



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

February 2, 2015

Attachment 17 – Portable Oxygen

OPERATIONAL FACTORS

DCA13MA081

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A. Portable Oxygen

1.0 Portable Oxygen Systems Description

Airplane General, Emergency
Equipment, Doors, Windows -
Systems Description



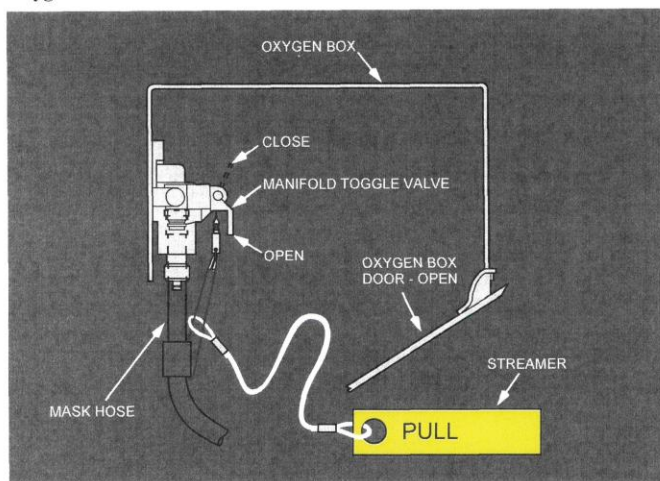
747 Flight Crew Operations Manual

The supernumerary oxygen system provides 195 minutes of oxygen at a cabin altitude of 25,000 feet. When an oxygen mask is no longer in use, placing the manifold toggle valve in the oxygen box to the CLOSE position will conserve oxygen and increase flow to the masks still in use.

Oxygen flow can be reset by selecting the Supernumerary Oxygen switch to RESET position.

Supernumerary oxygen pressure displays on the EICAS STATUS page.

Oxygen Box



Portable Oxygen Bottles

Portable oxygen bottles are stowed in various locations in the passenger cabin. The bottles are fitted with disposable masks and are used for first aid purposes or as walk-around units. All bottles are identical in size and capacity.

Oxygen Systems

Two independent oxygen systems are provided, one for the flight crew and one for the supernumeraries. Portable oxygen cylinders are located in the flight deck and supernumerary cabin for emergency use.

Oxygen pressure displays on the EICAS STATUS page.

Flight Crew Oxygen System

The flight crew oxygen system uses quick-donning diluter-demand full-face masks located at each crew station. Oxygen flow is controlled by an automatic pressure breathing regulator mounted on each mask.

During the preflight check of the crew oxygen mask, a pressure decrease may indicate the crew oxygen cylinder shutoff valve is closed, and oxygen is unavailable.

Squeezing the red release levers with the thumb and forefinger allows the mask to be removed from stowage, inflates the mask harness and momentarily displays the yellow cross in the flow indicator. Releasing the levers after placing the mask over the head deflates the mask harness, fitting it securely to the head and face.

When the left-hand door to the mask stowage box is opened, the mask microphone activates in the removed mask.

An OXYGEN ON flag appears in the mask compartment near the left-hand door of the stowage box, indicating the oxygen supply valve is open. The oxygen system is shut off by closing the left-hand door of the stowage box and pushing and releasing the RESET/TEST switch. This action shuts off oxygen to the mask, stows the flag, deactivates the mask microphone, and activates the boom microphone. The oxygen system can be reactivated by opening the left-hand door of the stowage box.

Supernumerary Oxygen System

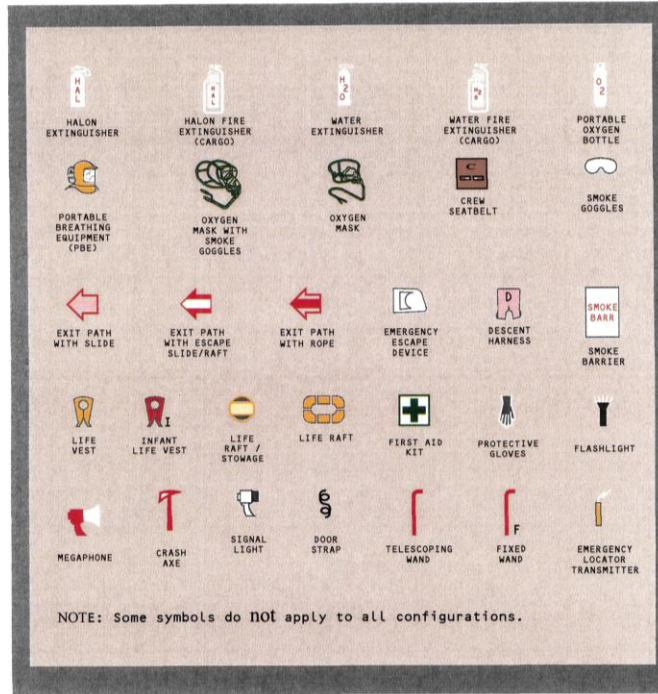
The supernumerary oxygen system is supplied by bottled gaseous oxygen. The oxygen bottles provide oxygen to the oxygen boxes located in passenger and lavatory service units. The supernumerary oxygen masks are located above the supernumerary seats in oxygen boxes. The masks automatically drop if cabin altitude exceeds approximately 14,000 feet. Supernumerary masks can be manually deployed from the flight deck by pushing the overhead panel Supernumerary Oxygen switch to ON position.

Oxygen flow to a mask begins when the mask or streamer is pulled down.

2.0 Portable Oxygen Locations

Emergency Equipment

Emergency Equipment Symbols



September 1, 2011

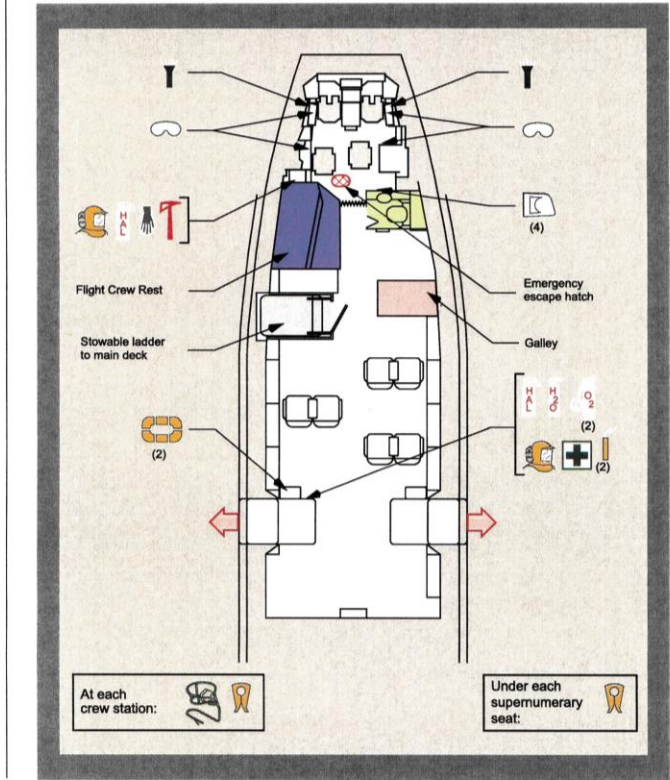
B747-400 FCOM II

1.45.3



Freighter

Flight Deck/Upper Deck



1.45.4

B747-400 FCOM II

September 7, 2012