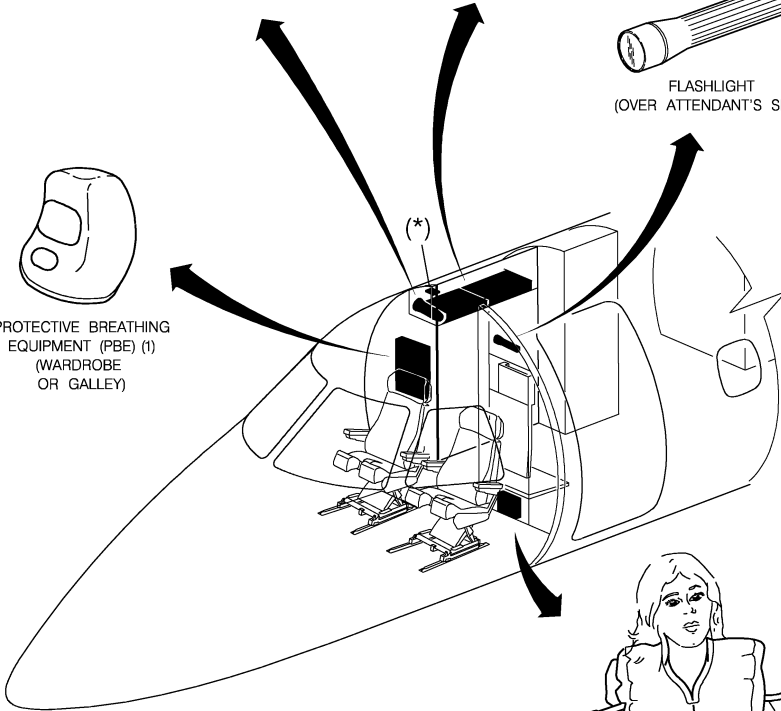
FIRST-AID KIT/  
MEDICAL KIT (2)  
(WARDROBE OR GALLEY)



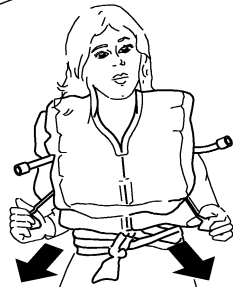
FLASHLIGHT  
(OVER ATTENDANT'S SEAT)



PROTECTIVE BREATHING  
EQUIPMENT (PBE) (1)  
(WARDROBE  
OR GALLEY)



(\*) OXYGEN BOX DEPLOY TOOL  
(WARDROBE OR GALLEY)



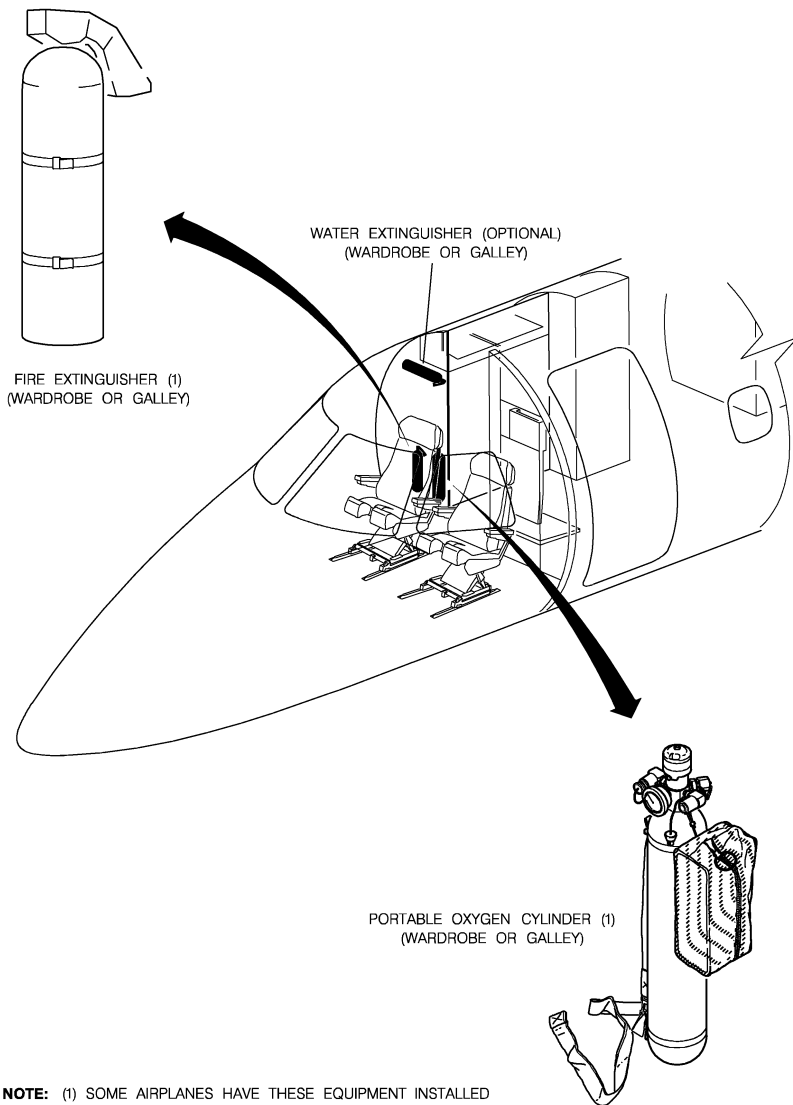
LIFE VEST  
(UNDER ATTENDANT'S SEAT)

1451114390.MCE

FRONT PASSENGER AREA (1 OF 2)

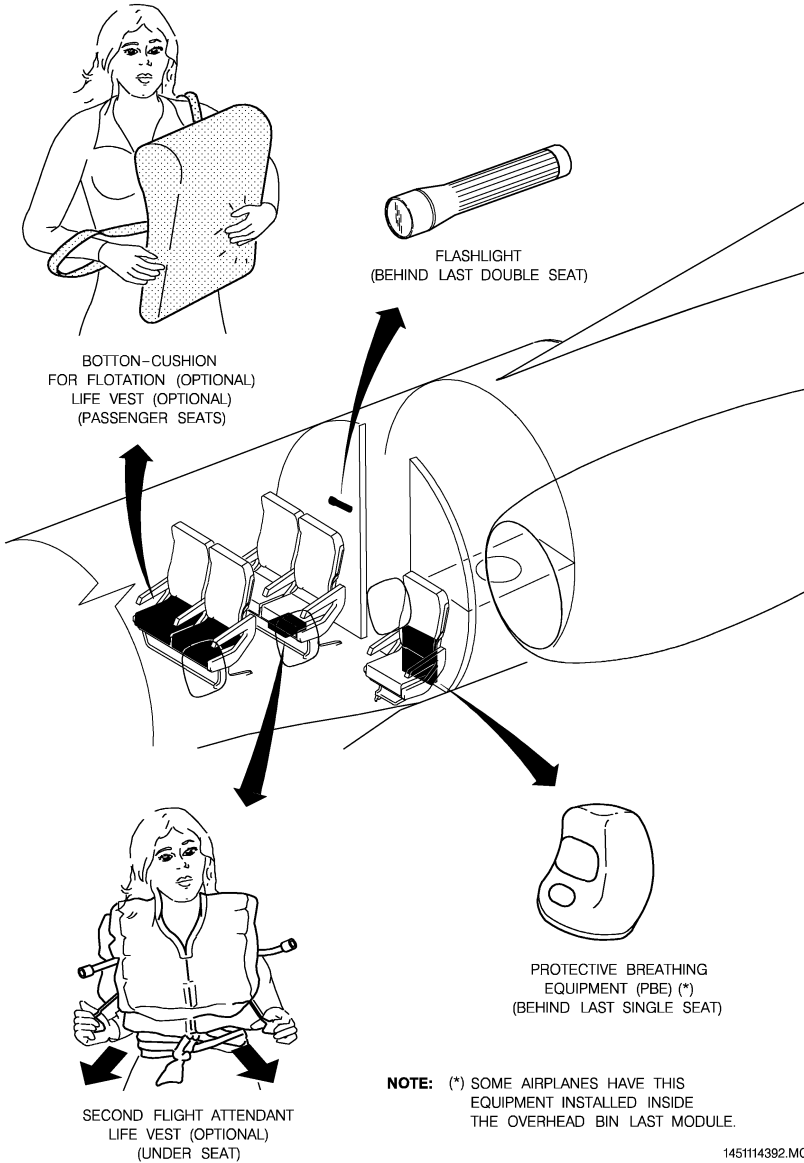
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REVISION 2



**NOTE:** (1) SOME AIRPLANES HAVE THESE EQUIPMENT INSTALLED INSIDE THE EMERGENCY EQUIPMENT STOWAGE UNIT IN FRONT OF THE FIRST SINGLE SEAT.

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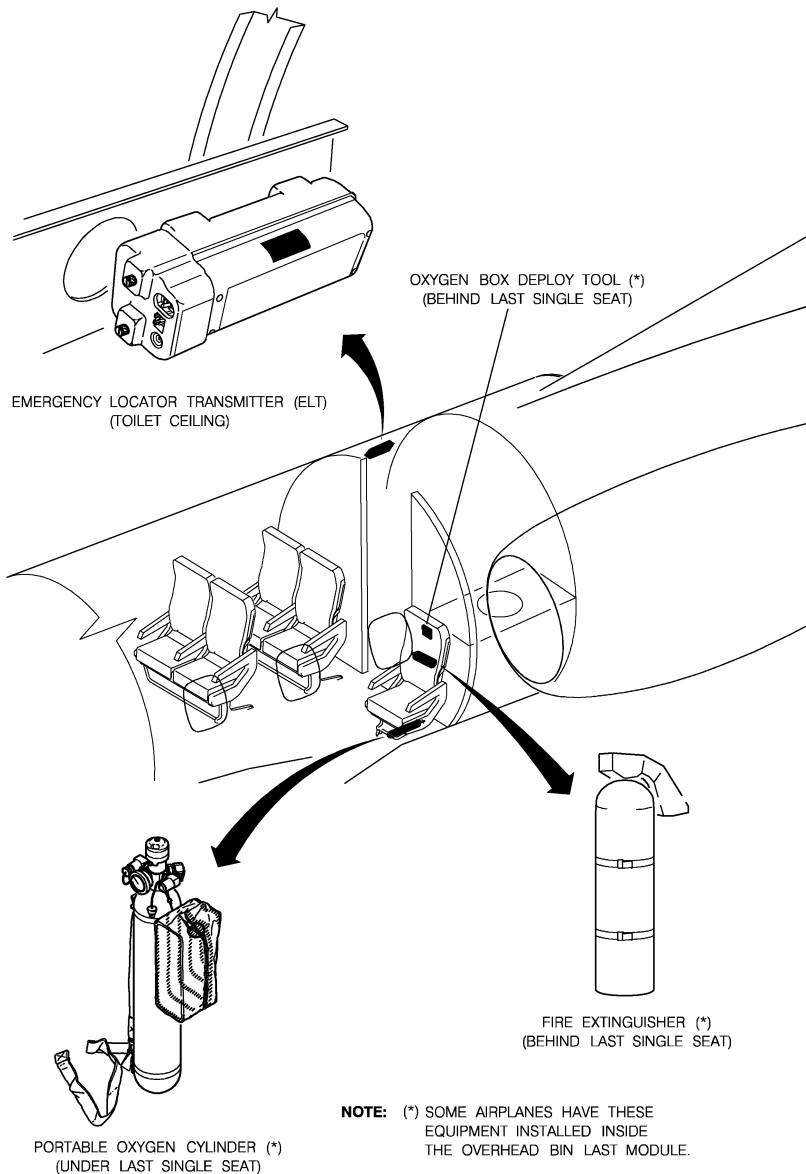


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REAR PASSENGER AREA (1 OF 2)

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REVISION 2



1451114393.MCE

REAR PASSENGER AREA (2 OF 2)

## EQUIPMENT CHECKLIST

### FRONT PASSENGER CABIN AREA

Flashlight .....	CHECK RED LIGHT
First-Aid Kit.....	CONDITION
Megaphone (optional).....	ON BOARD
Water Extinguisher (optional).....	CONDITION
Protective Breathing Equipment (PBE) .....	SEALED
Fire Extinguisher .....	CONDITION
Portable Oxygen Cylinder.....	CONDITION
Oxygen Box Deploy Tool.....	ON BOARD
Life Vest .....	ON BOARD

### REAR PASSENGER CABIN AREA

Flashlight .....	CHECK RED LIGHT
Life Vest (optional) .....	ON BOARD
Portable Oxygen Cylinder.....	CONDITION
Oxygen Box Deploy Tool.....	ON BOARD
Protective Breathing Equipment (PBE) .....	SEALED
Fire Extinguisher .....	CONDITION

### LAVATORY

Fire Extinguisher Bootle .....	CHECK GREEN RANGE
--------------------------------	-------------------

## **FIRE EXTINGUISHER**

### **HALON FIRE EXTINGUISHER**

The Halon fire extinguisher should be used on classes B (oils, greases, flammable liquids) and C (electrical or electronic equipment, live electrical) fire. It is also allowed to be used on class A (paper, wood, fabric, rubber) fires if the cabin configuration permits, according to the fire extinguisher cabin configuration table.

### **WATER FIRE EXTINGUISHER**

The water fire extinguisher is more effective than the Halon against class A (paper, wood, fabric, rubber) fire and should be used only on this class.

**CAUTION:** DO NOT USE ON ELECTRICAL OR GREASE TYPE FIRE.

## FIRE EXTINGUISHER CABIN CONFIGURATION

QUANTITY	TYPE	WEIGHT	CLASS
----------	------	--------	-------

CONFIGURATION 1	2	Halon 1211/1301	2.5 lb	B; C
	or			
	2	Halon 1211	2.5 lb	B; C

CONFIGURATION 2	2	Halon 1211/1301	2.5 lb	B; C
	and			
	1	water based	3.5 lb	A

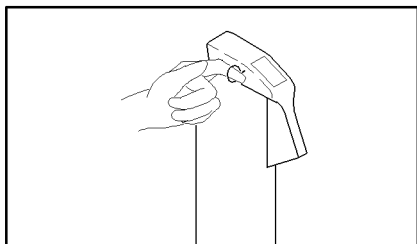
CONFIGURATION 3	1	Halon 1211/1301	2.5 lb	B; C
	and			
	1	Halon 1211	9.0 lb	A; B; C

CONFIGURATION 4	2	Halon 1211	3.3 lb	B; C
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CONFIGURATION 5	2	Halon 1211	3.5 lb	A; B; C
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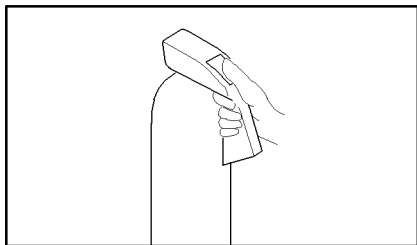
CONFIGURATION 6	1	Halon 1211	2.5 lb	B; C
	and			
	1	Halon 1211	9.0 lb	A; B; C

## **FIRE EXTINGUISHER OPERATION**

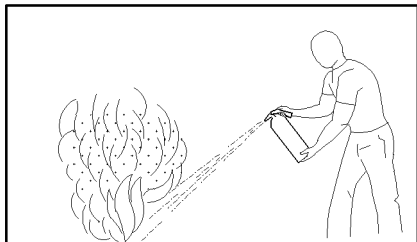


1. UNSNAP "QUICK RELEASE" MOUNTING STRAP AND REMOVE EXTINGUISHER.

2. HOLD UPRIGHT, PULL LOCKING PIN TO UNLOCK SPRAYING LEVER.



3. PRESS LEVER FOR DISCHARGE OPERATION



4. STAND APPROXIMATELY 2 m (8 ft) AWAY FROM FIRE BEFORE DISCHARGING. AIM DISCHARGE NOZZLE AT FIRE BASE. SPRAY QUICKLY SIDE TO SIDE ACROSS FIRE WIDTH. MOVE CLOSER AS FIRE IS BEING EXTINGUISHED. DIRECT ALL OF THE DISCHARGING AGENT ONTO THE FIRE AND MAKE SURE THE FIRE IS COMPLETELY EXTINGUISHED.

1451114219.MCE

Precautions after fire extinguishing:

- Look out for "flashback".
- Ventilate the compartment as promptly as possible.



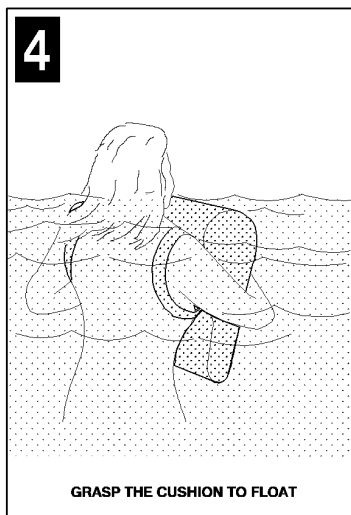
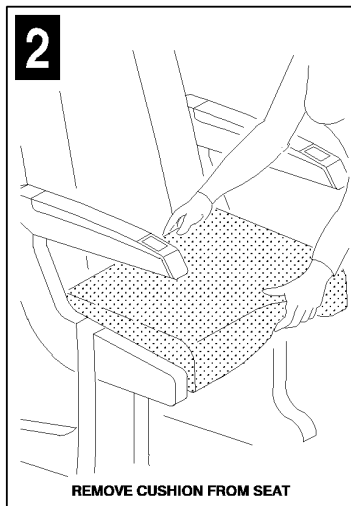
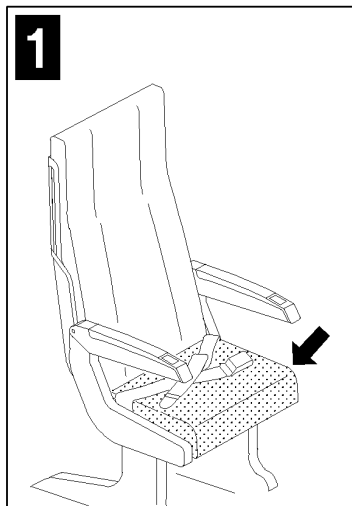
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REVISION 2

# PASSENGER FLOATABLE SEAT AND LIFE JACKET

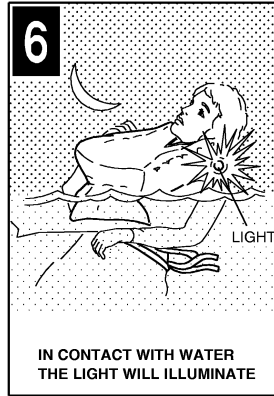
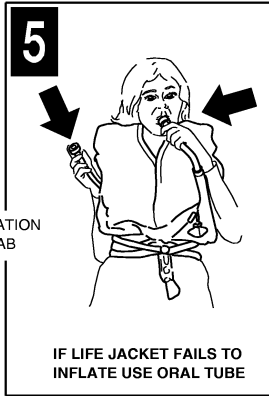
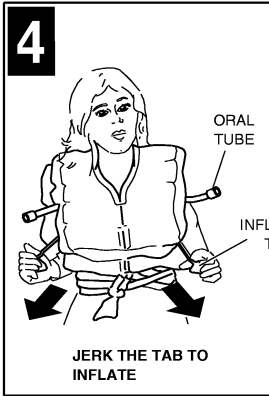
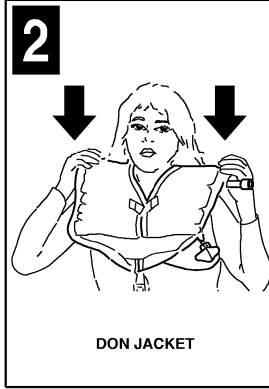
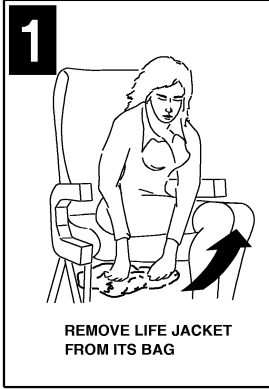
## PASSENGER FLOATABLE SEAT OPERATION



FAM-145/1713

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## LIFE JACKET OPERATION



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## **OXYGEN**

### **PASSENGER AND FLIGHT ATTENDANT OXYGEN SYSTEM**

Oxygen supplied to the passengers and flight attendants comes from chemical oxygen generators and continuous-flow masks installed in proper dispensing units.

The dispensing units are located in the right and left overhead bins, lavatory, and flight attendant stations. Some airplanes may be optionally equipped with an additional dispensing unit installed at the galley area. Each unit may be equipped with one, two or three continuous flow masks. The oxygen masks are held in a mask retainer. The mask must be pulled out of the retainer.

The passenger oxygen mask assembly possesses a reservoir bag, a flow indicator, an oxygen supply tubing and a head strap for securing the mask to the passenger's face. In addition, one lanyard and one "PULL" streamer is fitted to each oxygen mask.

In the event of a decompression, the mask and the "PULL" streamer remain attached to the oxygen flow valve by the lanyard. The passenger must pull the mask to his face or pull the "PULL" streamer to release the lanyard valve pin to obtain oxygen flow.

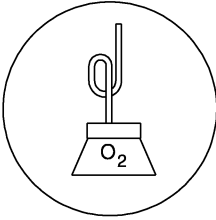
Activating the system causes the masks to drop from their dispensing units. Each oxygen generator is activated when any mask in the associated dispensing unit is pulled down. Pulling one mask down causes all masks in that unit to come down and 100% oxygen flows to all masks. Oxygen flows for approximately 12 minutes and cannot be shut off.

**CAUTION:** ONCE ACTUATED, EACH CHEMICAL GENERATOR SUPPLIES OXYGEN CONTINUOUSLY, WHETHER THE MASKS CONNECTED TO IT ARE BEING USED OR NOT.

**NOTE:** When oxygen is supplied, high temperature is produced in the oxygen chemical generator.

An in-line flow indicator is visible in the transparent oxygen hose whenever oxygen is flowing to the mask.

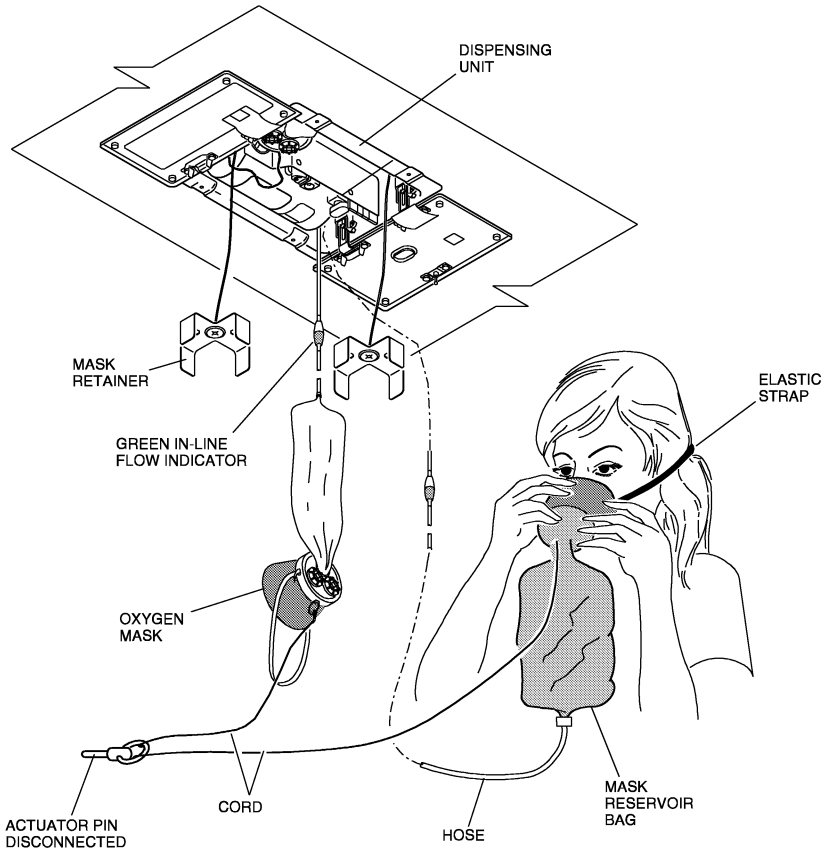
If the system is activated and the door of a dispensing unit does not open, the masks may be dropped manually by the attendant through a door-opening tool located near the cabin attendant stations.



ADDITIONAL OXYGEN  
MASK INDICATION

**NOTE:** - DISPENSING UNITS WITH THIS INDICATION  
INCLUDE AN ADDITIONAL OXYGEN MASK.

- AIRPLANES EQUIPPED WITH THREE MASKS  
IN ALL DISPENSING UNITS LOCATED IN THE  
RIGHT OVERHEAD BINS DO NOT HAVE THIS  
INDICATION.



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## DISPENSING UNITS/PASSENGER MASKS

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REVISION 2

## PORTABLE OXYGEN CYLINDER

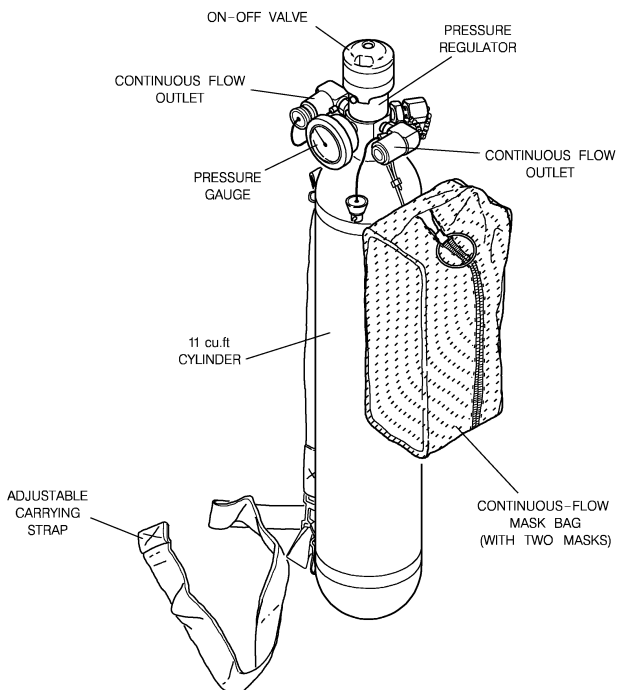
The cylinder has 312 liters (11 cu.ft) holding 280 liters of usable oxygen and is provided with an ON-OFF regulator installed on the cylinder neck. Two continuous-flow masks go with the cylinder.

A gauge is provided to monitor the cylinder pressure.

The cylinder is equipped with two outlets that permit the connection of the continuous-flow masks furnished in the cylinder bag. The supplied masks when connected to the bottle are designed to deliver a maximum of 4 liters per minute of oxygen.

The cylinders are positioned near the cabin attendant stations and are to be used exclusively for therapeutic first-aid purposes.

The minimum portable oxygen cylinder pressure for dispatch is 1200 psi for oxygen bottle P/N 176965-14 (11 cu.ft or 311 liters) and 1550 psi for oxygen bottle P/N 5500A1UBF25A (4.25 cu.ft or 120 liters); both will last at least 30 minutes.



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## PORTABLE OXYGEN CYLINDER

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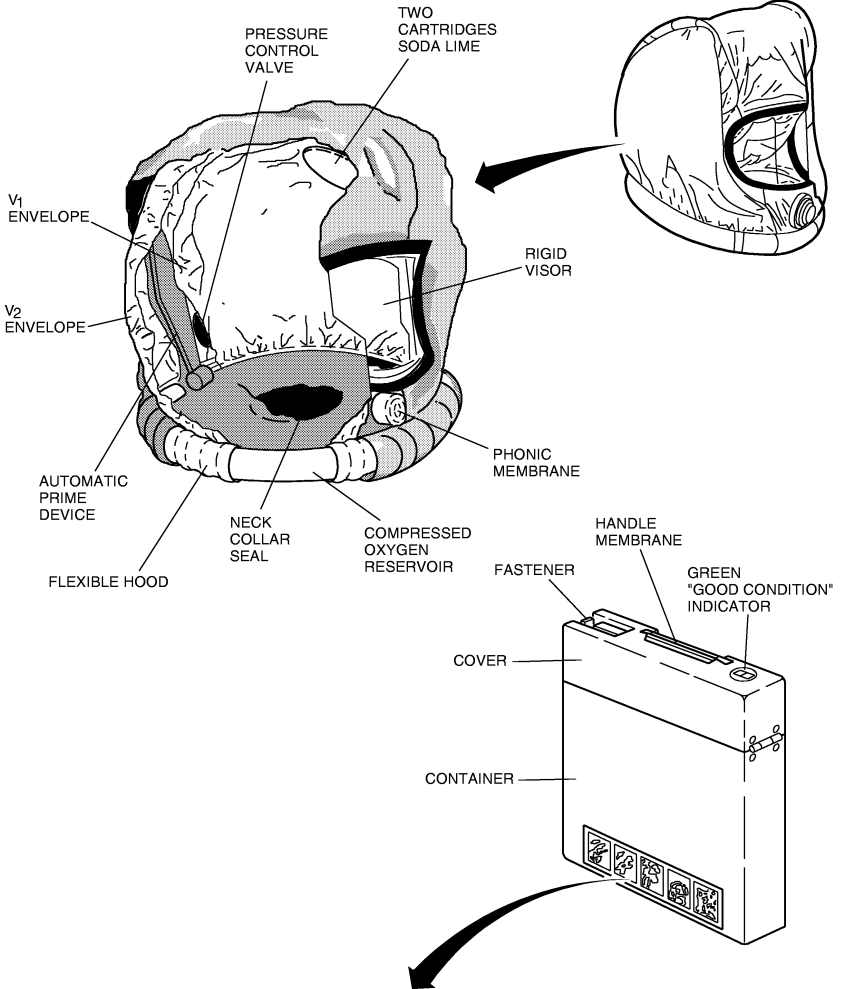
REVISION 2

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## PROTECTIVE BREATHING EQUIPMENT

The airplane is equipped with three EROS or PURITAN smoke hood-type Protective Breathing Equipment (PBE) units. The PBE unit is an emergency equipment that offers a 15-minute minimum oxygen supply for crewmember and flight attendant protection against the effects of smoke, toxic gases, and hypoxia.

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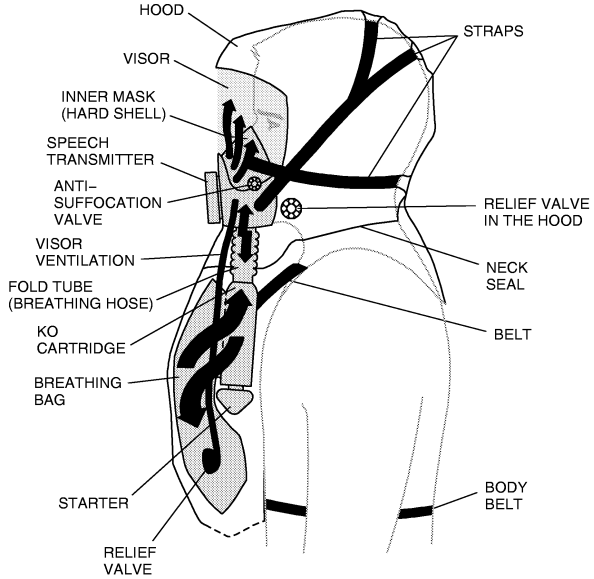
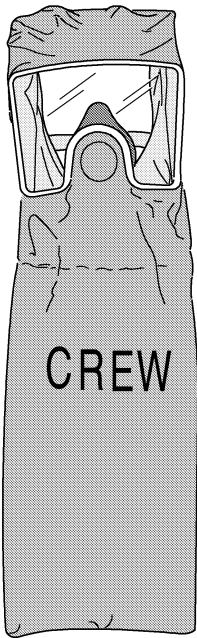
**OPERATION**



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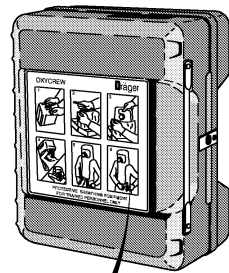
**PROTECTIVE BREATHING EQUIPMENT (EROS)**

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1. Opening the equipment from its case.  
 2. Removing the inner mask from the case.  
 3. Attaching the inner mask to the hood.  
 4. Adjusting the hood and visor.  
 5. The user wearing the hood and visor.  
 6. The user holding the breathing bag.

PROTECTIVE BREATHING EQUIPMENT  
FOR TRAINED PERSONNEL ONLY

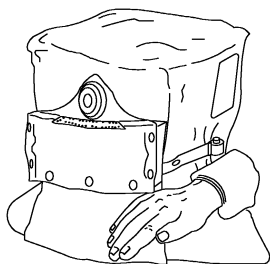
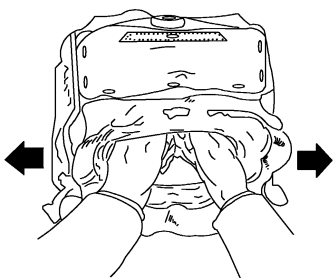
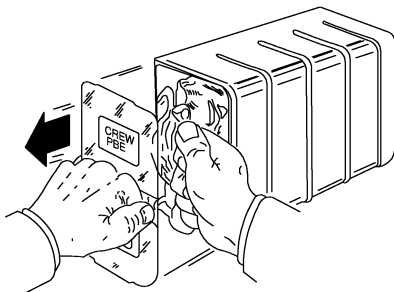


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**PROTECTIVE BREATHING EQUIPMENT (DRAGGER)**

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REVISION 2



TAMPER  
INDICATOR

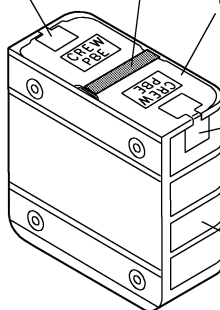
CENTER STRAP

DOOR

RETAINING  
GROOVE

TAMPER  
INDICATOR

STORAGE  
BOX



EM145AOM020051A.DGN

**PROTECTIVE BREATHING EQUIPMENT (AEROSPACE)**

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REVISION 2

# **EMERGENCY LOCATOR TRANSMITTER (ELT)**

## **ELT 110-4 MODEL**

The ELT 110-4 Model, when activated, transmits a radio signal on frequencies of 121.5 and 243.0 MHz, to facilitate airplane location during search and rescue operations. Airplanes Post-Mod. SB 145-25-0298 or equipped with an equivalent modification factory incorporated transmit a radio signal on frequencies of 121.5 and 406.0 MHz. When transmitting, the unit can operate for 48 hours.

The system comprises a transmitter with an ON/OFF switch and an impact switch installed in the lavatory right ceiling panel, an antenna located on the top rear and a remote panel located on the cockpit.

ELT may be manually or automatically activated. In both cases a red light flashes on the cockpit panel to indicate the ELT activation.

Manual activation may be performed when any switch is set to ON position.

Automatic activation occurs when the transmitter switch is set to OFF position, the cockpit switch is set to ARM position and the airplane suffers a deceleration greater than 5 g's.

In both cases (manual and automatic activation) the pilot may deactivate the ELT, performing the TEST/RESET function.

## CONTROLS AND INDICATORS

### REMOTE PANEL

#### 1 - ELT ALERT LIGHT (RED)

- Flashes when the ELT is transmitting.

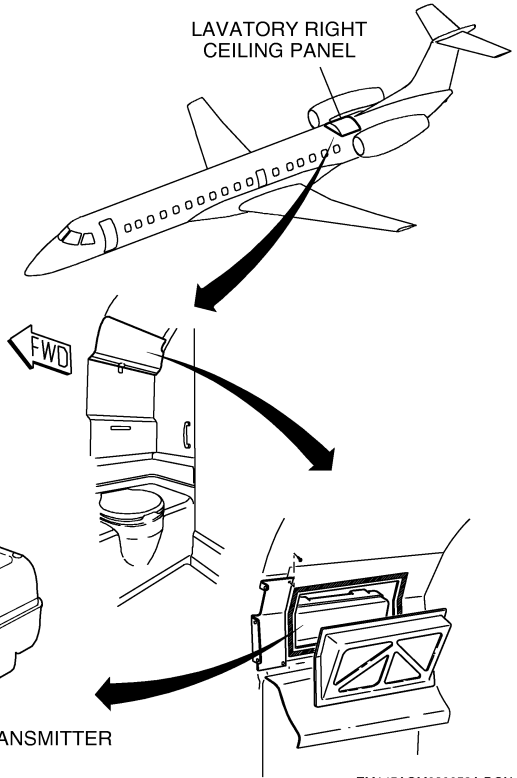
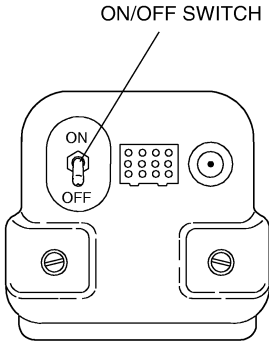
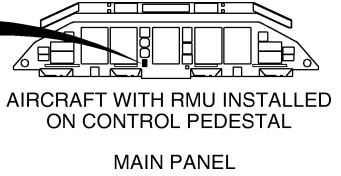
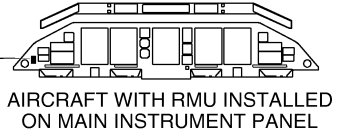
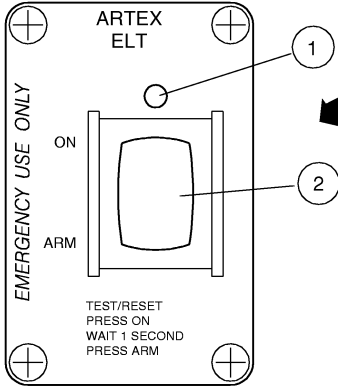
#### 2 - ELT SWITCH (GUARDED)

- ON - Activates the ELT.
- ARM - Allows the ELT to be automatically activated.

**NOTE:** - The TEST/RESET function is provided by pressing ON, waiting 1 second and then pressing ARM.

- RESET function allows ELT deactivating, after a manual or automatic activation.
- During TEST/RESET function, the ELT alert light flashes to indicate that the system is transmitting.

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**ELT 110-4 MODEL**

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REVISION 2

## **ELT C406-2 MODEL**

The ELT C406-2 Model, when activated, transmits a radio signal on frequencies of 121.5 and 243.0 MHz, and every 50 seconds, for 520 milliseconds (long message protocol), the transmitter turns on, using the 406.025 MHz frequency, to facilitate airplane location during search and rescue operations.

During 406.025 MHz time an encoded digital message is sent to the satellite. The information contained in that message is shown below:

- Serial number of the transmitter or airplane ID;
- Country code;
- ID code;
- Position coordinates (when connected to an ARTEX ELT/NAV interface unit).

The system comprises a transmitter with an ON/OFF switch and an impact switch installed in the lavatory right ceiling panel, an antenna located on the top rear and a remote panel located on the cockpit.

ELT may be manually or automatically activated. In both cases a red light flashes on the cockpit panel to indicate the ELT activation.

Manual activation may be performed when any switch is set to ON position.

Automatic activation occurs when the transmitter switch is set to OFF position, the cockpit switch is set to ARM position and the airplane suffers a deceleration greater than 5 g's.

In both cases (manual and automatic activation) the pilot may deactivate the ELT, performing the TEST/RESET function.

## CONTROLS AND INDICATORS

### REMOTE PANEL

#### 1 - ELT ALERT LIGHT (RED)

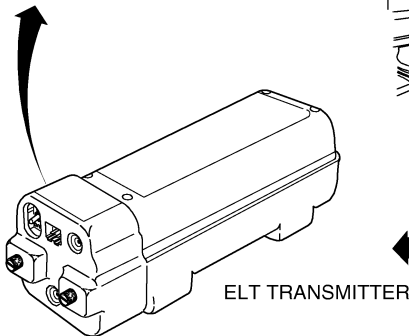
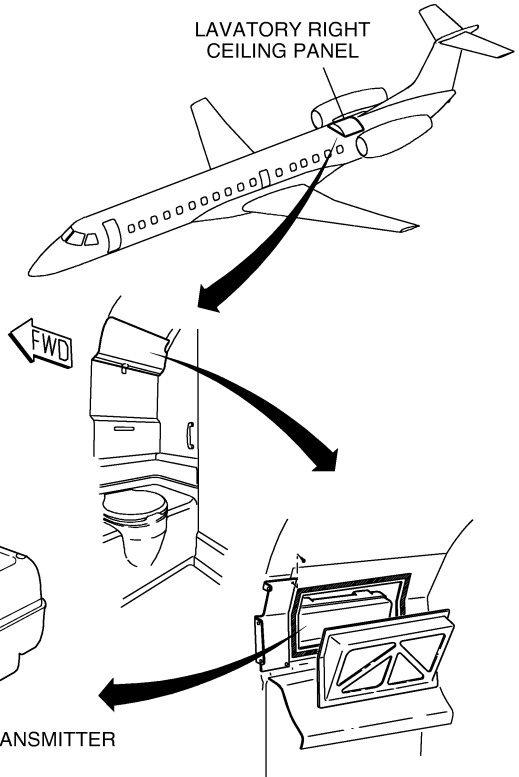
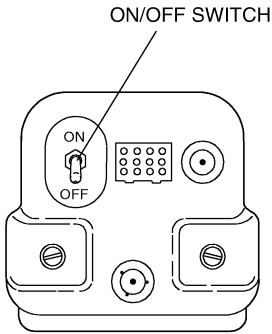
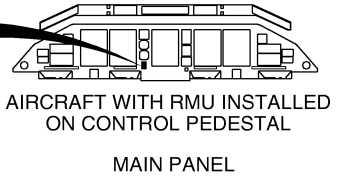
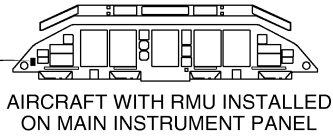
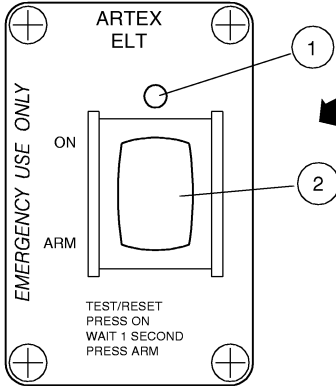
- Flashes when the ELT is transmitting.

#### 2 - ELT SWITCH (GUARDED)

- ON - Activates the ELT.
- ARM - Allows the ELT to be automatically activated.

**NOTE:** - The TEST/RESET function is provided by pressing ON, waiting 1 second and then pressing ARM.

- RESET function allows ELT deactivating, after a manual or automatic activation.
- During TEST/RESET function, the ELT alert light flashes to indicate that the system is transmitting.



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**ELT C406-2 MODEL**

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REVISION 2

## **ELT 96 MODEL**

The ELT 96 Model, when activated, transmits a radio signal on frequencies of 121.5 MHz, 243.0 MHz and 406.0 MHz, to facilitate airplane location during search and rescue operations.

The system comprises a transmitter, which also can be used in a portable mode, and an impact switch installed in the lavatory right ceiling panel, an antenna located on the top rear and a remote panel located on the cockpit.

ELT may be manually or automatically activated. In both cases a red light flashes on the cockpit panel to indicate the ELT activation, provided the portable mode is not removed for ground operation.

Manual activation may be performed either through the ELT front panel switch or remote switch in cockpit, in both cases setting the switch to MAN position.

Automatic activation occurs when the ELT switch and the remote control switch are set to AUTO position and airplane suffers a deceleration as a function of acceleration/time conditions.

In both cases (manual and automatic activation) the pilot may deactivate the ELT, performing the AUTO TEST/RESET function.

## **PORTABLE MODE OPERATION**

To operate the ELT 96 in portable mode, perform the following procedures:

- Release the quick-opening fireproof fasteners to remove the ELT from its compartment.
- Disconnect the fixed antenna coaxial plug from the ANT connector.
- Release the auxiliary antenna from its attaching clips and connect it to the ANT connector.
- Set the switch to MAN/RESET position.
- Hold or install the ELT vertically, preferably in a cleared area and as high as possible.

**NOTE:** When using in temperatures below freezing, keep ELT inside your jacket with antenna outside for longest operations life.

## CONTROLS AND INDICATORS

### REMOTE PANEL

#### 1 - ELT ALERT LIGHT (RED)

- Flashes when the ELT is transmitting.

#### 2 - ELT SWITCH

- MAN - Activates the ELT.
- AUTO - Allows the ELT to be automatically activated.

#### 3 - AUTO TEST/RESET BUTTON

- When pressed allows the ELT to be checked.

**NOTE:** The ELT test must be performed only pressing the AUTO TEST/RESET Button.

- During AUTO TEST/RESET function, the ELT alert light illuminates during 2 seconds.
- If a failure is detected during the test, the ELT alert light flashes. For confirmation repeat the operation. If the failure persists set the ELT Switch on transmitter panel to OFF position and report to the maintenance personnel.
- Reset function allows deactivating the ELT, after a manual or automatic activation.

### TRANSMITTER PANEL

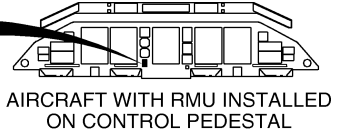
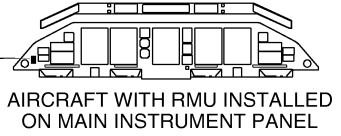
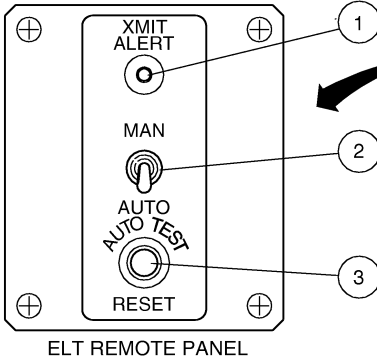
#### 1 - ELT ALERT LIGHT (RED)

- Flashes when the ELT is transmitting.

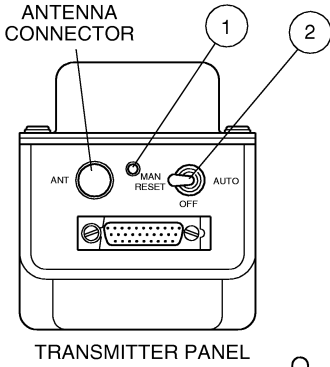
#### 2 - ELT SWITCH

- MAN/RESET - Activates the ELT. Reset function allows deactivating the ELT after a automatic activation.
- AUTO - Enables the remote control to automatic operation.
- OFF - Deactivates de ELT.

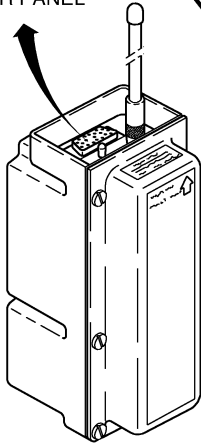
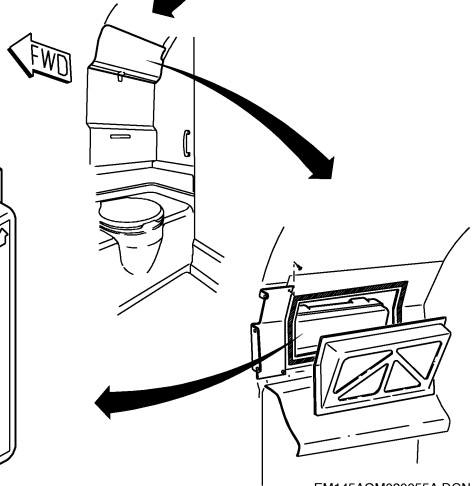
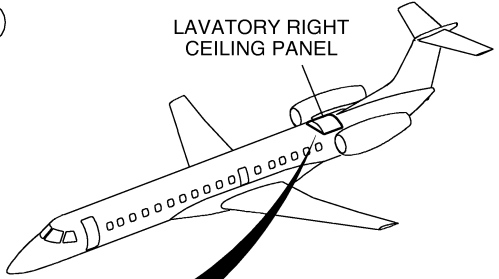
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MAIN PANEL



LAVATORY RIGHT  
CEILING PANEL



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ELT 96 MODEL



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REVISION 2

## ELT ADT 406 S MODEL (OPTIONAL)

The ELT ADT 406 S Model is a portable equipment that, when activated, transmits a digital message, on the 406 MHz frequency, to the satellites that are part of the COSPAS-SARSAT system. It also transmits a 121.5 and 243.0 MHz signal to enable the final approach of the rescue teams.

The system consists of a transmitter and a water sensor; it comprises an ON/OFF/ARMED switch and a TX led and is installed under the last passenger seat, near the toilet partition.

ELT may be manually or automatically activated. In both cases the indicator light and the aural indicator show the ELT activation.

Since the ELT is in armed, automatic activation is performed by dipping the beacon into the water. The water sensor need a certain quantity of water to be trigged.

Manual activation is performed by setting the ON/OFF/ARMED switch to the ON position (pull and slide).

## CONTROLS AND INDICATORS

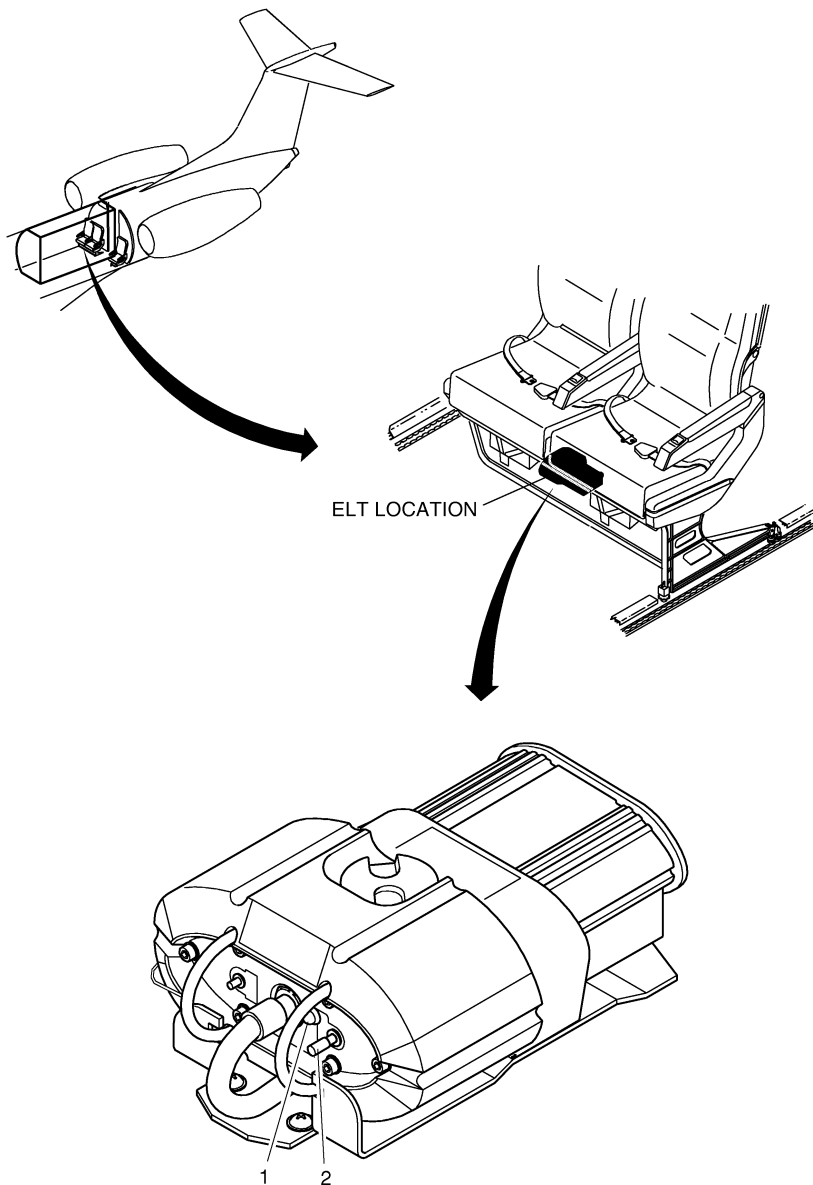
### REMOTE PANEL

#### 1 - TX LED

- Flashes when the ELT is transmitting.

#### 2 - ON/OFF/ARMED SWITCH

- ON - Activates the ELT.
- OFF - Deactivates the ELT.
- ARMED - Allows the ELT to be automatically activated.



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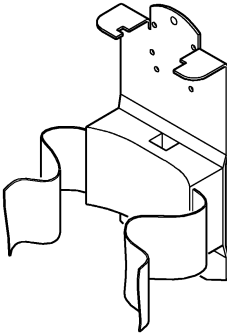
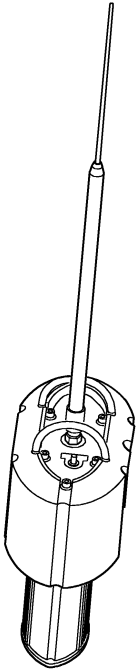
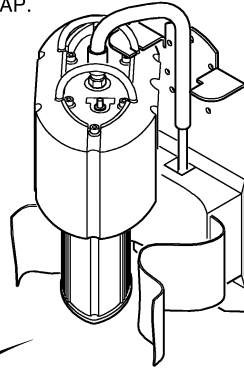
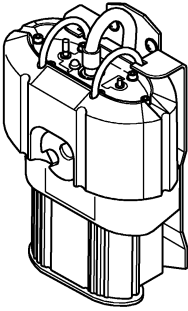
**ELT ADT 406 S MODEL - LOCATION**

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- UNFASTEN THE RETAINING VELCRO STRAP (NOT ILLUSTRATED).
- REMOVE THE BEACON FROM ITS BRACKET.
- PULL FIRMLY TO BREAK THE RETAINING METALLIC STRAP.



- DEPLOY THE ANTENNA.
- THE BEST DATA TRANSMISSION OF THE BEACON IS OBTAINED IN WATER FLOATING CONDITIONS (DON'T FORGET TO ANCHOR THE BEACON TO THE SURVIVORS OR TO THE LIFE RAFT WITH THE ORANGE LANYARD ATTACHED TO THE BEACON FRONT PANEL).
- IT IS RECOMMENDED TO PLACE THE BEACON IN AN UNOBSTRUCTED AREA (AVOIDING TRANSMISSION MASKS), AND CHECK REGULARLY THAT THE ANTENNA IS VERTICAL. IF NECESSARY SHIM THE BEACON VERTICALLY (E.G. IN CASE OF WINDSWEPT AREA).

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## ELT ADT 406 S MODEL - UTILIZATION

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REVISION 3



# FLIGHT ATTENDANT MANUAL

EMERGENCY  
EQUIPMENT

## LEAST RISK LOCATION

The place inside airplane cabin where structural or system damages are the least likely to jeopardize flight safety is the third overhead bin from front of the cabin. A noteworthy system located near this point is the chemical oxygen generator.



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REVISION 2



# FLIGHT ATTENDANT MANUAL

EMERGENCY  
EQUIPMENT

## EMERGENCY RESCUE CHARTS

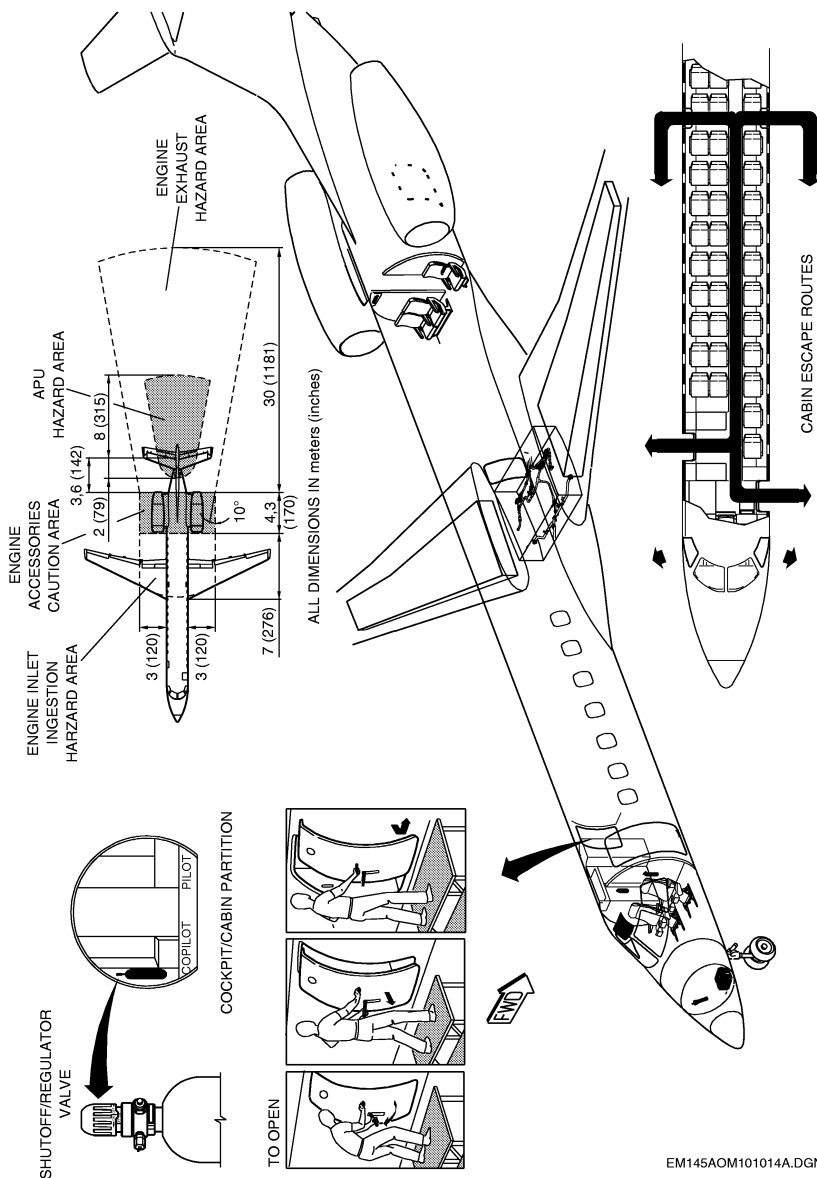
The Emergency Rescue Charts present emergency equipment location as well as emergency evacuation schematic. These charts may be used, at operators discretion, to develop customized evacuation procedures.

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EMERGENCY RESCUE CHART (2 OF 2)

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# FLIGHT ATTENDANT MANUAL

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## INTRODUCTION

This Section provides information and guidance for the efficient operation of the EMB-145/ERJ-140/EMB-135 models. It is optimized for passenger-carrying operations in a commercial airline environment and the philosophy behind it is based on reducing crew workload.

Standard operating procedures (SOP) are a set of procedures that serve to provide a common ground for all crewmembers, usually unfamiliar with each other's experience and technical capabilities. In a well-standardized operation, another qualified flight attendant could replace an active cabin crewmember during the flight, and the operation would continue safely and smoothly.

Embraer, as an airplane manufacturer, makes every effort to ensure that the customer, as the operator, has all the means to setup an efficient and safe operation. This set of Standard Operating Procedures for Cabin Crew is aimed at providing a reference should the operator require guidance on how to implement operating standards for the passenger cabin. Its use is optional, i.e., if the operator already has a set of standards in place and wishes to maintain them it can disregard the contents of this section. However, if the operator wants to follow the guidelines contained herein, Embraer will be more than happy to provide advice and explanations related to this section. Constructive remarks and comments are also very welcome.



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REVISION 2

## **DEFINITIONS**

### **ACCIDENT**

An accident is defined as a major problem that may occur during flight duty, and which is a severe threat to the safety of the flight and to the life of passengers and crew. Examples include onboard fire, ditching and heavy structural damage.

### **DISPATCH**

Ground staff that is entitled to handle and manage passengers including their tickets, boarding passes, etc.

### **FIRST AID**

First aid is the immediate, temporary treatment administered to any accident victim or person experiencing an unexpected illness. It is usually given at the place where it occurs until medical assistance does not arrive.

### **FIRST OFFICER OR SECOND IN COMMAND**

Pilot that is not in command but can carry out the duty of flying the airplane under the circumstances established by company rules.

### **FLIGHT ATTENDANT**

Crewmember that reports to the Pilot-in-Command and is in charge of assuring the safety of the occupants that are not crewmembers under all circumstances.

### **FLIGHT CREW**

Crewmembers that conduct the airplane's flight operations. The flight crew will be composed of Captain and First Officer.

### **FLIGHT OPERATION**

It begins when the airplane starts moving with the intention of flying and ends when the airplane stops at the gate at the end of the flight.

## **INCIDENT**

An incident is defined as a minor problem that occurs during flight duty.

It is not a direct threat to the safety of the flight, the airplane or the passengers (e.g., hatrack opens during take-off, rejected take-off, etc).

## **PA**

Public Address system - system through which a crewmember - cabin and flight crew alike - can speak on a microphone and his voice is heard through the cabin loudspeakers.

## **PILOT IN COMMAND OR CAPTAIN**

Pilot legally responsible for the operation of the airplane and who commands the operation of the airplane. He has the power to take action, to request or to prevent any crewmember action as he finds appropriate for the sake of flight safety.

## **PSU**

Passenger Service Unit - Units that contain reading lights, attendant call button, air gaspers and oxygen masks. There is one unit per seat row at each side of the cabin.

## **TAXI OUT**

Is the taxiing (movement of the airplane by its own means) from the departure gate to the departure runway in use.

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## PHILOSOPHY OF OPERATION

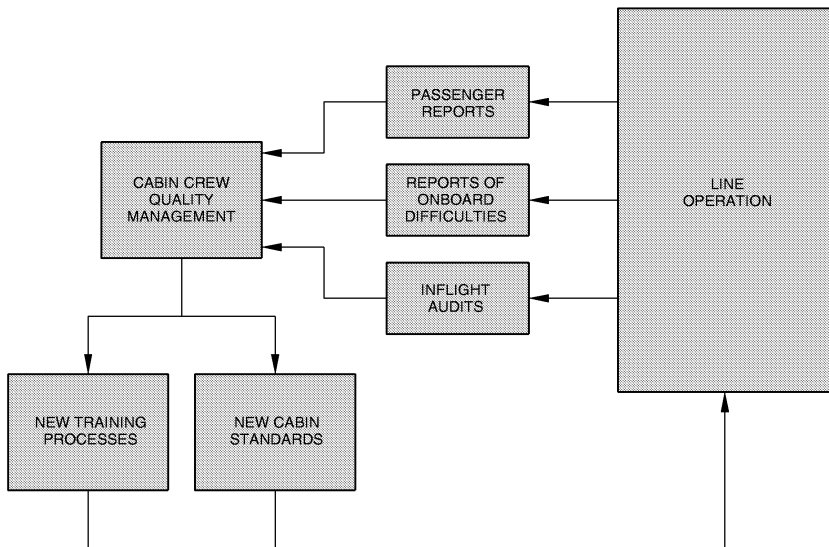
### PASSENGER PRIORITY

The first and most important philosophy is: Passengers have priority regarding safety and security. They have priority over the crew and over the airplane. Airplane integrity is important in what regards passenger safety and the safety of other people outside the airplane. Of course, crew safety is important but it cannot be obtained at the cost of passenger safety.

In case of an accident or incident, passengers cannot be left on their own. Passengers must be assisted at all times.

### OPERATIONAL QUALITY CONTROL

Passenger cabin operation must follow a process that leads to quality maximization. The process must define the acceptable level of quality and the means to achieve that objective. It must also include the means to verify that acceptable quality levels are kept at all times. This verification can be done through inflight audits.



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### OPERATIONAL QUALITY CONTROL DIAGRAM

## COMPANY ENVIRONMENT

Company management must encourage all crewmembers to be proactive and interested in doing their best to attain quality operation. This can only be done if crewmember motivation is at its highest. A few strategies are important to achieve that:

- Operational shortcomings that are not violations should generally be resolved through training, not through punishment.
- The company must be willing to listen to any crewmember that believes that he has something relevant to say, even if it implies that management will expend a substantial amount of time listening.
- Crewmembers must be treated correctly, with fairness and transparency. Following such a policy is extremely beneficial to the company in the long term.

## CABIN AS A SOCIAL ENVIRONMENT

The crewmember behavior that is visible to the passengers affects safety in that it can reduce or exacerbate panic or other emotional states. Therefore, Cabin crewmembers can never engage in harsh arguments among themselves, nor be bullish or impolite to each other in front of the passengers.

Crewmembers should not complain or make accusations about other crewmembers to the passengers either. Passengers must be treated with politeness and reservation. Crewmembers should not be intrusive into the passengers' personal matters.

## TEAM MENTALITY

The entire crew - Flight and Cabin personnel - must get along as a team. A sense of collaboration and mutual help must prevail to achieve the ultimate objective of efficiently and safely completing the flight. Individual differences must be worked out through talk and negotiation. There must be no place for rival groups or individuals on board.

An airline crew is a team. Like a football team or a surgery team, it must act in a coordinated manner for better results. During high workload situations task sharing is crucial.

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## **RULES ARE FOR REAL**

If rules exist, they must be abided by. There is no such thing as “yes, there is a rule, but nobody cares”, or “There is a rule but, I do not agree with it so I will do it differently”. If there is evidence that a rule is inappropriate, then action must be taken through the normal institutional channels to change it. Until then, the rule must be abided by.

## **CABIN EQUIPMENT USAGE**

If there are some items of equipment installed in the cabin and they are to be used by the Cabin Crew, then the Cabin Crew must be proficient at using them. There must not be any crew equipment in the cabin that the crew is not familiar with.

The Cabin Crew training program must cover all these items of equipment, addressing their usage and applicability.

## **AUTHORITY OF THE CABIN CREW**

The Pilot In Command (PIC) has full authority regarding flight operations, or in case of an accident or incident. The Second In Command takes over his duties should the (PIC) become incapacitated. However should the whole Flight Crew become incapacitated (after an emergency landing, for example) then the Flight Attendant can:

- Command an emergency evacuation.
- Command the removal of flight crewmembers from their stations.
- Coordinate as much as possible external assistance to the airplane (Fire brigade, medical assistance, etc).
- Call law enforcement authorities if necessary.
- Take notes that are important from the legal and operational point of view.

For that to be done in an efficient manner, the Flight Attendant must be properly trained.

## COMPANY POLICY REGARDING DRUGS AND MEDICAL ASPECTS

The company must have a clear policy regarding the following aspects:

- Blood donations.
- Scuba diving.
- Effects of alcohol/drugs (how much time prior to duty shift must consumption stop).

## CORPORATE KNOWLEDGE

Cabin crewmember must have a thorough knowledge of the organizational structure of the company and about the key persons in the several sectors that interface with them.

## CREW COORDINATION

The following situations must be trained jointly with the Flight Crew:

- Emergency evacuation.
- Pilot incapacitation.
- Fire fighting in the cabin and in the cockpit.

## ATTITUDE TOWARDS PASSENGERS

The company is providing a paid service to the passengers. The passengers have the right to be properly treated and properly informed.

Passengers always want to know what is going on. Flight Attendant (and the Flight crew as well, for that matter) should do their utmost to keep the passengers properly informed.

Flight Attendant should always be polite and patient with passengers.

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## **OPERATING POLICIES**

### **FLIGHT ATTENDANT MANUAL**

A copy of the company Flight Attendant Manual must be onboard at all times during flight operations and accessible to the flight attendant.

### **INFORMATION FLOW FROM THE CABIN TO THE COCKPIT AND VICE-VERSA**

Prior to any flight, the Flight Attendant must inform the Flight Crew about:

- Expected number of passengers.
- Passengers with special needs or relevant limitations (pregnant, respiratory insufficiency, passengers accompanied by medical staff etc.).
- If special equipment will be needed for deboarding (wheelchair, ambulance, etc.).
- Whether there is any unserviceable equipment in the cabin that can have any relevant implication regarding flight operations (e.g., inoperative floor exit lights or blocked doors).
- Whether delays are expected because of connecting or late passenger boarding.
- Whether any person under the responsibility of law enforcement authorities (e.g. deportees) will board the airplane.
- Whether restricted objects that need special handling or special stowage (e.g. firearms) will come onboard.
- Whether a departure delay is likely to happen because of excess carry-on baggage that must be transferred to the cargo bay, because of late loading of catering or any other reason.
- If there will be other, extra company crewmembers in the cabin during the flight.

- If any passenger with dispatched baggage did not show up for boarding; and
- If different meal menus for Pilot In Command and Second In Command is not available.

During flight operations the Flight Attendant must immediately advise the Pilot in Command about:

- Unruly or unmanageable passengers.
- Passengers under the effect of consciousness-altering drugs.
- Passengers in need of medical assistance.
- Onboard births or deaths.
- Any sign of fire, smoke or unusually hot floor or wall ( cargo compartment or lavatory).
- Any suspicious object that can be an explosive or a dangerous unlawful artifact in any way (radioactive, corrosive, etc.).
- Any passenger with suspicious behavior that may perform an act of unlawful interference.
- If the cabin air is improper in any way (too hot, too cold, lack of fresh air or smoky).
- If during taxi-out ice or snow is observed attached to the upper surface of the wing.

Prior to any flight the Captain (or the Copilot in the absence of the Captain) must advise the Flight Attendant about:

- Whether enroute weather will in any manner affect cabin service.
- Whether the airplane's systems status will affect cabin comfort in any way (e.g. no APU or air-conditioning prior to start, etc.).
- Whether refueling will be done with passengers on board and when.
- Whether taxi-out will be short.
- When the Flight Crew want their meals.
- If there will be any extra occupant in the cockpit and if that occupant will need a meal.

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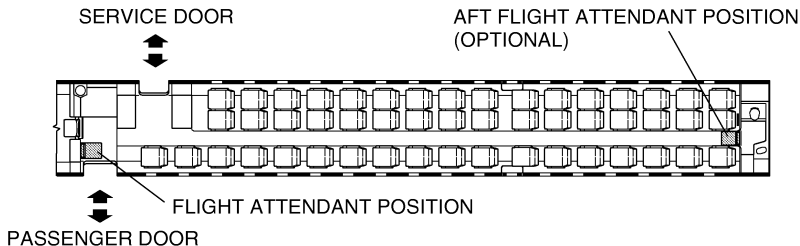
- Whatever needs to be communicated to the Cabin Crew to ensure that both cabin and flight crews have a common understanding of their roles in case of an emergency.
- Flight deck admittance policy if different from standard.
- If flight will be (partially or in its entirety) over water, desert or jungle.

This information can be passed to the Cabin Crew during a briefing in the airplane or somewhere else prior to the flight (e.g., crew lounge).

Time allowing, during flight operations the Pilot In Command must immediately advise the Flight Attendant of any impending loss of pressurization, unusual maneuver or unforeseen rough weather.

## POSITIONING OF THE FLIGHT ATTENDANT

The Flight Attendant should be positioned at the station closest to the cockpit for ease of coordination with the Flight Crew.



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## FLIGHT ATTENDANT POSITION

## ADMITTANCE OF STAFF ONBOARD

Flight Attendant must be capable of recognizing the ID badges that entitle their owners to board the airplane without a boarding pass. These ID badges are:

- Company staff.
- Civil Aviation Examiners.
- Federal Police.

## CABIN DOCUMENTS

The Cabin Crew should have on hand the following documents:

- Flight Attendant Manual (FAM).
- Cabin Tech Log.
- Cabin Incident Report forms.
- Passenger map (table with passenger, names, seat allocations, final destination, where boarded, if paid or company staff, if Civil Aviation Examiner or Security authority).
- Item listing of galley assets (trolleys, trays, glasses, china, bowls, etc.). A receipt should be produced every time these items are brought into the airplane or removed from it.
- Catering map (items boarded – number of services – and where, catering service plan with corresponding trolley, jug and standard container numbers) including crew meals and special diet meals (with corresponding seat allocation) if any. Catering receipts should also be issued whenever it is removed from the airplane or is loaded into it.
- Media plan, if any (films, video, etc.).

## COMMUNICATIONS WITH THE FLIGHT CREW

Cabin crewmembers must understand the chime difference between being called on the interphone in normal and abnormal situation. Whenever the Flight Crew calls, the Flight Attendant should answer the call. If not available for some reason, the Cabin crewmember closest to the cockpit should answer.

**NOTE:** One chime (high/low) indicates that the Flight Crew wants a normal intercom contact; three chimes (high/low) indicate that the flight crew wants an emergency intercom contact.

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## **CABIN CREW AT THEIR STATIONS DURING TAXI, TAKE-OFF AND LANDING**

Cabin crewmembers must be at their assigned stations during take-off and landing. Allocating passenger seats to cabin crewmembers during take-off or landing is totally unacceptable.

The seat belt must be used according to phase of flight or at the captain's request

Cabin crewmembers must be at their stations during taxi unless they are carrying out duties related to passenger safety.

## **CABIN CREW MEALS**

Cabin crewmembers cannot have their meals during passenger boarding or deboarding operations. They cannot have their meals during airplane refueling or defueling operations either.

Their meals must be brought separately to the cockpit. Beverages must be handed to the pilots to their outboard side and not over the central console.

## **MINIMUM PASSENGER CATERING**

Meals are not required. However, a minimum of 100 ml of potable drinking water per passenger is required.

## **PASSENGER BOARDING AND DEBOARDING**

There must always be a cabin crewmember by the main door when passenger boarding or deboarding is in progress.

If any person under the custody of law enforcement authorities (e.g. deportees) brought aboard the airplane whose documents or belongings must be kept with the Crew, the Pilot in Command must be properly advised and the stowing of these items must be coordinated with him.

Hazardous materials carried by passengers, if detected by the Cabin Crew, must be removed from the airplane.

## SMOKING IN THE LAVATORIES

As smoking in the lavatories imposes serious risks to the airplane, the cabin crew must periodically check the lavatories (such as for smell, passenger locked inside for a longer than accepted period).

Smoke detector functionality can be checked by pressing the TEST button on galley panel.

## DOOR OPERATION

Whenever opening a door, cabin crewmembers must always check if there is anything on the outside that can be damaged (or can damage the door) if the door is open.

A strap must be placed across any doors that are not connected to a jetway, stairway or to a catering truck.

After the airplane is parked and a jetway positioned next to the boarding/deboarding door, opening the latter requires coordination between the jetway operator and the assigned crewmember by means of hand signals.

## WEAPONS

The carriage of weapons such as firearms and explosives in the cabin is prohibited. The only exception applies solely to properly identified law enforcement agents that have a clearly defined requirement to carry a firearm, said requirement needing confirmation via dispatch. In such cases no alcoholic beverages can be served to on-duty law enforcement agents.

If a passenger needs to have a weapon delivered at the destination, he must declare it to Dispatch, which will take the necessary steps to have the Flight Crew advised and the weapon locked in an appropriate compartment.

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## **DIPLOMATIC MAIL**

Diplomatic mail must be stowed in the appropriate locked compartment. Upon arrival at the destination, it is the Purser's responsibility to advise Dispatch of the existence of such mail.

## **CANES, WHEELCHAIRS AND STROLLERS**

Canes, crutches or walking sticks must be stowed in a properly designated place.

Canes can be stowed in an overhead bin or in a closet.

Wheelchairs and strollers must be stowed in the cargo bay.

## BLIND PERSONS

Blind persons should be offered Braille briefing booklets when applicable. They must be briefed about how to reach an emergency exit from their seat position.

## PREGNANT WOMEN

Pregnant women with more than 7 months into their pregnancy must provide a medical waiver signed by a doctor indicating that she is not under any health risk because of the flight.

## PASSENGERS WITH HEALTH AT RISK

A doctor must examine passengers that visibly demonstrate precarious health conditions or have injuries that require immediate treatment to the extent that the flight may jeopardize their health. Should a doctor confirm the medical condition, the passenger must be prohibited from traveling.

## ITEMS THAT CANNOT BE CARRIED IN THE PASSENGER CABIN

The following items should not be allowed into the cabin:

- Fireworks of any kind.
- Flammable liquids and solids like paints, solvents or thinners.
- Pressure containers such as butane fuel, scuba tanks, propane tanks, CO<sub>2</sub> cartridges, self-inflating rafts.
- Unauthorized weapons such as firearms, ammunition, gunpowder, mace, tear gas or pepper spray.
- Gasoline-powered tools, wet-cell batteries (such as motorbike batteries), camping equipment with fuel, radioactive or corrosive material.
- Infectious substances.

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## **COCKPIT ACCESS**

In principle passengers should not be allowed into the cockpit and the cockpit door should remain locked throughout the flight. The door key must be deposited in a secure location known only to the Cabin crewmembers.

## **STERILE COCKPIT**

If the company possesses a sterile cockpit policy, the Cabin Crew must exercise care. Entry into the flight deck or communications with the Flight Crew must be restricted to what is essential to the operation of the airplane when the cockpit is under sterile conditions.

## **FUELING WITH PASSENGERS ONBOARD**

Fueling and defueling may be carried out with passengers on board provided that the following crew procedures are observed [FAR 121.570/JAR-OPS 1.305]:

- The airplane's main engines are shut down.
- The No Smoking signs are switched on.
- The Fasten Seat Belt signs are switched off.

The Cabin Crew should ensure that:

- Passengers are informed that fueling is in progress (see speech guide for defueling/refueling operations).
- Electrical equipment is switched off.
- Passengers remain seated, with their seat belt released.
- Aisle and routes to exits must remain clear of obstructions.
- The external area beneath each exit must remain clear.
- The passenger main door should remain open, with a jetway or stairs next to it.
- A Cabin crewmember should be positioned at the passenger main door.

## LOCKING THE GALLEY CONTAINERS AFTER LANDING

If it is an international flight, all the galley stowage areas, trolleys, ovens and disposal containers must be locked and sealed before passenger deboarding begins. There can be no unsealed volumes with disposed material or perishable catering.

## SANITARY PROCEDURES MANDATED BY HEALTH AUTHORITIES ON ARRIVAL

Health authority-mandated sanitary procedures such as spraying insecticides should preferably be carried out by the crewmembers rather than by health authorities.

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## **NORMAL PROCEDURES**

These procedures are applicable to all airplane and crewmembers, regardless of their assigned duty aboard the airplane.

### **PRESENTATION**

Before presenting signing-in at Operations at the time stipulated by flight scheduling, all Flight Attendants are required to:

- Check personal documentation.
- Verify if they are in possession of their Company I.D., passport with valid visas, valid health and technical qualification certificates. The validity of these documents is the employees' responsibility.
- Make sure inflight shoes are polished and in good conditions. For female Flight Attendants, it is also necessary to bring an extra pair of pantyhose.
- Check uniform.
- Check personal appearance.
- Hair, jewelry and accessories should meet pre-established standards; nails should be clean and manicured. Female Flight Attendants should wear make-up to enhance personal features.

### **CREWMEMBER BAGGAGE**

Before leaving Operations, establish the airplane's location; introduce yourself to the entire crew when possible and go straight to airplane.

Only a small suitcase, purse and garment bag for the uniform, (only for female Flight Attendants), may be taken on board. For safety reasons and courtesy towards other crewmembers, remove baggage carts before stowing them away.

Crewmember baggage should be accommodated in stowage bins or in closed compartments. Avoid baggage agglomeration. Distribute them to make room for passenger luggage. Separate the material you will need during the flight to avoid the excessive opening of bins during the flight, etc.

## ADDITIONAL SAFETY PROCEDURES RELATED TO CREWMEMBER BAGGAGE

Due to recent events involving on board safety (security), additional procedures will have effect in relation to crewmembers:

- All crewmembers should remove crew id tags from luggage.
- Luggage should remain closed and locked during the entire flight when not used.
- Crewmembers should maintain discreet surveillance over their uniform material (suitcase, purse, etc.).
- Crewmembers should maintain permanent control over their baggage to inhibit the insertion of any dangerous object or smuggled goods when at hotels, airports or transportation.

## PREFLIGHT ACTIVITIES BRIEFING

Before each flight or series of flights, a crew briefing must be performed.

It shall be conducted by the commander, who informs the copilot and the crew the pertinent details of the flight, such as special passengers, meteorological conditions, time of flight, takeoff and landing positions. Moreover, the briefing should cover essential communications, safety and emergency procedures, 30-second review (individual review of actions to be taken in case of emergency), or other events related to flight operations.

Tasks and emergency duties should be assigned to each Flight Attendant, making sure that all instructions are fully understood.

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## EMERGENCY EQUIPMENT CHECK

When taking over an airplane at the beginning of a day's flight or series of flights, or if an airplane has been left unattended for some time, the Flight Attendant must check the type-specific cabin emergency equipment.

The Flight Attendant should make sure that existing emergency equipment has been checked in accordance with specific instructions.

The cockpit must be informed immediately about any missing or emergency equipment malfunction.

For the equipment check, an "Equipment Checklist" is available in most of airplane.

Pilots or maintenance personnel are responsible for checking the emergency equipment located in the cockpit. If the airplane has two Flight Attendants, the forward one should check the emergency equipment stowed in the airstair wardrobe and located in the forward attendant station while the other one checks the equipment located in the aft station and on the divider behind the last seat row.

The pre-flight emergency equipment check should be done according to the tables on the following pages.

**NOTE:** Emergency equipment set may be different than the one presented here in this manual depending on specific client's request.

**COCKPIT**

<b>EQUIPMENT</b>	<b>PRE-FLIGHT CHECK</b>	<b>LOCATION</b>
03 Life Vests	Location/Integrity/ Expiration Date	02 behind the Copilot. 01 behind the Captain.
02 Emergency Rope	Location	01 above each direct vision window.
01 Emergency Axe	Location	Left console behind The Captain's seat.
01 PBE	Seal/green integrity indicator	Behind the Captain's seat.
01 Fire Extinguisher	Seal/Date of issue/ Pressure gauge	Behind the Captain's seat.
02 Emergency Flashlights	Functioning LED on	Beside each pilot's seat.
03 Oxygen Masks	Location/Integrity	01 Beside each pilot's seat and 01 by the right- hand side of the observer's seat.

**FORWARD ATTENDANT SEAT**

EQUIPMENT	PRE FLIGHT CHECK
01 Life Vest	Expiration Date/Integrity/Location
01 Flashlight	Well function/LED on

**AFT EMERGENCY EQUIPMENT LOCATION**

<b>EQUIPMENT</b>	<b>PRE-FLIGHT CHECK</b>	<b>LOCATION</b>
01 First Aid Kit	Medicine/ Prescription/ Expiration Date/ Quantity	Behind the last seat on the right-hand side.
01 Megaphone	Location/Integrity	Behind the last seat on the right-hand side.
02 Fire Extinguishers	Seal/Pressure gauge/Expiration Date	Behind the last seat on the left-hand side.
01 Oxygen cylinder with 02 masks	Pressure gauge minimum 1500 PSI/ Masks integrity	Behind the last seat on the left-hand side.
01 PBE	Seal/Green integrity indicator	Behind the last seat on the left-hand side.
01 Manual deploy tool	Location	Under the aft Attendant's seat (beside the restroom).
01 Life Vest	Location/Integrity/ Expiration Date	Under the aft Attendant's seat (beside the restroom).
01 Flashlight	Well function/LED on	Beside The left-hand side of the aft Attendant's seat.

## PASSENGER CABIN CHECK

It is the support service's responsibility to ensure cleanliness and adequate supplies for the airplane; the Flight Attendants should set lights and temperature according to external daylight and weather conditions and make sure that blankets, pillows and curtains are in accordance with Company standards.

### LIGHTING

During boarding and deboarding the sidewall and ceiling lights must be in the bright position; during takeoff and landing the ceiling lights must be dimmed and the sidewall lights turned off. During inflight service, the ceiling lights must be set to the DIM position while the window lights are to be turned on.

Night flights require the minimum possible level of luminosity.

### FLIGHT ATTENDANT PANELS

Check forward and aft Flight Attendant Panel lights by pressing the Panel Lights Test button.

### PSU AND SMOKE DETECTORS

The Flight Attendant must also test the PSU lights and the smoke detector in the lavatory pressing the respective test buttons located on the forward Flight Attendant Panel.

It is recommended to inform the flight crew before accomplish the smoke detectors test.

### VENTILATION/REFRIGERATION

The individual air-vents may affect the cabin's air conditioning. Make sure that all vents are open before passengers board the airplane, whenever local temperature is high.

When local humidity is high, there may be condensation next to air conditioner vents.

Although drains and pipes have condensation absorbing conditions, occasionally an overload that will result in dripping along the passenger cabin might occur. When condensation occurs while passengers are on board, give passengers an explanation and if possible, relocate affected passengers to another area.

## CABIN DIVIDERS

Check that the panel located on the aft bulkhead is folded down and latched during taxiing, takeoff and landing.

## COMMUNICATION SYSTEM

Check volume level before passengers board the airplane. Check also the PA and interphone system.

## GALLEY CHECK

Check cleanliness and make sure trash has been removed. Keep counters clean and all material stowed during boarding.

Check ovens, refrigerators, switches and circuit breakers. When any problem is found, inform the cockpit and request maintenance. When using the ovens, Flight Attendant should be aware of following recommendations:

- Verify oven conditions at the beginning of the flight.
- Always check oven contents before turning it on.
- Never heat cans, pots or any item that may accumulate pressure.

Galleys have panels with circuit breakers that protect each one of its electric components. Should one of them suffer a short circuit, the associated circuit breakers will jump and turn-off the offending equipment item. If this happens, you should wait 3 minutes for the circuit breakers to cool and press it again. If it jumps again, you should inform the cockpit.

## LAVATORY CHECK

It is the supporting service's responsibility to ensure cleanliness and supply for the airplane's lavatories. If any repair is necessary, notify the cockpit and contact maintenance.

Before boarding, Flight Attendant should check lavatories, observing the following items:

- Verify that the toilet flushes, that it is properly fed with water and that the timer functions properly.
- Functioning Flight Attendant call button.
- Closed fire blocking doors.

## BOARDING OF PASSENGERS

The Flight Attendant remains at the main door during the whole boarding process in order to direct passengers to their seats and control hand luggage brought on board.

When boarding passengers the Cabin Crew is responsible:

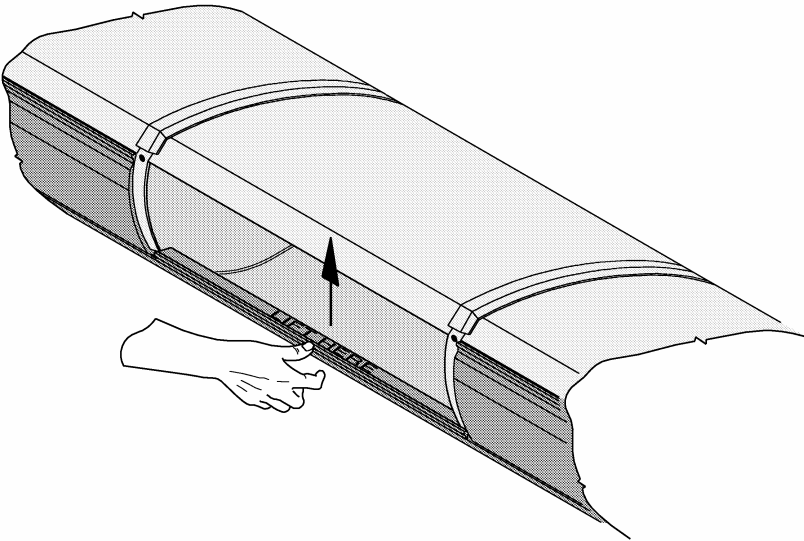
- To help passengers stow their hand luggage according to the existing rules.
- To be alert for possible carriage of dangerous goods not accepted in the cabin.
- To make sure that passengers with an infant are correctly seated where an additional oxygen mask is available.
- To ensure that the no-smoking rule is strictly observed.
- To help handicapped passengers to find their seat and to help them take their place.
- To help passengers travelling with a pet.
- To check the actual number of passengers on board for loadsheet control.

## HAND LUGGAGE

When on board in number or dimensions outside the pre-established standards, they must be checked-in. The Flight Attendant will explain existing regulations to the passenger and direct him/her to an operations employee so that the luggage may be tagged and checked-in.

The volume limit for hand luggage items in the overhead bin is normally reached before the weight limit. Instruct passengers to accommodate heavy luggage items under the seats. The overhead bins should be used only for light luggage items.

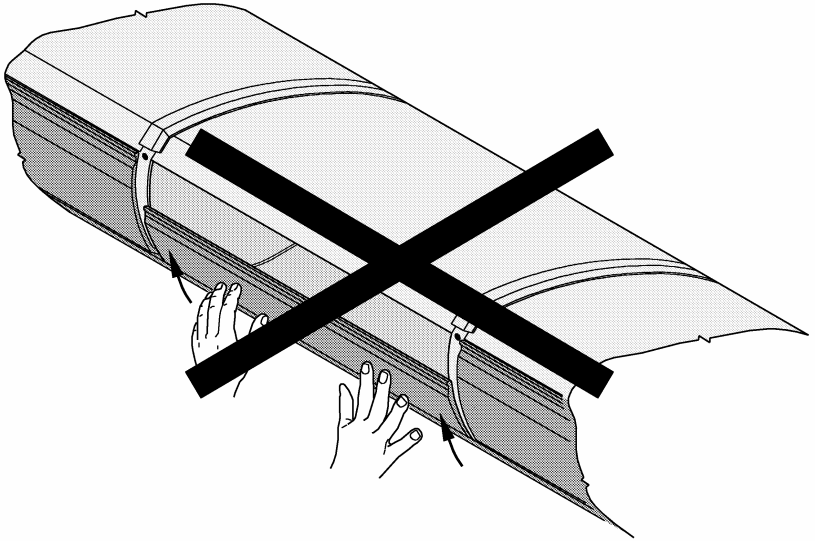
Use the lifting handle to close the overhead bin door.



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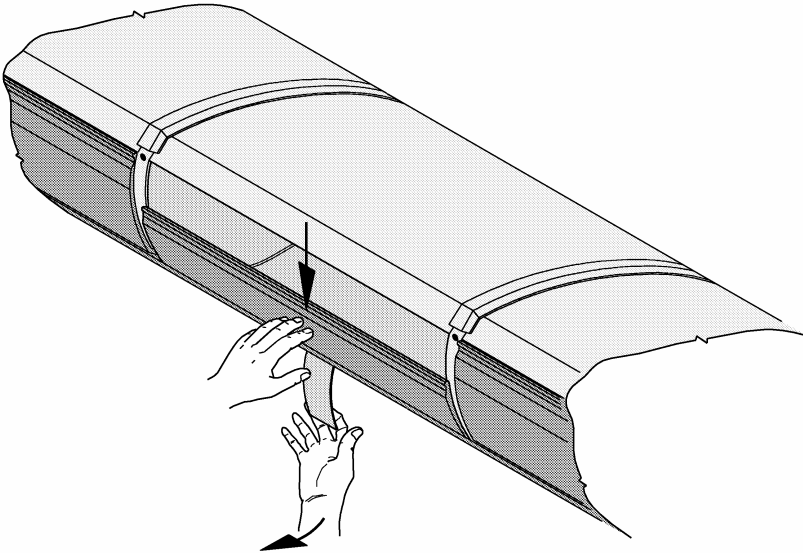


Do not close the overhead bin door by pushing it with both hands. The door may not latch this way.



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Luggage items in the overhead bins must be stowed and accommodated without force so that the doors can be closed and opened easily. If luggage items are forced into the overhead bin, the door may not open easily by simply pulling the latch and the flight attendant will have to press down on the overhead bin door while pulling the latch.



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Flight attendants should help passengers to stow their luggage suitably when overhead bins close to his/her seat are already full. Place volumes under the seat without obstructing the aisle. Keep feet area clear. Open the bin carefully to prevent volumes from falling due to over loading of the compartment or airplane motion.

For hand luggage, the following rules must be observed:

- Each item carried into the cabin must be stowed in a location where it will not move freely.
- Weight limitations of hatracks and stowage compartments must be observed.
- Underseat stowage is possible only if the seat is equipped with a restraint bar and the baggage is of such a size that it will adequately be restrained from movement.
- Items must not be stowed in toilets or against bulkheads where it cannot be appropriately secured.
- Baggage placed in lockers must not prevent doors from being closed securely.
- No hand luggage behind the legs or on the knees of a passenger is allowed.

If it is impossible to stow all carry-on baggage as mentioned above, ground personnel must remove it from the cabin.

## **LIVE ANIMALS IN CABIN**

Carriage of live animals in the cabin is limited in consideration of passenger safety and comfort and by the size of the cabin.

Excluding guide dogs for blind passengers, only small household pets of 5kg or less may be carried in the cabin. They must be transported in a leak-proof container or bag. A household pet is not allowed to move around in the cabin and should be kept in its container, which by its turn should be maintained on the floor for the duration of the flight.

No animal is allowed in front of row 1 or any other place where the container cannot be kept immobile.

## **INFANTS**

An adult must always accompany infants that are two years old or younger. There is no assigned seat for an infant, as he/she sits on the lap of an adult.

For takeoff and landing the baby must be held slightly to one side to avoid the adult from crushing the baby in case of abrupt deceleration.

In case of a life vest demonstration, the Flight Attendant must provide an infant life vest to the person responsible for the infant. Put it in the seat pocket just in front of the person and briefly explain how the life vest should be donned and deployed.

The operator must define the maximum number of infants according oxygen masks distribution, the company directives and procedures and comply with the authorities requirements. The flight attendants must follow the operator policies to lead the infants to their appropriated places.

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## PREPARING FOR TAKEOFF

### DOORS

As soon as all the passengers have boarded the airplane, the Flight Attendant informs his/her Cabin Crew about the actual status and the number of passengers on board, via the interphone system.

As soon as the release is given from the captain, the doors must be closed.

### BEFORE TAKEOFF ANNOUNCEMENT

The Flight Attendant will perform the announcements according to the manual and in the languages that correspond to the route or destination.

### EMERGENCY PROCEDURES INSTRUCTIONS

Emergency procedures instructions are done before airplane takeoff, and verbal instructions should be given in the local language and English. The instructions may be repeated in other languages. Nevertheless, on regular intercontinental flights it is mandatory that the repetition of all safety instructions be made in English.

Verbal instructions should provide information about:

- Safety instruction card.
- Emergency exit location.
- Non-smoking and fasten seat belts signs.
- Oxygen system operation.
- Floatable cushions or vests for flotation.
- Use of electronic devices on board the airplane.
- Seat at upright position.
- Tray tables latched.
- Seat belt demonstration.

## ELECTRONIC DEVICES

### Intentional Emitters

Electronic devices that emit electromagnetic energy as a primary product of their operation belong to this class. Such devices normally incorporate transmission antennas. Examples of intentional emitters include:

- Cellular or satellite telephones.
- Pagers.
- Wireless CD ROM.
- Wireless mouse.
- Citizen's band (CB) radios.
- Walkie-talkies.
- Radio controlled toys.
- Remote controls.

Regarding intentional emitters, Embraer recommends that the use of such devices should be prohibited after the door is closed or just prior to engine start.

### Unintentional Emitters

Electronic devices that emit electromagnetic energy as a by-product of their operation belong to this class. Examples of unintentional emitters include:

- Portable computers.
- Electronic agendas.
- Video cameras.
- Electronic toys.
- Photographic and digital cameras.
- Electric shavers.
- GPS units.

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In this case, Embraer recommends that the use of such devices should be prohibited during critical phases of flight or below 10000 ft above ground level (AGL).

The operation of approved M-PEDs, Medical Portable Electronic Devices, such as defibrillators (AED), airborne patient medical telemonitoring (APMT) equipment, etc., is not included.

Local authorities should be consulted to verify if there is any limitation on the use of portable electronic devices.

### CHECK BEFORE TAKEOFF

After the announcement and emergency procedures demonstration, the Flight Attendant must inspect the cabin to verify if:

- All passengers are seated with their seatbelts fastened.
- Live animals are in their special container and placed on the floor.
- Smoking rules observed.
- Hand luggage safely stowed.
- Overhead bins closed.
- All seatbacks in the upright position.
- All tables folded up and latched.
- All service articles stowed away.
- Galleys, containers and trolleys secured stowed.
- Curtains pulled aside and secured.
- Restrooms checked and doors closed.
- All exits and aisle clear.

After the above mentioned check has been performed, the Flight Attendants must go to their seats while the Forward Flight Attendant selects cabin luminosity. Perform 30 seconds mental review (refer to “30-second Review” in the Emergency/Abnormal Procedures section).

The Flight Attendant then informs the captain that everything is alright.

Before takeoff, the Captain will announce:

**“CABIN CREW, PREPARE FOR TAKEOFF.”**

## DURING THE FLIGHT

As soon as the FASTEN SEAT BELTS signs are turned-off, the Flight Attendant will start the in flight service. This will be done considering the duration of the flight, time and type of service offered by competing companies.

When encountering turbulent air zones, the Flight Attendant should observe the following procedures:

- Via the Passenger Address system, request passengers to fasten seat belts;
- Continue in flight service, unless fasten seat belt signs have been turned-on.

Keep lavatories in ideal use conditions by cleaning the mirror and sink when necessary. Ensure that there are sufficient supplies in the lavatories. Observe flight safety factors.

## PREPARING FOR LANDING

When initiating descent:

- Perform the descent announcement.
- Instruct passengers that need special attention about deboarding procedures to be taken.
- Take notes in Cabin Logbook of any deficiencies found in airplane equipment.

When cockpit announces “Prepare for landing, local temperature...” and FASTEN SEAT BELTS signs are turned on (10000 ft):

- All exits and aisle clear.
- Perform landing announcements.
- Stow away all loose items on counter, latch and seal trolleys, ovens and compartments.
- Seal LKs and ice boxes.
- Check passenger cabin, lavatories and galleys.
- All passengers are seated with their seatbelts fastened.

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- Live animals are in their special container and placed on the floor.
- Smoking rules observed.
- Hand luggage safely stowed.
- Overhead bins closed.
- All seatbacks in the upright position.
- All tables folded up and latched.
- All service articles stowed.
- Galleys, containers and trolleys secured stowed.
- Curtains pulled aside and secured.
- Restrooms checked and doors closed.
- Adjust cabin luminosity to minimum possible.
- Inform pilots only if a problem is detected.
- Take landing positions after executing all the above listed tasks, take bracing position and perform 30 seconds mental revision.

**TAXI AND DEBOARDING**

Perform the after landing announcement according to the manual.

Alert passengers to remain seated until the airplane has come to a full stop at its parking position, always keeping in mind passenger safety.

**DEBOARDING POSITIONING**

The Flight Attendant must remain close to the main door helping passengers during deboarding procedures.

Cleaning services may only begin after the deboarding procedure has ended.

After the passenger deboarding if the Flight Attendant find hand luggage or personal belongings, he/she should inform a company security agent or, in his/her absence, a dispatch employee that will take the right steps.

The entire crew remains on board until all the passengers have deboarded or until the relief crew arrives. Request permission to deboard according to hierarchy.

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# EMERGENCY/ABNORMAL PROCEDURES

## EMERGENCY LANDING PROCEDURES (PLANNED)

### INTRODUCTION

Communications has been recognized as a fundamental procedure for the successful management of an emergency situation. The effective coordination of the crew and the constant exchange of information are key elements in the performance of a team. Usually, there is little time available to make decisions. Therefore, it is important that each crewmember knows all the procedures that need to be followed in an emergency situation.

### COMMUNICATIONS

Whenever the Captain deems that an emergency situation can develop into an accident, he/she will have the Flight Attendants preparing the cabin for emergency landing over land or water in order to assure maximum safety of the airplane's occupants. Should there be enough time, the Captain will brief the Flight Attendant.

#### CAPTAIN → FLIGHT ATTENDANT

In this briefing, the Captain will give the following information:

**T**ime available.

**E**mergency (type).

**S**ignals conventioned.

**T**ransmit additional instructions (structural damages, restricted cargo, restricted exits, loss of landing gear, etc.).

The "Signals Conventioned", for evacuation of the airplane, must be agreed among the Flight Attendant and cockpit crew, as well as the impact warning.

The Flight Attendant must use the Emergency Procedures for cabin preparation and communications to passengers.

## INFORMATION TO PASSENGERS

Preferably the Captain should notify passengers of an emergency situation. Before addressing the passengers, the Flight Attendant must set the cabin lights to the bright position, position himself/herself along the cabin in order to forestall panic and its consequences, further ensuring that passengers are paying attention. Read the announcement clearly and slowly, doing so with a confident tone.

During the announcement, point out the protective positions shown in the Safety Information Card. To inhibit distractions, at this time do not give any other information. Once the announcement has been read, the Flight Attendant can clear any existing doubts.

## EMERGENCY LANDING ANNOUNCEMENT

“Ladies and gentlemen, your attention please.

The Captain has informed that due to \_\_\_\_\_ we have to perform an emergency landing at \_\_\_\_\_, in about \_\_\_\_\_ minutes.

This crew is prepared to face any emergency situation.

We must now prepare the cabin, so your undivided attention is very important.”

1. Close and secure your tray tables.
2. Remove sharp objects such as pens, eyeglasses and high heel shoes placing them in the seatback pocket in front of you.
3. Clear all footways of all luggage and straps.
4. When leaving the airplane you must leave all your personal belongings on board, take only eyeglasses and high heel shoes on your hands.
5. Tighten your seat belt low across your hips and put the back of your seat to the upright position.
6. Note the 04 emergency exits. There are 02 doors at the front and 02 over wing exits.

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7. At this time take the Safety Information Card from the seatback pocket in front of you and review it.
8. Note your protective position in the briefing card.
9. When you hear "IMPACT" take the protective position.
10. Remain in the protective position until the airplane comes to a complete stop since there may be more than one impact. Remember, to unfasten your seat belt, lift the buckle and pull the straps apart. Use only those exits indicated by the Cabin Crewmembers.

All military and airline personnel, please identify yourselves.

Thank you for your attention to these instructions. We will be around to assist you.

## CABIN

Check cabin conditions according to checklist announcement instructions, making sure that seat belts are securely fastened, seat backs are in the upright position and tray tables are closed and latched.

Check if there are bulky objects that might obstruct aisle during landing.

Since there is no protective position for infants in arms, instruct parents to take protective position while holding them, protecting the child in possible manner.

Pregnant passengers must sit on pillows or blankets while ensuring that the seat belt is below the navel line.

In case of ditching, instruct passengers to don life vests and inflate them only next to airplane exits. In airplane equipped solely with floatable seat cushions, passengers should be instructed to take them when leaving the airplane.

**WARNING: AIRPLANE EVACUATION MUST BE DONE THROUGH THE OVERWING EMERGENCY EXITS ONLY. DO NOT OPEN REMAINING DOORS.**

## CAPABLE PASSENGERS

Select capable passengers (military personnel, athletes, and deadheading flight and/or cabin crews) and instruct them, before landing, to help handicapped persons and unaccompanied minors during the evacuation.

Re-instruct passengers seated next to emergency exits - but not assisted by Flight Attendants - about the operation, opening and restrictions that might invalidate the use of that exit (external fire adjacent or within exit area, spilt fuel, metal edges that might compromise passenger safety, etc.).

## GALLEYS

Check and lock all trolleys and compartments and switch off all circuit breakers.

Should the landing site be located in an area where a survival period without resources is expected - and if time allows – select supplies that can be stowed in an easy-to-reach place.

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## LAVATORIES

If necessary, place inside the lavatory carry-on baggage or big volumes that cannot be stowed in the overhead bins or under the seats. Lock lavatory door.

## TASK SHARING

<b>1 FLIGHT ATTENDANT ONBOARD</b>			
Flight Attendant	Speech	Cabin Organization	Seat at forward station

<b>2 FLIGHT ATTENDANTS ONBOARD</b>			
Flight Attendant 1	Speech	Cabin Organization	Seat at forward station
Flight Attendant 2	–	Cabin Organization	Seat at after station

## BRACE POSITION

Brace positions are an attempt to minimize the first impact during emergency landing and are adopted in accordance with the type of seat belts restraining (abdominal and thoracic-abdominal), according of the position of the seats (facing the back or nose of airplane) and also taking in consideration the person’s physical building.

In order to have passengers and crew taking the brace position, the flight crew must provide the “IMPACT” warning 30 seconds before landing, which must be reinforced by Flight Attendant “**IMPACT, IMPACT, IMPACT**”.

## AFTER LANDING

An emergency evacuation will have to be initiated always when there is evidence or risk of fire, or under any other circumstances that the captain judges necessary.

Should the captain decide not to proceed with an emergency evacuation, he must notify the Flight Attendant. If necessary, this should be done through the PA system, using the following phraseology:

**“ATTENTION, CREW, WAIT FOR INSTRUCTIONS.”**

Wait until airplane has come to a complete stop.

The command to initiate emergency evacuation is given by the captain through the PA system. In case the captain is unable to do so, the command will be given by the next ranking and capable crewmember.

Phraseology to command evacuation:

**“ATTENTION, CREW, INITIATE EMERGENCY EVACUATION.”**

Wait for evacuation command and/or evaluate if there is evidence to initiate it.

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## **EMERGENCY LANDING PROCEDURES (UNPLANNED)**

Statistically, non-prepared emergencies are the most common. Such emergencies occur more commonly during takeoff and landing.

Should there be no time for a briefing or cabin preparation, the Flight Attendant must assume a position wherever he/she is and, at the same time, instruct passengers to assume a protective position.

The order to assume protective position must be transmitted from the cockpit 30 seconds before landing or at any moment an accident occurs, by using the following phraseology:

**“IMPACT, IMPACT, IMPACT.”**

The Flight Attendant, from her/his station, will instruct passengers by saying:

**“BRACE/BRACE/BRACE.”**

Under abnormal and unprepared situations, and always when the airplane has come to a stable stop, the Flight Attendant should enter the cockpit to verify its integrity and state of the flight crewmembers. In order to do so, the Flight Attendant will have to open the cockpit door by using the key or any other means necessary. Once inside the cockpit, he/she should confer with the Captain to ascertain whether an evacuation is necessary or not. Should flight crewmembers be incapacitated, decision to evacuate or not the airplane will rest upon the Flight Attendant.

Upon entering the cockpit and in view of the great workload at that moment, the Captain might request the Flight Attendant to inform the rest of the crew through the PA system:

**“ATTENTION, CREW, WAIT FOR INSTRUCTIONS.”**

When it is not yet possible to evacuate the airplane, the cabin crew will hold passengers away from exit and shout, **“SIT DOWN!” “SIT DOWN! FASTEN SEATBELTS!”**

If the Flight Attendant decides to initiate the emergency evacuation or if the Pilot In Command commands **“INITIATE EMERGENCY EVACUATION”** the Flight Attendant should follow the Evacuation Procedures and Techniques.

### 30-SECOND REVIEW

In order to condition yourself and maintain your mind focused under unexpected situations, make it a habit to mentally make a quick review – approximately 30 seconds – of the procedures to be followed in case a non-prepared emergency takes place.

Before each takeoff and landing, be aware of the following items:

- Am I aboard of which kind of airplane?
- Am I placed at which exit?
- Which protective position should I take? Am I facing the back or the nose of airplane?
- The takeoff/landing route is over water or land?
- What commands shall I expect from the captain in case of an emergency?
- In which situation can I command evacuation, even without being instructed by the cockpit? (Evidence vs Rank)
- Which verbal evacuation commands shall I give to the passengers?
- Observe external area – are there any obstacles?
- How do I open this door?
- Redirect passengers if exit is inoperative.
- As an additional safety measure, grasp the assist handle.
- Command evacuation, if conditions allow.
- Instruct passengers to stay away from the airplane.
- Perform passenger cabin clear check and rescue survivors whenever possible.

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This review serves as a preparation for facing an unexpected emergency, further offering the conditions to command a quick evacuation.

Develop and maintain self-confidence in the daily routine of preparing the cabin before each takeoff and landing.

Make it a habit to perform a briefing with the crew before the flight starts, bringing up subjects concerning safety and service, thus bringing the crew closer together.

Read passenger announcements (before takeoff, pre-landing, emergency equipment demonstration) slowly and clearly. Cabin checks and proper accommodation of luggage during boarding are procedures necessary to assure safety of the airplane's occupants in the event of an emergency.

## **EVIDENT EVACUATION**

An evacuation becomes evident when:

- There is fire or intense smoke in or outside the cabin.
- The airplane has performed a ditching and is settled in the water.
- The airplane's structure has been extensively damaged.

In those cases the Flight Attendant should initiate evacuation procedures following the Evacuation Procedures and Techniques only after the airplane comes to a complete stop and with engine shut down.

## **RANK**

Rank will be taken into consideration to initiate an evacuation when:

- After the airplane stops and the fuselage is undamaged, even with an abnormal attitude (partial collapse of landing gear).
- Fire in the engine.

## EVACUATION PROCEDURES AND TECHNIQUES

1. Wait for engine shutdown and airplane comes to a complete stop.
2. Wait the cockpit signal (not applicable in case of an evident evacuation).
3. Quickly release seat belt while ordering passengers to do the same, using the command: **“RELEASE YOUR SEAT BELTS”**.
4. Flight Attendant turns on the emergency lights.
5. Verify if exits are OK and evaluate situation outside the airplane for fire, obstructions, water and height above the ground.
6. If they are not OK, redirect passengers commanding: **“BLOCKED EXIT, USE THAT WAY”**.
7. Open exits if they are OK, verifying if the door is fully opened and locked.
8. Position yourself correctly at dedicated assist space holding the handle (exits or cabin partitions) in order to maintain passenger flow while commanding:  
**“RELEASE YOUR SEAT BELTS! LEAVE BELONGINGS! EXIT THE AIRPLANE! FOLLOW THE LIGHTS AND GET OUT”**.  
**“THIS WAY”**.  
**“CROSS YOUR ARMS AND JUMP OUT”** (on land) or  
**“TAKE YOUR SEAT CUSHIONS WITH YOU AND GET OUT NOW”** (ditching) or  
**“WEAR YOUR LIFE VESTS AND GET OUT”** (ditching).
9. Passengers with infants must be instructed to take a seated position and jump with the infant on their lap.
10. Control evacuation by directing or redirecting the flow, constantly observing internal and external areas. Command:  
**“USE THAT WAY”**.

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- 11.** Maintain evacuation flow regular. In case any passenger hesitates at the door, the Flight Attendant must push him out firm and immediately placing hand below waistline and then return to flow monitoring. If passenger grabs handle stubbornly, crew must hit his wrist with an upward motion and push him out.
- 12.** Passengers not responding to crew's instruction must be brought by force to the exit and pushed out. If passenger seems to have lost consciousness, they must be dragged to an exit and pushed out whenever possible.
- 13.** Always issue positive commands, because negative commands may confuse people.
- 14.** Flight Attendant shouts to those already outside the airplane "Stay at the bottom! Help other people off!"
- 15.** The Flight Attendant is responsible for the cabin clear check and confirm that no passenger remains in the cabin.
- 16.** Flight Attendant takes emergency equipment that can be useful outside such as first aid kit, megaphone, flashlight and survival kit, then exiting the airplane.
- 17.** Instruct passengers to stay away from the airplane.
- 18.** Flight Attendant prevents passengers from smoking or returning to the airplane.
- 19.** Flight Attendant gathers passengers at a safe distance from the airplane and counts them; assesses personal injuries and determines priorities; splits passengers into smaller manageable groups.
- 20.** Only if conditions permit may the airplane be reentered to search for more emergency equipment and other items such as blankets, seat cushions or pillows.
- 21.** No declarations or statements must be made to local authorities or to members of the press until an appropriate representation is determined.

## REJECTED TAKEOFF AND GO AROUND

The Flight Attendant should ask passengers to stay calm if a rejected takeoff or a go around occur using, for example, the following announcement:

*“Please remain seated with your seat belts fastened and wait for further information”.*

## TURBULENCE

In case of turbulence, Flight Attendant should establish communication with the flight crew. The following actions should also be taken:

- Inform passengers to keep seat belts fastened.
- Check that no passenger is in the lavatory.
- Secure galley items and stop service.
- Sit down immediately in case of severe turbulence.

After the turbulence is over and flight crew says that is safe to carry on with the activities, Flight Attendant should turn the cabin lights to bright, checking that passengers are not hurt, and let the flight crew know about the cabin situation.

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## **RAPID DEPLANING**

There are situations that require passengers to leave the airplane in an expeditious manner but do not justify an Emergency Evacuation. In those cases the Pilot in Command may command a Rapid Deboarding procedure.

Rapid Deboarding consists of leading the passengers out of the airplane by using normal means of deboarding such as stairways or jetways.

Should the Pilot in Command issue such a command, the Flight Attendant must announce:

*“Ladies and Gentlemen, due to technical reasons passengers must now deboard. All passengers without exception must leave their belongings on board and exit the airplane NOW. Wait outside to be guided by a company representative to the proper area”.*

## **SMOKE FILLED CABIN**

If smoke comes from a known and controllable source in the cabin, see the emergency procedure "FIRE IN THE CABIN".

Should fire or smoke go beyond control, Flight Attendant must power off galleys and all electrical equipment, if possible, and retrieve flashlights. Inform flight crew about the situation.

Flight Attendant will cover nose and mouth, retrieve PBEs and position as low as possible by crouching.

## FIRE IN THE CABIN

If fire or indications of fire is detected in the cabin, immediate action is required and the Pilot in Command must be advised. The following types of fire are among those most likely to be encountered:

**Fire Class A:** Solid materials such as wood, paper, cushions, fabric. It causes flames and glowing. Any extinguishing agent can extinguish fire from these materials.

**Fire Class B:** Flammable Liquids (kerosene, oil, fuel, paint, thinner). Class B fires cause flames. For this class of fire, water should not be used. Halon or CO<sub>2</sub> should be used instead.

**Fire Class C:** Gases like propane. Class C fires cause flames. In this case, water cannot be used. Halon or CO<sub>2</sub> should be used instead.

**Fire Class D:** Metals like aluminum or magnesium. Class D fires cause flames or glowing. Only a fire brigade can fight this kind of fire.

**Fire Class E:** Electrical fire. In this case, water cannot be used. Halon or CO<sub>2</sub> should be used instead.

Several heat sources can be found on board an airplane, such as the ovens, overheating of motors/generators, engines, cabin lights or illegal smoking in the toilet.

## FIRE FIGHTING PROCEDURES

Below is a guide to combat specific types of fire.

While fire fighting is carried-out, one of the cabin crewmembers must stay at one of the handsets to keep the flight crew regularly updated regarding fire status. If passengers are being affected by smokes or fumes, they must be instructed to breathe through wet paper towels or clothing and if necessary, be moved away from the source of smoke.

**Galley fire or smoke:** Immediately advise Pilot in Command. Switch galley off; galley circuit breaker as necessary; discharge fire extinguisher towards the source of fire/smoke as necessary. If fire comes from an oven, crack the oven door, discharge fire extinguisher, wait one minute, reopen oven door to ensure that fire is extinguished then keep oven door closed.

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## Electrical Fire

- Switch off electrical power.
- Pull the circuit breakers.
- Use only the Halon fire extinguisher.
- Never use water.
- Keep the electrical power off until the airplane has performed a safe landing.

If fire is of electrical origin and located within the galley area, the galley must be powered down immediately.

**Lavatory fire or smoke:** The Flight Attendant must go to the lavatory with a portable fire extinguisher and before opening it, check if door is hot or cool. If it is cool, open the door and direct the fire extinguisher to the source of fire/smoke. Soak the area with water to prevent re-ignition. If the door is hot (which indicates that the fire is severe and at a critical stage), put on a PBE and take extra fire extinguishers. Bend down to minimize fire or smoke threat and open the door slightly in an attempt to identify source of fire/smoke. Discharge one fire extinguisher and close the door again for one minute. Then open the door. If fire remains, discharge a second fire extinguisher. Soak the area to prevent re-ignition.

**Seat fire:** Immediately advise Pilot In Command. Use water extinguisher if available. If not, use Halon or CO<sub>2</sub> instead. Blankets and pillows can be used to smother the fire. Once the fire is under control the cushion must be torn apart to ascertain whether the origin of the fire is inside the cushion.

## DITCHING

**WARNING: THE EMB-145/ERJ-140/EMB-135 WERE NOT TESTED FOR DITCHING. BELOW ARE THE RECOMMENDED PROCEDURES, WHICH HAVE BEEN DEVELOPED BASED ON PREVIOUS EXPERIENCE.**

A ditching is characterized by being an emergency landing on water.

Cabin preparations for a ditching and subsequent evacuation are very similar to those applicable for an emergency landing.

If there is time available the Flight Attendant can plan the event and carefully brief the passengers. However if the airplane is unexpectedly ditched - such as might occur shortly after takeoff, specific procedures should be followed should there be sufficient time.

In such cases, the crew can shout commands such as **“HEADS DOWN! STAY DOWN!”** The Flight Attendant must quickly switch on the emergency lights and read the announcements to the passengers:

*“Pick up your life vest from your seat NOW. Put it on and adjust the straps around your waist. Get out through the overwing emergency exits. DO NOT – I repeat – DO NOT inflate it while you are inside the airplane” or “Take the seat cushion with you and get out now”.*

Flight Attendant must maintain bracing position until the airplane stops.

Flight Attendant should assess water seepage at each exit and identify which overwing emergency exit is the most appropriate.

The flight attendant should redirect passengers trying to leave through overwing emergency exits using the following wording:

### **THAT WAY! THAT WAY!**

The Flight Attendant must make effort to prevent passengers from reentering the airplane.

The Flight Attendant must be on board until the last passenger leaves.

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If the ditching is anticipated with enough time to prepare the passengers, then:

1. Pilot In Command informs Flight Attendant of the upcoming ditching event and passes the following information:

- Nature of the ditching.
- Type of evacuation.
- How the flight crew will signal to the Flight Attendant to start evacuation.
- How much time is left.
- Any further instructions that might be deemed necessary.

2. Flight Attendant makes sure to know the sequence of actions and her/his role in.

3. Flight Attendant puts the cabin lights to full bright and delivers a similarly worded speech to the passengers:

*“Ladies and gentlemen, this is your Lead Cabin Attendant speaking. The Captain has informed me that due to \_\_\_\_\_ we will be making preparations for a water landing in approximately \_\_\_\_\_ minutes. We will give you instructions to prepare for a safe and orderly evacuation if it becomes necessary. Your crew is capable and is trained to handle this situation. Please pay attention because I am going to perform a very important demonstration”.*

*“Please locate the overwing emergency exit closest to your seat”. “The location of each overwing emergency exit is clearly marked overhead with a red sign. A line of lights will also illuminate on the floor once the airplane comes to a standstill. Do not worry if the main cabin lights extinguish because it is part of the procedure. The exit signs and the lights on the floor shall remain illuminated”.*

*“If an exit is blocked by fire or smoke, do not use it. Go to another exit”.*

*“All passengers must remove high heeled shoes and sharp objects NOW and stow them in the seat pockets”.*

*“Pick up your life vest from your seat NOW. Put it on and adjust the straps around your waist. DO NOT inflate it for the time being”.*

*“Please make sure the safety belt is securely fastened, tight and low across hips, your seat back and tray table are upright and locked. Stow the carry on baggage under the seat in front of you”.*

*“The cabin crew will now demonstrate the bracing position. Please watch carefully” (CREW DEMONSTRATES BRACING POSITION).  
“Bracing position is also explained in the Safety Cards in the seat pockets”.*

*“Passengers with special needs will receive specific instructions from me now”.*

*“All adults sit back as far as possible, place your feet flat on the floor, cross your wrists on the seat back in front of you, lean forward, and place the forehead on your wrists. If you wish to take the alternate bracing position, lean forward, wrap your arms under your knees, and rest your head against your knees. Children should lean forward, place head face down in lap, wrapping arms under knees”.*

*“We will be back with you in a few moments”.*

4. Flight Attendant must secure the cabin including the galley, turn off galley power, lock lavatory doors and strap divider curtains.

5. If time allows, check if passengers really understood the instructions by asking questions such as “Show me your bracing position”, “Where is your nearest exit”?, “When will you evacuate”? or “Where will you go after you leave the airplane”?

6. Once the Flight Attendant is satisfied that the above tasks have been successfully completed, she/he must advise the flight crew that the cabin is ready for an emergency landing.

7. Shortly before landing (typically at 500 ft) the Pilot In Command should give the brace command. In short order, the cabin crew should shout the required order:

**“BRACE”, “HEADS DOWN” and “STAY DOWN”.**

8. Flight Attendant switches on the emergency lights.

9. Flight Attendant maintains the bracing position until the airplane comes to a complete stop.

10. Flight Attendant shouts the order **“RELEASE SEAT BELTS”** while releasing their own belts and harnesses.

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## DECOMPRESSION

Decompression is the convergence of cabin pressure with air pressure existing outside of the airplane at flying altitude. The time needed for this convergence depends on the size of the hole, the size of the cabin and the difference between external and internal air pressure.

The following decompression definitions relate to the time required for cabin pressure to decrease to ambient pressure:

- Slow** → 1 minute or more → incident
- Rapid** → 1 second to 1minute → accident
- Explosive** → less than 1second → accident

### SLOW DECOMPRESSION INDICATIONS

- Whistling sound from the affected area.
- Cabin pressure indication in the cockpit.
- Elderly and sick passengers may feel uncomfortable.
- Ear problems.

### RAPID/EXPLOSIVE

- Explosive noise.
- Fog in the cabin due to temperature drop.
- Flying objects, debris.
- Dizziness and pain in ears, sinuses, abdomen.
- Drop out system and its automatic announcement is activated.

If cabin pressure drops to a point where breathing oxygen becomes necessary, the oxygen masks will drop from the PSU.

In such case the PA is:

*"Ladies and Gentlemen, please fasten your seat belts, pull down on the mask in front of you NOW and the oxygen flow will start automatically. Take the elastic band and place it over your head. Pull the elastic tab on either side of the mask to tighten the band. Once the mask has been donned, assist those around you with their own masks. Do not remove the mask until the crew advises you to do so".*

**NOTE:** This PA speech is to be made if the Flight Attendant can safely reach a handset. If that is not possible, those instructions should be shouted to the passengers without removing the mask.

In the event of cabin depressurization, the Flight Attendant will immediately execute a rapid depressurization/emergency descent procedure. In this case the Flight Attendant should grab the nearest oxygen mask that is not in use by any of the passengers, sit down and fasten the seat belt or hold on.

Once the emergency descent is over, the flight crew will so inform the Flight Attendant. The Flight Attendant should then transfer from drop masks to portable oxygen masks (if oxygen is still required) and assess the cabin's situation. Passenger may require blankets and more oxygen.

Masks must not be re-stowed back in their compartments. However, passenger masks and tubing can be put inside the bins and the bin door closed, to prevent them from obstructing passenger movement.

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## VIOLENT OR UNRULY PASSENGER

Violent and out of control passenger are a risk to safety. They are usually classified into three categories:

**Category 1:** Verbal insults or refusing to comply with some announcement by the crew. However, if the Flight Attendant emphatically requests that he comply with the instructions, he does. In this case, the incident need not be reported to the flight crew but should be documented via the cabin report.

**Category 2:** The passenger, when directly requested to comply with given instructions, continues to disturb or interfere with cabin safety. Examples: continuing verbal insults, yelling, etc.. In this case the flight crew must be notified and the Pilot in Command and the Flight Attendant must coordinate the formal announcement to the passenger of the Airline Passenger Warning and Notification:

*“You must immediately comply with the crew’s instruction to avoid legal penalties set forth in Federal Legislation. This is a formal warning. The following is prohibited:*

- *Threatening, intimidating, or interfering with a crewmember.*
- *Smoking on board.*
- *Drinking any alcoholic beverage not served by a crewmember or creating an alcohol-related disturbance.*

*An incident report will be filed with the proper civil aviation authority. If you do not refrain from continuing on your current course of actions, you will be prosecuted.”*

The flight crew should take note of the time and location where this incident occurred and the Flight Attendant should try to collect as much identification information about the passenger as possible and fill an In-flight Passenger Incident Report.

**Category 3:** Applies to the following scenarios:

- Crewmember duties are seriously disrupted by passenger behavior.
- Crewmember is injured or is convincingly threatened of injuries.
- Crewmembers have to resort to physical force to maintain the passenger under control, sometimes with the use of handcuffs.

- An unscheduled landing has to be performed as a direct consequence of passenger actions.
- Passenger refuses to follow instructions even after receiving the formal warning.

In these cases the Pilot In Command should request law enforcement agents to meet that passenger upon arrival. The Flight Attendant may need to use force to strap the passenger to the seat using Flex-cuffs. In extreme cases the help of other passengers may be requested.

The time and location of the incident as well as a description of the event must be written down in the logbook. Flight Attendant must collect as much information as possible about the identity of the passenger.

## **PILOT INCAPACITATION**

If such a situation arises, the Emergency Call light will illuminate.

Removal of the incapacitated pilot should preferably be performed by the Flight Attendant with the assistance, if needed, of a capable passenger.

The pilot seat must be fully reclined. If there is a physician on board (see speech guide) he/she can determine if breathing oxygen is desirable. If so, a portable oxygen bottle should be used.

The Flight Attendant can discretely check if there is a qualified company pilot on board. If so he/she can be called to the cockpit to help out and take one of the pilots' seats. In that case the airplane can continue to its destination.

If there is no qualified pilot on board, the remaining pilot will land at the nearest suitable airport.

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## **BOMB THREAT**

If the airplane is subject to a bomb threat, Flight Attendant must:

- Discretely advise the Pilot in Command.
- Obtain instructions from the Pilot In Command regarding information that is to be disclosed to passengers should a landing be performed in order to execute a bomb search.
- Carry out Rapid Deplaning after landing.
- Have the passengers move away from the airplane in an orderly fashion.

If a suspect object is found on board, advise the Pilot In Command. If the Pilot in Command instructs it, advise the passengers about the situation.

The flight crew will take the airplane to an altitude where it can be depressurized (descent will preferably be done with constant cabin altitude until cabin altitude equals outside altitude).

The flight crew will possibly change the airplane configuration (lower the landing gear and extend flaps/slats).

Move the passengers as far away as possible from the suspect object. If suspect object can apparently be moved to a location of least risk:

- Prepare location of least risk, which is the third overhead bin from front of the cabin.
- Collect and stack hard luggage to a height equal to that of half the door height.
- Place wet blankets to a thickness of 25 cm on top of the stack.
- Move the passengers away from the location of least risk.
- Place the object on top of the blankets and surround and cover it with more wet blankets to a thickness of 25 cm.
- Fill the remaining area up to the ceiling with soft material (pillows, coats, blankets).
- Secure the pile with neckties, belts, and pantyhose.

If the airplane is on the ground, the object should not be moved at all.



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REVISION 2

## FIRST AIDS

### FLIGHT ATTENDANT RESPONSABILITIES

If a passenger or crewmember becomes ill or is injured, it is expected that the Flight Attendant, under existing situations:

- Recognize the emergency situation.
- Ask for relevant information for each case.
- Make use of necessary support sources:
  - Medical/Attendant First Aid Kit.
  - Portable oxygen bottle.
  - Medical Volunteer.
- Remain close to the victim even when there is a professional:
  - Request qualified medical assistance from passengers, further offering the medical equipment that is available.
  - Notify the Flight Crew.
  - Use suitable equipment and provide appropriate first aid.
  - When possible, provide privacy (keeping victim away from on-lookers) while medical assistance is given or you are in action.
  - Keep Pilot in Command informed of everything at all times.

## CPR (CARDIOPULMONARY RESUSCITATION)

- Verify if victim is conscious or unconscious by gently shaking the victim's shoulder and asking loudly next to his/her ear: "Are you OK"?
- Call for help (other flight attendants or capable passengers), notify the Pilot in Command, seek medical volunteers (verify credentials) and provide material (medical kit, therapeutic oxygen).
- Open airways: tilt the head back with one hand on the victim's forehead and gently lift the chin with the other hand. Extend victim's head until mouth opens.
- Verify if there is breathing by positioning your ear over victim's mouth and nose while keeping airways open. If there is no breathing...
- Blow two slow full breaths and keep airways open to start mouth-to-mask resuscitation by using the pocket mask. If none of the two blown breaths make the chest rise, reposition head and blow two more breaths.
- Verify circulation through such signs as coughing or any other physical response to mouth-to-mask action. If there are no circulation signs...
- Start CPR: place heel of the hand (heel and hand) on chest center between nipples. The reference is forefinger or little finger on nipple line according to attendant's position in relation to the victim. Chest compression should be performed uniformly and with rhythm (15x2). Speed of the compressions will be fundamental for its success. Count-out the cycle aloud. Speed of the compressions will be fundamental for its success, which should be executed at a rate of 100 chest compressions per minute.
- **Recovery position:** when the victim recovers signs of circulation, verify breathing. If positive, monitor breathing continually and place the victim in a recovery position with oxygen flow set at 4liters/min until the arrival of advanced care.

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## OBSTRUCTED AIRWAYS

If an adult or a child is conscious and unable to speak, breathe or cough, give at least five abdominal compressions:

- Position yourself behind the victim.
- Make a fist with one hand and place the thumb-side against the middle of the victim's abdomen, just above the navel and below the rib cage.
- Give at least five abdominal compressions.
- Compressions must be given separately and with an effort to force out the obstruction.

After completing five abdominal compressions, verify the results and confirm your technique. Repeat this cycle if necessary.

For pregnant women and obese victims, if the abdomen is an obstacle, apply compressions directly to the chest by employing the CPR position.

For babies up to 1 year old:

- Give five taps to the back.
- Put the baby face down over the forearm.
- Give five taps on the back and between shoulder blades by using the base of the hand.
- Give five compressions to the chest.
- Draw an imaginary line linking the nipples and measure three finger widths below this imaginary line.
- Raise the finger closest to the imaginary line.

If the baby loses consciousness:

- Give two slow breaths.
- Start the cycle again:
  - Five taps.
  - Five chest compressions.
  - Two breaths.

## FAINTNESS

Leading incidence of on board illness. It is the sudden and temporary loss of consciousness. The most common causes are:

- Abrupt change from the seated to standing position.
- Emotional factors.
- Fatigue.
- Excessive consumption of alcoholic beverages.

### PROCEDURE

- Have the victim lie down and with both legs raised.
- Loosen clothing.
- Request a volunteer doctor.
- Keep adjacent areas ventilated.
- Constantly check vital signs. If necessary, apply therapeutic oxygen.
- When victim recovers consciousness do not allow him/her to stand up abruptly.

## DIZZINESS

Frequently, prior to loosing consciousness, a person may feel dizzy, experience darkening of vision and pallor.

### PROCEDURE

Victim should be placed with head lower than chest, by reclining the seat or if possible, lain down on the cabin floor. This position allows for better blood circulation to the brain, thereby improving the victim's overall condition. Should the victim faint, then follow the procedure described under the item FAINTNESS contained in this section.

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## **STROKE (ICH INTRACEREBRAL HEMORRHAGE)**

A stroke should be suspected when the victim presents the following symptoms:

- Sudden numbness of the face or weakness of arm or leg on either side of the body.
- Sudden confusion, speech impairment or difficulty to understand and/or maintain a coherent dialogue.
- Sudden difficulty to stand or walk, dizziness, loss of balance or coordination, all of which cannot be attributed to a specific cause.
- Loss of consciousness.
- Persistent, severe and sudden headache, followed by all of the symptoms described above.

### **PROCEDURE**

- Request a volunteer doctor.

## **PAINS**

Pain is always an alarm signal given by some system or organ of the human body.

To evaluate pain the followings aspects should be considered:

- Intensity: the more intense, the worse the victim's conditions.
- Location/Irradiation: where the pain is located or whether it moves.
- Type as how the pain is described: twinge, tightness, pressure, knifing sensation, etc.
- Associated symptoms: perspiration, shortness of breath, accelerated breathing, overall discomfort, etc.
- Factors that cause pain relief or worsening, nutrition, physical movement, etc.
- Frequency: continuous or pulsating pain.

Try to identify these aspects to inform medical services.

## HEADACHE

Ask victim if pain is of the habitual kind. If the answer is yes, recommend use of the usual pain-relieving agent. If not, provide the analgesic available in the medical kit (always ask if the victim is allergic to any of the medical ingredients contained in the analgesic).

## TOOTHACHE

Ask victim if there is a medication that is usually taken. If the answer is yes, recommend its use.

## EAR DISCOMFORT OR PAIN

Ask victim if allergic to any medication and make available the one available in the medical kit. Orient victims to look for a doctor on the ground.

## CHEST PAIN

Chest pain is frequent among those that suffer from heart problems. Cardiac pain normally has the following symptoms.

- Pain in the middle of the chest accompanied by a sensation of pressure or weight that can irradiate to the jaw, left arm or both arms.
- Shortness of breath.
- Perspiration.
- Nausea.

## PROCEDURE

- Try acting in the fastest and most efficient manner, bearing in mind the seriousness of the symptoms.
- Maintain the person in resting position (recline the seat, if this will not increase discomfort).
- Loosen clothing.
- Ask about the usual medication the person may carry.
- Administer therapeutic oxygen at a rate of 4l/minute with mask connected to the cylinder.
- Request a volunteer doctor.

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## CONVULSIONS

Convulsions are involuntary muscular contractions, followed by loss of consciousness.

### COMMONEST REASONS

- Epilepsy.
- Brain tumors.
- High fever.

### PROCEDURES DURING CRISIS

- Protect the victim from injury. Guarantee that airways are open after the crisis.

For this purpose:

- Protect the person's head.
- Remove adjacent objects that may cause injury to the victim.
- Try not to restrain movements of the victim.
- In case of abundant salivation maintain the victim on his side.

### PROCEDURES AFTER CRISIS

- Administer therapeutic oxygen at a rate of 4l/min with mask connected to the cylinder. Leave the victim in a recovery position (laying down and on the left side).
- Request volunteer doctor.

## CHILDBIRTH

Call a volunteer doctor.

Childbirth is a normal act. Let nature follow its course. Wait for the child to be born, taking some care:

- Accommodate mother in a calm and reserved seat.
- While in labor, the mother can alternate between seating and lying on her left side, which provides better oxygenation for both mother and baby.
- Lay the mother down over blankets, between the two last seats and with head turned towards the tail of the airplane. Legs should be spread, knees flexed and buttocks resting over a moving seat.
- Have ready boiled water, clean cloth, two strong and thick strings, and a knife or scissors.
- Wash hands and use disposable gloves.
- Keep everything clean around the mother.
- The closer to birth, the smaller the intervals between contractions, which should occur every five or three minutes. The water bag will burst followed by loss of amniotic fluid.
- During childbirth, just support the body of the child being born.

## PROCEDURE AFTER BIRTH

- Clear the airways (nose and mouth) with a clean cloth, taking care to maintain the baby slightly lower than the mother. Hold the baby carefully given that it is slippery with amniotic fluid.
- After the baby has cried, cut the umbilical cord:
  - Measure 5 cm of the umbilical cord, approximately four fingerbreadths, from the baby's navel tie it firmly, in order to interrupt blood flow. Next, measure another 10 cm and tie again. There should be a distance of approximately four fingerbreadths between both knotting points.
  - Now cut the umbilical cord.
- Do not wash the baby. The white film covering the baby is protective.

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- Let the mother rest.
- To aid removal of the placenta, gently massage the mother's abdomen, taking care to avoid pulling or placing any tension on the umbilical cord. When the placenta is practically out, take it with both hands, taking care to turn it always in the same direction until it comes totally out. Wrap it with a slightly moistened cloth so that a doctor may determine if the entire placenta was delivered.

Stimulate the baby to cry, if it does not happen naturally. Lightly massage the soles of the feet. If it doesn't cry, put your mouth over the baby's mouth and nose and suck twice and then blow, observing if there is breathing movement.



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REVISION 2

## **ANNOUNCEMENTS GUIDE**

### **EMERGENCY ANNOUNCEMENTS**

Please refer to the Emergency/Abnormal Procedures, Section 3-25, where announcements are showed in conjunction with proper actions that should be taken in this kind of situation.

### **REGULAR ANNOUNCEMENTS**

#### **DURING BOARDING**

*“Good (Morning/Afternoon/Evening) ladies and gentlemen.*

*Welcome aboard the EMB-145/ EMB-135/ ERJ-140.*

*For your safety and comfort, please stow your hand luggage in the overhead compartments or under the seat in front of you.*

*Some electronic devices, such as mobile telephones and two-way pagers, are not approved for in-flight use. Please, ask the Cabin Crewmembers for further information about the use of any restricted items.*

*Passengers seated next to the emergency exits may be requested to operate them. Please read the Safety Information Card located in the seat pocket in front of you and if there is any doubt contact one of the Cabin Crewmembers.*

*Also note that is forbidden to smoke at any time during the flight. For this reason, the lavatory is equipped with a smoke detector.*

*Thank you”.*

#### **AFTER DOORS ARE CLOSED**

*“We kindly request you to turn off your mobile phones at this time. They must remain off until the end of the flight.*

*Thank you for your cooperation”.*

## DELAYED ENGINE STARTUP AND DEPARTURE FROM GATE

*“Ladies and Gentlemen,*

*We would like to inform that the startup of the engines will be delayed by \_\_\_\_ minutes due to:*

- Adverse weather.*
- Heavy air traffic.*
- Baggage and/or cargo loading.*
- Catering loading.*
- Check in procedures delay.*
- Special security measures.*
- Refueling procedures.*

*Thank you”.*

## **BEFORE TAKEOFF/TAXI**

*"Once again, a very pleasant good (morning/afternoon/evening) ladies and gentlemen. It is our pleasure to welcome you on board this EMB-145/ EMB-135/ ERJ-140 now departing to \_\_\_\_\_.*

*The In-flight Crewmembers flying with you today are \_\_\_\_\_ and \_\_\_\_\_. Our Captain is \_\_\_\_\_ and he will be assisted by Captain \_\_\_\_\_. In preparation for departure, check that your seatback and tray table are in the upright and locked position. For everyone's safety, Federal Aviation Regulations require you to comply with all lighted signs, posted placards and crewmember instructions:*

- To fasten your seat belt, place the metal fitting into the buckle, and adjust it by pulling the strap. To release it, lift the top portion of the buckle.*
- In the unlikely event of cabin decompression, oxygen masks will be released automatically from the overhead panels. To start the oxygen flow, remove the mask from the plastic container and pull down on the mask. Place it over your nose and mouth. Breathe normally. Be sure to secure your own mask before assisting others.*
- Your seat cushion may be used as a flotation device. In case of water landing remove it and take it with you.*
- In event of an emergency, lighted signs on the floor and ceiling will lead you to the exits.*
- This airplane is equipped with 04 emergency exits:*
  - 02 doors at the front.*
  - 02 over wing exits.*
- If an evacuation becomes necessary, leave all your carry on items behind and follow the crew's instructions.*
- Finally, please review the Safety Information Card located in the seatback pocket in front of you. It explains the many safety features of this airplane.*

*On behalf of this EMBRAER Flight Crew, it is our pleasure to have you on board. Thank you for your attention".*

## AFTER TAKEOFF

*“The flight time to \_\_\_\_\_ will be approximately \_\_\_\_\_.*

*As a reminder, smoking is not permitted in any area of the airplane.*

*For your safety, please keep your seat belt fastened while you are seated.*

*In a few moments we will begin our in-flight service.*

*Thank you”.*

## NIGHT FLIGHT

*“Ladies and gentlemen, we will be dimming the cabin lights for departure. Individual reading lights are located at the panel above your seat”.*

## TEN MINUTES BEFORE LANDING

*“Ladies and gentlemen, in preparation for landing in \_\_\_\_\_, please ensure that your seat belt is securely fastened and your seatback and tray table are returned to the full upright and locked position. Please, turn off all electronic devices.*

*Thank you”.*

## AFTER LANDING (TAXI)

*“Ladies and gentlemen, welcome to \_\_\_\_\_.*

*For your safety, please remain seated until the engines have been shut down and the fasten seat belt signs have been switched off. Use caution when opening the overhead compartments and removing your luggage.*

*Please refrain from smoking on your way to the terminal and also observe the local restrictions regarding smoking at this airport.*

*It has been a pleasure having you on board our EMB-145/ EMB-135/ ERJ-140.*

*We hope you have enjoyed this flight and that we’ll have an opportunity to see you again.*

*Thank you for flying the EMB-145/ EMB-135/ ERJ-140 and have a good (morning/afternoon/evening)”.*

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## **IN CASE OF INTERMEDIATE STOPS:**

*“Transiting passengers are kindly requested to remain on board” or  
“Transiting passengers are kindly requested to deboard”.*

*“May we suggest to the deboarding passengers that you make sure  
you take along all your personal belongings.*

*Thank you and have a nice day/weekend”.*

## **REFUELING WITH PASSENGERS ON BOARD**

*“Ladies and gentlemen,*

*We wish to inform you that we will be refueling the airplane. As of now  
and until further notice, the reading light and attendant call switches  
should not be used unless it is strictly necessary. Matches, devices or  
equipment that can produce sparks must not be used.*

*As a standard safety precaution, passengers are kindly requested to  
release their seatbelts, please.*

*Thank you”.*

## **FLIGHT INTO TURBULENCE**

*“Ladies and gentlemen,*

*Due to turbulence, inflight service will be interrupted/canceled. Please  
remain seated with your seat belts fastened.*

*Thank you”.*

## **LONG WAIT FOR TAKEOFF DUE TO AIR TRAFFIC**

*“Ladies and Gentlemen,*

*Due to air traffic constraints, our departure/landing will be delayed  
by \_\_\_ minutes.*

*Thank you”.*

## DIVERSION TO ALTERNATE AIRPORT

*“Ladies and gentlemen,*

*The Captain has just been informed that due to (weather conditions/closed runway/unserviceable navigational aid equipment on the ground) we are changing our destination to \_\_\_\_\_.*

*We are sorry for the inconvenience and will bring updates whenever new information becomes available.*

*Thank you”.*

## AIRPLANE CHANGE

*“Ladies and gentlemen,*

*There will be an airplane change. The other airplane is (\_\_\_\_\_/located at\_\_\_\_\_). We recommend passengers that are deboarding to carefully make sure that you are taking all your personal belongings.*

*Thank you”.*

## MEAL ON THE GROUND

*“Ladies and gentlemen,*

*Due to exceptional circumstances we will be serving (snacks/meals) on the ground. We are sorry for any inconvenience that it may bring.*

*Thank you”.*

## REQUEST FOR A DOCTOR

*“Ladies and gentlemen,*

*We have a passenger that needs medical assistance. If there is a physician onboard, please identify yourself to one of our cabin attendants.*

*Thank you”.*

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## REJECTED TAKEOFF AND GO-AROUND

*“Ladies and gentlemen,*

*Please remain seated with your seatbelts fastened and wait for further information”.*

## RAPID DEBOARDING

*“Ladies and gentlemen,*

*Due to technical reasons passengers must now deboard. All passengers without exception must leave their belongings on board and exit the airplane NOW. Wait outside to be guided by a company representative to the proper area”.*



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REVISION 2